

PDS4 Data Dictionary - Unabridged - V.0.5.0.0.g

PDS4 Data Design Working Group

Version 0.5.0.0.g - Fri Oct 28 10:17:55 PDT 2011

Generated from the PDS4 Information Model Version 0.5.0.0.g

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1. **Introduction**

The Planetary Data System (PDS) PDS4 Data Dictionary defines the organization and components of PDS4 product labels. Components of a product label include classes and their attributes.

2. **Audience**

The PDS4 Data Dictionary - Unabridged - is intended for use by programmers and data engineers who require formal definitions of the components and the organization of PDS4 products.

3. **Acknowledgements**

The PDS4 Data Dictionary and the PDS4 Information Model is a joint effort involving representatives from each of the PDS nodes functioning as the PDS4 Data Design Working Group.

4. **Scope**

The PDS4 Data Dictionary defines the common and discipline level classes and attributes used to create PDS4 product labels. It also defines the meta-attributes (i.e. attributes about attributes) used to define attributes. This unabridged version includes an entry for each use of an attribute in a class where the abridged version includes only one entry for each attribute.

5. Related Documents

- a. Controlling Documents
 - PDS4 Information Model Specification - The PDS4 Information Model is used as the source for class, attribute, and data type definitions. The model is presented in document format as the PDS4 Information Model Specification.
 - ISO/IEC 11179:3 Registry Metamodel and Basic Attributes Specification, 2003. - The ISO/IEC 11179 specification provides the schema for the PDS4 data dictionary.
- b. Reference Documents
 - Planetary Science Data Dictionary - The online version of the PDS3 data dictionary was used as the source for a few data elements being carried over from the PDS3 data standards.

6. Terminology

This document uses very specific engineering terminology to describe the various structures involved. It is particularly important that readers who have absorbed the PDS Standards Reference bear in mind that terms which are familiar in that context can have very different meanings in the present document.

Following are some definitions of essential terms used throughout this document.

- An *attribute* is a property or characteristic that provides a unit of information. For example, 'color' and 'length' are possible attributes.
 - A *class* is a set of attributes (including a name) which defines a family. A class is generic — a template from which individual members of the family may be constructed.
 - A *conceptual object* is an object which is intangible (and, because it is intangible, does not fit into a digital archive). Examples of 'conceptual objects' include the Cassini mission and NASA's strategic plan for solar system exploration. Note that a PDF describing the Cassini mission is a digital object, not a conceptual object (nor a component of a conceptual object).
 - A *data element* is a unit of data for which the definition, identification, representation and *permissible values* are specified by means of a set of attributes. For example, the concept of a *calibration_lamp_state_flag* is used in the PDS archive to indicate whether the lamp used for onboard camera calibration was turned on or off during the capture of an image. The *data element* aspect of this concept is the named attribute (or data element) *calibration_lamp_state_flag*.
 - A *data object* is constructed from a *class*. It is a specific instance of a *class*. A *data object* can be one of three types, digital, conceptual, or physical.
 - A *digital object* is an object which is real data — for example, a binary image of a redwood tree or an ASCII table of atmospheric composition versus altitude.
 - *Formal* as used in the definition of attributes that are names indicates that an established procedure was involved in creating the name.
 - A *unique identifier* is a special type of identifier used to provide a reference number which is unique in a context.
 - *Local* indicates a local scope where scope is an enclosing context where values and expressions are associated.
 - *Logical* as used in the definition of logical identifier indicates that the identifier logically groups a set of objects.
 - A *physical object* is an object which is physical or tangible (and, therefore, does not itself fit into a digital archive). Examples of 'physical objects' include the planet Saturn and the Venus Express magnetometer. Note that an ASCII file describing Saturn is a digital object, not a physical object (nor a component of a physical object).
 - A *resource* is the target (referent) of any Uniform Resource Identifier; the thing to which a URI points.
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7. PDS4 Attribute Definitions - Fri Oct 28 10:17:55 PDT 2011

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• **abstract_desc**

steward: **ops**
name space id: **ops**:
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The abstract_desc attribute provides a summary of a text, scientific article, or document.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

• **acknowledgement_text**

steward: **pds**
name space id: **pds**:
class: **Document_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TEXT** - administration_record: **DD_0.5.0.0.g**
- description: **The acknowledgement_text attribute is a character string which recognizes another's contribution,**

- **authority, or right.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **affiliation_type**

steward: **ops**
name space id: **ops**:
class: **PDS_Affiliate**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The affiliation type data attribute describes the type of relationship an individual has with the PDS.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **Manager** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Technical_Staff** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Data_Provider** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Affiliate** - begin date: 2009-06-09 - end date: 2019-12-31

- **alternate_designation**

steward: **pds**
name space id: **pds**:
class: **Name_Resolution**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: **DD_0.5.0.0.g**
- description: **The alternate_designation attribute provides a known alternate name or identifier.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **alternate_id**

steward: **pds**
name space id: **pds**:
class: **Identification_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The alternate_id attribute provides an additional identifier supplied by the data provider.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **alternate_telephone_number**

steward: **ops**
name space id: **ops**:
class: **PDS_Affiliate**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NUMBER** - administration_record: **DD_0.5.0.0.g**
- description: **The telephone_number attribute provides a telephone number in international notation in compliance with the E.164 telephone number format recommendation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **alternate_title**

steward: **pds**
name space id: **pds**:
class: **Identification_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_TITLE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The alternate_title attribute provides an alternate title for the product.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [UTF8_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **application_process_id**

steward: **img**
name space id: **img**:
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_ID](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The application_process_id attribute identifies the process, or source, which created the data.**
- **value domain** - conceptual domain: [CD_INTEGER](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Integer](#)
- minimum_value: 0

- **application_process_name**

steward: **img**
name space id: **img**:
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The application_process_name attribute provides the name associated with the source or process which created the data.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 127

- **archive_status**

steward: **ops**
name space id: **ops**:
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_STATUS](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The ARCHIVE_STATUS attribute indicates the stage to which a data set has progressed in the archiving process, from "IN_QUEUE" through "ARCHIVED". It can also take on the values "SUPERSEDED" or "SAFED", which indicate that the data set is not part of the active archive. "ACCUMULATING" can be appended to some values to indicate that the data set is incomplete and/or that not all components have reached the stage given by the root value; "ACCUMULATING" would be used, for example, when the archive is being delivered incrementally, as from a mission that lasts many months or years.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **ARCHIVED** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_LIEN_RESOLUTION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_PEER_REVIEW** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_QUEUE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **LOCALLY_ARCHIVED** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PRE_PEER_REVIEW** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SAFED** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SUPERSEDED** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_QUEUE_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PRE_PEER_REVIEW_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_PEER_REVIEW_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_LIEN_RESOLUTION_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **LOCALLY_ARCHIVED_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ARCHIVED_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31

- **archive_status**

steward: **ops**

name space id: **ops**:
class: **Volume_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_STATUS** - administration_record: **DD_0.5.0.0.g**
- description: **The ARCHIVE_STATUS attribute indicates the stage to which a data set has progressed in the archiving process, from "IN QUEUE" through "ARCHIVED". It can also take on the values "SUPERSEDED" or "SAFED", which indicate that the data set is not part of the active archive. "ACCUMULATING" can be appended to some values to indicate that the data set is incomplete and/or that not all components have reached the stage given by the root value; "ACCUMULATING" would be used, for example, when the archive is being delivered incrementally, as from a mission that lasts many months or years.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **ARCHIVED** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_LIEN_RESOLUTION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_PEER_REVIEW** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_QUEUE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **LOCALLY_ARCHIVED** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PRE_PEER_REVIEW** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SAFED** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SUPERSEDED** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_QUEUE_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PRE_PEER_REVIEW_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_PEER_REVIEW_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IN_LIEN_RESOLUTION_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **LOCALLY_ARCHIVED_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ARCHIVED_ACCUMULATING** - begin date: 2009-06-09 - end date: 2019-12-31

- **archive_status_note**

steward: **ops**
name space id: **ops**:
class: **Volume_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NOTE** - administration_record: **DD_0.5.0.0.g**
- description: **The archive status note attribute provides a comment about the archive status.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **attribute_concept**

steward: **ops**
name space id: **ops**:
class: **DD_Attribute_Full**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: **DD_0.5.0.0.g**
- description: **The attribute_concept attribute provides the type of information (classification) conveyed by the attribute – e.g., stop_date_time has attribute_concept = date_time.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **DEC_ADDRESS** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_ANGLE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_ATTRIBUTE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_BIT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_CHECKSUM** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_COLLECTION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_CONSTANT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_COSINE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_COUNT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_DELIMITER** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_DESCRIPTION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_DEVIATION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_DIRECTION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_DISTANCE** - begin date: 2009-06-09 - end date: 2019-12-31

- permissible value: **DEC_DOI** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_DURATION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_FACTOR** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_FLAG** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_FORMAT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_GROUP** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_HOME** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_LATITUDE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_LENGTH** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_LIST** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_LOCATION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_LOGICAL** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_LONGITUDE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_MASK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_MAXIMUM** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_MEAN** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_MEDIAN** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_MINIMUM** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_NAME** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_NOTE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_NUMBER** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_OFFSET** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_ORDER** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_PARALLEL** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_PASSWORD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_PATH** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_PATTERN** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_PIXEL** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_QUATERNION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_RADIUS** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_RATIO** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_REFERENCE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_RESOLUTION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_ROLE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_ROTATION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_SCALE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_SEQUENCE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_SET** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_SIZE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_STATUS** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_SUMMARY** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_SYNTAX** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_TEMPERATURE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_TEXT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_TITLE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_TYPE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_UNIT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_VALUE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_VECTOR** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DEC_ID** - begin date: 2009-06-09 - end date: 2019-12-31

- **author_list**

steward: **ops**
name space id: **ops**:
class: **Software_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LIST** - administration_record: **DD_0.5.0.0.g**
- description: **The author_list attribute lists the composers of a work.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **author_list**

steward: **pds**
name space id: **pds**:
class: **Citation**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LIST** - administration_record: DD_0.5.0.0.g
- description: **The author_list attribute lists the composers of a work.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **510**

- **author_list**

steward: **pds**
name space id: **pds**:
class: **Document_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LIST** - administration_record: DD_0.5.0.0.g
- description: **The author_list attribute lists the composers of a work.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **510**

- **axes**

steward: **pds**
name space id: **pds**:
class: **Array_2D**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: DD_0.5.0.0.g
- description: **The axes attribute provides a count of the axes.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer** - Enumerated
- minimum_value: **1**
- maximum_value: **16**
- permissible value: **2** - begin date: 2009-06-09 - end date: 2019-12-31

- **axes**

steward: **pds**
name space id: **pds**:
class: **Array_3D**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: DD_0.5.0.0.g
- description: **The axes attribute provides a count of the axes.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer** - Enumerated
- minimum_value: **1**
- maximum_value: **16**
- permissible value: **3** - begin date: 2009-06-09 - end date: 2019-12-31

- **axes**

steward: **pds**
name space id: **pds**:
class: **Array_Base**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: DD_0.5.0.0.g
- description: **The axes attribute provides a count of the axes.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **16**

- **axis_index_order**

steward: **pds**
name space id: **pds**:
class: **Array_Base**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ORDER** - administration_record: **DD_0.5.0.0.g**
- description: **The axis_index_order attribute provides the axis index that varies fastest with respect to storage order.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **FIRST_INDEX_FASTEST** - begin date: 2009-06-09 - end date: 2019-12-31

- **axis_name**

steward: **pds**
name space id: **pds:**
class: **Array_Axis**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The axis_name attribute provides a word or combination of words by which the axis is known.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **axis_storage_order**

steward: **pds**
name space id: **pds:**
class: **Array_Base**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ORDER** - administration_record: **DD_0.5.0.0.g**
- description: **The axis_storage_order attribute associates a name with each of the axis.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **bits**

steward: **pds**
name space id: **pds:**
class: **Table_Binary_Grouped_Bit_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The bits attribute provides the number of bits in the object.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **256**

- **bit_mask**

steward: **pds**
name space id: **pds:**
class: **Table_Binary_Grouped_Bit_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_MASK** - administration_record: **DD_0.5.0.0.g**
- description: **The bit_mask element is a series of binary digits identifying the active bits in a value.**
- **value domain** - conceptual domain: **CD_NUMERIC** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Numeric_Base2**

- **bytes**

steward: **pds**
name space id: **pds:**
class: **Header**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**

- description: **The bytes attribute provides the number of bytes in the object.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **bytes**

steward: **pds**
name space id: **pds:**
class: **Header_Binary**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: DD_0.5.0.0.g
- description: **The bytes attribute provides the number of bytes in the object.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **citation_text**

steward: **ops**
name space id: **ops:**
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TEXT** - administration_record: DD_0.5.0.0.g
- description: **The citation_text attribute provides a character string containing a literature or other citation in sufficient detail that the material could be located in PDS or elsewhere.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **citation_text**

steward: **pds**
name space id: **pds:**
class: **Citation**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TEXT** - administration_record: DD_0.5.0.0.g
- description: **The citation_text attribute provides a character string containing a literature or other citation in sufficient detail that the material could be located in PDS or elsewhere.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **class_name**

steward: **ops**
name space id: **meta**
class: **DD_Attribute_Full**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: DD_0.5.0.0.g
- description: **The class_name attribute provides the common name by which the class is identified, as well as the class within which the attribute is used.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **comment**

steward: **ops**
name space id: **ops:**
class: **DD_Attribute**

version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The comment attribute is a character string expressing one or more remarks or thoughts relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)

• **comment**

steward: **ops**
name space id: **ops**:
class: **Local_DD**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The comment attribute is a character string expressing one or more remarks or thoughts relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)

• **comment**

steward: **pds**
name space id: **pds**:
class: **Array_Base**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The comment attribute is a character string expressing one or more remarks or thoughts relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)

• **comment**

steward: **pds**
name space id: **pds**:
class: **Encoded_Byte_Stream**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The comment attribute is a character string expressing one or more remarks or thoughts relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)

• **comment**

steward: **pds**
name space id: **pds**:
class: **File**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The comment attribute is a character string expressing one or more remarks or thoughts relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)

• **comment**

steward: **pds**
name space id: **pds**:
class: **Name_Resolution**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The comment attribute is a character string expressing one or more remarks or thoughts relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)

- value_data_type: [ASCII_Text_Preserved](#)

- **comment**

steward: **pds**
name space id: **pds**:
class: **Observation_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The comment attribute is a character string expressing one or more remarks or thoughts relevant to the object.**
- **value domain** - conceptual domain: [CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)

- **comment**

steward: **pds**
name space id: **pds**:
class: **Observing_System_Component**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The comment attribute is a character string expressing one or more remarks or thoughts relevant to the object.**
- **value domain** - conceptual domain: [CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)

- **comment**

steward: **pds**
name space id: **pds**:
class: **Parsable_Byte_Stream**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The comment attribute is a character string expressing one or more remarks or thoughts relevant to the object.**
- **value domain** - conceptual domain: [CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)

- **comment**

steward: **pds**
name space id: **pds**:
class: **Table_Base**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The comment attribute is a character string expressing one or more remarks or thoughts relevant to the object.**
- **value domain** - conceptual domain: [CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)

- **compile_notes**

steward: **ops**
name space id: **ops**:
class: **Software_Source**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_VALUE2](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The compile notes attribute provides a brief statement giving particulars about the compilation of the software source.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **conceptual_domain**

steward: **ops**
name space id: **meta**
class: **DD_Value_Domain_Full**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: [DD_0.5.0.0.g](#)
- description: **The conceptual_domain attribute provides the domain to which the value has been assigned.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **CD_SHORT_STRING** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **CD_INTEGER** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **CD_TEXT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **CD_TIME** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **CD_REAL** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **CD_BOOLEAN** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **CD_TYPE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **CD_NAME** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **CD_NUMERIC** - begin date: 2009-06-09 - end date: 2019-12-31

• **confidence_level_note**

steward: **ops**
name space id: **ops:**
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NOTE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The confidence_level_note attribute is a text field which characterizes the reliability of data within a data set or the reliability of a particular programming algorithm or software component. Essentially, this note discusses the level of confidence in the accuracy of the data or in the ability of the software to produce accurate results.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

• **constant_value**

steward: **ops**
name space id: **ops:**
class: **DD_Association**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The constant value attribute provides the value to be used if an attribute is static.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **container_type**

steward: **ops**
name space id: **ops:**
class: **Product_Zipped**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The container type attribute indicates the method used to package the components.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **ZIP** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **GZIP** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **LZIP** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **TAR** - begin date: 2009-06-09 - end date: 2019-12-31

- **contains_primary_member**

steward: **pds**
name space id: **pds**:
class: **Identification_Area_Collection**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: **DD_0.5.0.0.g**
- description: **The contains_primary_member attribute indicates whether a collection contains products that are primary members of the collection.**
- **value domain** - conceptual domain: **CD_BOOLEAN** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Boolean_TF**

- **copyright**

steward: **pds**
name space id: **pds**:
class: **Document_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: **DD_0.5.0.0.g**
- description: **The copyright attribute is a character string giving information about the exclusive right to make copies, license, and otherwise exploit an object, whether physical or digital.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **510**

- **creation_date_time**

steward: **pds**
name space id: **pds**:
class: **File**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The creation_date_time attribute provides a date and time when the object was created.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Date_Time**

- **curating_node_id**

steward: **ops**
name space id: **ops**:
class: **Volume_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The curating_node_id attribute provides the id of the node currently maintaining the data set or volume and is responsible for maintaining catalog information.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **data_set_desc**

steward: **ops**
name space id: **ops**:
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The data_set_desc attribute describes the content and type of a data set and provides information required to use the data (such as binning information).**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **data_set_id**

steward: **ops**
name space id: **ops**:
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The data set id provides a formal name used to refer to a data set.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **data_set_name**

steward: **ops**
name space id: **ops**:
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The data_set_name attribute provides the full name given to a data set or a data product. The data_set_name typically identifies the instrument that acquired the data of that instrument Example value data_set_id. Note This attribute is defined in the AMMOS Magellan catalog as an alias for file_name to provide backward compatibility**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **data_set_release_date**

steward: **ops**
name space id: **ops**:
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The data_set_release_date attribute provides the date when a data set is released by the data producer for archive or publication. In many systems this represents the end of a proprietary or validation period. Formation rule In AMMOS identify the date at which a product may be released to the general public from proprietary access. AMMOS-related systems should apply this attribute only to proprietary data.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **data_set_terse_desc**

steward: **ops**
name space id: **ops**:
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **A one line description of the data set**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **data_type**

steward: **pds**
name space id: **meta**
class: **Array_Element**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The data_type attribute provides the hardware representation used to store a value.**

- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **30**
- permissible value: **IEEE754MSBDouble** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IEEE754MSBSingle** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedByte** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedMSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedMSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedLSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedLSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedLSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedLSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedMSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedMSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedMSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedLSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedMSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedLSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IEEE754LSBDouble** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IEEE754LSBSingle** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedByte** - begin date: 2009-06-09 - end date: 2019-12-31

• data_type

steward: **pds**
name space id: **meta**
class: **Delimited_Field**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The data_type attribute provides the hardware representation used to store a value.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- permissible value: **ASCII_Boolean_TF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_YMD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Integer** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Real** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_AnyURI** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_DOY** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_DOY** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_UTC** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_YMD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_LID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_LIDVID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_MD5_Checksum** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Short_String_Collapsed** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Text_Preserved** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Short_String_Preserved** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Time** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_VID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_DOI** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Numeric_Base2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Numeric_Base16** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_NonNegative_Integer** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_File_Specification_Name** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_File_Name** - begin date: 2009-06-09 - end date: 2019-12-31

• data_type

steward: **pds**
name space id: **meta**
class: **Table_Binary_Field**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The data_type attribute provides the hardware representation used to store a value.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **Bit** - begin date: 2009-06-09 - end date: 2019-12-31

- permissible value: **ComplexMSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ComplexMSB16** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedLSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedLSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedLSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedMSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedMSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedMSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedByte** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedLSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedLSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedMSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedMSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IEEE754MSBDouble** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IEEE754MSBSingle** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_File_Name** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Boolean_TF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_YMD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Integer** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Real** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_AnyURI** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_DOY** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_DOY** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_UTC** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_YMD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_LID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_LIDVID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_MD5_Checksum** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Short_String_Collapsed** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Text_Preserved** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Short_String_Preserved** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Time** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_VID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_DOI** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Numeric_Base2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Numeric_Base16** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_NonNegative_Integer** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_File_Specification_Name** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedLSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedMSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ComplexLSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ComplexLSB16** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IEEE754LSBDouble** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IEEE754LSBSingle** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedByte** - begin date: 2009-06-09 - end date: 2019-12-31

• data_type

steward: **pds**
name space id: **meta**
class: **Table_Binary_Grouped_Bit_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The data_type attribute provides the hardware representation used to store a value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **Bit** - begin date: 2009-06-09 - end date: 2019-12-31

• data_type

steward: **pds**
name space id: **meta**
class: **Table_Binary_Grouped_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The data_type attribute provides the hardware representation used to store a value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated

- minimum_characters: 1
- maximum_characters: 255
- permissible value: **Bit** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ComplexMSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ComplexMSB16** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedLSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedLSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedLSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedMSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedMSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedMSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedByte** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedLSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedLSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedMSB2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedMSB4** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IEEE754MSBDouble** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IEEE754MSBSingle** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_File_Name** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedLSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnsignedMSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ComplexLSB8** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ComplexLSB16** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IEEE754LSBDouble** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IEEE754LSBSingle** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SignedByte** - begin date: 2009-06-09 - end date: 2019-12-31

- **data_type**

steward: **pds**

name space id: **meta**

class: **Table_Character_Field**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The data_type attribute provides the hardware representation used to store a value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **ASCII_Boolean_TF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_YMD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Integer** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Real** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_AnyURI** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_DOY** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_DOY** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_UTC** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_YMD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_LID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_LIDVID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_MD5_Checksum** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Short_String_Collapsed** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Text_Preserved** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Short_String_Preserved** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Time** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_VID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_DOI** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Numeric_Base2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Numeric_Base16** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_NonNegative_Integer** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_File_Specification_Name** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_File_Name** - begin date: 2009-06-09 - end date: 2019-12-31

- **data_type**

steward: **pds**

name space id: **meta**

class: **Table_Character_Grouped_Field**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**

- description: **The data_type attribute provides the hardware representation used to store a value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **ASCII_Boolean_TF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_YMD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Integer** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Real** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_AnyURI** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_DOY** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_DOY** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_UTC** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_YMD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_LID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_LIDVID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_MD5_Checksum** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Short_String_Collapsed** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Text_Preserved** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Short_String_Preserved** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Time** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_VID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_DOI** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Numeric_Base2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Numeric_Base16** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_NonNegative_Integer** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_File_Specification_Name** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_File_Name** - begin date: 2009-06-09 - end date: 2019-12-31

- **data_type**

steward: **pds**
name space id: **meta**
class: **Table_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The data_type attribute provides the hardware representation used to store a value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **data_type**

steward: **pds**
name space id: **meta**
class: **Table_Field_Checksum**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The data_type attribute provides the hardware representation used to store a value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **ASCII_MD5_Checksum** - begin date: 2009-06-09 - end date: 2019-12-31

- **data_type**

steward: **pds**
name space id: **meta**
class: **Table_Field_File_Specification_Name**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The data_type attribute provides the hardware representation used to store a value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**

- permissible value: **ASCII_File_Specification_Name** - begin date: 2009-06-09 - end date: 2019-12-31

- **data_type**

steward: **pds**
name space id: **meta**
class: **Table_Field_LID**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The data_type attribute provides the hardware representation used to store a value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **ASCII_LID** - begin date: 2009-06-09 - end date: 2019-12-31

- **data_type**

steward: **pds**
name space id: **meta**
class: **Table_Field_LIDVID**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The data_type attribute provides the hardware representation used to store a value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **ASCII_LIDVID** - begin date: 2009-06-09 - end date: 2019-12-31

- **date_time**

steward: **pds**
name space id: **pds:**
class: **Update_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The date_time attribute provides the date and time of an event.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Date_Time**

- **dd_version_id**

steward: **pds**
name space id: **pds:**
class: **Data_Standards**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The dd version id attribute provides the version identifier for the data dictionary.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **definition**

steward: **ops**
name space id: **meta**
class: **DD_Attribute**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The definition attribute provides a statement, picture in words, or account that defines the term.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**

- **definition**

steward: **ops**
name space id: **meta**
class: **DD_Class**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The definition attribute provides a statement, picture in words, or account that defines the term.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**

- **definition**

steward: **pds**
name space id: **meta**
class: **Terminological_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The definition attribute provides a statement, picture in words, or account that defines the term.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **description**

steward: **ops**
name space id: **ops:**
class: **Node**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **255**

- **description**

steward: **ops**
name space id: **ops:**
class: **Personnel**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **255**

- **description**

steward: **ops**
name space id: **ops:**
class: **Software_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **description**

steward: **ops**
name space id: **ops**:
class: **Volume_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **description**

steward: **ops**
name space id: **ops**:
class: **Volume_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **description**

steward: **pds**
name space id: **pds**:
class: **Archive_Bundle**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **description**

steward: **pds**
name space id: **pds**:
class: **Bibliographic_Reference**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **description**

steward: **pds**
name space id: **pds**:
class: **Detector**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: [DD_0.5.0.0.g](#)

- value_data_type: [ASCII_Text_Preserved](#)
- minimum_characters: 1
- maximum_characters: 255

- **description**

steward: **pds**
name space id: **pds:**
class: **Document_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:[CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)
- minimum_characters: 1
- maximum_characters: **2147483647**

- **description**

steward: **pds**
name space id: **pds:**
class: **Document_Format**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:[CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)
- minimum_characters: 1
- maximum_characters: **2147483647**

- **description**

steward: **pds**
name space id: **pds:**
class: **Field_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:[CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)
- minimum_characters: 1
- maximum_characters: **255**

- **description**

steward: **pds**
name space id: **pds:**
class: **Header**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:[CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)
- minimum_characters: 1
- maximum_characters: **2147483647**

- **description**

steward: **pds**
name space id: **pds:**
class: **Header_Binary**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:[CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)
- minimum_characters: 1
- maximum_characters: 255

- **description**

steward: **pds**
name space id: **pds**:
class: **Instrument**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:[CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)
- minimum_characters: 1
- maximum_characters: 255

- **description**

steward: **pds**
name space id: **pds**:
class: **Instrument_Host**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:[CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)
- minimum_characters: 1
- maximum_characters: 255

- **description**

steward: **pds**
name space id: **pds**:
class: **Investigation**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:[CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)
- minimum_characters: 1
- maximum_characters: 255

- **description**

steward: **pds**
name space id: **pds**:
class: **Object_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:[CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)
- minimum_characters: 1
- maximum_characters: 255

- **description**

steward: **pds**
name space id: **pds:**
class: **Observing_System**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **255**

• **description**

steward: **pds**
name space id: **pds:**
class: **Quaternion**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

• **description**

steward: **pds**
name space id: **pds:**
class: **Quaternion_Component**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **255**

• **description**

steward: **pds**
name space id: **pds:**
class: **Reference**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

• **description**

steward: **pds**
name space id: **pds:**
class: **Resource**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **255**

- **description**

steward: **pds**
name space id: **pds**:
class: **Table_Field**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **255**

- **description**

steward: **pds**
name space id: **pds**:
class: **Target**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **255**

- **description**

steward: **pds**
name space id: **pds**:
class: **Update**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **description**

steward: **pds**
name space id: **pds**:
class: **Update_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **description**

steward: **pds**
name space id: **pds**:
class: **Vector**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: **DD_0.5.0.0.g**

- value_data_type: [ASCII_Text_Preserved](#)

- **description**

steward: **pds**
name space id: **pds**:
class: **Vector_Component**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DESCRIPTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The description attribute provides a statement, picture in words, or account that describes or is otherwise relevant to the object.**
- **value domain** - conceptual domain:[CD_TEXT](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Text_Preserved](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **directory_path_name**

steward: **pds**
name space id: **pds**:
class: **Document_File**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The directory_path_name attribute provides a sequence of names that locates a directory in a hierarchy of directories.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **document_name**

steward: **pds**
name space id: **pds**:
class: **Document_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The document_title attribute provides the full name of the published document. This optional attribute is used only if the title in the identification area of the document product is not sufficient.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **doi**

steward: **pds**
name space id: **pds**:
class: **Bibliographic_Reference**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DOI](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The doi attribute provides the Digital Object Identifier for an object, assigned by the appropriate DOI System Registration Agency.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **doi**

steward: **pds**
name space id: **pds**:
class: **Document_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_DOI](#) - administration_record: [DD_0.5.0.0.g](#)

- description: **The doi attribute provides the Digital Object Identifier for an object, assigned by the appropriate DOI System Registration Agency.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **doi**

steward: **pds**
name space id: **pds**:
class: **Reference**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DOI** - administration_record: **DD_0.5.0.0.g**
- description: **The doi attribute provides the Digital Object Identifier for an object, assigned by the appropriate DOI System Registration Agency.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **earth_received_start_date_time**

steward: **img**
name space id: **img**:
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The earth_received_start_date_time attribute provides the earliest time at which any component telemetry data for a particular product was received.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Date_Time_UTC**

- **earth_received_stop_date_time**

steward: **img**
name space id: **img**:
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The earth_received_stop_date_time attribute provides the latest time at which any component telemetry data for a particular product was received.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Date_Time_UTC**

- **editor_list**

steward: **pds**
name space id: **pds**:
class: **Document_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LIST** - administration_record: **DD_0.5.0.0.g**
- description: **The editor_list attribute lists the editors of a work.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **510**

- **electronic_mail_address**

steward: **ops**
name space id: **ops**:
class: **PDS_Affiliate**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ADDRESS** - administration_record: **DD_0.5.0.0.g**

- description: **The electronic mail address attribute provides a multi-part email address: the first part (the user name), which identifies a unique user, is separated by an "at sign" from the host name, which uniquely identifies the mail server.**
- value domain - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **electronic_mail_address**

steward: **ops**
name space id: **ops:**
class: **PDS_Guest**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ADDRESS** - administration_record: **DD_0.5.0.0.g**
- description: **The electronic mail address attribute provides a multi-part email address: the first part (the user name), which identifies a unique user, is separated by an "at sign" from the host name, which uniquely identifies the mail server.**
- value domain - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **elements**

steward: **pds**
name space id: **pds:**
class: **Array_Axis**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The elements attribute provides the count of the number of elements along an array axis.**
- value domain - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **encoding_type**

steward: **pds**
name space id: **pds:**
class: **Array_Base**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The encoding_type attribute provides the storage format (binary or character).**
- value domain - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **30**
- permissible value: **BINARY** - begin date: 2009-06-09 - end date: 2019-12-31

- **encoding_type**

steward: **pds**
name space id: **pds:**
class: **Document_File**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The encoding_type attribute provides the storage format (binary or character).**
- value domain - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **30**
- permissible value: **BINARY** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **CHARACTER** - begin date: 2009-06-09 - end date: 2019-12-31

- **encoding_type**

steward: **pds**
name space id: **pds**:
class: **Encoded_Byte_Stream**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The encoding_type attribute provides the storage format (binary or character).**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **30**
- permissible value: **BINARY** - begin date: 2009-06-09 - end date: 2019-12-31

• **encoding_type**

steward: **pds**
name space id: **pds**:
class: **Parsable_Byte_Stream**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The encoding_type attribute provides the storage format (binary or character).**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **30**
- permissible value: **CHARACTER** - begin date: 2009-06-09 - end date: 2019-12-31

• **encoding_type**

steward: **pds**
name space id: **pds**:
class: **Table_Base**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The encoding_type attribute provides the storage format (binary or character).**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **encoding_type**

steward: **pds**
name space id: **pds**:
class: **Table_Base_Binary**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The encoding_type attribute provides the storage format (binary or character).**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **30**
- permissible value: **BINARY** - begin date: 2009-06-09 - end date: 2019-12-31

• **encoding_type**

steward: **pds**
name space id: **pds**:
class: **Table_Base_Character**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The encoding_type attribute provides the storage format (binary or character).**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **30**
- permissible value: **CHARACTER** - begin date: 2009-06-09 - end date: 2019-12-31

- **encoding_type**

steward: **pds**
name space id: **pds**:
class: **TDO_Structures**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The encoding_type attribute provides the storage format (binary or character).**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**

- **enumeration_flag**

steward: **ops**
name space id: **meta**
class: **DD_Value_Domain**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_FLAG** - administration_record: [DD_0.5.0.0.g](#)
- description: **The enumeration_flag attribute indicates whether there is an enumerated set of permissible values.**
- **value domain** - conceptual domain: **CD_BOOLEAN** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Boolean_TF** - Enumerated
- minimum_characters: **1**
- maximum_characters: **1**
- permissible value: **T** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **F** - begin date: 2009-06-09 - end date: 2019-12-31

- **error_constant**

steward: **pds**
name space id: **pds**:
class: **Special_Constants**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_CONSTANT** - administration_record: [DD_0.5.0.0.g](#)
- description: **The error_constant attribute provides a value that indicates the original value was in error.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **expected_packets**

steward: **img**
name space id: **img**:
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: [DD_0.5.0.0.g](#)
- description: **The expected_packets attribute provides the total number of telemetry packets which constitute a complete data product, i.e., a data product without missing data.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Integer**
- minimum_value: **0**

- **external_standard_id**

steward: **pds**
name space id: **pds**:
class: **Delimited_Table**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- permissible value: **CSV** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **OTHER** - begin date: 2009-06-09 - end date: 2019-12-31

- **external_standard_id**

steward: **pds**
name space id: **pds**:
class: **Delimited_Table_Grouped**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- permissible value: **CSV** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **OTHER** - begin date: 2009-06-09 - end date: 2019-12-31

- **external_standard_id**

steward: **pds**
name space id: **pds**:
class: **Document_File**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **PDF-A** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ENCAPSULATED_POSTSCRIPT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **GIF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **HTML** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **JPG** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **LaTeX** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **MICROSOFT_WORD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PNG** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **POSTSCRIPT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **RICH_TEXT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **TEXT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **TIFF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PDF** - begin date: 2009-06-09 - end date: 2019-12-31

- **external_standard_id**

steward: **pds**
name space id: **pds**:
class: **Encoded_Binary**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **System** - begin date: 2009-06-09 - end date: 2019-12-31

- **external_standard_id**

steward: **pds**
name space id: **pds**:
class: **Encoded_Byte_Stream**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**

- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **external_standard_id**

steward: **pds**
name space id: **pds:**
class: **Encoded_Image**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_ID](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **JPEG** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **GIF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **TIFF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PDF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PNG** - begin date: 2009-06-09 - end date: 2019-12-31

- **external_standard_id**

steward: **pds**
name space id: **pds:**
class: **File_PDF**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_ID](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **PDF** - begin date: 2009-06-09 - end date: 2019-12-31

- **external_standard_id**

steward: **pds**
name space id: **pds:**
class: **Header**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_ID](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **VICAR** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ODL** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **FITS** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PDS3** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PDS2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PDS1** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ISIS2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ISIS3** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **TIFF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **FREE_TEXT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ISIS_HISTORY** - begin date: 2009-06-09 - end date: 2019-12-31

- **external_standard_id**

steward: **pds**
name space id: **pds:**
class: **Header_Binary**

version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **VICAR** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **FITS** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ISIS2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ISIS3** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **TIFF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ISIS_HISTORY** - begin date: 2009-06-09 - end date: 2019-12-31

- **external_standard_id**

steward: **pds**

name space id: **pds:**

class: **Parsable_Byte_Stream**

version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **external_standard_id**

steward: **pds**

name space id: **pds:**

class: **Service_Description**

version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **WSDL** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **WADL** - begin date: 2009-06-09 - end date: 2019-12-31

- **external_standard_id**

steward: **pds**

name space id: **pds:**

class: **SPICE_Kernel_Binary**

version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **SPICE** - begin date: 2009-06-09 - end date: 2019-12-31

- **external_standard_id**

steward: **pds**

name space id: **pds:**

class: **SPICE_Kernel_Text**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **SPICE** - begin date: 2009-06-09 - end date: 2019-12-31

- **external_standard_id**

steward: **pds**

name space id: **pds:**

class: **XML_Schema**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The external_standard_id attribute provides the formal name of a standard not under PDS governance.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **XML_Schema** - begin date: 2009-06-09 - end date: 2019-12-31

- **fields**

steward: **pds**

name space id: **pds:**

class: **Delimited_Table**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The fields attribute provides a count of the fields**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **fields**

steward: **pds**

name space id: **pds:**

class: **Delimited_Table_Grouped**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The fields attribute provides a count of the fields**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **fields**

steward: **pds**

name space id: **pds:**

class: **Inventory_LIDVID_Primary**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The fields attribute provides a count of the fields**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer** - Enumerated
- minimum_value: **1**
- maximum_value: **2147483647**
- permissible value: **2** - begin date: 2009-06-09 - end date: 2019-12-31

- **fields**

steward: **pds**
name space id: **pds**:
class: **Inventory_LIDVID_Secondary**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The fields attribute provides a count of the fields**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer** - Enumerated
- minimum_value: **1**
- maximum_value: **2147483647**
- permissible value: **1** - begin date: 2009-06-09 - end date: 2019-12-31

• **fields**

steward: **pds**
name space id: **pds**:
class: **Inventory_LID_Secondary**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The fields attribute provides a count of the fields**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer** - Enumerated
- minimum_value: **1**
- maximum_value: **2147483647**
- permissible value: **1** - begin date: 2009-06-09 - end date: 2019-12-31

• **fields**

steward: **pds**
name space id: **pds**
class: **Manifest**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The fields attribute provides a count of the fields**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer** - Enumerated
- minimum_value: **1**
- maximum_value: **2147483647**
- permissible value: **2** - begin date: 2009-06-09 - end date: 2019-12-31

• **fields**

steward: **pds**
name space id: **pds**:
class: **Table_Base**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The fields attribute provides a count of the fields**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

• **field_delimiter**

steward: **pds**
name space id: **pds**:
class: **Delimited_Table**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DELIMITER** - administration_record: **DD_0.5.0.0.g**
- description: **The field_delimiter attribute provides the character or characters that indicate the end of a character string.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- permissible value: **0x3B** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **0x7C** - begin date: 2009-06-09 - end date: 2019-12-31

- permissible value: **0x2C** - begin date: 2009-06-09 - end date: 2019-12-31

- **field_delimiter**

steward: **pds**
name space id: **pds**:
class: **Delimited_Table_Grouped**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DELIMITER** - administration_record: **DD_0.5.0.0.g**
- description: **The field_delimiter attribute provides the character or characters that indicate the end of a character string.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- permissible value: **0x09** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **0x3B** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **0x7C** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **0x2C** - begin date: 2009-06-09 - end date: 2019-12-31

- **field_format**

steward: **pds**
name space id: **pds**:
class: **Table_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_FORMAT** - administration_record: **DD_0.5.0.0.g**
- description: **The field_format attribute gives the magnitude and precision of the data value, providing a display format.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **field_length**

steward: **pds**
name space id: **pds**:
class: **Table_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LENGTH** - administration_record: **DD_0.5.0.0.g**
- description: **The field_length attribute sets an upper, inclusive bound on the number of bytes in the field**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **field_location**

steward: **pds**
name space id: **pds**:
class: **Table_Field_Checksum**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCATION** - administration_record: **DD_0.5.0.0.g**
- description: **The field_location attribute provides the starting position for a field within a record, counting from 1.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **field_location**

steward: **pds**
name space id: **pds**:
class: **Table_Field_Extended**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCATION** - administration_record: **DD_0.5.0.0.g**

- description: **The field_location attribute provides the starting position for a field within a record, counting from 1.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **field_location**

steward: **pds**
name space id: **pds**:
class: **Table_Field_File_Specification_Name**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCATION** - administration_record: DD_0.5.0.0.g
- description: **The field_location attribute provides the starting position for a field within a record, counting from 1.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **field_location**

steward: **pds**
name space id: **pds**:
class: **Table_Field_LID**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCATION** - administration_record: DD_0.5.0.0.g
- description: **The field_location attribute provides the starting position for a field within a record, counting from 1.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer** - Enumerated
- minimum_value: **1**
- maximum_value: **2147483647**
- permissible value: **1** - begin date: 2009-06-09 - end date: 2019-12-31

- **field_location**

steward: **pds**
name space id: **pds**:
class: **Table_Field_LIDVID**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCATION** - administration_record: DD_0.5.0.0.g
- description: **The field_location attribute provides the starting position for a field within a record, counting from 1.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer** - Enumerated
- minimum_value: **1**
- maximum_value: **2147483647**
- permissible value: **1** - begin date: 2009-06-09 - end date: 2019-12-31

- **field_number**

steward: **pds**
name space id: **pds**:
class: **Table_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NUMBER** - administration_record: DD_0.5.0.0.g
- description: **The field_number attribute provides the position of a field, within a series of fields, counting from 1.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **field_number**

steward: **pds**
name space id: **pds**:
class: **Table_Field_File_Specification_Name**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NUMBER** - administration_record: DD_0.5.0.0.g
- description: **The field_number attribute provides the position of a field, within a series of fields, counting from 1.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer** - Enumerated
- minimum_value: **1**
- maximum_value: **2147483647**
- permissible value: **2** - begin date: 2009-06-09 - end date: 2019-12-31

- **field_number**

steward: **pds**
name space id: **pds:**
class: **Table_Field_LID**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NUMBER** - administration_record: DD_0.5.0.0.g
- description: **The field_number attribute provides the position of a field, within a series of fields, counting from 1.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer** - Enumerated
- minimum_value: **1**
- maximum_value: **2147483647**
- permissible value: **1** - begin date: 2009-06-09 - end date: 2019-12-31

- **field_number**

steward: **pds**
name space id: **pds:**
class: **Table_Field_LIDVID**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NUMBER** - administration_record: DD_0.5.0.0.g
- description: **The field_number attribute provides the position of a field, within a series of fields, counting from 1.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer** - Enumerated
- minimum_value: **1**
- maximum_value: **2147483647**
- permissible value: **1** - begin date: 2009-06-09 - end date: 2019-12-31

- **files**

steward: **ops**
name space id: **ops:**
class: **Software_Format**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: DD_0.5.0.0.g
- description: **The files attribute provides the number of files.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer**
- minimum_value: **-2147483648**
- maximum_value: **2147483647**

- **file_name**

steward: **pds**
name space id: **pds:**
class: **File**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: DD_0.5.0.0.g
- description: **The file_name attribute provides the name of a file.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **file_size**

steward: **pds**
name space id: **pds:**

class: **File**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_SIZE** - administration_record: DD_0.5.0.0.g
- description: **The file_size attribute provides the size of the file.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer**
- minimum_value: **-2147483648**
- maximum_value: **2147483647**

- **file_specification_name**

steward: **pds**
name space id: **pds**:
class: **Bundle_Member_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: DD_0.5.0.0.g
- description: **The file_specification_name attribute provides the file_name prepended by the directory_path to the file.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_File_Specification_Name**
- minimum_characters: **1**
- maximum_characters: **255**

- **file_specification_name**

steward: **pds**
name space id: **pds**:
class: **Zipped_Member_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: DD_0.5.0.0.g
- description: **The file_specification_name attribute provides the file_name prepended by the directory_path to the file.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **first_line**

steward: **pds**
name space id: **pds**:
class: **Image_2D_Display**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: DD_0.5.0.0.g
- description: **The first_line attribute provides the line within a source image that corresponds to the first line in a sub-image.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **first_line_sample**

steward: **pds**
name space id: **pds**:
class: **Image_2D_Display**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: DD_0.5.0.0.g
- description: **The first_line_sample attribute provides the sample within a source image line that corresponds to the first line in a sub-image.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **first_sampling_parameter_value**

steward: **pds**
name space id: **pds**:
class: **Uniformly_Sampled**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The first_sampling_parameter_value element provides the first value in an ascending series and is therefore the minimum value at which a given data item was sampled.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

• **formation_rule**

steward: **ops**
name space id: **meta**
class: **DD_Value_Domain**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: [DD_0.5.0.0.g](#)
- description: **The formation_rule attribute provides a 'user friendly' instruction for forming values.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **format_type**

steward: **pds**
name space id: **pds**:
class: **Document_Format**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The format type attribute indicates the digital format used.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **HTML** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **TEXT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PDF-A** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PDF** - begin date: 2009-06-09 - end date: 2019-12-31

• **full_name**

steward: **ops**
name space id: **ops**:
class: **Local_DD**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: [DD_0.5.0.0.g](#)
- description: **The full_name attribute provides the complete name for a person performing the role of lexicographer.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **full_name**

steward: **pds**
name space id: **pds**:
class: **Subject_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: [DD_0.5.0.0.g](#)
- description: **The full_name attribute provides the complete name for a person and includes titles and suffixes.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)

- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **full_name**

steward: **pds**
name space id: **pds:**
class: **Update_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The full_name attribute provides the complete name for a person and includes titles and suffixes.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **home**

steward: **ops**
name space id: **ops**
class: **Identification_Area_System**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_HOME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The home attribute indicates where an object resides. It provides sufficient information to be able to access the object.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **incidence_angle**

steward: **rings**
name space id: **rings:**
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_ANGLE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The incidence_angle element provides a measure of the lighting condition at the intercept point. Incidence angle is the angle between the local vertical at the intercept point (surface) and a vector from the intercept point to the sun. The incidence_angle varies from 0 degrees when the intercept point coincides with the sub_solar point to 90 degrees when the intercept point is at the terminator (i.e., in the shadowed or dark portion of the target body). Thus, higher values of incidence_angle indicate the existence of a greater number of surface shadows. Note: In PDS labels for Magellan's altimetry and radiometry products, incidence_angle is defined as the value of the angle between the local vertical and the spacecraft direction, measured at the center of the radiometer footprint at rad_spacecraft_epoch_time.**
- **value domain** - conceptual domain:[CD_REAL](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Real](#)

- **install_notes**

steward: **ops**
name space id: **ops:**
class: **Software_Script**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_VALUE2](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The install notes attribute provides a brief statement giving particulars about the installation of the software.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **institution_name**

steward: **ops**

name space id: **ops**:
class: **Node**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_NAME** - administration_record: DD_0.5.0.0.g
- description: **The institution_name attribute provides the name of the associated institution.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**
- pattern: **[a-zA-Z]{1}([-/, _a-zA-Z0-9]*)**

• **institution_name**

steward: **ops**
name space id: **ops**:
class: **PDS_Affiliate**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_NAME** - administration_record: DD_0.5.0.0.g
- description: **The institution_name attribute provides the name of the associated institution.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**
- pattern: **[a-zA-Z]{1}([-/, _a-zA-Z0-9]*)**

• **instrument_desc**

steward: **ops**
name space id: **ops**:
class: **Instrument_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: DD_0.5.0.0.g
- description: **The instrument_desc attribute describes a given instrument.**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

• **instrument_host_desc**

steward: **ops**
name space id: **ops**:
class: **Instrument_Host_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_DESCRIPTION** - administration_record: DD_0.5.0.0.g
- description: **The instrument_host_desc provides a description of an instrument host**
- **value domain** - conceptual domain:**CD_TEXT** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

• **instrument_host_id**

steward: **ops**
name space id: **ops**:
class: **Instrument_Host_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_ID** - administration_record: DD_0.5.0.0.g
- description: **The instrument_host_id attribute provides a unique identifier for the host on which an instrument is located. This host can be either a spacecraft or an earth base (e.g. earth).**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**

• **instrument_host_name**

steward: **ops**
name space id: **ops**:
class: **Instrument_Host_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The instrument_host_name attribute provides the full name of the platform or facility upon which an instrument or other device is mounted. For example, the host can be a spacecraft, a ground-based telescope, or a laboratory.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **instrument_host_name**

steward: **pds**
name space id: **pds**:
class: **Subject_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The instrument_host_name attribute provides the full name of the platform or facility upon which an instrument or other device is mounted. For example, the host can be a spacecraft, a ground-based telescope, or a laboratory.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **instrument_host_type**

steward: **ops**
name space id: **ops**:
class: **Instrument_Host_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The instrument_host_type attribute provides the type of host on which an instrument is based. For example instrument is located on a spacecraft instrument_host_type attribute would have the value SPACECRAFT.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

• **instrument_id**

steward: **ops**
name space id: **ops**:
class: **Instrument_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The instrument id provides a formal name used to refer to an instrument.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

• **instrument_name**

steward: **ops**
name space id: **ops**:
class: **Instrument_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The instrument_name attribute provides a unique name for an instrument.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **instrument_name**

steward: **pds**
name space id: **pds:**
class: **Subject_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: [DD_0.5.0.0.g](#)
- description: **The instrument_name attribute provides a unique name for an instrument.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **instrument_serial_number**

steward: **ops**
name space id: **ops:**
class: **Instrument_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NUMBER** - administration_record: [DD_0.5.0.0.g](#)
- description: **TBD_description**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **instrument_type**

steward: **ops**
name space id: **ops:**
class: **Instrument_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The instrument_type attribute identifies the type of an instrument. Example values: POLARIMETER SPECTROMETER**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**

• **instrument_version_id**

steward: **ops**
name space id: **ops:**
class: **Instrument_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **TBD_description**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**

• **invalid_constant**

steward: **pds**
name space id: **pds:**
class: **Special_Constants**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_CONSTANT** - administration_record: [DD_0.5.0.0.g](#)
- description: **The invalid_constant attribute provides a value that indicates the original value was outside the valid range for the parameter.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **investigation_name**

steward: **pds**

name space id: **pds**:
class: **Subject_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: [DD_0.5.0.0.g](#)
- description: **The investigation_name attribute provides a unique name for an investigation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **kernel_type**

steward: **pds**
name space id: **pds**:
class: **SPICE_Kernel_Binary**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The kernel_type attribute identifies the type of SPICE kernel.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **SPK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PCK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **CK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **EK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DSK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DBK** - begin date: 2009-06-09 - end date: 2019-12-31

• **kernel_type**

steward: **pds**
name space id: **pds**:
class: **SPICE_Kernel_Text**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The kernel_type attribute identifies the type of SPICE kernel.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **LSK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SCLK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PCK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **EK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **IK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **FK** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **MK** - begin date: 2009-06-09 - end date: 2019-12-31

• **keywords**

steward: **pds**
name space id: **pds**:
class: **Subject_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: [DD_0.5.0.0.g](#)
- description: **The keywords attribute provides one or more words to be used for keyword search.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **language**

steward: **pds**
name space id: **meta**:
class: **Terminological_Entry**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: **DD_0.5.0.0.g**
- description: **The language attribute provides the language used for definition and designation of the term.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **English** - begin date: 2009-06-09 - end date: 2019-12-31

• **last_modification_date_time**

steward: **ops**
name space id: **ops**:
class: **Local_DD**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The last_modification_date_time attribute gives the most recent date and time that a change was made.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Date_Time**

• **last_modification_date_time**

steward: **pds**
name space id: **pds**:
class: **Identification_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The last_modification_date_time attribute gives the most recent date and time that a change was made.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Date_Time**

• **last_sampling_parameter_value**

steward: **pds**
name space id: **pds**:
class: **Uniformly_Sampled**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE** - administration_record: **DD_0.5.0.0.g**
- description: **The last_sampling_parameter_value element provides the last value in an ascending series and is therefore the maximum value at which a given data item was sampled.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

• **lidvid_reference**

steward: **pds**
name space id: **pds**:
class: **Reference_Entry_Generic**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_REFERENCE** - administration_record: **DD_0.5.0.0.g**
- description: **The lidvid_reference attribute provides the logical_identifier plus version_id, which uniquely identifies a product.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**
- pattern: **urn:nasa:pds:{1}[a-zA-Z]{1}([x20][-/ a-zA-Z0-9])(*)([0-9]*)(.?)([0-9]*)**

• **lidvid_reference**

steward: **pds**

name space id: **pds**:
class: **Zipped_Member_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_REFERENCE** - administration_record: **DD_0.5.0.0.g**
- description: **The lidvid_reference attribute provides the logical_identifier plus version_id, which uniquely identifies a product.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**
- pattern: **urn:nasa:pds:{1}[a-zA-Z]{1}([[^]x20][-/_a-zA-Z0-9])(*)([0-9]*)(. ?)([0-9]*)**

• lid_reference

steward: **pds**
name space id: **pds**:
class: **Name_Resolution**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_REFERENCE** - administration_record: **DD_0.5.0.0.g**
- description: **The lid_reference attribute provides the logical_identifier for a product.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

• lid_reference

steward: **pds**
name space id: **pds**:
class: **Reference_Entry_Generic**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_REFERENCE** - administration_record: **DD_0.5.0.0.g**
- description: **The lid_reference attribute provides the logical_identifier for a product.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• line_display_direction

steward: **pds**
name space id: **pds**:
class: **Image_2D_Display**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DIRECTION** - administration_record: **DD_0.5.0.0.g**
- description: **The line_display_direction attribute provides the preferred direction for displaying image lines on a display device. The default value is down, meaning lines are displayed top to bottom. When used, line_display_direction must be accompanied by sample_display_direction which gives the order of sample display within each line.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **RIGHT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UP** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **LEFT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DOWN** - begin date: 2009-06-09 - end date: 2019-12-31

• local_identifier

steward: **ops**
name space id: **ops**:
class: **DD_Association**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCAL_IDENTIFIER** - administration_record: **DD_0.5.0.0.g**
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**

- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **local_identifier**

steward: **ops**
name space id: **ops**:
class: **DD_Attribute**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_LOCAL_IDENTIFIER](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **local_identifier**

steward: **ops**
name space id: **ops**:
class: **DD_Class**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_LOCAL_IDENTIFIER](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **local_identifier**

steward: **ops**
name space id: **ops**:
class: **Local_DD**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_LOCAL_IDENTIFIER](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **local_identifier**

steward: **pds**
name space id: **pds**:
class: **Array_Base**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_LOCAL_IDENTIFIER](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **local_identifier**

steward: **pds**
name space id: **pds**:
class: **Encoded_Byte_Stream**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_LOCAL_IDENTIFIER](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **local_identifier**

steward: **pds**
name space id: **pds:**
class: **Field_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_LOCAL_IDENTIFIER](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **local_identifier**

steward: **pds**
name space id: **pds:**
class: **File**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_LOCAL_IDENTIFIER](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **local_identifier**

steward: **pds**
name space id: **pds:**
class: **Geometry**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_LOCAL_IDENTIFIER](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)

- **local_identifier**

steward: **pds**
name space id: **pds:**
class: **Object_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_LOCAL_IDENTIFIER](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **local_identifier**

steward: **pds**
name space id: **pds:**

class: **Observing_System**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCAL_IDENTIFIER** - administration_record: **DD_0.5.0.0.g**
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **local_identifier**

steward: **pds**
name space id: **pds:**
class: **Parsable_Byte_Stream**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCAL_IDENTIFIER** - administration_record: **DD_0.5.0.0.g**
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **local_identifier**

steward: **pds**
name space id: **pds:**
class: **Quaternion**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCAL_IDENTIFIER** - administration_record: **DD_0.5.0.0.g**
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **local_identifier**

steward: **pds**
name space id: **pds:**
class: **Reference**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCAL_IDENTIFIER** - administration_record: **DD_0.5.0.0.g**
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **local_identifier**

steward: **pds**
name space id: **pds:**
class: **Table_Base**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCAL_IDENTIFIER** - administration_record: **DD_0.5.0.0.g**
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **local_identifier**

steward: **pds**
name space id: **pds**:
class: **Update**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCAL_IDENTIFIER** - administration_record: **DD_0.5.0.0.g**
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **local_identifier**

steward: **pds**
name space id: **pds**:
class: **Vector**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOCAL_IDENTIFIER** - administration_record: **DD_0.5.0.0.g**
- description: **The local_identifier attribute provides a character string which uniquely identifies the containing object within the label.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

• **local_mean_solar_time**

steward: **pds**
name space id: **pds**:
class: **Observation_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The local_mean_solar_time attribute provides the hour angle of the fictitious mean Sun at a fixed point on a rotating solar system body.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **8**
- maximum_characters: **255**

• **local_true_solar_time**

steward: **pds**
name space id: **pds**:
class: **Observation_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The local_true_solar_time (LTST) attribute provides the local time on a rotating solar system body where LTST is 12 h at the sub-solar point (SSP) and increases 1 h for each 15 degree increase in east longitude away from the SSP for prograde rotation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **8**
- maximum_characters: **255**

• **logical_identifier**

steward: **pds**
name space id: **pds**:
class: **Identification_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LOGICAL_IDENTIFIER** - administration_record: **DD_0.5.0.0.g**
- description: **A logical identifier identifies the set of all versions of an object. It is an object identifier without a version.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **maximum**

steward: **pds**
name space id: **pds:**
class: **Field_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_MAXIMUM** - administration_record: **DD_0.5.0.0.g**
- description: **The maximum attribute provides the largest stored value which actually appears in the (repeating) field; empty and Special_Constant field values are excluded.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

- **maximum**

steward: **pds**
name space id: **pds:**
class: **Object_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_MAXIMUM** - administration_record: **DD_0.5.0.0.g**
- description: **The maximum attribute provides the largest stored value which actually appears in the (repeating) field; empty and Special_Constant field values are excluded.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

- **maximum_characters**

steward: **ops**
name space id: **meta**
class: **DD_Value_Domain**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The maximum_characters attribute provides the upper, inclusive bound on the number of characters.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **maximum_occurrences**

steward: **ops**
name space id: **ops:**
class: **DD_Association**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The maximum occurrences attribute indicates the number of times something may occur and is also called the maximum cardinality.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **maximum_record_bytes**

steward: **pds**
name space id: **pds:**
class: **File**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The maximum_record_bytes attribute provides the maximum number of bytes that may be contained in a record.**

- **value domain** - conceptual domain:[CD_INTEGER](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Integer](#)
- minimum_value: 1
- maximum_value: [2147483647](#)

- **maximum_record_length**

steward: **pds**
name space id: **pds**:
class: **Delimited_Table**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_LENGTH](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The maximum_record_length attribute provides the upper, inclusive bound on the length of a record, including any record delimiter.**
- **value domain** - conceptual domain:[CD_INTEGER](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Integer](#)
- minimum_value: 1
- maximum_value: [2147483647](#)

- **maximum_record_length**

steward: **pds**
name space id: **pds**:
class: **Delimited_Table_Grouped**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_LENGTH](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The maximum_record_length attribute provides the upper, inclusive bound on the length of a record, including any record delimiter.**
- **value domain** - conceptual domain:[CD_INTEGER](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Integer](#)
- minimum_value: 1
- maximum_value: [2147483647](#)

- **maximum_ring_radius**

steward: **rings**
name space id: **rings**:
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_RADIUS](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The maximum_ring_radius element indicates the maximum (outermost) radial location of an area within a planetary ring system. Radii are measured from the center of the planet along the nominal ring plane.**
- **value domain** - conceptual domain:[CD_REAL](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Real](#)

- **maximum_scaled_value**

steward: **pds**
name space id: **pds**:
class: **Delimited_Field**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_VALUE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The maximum_scaled_value attribute provides the maximum value after application of scaling_value and value_offset (see their definitions; maximum_scaled_value is the maximum of Ov).**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)

- **maximum_scaled_value**

steward: **pds**
name space id: **pds**:
class: **Table_Field_Extended**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_VALUE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The maximum_scaled_value attribute provides the maximum value after application of scaling_value**

- **and value_offset (see their definitions; maximum_scaled_value is the maximum of Ov).**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 255

- **maximum_value**

steward: **ops**
name space id: **meta**
class: **DD_Value_Domain**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE** - administration_record: DD_0.5.0.0.g
- description: **The maximum_value attribute provides the upper, inclusive bound on the value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 255

- **md5_checksum**

steward: **pds**
name space id: **pds:**
class: **File**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_CHECKSUM** - administration_record: DD_0.5.0.0.g
- description: **The md5_checksum attribute is the 32-character hexadecimal number computed for a file using the MD5 algorithm.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 32
- maximum_characters: 32
- pattern: **{[a-f0-9]{32}}**

- **md5_checksum**

steward: **pds**
name space id: **pds:**
class: **Object_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_CHECKSUM** - administration_record: DD_0.5.0.0.g
- description: **The md5_checksum attribute is the 32-character hexadecimal number computed for a file using the MD5 algorithm.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 32
- maximum_characters: 32
- pattern: **{[a-f0-9]{32}}**

- **md5_checksum**

steward: **pds**
name space id: **pds:**
class: **Zipped_Member_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_CHECKSUM** - administration_record: DD_0.5.0.0.g
- description: **The md5_checksum attribute is the 32-character hexadecimal number computed for a file using the MD5 algorithm.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 32
- maximum_characters: 32
- pattern: **{[a-f0-9]{32}}**

- **mean**

steward: **pds**
name space id: **pds**:
class: **Field_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_MEAN** - administration_record: **DD_0.5.0.0.g**
- description: **The mean attribute provides the sum of the field values divided by the number of values (empty or Special_Constants values in the repeating fields are excluded).**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

• **mean**

steward: **pds**
name space id: **pds**:
class: **Object_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_MEAN** - administration_record: **DD_0.5.0.0.g**
- description: **The mean attribute provides the sum of the field values divided by the number of values (empty or Special_Constants values in the repeating fields are excluded).**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

• **median**

steward: **pds**
name space id: **pds**:
class: **Field_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_MEDIAN** - administration_record: **DD_0.5.0.0.g**
- description: **The median attribute provides the number separating the higher half of field values from the lower half; empty and Special_Constants values in the repeating fields are excluded.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

• **median**

steward: **pds**
name space id: **pds**:
class: **Object_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_MEDIAN** - administration_record: **DD_0.5.0.0.g**
- description: **The median attribute provides the number separating the higher half of field values from the lower half; empty and Special_Constants values in the repeating fields are excluded.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

• **medium_type**

steward: **ops**
name space id: **ops**:
class: **NSSDC**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The medium_type attribute identifies the physical storage medium for a data volume. Examples: CD-ROM, CARTRIDGE TAPE.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**

- maximum_characters: 255

- **medium_type**

steward: **ops**
name space id: **ops**:
class: **Volume_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The medium_type attribute identifies the physical storage medium for a data volume. Examples: CD-ROM, CARTRIDGE TAPE.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **minimum**

steward: **pds**
name space id: **pds**:
class: **Field_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_MINIMUM** - administration_record: **DD_0.5.0.0.g**
- description: **The minimum attribute provides the largest stored value which actually appears in the (repeating) field; empty and Special_Constant field values are excluded.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

- **minimum**

steward: **pds**
name space id: **pds**:
class: **Object_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_MINIMUM** - administration_record: **DD_0.5.0.0.g**
- description: **The minimum attribute provides the largest stored value which actually appears in the (repeating) field; empty and Special_Constant field values are excluded.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

- **minimum_characters**

steward: **ops**
name space id: **meta**
class: **DD_Value_Domain**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The minimum_characters attribute provides the lower, inclusive bound on the number of characters.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **minimum_occurrences**

steward: **ops**
name space id: **ops**:
class: **DD_Association**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The minimum occurrences attribute indicates the number of times something may occur and is also**

- called the **minimum cardinality**.
- value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 255

- **minimum_ring_radius**

steward: **rings**
name space id: **rings**:
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_RADIUS** - administration_record: DD_0.5.0.0.g
- description: **The minimum_ring_radius element indicates the minimum (innermost) radial location of an area within a planetary ring system. Radii are measured from the center of the planet along the nominal ring plane.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Real**

- **minimum_scaled_value**

steward: **pds**
name space id: **pds**:
class: **Delimited_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE** - administration_record: DD_0.5.0.0.g
- description: **The minimum_scaled_value attribute provides the minimum value after application of scaling_value and value_offset (see their definitions; minimum_scaled_value is the minimum of Ov).**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**

- **minimum_scaled_value**

steward: **pds**
name space id: **pds**:
class: **Table_Field_Extended**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE** - administration_record: DD_0.5.0.0.g
- description: **The minimum_scaled_value attribute provides the minimum value after application of scaling_value and value_offset (see their definitions; minimum_scaled_value is the minimum of Ov).**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 255

- **minimum_value**

steward: **ops**
name space id: **meta**
class: **DD_Value_Domain**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE** - administration_record: DD_0.5.0.0.g
- description: **The minimum_value attribute provides the lower inclusive bound on the value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 255

- **missing_constant**

steward: **pds**
name space id: **pds**:
class: **Special_Constants**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_CONSTANT** - administration_record: DD_0.5.0.0.g
- description: **The missing_constant attribute provides a value that indicates the original value was missing, such**

- **as due to a gap in coverage.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 255

- **mission_desc**

steward: **ops**
name space id: **ops**:
class: **Mission_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DESCRIPTION** - administration_record: DD_0.5.0.0.g
- description: **The mission_desc attribute summarizes major aspects of a planetary mission or project, including the number and type of spacecraft, the target body or bodies and major accomplishments.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: 1
- maximum_characters: **2147483647**

- **mission_name**

steward: **ops**
name space id: **ops**:
class: **Mission_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: DD_0.5.0.0.g
- description: **The mission_name attribute identifies a major planetary mission or project. A given planetary mission may be associated with one or more spacecraft.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**

- **mission_objectives_summary**

steward: **ops**
name space id: **ops**:
class: **Mission_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_SUMMARY** - administration_record: DD_0.5.0.0.g
- description: **The mission_objectives_summary attribute describes the major scientific objectives of a planetary mission or project.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: 1
- maximum_characters: **2147483647**

- **mission_phase_name**

steward: **pds**
name space id: **pds**:
class: **Observation_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: DD_0.5.0.0.g
- description: **The mission_phase_name attribute provides the commonly recognized name for a mission phase.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: **255**

- **mission_start_date**

steward: **ops**
name space id: **ops**:
class: **Mission_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_DATE_TIME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The mission_start_date attribute provides the date of the beginning of a mission in UTC system format.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **mission_stop_date**

steward: **ops**
name space id: **ops**:
class: **Mission_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_DATE_TIME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The mission_stop_date attribute provides the date of the end of a mission in UTC system format.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **naif_host_id**

steward: **pds**
name space id: **pds**:
class: **Instrument_Host**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_ID](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The naif_instrument_id element provides the numeric ID used within the SPICE system to identify the spacecraft, spacecraft structure or science instrument.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **naif_instrument_id**

steward: **pds**
name space id: **pds**:
class: **Instrument**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_ID](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The naif_instrument_id element provides the numeric ID used within the SPICE system to identify the spacecraft, spacecraft structure or science instrument.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **ops**
name space id: **ops**:
class: **DD_Attribute**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **ops**
name space id: **ops**:

class: **DD_Class**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

• **name**

steward: **ops**
name space id: **ops**:
class: **Node**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **Geosciences** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Imaging** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Navigation_Ancillary_Information_Facility** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Planetary_Atmospheres** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Planetary_Plasma_Interactions** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Planetary_Rings** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Radio_Science** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Small_Bodies** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Engineering** - begin date: 2009-06-09 - end date: 2019-12-31

• **name**

steward: **ops**
name space id: **ops**:
class: **Personnel**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

• **name**

steward: **ops**
name space id: **ops**:
class: **Software_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

• **name**

steward: **pds**
name space id: **pds**:
class: **Bibliographic_Reference**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)

- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **pds**
name space id: **pds:**
class: **Detector**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **pds**
name space id: **pds:**
class: **Header**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 61

- **name**

steward: **pds**
name space id: **pds:**
class: **Header_Binary**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **pds**
name space id: **pds:**
class: **Instrument**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **pds**
name space id: **pds:**
class: **Instrument_Host**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)

- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **pds**
name space id: **pds:**
class: **Investigation**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **pds**
name space id: **pds:**
class: **Name_Resolution**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 61

- **name**

steward: **pds**
name space id: **pds:**
class: **Observing_System**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **pds**
name space id: **pds:**
class: **Observing_System_Component**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **pds**
name space id: **pds:**
class: **Quaternion**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)

- value_data_type: [ASCII_Short_String_Collapsed](#)

- **name**

steward: **pds**
name space id: **pds**:
class: **Quaternion_Component**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **name**

steward: **pds**
name space id: **pds**:
class: **Resource**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **name**

steward: **pds**
name space id: **pds**:
class: **Table_Field**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **name**

steward: **pds**
name space id: **pds**:
class: **Table_Field_Checksum**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **MD5_checksum** - begin date: 2009-06-09 - end date: 2019-12-31

- **name**

steward: **pds**
name space id: **pds**:
class: **Table_Field_File_Specification_Name**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated

- minimum_characters: 1
- maximum_characters: 255
- permissible value: **file_specification_name** - begin date: 2009-06-09 - end date: 2019-12-31

- **name**

steward: **pds**
name space id: **pds:**
class: **Table_Field_LID**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **LID** - begin date: 2009-06-09 - end date: 2019-12-31

- **name**

steward: **pds**
name space id: **pds:**
class: **Table_Field_LIDVID**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **LIDVID** - begin date: 2009-06-09 - end date: 2019-12-31

- **name**

steward: **pds**
name space id: **pds:**
class: **Target**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **pds**
name space id: **pds**
class: **Terminological_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 255

- **name**

steward: **pds**
name space id: **pds:**
class: **Vector**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**

- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**

- **name**

steward: **pds**
name space id: **pds:**
class: **Vector_Component**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: DD_0.5.0.0.g
- description: **The name attribute provides a word or combination of words by which the object is known.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **name_space_id**

steward: **ops**
name space id: **meta**
class: **DD_Attribute**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: DD_0.5.0.0.g
- description: **The name_space_id attribute provides the abbreviation of the XML schema namespace container for this logical grouping of classes and attributes. It is assigned by the steward.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **name_space_id**

steward: **ops**
name space id: **meta**
class: **DD_Attribute_Full**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: DD_0.5.0.0.g
- description: **The name_space_id attribute provides the abbreviation of the XML schema namespace container for this logical grouping of classes and attributes. It is assigned by the steward.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **name_space_id**

steward: **ops**
name space id: **meta**
class: **DD_Class**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: DD_0.5.0.0.g
- description: **The name_space_id attribute provides the abbreviation of the XML schema namespace container for this logical grouping of classes and attributes. It is assigned by the steward.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **node_id**

steward: **rings**
name space id: **rings:**
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The node_id element provides the node id assigned to a science community node.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- permissible value: **RINGS** - begin date: 2009-06-09 - end date: 2019-12-31

- **node_name**

steward: **ops**
name space id: **ops**:
class: **PDS_Affiliate**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The node_name attribute provides the name of a PDS Node.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **Engineering** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Geosciences** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Imaging** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Navigation_Ancillary_Information_Facility** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Planetary_Atmospheres** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Planetary_Plasma_Interactions** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Planetary_Rings** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Radio_Science** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Small_Bodies** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **unk** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **HQ** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **National_Space_Science_Data_Center** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PDS_Management** - begin date: 2009-06-09 - end date: 2019-12-31

- **node_name**

steward: **rings**
name space id: **rings**:
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The node_name element provides the officially recognized name of a PDS Node.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- permissible value: **Planetary_Rings** - begin date: 2009-06-09 - end date: 2019-12-31

- **not_applicable_constant**

steward: **pds**
name space id: **pds**:
class: **Special_Constants**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_CONSTANT** - administration_record: **DD_0.5.0.0.g**
- description: **The not_applicable_constant attribute provides a value that indicates the parameter is not applicable.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **nssdc_collection_id**

steward: **ops**
name space id: **ops**:
class: **NSSDC**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **An NSSDC Collection ID is an NSSDC assigned identifier for a collection of PDS datasets.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**

- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **observing_system_component_type**

steward: **pds**
name space id: **pds**:
class: **Observing_System_Component**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The Observing System Component Type attribute indicates the type of the observing system component'.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **Analyst** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Ground-based_Laboratory** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Ground-based_Observatory** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Ground-based_Telescope** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Instrument** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Literature_Search** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PDS_Archived_Data** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Spacecraft** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Artificial_Illumination** - begin date: 2009-06-09 - end date: 2019-12-31

- **observing_system_name**

steward: **pds**
name space id: **pds**:
class: **Subject_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The observing_system_name attribute provides a unique name for an observing system.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **occultation_type**

steward: **rings**
name space id: **rings**:
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The occultation type element distinguishes between two types of occultation experiments, stellar and radio. Stellar occultations involve observing a star as a targeted ring or body passes in front, as seen from either a spacecraft or Earth-based observatory. Radio occultations typically involve observing the continuous-wave radio transmissions from a spacecraft as it passes behind the target as seen from a radio telescope on Earth.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- permissible value: **STELLAR** - begin date: 2009-06-09 - end date: 2019-12-31

- **offset**

steward: **pds**
name space id: **pds**:
class: **Array_Base**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_OFFSET](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The offset attribute provides the displacement of the object starting position from the beginning of the parent structure (file, record, etc.). If there is no displacement, offset=0.**
- **value domain** - conceptual domain: [CD_INTEGER](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Integer](#)

- minimum_value: 0
- maximum_value: 2147483647
- unit_of_measure_type: UnitOfMeasure_Storage
- specified_unit_id: byte

- **offset**

steward: pds
name space id: pds:
class: Encoded_Byte_Stream
version: 0.5.0.0.g

- **data element** - data element concept:DEC_OFFSET - administration_record: DD_0.5.0.0.g
- description: **The offset attribute provides the displacement of the object starting position from the beginning of the parent structure (file, record, etc.). If there is no displacement, offset=0.**
- **value domain** - conceptual domain:CD_INTEGER - administration_record: DD_0.5.0.0.g
- value_data_type: ASCII_Integer
- minimum_value: 0
- maximum_value: 2147483647
- unit_of_measure_type: UnitOfMeasure_Storage
- specified_unit_id: byte

- **offset**

steward: pds
name space id: pds:
class: Parsable_Byte_Stream
version: 0.5.0.0.g

- **data element** - data element concept:DEC_OFFSET - administration_record: DD_0.5.0.0.g
- description: **The offset attribute provides the displacement of the object starting position from the beginning of the parent structure (file, record, etc.). If there is no displacement, offset=0.**
- **value domain** - conceptual domain:CD_INTEGER - administration_record: DD_0.5.0.0.g
- value_data_type: ASCII_Integer
- minimum_value: 0
- maximum_value: 2147483647
- unit_of_measure_type: UnitOfMeasure_Storage
- specified_unit_id: byte

- **offset**

steward: pds
name space id: pds:
class: Table_Base
version: 0.5.0.0.g

- **data element** - data element concept:DEC_OFFSET - administration_record: DD_0.5.0.0.g
- description: **The offset attribute provides the displacement of the object starting position from the beginning of the parent structure (file, record, etc.). If there is no displacement, offset=0.**
- **value domain** - conceptual domain:CD_INTEGER - administration_record: DD_0.5.0.0.g
- value_data_type: ASCII_Integer
- minimum_value: 0
- maximum_value: 2147483647
- unit_of_measure_type: UnitOfMeasure_Storage
- specified_unit_id: byte

- **orbit_number**

steward: pds
name space id: pds:
class: Observation_Area
version: 0.5.0.0.g

- **data element** - data element concept:DEC_NUMBER - administration_record: DD_0.5.0.0.g
- description: **The orbit_number attribute provides the number of the orbital revolution of one body around another.**
- **value domain** - conceptual domain:CD_INTEGER - administration_record: DD_0.5.0.0.g
- value_data_type: ASCII_Integer
- minimum_value: 0
- maximum_value: 2147483647

- **os_version**

steward: **ops**
name space id: **ops:**
class: **Software_Binary**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: **DD_0.5.0.0.g**
- description: **The OS version attribute indicates the version of an operating system.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **os_version**

steward: **ops**
name space id: **ops:**
class: **Software_Source**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: **DD_0.5.0.0.g**
- description: **The OS version attribute indicates the version of an operating system.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **packet_map_mask**

steward: **img**
name space id: **img:**
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_MASK** - administration_record: **DD_0.5.0.0.g**
- description: **The packet_map_mask attribute is a binary or hexadecimal number identifying which of a data file's expected packets were actually received. The digits correspond positionally with the relative packet numbers of the data file. The bits are to be read left to right; i.e., the first (left-most) digit of the number corresponds to the first packet of the data file. A bit value of 1 indicates that the packet was received; a value of 0 indicates that it was not received.**
- **value domain** - conceptual domain: **CD_NUMERIC** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Numeric_Base16**

- **pattern**

steward: **ops**
name space id: **meta**
class: **DD_Value_Domain**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_PATTERN** - administration_record: **DD_0.5.0.0.g**
- description: **The pattern attribute provides a symbolic instruction for forming values.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **pds4_merge_flag**

steward: **ops**
name space id: **ops:**
class: **Local_DD**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_FLAG** - administration_record: **DD_0.5.0.0.g**
- description: **The PDS4 merge flag attribute indicates that the local data dictionary should be merged with the PDS4 data dictionary and accept the PDS as the data dictionary's registration authority. The merge process requires validation that the local data dictionary conforms to PDS data standards.**
- **value domain** - conceptual domain: **CD_BOOLEAN** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Boolean_TF** - Enumerated

- minimum_characters: 1
- maximum_characters: 1
- permissible value: **T** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **F** - begin date: 2009-06-09 - end date: 2019-12-31

- **phone_book_flag**

steward: **ops**
name space id: **ops**:
class: **PDS_Affiliate**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_FLAG** - administration_record: **DD_0.5.0.0.g**
- description: **The phone_book_flag attribute indicates whether or not this person should be included in the phone book.**
- **value domain** - conceptual domain: **CD_BOOLEAN** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Boolean_TF**
- minimum_characters: 1
- maximum_characters: 1

- **planetary_occultation_flag**

steward: **rings**
name space id: **rings**:
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_FLAG** - administration_record: **DD_0.5.0.0.g**
- description: **The planetary_occultation_flag element is a yes-or-no flag hat indicates whether a ring occultation track also intersects the planet.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **planet_day_number**

steward: **pds**
name space id: **pds**:
class: **Observation_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NUMBER** - administration_record: **DD_0.5.0.0.g**
- description: **The planet_day_number attribute provides the number of solar days (sols) on a rotating solar system body since a reference event, such as the landing of a spacecraft. The day of landing is usually defined as planet_day_number=0.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **0**
- maximum_value: **2147483647**

- **postal_address_text**

steward: **ops**
name space id: **ops**:
class: **PDS_Affiliate**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TEXT** - administration_record: **DD_0.5.0.0.g**
- description: **The postal address text attribute provides a mailing address.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: 1
- maximum_characters: **2147483647**

- **preferred_flag**

steward: **ops**
name space id: **ops**:
class: **Terminological_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_FLAG](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The preferred flag indicates whether this entry is preferred over all other entries.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **primary_body_name**

steward: **ops**
name space id: **ops**:
class: **Target_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The primary_body_name attribute identifies the primary body with which a given target body is associated as a secondary body.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **processing_level_id**

steward: **pds**
name space id: **pds**:
class: **Product_Collection_Data**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_ID](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The processing_level_id attribute provides the state to which data have been processed.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **RAW** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **RDC** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **CLB** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DRV** - begin date: 2009-06-09 - end date: 2019-12-31

- **producer_full_name**

steward: **ops**
name space id: **ops**:
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_NAME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The producer_full_name attribute provides the full_name of the individual mainly responsible for the production of the data set. This individual does not have to be registered with the PDS.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **product_class**

steward: **pds**
name space id: **pds**:
class: **Identification_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_VALUE2](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The product_class attribute provides the class of the product.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **programmers_manual_identifier**

steward: **ops**
name space id: **ops**:
class: **Software_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The programmers manual identifier attribute provides an identifier to a document giving instruction about the programming of the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **program_notes_identifier**

steward: **ops**
name space id: **ops**:
class: **Software_Binary**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The program notes identifier attribute provides an identifier to a brief statement giving particulars about a software program.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **program_notes_identifier**

steward: **ops**
name space id: **ops**:
class: **Software_Source**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The program notes identifier attribute provides an identifier to a brief statement giving particulars about a software program.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **publication_date**

steward: **ops**
name space id: **ops**:
class: **Volume_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The publication_date attribute provides the date on which an item was published.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Date_YMD**

- **publication_date**

steward: **pds**
name space id: **pds**:
class: **Document_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The publication_date attribute provides the date on which an item was published.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Date_YMD**

- **quaternion_components**

steward: **pds**

name space id: **pds:**
class: **Quaternion**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The quaternion_components attribute provides a count of quaternion components.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**

• **radial_resolution**

steward: **rings**
name space id: **rings:**
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_RESOLUTION** - administration_record: **DD_0.5.0.0.g**
- description: **The radial_resolution element indicates the nominal radial distance over which changes in ring properties can be detected within a data product. Note: this value may be larger than the radial_sampling_interval value, since many data products are over-sampled.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**

• **received_packets**

steward: **img**
name space id: **img:**
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The received_packets attribute provides the total number of telemetry packets which constitute a reconstructed data product, cf. expected_packets.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **0**

• **records**

steward: **pds**
name space id: **pds:**
class: **Delimited_Table**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The records attribute provides a count of records.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

• **records**

steward: **pds**
name space id: **pds:**
class: **Delimited_Table_Grouped**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The records attribute provides a count of records.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

• **records**

steward: **pds**
name space id: **pds:**
class: **File**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The records attribute provides a count of records.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **records**

steward: **pds**
name space id: **pds**:
class: **Table_Base**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The records attribute provides a count of records.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **record_delimiter**

steward: **pds**
name space id: **pds**:
class: **Delimited_Table**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DELIMITER** - administration_record: **DD_0.5.0.0.g**
- description: **The record_delimiter attribute provides the character or characters used to indicate the end of a record.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- permissible value: **0x0A** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **0x0D** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **0x0D0x0A** - begin date: 2009-06-09 - end date: 2019-12-31

- **record_delimiter**

steward: **pds**
name space id: **pds**:
class: **Delimited_Table_Grouped**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DELIMITER** - administration_record: **DD_0.5.0.0.g**
- description: **The record_delimiter attribute provides the character or characters used to indicate the end of a record.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- permissible value: **0x0A** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **0x0D** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **0x0D0x0A** - begin date: 2009-06-09 - end date: 2019-12-31

- **record_length**

steward: **pds**
name space id: **pds**:
class: **Table_Base**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LENGTH** - administration_record: **DD_0.5.0.0.g**
- description: **The record_length attribute provides the length of a record, including a record delimiter if present.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**
- unit_of_measure_type: **UnitOfMeasure_Storage**
- specified_unit_id: **byte**

- **reference_association_type**

steward: **ops**
name space id: **ops**:
class: **DD_Association**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **subclass_of** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **attribute_of** - begin date: 2009-06-09 - end date: 2019-12-31

- **reference_association_type**

steward: **pds**
name space id: **pds**:
class: **Bundle_Member_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **has_miscellaneous_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_browse_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_calibration_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_data_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_document_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_geometry_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_spice_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_xml_schema_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_member_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_context_collection** - begin date: 2009-06-09 - end date: 2019-12-31

- **reference_association_type**

steward: **pds**
name space id: **pds**:
class: **Inventory_LIDVID_Primary**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **has_member_LIDVID_Primary** - begin date: 2009-06-09 - end date: 2019-12-31

- **reference_association_type**

steward: **pds**
name space id: **pds**:
class: **Inventory_LIDVID_Secondary**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **has_member_LIDVID_Secondary** - begin date: 2009-06-09 - end date: 2019-12-31

- **reference_association_type**

steward: **pds**
name space id: **pds**:
class: **Inventory_LID_Secondary**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **has_member_LID_Secondary** - begin date: 2009-06-09 - end date: 2019-12-31

• **reference_association_type**

steward: **pds**
name space id: **pds**
class: **Manifest**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **has_member** - begin date: 2009-06-09 - end date: 2019-12-31

• **reference_association_type**

steward: **pds**
name space id: **pds**:
class: **Reference_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **has_association** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **member_of** - begin date: 2009-06-09 - end date: 2019-12-31

• **reference_association_type**

steward: **pds**
name space id: **pds**:
class: **Reference_Entry_Collection**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **has_update_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_associated_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_investigation_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_node_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_publication_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_target_collection** - begin date: 2009-06-09 - end date: 2019-12-31

• **reference_association_type**

steward: **pds**
name space id: **pds**:
class: **Reference_Entry_Context**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **has_instrument_host** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_instrument** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_investigation** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_node** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_personnel** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_publication** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_resource** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_target** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_association** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_data_producer** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_data_set** - begin date: 2009-06-09 - end date: 2019-12-31

- **reference_association_type**

steward: **pds**

name space id: **pds:**

class: **Reference_Entry_Generic**

version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **reference_association_type**

steward: **pds**

name space id: **pds:**

class: **Reference_Entry_Observing_System_Component**

version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **Analyst** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Ground-based_Laboratory** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Ground-based_Observatory** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Ground-based_Telescope** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Instrument** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Literature_Search** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **PDS_Archived_Data** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Spacecraft** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Artificial_Illumination** - begin date: 2009-06-09 - end date: 2019-12-31

- **reference_association_type**

steward: **pds**

name space id: **pds:**

class: **Reference_Entry_Product**

version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **has_browse** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_calibration** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_publication** - begin date: 2009-06-09 - end date: 2019-12-31

- permissible value: **has_geometry** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_personnel** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_spice** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_target** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_thumbnail** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **curated_by_node** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_association** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_document** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_investigation** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_node** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_instrument** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_instrument_host** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_primary_collection** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_resource** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **has_primary_product** - begin date: 2009-06-09 - end date: 2019-12-31

- **reference_association_type**

steward: **pds**
name space id: **pds**:
class: **Zipped_Member_Entry**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The reference_association_type attribute provides the name of the association used in a reference.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **manifest_product** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **contained_product** - begin date: 2009-06-09 - end date: 2019-12-31

- **reference_text**

steward: **pds**
name space id: **pds**:
class: **Bibliographic_Reference**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TEXT** - administration_record: **DD_0.5.0.0.g**
- description: **The reference_text attribute provides a complete bibliographic citation for a published work.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **reference_text**

steward: **pds**
name space id: **pds**:
class: **Reference**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TEXT** - administration_record: **DD_0.5.0.0.g**
- description: **The reference_text attribute provides a complete bibliographic citation for a published work.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **registered_by**

steward: **ops**
name space id: **meta**
class: **DD_Attribute_Full**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: **DD_0.5.0.0.g**
- description: **The registered_by attribute provides the name of the person or organization that registered the object.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**

- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **registration_authority_id**

steward: **ops**
name space id: **meta**
class: **DD_Attribute_Full**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_ID](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The registration_authority_id attribute provides the name of the organization that registered the object.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **0001_NASA_PDS_1** - begin date: 2009-06-09 - end date: 2019-12-31

- **registration_date**

steward: **ops**
name space id: **ops:**
class: **Personnel**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_DATE_TIME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The registration_date attribute provides the date of registration within the PDS system.**
- **value domain** - conceptual domain: [CD_TIME](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Date_YMD](#)

- **repetitions**

steward: **pds**
name space id: **pds:**
class: **Delimited_Grouped_Sequence**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_COUNT](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The repetitions attribute provides the number of occurrences.**
- **value domain** - conceptual domain: [CD_INTEGER](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Integer](#)
- minimum_value: 1
- maximum_value: 2147483647

- **repetitions**

steward: **pds**
name space id: **pds:**
class: **Table_Binary_Grouped_Sequence**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_COUNT](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The repetitions attribute provides the number of occurrences.**
- **value domain** - conceptual domain: [CD_INTEGER](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Integer](#)
- minimum_value: 1
- maximum_value: 2147483647

- **repetitions**

steward: **pds**
name space id: **pds:**
class: **Table_Character_Grouped_Sequence**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_COUNT](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The repetitions attribute provides the number of occurrences.**
- **value domain** - conceptual domain: [CD_INTEGER](#) - administration_record: [DD_0.5.0.0.g](#)

- value_data_type: [ASCII_Integer](#)
- minimum_value: 1
- maximum_value: 2147483647

- **revision_id**

steward: **pds**
name space id: **pds:**
class: **Document_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_ID](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The revision_id attribute provides the revision level of a document, which may be set outside PDS and may be different from its version_id.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **ring_event_start_time**

steward: **rings**
name space id: **rings:**
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_DATE_TIME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The ring_event_start_time element indicates the starting instant of a data product as measured at the ring plane. This element differs from the observation start time because it allows for light travel time.**
- **value domain** - conceptual domain: [CD_TIME](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Date_Time](#)

- **ring_event_stop_time**

steward: **rings**
name space id: **rings:**
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_DATE_TIME](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The ring_event_stop_time element indicates the stopping instant of a data product as measured at the ring plane. This element differs from the observation stop time because it allows for light travel time.**
- **value domain** - conceptual domain: [CD_TIME](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Date_Time](#)

- **ring_occultation_direction**

steward: **rings**
name space id: **rings:**
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_DIRECTION](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The ring_occultation_direction element indicates the radial direction of a ring occultation track.**
- **value domain** - conceptual domain: [CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)

- **sample_bit_mask**

steward: **pds**
name space id: **pds:**
class: **Object_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: [DEC_MASK](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The sample_bit_mask attribute identifies the active bits in a sample. Note: In the PDS, the domain of sample_bit_mask is dependent upon the currently-described value in the sample_bits attribute and only applies to integer values. For an 8-bit sample where all bits are active the sample_bit_mask would be 2#1111111#.**
- **value domain** - conceptual domain: [CD_NUMERIC](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Numeric_Base2](#)

- **sample_display_direction**

steward: **pds**

name space id: **pds:**

class: **Image_2D_Display**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DIRECTION** - administration_record: [DD_0.5.0.0.g](#)
- description: **The sample_display_direction attribute provides the preferred orientation of samples within a line for viewing on a display device. The default is right, meaning samples are viewed from left to right on the display. sample_display_direction must be used with line_display_direction.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **RIGHT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DOWN** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **LEFT** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UP** - begin date: 2009-06-09 - end date: 2019-12-31

- **sampling_parameter_interval**

steward: **pds**

name space id: **pds:**

class: **Uniformly_Sampled**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: [DD_0.5.0.0.g](#)
- description: **The sampling_parameter_interval element identifies the spacing of points at which data are sampled and at which a value for an instrument or dataset parameter is available. This sampling interval can be either the original (raw) sampling or the result of some resampling process. For example, in 48-second magnetometer data the sampling interval is 48. The sampling parameter (time, in the example) is identified by the sampling_parameter_name element.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

- **sampling_parameter_name**

steward: **pds**

name space id: **pds:**

class: **Uniformly_Sampled**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: [DD_0.5.0.0.g](#)
- description: **The sampling_parameter_name element provides the name of the parameter which determines the sampling interval of a particular instrument or dataset parameter. For example, magnetic field intensity is sampled in time increments, and a spectrum is sampled in wavelength or frequency.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**

- **sampling_parameter_scale**

steward: **pds**

name space id: **pds:**

class: **Uniformly_Sampled**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_SCALE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The sampling_parameter_scale element specifies whether the sampling interval is linear or something other such as logarithmic.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **LINEAR** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **LOGARITHMIC** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **EXPONENTIAL** - begin date: 2009-06-09 - end date: 2019-12-31

- **sampling_parameter_unit**

steward: **pds**
name space id: **pds**:
class: **Uniformly_Sampled**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_UNIT** - administration_record: **DD_0.5.0.0.g**
- description: **The sampling_parameter_unit element specifies the unit of measure of associated data sampling parameters.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **saturated_constant**

steward: **pds**
name space id: **pds**:
class: **Special_Constants**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_CONSTANT** - administration_record: **DD_0.5.0.0.g**
- description: **The saturated_constant attribute provides a value that indicates the original value was invalid because of sensor saturation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **scaling_factor**

steward: **pds**
name space id: **pds**:
class: **Array_Element**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_FACTOR** - administration_record: **DD_0.5.0.0.g**
- description: **The scaling_factor attribute is the scaling factor to be applied to each stored value in order to recover an original value. The observed value (Ov) is calculated from the stored value (Sv) thus: $Ov = (Sv * scaling_factor) + value_offset$.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

- **scaling_factor**

steward: **pds**
name space id: **pds**:
class: **Delimited_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_FACTOR** - administration_record: **DD_0.5.0.0.g**
- description: **The scaling_factor attribute is the scaling factor to be applied to each stored value in order to recover an original value. The observed value (Ov) is calculated from the stored value (Sv) thus: $Ov = (Sv * scaling_factor) + value_offset$.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**

- **scaling_factor**

steward: **pds**
name space id: **pds**:
class: **Table_Field_Extended**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_FACTOR** - administration_record: **DD_0.5.0.0.g**
- description: **The scaling_factor attribute is the scaling factor to be applied to each stored value in order to recover an original value. The observed value (Ov) is calculated from the stored value (Sv) thus: $Ov = (Sv * scaling_factor) + value_offset$.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**

- minimum_value: **-INF**
- maximum_value: **INF**

- **sequence_number**

steward: **pds**
name space id: **pds:**
class: **Array_Axis**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_NUMBER** - administration_record: [DD_0.5.0.0.g](#)
- description: **The sequence_number attribute provides a number that is used to order axes in an array.**
- **value domain** - conceptual domain:**CD_INTEGER** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **16**

- **sequence_number**

steward: **pds**
name space id: **pds:**
class: **Quaternion_Component**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_NUMBER** - administration_record: [DD_0.5.0.0.g](#)
- description: **The sequence_number attribute provides a number that is used to order axes in an array.**
- **value domain** - conceptual domain:**CD_INTEGER** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Integer**
- minimum_value: **-2147483648**
- maximum_value: **2147483647**

- **sequence_number**

steward: **pds**
name space id: **pds:**
class: **Vector_Component**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_NUMBER** - administration_record: [DD_0.5.0.0.g](#)
- description: **The sequence_number attribute provides a number that is used to order axes in an array.**
- **value domain** - conceptual domain:**CD_INTEGER** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **serial_number**

steward: **pds**
name space id: **pds:**
class: **Instrument**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_NUMBER** - administration_record: [DD_0.5.0.0.g](#)
- description: **The serial number element provides the assigned manufacturer's serial number.**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **serial_number**

steward: **pds**
name space id: **pds:**
class: **Instrument_Host**
version: **0.5.0.0.g**

- **data element** - data element concept:**DEC_NUMBER** - administration_record: [DD_0.5.0.0.g](#)
- description: **TBD_description**
- **value domain** - conceptual domain:**CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**

- minimum_characters: 1
- maximum_characters: 255

- **software_dialect**

steward: **ops**
name space id: **ops**:
class: **Software_Source**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: [DD_0.5.0.0.g](#)
- description: **The software dialect attribute indicates the variety of a language used to write the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 255

- **software_id**

steward: **ops**
name space id: **ops**:
class: **Software_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The software id attribute provides a formal name used to refer to the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 255

- **software_language**

steward: **ops**
name space id: **ops**:
class: **Software_Source**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: [DD_0.5.0.0.g](#)
- description: **The software language attribute identifies the language used to write the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 255

- **software_type**

steward: **ops**
name space id: **ops**:
class: **Software_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The software type attribute identifies the class of which the software is a member.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**

- **solar_longitude**

steward: **pds**
name space id: **pds**:
class: **Observation_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_LONGITUDE** - administration_record: [DD_0.5.0.0.g](#)
- description: **The solar_longitude attribute provides the angle between the body-Sun line at the time of interest and the body-Sun line at its vernal equinox.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Real**
- minimum_value: 0

- maximum_value: 360

- **sort_name**

steward: ops
name space id: ops:
class: Personnel
version: 0.5.0.0.g

- **data element** - data element concept:DEC_NAME - administration_record: DD_0.5.0.0.g
- description: **The sort name attribute provides a string to be used in ordering. For people, the last name (surname) is typically first, followed by a comma and then other names.**
- **value domain** - conceptual domain:CD_SHORT_STRING - administration_record: DD_0.5.0.0.g
- value_data_type: ASCII_Short_String_Collapsed
- minimum_characters: 1
- maximum_characters: 255
- pattern: [a-zA-Z]{1}([- ,_a-zA-Z0-9]*)

- **spacecraft_clock_count_partition**

steward: pds
name space id: pds:
class: Observation_Area
version: 0.5.0.0.g

- **data element** - data element concept:DEC_VALUE2 - administration_record: DD_0.5.0.0.g
- description: **The spacecraft_clock_count_partition attribute provides the clock partition active for spacecraft_clock_start_count and spacecraft_clock_stop_count.**
- **value domain** - conceptual domain:CD_INTEGER - administration_record: DD_0.5.0.0.g
- value_data_type: ASCII_Integer
- minimum_value: 0
- maximum_value: 2147483647

- **spacecraft_clock_start_count**

steward: pds
name space id: pds:
class: Observation_Area
version: 0.5.0.0.g

- **data element** - data element concept:DEC_COUNT - administration_record: DD_0.5.0.0.g
- description: **The spacecraft_clock_start_count attribute provides the value of the spacecraft clock at the beginning of a time period of interest.**
- **value domain** - conceptual domain:CD_SHORT_STRING - administration_record: DD_0.5.0.0.g
- value_data_type: ASCII_Short_String_Collapsed
- minimum_characters: 1
- maximum_characters: 255

- **spacecraft_clock_stop_count**

steward: pds
name space id: pds:
class: Observation_Area
version: 0.5.0.0.g

- **data element** - data element concept:DEC_COUNT - administration_record: DD_0.5.0.0.g
- description: **The spacecraft_clock_stop_count attribute provides the value of the spacecraft clock at the end of a time period of interest.**
- **value domain** - conceptual domain:CD_SHORT_STRING - administration_record: DD_0.5.0.0.g
- value_data_type: ASCII_Short_String_Collapsed
- minimum_characters: 1
- maximum_characters: 255

- **specified_unit_id**

steward: ops
name space id: meta
class: DD_Value_Domain
version: 0.5.0.0.g

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The specified_unit_id attribute provides the units chosen for maximum_value, minimum_value, and permissible_value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **spice_file_name**

steward: **img**
name space id: **img:**
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The spice_file_name attribute provides the names of the SPICE files used in processing the data.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **standard_deviation**

steward: **pds**
name space id: **pds:**
class: **Field_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DEVIATION** - administration_record: **DD_0.5.0.0.g**
- description: **The standard_deviation attribute provides the standard deviation of values in the associated object; empty and Special_Constants values are excluded.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **0**
- maximum_value: **INF**

- **standard_deviation**

steward: **pds**
name space id: **pds:**
class: **Object_Statistics**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DEVIATION** - administration_record: **DD_0.5.0.0.g**
- description: **The standard_deviation attribute provides the standard deviation of values in the repeating field; empty and Special_Constants field values are excluded.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **0.0**
- maximum_value: **INF**

- **starting_point_identifier**

steward: **pds**
name space id: **pds:**
class: **Document_Format**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The starting_point attribute provides the local_identifier of the object to be accessed first.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **start_bit**

steward: **pds**
name space id: **pds:**
class: **Table_Binary_Grouped_Bit_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_BIT** - administration_record: DD_0.5.0.0.g
- description: **The start_bit attribute provides the position of the first bit within an ordered sequence of bits.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Integer**
- minimum_value: **1**
- maximum_value: **2147483647**

- **start_date**

steward: **pds**
name space id: **pds**:
class: **Investigation**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: DD_0.5.0.0.g
- description: **The start_date attribute provides the date when an activity began.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Date_YMD**

- **start_date_time**

steward: **ops**
name space id: **ops**:
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: DD_0.5.0.0.g
- description: **The start_date_time attribute provides the date and time at the beginning of a time interval of interest.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Date_Time_YMD**
- minimum_characters: **4**
- maximum_characters: **30**

- **start_date_time**

steward: **pds**
name space id: **pds**:
class: **Archive_Bundle**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: DD_0.5.0.0.g
- description: **The start_date_time attribute provides the date and time at the beginning of a time interval of interest.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Date_Time_YMD**
- minimum_characters: **4**
- maximum_characters: **30**

- **start_date_time**

steward: **pds**
name space id: **pds**:
class: **Observation_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: DD_0.5.0.0.g
- description: **The start_date_time attribute provides the date and time at the beginning of a time interval of interest.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: DD_0.5.0.0.g
- value_data_type: **ASCII_Date_Time**

- **star_name**

steward: **rings**
name space id: **rings**:
class: **Rings_Prod_Info**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: DD_0.5.0.0.g

- description: **The star_name element provides the identifying name of star, including the catalog name if necessary. Examples include 'sigma Sgr' and 'SAO 123456' (for star number 123456 in the Smithsonian Astrophysical Observatory catalog).**
- value domain - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **std_ref_version_id**

steward: **pds**
name space id: **pds**:
class: **Data_Standards**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The std ref version id attribute provides the version identifier for the standard reference document.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **steward_id**

steward: **ops**
name space id: **meta**
class: **DD_Attribute**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The steward_id attribute provides the abbreviation of the organization that manages the set of registered attributes and classes.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **pds** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **atm** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **geo** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **img** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **naif** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ppi** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **rings** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **rs** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **sbn** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ops** - begin date: 2009-06-09 - end date: 2019-12-31

- **steward_id**

steward: **ops**
name space id: **meta**
class: **DD_Attribute_Full**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The steward attribute indicates the person or organization who manages a set of registered attributes and classes.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **pds** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **atm** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **geo** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **img** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **naif** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ppi** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **rings** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **rs** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **sbn** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ops** - begin date: 2009-06-09 - end date: 2019-12-31

- **steward_id**

steward: **ops**
name space id: **meta**
class: **DD_Class**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The steward_id attribute provides the abbreviation of the organization that manages the set of registered attributes and classes.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **pds** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **atm** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **geo** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **img** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **naif** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ppi** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **rings** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **rs** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **sbn** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ops** - begin date: 2009-06-09 - end date: 2019-12-31

- **stop_date**

steward: **pds**
name space id: **pds**:
class: **Investigation**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The stop_date attribute provides the date when an activity ended.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Date_YMD**

- **stop_date_time**

steward: **ops**
name space id: **ops**:
class: **Data_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The stop_date_time attribute provides the date and time at the end of a time interval of interest.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Date_Time_YMD**
- minimum_characters: **4**
- maximum_characters: **30**

- **stop_date_time**

steward: **pds**
name space id: **pds**:
class: **Archive_Bundle**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The stop_date_time attribute provides the date and time at the end of a time interval of interest.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Date_Time_YMD**
- minimum_characters: **4**
- maximum_characters: **30**

- **stop_date_time**

steward: **pds**
name space id: **pds**:
class: **Observation_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: [DD_0.5.0.0.g](#)
- description: **The stop_date_time attribute provides the date and time at the end of a time interval of interest.**
- **value domain** - conceptual domain: **CD_TIME** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Date_Time**

- **submitter_id**

steward: **ops**
name space id: **meta**
class: **DD_Attribute**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The submitter_id attribute provides the name of the author, who submits the item to the steward.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **submitter_id**

steward: **ops**
name space id: **meta**
class: **DD_Attribute_Full**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The submitter_id attribute provides the name of the author, who submits the item to the steward.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **supported_architecture**

steward: **ops**
name space id: **ops**
class: **Software_Binary**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: [DD_0.5.0.0.g](#)
- description: **The supported architecture attribute identifies the hardware architecture that can process the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **supported_architecture**

steward: **ops**
name space id: **ops**
class: **Software_Source**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: [DD_0.5.0.0.g](#)
- description: **The supported architecture attribute identifies the hardware architecture that can process the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **supported_environment**

steward: **ops**
name space id: **ops**
class: **Software_Script**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: **DD_0.5.0.0.g**
- description: **The supported environment attribute identifies the environment that can process the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **supported_os**

steward: **ops**
name space id: **ops:**
class: **Software_Binary**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The supported OS attribute identifies the Operating System that supports the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **supported_os**

steward: **ops**
name space id: **ops:**
class: **Software_Source**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The supported OS attribute identifies the Operating System that supports the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **sw_format_type**

steward: **ops**
name space id: **ops:**
class: **Software_Binary**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The sw format type attribute classifies the format of the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **sw_format_type**

steward: **ops**
name space id: **ops:**
class: **Software_Source**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The sw format type attribute classifies the format of the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **system_requirements**

steward: **ops**
name space id: **ops:**
class: **Software_Format**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The system requirements attribute identifies what is necessary to process the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **target_desc**

steward: **ops**
name space id: **ops**:
class: **Target_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DESCRIPTION** - administration_record: **DD_0.5.0.0.g**
- description: **The target_desc attribute describes the characteristics of a particular target.**
- **value domain** - conceptual domain: **CD_TEXT** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Text_Preserved**
- minimum_characters: **1**
- maximum_characters: **2147483647**

- **target_name**

steward: **ops**
name space id: **ops**:
class: **Target_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The target_name attribute provides a name by which the target is formally known.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **target_name**

steward: **pds**
name space id: **pds**:
class: **Subject_Area**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The target_name attribute provides a name by which the target is formally known.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **target_type**

steward: **ops**
name space id: **ops**:
class: **Target_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The target_type attribute identifies the type of a named target.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **telemetry_format_id**

steward: **img**
name space id: **img**:
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The telemetry_format_id attribute supplies a telemetry format code.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: 4

- **telemetry_provider_id**

steward: **img**
name space id: **img**:
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The telemetry_provider_id attribute identifies the provider and or version of the telemetry data used in the generation of this data.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- maximum_characters: **20**

- **telemetry_source_name**

steward: **img**
name space id: **img**:
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The telemetry_source_name attribute identifies the telemetry source used in creation of a data set.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: 1
- maximum_characters: **60**

- **telemetry_source_type**

steward: **img**
name space id: **img**:
class: **Telemetry_Parameters**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The telemetry_source_type attribute classifies the source of the telemetry used in creation of this data collection.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- unit_of_measure_type: **UnitOfMeasure_None**
- permissible value: **SFDU** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **DATA_PRODUCT** - begin date: 2009-06-09 - end date: 2019-12-31

- **telephone_number**

steward: **ops**
name space id: **ops**:
class: **PDS_Affiliate**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NUMBER** - administration_record: **DD_0.5.0.0.g**
- description: **The telephone_number attribute provides a telephone number in international notation in compliance with the E.164 telephone number format recommendation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **title**

steward: **pds**
name space id: **pds**:
class: **Identification_Area**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TITLE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The name given to the resource. Typically, a Title will be a name by which the resource is formally known.** - Dublin Core - **The title is used to refer to an object in a version independent manner.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [UTF8_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **type**

steward: **pds**
name space id: **pds**:
class: **Identification_Area**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The type attribute provides a classification for the resource.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: 1
- maximum_characters: 255

- **type**

steward: **pds**
name space id: **pds**:
class: **Identification_Area_Collection**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The type attribute provides a classification for the resource.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: 1
- maximum_characters: 255
- permissible value: **Browse** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Calibration** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Context** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Document** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Miscellaneous** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **SPICE** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **XML_Schema** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Geometry** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **Data** - begin date: 2009-06-09 - end date: 2019-12-31

- **type**

steward: **pds**
name space id: **pds**:
class: **Name_Resolution**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The type attribute provides a classification for the resource.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)

- **type**

steward: **pds**
name space id: **pds**:
class: **Quaternion**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The type attribute provides a classification for the resource.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- permissible value: **type1** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **type2** - begin date: 2009-06-09 - end date: 2019-12-31

- **type**

steward: **pds**
name space id: **pds:**
class: **Vector**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The type attribute provides a classification for the resource.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- permissible value: **POSITION** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **VELOCITY** - begin date: 2009-06-09 - end date: 2019-12-31

- **unit**

steward: **pds**
name space id: **pds:**
class: **Array_Axis**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_UNIT** - administration_record: **DD_0.5.0.0.g**
- description: **The unit attribute provides the unit of measurement.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **unit**

steward: **pds**
name space id: **pds:**
class: **Array_Element**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_UNIT** - administration_record: **DD_0.5.0.0.g**
- description: **The unit attribute provides the unit of measurement.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **unit**

steward: **pds**
name space id: **pds:**
class: **Delimited_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_UNIT** - administration_record: **DD_0.5.0.0.g**
- description: **The unit attribute provides the unit of measurement.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**

- **unit**

steward: **pds**
name space id: **pds:**
class: **Quaternion_Component**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_UNIT** - administration_record: **DD_0.5.0.0.g**
- description: **The unit attribute provides the unit of measurement.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **unit**

steward: **pds**
name space id: **pds:**
class: **Table_Field_Extended**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_UNIT](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The unit attribute provides the unit of measurement.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)

- **unit**

steward: **pds**
name space id: **pds**:
class: **Vector_Component**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_UNIT](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The unit attribute provides the unit of measurement.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **unit_of_measure_type**

steward: **ops**
name space id: **meta**
class: **DD_Value_Domain**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_TYPE](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The unit_of_measure_type attribute provides the named grouping of units to be used for this attribute - for example UnitofMeasure_Length and UnitofMeasure_Time.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#) - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **UnitOfMeasure_AmountOfSubstance** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Angle** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_AngularVelocity** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Area** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Frequency** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Length** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Mass** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Misc** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_None** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_OpticalPathLength** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Pressure** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Radiance** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Rates** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_MapScale** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_SolidAngle** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Storage** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Temperature** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Time** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Velocity** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Voltage** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **UnitOfMeasure_Volume** - begin date: 2009-06-09 - end date: 2019-12-31

- **unknown_constant**

steward: **pds**
name space id: **pds**:
class: **Special_Constants**
version: **0.5.0.0.g**

- **data element** - data element concept:[DEC_CONSTANT](#) - administration_record: [DD_0.5.0.0.g](#)
- description: **The unknown_constant attribute provides a value that indicates the original value was unknown.**
- **value domain** - conceptual domain:[CD_SHORT_STRING](#) - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: [ASCII_Short_String_Collapsed](#)
- minimum_characters: **1**
- maximum_characters: **255**

- **url**

steward: **pds**
name space id: **pds:**
class: **Bibliographic_Reference**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ANYURI** - administration_record: **DD_0.5.0.0.g**
- description: **The url attribute provides a Uniform Resource Identifier (URI) that specifies where a resource is available and the mechanism for retrieving it.**
- **value domain** - conceptual domain: **CD_ANYURI** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_AnyURI**
- minimum_characters: **1**
- maximum_characters: **255**

• **url**

steward: **pds**
name space id: **pds:**
class: **Resource**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ANYURI** - administration_record: **DD_0.5.0.0.g**
- description: **The url attribute provides a Uniform Resource Identifier (URI) that specifies where a resource is available and the mechanism for retrieving it.**
- **value domain** - conceptual domain: **CD_ANYURI** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_AnyURI**
- minimum_characters: **1**
- maximum_characters: **255**

• **users_manual_identifier**

steward: **ops**
name space id: **ops:**
class: **Software_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The users manual identifier attribute provides a formal name used to refer to a manual that describes how to use the software.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **value**

steward: **ops**
name space id: **meta**
class: **DD_Permissible_Value**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE** - administration_record: **DD_0.5.0.0.g**
- description: **The value attribute provides a single, allowed numerical or character string value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **value**

steward: **pds**
name space id: **meta**
class: **Quaternion_Component**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE** - administration_record: **DD_0.5.0.0.g**
- description: **The value attribute provides a single, allowed numerical or character string value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **value**

steward: **pds**
name space id: **meta**
class: **Vector_Component**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE** - administration_record: **DD_0.5.0.0.g**
- description: **The value attribute provides a single, allowed numerical or character string value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **value_begin_date**

steward: **ops**
name space id: **meta**
class: **DD_Permissible_Value**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**
- description: **The value_begin_date attribute provides the first date on which the permissible value is in effect.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **value_data_type**

steward: **ops**
name space id: **ops**
class: **DD_Value_Domain**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_TYPE** - administration_record: **DD_0.5.0.0.g**
- description: **The value_data_type attribute provides the data type used to represent the value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed** - Enumerated
- minimum_characters: **1**
- maximum_characters: **255**
- permissible value: **ASCII_Boolean_TF** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_YMD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Integer** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Real** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_AnyURI** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_DOY** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_UTC** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Date_Time_YMD** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_LID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_LIDVID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_MD5_Checksum** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Short_String_Collapsed** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Text_Preserved** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Short_String_Preserved** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Time** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_VID** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_DOI** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Numeric_Base2** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_Numeric_Base16** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_NonNegative_Integer** - begin date: 2009-06-09 - end date: 2019-12-31
- permissible value: **ASCII_File_Specification_Name** - begin date: 2009-06-09 - end date: 2019-12-31

- **value_end_date**

steward: **ops**
name space id: **meta**
class: **DD_Permissible_Value**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_DATE_TIME** - administration_record: **DD_0.5.0.0.g**

- description: **The value_end_date attribute provides the last date on which the permissible value is in effect.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **value_meaning**

steward: **ops**
name space id: **meta**
class: **DD_Permissible_Value**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: **DD_0.5.0.0.g**
- description: **The value_meaning attribute provides the meaning, or semantic content, of the associated permissible value.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **value_offset**

steward: **pds**
name space id: **pds:**
class: **Array_Element**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_OFFSET** - administration_record: **DD_0.5.0.0.g**
- description: **The value_offset attribute is the offset to be applied to each stored value in order to recover an original value. The observed value (Ov) is calculated from the stored value (Sv) thus: $Ov = (Sv * scaling_factor) + value_offset$.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

- **value_offset**

steward: **pds**
name space id: **pds:**
class: **Delimited_Field**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_OFFSET** - administration_record: **DD_0.5.0.0.g**
- description: **The value_offset attribute is the offset to be applied to each stored value in order to recover an original value. The observed value (Ov) is calculated from the stored value (Sv) thus: $Ov = (Sv * scaling_factor) + value_offset$.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**

- **value_offset**

steward: **pds**
name space id: **pds:**
class: **Table_Field_Extended**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_OFFSET** - administration_record: **DD_0.5.0.0.g**
- description: **The value_offset attribute is the offset to be applied to each stored value in order to recover an original value. The observed value (Ov) is calculated from the stored value (Sv) thus: $Ov = (Sv * scaling_factor) + value_offset$.**
- **value domain** - conceptual domain: **CD_REAL** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Real**
- minimum_value: **-INF**
- maximum_value: **INF**

- **vector_components**

steward: **pds**

name space id: **pds:**
class: **Vector**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: [DD_0.5.0.0.g](#)
- description: **The vector_components attribute provides a count of vector components.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Integer**

• **version_id**

steward: **ops**
name space id: **ops:**
class: **DD_Attribute**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The version_id attribute provides the version of the product, expressed in the PDS [m.n] notation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **version_id**

steward: **ops**
name space id: **ops:**
class: **DD_Attribute_Full**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The version_id attribute provides the version of the product, expressed in the PDS [m.n] notation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **version_id**

steward: **ops**
name space id: **ops:**
class: **DD_Class**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The version_id attribute provides the version of the product, expressed in the PDS [m.n] notation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **version_id**

steward: **ops**
name space id: **ops:**
class: **Software_Desc**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The version_id attribute provides the version of the product, expressed in the PDS [m.n] notation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **version_id**

steward: **pds**
name space id: **pds:**
class: **Identification_Area**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The version_id attribute provides the version of the product, expressed in the PDS [m.n] notation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**
- pattern: **([-_a-zA-Z0-9]*)**

- **version_id**

steward: **pds**
name space id: **pds:**
class: **Instrument**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The version_id attribute provides the version of the product, expressed in the PDS [m.n] notation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **version_id**

steward: **pds**
name space id: **pds:**
class: **Instrument_Host**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The version_id attribute provides the version of the product, expressed in the PDS [m.n] notation.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **volumes**

steward: **ops**
name space id: **ops:**
class: **Volume_Set_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_COUNT** - administration_record: **DD_0.5.0.0.g**
- description: **The volumes element provides the number of physical data volumes contained in a volume set.**
- **value domain** - conceptual domain: **CD_INTEGER** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Integer**
- minimum_value: **0**
- maximum_value: **2147483647**

- **volume_de_fullname**

steward: **ops**
name space id: **ops:**
class: **Volume_PDS3**
version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_VALUE2** - administration_record: **DD_0.5.0.0.g**
- description: **The volume_de_fullname attribute provide the full name of the data engineer.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **volume_format**

steward: **ops**
name space id: **ops:**

class: **Volume_PDS3**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_FORMAT** - administration_record: [DD_0.5.0.0.g](#)
- description: **The volume_format attribute identifies the logical format used in writing a data volume.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **volume_id**

steward: **ops**

name space id: **ops:**

class: **Volume_PDS3**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The volume_id attribute provides a unique identifier for a data volume. Example: MG_1001.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **volume_name**

steward: **ops**

name space id: **ops:**

class: **Volume_PDS3**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: [DD_0.5.0.0.g](#)
- description: **The volume_name attribute contains the name of a data volume.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **volume_series_name**

steward: **ops**

name space id: **ops:**

class: **Volume_Set_PDS3**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: [DD_0.5.0.0.g](#)
- description: **The volume_series_name element provides a full, formal name that describes a broad categorization of data products or data sets related to a planetary body or a research campaign (e.g. International Halley Watch). A volume series consists of one or more volume sets that represent data from one or more missions or campaigns.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

• **volume_set_id**

steward: **ops**

name space id: **ops:**

class: **Volume_PDS3**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: [DD_0.5.0.0.g](#)
- description: **The volume_set_id attribute identifies a data volume or a set of volumes. Volume sets are normally considered as a single orderable entity. Examples: USA_NASA_PDS_MG_1001, USA_NASA_PDS_GR_0001_TO_GR_0009**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: [DD_0.5.0.0.g](#)
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **volume_set_id**

steward: **ops**

name space id: **ops:**

class: **Volume_Set_PDS3**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The volume_set_id attribute identifies a data volume or a set of volumes. Volume sets are normally considered as a single orderable entity. Examples: USA_NASA_PDS_MG_1001, USA_NASA_PDS_GR_0001_TO_GR_0009**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **volume_set_name**

steward: **ops**

name space id: **ops:**

class: **Volume_Set_PDS3**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_NAME** - administration_record: **DD_0.5.0.0.g**
- description: **The volume_set_name element provides the full, formal name of one or more data volumes containing a single data set or a collection of related data sets. Volume sets are normally considered as a single orderable entity.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **volume_size**

steward: **ops**

name space id: **ops:**

class: **Volume_PDS3**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_SIZE** - administration_record: **DD_0.5.0.0.g**
- description: **The volume_size attribute provide the number of bytes in the volume.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **volume_version_id**

steward: **ops**

name space id: **ops:**

class: **Volume_PDS3**

version: **0.5.0.0.g**

- **data element** - data element concept: **DEC_ID** - administration_record: **DD_0.5.0.0.g**
- description: **The volume_version_id attribute identifies the version of a data volume. All original volumes should use a volume_version_id of 'Version 1'.**
- **value domain** - conceptual domain: **CD_SHORT_STRING** - administration_record: **DD_0.5.0.0.g**
- value_data_type: **ASCII_Short_String_Collapsed**
- minimum_characters: **1**
- maximum_characters: **255**

- **CD_BOOLEAN**

version_identifier: **0.5.0.0.g**

definition: **The values true and false, such that true is not equal to false. - ISO/IEC 11404**

- **CD_CHARACTER**

version_identifier: **0.5.0.0.g**

definition: **The value space of a character datatype comprises exactly the members of the character-sets identified by the**

- **CD_COMPLEX**

version_identifier: 0.5.0.0.g

definition: **The value space of the mathematical complex type is the field which is the solution space of all polynomial equations having real coefficients. The value space of a computational complex datatype shall be a subset of the mathematical complex type, characterized by two parametric values, radix and factor, which, taken together, describe the precision to which values of the datatype are distinguishable. - ISO/IEC 11404**

- **CD_ENUMERATED**

version_identifier: 0.5.0.0.g

definition: **The value space of an enumerated datatype is the set comprising exactly the named values in the enumerated-value-list, each of which is designated by a unique enumerated-literal. The order of these values is given by the sequence of their occurrence in the enumerated-value-list, which shall be referred to as the naming sequence of the enumerated datatype. - ISO/IEC 11404**

- **CD_INTEGER**

version_identifier: 0.5.0.0.g

definition: **Mathematically, the infinite ring produced from the additive identity (0) and the multiplicative identity (1) by requiring $0 = 1$ and $\text{Add}(x,1) \neq y$ for any $y = x$. That is: ..., -2, -1, 0, 1, 2, ... (a denumerably infinite list). - ISO/IEC 11404**

- **CD_OCTET**

version_identifier: 0.5.0.0.g

definition: **Each value of datatype octet is a code, represented by a non-negative integer value in the range [0, 255]. - ISO/IEC 11404**

- **CD_REAL**

version_identifier: 0.5.0.0.g

definition: **The value space of the mathematical real type comprises all values which are the limits of convergent sequences of rational numbers. The value space of a computational real datatype shall be a subset of the mathematical real type. - ISO/IEC 11404**

- **CD_SCALED**

version_identifier: 0.5.0.0.g

definition: **The value space of a scaled datatype is that set of values of the rational datatype which are expressible as a value of datatype Integer divided by radix raised to the power factor. - ISO/IEC 11404**

- **CD_TIME**

version_identifier: 0.5.0.0.g

definition: **The value-space of a date-and-time datatype is the denumerably infinite set of all possible points in time with the resolution (time-unit, radix, factor). The time-literal denotes the date-and-time value specified by the characterstring as interpreted under ISO 8601. - ISO/IEC 11404**

- **CD_TIME_INTERVAL**

version_identifier: 0.5.0.0.g

definition: **All values which are integral multiples of one radix ^ (-factor) unit of the specified timeunit. - ISO/IEC 11404**

- **CD_VOID**

version_identifier: 0.5.0.0.g

definition: **Conceptually, the value space of the void datatype is empty, but a single nominal value is necessary to perform the "presence required" function. - ISO/IEC 11404**

- **DEC_COUNT**

version_identifier: 0.5.0.0.g

definition: **A numeric value indicating a current total or tally.**

- **DEC_DATE**

version_identifier: **0.5.0.0.g**
definition: **A representation of time in which the smallest unit of measure is a day.**

- **DEC_DATE_TIME**

version_identifier: **0.5.0.0.g**
definition: **A value that measures the point of occurrence of an event expressed in date and time in a standard form.**

- **DEC_DESCRIPTION**

version_identifier: **0.5.0.0.g**
definition: **A free-form, unlimited-length character string that provides a description of the item identified.**

- **DEC_DIRECTION**

version_identifier: **0.5.0.0.g**
definition: **TBD**

- **DEC_FLAG**

version_identifier: **0.5.0.0.g**
definition: **A boolean condition indicator, limited to two states.**

- **DEC_FORMAT**

version_identifier: **0.5.0.0.g**
definition: **A specified or predetermined arrangement of data within a file or on a storage medium.**

- **DEC_GROUP**

version_identifier: **0.5.0.0.g**
definition: **Names a collection or aggregation of elements. Example: ALT FLAG GROUP**

- **DEC_GUID**

version_identifier: **0.5.0.0.g**
definition: **A globally unique, immutable, and opaque product identifier.**

- **DEC_ID**

version_identifier: **0.5.0.0.g**
definition: **A shorthand alphanumeric identifier.**

- **DEC_IDENTIFIER**

version_identifier: **0.5.0.0.g**
definition: **A shorthand alphanumeric identifier.**

- **DEC_LOCAL_IDENTIFIER**

version_identifier: **0.5.0.0.g**
definition: **An identifier unique within a product label. When appended to the LID, it provides a global identifier for a component of an product.**

- **DEC_LOGICAL_IDENTIFIER**

version_identifier: **0.5.0.0.g**
definition: **A unique product identifier without the version. It identifies the set of all versions of a product.**

- **DEC_MASK**

version_identifier: **0.5.0.0.g**
definition: **An unsigned numeric value representing the bit positions within a value.**

- **DEC_NAME**

version_identifier: **0.5.0.0.g**

definition: **A literal value representing the common term used to identify an element.**

- **DEC_NOTE**

version_identifier: **0.5.0.0.g**

definition: **A textual expression of opinion, an observation, or a criticism; a remark.**

- **DEC_NUMBER**

version_identifier: **0.5.0.0.g**

definition: **A quantity.**

- **DEC_QUATERNION**

version_identifier: **0.5.0.0.g**

definition: **TBD**

- **DEC_RATIO**

version_identifier: **0.5.0.0.g**

definition: **The relation between two quantities with respect to the number of times the first contains the second.**

- **DEC_SEQUENCE**

version_identifier: **0.5.0.0.g**

definition: **1) an arrangement of items in accordance with some criterion that defines their spacewise or timewise succession; 2) an orderly progression of items or operations in accordance with some rule, such as alphabetical or numerical order.**

- **DEC_SET**

version_identifier: **0.5.0.0.g**

definition: **A collection of items having some feature in common or which bear a certain relation to one another, e.g. all even numbers.**

- **DEC_SUMMARY**

version_identifier: **0.5.0.0.g**

definition: **An abridged description.**

- **DEC_TEXT**

version_identifier: **0.5.0.0.g**

definition: **A free-form, unlimited length character string.**

- **DEC_TYPE**

version_identifier: **0.5.0.0.g**

definition: **A literal that indicates membership in a predefined class.**

- **DEC_UNIT**

version_identifier: **0.5.0.0.g**

definition: **A determinate quantity adopted as a standard of measurement.**

- **DEC_VALUE**

version_identifier: **0.5.0.0.g**

definition: **The default class word for data element names not terminated with a class word.**

- **DEC_VECTOR**

version_identifier: **0.5.0.0.g**

definition: **A quantity that has both length and direction which are independent of both the units and of the coordinate system in which each are measured. The vector direction is uniquely defined in terms of an ordered set of components with respect to the particular coordinate system for which those components have been defined.**

- **Administration Record: DD_0.5.0.0.g**

administration_record: [DD_0.5.0.0.g](#)
version_identifier: [0.5.0.0.g](#)
steward: [Steward_PDS](#)
submitter: [Submitter_PDS](#)
registered_by: [RA_0001_NASA_PDS_1](#)
registration_authority_identifier: [0001_NASA_PDS_1](#)

- **Administration Record: DD_0.5.0.0.g**

administration_record: [DD_0.5.0.0.g](#)
version_identifier: [0.5.0.0.g](#)
steward: [Steward_PDS](#)
submitter: [Submitter_PDS](#)
registered_by: [RA_0001_NASA_PDS_1](#)
registration_authority_identifier: [0001_NASA_PDS_1](#)

- **Administration Record: DD_0.5.0.0.g**

administration_record: [DD_0.5.0.0.g](#)
version_identifier: [0.5.0.0.g](#)
steward: [Steward_PDS](#)
submitter: [Submitter_PDS](#)
registered_by: [RA_0001_NASA_PDS_1](#)
registration_authority_identifier: [0001_NASA_PDS_1](#)

- **Administration Record: DD_0.5.0.0.g**

administration_record: [DD_0.5.0.0.g](#)
version_identifier: [0.5.0.0.g](#)
steward: [Steward_PDS](#)
submitter: [Submitter_PDS](#)
registered_by: [RA_0001_NASA_PDS_1](#)
registration_authority_identifier: [0001_NASA_PDS_1](#)

- **Administration Record: DD_0.5.0.0.g**

administration_record: [DD_0.5.0.0.g](#)
version_identifier: [0.5.0.0.g](#)
steward: [Steward_PDS](#)
submitter: [Submitter_PDS](#)
registered_by: [RA_0001_NASA_PDS_1](#)
registration_authority_identifier: [0001_NASA_PDS_1](#)

- **AdministrationRecord**

identifier: [DD_0.5.0.0.g](#)
administrative_note: Test load from PDS4 Master Model
administrative_status: Final
change_description: *In development.
creation_date: **2009-10-10**
effective_date: **2009-10-10**
last_change_date: **2009-10-10**
origin: **Planetary Data System**
registration_status: **Preferred**
unresolved_issue: **Issues still being determined.**
until_date: **2019-12-31**
label: [DD_0.5.0.0.g](#)
explanatory_comment: This is a test load of a ISO/IEC 11179 Data Dictionary from the PDS4 master model.

- **Steward**

identifier: [Steward_PDS](#)
label: [Steward_PDS](#)
contact: [Elizabeth_Rye](#)
organization: [RA_0001_NASA_PDS_1](#)

- **Submitter**

identifier: **Submitter_PDS**
label: **Submitter_PDS**
contact: **Elizabeth_Rye**
organization: **RA_0001_NASA_PDS_1**

- **RegistrationAuthority**

Identifier: **RA_0001_NASA_PDS_1**
organization_mailing_address: **4800 Oak Grove Drive, Pasadena, CA 91109**
organization_name: **NASA Planetary Data System**
label: **RA_0001_NASA_PDS_1**
documentation_language_identifier: **LI_English**
language_used: **LI_English**
registrar: **PDS_Registrar**
registration_authority_identifier: **0001_NASA_PDS_1**

8. PDS4 Class Definitions - Fri Oct 28 10:17:55 PDT 2011

Generated from the PDS4 Information Model Version 0.5.0.0.g

- **Collection_Volume_PDS3**

description: **A Collection Volume PDS3 product captures the PDS3 volume information.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**
role: **Concrete**
attribute: **dd_version_id** value: **value**
attribute: **std_ref_version_id** value: **value**

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**
role: **Concrete**
attribute: **logical_identifier** value: **value**
attribute: **version_id** value: **value**
attribute: **product_class** value: **value**
attribute: **title** value: **value**
attribute: **alternate_title** value: **value** Optional
attribute: **alternate_id** value: **value** Optional
attribute: **last_modification_date_time** value: **value** Optional
attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**
role: **Concrete**
attribute: **target_name** value: **value** Optional
attribute: **instrument_name** value: **value** Optional
attribute: **instrument_host_name** value: **value** Optional
attribute: **keywords** value: **value** Optional
attribute: **full_name** value: **value** Optional
attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in**

observational data products labels.

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- End Name_Resolution
- End Subject_Area
- End Identification_Area_Product
- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**

role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target**

- End Reference_Entry_Context
- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- End Cross_Reference_Area_Context

- **Volume_PDS3 Occurs 1 Times**

description: **The Volume_PDS3 class is used to capture the volume information from the PDS3 Data Set Catalog.**

role: **Concrete**

attribute: **archive_status** value: **ARCHIVED, ARCHIVED_ACCUMULATING, IN_LIEN_RESOLUTION, IN_LIEN_RESOLUTION_ACCUMULATING, IN_PEER_REVIEW, IN_PEER_REVIEW_ACCUMULATING, IN_QUEUE, IN_QUEUE_ACCUMULATING, LOCALLY_ARCHIVED, LOCALLY_ARCHIVED_ACCUMULATING, PRE_PEER_REVIEW, PRE_PEER_REVIEW_ACCUMULATING, SAFED, SUPERSEDED**

attribute: **description** value: **value** Optional

attribute: **archive_status_note** value: **value**

attribute: **curating_node_id** value: **value** Optional

attribute: **medium_type** value: **value**

attribute: **publication_date** value: **value**

attribute: **volume_de_fullname** value: **value**

attribute: **volume_format** value: **value**

attribute: **volume_id** value: **value**

attribute: **volume_name** value: **value**

attribute: **volume_set_id** value: **value**

attribute: **volume_size** value: **value**

attribute: **volume_version_id** value: **value**

- End Volume_PDS3
 - End Collection_Volume_PDS3
-

- **Collection_Volume_Set_PDS3**

description: A Collection Volume Set PDS3 product captures the PDS3 volume set information.
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: The Data Standards class indicates the controlling standards for this product.
role: **Concrete**
attribute: **dd_version_id** value: *value*
attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: The product identification area consists of attributes that identify and name a data product.
role: **Concrete**
attribute: **logical_identifier** value: *value*
attribute: **version_id** value: *value*
attribute: **product_class** value: *value*
attribute: **title** value: *value*
attribute: **alternate_title** value: *value* Optional
attribute: **alternate_id** value: *value* Optional
attribute: **last_modification_date_time** value: *value* Optional
attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.

role: **Concrete**

attribute: **target_name** value: *value* Optional
attribute: **instrument_name** value: *value* Optional
attribute: **instrument_host_name** value: *value* Optional
attribute: **keywords** value: *value* Optional
attribute: **full_name** value: *value* Optional
attribute: **investigation_name** value: *value* Optional
attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.

role: **Concrete**

attribute: **comment** value: *value* Optional
attribute: **name** value: *value*
attribute: **alternate_designation** value: *value* Optional
attribute: **lid_reference** value: *value* Optional
attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Context Occurs 1 Times**

description: The context cross reference area provides references to associated registered products.
role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.
role: **Concrete**

attribute: **lid_reference** value: *value* Optional
attribute: **lidvid_reference** value: *value* Optional
attribute: **reference_association_type** value: **has_association**, **has_data_producer**, **has_data_set**, **has_instrument**, **has_instrument_host**, **has_investigation**, **has_node**, **has_personnel**, **has_publication**, **has_resource**, **has_target**

- End Reference_Entry_Context

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **doi** value: *value* Optional
attribute: **reference_text** value: *value* Optional
attribute: **url** value: *value* Optional

- End Bibliographic_Reference
- End Cross_Reference_Area_Context

- **Volume_Set_PDS3 Occurs 1 Times**

description: **The Volume_Set_PDS3 class is used to capture the volume set information from the PDS3 Data Set Catalog.**

role: **Concrete**

attribute: **description** value: *value* Optional
attribute: **volume_series_name** value: *value*
attribute: **volume_set_id** value: *value*
attribute: **volume_set_name** value: *value*
attribute: **volumes** value: *value*

- End Volume_Set_PDS3
 - End Collection_Volume_Set_PDS3
-

- **Delivery_Manifest**

description: **The Delivery_Manifest class defines a two column table for file references. The table structure is compatible with the output from an MD5 checksum utility.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **2**
attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*
attribute: **reference_association_type** value: **has_member** Optional

- **Table_Record_Manifest Occurs 1 Times**

description: **The Table Record Manifest class defines the record for an MD5 checksum manifest table.**

role: **Concrete**

- **Table_Field_Checksum Occurs 1 Times**

description: **The Table Field Checksum class defines a table field that provides a file checksum.**

role: **Concrete**

attribute: **name** value: **MD5_checksum**
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **ASCII_MD5_Checksum**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional

- End Table_Field_Checksum

- **Table_Field_File_Specification_Name Occurs 1 Times**

description: The **Table_Field_File_Specification_Name** class defines a table field that provides a file name, file extension, and relative directory path to a product label.

role: **Concrete**

attribute: **name** value: **file_specification_name**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **2** Optional

attribute: **data_type** value: **ASCII_File_Specification_Name**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

- End Table_Field_File_Specification_Name
 - End Table_Record_Manifest
 - End Delivery_Manifest
-

- **Detector**

description: The **Detector** class provides a description of a physical object that collects data.

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- End Detector
-

- **Header**

description: The **Header** class describes a data object header.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR**

attribute: **offset** value: **value**

- End Header
-

- **Header_Binary**

description: The **Header Binary** class describes a data object header.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**

attribute: **offset** value: **value**

- End Header_Binary
-

- **Local_DD**

description: The **Local_DD** class provides a form for collecting class and attribute definitions for a data dictionary.

role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **full_name** value: **value**
attribute: **last_modification_date_time** value: **value**
attribute: **pds4_merge_flag** value: **F, T**

- **DD_Attribute - Occurs 1 to * Times**

description: **The DD_Attribute class defines an attribute for a data dictionary.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **version_id** value: **value**
attribute: **name** value: **value**
attribute: **steward_id** value: **atm, geo, img, naif, ops, pds, ppi, rings, rs, sbn** ^{Optional}
attribute: **name_space_id** value: **value** ^{Optional}
attribute: **submitter_id** value: **value** ^{Optional}
attribute: **definition** value: **value**

- **Terminological_Entry - Occurs 0 to * Times**

description: **The terminological_entry class provides the name (designation) and definition of the attribute in a specified natural language.**
role: **Concrete**
attribute: **name** value: **value**
attribute: **definition** value: **value**
attribute: **language** value: **English**
attribute: **preferred_flag** value: **value**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**
role: **Concrete**
attribute: **name** value: **value** ^{Optional}
attribute: **description** value: **value** ^{Optional}
attribute: **doi** value: **value** ^{Optional}
attribute: **reference_text** value: **value** ^{Optional}
attribute: **url** value: **value** ^{Optional}

- **End Bibliographic_Reference**

- **End Terminological_Entry**

- **DD_Value_Domain - Occurs 0 to 1 Times**

description: **The DD_Value_Domain class defines the value domain for a data dictionary attribute.**
role: **Concrete**
attribute: **enumeration_flag** value: **F, T**
attribute: **specified_unit_id** value: **value** ^{Optional}
attribute: **value_data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **formation_rule** value: **value** ^{Optional}
attribute: **minimum_characters** value: **value** ^{Optional}
attribute: **maximum_characters** value: **value** ^{Optional}
attribute: **minimum_value** value: **value** ^{Optional}
attribute: **maximum_value** value: **value** ^{Optional}
attribute: **pattern** value: **value** ^{Optional}
attribute: **unit_of_measure_type** value: **UnitOfMeasure_AmountOfSubstance, UnitOfMeasure_Angle, UnitOfMeasure_AngularVelocity, UnitOfMeasure_Area, UnitOfMeasure_Frequency, UnitOfMeasure_Length, UnitOfMeasure_MapScale, UnitOfMeasure_Mass, UnitOfMeasure_Misc, UnitOfMeasure_None, UnitOfMeasure_OpticalPathLength, UnitOfMeasure_Pressure, UnitOfMeasure_Radiance, UnitOfMeasure_Rates, UnitOfMeasure_SolidAngle, UnitOfMeasure_Storage, UnitOfMeasure_Temperature, UnitOfMeasure_Time, UnitOfMeasure_Velocity, UnitOfMeasure_Voltage, UnitOfMeasure_Volume** ^{Optional}

- **DD_Permissible_Value - Occurs 0 to * Times**

description: **The DD_Permissible_Value class lists permissible values and their meanings.**

role: **Concrete**

attribute: **value** value: **value**

attribute: **value_meaning** value: **value** ^{Optional}

attribute: **value_begin_date** value: **value**

attribute: **value_end_date** value: **value**

- **End DD_Permissible_Value**

- **End DD_Value_Domain**

- **End DD_Attribute**

- **DD_Class - Occurs 0 to * Times**

description: **The DD_Class class defines a user class, a collection of attributes in a data dictionary.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **version_id** value: **value** ^{Optional}

attribute: **name** value: **value**

attribute: **steward_id** value: **atm, geo, img, naif, ops, pds, ppi, rings, rs, sbn** ^{Optional}

attribute: **name_space_id** value: **value** ^{Optional}

attribute: **definition** value: **value** ^{Optional}

- **DD_Association - Occurs 0 to * Times**

description: **The DD_Association class defines the association between two classes or a class and an attribute in a data dictionary.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **constant_value** value: **value** ^{Optional}

attribute: **maximum_occurrences** value: **value**

attribute: **minimum_occurrences** value: **value**

attribute: **reference_association_type** value: **attribute_of, subclass_of**

- **End DD_Association**

- **DD_Association - Occurs 0 to * Times**

description: **The DD_Association class defines the association between two classes or a class and an attribute in a data dictionary.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **constant_value** value: **value** ^{Optional}

attribute: **maximum_occurrences** value: **value**

attribute: **minimum_occurrences** value: **value**

attribute: **reference_association_type** value: **attribute_of, subclass_of**

- **End DD_Association**

- **Terminological_Entry - Occurs 0 to * Times**

description: **The terminological_entry class provides the name (designation) and definition of the attribute in a specified natural language.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **definition** value: **value**

attribute: **language** value: **English**

attribute: **preferred_flag** value: **value**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** ^{Optional}

attribute: **description** value: **value** ^{Optional}

attribute: **doi** value: **value** Optional
attribute: **reference_text** value: **value** Optional
attribute: **url** value: **value** Optional

- End Bibliographic_Reference
 - End Terminological_Entry
 - End DD_Class
 - End Local_DD
-

• Product_Archive_Bundle

description: **A product archive bundle is a product that references primary collections.**
role: **Concrete**

• Data_Standards Occurs 1 Times

description: **The Data Standards class indicates the controlling standards for this product.**
role: **Concrete**
attribute: **dd_version_id** value: **value**
attribute: **std_ref_version_id** value: **value**

• End Data_Standards

• Identification_Area_Bundle Occurs 1 Times

description: **The bundle identification area consists of attributes that identify and name a bundle.**
role: **Concrete**
attribute: **logical_identifier** value: **value**
attribute: **version_id** value: **value**
attribute: **product_class** value: **value**
attribute: **title** value: **value**
attribute: **alternate_title** value: **value** Optional
attribute: **alternate_id** value: **value** Optional
attribute: **last_modification_date_time** value: **value** Optional
attribute: **type** value: **value**

• Subject_Area - Occurs 0 to 1 Times

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**
role: **Concrete**

attribute: **target_name** value: **value** Optional
attribute: **instrument_name** value: **value** Optional
attribute: **instrument_host_name** value: **value** Optional
attribute: **keywords** value: **value** Optional
attribute: **full_name** value: **value** Optional
attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

• Name_Resolution - Occurs 0 to * Times

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**
attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **alternate_designation** value: **value** Optional
attribute: **lid_reference** value: **value** Optional
attribute: **type** value: **value**

• End Name_Resolution

• End Subject_Area

• End Identification_Area_Bundle

• Cross_Reference_Area_Bundle - Occurs 0 to 1 Times

description: **The bundle cross reference area provides references to associated registered products.**
role: **Concrete**

- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_association, member_of**

- **End Reference_Entry**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **End Cross_Reference_Area_Bundle**

- **File_Area_Text - Occurs 0 to 3 Times**

description: **The File Area Text class describes a file that contains a text stream object.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **comment** value: **value** Optional

attribute: **creation_date_time** value: **value** Optional

attribute: **file_name** value: **value**

attribute: **file_size** value: **value** Optional

attribute: **maximum_record_bytes** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **records** value: **value** Optional

- **End File**

- **Stream_Text Occurs 1 Times**

description: **The Stream text class defines a text file.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **value**

attribute: **offset** value: **value**

- **End Stream_Text**

- **End File_Area_Text**

- **Archive_Bundle Occurs 1 Times**

description: **The archive bundle class describes a collection of products.**
role: **Concrete**

attribute: **start_date_time** value: *value*
attribute: **stop_date_time** value: *value*
attribute: **description** value: *value*

- **Citation Occurs 1 Times**

description: **The Citation class provides text to be used for quoting an artifact as an authoritative source.**
role: **Concrete**
attribute: **citation_text** value: *value*
attribute: **author_list** value: *value*

- **End Citation**

- **End Archive_Bundle**

- **Bundle_Member_Entry - Occurs 1 to * Times**

description: **The Bundle Member Entry class provides a member reference to a collection.**
role: **Concrete**
attribute: **file_specification_name** value: *value*
attribute: **lid_reference** value: *value* Optional
attribute: **lidvid_reference** value: *value* Optional
attribute: **reference_association_type** value: *has_browse_collection, has_calibration_collection, has_context_collection, has_data_collection, has_document_collection, has_geometry_collection, has_member_collection, has_miscellaneous_collection, has_spice_collection, has_xml_schema_collection*

- **End Bundle_Member_Entry**

- **End Product_Archive_Bundle**

- **Product_Array_2D_Image**

description: **The Product Array 2D Image class defines a product consisting of at least one Array 2D Image and other associated data objects and metadata.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**
role: **Concrete**
attribute: **dd_version_id** value: *value*
attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**
role: **Concrete**
attribute: **logical_identifier** value: *value*
attribute: **version_id** value: *value*
attribute: **product_class** value: *value*
attribute: **title** value: *value*
attribute: **alternate_title** value: *value* Optional
attribute: **alternate_id** value: *value* Optional
attribute: **last_modification_date_time** value: *value* Optional
attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**
role: **Concrete**
attribute: **target_name** value: *value* Optional
attribute: **instrument_name** value: *value* Optional
attribute: **instrument_host_name** value: *value* Optional
attribute: **keywords** value: *value* Optional
attribute: **full_name** value: *value* Optional

attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- End Name_Resolution
- End Subject_Area
- End Identification_Area_Product

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination,**

**Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope,
Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- End Reference_Entry_Observing_System_Component
- End Observing_System_Component
- End Observing_System

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- End Reference_Entry_Product
- End Cross_Reference_Area_Product

- **Observation_Area Occurs 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- End Mission_Area

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- End Node_Area

attribute: **comment** value: **value** Optional

attribute: **start_date_time** value: **value**

attribute: **stop_date_time** value: **value**

attribute: **local_mean_solar_time** value: **value** Optional

attribute: **local_true_solar_time** value: **value** Optional

attribute: **mission_phase_name** value: **value** Optional

attribute: **orbit_number** value: **value** Optional

attribute: **planet_day_number** value: **value** Optional

attribute: **solar_longitude** value: **value** Optional

attribute: **spacecraft_clock_count_partition** value: **value** Optional

attribute: **spacecraft_clock_start_count** value: **value** Optional

attribute: **spacecraft_clock_stop_count** value: **value** Optional

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**

role: **Concrete**

attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **name** value: **value**

attribute: **description** value: *value*
attribute: **type** value: **POSITION, VELOCITY**
attribute: **vector_components** value: *value*

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**
role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional
attribute: **value** value: *value*

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area_Observational - Occurs 1 to * Times**

description: **The File Area Observational class describes, for an observational product, a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**

attribute: **local_identifier** value: *value* Optional
attribute: **comment** value: *value* Optional
attribute: **creation_date_time** value: *value* Optional
attribute: **file_name** value: *value*
attribute: **file_size** value: *value* Optional
attribute: **maximum_record_bytes** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **records** value: *value* Optional

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**
- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

 - **End Band_Bin_Set**
- **End Array_Axis**
- **Image_2D_Display - Occurs 0 to 1 Times**

description: **The Image_2D_Display class provides attributes to enable the display of a 2D image.**
role: **Concrete**
attribute: **first_line** value: **value** Optional
attribute: **first_line_sample** value: **value** Optional
attribute: **line_display_direction** value: **DOWN, LEFT, RIGHT, UP**
attribute: **sample_display_direction** value: **DOWN, LEFT, RIGHT, UP**
- **End Image_2D_Display**
- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**
role: **Concrete**
attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional
- **End Array_Element**
- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**
role: **Concrete**
- **End Cartography**
- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional
- **End Object_Statistics**
- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**
role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**
- **End Array_2D_Image**
- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Map**

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Spectrum**

- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Image class is an extension of array_base and defines a three dimensional**

image.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Array_3D_Image

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The Object Statistics class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}

attribute: **invalid_constant** value: *value* ^{Optional}

attribute: **missing_constant** value: *value* ^{Optional}

attribute: **not_applicable_constant** value: *value* ^{Optional}

attribute: **saturated_constant** value: *value* ^{Optional}

attribute: **unknown_constant** value: *value* ^{Optional}

- End Special_Constants

- End Array_3D_Movie

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: FIRST_INDEX_FASTEST

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: BINARY

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: The Array Axis class is used as a component of the array class and defines an axis of the array.

role: **Concrete**
attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**
- **End Array_3D_Spectrum**
- **Delimited_Table - Occurs 0 to * Times**

description: **The Delimited_Table class defines a simple table (spreadsheet) with delimited fields and records.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x2C, 0x3B, 0x7C**
attribute: **fields** value: **value**
attribute: **maximum_record_length** value: **value**
attribute: **offset** value: **value**
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: **value**

- **Delimited_Record Occurs 1 Times**

description: **The Delimited Record class is a component of the delimited table (spreadsheet) class and defines a record of the delimited table.**

role: **Concrete**

- **Delimited_Field - Occurs 1 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: Concrete

attribute: **error_constant** value: *value* Optional

attribute: **invalid_constant** value: *value* Optional

attribute: **missing_constant** value: *value* Optional

attribute: **not_applicable_constant** value: *value* Optional

attribute: **saturated_constant** value: *value* Optional

attribute: **unknown_constant** value: *value* Optional

- End Special_Constants

- End Delimited_Field

- End Delimited_Record

- End Delimited_Table

- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.

role: Concrete

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: CHARACTER

attribute: **external_standard_id** value: CSV, OTHER

attribute: **field_delimiter** value: 0x09, 0x2C, 0x3B, 0x7C

attribute: **fields** value: *value*

attribute: **maximum_record_length** value: *value*

attribute: **offset** value: *value*

attribute: **record_delimiter** value: 0x0A, 0x0D, 0x0D0x0A

attribute: **records** value: *value*

- **Delimited_Record_Grouped Occurs 1 Times**

description: The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.

role: Concrete

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.

role: Concrete

attribute: **repetitions** value: *value* Optional

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.

role: Concrete

- **Delimited_Field - Occurs 0 to * Times**

description: The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: Concrete

attribute: **name** value: *value*

attribute: **description** value: *value* Optional

attribute: **field_number** value: *value* Optional

attribute: **data_type** value: ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer,

ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR**

attribute: **offset** value: **value**

- **End Header**

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** ^{Optional}
attribute: **description** value: **value** ^{Optional}
attribute: **bytes** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**
attribute: **offset** value: **value**

- **End Header_Binary**

- **Parsable_Byte_Stream - Occurs 0 to * Times**

description: **The Parsable Byte Stream class defines byte streams that have standard parsing rules. The Parsable Byte Stream class is the parent class for all parsable byte streams.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Parsable_Byte_Stream**

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Stream_Text**

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**

role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2,**

SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**
attribute: **last_sampling_parameter_value** value: **value**
attribute: **sampling_parameter_interval** value: **value**
attribute: **sampling_parameter_name** value: **value**
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional
attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Binary**

- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**

attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.
role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.
role: **Concrete**
attribute: **repetitions** value: *value* Optional

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.
role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **Bit**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional
attribute: **bit_mask** value: *value* Optional
attribute: **bits** value: *value*
attribute: **scaling_factor** value: *value* Optional
attribute: **start_bit** value: *value*
attribute: **value_offset** value: *value* Optional
attribute: **unit** value: *value* Optional

- **End Table_Binary_Grouped_Bit_Field**

- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional

attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- End Table_Binary_Grouped_Field
- End Table_Binary_Field_Sequence
- End Table_Binary_Grouped_Sequence
- End Table_Record_Binary_Grouped
- End Table_Binary_Grouped
- **Table_Character - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character class is an extension of table base and defines a simple character table.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character Occurs 1 Times**

description: **The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.**
role: **Concrete**

- **Table_Character_Field - Occurs 1 to * Times**

description: **The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.**
role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** ^{Optional}
attribute: **minimum_scaled_value** value: **value** ^{Optional}
attribute: **maximum_scaled_value** value: **value** ^{Optional}
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**
- **End Table_Character_Field**
- **End Table_Record_Character**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: **value**

attribute: **sampling_parameter_interval** value: **value**

attribute: **sampling_parameter_name** value: **value**

attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional

attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**
- **End Table_Character**

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character Grouped class is an extension of table base and defines a simple character table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **value**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

- **Table_Record_Character_Grouped Occurs 1 Times**

description: **The Table Record Character Grouped class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.**

role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Character Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** Optional

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: **The Table Character Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: **The Table Character Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.**

role: **Concrete**

attribute: **name** value: **value**
 attribute: **description** value: **value** Optional
 attribute: **field_number** value: **value** Optional
 attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
 attribute: **field_location** value: **value**
 attribute: **field_length** value: **value**
 attribute: **field_format** value: **value** Optional
 attribute: **minimum_scaled_value** value: **value** Optional
 attribute: **maximum_scaled_value** value: **value** Optional
 attribute: **scaling_factor** value: **value** Optional
 attribute: **value_offset** value: **value** Optional
 attribute: **unit** value: **value** Optional

- End Table_Character_Grouped_Field
 - End Table_Character_Field_Sequence
 - End Table_Character_Grouped_Sequence
 - End Table_Record_Character_Grouped
 - End Table_Character_Grouped
 - End File_Area_Observational
 - End Product_Array_2D_Image
-

- **Product_Array_3D_Image**

description: **The Product Array 3D Image class defines a product consisting of at least one Array 3D image and other associated data objects and metadata.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- End Data_Standards

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: **value** Optional

attribute: **last_modification_date_time** value: **value** Optional

attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- End Name_Resolution
- End Subject_Area
- End Identification_Area_Product

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination,**

Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft

- End Reference_Entry_Observing_System_Component
- End Observing_System_Component
- End Observing_System

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- End Reference_Entry_Product
- End Cross_Reference_Area_Product

- **Observation_Area Occurs 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- End Mission_Area

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- End Node_Area

attribute: **comment** value: **value** Optional

attribute: **start_date_time** value: **value**

attribute: **stop_date_time** value: **value**

attribute: **local_mean_solar_time** value: **value** Optional

attribute: **local_true_solar_time** value: **value** Optional

attribute: **mission_phase_name** value: **value** Optional

attribute: **orbit_number** value: **value** Optional

attribute: **planet_day_number** value: **value** Optional

attribute: **solar_longitude** value: **value** Optional

attribute: **spacecraft_clock_count_partition** value: **value** Optional

attribute: **spacecraft_clock_start_count** value: **value** Optional

attribute: **spacecraft_clock_stop_count** value: **value** Optional

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**

role: **Concrete**

attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **name** value: **value**

attribute: **description** value: *value*
attribute: **type** value: **POSITION, VELOCITY**
attribute: **vector_components** value: *value*

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**
role: **Concrete**
attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional
attribute: **value** value: *value*

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area_Observational - Occurs 1 to * Times**

description: **The File Area Observational class describes, for an observational product, a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**
attribute: **local_identifier** value: *value* Optional
attribute: **comment** value: *value* Optional
attribute: **creation_date_time** value: *value* Optional
attribute: **file_name** value: *value*
attribute: **file_size** value: *value* Optional
attribute: **maximum_record_bytes** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **records** value: *value* Optional

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**
role: **Concrete**
attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Axis_Display**
- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

 - **End Band_Bin_Set**
- **End Array_Axis**
- **Image_2D_Display - Occurs 0 to 1 Times**

description: **The Image_2D_Display class provides attributes to enable the display of a 2D image.**
role: **Concrete**
attribute: **first_line** value: **value** ^{Optional}
attribute: **first_line_sample** value: **value** ^{Optional}
attribute: **line_display_direction** value: **DOWN, LEFT, RIGHT, UP**
attribute: **sample_display_direction** value: **DOWN, LEFT, RIGHT, UP**
- **End Image_2D_Display**
- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**
role: **Concrete**
attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}
- **End Array_Element**
- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**
role: **Concrete**
- **End Cartography**
- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **md5_checksum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **sample_bit_mask** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}
- **End Object_Statistics**
- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**
role: **Concrete**

attribute: **error_constant** value: *value* Optional
attribute: **invalid_constant** value: *value* Optional
attribute: **missing_constant** value: *value* Optional
attribute: **not_applicable_constant** value: *value* Optional
attribute: **saturated_constant** value: *value* Optional
attribute: **unknown_constant** value: *value* Optional

- **End Special_Constants**
- **End Array_2D_Image**
- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: *value* Optional
attribute: **value_offset** value: *value* Optional
attribute: **unit** value: *value* Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Map**

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Spectrum**

- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Image class is an extension of array_base and defines a three dimensional**

image.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Array_3D_Image

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The Object Statistics class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}

attribute: **invalid_constant** value: *value* ^{Optional}

attribute: **missing_constant** value: *value* ^{Optional}

attribute: **not_applicable_constant** value: *value* ^{Optional}

attribute: **saturated_constant** value: *value* ^{Optional}

attribute: **unknown_constant** value: *value* ^{Optional}

- End Special_Constants

- End Array_3D_Movie

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: FIRST_INDEX_FASTEST

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: BINARY

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: The Array Axis class is used as a component of the array class and defines an axis of the array.

role: **Concrete**
attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* Optional

attribute: **value_offset** value: *value* Optional

attribute: **unit** value: *value* Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* Optional

attribute: **maximum** value: *value* Optional

attribute: **md5_checksum** value: *value* Optional

attribute: **mean** value: *value* Optional

attribute: **median** value: *value* Optional

attribute: **minimum** value: *value* Optional

attribute: **sample_bit_mask** value: *value* Optional

attribute: **standard_deviation** value: *value* Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants
- End Array_3D_Spectrum
- **Delimited_Table - Occurs 0 to * Times**

description: The **Delimited_Table** class defines a simple table (spreadsheet) with delimited fields and records.

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x2C, 0x3B, 0x7C**
attribute: **fields** value: **value**
attribute: **maximum_record_length** value: **value**
attribute: **offset** value: **value**
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: **value**

- **Delimited_Record Occurs 1 Times**

description: The **Delimited Record** class is a component of the delimited table (spreadsheet) class and defines a record of the delimited table.

role: **Concrete**

- **Delimited_Field - Occurs 1 to * Times**

description: The **Delimited Field** class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: The **Field Statistics** class provides a set of metrics for a column formed by a field in a repeating record.

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: Concrete

attribute: **error_constant** value: *value* Optional

attribute: **invalid_constant** value: *value* Optional

attribute: **missing_constant** value: *value* Optional

attribute: **not_applicable_constant** value: *value* Optional

attribute: **saturated_constant** value: *value* Optional

attribute: **unknown_constant** value: *value* Optional

- End Special_Constants

- End Delimited_Field

- End Delimited_Record

- End Delimited_Table

- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.

role: Concrete

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: CHARACTER

attribute: **external_standard_id** value: CSV, OTHER

attribute: **field_delimiter** value: 0x09, 0x2C, 0x3B, 0x7C

attribute: **fields** value: *value*

attribute: **maximum_record_length** value: *value*

attribute: **offset** value: *value*

attribute: **record_delimiter** value: 0x0A, 0x0D, 0x0D0x0A

attribute: **records** value: *value*

- **Delimited_Record_Grouped Occurs 1 Times**

description: The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.

role: Concrete

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.

role: Concrete

attribute: **repetitions** value: *value* Optional

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.

role: Concrete

- **Delimited_Field - Occurs 0 to * Times**

description: The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: Concrete

attribute: **name** value: *value*

attribute: **description** value: *value* Optional

attribute: **field_number** value: *value* Optional

attribute: **data_type** value: ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer,

ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR**

attribute: **offset** value: **value**

- **End Header**

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** ^{Optional}
attribute: **description** value: **value** ^{Optional}
attribute: **bytes** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**
attribute: **offset** value: **value**

- **End Header_Binary**

- **Parsable_Byte_Stream - Occurs 0 to * Times**

description: **The Parsable Byte Stream class defines byte streams that have standard parsing rules. The Parsable Byte Stream class is the parent class for all parsable byte streams.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Parsable_Byte_Stream**

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Stream_Text**

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**

role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2,**

SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**
attribute: **last_sampling_parameter_value** value: **value**
attribute: **sampling_parameter_interval** value: **value**
attribute: **sampling_parameter_name** value: **value**
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional
attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Binary**

- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**

attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.
role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.
role: **Concrete**
attribute: **repetitions** value: *value* Optional

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.
role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **Bit**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional
attribute: **bit_mask** value: *value* Optional
attribute: **bits** value: *value*
attribute: **scaling_factor** value: *value* Optional
attribute: **start_bit** value: *value*
attribute: **value_offset** value: *value* Optional
attribute: **unit** value: *value* Optional

- **End Table_Binary_Grouped_Bit_Field**

- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional

attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- End Table_Binary_Grouped_Field
- End Table_Binary_Field_Sequence
- End Table_Binary_Grouped_Sequence
- End Table_Record_Binary_Grouped
- End Table_Binary_Grouped
- **Table_Character - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character class is an extension of table base and defines a simple character table.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character Occurs 1 Times**

description: **The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.**
role: **Concrete**

- **Table_Character_Field - Occurs 1 to * Times**

description: **The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.**
role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** ^{Optional}
attribute: **minimum_scaled_value** value: **value** ^{Optional}
attribute: **maximum_scaled_value** value: **value** ^{Optional}
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: *value* Optional

attribute: **invalid_constant** value: *value* Optional

attribute: **missing_constant** value: *value* Optional

attribute: **not_applicable_constant** value: *value* Optional

attribute: **saturated_constant** value: *value* Optional

attribute: **unknown_constant** value: *value* Optional

- **End Special_Constants**
- **End Table_Character_Field**
- **End Table_Record_Character**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: The **Uniformly_Sampled** class provides parameters for a uniformly sampled table.

role: **Concrete**

attribute: **first_sampling_parameter_value** value: *value*

attribute: **last_sampling_parameter_value** value: *value*

attribute: **sampling_parameter_interval** value: *value*

attribute: **sampling_parameter_name** value: *value*

attribute: **sampling_parameter_scale** value: EXPONENTIAL, LINEAR, LOGARITHMIC Optional

attribute: **sampling_parameter_unit** value: *value*

- **End Uniformly_Sampled**
- **End Table_Character**

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: The **Table Character Grouped** class is an extension of table base and defines a simple character table that allows repeating groups of fields.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: CHARACTER

attribute: **fields** value: *value*

attribute: **offset** value: *value*

attribute: **record_length** value: *value*

attribute: **records** value: *value*

- **Table_Record_Character_Grouped Occurs 1 Times**

description: The **Table Record Character Grouped** class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.

role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: The **Table Character Grouped Sequence** class is a component of the grouped table class. It defines a set of fields.

role: **Concrete**

attribute: **repetitions** value: *value* Optional

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: The **Table Character Field Sequence** class is a component of the grouped table class. It defines a set of fields or a nested set of fields.

role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: The **Table Character Grouped Field** class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.

role: **Concrete**

attribute: **name** value: **value**
 attribute: **description** value: **value** Optional
 attribute: **field_number** value: **value** Optional
 attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
 attribute: **field_location** value: **value**
 attribute: **field_length** value: **value**
 attribute: **field_format** value: **value** Optional
 attribute: **minimum_scaled_value** value: **value** Optional
 attribute: **maximum_scaled_value** value: **value** Optional
 attribute: **scaling_factor** value: **value** Optional
 attribute: **value_offset** value: **value** Optional
 attribute: **unit** value: **value** Optional

- End Table_Character_Grouped_Field
 - End Table_Character_Field_Sequence
 - End Table_Character_Grouped_Sequence
 - End Table_Record_Character_Grouped
 - End Table_Character_Grouped
 - End File_Area_Observational
 - End Product_Array_3D_Image
-

• Product_Array_3D_Movie

description: **The Product Array 3D Movie defines a product consisting of at least one array 3D movie and other associated data objects and metadata.**

role: **Concrete**

• Data_Standards Occurs 1 Times

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

• End Data_Standards

• Identification_Area_Product Occurs 1 Times

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: **value** Optional

attribute: **last_modification_date_time** value: **value** Optional

attribute: **type** value: **value**

• Subject_Area - Occurs 0 to 1 Times

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- **End Name_Resolution**
- **End Subject_Area**
- **End Identification_Area_Product**

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**
- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination,**

**Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope,
Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- End Reference_Entry_Observing_System_Component
- End Observing_System_Component
- End Observing_System

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- End Reference_Entry_Product
- End Cross_Reference_Area_Product

- **Observation_Area Occurs 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- End Mission_Area

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- End Node_Area

attribute: **comment** value: **value** Optional

attribute: **start_date_time** value: **value**

attribute: **stop_date_time** value: **value**

attribute: **local_mean_solar_time** value: **value** Optional

attribute: **local_true_solar_time** value: **value** Optional

attribute: **mission_phase_name** value: **value** Optional

attribute: **orbit_number** value: **value** Optional

attribute: **planet_day_number** value: **value** Optional

attribute: **solar_longitude** value: **value** Optional

attribute: **spacecraft_clock_count_partition** value: **value** Optional

attribute: **spacecraft_clock_start_count** value: **value** Optional

attribute: **spacecraft_clock_stop_count** value: **value** Optional

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**

role: **Concrete**

attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **name** value: **value**

attribute: **description** value: *value*
attribute: **type** value: **POSITION, VELOCITY**
attribute: **vector_components** value: *value*

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**
role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional
attribute: **value** value: *value*

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area_Observational - Occurs 1 to * Times**

description: **The File Area Observational class describes, for an observational product, a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**

attribute: **local_identifier** value: *value* Optional
attribute: **comment** value: *value* Optional
attribute: **creation_date_time** value: *value* Optional
attribute: **file_name** value: *value*
attribute: **file_size** value: *value* Optional
attribute: **maximum_record_bytes** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **records** value: *value* Optional

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**
- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

 - **End Band_Bin_Set**
- **End Array_Axis**
- **Image_2D_Display - Occurs 0 to 1 Times**

description: **The Image_2D_Display class provides attributes to enable the display of a 2D image.**
role: **Concrete**
attribute: **first_line** value: **value** ^{Optional}
attribute: **first_line_sample** value: **value** ^{Optional}
attribute: **line_display_direction** value: **DOWN, LEFT, RIGHT, UP**
attribute: **sample_display_direction** value: **DOWN, LEFT, RIGHT, UP**
- **End Image_2D_Display**
- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**
role: **Concrete**
attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}
- **End Array_Element**
- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**
role: **Concrete**
- **End Cartography**
- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **md5_checksum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **sample_bit_mask** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}
- **End Object_Statistics**
- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**
role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}
attribute: **invalid_constant** value: *value* ^{Optional}
attribute: **missing_constant** value: *value* ^{Optional}
attribute: **not_applicable_constant** value: *value* ^{Optional}
attribute: **saturated_constant** value: *value* ^{Optional}
attribute: **unknown_constant** value: *value* ^{Optional}

- **End Special_Constants**
- **End Array_2D_Image**
- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* ^{Optional}
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: *value* ^{Optional}
attribute: **value_offset** value: *value* ^{Optional}
attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Map**

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Spectrum**

- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Image class is an extension of array_base and defines a three dimensional**

image.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Array_3D_Image

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The Object Statistics class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}

attribute: **invalid_constant** value: *value* ^{Optional}

attribute: **missing_constant** value: *value* ^{Optional}

attribute: **not_applicable_constant** value: *value* ^{Optional}

attribute: **saturated_constant** value: *value* ^{Optional}

attribute: **unknown_constant** value: *value* ^{Optional}

- End Special_Constants

- End Array_3D_Movie

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: FIRST_INDEX_FASTEST

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: BINARY

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: The Array Axis class is used as a component of the array class and defines an axis of the array.

role: **Concrete**
attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* Optional

attribute: **value_offset** value: *value* Optional

attribute: **unit** value: *value* Optional

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* Optional

attribute: **maximum** value: *value* Optional

attribute: **md5_checksum** value: *value* Optional

attribute: **mean** value: *value* Optional

attribute: **median** value: *value* Optional

attribute: **minimum** value: *value* Optional

attribute: **sample_bit_mask** value: *value* Optional

attribute: **standard_deviation** value: *value* Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants
- End Array_3D_Spectrum
- **Delimited_Table - Occurs 0 to * Times**

description: The **Delimited_Table** class defines a simple table (spreadsheet) with delimited fields and records.

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x2C, 0x3B, 0x7C**
attribute: **fields** value: **value**
attribute: **maximum_record_length** value: **value**
attribute: **offset** value: **value**
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: **value**

- **Delimited_Record Occurs 1 Times**

description: The **Delimited Record** class is a component of the delimited table (spreadsheet) class and defines a record of the delimited table.

role: **Concrete**

- **Delimited_Field - Occurs 1 to * Times**

description: The **Delimited Field** class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: The **Field Statistics** class provides a set of metrics for a column formed by a field in a repeating record.

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: Concrete

attribute: **error_constant** value: *value* Optional

attribute: **invalid_constant** value: *value* Optional

attribute: **missing_constant** value: *value* Optional

attribute: **not_applicable_constant** value: *value* Optional

attribute: **saturated_constant** value: *value* Optional

attribute: **unknown_constant** value: *value* Optional

- End Special_Constants

- End Delimited_Field

- End Delimited_Record

- End Delimited_Table

- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.

role: Concrete

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: CHARACTER

attribute: **external_standard_id** value: CSV, OTHER

attribute: **field_delimiter** value: 0x09, 0x2C, 0x3B, 0x7C

attribute: **fields** value: *value*

attribute: **maximum_record_length** value: *value*

attribute: **offset** value: *value*

attribute: **record_delimiter** value: 0x0A, 0x0D, 0x0D0x0A

attribute: **records** value: *value*

- **Delimited_Record_Grouped Occurs 1 Times**

description: The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.

role: Concrete

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.

role: Concrete

attribute: **repetitions** value: *value* Optional

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.

role: Concrete

- **Delimited_Field - Occurs 0 to * Times**

description: The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: Concrete

attribute: **name** value: *value*

attribute: **description** value: *value* Optional

attribute: **field_number** value: *value* Optional

attribute: **data_type** value: ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer,

ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR**

attribute: **offset** value: **value**

- **End Header**

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** ^{Optional}
attribute: **description** value: **value** ^{Optional}
attribute: **bytes** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**
attribute: **offset** value: **value**

- **End Header_Binary**

- **Parsable_Byte_Stream - Occurs 0 to * Times**

description: **The Parsable Byte Stream class defines byte streams that have standard parsing rules. The Parsable Byte Stream class is the parent class for all parsable byte streams.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Parsable_Byte_Stream**

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Stream_Text**

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**

role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2,**

SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**
attribute: **last_sampling_parameter_value** value: **value**
attribute: **sampling_parameter_interval** value: **value**
attribute: **sampling_parameter_name** value: **value**
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional
attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Binary**

- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**

attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.
role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.
role: **Concrete**
attribute: **repetitions** value: *value* Optional

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.
role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **Bit**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional
attribute: **bit_mask** value: *value* Optional
attribute: **bits** value: *value*
attribute: **scaling_factor** value: *value* Optional
attribute: **start_bit** value: *value*
attribute: **value_offset** value: *value* Optional
attribute: **unit** value: *value* Optional

- **End Table_Binary_Grouped_Bit_Field**

- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional

attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- End Table_Binary_Grouped_Field
- End Table_Binary_Field_Sequence
- End Table_Binary_Grouped_Sequence
- End Table_Record_Binary_Grouped
- End Table_Binary_Grouped
- **Table_Character - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character class is an extension of table base and defines a simple character table.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character Occurs 1 Times**

description: **The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.**
role: **Concrete**

- **Table_Character_Field - Occurs 1 to * Times**

description: **The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.**
role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** ^{Optional}
attribute: **minimum_scaled_value** value: **value** ^{Optional}
attribute: **maximum_scaled_value** value: **value** ^{Optional}
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**
- **End Table_Character_Field**
- **End Table_Record_Character**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: The **Uniformly_Sampled** class provides parameters for a uniformly sampled table.

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: **value**

attribute: **sampling_parameter_interval** value: **value**

attribute: **sampling_parameter_name** value: **value**

attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional

attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**
- **End Table_Character**

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: The **Table Character Grouped** class is an extension of table base and defines a simple character table that allows repeating groups of fields.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **value**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

- **Table_Record_Character_Grouped Occurs 1 Times**

description: The **Table Record Character Grouped** class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.

role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: The **Table Character Grouped Sequence** class is a component of the grouped table class. It defines a set of fields.

role: **Concrete**

attribute: **repetitions** value: **value** Optional

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: The **Table Character Field Sequence** class is a component of the grouped table class. It defines a set of fields or a nested set of fields.

role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: The **Table Character Grouped Field** class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.

role: **Concrete**

attribute: **name** value: **value**
 attribute: **description** value: **value** Optional
 attribute: **field_number** value: **value** Optional
 attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
 attribute: **field_location** value: **value**
 attribute: **field_length** value: **value**
 attribute: **field_format** value: **value** Optional
 attribute: **minimum_scaled_value** value: **value** Optional
 attribute: **maximum_scaled_value** value: **value** Optional
 attribute: **scaling_factor** value: **value** Optional
 attribute: **value_offset** value: **value** Optional
 attribute: **unit** value: **value** Optional

- End Table_Character_Grouped_Field
 - End Table_Character_Field_Sequence
 - End Table_Character_Grouped_Sequence
 - End Table_Record_Character_Grouped
 - End Table_Character_Grouped
 - End File_Area_Observational
 - End Product_Array_3D_Movie
-

• Product_Array_3D_Spectrum

description: The Product Array 3D Spectrum class defines a product consisting of at least one Array 3D spectrum and other associated data objects and metadata..

role: **Concrete**

• Data_Standards Occurs 1 Times

description: The Data Standards class indicates the controlling standards for this product.

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

• End Data_Standards

• Identification_Area_Product Occurs 1 Times

description: The product identification area consists of attributes that identify and name a data product.

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: **value** Optional

attribute: **last_modification_date_time** value: **value** Optional

attribute: **type** value: **value**

• Subject_Area - Occurs 0 to 1 Times

description: The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- End Name_Resolution
- End Subject_Area
- End Identification_Area_Product

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination,**

**Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope,
Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- End Reference_Entry_Observing_System_Component
- End Observing_System_Component
- End Observing_System

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- End Reference_Entry_Product
- End Cross_Reference_Area_Product

- **Observation_Area Occurs 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- End Mission_Area

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- End Node_Area

attribute: **comment** value: **value** Optional

attribute: **start_date_time** value: **value**

attribute: **stop_date_time** value: **value**

attribute: **local_mean_solar_time** value: **value** Optional

attribute: **local_true_solar_time** value: **value** Optional

attribute: **mission_phase_name** value: **value** Optional

attribute: **orbit_number** value: **value** Optional

attribute: **planet_day_number** value: **value** Optional

attribute: **solar_longitude** value: **value** Optional

attribute: **spacecraft_clock_count_partition** value: **value** Optional

attribute: **spacecraft_clock_start_count** value: **value** Optional

attribute: **spacecraft_clock_stop_count** value: **value** Optional

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**

role: **Concrete**

attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **name** value: **value**

attribute: **description** value: *value*
attribute: **type** value: **POSITION, VELOCITY**
attribute: **vector_components** value: *value*

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**
role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional
attribute: **value** value: *value*

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area_Observational - Occurs 1 to * Times**

description: **The File Area Observational class describes, for an observational product, a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**

attribute: **local_identifier** value: *value* Optional
attribute: **comment** value: *value* Optional
attribute: **creation_date_time** value: *value* Optional
attribute: **file_name** value: *value*
attribute: **file_size** value: *value* Optional
attribute: **maximum_record_bytes** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **records** value: *value* Optional

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**
- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

 - **End Band_Bin_Set**
- **End Array_Axis**
- **Image_2D_Display - Occurs 0 to 1 Times**

description: **The Image_2D_Display class provides attributes to enable the display of a 2D image.**
role: **Concrete**
attribute: **first_line** value: **value** Optional
attribute: **first_line_sample** value: **value** Optional
attribute: **line_display_direction** value: **DOWN, LEFT, RIGHT, UP**
attribute: **sample_display_direction** value: **DOWN, LEFT, RIGHT, UP**
- **End Image_2D_Display**
- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**
role: **Concrete**
attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional
- **End Array_Element**
- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**
role: **Concrete**
- **End Cartography**
- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional
- **End Object_Statistics**
- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**
role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}
attribute: **invalid_constant** value: *value* ^{Optional}
attribute: **missing_constant** value: *value* ^{Optional}
attribute: **not_applicable_constant** value: *value* ^{Optional}
attribute: **saturated_constant** value: *value* ^{Optional}
attribute: **unknown_constant** value: *value* ^{Optional}

- **End Special_Constants**
- **End Array_2D_Image**
- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* ^{Optional}
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: *value* ^{Optional}
attribute: **value_offset** value: *value* ^{Optional}
attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Map**

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Spectrum**

- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: The **Array 3D Image** class is an extension of **array_base** and defines a three dimensional

image.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Array_3D_Image

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The Object Statistics class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}

attribute: **invalid_constant** value: *value* ^{Optional}

attribute: **missing_constant** value: *value* ^{Optional}

attribute: **not_applicable_constant** value: *value* ^{Optional}

attribute: **saturated_constant** value: *value* ^{Optional}

attribute: **unknown_constant** value: *value* ^{Optional}

- End Special_Constants

- End Array_3D_Movie

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: FIRST_INDEX_FASTEST

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: BINARY

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: The Array Axis class is used as a component of the array class and defines an axis of the array.

role: **Concrete**
attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* Optional

attribute: **value_offset** value: *value* Optional

attribute: **unit** value: *value* Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* Optional

attribute: **maximum** value: *value* Optional

attribute: **md5_checksum** value: *value* Optional

attribute: **mean** value: *value* Optional

attribute: **median** value: *value* Optional

attribute: **minimum** value: *value* Optional

attribute: **sample_bit_mask** value: *value* Optional

attribute: **standard_deviation** value: *value* Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants
- End Array_3D_Spectrum
- **Delimited_Table - Occurs 0 to * Times**

description: The **Delimited_Table** class defines a simple table (spreadsheet) with delimited fields and records.

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x2C, 0x3B, 0x7C**
attribute: **fields** value: **value**
attribute: **maximum_record_length** value: **value**
attribute: **offset** value: **value**
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: **value**

- **Delimited_Record Occurs 1 Times**

description: The **Delimited Record** class is a component of the delimited table (spreadsheet) class and defines a record of the delimited table.

role: **Concrete**

- **Delimited_Field - Occurs 1 to * Times**

description: The **Delimited Field** class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: The **Field Statistics** class provides a set of metrics for a column formed by a field in a repeating record.

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: Concrete

attribute: **error_constant** value: *value* Optional

attribute: **invalid_constant** value: *value* Optional

attribute: **missing_constant** value: *value* Optional

attribute: **not_applicable_constant** value: *value* Optional

attribute: **saturated_constant** value: *value* Optional

attribute: **unknown_constant** value: *value* Optional

- End Special_Constants

- End Delimited_Field

- End Delimited_Record

- End Delimited_Table

- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.

role: Concrete

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: CHARACTER

attribute: **external_standard_id** value: CSV, OTHER

attribute: **field_delimiter** value: 0x09, 0x2C, 0x3B, 0x7C

attribute: **fields** value: *value*

attribute: **maximum_record_length** value: *value*

attribute: **offset** value: *value*

attribute: **record_delimiter** value: 0x0A, 0x0D, 0x0D0x0A

attribute: **records** value: *value*

- **Delimited_Record_Grouped Occurs 1 Times**

description: The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.

role: Concrete

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.

role: Concrete

attribute: **repetitions** value: *value* Optional

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.

role: Concrete

- **Delimited_Field - Occurs 0 to * Times**

description: The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: Concrete

attribute: **name** value: *value*

attribute: **description** value: *value* Optional

attribute: **field_number** value: *value* Optional

attribute: **data_type** value: ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer,

ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR**

attribute: **offset** value: **value**

- **End Header**

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** ^{Optional}
attribute: **description** value: **value** ^{Optional}
attribute: **bytes** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**
attribute: **offset** value: **value**

- **End Header_Binary**

- **Parsable_Byte_Stream - Occurs 0 to * Times**

description: **The Parsable Byte Stream class defines byte streams that have standard parsing rules. The Parsable Byte Stream class is the parent class for all parsable byte streams.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Parsable_Byte_Stream**

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Stream_Text**

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**

role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2,**

SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**
attribute: **last_sampling_parameter_value** value: **value**
attribute: **sampling_parameter_interval** value: **value**
attribute: **sampling_parameter_name** value: **value**
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional
attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Binary**

- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**

attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.
role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.
role: **Concrete**
attribute: **repetitions** value: *value* Optional

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.
role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **Bit**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional
attribute: **bit_mask** value: *value* Optional
attribute: **bits** value: *value*
attribute: **scaling_factor** value: *value* Optional
attribute: **start_bit** value: *value*
attribute: **value_offset** value: *value* Optional
attribute: **unit** value: *value* Optional

- **End Table_Binary_Grouped_Bit_Field**

- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional

attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- End Table_Binary_Grouped_Field
- End Table_Binary_Field_Sequence
- End Table_Binary_Grouped_Sequence
- End Table_Record_Binary_Grouped
- End Table_Binary_Grouped
- **Table_Character - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character class is an extension of table base and defines a simple character table.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character Occurs 1 Times**

description: **The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.**
role: **Concrete**

- **Table_Character_Field - Occurs 1 to * Times**

description: **The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.**
role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** ^{Optional}
attribute: **minimum_scaled_value** value: **value** ^{Optional}
attribute: **maximum_scaled_value** value: **value** ^{Optional}
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**
- **End Table_Character_Field**
- **End Table_Record_Character**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: The **Uniformly_Sampled** class provides parameters for a uniformly sampled table.

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: **value**

attribute: **sampling_parameter_interval** value: **value**

attribute: **sampling_parameter_name** value: **value**

attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional

attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**
- **End Table_Character**

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: The **Table Character Grouped** class is an extension of table base and defines a simple character table that allows repeating groups of fields.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **value**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

- **Table_Record_Character_Grouped Occurs 1 Times**

description: The **Table Record Character Grouped** class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.

role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: The **Table Character Grouped Sequence** class is a component of the grouped table class. It defines a set of fields.

role: **Concrete**

attribute: **repetitions** value: **value** Optional

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: The **Table Character Field Sequence** class is a component of the grouped table class. It defines a set of fields or a nested set of fields.

role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: The **Table Character Grouped Field** class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.

role: **Concrete**

attribute: **name** value: **value**
 attribute: **description** value: **value** Optional
 attribute: **field_number** value: **value** Optional
 attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
 attribute: **field_location** value: **value**
 attribute: **field_length** value: **value**
 attribute: **field_format** value: **value** Optional
 attribute: **minimum_scaled_value** value: **value** Optional
 attribute: **maximum_scaled_value** value: **value** Optional
 attribute: **scaling_factor** value: **value** Optional
 attribute: **value_offset** value: **value** Optional
 attribute: **unit** value: **value** Optional

- End Table_Character_Grouped_Field
 - End Table_Character_Field_Sequence
 - End Table_Character_Grouped_Sequence
 - End Table_Record_Character_Grouped
 - End Table_Character_Grouped
 - End File_Area_Observational
 - End Product_Array_3D_Spectrum
-

• Product_Attribute_Definition

description: **The Product Attribute Definition provides an attribute definition in XML encoding.**
 role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**
 role: **Concrete**
 attribute: **dd_version_id** value: **value**
 attribute: **std_ref_version_id** value: **value**

- End Data_Standards

- **Identification_Area Occurs 1 Times**

description: **The identification area consists of attributes that identify and name an object.**
 role: **Concrete**
 attribute: **logical_identifier** value: **value**
 attribute: **version_id** value: **value**
 attribute: **product_class** value: **value**
 attribute: **title** value: **value**
 attribute: **alternate_title** value: **value** Optional
 attribute: **alternate_id** value: **value** Optional
 attribute: **last_modification_date_time** value: **value** Optional
 attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**
 role: **Concrete**
 attribute: **target_name** value: **value** Optional
 attribute: **instrument_name** value: **value** Optional
 attribute: **instrument_host_name** value: **value** Optional
 attribute: **keywords** value: **value** Optional

attribute: **full_name** value: *value* Optional
attribute: **investigation_name** value: *value* Optional
attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional
attribute: **name** value: *value*
attribute: **alternate_designation** value: *value* Optional
attribute: **lid_reference** value: *value* Optional
attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area**

- **Cross_Reference_Area - Occurs 0 to 1 Times**

description: **The cross reference area provides references to associated registered products.**

role: **Concrete**

- **Observing_System - Occurs 0 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value*

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: *value* Optional
attribute: **name** value: *value*
attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: *value* Optional
attribute: **lidvid_reference** value: *value* Optional
attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: *value* Optional

attribute: **lidvid_reference** value: **value** Optional
attribute: **reference_association_type** value: **has_association, member_of**

- **End Reference_Entry**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **doi** value: **value** Optional
attribute: **reference_text** value: **value** Optional
attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **End Cross_Reference_Area**

- **DD_Attribute_Full Occurs 1 Times**

description: **The DD_Attribute_Full class provides a more complete definition of an attribute in the data dictionary.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **version_id** value: **value**
attribute: **class_name** value: **value**
attribute: **name** value: **value**
attribute: **registration_authority_id** value: **0001_NASA_PDS_1**
attribute: **steward_id** value: **atm, geo, img, naif, ops, pds, ppi, rings, rs, sbn**
attribute: **name_space_id** value: **value**
attribute: **registered_by** value: **value**
attribute: **submitter_id** value: **value**
attribute: **definition** value: **value**
attribute: **attribute_concept** value: **DEC_ADDRESS, DEC_ANGLE, DEC_ATTRIBUTE, DEC_BIT, DEC_CHECKSUM, DEC_COLLECTION, DEC_CONSTANT, DEC_COSINE, DEC_COUNT, DEC_DELIMITER, DEC_DESCRIPTION, DEC_DEVIATION, DEC_DIRECTION, DEC_DISTANCE, DEC_DOI, DEC_DURATION, DEC_FACTOR, DEC_FLAG, DEC_FORMAT, DEC_GROUP, DEC_HOME, DEC_ID, DEC_LATITUDE, DEC_LENGTH, DEC_LIST, DEC_LOCATION, DEC_LOGICAL, DEC_LONGITUDE, DEC_MASK, DEC_MAXIMUM, DEC_MEAN, DEC_MEDIAN, DEC_MINIMUM, DEC_NAME, DEC_NOTE, DEC_NUMBER, DEC_OFFSET, DEC_ORDER, DEC_PARALLEL, DEC_PASSWORD, DEC_PATH, DEC_PATTERN, DEC_PIXEL, DEC_QUATERNION, DEC_RADIUS, DEC_RATIO, DEC_REFERENCE, DEC_RESOLUTION, DEC_ROLE, DEC_ROTATION, DEC_SCALE, DEC_SEQUENCE, DEC_SET, DEC_SIZE, DEC_STATUS, DEC_SUMMARY, DEC_SYNTAX, DEC_TEMPERATURE, DEC_TEXT, DEC_TITLE, DEC_TYPE, DEC_UNIT, DEC_VALUE, DEC_VECTOR**

- **Terminological_Entry - Occurs 1 to * Times**

description: **The terminological_entry class provides the name (designation) and definition of the attribute in a specified natural language.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **definition** value: **value**
attribute: **language** value: **English**
attribute: **preferred_flag** value: **value**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **doi** value: **value** Optional
attribute: **reference_text** value: **value** Optional
attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **End Terminological_Entry**

- **DD_Value_Domain_Full - Occurs 0 to 1 Times**

description: The **DD_Value_Domain_Full** class provides a more complete definition of a attribute's value domain.

role: **Concrete**

attribute: **enumeration_flag** value: **F, T**

attribute: **specified_unit_id** value: **value** ^{Optional}

attribute: **value_data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **formation_rule** value: **value** ^{Optional}

attribute: **minimum_characters** value: **value** ^{Optional}

attribute: **maximum_characters** value: **value** ^{Optional}

attribute: **minimum_value** value: **value** ^{Optional}

attribute: **maximum_value** value: **value** ^{Optional}

attribute: **pattern** value: **value** ^{Optional}

attribute: **unit_of_measure_type** value: **UnitOfMeasure_AmountOfSubstance, UnitOfMeasure_Angle, UnitOfMeasure_AngularVelocity, UnitOfMeasure_Area, UnitOfMeasure_Frequency, UnitOfMeasure_Length, UnitOfMeasure_MapScale, UnitOfMeasure_Mass, UnitOfMeasure_Misc, UnitOfMeasure_None, UnitOfMeasure_OpticalPathLength, UnitOfMeasure_Pressure, UnitOfMeasure_Radiance, UnitOfMeasure_Rates, UnitOfMeasure_SolidAngle, UnitOfMeasure_Storage, UnitOfMeasure_Temperature, UnitOfMeasure_Time, UnitOfMeasure_Velocity, UnitOfMeasure_Voltage, UnitOfMeasure_Volume** ^{Optional}

attribute: **conceptual_domain** value: **CD_BOOLEAN, CD_INTEGER, CD_NAME, CD_NUMERIC, CD_REAL, CD_SHORT_STRING, CD_TEXT, CD_TIME, CD_TYPE**

- **DD_Permissible_Value - Occurs 0 to * Times**

description: The **DD_Permissible_Value** class lists permissible values and their meanings.

role: **Concrete**

attribute: **value** value: **value**

attribute: **value_meaning** value: **value** ^{Optional}

attribute: **value_begin_date** value: **value**

attribute: **value_end_date** value: **value**

- **End DD_Permissible_Value**

- **End DD_Value_Domain_Full**

- **End DD_Attribute_Full**

- **End Product_Attribute_Definition**

- **Product_Browse**

description: The **Product Browse** class defines a product consisting of one encoded byte stream digital object.

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: The **Data Standards** class indicates the controlling standards for this product.

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: The **product identification area** consists of attributes that identify and name a data product.

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** ^{Optional}

attribute: **alternate_id** value: **value** ^{Optional}

attribute: **last_modification_date_time** value: **value** Optional
attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional

attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- **End Reference_Entry_Product**

- **End Cross_Reference_Area_Product**

- **File_Area Occurs 1 Times**

description: **The File Area class describes a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** ^{Optional}

attribute: **comment** value: **value** ^{Optional}

attribute: **creation_date_time** value: **value** ^{Optional}

attribute: **file_name** value: **value**

attribute: **file_size** value: **value** ^{Optional}

attribute: **maximum_record_bytes** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **records** value: **value** ^{Optional}

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** ^{Optional}

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: The **Array Axis** class is used as a component of the array class and defines an axis of the array.

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: The **Axis_Display** class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Image_2D_Display - Occurs 0 to 1 Times**

description: The **Image_2D_Display** class provides attributes to enable the display of a 2D image.

role: **Concrete**

attribute: **first_line** value: *value* ^{Optional}

attribute: **first_line_sample** value: *value* ^{Optional}

attribute: **line_display_direction** value: DOWN, LEFT, RIGHT, UP

attribute: **sample_display_direction** value: DOWN, LEFT, RIGHT, UP

- **End Image_2D_Display**

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Image**

- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an**

element of the array.

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}

attribute: **invalid_constant** value: *value* ^{Optional}

attribute: **missing_constant** value: *value* ^{Optional}

attribute: **not_applicable_constant** value: *value* ^{Optional}

attribute: **saturated_constant** value: *value* ^{Optional}

attribute: **unknown_constant** value: *value* ^{Optional}

- **End Special_Constants**

- **End Array_2D_Map**

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases**

that occur in the data.

role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}

attribute: **invalid_constant** value: *value* ^{Optional}

attribute: **missing_constant** value: *value* ^{Optional}

attribute: **not_applicable_constant** value: *value* ^{Optional}

attribute: **saturated_constant** value: *value* ^{Optional}

attribute: **unknown_constant** value: *value* ^{Optional}

- **End Special_Constants**
- **End Array_2D_Spectrum**
- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: The Array 3D Image class is an extension of array_base and defines a three dimensional image.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: The Array Axis class is used as a component of the array class and defines an axis of the array.

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: The Axis_Display class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: The Array Element class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**
role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_3D_Image**

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** ^{Optional}

attribute: **not_applicable_constant** value: **value** ^{Optional}

attribute: **saturated_constant** value: **value** ^{Optional}

attribute: **unknown_constant** value: **value** ^{Optional}

- End Special_Constants

- End Array_3D_Movie

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **mean** value: *value* Optional
attribute: **median** value: *value* Optional
attribute: **minimum** value: *value* Optional
attribute: **sample_bit_mask** value: *value* Optional
attribute: **standard_deviation** value: *value* Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: *value* Optional
attribute: **invalid_constant** value: *value* Optional
attribute: **missing_constant** value: *value* Optional
attribute: **not_applicable_constant** value: *value* Optional
attribute: **saturated_constant** value: *value* Optional
attribute: **unknown_constant** value: *value* Optional

- **End Special_Constants**

- **End Array_3D_Spectrum**

- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: **The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x09, 0x2C, 0x3B, 0x7C**
attribute: **fields** value: *value*
attribute: **maximum_record_length** value: *value*
attribute: **offset** value: *value*
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: *value*

- **Delimited_Record_Grouped Occurs 1 Times**

description: **The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.**

role: **Concrete**

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: **The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: *value* Optional

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: **The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Delimited_Field - Occurs 0 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: *value*

attribute: **description** value: **value** Optional
 attribute: **field_number** value: **value** Optional
 attribute: **data_type** value: ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID
 attribute: **field_length** value: **value**
 attribute: **field_format** value: **value** Optional
 attribute: **minimum_scaled_value** value: **value** Optional
 attribute: **maximum_scaled_value** value: **value** Optional
 attribute: **scaling_factor** value: **value** Optional
 attribute: **value_offset** value: **value** Optional
 attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
 attribute: **description** value: **value** Optional
 attribute: **maximum** value: **value** Optional
 attribute: **mean** value: **value** Optional
 attribute: **median** value: **value** Optional
 attribute: **minimum** value: **value** Optional
 attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
 attribute: **invalid_constant** value: **value** Optional
 attribute: **missing_constant** value: **value** Optional
 attribute: **not_applicable_constant** value: **value** Optional
 attribute: **saturated_constant** value: **value** Optional
 attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Encoded_Image - Occurs 0 to * Times**

description: **The Encoded Image class, a subclass of Encoded Byte stream is used for ancillary images in standard formats, such as JPEG.**

role: **Concrete**

attribute: **local_identifier** value: **value**
 attribute: **comment** value: **value** Optional
 attribute: **encoding_type** value: **BINARY**
 attribute: **external_standard_id** value: **GIF, JPEG, PDF, PNG, TIFF**
 attribute: **offset** value: **value**

- **End Encoded_Image**

- **File_PDF - Occurs 0 to * Times**

description: **The File PDF class describes a PDF encoded byte stream.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **PDF**
attribute: **offset** value: *value*

- End File_PDF

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **bytes** value: *value*
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR**
attribute: **offset** value: *value*

- End Header

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **bytes** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**
attribute: **offset** value: *value*

- End Header_Binary

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: *value*
attribute: **offset** value: *value*

- End Stream_Text

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: *value*
attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**

role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **field_number** value: **value** ^{Optional}

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** ^{Optional}

attribute: **minimum_scaled_value** value: **value** ^{Optional}

attribute: **maximum_scaled_value** value: **value** ^{Optional}

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** ^{Optional}

attribute: **not_applicable_constant** value: **value** ^{Optional}

attribute: **saturated_constant** value: **value** ^{Optional}

attribute: **unknown_constant** value: **value** ^{Optional}

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: *value*
attribute: **sampling_parameter_interval** value: *value*
attribute: **sampling_parameter_name** value: *value*
attribute: **sampling_parameter_scale** value: EXPONENTIAL, LINEAR, LOGARITHMIC ^{Optional}
attribute: **sampling_parameter_unit** value: *value*

- End Uniformly_Sampled
- End Table_Binary
- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* ^{Optional}
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: *value*
attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: **The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.**

role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: *value* ^{Optional}

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: **The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.**

role: **Concrete**

attribute: **name** value: *value*
attribute: **description** value: *value* ^{Optional}
attribute: **field_number** value: *value* ^{Optional}
attribute: **data_type** value: **Bit**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* ^{Optional}
attribute: **minimum_scaled_value** value: *value* ^{Optional}
attribute: **maximum_scaled_value** value: *value* ^{Optional}
attribute: **bit_mask** value: *value* ^{Optional}
attribute: **bits** value: *value*
attribute: **scaling_factor** value: *value* ^{Optional}
attribute: **start_bit** value: *value*
attribute: **value_offset** value: *value* ^{Optional}
attribute: **unit** value: *value* ^{Optional}

- End Table_Binary_Grouped_Bit_Field
- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Field class is a component of the**

table record class and defines a field of the record. This extension defines a binary grouped field.

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Table_Binary_Grouped_Field**
- **End Table_Binary_Field_Sequence**
- **End Table_Binary_Grouped_Sequence**
- **End Table_Record_Binary_Grouped**
- **End Table_Binary_Grouped**

- **Table_Character - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character class is an extension of table base and defines a simple character table.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **value**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

- **Table_Record_Character Occurs 1 Times**

description: **The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.**

role: **Concrete**

- **Table_Character_Field - Occurs 1 to * Times**

description: **The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}
attribute: **invalid_constant** value: **value** ^{Optional}
attribute: **missing_constant** value: **value** ^{Optional}
attribute: **not_applicable_constant** value: **value** ^{Optional}
attribute: **saturated_constant** value: **value** ^{Optional}
attribute: **unknown_constant** value: **value** ^{Optional}

- **End Special_Constants**

- **End Table_Character_Field**

- **End Table_Record_Character**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**
attribute: **last_sampling_parameter_value** value: **value**
attribute: **sampling_parameter_interval** value: **value**
attribute: **sampling_parameter_name** value: **value**
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** ^{Optional}
attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Character**

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character Grouped class is an extension of table base and defines a simple character table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character_Grouped Occurs 1 Times**

description: **The Table Record Character Grouped class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.**

role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Character Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** ^{Optional}

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: **The Table Character Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: **The Table Character Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **field_number** value: **value** ^{Optional}

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** ^{Optional}

attribute: **minimum_scaled_value** value: **value** ^{Optional}

attribute: **maximum_scaled_value** value: **value** ^{Optional}

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Table_Character_Grouped_Field**

- **End Table_Character_Field_Sequence**

- **End Table_Character_Grouped_Sequence**

- **End Table_Record_Character_Grouped**

- **End Table_Character_Grouped**

- **End File_Area**

- **End Product_Browse**

- **Product_Bundle**

description: **Product Bundle is a cluster product and has a table of references to one or more collections.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- **End Data_Standards**

- **Identification_Area_Bundle Occurs 1 Times**

description: **The bundle identification area consists of attributes that identify and name a bundle.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: *value*
attribute: **title** value: *value*
attribute: **alternate_title** value: *value* Optional
attribute: **alternate_id** value: *value* Optional
attribute: **last_modification_date_time** value: *value* Optional
attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional
attribute: **instrument_name** value: *value* Optional
attribute: **instrument_host_name** value: *value* Optional
attribute: **keywords** value: *value* Optional
attribute: **full_name** value: *value* Optional
attribute: **investigation_name** value: *value* Optional
attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional
attribute: **name** value: *value*
attribute: **alternate_designation** value: *value* Optional
attribute: **lid_reference** value: *value* Optional
attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Bundle**

- **Cross_Reference_Area_Bundle - Occurs 0 to 1 Times**

description: **The bundle cross reference area provides references to associated registered products.**
role: **Concrete**

- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: *value* Optional
attribute: **lidvid_reference** value: *value* Optional
attribute: **reference_association_type** value: *has_association, member_of*

- **End Reference_Entry**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **doi** value: *value* Optional
attribute: **reference_text** value: *value* Optional
attribute: **url** value: *value* Optional

- **End Bibliographic_Reference**

- **End Cross_Reference_Area_Bundle**

- **Bundle_Member_Entry - Occurs 1 to * Times**

description: **The Bundle Member Entry class provides a member reference to a collection.**
role: **Concrete**
attribute: **file_specification_name** value: **value**
attribute: **lid_reference** value: **value** Optional
attribute: **lidvid_reference** value: **value** Optional
attribute: **reference_association_type** value: **has_browse_collection, has_calibration_collection, has_context_collection, has_data_collection, has_document_collection, has_geometry_collection, has_member_collection, has_miscellaneous_collection, has_spice_collection, has_xml_schema_collection**

- End Bundle_Member_Entry
 - End Product_Bundle
-

- **Product_Collection**

description: **A Collection product has a table of references to one or more standard products. The references are stored in a Table_Character called the Inventory.**
role: **Abstract**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**
role: **Concrete**
attribute: **dd_version_id** value: **value**
attribute: **std_ref_version_id** value: **value**

- End Data_Standards

- **Identification_Area_Collection Occurs 1 Times**

description: **The collection identification area consists of attributes that identify and name a collection.**
role: **Concrete**
attribute: **logical_identifier** value: **value**
attribute: **version_id** value: **value**
attribute: **product_class** value: **value**
attribute: **title** value: **value**
attribute: **alternate_title** value: **value** Optional
attribute: **alternate_id** value: **value** Optional
attribute: **contains_primary_member** value: **value**
attribute: **last_modification_date_time** value: **value** Optional
attribute: **type** value: **Browse, Calibration, Context, Data, Document, Geometry, Miscellaneous, SPICE, XML_Schema**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**
role: **Concrete**

attribute: **target_name** value: **value** Optional
attribute: **instrument_name** value: **value** Optional
attribute: **instrument_host_name** value: **value** Optional
attribute: **keywords** value: **value** Optional
attribute: **full_name** value: **value** Optional
attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**
role: **Concrete**

attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **alternate_designation** value: **value** Optional
attribute: **lid_reference** value: **value** Optional
attribute: **type** value: **value**

- End Name_Resolution
 - End Subject_Area
- End Identification_Area_Collection
- Cross_Reference_Area_Collection - Occurs 0 to 1 Times

description: **The collection cross reference area provides references to associated registered products.**
 role: **Concrete**

- Observing_System - Occurs 0 to * Times

description: **The Observing System class describes the entire suite used to collect the data.**
 role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- Observing_System_Component - Occurs 1 to * Times

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- End Reference_Entry_Observing_System_Component
 - End Observing_System_Component
- End Observing_System

- Reference_Entry_Collection - Occurs 0 to * Times

description: **The Reference Entry Collection class provides a collection specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_associated_collection, has_investigation_collection, has_node_collection, has_publication_collection, has_target_collection, has_update_collection**

- End Reference_Entry_Collection

- Bibliographic_Reference - Occurs 0 to * Times

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional
attribute: **reference_text** value: **value** Optional
attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- End Cross_Reference_Area_Collection
- **File_Area_Inventory_LIDVID_Primary - Occurs 0 to 1 Times**

description: **The File Area Inventory LIDVID Primary class describes a file and an inventory with references to primary members. The references are product LIDVIDs.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**

attribute: **local_identifier** value: **value** Optional
attribute: **comment** value: **value** Optional
attribute: **creation_date_time** value: **value** Optional
attribute: **file_name** value: **value**
attribute: **file_size** value: **value** Optional
attribute: **maximum_record_bytes** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **records** value: **value** Optional

- End File
- **Inventory_LIDVID_Primary Occurs 1 Times - Base_Class:Table_Base**

description: **The Inventory LIDVID Primary class defines the inventory for primary members of a collection.**

role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **2**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**
attribute: **reference_association_type** value: **has_member_LIDVID_Primary**

- **Table_Record_Inventory_LIDVID_Primary Occurs 1 Times**

description: **The Table Record Inventory LIDVID Primary class defines the inventory record for a primary member.**
role: **Concrete**

- **Table_Field_LIDVID Occurs 1 Times**

description: **The Table Field LIDVID class defines a table field that provides the logical identifier and version identifier for a product.**

role: **Concrete**
attribute: **name** value: **LIDVID**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **1**
attribute: **data_type** value: **ASCII_LIDVID**
attribute: **field_location** value: **1**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional

- End Table_Field_LIDVID
- **Table_Field_File_Specification_Name Occurs 1 Times**

description: **The Table_Field_File_Specification_Name class defines a table field that provides a file name, file extension, and relative directory path to a product label.**
role: **Concrete**

attribute: **name** value: **file_specification_name**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **2** Optional
attribute: **data_type** value: **ASCII_File_Specification_Name**
attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional

- **End Table_Field_File_Specification_Name**
- **End Table_Record_Inventory_LIDVID_Primary**
- **End Inventory_LIDVID_Primary**
- **End File_Area_Inventory_LIDVID_Primary**

- **File_Area_Inventory_LIDVID_Secondary - Occurs 0 to 1 Times**

description: **The File Area Inventory LIDVID Secondary class describes a file and an inventory with references to secondary members. The references are product LIDVIDs.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**

attribute: **local_identifier** value: **value** Optional
attribute: **comment** value: **value** Optional
attribute: **creation_date_time** value: **value** Optional
attribute: **file_name** value: **value**
attribute: **file_size** value: **value** Optional
attribute: **maximum_record_bytes** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **records** value: **value** Optional

- **End File**

- **Inventory_LIDVID_Secondary Occurs 1 Times - Base_Class:Table_Base**

description: **The Inventory LIDVID Secondary class defines the inventory for secondary members of a collection. The references are LIDVIDs.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **1**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**
attribute: **reference_association_type** value: **has_member_LIDVID_Secondary**

- **Table_Record_Inventory_LIDVID_Secondary Occurs 1 Times**

description: **The Table Record Inventory LIDVID Secondary class defines the inventory record for a secondary member. The reference is a LIDVID.**
role: **Concrete**

- **Table_Field_LIDVID Occurs 1 Times**

description: **The Table Field LIDVID class defines a table field that provides the logical identifier and version identifier for a product.**

role: **Concrete**
attribute: **name** value: **LIDVID**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **1**
attribute: **data_type** value: **ASCII_LIDVID**
attribute: **field_location** value: **1**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional

- **End Table_Field_LIDVID**

- **End Table_Record_Inventory_LIDVID_Secondary**
- **End Inventory_LIDVID_Secondary**
- **End File_Area_Inventory_LIDVID_Secondary**

- **File_Area_Inventory_LID_Secondary - Occurs 0 to 1 Times**

description: **The File Area Inventory LID Secondary class describes a file and an inventory with references to secondary members. The references are product LIDs.**
 role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
 role: **Concrete**

attribute: **local_identifier** value: **value** Optional
 attribute: **comment** value: **value** Optional
 attribute: **creation_date_time** value: **value** Optional
 attribute: **file_name** value: **value**
 attribute: **file_size** value: **value** Optional
 attribute: **maximum_record_bytes** value: **value** Optional
 attribute: **md5_checksum** value: **value** Optional
 attribute: **records** value: **value** Optional

- **End File**

- **Inventory_LID_Secondary Occurs 1 Times - Base_Class:Table_Base**

description: **The Inventory LID Secondary class defines the inventory for secondary members of a collection. The references are LIDs.**
 role: **Concrete**

attribute: **local_identifier** value: **value**
 attribute: **comment** value: **value** Optional
 attribute: **encoding_type** value: **CHARACTER**
 attribute: **fields** value: **1**
 attribute: **offset** value: **value**
 attribute: **record_length** value: **value**
 attribute: **records** value: **value**
 attribute: **reference_association_type** value: **has_member_LID_Secondary**

- **Table_Record_Inventory_LID_Secondary Occurs 1 Times**

description: **The Table Record Inventory LID Secondary class defines the inventory record for a secondary member. The reference is a LID.**
 role: **Concrete**

- **Table_Field_LID Occurs 1 Times**

description: **The Table_Field_LID class defines a table field that provides the logical identifier for a product.**

role: **Concrete**
 attribute: **name** value: **LID**
 attribute: **description** value: **value** Optional
 attribute: **field_number** value: **1** Optional
 attribute: **data_type** value: **ASCII_LID**
 attribute: **field_location** value: **1**
 attribute: **field_length** value: **value**
 attribute: **field_format** value: **value** Optional

- **End Table_Field_LID**

- **End Table_Record_Inventory_LID_Secondary**

- **End Inventory_LID_Secondary**

- **End File_Area_Inventory_LID_Secondary**

- **End Product_Collection**

- **Product_Collection_Data**

description: A Data collection is a product that has a table of references to one or more standard digital products.
role: Concrete

- Data_Standards Occurs 1 Times

description: The Data Standards class indicates the controlling standards for this product.
role: Concrete
attribute: **dd_version_id** value: *value*
attribute: **std_ref_version_id** value: *value*

- End Data_Standards

- Identification_Area_Collection Occurs 1 Times

description: The collection identification area consists of attributes that identify and name a collection.
role: Concrete
attribute: **logical_identifier** value: *value*
attribute: **version_id** value: *value*
attribute: **product_class** value: *value*
attribute: **title** value: *value*
attribute: **alternate_title** value: *value* Optional
attribute: **alternate_id** value: *value* Optional
attribute: **contains_primary_member** value: *value*
attribute: **last_modification_date_time** value: *value* Optional
attribute: **type** value: Browse, Calibration, Context, Data, Document, Geometry, Miscellaneous, SPICE, XML_Schema

- Subject_Area - Occurs 0 to 1 Times

description: The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.
role: Concrete

attribute: **target_name** value: *value* Optional
attribute: **instrument_name** value: *value* Optional
attribute: **instrument_host_name** value: *value* Optional
attribute: **keywords** value: *value* Optional
attribute: **full_name** value: *value* Optional
attribute: **investigation_name** value: *value* Optional
attribute: **observing_system_name** value: *value* Optional

- Name_Resolution - Occurs 0 to * Times

description: The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.

role: Concrete
attribute: **comment** value: *value* Optional
attribute: **name** value: *value*
attribute: **alternate_designation** value: *value* Optional
attribute: **lid_reference** value: *value* Optional
attribute: **type** value: *value*

- End Name_Resolution

- End Subject_Area

- End Identification_Area_Collection

- Cross_Reference_Area_Collection - Occurs 0 to 1 Times

description: The collection cross reference area provides references to associated registered products.
role: Concrete

- Observing_System - Occurs 0 to * Times

description: The Observing System class describes the entire suite used to collect the data.
role: Concrete
attribute: **local_identifier** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value*

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry_Collection - Occurs 0 to * Times**

description: **The Reference Entry Collection class provides a collection specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_associated_collection, has_investigation_collection, has_node_collection, has_publication_collection, has_target_collection, has_update_collection**

- **End Reference_Entry_Collection**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **End Cross_Reference_Area_Collection**

attribute: **processing_level_id** value: **CLB, DRV, RAW, RDC** Optional

- **File_Area_Inventory_LIDVID_Primary - Occurs 0 to 1 Times**

description: **The File Area Inventory LIDVID Primary class describes a file and an inventory with references to primary members. The references are product LIDVIDs.**

role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **comment** value: *value* Optional
attribute: **creation_date_time** value: *value* Optional
attribute: **file_name** value: *value*
attribute: **file_size** value: *value* Optional
attribute: **maximum_record_bytes** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **records** value: *value* Optional

- **End File**

- **Inventory_LIDVID_Primary Occurs 1 Times - Base_Class:Table_Base**

description: **The Inventory LIDVID Primary class defines the inventory for primary members of a collection.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **2**
attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*
attribute: **reference_association_type** value: **has_member_LIDVID_Primary**

- **Table_Record_Inventory_LIDVID_Primary Occurs 1 Times**

description: **The Table Record Inventory LIDVID Primary class defines the inventory record for a primary member.**

role: **Concrete**

- **Table_Field_LIDVID Occurs 1 Times**

description: **The Table Field LIDVID class defines a table field that provides the logical identifier and version identifier for a product.**

role: **Concrete**

attribute: **name** value: **LIDVID**
attribute: **description** value: *value* Optional
attribute: **field_number** value: **1**
attribute: **data_type** value: **ASCII_LIDVID**
attribute: **field_location** value: **1**
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional

- **End Table_Field_LIDVID**

- **Table_Field_File_Specification_Name Occurs 1 Times**

description: **The Table_Field_File_Specification_Name class defines a table field that provides a file name, file extension, and relative directory path to a product label.**

role: **Concrete**

attribute: **name** value: **file_specification_name**
attribute: **description** value: *value* Optional
attribute: **field_number** value: **2** Optional
attribute: **data_type** value: **ASCII_File_Specification_Name**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional

- **End Table_Field_File_Specification_Name**

- **End Table_Record_Inventory_LIDVID_Primary**

- **End Inventory_LIDVID_Primary**

- **End File_Area_Inventory_LIDVID_Primary**

- **File_Area_Inventory_LIDVID_Secondary - Occurs 0 to 1 Times**

description: **The File Area Inventory LIDVID Secondary class describes a file and an inventory with references to secondary members. The references are product LIDVIDs.**

role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** ^{Optional}

attribute: **comment** value: **value** ^{Optional}

attribute: **creation_date_time** value: **value** ^{Optional}

attribute: **file_name** value: **value**

attribute: **file_size** value: **value** ^{Optional}

attribute: **maximum_record_bytes** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **records** value: **value** ^{Optional}

- **End File**

- **Inventory_LIDVID_Secondary Occurs 1 Times - Base_Class:Table_Base**

description: **The Inventory LIDVID Secondary class defines the inventory for secondary members of a collection. The references are LIDVIDs.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** ^{Optional}

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **1**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

attribute: **reference_association_type** value: **has_member_LIDVID_Secondary**

- **Table_Record_Inventory_LIDVID_Secondary Occurs 1 Times**

description: **The Table Record Inventory LIDVID Secondary class defines the inventory record for a secondary member. The reference is a LIDVID.**

role: **Concrete**

- **Table_Field_LIDVID Occurs 1 Times**

description: **The Table Field LIDVID class defines a table field that provides the logical identifier and version identifier for a product.**

role: **Concrete**

attribute: **name** value: **LIDVID**

attribute: **description** value: **value** ^{Optional}

attribute: **field_number** value: **1**

attribute: **data_type** value: **ASCII_LIDVID**

attribute: **field_location** value: **1**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** ^{Optional}

- **End Table_Field_LIDVID**

- **End Table_Record_Inventory_LIDVID_Secondary**

- **End Inventory_LIDVID_Secondary**

- **End File_Area_Inventory_LIDVID_Secondary**

- **File_Area_Inventory_LID_Secondary - Occurs 0 to 1 Times**

description: **The File Area Inventory LID Secondary class describes a file and an inventory with references to secondary members. The references are product LIDs.**

role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** ^{Optional}

attribute: **comment** value: **value** ^{Optional}

attribute: **creation_date_time** value: **value** ^{Optional}

attribute: **file_name** value: **value**

attribute: **file_size** value: *value* Optional
attribute: **maximum_record_bytes** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **records** value: *value* Optional

- End File

- **Inventory_LID_Secondary Occurs 1 Times - Base_Class:Table_Base**

description: **The Inventory LID Secondary class defines the inventory for secondary members of a collection. The references are LIDs.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **1**

attribute: **offset** value: *value*

attribute: **record_length** value: *value*

attribute: **records** value: *value*

attribute: **reference_association_type** value: **has_member_LID_Secondary**

- **Table_Record_Inventory_LID_Secondary Occurs 1 Times**

description: **The Table Record Inventory LID Secondary class defines the inventory record for a secondary member. The reference is a LID.**

role: **Concrete**

- **Table_Field_LID Occurs 1 Times**

description: **The Table_Field_LID class defines a table field that provides the logical identifier for a product.**

role: **Concrete**

attribute: **name** value: **LID**

attribute: **description** value: *value* Optional

attribute: **field_number** value: **1** Optional

attribute: **data_type** value: **ASCII_LID**

attribute: **field_location** value: **1**

attribute: **field_length** value: *value*

attribute: **field_format** value: *value* Optional

- End Table_Field_LID

- End Table_Record_Inventory_LID_Secondary

- End Inventory_LID_Secondary

- End File_Area_Inventory_LID_Secondary

- End Product_Collection_Data

- **Product_Data_Set_PDS3**

description: **The Data Set PDS3 product is used to create proxy labels for the data sets in the PDS3 Data Set catalog.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- End Data_Standards

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: **value**
attribute: **alternate_title** value: **value** ^{Optional}
attribute: **alternate_id** value: **value** ^{Optional}
attribute: **last_modification_date_time** value: **value** ^{Optional}
attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** ^{Optional}
attribute: **instrument_name** value: **value** ^{Optional}
attribute: **instrument_host_name** value: **value** ^{Optional}
attribute: **keywords** value: **value** ^{Optional}
attribute: **full_name** value: **value** ^{Optional}
attribute: **investigation_name** value: **value** ^{Optional}
attribute: **observing_system_name** value: **value** ^{Optional}

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** ^{Optional}
attribute: **name** value: **value**
attribute: **alternate_designation** value: **value** ^{Optional}
attribute: **lid_reference** value: **value** ^{Optional}
attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**
role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}
attribute: **lidvid_reference** value: **value** ^{Optional}
attribute: **reference_association_type** value: **has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target**

- **End Reference_Entry_Context**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** ^{Optional}
attribute: **description** value: **value** ^{Optional}
attribute: **doi** value: **value** ^{Optional}
attribute: **reference_text** value: **value** ^{Optional}
attribute: **url** value: **value** ^{Optional}

- **End Bibliographic_Reference**

- **End Cross_Reference_Area_Context**

- **Data_Set_PDS3 Occurs 1 Times**

description: **The Data Set PDS3 class is used to capture the data set information from the PDS3 Data Set Catalog.**
role: **Concrete**

attribute: **data_set_id** value: *value*

attribute: **data_set_name** value: *value*

attribute: **data_set_release_date** value: *value*

attribute: **start_date_time** value: *value*

attribute: **stop_date_time** value: *value*

attribute: **producer_full_name** value: *value*

attribute: **citation_text** value: *value*

attribute: **data_set_terse_desc** value: *value*

attribute: **abstract_desc** value: *value*

attribute: **data_set_desc** value: *value*

attribute: **confidence_level_note** value: *value*

attribute: **archive_status** value: ARCHIVED, ARCHIVED_ACCUMULATING, IN_LIEN_RESOLUTION, IN_LIEN_RESOLUTION_ACCUMULATING, IN_PEER_REVIEW, IN_PEER_REVIEW_ACCUMULATING, IN_QUEUE, IN_QUEUE_ACCUMULATING, LOCALLY_ARCHIVED, LOCALLY_ARCHIVED_ACCUMULATING, PRE_PEER_REVIEW, PRE_PEER_REVIEW_ACCUMULATING, SAFED, SUPERSEDED

- **NSSDC - Occurs 0 to * Times**

description: **The NSSDC Information class provides identification information for data submitted to the NSSDC.**

role: **Concrete**

attribute: **medium_type** value: *value*

attribute: **nssdc_collection_id** value: *value*

- **End NSSDC**

- **End Data_Set_PDS3**

- **End Product_Data_Set_PDS3**

- **Product_Delimited_Table**

description: **The Product Delimited Table class defines a product consisting of at least one Delimited Table (Spreadsheet) and other associated data objects and metadata.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* ^{Optional}

attribute: **alternate_id** value: *value* ^{Optional}

attribute: **last_modification_date_time** value: *value* ^{Optional}

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* ^{Optional}

attribute: **instrument_name** value: *value* ^{Optional}

attribute: **instrument_host_name** value: **value** Optional
attribute: **keywords** value: **value** Optional
attribute: **full_name** value: **value** Optional
attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **alternate_designation** value: **value** Optional
attribute: **lid_reference** value: **value** Optional
attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **doi** value: **value** Optional
attribute: **reference_text** value: **value** Optional
attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional
attribute: **name** value: **value** Optional
attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}
attribute: **lidvid_reference** value: **value** ^{Optional}
attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**
- **End Observing_System_Component**
- **End Observing_System**

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- **End Reference_Entry_Product**
- **End Cross_Reference_Area_Product**

- **Observation_Area Occurs 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- **End Mission_Area**

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- **End Node_Area**

attribute: **comment** value: **value** ^{Optional}

attribute: **start_date_time** value: **value**

attribute: **stop_date_time** value: **value**

attribute: **local_mean_solar_time** value: **value** ^{Optional}

attribute: **local_true_solar_time** value: **value** ^{Optional}

attribute: **mission_phase_name** value: **value** ^{Optional}

attribute: **orbit_number** value: **value** ^{Optional}

attribute: **planet_day_number** value: **value** ^{Optional}

attribute: **solar_longitude** value: **value** ^{Optional}

attribute: **spacecraft_clock_count_partition** value: **value** ^{Optional}

attribute: **spacecraft_clock_start_count** value: **value** ^{Optional}

attribute: **spacecraft_clock_stop_count** value: **value** ^{Optional}

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**

role: **Concrete**

attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **name** value: *value*
attribute: **description** value: *value*
attribute: **type** value: POSITION, VELOCITY
attribute: **vector_components** value: *value*

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**
role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional
attribute: **value** value: *value*

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area_Observational - Occurs 1 to * Times**

description: **The File Area Observational class describes, for an observational product, a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**

attribute: **local_identifier** value: *value* Optional
attribute: **comment** value: *value* Optional
attribute: **creation_date_time** value: *value* Optional
attribute: **file_name** value: *value*
attribute: **file_size** value: *value* Optional
attribute: **maximum_record_bytes** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **records** value: *value* Optional

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Image_2D_Display - Occurs 0 to 1 Times**

description: **The Image_2D_Display class provides attributes to enable the display of a 2D image.**

role: **Concrete**

attribute: **first_line** value: **value** ^{Optional}

attribute: **first_line_sample** value: **value** ^{Optional}

attribute: **line_display_direction** value: **DOWN, LEFT, RIGHT, UP**

attribute: **sample_display_direction** value: **DOWN, LEFT, RIGHT, UP**

- **End Image_2D_Display**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**
attribute: **error_constant** value: *value* ^{Optional}
attribute: **invalid_constant** value: *value* ^{Optional}
attribute: **missing_constant** value: *value* ^{Optional}
attribute: **not_applicable_constant** value: *value* ^{Optional}
attribute: **saturated_constant** value: *value* ^{Optional}
attribute: **unknown_constant** value: *value* ^{Optional}

- **End Special_Constants**
- **End Array_2D_Image**
- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**
role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* ^{Optional}
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**
attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**
attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: *value* ^{Optional}
attribute: **value_offset** value: *value* ^{Optional}
attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography**

classes.
role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Map**

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** ^{Optional}

attribute: **not_applicable_constant** value: **value** ^{Optional}

attribute: **saturated_constant** value: **value** ^{Optional}

attribute: **unknown_constant** value: **value** ^{Optional}

- **End Special_Constants**

- **End Array_2D_Spectrum**

- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: The **Array 3D Image** class is an extension of **array_base** and defines a three dimensional

image.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Array_3D_Image

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The Object Statistics class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}

attribute: **invalid_constant** value: *value* ^{Optional}

attribute: **missing_constant** value: *value* ^{Optional}

attribute: **not_applicable_constant** value: *value* ^{Optional}

attribute: **saturated_constant** value: *value* ^{Optional}

attribute: **unknown_constant** value: *value* ^{Optional}

- End Special_Constants

- End Array_3D_Movie

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: FIRST_INDEX_FASTEST

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: BINARY

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: The Array Axis class is used as a component of the array class and defines an axis of the array.

role: **Concrete**
attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* Optional

attribute: **value_offset** value: *value* Optional

attribute: **unit** value: *value* Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* Optional

attribute: **maximum** value: *value* Optional

attribute: **md5_checksum** value: *value* Optional

attribute: **mean** value: *value* Optional

attribute: **median** value: *value* Optional

attribute: **minimum** value: *value* Optional

attribute: **sample_bit_mask** value: *value* Optional

attribute: **standard_deviation** value: *value* Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants
- End Array_3D_Spectrum
- **Delimited_Table - Occurs 0 to * Times**

description: The **Delimited_Table** class defines a simple table (spreadsheet) with delimited fields and records.

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x2C, 0x3B, 0x7C**
attribute: **fields** value: **value**
attribute: **maximum_record_length** value: **value**
attribute: **offset** value: **value**
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: **value**

- **Delimited_Record Occurs 1 Times**

description: The **Delimited Record** class is a component of the delimited table (spreadsheet) class and defines a record of the delimited table.

role: **Concrete**

- **Delimited_Field - Occurs 1 to * Times**

description: The **Delimited Field** class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: The **Field Statistics** class provides a set of metrics for a column formed by a field in a repeating record.

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: Concrete

attribute: **error_constant** value: *value* Optional

attribute: **invalid_constant** value: *value* Optional

attribute: **missing_constant** value: *value* Optional

attribute: **not_applicable_constant** value: *value* Optional

attribute: **saturated_constant** value: *value* Optional

attribute: **unknown_constant** value: *value* Optional

- End Special_Constants

- End Delimited_Field

- End Delimited_Record

- End Delimited_Table

- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.

role: Concrete

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: CHARACTER

attribute: **external_standard_id** value: CSV, OTHER

attribute: **field_delimiter** value: 0x09, 0x2C, 0x3B, 0x7C

attribute: **fields** value: *value*

attribute: **maximum_record_length** value: *value*

attribute: **offset** value: *value*

attribute: **record_delimiter** value: 0x0A, 0x0D, 0x0D0x0A

attribute: **records** value: *value*

- **Delimited_Record_Grouped Occurs 1 Times**

description: The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.

role: Concrete

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.

role: Concrete

attribute: **repetitions** value: *value* Optional

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.

role: Concrete

- **Delimited_Field - Occurs 0 to * Times**

description: The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: Concrete

attribute: **name** value: *value*

attribute: **description** value: *value* Optional

attribute: **field_number** value: *value* Optional

attribute: **data_type** value: ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer,

ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR**

attribute: **offset** value: **value**

- **End Header**

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** ^{Optional}
attribute: **description** value: **value** ^{Optional}
attribute: **bytes** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**
attribute: **offset** value: **value**

- **End Header_Binary**

- **Parsable_Byte_Stream - Occurs 0 to * Times**

description: **The Parsable Byte Stream class defines byte streams that have standard parsing rules. The Parsable Byte Stream class is the parent class for all parsable byte streams.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Parsable_Byte_Stream**

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Stream_Text**

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**

role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2,**

SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**
attribute: **last_sampling_parameter_value** value: **value**
attribute: **sampling_parameter_interval** value: **value**
attribute: **sampling_parameter_name** value: **value**
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional
attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Binary**

- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**

attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.
role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.
role: **Concrete**
attribute: **repetitions** value: *value* Optional

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.
role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **Bit**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional
attribute: **bit_mask** value: *value* Optional
attribute: **bits** value: *value*
attribute: **scaling_factor** value: *value* Optional
attribute: **start_bit** value: *value*
attribute: **value_offset** value: *value* Optional
attribute: **unit** value: *value* Optional

- **End Table_Binary_Grouped_Bit_Field**

- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional

attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- End Table_Binary_Grouped_Field
- End Table_Binary_Field_Sequence
- End Table_Binary_Grouped_Sequence
- End Table_Record_Binary_Grouped
- End Table_Binary_Grouped
- **Table_Character - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character class is an extension of table base and defines a simple character table.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character Occurs 1 Times**

description: **The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.**
role: **Concrete**

- **Table_Character_Field - Occurs 1 to * Times**

description: **The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.**
role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** ^{Optional}
attribute: **minimum_scaled_value** value: **value** ^{Optional}
attribute: **maximum_scaled_value** value: **value** ^{Optional}
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Character_Field**

- **End Table_Record_Character**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: **value**

attribute: **sampling_parameter_interval** value: **value**

attribute: **sampling_parameter_name** value: **value**

attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional

attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Character**

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character Grouped class is an extension of table base and defines a simple character table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **value**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

- **Table_Record_Character_Grouped Occurs 1 Times**

description: **The Table Record Character Grouped class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.**

role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Character Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** Optional

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: **The Table Character Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: **The Table Character Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.**

role: **Concrete**

attribute: **name** value: **value**
 attribute: **description** value: **value** Optional
 attribute: **field_number** value: **value** Optional
 attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
 attribute: **field_location** value: **value**
 attribute: **field_length** value: **value**
 attribute: **field_format** value: **value** Optional
 attribute: **minimum_scaled_value** value: **value** Optional
 attribute: **maximum_scaled_value** value: **value** Optional
 attribute: **scaling_factor** value: **value** Optional
 attribute: **value_offset** value: **value** Optional
 attribute: **unit** value: **value** Optional

- End Table_Character_Grouped_Field
 - End Table_Character_Field_Sequence
 - End Table_Character_Grouped_Sequence
 - End Table_Record_Character_Grouped
 - End Table_Character_Grouped
 - End File_Area_Observational
 - End Product_Delimited_Table
-

• Product_Delimited_Table_Grouped

description: **The Product Delimited Table Grouped class defines a product consisting one delimited table with groups of repeating fields.**

role: **Concrete**

• Data_Standards Occurs 1 Times

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

• End Data_Standards

• Identification_Area_Product Occurs 1 Times

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: **value** Optional

attribute: **last_modification_date_time** value: **value** Optional

attribute: **type** value: **value**

• Subject_Area - Occurs 0 to 1 Times

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- End Name_Resolution
- End Subject_Area
- End Identification_Area_Product

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- End Bibliographic_Reference

- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination,**

**Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope,
Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- End Reference_Entry_Observing_System_Component
- End Observing_System_Component
- End Observing_System

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- End Reference_Entry_Product
- End Cross_Reference_Area_Product

- **Observation_Area Occurs 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- End Mission_Area

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- End Node_Area

attribute: **comment** value: **value** Optional

attribute: **start_date_time** value: **value**

attribute: **stop_date_time** value: **value**

attribute: **local_mean_solar_time** value: **value** Optional

attribute: **local_true_solar_time** value: **value** Optional

attribute: **mission_phase_name** value: **value** Optional

attribute: **orbit_number** value: **value** Optional

attribute: **planet_day_number** value: **value** Optional

attribute: **solar_longitude** value: **value** Optional

attribute: **spacecraft_clock_count_partition** value: **value** Optional

attribute: **spacecraft_clock_start_count** value: **value** Optional

attribute: **spacecraft_clock_stop_count** value: **value** Optional

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**

role: **Concrete**

attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **name** value: **value**

attribute: **description** value: *value*
attribute: **type** value: **POSITION, VELOCITY**
attribute: **vector_components** value: *value*

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**
role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional
attribute: **value** value: *value*

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area_Observational - Occurs 1 to * Times**

description: **The File Area Observational class describes, for an observational product, a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**

attribute: **local_identifier** value: *value* Optional
attribute: **comment** value: *value* Optional
attribute: **creation_date_time** value: *value* Optional
attribute: **file_name** value: *value*
attribute: **file_size** value: *value* Optional
attribute: **maximum_record_bytes** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **records** value: *value* Optional

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**
- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

 - **End Band_Bin_Set**
- **End Array_Axis**
- **Image_2D_Display - Occurs 0 to 1 Times**

description: **The Image_2D_Display class provides attributes to enable the display of a 2D image.**
role: **Concrete**
attribute: **first_line** value: **value** ^{Optional}
attribute: **first_line_sample** value: **value** ^{Optional}
attribute: **line_display_direction** value: **DOWN, LEFT, RIGHT, UP**
attribute: **sample_display_direction** value: **DOWN, LEFT, RIGHT, UP**
- **End Image_2D_Display**
- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**
role: **Concrete**
attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}
- **End Array_Element**
- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**
role: **Concrete**
- **End Cartography**
- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **md5_checksum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **sample_bit_mask** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}
- **End Object_Statistics**
- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**
role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**
- **End Array_2D_Image**
- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Map**

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.
role: **Concrete**

- End Band_Bin_Set

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- **End Array_2D_Spectrum**

- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: The **Array 3D Image** class is an extension of **array_base** and defines a three dimensional

image.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* Optional
attribute: **median** value: *value* Optional
attribute: **minimum** value: *value* Optional
attribute: **sample_bit_mask** value: *value* Optional
attribute: **standard_deviation** value: *value* Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: *value* Optional
attribute: **invalid_constant** value: *value* Optional
attribute: **missing_constant** value: *value* Optional
attribute: **not_applicable_constant** value: *value* Optional
attribute: **saturated_constant** value: *value* Optional
attribute: **unknown_constant** value: *value* Optional

- End Special_Constants

- End Array_3D_Image

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The Object Statistics class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}

attribute: **invalid_constant** value: *value* ^{Optional}

attribute: **missing_constant** value: *value* ^{Optional}

attribute: **not_applicable_constant** value: *value* ^{Optional}

attribute: **saturated_constant** value: *value* ^{Optional}

attribute: **unknown_constant** value: *value* ^{Optional}

- End Special_Constants

- End Array_3D_Movie

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: FIRST_INDEX_FASTEST

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: BINARY

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: The Array Axis class is used as a component of the array class and defines an axis of the array.

role: **Concrete**
attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: The **Axis_Display** class is a placeholder for a soon forthcoming Imaging class.
role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.
role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* Optional

attribute: **value_offset** value: *value* Optional

attribute: **unit** value: *value* Optional

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* Optional

attribute: **maximum** value: *value* Optional

attribute: **md5_checksum** value: *value* Optional

attribute: **mean** value: *value* Optional

attribute: **median** value: *value* Optional

attribute: **minimum** value: *value* Optional

attribute: **sample_bit_mask** value: *value* Optional

attribute: **standard_deviation** value: *value* Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**
- **End Array_3D_Spectrum**
- **Delimited_Table - Occurs 0 to * Times**

description: **The Delimited_Table class defines a simple table (spreadsheet) with delimited fields and records.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x2C, 0x3B, 0x7C**
attribute: **fields** value: **value**
attribute: **maximum_record_length** value: **value**
attribute: **offset** value: **value**
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: **value**

- **Delimited_Record Occurs 1 Times**

description: **The Delimited Record class is a component of the delimited table (spreadsheet) class and defines a record of the delimited table.**

role: **Concrete**

- **Delimited_Field - Occurs 1 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: Concrete

attribute: **error_constant** value: *value* Optional

attribute: **invalid_constant** value: *value* Optional

attribute: **missing_constant** value: *value* Optional

attribute: **not_applicable_constant** value: *value* Optional

attribute: **saturated_constant** value: *value* Optional

attribute: **unknown_constant** value: *value* Optional

- End Special_Constants

- End Delimited_Field

- End Delimited_Record

- End Delimited_Table

- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.

role: Concrete

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: CHARACTER

attribute: **external_standard_id** value: CSV, OTHER

attribute: **field_delimiter** value: 0x09, 0x2C, 0x3B, 0x7C

attribute: **fields** value: *value*

attribute: **maximum_record_length** value: *value*

attribute: **offset** value: *value*

attribute: **record_delimiter** value: 0x0A, 0x0D, 0x0D0x0A

attribute: **records** value: *value*

- **Delimited_Record_Grouped Occurs 1 Times**

description: The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.

role: Concrete

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.

role: Concrete

attribute: **repetitions** value: *value* Optional

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.

role: Concrete

- **Delimited_Field - Occurs 0 to * Times**

description: The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: Concrete

attribute: **name** value: *value*

attribute: **description** value: *value* Optional

attribute: **field_number** value: *value* Optional

attribute: **data_type** value: ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer,

ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR**

attribute: **offset** value: **value**

- **End Header**

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **bytes** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**
attribute: **offset** value: **value**

- **End Header_Binary**

- **Parsable_Byte_Stream - Occurs 0 to * Times**

description: **The Parsable Byte Stream class defines byte streams that have standard parsing rules. The Parsable Byte Stream class is the parent class for all parsable byte streams.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Parsable_Byte_Stream**

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Stream_Text**

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**

role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2,**

SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**
attribute: **last_sampling_parameter_value** value: **value**
attribute: **sampling_parameter_interval** value: **value**
attribute: **sampling_parameter_name** value: **value**
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional
attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Binary**

- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**

attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.
role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.
role: **Concrete**
attribute: **repetitions** value: *value* Optional

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.
role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **Bit**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional
attribute: **bit_mask** value: *value* Optional
attribute: **bits** value: *value*
attribute: **scaling_factor** value: *value* Optional
attribute: **start_bit** value: *value*
attribute: **value_offset** value: *value* Optional
attribute: **unit** value: *value* Optional

- **End Table_Binary_Grouped_Bit_Field**

- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.

role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional

attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- End Table_Binary_Grouped_Field
- End Table_Binary_Field_Sequence
- End Table_Binary_Grouped_Sequence
- End Table_Record_Binary_Grouped
- End Table_Binary_Grouped
- **Table_Character - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character class is an extension of table base and defines a simple character table.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character Occurs 1 Times**

description: **The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.**
role: **Concrete**

- **Table_Character_Field - Occurs 1 to * Times**

description: **The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.**
role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** ^{Optional}
attribute: **minimum_scaled_value** value: **value** ^{Optional}
attribute: **maximum_scaled_value** value: **value** ^{Optional}
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Character_Field**

- **End Table_Record_Character**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: **value**

attribute: **sampling_parameter_interval** value: **value**

attribute: **sampling_parameter_name** value: **value**

attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional

attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Character**

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character Grouped class is an extension of table base and defines a simple character table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **value**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

- **Table_Record_Character_Grouped Occurs 1 Times**

description: **The Table Record Character Grouped class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.**

role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Character Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** Optional

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: **The Table Character Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: **The Table Character Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.**

role: **Concrete**

attribute: **name** value: **value**
 attribute: **description** value: **value** Optional
 attribute: **field_number** value: **value** Optional
 attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
 attribute: **field_location** value: **value**
 attribute: **field_length** value: **value**
 attribute: **field_format** value: **value** Optional
 attribute: **minimum_scaled_value** value: **value** Optional
 attribute: **maximum_scaled_value** value: **value** Optional
 attribute: **scaling_factor** value: **value** Optional
 attribute: **value_offset** value: **value** Optional
 attribute: **unit** value: **value** Optional

- End Table_Character_Grouped_Field
 - End Table_Character_Field_Sequence
 - End Table_Character_Grouped_Sequence
 - End Table_Record_Character_Grouped
 - End Table_Character_Grouped
 - End File_Area_Observational
 - End Product_Delimited_Table_Grouped
-

• Product_Delivery_Manifest

description: **The Product Delivery Manifest is class that defines a system product that contains a table of references to one or more files.**

role: **Concrete**

• Data_Standards Occurs 1 Times

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

• End Data_Standards

• Identification_Area_Manifest Occurs 1 Times

description: **The manifest identification area consists of attributes that identify and name a manifest.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: **value** Optional

attribute: **last_modification_date_time** value: **value** Optional

attribute: **type** value: **value**

• Subject_Area - Occurs 0 to 1 Times

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Manifest**

- **Cross_Reference_Area_Manifest - Occurs 0 to 1 Times**

description: **The manifest cross reference area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_association, member_of**

- **End Reference_Entry**

- **End Cross_Reference_Area_Manifest**

- **File_Area_Delivery_Manifest Occurs 1 Times**

description: **The File_Area_Delivery_Manifest class describes a file that contains a character table that is compliant to a file generated from MD5 checksum software.**

role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **comment** value: **value** Optional

attribute: **creation_date_time** value: **value** Optional

attribute: **file_name** value: **value**

attribute: **file_size** value: **value** Optional

attribute: **maximum_record_bytes** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **records** value: **value** Optional

- End File

- **Delivery_Manifest Occurs 1 Times**

description: **The Delivery_Manifest class defines a two column table for file references. The table structure is compatible with the output from an MD5 checksum utility.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **2**

attribute: **offset** value: *value*

attribute: **record_length** value: *value*

attribute: **records** value: *value*

attribute: **reference_association_type** value: **has_member** Optional

- **Table_Record_Manifest Occurs 1 Times**

description: **The Table Record Manifest class defines the record for an MD5 checksum manifest table.**

role: **Concrete**

- **Table_Field_Checksum Occurs 1 Times**

description: **The Table Field Checksum class defines a table field that provides a file checksum.**

role: **Concrete**

attribute: **name** value: **MD5_checksum**

attribute: **description** value: *value* Optional

attribute: **field_number** value: *value* Optional

attribute: **data_type** value: **ASCII_MD5_Checksum**

attribute: **field_location** value: *value*

attribute: **field_length** value: *value*

attribute: **field_format** value: *value* Optional

- End Table_Field_Checksum

- **Table_Field_File_Specification_Name Occurs 1 Times**

description: **The Table_Field_File_Specification_Name class defines a table field that provides a file name, file extension, and relative directory path to a product label.**

role: **Concrete**

attribute: **name** value: **file_specification_name**

attribute: **description** value: *value* Optional

attribute: **field_number** value: **2** Optional

attribute: **data_type** value: **ASCII_File_Specification_Name**

attribute: **field_location** value: *value*

attribute: **field_length** value: *value*

attribute: **field_format** value: *value* Optional

- End Table_Field_File_Specification_Name

- End Table_Record_Manifest

- End Delivery_Manifest

- End File_Area_Delivery_Manifest

- End Product_Delivery_Manifest

- **Product_Document**

description: **A Product Document is a product consisting of a single logical document that may be comprised of one or more document formats.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area_Document Occurs 1 Times**

description: **The document identification area consists of attributes that identify and name a document product.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* ^{Optional}

attribute: **alternate_id** value: *value* ^{Optional}

attribute: **last_modification_date_time** value: *value* ^{Optional}

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* ^{Optional}

attribute: **instrument_name** value: *value* ^{Optional}

attribute: **instrument_host_name** value: *value* ^{Optional}

attribute: **keywords** value: *value* ^{Optional}

attribute: **full_name** value: *value* ^{Optional}

attribute: **investigation_name** value: *value* ^{Optional}

attribute: **observing_system_name** value: *value* ^{Optional}

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* ^{Optional}

attribute: **name** value: *value*

attribute: **alternate_designation** value: *value* ^{Optional}

attribute: **lid_reference** value: *value* ^{Optional}

attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Document**

- **Cross_Reference_Area_Document - Occurs 0 to 1 Times**

description: **The document cross reference area provides references to associated registered products.**

role: **Concrete**

- **Observing_System - Occurs 0 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: *value* ^{Optional}

attribute: **name** value: *value* ^{Optional}

attribute: **description** value: *value*

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: *value* ^{Optional}

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_association, member_of**

- **End Reference_Entry**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **End Cross_Reference_Area_Document**

- **Document_Format_Set - Occurs 1 to * Times**

description: **The Document Format Set class is a set consisting of a document format and associated files.**

role: **Concrete**

- **Document_File - Occurs 1 to * Times**

description: **The Document File class describes a file which is a part of a document.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **comment** value: **value** Optional

attribute: **creation_date_time** value: **value** Optional

attribute: **directory_path_name** value: **value** Optional

attribute: **encoding_type** value: **BINARY, CHARACTER**

attribute: **external_standard_id** value: **ENCAPSULATED_POSTSCRIPT, GIF, HTML, JPG, LaTeX, MICROSOFT_WORD, PDF, PDF-A, PNG, POSTSCRIPT, RICH_TEXT, TEXT, TIFF**

attribute: **file_name** value: **value**

attribute: **file_size** value: **value** Optional

attribute: **maximum_record_bytes** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **records** value: **value** Optional

- End Document_File

- **Document_Format Occurs 1 Times**

description: **The Document Format provides a description of a variant of a logical document that is stored in a specific format. For example the PDS Standards Reference has HTML and PDF formatted versions.**

role: **Concrete**

attribute: **description** value: *value* Optional

attribute: **format_type** value: HTML, PDF, PDF-A, TEXT

attribute: **starting_point_identifier** value: *value* Optional

- End Document_Format
- End Document_Format_Set

- **Document_Desc Occurs 1 Times**

description: **The Document_Desc class describes a document.**

role: **Concrete**

attribute: **document_name** value: *value* Optional

attribute: **description** value: *value* Optional

attribute: **acknowledgement_text** value: *value* Optional

attribute: **author_list** value: *value* Optional

attribute: **copyright** value: *value* Optional

attribute: **doi** value: *value* Optional

attribute: **editor_list** value: *value* Optional

attribute: **publication_date** value: *value* Optional

attribute: **revision_id** value: *value* Optional

- End Document_Desc
 - End Product_Document
-

- **Product_File_Repository**

description: **The Product File Repository class consists of a single text file. This product is used to register a file in a repository.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- End Data_Standards

- **Identification_Area Occurs 1 Times**

description: **The identification area consists of attributes that identify and name an object.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* Optional

attribute: **alternate_id** value: *value* Optional

attribute: **last_modification_date_time** value: *value* Optional

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional

attribute: **instrument_name** value: **value** Optional
attribute: **instrument_host_name** value: **value** Optional
attribute: **keywords** value: **value** Optional
attribute: **full_name** value: **value** Optional
attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **alternate_designation** value: **value** Optional
attribute: **lid_reference** value: **value** Optional
attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area**

- **Cross_Reference_Area - Occurs 0 to 1 Times**

description: **The cross reference area provides references to associated registered products.**

role: **Concrete**

- **Observing_System - Occurs 0 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional
attribute: **name** value: **value** Optional
attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional
attribute: **lidvid_reference** value: **value** Optional
attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference.**

The reference is to a product.

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_association, member_of**

- **End Reference_Entry**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **End Cross_Reference_Area**

- **File_Area_Binary Occurs 1 Times**

description: **The File Area Binary class describes a file that contains an encoded byte stream.**

role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **comment** value: **value** Optional

attribute: **creation_date_time** value: **value** Optional

attribute: **file_name** value: **value**

attribute: **file_size** value: **value** Optional

attribute: **maximum_record_bytes** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **records** value: **value** Optional

- **End File**

- **Encoded_Binary - Occurs 0 to * Times**

description: **The Encoded Binary class describes a binary encoded byte stream. This class is used to describe files in the repository that are being registered using Product_File_Repository.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **BINARY**

attribute: **external_standard_id** value: **System**

attribute: **offset** value: **value**

- **End Encoded_Binary**

- **End File_Area_Binary**

- **End Product_File_Repository**
-

- **Product_File_Text**

description: **The Product File Text consists of a single text file with ASCII character encoding.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**
attribute: **dd_version_id** value: *value*
attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area Occurs 1 Times**

description: **The identification area consists of attributes that identify and name an object.**

role: **Concrete**

attribute: **logical_identifier** value: *value*
attribute: **version_id** value: *value*
attribute: **product_class** value: *value*
attribute: **title** value: *value*
attribute: **alternate_title** value: *value* Optional
attribute: **alternate_id** value: *value* Optional
attribute: **last_modification_date_time** value: *value* Optional
attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional
attribute: **instrument_name** value: *value* Optional
attribute: **instrument_host_name** value: *value* Optional
attribute: **keywords** value: *value* Optional
attribute: **full_name** value: *value* Optional
attribute: **investigation_name** value: *value* Optional
attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional
attribute: **name** value: *value*
attribute: **alternate_designation** value: *value* Optional
attribute: **lid_reference** value: *value* Optional
attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area**

- **Cross_Reference_Area - Occurs 0 to 1 Times**

description: **The cross reference area provides references to associated registered products.**

role: **Concrete**

- **Observing_System - Occurs 0 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value*

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: *value* ^{Optional}

attribute: **name** value: *value*

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: *value* ^{Optional}

attribute: **lidvid_reference** value: *value* ^{Optional}

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: *value* ^{Optional}

attribute: **lidvid_reference** value: *value* ^{Optional}

attribute: **reference_association_type** value: **has_association, member_of**

- **End Reference_Entry**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: *value* ^{Optional}

attribute: **description** value: *value* ^{Optional}

attribute: **doi** value: *value* ^{Optional}

attribute: **reference_text** value: *value* ^{Optional}

attribute: **url** value: *value* ^{Optional}

- **End Bibliographic_Reference**

- **End Cross_Reference_Area**

- **File_Area_Text Occurs 1 Times**

description: **The File Area Text class describes a file that contains a text stream object.**

role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: *value* ^{Optional}

attribute: **comment** value: *value* ^{Optional}

attribute: **creation_date_time** value: *value* ^{Optional}

attribute: **file_name** value: *value*

attribute: **file_size** value: *value* ^{Optional}

attribute: **maximum_record_bytes** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **records** value: *value* ^{Optional}

- **End File**

- **Stream_Text Occurs 1 Times**

description: **The Stream text class defines a text file.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: *value*

attribute: **offset** value: *value*

- **End Stream_Text**

- **End File_Area_Text**

- **End Product_File_Text**

- **Product_Instrument**

description: **An Instrument product describes an instrument.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* Optional

attribute: **alternate_id** value: *value* Optional

attribute: **last_modification_date_time** value: *value* Optional

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional

attribute: **instrument_name** value: *value* Optional

attribute: **instrument_host_name** value: *value* Optional

attribute: **keywords** value: *value* Optional

attribute: **full_name** value: *value* Optional

attribute: **investigation_name** value: *value* Optional

attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional

attribute: **name** value: *value*

attribute: **alternate_designation** value: *value* Optional

attribute: **lid_reference** value: *value* Optional

attribute: **type** value: *value*

- **End Name_Resolution**

- End Subject_Area
- End Identification_Area_Product

- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**
 role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target**

- End Reference_Entry_Context

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- End Cross_Reference_Area_Context

- **Instrument Occurs 1 Times**

description: **The Instrument class provides a description of a physical object that collects data.**

role: **Concrete**

attribute: **version_id** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

attribute: **naif_instrument_id** value: **value** Optional

attribute: **serial_number** value: **value** Optional

- End Instrument
- End Product_Instrument

- **Product_Instrument_Host**

description: **An Instrument Host product describes an instrument host.**
 role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- End Data_Standards

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**
attribute: **logical_identifier** value: **value**
attribute: **version_id** value: **value**
attribute: **product_class** value: **value**
attribute: **title** value: **value**
attribute: **alternate_title** value: **value** Optional
attribute: **alternate_id** value: **value** Optional
attribute: **last_modification_date_time** value: **value** Optional
attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional
attribute: **instrument_name** value: **value** Optional
attribute: **instrument_host_name** value: **value** Optional
attribute: **keywords** value: **value** Optional
attribute: **full_name** value: **value** Optional
attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **alternate_designation** value: **value** Optional
attribute: **lid_reference** value: **value** Optional
attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**

role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional
attribute: **lidvid_reference** value: **value** Optional
attribute: **reference_association_type** value: **has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target**

- **End Reference_Entry_Context**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **doi** value: **value** Optional
attribute: **reference_text** value: **value** Optional
attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- End Cross_Reference_Area_Context

- **Instrument_Host Occurs 1 Times**

description: **The Instrument Host class provides a description of the physical object upon which an instrument is mounted.**

role: **Concrete**

attribute: **version_id** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

attribute: **naif_host_id** value: **value** Optional

attribute: **serial_number** value: **value** Optional

- End Instrument_Host
 - End Product_Instrument_Host
-

- **Product_Instrument_Host_PDS3**

description: **An Instrument Host product describes an instrument host. This product captures the PDS3 catalog instrument host information.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- End Data_Standards

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: **value** Optional

attribute: **last_modification_date_time** value: **value** Optional

attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional

attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional
attribute: **lid_reference** value: **value** Optional
attribute: **type** value: **value**

- End Name_Resolution
- End Subject_Area
- End Identification_Area_Product
- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**
role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target**

- End Reference_Entry_Context

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- End Bibliographic_Reference

- End Cross_Reference_Area_Context

- **Instrument_Host_PDS3 Occurs 1 Times**

description: **The Instrument Host class provides a description of the physical object upon which an instrument is mounted. This class captures the PDS3 catalog Instrument Host information.**

role: **Concrete**

attribute: **instrument_host_name** value: **value**

attribute: **instrument_host_desc** value: **value**

attribute: **instrument_host_id** value: **value**

attribute: **instrument_host_type** value: **value**

- End Instrument_Host_PDS3

- End Product_Instrument_Host_PDS3
-

- **Product_Instrument_PDS3**

description: **An Instrument product describes an instrument. This product captures the PDS3 catalog instrument information.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- End Data_Standards

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* Optional

attribute: **alternate_id** value: *value* Optional

attribute: **last_modification_date_time** value: *value* Optional

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional

attribute: **instrument_name** value: *value* Optional

attribute: **instrument_host_name** value: *value* Optional

attribute: **keywords** value: *value* Optional

attribute: **full_name** value: *value* Optional

attribute: **investigation_name** value: *value* Optional

attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional

attribute: **name** value: *value*

attribute: **alternate_designation** value: *value* Optional

attribute: **lid_reference** value: *value* Optional

attribute: **type** value: *value*

- End Name_Resolution

- End Subject_Area

- End Identification_Area_Product

- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**

role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: *value* Optional

attribute: **lidvid_reference** value: *value* Optional

attribute: **reference_association_type** value: *has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target*

- End Reference_Entry_Context

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **doi** value: **value** Optional
attribute: **reference_text** value: **value** Optional
attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- End Cross_Reference_Area_Context
- **Instrument_PDS3 Occurs 1 Times**

description: **The Instrument class provides a description of a physical object that collects data. This class captures the PDS3 catalog Instrument information.**

role: **Concrete**

attribute: **instrument_name** value: **value**
attribute: **instrument_desc** value: **value**
attribute: **instrument_id** value: **value**
attribute: **instrument_serial_number** value: **value**
attribute: **instrument_type** value: **value**
attribute: **instrument_version_id** value: **value**

- End Instrument_PDS3
 - End Product_Instrument_PDS3
-

• **Product_Investigation**

description: **The Investigation product describes an investigation.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**
attribute: **std_ref_version_id** value: **value**

- End Data_Standards
- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: **value**
attribute: **version_id** value: **value**
attribute: **product_class** value: **value**
attribute: **title** value: **value**
attribute: **alternate_title** value: **value** Optional
attribute: **alternate_id** value: **value** Optional
attribute: **last_modification_date_time** value: **value** Optional
attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional
attribute: **instrument_name** value: **value** Optional
attribute: **instrument_host_name** value: **value** Optional
attribute: **keywords** value: **value** Optional
attribute: **full_name** value: **value** Optional
attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- End Name_Resolution
- End Subject_Area
- End Identification_Area_Product
- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**
role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target**

- End Reference_Entry_Context
- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- End Cross_Reference_Area_Context
- **Investigation Occurs 1 Times**

description: **The Investigation class is the abstract parent class for all activities involved in the collection of data.**
role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

attribute: **start_date** value: **value**

attribute: **stop_date** value: **value**

- End Investigation
 - End Product_Investigation
-

• **Product_Mission**

description: **An Mission product describes a mission.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**
attribute: **dd_version_id** value: *value*
attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: *value*
attribute: **version_id** value: *value*
attribute: **product_class** value: *value*
attribute: **title** value: *value*
attribute: **alternate_title** value: *value* Optional
attribute: **alternate_id** value: *value* Optional
attribute: **last_modification_date_time** value: *value* Optional
attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional
attribute: **instrument_name** value: *value* Optional
attribute: **instrument_host_name** value: *value* Optional
attribute: **keywords** value: *value* Optional
attribute: **full_name** value: *value* Optional
attribute: **investigation_name** value: *value* Optional
attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional
attribute: **name** value: *value*
attribute: **alternate_designation** value: *value* Optional
attribute: **lid_reference** value: *value* Optional
attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**

role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: *value* Optional
attribute: **lidvid_reference** value: *value* Optional
attribute: **reference_association_type** value: *has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target*

- **End Reference_Entry_Context**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**
- **End Cross_Reference_Area_Context**

- **Mission Occurs 1 Times**

description: **The Mission class describes an activity involved in the collection of data.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

attribute: **start_date** value: **value**

attribute: **stop_date** value: **value**

- **End Mission**
 - **End Product_Mission**
-

- **Product_Mission_PDS3**

description: **An Mission product describes a mission. This product captures the PDS3 catalog mission information.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: **value** Optional

attribute: **last_modification_date_time** value: **value** Optional

attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional

attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** ^{Optional}

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** ^{Optional}

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **type** value: **value**

- End Name_Resolution
- End Subject_Area
- End Identification_Area_Product
- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**

role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target**

- End Reference_Entry_Context
- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** ^{Optional}

attribute: **description** value: **value** ^{Optional}

attribute: **doi** value: **value** ^{Optional}

attribute: **reference_text** value: **value** ^{Optional}

attribute: **url** value: **value** ^{Optional}

- End Bibliographic_Reference
- End Cross_Reference_Area_Context
- **Mission_PDS3 Occurs 1 Times**

description: **The Mission PDS3 class describes an activity involved in the collection of data. This class captures the PDS3 catalog Mission information.**

role: **Concrete**

attribute: **mission_name** value: **value**

attribute: **mission_desc** value: **value**

attribute: **mission_objectives_summary** value: **value**

attribute: **mission_start_date** value: **value**

attribute: **mission_stop_date** value: **value**

- End Mission_PDS3
 - End Product_Mission_PDS3
-

- **Product_Node**

description: **A node product describes a node.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area Occurs 1 Times**

description: **The identification area consists of attributes that identify and name an object.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* Optional

attribute: **alternate_id** value: *value* Optional

attribute: **last_modification_date_time** value: *value* Optional

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional

attribute: **instrument_name** value: *value* Optional

attribute: **instrument_host_name** value: *value* Optional

attribute: **keywords** value: *value* Optional

attribute: **full_name** value: *value* Optional

attribute: **investigation_name** value: *value* Optional

attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional

attribute: **name** value: *value*

attribute: **alternate_designation** value: *value* Optional

attribute: **lid_reference** value: *value* Optional

attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area**

- **Cross_Reference_Area_Context - Occurs 0 to 1 Times**

description: **The context cross reference area provides references to associated registered products.**

role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: *value* Optional

attribute: **lidvid_reference** value: *value* Optional

attribute: **reference_association_type** value: *has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target*

- **End Reference_Entry_Context**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: *value* Optional

attribute: **description** value: *value* Optional

attribute: **doi** value: *value* Optional

attribute: **reference_text** value: *value* Optional

attribute: **url** value: *value* Optional

- End Bibliographic_Reference
- End Cross_Reference_Area_Context

- **Node Occurs 1 Times**

description: **The Node class provides a description of a conceptual object that provides local governance within the federated Planetary Data System.**

role: **Concrete**

attribute: **name** value: **Engineering, Geosciences, Imaging, Navigation Ancillary Information Facility, Planetary Atmospheres, Planetary Plasma Interactions, Planetary Rings, Radio Science, Small Bodies**

attribute: **description** value: *value*

attribute: **institution_name** value: *value*

- End Node
 - End Product_Node
-

- **Product_Non_Specific**

description: **The Product Non Specific class defines a template for any data product.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- End Data_Standards

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* Optional

attribute: **alternate_id** value: *value* Optional

attribute: **last_modification_date_time** value: *value* Optional

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional

attribute: **instrument_name** value: *value* Optional

attribute: **instrument_host_name** value: *value* Optional

attribute: **keywords** value: *value* Optional

attribute: **full_name** value: *value* Optional

attribute: **investigation_name** value: *value* Optional

attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** ^{Optional}

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** ^{Optional}

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** ^{Optional}

attribute: **description** value: **value** ^{Optional}

attribute: **doi** value: **value** ^{Optional}

attribute: **reference_text** value: **value** ^{Optional}

attribute: **url** value: **value** ^{Optional}

- **End Bibliographic_Reference**

- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** ^{Optional}

attribute: **name** value: **value** ^{Optional}

attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** ^{Optional}

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- End Reference_Entry_Observing_System_Component
 - End Observing_System_Component
- End Observing_System

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- End Reference_Entry_Product
- End Cross_Reference_Area_Product

- **Observation_Area Occurs 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- End Mission_Area

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- End Node_Area

attribute: **comment** value: **value** Optional

attribute: **start_date_time** value: **value**

attribute: **stop_date_time** value: **value**

attribute: **local_mean_solar_time** value: **value** Optional

attribute: **local_true_solar_time** value: **value** Optional

attribute: **mission_phase_name** value: **value** Optional

attribute: **orbit_number** value: **value** Optional

attribute: **planet_day_number** value: **value** Optional

attribute: **solar_longitude** value: **value** Optional

attribute: **spacecraft_clock_count_partition** value: **value** Optional

attribute: **spacecraft_clock_start_count** value: **value** Optional

attribute: **spacecraft_clock_stop_count** value: **value** Optional

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**

role: **Concrete**

attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **name** value: **value**

attribute: **description** value: **value**

attribute: **type** value: **POSITION, VELOCITY**

attribute: **vector_components** value: **value**

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**

role: **Concrete**

attribute: **name** value: **value** ^{Optional}

attribute: **description** value: **value** ^{Optional}

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** ^{Optional}

attribute: **value** value: **value**

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area_Observational - Occurs 1 to * Times**

description: **The File Area Observational class describes, for an observational product, a file and one or more tagged_data_objects contained within the file.**

role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** ^{Optional}

attribute: **comment** value: **value** ^{Optional}

attribute: **creation_date_time** value: **value** ^{Optional}

attribute: **file_name** value: **value**

attribute: **file_size** value: **value** ^{Optional}

attribute: **maximum_record_bytes** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **records** value: **value** ^{Optional}

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** ^{Optional}

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**
- **End Array_Axis**

- **Image_2D_Display - Occurs 0 to 1 Times**

description: **The Image_2D_Display class provides attributes to enable the display of a 2D image.**

role: **Concrete**

attribute: **first_line** value: **value** ^{Optional}

attribute: **first_line_sample** value: **value** ^{Optional}

attribute: **line_display_direction** value: **DOWN, LEFT, RIGHT, UP**

attribute: **sample_display_direction** value: **DOWN, LEFT, RIGHT, UP**

- **End Image_2D_Display**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** ^{Optional}

attribute: **not_applicable_constant** value: **value** ^{Optional}

attribute: **saturated_constant** value: *value* ^{Optional}

attribute: **unknown_constant** value: *value* ^{Optional}

- End Special_Constants
- End Array_2D_Image
- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Map**

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set
- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** ^{Optional}

attribute: **not_applicable_constant** value: **value** ^{Optional}

attribute: **saturated_constant** value: **value** ^{Optional}

attribute: **unknown_constant** value: **value** ^{Optional}

- End Special_Constants

- End Array_2D_Spectrum

- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Image class is an extension of array_base and defines a three dimensional image.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** ^{Optional}

attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Array_3D_Image

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8,**

UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- End Array_Element

• Cartography - Occurs 0 to 1 Times

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- End Cartography

• Object_Statistics - Occurs 0 to 1 Times

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- End Object_Statistics

• Special_Constants - Occurs 0 to 1 Times

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Array_3D_Movie

• Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base

description: **The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

• Array_Axis Occurs 3 Times

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: The **Axis_Display** class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**
- **End Array_3D_Spectrum**

- **Delimited_Table - Occurs 0 to * Times**

description: **The Delimited_Table class defines a simple table (spreadsheet) with delimited fields and records.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x2C, 0x3B, 0x7C**
attribute: **fields** value: **value**
attribute: **maximum_record_length** value: **value**
attribute: **offset** value: **value**
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: **value**

- **Delimited_Record Occurs 1 Times**

description: **The Delimited Record class is a component of the delimited table (spreadsheet) class and defines a record of the delimited table.**

role: **Concrete**

- **Delimited_Field - Occurs 1 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: *value* Optional

attribute: **invalid_constant** value: *value* Optional

attribute: **missing_constant** value: *value* Optional

attribute: **not_applicable_constant** value: *value* Optional

attribute: **saturated_constant** value: *value* Optional

attribute: **unknown_constant** value: *value* Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Record**

- **End Delimited_Table**

- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: **The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **CSV, OTHER**

attribute: **field_delimiter** value: **0x09, 0x2C, 0x3B, 0x7C**

attribute: **fields** value: *value*

attribute: **maximum_record_length** value: *value*

attribute: **offset** value: *value*

attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**

attribute: **records** value: *value*

- **Delimited_Record_Grouped Occurs 1 Times**

description: **The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.**

role: **Concrete**

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: **The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: *value* Optional

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: **The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Delimited_Field - Occurs 0 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: *value*

attribute: **description** value: *value* Optional

attribute: **field_number** value: *value* Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved,**

ASCII_Text_Preserved, ASCII_Time, ASCII_VID

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Delimited_Field

- End Delimited_Field_Sequence

- End Delimited_Grouped_Sequence

- End Delimited_Record_Grouped

- End Delimited_Table_Grouped

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR**

attribute: **offset** value: **value**

- End Header

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**
attribute: **offset** value: *value*

- **End Header_Binary**

- **Parsable_Byte_Stream - Occurs 0 to * Times**

description: **The Parsable Byte Stream class defines byte streams that have standard parsing rules. The Parsable Byte Stream class is the parent class for all parsable byte streams.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: *value*
attribute: **offset** value: *value*

- **End Parsable_Byte_Stream**

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: *value*
attribute: **offset** value: *value*

- **End Stream_Text**

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: *value*
attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**

role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**

role: **Concrete**

attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4,**

UnsignedMSB8

attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**
attribute: **last_sampling_parameter_value** value: **value**
attribute: **sampling_parameter_interval** value: **value**
attribute: **sampling_parameter_name** value: **value**
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional
attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Binary**

- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: **The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.**
role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** ^{Optional}

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: **The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **field_number** value: **value** ^{Optional}

attribute: **data_type** value: **Bit**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** ^{Optional}

attribute: **minimum_scaled_value** value: **value** ^{Optional}

attribute: **maximum_scaled_value** value: **value** ^{Optional}

attribute: **bit_mask** value: **value** ^{Optional}

attribute: **bits** value: **value**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **start_bit** value: **value**

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Table_Binary_Grouped_Bit_Field**

- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **field_number** value: **value** ^{Optional}

attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** ^{Optional}

attribute: **minimum_scaled_value** value: **value** ^{Optional}

attribute: **maximum_scaled_value** value: **value** ^{Optional}

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- End Table_Binary_Grouped_Field
 - End Table_Binary_Field_Sequence
 - End Table_Binary_Grouped_Sequence
 - End Table_Record_Binary_Grouped
- End Table_Binary_Grouped

- **Table_Character - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character class is an extension of table base and defines a simple character table.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: *value*

attribute: **offset** value: *value*

attribute: **record_length** value: *value*

attribute: **records** value: *value*

- **Table_Record_Character Occurs 1 Times**

description: **The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.**

role: **Concrete**

- **Table_Character_Field - Occurs 1 to * Times**

description: **The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.**

role: **Concrete**

attribute: **name** value: *value*

attribute: **description** value: *value* Optional

attribute: **field_number** value: *value* Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_location** value: *value*

attribute: **field_length** value: *value*

attribute: **field_format** value: *value* Optional

attribute: **minimum_scaled_value** value: *value* Optional

attribute: **maximum_scaled_value** value: *value* Optional

attribute: **scaling_factor** value: *value* Optional

attribute: **value_offset** value: *value* Optional

attribute: **unit** value: *value* Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* Optional

attribute: **maximum** value: *value* Optional

attribute: **mean** value: *value* Optional

attribute: **median** value: *value* Optional

attribute: **minimum** value: *value* Optional

attribute: **standard_deviation** value: *value* Optional

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants
- End Table_Character_Field
- End Table_Record_Character

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**
role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**
attribute: **last_sampling_parameter_value** value: **value**
attribute: **sampling_parameter_interval** value: **value**
attribute: **sampling_parameter_name** value: **value**
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional
attribute: **sampling_parameter_unit** value: **value**

- End Uniformly_Sampled
- End Table_Character

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character Grouped class is an extension of table base and defines a simple character table that allows repeating groups of fields.**

role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character_Grouped Occurs 1 Times**

description: **The Table Record Character Grouped class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.**
role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Character Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**
attribute: **repetitions** value: **value** Optional

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: **The Table Character Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**
role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: **The Table Character Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.**

role: **Concrete**
attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC,**

ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- End Table_Character_Grouped_Field
 - End Table_Character_Field_Sequence
 - End Table_Character_Grouped_Sequence
 - End Table_Record_Character_Grouped
 - End Table_Character_Grouped
 - End File_Area_Observational
 - End Product_Non_Specific

- **Product_PDS_Affiliate**

description: **A PDS Affiliate product describes a person in the role of an affiliate of the PDS.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: **value** Optional

attribute: **last_modification_date_time** value: **value** Optional

attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional

attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in**

observational data products labels.

role: **Concrete**

attribute: **comment** value: **value** ^{Optional}

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** ^{Optional}

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **type** value: **value**

- End Name_Resolution
- End Subject_Area
- End Identification_Area_Product

- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**

role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target**

- End Reference_Entry_Context

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** ^{Optional}

attribute: **description** value: **value** ^{Optional}

attribute: **doi** value: **value** ^{Optional}

attribute: **reference_text** value: **value** ^{Optional}

attribute: **url** value: **value** ^{Optional}

- End Bibliographic_Reference
- End Cross_Reference_Area_Context

- **PDS_Affiliate Occurs 1 Times**

description: **The PDS Affiliate class provides a description of a person who has an association with the planetary science community and has access to PDS resources not normally allowed to the general public.**

role: **Concrete**

attribute: **node_name** value: **Engineering, Geosciences, HQ, Imaging, National_Space_Science_Data_Center, Navigation_Ancillary_Information_Facility, PDS_Management, Planetary_Atmospheres, Planetary_Plasma_Interactions, Planetary_Rings, Radio_Science, Small_Bodies, unk** ^{Optional}

attribute: **registration_date** value: **value**

attribute: **electronic_mail_address** value: **value** ^{Optional}

attribute: **name** value: **value** ^{Optional}

attribute: **sort_name** value: **value**

attribute: **description** value: **value**

attribute: **affiliation_type** value: **Affiliate, Data_Provider, Manager, Technical_Staff**

attribute: **alternate_telephone_number** value: **value** ^{Optional}

attribute: **institution_name** value: **value**

attribute: **phone_book_flag** value: **value**

attribute: **postal_address_text** value: **value**

attribute: **telephone_number** value: **value** ^{Optional}

- End PDS_Affiliate
 - End Product_PDS_Affiliate
-

- **Product_PDS_Guest**

description: **A PDS Guest product describes a person in the role of guest user of the PDS.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**
role: **Concrete**
attribute: **dd_version_id** value: *value*
attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**
role: **Concrete**
attribute: **logical_identifier** value: *value*
attribute: **version_id** value: *value*
attribute: **product_class** value: *value*
attribute: **title** value: *value*
attribute: **alternate_title** value: *value* Optional
attribute: **alternate_id** value: *value* Optional
attribute: **last_modification_date_time** value: *value* Optional
attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**
role: **Concrete**

attribute: **target_name** value: *value* Optional
attribute: **instrument_name** value: *value* Optional
attribute: **instrument_host_name** value: *value* Optional
attribute: **keywords** value: *value* Optional
attribute: **full_name** value: *value* Optional
attribute: **investigation_name** value: *value* Optional
attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**
attribute: **comment** value: *value* Optional
attribute: **name** value: *value*
attribute: **alternate_designation** value: *value* Optional
attribute: **lid_reference** value: *value* Optional
attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**
role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**
role: **Concrete**

attribute: **lid_reference** value: *value* Optional
attribute: **lidvid_reference** value: *value* Optional
attribute: **reference_association_type** value: **has_association**, **has_data_producer**, **has_data_set**, **has_instrument**, **has_instrument_host**, **has_investigation**, **has_node**, **has_personnel**, **has_publication**, **has_resource**, **has_target**

- End Reference_Entry_Context

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **doi** value: *value* Optional
attribute: **reference_text** value: *value* Optional
attribute: **url** value: *value* Optional

- End Bibliographic_Reference
- End Cross_Reference_Area_Context

- **PDS_Guest Occurs 1 Times**

description: **The PDS_Guest class is the default description of a person who has an association with the planetary science community and who has the most limited access to PDS resources.**

role: **Concrete**

attribute: **registration_date** value: *value*
attribute: **electronic_mail_address** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **sort_name** value: *value*
attribute: **description** value: *value*

- End PDS_Guest
 - End Product_PDS_Guest
-

- **Product_Proxy_PDS3**

description: **The Product Proxy PDS class defines a product with enough information to register a PDS3 data product.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*
attribute: **std_ref_version_id** value: *value*

- End Data_Standards

- **Identification_Area Occurs 1 Times**

description: **The identification area consists of attributes that identify and name an object.**

role: **Concrete**

attribute: **logical_identifier** value: *value*
attribute: **version_id** value: *value*
attribute: **product_class** value: *value*
attribute: **title** value: *value*
attribute: **alternate_title** value: *value* Optional
attribute: **alternate_id** value: *value* Optional
attribute: **last_modification_date_time** value: *value* Optional
attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using**

keywords, key phrases, or classification codes.

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional

attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area**

- **Cross_Reference_Area - Occurs 0 to 1 Times**

description: **The cross reference area provides references to associated registered products.**

role: **Concrete**

- **Observing_System - Occurs 0 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **has_association, member_of**

- **End Reference_Entry**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** ^{Optional}

attribute: **description** value: **value** ^{Optional}

attribute: **doi** value: **value** ^{Optional}

attribute: **reference_text** value: **value** ^{Optional}

attribute: **url** value: **value** ^{Optional}

- **End Bibliographic_Reference**

- **End Cross_Reference_Area**

- **Observation_Area - Occurs 0 to 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- **End Mission_Area**

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- **End Node_Area**

attribute: **comment** value: **value** ^{Optional}

attribute: **start_date_time** value: **value**

attribute: **stop_date_time** value: **value**

attribute: **local_mean_solar_time** value: **value** ^{Optional}

attribute: **local_true_solar_time** value: **value** ^{Optional}

attribute: **mission_phase_name** value: **value** ^{Optional}

attribute: **orbit_number** value: **value** ^{Optional}

attribute: **planet_day_number** value: **value** ^{Optional}

attribute: **solar_longitude** value: **value** ^{Optional}

attribute: **spacecraft_clock_count_partition** value: **value** ^{Optional}

attribute: **spacecraft_clock_start_count** value: **value** ^{Optional}

attribute: **spacecraft_clock_stop_count** value: **value** ^{Optional}

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**

role: **Concrete**

attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **name** value: **value**
attribute: **description** value: **value**
attribute: **type** value: **POSITION, VELOCITY**
attribute: **vector_components** value: **value**

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**
role: **Concrete**

attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional
attribute: **value** value: **value**

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area - Occurs 1 to * Times**

description: **The File Area class describes a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**

attribute: **local_identifier** value: **value** Optional
attribute: **comment** value: **value** Optional
attribute: **creation_date_time** value: **value** Optional
attribute: **file_name** value: **value**
attribute: **file_size** value: **value** Optional
attribute: **maximum_record_bytes** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **records** value: **value** Optional

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Image_2D_Display - Occurs 0 to 1 Times**

description: **The Image_2D_Display class provides attributes to enable the display of a 2D image.**

role: **Concrete**

attribute: **first_line** value: **value** ^{Optional}

attribute: **first_line_sample** value: **value** ^{Optional}

attribute: **line_display_direction** value: **DOWN, LEFT, RIGHT, UP**

attribute: **sample_display_direction** value: **DOWN, LEFT, RIGHT, UP**

- **End Image_2D_Display**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**
attribute: **error_constant** value: *value* ^{Optional}
attribute: **invalid_constant** value: *value* ^{Optional}
attribute: **missing_constant** value: *value* ^{Optional}
attribute: **not_applicable_constant** value: *value* ^{Optional}
attribute: **saturated_constant** value: *value* ^{Optional}
attribute: **unknown_constant** value: *value* ^{Optional}

- End Special_Constants
- End Array_2D_Image
- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**
role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* ^{Optional}
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**
attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**
attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: *value* ^{Optional}
attribute: **value_offset** value: *value* ^{Optional}
attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography**

classes.
role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Map**

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Spectrum**

- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: The **Array 3D Image** class is an extension of **array_base** and defines a three dimensional

image.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Array_3D_Image

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The Object Statistics class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}

attribute: **invalid_constant** value: *value* ^{Optional}

attribute: **missing_constant** value: *value* ^{Optional}

attribute: **not_applicable_constant** value: *value* ^{Optional}

attribute: **saturated_constant** value: *value* ^{Optional}

attribute: **unknown_constant** value: *value* ^{Optional}

- End Special_Constants

- End Array_3D_Movie

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: FIRST_INDEX_FASTEST

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: BINARY

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: The Array Axis class is used as a component of the array class and defines an axis of the array.

role: **Concrete**
attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: The **Axis_Display** class is a placeholder for a soon forthcoming Imaging class.
role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.
role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: *value* Optional
attribute: **invalid_constant** value: *value* Optional
attribute: **missing_constant** value: *value* Optional
attribute: **not_applicable_constant** value: *value* Optional
attribute: **saturated_constant** value: *value* Optional
attribute: **unknown_constant** value: *value* Optional

- **End Special_Constants**
- **End Array_3D_Spectrum**
- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: The **Delimited_Table_Grouped** class defines a simple table (spreadsheet) that allows repeating groups of fields.

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x09, 0x2C, 0x3B, 0x7C**
attribute: **fields** value: *value*
attribute: **maximum_record_length** value: *value*
attribute: **offset** value: *value*
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: *value*

- **Delimited_Record_Grouped Occurs 1 Times**

description: The **Delimited Record Grouped** class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.

role: **Concrete**

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: The **Delimited Grouped Sequence** class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.

role: **Concrete**

attribute: **repetitions** value: *value* Optional

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: The **Delimited Field Sequence** class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.

role: **Concrete**

- **Delimited_Field - Occurs 0 to * Times**

description: The **Delimited Field** class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: **Concrete**

attribute: **name** value: *value*

attribute: **description** value: *value* Optional

attribute: **field_number** value: *value* Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_length** value: *value*

attribute: **field_format** value: *value* Optional

attribute: **minimum_scaled_value** value: *value* Optional

attribute: **maximum_scaled_value** value: *value* Optional

attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}
attribute: **invalid_constant** value: **value** ^{Optional}
attribute: **missing_constant** value: **value** ^{Optional}
attribute: **not_applicable_constant** value: **value** ^{Optional}
attribute: **saturated_constant** value: **value** ^{Optional}
attribute: **unknown_constant** value: **value** ^{Optional}

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Encoded_Image - Occurs 0 to * Times**

description: **The Encoded Image class, a subclass of Encoded Byte stream is used for ancillary images in standard formats, such as JPEG.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **GIF, JPEG, PDF, PNG, TIFF**
attribute: **offset** value: **value**

- **End Encoded_Image**

- **File_PDF - Occurs 0 to * Times**

description: **The File PDF class describes a PDF encoded byte stream.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **PDF**
attribute: **offset** value: **value**

- **End File_PDF**

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **bytes** value: *value*
attribute: **encoding_type** value: CHARACTER
attribute: **external_standard_id** value: FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR
attribute: **offset** value: *value*

- End Header

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **bytes** value: *value*
attribute: **encoding_type** value: BINARY
attribute: **external_standard_id** value: FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR
attribute: **offset** value: *value*

- End Header_Binary

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: CHARACTER
attribute: **external_standard_id** value: *value*
attribute: **offset** value: *value*

- End Stream_Text

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: BINARY
attribute: **fields** value: *value*
attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**
role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**
role: **Concrete**
attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16,

ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: **value**

attribute: **sampling_parameter_interval** value: **value**

attribute: **sampling_parameter_name** value: **value**

attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional

attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Binary**

- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: **The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.**
role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**
role: **Concrete**

attribute: **repetitions** value: **value** Optional

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: **The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**
role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **Bit**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **bit_mask** value: **value** Optional

attribute: **bits** value: **value**

attribute: **scaling_factor** value: **value** Optional

attribute: **start_bit** value: **value**

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Table_Binary_Grouped_Bit_Field**

- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** ^{Optional}
attribute: **maximum_scaled_value** value: **value** ^{Optional}
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **End Table_Binary_Grouped_Field**
- **End Table_Binary_Field_Sequence**
- **End Table_Binary_Grouped_Sequence**
- **End Table_Record_Binary_Grouped**
- **End Table_Binary_Grouped**
- **Table_Character - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character class is an extension of table base and defines a simple character table.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character Occurs 1 Times**

description: **The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.**
role: **Concrete**

- **Table_Character_Field - Occurs 1 to * Times**

description: **The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.**
role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** ^{Optional}
attribute: **minimum_scaled_value** value: **value** ^{Optional}
attribute: **maximum_scaled_value** value: **value** ^{Optional}
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**
role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: The Special Constants class provides a set of values used to indicate special cases that occur in the data.

role: Concrete

attribute: **error_constant** value: *value* Optional

attribute: **invalid_constant** value: *value* Optional

attribute: **missing_constant** value: *value* Optional

attribute: **not_applicable_constant** value: *value* Optional

attribute: **saturated_constant** value: *value* Optional

attribute: **unknown_constant** value: *value* Optional

- End Special_Constants

- End Table_Character_Field

- End Table_Record_Character

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: The Uniformly_Sampled class provides parameters for a uniformly sampled table.

role: Concrete

attribute: **first_sampling_parameter_value** value: *value*

attribute: **last_sampling_parameter_value** value: *value*

attribute: **sampling_parameter_interval** value: *value*

attribute: **sampling_parameter_name** value: *value*

attribute: **sampling_parameter_scale** value: EXPONENTIAL, LINEAR, LOGARITHMIC Optional

attribute: **sampling_parameter_unit** value: *value*

- End Uniformly_Sampled

- End Table_Character

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: The Table Character Grouped class is an extension of table base and defines a simple character table that allows repeating groups of fields.

role: Concrete

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **encoding_type** value: CHARACTER

attribute: **fields** value: *value*

attribute: **offset** value: *value*

attribute: **record_length** value: *value*

attribute: **records** value: *value*

- **Table_Record_Character_Grouped Occurs 1 Times**

description: The Table Record Character Grouped class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.

role: Concrete

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: The Table Character Grouped Sequence class is a component of the grouped table class. It defines a set of fields.

role: Concrete

attribute: **repetitions** value: *value* Optional

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: The Table Character Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.

role: Concrete

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: The Table Character Grouped Field class is a component of the table record class and defines a field of the record. This extension

defines a character grouped field.

role: **Concrete**

attribute: **name** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **field_number** value: *value* ^{Optional}

attribute: **data_type** value: ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID

attribute: **field_location** value: *value*

attribute: **field_length** value: *value*

attribute: **field_format** value: *value* ^{Optional}

attribute: **minimum_scaled_value** value: *value* ^{Optional}

attribute: **maximum_scaled_value** value: *value* ^{Optional}

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Table_Character_Grouped_Field
 - End Table_Character_Field_Sequence
 - End Table_Character_Grouped_Sequence
 - End Table_Record_Character_Grouped
 - End Table_Character_Grouped
 - End File_Area
 - End Product_Proxy_PDS3
-

• Product_Resource

description: **A resource product describes a web resource.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- End Data_Standards

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* ^{Optional}

attribute: **alternate_id** value: *value* ^{Optional}

attribute: **last_modification_date_time** value: *value* ^{Optional}

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* ^{Optional}

attribute: **instrument_name** value: *value* ^{Optional}

attribute: **instrument_host_name** value: *value* ^{Optional}

attribute: **keywords** value: *value* ^{Optional}

attribute: **full_name** value: *value* Optional
attribute: **investigation_name** value: *value* Optional
attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional
attribute: **name** value: *value*
attribute: **alternate_designation** value: *value* Optional
attribute: **lid_reference** value: *value* Optional
attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**

role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: *value* Optional
attribute: **lidvid_reference** value: *value* Optional
attribute: **reference_association_type** value: *has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target*

- **End Reference_Entry_Context**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **doi** value: *value* Optional
attribute: **reference_text** value: *value* Optional
attribute: **url** value: *value* Optional

- **End Bibliographic_Reference**

- **End Cross_Reference_Area_Context**

- **Resource Occurs 1 Times**

description: **The Resource class provides a description of a web resource. This class is a generic class and is used for resources not otherwise defined in the model.**

role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value*
attribute: **url** value: *value*

- **End Resource**

- **End Product_Resource**

- **Product_Service**

description: **The Product Service class defines a product for registering services. Service descriptions from this product are used to register services as intrinsic registry objects.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area Occurs 1 Times**

description: **The identification area consists of attributes that identify and name an object.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* Optional

attribute: **alternate_id** value: *value* Optional

attribute: **last_modification_date_time** value: *value* Optional

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional

attribute: **instrument_name** value: *value* Optional

attribute: **instrument_host_name** value: *value* Optional

attribute: **keywords** value: *value* Optional

attribute: **full_name** value: *value* Optional

attribute: **investigation_name** value: *value* Optional

attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional

attribute: **name** value: *value*

attribute: **alternate_designation** value: *value* Optional

attribute: **lid_reference** value: *value* Optional

attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area**

- **Cross_Reference_Area - Occurs 0 to 1 Times**

description: **The cross reference area provides references to associated registered products.**

role: **Concrete**

- **Observing_System - Occurs 0 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: *value* Optional

attribute: **name** value: *value* Optional

attribute: **description** value: *value*

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** ^{Optional}

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **has_association, member_of**

- **End Reference_Entry**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** ^{Optional}

attribute: **description** value: **value** ^{Optional}

attribute: **doi** value: **value** ^{Optional}

attribute: **reference_text** value: **value** ^{Optional}

attribute: **url** value: **value** ^{Optional}

- **End Bibliographic_Reference**

- **End Cross_Reference_Area**

- **File_Area_Service_Description - Occurs 0 to * Times**

description: **The File Area Service Description class describes a file that contains a service description.**

role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** ^{Optional}

attribute: **comment** value: **value** ^{Optional}

attribute: **creation_date_time** value: **value** ^{Optional}

attribute: **file_name** value: **value**

attribute: **file_size** value: **value** Optional
attribute: **maximum_record_bytes** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **records** value: **value** Optional

- End File
- **Service_Description - Occurs 0 to * Times**

description: **The Service Description class defines a file that contains a standardized service specification.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **WADL, WSDL**
attribute: **offset** value: **value**

- End Service_Description
 - End File_Area_Service_Description
 - End Product_Service
-

• **Product_Software**

description: **Product Software is a product consisting of a set of one or more software formats.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**
attribute: **std_ref_version_id** value: **value**

- End Data_Standards
- **Cross_Reference_Area_Software - Occurs 0 to 1 Times**

description: **The cross reference area software provides references for registered products associated with this product.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **doi** value: **value** Optional
attribute: **reference_text** value: **value** Optional
attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional
attribute: **lidvid_reference** value: **value** Optional
attribute: **reference_association_type** value: **has_association, member_of**

- End Reference_Entry
- End Cross_Reference_Area_Software

- **Software_Desc Occurs 1 Times**

description: **The Software Desc class describes a software product**
role: **Concrete**
attribute: **version_id** value: **value**
attribute: **name** value: **value**
attribute: **description** value: **value**
attribute: **author_list** value: **value** Optional
attribute: **programmers_manual_identifier** value: **value**
attribute: **software_id** value: **value**
attribute: **software_type** value: **value**
attribute: **users_manual_identifier** value: **value**

- **End Software_Desc**

- **Software_Binary - Occurs 0 to * Times**

description: **The Software Script class provides a description of a software code that is stored as a compiled binary file.**
role: **Concrete**
attribute: **files** value: **value**
attribute: **os_version** value: **value**
attribute: **program_notes_identifier** value: **value**
attribute: **supported_architecture** value: **value**
attribute: **supported_os** value: **value**
attribute: **sw_format_type** value: **value**
attribute: **system_requirements** value: **value**

- **End Software_Binary**

- **Software_Script - Occurs 0 to * Times**

description: **The Software Script class provides a description of a software code that is stored as a script.**
role: **Concrete**
attribute: **files** value: **value**
attribute: **install_notes** value: **value**
attribute: **supported_environment** value: **value**
attribute: **system_requirements** value: **value**

- **End Software_Script**

- **Software_Source - Occurs 0 to * Times**

description: **The Software Script class provides a description of a software code that is stored as source code.**
role: **Concrete**
attribute: **compile_notes** value: **value**
attribute: **files** value: **value**
attribute: **os_version** value: **value**
attribute: **program_notes_identifier** value: **value**
attribute: **software_dialect** value: **value**
attribute: **software_language** value: **value**
attribute: **supported_architecture** value: **value**
attribute: **supported_os** value: **value**
attribute: **sw_format_type** value: **value**
attribute: **system_requirements** value: **value**

- **End Software_Source**

- **End Product_Software**

- **Product_SPICE_Kernel_Binary**

description: **The Product SPICE Kernel Text class defines a binary SPICE product.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**
role: **Concrete**

attribute: **dd_version_id** value: *value*
attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area Occurs 1 Times**

description: **The identification area consists of attributes that identify and name an object.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* Optional

attribute: **alternate_id** value: *value* Optional

attribute: **last_modification_date_time** value: *value* Optional

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional

attribute: **instrument_name** value: *value* Optional

attribute: **instrument_host_name** value: *value* Optional

attribute: **keywords** value: *value* Optional

attribute: **full_name** value: *value* Optional

attribute: **investigation_name** value: *value* Optional

attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional

attribute: **name** value: *value*

attribute: **alternate_designation** value: *value* Optional

attribute: **lid_reference** value: *value* Optional

attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area**

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: *value* Optional

attribute: **description** value: *value* Optional

attribute: **doi** value: *value* Optional

attribute: **reference_text** value: *value* Optional

attribute: **url** value: *value* Optional

- **End Bibliographic_Reference**

- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**
attribute: **local_identifier** value: **value** ^{Optional}
attribute: **name** value: **value** ^{Optional}
attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** ^{Optional}

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- **End Reference_Entry_Product**

- **End Cross_Reference_Area_Product**

- **File_Area_SPICE_Kernel_Binary Occurs 1 Times**

description: **The File Area SPICE Kernel Text class describes a file that contains a SPICE Kernel Binary object.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** ^{Optional}

attribute: **comment** value: **value** ^{Optional}

attribute: **creation_date_time** value: **value** ^{Optional}

attribute: **file_name** value: **value**

attribute: **file_size** value: **value** ^{Optional}

attribute: **maximum_record_bytes** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **records** value: **value** ^{Optional}

- End File
- **SPICE_Kernel_Binary Occurs 1 Times**

description: **The SPICE Kernel class describes a SPICE file.**
 role: **Concrete**
 attribute: **local_identifier** value: **value**
 attribute: **comment** value: **value** Optional
 attribute: **encoding_type** value: **BINARY**
 attribute: **external_standard_id** value: **SPICE**
 attribute: **kernel_type** value: **CK, DBK, DSK, EK, PCK, SPK**
 attribute: **offset** value: **value**

- End SPICE_Kernel_Binary
 - End File_Area_SPICE_Kernel_Binary
 - End Product_SPICE_Kernel_Binary
-

- **Product_SPICE_Kernel_Text**

description: **The Product SPICE Kernel Text class defines a text SPICE product.**
 role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**
 role: **Concrete**
 attribute: **dd_version_id** value: **value**
 attribute: **std_ref_version_id** value: **value**

- End Data_Standards

- **Identification_Area Occurs 1 Times**

description: **The identification area consists of attributes that identify and name an object.**
 role: **Concrete**
 attribute: **logical_identifier** value: **value**
 attribute: **version_id** value: **value**
 attribute: **product_class** value: **value**
 attribute: **title** value: **value**
 attribute: **alternate_title** value: **value** Optional
 attribute: **alternate_id** value: **value** Optional
 attribute: **last_modification_date_time** value: **value** Optional
 attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**
 attribute: **target_name** value: **value** Optional
 attribute: **instrument_name** value: **value** Optional
 attribute: **instrument_host_name** value: **value** Optional
 attribute: **keywords** value: **value** Optional
 attribute: **full_name** value: **value** Optional
 attribute: **investigation_name** value: **value** Optional
 attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**
 attribute: **comment** value: **value** Optional
 attribute: **name** value: **value**

attribute: **alternate_designation** value: *value* Optional
attribute: **lid_reference** value: *value* Optional
attribute: **type** value: *value*

- End Name_Resolution
- End Subject_Area
- End Identification_Area
- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**
role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **doi** value: *value* Optional
attribute: **reference_text** value: *value* Optional
attribute: **url** value: *value* Optional

- End Bibliographic_Reference
- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**
role: **Concrete**

attribute: **local_identifier** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value*

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: *value* Optional
attribute: **name** value: *value*
attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: *value* Optional
attribute: **lidvid_reference** value: *value* Optional
attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- End Reference_Entry_Observing_System_Component
- End Observing_System_Component
- End Observing_System

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**
attribute: **lid_reference** value: *value* Optional
attribute: **lidvid_reference** value: *value* Optional
attribute: **reference_association_type** value: **curated_by_node**, **has_association**, **has_browse**, **has_calibration**, **has_document**, **has_geometry**, **has_instrument**, **has_instrument_host**, **has_investigation**, **has_node**, **has_personnel**, **has_primary_collection**, **has_primary_product**, **has_publication**, **has_resource**, **has_spice**, **has_target**, **has_thumbnail**

- **End Reference_Entry_Product**
- **End Cross_Reference_Area_Product**
- **File_Area_SPICE_Kernel_Text Occurs 1 Times**

description: **The File Area SPICE Kernel Text class describes a file that contains a SPICE Kernel Text object.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**

attribute: **local_identifier** value: *value* Optional
attribute: **comment** value: *value* Optional
attribute: **creation_date_time** value: *value* Optional
attribute: **file_name** value: *value*
attribute: **file_size** value: *value* Optional
attribute: **maximum_record_bytes** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **records** value: *value* Optional

- **End File**
- **SPICE_Kernel_Text Occurs 1 Times**

description: **The SPICE Kernel class describes a SPICE file.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **SPICE**
attribute: **kernel_type** value: **EK, FK, IK, LSK, MK, PCK, SCLK**
attribute: **offset** value: *value*

- **End SPICE_Kernel_Text**
- **End File_Area_SPICE_Kernel_Text**
- **End Product_SPICE_Kernel_Text**

- **Product_Table_Binary**

description: **The Product Table Binary class defines a product consisting of at least one Binary table and other associated data objects and metadata.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**
role: **Concrete**
attribute: **dd_version_id** value: *value*
attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**
- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**
role: **Concrete**
attribute: **logical_identifier** value: *value*

attribute: **version_id** value: **value**
attribute: **product_class** value: **value**
attribute: **title** value: **value**
attribute: **alternate_title** value: **value** Optional
attribute: **alternate_id** value: **value** Optional
attribute: **last_modification_date_time** value: **value** Optional
attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional
attribute: **instrument_name** value: **value** Optional
attribute: **instrument_host_name** value: **value** Optional
attribute: **keywords** value: **value** Optional
attribute: **full_name** value: **value** Optional
attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **alternate_designation** value: **value** Optional
attribute: **lid_reference** value: **value** Optional
attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **doi** value: **value** Optional
attribute: **reference_text** value: **value** Optional
attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional
attribute: **name** value: **value** Optional
attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar**

product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.

role: **Concrete**

attribute: **comment** value: *value* ^{Optional}

attribute: **name** value: *value*

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: *value* ^{Optional}

attribute: **lidvid_reference** value: *value* ^{Optional}

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: *value* ^{Optional}

attribute: **lidvid_reference** value: *value* ^{Optional}

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- **End Reference_Entry_Product**

- **End Cross_Reference_Area_Product**

- **Observation_Area Occurs 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- **End Mission_Area**

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- **End Node_Area**

attribute: **comment** value: *value* ^{Optional}

attribute: **start_date_time** value: *value*

attribute: **stop_date_time** value: *value*

attribute: **local_mean_solar_time** value: *value* ^{Optional}

attribute: **local_true_solar_time** value: *value* ^{Optional}

attribute: **mission_phase_name** value: *value* ^{Optional}

attribute: **orbit_number** value: *value* ^{Optional}

attribute: **planet_day_number** value: *value* ^{Optional}

attribute: **solar_longitude** value: **value** ^{Optional}
attribute: **spacecraft_clock_count_partition** value: **value** ^{Optional}
attribute: **spacecraft_clock_start_count** value: **value** ^{Optional}
attribute: **spacecraft_clock_stop_count** value: **value** ^{Optional}

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**
role: **Concrete**
attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **name** value: **value**
attribute: **description** value: **value**
attribute: **type** value: **POSITION, VELOCITY**
attribute: **vector_components** value: **value**

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**
role: **Concrete**
attribute: **name** value: **value** ^{Optional}
attribute: **description** value: **value** ^{Optional}
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** ^{Optional}
attribute: **value** value: **value**

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area_Observational - Occurs 1 to * Times**

description: **The File Area Observational class describes, for an observational product, a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**
attribute: **local_identifier** value: **value** ^{Optional}
attribute: **comment** value: **value** ^{Optional}
attribute: **creation_date_time** value: **value** ^{Optional}
attribute: **file_name** value: **value**
attribute: **file_size** value: **value** ^{Optional}
attribute: **maximum_record_bytes** value: **value** ^{Optional}
attribute: **md5_checksum** value: **value** ^{Optional}
attribute: **records** value: **value** ^{Optional}

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Image_2D_Display - Occurs 0 to 1 Times**

description: **The Image_2D_Display class provides attributes to enable the display of a 2D image.**

role: **Concrete**

attribute: **first_line** value: **value** Optional

attribute: **first_line_sample** value: **value** Optional

attribute: **line_display_direction** value: **DOWN, LEFT, RIGHT, UP**

attribute: **sample_display_direction** value: **DOWN, LEFT, RIGHT, UP**

- **End Image_2D_Display**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**
attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Image**

- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**

role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**
attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Map**

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}

attribute: **invalid_constant** value: *value* ^{Optional}

attribute: **missing_constant** value: *value* ^{Optional}

attribute: **not_applicable_constant** value: *value* ^{Optional}

attribute: **saturated_constant** value: *value* ^{Optional}

attribute: **unknown_constant** value: *value* ^{Optional}

- **End Special_Constants**
- **End Array_2D_Spectrum**
- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Image class is an extension of array_base and defines a three dimensional image.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_3D_Image**

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** ^{Optional}

attribute: **not_applicable_constant** value: **value** ^{Optional}

attribute: **saturated_constant** value: **value** ^{Optional}

attribute: **unknown_constant** value: **value** ^{Optional}

- **End Special_Constants**

- **End Array_3D_Movie**

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** ^{Optional}

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: *value* Optional
attribute: **maximum** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **mean** value: *value* Optional
attribute: **median** value: *value* Optional
attribute: **minimum** value: *value* Optional
attribute: **sample_bit_mask** value: *value* Optional
attribute: **standard_deviation** value: *value* Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: *value* Optional
attribute: **invalid_constant** value: *value* Optional
attribute: **missing_constant** value: *value* Optional
attribute: **not_applicable_constant** value: *value* Optional
attribute: **saturated_constant** value: *value* Optional
attribute: **unknown_constant** value: *value* Optional

- End Special_Constants
- End Array_3D_Spectrum

- **Delimited_Table - Occurs 0 to * Times**

description: **The Delimited_Table class defines a simple table (spreadsheet) with delimited fields and records.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x2C, 0x3B, 0x7C**
attribute: **fields** value: *value*
attribute: **maximum_record_length** value: *value*
attribute: **offset** value: *value*
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: *value*

- **Delimited_Record Occurs 1 Times**

description: **The Delimited Record class is a component of the delimited table (spreadsheet) class and defines a record of the delimited table.**

role: **Concrete**

- **Delimited_Field - Occurs 1 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** ^{Optional}

attribute: **not_applicable_constant** value: **value** ^{Optional}

attribute: **saturated_constant** value: **value** ^{Optional}

attribute: **unknown_constant** value: **value** ^{Optional}

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Record**

- **End Delimited_Table**

- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: **The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** ^{Optional}

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **CSV, OTHER**

attribute: **field_delimiter** value: **0x09, 0x2C, 0x3B, 0x7C**

attribute: **fields** value: **value**

attribute: **maximum_record_length** value: **value**

attribute: **offset** value: **value**

attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**

attribute: **records** value: **value**

- **Delimited_Record_Grouped Occurs 1 Times**

description: **The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.**

role: **Concrete**

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: **The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** ^{Optional}

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: **The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Delimited_Field - Occurs 0 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **bytes** value: *value*
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR**
attribute: **offset** value: *value*

- **End Header**

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **bytes** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**
attribute: **offset** value: *value*

- **End Header_Binary**

- **Parsable_Byte_Stream - Occurs 0 to * Times**

description: **The Parsable Byte Stream class defines byte streams that have standard parsing rules. The Parsable Byte Stream class is the parent class for all parsable byte streams.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: *value*
attribute: **offset** value: *value*

- **End Parsable_Byte_Stream**

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: *value*
attribute: **offset** value: *value*

- **End Stream_Text**

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: *value*
attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**
role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: **value**

attribute: **sampling_parameter_interval** value: **value**

attribute: **sampling_parameter_name** value: *value*
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional
attribute: **sampling_parameter_unit** value: *value*

- **End Uniformly_Sampled**
- **End Table_Binary**
- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: *value*
attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: **The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.**
role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: *value* Optional

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: **The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**
role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.**

role: **Concrete**

attribute: **name** value: *value*
attribute: **description** value: *value* Optional
attribute: **field_number** value: *value* Optional
attribute: **data_type** value: **Bit**
attribute: **field_location** value: *value*
attribute: **field_length** value: *value*
attribute: **field_format** value: *value* Optional
attribute: **minimum_scaled_value** value: *value* Optional
attribute: **maximum_scaled_value** value: *value* Optional
attribute: **bit_mask** value: *value* Optional
attribute: **bits** value: *value*
attribute: **scaling_factor** value: *value* Optional
attribute: **start_bit** value: *value*
attribute: **value_offset** value: *value* Optional
attribute: **unit** value: *value* Optional

- **End Table_Binary_Grouped_Bit_Field**
- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.**

role: **Concrete**
attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- End Table_Binary_Grouped_Field
- End Table_Binary_Field_Sequence
- End Table_Binary_Grouped_Sequence
- End Table_Record_Binary_Grouped
- End Table_Binary_Grouped
- **Table_Character - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character class is an extension of table base and defines a simple character table.**

role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character Occurs 1 Times**

description: **The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.**

role: **Concrete**

- **Table_Character_Field - Occurs 1 to * Times**

description: **The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.**

role: **Concrete**
attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Character_Field**

- **End Table_Record_Character**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: **value**

attribute: **sampling_parameter_interval** value: **value**

attribute: **sampling_parameter_name** value: **value**

attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional

attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Character**

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character Grouped class is an extension of table base and defines a simple character table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **value**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

- **Table_Record_Character_Grouped Occurs 1 Times**

description: **The Table Record Character Grouped class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.**

role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Character Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**
attribute: **repetitions** value: **value** Optional

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: **The Table Character Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**
role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: **The Table Character Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Table_Character_Grouped_Field**

- **End Table_Character_Field_Sequence**

- **End Table_Character_Grouped_Sequence**

- **End Table_Record_Character_Grouped**

- **End Table_Character_Grouped**

- **End File_Area_Observational**

- **End Product_Table_Binary**

- **Product_Table_Binary_Grouped**

description: **The Product Table Binary Grouped class defines a product consisting of one Binary table with groups of repeating fields.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: *value* Optional
attribute: **last_modification_date_time** value: *value* Optional
attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional
attribute: **instrument_name** value: *value* Optional
attribute: **instrument_host_name** value: *value* Optional
attribute: **keywords** value: *value* Optional
attribute: **full_name** value: *value* Optional
attribute: **investigation_name** value: *value* Optional
attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional
attribute: **name** value: *value*
attribute: **alternate_designation** value: *value* Optional
attribute: **lid_reference** value: *value* Optional
attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**
role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **doi** value: *value* Optional
attribute: **reference_text** value: *value* Optional
attribute: **url** value: *value* Optional

- **End Bibliographic_Reference**

- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value*

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** ^{Optional}

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- **End Reference_Entry_Product**

- **End Cross_Reference_Area_Product**

- **Observation_Area Occurs 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- **End Mission_Area**

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- **End Node_Area**

attribute: **comment** value: **value** ^{Optional}

attribute: **start_date_time** value: **value**

attribute: **stop_date_time** value: **value**

attribute: **local_mean_solar_time** value: **value** ^{Optional}

attribute: **local_true_solar_time** value: **value** ^{Optional}

attribute: **mission_phase_name** value: **value** ^{Optional}

attribute: **orbit_number** value: **value** ^{Optional}

attribute: **planet_day_number** value: **value** ^{Optional}

attribute: **solar_longitude** value: **value** ^{Optional}

attribute: **spacecraft_clock_count_partition** value: **value** ^{Optional}

attribute: **spacecraft_clock_start_count** value: **value** ^{Optional}

attribute: **spacecraft_clock_stop_count** value: **value** ^{Optional}

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**
role: **Concrete**
attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **name** value: **value**
attribute: **description** value: **value**
attribute: **type** value: **POSITION, VELOCITY**
attribute: **vector_components** value: **value**

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**
role: **Concrete**
attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional
attribute: **value** value: **value**

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area_Observational - Occurs 1 to * Times**

description: **The File Area Observational class describes, for an observational product, a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**
attribute: **local_identifier** value: **value** Optional
attribute: **comment** value: **value** Optional
attribute: **creation_date_time** value: **value** Optional
attribute: **file_name** value: **value**
attribute: **file_size** value: **value** Optional
attribute: **maximum_record_bytes** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **records** value: **value** Optional

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Image_2D_Display - Occurs 0 to 1 Times**

description: **The Image_2D_Display class provides attributes to enable the display of a 2D image.**

role: **Concrete**

attribute: **first_line** value: *value* ^{Optional}

attribute: **first_line_sample** value: *value* ^{Optional}

attribute: **line_display_direction** value: **DOWN, LEFT, RIGHT, UP**

attribute: **sample_display_direction** value: **DOWN, LEFT, RIGHT, UP**

- **End Image_2D_Display**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Image**

- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble,**

IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** ^{Optional}

attribute: **not_applicable_constant** value: **value** ^{Optional}

attribute: **saturated_constant** value: **value** ^{Optional}

attribute: **unknown_constant** value: **value** ^{Optional}

- End Special_Constants

- End Array_2D_Map

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** ^{Optional}

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: *value* ^{Optional}

attribute: **invalid_constant** value: *value* Optional
attribute: **missing_constant** value: *value* Optional
attribute: **not_applicable_constant** value: *value* Optional
attribute: **saturated_constant** value: *value* Optional
attribute: **unknown_constant** value: *value* Optional

- **End Special_Constants**
- **End Array_2D_Spectrum**
- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Image class is an extension of array_base and defines a three dimensional image.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**
attribute: **scaling_factor** value: *value* Optional
attribute: **value_offset** value: *value* Optional
attribute: **unit** value: *value* Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_3D_Image**

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**
role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_3D_Movie**

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Spectrum class is an extension of array_base and defines a three dimensional**

spectrum.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: 3

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_3D_Spectrum**

- **Delimited_Table - Occurs 0 to * Times**

description: **The Delimited_Table class defines a simple table (spreadsheet) with delimited fields and records.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x2C, 0x3B, 0x7C**
attribute: **fields** value: **value**
attribute: **maximum_record_length** value: **value**
attribute: **offset** value: **value**
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: **value**

- **Delimited_Record Occurs 1 Times**

description: **The Delimited Record class is a component of the delimited table (spreadsheet) class and defines a record of the delimited table.**

role: **Concrete**

- **Delimited_Field - Occurs 1 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Record**

- **End Delimited_Table**

- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: **The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **CSV, OTHER**

attribute: **field_delimiter** value: **0x09, 0x2C, 0x3B, 0x7C**

attribute: **fields** value: **value**

attribute: **maximum_record_length** value: **value**

attribute: **offset** value: **value**

attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**

attribute: **records** value: **value**

- **Delimited_Record_Grouped Occurs 1 Times**

description: **The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.**

role: **Concrete**

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: **The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** Optional

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: **The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Delimited_Field - Occurs 0 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: CHARACTER
attribute: **external_standard_id** value: FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR
attribute: **offset** value: *value*

- End Header

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **bytes** value: *value*
attribute: **encoding_type** value: BINARY
attribute: **external_standard_id** value: FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR
attribute: **offset** value: *value*

- End Header_Binary

- **Parsable_Byte_Stream - Occurs 0 to * Times**

description: **The Parsable Byte Stream class defines byte streams that have standard parsing rules. The Parsable Byte Stream class is the parent class for all parsable byte streams.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: CHARACTER
attribute: **external_standard_id** value: *value*
attribute: **offset** value: *value*

- End Parsable_Byte_Stream

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: CHARACTER
attribute: **external_standard_id** value: *value*
attribute: **offset** value: *value*

- End Stream_Text

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: BINARY
attribute: **fields** value: *value*
attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**
role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: **value**

attribute: **sampling_parameter_interval** value: **value**

attribute: **sampling_parameter_name** value: **value**

attribute: **sampling_parameter_scale** value: EXPONENTIAL, LINEAR, LOGARITHMIC Optional

attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- End Table_Binary

- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** ^{Optional}

attribute: **encoding_type** value: **BINARY**

attribute: **fields** value: **value**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: **The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.**

role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** ^{Optional}

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: **The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **field_number** value: **value** ^{Optional}

attribute: **data_type** value: **Bit**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** ^{Optional}

attribute: **minimum_scaled_value** value: **value** ^{Optional}

attribute: **maximum_scaled_value** value: **value** ^{Optional}

attribute: **bit_mask** value: **value** ^{Optional}

attribute: **bits** value: **value**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **start_bit** value: **value**

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- End Table_Binary_Grouped_Bit_Field

- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **field_number** value: **value** ^{Optional}

attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16,**

ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- End Table_Binary_Grouped_Field
- End Table_Binary_Field_Sequence
- End Table_Binary_Grouped_Sequence
- End Table_Record_Binary_Grouped
- End Table_Binary_Grouped
- Table_Character - Occurs 0 to * Times - Base_Class:Table_Base

description: The Table Character class is an extension of table base and defines a simple character table.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **value**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

- Table_Record_Character Occurs 1 Times

description: The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.

role: **Concrete**

- Table_Character_Field - Occurs 1 to * Times

description: The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- Field_Statistics - Occurs 0 to 1 Times

description: The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** Optional
attribute: **maximum** value: **value** Optional
attribute: **mean** value: **value** Optional
attribute: **median** value: **value** Optional
attribute: **minimum** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Table_Character_Field

- End Table_Record_Character

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**
attribute: **last_sampling_parameter_value** value: **value**
attribute: **sampling_parameter_interval** value: **value**
attribute: **sampling_parameter_name** value: **value**
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional
attribute: **sampling_parameter_unit** value: **value**

- End Uniformly_Sampled

- End Table_Character

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character Grouped class is an extension of table base and defines a simple character table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character_Grouped Occurs 1 Times**

description: **The Table Record Character Grouped class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.**

role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Character Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** Optional

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: **The Table Character Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**
role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: **The Table Character Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Table_Character_Grouped_Field**

- **End Table_Character_Field_Sequence**

- **End Table_Character_Grouped_Sequence**

- **End Table_Record_Character_Grouped**

- **End Table_Character_Grouped**

- **End File_Area_Observational**

- **End Product_Table_Binary_Grouped**

- **Product_Table_Character**

description: **The Product Table Character class defines a product consisting of at least one character table and other associated data objects and metadata.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: **value** Optional

attribute: **last_modification_date_time** value: **value** Optional

attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional

attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- **End Reference_Entry_Product**

- **End Cross_Reference_Area_Product**

- **Observation_Area Occurs 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- **End Mission_Area**

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- **End Node_Area**

attribute: **comment** value: **value** ^{Optional}

attribute: **start_date_time** value: **value**

attribute: **stop_date_time** value: **value**

attribute: **local_mean_solar_time** value: **value** ^{Optional}

attribute: **local_true_solar_time** value: **value** ^{Optional}

attribute: **mission_phase_name** value: **value** ^{Optional}

attribute: **orbit_number** value: **value** ^{Optional}

attribute: **planet_day_number** value: **value** ^{Optional}

attribute: **solar_longitude** value: **value** ^{Optional}

attribute: **spacecraft_clock_count_partition** value: **value** ^{Optional}

attribute: **spacecraft_clock_start_count** value: **value** ^{Optional}

attribute: **spacecraft_clock_stop_count** value: **value** ^{Optional}

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**

role: **Concrete**

attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **name** value: **value**
attribute: **description** value: **value**
attribute: **type** value: **POSITION, VELOCITY**
attribute: **vector_components** value: **value**

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**
role: **Concrete**
attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional
attribute: **value** value: **value**

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area_Observational - Occurs 1 to * Times**

description: **The File Area Observational class describes, for an observational product, a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**
attribute: **local_identifier** value: **value** Optional
attribute: **comment** value: **value** Optional
attribute: **creation_date_time** value: **value** Optional
attribute: **file_name** value: **value**
attribute: **file_size** value: **value** Optional
attribute: **maximum_record_bytes** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **records** value: **value** Optional

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**
role: **Concrete**
attribute: **axis_name** value: **value**

attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: The **Axis_Display** class is a placeholder for a soon forthcoming Imaging class.
role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.
role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Image_2D_Display - Occurs 0 to 1 Times**

description: The **Image_2D_Display** class provides attributes to enable the display of a 2D image.
role: **Concrete**

attribute: **first_line** value: *value* ^{Optional}

attribute: **first_line_sample** value: *value* ^{Optional}

attribute: **line_display_direction** value: DOWN, LEFT, RIGHT, UP

attribute: **sample_display_direction** value: DOWN, LEFT, RIGHT, UP

- End Image_2D_Display

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: **value** ^{Optional}
attribute: **sample_bit_mask** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}
attribute: **invalid_constant** value: **value** ^{Optional}
attribute: **missing_constant** value: **value** ^{Optional}
attribute: **not_applicable_constant** value: **value** ^{Optional}
attribute: **saturated_constant** value: **value** ^{Optional}
attribute: **unknown_constant** value: **value** ^{Optional}

- **End Special_Constants**

- **End Array_2D_Image**

- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8,**

UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- End Array_Element

• Cartography - Occurs 0 to 1 Times

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- End Cartography

• Object_Statistics - Occurs 0 to 1 Times

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- End Object_Statistics

• Special_Constants - Occurs 0 to 1 Times

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Array_2D_Map

• Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

• Array_Axis Occurs 2 Times

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: The **Axis_Display** class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: The **Special Constants** class provides a set of values used to indicate special cases that occur in the data.

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: *value* Optional
attribute: **not_applicable_constant** value: *value* Optional
attribute: **saturated_constant** value: *value* Optional
attribute: **unknown_constant** value: *value* Optional

- End Special_Constants
- End Array_2D_Spectrum
- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: The Array 3D Image class is an extension of array_base and defines a three dimensional image.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* Optional

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: The Array Axis class is used as a component of the array class and defines an axis of the array.

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: The Axis_Display class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: The Array Element class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* Optional

attribute: **value_offset** value: *value* Optional

attribute: **unit** value: *value* Optional

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- End Special_Constants

- End Array_3D_Image

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set
- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** ^{Optional}

attribute: **not_applicable_constant** value: **value** ^{Optional}

attribute: **saturated_constant** value: **value** ^{Optional}

attribute: **unknown_constant** value: **value** ^{Optional}

- End Special_Constants
- End Array_3D_Movie

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: *value* ^{Optional}
attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: **value** Optional
attribute: **sample_bit_mask** value: **value** Optional
attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional
attribute: **invalid_constant** value: **value** Optional
attribute: **missing_constant** value: **value** Optional
attribute: **not_applicable_constant** value: **value** Optional
attribute: **saturated_constant** value: **value** Optional
attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_3D_Spectrum**

- **Delimited_Table - Occurs 0 to * Times**

description: **The Delimited_Table class defines a simple table (spreadsheet) with delimited fields and records.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x2C, 0x3B, 0x7C**
attribute: **fields** value: **value**
attribute: **maximum_record_length** value: **value**
attribute: **offset** value: **value**
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: **value**

- **Delimited_Record Occurs 1 Times**

description: **The Delimited Record class is a component of the delimited table (spreadsheet) class and defines a record of the delimited table.**

role: **Concrete**

- **Delimited_Field - Occurs 1 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** Optional
attribute: **field_number** value: **value** Optional
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** Optional
attribute: **minimum_scaled_value** value: **value** Optional
attribute: **maximum_scaled_value** value: **value** Optional
attribute: **scaling_factor** value: **value** Optional
attribute: **value_offset** value: **value** Optional
attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Record**

- **End Delimited_Table**

- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: **The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **CSV, OTHER**

attribute: **field_delimiter** value: **0x09, 0x2C, 0x3B, 0x7C**

attribute: **fields** value: **value**

attribute: **maximum_record_length** value: **value**

attribute: **offset** value: **value**

attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**

attribute: **records** value: **value**

- **Delimited_Record_Grouped Occurs 1 Times**

description: **The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.**

role: **Concrete**

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: **The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** Optional

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: **The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Delimited_Field - Occurs 0 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2,**

PDS3, TIFF, VICAR
attribute: **offset** value: *value*

- End Header

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **name** value: *value* Optional
attribute: **description** value: *value* Optional
attribute: **bytes** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**
attribute: **offset** value: *value*

- End Header_Binary

- **Parsable_Byte_Stream - Occurs 0 to * Times**

description: **The Parsable Byte Stream class defines byte streams that have standard parsing rules. The Parsable Byte Stream class is the parent class for all parsable byte streams.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: *value*
attribute: **offset** value: *value*

- End Parsable_Byte_Stream

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: *value*
attribute: **offset** value: *value*

- End Stream_Text

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**
role: **Concrete**
attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: *value*
attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**
role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**
role: **Concrete**
attribute: **name** value: *value*

attribute: **description** value: *value* Optional
 attribute: **field_number** value: *value* Optional
 attribute: **data_type** value: ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8
 attribute: **field_location** value: *value*
 attribute: **field_length** value: *value*
 attribute: **field_format** value: *value* Optional
 attribute: **minimum_scaled_value** value: *value* Optional
 attribute: **maximum_scaled_value** value: *value* Optional
 attribute: **scaling_factor** value: *value* Optional
 attribute: **value_offset** value: *value* Optional
 attribute: **unit** value: *value* Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: *value*
 attribute: **description** value: *value* Optional
 attribute: **maximum** value: *value* Optional
 attribute: **mean** value: *value* Optional
 attribute: **median** value: *value* Optional
 attribute: **minimum** value: *value* Optional
 attribute: **standard_deviation** value: *value* Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: *value* Optional
 attribute: **invalid_constant** value: *value* Optional
 attribute: **missing_constant** value: *value* Optional
 attribute: **not_applicable_constant** value: *value* Optional
 attribute: **saturated_constant** value: *value* Optional
 attribute: **unknown_constant** value: *value* Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: *value*
 attribute: **last_sampling_parameter_value** value: *value*
 attribute: **sampling_parameter_interval** value: *value*
 attribute: **sampling_parameter_name** value: *value*
 attribute: **sampling_parameter_scale** value: EXPONENTIAL, LINEAR, LOGARITHMIC Optional
 attribute: **sampling_parameter_unit** value: *value*

- **End Uniformly_Sampled**

- **End Table_Binary**

- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **encoding_type** value: **BINARY**

attribute: **fields** value: *value*

attribute: **offset** value: *value*

attribute: **record_length** value: *value*

attribute: **records** value: *value*

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.

role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.

role: **Concrete**

attribute: **repetitions** value: *value* ^{Optional}

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.

role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.

role: **Concrete**

attribute: **name** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **field_number** value: *value* ^{Optional}

attribute: **data_type** value: **Bit**

attribute: **field_location** value: *value*

attribute: **field_length** value: *value*

attribute: **field_format** value: *value* ^{Optional}

attribute: **minimum_scaled_value** value: *value* ^{Optional}

attribute: **maximum_scaled_value** value: *value* ^{Optional}

attribute: **bit_mask** value: *value* ^{Optional}

attribute: **bits** value: *value*

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **start_bit** value: *value*

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Table_Binary_Grouped_Bit_Field**

- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.

role: **Concrete**

attribute: **name** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **field_number** value: *value* ^{Optional}

attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle,**

SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- End Table_Binary_Grouped_Field
- End Table_Binary_Field_Sequence
- End Table_Binary_Grouped_Sequence
- End Table_Record_Binary_Grouped
- End Table_Binary_Grouped
- Table_Character - Occurs 0 to * Times - Base_Class:Table_Base

description: The Table Character class is an extension of table base and defines a simple character table.
role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **value**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

- Table_Record_Character Occurs 1 Times

description: The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.
role: **Concrete**

- Table_Character_Field - Occurs 1 to * Times

description: The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI,**

ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC,

ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name,

ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID,

ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16,

ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed,

ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- Field_Statistics - Occurs 0 to 1 Times

description: The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- End Field_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**
role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}
attribute: **invalid_constant** value: **value** ^{Optional}
attribute: **missing_constant** value: **value** ^{Optional}
attribute: **not_applicable_constant** value: **value** ^{Optional}
attribute: **saturated_constant** value: **value** ^{Optional}
attribute: **unknown_constant** value: **value** ^{Optional}

- End Special_Constants
- End Table_Character_Field
- End Table_Record_Character

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**
role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**
attribute: **last_sampling_parameter_value** value: **value**
attribute: **sampling_parameter_interval** value: **value**
attribute: **sampling_parameter_name** value: **value**
attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** ^{Optional}
attribute: **sampling_parameter_unit** value: **value**

- End Uniformly_Sampled
- End Table_Character

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character Grouped class is an extension of table base and defines a simple character table that allows repeating groups of fields.**

role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character_Grouped Occurs 1 Times**

description: **The Table Record Character Grouped class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.**
role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Character Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**
attribute: **repetitions** value: **value** ^{Optional}

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: **The Table Character Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: **The Table Character Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.**

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Table_Character_Grouped_Field**

- **End Table_Character_Field_Sequence**

- **End Table_Character_Grouped_Sequence**

- **End Table_Record_Character_Grouped**

- **End Table_Character_Grouped**

- **End File_Area_Observational**

- **End Product_Table_Character**

- **Product_Table_Character_Grouped**

description: **The Product Table Character Grouped class defines a product consisting of one Character table with groups of repeating fields.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: **value** Optional

attribute: **last_modification_date_time** value: **value** Optional

attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using**

keywords, key phrases, or classification codes.

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional

attribute: **instrument_host_name** value: **value** Optional

attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional

attribute: **investigation_name** value: **value** Optional

attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Product Occurs 1 Times**

description: **The cross reference product area provides references to associated registered products.**

role: **Concrete**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **Observing_System - Occurs 1 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**
- **End Observing_System_Component**
- **End Observing_System**

- **Reference_Entry_Product - Occurs 0 to * Times**

description: **The Reference Entry Product class provides a product specific reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **curated_by_node, has_association, has_browse, has_calibration, has_document, has_geometry, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_primary_collection, has_primary_product, has_publication, has_resource, has_spice, has_target, has_thumbnail**

- **End Reference_Entry_Product**
- **End Cross_Reference_Area_Product**

- **Observation_Area Occurs 1 Times**

description: **The observation area consists of attributes that provide information about the circumstances under which the data were collected.**

role: **Concrete**

- **Mission_Area - Occurs 0 to * Times**

description: **The mission area allow the insertion of mission specific metadata.**

role: **Concrete**

- **End Mission_Area**

- **Node_Area - Occurs 0 to * Times**

description: **The node area allow the insertion of node specific metadata.**

role: **Concrete**

- **End Node_Area**

attribute: **comment** value: **value** Optional

attribute: **start_date_time** value: **value**

attribute: **stop_date_time** value: **value**

attribute: **local_mean_solar_time** value: **value** Optional

attribute: **local_true_solar_time** value: **value** Optional

attribute: **mission_phase_name** value: **value** Optional

attribute: **orbit_number** value: **value** Optional

attribute: **planet_day_number** value: **value** Optional

attribute: **solar_longitude** value: **value** Optional

attribute: **spacecraft_clock_count_partition** value: **value** Optional

attribute: **spacecraft_clock_start_count** value: **value** Optional

attribute: **spacecraft_clock_stop_count** value: **value** Optional

- **Geometry - Occurs 0 to * Times**

description: **The Geometry class groups objects associated with geometry information.**

role: **Concrete**

attribute: **local_identifier** value: **value**

- **Vector - Occurs 0 to * Times**

description: **The Vector class provides the components of either a velocity or position vector.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **name** value: **value**
attribute: **description** value: **value**
attribute: **type** value: **POSITION, VELOCITY**
attribute: **vector_components** value: **value**

- **Vector_Component - Occurs 1 to * Times**

description: **The Vector_Component class provides a component of a vector.**
role: **Concrete**
attribute: **name** value: **value** Optional
attribute: **description** value: **value** Optional
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional
attribute: **value** value: **value**

- **End Vector_Component**

- **End Vector**

- **End Geometry**

- **End Observation_Area**

- **File_Area_Observational - Occurs 1 to * Times**

description: **The File Area Observational class describes, for an observational product, a file and one or more tagged_data_objects contained within the file.**
role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**
role: **Concrete**
attribute: **local_identifier** value: **value** Optional
attribute: **comment** value: **value** Optional
attribute: **creation_date_time** value: **value** Optional
attribute: **file_name** value: **value**
attribute: **file_size** value: **value** Optional
attribute: **maximum_record_bytes** value: **value** Optional
attribute: **md5_checksum** value: **value** Optional
attribute: **records** value: **value** Optional

- **End File**

- **Array_2D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Image class is an extension of array_base and defines a two dimensional image.**
role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** Optional
attribute: **axes** value: **2**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**
role: **Concrete**
attribute: **axis_name** value: **value**
attribute: **elements** value: **value**
attribute: **sequence_number** value: **value**
attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: The **Axis_Display** class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The **Band_Bin_Set** class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Image_2D_Display - Occurs 0 to 1 Times**

description: The **Image_2D_Display** class provides attributes to enable the display of a 2D image.

role: **Concrete**

attribute: **first_line** value: *value* Optional

attribute: **first_line_sample** value: *value* Optional

attribute: **line_display_direction** value: DOWN, LEFT, RIGHT, UP

attribute: **sample_display_direction** value: DOWN, LEFT, RIGHT, UP

- End Image_2D_Display

- **Array_Element Occurs 1 Times**

description: The **Array Element** class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **scaling_factor** value: *value* Optional

attribute: **value_offset** value: *value* Optional

attribute: **unit** value: *value* Optional

- End Array_Element

- **Cartography - Occurs 0 to 1 Times**

description: The **Cartography** class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- End Cartography

- **Object_Statistics - Occurs 0 to 1 Times**

description: The **Object Statistics** class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* Optional

attribute: **maximum** value: *value* Optional

attribute: **md5_checksum** value: *value* Optional

attribute: **mean** value: *value* Optional

attribute: **median** value: *value* Optional

attribute: **minimum** value: *value* Optional

attribute: **sample_bit_mask** value: *value* Optional

attribute: **standard_deviation** value: *value* Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Image**

- **Array_2D_Map - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Map class is an extension of array_base and defines a two dimensional map.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_2D_Map**

- **Array_2D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 2D Spectrum class is an extension of array_base and defines a two dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **2**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 2 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: **value**

attribute: **elements** value: **value**

attribute: **sequence_number** value: **value**

attribute: **unit** value: **value** Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** ^{Optional}

attribute: **value_offset** value: **value** ^{Optional}

attribute: **unit** value: **value** ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** ^{Optional}

attribute: **maximum** value: **value** ^{Optional}

attribute: **md5_checksum** value: **value** ^{Optional}

attribute: **mean** value: **value** ^{Optional}

attribute: **median** value: **value** ^{Optional}

attribute: **minimum** value: **value** ^{Optional}

attribute: **sample_bit_mask** value: **value** ^{Optional}

attribute: **standard_deviation** value: **value** ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** ^{Optional}

attribute: **not_applicable_constant** value: **value** ^{Optional}

attribute: **saturated_constant** value: **value** ^{Optional}

attribute: **unknown_constant** value: **value** ^{Optional}

- **End Special_Constants**

- **End Array_2D_Spectrum**

- **Array_3D_Image - Occurs 0 to * Times - Base_Class:Array_Base**

description: The Array 3D Image class is an extension of array_base and defines a three dimensional image.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **comment** value: *value* ^{Optional}

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: *value*

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: The Array Axis class is used as a component of the array class and defines an axis of the array.

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: The Axis_Display class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: The Array Element class is used as a component of the array class and defines an element of the array.

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: The Object Statistics class provides a set of values that provide metrics about the object.

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* Optional
attribute: **maximum** value: *value* Optional
attribute: **md5_checksum** value: *value* Optional
attribute: **mean** value: *value* Optional
attribute: **median** value: *value* Optional
attribute: **minimum** value: *value* Optional
attribute: **sample_bit_mask** value: *value* Optional
attribute: **standard_deviation** value: *value* Optional

- End Object_Statistics

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: *value* Optional
attribute: **invalid_constant** value: *value* Optional
attribute: **missing_constant** value: *value* Optional
attribute: **not_applicable_constant** value: *value* Optional
attribute: **saturated_constant** value: *value* Optional
attribute: **unknown_constant** value: *value* Optional

- End Special_Constants

- End Array_3D_Image

- **Array_3D_Movie - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Movie class is an extension of array_base and defines a movie as a set of two dimensional images in a time series.**

role: **Concrete**

attribute: **local_identifier** value: *value*
attribute: **comment** value: *value* Optional
attribute: **axes** value: **3**
attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**
attribute: **axis_storage_order** value: *value*
attribute: **encoding_type** value: **BINARY**
attribute: **offset** value: *value*

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*
attribute: **elements** value: *value*
attribute: **sequence_number** value: *value*
attribute: **unit** value: *value* Optional

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Axis_Display

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- End Band_Bin_Set

- End Array_Axis

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **sample_bit_mask** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Array_3D_Movie**

- **Array_3D_Spectrum - Occurs 0 to * Times - Base_Class:Array_Base**

description: **The Array 3D Spectrum class is an extension of array_base and defines a three dimensional spectrum.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **axes** value: **3**

attribute: **axis_index_order** value: **FIRST_INDEX_FASTEST**

attribute: **axis_storage_order** value: **value**

attribute: **encoding_type** value: **BINARY**

attribute: **offset** value: **value**

- **Array_Axis Occurs 3 Times**

description: **The Array Axis class is used as a component of the array class and defines an axis of the array.**

role: **Concrete**

attribute: **axis_name** value: *value*

attribute: **elements** value: *value*

attribute: **sequence_number** value: *value*

attribute: **unit** value: *value* ^{Optional}

- **Axis_Display - Occurs 0 to 1 Times**

description: **The Axis_Display class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Axis_Display**

- **Band_Bin_Set - Occurs 0 to 1 Times**

description: **The Band_Bin_Set class is a placeholder for a soon forthcoming Imaging class.**

role: **Concrete**

- **End Band_Bin_Set**

- **End Array_Axis**

- **Array_Element Occurs 1 Times**

description: **The Array Element class is used as a component of the array class and defines an element of the array.**

role: **Concrete**

attribute: **data_type** value: **IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Array_Element**

- **Cartography - Occurs 0 to 1 Times**

description: **The Cartography class is a placeholder for soon forthcoming Imaging cartography classes.**

role: **Concrete**

- **End Cartography**

- **Object_Statistics - Occurs 0 to 1 Times**

description: **The Object Statistics class provides a set of values that provide metrics about the object.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **maximum** value: *value* ^{Optional}

attribute: **md5_checksum** value: *value* ^{Optional}

attribute: **mean** value: *value* ^{Optional}

attribute: **median** value: *value* ^{Optional}

attribute: **minimum** value: *value* ^{Optional}

attribute: **sample_bit_mask** value: *value* ^{Optional}

attribute: **standard_deviation** value: *value* ^{Optional}

- **End Object_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases**

that occur in the data.

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- End Special_Constants
- End Array_3D_Spectrum

- **Delimited_Table - Occurs 0 to * Times**

description: The **Delimited_Table** class defines a simple table (spreadsheet) with delimited fields and records.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **CSV, OTHER**

attribute: **field_delimiter** value: **0x2C, 0x3B, 0x7C**

attribute: **fields** value: **value**

attribute: **maximum_record_length** value: **value**

attribute: **offset** value: **value**

attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**

attribute: **records** value: **value**

- **Delimited_Record Occurs 1 Times**

description: The **Delimited Record** class is a component of the delimited table (spreadsheet) class and defines a record of the delimited table.

role: **Concrete**

- **Delimited_Field - Occurs 1 to * Times**

description: The **Delimited Field** class is a component of the delimited table (spreadsheet) record class and defines a field of the record.

role: **Concrete**

attribute: **name** value: **value**

attribute: **description** value: **value** Optional

attribute: **field_number** value: **value** Optional

attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: The **Field Statistics** class provides a set of metrics for a column formed by a field in a repeating record.

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- End Field_Statistics
- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}
attribute: **invalid_constant** value: **value** ^{Optional}
attribute: **missing_constant** value: **value** ^{Optional}
attribute: **not_applicable_constant** value: **value** ^{Optional}
attribute: **saturated_constant** value: **value** ^{Optional}
attribute: **unknown_constant** value: **value** ^{Optional}

- End Special_Constants
- End Delimited_Field
- End Delimited_Record
- End Delimited_Table
- **Delimited_Table_Grouped - Occurs 0 to * Times**

description: **The Delimited_Table_Grouped class defines a simple table (spreadsheet) that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **CSV, OTHER**
attribute: **field_delimiter** value: **0x09, 0x2C, 0x3B, 0x7C**
attribute: **fields** value: **value**
attribute: **maximum_record_length** value: **value**
attribute: **offset** value: **value**
attribute: **record_delimiter** value: **0x0A, 0x0D, 0x0D0x0A**
attribute: **records** value: **value**

- **Delimited_Record_Grouped Occurs 1 Times**

description: **The Delimited Record Grouped class is a component of the delimited table (spreadsheet) class and defines a record of the spreadsheet.**

role: **Concrete**

- **Delimited_Grouped_Sequence - Occurs 1 to * Times**

description: **The Delimited Grouped Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** ^{Optional}

- **Delimited_Field_Sequence - Occurs 1 to * Times**

description: **The Delimited Field Sequence class is a component of the grouped delimited table (spreadsheet) class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Delimited_Field - Occurs 0 to * Times**

description: **The Delimited Field class is a component of the delimited table (spreadsheet) record class and defines a field of the record.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC,**

ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Delimited_Field**

- **End Delimited_Field_Sequence**

- **End Delimited_Grouped_Sequence**

- **End Delimited_Record_Grouped**

- **End Delimited_Table_Grouped**

- **Header - Occurs 0 to * Times**

description: **The Header class describes a data object header.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **bytes** value: **value**

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **FITS, FREE_TEXT, ISIS2, ISIS3, ISIS_HISTORY, ODL, PDS1, PDS2, PDS3, TIFF, VICAR**

attribute: **offset** value: **value**

- **End Header**

- **Header_Binary - Occurs 0 to * Times**

description: **The Header Binary class describes a data object header.**

role: **Concrete**
attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **name** value: **value** ^{Optional}
attribute: **description** value: **value** ^{Optional}
attribute: **bytes** value: **value**
attribute: **encoding_type** value: **BINARY**
attribute: **external_standard_id** value: **FITS, ISIS2, ISIS3, ISIS_HISTORY, TIFF, VICAR**
attribute: **offset** value: **value**

- **End Header_Binary**

- **Parsable_Byte_Stream - Occurs 0 to * Times**

description: **The Parsable Byte Stream class defines byte streams that have standard parsing rules. The Parsable Byte Stream class is the parent class for all parsable byte streams.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Parsable_Byte_Stream**

- **Stream_Text - Occurs 0 to * Times**

description: **The Stream text class defines a text file.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **external_standard_id** value: **value**
attribute: **offset** value: **value**

- **End Stream_Text**

- **Table_Binary - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary class is an extension of table base and defines a simple binary table.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **BINARY**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Binary Occurs 1 Times**

description: **The Table Record Binary class is a component of the table class and defines a record of the table. This extension defines a binary record.**

role: **Concrete**

- **Table_Binary_Field - Occurs 1 to * Times**

description: **The Table Binary Field class is a component of the table record class and defines a field of the record. This extension defines a binary field.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed,**

ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8

attribute: **field_location** value: **value**

attribute: **field_length** value: **value**

attribute: **field_format** value: **value** Optional

attribute: **minimum_scaled_value** value: **value** Optional

attribute: **maximum_scaled_value** value: **value** Optional

attribute: **scaling_factor** value: **value** Optional

attribute: **value_offset** value: **value** Optional

attribute: **unit** value: **value** Optional

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **description** value: **value** Optional

attribute: **maximum** value: **value** Optional

attribute: **mean** value: **value** Optional

attribute: **median** value: **value** Optional

attribute: **minimum** value: **value** Optional

attribute: **standard_deviation** value: **value** Optional

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** Optional

attribute: **invalid_constant** value: **value** Optional

attribute: **missing_constant** value: **value** Optional

attribute: **not_applicable_constant** value: **value** Optional

attribute: **saturated_constant** value: **value** Optional

attribute: **unknown_constant** value: **value** Optional

- **End Special_Constants**

- **End Table_Binary_Field**

- **End Table_Record_Binary**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: **value**

attribute: **sampling_parameter_interval** value: **value**

attribute: **sampling_parameter_name** value: **value**

attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** Optional

attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Binary**

- **Table_Binary_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Binary Grouped class is an extension of table base and defines a simple binary table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **BINARY**

attribute: **fields** value: *value*
attribute: **offset** value: *value*
attribute: **record_length** value: *value*
attribute: **records** value: *value*

- **Table_Record_Binary_Grouped Occurs 1 Times**

description: **The Table Record Binary Grouped class is a component of the table class and defines a record of the table. This extension defines a binary record with grouped fields.**
role: **Concrete**

- **Table_Binary_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Binary Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: *value* ^{Optional}

- **Table_Binary_Field_Sequence - Occurs 1 to * Times**

description: **The Table Binary Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**
role: **Concrete**

- **Table_Binary_Grouped_Bit_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Bit Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped bit field.**

role: **Concrete**

attribute: **name** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **field_number** value: *value* ^{Optional}

attribute: **data_type** value: **Bit**

attribute: **field_location** value: *value*

attribute: **field_length** value: *value*

attribute: **field_format** value: *value* ^{Optional}

attribute: **minimum_scaled_value** value: *value* ^{Optional}

attribute: **maximum_scaled_value** value: *value* ^{Optional}

attribute: **bit_mask** value: *value* ^{Optional}

attribute: **bits** value: *value*

attribute: **scaling_factor** value: *value* ^{Optional}

attribute: **start_bit** value: *value*

attribute: **value_offset** value: *value* ^{Optional}

attribute: **unit** value: *value* ^{Optional}

- **End Table_Binary_Grouped_Bit_Field**

- **Table_Binary_Grouped_Field - Occurs 0 to * Times**

description: **The Table Binary Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a binary grouped field.**

role: **Concrete**

attribute: **name** value: *value*

attribute: **description** value: *value* ^{Optional}

attribute: **field_number** value: *value* ^{Optional}

attribute: **data_type** value: **ASCII_File_Name, Bit, ComplexLSB16, ComplexLSB8, ComplexMSB16, ComplexMSB8, IEEE754LSBDouble, IEEE754LSBSingle, IEEE754MSBDouble, IEEE754MSBSingle, SignedByte, SignedLSB2, SignedLSB4, SignedLSB8, SignedMSB2, SignedMSB4, SignedMSB8, UnsignedByte, UnsignedLSB2, UnsignedLSB4, UnsignedLSB8, UnsignedMSB2, UnsignedMSB4, UnsignedMSB8**

attribute: **field_location** value: *value*

attribute: **field_length** value: *value*

attribute: **field_format** value: *value* ^{Optional}

attribute: **minimum_scaled_value** value: *value* ^{Optional}

attribute: **maximum_scaled_value** value: **value** ^{Optional}
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **End Table_Binary_Grouped_Field**
- **End Table_Binary_Field_Sequence**
- **End Table_Binary_Grouped_Sequence**
- **End Table_Record_Binary_Grouped**
- **End Table_Binary_Grouped**

- **Table_Character - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character class is an extension of table base and defines a simple character table.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **comment** value: **value** ^{Optional}
attribute: **encoding_type** value: **CHARACTER**
attribute: **fields** value: **value**
attribute: **offset** value: **value**
attribute: **record_length** value: **value**
attribute: **records** value: **value**

- **Table_Record_Character Occurs 1 Times**

description: **The Table Record Character class is a component of the table class and defines a record of the table. This extension defines a character record.**

role: **Concrete**

- **Table_Character_Field - Occurs 1 to * Times**

description: **The Table Character Field class is a component of the table record class and defines a field of the record. This extension defines a character field.**

role: **Concrete**

attribute: **name** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **field_number** value: **value** ^{Optional}
attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
attribute: **field_location** value: **value**
attribute: **field_length** value: **value**
attribute: **field_format** value: **value** ^{Optional}
attribute: **minimum_scaled_value** value: **value** ^{Optional}
attribute: **maximum_scaled_value** value: **value** ^{Optional}
attribute: **scaling_factor** value: **value** ^{Optional}
attribute: **value_offset** value: **value** ^{Optional}
attribute: **unit** value: **value** ^{Optional}

- **Field_Statistics - Occurs 0 to 1 Times**

description: **The Field Statistics class provides a set of metrics for a column formed by a field in a repeating record.**

role: **Concrete**

attribute: **local_identifier** value: **value**
attribute: **description** value: **value** ^{Optional}
attribute: **maximum** value: **value** ^{Optional}
attribute: **mean** value: **value** ^{Optional}
attribute: **median** value: **value** ^{Optional}
attribute: **minimum** value: **value** ^{Optional}
attribute: **standard_deviation** value: **value** ^{Optional}

- **End Field_Statistics**

- **Special_Constants - Occurs 0 to 1 Times**

description: **The Special Constants class provides a set of values used to indicate special cases that occur in the data.**

role: **Concrete**

attribute: **error_constant** value: **value** ^{Optional}

attribute: **invalid_constant** value: **value** ^{Optional}

attribute: **missing_constant** value: **value** ^{Optional}

attribute: **not_applicable_constant** value: **value** ^{Optional}

attribute: **saturated_constant** value: **value** ^{Optional}

attribute: **unknown_constant** value: **value** ^{Optional}

- **End Special_Constants**

- **End Table_Character_Field**

- **End Table_Record_Character**

- **Uniformly_Sampled - Occurs 0 to 1 Times**

description: **The Uniformly_Sampled class provides parameters for a uniformly sampled table.**

role: **Concrete**

attribute: **first_sampling_parameter_value** value: **value**

attribute: **last_sampling_parameter_value** value: **value**

attribute: **sampling_parameter_interval** value: **value**

attribute: **sampling_parameter_name** value: **value**

attribute: **sampling_parameter_scale** value: **EXPONENTIAL, LINEAR, LOGARITHMIC** ^{Optional}

attribute: **sampling_parameter_unit** value: **value**

- **End Uniformly_Sampled**

- **End Table_Character**

- **Table_Character_Grouped - Occurs 0 to * Times - Base_Class:Table_Base**

description: **The Table Character Grouped class is an extension of table base and defines a simple character table that allows repeating groups of fields.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** ^{Optional}

attribute: **encoding_type** value: **CHARACTER**

attribute: **fields** value: **value**

attribute: **offset** value: **value**

attribute: **record_length** value: **value**

attribute: **records** value: **value**

- **Table_Record_Character_Grouped Occurs 1 Times**

description: **The Table Record Character Grouped class is a component of the table class and defines a record of the table. This extension defines a character record with grouped fields.**

role: **Concrete**

- **Table_Character_Grouped_Sequence - Occurs 1 to * Times**

description: **The Table Character Grouped Sequence class is a component of the grouped table class. It defines a set of fields.**

role: **Concrete**

attribute: **repetitions** value: **value** ^{Optional}

- **Table_Character_Field_Sequence - Occurs 1 to * Times**

description: **The Table Character Field Sequence class is a component of the grouped table class. It defines a set of fields or a nested set of fields.**

role: **Concrete**

- **Table_Character_Grouped_Field - Occurs 0 to * Times**

description: **The Table Character Grouped Field class is a component of the table record class and defines a field of the record. This extension defines a character grouped field.**

role: **Concrete**

attribute: **name** value: **value**
 attribute: **description** value: **value** Optional
 attribute: **field_number** value: **value** Optional
 attribute: **data_type** value: **ASCII_AnyURI, ASCII_Boolean_TF, ASCII_DOI, ASCII_Date_DOY, ASCII_Date_Time_DOY, ASCII_Date_Time_UTC, ASCII_Date_Time_YMD, ASCII_Date_YMD, ASCII_File_Name, ASCII_File_Specification_Name, ASCII_Integer, ASCII_LID, ASCII_LIDVID, ASCII_MD5_Checksum, ASCII_NonNegative_Integer, ASCII_Numeric_Base16, ASCII_Numeric_Base2, ASCII_Real, ASCII_Short_String_Collapsed, ASCII_Short_String_Preserved, ASCII_Text_Preserved, ASCII_Time, ASCII_VID**
 attribute: **field_location** value: **value**
 attribute: **field_length** value: **value**
 attribute: **field_format** value: **value** Optional
 attribute: **minimum_scaled_value** value: **value** Optional
 attribute: **maximum_scaled_value** value: **value** Optional
 attribute: **scaling_factor** value: **value** Optional
 attribute: **value_offset** value: **value** Optional
 attribute: **unit** value: **value** Optional

- End Table_Character_Grouped_Field
 - End Table_Character_Field_Sequence
 - End Table_Character_Grouped_Sequence
 - End Table_Record_Character_Grouped
 - End Table_Character_Grouped
 - End File_Area_Observational
 - End Product_Table_Character_Grouped
-

• Product_Target

description: **A target product describes a target.**
 role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**
 role: **Concrete**
 attribute: **dd_version_id** value: **value**
 attribute: **std_ref_version_id** value: **value**

- End Data_Standards

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**
 role: **Concrete**
 attribute: **logical_identifier** value: **value**
 attribute: **version_id** value: **value**
 attribute: **product_class** value: **value**
 attribute: **title** value: **value**
 attribute: **alternate_title** value: **value** Optional
 attribute: **alternate_id** value: **value** Optional
 attribute: **last_modification_date_time** value: **value** Optional
 attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**
 role: **Concrete**
 attribute: **target_name** value: **value** Optional
 attribute: **instrument_name** value: **value** Optional
 attribute: **instrument_host_name** value: **value** Optional
 attribute: **keywords** value: **value** Optional

attribute: **full_name** value: **value** Optional
attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** Optional

attribute: **lid_reference** value: **value** Optional

attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**

role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target**

- **End Reference_Entry_Context**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **End Cross_Reference_Area_Context**

- **Target Occurs 1 Times**

description: **The Target class provides a description of a physical object that is the object of data collection.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value**

- **End Target**

- **End Product_Target**

- **Product_Target_PDS3**

description: **A target product describes a target. This product captures a reduced set of the PDS3 catalog target information.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** ^{Optional}

attribute: **alternate_id** value: **value** ^{Optional}

attribute: **last_modification_date_time** value: **value** ^{Optional}

attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** ^{Optional}

attribute: **instrument_name** value: **value** ^{Optional}

attribute: **instrument_host_name** value: **value** ^{Optional}

attribute: **keywords** value: **value** ^{Optional}

attribute: **full_name** value: **value** ^{Optional}

attribute: **investigation_name** value: **value** ^{Optional}

attribute: **observing_system_name** value: **value** ^{Optional}

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** ^{Optional}

attribute: **name** value: **value**

attribute: **alternate_designation** value: **value** ^{Optional}

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**

role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: **value** ^{Optional}

attribute: **lidvid_reference** value: **value** ^{Optional}

attribute: **reference_association_type** value: **has_association**, **has_data_producer**, **has_data_set**, **has_instrument**, **has_instrument_host**, **has_investigation**, **has_node**, **has_personnel**, **has_publication**, **has_resource**, **has_target**

- End Reference_Entry_Context

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- End Cross_Reference_Area_Context

- **Target_PDS3 Occurs 1 Times**

description: **The Target class provides a description of a physical object that is the object of data collection. This class captures the PDS3 catalog Target information.**

role: **Concrete**

attribute: **target_name** value: **value**

attribute: **primary_body_name** value: **value**

attribute: **target_desc** value: **value**

attribute: **target_type** value: **value**

- End Target_PDS3
 - End Product_Target_PDS3
-

- **Product_Thumbnail**

description: **The Product Thumbnail class defines a product consisting of one encoded byte stream digital object.**
role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: **value**

attribute: **std_ref_version_id** value: **value**

- End Data_Standards

- **Identification_Area Occurs 1 Times**

description: **The identification area consists of attributes that identify and name an object.**

role: **Concrete**

attribute: **logical_identifier** value: **value**

attribute: **version_id** value: **value**

attribute: **product_class** value: **value**

attribute: **title** value: **value**

attribute: **alternate_title** value: **value** Optional

attribute: **alternate_id** value: **value** Optional

attribute: **last_modification_date_time** value: **value** Optional

attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional

attribute: **instrument_name** value: **value** Optional
attribute: **instrument_host_name** value: **value** Optional
attribute: **keywords** value: **value** Optional
attribute: **full_name** value: **value** Optional
attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **alternate_designation** value: **value** Optional
attribute: **lid_reference** value: **value** Optional
attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area**

- **Cross_Reference_Area - Occurs 0 to 1 Times**

description: **The cross reference area provides references to associated registered products.**

role: **Concrete**

- **Observing_System - Occurs 0 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional
attribute: **name** value: **value** Optional
attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional
attribute: **lidvid_reference** value: **value** Optional
attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **End Reference_Entry_Observing_System_Component**

- **End Observing_System_Component**

- **End Observing_System**

- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference.**

The reference is to a product.

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_association, member_of**

- **End Reference_Entry**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**

- **End Cross_Reference_Area**

- **File_Area_Encoded_Image Occurs 1 Times**

description: **The File Area Encoded Image class describes a file that contains an Encoded Image object.**

role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **comment** value: **value** Optional

attribute: **creation_date_time** value: **value** Optional

attribute: **file_name** value: **value**

attribute: **file_size** value: **value** Optional

attribute: **maximum_record_bytes** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **records** value: **value** Optional

- **End File**

- **Encoded_Image Occurs 1 Times**

description: **The Encoded Image class, a subclass of Encoded Byte stream is used for ancillary images in standard formats, such as JPEG.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **BINARY**

attribute: **external_standard_id** value: **GIF, JPEG, PDF, PNG, TIFF**

attribute: **offset** value: **value**

- **End Encoded_Image**

- **End File_Area_Encoded_Image**

- **End Product_Thumbnail**
-

- **Product_Update**

description: **The Product Update class defines a product consisting of update information and optional references to other products.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area_Product Occurs 1 Times**

description: **The product identification area consists of attributes that identify and name a data product.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* Optional

attribute: **alternate_id** value: *value* Optional

attribute: **last_modification_date_time** value: *value* Optional

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* Optional

attribute: **instrument_name** value: *value* Optional

attribute: **instrument_host_name** value: *value* Optional

attribute: **keywords** value: *value* Optional

attribute: **full_name** value: *value* Optional

attribute: **investigation_name** value: *value* Optional

attribute: **observing_system_name** value: *value* Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* Optional

attribute: **name** value: *value*

attribute: **alternate_designation** value: *value* Optional

attribute: **lid_reference** value: *value* Optional

attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area_Product**

- **Cross_Reference_Area_Context Occurs 1 Times**

description: **The context cross reference area provides references to associated registered products.**

role: **Concrete**

- **Reference_Entry_Context - Occurs 0 to * Times**

description: **The Reference Entry Context class implements associations between context products. For example, an instrument is associated with an instrument_host which in turn is associated with an investigation.**

role: **Concrete**

attribute: **lid_reference** value: *value* Optional

attribute: **lidvid_reference** value: *value* Optional

attribute: **reference_association_type** value: *has_association, has_data_producer, has_data_set, has_instrument, has_instrument_host, has_investigation, has_node, has_personnel, has_publication, has_resource, has_target*

- **End Reference_Entry_Context**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: *value* Optional

attribute: **description** value: *value* Optional

attribute: **doi** value: *value* Optional

attribute: **reference_text** value: *value* Optional

attribute: **url** value: *value* Optional

- **End Bibliographic_Reference**
- **End Cross_Reference_Area_Context**

- **Update Occurs 1 Times**

description: **The Update class consists of update information.**

role: **Concrete**

attribute: **local_identifier** value: *value*

attribute: **description** value: *value* Optional

- **Update_Entry - Occurs 0 to * Times**

description: **The Update Entry class provides the date and description of an update.**

role: **Concrete**

attribute: **description** value: *value*

attribute: **date_time** value: *value*

attribute: **full_name** value: *value*

- **Reference_Entry_Generic - Occurs 0 to 1 Times**

description: **The Reference Entry Generic class provides a reference and type information about the reference. The reference is to a product.**

role: **Abstract**

attribute: **lid_reference** value: *value* Optional

attribute: **lidvid_reference** value: *value* Optional

attribute: **reference_association_type** value: *value*

- **End Reference_Entry_Generic**
 - **End Update_Entry**
 - **End Update**
 - **End Product_Update**
-

- **Product_XML_Schema**

description: **The Product XML Schema consists of a single text file in XML Schema encoding.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area Occurs 1 Times**

description: **The identification area consists of attributes that identify and name an object.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* Optional

attribute: **alternate_id** value: **value** Optional
attribute: **last_modification_date_time** value: **value** Optional
attribute: **type** value: **value**

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: **value** Optional
attribute: **instrument_name** value: **value** Optional
attribute: **instrument_host_name** value: **value** Optional
attribute: **keywords** value: **value** Optional
attribute: **full_name** value: **value** Optional
attribute: **investigation_name** value: **value** Optional
attribute: **observing_system_name** value: **value** Optional

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **alternate_designation** value: **value** Optional
attribute: **lid_reference** value: **value** Optional
attribute: **type** value: **value**

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area**

- **Cross_Reference_Area - Occurs 0 to 1 Times**

description: **The cross reference area provides references to associated registered products.**

role: **Concrete**

- **Observing_System - Occurs 0 to * Times**

description: **The Observing System class describes the entire suite used to collect the data.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional
attribute: **name** value: **value** Optional
attribute: **description** value: **value**

- **Observing_System_Component - Occurs 1 to * Times**

description: **The Observing System Component class references one or more subsystems used to collect data. A subsystem can be an instrument_host, instrument, or any other similar product. Each subsystem is categorized as either a sensor or a source. If the observing system includes both a sensor and a source, Observing System Component occurs twice (once for each type) otherwise it only occurs once.**

role: **Concrete**

attribute: **comment** value: **value** Optional
attribute: **name** value: **value**
attribute: **observing_system_component_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- **Reference_Entry_Observing_System_Component - Occurs 0 to 1 Times**

description: **The Reference Entry Observing System Component class provides a product specific reference and type information about the reference. The references are to components of the observing system.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional
attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **Analyst, Artificial_Illumination, Ground-based_Laboratory, Ground-based_Observatory, Ground-based_Telescope, Instrument, Literature_Search, PDS_Archived_Data, Spacecraft**

- End Reference_Entry_Observing_System_Component
- End Observing_System_Component
- End Observing_System

- **Reference_Entry - Occurs 0 to * Times**

description: **The Reference Entry class provides a reference and type information about the reference. The reference is to a product.**

role: **Concrete**

attribute: **lid_reference** value: **value** Optional

attribute: **lidvid_reference** value: **value** Optional

attribute: **reference_association_type** value: **has_association, member_of**

- End Reference_Entry

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- End Bibliographic_Reference
- End Cross_Reference_Area

- **File_Area_XML_Schema Occurs 1 Times**

description: **The File Area XML Schema class describes a file that contains an XML Schema object.**

role: **Concrete**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: **value** Optional

attribute: **comment** value: **value** Optional

attribute: **creation_date_time** value: **value** Optional

attribute: **file_name** value: **value**

attribute: **file_size** value: **value** Optional

attribute: **maximum_record_bytes** value: **value** Optional

attribute: **md5_checksum** value: **value** Optional

attribute: **records** value: **value** Optional

- End File

- **XML_Schema Occurs 1 Times**

description: **The XML Schema class defines a text stream file containing XML Schema.**

role: **Concrete**

attribute: **local_identifier** value: **value**

attribute: **comment** value: **value** Optional

attribute: **encoding_type** value: **CHARACTER**

attribute: **external_standard_id** value: **XML_Schema**

attribute: **offset** value: **value**

- End XML_Schema
 - End File_Area_XML_Schema
 - End Product_XML_Schema
-

- **Product_Zipped**

description: **The Product_Zipped is a product with references to other products. The referenced products and all associated products and files are packaged into a single ZIP file.**

role: **Concrete**

- **Data_Standards Occurs 1 Times**

description: **The Data Standards class indicates the controlling standards for this product.**

role: **Concrete**

attribute: **dd_version_id** value: *value*

attribute: **std_ref_version_id** value: *value*

- **End Data_Standards**

- **Identification_Area Occurs 1 Times**

description: **The identification area consists of attributes that identify and name an object.**

role: **Concrete**

attribute: **logical_identifier** value: *value*

attribute: **version_id** value: *value*

attribute: **product_class** value: *value*

attribute: **title** value: *value*

attribute: **alternate_title** value: *value* ^{Optional}

attribute: **alternate_id** value: *value* ^{Optional}

attribute: **last_modification_date_time** value: *value* ^{Optional}

attribute: **type** value: *value*

- **Subject_Area - Occurs 0 to 1 Times**

description: **The Subject Area provides one or more topics associated with the identifiable using keywords, key phrases, or classification codes.**

role: **Concrete**

attribute: **target_name** value: *value* ^{Optional}

attribute: **instrument_name** value: *value* ^{Optional}

attribute: **instrument_host_name** value: *value* ^{Optional}

attribute: **keywords** value: *value* ^{Optional}

attribute: **full_name** value: *value* ^{Optional}

attribute: **investigation_name** value: *value* ^{Optional}

attribute: **observing_system_name** value: *value* ^{Optional}

- **Name_Resolution - Occurs 0 to * Times**

description: **The Name_Resolution (aka Target) class provides a means for target identification in observational data products labels.**

role: **Concrete**

attribute: **comment** value: *value* ^{Optional}

attribute: **name** value: *value*

attribute: **alternate_designation** value: *value* ^{Optional}

attribute: **lid_reference** value: *value* ^{Optional}

attribute: **type** value: *value*

- **End Name_Resolution**

- **End Subject_Area**

- **End Identification_Area**

- **File Occurs 1 Times**

description: **The File class consists of attributes that describe a file in a data store.**

role: **Concrete**

attribute: **local_identifier** value: *value* ^{Optional}

attribute: **comment** value: *value* ^{Optional}

attribute: **creation_date_time** value: *value* ^{Optional}

attribute: **file_name** value: *value*

attribute: **file_size** value: *value* ^{Optional}

attribute: **maximum_record_bytes** value: *value* ^{Optional}

attribute: **md5_checksum** value: **value** Optional

attribute: **records** value: **value** Optional

- **End File**
attribute: **container_type** value: **GZIP, LZIP, TAR, ZIP**

- **Cross_Reference_Area_Generic - Occurs 0 to 1 Times**

description: **The cross reference area generic provides references for associated products.**
role: **Abstract**

- **Bibliographic_Reference - Occurs 0 to * Times**

description: **The Bibliographic Reference class provides references to documents that are not registered with the PDS.**

role: **Concrete**

attribute: **name** value: **value** Optional

attribute: **description** value: **value** Optional

attribute: **doi** value: **value** Optional

attribute: **reference_text** value: **value** Optional

attribute: **url** value: **value** Optional

- **End Bibliographic_Reference**
 - **End Cross_Reference_Area_Generic**

- **Zipped_Member_Entry - Occurs 0 to * Times**

description: **The Zipped Member Entry class provides a member reference to a product.**

role: **Concrete**

attribute: **file_specification_name** value: **value**

attribute: **lidvid_reference** value: **value**

attribute: **md5_checksum** value: **value**

attribute: **reference_association_type** value: **contained_product, manifest_product**

- **End Zipped_Member_Entry**
 - **End Product_Zipped**
-

- **Rings_Prod_Info**

description: **This class identifies the set of elements pertinent to Rings products.**

role: **Concrete**

attribute: **node_name** value: **Planetary_Rings**

attribute: **incidence_angle** value: **value**

attribute: **maximum_ring_radius** value: **value**

attribute: **minimum_ring_radius** value: **value**

attribute: **node_id** value: **RINGS**

attribute: **occultation_type** value: **STELLAR**

attribute: **planetary_occultation_flag** value: **value**

attribute: **radial_resolution** value: **value**

attribute: **ring_event_start_time** value: **value**

attribute: **ring_event_stop_time** value: **value**

attribute: **ring_occultation_direction** value: **value**

attribute: **star_name** value: **value**

- **End Rings_Prod_Info**
-

- **Telemetry_Parameters**

description: **The Telemetry_Parameters class contains downlink-related attributes used primarily during mission operations.**

role: **Concrete**

attribute: **application_process_id** value: **value** Optional

attribute: **application_process_name** value: **value** Optional

attribute: **earth_received_start_date_time** value: **value** Optional

attribute: **earth_received_stop_date_time** value: **value** Optional

attribute: **expected_packets** value: **value** Optional
attribute: **packet_map_mask** value: **value** Optional
attribute: **received_packets** value: **value** Optional
attribute: **spice_file_name** value: **value** Optional
attribute: **telemetry_format_id** value: **value** Optional
attribute: **telemetry_provider_id** value: **value** Optional
attribute: **telemetry_source_name** value: **value** Optional
attribute: **telemetry_source_type** value: **DATA_PRODUCT, SFDU** Optional

- **End Telemetry_Parameters**
-

9. PDS4 Data Type Definitions Fri Oct 28 10:17:55 PDT 2011

Generated from the PDS4 Information Model Version 0.5.0.0.g

- **Data Type:ASCII_AnyURI**

description: **The ASCII AnyURI class indicates a URI or its subclasses URN and URL.**
minimum_characters: **1**
maximum_characters: **255**
xml_schema_base_type: **xsd:anyURI**
enumeration_flag: **F**
character_encoding: **UTF-8**

- **Data Type:ASCII_Boolean**

description: **The ASCII Boolean class indicates a boolean.**
xml_schema_base_type: **xsd:boolean**
enumeration_flag: **F**
character_encoding: **UTF-8**

- **Data Type:ASCII_Boolean_TF**

description: **The ASCII Boolean_TF class indicates a boolean with a permissible value of either T or F.**
minimum_characters: **1**
maximum_characters: **1**
xml_schema_base_type: **xsd:string**
enumeration_flag: **T**
character_constraint: **ASCII**
character_encoding: **UTF-8**

- **Data Type:ASCII_DOI**

description: **The ASCII DOI class indicates a digital object identifier (DOI).**
minimum_characters: **1**
maximum_characters: **255**
xml_schema_base_type: **xsd:string**
enumeration_flag: **F**
character_constraint: **ASCII**
formation_rule: **nn.nnnn/nnn**
character_encoding: **UTF-8**

- **Data Type:ASCII_Date**

description: **The ASCII_Date class indicates a date in either YMD or DOY format.**
minimum_characters: **1**
maximum_characters: **10**
xml_schema_base_type: **xsd:string**
enumeration_flag: **F**
character_constraint: **ASCII**
formation_rule: **yyyy-mm-dd/yyyy-doy**
character_encoding: **UTF-8**

- **Data Type:ASCII_Date_DOY**

description: **The ASCII_Date_DOY class indicates a date in DOY format.**

minimum_characters: 4
maximum_characters: 8
xml_schema_base_type: **xsd:string**
enumeration_flag: F
character_constraint: **ASCII**
formation_rule: **yyyy-doy**
character_encoding: **UTF-8**

- **Data Type:ASCII_Date_Time**

description: **The ASCII_Date_Time class indicates a date in either YMD or DOY format and time.**
minimum_characters: 4
maximum_characters: 255
xml_schema_base_type: **xsd:string**
enumeration_flag: F
character_constraint: **ASCII**
formation_rule: **yyyy-mm-ddThh:mm:ss.sss/yyyy-doyThh:mm:ss.sss**
character_encoding: **UTF-8**

- **Data Type:ASCII_Date_Time_DOY**

description: **The ASCII_Date_Time_DOY class indicates a date in DOY format and time.**
minimum_characters: 4
maximum_characters: 30
xml_schema_base_type: **xsd:string**
enumeration_flag: F
character_constraint: **ASCII**
formation_rule: **yyyy-doyThh:mm:ss.sss**
character_encoding: **UTF-8**

- **Data Type:ASCII_Date_Time_UTC**

description: **The ASCII_Date_Time_UTC class indicates a date and time in UTC format.**
minimum_characters: 4
maximum_characters: 30
xml_schema_base_type: **xsd:string**
enumeration_flag: F
character_constraint: **ASCII**
formation_rule: **yyyy-mm-ddThh:mm:ss.sssZ**
character_encoding: **UTF-8**

- **Data Type:ASCII_Date_Time_YMD**

description: **The ASCII_Date_Time_YMD class indicates a date in YMD format and time.**
minimum_characters: 4
maximum_characters: 30
xml_schema_base_type: **xsd:string**
enumeration_flag: F
character_constraint: **ASCII**
formation_rule: **yyyy-mm-ddThh:mm:ss.sss**
character_encoding: **UTF-8**

- **Data Type:ASCII_Date_YMD**

description: **The ASCII_Date_YMD class indicates a date in YMD format.**
minimum_characters: 4
maximum_characters: 10
xml_schema_base_type: **xsd:string**
enumeration_flag: F
character_constraint: **ASCII**
formation_rule: **yyyy-mm-dd**
character_encoding: **UTF-8**

- **Data Type:ASCII_Directory_Path_Name**

description: **The ASCII Directory Path Name class indicates a system directory path.**
minimum_characters: 1
maximum_characters: 255
xml_schema_base_type: **xsd:token**
enumeration_flag: F

character_constraint: **ASCII**
formation_rule: **dir1/dir2/**
character_encoding: **UTF-8**

- **Data Type:ASCII_File_Name**

description: **The ASCII File Name class indicates a system file name.**
minimum_characters: **1**
maximum_characters: **255**
xml_schema_base_type: **xsd:token**
enumeration_flag: **F**
character_constraint: **ASCII**
formation_rule: **file_name.file_extension**
character_encoding: **UTF-8**

- **Data Type:ASCII_File_Specification_Name**

description: **The ASCII File Specification Name class indicates a system file including directory path, file name, and file extension.**
minimum_characters: **1**
maximum_characters: **255**
xml_schema_base_type: **xsd:token**
enumeration_flag: **F**
character_constraint: **ASCII**
formation_rule: **dir1/dir2/file_name.file_extension**
character_encoding: **UTF-8**

- **Data Type:ASCII_Identifier**

description: **The ASCII Identifier class indicates a identifier.**
minimum_characters: **1**
maximum_characters: **100**
xml_schema_base_type: **xsd:string**
enumeration_flag: **F**
character_constraint: **ASCII**
character_encoding: **UTF-8**

- **Data Type:ASCII_Integer**

description: **The ASCII Integer class indicates an integer.**
maximum_value: **2147483647**
xml_schema_base_type: **xsd:integer**
enumeration_flag: **F**
minimum_value: **-2147483648**
character_encoding: **UTF-8**

- **Data Type:ASCII_LID**

description: **The ASCII LID class indicates a logical identifier.**
minimum_characters: **14**
maximum_characters: **255**
xml_schema_base_type: **xsd:string**
enumeration_flag: **F**
character_constraint: **ASCII**
formation_rule: **urn:nasa:pds:xxxx**
character_encoding: **UTF-8**

- **Data Type:ASCII_LIDVID**

description: **The ASCII LIDVID class indicates a logical identifier and version identifier.**
minimum_characters: **19**
maximum_characters: **255**
xml_schema_base_type: **xsd:string**
enumeration_flag: **F**
character_constraint: **ASCII**
formation_rule: **urn:nasa:pds:xxxx::M.n**
character_encoding: **UTF-8**

- **Data Type:ASCII_MD5_Checksum**

description: **The ASCII MD5 Checksum class indicates a checksum computed by the Message-Digest algorithm 5 (MD5).**
minimum_characters: **32**
maximum_characters: **32**
xml_schema_base_type: **xsd:string**
enumeration_flag: **F**
character_constraint: **ASCII**
formation_rule: **0123456789abcdef**
character_encoding: **UTF-8**

- **Data Type:ASCII_NonNegative_Integer**

description: **The ASCII_NonNegative_Integer class indicates a non-negative integer.**
maximum_value: **4294967295**
xml_schema_base_type: **xsd:integer**
enumeration_flag: **F**
minimum_value: **0**
character_encoding: **UTF-8**

- **Data Type:ASCII_Numeric_Base16**

description: **The ASCII Numeric Base16 class indicates a ASCII encoded string constrained to hexadecimal digits.**
minimum_characters: **1**
maximum_characters: **255**
xml_schema_base_type: **xsd:hexBinary**
enumeration_flag: **F**
character_encoding: **UTF-8**

- **Data Type:ASCII_Numeric_Base2**

description: **The ASCII Numeric Base2 class indicates a ASCII encoded string constrained to binary digits.**
minimum_characters: **1**
maximum_characters: **255**
xml_schema_base_type: **xsd:string**
enumeration_flag: **F**
character_constraint: **ASCII**
character_encoding: **UTF-8**

- **Data Type:ASCII_Numeric_Base8**

description: **The ASCII Numeric Base8 class indicates a ASCII encoded string constrained to octal digits.**
minimum_characters: **1**
maximum_characters: **255**
xml_schema_base_type: **xsd:string**
enumeration_flag: **F**
character_constraint: **ASCII**
character_encoding: **UTF-8**

- **Data Type:ASCII_Real**

description: **The ASCII_Real class indicates a real.**
maximum_value: **INF**
xml_schema_base_type: **xsd:double**
enumeration_flag: **F**
minimum_value: **-INF**
character_encoding: **UTF-8**

- **Data Type:ASCII_Short_String_Collapsed**

description: **The ASCII_Short_String_Collapsed class indicates a limited length, whitespace-collapsed string.**
minimum_characters: **1**
maximum_characters: **255**
xml_schema_base_type: **xsd:token**
enumeration_flag: **F**
character_constraint: **ASCII**
character_encoding: **UTF-8**

- **Data Type:ASCII_Short_String_Preserved**

description: **The ASCII_Short_String_Preserved class indicates a limited length, whitespace-preserved string.**

minimum_characters: 1
maximum_characters: 255
xml_schema_base_type: **xsd:string**
enumeration_flag: F
character_constraint: **ASCII**
character_encoding: **UTF-8**

- **Data Type:ASCII_Text_Collapsed**

description: **The ASCII_Text_Collapsed class indicates an unlimited length, whitespace-collapsed text string.**
minimum_characters: 1
maximum_characters: **2147483647**
xml_schema_base_type: **xsd:token**
enumeration_flag: F
character_constraint: **ASCII**
character_encoding: **UTF-8**

- **Data Type:ASCII_Text_Preserved**

description: **The ASCII_Text_Preserved class indicates an unlimited length, whitespace-preserved text string.**
minimum_characters: 1
maximum_characters: **2147483647**
xml_schema_base_type: **xsd:string**
enumeration_flag: F
character_constraint: **ASCII**
character_encoding: **UTF-8**

- **Data Type:ASCII_Time**

description: **The ASCII_Time class indicates a time value.**
minimum_characters: 1
maximum_characters: **20**
xml_schema_base_type: **xsd:string**
enumeration_flag: F
character_constraint: **ASCII**
formation_rule: *hh:mm:ss.sss *
character_encoding: **UTF-8**

- **Data Type:ASCII_VID**

description: **The ASCII_VID class indicates a version identifier.**
minimum_characters: 3
maximum_characters: **100**
xml_schema_base_type: **xsd:string**
enumeration_flag: F
character_constraint: **ASCII**
formation_rule: **M.m**
character_encoding: **UTF-8**

- **Data Type:Bit**

description: **A single binary digit.**
enumeration_flag: **TRUE**

- **Data Type:ComplexLSB16**

description: **Complex number consisting of two LSB 8 byte decimal reals.**
enumeration_flag: **FALSE**

- **Data Type:ComplexLSB8**

description: **Complex number consisting of two LSB 4 byte decimal reals.**
enumeration_flag: **FALSE**

- **Data Type:ComplexMSB16**

description: **Complex number consisting of two MSB 8 byte decimal reals.**
enumeration_flag: **FALSE**

- **Data Type:ComplexMSB8**

description: **Complex number consisting of two MSB 4 byte decimal reals.**
enumeration_flag: **FALSE**

- **Data Type:Float3Vector**

description: **The Float3Vector data type class is a prototype of Anne's simple demo schema for float3vector.**
xml_schema_base_type: **xsd:token**
enumeration_flag: **F**
character_encoding: **UTF-8**

- **Data Type:IEEE754LSBDouble**

description: **IEEE 754 LSB double precision floating point**
enumeration_flag: **FALSE**

- **Data Type:IEEE754LSBSingle**

description: **IEEE 754 LSB single precision floating point**
enumeration_flag: **FALSE**

- **Data Type:IEEE754MSBDouble**

description: **IEEE 754 MSB double precision floating point**
enumeration_flag: **FALSE**

- **Data Type:IEEE754MSBSingle**

description: **IEEE 754 MSB single precision floating point**
enumeration_flag: **FALSE**

- **Data Type:SignedByte**

description: **Signed 8-bit byte**
enumeration_flag: **FALSE**

- **Data Type:SignedLSB2**

description: **Signed 2's-complement LSB 2-byte integer**
enumeration_flag: **FALSE**

- **Data Type:SignedLSB4**

description: **Signed 2's-complement LSB 4-byte integer**
enumeration_flag: **FALSE**

- **Data Type:SignedLSB8**

description: **Signed 2's-complement LSB 8-byte integer**
enumeration_flag: **FALSE**

- **Data Type:SignedMSB2**

description: **Signed 2's-complement MSB 2-byte integer**
enumeration_flag: **FALSE**

- **Data Type:SignedMSB4**

description: **Signed 2's-complement MSB 4-byte integer**
enumeration_flag: **FALSE**

- **Data Type:SignedMSB8**

description: **Signed 2's-complement MSB 8-byte integer**
enumeration_flag: **FALSE**

- **Data Type:UTF8_Short_String_Collapsed**

description: **The UTF8_Short_String_Collapsed class indicates a limited length, whitespace-collapsed string constrained to the UTF-8 character encoding.**

minimum_characters: 1
maximum_characters: 255
xml_schema_base_type: xsd:token
enumeration_flag: F
character_encoding: UTF-8

- **Data Type:UTF8_Short_String_Preserved**

description: **The UTF8_Short_String_Preserved class indicates a limited length, whitespace-preserved string constrained to the UTF-8 character encoding.**

minimum_characters: 1
maximum_characters: 255
xml_schema_base_type: xsd:string
enumeration_flag: F
character_encoding: UTF-8

- **Data Type:UTF8_Text_Preserved**

description: **The UTF8_Text_Preserved class indicates an unlimited length, whitespace-preserved text string constrained to the UTF-8 character encoding.**

minimum_characters: 1
maximum_characters: 2147483647
xml_schema_base_type: xsd:string
enumeration_flag: F
character_encoding: UTF-8

- **Data Type:UnsignedByte**

description: **Unsigned 8-bit byte**
enumeration_flag: FALSE

- **Data Type:UnsignedLSB2**

description: **Unsigned 2's-complement LSB 2-byte integer**
enumeration_flag: FALSE

- **Data Type:UnsignedLSB4**

description: **Unsigned 2's-complement LSB 4-byte integer**
enumeration_flag: FALSE

- **Data Type:UnsignedLSB8**

description: **Unsigned 2's-complement LSB 8-byte integer**
enumeration_flag: FALSE

- **Data Type:UnsignedMSB2**

description: **Unsigned 2's-complement MSB 2-byte integer**
enumeration_flag: FALSE

- **Data Type:UnsignedMSB4**

description: **Unsigned 2's-complement MSB 4-byte integer**
enumeration_flag: FALSE

- **Data Type:UnsignedMSB8**

description: **Unsigned 2's-complement MSB 8-byte integer**
enumeration_flag: FALSE

10. Attribute and Class Indices

11. Attribute Index

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- local_identifier** - **local_identifier** in ops:DD_Association, **local_identifier** in ops:DD_Attribute, **local_identifier** in ops:DD_Class, **local_identifier** in ops:Local_DD, **local_identifier** in pds:Array_Base, **local_identifier** in pds:Encoded_Byte_Stream, **local_identifier** in pds:Field_Statistics, **local_identifier** in pds:File, **local_identifier** in pds:Geometry, **local_identifier** in pds:Object_Statistics, **local_identifier** in pds:Observing_System, **local_identifier** in pds:Parseable_Byte_Stream, **local_identifier** in pds:Quaternion, **local_identifier** in pds:Reference, **local_identifier** in pds:Table_Base, **local_identifier** in pds:Update, **local_identifier** in pds:Vector
- local_mean_solar_time** - **local_mean_solar_time** in pds:Observation_Area
- local_true_solar_time** - **local_true_solar_time** in pds:Observation_Area
- logical_identifier** - **logical_identifier** in pds:Identification_Area
- maximum** - **maximum** in pds:Field_Statistics, **maximum** in pds:Object_Statistics
- maximum_characters** - **maximum_characters** in ops:DD_Value_Domain, **maximum_characters** in pds:ASCII_AnyURI, **maximum_characters** in pds:ASCII_Boolean_TF, **maximum_characters** in pds:ASCII_Date, **maximum_characters** in pds:ASCII_Date_DOY, **maximum_characters** in pds:ASCII_Date_Time, **maximum_characters** in pds:ASCII_Date_Time_DOY, **maximum_characters** in pds:ASCII_Date_Time_UTC, **maximum_characters** in pds:ASCII_Date_Time_YMD, **maximum_characters** in pds:ASCII_Date_YMD, **maximum_characters** in pds:ASCII_Directory_Path_Name, **maximum_characters** in pds:ASCII_DOI, **maximum_characters** in pds:ASCII_File_Name, **maximum_characters** in pds:ASCII_File_Specification_Name, **maximum_characters** in pds:ASCII_Identifier, **maximum_characters** in pds:ASCII_Integer, **maximum_characters** in pds:ASCII_LID, **maximum_characters** in pds:ASCII_LIDVID, **maximum_characters** in pds:ASCII_MD5_Checksum, **maximum_characters** in pds:ASCII_NonNegative_Integer, **maximum_characters** in pds:ASCII_Numeric_Base16, **maximum_characters** in pds:ASCII_Numeric_Base2, **maximum_characters** in pds:ASCII_Numeric_Base8, **maximum_characters** in pds:ASCII_Real, **maximum_characters** in pds:ASCII_Short_String_Collapsed, **maximum_characters** in pds:ASCII_Short_String_Preserved, **maximum_characters** in pds:ASCII_Text_Collapsed, **maximum_characters** in pds:ASCII_Text_Preserved, **maximum_characters** in pds:ASCII_Time, **maximum_characters** in pds:ASCII_VID, **maximum_characters** in pds:Character_Data_Type, **maximum_characters** in pds:UTF8_Short_String_Collapsed, **maximum_characters** in pds:UTF8_Short_String_Preserved, **maximum_characters** in pds:UTF8_Text_Preserved
- maximum_occurrences** - **maximum_occurrences** in ops:DD_Association
- maximum_record_bytes** - **maximum_record_bytes** in pds:File
- maximum_record_length** - **maximum_record_length** in pds:Delimited_Table, **maximum_record_length** in pds:Delimited_Table_Grouped
- maximum_ring_radius** - **maximum_ring_radius** in rings:Rings_Prod_Info
- maximum_scaled_value** - **maximum_scaled_value** in pds:Delimited_Field, **maximum_scaled_value** in pds:Table_Field_Extended
- maximum_value** - **maximum_value** in ops:DD_Value_Domain, **maximum_value** in pds:ASCII_Date_Time, **maximum_value** in pds:ASCII_Date_Time_DOY, **maximum_value** in pds:ASCII_Date_Time_UTC, **maximum_value** in pds:ASCII_Date_Time_YMD, **maximum_value** in pds:ASCII_Identifier, **maximum_value** in pds:ASCII_Integer, **maximum_value** in pds:ASCII_LID, **maximum_value** in pds:ASCII_NonNegative_Integer, **maximum_value** in

- pds:ASCII_Numeric_Base16, **maximum_value** in pds:ASCII_Numeric_Base2, **maximum_value** in pds:ASCII_Real, **maximum_value** in pds:ASCII_Short_String_Collapsed, **maximum_value** in pds:ASCII_Short_String_Preserved, **maximum_value** in pds:ASCII_Text_Preserved, **maximum_value** in pds:ASCII_Time, **maximum_value** in pds:ASCII_VID, **maximum_value** in pds:Character_Data_Type, **maximum_value** in pds:UTF8_Short_String_Collapsed, **maximum_value** in pds:UTF8_Short_String_Preserved, **maximum_value** in pds:UTF8_Text_Preserved
- **md5_checksum - md5_checksum** in pds:File, **md5_checksum** in pds:Object_Statistics, **md5_checksum** in pds:Zipped_Member_Entry
 - **mean - mean** in pds:Field_Statistics, **mean** in pds:Object_Statistics
 - **median - median** in pds:Field_Statistics, **median** in pds:Object_Statistics
 - **medium_type - medium_type** in ops:NSSDC, **medium_type** in ops:Volume_PDS3
 - **minimum - minimum** in pds:Field_Statistics, **minimum** in pds:Object_Statistics
 - **minimum_characters - minimum_characters** in ops:DD_Value_Domain, **minimum_characters** in pds:ASCII_AnyURI, **minimum_characters** in pds:ASCII_Boolean_TF, **minimum_characters** in pds:ASCII_Date, **minimum_characters** in pds:ASCII_Date_DOY, **minimum_characters** in pds:ASCII_Date_Time, **minimum_characters** in pds:ASCII_Date_Time_DOY, **minimum_characters** in pds:ASCII_Date_Time_UTC, **minimum_characters** in pds:ASCII_Date_Time_YMD, **minimum_characters** in pds:ASCII_Date_YMD, **minimum_characters** in pds:ASCII_Directory_Path_Name, **minimum_characters** in pds:ASCII_DOI, **minimum_characters** in pds:ASCII_File_Name, **minimum_characters** in pds:ASCII_File_Specification_Name, **minimum_characters** in pds:ASCII_Identifier, **minimum_characters** in pds:ASCII_Integer, **minimum_characters** in pds:ASCII_LID, **minimum_characters** in pds:ASCII_LIDVID, **minimum_characters** in pds:ASCII_MD5_Checksum, **minimum_characters** in pds:ASCII_NonNegative_Integer, **minimum_characters** in pds:ASCII_Numeric_Base16, **minimum_characters** in pds:ASCII_Numeric_Base2, **minimum_characters** in pds:ASCII_Numeric_Base8, **minimum_characters** in pds:ASCII_Real, **minimum_characters** in pds:ASCII_Short_String_Collapsed, **minimum_characters** in pds:ASCII_Short_String_Preserved, **minimum_characters** in pds:ASCII_Text_Collapsed, **minimum_characters** in pds:ASCII_Text_Preserved, **minimum_characters** in pds:ASCII_Time, **minimum_characters** in pds:ASCII_VID, **minimum_characters** in pds:Character_Data_Type, **minimum_characters** in pds:UTF8_Short_String_Collapsed, **minimum_characters** in pds:UTF8_Short_String_Preserved, **minimum_characters** in pds:UTF8_Text_Preserved
 - **minimum_occurrences - minimum_occurrences** in ops:DD_Association
 - **minimum_ring_radius - minimum_ring_radius** in rings:Rings_Prod_Info
 - **minimum_scaled_value - minimum_scaled_value** in pds:Delimited_Field, **minimum_scaled_value** in pds:Table_Field_Extended
 - **minimum_value - minimum_value** in ops:DD_Value_Domain, **minimum_value** in pds:ASCII_Date_Time, **minimum_value** in pds:ASCII_Date_Time_DOY, **minimum_value** in pds:ASCII_Date_Time_UTC, **minimum_value** in pds:ASCII_Date_Time_YMD, **minimum_value** in pds:ASCII_Identifier, **minimum_value** in pds:ASCII_Integer, **minimum_value** in pds:ASCII_LID, **minimum_value** in pds:ASCII_NonNegative_Integer, **minimum_value** in pds:ASCII_Numeric_Base16, **minimum_value** in pds:ASCII_Numeric_Base2, **minimum_value** in pds:ASCII_Real, **minimum_value** in pds:ASCII_Short_String_Collapsed, **minimum_value** in pds:ASCII_Short_String_Preserved, **minimum_value** in pds:ASCII_Text_Preserved, **minimum_value** in pds:ASCII_Time, **minimum_value** in pds:ASCII_VID, **minimum_value** in pds:Character_Data_Type, **minimum_value** in pds:UTF8_Short_String_Collapsed, **minimum_value** in pds:UTF8_Short_String_Preserved, **minimum_value** in pds:UTF8_Text_Preserved
 - **missing_constant - missing_constant** in pds:Special_Constants
 - **mission_desc - mission_desc** in ops:Mission_PDS3
 - **mission_name - mission_name** in ops:Mission_PDS3
 - **mission_objectives_summary - mission_objectives_summary** in ops:Mission_PDS3
 - **mission_phase_name - mission_phase_name** in pds:Observation_Area
 - **mission_start_date - mission_start_date** in ops:Mission_PDS3
 - **mission_stop_date - mission_stop_date** in ops:Mission_PDS3
 - **naif_host_id - naif_host_id** in pds:Instrument_Host
 - **naif_instrument_id - naif_instrument_id** in pds:Instrument
 - **name - name** in ops:DD_Attribute, **name** in ops:DD_Class, **name** in ops:Node, **name** in ops:Personnel, **name** in ops:Software_Desc, **name** in pds:Bibliographic_Reference, **name** in pds:Detector, **name** in pds:Header, **name** in pds:Header_Binary, **name** in pds:Instrument, **name** in pds:Instrument_Host, **name** in pds:Investigation, **name** in pds:Name_Resolution, **name** in pds:Observing_System, **name** in pds:Observing_System_Component, **name** in pds:Quaternion, **name** in pds:Quaternion_Component, **name** in pds:Resource, **name** in pds:Table_Field, **name** in pds:Table_Field_Checksum, **name** in pds:Table_Field_File_Specification_Name, **name** in pds:Table_Field_LID, **name** in pds:Table_Field_LIDVID, **name** in pds:Target, **name** in ops:Terminological_Entry, **name** in pds:Vector, **name** in pds:Vector_Component
 - **name_space_id - name_space_id** in ops:DD_Attribute, **name_space_id** in ops:DD_Attribute_Full, **name_space_id** in ops:DD_Class
 - **node_id - node_id** in rings:Rings_Prod_Info
 - **node_name - node_name** in ops:PDS_Affiliate, **node_name** in rings:Rings_Prod_Info
 - **not_applicable_constant - not_applicable_constant** in pds:Special_Constants
 - **nssdc_collection_id - nssdc_collection_id** in ops:NSSDC
 - **observing_system_component_type - observing_system_component_type** in pds:Observing_System_Component
 - **observing_system_name - observing_system_name** in pds:Subject_Area
 - **occultation_type - occultation_type** in rings:Rings_Prod_Info
 - **offset - offset** in pds:Array_Base, **offset** in pds:Encoded_Byte_Stream, **offset** in pds:Parsable_Byte_Stream, **offset** in pds:Table_Base
 - **orbit_number - orbit_number** in pds:Observation_Area
 - **os_version - os_version** in ops:Software_Binary, **os_version** in ops:Software_Source
 - **packet_map_mask - packet_map_mask** in img:Telemetry_Parameters

- **pattern** - **pattern** in ops:DD_Value_Domain, **pattern** in pds:ASCII_Boolean_TF, **pattern** in pds:ASCII_Date_DOY, **pattern** in pds:ASCII_Date_Time_DOY, **pattern** in pds:ASCII_Date_Time_YMD, **pattern** in pds:ASCII_Date_YMD, **pattern** in pds:ASCII_DOI, **pattern** in pds:ASCII_Identifier, **pattern** in pds:ASCII_LID, **pattern** in pds:ASCII_MD5_Checksum, **pattern** in pds:ASCII_Numeric_Base16, **pattern** in pds:ASCII_Numeric_Base2, **pattern** in pds:ASCII_Numeric_Base8, **pattern** in pds:ASCII_Time, **pattern** in pds:ASCII_VID, **pattern** in pds:Character_Data_Type, **pattern** in pds:Float3Vector
 - **pds4_merge_flag** - **pds4_merge_flag** in ops:Local_DD
 - **phone_book_flag** - **phone_book_flag** in ops:PDS_Affiliate
 - **planetary_occultation_flag** - **planetary_occultation_flag** in rings:Rings_Prod_Info
 - **planet_day_number** - **planet_day_number** in pds:Observation_Area
 - **postal_address_text** - **postal_address_text** in ops:PDS_Affiliate
 - **preferred_flag** - **preferred_flag** in ops:Terminological_Entry
 - **primary_body_name** - **primary_body_name** in ops:Target_PDS3
 - **processing_level_id** - **processing_level_id** in pds:Product_Collection_Data
 - **producer_full_name** - **producer_full_name** in ops>Data_Set_PDS3
 - **product_class** - **product_class** in pds:Identification_Area
 - **programmers_manual_identifier** - **programmers_manual_identifier** in ops:Software_Desc
 - **program_notes_identifier** - **program_notes_identifier** in ops:Software_Binary, **program_notes_identifier** in ops:Software_Source
 - **publication_date** - **publication_date** in ops:Volume_PDS3, **publication_date** in pds:Document_Desc
- **quaternion_components** - **quaternion_components** in pds:Quaternion
- **radial_resolution** - **radial_resolution** in rings:Rings_Prod_Info
 - **received_packets** - **received_packets** in img:Telemetry_Parameters
 - **records** - **records** in pds:Delimited_Table, **records** in pds:Delimited_Table_Grouped, **records** in pds:File, **records** in pds:Table_Base
 - **record_delimiter** - **record_delimiter** in pds:Delimited_Table, **record_delimiter** in pds:Delimited_Table_Grouped
 - **record_length** - **record_length** in pds:Table_Base
 - **reference_association_type** - **reference_association_type** in ops:DD_Association, **reference_association_type** in pds:Bundle_Member_Entry, **reference_association_type** in pds:Inventory_LIDVID_Primary, **reference_association_type** in pds:Inventory_LIDVID_Secondary, **reference_association_type** in pds:Inventory_LID_Secondary, **reference_association_type** in ops:Manifest, **reference_association_type** in pds:Reference_Entry, **reference_association_type** in pds:Reference_Entry_Collection, **reference_association_type** in pds:Reference_Entry_Context, **reference_association_type** in pds:Reference_Entry_Generic, **reference_association_type** in pds:Reference_Entry_Observing_System_Component, **reference_association_type** in pds:Reference_Entry_Product, **reference_association_type** in pds:Zipped_Member_Entry
 - **reference_text** - **reference_text** in pds:Bibliographic_Reference, **reference_text** in pds:Reference
 - **registered_by** - **registered_by** in ops:DD_Attribute_Full
 - **registration_authority_id** - **registration_authority_id** in ops:DD_Attribute_Full
 - **registration_date** - **registration_date** in ops:Personnel
 - **repetitions** - **repetitions** in pds:Delimited_Grouped_Sequence, **repetitions** in pds:Table_Binary_Grouped_Sequence, **repetitions** in pds:Table_Character_Grouped_Sequence
 - **revision_id** - **revision_id** in pds:Document_Desc
 - **ring_event_start_time** - **ring_event_start_time** in rings:Rings_Prod_Info
 - **ring_event_stop_time** - **ring_event_stop_time** in rings:Rings_Prod_Info
 - **ring_occultation_direction** - **ring_occultation_direction** in rings:Rings_Prod_Info
- **sample_bit_mask** - **sample_bit_mask** in pds:Object_Statistics
 - **sample_display_direction** - **sample_display_direction** in pds:Image_2D_Display
 - **sampling_parameter_interval** - **sampling_parameter_interval** in pds:Uniformly_Sampled
 - **sampling_parameter_name** - **sampling_parameter_name** in pds:Uniformly_Sampled
 - **sampling_parameter_scale** - **sampling_parameter_scale** in pds:Uniformly_Sampled
 - **sampling_parameter_unit** - **sampling_parameter_unit** in pds:Uniformly_Sampled
 - **saturated_constant** - **saturated_constant** in pds:Special_Constants
 - **scaling_factor** - **scaling_factor** in pds:Array_Element, **scaling_factor** in pds:Delimited_Field, **scaling_factor** in pds:Table_Field_Extended
 - **sequence_number** - **sequence_number** in pds:Array_Axis, **sequence_number** in pds:Quaternion_Component, **sequence_number** in pds:Vector_Component
 - **serial_number** - **serial_number** in pds:Instrument, **serial_number** in pds:Instrument_Host
 - **software_dialect** - **software_dialect** in ops:Software_Source
 - **software_id** - **software_id** in ops:Software_Desc
 - **software_language** - **software_language** in ops:Software_Source
 - **software_type** - **software_type** in ops:Software_Desc
 - **solar_longitude** - **solar_longitude** in pds:Observation_Area
 - **sort_name** - **sort_name** in ops:Personnel
 - **spacecraft_clock_count_partition** - **spacecraft_clock_count_partition** in pds:Observation_Area
 - **spacecraft_clock_start_count** - **spacecraft_clock_start_count** in pds:Observation_Area
 - **spacecraft_clock_stop_count** - **spacecraft_clock_stop_count** in pds:Observation_Area
 - **specified_unit_id** - **specified_unit_id** in ops:DD_Value_Domain, **specified_unit_id** in pds:UnitOfMeasure, **specified_unit_id** in pds:UnitOfMeasure_AmountOfSubstance, **specified_unit_id** in pds:UnitOfMeasure_Angle, **specified_unit_id** in pds:UnitOfMeasure_AngularVelocity, **specified_unit_id** in pds:UnitOfMeasure_Area, **specified_unit_id** in pds:UnitOfMeasure_Frequency, **specified_unit_id** in pds:UnitOfMeasure_Length, **specified_unit_id** in pds:UnitOfMeasure_MapScale, **specified_unit_id** in pds:UnitOfMeasure_Mass, **specified_unit_id** in pds:UnitOfMeasure_Misc,

- specified_unit_id** in pds:UnitOfMeasure_None, **specified_unit_id** in pds:UnitOfMeasure_OpticalPathLength, **specified_unit_id** in pds:UnitOfMeasure_Pressure, **specified_unit_id** in pds:UnitOfMeasure_Radiance, **specified_unit_id** in pds:UnitOfMeasure_Rates, **specified_unit_id** in pds:UnitOfMeasure_SolidAngle, **specified_unit_id** in pds:UnitOfMeasure_Storage, **specified_unit_id** in pds:UnitOfMeasure_Temperature, **specified_unit_id** in pds:UnitOfMeasure_Time, **specified_unit_id** in pds:UnitOfMeasure_Velocity, **specified_unit_id** in pds:UnitOfMeasure_Voltage, **specified_unit_id** in pds:UnitOfMeasure_Volume
 - spice_file_name** - **spice_file_name** in img:Telemetry_Parameters
 - standard_deviation** - **standard_deviation** in pds:Field_Statistics, **standard_deviation** in pds:Object_Statistics
 - starting_point_identifier** - **starting_point_identifier** in pds:Document_Format
 - start_bit** - **start_bit** in pds:Table_Binary_Grouped_Bit_Field
 - start_date** - **start_date** in pds:Investigation
 - start_date_time** - **start_date_time** in ops:Data_Set_PDS3, **start_date_time** in pds:Archive_Bundle, **start_date_time** in pds:Observation_Area
 - star_name** - **star_name** in rings:Rings_Prod_Info
 - std_ref_version_id** - **std_ref_version_id** in pds:Data_Standards
 - steward_id** - **steward_id** in ops:DD_Attribute, **steward_id** in ops:DD_Attribute_Full, **steward_id** in ops:DD_Class
 - stop_date** - **stop_date** in pds:Investigation
 - stop_date_time** - **stop_date_time** in ops:Data_Set_PDS3, **stop_date_time** in pds:Archive_Bundle, **stop_date_time** in pds:Observation_Area
 - submitter_id** - **submitter_id** in ops:DD_Attribute, **submitter_id** in ops:DD_Attribute_Full
 - supported_architecture** - **supported_architecture** in ops:Software_Binary, **supported_architecture** in ops:Software_Source
 - supported_environment** - **supported_environment** in ops:Software_Script
 - supported_os** - **supported_os** in ops:Software_Binary, **supported_os** in ops:Software_Source
 - sw_format_type** - **sw_format_type** in ops:Software_Binary, **sw_format_type** in ops:Software_Source
 - system_requirements** - **system_requirements** in ops:Software_Format
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- target_desc** - **target_desc** in ops:Target_PDS3
 - target_name** - **target_name** in ops:Target_PDS3, **target_name** in pds:Subject_Area
 - target_type** - **target_type** in ops:Target_PDS3
 - telemetry_format_id** - **telemetry_format_id** in img:Telemetry_Parameters
 - telemetry_provider_id** - **telemetry_provider_id** in img:Telemetry_Parameters
 - telemetry_source_name** - **telemetry_source_name** in img:Telemetry_Parameters
 - telemetry_source_type** - **telemetry_source_type** in img:Telemetry_Parameters
 - telephone_number** - **telephone_number** in ops:PDS_Affiliate
 - title** - **title** in pds:Identification_Area
 - type** - **type** in pds:Identification_Area, **type** in pds:Identification_Area_Collection, **type** in pds:Name_Resolution, **type** in pds:Quaternion, **type** in pds:UnitOfMeasure, **type** in pds:UnitOfMeasure_AmountOfSubstance, **type** in pds:UnitOfMeasure_Angle, **type** in pds:UnitOfMeasure_AngularVelocity, **type** in pds:UnitOfMeasure_Area, **type** in pds:UnitOfMeasure_Frequency, **type** in pds:UnitOfMeasure_Length, **type** in pds:UnitOfMeasure_MapScale, **type** in pds:UnitOfMeasure_Mass, **type** in pds:UnitOfMeasure_Misc, **type** in pds:UnitOfMeasure_None, **type** in pds:UnitOfMeasure_OpticalPathLength, **type** in pds:UnitOfMeasure_Pressure, **type** in pds:UnitOfMeasure_Radiance, **type** in pds:UnitOfMeasure_Rates, **type** in pds:UnitOfMeasure_SolidAngle, **type** in pds:UnitOfMeasure_Storage, **type** in pds:UnitOfMeasure_Temperature, **type** in pds:UnitOfMeasure_Time, **type** in pds:UnitOfMeasure_Velocity, **type** in pds:UnitOfMeasure_Voltage, **type** in pds:UnitOfMeasure_Volume, **type** in pds:Vector
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- unit** - **unit** in pds:Array_Axis, **unit** in pds:Array_Element, **unit** in pds:Delimited_Field, **unit** in pds:Quaternion_Component, **unit** in pds:Table_Field_Extended, **unit** in pds:Vector_Component
 - unit_id** - **unit_id** in pds:UnitOfMeasure, **unit_id** in pds:UnitOfMeasure_AmountOfSubstance, **unit_id** in pds:UnitOfMeasure_Angle, **unit_id** in pds:UnitOfMeasure_AngularVelocity, **unit_id** in pds:UnitOfMeasure_Area, **unit_id** in pds:UnitOfMeasure_Frequency, **unit_id** in pds:UnitOfMeasure_Length, **unit_id** in pds:UnitOfMeasure_MapScale, **unit_id** in pds:UnitOfMeasure_Mass, **unit_id** in pds:UnitOfMeasure_Misc, **unit_id** in pds:UnitOfMeasure_None, **unit_id** in pds:UnitOfMeasure_OpticalPathLength, **unit_id** in pds:UnitOfMeasure_Pressure, **unit_id** in pds:UnitOfMeasure_Radiance, **unit_id** in pds:UnitOfMeasure_Rates, **unit_id** in pds:UnitOfMeasure_SolidAngle, **unit_id** in pds:UnitOfMeasure_Storage, **unit_id** in pds:UnitOfMeasure_Temperature, **unit_id** in pds:UnitOfMeasure_Time, **unit_id** in pds:UnitOfMeasure_Velocity, **unit_id** in pds:UnitOfMeasure_Voltage, **unit_id** in pds:UnitOfMeasure_Volume
 - unit_of_measure_type** - **unit_of_measure_type** in ops:DD_Value_Domain
 - unknown_constant** - **unknown_constant** in pds:Special_Constants
 - url** - **url** in pds:Bibliographic_Reference, **url** in pds:Resource
 - users_manual_identifier** - **users_manual_identifier** in ops:Software_Desc
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- value** - **value** in ops:DD_Permissible_Value, **value** in pds:Quaternion_Component, **value** in pds:Vector_Component
 - value_begin_date** - **value_begin_date** in ops:DD_Permissible_Value
 - value_data_type** - **value_data_type** in ops:DD_Value_Domain
 - value_end_date** - **value_end_date** in ops:DD_Permissible_Value
 - value_meaning** - **value_meaning** in ops:DD_Permissible_Value
 - value_offset** - **value_offset** in pds:Array_Element, **value_offset** in pds:Delimited_Field, **value_offset** in pds:Table_Field_Extended
 - vector_components** - **vector_components** in pds:Vector
 - version_id** - **version_id** in ops:DD_Attribute, **version_id** in ops:DD_Attribute_Full, **version_id** in ops:DD_Class, **version_id** in ops:Software_Desc, **version_id** in pds:Identification_Area, **version_id** in pds:Instrument, **version_id** in pds:Instrument_Host
 - volumes** - **volumes** in ops:Volume_Set_PDS3
 - volume_de_fullname** - **volume_de_fullname** in ops:Volume_PDS3
 - volume_format** - **volume_format** in ops:Volume_PDS3

- **volume_id - volume_id** in ops:Volume_PDS3
- **volume_name - volume_name** in ops:Volume_PDS3
- **volume_series_name - volume_series_name** in ops:Volume_Set_PDS3
- **volume_set_id - volume_set_id** in ops:Volume_PDS3, **volume_set_id** in ops:Volume_Set_PDS3
- **volume_set_name - volume_set_name** in ops:Volume_Set_PDS3
- **volume_size - volume_size** in ops:Volume_PDS3
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