# OSURC Nightlog 20220618 UT

Observer\*: Olga Kuhn Lead Partner Observer\*: Mark Whittle (UVa) AO Operator\*: Juan Carlos Guerra Telescope Operator: Josh Williams \* = from home

# Plan:

Start with PEPSI, to observe the VATT source in twilight, 3 OSU sources and then uSco plus the associated calibration star. Then, switch to the MODS, given the cloud cover, to get the bright OSU\_ASASSN targets and finally to LUCI for the AO program and ND programs.

### Summary:

There were no observations made as the skies were nearly completely overcast all night. I took LBC biases, completed the MODS calibrations and took LUCI darks. Calibrations from last night and tonight are in this file. Only the closed-dome LUCI calibrations and the twilight flats remain.

#### **Issues**:

\* the MOS calibrations. I reduced the MODS1&2R VFLAT10 exposure times by a factor <sup>2</sup>/<sub>3</sub> to prevent saturation effects at the left and right edges when the saturated trace of a box crossed the central column. They were good for the slits, but the boxes caused some issues which I've heard may affect the reduction. We had time, so I repeated the calibrations for all 3 pairs of masks.

\* IT 8652 - a red rotator timeout error when running the series of biases.

#### Weather:

The skies were overcast all night as a stream of clouds tracked north from the border.

## **Preparations:**

Both MODS are up and running and test images taken.

Both LUCIs are up and test images taken (Did some work with the SW person so I changed slightly the alignment of the N30 FS) LBCs are up and running PEPSI - is up and running. The CCDs are cool and both CDs are working, although to get the Blue CD out of a limit(?) required Jay's help with the handpaddle at the bridge. For the red CD mechanism, Ilya had to find the position for each CD since this table was lost when the power went out yesterday.

mods[1,2][b,r].20220618.NNNN.fits luci[1,2].20220618.NNNN.fits lbc[b,r].20220618.hhmmss.fits

# Overview (times are given in UT):

02:35 Josh wrote: Staying closed at sunset due to thick cloud cover and recent precip

~08:00 PEPSI switched to VATT.

10:42 Calling it a night -there was cloud cover all night.

#### **Closed Dome Calibrations**

A running list of the calibrations taken for this run.

## MODS

20					
	m1b	m1r	m2b	m2r	comments
dual grating comp lamps	10-12	10-12	9-11	9-11	
dual grating pixel flats	13-17 (clear) 18-22 (UG5)	13-17	12-16 (clear) 17-21 (UG5)	12-16	
0.6" slit flats (for an LBTB)	22-24 25-27	18-20 21-23	22-24 25-27	17-19 20-22	

1" slit flats	28-30 31-33	24-26 27-29	28-30 31-33	23-25 26-28	
bias 8K	34-38	30-34	34-38	29-33	
20					
	m1b	m1r	m2b	m2r	comments
<del>OSU_IDF_M</del> <del>ODS UL</del> <del>505551 &amp;</del> <del>545255</del>	<del>1-3</del> 4-6 <del>7-9</del>	<del>1-3</del> 4-6 <del>7-9</del>	<del>1-3</del> 4-6 <del>7-9</del>	<del>1-3</del> 4-6 <del>7-9</del>	<del>sat effects at</del> <del>at left/right</del> <del>edges on</del> <del>flats</del>
OSU_IDF_M ODS UL 505551 & 545255	<del>10-12</del> <del>13-15</del> <del>16-18</del>	<del>10-12</del> <del>13-15*</del> <del>16-18</del>	<del>10-12</del> <del>13-15</del> <del>16-18</del>	<del>10-12</del> <del>13-15</del> <del>16-18</del>	repeat with <del>¾</del> exptime for flats * sat effects
OSU_IDF_M ODS 553014 & 524601	19-21 22-24 25-27,28	19-21 <del>22-24*</del> 25-27 28-30	19-21 22-24 25-27	19-21 22-24 25-27	repeating these two *sat effects so repeated as 28-30 (1.5s instead of 2s) 2 mods1b Ar lamps - not sure why
OSU_IDF_M ODS 571731 & 563143	29-31 32-34 35-37	31-33 34-36 37-39	28-30 31-33 34-46	28-30 31-33 34-36	
OSU_IDF_M ODS UL 505551 & 545255	38-40 41-43 44-46	40-42 43-45 46-48	37-39 40-42 43-45	37-39 40-42 43-45	once more with MODS1 VFLAT10 dropped from 2 to 1.5s
bias 1K	47-51	49-53	46-50	46-50	

# LUCI

#### LUCI closed-dome cals

I aligned the N30 FS and took a few closed-dome flats with the N30 camera and FS, using the UVa\_nirjets\_AO script to provide a look. (I will repeat on the night that the target is observed so as to match the field position, since it may change a bit). There are some donuts on the flats, but I do not see these with the N3.75 camera or in all 3 filters: H2, BrG and Ks. Are they on the N30 camera and filters?

20220617 UT luci[1,2].20220617.NNNN.fits						
Ks	5-9 lamp off 10-14 lamp on					
BrG	15-19 lamp off 20-24 lamp on					
H2	25-29 lamp off 30-34 lamp on					
20220618 UT luci[1,2].20220618.NNNN.fits						

#### LUCI darks

The nirjets\_AO dark script was missing the 30s x 2 darks, so I added these. I used savemode=cube, like the data. I will add a set of 30x x 2 darks to those for the SL program for comparison. The save mode of the darks should not need to match the data.

program	L1	L2	DIT	NDIT	readmode	savemode
UVa_nirjets and UVa_nirjets_AO	5-9,10-14	56-60,61- 65	2.51	20	LIR	integrated
	15-19	66-70	30	2	LIR	integrated
	20-24	71-75	10	6	LIR	integrated

UVa_nirjets_AO	25-29		2.5	20	LIR	cube
	30-34		2	30	LIR	cube
ND_j0053K	35-43	76-84	60	1	MER	norm
	44-52	85-93	30	1	MER	norm
	53-67	94-108	5	3	LIR	norm
	68-72	109-113	5	3	LIR	integrated

## LBC

#### 20220318 UT:

Three sets of 25 biases taken at 03:19. These are mostly free of noise. In the second set, we had the following error and as a result only got about half as many LBCR as LBCB biases. But we repeated the series once more after that.

022/06/18 03:40:10.196644 W R ROTATORtimeout error on motion (maybe too largemechanical friction problem) [src/rotator/rotator.c:1777]2022/06/18 03:40:10.326779 N R ROTATOR2022/06/18 03:40:10.567384 W R ROTATORGOYA query:>CTRL\_D< answer:>E0X0\$2022/06/18 03:40:10.567427 W R ROTATORactual position is 66.261 deg2022/06/18 03:40:10.567427 W R ROTATORfailure [src/rotator/rotator.c:1123]

Reloading and replaying the OB resolved the problem.