

OSURC Nightlog 20220926

Observer: A. Becker, Ilya Ilyin

Lead Partner Observer*: Peter Garnavich

Telescope Operator: D. Gonzalez-Huerta

AO Support*: ./.

*** = from home**

Night Info (AZ Time):

- Sunset: 18:18
- Nautical Twilight Ends: 19:06
- Astro Twilight Ends: 19:35
- Moonset: 18:02
- Astro Twilight Starts: 4:48
- Nautical Twilight Starts: 5:17
- Sunrise: 06:05
- Moon Illumination: 0.005

Plan:

First half of the night: PEPSI

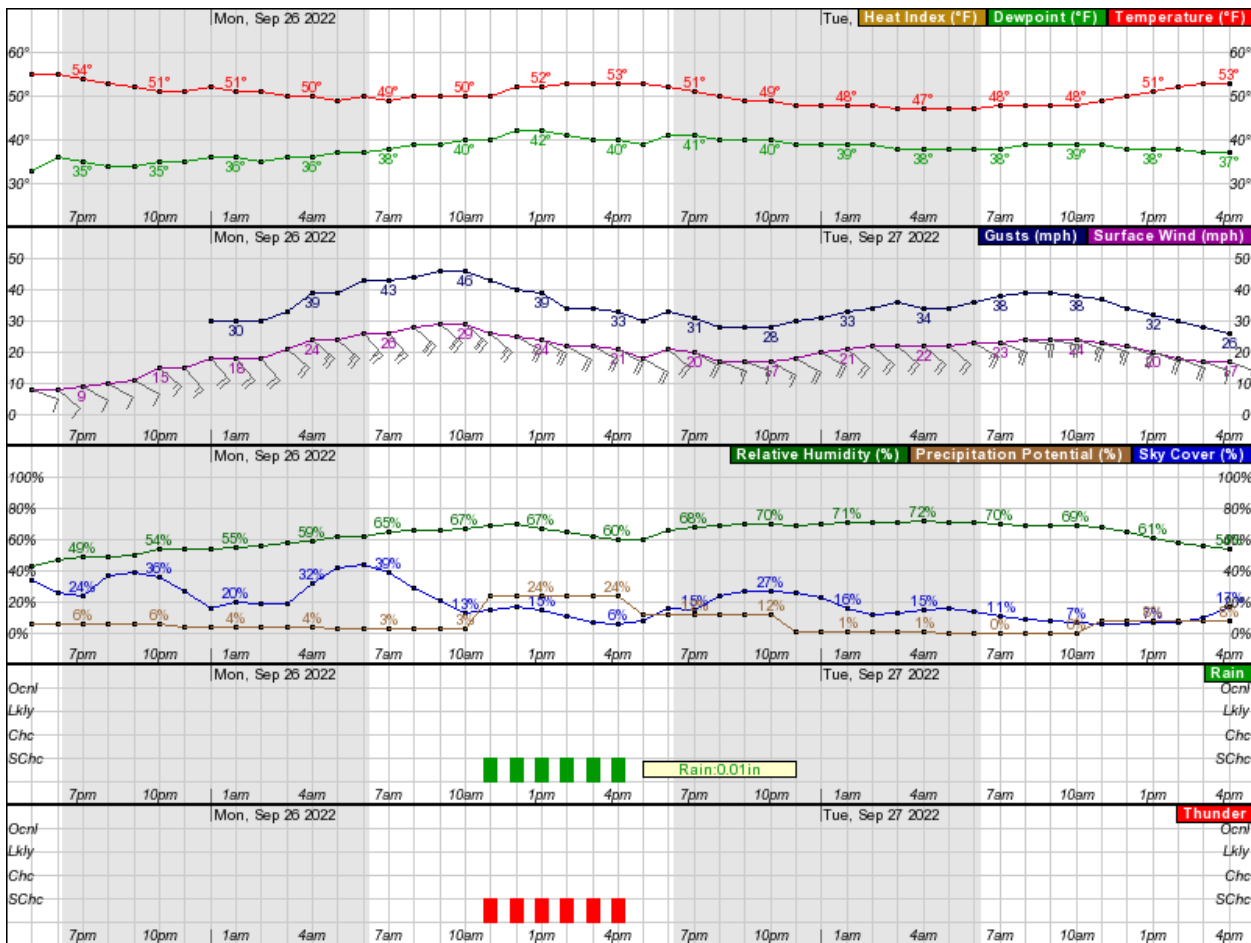
Second half of the night: LUCI

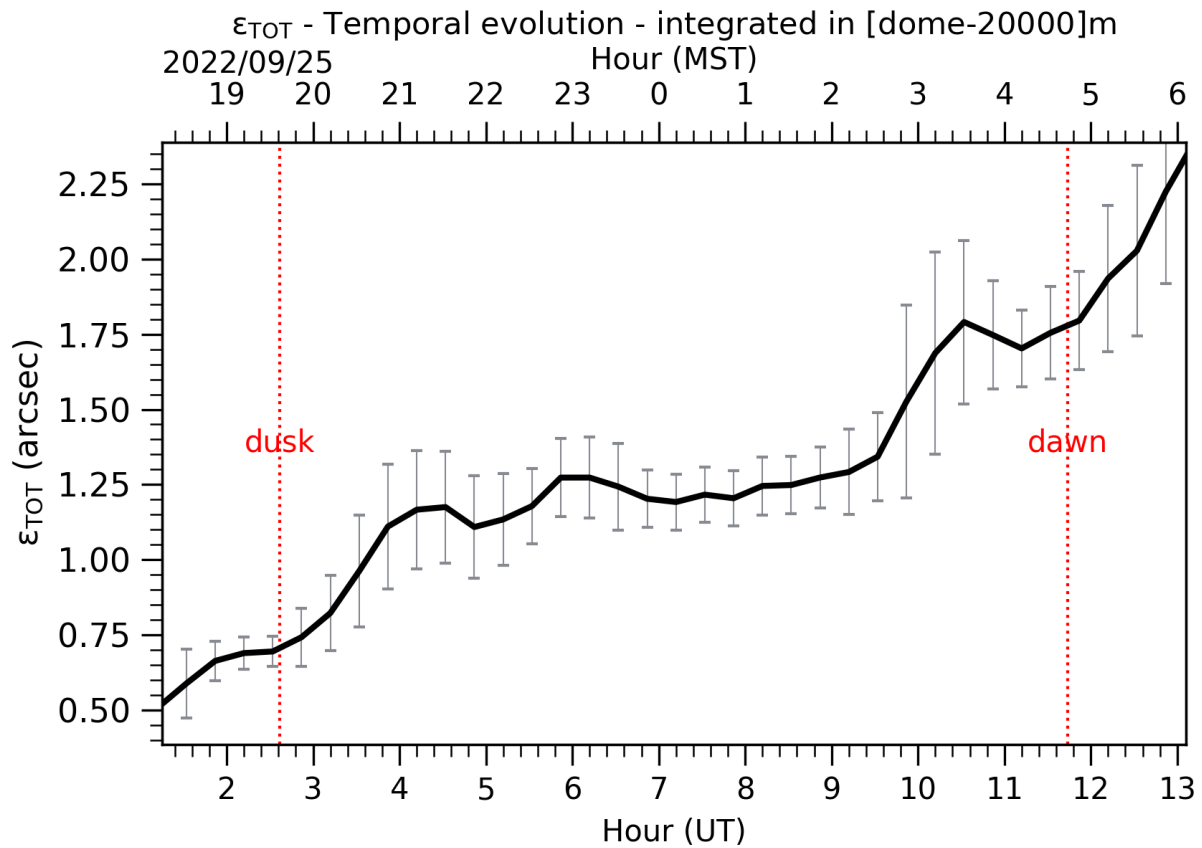
Summary:

Issues:

- IT #2397 RPC error on LBCR. We had to power cycle 4 times until tracker initialized.
- TeamViewer connection to TMS PC didn't work because of licensing issue.
- RDP worked but the window came up very small and only a subfield of the Desktop was visible. Maximizing the RDP window did not enlarge the Desktop of the TMS PC. A lot of resizing of the RTD window, the TMS PC Desktop, the Multiline GUI, and a terminal window hiding the Multiline software was needed; paired with a bit of confusion on my side as it took me a bit to figure out what I saw and what was going.

Weather:





Night/Closed Dome Log (times are given in UT)

Closed Dome:

UT 01:35 LUCIs initialized

UT 01:37 Enclosure open

On-sky:

01:40: Temp: 11C, Humidity: 54%, Wind: ~6m/s, partly cloudy

01:55 Collimation issues on DX. David is going to a brighter target

02:00 DX adsec in failure state. David is resetting the shell.

02:10 Clouds are coming in from the east

TOI 1518

02:12 Sending Preset

02:14 Starting science

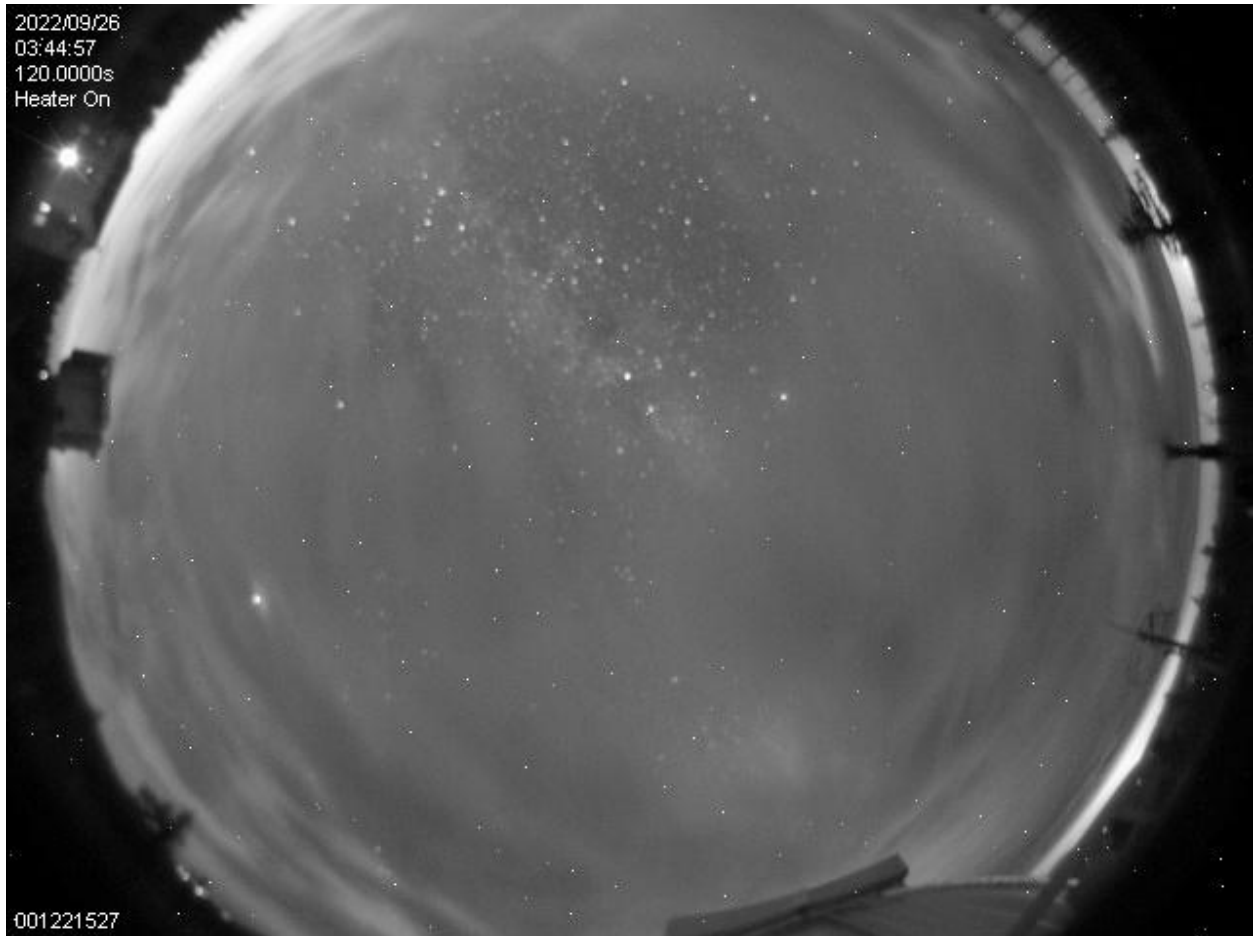
02:33 Seeing is variable mostly between 0.8" and 1.2". Clouds at times.

02:36 We lost the guiding/target for a short period of time due to clouds and >6mag extinction.
From about 02:35-02:38

03:30 Another cloud is bringing ~3-4mag extinction

03:41 We have lost the guide star on the left side. Sending preset to SX.
We might have lost the star during the cloud at around 03:34.

We are in the only somewhat clear spot in the sky...



03:55 Lost the left side again

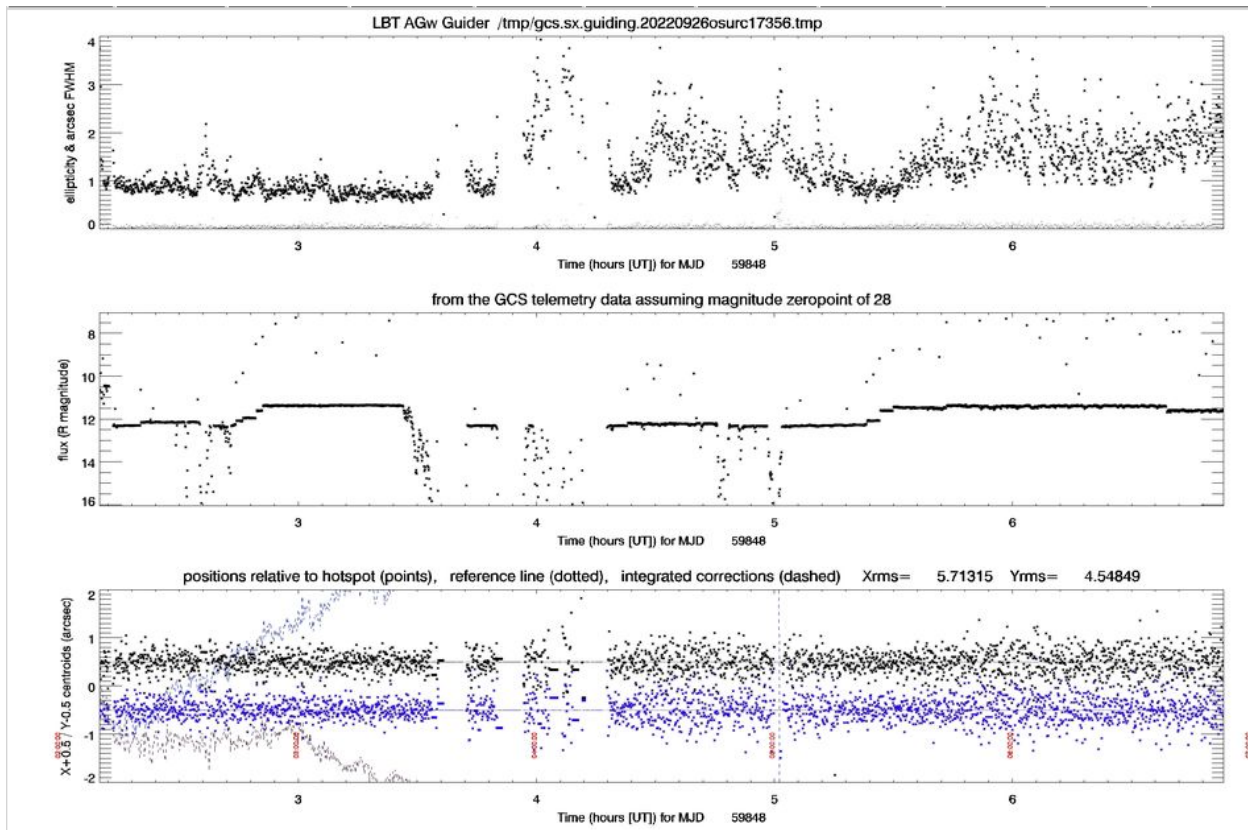
04:18 Back on target after a new preset. The sky is at least somewhat clearer now. ~1mag extinction. Both sides were off target for about 20min.

04:48 We had lost the target again for about 1min

05:00 We have lost it on the left side again for a minute

05:15 Mostly clear now, but wind speed is slowly rising. Gusts up to 18 m/s

05:55 Seeing has deteriorated within the last 30min. Between 1.5" and 2", with some excursions up to 3".



V1405 Cas

07:00 Preset

07:02 Resending preset, as it was accidentally only sent to SX.

07:04 Guide star not found on DX. Pointing check

07:07 Resending preset

07:08 Starting science integration

We have moved only a couple degree away from the previous target and seeing on the guider has improved a lot. Still not very good ($\sim 1.5''$), but much less variable. DIMM seeing is still comparable to what we had before.

HR 9087

07:40 Preset

Pointing to the south and GCS measures sub-arcsecond seeing most of the time

07:55 Reconfig to LBC

08:10 trackers system encountered a problem RPC communication failed

08:12 lbckill/lbcstart

```
17 2022/09/26 08:56:12.853275 TrackersInitialize failed, disabling
TRACKERS system
16 2022/09/26 08:56:12.853241 trackers system encountered a problem:
RPC Client/Host communication failed (6) [src/channel/channel.c:542]
15 2022/09/26 08:56:12.610057 TRACKERS CCD clnt_create failed; RPC
Client/Host communication failed [src/trackers/trackers.c:579]
14 2022/09/26 08:43:25.077955 TrackersInitialize failed, disabling
TRACKERS system
13 2022/09/26 08:43:25.077906 trackers system encountered a problem:
RPC Client/Host communication failed (6) [src/channel/channel.c:542]
12 2022/09/26 08:43:24.832039 TRACKERS CCD clnt_create failed; RPC
Client/Host communication failed [src/trackers/trackers.c:579]

11 2022/09/26 08:36:26.743348 < Log Service: RPC server started, tid=11757 >
10 2022/09/26 08:36:26.743119 < Log Service: session started >

9 2022/09/26 08:27:07.958876 < Log Service: RPC server started, tid=10551 >
8 2022/09/26 08:27:07.958656 < Log Service: session started >

7 2022/09/26 08:25:25.700781 TrackersInitialize failed, disabling TRACKERS
system
6 2022/09/26 08:25:25.700733 trackers system encountered a problem: RPC
Client/Host communication failed (6) [src/channel/channel.c:542]
5 2022/09/26 08:25:25.458075 TRACKERS CCD clnt_create failed; RPC Client/Host
communication failed [src/trackers/trackers.c:579]

4 2022/09/26 08:12:28.075625 < Log Service: RPC server started, tid=8854 >
3 2022/09/26 08:12:28.075404 < Log Service: session started >

2 2022/09/26 08:05:21.035406 TrackersInitialize failed, disabling TRACKERS
system
1 2022/09/26 08:05:21.035359 trackers system encountered a problem: RPC
Client/Host communication failed (6) [src/channel/channel.c:542]
```

0 2022/09/26 08:05:20.791056 TRACKERS CCD clnt_create failed; RPC Client/Host communication failed [src/trackers/trackers.c:579]

~08:20 We are reconfigured for LBCs and would be ready for science, technical time losses from this time on.

08:27 This didn't solve the problem. David is power cycling the CCD Controller and PC.

08:35 lbckill/lbcstart and trying to turn on the systems again.

09:05 It finally came up after power cycling the CCD controller 4 times. We were just about to give up. Stopping reconfiguration.

OSU Monitor

N628

09:10 Preset to N628 focus
Pointing error

09:15 resending preset

09:16 dohybrid

09:24 setting tms reference, tms active

09:25 copointing check

lbcrangebal:

COPOINTING: B=92510 R=92506

Pointing updates: delta_IE = 3.60", delta_CA = 1.25"

Mirror updates: dX(mm) dY(mm) dRX(") dRY(")

SX: 0.56 0.22 4.63 -11.95

DX: -0.46 -0.09 -1.87 9.90

09:28 Starting science script

IQ about 1.0"-1.2" on the first image

N672

We will run dofpia again, as LBCR had a bit of an elongated PSF

10:04 Preset to N672 focus, TMS stopped

10:05 dofpia

10:10 setting tms reference, TMS active

10:11 copointing check

lbcrangebal:

COPOINTING: B=101304 R=101302

Pointing updates: delta_IE = -2.66", delta_CA = 2.07"

Mirror updates: dX(mm) dY(mm) dRX(") dRY(")

SX: -0.01 0.05 1.01 0.23

DX: -0.12 -0.19 -4.11 2.58

10:15 Starting science script

Recollimating hasn't made a big difference. We also had a large temperature drop of ~1.5 degree within the last hour. It seems like DX M1 is cooling faster than SX.

N925

10:51 Preset to N925 focus

10:52 dofpia and tms stopped

10:55 set TMS reference, TMS active

10:58 Copointing check

Too few downloaded pixels on LBCB. Retaking copointing image

11:04 Starting science script

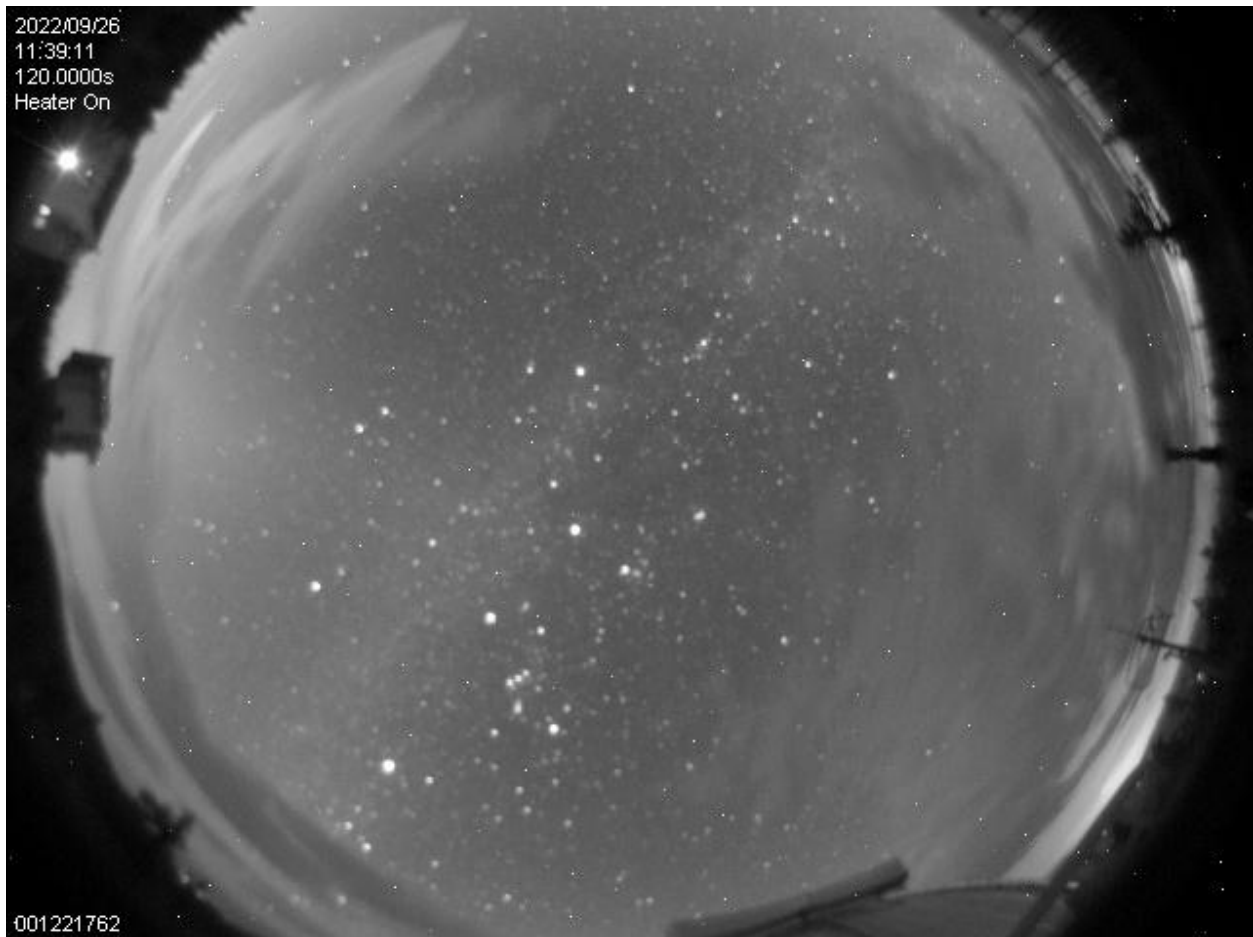
11:20 Clouds are coming in again.

N2403

10:29 Preset 2403 focus

11:31 dofpa+copointing and tms stopped

Clouds are coming in. Not a very good timing during collimation. It converged with one visible star.



lbcrangebal:

COPOINTING: B=113810 R=113806
Pointing updates: delta_IE = -2.27", delta_CA = 12.65"
Mirror updates: dX(mm) dY(mm) dRX(") dRY(")
SX: -0.01 -0.08 -1.68 0.32
DX: -0.01 -0.86 -18.44 0.13

11:40 TMS reference set, tms active

11:42 Starting science OB

Collimation went fairly well. IQ ~1", as is the seeing.

11:53 Another RPC error. This time during the observation.

```
18 2022/09/26 11:53:01.043240 < Log Service: RPC server started, tid=16132 >
17 2022/09/26 11:53:01.043039 < Log Service: session started >
16 2022/09/26 11:48:00.955000 TRACKERS CCDCTRL safetyoff has been forced
15 2022/09/26 11:48:00.939000 TRACKERS CCDCTRL
CDS_A600_Bias_Output_Enable_by_PCI_A300 failed "FPGA not loaded" (code:48)
[ccdctrl.c:2531]
14 2022/09/26 11:48:00.853927 OB execution error: one or more systems
failed [src/lbc/actions.c:1162]
13 2022/09/26 11:48:00.702768 >>> preset/expose/save interrupted at
expose time
12 2022/09/26 11:48:00.702720 trackers system encountered a problem 6
[src/channel/channel.c:1339]
11 2022/09/26 11:48:00.702600 TRACKERS ccdctrlresume failed; RPC
Client/Host communication failed (5) [src/trackers/trackers.c:1094]
10 2022/09/26 11:47:59.830000 TRACKERS CCDCTRL safetyoff has been forced
9 2022/09/26 11:47:59.814000 TRACKERS CCDCTRL
SPC_A200_Clock_Output_Enable_by_PCI_A300 failed: "FPGA not loaded" (code:48)
[ccdctrl.c:2525]
8 2022/09/26 11:47:58.658000 TRACKERS CCDCTRL safetyoff has been forced
7 2022/09/26 11:47:58.643000 TRACKERS CCDCTRL
CDS_A600_Bias_Output_Enable_by_PCI_A300 failed "FPGA not loaded" (code:48)
[ccdctrl.c:2531]
6 2022/09/26 11:47:58.567061 TRACKERS CCD Controller error (2)
[src/trackers/trackers.c:1663]
5 2022/09/26 11:47:58.567022 TRACKERS reinitializing CCD Controller failed
4 2022/09/26 11:47:57.533000 TRACKERS CCDCTRL safetyoff has been forced
3 2022/09/26 11:47:57.518000 TRACKERS CCDCTRL
SPC_A200_Clock_Output_Enable_by_PCI_A300 failed: "FPGA not loaded" (code:48)
[ccdctrl.c:2525]
2 2022/09/26 11:47:48.643000 TRACKERS CCDCTRL GetTemperature
error:hardware problems [ccdctrl.c:2690]
1 2022/09/26 11:47:48.627000 TRACKERS CCDCTRL
SPC_A200_Get_Temp_TIm_by_PCI_A300 failed: "CCD Controller fiber link error or incomplete
data" (code:22) [ccdctrl.c:2440]
```

This time lbckill/lbcstart fixed the issue.

Calibrations: