

LBT Observing Log for 2024 Jan 13/14 (MST)

C19 Observer: Andrew Cardwell, Ilya Ilyin

Partner Observer(s): Donald Terndrup, Michael Tucker

Telescope Operator: Steve Allanson

[PEPSI Log](#)

Plan:

PEPSI all night!

Begin with OSU_PETS/TOI 1518

Then:

~~2MASS J06024026-1646042 Rowan~~

~~2MASS J05214968+0243217 Rowan~~

~~2MASS J06281415+0607344 Rowan~~

2MASS J06251276+2418106 Rowan

2MASS J06502446+2433129 Rowan

HD51400 06:57:49.99 +16:34:42.8 Phillips

2MASS J06561851+0926267 Rowan

~~2MASS J08301619-0204550 Rowan~~

~~BD+13 2269 10:31:34.1 +12:37:16.7 Phillips~~

~~2MASS J11013117+4751126 Rowan~~

HIP 63506 13:00:45.6 +42 12 44.1 Phillips

LP616-93 12:58:59 +00:11:16 Phillips

LP617-58 13:25:37.9 +02 23 20 Phillips

Observed and completed:

[OSU_PETS: TOI 1518](#)

[OSU_BHBinaries](#)

[05:33 Preset to 2MASS J06024026-1646042.](#)

[06:12 Preset to 2MASS J05214968+0243217.](#)

[06:41 Preset to MASS J06281415+0607344.](#)

[07:47 Preset to BD+13 2269.](#)

[08:55 Preset to 2MASS J11013117+4751126.](#)

[09:20 Preset to HIP 63506](#)

[10:38 Preset to LP616-93. TARGET IS INCOMPLETE.](#)

[Enclosure Closed: Weather Loss](#)

Summary:

Increasing cloud from 05:40 onwards. We were able to complete the transit observation, and get useful data for a number of other programs. Once the clouds thickened (after the transit) we doubled exposure times to meet S/N requirements for projects. Ultimately wind ended our night at 11:06

Issues:

Overview (times are given in UT):

00:39 **Sunset**. Enclosure open.

00:54 We are having odd focus issues with the DX AGw.

01:10 Issue resolved, it appears to have been related to the azcam server.

OSU_PETS: TOI 1518

01:17 Starting observations, TOI 1518. We'll be on this target for several hours. Guiders report 1".

01:31 **12 degree twilight**.

02:00 **18 degree twilight**.

02:24 PSF issues, sending preset to clear it. Range balancing issue. DIMM reports 1.2". Clouds are getting close.



02:47 Seeing is degrading, DIMM reports 1.5".

03:31 DIMM reports 1.2", wind is picking up and may become an issue.

04:49 Winds have leveled off again and are holding around 15 m/s. Guiders are reporting 1.2".

05:22 Coming to the end of this target. DIMM reports 0.9".

05:24 Range balancing issues again. DX lost target.

05:25 Finished here. Steve is restarting the PCS to solve the range balancing issue.

OSU_BHBinaries

05:33 Preset to **2MASS J06024026-1646042**.

2MASS J06024026-1646042 12.91 PFU 300 CD3 00:13:20 CD5 00:13:20

05:37 No GS found on SX, Steve is correcting the pointing.

05:40 Preset back to science target.

05:42 We are looking through some cloud. Exposure time has been doubled to 26m 40s. Once this target is complete we will check the signal to noise and adapt our approach for the following targets.

06:12 Preset to **2MASS J05214968+0243217**.

06:14 Starting science. Seeing is variable, the DIMM currently reports 1.2" but has been up as high as 1.7".

2MASS J05214968+0243217 12.80 PFU 300 CD3 00:13:20 CD5 00:13:20

We will continue doubling the exposure time.

06:41 Preset to **2MASS J06281415+0607344**.

2MASS J06281415+0607344 12.10 PFU 300 CD3 00:08:20 CD5 00:08:20

06:43 No GS found on DX, Steve is correcting the pointing.

06:46 Preset back to science target. Starting science.

~~07:07 Preset to 2MASS J06251276+2418106. Too windy! (NOT OBSERVED!)~~

07:11 **Preset to 2MASS J08301619-0204550.**

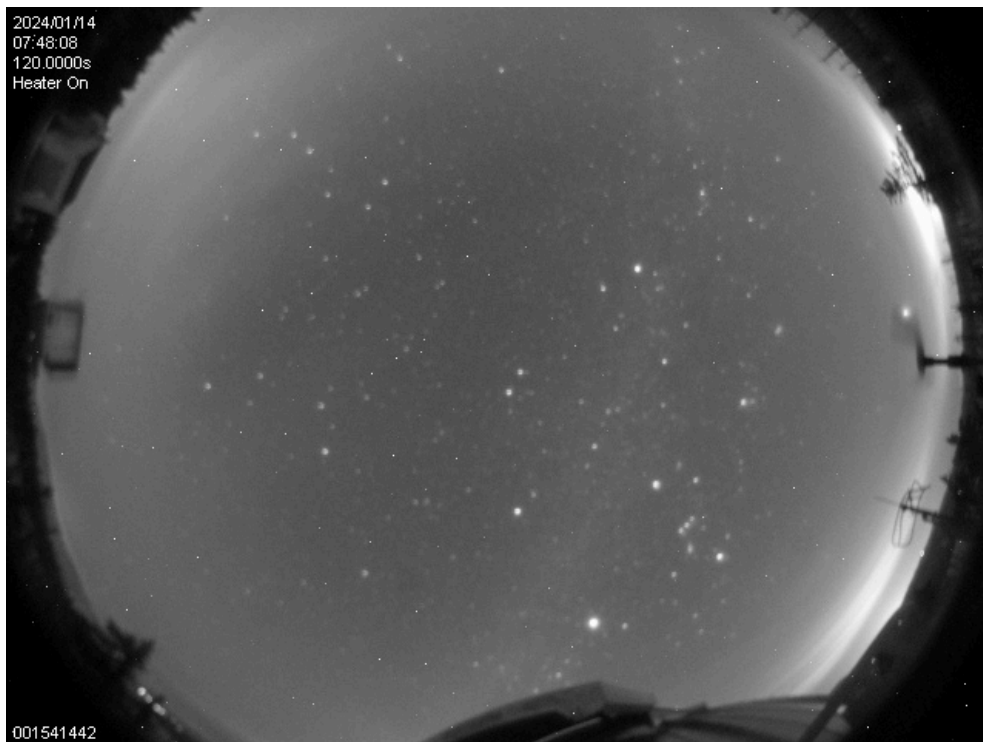
07:13 Steve is restarting PCS again, it continues to cause problems.

07:14 Resending preset.

07:15 Starting science.

07:47 **Preset to BD+13 2269.**

07:52 Starting science. The cloud is visibly thickening on the allsky camera. Seeing has also degraded, guiders report 1.5" or worse.



08:10 Seeing is now over 2" and approaching 3" at times.

08:21 S/N of 117 in the blue, 200 is the goal. Repeating observation.

08:55 **Preset to 2MASS J11013117+4751126.**

08:58 Starting science. Exposure times still doubled. Guiders report around 1".

09:20 **Preset to HIP 63506**

09:21 The PCS needs to be restarted again. The blue exposure time for this target is 48min before any adjustment for clouds. Rather than have an excessively long blue exposure time, and risk losing it all in case of error, we will run this sequence twice.

09:23 Resending preset.

09:26 Starting science.

09:28 Target lost on SX, resending preset.

09:29 Back on target. Aborting exposures and starting again.

10:28 S/N of 100 in the first blue exposure.

10:37 Stacked S/N in the red exceeds 200. Moving on.

10:38 **Preset to LP616-93. TARGET IS INCOMPLETE.**

10:40 DX caught a reflection rather than the target. Steve is adjusting the pointing.

10:41 Sending the preset again. The combined exp time and overheads for CD6 are less than that for CD3. I have slightly increased them to avoid idle time on the red arm. (11m to 14.5 min)

10:43 Starting science. DIMM and guiders report 1".

Enclosure Closed: Weather Loss

11:06 Winds have exceeded our limits, we have to close. Gusts over 22 m/s, including one at 24.7 m/s. Stopping and reading out the exposures. Target is incomplete.

11:17 Taking PEPSI cals. Waking MODS and running simSnap.

11:23 Running MODS biases.

11:47 Running MODS DG 5" slit flats.

12:08 Running MODS DG slitless flats. Wind continues to gust over the limits.

12:38 Running 1x2 binned MODS biases.

12:55 **18 degree twilight.**

12:56 **We have called the night.** There is no sign of the conditions improving.

13:14 Biases are finished. Putting MODS to sleep.

13:25 **12 degree twilight.**

14:17 **Sunrise.**