

LARGE
BINOCULAR
TELESCOPE
OBSERVATORY

Users and Member Coordinators Meeting

September 12, 2025



Agenda

1. Introduction (Joe)

Welcome

New Instrument Proposals Update

LBT Access

2. Observatory Status Update (LBT Staff)

A. 2025B and 2026A Instrument Availability

B. 2025B and 2026A Coordination

C. MODS Upgrades News

D. AO Status

E. Archive and Calibration File Updates (AI)

F. iLocator Update

G. Shutdown Activities

3. Questions and Discussion (All)





Call for New Instrument Proposals

- 9 proposals were received
- Have gone through internal staff review and are currently being reviewed by SAC and external reviewers





LBT Access and Allocations for 2026A

LBTB will depart from membership at the end of 2025B.

What will happen to that additional time in 2026A?





General Information

Posted Schedule: <https://www.lbto.org/2025b-observing-schedule/>

Instrument Modes Available for 2025B and 2026A

Facility Instruments

Seeing Limited:

- Monocular and Homogenous Binocular (twin or fraternal): Facility instruments in seeing-limited mode including LBC, MODS (after Oct 1), LUCI, and PEPSI PFU, all of which are flexibly scheduled in partner science blocks.
- Mixed Mode Binocular in shared risk (e.g., LBC + MODS)

Enhanced Seeing Mode: LUCI1/LUCI2 Imaging offered,

Spectroscopy offered in shared risk

Diffraction Limited : LUCI1/LUCI2 Imaging offered,
Spectroscopy offered

Strategic Instruments – LBTI

PI Instruments – SHARK-NIR (SX) and SHARK-VIS (DX)



2025B Coordination

- Member coordinators should notify LBT staff of any planned AO use during their block, ideally 2 weeks in advance and including instrument modes, observing windows
- Likewise, coordinators should send proposal IDs and proprietary periods in advance of the semester
- PEPSI PFU readme files should be submitted no later than 1 week in advance of a block, leaving time for OBs to be generated and checked
- Time sensitive observations – listed on the schedule for convenience with instrument requested. Please communicate with member coordinators in advance of the block.

2026A Allocations **Due December 1**



MODS News

MODS upgraded to Archon CCD controllers to improve performance and to replace old controllers that were custom and ageing and not easily replaceable

What should you expect?

- Faster readout – exact improvement TBD – much faster!
- No even-odd column striping
- Headers will look somewhat different
- Brand new pre-processing software – modsCCDRed

PypeIT Workshop

October 21, 2025 via Zoom - 2 hour workshop – 4-6pm AZ time

- Most of the workshop (1.5 hours) will be breakout sessions, including one for MODS-specific reduction questions with Olga



AO Status Update

- Successful DX ASM service campaign over the summer shutdown
- Both ASMs were released for seeing-limited science on the 1st week of restart
- Efforts are underway to recondition the Magellan secondary for use at the LBT; this a year-long process
- The new secondary could possibly be ready for testing by mid-2026



Archive Update

- A faster virtual machine for the archive database has been deployed
- PEPSI data are now available via the archive
- More data are available, in accordance with the new archive policies
- GetCals – new feature to find and download calibration files



The LBTO Archive

Get Cals Feature

- The LBTO archive "Get Cals" feature can be used to:
 - Locate the calibration files needed for data reduction (darks, arcs, biases flats, etc.) that are appropriate for a given set of science files found in the archive.
 - Download the found calibration files to local storage on the users computer.

Data Calibration

Science files

[SEARCH SCIENCE](#)

Show 10 entries

file_name	policy	date_obs	exptime	flt_id	instrument	object	imagetyp	piname	partner	short_program	file_url	program
luci1.20180906.0001.fits.gz	FREE	2018-09-06T02:03:37.3468	2.50242	blind blind	LUCI1	NGC 628	SCIENCE	Barry Rothberg	LBTO	LBT-2018A-C2576-2	http://archive.lbt.org/files/lbt/luci1.20180906.0001.fits.gz	LBTO.LBT-2018A-C
luci2.20180906.0001.fits.gz	FREE	2018-09-06T02:03:48.0649	2.50242	blind blind	LUCI2	NGC 628	SCIENCE	Barry Rothberg	LBTO	LBT-2018A-C2576-2	http://archive.lbt.org/files/lbt/luci2.20180906.0001.fits.gz	LBTO.LBT-2018A-C
luci1.20180906.0002.fits.gz	FREE	2018-09-06T02:03:52.3651	2.50242	blind blind	LUCI1	NGC 628	SCIENCE	Barry Rothberg	LBTO	LBT-2018A-C2576-2	http://archive.lbt.org/files/lbt/luci1.20180906.0002.fits.gz	LBTO.LBT-2018A-C
luci2.20180906.0002.fits.gz	FREE	2018-09-06T02:04:03.0832	2.50242	blind blind	LUCI2	NGC 628	SCIENCE	Barry Rothberg	LBTO	LBT-2018A-C2576-2	http://archive.lbt.org/files/lbt/luci2.20180906.0002.fits.gz	LBTO.LBT-2018A-C
lbc.20180906.020910.fits.gz	FREE	2018-09-06T02:09:10.685	0	U-BESSEL	LBC_BLUE	BinoBias	zero	bias	calibration	CALIB	http://archive.lbt.org/files/lbt/lbc.20180906.020910.fits.gz	OTHERS.CALIB
lbc.20180906.020914.fits.gz	FREE	2018-09-06T02:09:14.860	0	F972N20	LBC-RED	BinoBias	zero	bias	calibration	CALIB	http://archive.lbt.org/files/lbt/lbc.20180906.020914.fits.gz	OTHERS.CALIB

Showing 1 to 10 of 500 entries

Previous 1 2 3 4 5 ... 50 Next

[SEARCH CALIBRATIONS](#) Delta (days) 4.0 [CUSTOM PARAMETERS ...](#)

Show 10 entries

file_name	file_type	file_url
luci1.20180904.0114.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180904.0114.fits.gz
luci1.20180906.0001.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180906.0001.fits.gz
luci1.20180906.0002.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180906.0002.fits.gz
luci1.20180907.0001.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180907.0001.fits.gz
luci1.20180907.0002.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180907.0002.fits.gz
luci1.20180907.0003.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180907.0003.fits.gz

Showing 1 to 10 of 191 entries

Previous 1 2 3 4 5 ... 20 Next

Progress
found 191 cal files

[DOWNLOAD CALIBRATIONS \(WGSET\)](#) [DOWNLOAD ASSOCIATIONS \(JSON\)](#) [DOWNLOAD GROUPS \(TXT\)](#)

- These are the types of calibration files that are currently searched for, depending on the instrument

MODS:

Bias
Slitless Flat
Slit Flat
MOS Flat
Longslit Arc
MOS Arc
Spec Std
Imaging Flat
Twilight Flat

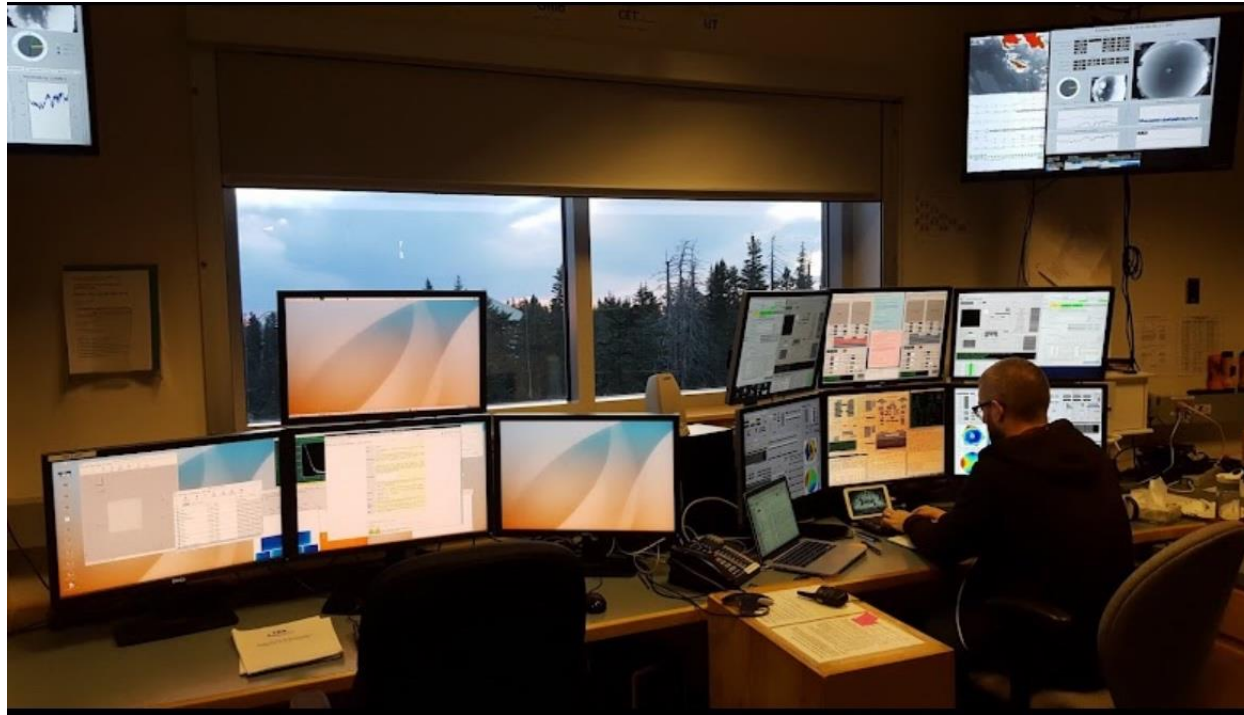
LBC:

Twilight Flat
Bias

LUCI:

Dark
Slit Arcs and Flats
Telluric
Imaging Flats
Twilight Flats

- The "Get Cals" feature can be used by:
 - Current observers, as a quick way to obtain the calibrations they need for recently acquired data, and
 - Researchers mining older data in the archive, with plans to analyze and publish science frames that are no longer proprietary (made publicly available during July 2025).



How it works...

A portal search result has always looked like this:

The screenshot shows a search interface with the following elements:

- File name:** A text input field.
- Observation date:** A checkbox, a "From:" label, a date input field with "2018-09-05 07:41", and a calendar icon.
- Exposure time (s):** A checkbox and a "From:" label with an empty input field.
- Filter:** A checkbox and an empty input field.
- Object:** A checkbox and an empty input field.
- PI name:** A checkbox and an empty input field.
- Partner:** A checkbox, a "Select..." dropdown, and a "Single instrument" button.
- Buttons:** "Download" and "Edit query".
- Table:** A table with columns "File name", "Policy", and "Observation date".

<input checked="" type="checkbox"/>	<input type="checkbox"/> File name	Policy	Observation date
<input type="checkbox"/>	luci1.20180906.0001.fits.gz	FREE	2018-09-06T02:03:37.3468
<input type="checkbox"/>	luci2.20180906.0001.fits.gz	FREE	2018-09-06T02:03:48.0649
<input type="checkbox"/>	luci1.20180906.0002.fits.gz	FREE	2018-09-06T02:03:52.3651
<input type="checkbox"/>	luci2.20180906.0002.fits.gz	FREE	2018-09-06T02:04:03.0832

Now there's a third option:

This screenshot is identical to the previous one, but with an additional button and a highlight:

- Buttons:** "Download", "Edit query", and "Get cals". An orange arrow points to the "Get cals" button.
- Table:** The same table as in the previous screenshot.

<input checked="" type="checkbox"/>	<input type="checkbox"/> File name	Policy	Observation date
<input type="checkbox"/>	luci1.20180906.0001.fits.gz	FREE	2018-09-06T02:03:37.3468
<input type="checkbox"/>	luci2.20180906.0001.fits.gz	FREE	2018-09-06T02:03:48.0649
<input type="checkbox"/>	luci1.20180906.0002.fits.gz	FREE	2018-09-06T02:03:52.3651
<input type="checkbox"/>	luci2.20180906.0002.fits.gz	FREE	2018-09-06T02:04:03.0832

- Clicking on the “Get Cals” button brings you to the Get Cals landing page
- From this page you can
 - Search for calibrations matching the science files that you found on the portal
 - Tweak the search parameters
 - Download the calibrations that were found to your local computer
 - Download text files that show which calibrations go with which science files

Data Calibration

Science files

SEARCH SCIENCE

Show 10 entries

file_name	policy	date_obs	exptime	fit_id	instrument	object	imagetype	piname	partner	short_program	file_url	program
luci1.20180906.0001.fits.gz	FREE	2018-09-06T02:03:37.3468	2.50242	blind blind	LUC11	NGC 628	SCIENCE	Barry Rothberg	LBT0	LBT-2018A-C2576-2	http://archive.lbt.org/files/lbt/luci1.20180906.0001.fits.gz	LBT0.LBT-2018A-C
luci2.20180906.0001.fits.gz	FREE	2018-09-06T02:03:48.0649	2.50242	blind blind	LUC12	NGC 628	SCIENCE	Barry Rothberg	LBT0	LBT-2018A-C2576-2	http://archive.lbt.org/files/lbt/luci2.20180906.0001.fits.gz	LBT0.LBT-2018A-C
luci1.20180906.0002.fits.gz	FREE	2018-09-06T02:03:52.3651	2.50242	blind blind	LUC11	NGC 628	SCIENCE	Barry Rothberg	LBT0	LBT-2018A-C2576-2	http://archive.lbt.org/files/lbt/luci1.20180906.0002.fits.gz	LBT0.LBT-2018A-C
luci2.20180906.0002.fits.gz	FREE	2018-09-06T02:04:03.0832	2.50242	blind blind	LUC12	NGC 628	SCIENCE	Barry Rothberg	LBT0	LBT-2018A-C2576-2	http://archive.lbt.org/files/lbt/luci2.20180906.0002.fits.gz	LBT0.LBT-2018A-C
lbc.20180906.020910.fits.gz	FREE	2018-09-06T02:09:10.685	0	U-BESSEL	LBC-BLUE	BinoBias	zero	bias	calibration	CALIB	http://archive.lbt.org/files/lbt/lbc.20180906.020910.fits.gz	OTHERS.CALIB
lbc.20180906.020914.fits.gz	FREE	2018-09-06T02:09:14.860	0	F972N20	LBC-RED	BinoBias	zero	bias	calibration	CALIB	http://archive.lbt.org/files/lbt/lbc.20180906.020914.fits.gz	OTHERS.CALIB

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SEARCH CALIBRATIONS Delta (days) 4.0 **CUSTOM PARAMETERS...**

Show 10 entries

file_name	file_type	file_url
luci1.20180904.0114.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180904.0114.fits.gz
luci1.20180906.0001.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180906.0001.fits.gz
luci1.20180906.0002.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180906.0002.fits.gz
luci1.20180907.0001.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180907.0001.fits.gz
luci1.20180907.0002.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180907.0002.fits.gz
luci1.20180907.0003.fits.gz	DARK	http://archive.lbt.org/files/lbt/luci1.20180907.0003.fits.gz

Showing 1 to 10 of 191 entries

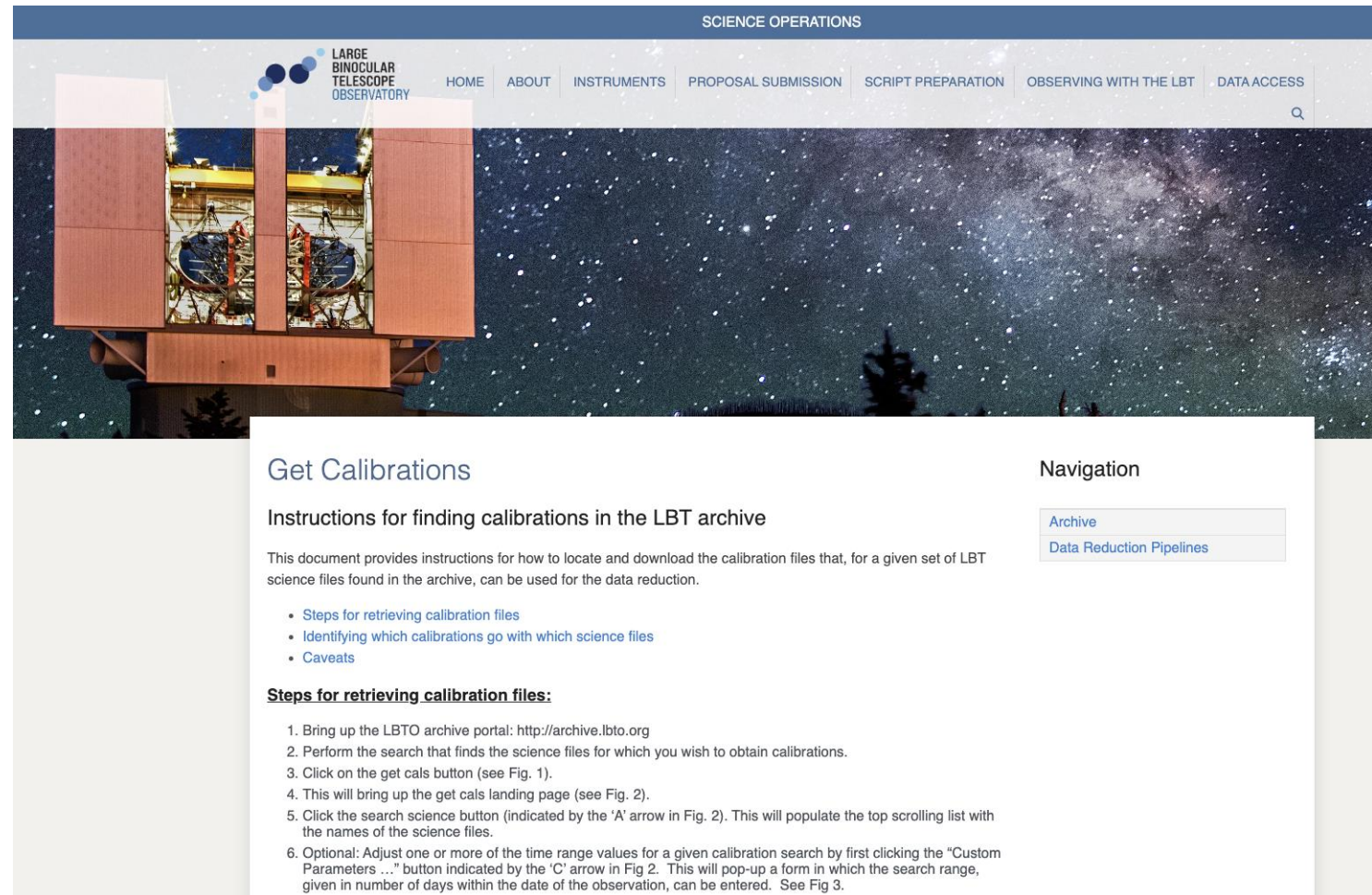
Previous 1 2 3 4 5 ... 20 Next

Progress
found 191 cal files

DOWNLOAD CALIBRATIONS (WGSET) **DOWNLOAD ASSOCIATIONS (JSON)** **DOWNLOAD GROUPS (TXT)**

Documentation

- Instructions for how to use this tool will soon be available on the LBTO Science Operation webpages.



The screenshot displays the LBTO Science Operations website. The header features the 'LARGE BINOCULAR TELESCOPE OBSERVATORY' logo and a navigation menu with links: HOME, ABOUT, INSTRUMENTS, PROPOSAL SUBMISSION, SCRIPT PREPARATION, OBSERVING WITH THE LBT, and DATA ACCESS. The main content area is titled 'Get Calibrations' and includes the subheading 'Instructions for finding calibrations in the LBT archive'. Below this, a paragraph states: 'This document provides instructions for how to locate and download the calibration files that, for a given set of LBT science files found in the archive, can be used for the data reduction.' A bulleted list follows:

- [Steps for retrieving calibration files](#)
- [Identifying which calibrations go with which science files](#)
- [Caveats](#)

 A section titled 'Steps for retrieving calibration files:' contains a numbered list of six steps. To the right of the main content is a 'Navigation' sidebar with two links: [Archive](#) and [Data Reduction Pipelines](#).

SCIENCE OPERATIONS

LARGE BINOCULAR TELESCOPE OBSERVATORY

HOME ABOUT INSTRUMENTS PROPOSAL SUBMISSION SCRIPT PREPARATION OBSERVING WITH THE LBT DATA ACCESS

Get Calibrations

Instructions for finding calibrations in the LBT archive

This document provides instructions for how to locate and download the calibration files that, for a given set of LBT science files found in the archive, can be used for the data reduction.

- [Steps for retrieving calibration files](#)
- [Identifying which calibrations go with which science files](#)
- [Caveats](#)

Steps for retrieving calibration files:

1. Bring up the LBTO archive portal: <http://archive.lbto.org>
2. Perform the search that finds the science files for which you wish to obtain calibrations.
3. Click on the get cal button (see Fig. 1).
4. This will bring up the get cal landing page (see Fig. 2).
5. Click the search science button (indicated by the 'A' arrow in Fig. 2). This will populate the top scrolling list with the names of the science files.
6. Optional: Adjust one or more of the time range values for a given calibration search by first clicking the "Custom Parameters ..." button indicated by the 'C' arrow in Fig 2. This will pop-up a form in which the search range, given in number of days within the date of the observation, can be entered. See Fig 3.

Navigation

- [Archive](#)
- [Data Reduction Pipelines](#)

The Team

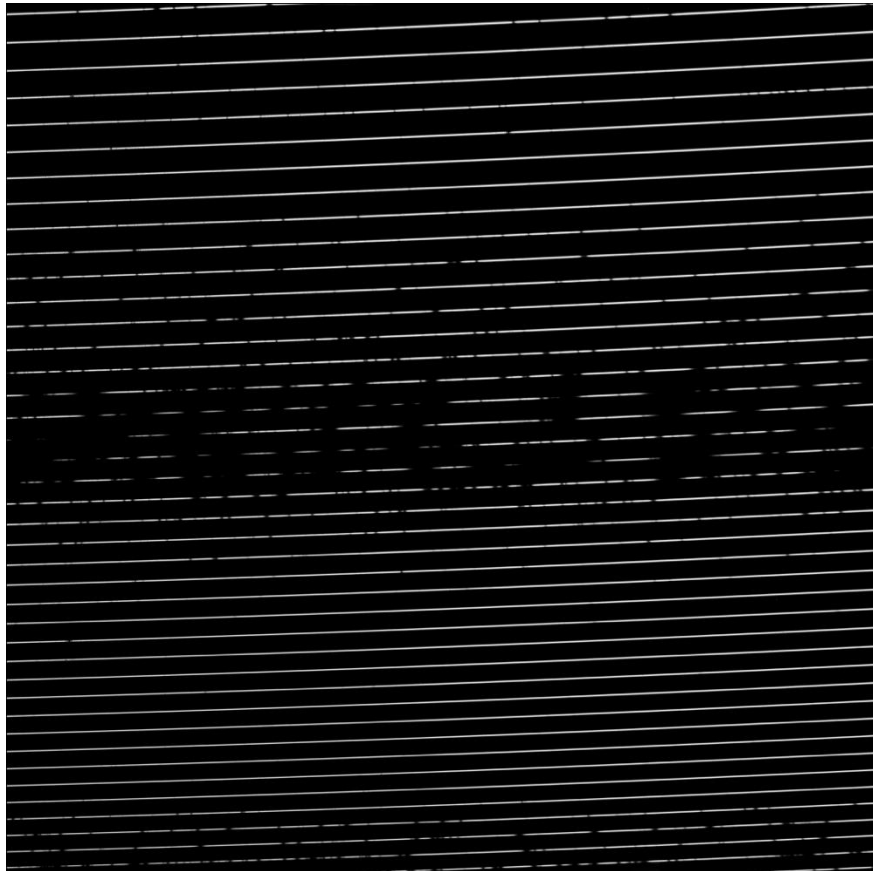
- Olga Kuhn (LBTO)
- Matthieu Bec (LBTO)
- Al Conrad (LBTO)
- Martina Vicinanza (IA2)

Disclaimer

- This early release of the Get Cals web tool is at a beta test stage..
- In cases where calibrations were taken in a non-standard way, they may not be found.
- The tool only works with the first generation LBT instruments: LBC, LUCI, MODS.

Questions?

iLocator Update

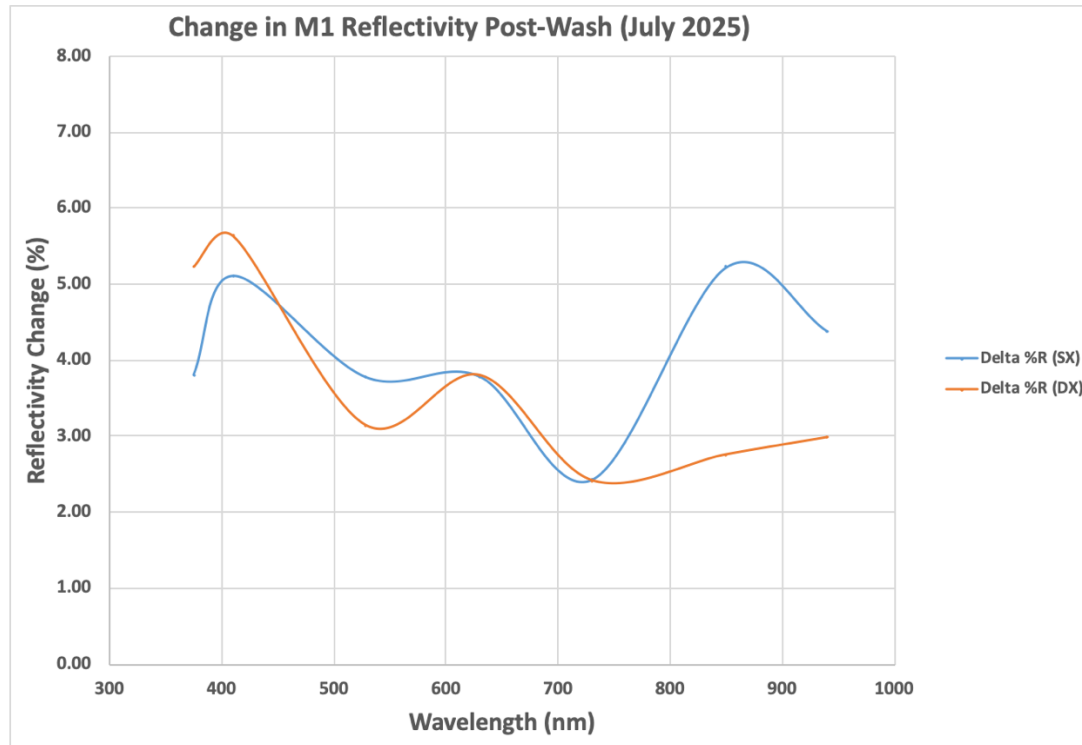


An iLocator spectrum of the Sun taken in June from the testing laboratory at OSU.

- Pre-ship review planned for October
- Progress continues on the enclosure located on 3L
- The goal is on-sky testing in early 2026, AZ and OSU/RC contributing time
- iLocator will be listed in the PIT
- Anyone interested in early observations should contact Jonathan Crass and the iLocator team at ilocator-obs-list@nd.edu



Shutdown Activities



- New all sky camera (Alcor Omea 9c) is ready to go and will be installed during September ECD time
- Both primary mirrors washed
- New versions of the OT and a new PIT server upgrade
 - The new OT includes the Gaia catalog
 - Both old and new OT will work for a while
 - Improvements to position editor
 - Security improvements





DISCUSSION

LBTO Status Update

- LMIRCam – all modes available
- FFTCam – is deployed and being commissioned
- NOMIC – remains offline until detector upgrade planned for SSD 2026
- Completed summer work on UBC
- Next run is in October / split with SHARK NIR for 4 nights, then 5 additional full nights





Proposal Deadlines

- AZ — CfP: Sep 1; Closing: Oct 1 12pm MST
- OSU — CfP: Oct 1; Closing: Nov 1
- UMinn — CfP: Sep 1; Closing: Oct 20 23:45 (hard)
- INAF — No call this semester
- UVirginia — CfP: Oct 1; Closing: Oct 31 (soft) Nov 8 (Grace)
- ND - No call this semester

<https://scienceops.lbto.org/proposal-submission/>





Current Instrument Status

- MODS1 & MODS2 – unavailable until October 1
- LUCI1 & LUCI2 - ready and working, with some instability seen in the G210 grating; please contact sciops for details
- LBCB and LBCR – ready and working
- TMS - available
- PEPSI PFU - available
- PEPSI POL - scheduled for installation Oct 29 – Foster prism undergoing repairs
- LBTI - work occurred in August - expected to be ready for block beginning Oct 4
- SHARK VIS - activities (new filters, etc.) taking place Sept 24-Oct 1 - available
- SHARK NIR - available

