LBT Observing Log for 2024 12 26 UT

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Partner Observer:
Telescope Operator: David Gonzalez Huerta

Plan:

Summary:

http://people.lbto.org/~cveillet/dms/lbcIQ_raw_20241226.png

PEPSI Log:
https://drive.google.com/file/d/12xHf_aG-dd8vZeq-pYzL0HaCNjRDVyu9/view?usp=sharing

Overview (times are given in UT):

- PEPSI
  - ND_RPED (UT 01:29-03:39)
    - Gaia DR3 153236…61664 (UT 01:29-03:39)
  - OSU_BHBinaries2 (UT 03:39-05:11)
    - 2MJ0049+0959 (Gaia 2582136541674074880) (UT 03:39-03:54)
    - 2MJ0045+0147 (Gaia 2549518081831888000) (UT 03:54-04:19)
    - 2MJ0021+7341 (Gaia 537833573089452416) (UT 04:19-04:33)
    - 2MJ0032+6458 (Gaia 527155253604491392) (UT 04:33-04:43)
    - 2MJ0059+6100 (Gaia 426648861352371328) (UT 04:43-04:50)
    - 2MJ0103+6656 (Gaia 526430915958431616) (UT 04:50-04:55)
    - 2MJ0305+5851 (4612512825466344960) (UT 04:55-05:11)
  - 05:11 Reconfig LBC (UT 05:11-05:52)
- LBC
  - OSU_Monitor (UT 05:52-11:22)
    - N672 (UT 05:52-06:46)
    - N925 (UT 06:46-07:20)
    - N3077 (UT 07:20-07:32)
    - N2903 (UT 07:32-08:18)
    - N3344 (UT 08:18-08:59)
    - N4449 (UT 08:59-09:18)
    - N3627 (UT 09:18-09:59)
    - N4605 (UT 09:59-10:55)

- M101 (UT 10:55-11:21)
- Reconfig PEPSI (UT 11:22-12:15)
- PEPSI (UT 12:15-13:22)
  - OSU_BHB
    - 2MJ1316+5315 (Gaia 1563195407995534592) (UT 12:15-12:43)
    - 2MJ1309+2330 (Gaia 3944854382508327936) (UT 12:43-12:57)
    - 2MJ0758+2601 (Gaia 682109633457430016) (UT 12:57-13:14)
    - 2MJ0759+5039 (Gaia 935731163137564416) (UT 13:14-13:22)

Issues:

Weather:

Sunset: Humidity around 40%, clear, -4.1C ambient -3.2C chamber M1 temp: -0.8C, 10m/s 210deg, Seeing 3.5”
These weather conditions are good for nothing

Overview (times are given in UT):

23:41 LBCs turned on, MODS awake

23:49 MODS simSnap bino
all good

23:52 LBC 2bias_bino_checkout
all good

00:36 We are open

00:56 Pointing and collimation check

01:18 12deg twilight

PEPSI

ND_RPED (UT 01:29-03:39)

This target will be above 30deg right at twilight

Gaia DR3 153236…61664 (UT 01:29-03:39)

SNR CD1: 50/50, CD4: 160/178
SNR CD2 78, CD5 282

01:29 Preset
Not found

01:30 Sending preset in acquire mode for DX

01:32 Preset

01:37 Starting science exposure
Seeing 3.5” on the guider

01:59 I will consider this observation as weather loss due to the ridiculous seeing.

02:10 SNR CD1: 50, CD4: 160
We can continue with that

03:09 Seeingh has improved a bit. Now 2.2” on the guider.
SNR CD2 78, CD5 282

OSU_BHBinaries2 (UT 03:39-05:11)

Seeing is still ~2” and we have some thin cirrus

2MJ0049+0959 (Gaia 2582136541674074880) (UT 03:39-03:54)

SNR: CD2 76, CD4 107

03:39 Preset

03:43 Starting science exposure
Seeing ~1.8”

2MJ0045+0147 (Gaia 2549518081831888000) (UT 03:54-04:19)

SNR: CD2 62 CD4 84

03:54 Preset

03:58 Starting science exposure
Seeing 2”

04:10 Hotspot jump on DX -23 73
Fixed by 04:13

2MJ0021+7341 (Gaia 537833573089452416) (UT 04:19-04:33)

SNR: CD3 63 CD5 90
04:19 Preset

04:24 Starting science exposure
Seeing 1.7” but variable

04:30 Another hotspot jump 37.2 39.2
Adding another minute to compensate

2MJ0032+6458 (Gaia 527155253604491392) (UT 04:33-04:43)

04:33 Preset

04:36 Starting science exposure
Seeing ~1.4

2MJ0059+6100 (Gaia 426648861352371328) (UT 04:43-04:50)

Seeing is again 2.4 on the DIMM

04:43 Preset

04:46 Starting science exposure
Seeing 1.5 on the guiders

2MJ0103+6656 (Gaia 526430915958431616) (UT 04:50-04:55)

04:50 Preset
04:52 Starting science exposure
Seeing 1.2”, still some thin cirrus but it seems like it is slowly getting less

2MJ0305+5851 (461251282546634496) (UT 04:55-05:11)

04:55 Preset
GS not found. Acquire preset on DX

04:57 New preset

05:00 Starting science exposure
Seeing 1.2”

05:11 Reconfig LBC (UT 05:11-05:52)

LBC

Seeing is good enough, but MODS targets are not up yet. Therefore switching to LBCs

OSU_Monitor (UT 05:52-11:22)

N672 (UT 05:52-06:46)

05:52 Preset to focus field

05:55 dohybrid

06:03 Setting tms reference offset
Last reference is 3 weeks old

06:04 starting tms loop

06:06 lbcrangebal
IQ ~1.2”

06:10 Starting science script
DIMM 1.3”, IQ ~1.4”

Seeing has gotten worse during reconfig. But IQ is still within spec. Will continue

N925 (UT 06:46-07:20)

06:46 Preset to copointing field to recollimate

06:48 dofpia

06:55 Starting science script
IQ ~1”

N3077 (UT 07:20-07:32)

07:20 Preset
IQ ~1”

N2903 (UT 07:32-08:18)

07:32 Preset
IQ ~1”
We are getting some more cirrus again. Scattered clouds visible on the satellite image, but still far away

N3344 (UT 08:18-08:59)

08:18 Preset to collimation field as IQ in red was worse than in blue for the last two exposures

08:20 dofpia

08:26 Preset for science script
Shoot, I forgot to wait for the reference offset. Setting it manually

08:28 Starting tms loop again

08:29 Starting science script
Seeing in this part of the sky is a bit worse but still ok.. About 1.2”

N4449 (UT 08:59-09:18)

Clouds to the north are dissolving as they come closer. We will stay with LBCs for as long as possible. DIMM is now showing 0.5”, but just at a very low elevation

08:59 Preset
We have an image jump on lbcr..090125. I will retake one exposure
IQ ~1.2”

N3627 (UT 09:18-09:59)

09:18 Preset
IQ ~1”

N4605 (UT 09:59-10:55)

09:59 Preset

IQ much worse than DIMM on the second image. Recollimate on focus field for this target to see if it is a collimation issue.
Also lbcb…101203 is scrambled.
I will retake all exposures for this field

10:17 Preset to focus field

10:17 dofpia
Lots of Z4 and Z5 on both sides

10:23 X2go is slow to a crawl …. Closing session and trying to recover it
I think it was LBTplot which caused this and crashed at 10:25

10:29 Ok, back in business.
But I messed up stopping script before dofpia

10:31 dofpia

10:37 setting TMS reference offset

10:38 starting TMS loop

10:39 Preset

M101 (UT 10:55-11:21)

10:55 Preset to focus field to recollimate. Something still seems to be off with blue

10:56 dofpia

11:01 Starting science script

11:21 We will stop here after 6/10 exposures. We had a large temperature increase to 3.2C and SX M1 is 4 degrees colder than ambient. I am unable to properly collimate LBCB and we are out of spec with IQ. Clouds are also coming in. Switching to PEPSI.

Reconfig PEPSI (UT 11:22-12:15)

PEPSI (UT 12:15-13:22)

OSU_BHB

Mostly sub-arcsec seeing but several magnitudes of extinction

2MJ1316+5315 (Gaia 1563195407995534592) (UT 12:15-12:43)

12:15 Preset

12:17 Starting science exposure
Exposure time doubled due to clouds

12:22 We have lost the target. It is pretty cloudy

12:26 It is back on DX

SNR blue50 red 55

12:30 Sending preset again to reacquire on SX

12:33 Taking another exposure with double the exp time

12:42 We are losing the target again towards the end of the exposure.

2MJ1309+2330 (Gaia 3944854382508327936) (UT 12:43-12:57)

Brighter target, still doubling the exp time

12:43 Preset

12:49 Starting exposure
Seeing 0.9”
SNR Blue 62 Red 76

12:53 Taking another exposure
SNR Blue 73 Red 97

2MJ0758+2601 (Gaia 682109633457430016) (UT 12:57-13:14)

12:57 Preset

It was a long slew. Pointing correction on target

13:09 Starting exposure
Seeing 1.5”
SNR Blue 107 Red 135

2MJ0759+5039 (Gaia 935731163137564416) (UT 13:14-13:22)

13:14 Preset

13:17 Starting exposure
SNR Blue 55 Red 58

13:22 We will stop here. We are at 12deg twilight and clouds are getting thicker at this position

13:22 12deg twilight

13:27 Putting MODS to bed

13:28 Turning LBCs off