OSURC Nightlog 20210909 UT

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Other Partner Observers: Chris Howk* (ND), Jessie Sullivan (ND), Ananya Tuli (ND), Chris Kochanek (OSU)
Special Assistants: Bentley (ND), Patrick Fasano (ND)
Telescope Operator: David Gonzalez Huerta (LBT)
*** = from home**

Plan:

The plan is to use MODS all night.

Summary:

Two OSU_ASASSN targets: ASASSN16ad and 2M04123153 were observed as well as the time series on ND_merger/j0053. The observations went smoothly - no issues and it looks like good data were collected.

Three spectrophotometric standards were observed in dual mode and the most essential calibrations for (dual grating 0.8" slit bin12 and dual grating 1" slit) were done. Other MODS cals which are TBD: bin11 8Kx3K biases; 3Kx3K biases; red-only imaging flats for acquisitions and bin12 comp lamps.

Issues:

The most significant issue is the slow network on the mountain (IT 8463). This hampers finding new guide stars, as would be done when the PA is adjusted. I also might have run into a problem with modsView on robs - it worked earlier, but there were changes made to the servers and surveys called up by default. It was hard to tell with the slowness. The resolution was to run modsView or the OT on a laptop and upload the new script.

I also saw a slitmask move fault on MODS2 (IT 5834 updated) - this occurred once last night and once the night before.

The acquisition scripts for the bright OSU_ASASSN stars use 60-sec exposure times, too long for these stars of R~14. I edited exptime to 10-sec.

Weather:

There were some low, threatening clouds that came through at the beginning of the night, causing a delay in the start of observing and a loss of 2.25 hrs during the night. After we reopened at 05:43, skies cleared. The seeing was good, ~0.7-1" most of the night, though it was puffy for a while after we reopened.

Preparations:

luci[1|2].20210909.0NNN.fits
mods[1|2][b|r].20210909.NNNN.fits
lbc[b|r].20210909.HHMMSS.fits

Ran up both MODS on robs and took simSnap (set of sieve + imaging snaps)
Ran up the LBCs: UI doesn't want to come up for osurc@robs, but it worked last night for lbto@robs. I brought up the LBCs through another browser and added a note to IT 7595. Meanwhile, I was able to open chromium as osurc@robs and I entered the URL, so the LBC UI is open on robs, it just did not come up in the usual ways (Applications->Graphics and lbc_cmu)
Ran up the LUCI software

Overview (times are given in UT):

02:00 Opening the enclosure. The skies look clear although a low cloud arose just over LBT
02:13 Closing

Reopened once the cloud passed...

BD+28 4211 dual grating

02:50 acqBinoMODS bd284211.acq
m1r: 24 → offsetxy -0.202 11.280 rel → 25 → offsetxy -1.016 0.288 → 26, good
m2r: 06 → offsetxy 3.918 8.047 rel → 07 → offsetxy -0.661 -0.002 rel → 08, good

03:00 execBinoMODS bd284211_dualgrating.obs

m1b	m1r	m2b	m2r	airmass	seeing
11-12	27-29	6-8	9-11	1.241	1-1.2"

OSU_ASASSN/J204952 (not observed - closed for clouds before starting)

Changing the PA from 25 to -33 deg to match the parallactic angle at the predicted midpoint of the observation, ~03:32 UT.
With the abnormally slow upload speeds to the mountain, this is quite a feat --- uploading a DSS image is taking forever. Also, on robs there was an error message about the server. On obs3, there was no error but it was still slowed by the mountain network. I reverted to modsView on my laptop, but had a problem, so I entered the coordinates in the OT.

Later on, I copied the version of modsView which Yang translated to python3 to my laptop, removed the timestamp in the title (because there seems to be a long delay in launching the ds9 window and so reusing the same one works better for me) --- working solution for tonight.

03:26 Closing - there are threatening clouds

03:40 Starting some calibrations. I ran the longslit comparison lamp cals earlier and include them in the table below.

	m1b	m1r	m2b	m2r
dual grating comp lamps	8-10	21-23	3-5	3-5
dual grating pix flats	14-18 19-23	30-34	9-13 14-18	12-16
bin12 8Kx3K biases	24-28	35-39	19-23	17-21
bin12 dual grating pix flats	29-33 34-38	40-44	24-28 29-33	22-26
bin12 0.8" slit flats	39-41 42-44	45-47 48-50	34-36 37-39	27-29 30-32
1" slit flats	45-47 48-50	51-53 54-56	40-42 43-45	33-35 36-38

With MODS2, there was a slitmask move fault when putting the imaging mask in for the pixflats. This error also occurred last night. Retrying the move worked, but this may be indicative of a problem.

2021-09-09T03:41:53.386361 M2.IE>MC2 ERROR: SLITMASK SLITMASK=1 Move Fault, position at end of move 1 but requested position 3

MODS1R - fitsflush was needed to transfer a few files up to 40

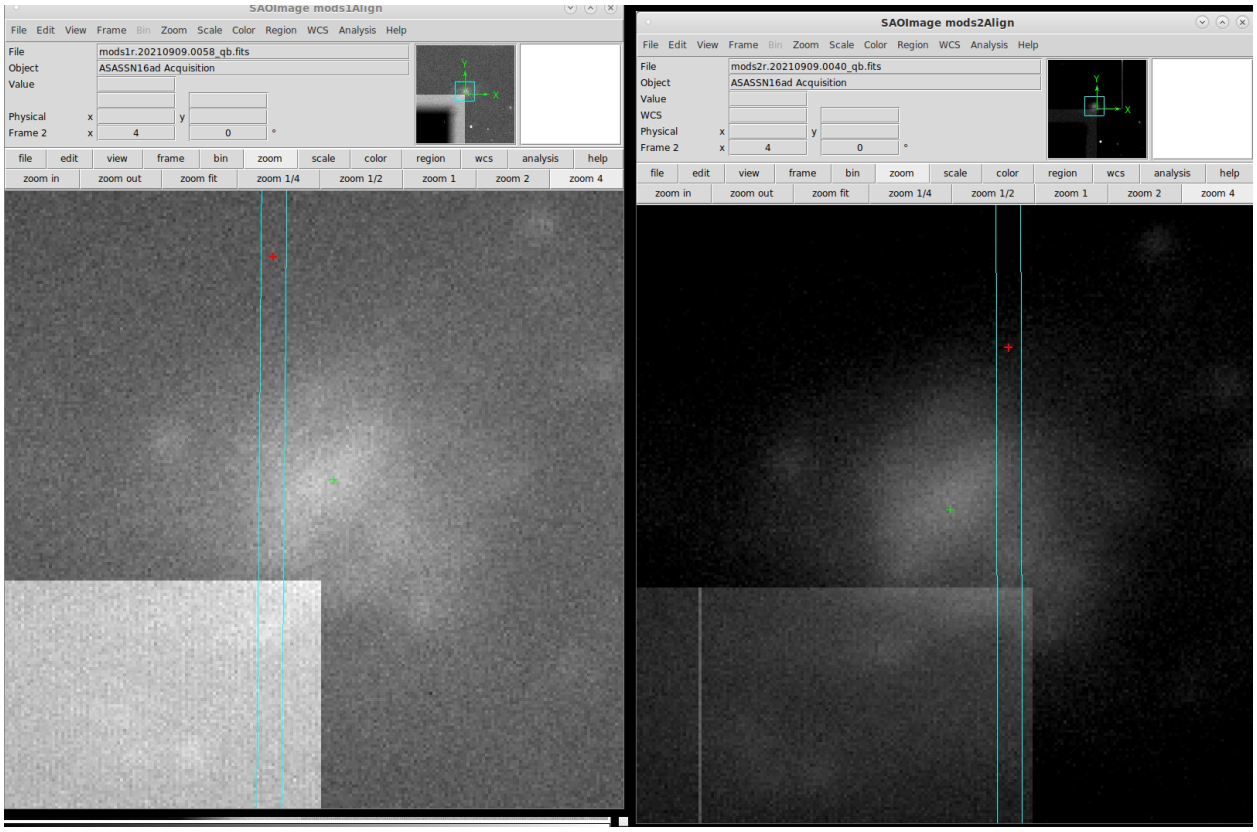
04:50 MODS2R - comm glitch (RED FLAT command) timed out.

05:43 Opening again - the clouds have moved away

OSU_ASASSN/ASASSN16ad

05:29 acqBinoMODS ASASSN16ad.acq
m1r: 57 & 58 → -2.391 8.849 → 59
m2r: 39 & 40 → 2.314 6.431 → 41

05:33 - The seeing has deteriorated. It is ~1.5" during the acquisition.



05:44 execBinoMODS ASASSN16ad.obs

m1b	m1r	m2b	m2r
51-56	60-65	46-51	42-47

05:47 At the start of the 1st (of 6) exposures, the seeing is ~1.4-1.5".

Trying to run the first pair of MODS1 spectra through the mods_quickreduce pipeline --- mods1b is fine, but mods1r 60 throws an error (related to the headers?)

mods_quickreduce, "mods1r.20210909.0060_edit.fits", /calwave, apertures=[1]
% Compiled module: MODS_SLITS2MASK.
% Tag name XX1 is undefined for structure <Anonymous>.

07:00 - The seeing has improved and is now 0.85" (SX) and 1.2" (DX)

07:25 - Last exposures finishing up or reading out.

ND_merger/j0053

07:30 acqBinoMODS j0053_pa0.acq

During acquisition, the seeing was 0.9" (SX) and 1.15" (DX) on the guiders and 0.8" on the WFS Shack spots.

m1r 66 & 67 → offsetxy -0.860 10.589 rel → 68 tweak by -0.15" → 69
m2r 48 & 49 → offsetxy -0.860 10.589 rel → 50 tweak by -0.15" → 51

07:45 execBinoMODS j0053_mods1_nov.obs j0053_mods2_nov.obs

I copied the OldOBs/2020/Nov scripts because these had the lines to pause after the instrument configuration and issue a "sleep 112s" in the MODS2 script. I edited these scripts to set change nimgs from 30 to 37 to match the scripts in the current OBs directory.

07:48 exposures starting for MODS1 and MODS2 is sleeping a bit longer before starting its exposure series.

m1b	m1r	m2b	m2r	airmass	seeing
57-93	70-106	52-88	52-88		1"

08:50 red fitsflush on MODS2 to get file 67 over.
10:10 finished

OSU_ASASSN/2M04123153

PA about 20 m from the slew is -140, so the UT12 script is good.
But I edited the script to set th exptime from 60 to 10-sec as the target has R=13.76 (NOMAD).

1010 acqBinoMODS 2M04123153_UT1200_edit.acq

m1r: 107 & 108 → -0.556 11.26 → 109, looks well-centered
m2r: 89 & 90 → 4.129 8.460 → 91, well-centered

10:21 execBinoMODS 2M04123153_UT1200_edit.acq

Comm glitch on the Partner command - MODS2 - when starting obs script.

m1b	m1r	m2b	m2r	airmass	seeing
94	110	89	92	1.28	0.8"(SX)/0.97 "(DX)

GD71

10:43 acqBinoMODS gd71.acq
m1r: 115 → 0.123 11.496 → 116 → -0.841 0.253→ 117 well-centered
m2r: 97 → 4.054 8.437 → 98 → -0.443 0.148 → 99 pretty well-centered, tad to right.

10:55 execBinoMODS gd71_dualGrating.obs

m1b	m1r	m2b	m2r	airmass	seeing
99-101	118-120	94-96	100-102	1.12	

G191-B2B

11:16 acqBinoMODS g191b2b.acq
m1r: 121 →0.262 10.802 → 122 → -0.716 0.364 → 123
m2r: 103 → 4.529 8.129 → 104 → -0.417 -0.122 → 105

execBinoMODS 191b2b_dualGrating.obs

m1b	m1r	m2b	m2r	airmass	seeing
102	124	97	106	1.12	

11:41 David is closing up.

LBTplot

The SX (black) and DX (green) guide star FWHM and flux are plotted below.