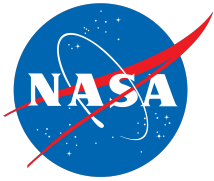# PDS4 Operational Readiness Review
Early User Testing Using Phoenix Data
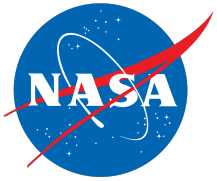
L. Neakrase
ATMOS

Purpose

To test the end-to-end development with a data set similar to those of LADEE that had been migrated from PDS3 and adapted to a proposed users' interface

This test was completed using the Build 3a, 0300a schemas over the time period of Nov 2012 – Jan 2013

Selection of a Data Set

- Mars Phoenix Lander (PHX) atmospheric holdings were chosen because data formats are comparable to LADEE, and the 5 individual data sets provided a range of challenges

- The volume of the individual data sets allowed multiple migration efforts as the system developed

- Iteration of the migration process allowed us to test each released build of the PDS4 IM and prepare for the LADEE mission interfacing

- A rebuild of the web interface for PDS4 will make use of some of the enhanced capabilities of our new system and the desire of PDS to better serve the end-users

- By 0300a the system was mature enough to carry out a beta test
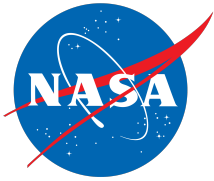
PDS4 PHX Beta Test

- Migrated ATM holdings for Phoenix Mars Lander data
  - 5 Bundles corresponding to the instruments/ experiments

- Redesigned website environment

- Beta Review
  - Contacted ~35-40 reviewers (27 responded)
 - Guided review (Worksheet, 2 exercises + Scorecard)
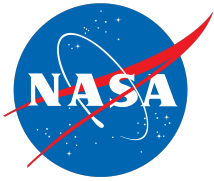
Guided Review

- Worksheet guided reviewers through intro materials for PDS4 (PDS4 Core Documents and On-site Information)

- Exercises for the reviewers:
  - 1st Exercise focused on Website architecture and access to data, including navigating through the redesigned site
  - 2nd Exercise focused on reading XML and looking at sample labels to introduce new PDS4 structures

- Scorecard matched worksheet and allowed reviewers the opportunity to rank responses as well as input comments for more detailed feedback
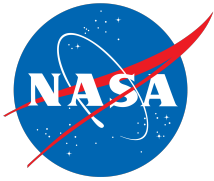
Reviewer Pool

- Reviewer pool was a diverse pool including veteran data providers and users, new providers, engineers, scientists, those familiar with PDS3 and those new to PDS

- We've kept track of each reviewer's responses to understand more about the context for each of these demographics

- 27 out of ~35-40 (70-75% return) responded with very usable comments and suggestions
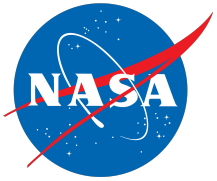
Summary of Findings

- PDS4 in general is a step in the right direction

- Users find raw XML files difficult to read. As a result, we plan to format labels when presented to the users to make them easier to consume.

- LADEE and MAVEN development have succeeded in preparing much of the data provider interfaces

- Data user interface will need to be expanded and refined for a modern web environment (i.e., cross-linking, easy access to web tools, etc.)

- Cassini-style User Guides not just for data processing, but consistently for access to all PDS4 information
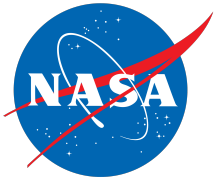
Lessons Learned

- Website design for PDS4 data access should be a tiered approach making the process transparent for experienced users as well as novices

- Adding accessible help at each level helps the user determine and retrieve the products they want

- Bare directory structures common in PDS3 are not desirable for modern users

- Finished looking pages help build confidence in the users' experience