OSURC Nightlog 20220502 UT

Observer*: Olga Kuhn
Lead Partner Observer*: Don Terndrup (OSU)
Other Partner Observers*: Noah Rogers (UM)
Special Assistants*:
AO Operator*:
Telescope Operator: David Gonzalez Huerta
*** = from home**

Plan:

LBC. All programs require seeing < 1.1”

Twilight flats:
need Uspec, B- and V-Bessel on LBCB and R-Bessel on LBCR. ND_oldsn also uses I-Bessel on LBCR.

Closed most of the night for high winds. Managed to observe one LUCI target at the end of the night: OSU_XMDs_LUCI/LEDA101572.

Summary:

Unable to open due to high winds most of the night. We were only able to open at 09:30, but because the ambient temperature had dropped from about 6 to 2 deg and the mirrors were still around 7 deg at the time of opening, we switched from LBC to LUCI since it would be very difficult to collimate the LBCs with such a big temperature differential.
We could only only 4 of 6 spectra of the OSU_XMDs_LUCI target, LEDA 101572, before onset of 12-degree twilight. The average FWHM on the guiders was ~1.7"/1.4" with some excursions to around 3".

Issues:

None other than the conditions.

Weather:

High winds most of the night.

Preparations:

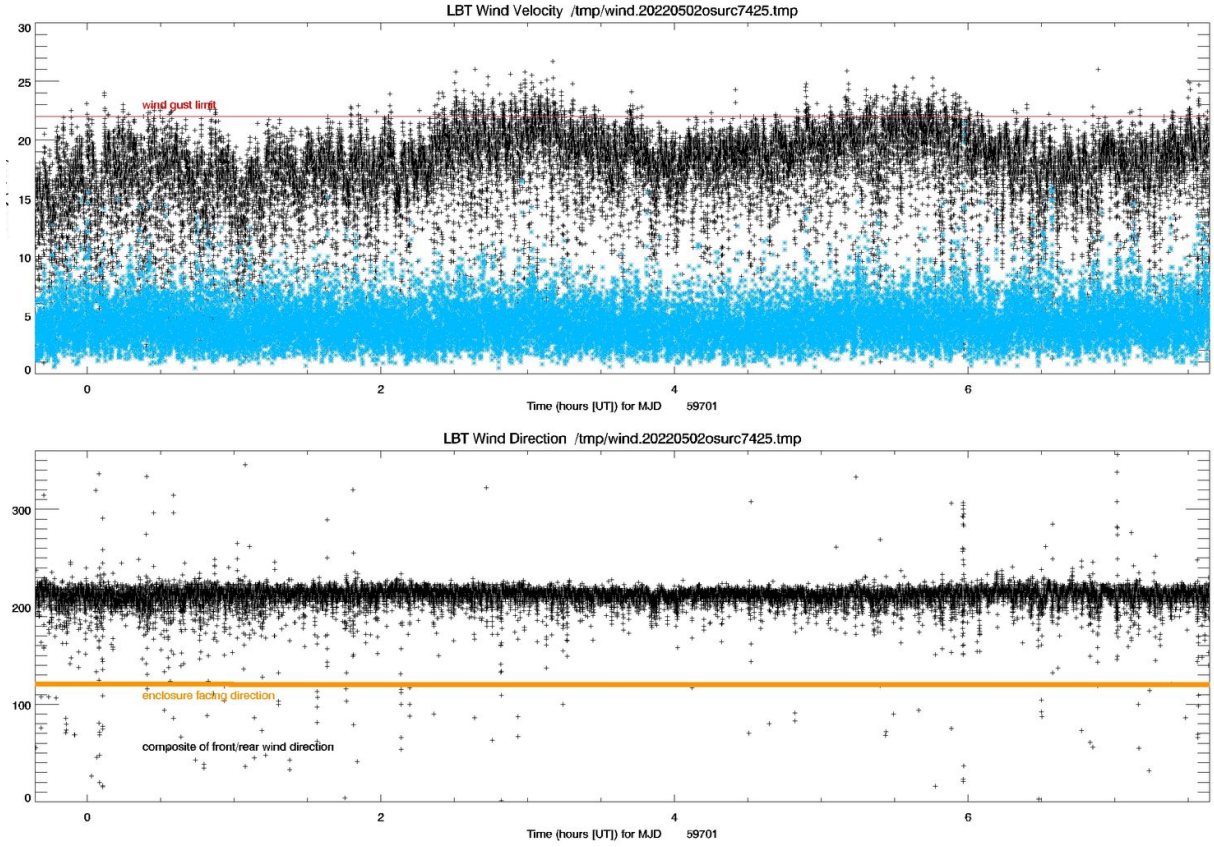
I copied the last good TMS reference (from 20220425) to /tmp (telescope@robs) so that it may be used to help the initial collimation.
Before opening, ran the TMS active loop to set M1 using the old reference.

Overview (times are given in UT):

03:04 We remain closed due to high winds. Gusts are >22 m/s.

03:14 Starting a set of 25 biases while waiting, and repeating it.

06:44 We're still closed, watching the wind speeds. They are still <~20 m/s with a gust above 22 m/s within the past 15 min,



08:56 The wind speeds are about the lowest they've been all night. The ambient temperature has dropped to 2 C.

09:12 The primaries are at 7 C.

09:28 Opening and reconfiguring to LUCI

09:55 Going to check pointing near the first target, the telluric for LEDA. The average FWHM ~1.3" or so -

OSU_XMDs_LUCI/LEDA101572

10:15 Slewing to telluric. Seeing is very variable - it just bounced up to 3". It's worse on SX than DX - dome seeing? We're into the NW and wind is from SW.

L1: 6, 7 → -10.3464, -0.2003" to put star at 1035.62, 1027.54 → 8, looks fine
L2: 5, 6 → -8.5014", -0.3403" to put star at 1034.45, 1040.03 → 7, also fine

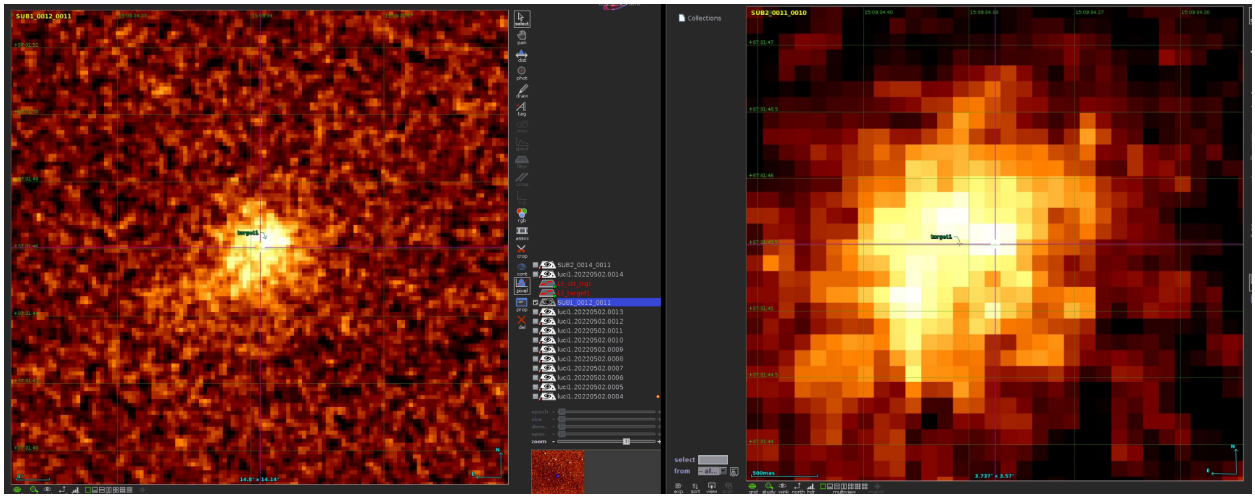
1.97, 1.3" seeing

10:24 Starting the telluric spectra

UT	L1	L2	airmass	seeing
10:24	9-10	8-9	1.28	1.97/1.3"

10:29 Acquiring LEDA
avg FWHM 1.8" SX and 1.3" DX

L1 11, 12 & 13(slit) → 0.3581, 3.8968 to put at 1034.51 1067.89 → 14
L2 10, 11 & 12(slit) → 2.3467, 5.5692 to put at 1033.67, 1081.04.24 → 13 did we get the core? the positive image (11) is much more diffuse than the negative one - the seeing may have blown up during it(- not much, 1.1" on the negative and 1.4" on the positive). We offset by 2 pix dx = -0.24" to put the brighter spot in the field image under the slit → 14. Now it looks like there is something at Y=1081.

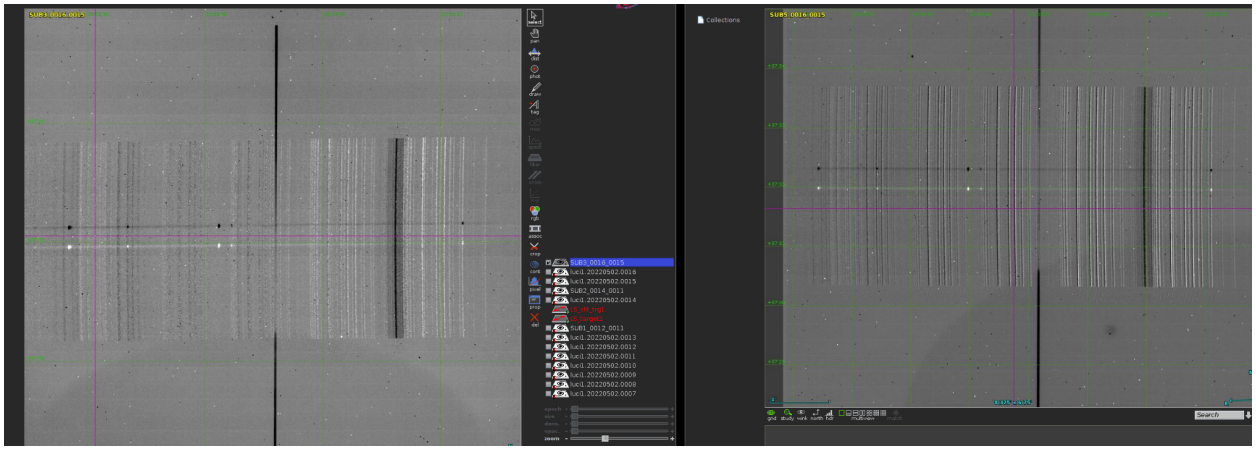


We'll start taking spectra, although we won't be able to finish this before 12-deg twilight. Might be enough for a first look at this object in the IR. We will *not* push the DONE button on this object.

10:55 Starting the spectroscopy. Avg seeing is 1.7/1.4" on SX/DX.

UT	L1	L2	seeing	airmass
10:55	15-18	15-18	1.7/1.4"	1.27-1.4

We see HeI 10830 in the first spectra. The first difference spectra from LUCI1 (left) and LUCI2 (right) are below.



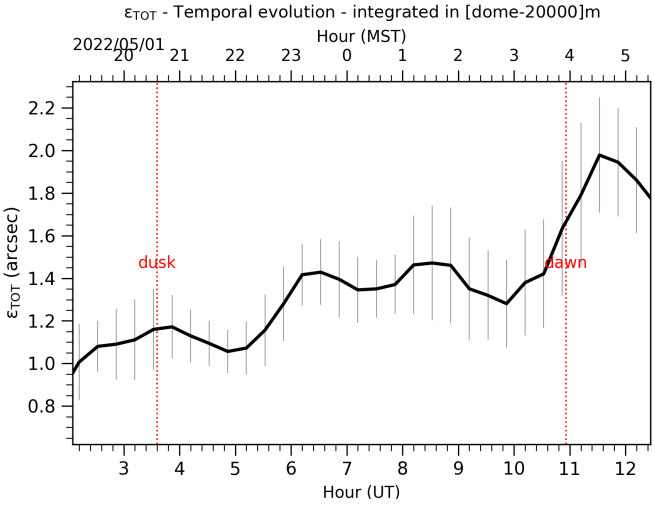
04:36 Ended the observation, after getting 4 of the 6 exposures.

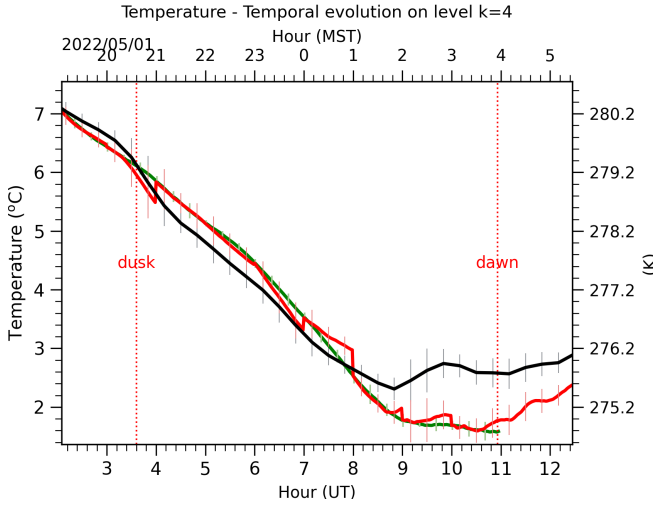
Closed Dome Calibrations

		L1	L2
G200zJ 1" slit	flats lamp off lamp on	19-23 24-28	19-23 24-28
	arcs 60s lamp off Ne 5s lamp off Ar	29 & 30 31 & 32 33 & 34 35 & 36	29 & 30 31 & 32 33 & 34 35 & 36

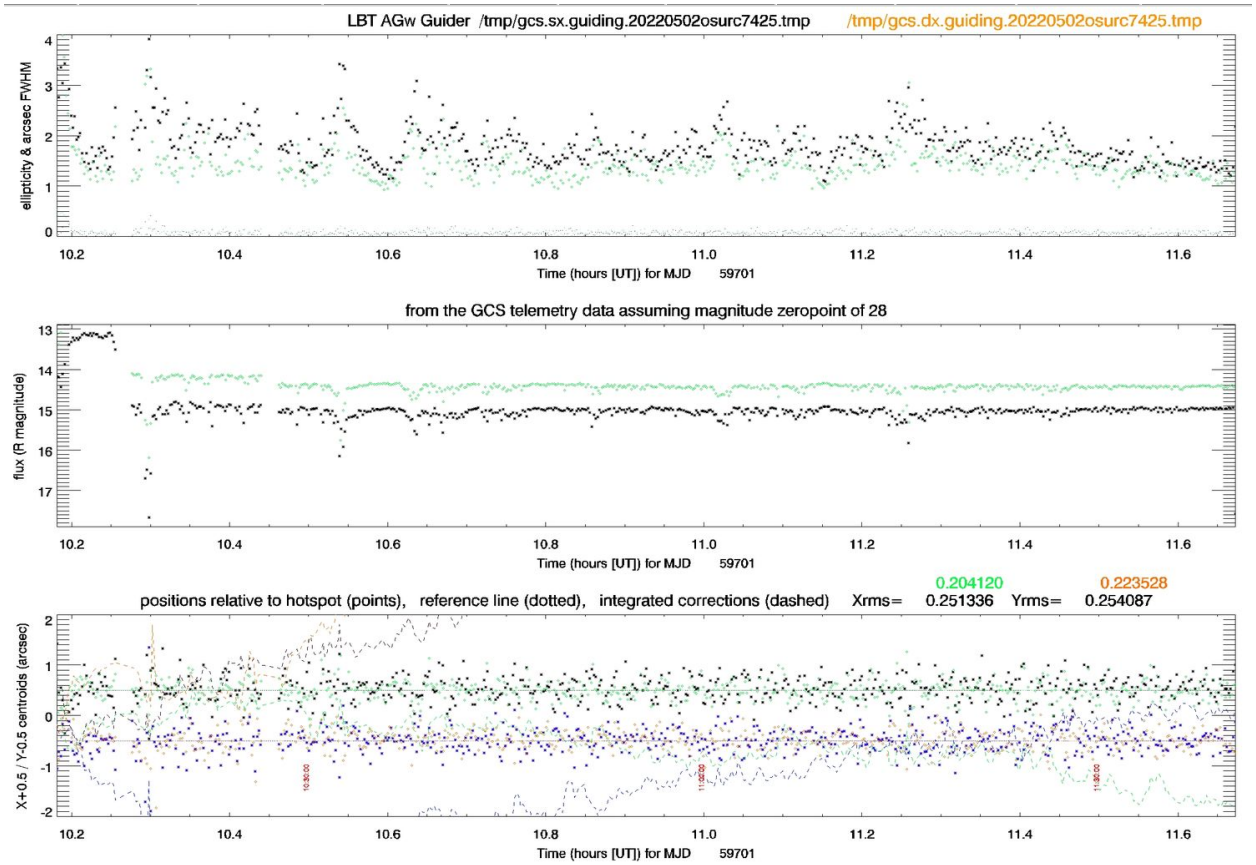
*We'll have to get the LUCI darks in the afternoon or later.

ALTA predictions





LBTplot


LBT AGw Guider /tmp/gcs.sx.guiding.20220502osurc7425.tmp
/tmp/gcs.dx.guiding.20220502osurc7425.tmp
ellipticity & arcsec FWHM
Time (hours [UT]) for MJD 59701
from the GCS telemetry data assuming magnitude zeropoint of 28
flux (R magnitude)
Time (hours [UT]) for MJD 59701
positions relative to hotspot (points), reference line (dotted), integrated corrections (dashed)
0.204120
Xrms= 0.251336
0.223528
Yrms= 0.254087
X+0.5 / Y-0.5 centroids (arcsec)
Time (hours [UT]) for MJD 59701