OSURC Night Log 2021-10-29 UT

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ISA/Service Observer: B.Rothberg, R.T. Gatto
OSU Observer: P. Vallely
ISp: Mtn Staff
Mtn Manager: P. Hartley

Sunset: 17:37
Twilight Ends: 18:55
Moonrise:23:43
Twilight Starts: 05:12
Sunrise: 06:30

Tentative Plan:	~Goal	~Actual
[x] OSU_ASASSN/2M22001521	01:30 - 02:10	01:25 - 02:10
[x] MODSPhotCal/feige110	02:10 - 02:25	02:10 - 02:35
[x] ND_j2055/j2055	02:25 - 03:15	02:35 - 03:35
[-] **Switch to LBC**	03:15 - 03:45	03:35 - 03:50
[x] OSU_monitor/N6503	03:45 - 04:05	03:50 - 04:30
[x] OSU_monitor/N6946	04:05 - 04:45	04:30 - 05:20
[x] OSU_monitor/N672	04:45 - 05:25	05:20 - 06:15
[x] OSU_monitor/N628	05:25 - 06:05	06:15 - 07:05
[x] OSU_monitor/N925	06:05 - 06:35	07:05 - 07:40
[x] OSU_monitor/N2403	06:35 - 06:45	07:40 - 08:10
[x] **Switch to PEPSI**	06:45 - 07:15	08:10 - 08:40
~~[ ] OSU_AbundLowZ/2MJ2140p2850*~~	~~07:15 - 07:30~~	
~~[-] OSU_AbundLowZ/2MJ2315p1113*~~	~~07:30 - 07:50~~	
~~[ ] OSU_AbundLowZ/2MJ2319p1732*~~	~~07:50 - 08:10~~	
~~[-] OSU_AbundLowZ/2MJ2357p1553*~~	~~08:10 - 08:30~~	
[x] OSU_AbundLowZ/2MJ2359p4046	08:40 - 09:00	08:40 - 08:57
[x] OSU_BHBinaries/2MJ0224p4551	09:00 - 09:20	08:57 - 09:16
[x] OSU_AbundLowZ/2MJ0212p4013	09:20 - 09:40	09:16 - 09:34
[x] OSU_AbundLowZ/2MJ0602p4502	09:40 - 10:00	09:34 - 09:52
[x] OSU_AbundLowZ/2MJ0416p0812	10:00 - 10:20	09:58 - 10:16
[x] OSU_AbundLowZ/2MJ0650p2630**	10:20 - 10:40	10:17 - 10:35
[x] OSU_AbundLowZ/2MJ0653p4605	10:40 - 11:00	10:35 - 10:54
[x] OSU_AbundLowZ/2MJ0655p5458	11:00 - 11:20	10:54 - 11:16
[x] OSU_BHBinaries/2MJ0536p1322	11:20 - 11:40	11:16 - 11:38
[x] OSU_BHBinaries/2MJ0757p4300	11:40 - 12:20	11:38 - 12:16
[x] OSU_AbundLowZ/2MJ0756p0930**	12:20 - 12:40	12:16 - 12:36
[x] OSU_AbundLowZ/2MJ0809p0225**	12:40 - 01:00	12:36 - 12:53
[x] OSU_AbundLowZ/2MJ0751p3357**	01:00 - 01:20	12:53 - 01:06

Thu Oct 28, 2021

Name	V	Inst	Fiber	BlueArm		RedArm		Start MST	End	Duration	Phase	PID	
2MASS J23591304+4046438	11.81	PFU	300	CD2	00:15:00	CD4	00:15:00	01:50:00	02:05:19	00:15:19	Griffith		
2MASS J02244871+4551279	13.20	PFU	300	CD3	00:15:00	CD5	00:15:00	02:07:19	02:22:38	00:15:19	Thompson		
2MASS J02120136+4013136	12.50	PFU	300	CD2	00:15:00	CD4	00:15:00	02:24:38	02:39:57	00:15:19	Griffith		
2MASS J06023368+4502078	11.34	PFU	300	CD2	00:15:00	CD4	00:15:00	02:41:57	02:57:16	00:15:19	Griffith		
2MASS J04163444+0812444	11.80	PFU	300	CD2	00:15:00	CD4	00:15:00	02:59:16	03:14:35	00:15:19	Griffith		
2MASS J06502859+2630475	11.58	PFU	300	CD2	00:15:00	CD4	00:15:00	03:16:35	03:31:54	00:15:19	Griffith		
2MASS J06535189+4605517	11.38	PFU	300	CD2	00:15:00	CD4	00:15:00	03:33:54	03:49:13	00:15:19	Griffith		
2MASS J06552354+5458156	11.87	PFU	300	CD2	00:15:00	CD4	00:15:00	03:51:13	04:06:32	00:15:19	Griffith		
2MASS J05365582-1322134	13.20	PFU	300	CD3	00:15:00	CD5	00:15:00	04:08:32	04:23:51	00:15:19	Thompson		
2MASS J07570459+4300544	12.31	PFU	200	CD2	00:30:00	CD4	00:30:00	04:25:51	04:56:34	00:30:43	Thompson		
2MASS J07561397+0930267	12.40	PFU	300	CD2	00:15:00	CD4	00:15:00	04:58:34	05:13:53	00:15:19	Griffith		
2MASS J08090405+0225205	11.70	PFU	300	CD2	00:15:00	CD4	00:15:00	05:15:53	05:31:12	00:15:19	Griffith		
2MASS J07513978+3357592	10.93	PFU	300	CD2	00:10:00	CD4	00:10:00	05:33:12	05:43:31	00:10:19	Griffith		

*these targets may be below 30-degrees by the time we get to PEPSI, in which case we'll just skip them and move to the next target on the list
**these are near-moon targets, so if we don't get to them before twilight ends then c'est la vie

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Closed Dome:

UT 23:23 (-1 day) - waking up MODS and taking simsnaps - all good
UT 23:28 (-1 day) - LUCI GUIs up...disconnected from DD - OBS1 reboot - reconnected via telsvc GUI
-init all
L1 0001-0002 - 2.51sec dark
L2 0001-0002 - 2.51sec dark

UT 23:33 (-1 day) - waking up LBCs
UT 23:43 (-1 day) - test biases

Continuing MODS cals

1" Dual Grating Slitflats

M1B 0003-0008
M1R 0003-0008
M2B 0003-0008
M2R 0003-0008

MODS1blue is taking a long time on the exposure done cleaning up step (file is in Repository already). Clicked Abort so that red can continue.

Made a short script to do the last 3 exposures of 1” slits in red

1.2” Dual Grating Slitflats

U 00:11 - staring MODS2 first as MODS1 got hung up
M2B 0009-0014
M2R 0009-0014

-not enough time before sunset to get to the MODS-1 1.2” - will do in morning

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UT 00:32 -not sure yet what the final plans are for the night
UT 00:35 - all done with cals for now

Could do Feige 110 to start the night
UT 00:45 - still waiting for first target for the night….

2M22001521

Finderchart PA=0, script is PA=-50
-local DS9 with DSS and with script PA to double check

UT 00:54 - pointing preset
UT 00:59 - collimation preset
UT 01:00 - collimated...going to wait a bit more for the sky to darken, we are still in -8 deg twilight

UT 01:09 -sending acquisition preset
MODS2 setup seems hung on CCD setup...but eventually cleared
M1 offset -0.313”, +10.722”
M2 offset +3.906”, +8.113”
M1 tweak -0.18” (1.5 pixels)
M2 looks good
UT 01:22 - verifying MODS1 thru-slit tweak

UT 01:23 -starting spectroscopy on target
-M1B seems slower in readout today

M1B 0009-0012
M1R 0013-0016
M2B 0015-0018
M2R 0018-0021

UT 01:50 - will start another round on this target
M1B 0013-0014
M1R 0017-0018
M2B 0019-0020
M2R 0022-0023

Feige 110

UT 02:09 - stopping after 2exp going to SpecStd
UT 02:10 - preset to Feige 110
-stuck on PI on M1
UT 02:12 - Resent, but now MODS-2 is stuck on Clearstars in preset
Timed out on MODS-2, telescope is moving.
UT 02:13 - letting it move to target, although IIF doesn't think a preset came through on DX...weird…
Found GS and is guiding….
UT 02:15 - trying presets again
M2 offset 3.322", 8.217"
M1 offset -0.953", 11.568"
M2 looks OK - although star looks elongated in thruslit image
M1R doing that long readout thing
M1 tweak -0.351",-0.067"

UT 02:23 - starting spectroscopy
M1B 0015-0017
M1R 0021-0023
M2B 0021-0023
M2R 0026-0028

Notre Dame Target J2055

BINNED Target 1x2 (spatial) - NEED TO TAKE BINNED CALS
SLIT = 0.8"
Use PA=65 script for 01 < UT < 06:30
Observer's Note: Finder is PA=0, would be nice to have finders corresponding to the PAs
UT 02:35 - sending preset
-same problem again with MODS1 stalling on BLUE PI_NAME

UT 02:36 - trying again
M2 got stuck on ClearStars - preset stuck but telescope is moving.
CTRL-C'd out of pop-up scripts
-same thing happened on Standard
Will wait until telescope reaches target before trying again
UT 02:40 - third time worked

M1 offset -1.066”, +10.583”
M2 offset +2.985”, +8.141”
Tweak M1 1.5pixels -0.18” , 0”
M2 looks good
M1 overshot, doing +0.12” (about +1pix)
-will start script after

UT 02:51 - starting spectroscopy

M1B 0018-0028
M1R 0028-0038
M2B 0024-0034
M2R 0032-0042

UT 02:59 - Submitted IT 8508 regarding the hanging presets
Seeing 0.9”-1” on guiders/WFS
UT 03:35 - script completed, reconfiguring for LBCs

LBC OSU Monitoring Program

NGC 6503

UT 03:50 - preset to NGC 6503 - for collimation - dohybrid

UT 03:53 - running dohybrid
Dohybrid seems to have trouble finding the LBC images on first pass, asks user to check, usually finds it after that
UT 04:03 - some weird communication issue? LBC GUI complained about double the commands running - dofpia portion seems to be waiting
‘Shift S’ and run dofpia again
-that didn't seem to do anything..its still going. Com glitch? Its back to taking data and running
UT 04:08 - copointing

```
COPOINTING: B=40943 R=40939
Pointing updates: delta_IE = -3.31", delta_CA = 21.75"
  Mirror updates:   dX(mm)   dY(mm)   dRX(")   dRY(")
              SX:    0.09    -0.06    -1.26    -2.02
              DX:   -1.33    -0.73   -15.60    28.62
```

UT 04:15 - starting script
Problem with lbcrangebal - the default seemed to be /newdata for path, but on OBS5 (and ROBS) this is wrong. Should be /nfs/192.168.34.15/newdata/

Observer's Note: Co-pointing finder chart was rotated/oriented differently than the field PA. PLEASE make sure these are matched.
UT 04:30 -finished with 1deg left till elevation limit

NGC 6946

UT 04:30 - sending collimation preset
UT 04:31 - running dofpia
UT 04:40 - finally converged
UT 04:41 - co-pointing

```
--------------------------------------------------------------------------
COPOINTING: B=44138 R=44134
Pointing updates: delta_IE = 1.63", delta_CA = -1.17"
  Mirror updates:   dX(mm)   dY(mm)   dRX(")   dRY(")
              SX:   -0.09    -0.26    -5.55     1.83
              DX:    0.01     0.29     6.17    -0.32
--------------------------------------------------------------------------
```

UT 04:43 - sending science OB
UT 05:18 - running TMS passive mode

NGC 672

UT 05:20 - sending preset for collimation
UT 05:24 - starting dofpia
UT 05:27 - again issue where its looking for the data before its arrived
-command rejected came up again, as if dofopia was commanding exposures to be taken too fast - it looks like the first pass grabbed the wrong images from /newdata (previous galaxy image - could see it in the IDL popup)
UT 05:31 - finally grabbed the right data
UT 05:40 - finally converged, sending co-pointing script

```
--------------------------------------------------------------------------
COPOINTING: B=54147 R=54144
Pointing updates: delta_IE = 4.61", delta_CA = -11.61"
  Mirror updates:   dX(mm)   dY(mm)   dRX(")   dRY(")
              SX:   -0.09     0.23     4.93     1.99
              DX:    0.01    -0.26    -5.61    -0.26
--------------------------------------------------------------------------
```

Again, the finder chart is the wrong orientation from the OB co-pointing script
UT 05:43 - preset for science OB
UT 06:10 - conditions look great, seeing sub-arcsecond fwhms on the images! Sky looks clear too.

NGC 628

UT 06:19 - collimation preset
UT 06:20 - running dofpia
UT 06:27 - co-pointing script

```
--------------------------------------------------------------------------
COPOINTING: B=62914 R=62910
Pointing updates: delta_IE = 4.00", delta_CA = -4.46"
  Mirror updates:   dX(mm)   dY(mm)   dRX(")   dRY(")
              SX:   -0.12    -0.16    -3.53     2.52
              DX:    0.05     0.10     2.12    -1.07
--------------------------------------------------------------------------
```

UT 06:31 - science OB preset
UT 06:43 - getting blue 3pix FWHM, red 2.3pix FWHM (0.68', 0.52")
UT 06:49 - seeing 0.9" in Uspec

NGC 925

UT 07:07 - sending collimation preset
UT 07:10 - starting dofpia
UT 07:13 - sending co-pointing

```
--------------------------------------------------------------------------
COPOINTING: B=71523 R=71519
Pointing updates: delta_IE = 8.01", delta_CA = 14.33"
  Mirror updates:   dX(mm)   dY(mm)   dRX(")   dRY(")
              SX:   -0.18     0.12     2.55     3.78
              DX:    0.11    -0.19    -4.03    -2.34
--------------------------------------------------------------------------
```

The co-point finder did not match the orientation of the image.
UT 07:17 - sending science ob preset
UT 07:29 - first images, blue 0.85", red 0.68"

NGC 2403

UT 07:44 - preset for collimation
UT 07:46 - dofpia
UT 07:47 - dofpia race condition
-don't think it actually ran dofpia
-it tried to find pupils on the last image in /newdata before it even took exposures (after the command rejected occurred)

UT 07:54 - dofpia finished - corrections look OK and it was short
UT 07:55 - co-pointing preset

```
--------------------------------------------------------------------------
COPOINTING: B=75532 R=75528
Pointing updates: delta_IE = -7.33", delta_CA = -2.80"
  Mirror updates:   dX(mm)   dY(mm)   dRX(")   dRY(")
              SX:   -0.04    -0.11    -2.33     0.93
              DX:   -0.01    -0.02    -0.46     0.19
--------------------------------------------------------------------------
```

UT 07:57 - sending science OB preset
UT 08:08 - done

PEPSI

UT 08:11 - reconfiguring for PEPSI
UT 08:29 - sending pointing preset
UT 08:30 - put first target into the PEPSI@LBT GUI while we wait to do pointing and collimation
-pointing missed both sides

UT 08:36 - collimation preset

UT 08:39 - sending preset to **J2359+4064**
UT 08:41 - WFS not updating on SX - finally did
UT 08:42 - starting exposures

UT 08:57 - sending preset to **J0224+4551**
UT 09:01 - starting exposures

UT 09:16 - sending preset to **J02120+4013**
UT 09:18 - starting exposure

-seeing is consistently <0.75”
UT 09:34 - sending preset to **J0602+4502**
-just caught the GS on DX
UT 09:38 - starting exposure

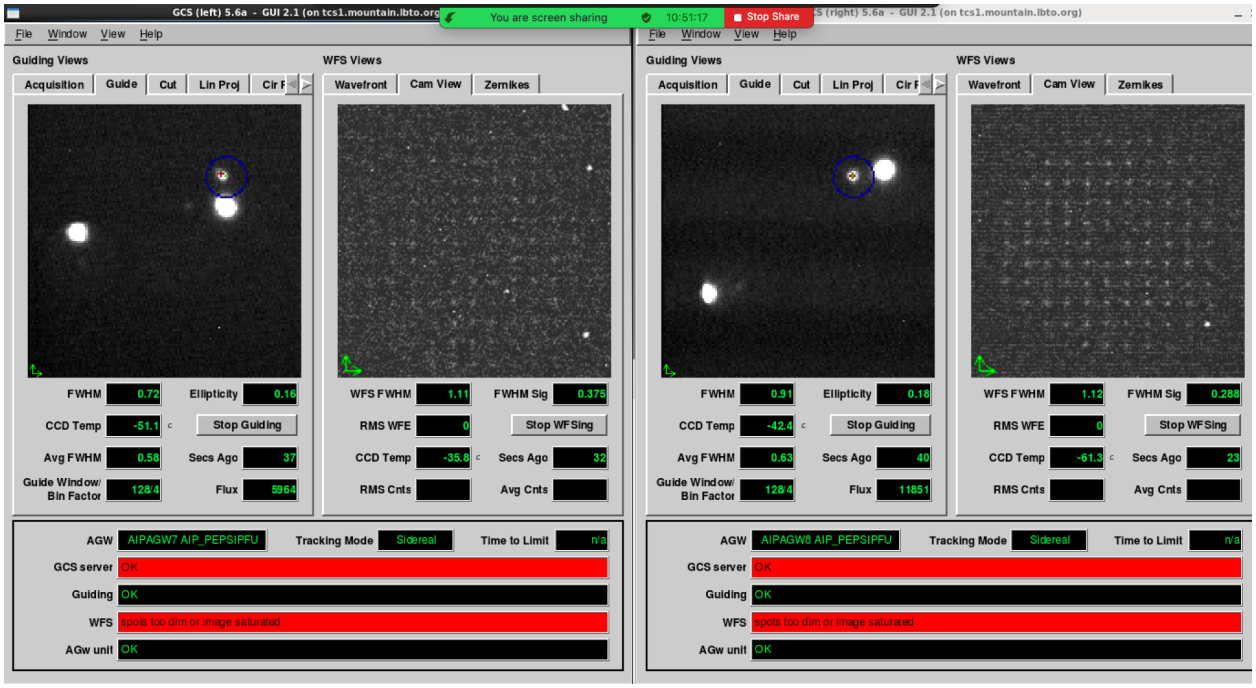
-may do a pointing check next - big slew to next target
UT 09:53 - pre-emptive pointing check for next target (big slew)
-wasn’t too bad, updating pointing

UT 09:59 - sending preset to **J0416+0812**
UT 10:01 - starting exposure

UT 10:17 - sending preset to **J0650+2630**
UT 10:20 - starting exposure

UT 10:35 - sending preset to **J0654+4605**
UT 10:39 - starting exposure

UT 10:54 - sending preset to **J0655+5458**
UT 10:55 - missed it?



Looking at SIMBAD, there is a faint extension in DSS and 2MASS (lower res) so there is a fainter companion. Doing a pointing check. The star is V=11.87

UT 10:58 - Pointing check missed on DX - correcting
UT 11:00 - re-sending preset, now it grabbed the brighter one.
UT 11:01 - starting exposure

UT 11:16 - sending preset to **J0536-1322**
-long slew from +54 Dec to -13 Dec!
-SX taking a long time for SH WFS update
UT 11:23 - starting exposure

UT 11:38 - sending preset to **J0757+4300**
UT 11:41 - missed the GS on SX
-pointing check
UT 11:44 - resending preset
UT 11:46 - starting exposure
UT 11:57 - seeing 0.65”

UT 12:17 - sending preset to **J0756+0930**
UT 12:20 - starting exposure

UT 12:36 - sending preset to **J0809+0225**
UT 12:38 - starting exposure

UT 12:53 - sending preset to **J0751+3357**

UT 12:56 - starting exposure

UT 13:07 - done - closing dome

Calibrations

PEPSI

UT 13:15 - Cals underway for PEPSI
I clicked the relevant cals but not sure it did what I asked.
Need:

Fiber	CD Blue	CD Red
300	2	4
300	3	5
200	2	4

Doesn't look like it did ThAr trace for 200 fiber, looks like it did CD3,CD5 nor the trace
UT 13:30 - cals completed, selected again 200 Fiber and CD2 and CD4 in the Control Interface and clicked start, it then highlighted CD3 and CD5 in green and started taking the data.
Its only doing CD3 and CD5
UT 13:35 - clicked ALL CDs and 200 fiber ThAr and Traces, and starting cals again
-first thing it did is go to CD3 and CD5

UT 13:53 - setting ThAr 200 fiber and selected CD2 and CD4 (and took screenshot)

JP 15:14. Took the missed ThAR for D200 CD2 & CD4

MODS

MODS-1 1.2" slit flats

M1B 0029-0035
M1R 0039-0044

<u>Binned 1,2</u>
MODS2
M2B 0035-0039 8kBias
M2R 0043-0047 8kBias

M2B 0040-0042 Arcs
M2R 0048-0050 Arcs

M2B 0043-0045 0.8" slit flats - Did not finish, got bad filename for M2B
M2R 0051-0054 0.8" slit flats - CTRL C'd out - restarting
M2B 0047-0052 "

M2R 0054-0059 “

M2B 0053-0062 pixelflats
M2R 0060-0064 pixelflats

M1B 0035-0039 8kBias
M1R 0045-0049 8kBias

M1B 0040-0042 Arcs
M1R 0050-0052 Arcs

M1B 0043-0052 pixelflats
M1R 0053-0057 pixelfats

M1B 0053-0058 0.8” slitflats
M1R 0057-0062 0.8” slitflats

UT 14:26 - putting MODS-2 to sleep
UT 14:32 - putting MODS-1 to sleep

LBCs

UT 13:27 - taking 25 biases LBC-B and LBC-R
UT 13:46 - powering off LBCs