# LBT Observing Log for 2024 05 16 UT

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

PEPSI Log

# Plan:

Given cloud prediction and moon, opt to start with PEPSI:
    OSU_BHB J12503 (high); J08120 (med); J07591 (med)
If clear enough, then try the UM TCrB program (which requires ~2hr clear time):
    UM HD134807; TCrB; HR5501
If too cloudy, continue with the OSU_BHB targets:
    J15562 (high); J12090 (med); J13030 (med); J14573 (med)
Then hand over to time-sensitive PETs program:
    OSU_PETS Kelt20 for the rest of the night.

# Summary:

Observations completed: (clouds in the area made it too risky to start the UM TCrB program).
OSU_BHB J12503; J08120; J07591; J12090; J15562; J13030; J14573;
Clouds, closed dome UT 6:15
Reopened 8:39
Kelt20 until well into twilight 11:50. (20 minute period with some clouds).

# Issues:

# Weather:

Time loss due to clouds:
    03:11 - 03:41: 0.5h
    06:15 - 08:39: 2.42h

# Overview (times are given in UT):

01:05 Conditions are cloudy, humidity is at 52% and slowly rising. Bringing up MODS to run some cals.

01:08 Waking mods, running simSnap.

01:46 MODS biases are complete, running MODS DG cals. There is an idl process (user lbto) running on robs1 that appears to be using a lot of system resources. It has been running for almost 6 days.

02:16 **Sunset. Remaining closed due to threatening clouds.**

03:11 12 degree twilight.

03:41 It has cleared up enough for us to **open**. We will begin with PEPSI.

03:46 18 degree twilight.

04:14 We are pointed and collimated. Preset to OSU_BHB_J12503. We are looking through some cloud, exp time doubled from 5min to 10min.

04:15 Starting science. Guiders report 1.3” to 1.4”. Humidity is 52%.

04:24 The last WFS exposures were corrupted and not displayed or used.

04:28 Final S/N was 160 in B and 10 in R. Preset to OSU_BHB_J08120. No GS found on DX, Steve is correcting the pointing.

04:32 Sending the preset again. Exp time increased from 1:40 to 3min.

04:38 S/N good (190 in red). Preset to OBU_BHB_J07591. Exp time increased 50% from 6:40 to 10min.

04:40 Starting science.

04:50 Preset to OSU_BHB_J12090. AZ is unwrapping.

04:55 Pointing check required, no GS found on DX.

05:00 Preset to target. Exp time increased by 50% to compensate for clouds.

05:02 Starting science.

05:23 Preset to OSU_BHB_J15562. Exp time increased by 50% to compensate for clouds.

05:27 Starting science. DIMM reports 1.2”.

05:33 Preset to OSU_BHB_J13030.  Increasing exp time by 20%, S/N has been good thus far.

05:36 Starting science.

05:49 Guiders report 1.35”.

05:57 Preset to OSU_BHB_J14573. Increasing exp time by 10%, 11min on target.

06:00 Starting science. The target has a faint companion which might interfere with the pinhole guiding.

06:12 Stopping exposure and reading out. A band of thick cloud came through and reduced our flux to zero. S/N of 139 in the red and 88 in the blue.

06:15 We are **closing** due to cloud, the clouds are threatening. Ilya has joined us for the transit.

07:33 Conditions are unchanged, still cloudy.

08:39 The sky has cleared some, we will **open** and see what we can get.

08:48 Preset to OSU_Kelt-20.

10:26 SX target disappeared. Jump? Sending an SX only preset. (IT#7634/3852)

10:28 That worked, target has returned. DIMM reports 1.2”. This happened during exposure 033.

10:46 18 degree twilight.

11:08 Cloud has thickened. GCS grabbed noise on SX and pulled us off source, sending a DX only preset to recover.

11:20 12 degree twilight.

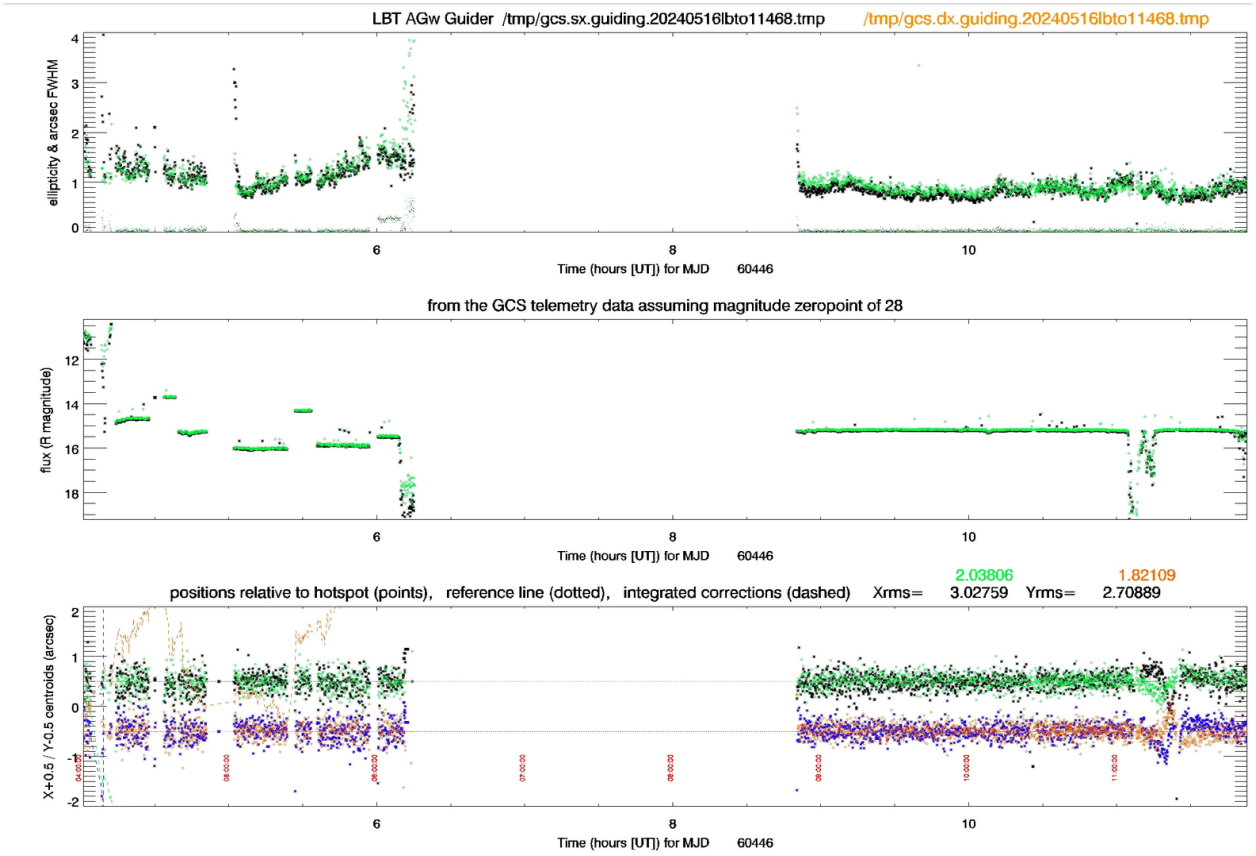
11:24 Star lost on SX, spurious tip/tilt applied. Preset on both sides needed to recover.

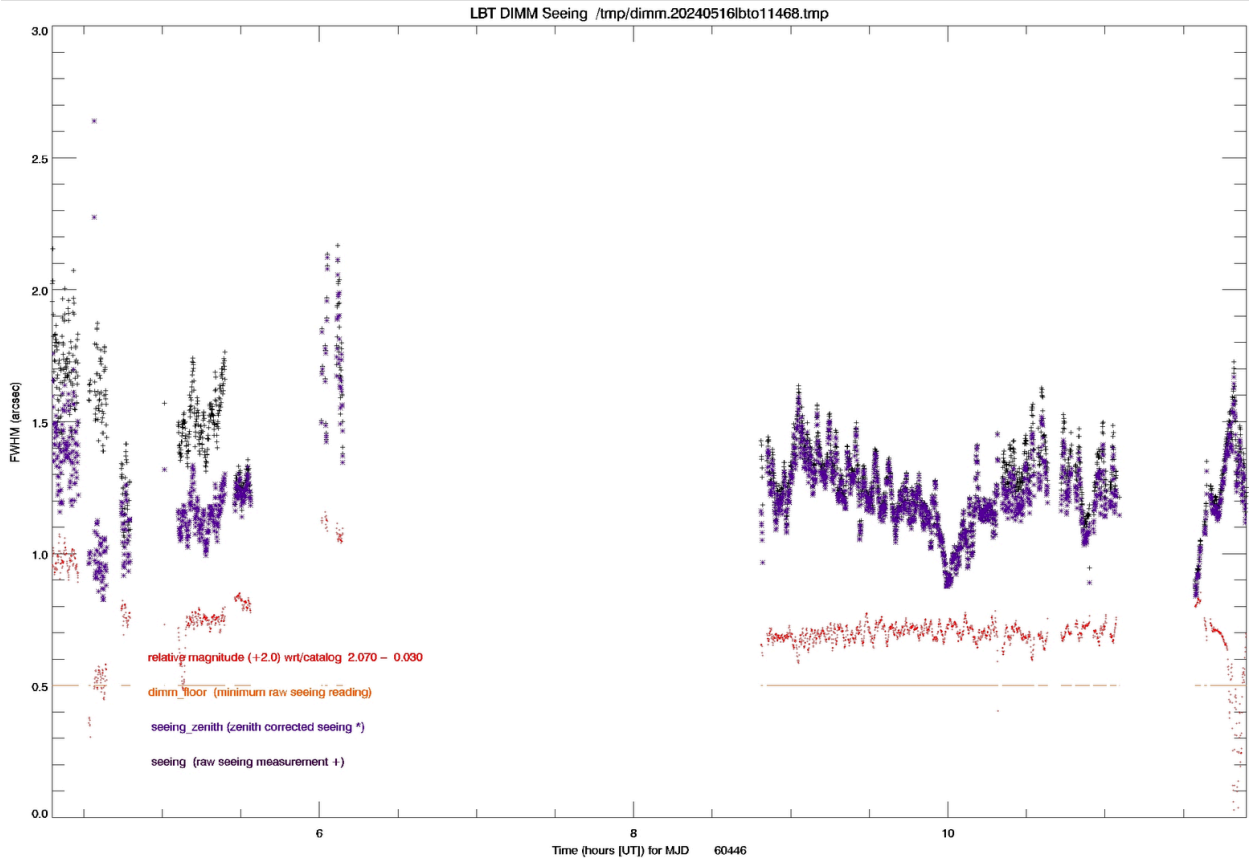
11:50 Starting the final exposure.

11:54 End of science. Starting PEPSI calibrations.

12:03 Putting MODS to sleep.

12:15 Sunrise.




LBT DIMM Seeing /tmp/dimm.20240516lbto11468.tmp
FWHM (arcsec)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
6
8
10
Time (hours [UT]) for MJD 60446
relative magnitude (+2.0) wrt/catalog 2.070 – 0.030
dimm_floor (minimum raw seeing reading)
seeing_zenith (zenith corrected seeing *)
seeing (raw seeing measurement +)