LBT Observing Log for 2024 03 12

Observers: Jason Chu, Olga Kuhn, Kylee Carden
Partner Observer: Peter Garnavich (ND)
Telescope Operator: Josh Williams

Plan:

Start with LBC for OSU_monitor, then PEPSI for the transit observation and TCrB.

Summary:

Overall a good night, starting with OSU monitor program then switched to PEPSI for the PETS program, UM_TCrb, one ND_M3Cluster target and a few BHBinaries targets. Seeing was mostly <1”, with some cirrus passing overhead during the first part of the night, guiders showed clearer conditions after 09 UT.

PEPSI Log

Issues:

Weather:

Seeing was mostly <1”, with some cirrus passing overhead first part, clearer after 9UT.

Overview (times are given in UT):

Skyflats

01:54 Skyflats: Uspec & R-BESSEL (got 5 good ones at Us & R)

02:00 Skyflats: B-BESSEL & R-BESSEL (3 B-Bessel flats with 11-17K counts and a few with counts)

02:06 Skyflats: V-BESSEL & R-BESSEL (~3 V-Bessel flats with 7-10K counts; red have out-of-focus stars, earlier R ones are better).

OSU_monitor/NGC 2403

02:15 Preset

02:18 **12-deg**

02:30 `dohybrid --bypasstms`
Converged - estimated seeing 1.8". Josh is trying to get the DIMM to work.

02:40 copointing - LBCB IQ 4pix, but LBCR IQ 5.3 pix.

02:47 Starting science - images have ~4.5 pix (1") B and 4.9 pix (1.1") R.

OSU_monitor/I 2574

02:57 Presetting to I2574focusnew.xml

The DIMM is still not working - Josh says it may be stuck on a limit.

03:05 Starting science. (This field is close enough to the first and we're at elev 45deg. We don't need to copoint again.)
R 5.33 (1.2")
B 4.97 (1.1")

OSU_monitor/NGC 3489

03:28 Collimated

03:28 Copointing

03:31 Starting science

03:40 B 7.4 (1.64") but R 4.1 (0.9") after 2 exp each. Going to recollimate.

03:43 recollimating. There is only 1 star being selected for focus/collimation. If the field center were just a bit further to the East, then 2 more stars might be available. Field should be reselected to get several stars with 15 < R < 16.5.

03:49 Starting science. B 4.92pix (1.1") and R 4.7 (1.1"). There's some elongation but FWHM has improved.

CV: the plot is available - just no DIMM…
http://people.lbto.org/~cveillet/Chris/LBC_Current_Plot.png (included below)

04:07 Some clouds visible on all-sky camera.
04:27 Finished - Looks like clouds held off. B 3.38pix (0.76”) and R 3.58pix (0.8”)

Reconfiguring to PEPSI (04:27-05:00)

OSU_PETS/TOI 1789

05:00 starting acquisition, we had to spiral to find the star on right side
05:12 Started series of observations. D200 CD3 & CD5 6:40 per integration
06:05 Flux dropped - some cirrus. SNR in red dropped from 350 → 200
06:33 Cirrus continues - photon counter (below):

08:13 - official end of transit + post-transit baseline. The cirrus caused a steady drop in transmission throughout the transit, though at the end it looked like the flux was going back up

OSU_BHBinaries/2MASS J10460599+1002584

8:26 slewing to target
8:30 taking data
SNR ~ 97/136 in CD3/5 desired SNR 150. Repeating.

OSU_BHBinaries/2MASS J12503035+6933196

9:05 slewing to target
9:14 taking data

UM_TCrb/T Crb

9:21 slewing to target
9:27 taking data
CD1/4 – SNR 52/286 - no strong emission lines
CD2/5 – SNR 126/441 - H_alpha, several bands at the red end of CD5
CD3/6 – SNR 235/862

UM_TCrb/HR 5501

10:15 slewing to flux standard for T Crb
10:18 taking data

ND_M3Cluster/GC1(=NGC 5272 139)

10:43 slewing to target
10:49 taking data, seeing is currently 0.65”
11:36 seeing was about 0.8”
SNR CD2/4 ~ 80/133. CD2 spectrum has some scattered light or amplifier glow in the corners, particularly lower left.

OSU_BHBinaries/2MASSJ15562887+1218157

11:36 slewing to target
11:40 taking data, seeing is about 0.75” SNR=213/229 for B/R

OSU_BHBinaries/2MASSJ17504318+0919358

11:47 slewing to target
11:50 taking data, seeing is about 1”
SNR CD3/5 ~ 118/155

OSU_BHBinaries/2MASSJ17551730+0611367

12:04 slewing to target, pointing check was needed
12:11 taking data
12:15 aborted exposure, guiding on wrong star - on SX GCS, red cross was down at lower left, on back-reflected image & green cross & circle on right edge. There was a large hotspot adj:
12/03/2024 05:11:36 iif sx: hotspot 114.7 38.1
resent SX-side preset to recover.
12:16 taking data, seeing is about 0.9”
SNR CD3/5 ~ 127/199

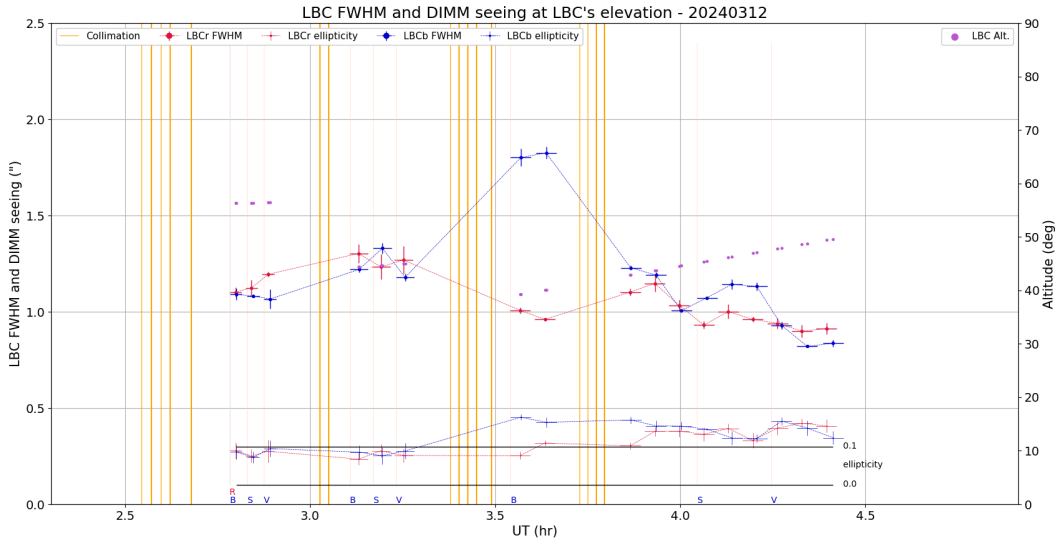
OSU_BHBinaries/2MASSJ17063618+0039075

12:32 slewing to target
12:33 taking data, SNR CD3/5=297/418

12:38 closing up and taking calibrations
12:40 12-deg twilight

IQ plots

LBC IQ



LBC IQ (*http://people.lbto.org/~cveillet/Chris/LBC_Current_Plot.png*)

LBTplot - guide star FWHM & flux