

PDS Data Review

General Comments related to:

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General Comments - Reviewing

- Tricky datasets to review
 - Balance well-written sections of documents with incomplete/nonexistent sections
 - Not all information is included in labels and headers
 - Incomplete pipeline?
- Reading documents and labels
 - Looking for inconsistencies and missing items
 - Suggestions of what might be added during the pipeline development

General Comments - SISes

- Large sections of SIS documents are common between the three data sets
 - Tend to be well-written and complete
 - Adapted from NH model?
 - If changes are needed, they should be propagated to all datasets
- SISes question whether specific items (including Temperature, Voltage and Current fields) need to be included
 - Is there some reason to include these?
 - Carry along in FITS headers for the record, but not in labels?

General Comments - SISES

- SISEs note that "There are many SPICE kernels..."
 - Can reference a metakernel rather than including every file
 - Requires that metakernels be archived and available, as well as individual files

General Comments - Geometry

- Many geometric parameters are in the header/labels
- Suggestions for additional parameters:
 - Solar phase angle
 - Celestial North clock angle
 - Ecliptic North clock angle
 - Sun clock angle
 - Target positive pole clock angle
 - Sub-observer latitude and longitude
 - Sub-solar latitude and longitude
- Other issues in the FITS headers
 - Some keywords (e.g., PA_ZINST and PA_SUN_Z) are undefined → shouldn't be keywords

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Test Data

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L'LORRI Instrument

- Panchromatic high resolution camera
 - 0.29 degree square FOV
 - high resolution (5 microradian/pixel)
 - 1024x1024 pixel CCD detector
 - Operates in 1x1 or 4x4 on-chip binning modes
- Raw data format
 - FITS files with 4 extensions
 - Primary image (DN), histogram, housekeeping data and instrument descriptor
- Calibrated data format
 - FITS files with 3 extensions
 - Primary image (DN), Error map, Quality flag image
 - Do-it-yourself flux calibration: Radiance and Irradiance calibration coefficients are given in the Users Guide

Dataset

- Sample dataset
 - 1 raw image + label
 - 1 calibrated image + label
 - Draft version of the LLORRI SIS document

Document

- Draft SIS
 - Sections that are complete look pretty good
 - Based on NH documents?
 - Many sections are incomplete
 - Not obvious if any sections are missing
- Issue with the calibrated image units (see Didymos comments) carries over to this dataset
 - SIS could use clarification (imply DN)
 - Labels say units are DN/s
 - Clarify the units and make consistent throughout

Data

- Images are readable and contain the data as described

