

Standards Change Request

Fix invalid GENERAL_CLASSIFICATION_TYPE values in PSDD

SCR3-1132.v1

Provenance:

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Problem:

In recent years, a number of keywords have been entered into the PSDD with new or erroneous values for GENERAL_CLASSIFICATION_TYPE. Correct values are needed for production of Appendix F, "Data Element Classified Listings", of the PDF version of the PSDD. This SCR proposes to make the necessary changes to the PSDD to fully implement or correct these values.

Note that this SCR does not claim to exhaustively review every keyword and ascertain that it has been assigned the correct value of the GENERAL_CLASSIFICATION_TYPE; it only deals with those keywords that have invalid values.

Current Urgency:

The production of the PDF version of the PSDD is waiting on these corrections, among others.

Proposed Solution:

The nature of the errors in the values for the GENERAL_CLASSIFICATION_TYPE are of the following variety:

1. Single quotes included along with value
2. Two values are concatenated with a space, rather than listed as two separate values
3. DATASET is written as DATA_SET
4. The new values DIS, meteorite, and mineral have been used
5. Values are missing
6. The "rings" value has been entered in lower case

These corresponding solutions are proposed:

1. Remove the extraneous quotes from the values
2. Change the single concatenated values into two separate values
3. Change all occurrences of DATA_SET to DATASET
4. Update the GENERAL_CLASSIFICATION_TYPE keyword to include the new standard values DIS, METEORITE, and MINERAL. Update the lower case values for the latter two to upper case. Update the database with new full name versions of these three values in order to correctly populate Appendix F of the PDF.
5. Supply the missing values.
6. Change the lower case “rings” value to upper case.

All of these changes are listed in detail below.

Impact Assessment:

There should be no impact from these changes on any ongoing mission.

PDS Standards Reference – no impact

Archive Preparation Guide – no impact

Proposer’s Archive Guide – no impact

Planetary Science Data Dictionary – changes as specified below

PDS tools – no impact (except enabling correct performance of gen_PSDD_pdf.pl)

Additional Information:

None.

Requested Changes:

Element Name	Existing Value for genclasstype	Proposed Value for genclasstype
DECLINATION	'GEOMETRY'	GEOMETRY
EQUINOX_EPOCH	'GEOMETRY'	GEOMETRY
PIXEL_ANGULAR_SCALE	'GEOMETRY'	GEOMETRY
RA_DEC_REF_PIXEL	'GEOMETRY'	GEOMETRY
RIGHT_ASCENSION	'GEOMETRY'	GEOMETRY
NAME	DATASET STRUCTURE	DATASET, STRUCTURE
NODAL_REGRESSION_RATE	DATA_SET	DATASET
OCCULTATION_TYPE	DATA_SET	DATASET
PERICENTER_PRECESSION_RATE	DATA_SET	DATASET

REFERENCE_TIME	DATA_SET	DATASET
RING_ASCENDING_NODE_LONGITUDE	DATA_SET	DATASET
RING_ECCENTRICITY	DATA_SET	DATASET
RING_INCLINATION	DATA_SET	DATASET
RING_PERICENTER_LONGITUDE	DATA_SET	DATASET
RING_RADIAL_MODE	DATA_SET	DATASET
RING_RADIAL_MODE_AMPLITUDE	DATA_SET	DATASET
RING_RADIAL_MODE_FREQUENCY	DATA_SET	DATASET
RING_RADIAL_MODE_PHASE	DATA_SET	DATASET
RING_SEMIMAJOR_AXIS	DATA_SET	DATASET
RELEASE_DATE	DIS	DIS*
RELEASE_ID	DIS	DIS*
RELEASE_MEDIUM	DIS	DIS*
RELEASE_PARAMETER_TEXT	DIS	DIS*
OBLIQUE_PROJ_POLE_LATITUDE	GEOMETRY MAP	GEOMETRY, MAP
OBLIQUE_PROJ_POLE_LONGITUDE	GEOMETRY MAP	GEOMETRY, MAP
OBLIQUE_PROJ_POLE_ROTATION	GEOMETRY MAP	GEOMETRY, MAP
OBLIQUE_PROJ_X_AXIS_VECTOR	GEOMETRY MAP	GEOMETRY, MAP
OBLIQUE_PROJ_Y_AXIS_VECTOR	GEOMETRY MAP	GEOMETRY, MAP
OBLIQUE_PROJ_Z_AXIS_VECTOR	GEOMETRY MAP	GEOMETRY, MAP
FIELDS	N/A	STRUCTURE
FIELD_NUMBER	N/A	STRUCTURE
MD5_CHECKSUM	N/A	PARAM?
FIELD_DELIMITER	N/A	STRUCTURE
SUFFIX_NAME	QUBE STRUCTURE	QUBE, STRUCTURE
METEORITE_LOCATION_NAME	meteorite	METEORITE*
METEORIE_NAME	meteorite	METEORITE*
METEORITE_SUB_TYPE	meteorite	METEORITE*
METEORITE_TYPE	meteorite	METEORITE*
MINERAL_NAME	mineral	MINERAL*
B1950_DECLINATION	rings	RINGS
B1950_RIGHT_ASCENSION	rings	RINGS
B1950_RING_LONGITUDE	rings	RINGS
DIFFRACTION_CORRECTED_FLAG	rings	RINGS
EARTH_RECEIVED_START_TIME	rings	RINGS, TIME**
EARTH_RECEIVED_STOP_TIME	rings	RINGS, TIME**
HIGHEST_DETECTABLE_OPACITY	rings	RINGS
LOWEST_DETECTABLE_OPACITY	rings	RINGS
MAXIMUM_B1950_RING_LONGITUDE	rings	RINGS
MAXIMUM_RADIAL_RESOLUTION	rings	RINGS
MAXIMUM_RADIAL_SAMPLING_INTERV	rings	RINGS
MAXIMUM_RING_LONGITUDE	rings	RINGS
MAXIMUM_RING_RADIUS	rings	RINGS
MINIMUM_B1950_RING_LONGITUDE	rings	RINGS
MINIMUM_RADIAL_RESOLUTION	rings	RINGS
MINIMUM_RADIAL_SAMPLING_INTERV	rings	RINGS
MINIMUM_RING_LONGITUDE	rings	RINGS
MINIMUM_RING_RADIUS	rings	RINGS
NOISE_TYPE	rings	RINGS
PHASE_INFORMATION_FLAG	rings	RINGS
PLANETARY_OCCULTATION_FLAG	rings	RINGS
PROJECTED_STAR_DIAMETER	rings	RINGS
RADIAL_RESOLUTION	rings	RINGS

RADIAL_SAMPLING_INTERVAL	rings	RINGS
RECEIVER_DESCRIPTION	rings	RINGS
RECEIVER_ID	rings	RINGS
RECEIVER_NAME	rings	RINGS
REFERENCE_RADIAL_RESOLUTION	rings	RINGS
RING_EVENT_START_TIME	rings, TIME	RINGS, TIME
RING_EVENT_STOP_TIME	rings, TIME	RINGS, TIME
RING_EVENT_TIME	rings	RINGS
RING_LONGITUDE	rings	RINGS
RING_OCCULTATION_DIRECTION	rings	RINGS
RING_RADIUS	rings	RINGS
SCALED_NOISE_LEVEL	rings	RINGS
STAR_DESCRIPTION	rings	RINGS
STAR_DIAMETER	rings	RINGS
STAR_NAME	rings	RINGS
TELESCOPE_LATITUDE	rings	RINGS
TELESCOPE_LONGITUDE	rings	RINGS
TELESCOPE_SITE_RADIUS	rings	RINGS
WAVELENGTH	rings	RINGS

*Will be added to standard value list for GENERAL_CLASSIFICATION_TYPE.

**The addition of the TIME value isn't correcting an invalid value, but seems logical to do nonetheless.

For the new standard values for GENERAL_CLASSIFICATION_TYPE, the following full name values will be added to the PSDD:

DIS – Distributed Inventory System Data Elements

METEORITE – Meteorite Related Data Elements

MINERAL – Mineralogy Data Elements

For the following existing standard values for GENERAL_CLASSIFICATION_TYPE, the following full name values will be added to the PSDD:

QUBE – QUBE Data Elements

RINGS – Rings Data Elements

Attached is the updated element definition object for GENERAL_CLASSIFICATION_TYPE with changes highlighted in red.

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PDS_VERSION_ID          = PDS3
LABEL_REVISION_NOTE     = "2008-02-22 PDS-EN/EDR Added DIS,
METEORITE, and MINERAL standard values and updated standard value set desc."

OBJECT                  = ELEMENT_DEFINITION
  ELEMENT_NAME          = "general_classification_type"
  BL_NAME               = "genclasstype"
  DESCRIPTION           = "

```

The general_classification_type data element serves to allow data systems to group data objects or elements according to common characteristics. Its purpose is akin to subject access in library systems, because it allows the user to find a data element according to its membership in a larger category. In this document the general_classification_type is an indexing mechanism for data element names, to allow them to be published in a classified list entitled 'DATA ELEMENT CLASSIFIED LISTINGS'. See also: system_classification_id."

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GENERAL_DATA_TYPE       = "IDENTIFIER"
MAXIMUM                 = "N/A"
MINIMUM                 = "N/A"
MAXIMUM_LENGTH          = "20"
MINIMUM_LENGTH          = "N/A"
STANDARD_VALUE_TYPE     = "STATIC"
STANDARD_VALUE_SET_DESC = "

```

The spelled-out headings for the general classification types are: Bibliographic Data Elements, Data Set Data Elements, **Distributed Inventory System Data Elements**, Geometry Data Elements, Image Data Elements, Instrument Data Elements, Map Projection Data Elements, **Meteorite Related Data Elements**, Magellan Altimetry and Radiometry Data Elements, **Mineralogy Data Elements**, Mission/Spacecraft/Earth-Base Data Elements, Parameter Data Elements, Personnel/Institution Data Elements, Physical Organization/Media Data Elements, Plasma Data Elements, **QUBE Data Elements**, Radiometry/Spectroscopy Data Elements, **Rings Data Elements**, Software Data Elements, Data Structure Elements, Data System-Related Data Elements, Target Data Elements, Time/Event/Observation Data Elements."

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KEYWORD_DEFAULT_VALUE   = ""
UNIT_ID                 = "none"
SOURCE_NAME             = "PDS CN/M. Cribbs"
FORMATION_RULE_DESC     = ""
OBJECT                  = ELEMENT_STANDARD_VALUE
  COLUMN_VALUE          = "BIBLIO"
  COLUMN_VALUE_TYPE     = ""
  COLUMN_VALUE_NODE_ID  = ""
  OUTPUT_FLAG           = "Y"
END_OBJECT              = ELEMENT_STANDARD_VALUE

OBJECT                  = ELEMENT_STANDARD_VALUE
  COLUMN_VALUE          = "DATASET"
  COLUMN_VALUE_TYPE     = ""
  COLUMN_VALUE_NODE_ID  = ""

```

```

OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "DIS"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "GEOMETRY"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "IMAGING"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "INSTRUMENT"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "MAP"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "METEORITE"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "MGN-ALTRAD"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "MINERAL"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

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OBJECT	= ELEMENT_STANDARD_VALUE
COLUMN_VALUE	= "MISSION"
COLUMN_VALUE_TYPE	= ""
COLUMN_VALUE_NODE_ID	= ""
OUTPUT_FLAG	= "Y"
END_OBJECT	= ELEMENT_STANDARD_VALUE
OBJECT	= ELEMENT_STANDARD_VALUE
COLUMN_VALUE	= "PARAM"
COLUMN_VALUE_TYPE	= ""
COLUMN_VALUE_NODE_ID	= ""
OUTPUT_FLAG	= "Y"
END_OBJECT	= ELEMENT_STANDARD_VALUE
OBJECT	= ELEMENT_STANDARD_VALUE
COLUMN_VALUE	= "PERS"
COLUMN_VALUE_TYPE	= ""
COLUMN_VALUE_NODE_ID	= ""
OUTPUT_FLAG	= "Y"
END_OBJECT	= ELEMENT_STANDARD_VALUE
OBJECT	= ELEMENT_STANDARD_VALUE
COLUMN_VALUE	= "PHYSICAL"
COLUMN_VALUE_TYPE	= ""
COLUMN_VALUE_NODE_ID	= ""
OUTPUT_FLAG	= "Y"
END_OBJECT	= ELEMENT_STANDARD_VALUE
OBJECT	= ELEMENT_STANDARD_VALUE
COLUMN_VALUE	= "PLASMA"
COLUMN_VALUE_TYPE	= ""
COLUMN_VALUE_NODE_ID	= ""
OUTPUT_FLAG	= "Y"
END_OBJECT	= ELEMENT_STANDARD_VALUE
OBJECT	= ELEMENT_STANDARD_VALUE
COLUMN_VALUE	= "QUBE"
COLUMN_VALUE_TYPE	= ""
COLUMN_VALUE_NODE_ID	= ""
OUTPUT_FLAG	= "Y"
END_OBJECT	= ELEMENT_STANDARD_VALUE
OBJECT	= ELEMENT_STANDARD_VALUE
COLUMN_VALUE	= "RADIOMETRY"
COLUMN_VALUE_TYPE	= ""
COLUMN_VALUE_NODE_ID	= ""
OUTPUT_FLAG	= "Y"
END_OBJECT	= ELEMENT_STANDARD_VALUE
OBJECT	= ELEMENT_STANDARD_VALUE
COLUMN_VALUE	= "RINGS"
COLUMN_VALUE_TYPE	= ""
COLUMN_VALUE_NODE_ID	= ""
OUTPUT_FLAG	= "Y"
END_OBJECT	= ELEMENT_STANDARD_VALUE
OBJECT	= ELEMENT_STANDARD_VALUE

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COLUMN_VALUE = "SOFTWARE"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "STRUCTURE"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "SYSTEM"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "TARGET"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

OBJECT = ELEMENT_STANDARD_VALUE
COLUMN_VALUE = "TIME"
COLUMN_VALUE_TYPE = ""
COLUMN_VALUE_NODE_ID = ""
OUTPUT_FLAG = "Y"
END_OBJECT = ELEMENT_STANDARD_VALUE

SYSTEM_CLASSIFICATION_ID = "PDS-CN"
GENERAL_CLASSIFICATION_TYPE = "SYSTEM"
CHANGE_DATE = "2008-02-22"
STATUS_TYPE = "APPROVED"
STANDARD_VALUE_OUTPUT_FLAG = "Y"
TEXT_FLAG = "N"
TERSE_NAME = ""
SQL_FORMAT = "CHAR(20)"
BL_SQL_FORMAT = "char(20)"
DISPLAY_FORMAT = "JUSTLEFT"
AVAILABLE_VALUE_TYPE = ""
END_OBJECT = ELEMENT_DEFINITION
END

```