

# LBT Observing Log: 2025 Dec 20 UT

Observers: Alex Becker

Partner Observer: Michael Tucker

Telescope Operator: Josh Williams

## Plan:

Start with LUCI AO if good seeing, then PEPSI

Maybe switch to LBC around 6-7UT

Likely end with LUCI

PEPSI targets

~~OSU\_PASTA/TOI5967 (0.55hr, start before UT2:30)~~

~~OSU\_BHBinaries/2MASSJ23591989+0607195 (0.17hr)~~

~~OSU\_BHBinaries/2MASSJ23434829+2706302 (0.31hr)~~

~~OSU\_BHBinaries/2MASSJ23391679-1404375 (0.23hr) — too south?~~

~~OSU\_BHBinaries/2MASSJ23005913-0631412 (0.51hr) — wind?~~

~~OSU\_BHBinaries/2MASSJ00435538+3505407 (0.28hr)~~

~~OSU\_MWAbundDisp/2MJ0544+4551 (0.2hr)~~

~~UVa\_Multistar/TIC392229331EB~~

~~UVa\_Multistar/HIP18902RV~~

~~UVa\_Multistar/TIC52856877EB (north-west)~~

~~UVa\_Multistar/TIC307119043EB (north-west)~~

~~UVa\_Multistar/HIP1127RV (south-west) - retry another night, into wind~~

~~OSU\_BHBinaries/2MASSJ06464003+0109157 (Gaia 3125722720945464576)~~

~~UVa\_Multistar/TIC367448265EB~~

~~UVa\_Multistar/HIP26981RV - Never above horizon (Dec -39)~~

~~OSU\_MWAbundDisp/2MJ0735+2716 (0.24hr)~~

~~OSU\_MWAbundDisp/2MJ0740+3715 (0.28hr)~~

~~OSU\_MWAbundDisp/2MJ0717-0150 (0.2hr) — south~~

~~OSU\_MWAbundDisp/2MJ0757+1950 (0.28hr)~~

~~OSU\_MWAbundDisp/2MJ0757+3236 (0.2hr)~~

~~OSU\_MWAbundDisp/2MJ0746+2714 (0.2hr)~~

~~OSU\_MWAbundDisp/2MJ0847+2628 (0.2hr)~~

~~UVa\_Multistar/HIP38979Tel~~

~~OSU\_BHBinaries/3089372385493635584 (2MASSJ07534797+0408447 - 0.23hr)~~

~~OSU\_BHBinaries/2999450613724744832 (2MASSJ06231006-1357157 - 0.26hr)~~

OSU\_BHBinaries/2MASSJ08073604+6945544 (0.17hr)

~~OSU\_BHBinaries/2MASSJ08270090+2157246 (0.14hr)~~

~~OSU\_BHBinaries/2MASSJ08301619-0204550 (0.28hr)~~

~~OSU\_PASTA/TIC71582158 (0.14hr)~~

OSU\_PASTA/TIC71582156 (0.23hr) - missing csv

OSU\_PASTA/TIC71582157 (0.15hr) - missing csv

~~OSU\_PASTA/TOI1777 (0.3hr)~~

~~ND\_CEMPG4/Gaia745047225218663296 (2.2hr)~~

~~OSU\_SCAT-PEPSI/2025adje (2.2hr, rises right before 10:30UT, faint)~~

~~ND\_CEMPG4/Gaia854506219104332928 (0.54hr)~~

## Summary:

PEPSI log:

<https://drive.google.com/file/d/1PyATIndeY6ILTf2zS-gz0OeN44zIhiaw/view?usp=sharing>

## Issues:

LUCI DX: Issue with AO camera, currently (at the start of the night) not working. Doug was trying to solve the issue during twilight, but has not been successful.

## Weather:

## Overview:

22:43 LUCI1/2 init all

23:04 LBCs turned on

23:11 LBC 2bias bino checkout

Calib

LUCI

22:53 AFGL437 darks

23:10 AFGL437 BrG/H2 img flat

23:42 AFGL437 Ks/KS img flat

LBC

23:15 10 bias bino

23:53 10 bias bino

LBC

00:25 Opening

Skyflat

We have a few clouds at the horizon, but it seems to be clear otherwise (for now)

00:33 Preset to 00:24:00 +08:05:00

SY PA0

00:39 Starting

SY PA180

00:43 Starting

gl PA180

00:54 Starting

gl PA0

01:01 Starting

VI PA0

01:08 Starting

01:16 12 deg twilight, switching over to PEPSI

PEPSI

OSU\_PASTA

Seeing 1.5-2

TOI5967

01:53 Preset

01:55 Starting exposure

OSU\_BHBinaries

2MASSJ23591989+0607195

02:20 Preset

Missed it on SX, acquire preset

02:23 Starting exposure

2MASSJ23434829+2706302

02:27 Preset

02:31 Starting exposure

2MASSJ23391679-1404375

02:43 Preset

02:47 Starting exposure

2MASSJ23005913-0631412

02:55 Preset

02:59 Starting exposure

03:16 DX AdSec RIP. High wind

SNR 94/162 after 17 minutes. Good enough

2MASSJ00435538+3505407

03:25 Preset

03:30 Starting exposure

OSU\_MWAbundDisp

2MJ0544+4551

03:41 Preset

03:44 Starting exposure

While we were searching for new targets, I accidentally broke the BHBinary OB which caused the PEPSI interface to crash. Renamed OB so I can start it again. Will recreate it one I have time

UVa\_Multistar

TIC392229331EB

04:06 Preset

04:09 Starting exposure

HIP18902RV

04:14 Preset

04:18 Starting exposure

TIC52856877EB

04:20 Preset

04:24 Starting exposure

TIC307119043EB

04:30 Preset

04:32 Starting exposure

OSU\_BHBinaries

2MASSJ06464003+0109157 (Gaia 3125722720945464576)

04:37 Preset

Missed it on DX. Acq preset

04:44 Starting exposure

UVa\_Multistar

TIC367448265EB

04:58 Preset

05:01 Starting exposure

HIP26981RV

05:05 Below horizon.

OSU\_MWAbundDisp

2MJ0735+2716 (0.24hr)

05:07 Preset

05:10 Starting exposure

2MJ0740+3715

05:19 Preset

05:20 Starting exposure

2MJ0717-0150

05:31 Preset

05:34 Starting exposure

2MJ0757+3236

05:40 Preset

05:43 Starting exposure

2MJ0757+1950

05:48 Preset

05:51 Starting exposure

2MJ0746+2714

06:00 Preset

06:03 Starting exposure

UVa\_Multistar

HIP38979Tel

06:09 Preset

Missed the target on SX. Acq preset

06:14 Starting exposure

OSU\_MWAbundDisp

2MJ0847+2628

06:17 Preset

06:19 Starting exposure

OSU\_BHBinaries

3089372385493635584 (2MASSJ07534797+0408447 - 0.23hr)

06:25 Preset

06:28 Starting exposure

2MASSJ06231006-1357157

06:35 Preset

06:50 We are having an issue with a stuck preset again. Josh is working on it and I have fixed the BHBinaries OB.

06:58 I might have fixed the preset (for now). We will know when we go to the next target

07:00 Starting exposure

07:09 SNR 63/66; taking another exposure

2MASSJ08270090+2157246

07:19 Preset  
WFS on DX hung.

07:26 Sending new preset for DX

07:28 Starting exposure  
Seeing 3.5"

2MASSJ08073604+6945544

07:30 Preset

07:34 Starting exposure

2MASSJ08301619-0204550

07:38 Preset

07:41 Starting exposure

OSU\_PASTA

TIC71582158

07:52 Preset

07:56 Starting exposure

TOI 1777

08:00 Preset

08:02 Starting exposure

ND\_CEMPG4

Gaia745047225218663296 (2.2hr)

01:11 Preset

01:16 Starting exposure

Lost the target after first exposure. Sending a mono preset to the right side only. Recovered after < 1 min

08:52 Switching from BS1 to BS2 so we get some more light on the guider to compensate for the atrocious seeing (variable up to 3").

OSU\_SCAT-PEPSI

2025adje

(2.2hr, rises right before 10:30UT, faint)

10:18 Preset  
Co-pointing error...  
Restart PCS

10:23 Preset  
DIMM 5" seeing, GCS was also up there, but also not fully collimated

10:30 We lost the target on DX. New preset caused co-pointing limit error.  
New bino preset

faint target, with bad seeing not very helpful

10:32 Switching to BS5 for CD 3/6.

10:34 Starting exposure, not waiting for WFS

11:21 Switching to BS4 for CD 2/4

11:30 Hotspot on DX moved, recovering with new preset (mono)

12:07 Switching to BS4 for CD 1/6

ND\_CEMPG4

Gaia854506219104332928 (0.54hr)

12:52 Preset

Target not found on DX, acq preset

12:59 Starting exposure

Calib

OSU\_SCAT-LUCI

bino G210 H flat

bino G210 J flat

bino G210 K flat