LBT Observing Log for 2024 05 19 UT

Observers: Andrew Cardwell
Partner Observer: Mark Whittle (UVa), Yifan Zhou (UVa)
Telescope Operator: Steve Allanson

PEPSI Log

Plan:

LUCI1 all night.
Start with OSU_SCAT-LUCI: 2024igg + Telluric; 2023zvq + Telluric; [2022 pul removed from monocular program].

Switch to Pepsi
UM T Crb and calibrators.
Then, OSU_BHB: J12503, J15562, J19095, J20205, J21072, J18335, J21561, J22362

Then, OSU_BHB medium priority: J19452, J22003, J21080

Summary:

LUCI1 first
Start with OSU_SCAT-LUCI: 2024igg + Telluric; OSU_SCAT 2023zvq + Telluric; [2022 pul removed from monocular program].

Switch to Pepsi
UM T Crb and calibrators.
Then, OSU_BHB: J12503, J19095, J20205, J21072, J18335, J21561, J22362, J15562

OSU_BHB medium priority: J19452

8 min weather loss due to high wind.

Issues:

Weather:

Overview (times are given in UT):

01:34 Bringing up LUCI, init_all on LUCI1. We received updated scripts from Michael Tucker during the day, but they have issues.

02:13 I mailed Michael and asked him to join us on the zoom. The issues were resolved, the program is ready to go. Steve is opening the vent doors.

02:19 **Sunset**. Enclosure open.

02:46 Preset to HD128039, telluric for OSU_SCAT-LUCI 2024igg. It's still very bright, we will hang out here until conditions are good enough to start observing.

02:57 DIMM reports 1.5", SX guider agrees.

03:04 Starting science. Seeing looks like it may be an issue, The DIMM has reported values up to 1.8". Current avg fwhm from the guider is 1.55". We will repeat this after the target. Did all four filters: z,j,H,K.

03:14 **12 degree twilight**.

03:26 Preset to OSU_SCAT-LUCI 2024igg. LUCI1 LS.

03:32 Acquisition confirmed, starting science.

03:49 **18 degree twilight**.

04:04 DIMM reports 1.2". Avg seeing from the SX guider is 0.9".

04:54 DIMM reports 1.5", avg fwhm from the SX guider is 0.9".

05:16 Preset to Preset to HD128039. Second shot on this telluric.

05:21 Starting science.

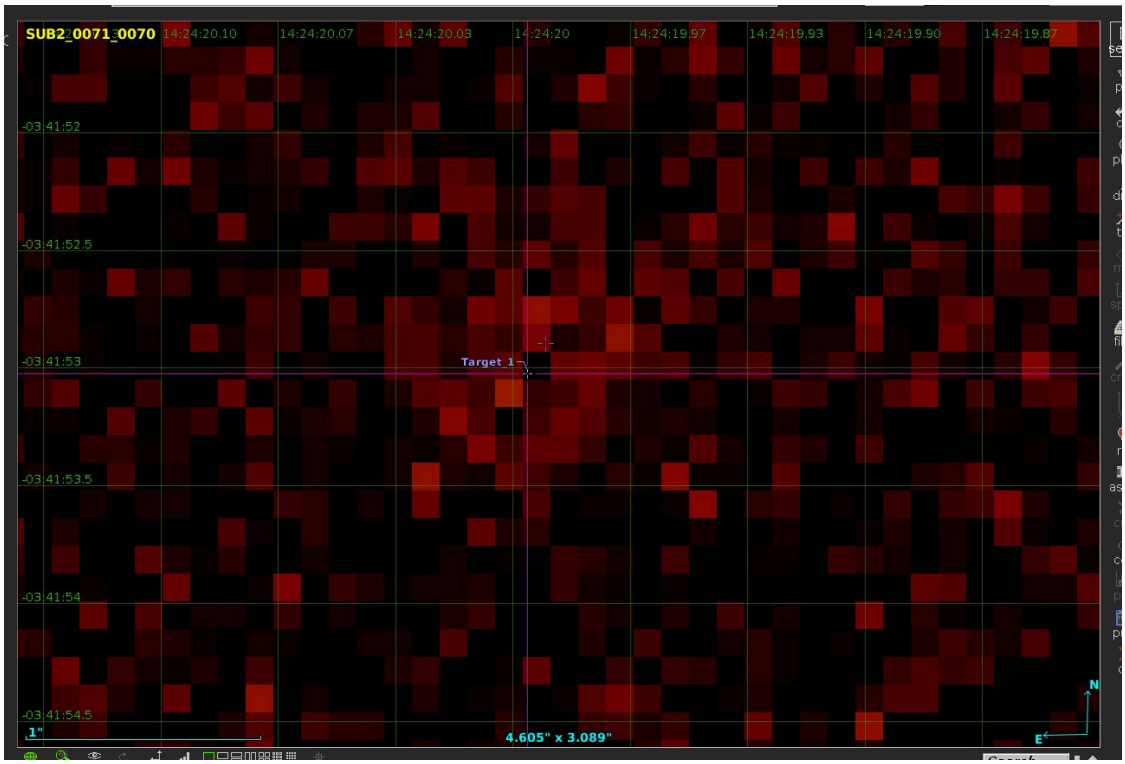
05:43 Preset to OSU_SCAT HD126846.

05:52 Starting science. Acquisition slowed down by the RTD slowing down to the point of being unusable. Killing and restarting it cleared the issue.

05:58 Preset to OSU_SCAT 2023zvq.

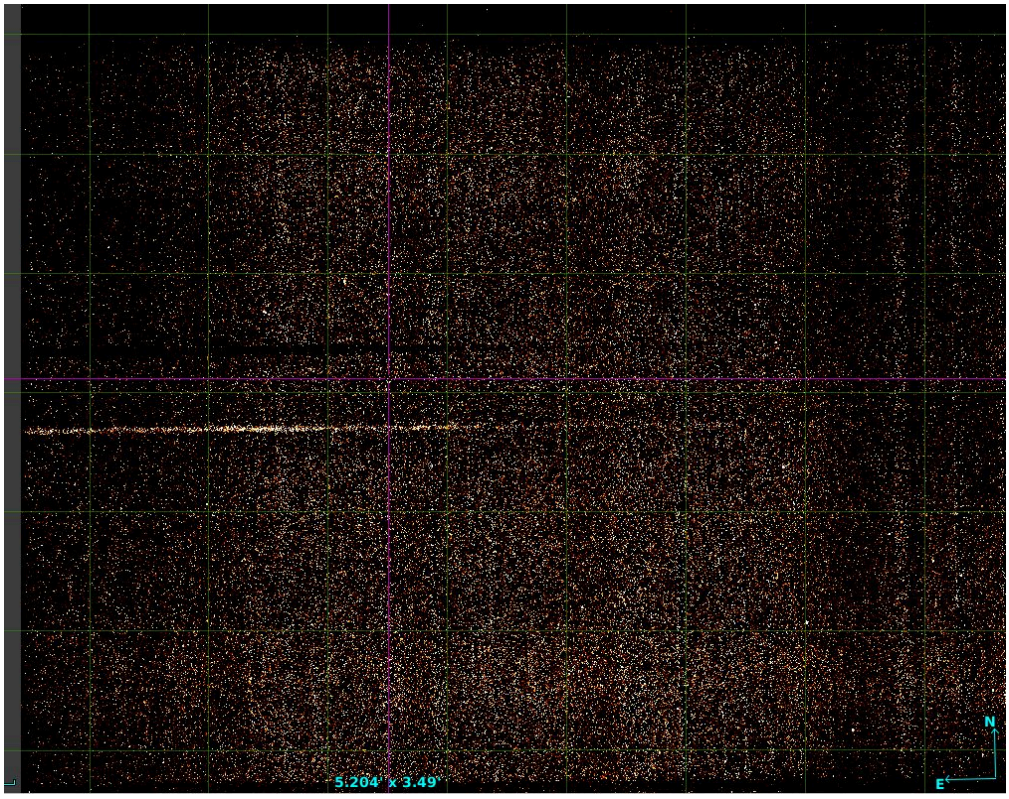
06:05 The target is very faint. We could just about acquire it, but would not be able to confirm it in a through slit image. I have altered the OT file to triple the time of the acquisition exposures. IQ of 0.9” measured on initial J band acquisition exposure.

06:18 Still very faint, but enough to acquire on. See subtracted image below.



06:25 Trusting the acquisition and starting science.

06:39 We do see a faint trace from the target in the subtraction of the first zJ pair.



07:13 Preset to UVa_BCD J1509.

07:18 Script was still bino. Regenerated forLUCI1 only, but running it twice would not have fitted in the time available. Reconfiguring to PEPSI.

07:34 Preset to UM_TCrb. On Chick Woodward's suggestion, we can do a shorter program than last night on this variable source.

07:37 Starting science. CD3+CD5, 200 fiber.

07:59 We accidentally took CD4 only, CD3+CD5 are running now. User error. (AC)

08:19 Preset to UM HR 5501.

08:21 DIMM reports 2"!. Seeing bubble. Starting science. CD3+CD5.

08:33 Preset to UM HD 134807.

08:37 Starting science. CD3+CD5 only.

08:47 Preset to OSU_BHB J12503.

08:48 No GS found on DX. Pointing check.

08:52 REturning to science source.

08:54 Starting science. DIMM reports 1.2”.

08:59 Preset to J15562.

09:02 DX GS not found, pointing check required.

09:04 Returning to target.

09:06 Starting science.

09:07 It’s too windy here, we will have to avoid the SW. Preset to J19095.

09:09 No GS found on DX, pointing check required.

09:12 Return to science target.

09:23 Preset to OSU_BHB J20205.

09:27 Starting science. Slightly increasing exposure times as we have fallen a little below the S/N requirements on the last 2 targets. Likely due to degrading seeing. DIMM currently reports 1.6”, but has reported up to 2.2”.

09:40 Preset to OSU_BHB J21072. Exp time increased to 13min.

09:42 Starting science.

09:57 Preset to OSU_BHB J18335. Seeing has improved, no change to exp time.

09:59 No GS found on DX, pointing check required.

10:02 Returning to target.

10:03 Starting science.

10:14 Preset to OSU_BHB J21561.

10:17 Starting science.

10:35 Preset to OSU_BHB J22362.

10:37 Starting science.

10:43 **18 degree twilight**.

10:45 Preset to OSU_BHB J19452.

10:49 Wrong target picked up on DX. Correcting.

10:50 Starting science.

11:01 Preset to OSU_BHB J15562. Final target as our other targets are all east and we can't point east this close to sunrise.

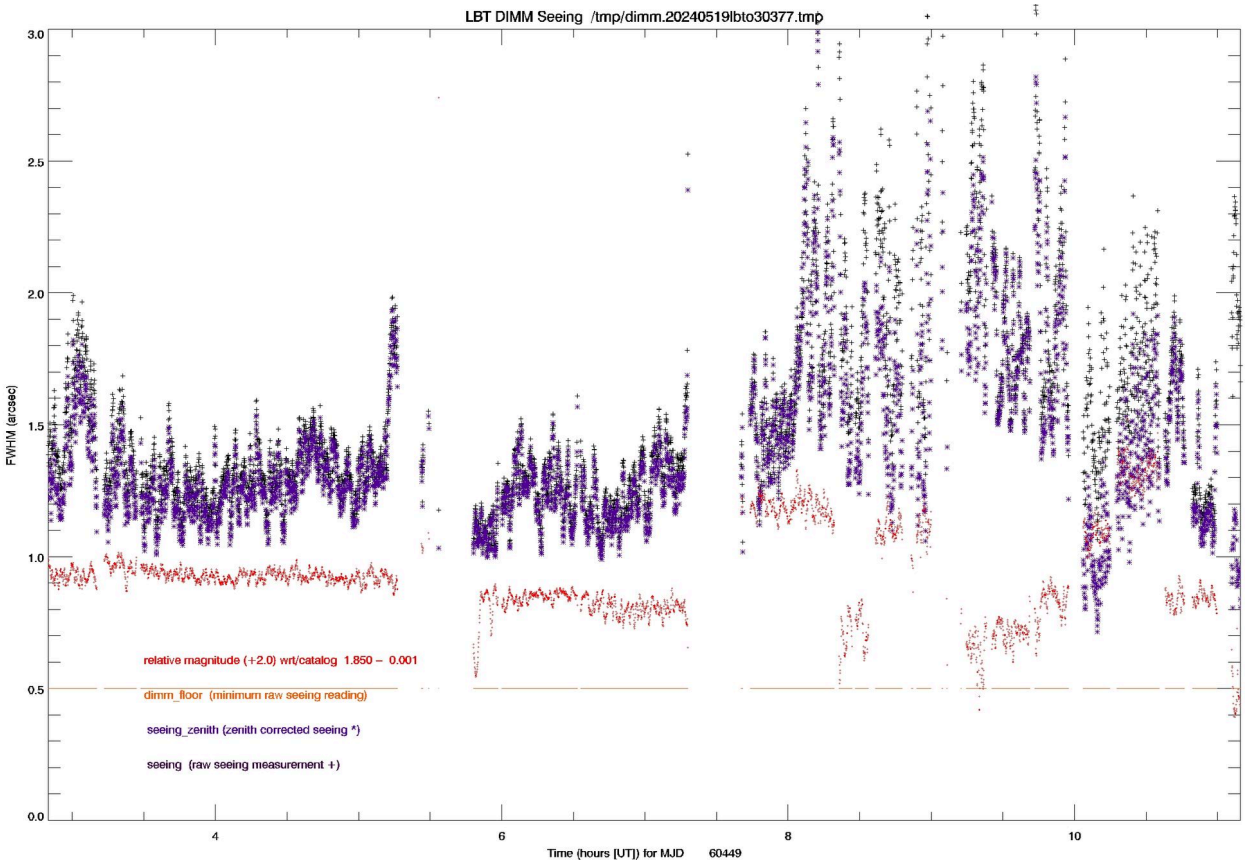
11:05 Starting science.

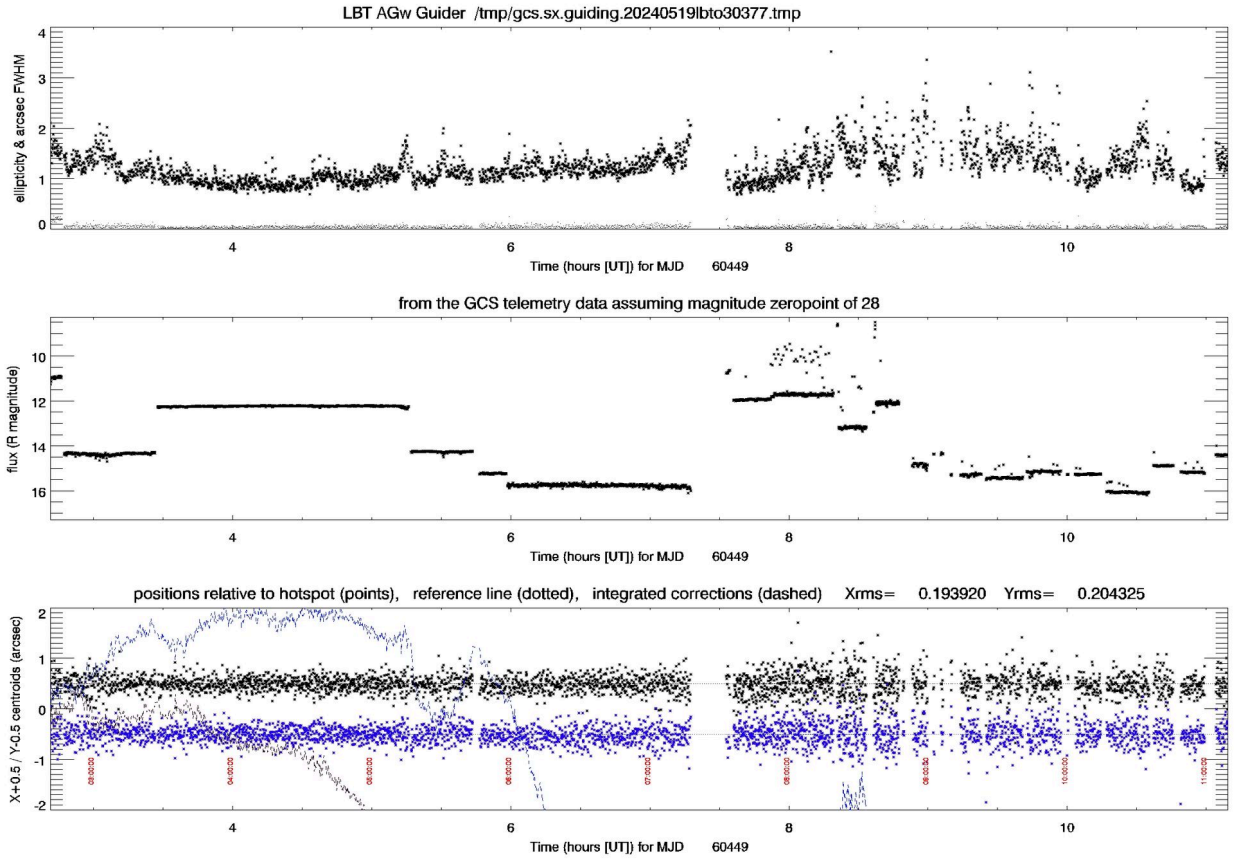
11:09 End of science. Closing the enclosure.

11:13 Starting PEPSI calibrations.

11:18 **12 degree twilight**.

12:13 **Sunrise**.


LBT DIMM Seeing /tmp/dimm.20240519lbto30377.tmp
FWHM (arcsec)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4
6
8
10
Time (hours [UT]) for MJD 60449
relative magnitude (+2.0) wrt/catalog 1.850 – 0.001
dimm_floor (minimum raw seeing reading)
seeing_zenith (zenith corrected seeing *)
seeing (raw seeing measurement +)


LBT AGw Guider /tmp/gcs.sx.guiding.20240519lbto30377.tmp
ellipticity & arcsec FWHM
Time (hours [UT]) for MJD 60449
from the GCS telemetry data assuming magnitude zeropoint of 28
flux (R magnitude)
Time (hours [UT]) for MJD 60449
positions relative to hotspot (points), reference line (dotted), integrated corrections (dashed) Xrms= 0.193920 Yrms= 0.204325
X+0.5 / Y-0.5 centroids (arcsec)
Time (hours [UT]) for MJD 60449