## Jan 27 UT 2022 Night notes.

## **Overview**:

Observer: Olga Kuhn (LBTO) Lead: Mark Whittle (UVa) Other Partner Observers: Charlotte Wood (ND) Telescope Operator: Steve Allanson (LBTO)

Initially looked like it would be patchy clouds, but satellite and skycam both showed the night was better than expected – mostly clear. The seeing wasn't great initially (~1.5 optical, ~1.0 in LUCI), but improved, so that it was ~0.8-1.0 for the LBC observations. Plan: start with LUCI-nirjets; then one MODS: ASASSN J0933 then MODS OSU-monitor if conditions

allow (which they did) – if not then PEPSI-LowAbundZ.

## **Objects completed (all times UT):**

LUCI: UVA-nirjets-HH788 UVa-nirjets-IRAS00420

MODS: OSU-ASASSN-J0933

LBC: NGC 2903 NGC 3344 NGC 3489 NGC 3627 NGC 4449 NGC 4826 NGC 4826 NGC 4605 NGC 4395 NGC 4214 NGC 4736

## **Observing Log:**

Sunset: 00:50 12-deg: 01:42 18-deg: 02:11

01:25 slew to HH288 and star for pointing & collimation

01:33 Start exposure.

01:41 lost wave front sensor on DX, need to restart. Did another restart.

01:47 Start exposures again. Seeing about 1.2. Pause introduced inadvertently.

02:07 Start again! seeing stayed around 1 and got a bit worse towards the end. Transparency good! 03:38 End exposure (longer than expected – planner only gave 1.16 hours).

03:39 Slew to UVa-nirjets-IRAS00420
03:42 Start script.
03:59 ~1 arcsec on K image (optical ~2 arcsec).
04:38 getting some clouds – continuing.
05:00 pause for clouds.
05:04 stop – clouds unlikely to pass before we hit the elevation limit.
05:05 Change to MODS.
05:30 Acquiring OSU-ASASSN-J0933
06:00 End exposure – mostly clear throughout, seeing around 1.5.
06:01 slew to g191b2b standard. (wide slit but not photometric).
06:20 end
Change to LBC – conditions seem to be improving, so try OSU-monitor.
06:48 slew to NGC 2903. Problems with co-pointing, lost some time.

07:12 started exposure. Seeing blue:1.38, red: 1.4. Clear skies! 07:53 end

07:55 slew to NGC 3344. Collimate 08:00 start exposures. Seeing  $\sim 1.0$  arcsec. Clear. 08:34 end

08:35 slew to NGC 3489 & collimate. Seeing 1.0 arcsec. Clear. 08:44 start exposures. Seeing: 0.75 red and 0.8 blue. Clear skies. 09:23 end.

09:24 slew to NGC 3627 & collimate.

09:31 start exposures. Seeing: 0.74 red and 0.7 blue. Clear skies.

10:04 some thin clouds coming to the satellite, likely overhead, but not obvious in the skycam. Seeing  $\sim 0.9$ .

10:12 end exposure. May have been some slight clouds at the end of the last exposure.

10:13 slew to NGC 4449.

10:25 start exposures. Thin clouds now past us and moving on to the east – clear to the west. Seeing 1.2 red and blue.

10:39 end exposure.

10:39 slew to NGC 4826. Slow to do fpia – couldn't find good star images to work with. 10:56 start exposures. Seeing ~1.0 arcsec. Red images looking elongated? (maybe falling out of collimation?).

11:30 end exposures. Clear skies now – clouds gone off to the east.

11:30 slew to NGC 4605. Fpia and copoint. Takes a while. 11:48 start exposures. Seeing 1.0 red & blue. 12:02 end.

12:04 slew to NGC 4395. (OSU-monitor-priority 2).
12:?? Start exposures. Seeing 1.3 arcsec.
Slew to NGC 4214
12:39 collimate.
12:47 start exposures. Seeing 1.2 arcsec.
12:56 end. (Twilight 18-deg at 12:52).

12:56 slew to NGC 4736 13:02 start exposures. Somewhat larger images on blue than red (1.3 vs 0.7). 13:17 end.

13:21 12-degree twilight.

13:26 slew to blank sky for twilight sky flats.

13:09 seeing 1.3 blue (not quite circular) and 0.9 red. Clear. Just past 18 degrees.

14:14 sunrise.