

DART Data Review: LCO

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Sep 15 2023

1. Overview:

Las Campanas Observatory
IMACS and Swope

Bundle: PDS4 standard

Time range:

- IMACS:

2022-07-02

2022-09-26

2022-10-03

2022-10-04

2022-10-21

- Swope:

2022-08-22 to 2022-08-25

2022-08-30 to 2022-09-02

2022-09-25 to 2022-10-06

This bundle contains data files associated with the DART Las Campanas Observatory Telescopic Observations. Hosting raw, calibrated, derived and document packages.

Review summary:

For its ground observation, this review focused mainly on the document and data header and labels. For this review, the image packages are very large. I did not download the whole package because of my limited local space. So I focused my review on the files from one package of each calibration and raw sets, the ddp sets and the documentation set. I checked image files, header, XML labels with both my own tools and *PDS4_tools*. The documentation and calibration are also checked. The dataset is now in good condition.

2. Review process:

Review environment:



Tools:

- Python Jupyter notebook 6.0.3
- PDS4_Tools v1.3
- Oxygen XML Editor 23.1
- Adobe Acrobat Reader DC 2019
- Beyond Compare 2

Review steps:

- Read data files and label files.
- Check the headers and XML labels.
- Check documents

3. Documents :

- Generally sufficient. Compared to the previously reviewed Lowell sis file.
- SIS file is in editing mode, not yet cleaned.
- “NASA’s Double Asteroid Redirection Test (DART) will be the first space”
will be→ is and also the following part and some others, change them all:

4.6. Data Validation

Validation of the science data will be carried out by the DART SOC and the DART Investigation Team. Compliance of the provided data products with PDS archiving requirements will be overseen by the PDS in coordination with the DART SOC.

The formal validation of data content, adequacy of documentation, and adherence to PDS archiving and distribution standards is subject to an external peer review. The peer review will be scheduled and coordinated by the PDS. The peer review process may result in "liens," actions recommended by the reviewers or by PDS personnel to correct the archive. All liens must be resolved by the SOC. Once the liens are cleared, PDS will do a final validation prior to packaging and delivery. When data are prepared for submission to PDS, the SOC will use PDS-provided validation tools to ensure conformance to PDS standards.

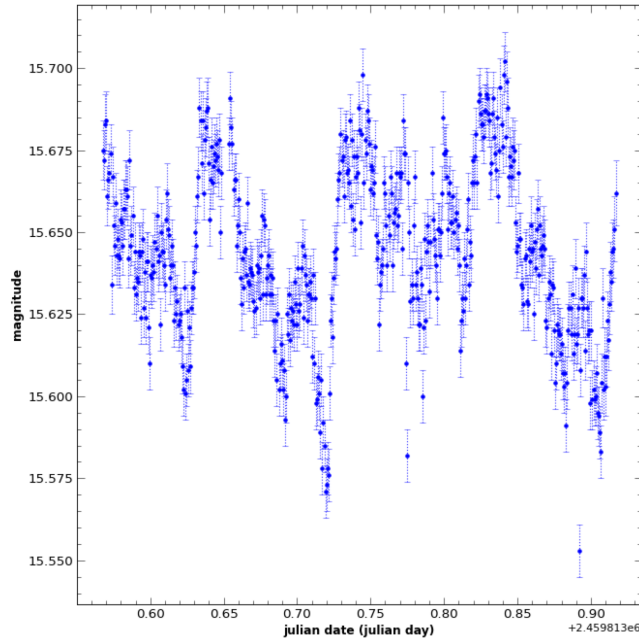
- Reference the sis file in the *_overview.txt
- “Aperture photometry was performed on Didymos and reference stars on each frame, using a variety of aperture sizes that were then selected based on image quality conditions for the night along with minimized photometric uncertainties.”
What was the standard of picking the image quality? Is it recorded somewhere?
- Instrument and telescope description?

4. XML Labels:

- Validation: good.

5. Data files:

- Image shown correctly.
- Plot light curve normally



1.

- Header: sufficient
“TIME-OBS= '09:35:13.0' / UT time (start) ”
Is this time data accurate enough?

6. Other small edits:

- “Lco_sis.pdf”
 - “manufactured by E2V to produce a 8192 x 8192 pixel mosaic.” a → an
 - The PDFs could benefit from a auto batch edit correction for small format issues, such as, “insert a space between words and parentheses”, “add a comma after all the e.g. and i.g.”, “remove commas before ands” and spell check for small typos.
 - “Similarly for the LCO Swope..” add comma after similarly