

LBT Observing Log for 2023 Dec 11/12 (MST)

C19 Observer: Andrew Cardwell
Partner Observer(s): Hayley Williams
Telescope Operator: Steve Allanson

[PEPSI Log](#)

Plan:

We start with PEPSI, but the night is expected to be cloudy.

~~V2012Cyg ————— 2053893497434322048 J2017+3133 20:17:11.05 31:33:18.0 9.00 M0I
D300/CD3/CD5 100 Medium 1 100 02:30 — 04:30 0.358 1.182~~

~~2MASSJ20281989+4048511 2067612550678658560 J2028+4048 20:28:19.88 40:48:51.1 11.7
G5III D300/CD3/CD5 200 Medium 1 100 02:30 — 05:30 2.526 4.615~~

~~2MASSJ21072666+4214014 1969468871480562560 J2107+4214 21:07:26.66 42:14:01.4 12.6
K0V D300/CD3/CD5 400 Medium 1 100 02:00 — 04:45 1.823 2.627~~

~~2MASSJ21561240+2510478 1796406772051028224 J2156+2510 21:56:12.40 25:10:47.8 13.1
K0III D300/CD3/CD5 600 Medium 1 100 01:15 — 04:00 3.488 1.865~~

~~2MASSJ19475213+7731445 ————— J1947+7731 J1947+7731 19:47:52.13 77:31:44.5
13.10 G8IV D300/CD3/CD5 300 Medium 1 50 03:00 — 07:00 7.191 05.259~~

~~2MASSJ02194131+5740239 458673511897852544 J0219+5740 02:19:41.37 57:40:23.7 9.2
F0V D300/CD3/CD5 100 Low 1 50 3:15 — 05:30 26.08 17.729~~

~~2MASSJ01134986+5638294 413296185980264576 J0113+5638 01:13:49.88 56:38:29.3 12.4
F4V D300/CD3/CD5 100 Low 1 50 2:15 — 05:30 6.332 1.22~~

~~2MASSJ02002892+3940279 344813172958295424 J0200+3940 02:00:28.93 39:40:27.8 11.6
F1V D300/CD3/CD5 100 Low 1 50 3:00 — 04:45 7.2 6.889~~

~~2MASSJ01580277+3859380 343267049155332992 J0158+3859 01:58:02.82 38:59:37.5 12.0
G9V D300/CD3/CD5 100 Low 1 50 3:00 — 05:00 34.1 32.718~~

~~2MASSJ00214625+4715040 392456111304070784 J0021+4715 00:21:46.24 47:15:04.0 12.6
F6V D300/CD3/CD5 200 Low 1 50 1:15 — 05:30 9.578 3.257~~

~~2MASSJ00183625+4622171 391950954429459200 J0018+4622 00:18:36.23 46:22:16.9 11.5
A9V D300/CD3/CD5 100 Low 1 50 1:15 05:30 16.66 8.056~~

~~2MASSJ01073558+6036060 426402227150592000 J0107+6036 01:07:35.58 60:36:05.9 12.9
F4V D300/CD3/CD5 200 Low 1 50 2:00 05:45 2.542 6.767~~

~~2MASSJ03111269+6112167 463223016134034176 J0311+6112 03:11:12.68 61:12:16.7 12.7
K0V D300/CD3/CD5 200 Low 1 50 4:15 05:45 3.273 2.05~~

~~2MASSJ03080769+6548070 492116360644495104 J0308+6548 03:08:07.78 65:48:05.2 13.1
K5V D300/CD3/CD5 300 Low 1 50 4:00 05:45 30.652 102.196~~

~~2MASSJ03080977+5359007 447102011005908992 J0308+5359 03:08:09.81 53:59:00.4 12.6
F9V D300/CD3/CD5 200 Low 1 50 4:00 05:45 14.368 13.438~~

~~2MASSJ03174125+4339232 242075631095541632 J0317+4339 03:17:41.25 43:39:23.3 12.4
F5V D300/CD3/CD5 100 Low 1 50 4:15 04:30 8.619 1.236~~

~~2MASSJ03090500+2353037 110849639873977728 J0309+2353 03:09:05.01 23:53:03.6 13.0
F8V D300/CD3/CD5 200 Low 1 50 4:00 04:45 7.727 4.243~~

~~2MASSJ01475589+2303391 98494217256437632 J0147+2303 01:47:55.90 23:03:39.3 12.3
F5V D300/CD3/CD5 100 Low 1 50 2:45 04:00 0.082 3.389~~

~~2MASSJ01425770+1708039 91580045759824384 J0142+1707 01:42:58.08 17:07:57.5 12.5
G9V D300/CD3/CD5 200 Low 1 50 2:45 04:15 307.422 380.025~~

~~2MASSJ02424353 0148310 2496061205174013568 J0242 0148 02:42:43.53 01:48:31.7 13.4
F9V D300/CD3/CD5 300 Low 1 50 3:45 03:15 5.594 27.84~~

~~2MASSJ02313252 0727248 5178140772537135744 J0231 0727 02:31:32.55 07:27:25.1 11.3
F6V D300/CD3/CD5 100 Low 1 50 2:45 03:15 19.802 6.711~~

~~2MASSJ02245932+0108428 2501510964621676928 J0224+0108 02:24:59.34 01:08:43.1 11.7
G6V D300/CD3/CD5 100 Low 1 50 3:15 03:30 19.263 12.455~~

~~2MASSJ00425546+0033266 2549127209743519872 J0042+0033 00:42:55.46 00:33:26.5 11.8
G8V D300/CD3/CD5 100 Low 1 50 1:45 03:15 9.689 19.294~~

~~2MASSJ05290811 0200344 3217110382231664256 J0529 0200 05:29:08.12 02:00:34.9 9.0
F8V D300/CD3/CD5 100 Low 1 50 3:30 03:30 3.127 21.208~~

~~2MASSJ05131312 0423081 3213393173935430912 J0513 0423 05:13:13.12 04:23:08.2 9.9
F1V D300/CD3/CD5 100 Low 1 50 3:15 02:45 2.522 1.235~~

~~2MASSJ04301953-1349132 3177348674516543104 J0430-1349 04:30:19.55 -13:49:13.2 9.9
F4V D300/CD3/CD5 100 Low 1 50 -2:45 -02:15 12.164 8.866
2MASSJ06410051-0048279 3119341872712018304 J0641-0048 06:41:00.51 -00:48:28.0 8.9
A0V D300/CD3/CD5 100 Low 1 50 -3:30 -03:15 -6.341 0.771~~

~~2MASSJ06334362-0015514 3119297209350280192 J0633-0015 06:33:43.62 -00:15:51.8 8.3
A0V D300/CD3/CD5 100 Low 1 50 -3:30 -03:15 1.878 25.175~~

2MASSJ07202130-0856427 3048436120183383424 J0720-0856 07:20:21.31 -08:56:42.7 12.3
G5III D300/CD3/CD5 300 Medium 1 100 -3:15--02:30 -1.339 1.508

~~2MASSJ06105473-1407137 2994352659340543232 J0610-1407 06:10:54.73 -14:07:13.9 10.8
A5V D300/CD3/CD5 100 Low 1 50 -2:15 -02:45 -1.697 -1.786~~

2MASSJ06410492-0932185 3002438532273814656 J0641-0932 06:41:04.92 -09:32:18.5 12.5
A8V D300/CD3/CD5 100 Low 1 50 -2:45--03:15 -1.594 5.417

~~2MASSJ06144382+1247324 3344066381388742656 J0614+1247 06:14:43.82 12:47:32.4 12.0
A1V D300/CD3/CD5 100 Low 1 50 -4:15 -03:30 -1.613 -3.56~~

2MASSJ07071042+1647238 3360244389321377664 J0707+1647 07:07:10.43 16:47:23.7 12.6
F5V D300/CD3/CD5 200 Low 1 50 -4:15--03:45 0.591 -5.818

2MASSJ07415562+3024101 J0741+3024 J0741+3024 07:41:55.62 30:24:10.1
11.96 G5V D300/CD3/CD5 100 Medium 1 50 -5:00 -- 04:00 -5.130 -24.886

Observed and completed:

See the struck through targets in the plan.

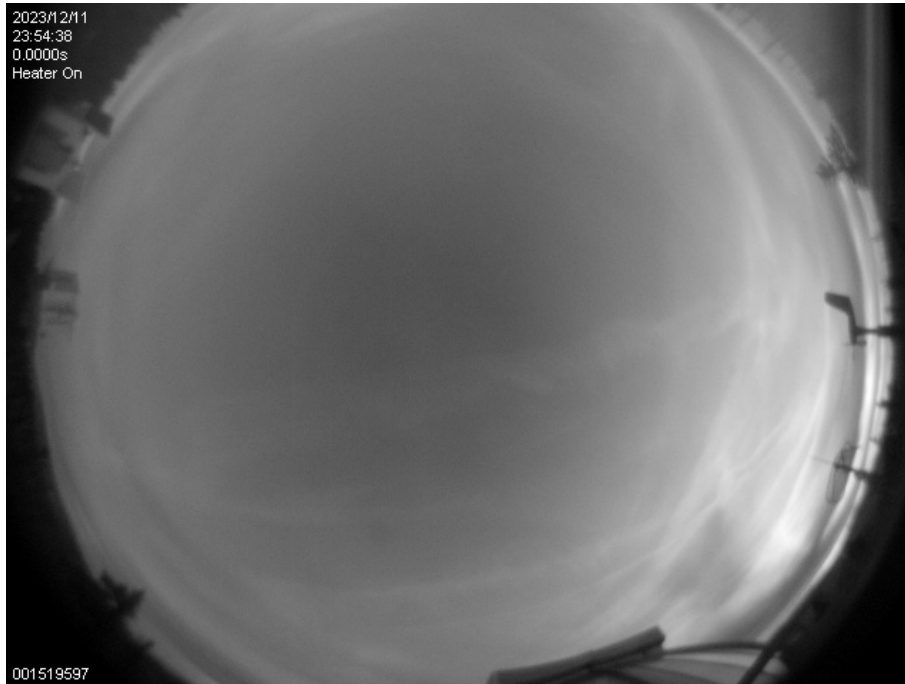
Summary:

Cloudy all night. PEPSI data collected for the first 6 hours of the night, after which it became too cloudy to continue.

Issues:

Overview (times are given in UT):

23:33 Bringing up MODS. Thick cloud at the telescope.



23:38 Running simSnap, powering on LBCs.

23:44 Bringing up LUCIs, running MODS biases.

23:51 LBCB did not come up cleanly. lbckill/lbcstart

00:03 Running the 2 bias checkout on LBCs.

00:16 Enclosure open.

00:19 **Sunset.**

OSU_BHBinaries

00:40 Preset to **V2012Cyg / 2053893497434322048.**

00:41 Looks good, if cloudy. We will wait another 10 to 15 mins for the sky to further darken.
Exp time increased from 100s to 200s.

00:52 Starting science.

00:50 Preset to **Gaia DR3 1836260735679149440.** S/N was good in the last target.

01:00 Starting science. Exp time doubled from 200s to 400s.

01:09 We did not meet the S/N requirement in one shot, even with the exposure time doubled. Taking a second shot which should be sufficient.

01:12 **12 degree twilight.**

01:18 Preset to **2MASSJ21072666+4214014 / 1969468871480562560 / J2107+4214.**

01:22 Starting science.

01:37 Preset to **2MASSJ20281989+4048511 / 2067612550678658560 / J2028+4048.** Exp time increased from 3m 20s to 5m.

01:40 Starting science.

01:42 **18 degree twilight.**

01:47 Preset to **2MASSJ21561240+2510478 / 1796406772051028224 / J2156+2510.**

01:49 Starting science. Exp time increased from 10m to 12m 30s.

02:04 Preset to **2MASSJ19475213+7731445 / J1947+7731 / J1947+7731.**

02:08 The cloud is getting thicker. Guiders report 0.75". It's too cloudy for the DIMM.

02:09 Starting science. Exp time increased from 5min to 15min. If the cloud get's any thicker we won't be able to guide.

02:32 We did not meet S/N requirements in the red. Repeating the target with the exp time increased to 25min.

03:01 S/N requirements met. Preset to **2MASSJ02194131+5740239 / 458673511897852544 / J0219+5740.** Exp time doubled from 6m 40s to 13m 20s.

03:04 Starting science.

03:17 The updated time did not take on blue and it read out after 06m 40s. However the S/N was excellent. Read out the red early and moving on.

03:18 Preset to **2MASSJ01134986+5638294 / 413296185980264576 / J0113+5638.** Exp time doubled. 3min 20s.

03:25 Preset to **2MASSJ02002892+3940279 / 344813172958295424 / J0200+3940.** Exp time doubled.

03:27 No GS found on DX. Steve is taking care of it.

03:28 Starting science.

03:35 Preset to **2MASSJ01580277+3859380 / 343267049155332992 / J0158+3859**. Exp time doubled.

03:37 Starting science.

03:42 Preset to **2MASSJ00183625+4622171 / 391950954429459200 / J0018+4622**. Exp time doubled.

03:45 Starting science.

03:49 Preset to **2MASSJ00214625+4715040 / 392456111304070784 / J0021+4715**. Exp time doubled.

03:50 Starting science.

03:59 Preset to **2MASSJ01073558+6036060 / 426402227150592000 / J0107+6036**. Exp time doubled.

04:01 Starting science.

04:10 Preset to **2MASSJ03111269+6112167 / 463223016134034176 / J0311+6112**. Exp time doubled.

04:13 Starting science.

04:21 Preset to **2MASSJ03080769+6548070 / 492116360644495104 / J0308+6548**. Exp time doubled.

04:23 Starting science.

04:34 Preset to **2MASSJ03080977+5359007 / 447102011005908992 / J0308+5359**. Exp time doubled.

04:36 Starting science.

04:44 Preset to **2MASSJ03174125+4339232 / 242075631095541632 / J0317+4339**. Exp time doubled.

04:47 Starting science.

04:51 Preset to **2MASSJ03090500+2353037 / 110849639873977728 / J0309+2353**. Exp time doubled.

04:55 Starting science.

05:03 Preset to **2MASSJ01475589+2303391 / 98494217256437632 / J0147+2303**. Exp time doubled.

05:06 Starting science. Guiders report 0.5".

05:10 Preset to **2MASSJ01425770+1708039 / 91580045759824384 / J0142+1707**. Exp time doubled.

05:12 Starting science.

05:21 Preset to **2MASSJ02424353-0148310 / 2496061205174013568 / J0242-0148**. Exp time doubled.

05:23 Starting science.

05:34 Preset to **2MASSJ02313252-0727248 / 5178140772537135744 / J0231-0727**. Exp time doubled.

05:35 DX grabbed a glint instead of the GS. Steve is nudging it in.

05:37 Starting science.

05:42 Preset to **2MASSJ02245932+0108428 / 2501510964621676928 / J0224+0108**. Exp time doubled.

05:44 Starting science.

05:51 Preset to **2MASSJ00425546+0033266 / 2549127209743519872 / J0042+0033**. Exp time doubled.

05:43 Starting science.

06:01 Preset to **2MASSJ05290811-0200344 / 3217110382231664256 / J0529-0200**. Exp time doubled.

06:04 This target has a nearby partner. Performing a pointing check to ensure we acquire the correct target.

06:06 Preset back to science source.

06:08 Starting science.

06:12 Preset to **2MASSJ05131312-0423081 / 3213393173935430912 / J0513-0423**. Exp times doubled.

06:14 Starting science.

06:18 Preset to **2MASSJ04301953-1349132 / 3177348674516543104 / J0430-1349**.

06:21 Starting science.

06:23 Preset to **2MASSJ06410051-0048279 / 3119341872712018304 / J0641-0048**.

06:25 Starting science.

06:28 Preset to **2MASSJ06334362-0015514 / 3119297209350280192 / J0633-0015**. Exp time doubled.

06:30 Starting science.

06:35 Preset to ~~**2MASSJ07202130-0856427 / 3048436120183383424 / J0720-0856**~~. Exp time tripled. Target is behind a thick patch of cloud.

06:39 The cloud was too thick to continue. We are looking for a brighter target in a clearer part of the sky.

06:48 Preset to **2MASSJ06105473-1407137 2994352659340543232 J0610-1407**. Exp time doubled.

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06:50 Starting science.

06:59 Preset to **2MASSJ06144382+1247324 / 3344066381388742656 / J0614+1247**. Exp time doubled.

07:00 No GS found on DX. Steve is correcting.

07:02 Starting science. Exp time further increased to 5min based on the guider.

07:09 We are running short of targets bright enough for this cloud. Preset to ~~**2MASSJ07415562+3024101 / J0741+3024**~~. Exp time increased to 10 mins.

07:15 We can't guide on this target. **Closing** due to increasing cloud and lack of suitable targets.

08:30 Thick cloud persists. Taking 5" DG slit flats with MODS.

10:07 Conditions are unchanged.

10:15 Taking MODS imaging lamp flats.

11:21 Taking PEPSI cals.

11:43 Putting MODS to sleep and powering down LBCs. There is no change in the cloud situation.

12:14 **We are calling the night**, we see no possibility of improvement before twilight.

12:44 **18 degree twilight.**

13:14 **12 degree twilight.**

14:06 **Sunrise.**