LDT Observer Information

Quick Links

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- LDT Important Notes

Facility

- LDT Science Schedule
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- Selected Technical Publications

Instruments

- Instrumentation Main Page

Facility Instruments:

- Large Monolithic Imager (LMI)
- DeVeny Optical Spectrograph
- NIR Spectrograph (NIHTS)

Visitor / PI Instruments:

- High-Res Spectrograph (EXPRES)
- Speckle Imager (QWSSI)
- High Speed Imager (POETS)
- NIR Spectrograph (RIMAS)

User Manuals:

- LMI Manual
- DeVeny Manual
- NIHTS Manual

Observing Planning

- Applying for Observing Time
- Planning Checklist
- Remote Observing
- Target of Opportunity (ToO) Policies
- Target Lists
- First-Time Users
- Logistics

At the Telescope

- Observing Quick Links
- Target of Opportunity (ToO Policies)
- Remote Observing
- LDT Startup Procedures
- Closure Conditions
- Night Feedback Form
- End of Night Tasks

Lowell Discovery Telescope

Observer Information Pages

COVID-19 Note:

Continuing in 2024A, limited in-person observing will be supported at LDT. For those observing remotely, see **LDT Remote Observing Notes**.

- **Current Semester Observer and Telescope Operator Calendar**
- **Facility Overview**

Updates (and Old Updates)

UPDATE: Check your VPN settings before your next remote observations (2024May14)

- **List of LDT Scientific and Technical Publications**

The 4.3-m Lowell Discovery Telescope (LDT) is Lowell Observatory's flagship facility at a dark-sky site approximately 40 miles southeast of Flagstaff on the Coconino National Forest. The telescope is classically scheduled by semester, with the current being 2024A. See the current call for observing proposals for Lowell Observatory and Partner Institution members.

The facility was constructed as the Discovery Channel Telescope, and was renamed in 2019 in cooperation with Discovery Communications.

Image: J. Fernandez (Lowell)

Lowell Observatory operates the LDT in partnership with Boston University, University of Maryland, Northern Arizona University, University of Toledo, and Yale University.

UPDATE: Check with staff about the upcoming PypeIt Workshop on June 11. (2024Apr24)

UPDATE: The 2024B LDT Call for Proposals has been released. (2024Apr11)

UPDATE: The 2024A LDT Schedule has been released. (2023Dec08)

The LMI User Manual has been updated.
The new version (v1.8 – 16 November 2023) updates to the PypeIt instructions and introduces the LDT Observer Tools python package. It is available on the LDT Observer Information Confluence page.
An updated version of the NIHTS User Manual (v1.7) has been released and is available on the LDT confluence pages. Per the authors, NIHTS User Manual v1.7 includes a couple of revised figures from the NIHTS Commissioning paper.
The new LDT Observer Information Pages were released, replacing the prior DCT Observer Information Pages.
We have looked into quantifying the delay between when a user requests an image with LMI, and when the shutter actually opens. Details can be found in the write up under the LMI link about the shutter delay. The bottom line is that:

1. The exposure times are as recorded to within a few hundredths of a second, based on the star streaks.
2. The shutter throw time in each direction is between roughly 0.1 and 0.2 seconds, meaning that there is also a temporal gradient across all the images.
3. Formal uncertainty on the measured time offsets are an underestimate of the true variation. The shutter throw time alone means the mid-time varies across the frame systematically by at least 0.1 second (added as the systematic uncertainty below).
4. The shutter opens 2.05 +/- 0.06 (ran) +/- 0.1 (sys) seconds later than the UTCSTART in the image header.
5. The shutter closes 0.19 +/- 0.06 (ran) +/- 0.1 (sys) seconds earlier than the UTCEND in the image header.

Exposure times should be computed as:

1. Start time = UTCSTART + 2.05 sec
2. End time = UTCEND - 0.19sec
3. Mid-time = UTCSTART + 2.05 + EXPTIME/2 or
4. Mid-time = [(UTCSTART + 2.05) + (UTCEND-0.19)] / 2

Facility Information:

- Telescope
- Instrumentation
- Staff
- Logistics
- Weather / Environment

Planning Your Observing Run:

- Applying for Time
- First-Time Users
- Remote Observing
- Target Lists
- Target of Opportunity (ToO) Policy

At the Telescope:

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