LBT Observing Log: 2025 Jun 25 UT

Observers: Jenny Power
Partner Observer: Mark Whittle
Telescope Operator: Riccardo Ansaldi, Steve Allanson

Plan:

Start with LUCI, switch to MODS for second half.

HD 101060 Telluric
UVa_SN2020ywx
HD 53735 Telluric for XMD
OSU_XMD_HS1222

UVa_nirjets. Complete from last night (narrow band filters remaining).

Switch to MODS:

ND_V844 Her (need to find prior OB files)
UM_V1405Cas
Merianassoc M3546B
Feige 110 ** (note must be completed before 18 degree twilight to avoid pointing into rising sun)

Summary:

Delayed start by ~1 hour due to dome drying after evening rain/hail.

Went straight to:
UVa_SN2020ywx (only 2 of 3 ABBA sets done) before hit 26 deg limit.
Then chose higher telluric:
HIP 60327 (done for SN2020ywx)
Pressed for time to get OSU_XMD so continue with same telluric
HIP 60327 (done) for XMD setup.
OSU_XMD_HS1222 did 3 of 6 exposures before stopped by clouds for the rest of the night..

- Calibrations:
- Weather Loss (Sunset-4:46)
- UVa Supernovae
  - 2020ywx (4:46-5:23)
  - Telluric HIP60327 SN (5:23-5:41)

Issues:

Weather:

Rain to start. Once we dried out we opened to mostly clear skies with seeing ~ 1-1.2". Closed for threatening clouds just before midnight, and rain started during the second half. Stayed closed.

Overview (times are given in UT):

00:39 UT Steve and Riccardo have the telescope configured for LUCI and are investigating an issue with the tertiary.

00:50 UT LUCI mechanisms initialized and mods awake. Taking LUCI darks

Calibrations:

UVa nirjets Darks:
5x[20x2.53] LIR INT luci{½}.20250625.0003-0007
5x[6x10.0] LIR INT luci{½}.20250625.0008-0012

UVa Supernovae
5x[10x5.0] LIR INT luci{½}.20250625.0013-0017
5x[1x150.0] MER NORM luci{½}.20250625.0018-0022

For UM_NovaRecon
execBinoMODS redimflats_r1K_m1.txt redimflats_r1K_m2.txt
Mods[½]r.20250625.0023-27

MODS Dual Grating Arcs
Mods[½]b.20250625.0023-25
Mods[½]r.20250625.0028-30

MODS Dual Grating Pixel flats
Mods[½]b.20250625.0026-35
Mods[½]r.20250625.0031-35

Bias 8K bin 12
mods[½]{b/r}.20250625.0036-40

Arcs bin 12
Mods[½]b.20250625.0041-43
Mods[½]r.20250625.0041-43

1” Longslit bin 12
Mods[½]b.20250625.0044-49
Mods[½]r.20250625.0044-49

When running Running simSnap for MODS. IMCS lock fail on mods2 red

Laser is on and at 1.2. MODS2 red quadcell 2 has counts around 6K while other quadcells around bias.

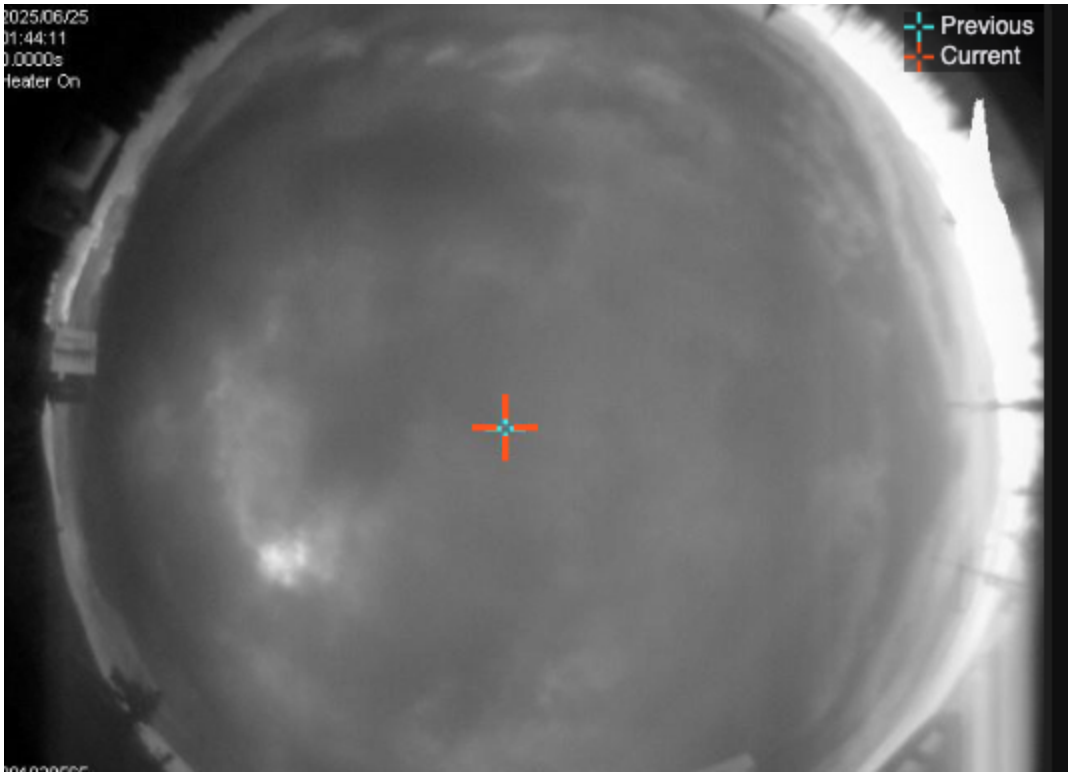
Asked Riccardo to take us to 60 degrees. At this elevation, Q4 was the highest around 2K, Q1 & 3 were hovering around 1200 counts and Q2 dropped to about 700 counts. IMCS failed again.

Rotating the rotator 90 degree to 300deg. When locking, Q4 is around 5500counts and Q1 & Q2 are around bias, Q3 around 1200 counts.

Rotating 180 to a rotator angle of 120deg. Locking at this position, Q2 is around 6800 counts, Q1 and Q4 are around bias level, Q3 is around 700 counts.

01:45 UT Olga is investigating. Looks like the process needed a kick. Thanks Olga!!

01:53 UT Complete overcast with threatening looking clouds:



02:00 UT Its started to hail/rain on the summit. Field stop alignment checked for both LUCI's.

02:04 UT Running bias all for MODS
mods[½]{b/r}.20250625.0003-0022

02:35 UT We had some rain and hail (>5mm) before sunset. will remain closed at sunset for thick cloud cover and water on the building.

Weather Loss (Sunset-4:46)

02:37 UT Sunset

03:03 UT A cloudy sunset

03:35 UT 12 degree evening twilight.

03:41 UT conditions are clearing but still some clouds to the west. There was some heavy rain so waiting for things to dry out as well.

03:53 UT Dome is still wet, still probably another 30 minutes or so but conditions are improving.

04:13 UT 18 degree evening twilight

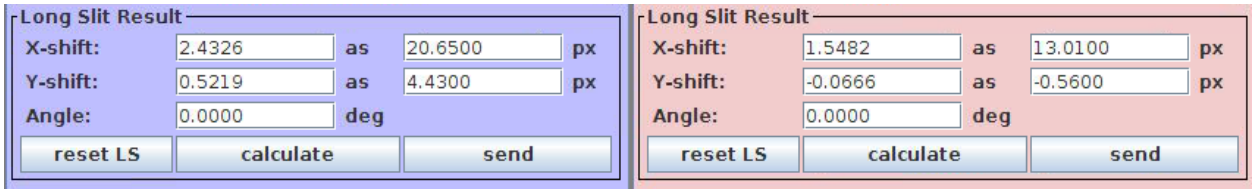
04:26 UT Conditions have dried out. Humidity has dropped to 32% which helped things along nicely. Thin cirrus. Opening now.

04:41 UT Seeing about 0.9-1” on the guider with the pointing and collimation preset

UVa Supernovae

2020ywx (4:46-5:23)

04:46 UT Preset to target for acquisition. 26 deg elevation limit has been put in place just in case we dip below 30. Seeing 1-1.15” on the guiders.



Additions 0.2” in X needed on LUCI1. Observers opted to skip confirmation image after extra image

Acquisition images:
Luci1.20250625.0024-25
luci2.20250625.0025-26

04:59 UT Starting science
Luci1.20250625.0028-35
Luci2.20250625.0029-36

Seeing up to 1.4” on the guiders, averaging 1.3”

Telluric HIP60327 SN (5:23-5:41)

05:23 UT Preset sent to telluric. Script error, Guide preset
05;26 UT Preset resent with active. Seeing 1” on the guider.

Luci1.20250625.0039-42
Luci2.20250625.0040-43

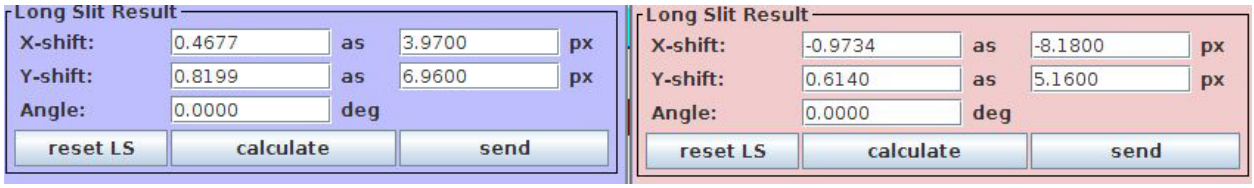
OSU_XMD_LUCI

Telluric HIP60327 XMD (05:41-5:50)

05:41 UT Sending to same telluric for OSU XMD, moving 1” longslit in place
Luci1.20250625.0046-47
Luci2.20250625.0047-48

HS1222 (partial, 5:50-6:36)

05:50 UT Preset to HS1222+3741



06:00 UT Starting science. Seeing around 1.2”

06:21 UT Seeing just blew up to 2.5”

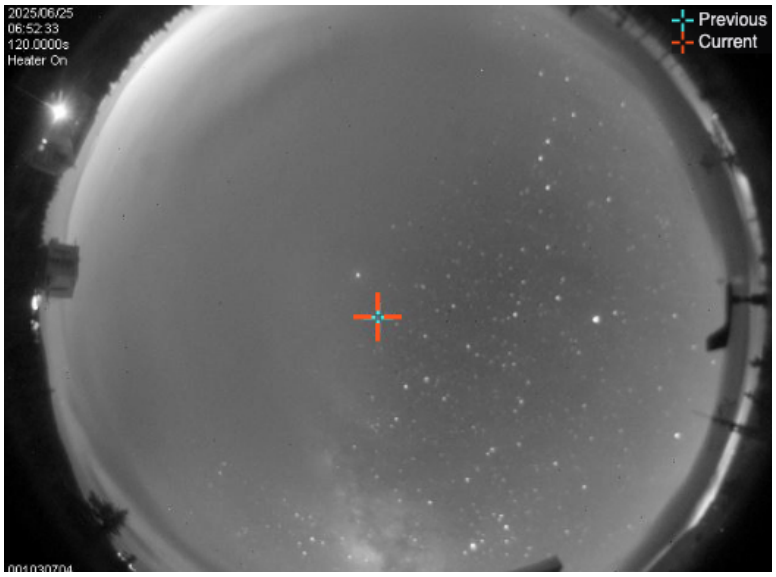
06:25 UT Seeing is coming aback down after the short lived bubble. There are clouds heading towards the mountain with precipitation showing on the radar. The end may be coming soon… But for now, the clouds remain along the horizon with the occasional small thin band passing overhead.

Luci1.20250625.0052-54
Luci2.20250625.0053-55

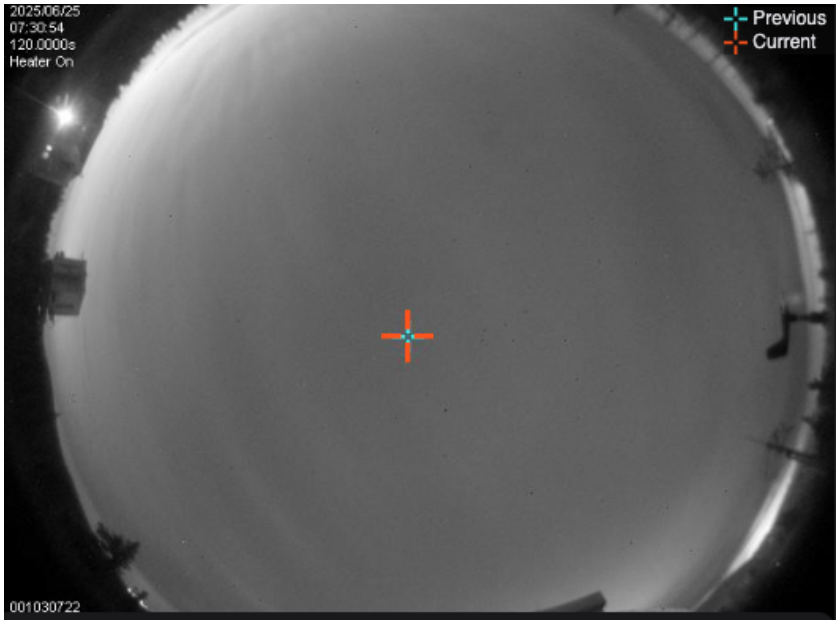
Weather Loss (6:36-sunrise)

06:36 UT Closing. The radar shows heady precipitation within 30 miles of the observatory. Script aborted at 3/6 completed.

06:59 UT Clouds are taking over the mountain, precipitation to the west.



07:36 UT Fully overcast now with the bulk of the cloud still heading our way.



09:24 UT It’s raining.

Calibrations

UVa BCD Lamps and Arcs:

1” LS G200 zJspec@1.17 Lamps and Arcs:
Luci1.20250625.0055-72
Luci2.20250625.0056-73

UVa Supernovae Lamps and Arcs:

0.75” LS G200 HKspec@1.93 Lamps and Arcs:
Luci1.20250625.0073-90
Luci2.20250625.0074-91

10:32 UT 18 degree morning twilight (LMST at morning twilight 21:27)

11:10 UT 12 degree morning twilight

12:08 UT Sunrise