OSURC Nightlog 20221015UT

Observer*: Olga Kuhn

Lead Partner Observer*: Subhash Bose (OSU), Michael Tucker (OSU), Rick Pogge (OSU)

Telescope Operator: David Gonzalez Huerta

AO Support*:

* = from home

Night Info (AZ Time):

- Sunset: 17:51
- Nautical Twilight Ends: 18:41
- Astro Twilight Ends: 19:09
- Moonrise: 20:59
- Astro Twilight Starts: 05:02
- Nautical Twilight Starts: 05:30
- Sunrise: 06:20
- Moon Illumination: 71.7%

Plan:

The forecast is for cloudy skies. If we can open, there are LUCI (imaging, repeat IRAS00259), LBC and two end-of-night PEPSI targets to observe (2MJ0824, 2MJ0933) - also an early bright ELLJ MODS target that was not done yet.

Summary:

We completed the MODS calibrations and obtained the LUCI darks. The LUCI calibrations were done at the end of the first night. The overcast skies at sunset gave way so we saw some stars on the allsky images, but we never had a hole that lasted long enough to observe - the cloud pattern changed on each allsky image, i.e. every 2-3 minutes.

Issues:

- mods1data froze while taking a series of biases. I could not ssh into it. This happened at 04:03 (the same time as several other freeze-ups, documented in IT 7285).
- I rebooted m1.rc and m1.bc when rebooting mods1data, and I found that while I could bring down m1.rc via the APC, I could not bring it up. I had to ask David to power it on. IT 8745

Weather:

The sky was completely overcast at sunset. Around 08:15, the clouds seemed to be breaking up, but they were still passing over fairly quickly. The humidity gradually rose, levelling off ~87% near 12-deg morning twilight.

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

01:19 The enclosure has not been opened due to clouds. Taking MODS calibrations.

Taking LUCI darks as well (MODS calibrations & LUCI darks are detailed in the Calibrations section).

04:03 mods1data froze (added a note to IT 7285). I rebooted it and also m1.rc and m1.bc. I could not bring up m1.rc via the APC (filed IT 8745).

06:10 Starting a series of 50 biases on each of the LBCs

06:15 We remain closed. On the current allsky image (below) not even the moon is seen. Earlier I saw one or two stars, but that was the best.



06:36 Taking PEPSI CD3 & CD5 calibrations with the 200 & 300 mic fibers.

08:14 Clouds are thinning. Moving the LUCI blind masks in preparation for a LUCI imaging.



08:17 David is opening the enclosure.

08:34 Corrected pointing and now collimating. But another batch of thick clouds came over.

08:38 David is closing up.

10:03 Discussing plans – the clouds are moving fast, in a different place on each allsky image and the patch that was clear is no longer. If we go to the UVa_nirjets/IRAS00259 target ,we could tr to start with the shorter wavelength cont+line filters that we missed on the first night: J+H, PaB+FeII -

however

10:05 Clouds and also the RH is slowly creeping up. Would be nice to try to get the 10 or 20-min PEPSI observations - the two PEPSI targets rise above the 30-deg elev limit at 03:10.

10:15 We'll try again to open.



10:26 The enclosure is open. David is checking pointing and collimation near the first target, IRAS00259



10:31 Closing up - as more clouds, this time which look lower, came in from the SW (see the allsky image below) and the RH continues to increase - it is 85% now.

10:57 It was almost looking like we could open again, but then more cloud and now the allsky image is covered.

11:19 The higher priority UVa_nirjets target is setting and David will authorize PEPSI so we can catch one or both of the PEPSI targets if we open. But the chance to open is looking slim - each allsky image shows streaks from low and fast clouds, though on the satellite animation, it looks like we should be in a hole - these clouds may be local.



12:15 Trying one last time - but the clouds are still passing over and we closed.

12:22 I think this is it - clouds, moonlight and twilight - plus a chance of rain in the forecast. David has closed the shutter doors.

Calibrations:

MODS

Finishing up MODS calibrations: mods#c.20221015.00##.fits

Calibration	m1b	m1r	m2b	m2r
dual grating comparison lamps (unbinned)	3-5	3-5	3-5	3-5
dual grating pixflats (unbinned)	6-10 11-15	6-10	6-10 11-15	6-10
dual grating 1" slit flats (unbinned)	16-18 19-21	11-13 14-16	16-18 19-21	11-13 14-16
dual grating 5" slit flats (unbinned)	22-24 25-27	17-19	22-24 25-27	17-19
bias8K unbinned	28-32	20-24	28-32	20-24
bias1K unbinned	33-37	25-29	33-37	25-29
dual grating comp lamps (bin 1x2)	38-40	30-32	38-40	30-32
bias8K bin12	41-46**	33-37**	41-55	33-47
bias 8K bin12 (repeat after getting mods1 back up)	47-51 52-66	39-44 (3-digit index number) 45-59	56-70	48-61

** 21:05 MST mods1data froze after m1b 46 (Exposure Done, Cleaning up 47...) and m1r 37 (Reading Out 38...). See italert email below. mods1data is pingable (with no action by me) but I cannot ssh into it, and the console that I view from the raritan is entirely frozen. And mods1 status does not show the status of any of the data services (calibans or isis).

italert email: Trigger: no SSH response Trigger status: PROBLEM Trigger severity: High Trigger time: 04:03:08

ssh (mods1data.mods.lbto.org:net.t

cp.service[ssh]): 0

Original event ID: 11371171

21:12 MST - I rebooted mods1data via the APC. I halted the boot process so that I could reboot m1.rc and m1.bc (as this helps both the data & ccd control computers see the shared disks), but m1.rc is not comig back up. I've tried a couple of times via the APC and now (21:47) asking David to power cycle the machine. That did the trick. Hmmm - I was able to power down M1.RC via the APC, but I could not power it back on via the APC (APC or IC flakiness?)

After at least 1 more cycle of reboots of mods1data, m1.rc and m1.bc, the shared disks are seen.

Added a note to IT 7285 mods1data computer froze mid-exposures, and opened a new IT, IT 8745 to report that m1.rc could not be powered up via the APC (issue with configuration from Sep 22?) Resuming the series of 15 bin12 biases.

LUCI

Darks

	DIT	NDIT	readmode	savemode	L1	L2	
OSU_XMD s_LUCI	2.51	2	LIR	int	2-6	2-6	
	5	1	LIR	int	7-11	7-11	
	15	4	LIR	int	12-16	12-16	
	60	1	MER	int	17-21	17-21	
	120	1	MER	int	22-26	22-26	
	aborted the 2nd 600 sec darks to allow for a test preset, resume at 28						
	600	1	MER	int	28-32	28-32	

					33-37	33-37
UVa_nirjet	2.5	20	LIR	int	38-42	38-42
S	10	6	LIR	int	43-47	43-47

PEPSI

06:36 Taking a set of ThAr & traces calibration spectra with both 200 & 300 mic fibers and CD 3 & CD5

LBC

Obtained 100 biases with each LBC - LBCR biases were sometimes showing horizontal banding.