

# Night Log for UT 20230430

## PEPSI Log

Partner observers:

Donald Terndrup, OSU

Marshall Johnson, OSU

Service Observer: Andrew Cardwell

Telescope Operator: Josh Williams

## Plan:

- Will start with LUCI until PEPSI targets have risen sufficiently.
  - OSU\_XMDs\_LUCI: Telluric star HIP53735, then target SBS1211
  - SBS1249
- Reconfigure to PEPSI and attempt stars in the ND\_gccluster program.
  - Obtained a spectrum of GC-1
- KELT-20 time-critical PEPSI observation

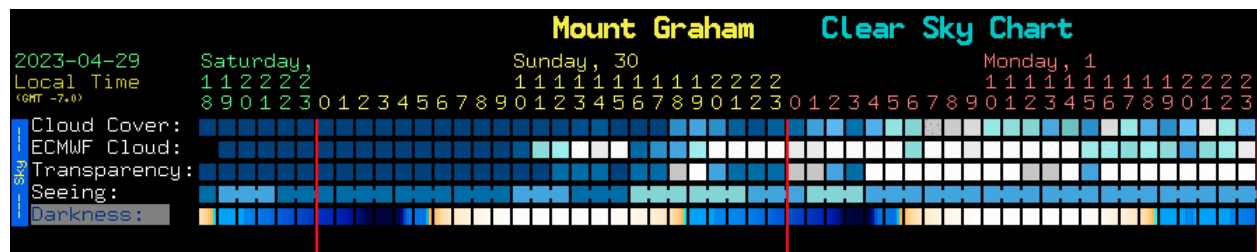
## Summary:

Completed LUCI and PEPSI observations as planned. Subarcsecond seeing and transparency all night.

## Issues:

Forecast from NWS: Clear, with a low around 45. West northwest wind 8 to 10 mph.

It is going to get worse!



## Overview:

All times are in UT

01:12 Bringing up LUCI. init all on both sides.

01:17 Taking pending LUCI darks for UVA\_BCD\_LUCI.

02:05 Sunset

02:12 Opening now. Darks completed with the exception of the [4x15s] ones.

02:28 Pointing has been corrected, collimating.

02:35 The LUCI RTD is very unresponsive, other GUIs seem fine.

02:38 Field stops aligned. Preset to our first target, **HIP53735**, telluric for **SBS1211**.  
OSU\_XMDs\_LUCI.

02:40 No GS found on SX. LUCI2 FW2 error.

02:46 Josh has made a pointing correction, LUCI2 FW2 back in action. After a number of failed inits from the FW2 GUI I moved it +970 steps and made another init. That worked.

02:51 Acquisition confirmed, starting science. Luci[1|2].20230430.0030-0031.

02:53 Preset to **SBS1211**. Acquisition begins with luci[1|2].0032. Guiders are reporting 0.8".

02:57 12 degree twilight.

03:05 Taking a longer exposure, I'm not 100% convinced on LUCI2 and it was giving us some acquisition issues last night.

03:10 OK, I'm as sure as I can be. Starting science. luci[1|2].0037-0042.

03:30 18 degree twilight.

03:34 Clear emission lines in the first pair subtracted spectra. DIMM reports 1", guiders 0.8".  
Sky is clear.

04:00 0.95" from the DIMM, 0.6" from the guiders.

04:15 Preset to **SBS1249**. Acquisition begins with luci[1|2].0043.

04:27 Acquisition confirmed, starting science. DIMM reports 1", guiders 0.6".

04:27 Error on LUCI2 FW2 again, moving from J to zJspec.

04:31 Actually starting science, FW2 issue resolved for now. Luci[1|2].0047-0052. IT7425 Updated.

05:12 Nice emission lines in the spectra. DIMM reports 0.9", guiders 0.55".

05:36 Target completed, LUCI safed. **Reconfiguring for PEPSI bino.**

06:18 Preset to **2MASS J1518551+0207201**. Initial pointing after reconfiguration was very poor, it took a lot of spiraling.

07:18 Preset to **KELT-20**. We will stay on this target for the rest of the night. Conditions remain good, clear and good seeing.

08:03 DIMM reports 0.8".

08:49 DIMM reports 0.7".

10:13 DIMM reports 0.6" seeing. The satellite animation shows clouds coming in from the south, but it hasn't hit us yet.

11:04 18 degree twilight.

11:16 0.7" from the DIMM.

11:36 12 degree twilight.

11:50 0.7" from the DIMM.

12:09 Stopping now, it's too bright to continue. Closing the enclosure. No calibrations needed tonight.

12:13 MOS error on LUCI1 switching from the 1" slit to the blind mask. (In prep for darks tomorrow afternoon.)

12:17 The MOS switchbox shows all masks in place. It should be safe to init. That appears to have recovered the system.

12:22 Blind mask in place.

12:29 Sunrise.