

# LBT Observing Log for 2024 12 27 UT

Observers: Alex Becker

Partner Observer:

Telescope Operator: David Gonzalez Huerta

## Plan:

## Summary:

PEPSI log:

[https://drive.google.com/file/d/1a-aVmo\\_lp6suZd\\_hNUwNbwlva33MB6pt/view?usp=sharing](https://drive.google.com/file/d/1a-aVmo_lp6suZd_hNUwNbwlva33MB6pt/view?usp=sharing)

## Issues:

## Weather:

Closed for clouds for the first ~2h of the night. Pretty bad seeing during PEPSI until ~5:30 UT. After that seeing was mostly below 1.5" during MODS with occasional short seeing spikes. Closed at the end of the night for the last hour for high winds.

## Overview (times are given in UT):

23:46 modsSimSnap bino  
all good

00:26 Sunset  
Staying closed at sunset due to clouds

01:18 12deg twilight

03:03 We are open!  
1.3C, 19.3% humidity, 7m/s 350deg, cirrus, Seeing 1.8"-2"

# PEPSI

OSU\_BHBinaries (UT 03:14-06:04)

SNR was >50 for all targets in blue and red

2MJ2231 5022 (Gaia 1988197540232303872) (UT 03:13-03:21)

03:13 Preset

Error copointing limit. Ohh, somehow it was set to left side only

03:14 Preset

03:16 Starting science exposure

Hotspot jump on DX and it took me a while to get it back as it kept trying to move it away.

SNR 53/63 good

2MJ2236 5054 (Gaia 1988330649858725120) (UT 03:21-03:25)

03:21 Preset

03:23 Starting science exposure

03:25 PEPSI GUI became unresponsive. Restarted software

Apparently it was an activated caps lock on my keyboard. Ilya knows about it and will fix it.

2MJ2246 7046 (Gaia 2226790700157615872) (UT 03:28-03:34)

03:28 Preset

03:32 Starting exposure

2MJ2246 6015 (Gaia 2008602689332951808) (UT 03:34-03:41)

03:34 Preset

03:37 Starting exposure

2MJ2253 5658 (Gaia 2004074312033531264) (UT 03:41-03:49)

03:41 Preset

03:43 Starting exposure

2MJ0123+6114 (Gaia 510691269572063232) (UT 03:49-03:59)

03:49 Preset ... failed  
Pointing check on target

03:52 Preset

03:54 Starting exposure  
Seeing variable between 1.5 and 2

2MJ0151+6002 (Gaia 508085530090372608) (UT 03:59-04:03)

03:59 Preset  
04:00 Starting exposure

2MJ0203+5810 (Gaia 505438245385791744) (UT 04:03-04:09)

04:03 Preset

04:05 Starting exposure  
Seeing has improved a bit 1.1"-1.3". Lets see if it stays this way

2MJ0220+3431 (Gaia 327644539409124736) (UT 04:09-04:18)

04:09 Preset

Seeing ~2" here...

04:13 Starting exposure

2MJ0018+4622 (Gaia 391950954429459200) (UT 04:18-04:25)

04:18 Preset ... picked up wrong star on DX

04:20 Preset

04:22 Starting exposure

2MJ0021+4715 (Gaia 392456111304070784) (UT 04:25-04:31)

04:25 Preset

04:27 Starting exposure

2MJ0042+0033 (Gaia 2549127209743519872) (UT 04:31-04:42)

04:31 Preset

We had to unwrap the AZ drive

04:39 Starting exposure

Seeing still variable between 1.5 and 2

2MJ0054+5748 (Gaia 424347789670037632) (UT 04:42-04:49)

04:42 Preset

04:46 Starting exposure

2MJ0107+0749 (Gaia 2577853531566949248) (UT 04:49-04:55)

04:49 Preset

04:52 Starting exposure

2MJ0113+5638 (Gaia 413296185980264576) (UT 04:55-05:00)

04:55 Preset

04:58 Starting exposure

2MJ0143+6231 (Gaia 511610392568860928) (UT 05:00-05:07)

05:00 Preset

05:03 Starting exposure

2MJ0147+2303 (Gaia 98494217256437632) (UT 05:07-05:13)

05:07 Preset

05:10 Starting exposure

2MJ0149+2452 (Gaia 291299525421744384) (UT 05:13-05:19)

05:13 Preset

05:15 Starting exposure

Seeing 1.8" again

2MJ0158+3859 (Gaia 343267049155332992) (UT 05:19-05:25)

05:19 Preset

05:22 Starting exposure

2MJ0200+3940 (Gaia 344813172958295424) (UT 05:25-05:29)

05:25 Preset

05:26 Starting exposure

2MJ0215+5931 (Gaia 507297180254126720) (UT 05:29-05:34)

05:29 Preset

05:31 Starting exposure

2MJ0215+5228 (Gaia 455180771469033856) (UT 05:34-05:38)

05:34 Preset

05:36 Starting exposure

2MJ0219+5740 (Gaia 458673511897852544) (UT 05:38-05:42)

05:38 Preset

05:40 Starting exposure

2MJ0222+6124 (Gaia 513522580727032576) (UT 05:42-05:49)

05:42 Preset

05:45 Starting exposure

We still get some seeing bubbles up to 2" but mostly 1.2-1.5

2MJ0224+0108 (Gaia 2501510964621676928) (UT 05:49-05:55)

05:49 Preset

05:53 Starting exposure

2MJ0242-0148 (Gaia 2496061205174013568) (UT 05:55-06:04)

05:55 Preset

05:58 Starting exposure

06:04 Reconfig MODS

## MODS

After reconfig: Light cirrus (improving) and 1.3"-1.5" on the DIMM (variable)

06:23 Pointing and collimation check

OSU\_XMDs\_MODS (UT 06:35-)

Std g191b2b (UT 06:35-06:54)

06:35 Preset for acquisition

MODS1 Offset Command:

offsetxy -0.734 11.517 rel

MODS2 Offset Command:

offsetxy 3.589 8.303 rel

06:40 Starting science script

1"-1.2" on the guider

SBS0926 (UT 06:54-08:15)

Seeing just got really bad >2". Let's hope it is only a short seeing bubble.

06:54 acqBinoMODS SBS0926\_UT0700.acq

MODS1 Offset Command:

offsetxy -0.516 12.562 rel

MODS2 Offset Command:

offsetxy 3.489 9.126 rel

Seeing improved a bit during acquisition. 1.7-1.8

07:07 Starting science script

07:30 Seeing keeps improving. ~1.5" on the guider after first exposure

07:50 Seeing still improving. Now 1.2" on the guider after second exposure

IZw18SE (UT 08:15-09:35)

08:15 acqBinoMODS IZw18SE\_UT0830.acq

MODS1 Offset Command:  
offsetxy -1.159 10.995 rel

MODS2 Offset Command:  
offsetxy 2.550 8.357 rel

08:27 execBinoMODS IZw18SE.obs

Seeing now 1"-1.2". DX is always 0.1-0.2 worse than SX.

08:57 Seeing fairly stable. Still 1"-1.2" on the guiders

SBS0946 (UT 09:35-10:56)

09:35 acqBinoMODS SBS0946\_UT0930.acq

MODS1 Offset Command:  
offsetxy -0.982 10.862 rel  
MODS1 manual adjustment deltax -0.15"

MODS2 Offset Command:  
offsetxy 3.310 7.692 rel

Seeing ~1.2"

09:48 execBinoMODS SBS0946.obs

SBS0948 (UT 10:56-12:15)

Seeing 1.2-1.3, still some light cirrus

10:56 acqBinoMODS SBS0948\_UT1100.acq

MODS1 Offset Command:

offsetxy -0.740 12.131 rel

MODS2 Offset Command:

offsetxy 3.199 9.037 rel

11:08 execBinoMODS SBS0948.obs

Seeing 1.0-1.1

11:30 Winds are picking up and seeing just gotten worse. Up to 2"

Most of it was during the readout and at the start of the next exposure it was back to <1.5"

12:15 last exposure done and wind just went above the limits. We have to close.

12:15 Closing

## Closed due to high winds (UT 12:15-)

Reconfig to PEPSI in case of a quick miracle

But clouds are also coming in from the NW.

12:26 Turning LBCs off and putting MODS to bed.

13:00 We are done for tonight.

13:22 12deg twilight