

PDS Data Review

LDT Data

Tony Farnham

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No associated document data set

LDT SIS was reviewed in previous DART review
(Downloaded from the DART SOC for reference)

data_ldtraw

data_ldtcal

LDT Raw & Calibrated Images

- Overview files
 - Present a short summary of the LDT data
 - Presumably from the original SIS (not included here)
 - Typo in ldtcal overview file:

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Naming Convention
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Calibrated images consist of a single fits file containing the raw  
image and an associated XML file. They are named according to the following  
convention.
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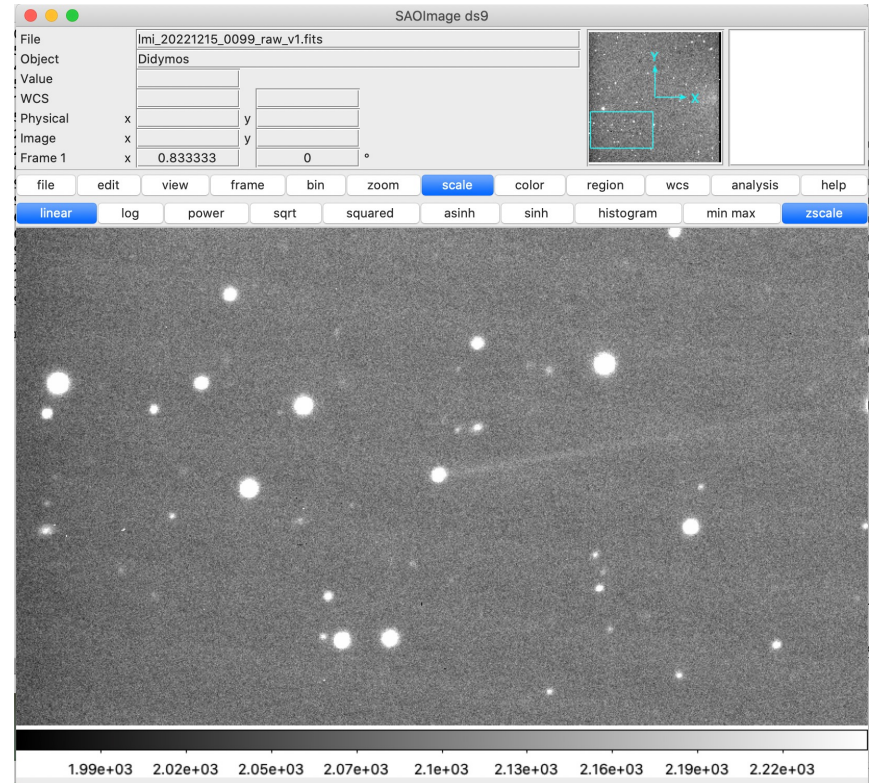
- Raw data: FITS images with detached XML labels
 - 2096 x 2054 pixels
 - 3840 images in 16 directories (by date)
 - 279 Bias frames
 - 328 Flat field frames
 - 3233 Didymos images

LDT Raw & Calibrated Images

- Calibrated data: FITS images with detached XML labels
 - 2045 x 2049 pixels
 - 3201 images in 16 directories (by date)
 - 3169 Didymos images (64 fewer than in raw data)
 - 16 master bias images (one for each date)
 - 16 master flat field images (one for each date)
 - Note: WCS not being added to each frame
- Calibrated data: PNG reference images (included in FITS image XML labels)
 - 3169 astrometry reference images (one for each calibrated image)
 - 3169 photometry reference images (one for each calibrated image)


























LDT FITS Image Data

- Data are mostly in good shape
 - Read with IDL FITS readers and PDS_READ
 - Read and displayed every image
- Tested to make sure data could be manipulated and measured
- **Inconsistencies between the raw and calibrated datasets**
- Spot-checked:
 - Image orientations are good
 - XML Label information
 - Just contains basic info
 - No problems
- Did not try to reproduce the photometric measurements



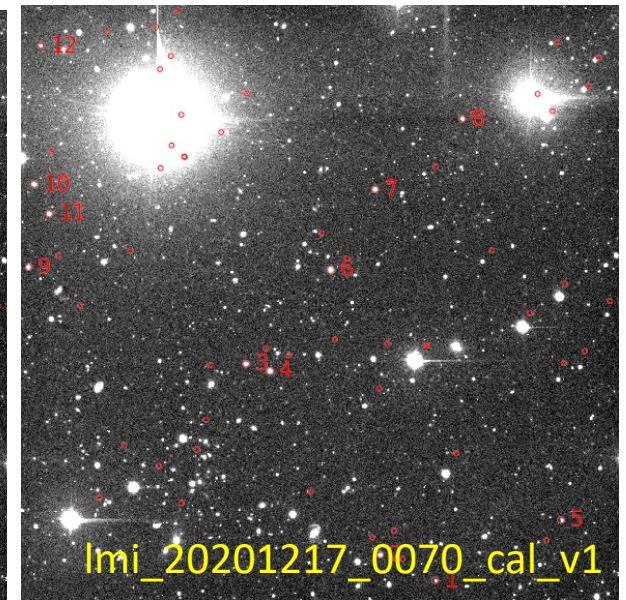
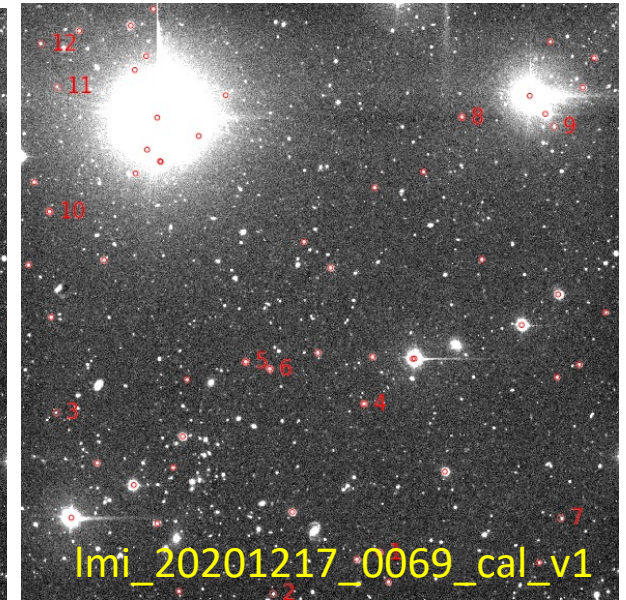
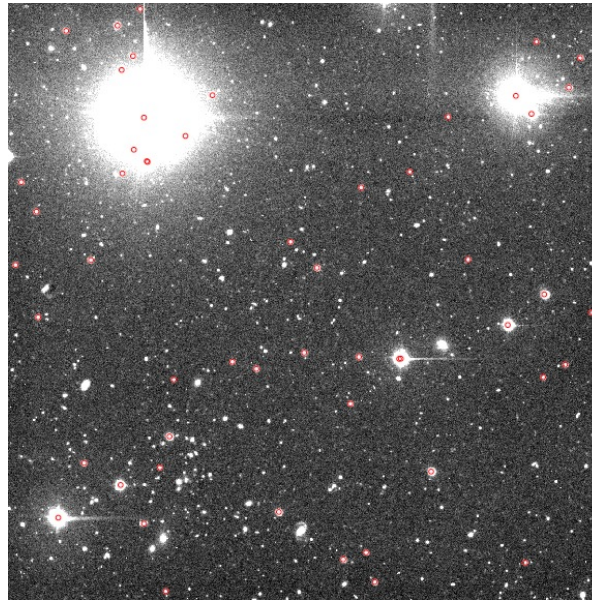
Raw/Calibrated File Discrepancies

- Not a direct correlation between the two data sets
 - See 74 raw data files that are not in the calibrated data
 - Some are poor quality (clouds, stars) but some look fine
 - Measurements are not included in photometry tables
 - “Lost” during reduction process, not archiving process
 - See 10 calibrated data files that are not in the raw data
 - Measurements are included in the photometry table
 - No explanation for why they are not in raw data
- List of discrepancies is given in file raw_cal_disc.txt
- Include the files or provide a note in the documentation that they are not included and why

 lmi_20230314_0022_raw_v1.xml	2023-06-23 16:33	 lmi_20230314_0031_cal_v1.xml	2023-06-27 17:33	11K
 lmi_20230314_0023_raw_v1.fits	2023-06-23 16:33	 lmi_20230314_0032_cal_v1.fits	2023-06-27 17:33	32M
 lmi_20230314_0023_raw_v1.xml	2023-06-23 16:33	 lmi_20230314_0032_cal_v1.fits_astro_v1.png	2023-06-27 17:33	483K
 lmi_20230314_0024_raw_v1.fits	2023-06-23 16:33	 lmi_20230314_0032_cal_v1.fits_photo_v1.png	2023-06-27 17:33	494K
 lmi_20230314_0024_raw_v1.xml	2023-06-23 16:33	 lmi_20230314_0032_cal_v1.xml	2023-06-27 17:33	11K
 lmi_20230314_0025_raw_v1.fits	2023-06-23 16:33	 lmi_20230314_0033_cal_v1.fits	2023-06-27 17:33	32M
 lmi_20230314_0025_raw_v1.xml	2023-06-23 16:33	 lmi_20230314_0033_cal_v1.fits_astro_v1.png	2023-06-27 17:33	479K
 lmi_20230314_0026_raw_v1.fits	2023-06-23 16:33	 lmi_20230314_0033_cal_v1.fits_photo_v1.png	2023-06-27 17:33	495K
 lmi_20230314_0026_raw_v1.xml	2023-06-23 16:33	 lmi_20230314_0033_cal_v1.xml	2023-06-27 17:33	11K
 lmi_20230314_0037_raw_v1.fits	2023-06-23 16:33	 lmi_20230314_0034_cal_v1.fits	2023-06-27 17:33	32M
 lmi_20230314_0037_raw_v1.xml	2023-06-23 16:33	 lmi_20230314_0034_cal_v1.fits_astro_v1.png	2023-06-27 17:33	443K
 lmi_20230314_0038_raw_v1.fits	2023-06-23 16:33	 lmi_20230314_0034_cal_v1.fits_photo_v1.png	2023-06-27 17:33	460K
 lmi_20230314_0038_raw_v1.xml	2023-06-23 16:33			

LDT PNG Reference images

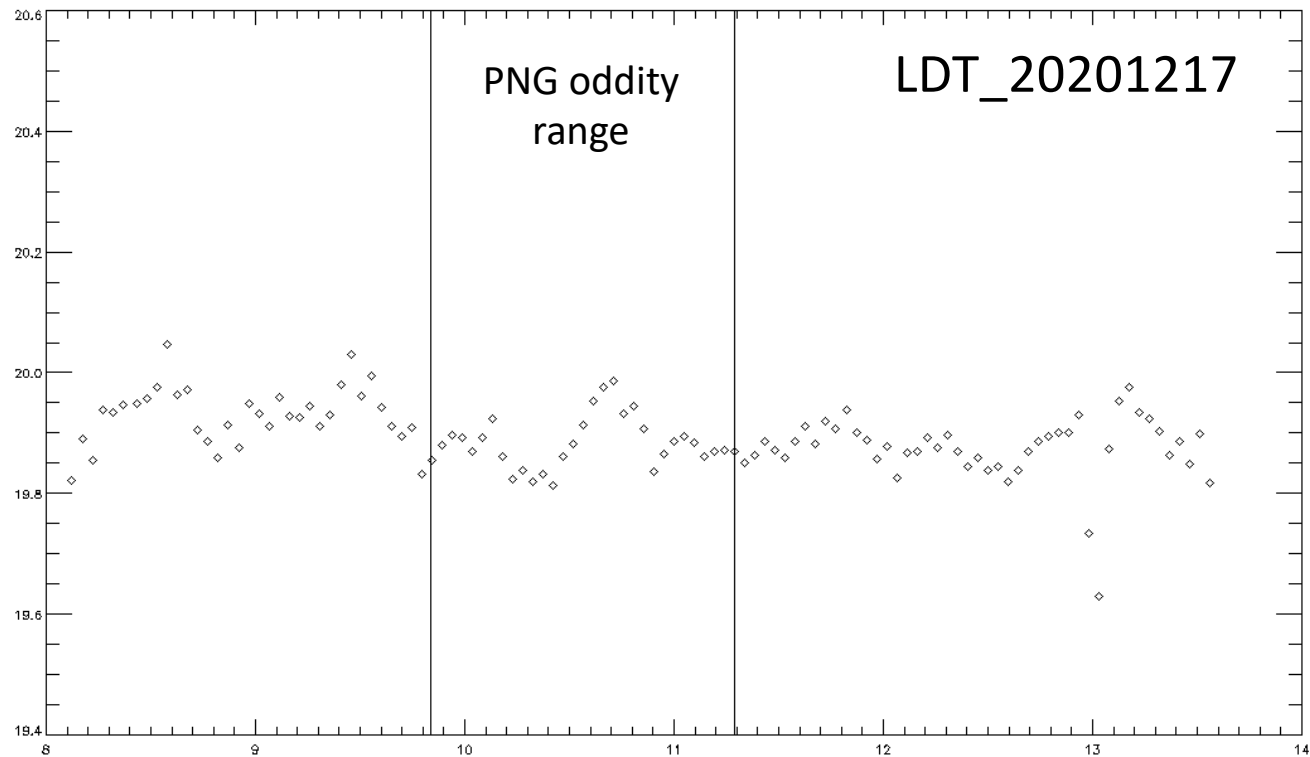
- Spot checked the images
- Some don't seem to have accurate astrometric solutions
 - Offset in positions
 - Photometric star positions seem to be ok
- I don't know how many are bad
 - One group:
 - Imi_20201217
 - Frames 0070 - 0100
- Doesn't seem to affect the photometry
 - Just an error in the plotting or is astrometry bad?



data_ldtddp

LDT Photometry

- Overview file
 - Short summary of the data reduction and photometry measurements
- Data: 16 tables of photometry from 16 dates (ASCII)
- Data look like Didymos lightcurves



LDT Status

- Typo in calibration overview document
- Discrepancies between raw and calibrated files
- Questions about the offset in the astrometric solution in the PNG files and does that affect the photometry?
- **Data are not certifiable**