LBT Observing Log for 2024 10 07 UT

Observers: Justin Rupert
Partner Observer: Peter Garnavich
Telescope Operator: David Gonzalez Huerta

Plan:

Starting with LUCI.

OSU_XMD J2104   1.5hr tried, too faint
UM_XMD HS2236 1.5hr done
UVa_BCD J2229   1.2hr tried, but too faint
OSU_XMD HS0029 1.5 hr done
OSU_XMD UM420 1.5 hr done

Switch to MODS

ND_blobs (seeing 1.0 or less)
Cal_g191b2b
OSU_SCAT - problems with 24pjl guide star
     some data on 24any, but twilight…

Summary:

Issues:

1. At the start of the night, we had issues with the GCS server sending presets with LUCI. We were only authorized for mono LUCI, but the script was bino. This caused an issue with the GCS server. Eventually we just edited the scripts to make them monocular.
2. We had an issue finding the target OSU_XMD_J2104. It was too faint even in a subtracted image. Perhaps a blind offset would be better for this target.
3. The script for the UVa_XMD_J2229 had errors. The acquisition sequence was missing a slit image and contained extra sky images.
4. OSU_SCAT_2024pjl wasn't completed due to a guiding issue. Two different offsets caused GCS to pause. Perhaps the guide star is near the edge of the patrol field. No OT to determine the issue.

[OSURC Queue Team will review scripts with PIs and revise as needed for coming nights]

Weather:

Clear, calm winds, low humidity all night. Seeing was pretty good and relatively stable all night as well.

Overview (times are given in UT):

00:34 Initiializing LUCI2

00:47 LS pinholes aligned.

01:05 Opening.

01:20 Pointing check.

01:48 12-degree twilight.

01:57 Preset to target. Failed. The script is written binocularly but we're only authorized for LUCI2. David is authorizing for bino LUCI now.

02:07 Preset. We're moving but the preset failed on SX. Rotator wasn't powered on. GCS server got stuck on "initializing guide thread". David restarted GCS.

02:12 Preset. Failed again. GCS server is stuck in the same state. David will try sending a preset from his end.

02:16 18-degree twilight.

02:19 David sent the preset on his end and again the GCS got stuck in the "initializing guide thread" state.

02:22 David reauthorized for LUCI DX and got errors related to FLAO. Strange. He is attempting to send a preset monocularly. That worked.

02:26 Reauthorizing for binocular LUCI.

02:27 David is sending binocular preset. Once again got stuck on the "initializing guide thread" on GCS DX.

02:36 Jenny has been adjusting the scripts to make them monocular. We're going to a different telluric for a different program.

UM

XMD_HIP116886 (UT 02:38-02:48)

Luci2: 5-9
02:38 Preset.

02:46 Starting science. Seeing is 0.7" on guider.
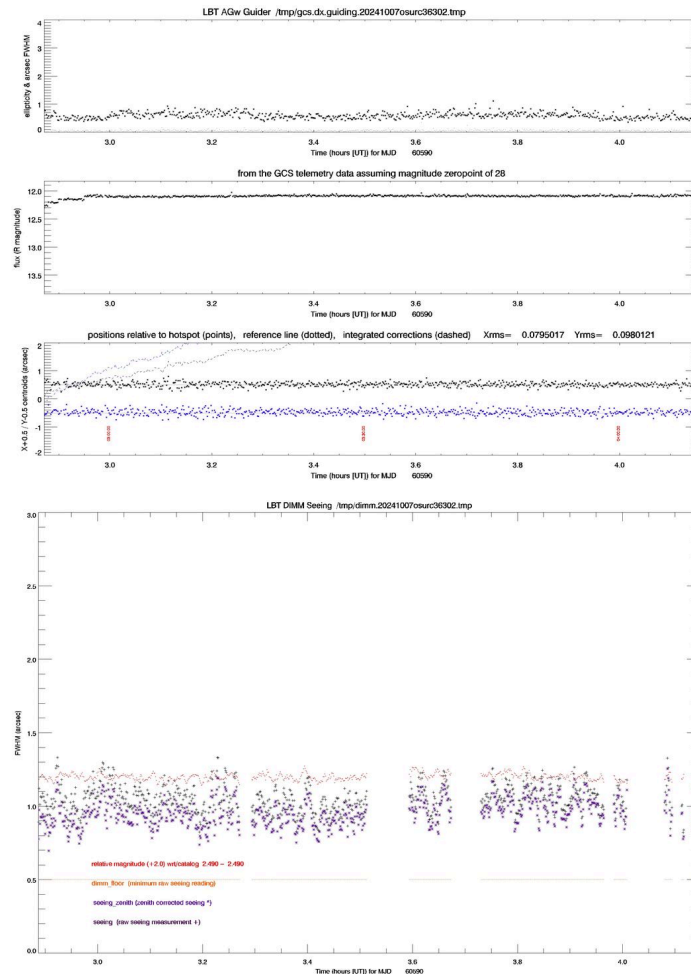
XMD_2236+1344 (UT 02:51-04:08)

Luci2: 10-20
02:51 Preset.

03:02 Need to tweak the slit alignment.
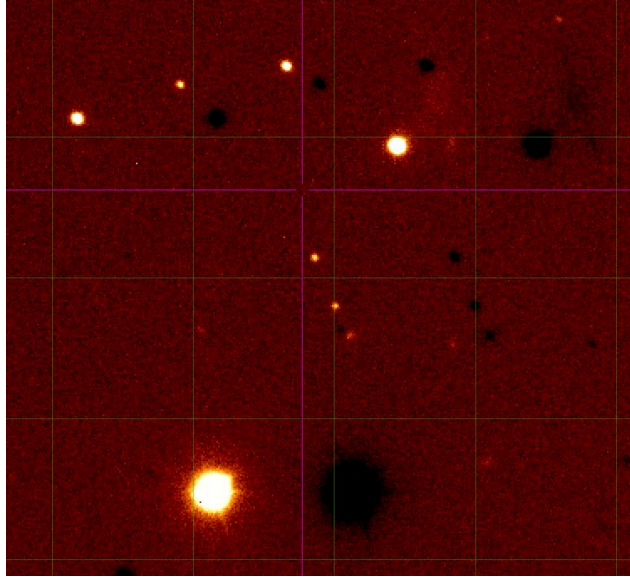03:05 Starting science. Seeing is 0.8" on DIMM, 0.6" on guider.

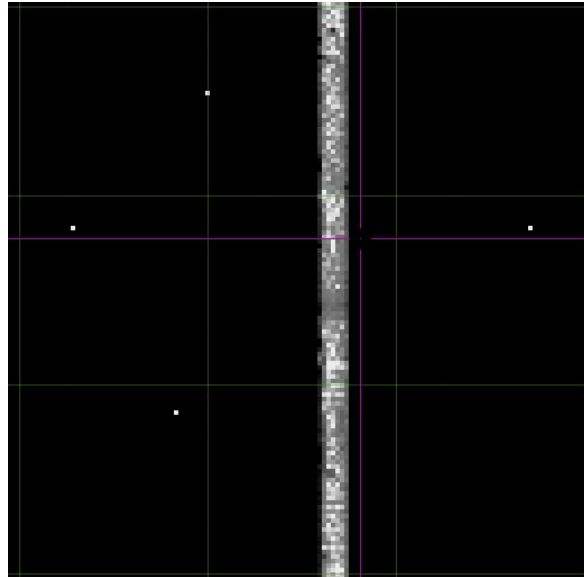03:40 Seeing is 1" on DIMM, 0.7" on guider.

# OSU

XMD_J2104 (UT 04:09-04:47)

Luci2: 21-2604:09 Preset

04:19 Target is very tough to see in the slit…It's supposed to be just above and to the left of the purple crosshair. May be better to re-tool this script with a blind offset (seems to be a decent field for that).

04:22 Starting science. Seeing is 0.6" on guider.

04:33 Can't see the trace in the first spectrum. We'll take another and hope we can see it in the subtraction.

04:47 Can't see anything in the subtracted spectra either. We've decided to move to another target as this one is too faint to either align or see in a 10-minute exposure.
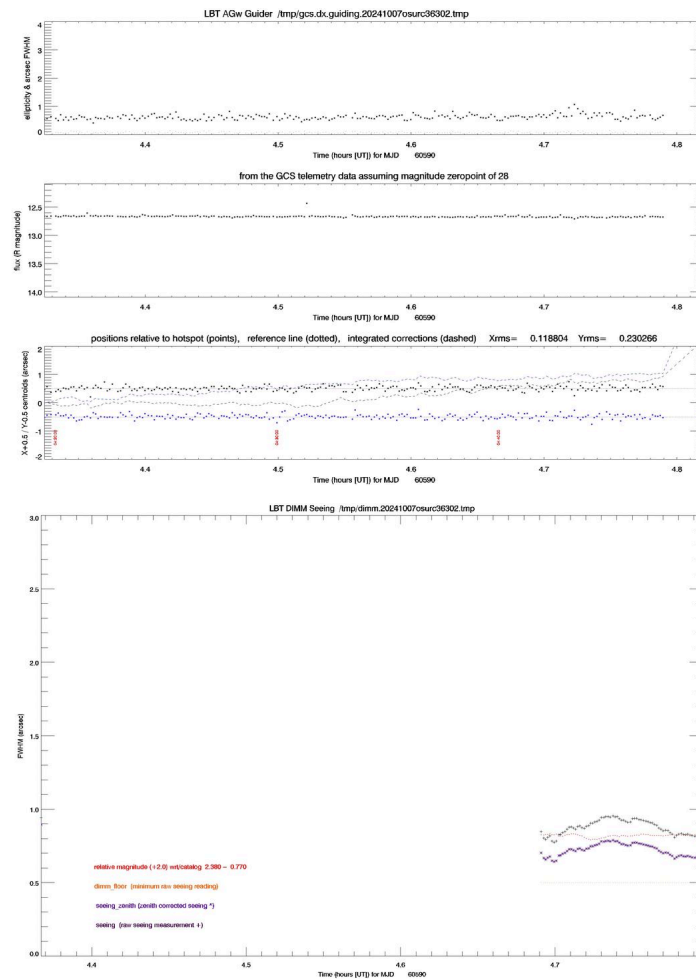
04:48 Preset to HS2236.

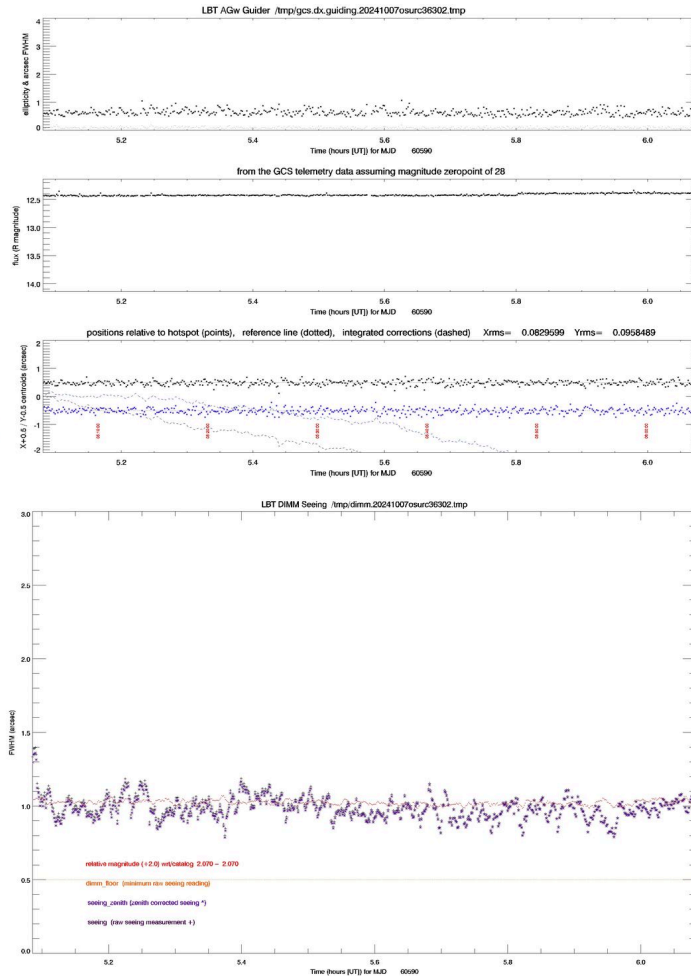04:50 Oops. Did this already.

XMD_HS0029 (UT 04:51-06:06)

Luci2: 27-36
04:51 Preset.

05:02 Starting science. Seeing is 0.9" on DIMM, 0.7" on guider.

05:43 Seeing is 1" on DIMM, 0.6" on guider. Skies still clear

XMD_HIP116886 (UT 06:06-06:18)

Luci2: 37-41
06:06 Preset.

06:08 Missed the target. A star appeared near the bottom of the guide camera. Pointing check.
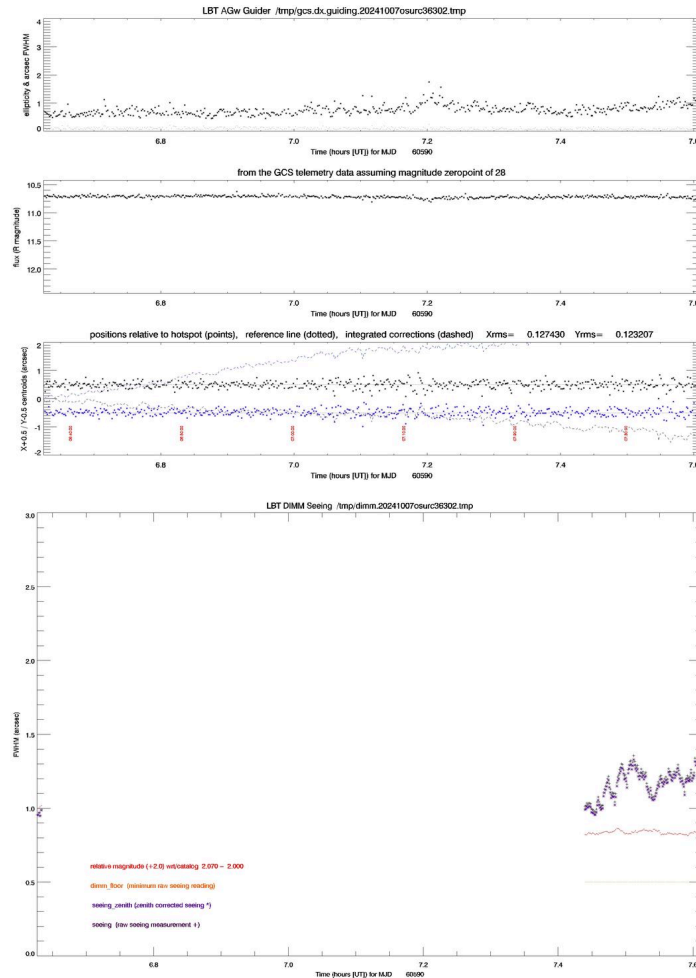
06:10 Resending preset. Got it.

XMD_UM420 (UT 06:20-07:36)

Luci2: 42-51
06:20 Preset.

06:32 Starting science. Seeing is 0.8" on DIMM, 0.7" on guider.

07:15 Seeing has destabilized a bit. We've hit almost 2" (momentarily) a couple times. Still mostly hanging around 1".

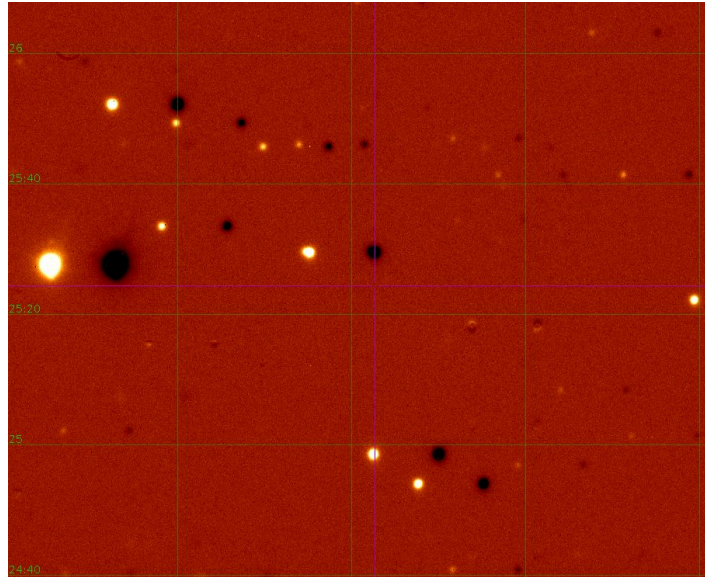## XMD_HIP13917 (UT 07:36-07:48)

Luci2: 52-56
07:36 Preset.

07:45 Starting science. Seeing is ~1".

UVa

XMD_J2229 (UT 07:52-08:03)

Luci2: 57-
07:52 Preset.

07:59 Script wasn't set up properly. There is no slit image during the acquisition stage. We also don't see the object at all in a subtracted image. We're moving on to MODS targets.

08:03 Reconfiguring to MODS.

08:18 Pointing check.

ND

Blobs Imaging (UT 08:25-09:04)

Mods2r: 1-15
Mods2b: 1-15
08:25 Preset.

08:28 Starting science. Seeing is 1.1" on DIMM, 0.9" on guider.

08:39 DIMM reading 1.3", guider reading 0.9" seeing.

08:59 DIMM reading 1", guider reading 0.7" seeing.

09:03 mods2b…015 image took a while to start reading out.

Blobs Spectroscopy (UT09:04-09:52)
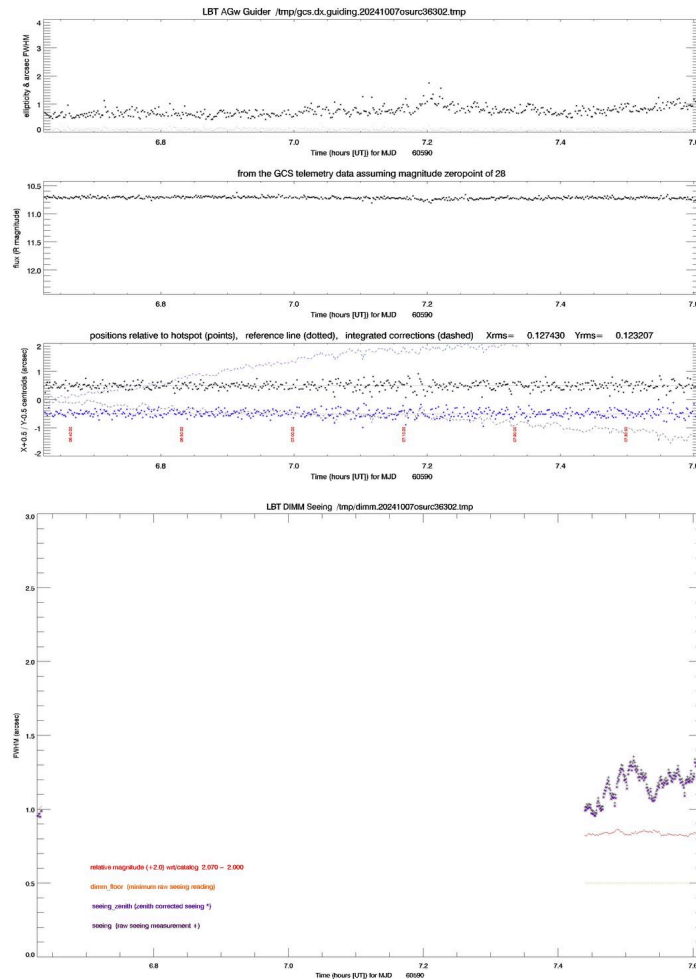
Mods2r: 16-23
Mods2b: 16-20

09:10 Starting science. Seeing is 0.7" on guider.

09:49 The observer has decided to try imaging again with better seeing and 2-minute exposures. Current seeing is 0.6" on guider.

Blobs Imaging (UT 09:52-10:26)

Mods2r: 24-33
Mods2b 21-30

OSU

~~SCAT_2024pjl Imaging (UT 10:28-10:36)~~

10:28 Preset.

10:32 Script called for a 15" offset in RA and Dec. Caused the gcs to pause and throw an error:

ERROR: probe failed to move to offset position

Going to start the spectroscopy while we look for the imaging script.

~~SCAT_2024pjl Spectroscopy (UT 10:37-10:45)~~

Mods2b: 31-32

10:37 Preset with the UT1100 acq script.

10:43 Having the same guiding issue when running modsAlign. This was a smaller offset compared to the imaging (3.4" in X, 7.2" in Y). Perhaps the guide star is near the edge of its patrol field. Without the OT it's tough to say. We're moving on to another target.

2024any Imaging (UT 10:46-11:02)

Mods2r: 34-37
Mods2b: 33-36
10:46 Preset.

10:48 Starting science. Seeing is 0.7" on guider.

2024any Spectroscopy (11:02-)

Mods2r: 38-39
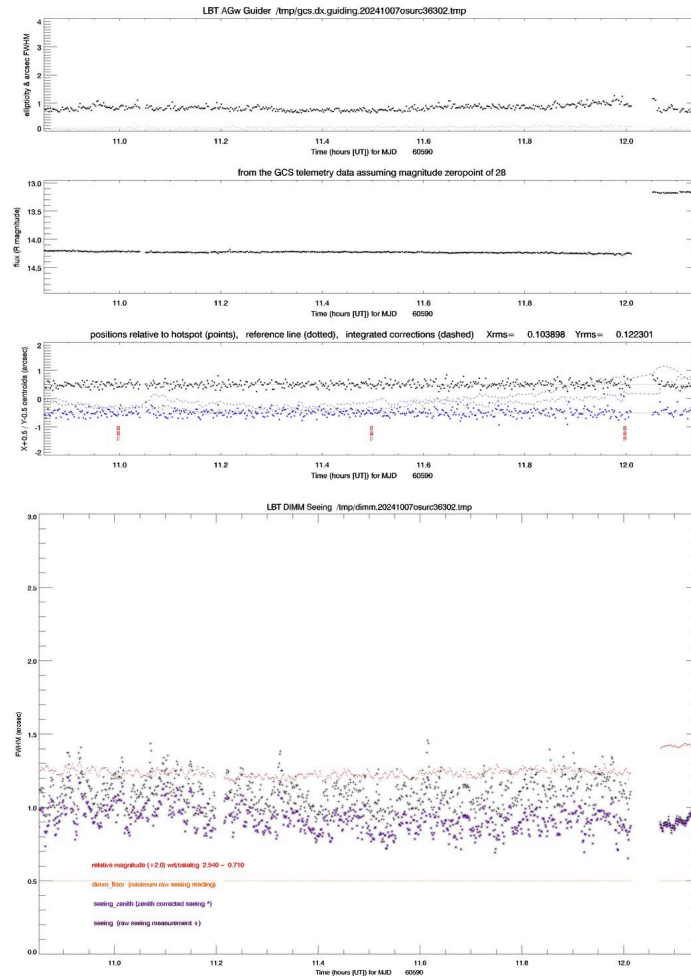mods2b : 37-41
11:02 Preset.

11:06 mods2b instconfig timeout. Updated and retried. That worked.

11:13 Starting science. Seeing is 1.1" on DIMM, 0.8" on guider.

11:16 mods2b object name timeout. Updated and retried. That worked.

11:55 18-degree twilight.

11:59 Cutting off this script after two exposures. We're into twilight now.

ND

G191B2B (UT 12:00-12:15)

Mods2r: 40-44
Mods2b: 42-44
12:00 Preset.

12:08 Starting science. Seeing is 0.9" on DIMM, 0.8" on guider.

All

G191B2B (UT 12:15-12:27)

Mods2r: 45-
Mods2b: 45-

12:15 Starting science. Seeing is 0.8" on DIMM, 0.6" on guider.

12:24 12-degree twilight.

12:27 Closing.

12:37 Running XMD arcs on LUCI and prism arcs on MODS.

12:46 Mistakenly ran LUCI cals with N1.8. Adjusting.

12:55 Running prism biases.

13:05 Running Prism flats.

13:22 Running imaging biases.

Calibrations needed:
MODS imaging flats in g+r
~~MODS imaging bias frames~~
~~MODS Prism flats~~
~~MODS Prism bias frames~~
~~MODS Prism arc lamps (0.3 arcsec slit)~~