C19 Observer: Andrew Cardwell (From obs1, x2go session 51)
Partner Observer(s): Peter Garnavich (ND, Remote), Annalisa Citro (UM, Remote)
Telescope Operator: David Gonzalez-Huerta

Plan:

Summary:

Clear and poor seeing, typically 1.5” to 2”.

Issues:
AGW2 focus check is pending.
For PEPSI blue arm only CD3 is available.
8 hours 29 mins of technical downtime due to the failure of the main 4160V breaker.

Weather:

Overview (times are given in UT):

22:00 Daily telescope planning meeting.

23:08 Running up MODS for pending cals.

23:14 Running simSnap. Looks good.

23:22 LBC is up, checking it out. Starting MODS bias sequence.
mods[1|2][b|r].20230127.0001-0022.

23:23 LBC looks good, running bias sequence.

23:59 MODS slitless flats, mods[1|2]b.20230127.0023-0032, mods[1|2]r.20230127.0023-0027.

00:25 MODS 5” slit flats. mods[1|2]b.20230127.0033-0038, mods[1|2]r.20230127.0028-0030.

00:51 Sunset.

00:55 Configuring for LBCs.

01:18 Opening the enclosure.

01:20 Issue with left shutter door. The mountain crew are on it.

01:42 12 degree twilight.

01:43 Problem resolved, preset to collimation field for NGC672.

01:46 PSF problems, OSA is working on it.

01:47 TMS lasers are on.

01:50 PCS restarted, optics cleared.

01:52 Still issues, second attempt at preset failed.

01:56 Still no luck. OSA is calling John Hill.

02:02 Third attempt at preset, same problem.

02:10 Problem resolved. Starting collimation, dohybrid, /X2.

02:11 18 degree twilight.

02:21 Collimation is slow, which is to be expected with a 3C temp difference between the primaries and external temps. DIMM reports 1.5”,

02:26 Collimation converged, but with no spherical corrections on lbcb. Running dofpia, /X2.

02:29 We appear to be having network issues. I have 2 completely independent internet connections and I’m seeing the same issues on both, this suggest to me that the issue is internal to the university network as that is the only common factor.

02:34 Blue collimation is struggling…

02:39 Collimation complete, copointing… Taking TMS reference. 1.7” on lbcb and 1.5” on lbcr from copointing exposures.

02:44 Sending science preset. Starting TMS.

02:53 Background is very high, ~20k ADU in blue and 40k ADU in red. After discussing this with Peter we will continue to observe this target.

02:57 IQ remains poor, 1.7” i on lbcb and ~2” on lbcr. Collimation has degraded heavily on lbcr. Pause inserted in script, we will move on to the next target after the next readout.

03:02 Preset to collimation field for NGC925.

03:05 TMS stopped, starting collimation.

03:11 Collimated, running copointing. TMS reference taken. IQ from copointing exposures was 1.5” on both sides.

03:15 Sending the science preset, starting TMS.

03:25 Background of 17k on lbcb, 38k on lbcr. Red collimation is drifting very quickly again, IQ of 1.7” on lbcb and 2.1” on lbcr. DIMM reports rapidly varying seeing, typically around 1.7”.

03:37 Bad read on lbcb.20230127.032825.fits. I can see no associated too few/many pixels error message.

03:39 Preset to copointing field for M81.

03:42 Starting collimation.

03:49 Collimated, moving on to copointing. Taking TMS reference.

03:51 lbcb copointing exposure is also scrambled, lbcb.20230127.035006.fits. Taking copointing images again. I can see no associated too few/many pixels error message.

03:55 Sending the science preset. IQ of 1.5” measured on copointing exposures. TMS running.

04:00 IQ on initial science exposures is 1.7” on lbcb and 1.5” on lbcr.

04:08 Preset to M82 collimation field. No need for copointing here, it’s very close to the last target.

04:09 Starting collimation. We still have a temperature difference of 2C on SX and 1.5C on DX.

04:15 Collimatied, taking TMS reference.

04:16 Preset to science field. Starting TMS.

04:23 Background of 2.5k ADU in blue and 5k ADU in red. IQ is 1.6” on lbcb and 1.7” on lbcr.

04:28 Preset to collimation field for NGC2403.

04:30 Starting collimation.

04:38 Collimated, moving on to copointing. Taling TMS reference. IQ of 1.6” measured on both sides.

04:41 Preset to the science field. Starting TMS.

04:46 Satellite trail in initial exposures, lbcb.20230127.044244.fits, lbcr.20230127.044237.fits.

04:51 lbcb.20230127.044822.fits is scrambled. Finished here. IQ on final exposures was 1.9”.

04:52 Preset to NGC2903.

04:53 Issue on the summit, we have lost power to the drives and HBS. Most likely a power bump. This will take some time to resolve.

05:39 This is looking serious, the generator has not kicked in and the UPS systems are depleting fast. The mountain crew are working to manually close the enclosure.

07:10 Mountain staff are still working to close the enclosure.

08:28 Shutter doors are closed.

08:47 The situation is not recoverable tonight. There is no power going to the 4th floor, technicians from Sabino Electric will be required to investigate the issue. The 4160V breaker has tripped and will not reset.

12:53 18 degree twilight.

13:22 12 degree twilight.

14:13 Sunrise.

Follow-up: the mountain did not lose power, the problem is in the electrical distribution system to everything in the upper part of the observatory. Day crew is at work