LBT Observing Log for 2024 06 28 UT

Observers: Andrew Cardwell

Partner Observer: Marshall Johnson (remote), with Connor Basinger, Chen Yang
Telescope Operator: Steve Allanson.

[PEPSI Log](#)

Plan:

- OSU PETS TOI-1518 b transit with PEPSI

NOTE:
- **We have the flat on DX, the DX adsec is unavailable.**

Summary:

Weather kept up closed except for the last 3.5 hours of the night. One PEPSI transit program competed, TOI-1518 b. Seeing plots are appended at the end of the log.

Issues:

Weather:

Monsoon conditions, but good enough to open for the last 3.5 hours of the night.

Overview (times are given in UT):

01:50 Thick cloud. Bringing up MODS.

02:06 MODS are awake, simSnap looks good. Running biases. Checking LUCI field stop positions.

02:22 LBCs powered up, taking biases. GIven the current cloud, and nearby rainstorms, we will not be opening at sunset.

02:37 **Sunset**.

03:35 **12 degree twilight**.

04:02 ~~We have a sucker hole, the satellite animation and radar plots strongly suggest it is no more than that.~~ Scratch that. I looked at the allsky cam from a distance and was fooled by the hot pixels…

04:13 **18 degree twilight**.

06:51 The sky is slowly clearing, the rain storms appear to be moving away from us now.

07:51 **Opening up**. We still have cloud, but the risk of rain has passed. Humidity is rising, but is currently within limits, 81.5%.

08:05 Preset to TOI 1518. PEPSI transit observation.

08:07 Starting science.

09:14 Humidity is climbing, 93%.
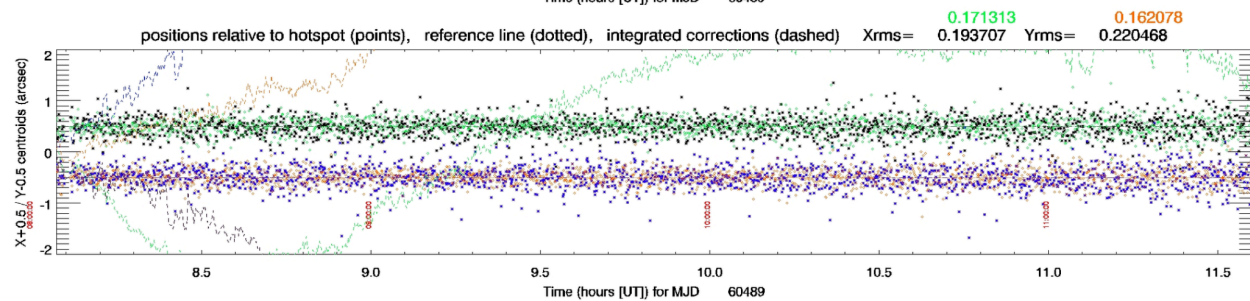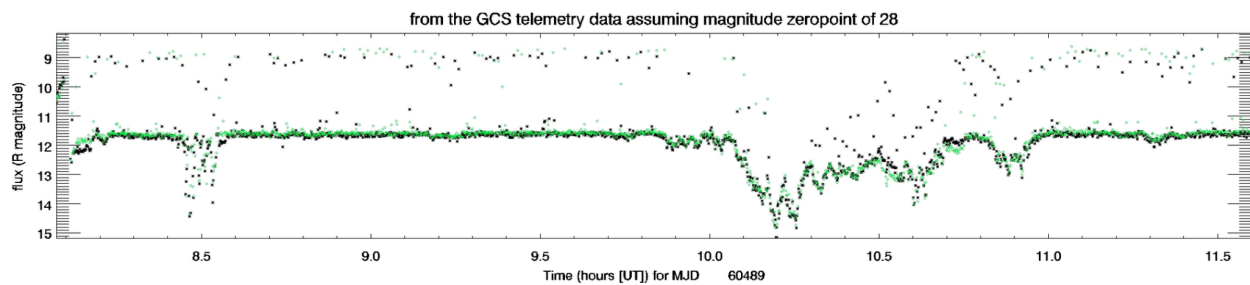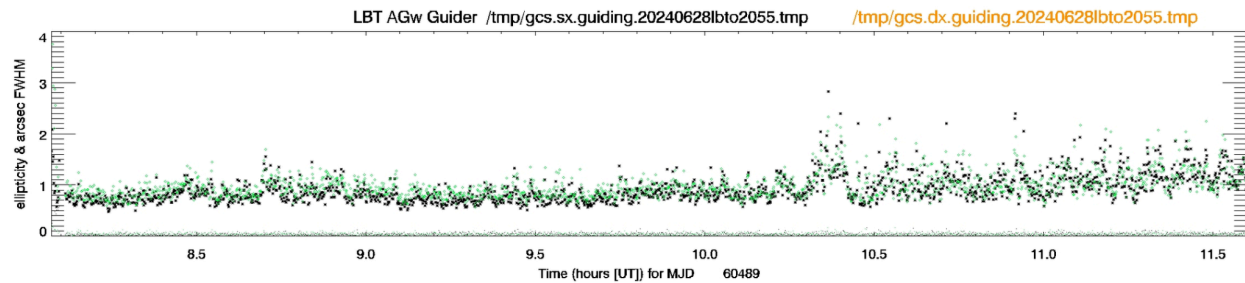
09:21 92% humidity, 1" from the DIMM.

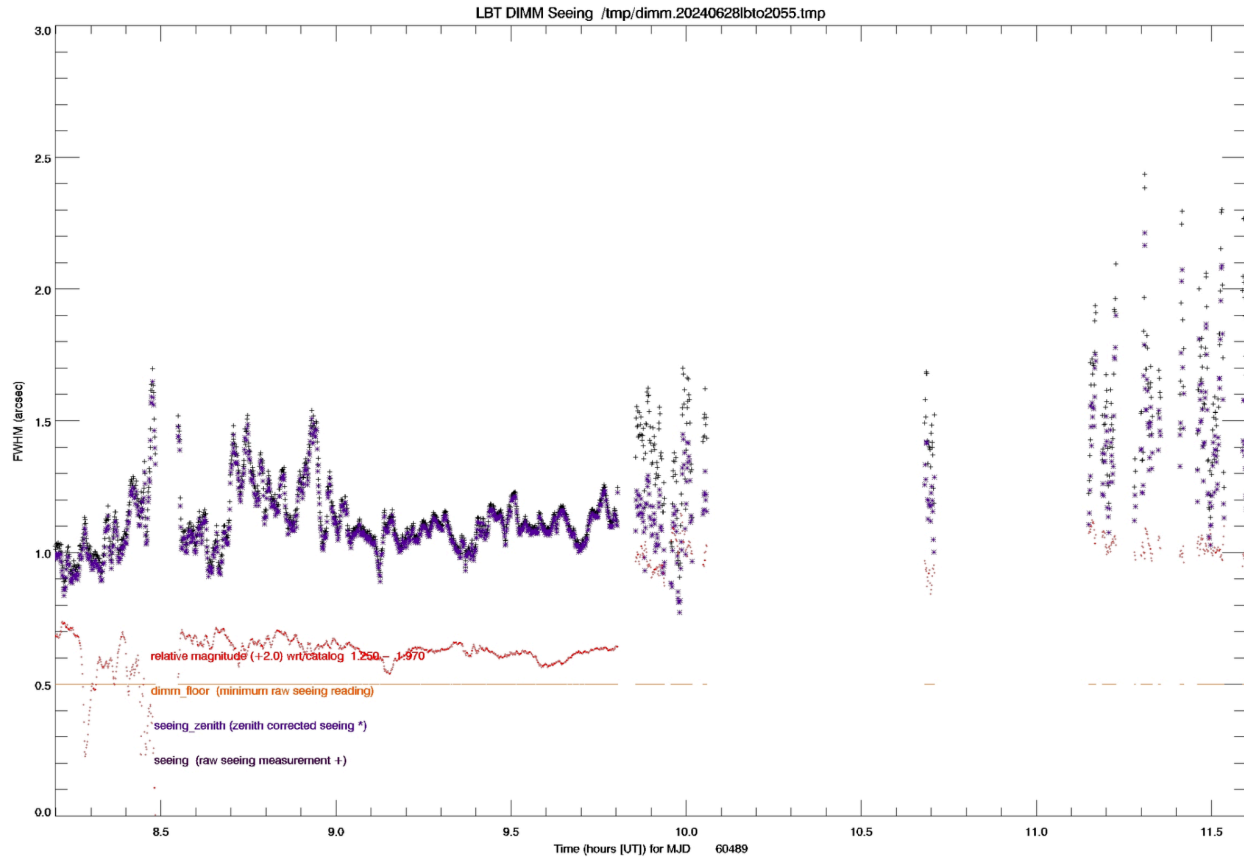09:39 88.5% humidity. MODS put to sleep, LUCIs safed, LBC powered off.

10:32 **18 degree twilight**.

11:10 **12 degree twilight**.

11:35 End of observing, closing up. 88.5% humidity.

12:08 **Sunrise**.

LBT AGw Guider /tmp/gcs.sx.guiding.20240628lbto2055.tmp   /tmp/gcs.dx.guiding.20240628lbto2055.tmp

from the GCS telemetry data assuming magnitude zeropoint of 28

positions relative to hotspot (points), reference line (dotted), integrated corrections (dashed)   Xrms=   0.193707   Yrms=   0.220468
0.171313   0.162078

LBT DIMM Seeing /tmp/dimm.20240628lbto2055.tmp

For LUCI2 G200
  Start observing binocularly
  Insert pause after first spec DIT
  Check carefully the first spectrum from luci2
    If shifted, switch to mirror and back
    Take short exposure, deep enough to confirm position
    If still shifted, try:
      Run: /lbt/lbto/luci/L2G200 -r 1.17
        # replace 1.17 with requested central wavelength
      On HIRAMO gui, enter the second voltage in closed loop operation
      Take short exposure, deep enough to confirm position
If OK, resume