

LBT Observing Log: 2025 Nov 15 UT

Observers: Jenny Power

Partner Observer: Mark Whittle, Yifan Zhou

Telescope Operator: Riccardo Ansaldi

Plan:

We will start with LUCI if seeing is 1 arcsec or better. We will observe two UW XMD targets and two UVA targets until approximately 6:00 UT. We will then switch to PEPSI-POL for the two OSU polarization programs. If there is time left, we will use PEPSI-PFU at night's end.

If seeing exceeds 1 arcsec, we will start with PEPSI-PFU and switch to PEPSI-POL at approximately 6:00 UT.

Alta looks promising – elect to start with LUCI.

UVa_nirjets: IRAS20343 done

~~UVa_BCD: J2229+2725~~ could not acquire.

BDp36d4912 (telluric) not attempted

OSU_XMD: J0047 done

HIP116886 (telluric) done

OSU_XMD: J0232 done

~~HIP16652 (telluric)~~ not needed

Switch to LBC

ND SN09ig done

OSU N925 done

OSU ALSBG1 done

OSU N2403 done

OSU I2574 done

OSU N3077 done

OSU M81 done

OSU M82 done

OSU I2574 repeat done

Twilight Sky flats

Summary:

Calibrations

UVa_nirjets

[IRS20343 \(1:11-2:14, 2:17-2:40\)](#)

[LUCI1 FW1 error \(2:14-2:17\)](#)

UVa_BCD

[J2229+2725 \(2:40-3:18, no science\)](#)

[LUCI MOS error \(3:18-3:44\)](#)

UM_XMDs_LUCI

[J0047 \(3:44-5:03\)](#)

[HIP116886 \(5:03-5:17\)](#)

[J0232 \(5:17-7:01\)](#)

[Reconfig & LBC Collimation\(7:01-7:52\)](#)

ND_sn09ig

[SN09ig \(7:52-8:53\)](#)

OSU_monitor

[N925 \(8:53-9:31\)](#)

OSU_ASASSN_LSB

[ALSBG1 \(9:31-10:28\)](#)

OSU_monitor

[N2403 \(10:28-10:46\)](#)

[I2574 \(10:46-11:08\)](#)

[N3077 \(11:08-11:37\)](#)

[M81 \(11:37-11:53\)](#)

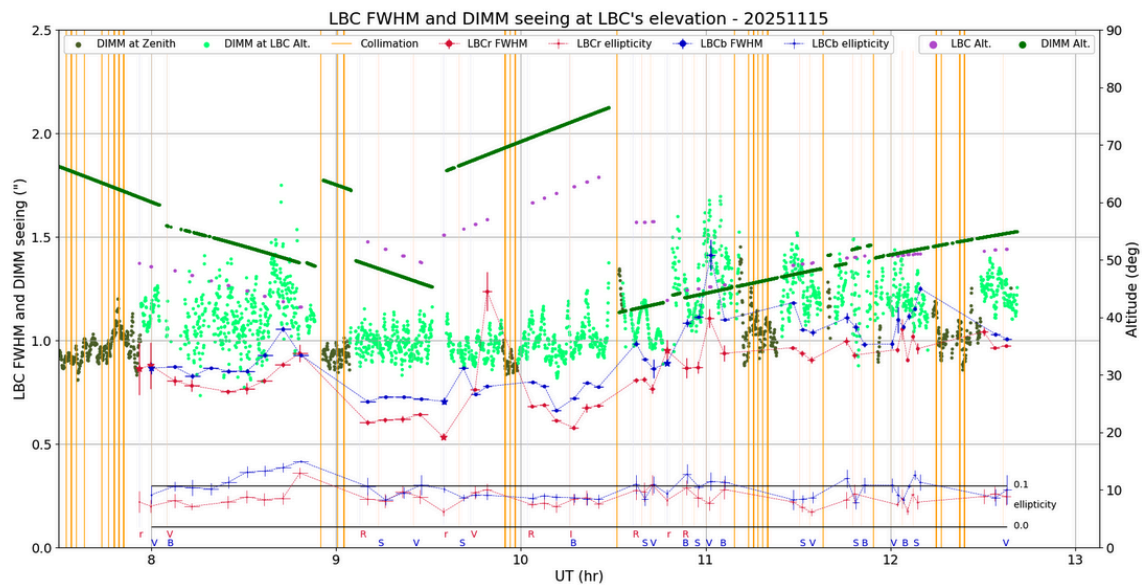
[M82 \(11:53-12:12\)](#)

[IC2574 extra \(12:12-12:42\)](#)

Sky Flats

Issues:

Weather:



Overview:

23:10 Riccardo has completed setting up with LUCI and done his test preset.

Calibrations

23:17 UT LUCI's initialized and starting Darks of OSU_XMD
10x[1x5.0s] LIR INT luci1/2.20251115.0001-10

GEIRS timeout on LUCI1. Endless countdown when taking the second exp of the second set of darks. Restarting LUCI1 GEIRS.

10x[4x15.0s] LIR INT luci1.20251115.0011, luci1.20251115.0017-25, luci2.20251115.0011-20,
5x[1x600.0s] NORM MER luci1.20251115.0012-16, luci2.20251115.0021-25

Although LBC's are not in the plan for tonight, I'm taking some biases for them just in case

00:24 UT Sunset

00:39 UT Riccardo is doing a pointing and collimation check

00:50 UT Waiting for 12 degree twilight to start science.

UVa_nirjets

IRS20343 (1:11-2:14, 2:17-2:40)

01:11 UT Sending preset for IRAS20343+4129
Luci1.20251115.0026- ,luci2.20251115.0026-

01:15 UT 12 degree evening twilight

01:24 UT IQ on images 0.52-0.63", conditions clear

01:35 UT GCS is reporting 0.68" average seeing.



01:44 UT 18 degree evening twilight

01:47 UT DIMM 1.1", seeing a bit more variable on the the guider, jumping from 0.75-0.95" on the WFS

LUCI1 FW1 error (2:14-2:17)

02:14 UT FW1 on LUCI1 failed to reach position. A nudge os 3x+10 triggered switch 6 for PaB.

02:17 Resuming script. Luci2 took one additional image in Fell at 2.69", 8.35" offset position, but then we continued with the two sides taking in sync

PaB, Fell star with

luci1.20251115.0063, luci2, 20251115.0064 (luci2.20251115.0063 is repeat of Fell 1st pos)

02:25 UT Seeing briefly was 1.4 for about a minute, but back down to 0.8" or less on the guiders. Seeing may be becoming more variable, but average is still ~0.8"

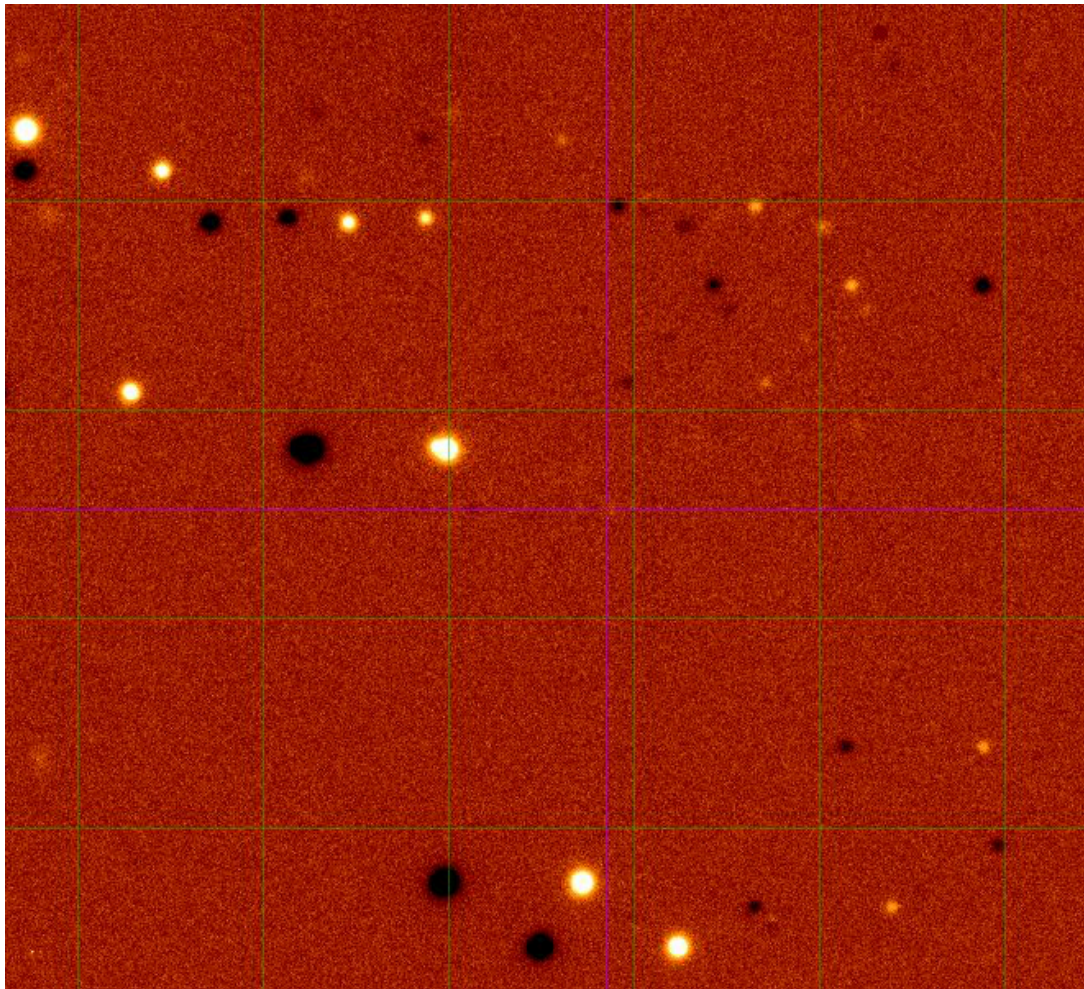
UVa_BCD

J2229+2725 (2:40-3:18, no science)

02:40 UT Sending preset to J2229+2725. Pointing check needed.

02:47 UT Resending preset after pointing check.

03:00 UT We can not identify the source in J, we are trying z since it is a bluer source. Bind offsets should be used for such a faint target in the future.



03:16 UT Script has an error. No slit image. Moving mask in FPU

LUCI MOS error (3:18-3:44)

03:18 UT MOS error on LUCI2.

Y clamp failed to reach the locked position , even after -50 autocorrect.

Moved an additional - 50, moved 9 extra steps and the neg limit came on.

03:43 UT MOS unit recovered. The previous target was not easily identifiable so we are moving on.

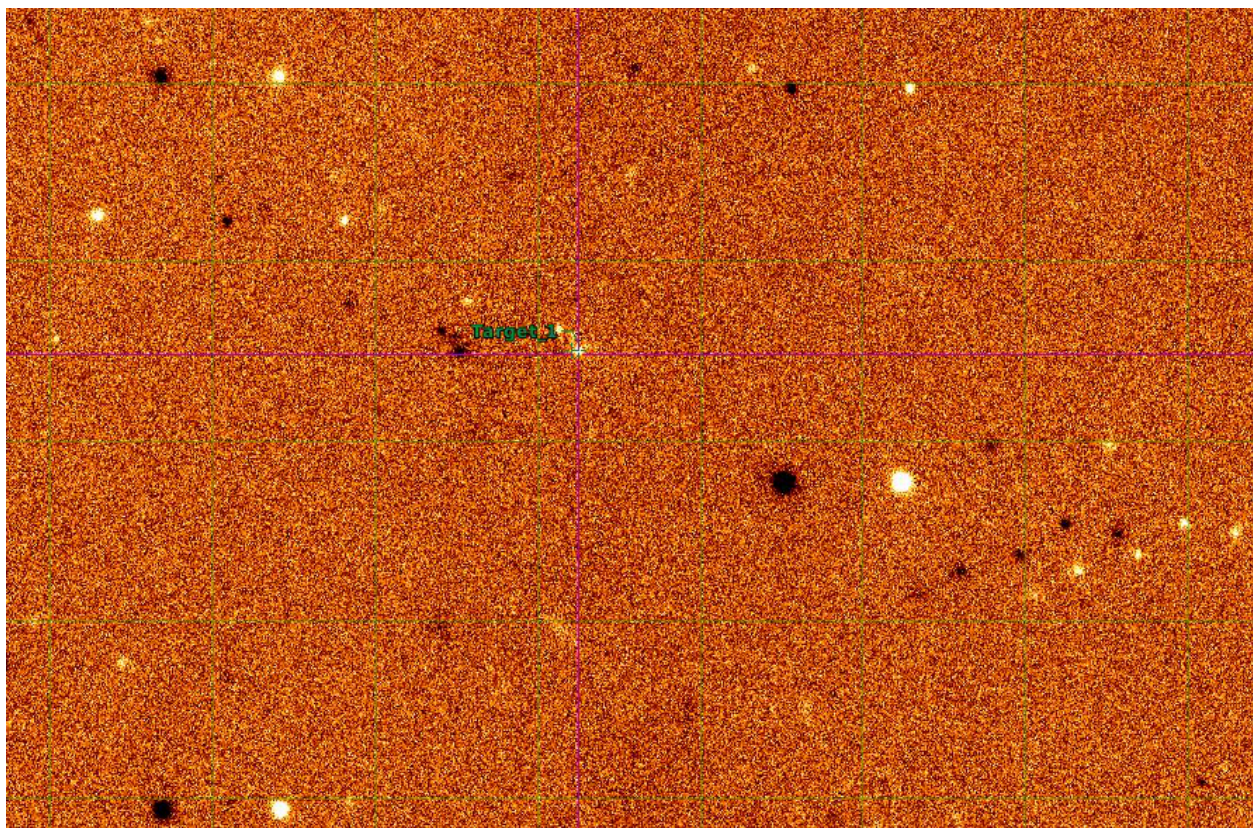
UM_XMDs_LUCI

J0047 (3:44-5:03)

03:44 UT Slewing to J0047+2447 for acquisition

Long Slit Result				
X-shift:	<input type="text" value="-0.6326"/>	as	<input type="text" value="-5.3700"/>	px
Y-shift:	<input type="text" value="-0.0094"/>	as	<input type="text" value="-0.0800"/>	px
Angle:	<input type="text" value="0.0000"/>	deg		
<input type="button" value="reset LS"/>		<input type="button" value="calculate"/>		<input type="button" value="send"/>

Long Slit Result				
X-shift:	<input type="text" value="-2.8144"/>	as	<input type="text" value="-23.6500"/>	px
Y-shift:	<input type="text" value="0.0571"/>	as	<input type="text" value="0.4800"/>	px
Angle:	<input type="text" value="0.0000"/>	deg		
<input type="button" value="reset LS"/>		<input type="button" value="calculate"/>		<input type="button" value="send"/>



03:59 UT Starting science. Seeing is 0.85-0.89 on the guiders, 1.1" on the DIMM. Conditions clear. Cyclope is 0.8-1.0"
luci1/2.20251115.0087-92

Emission lines are easily identifiable for this source!

HIP116886 (5:03-5:17)

05:03 UT Sending preset to telluric

Long Slit Result			
X-shift:	<input type="text" value="-10.1756"/>	as	<input type="text" value="-86.3800"/> px
Y-shift:	<input type="text" value="0.1567"/>	as	<input type="text" value="1.3300"/> px
Angle:	<input type="text" value="0.0000"/>	deg	
<input type="button" value="reset LS"/>		<input type="button" value="calculate"/>	
<input type="button" value="send"/>			

Long Slit Result			
X-shift:	<input type="text" value="-12.1951"/>	as	<input type="text" value="-102.4800"/> px
Y-shift:	<input type="text" value="-0.0881"/>	as	<input type="text" value="-0.7400"/> px
Angle:	<input type="text" value="0.0000"/>	deg	
<input type="button" value="reset LS"/>		<input type="button" value="calculate"/>	
<input type="button" value="send"/>			

Slight nudge right needed on the left

luci1/2.20251115.0098-99

05:16 UT Seeing is 1.2" on the DIMM and 0.8" on the guider.

J0232 (5:17-7:01)

05:17 UT Slewing to J0232+2105. Pointing check needed.

05:23 UT Resending preset to target after pointing.

Finders do not match. Finder has one source in 2arcmin field but this is a rather populated field with a very bright star above that may have washed it out. Finders were provided in the visible. Mark verified field in the legacy survey:

RA,Dec = 38.0589, 21.0824, zoom 14



50 arcsec

Contrast: 1

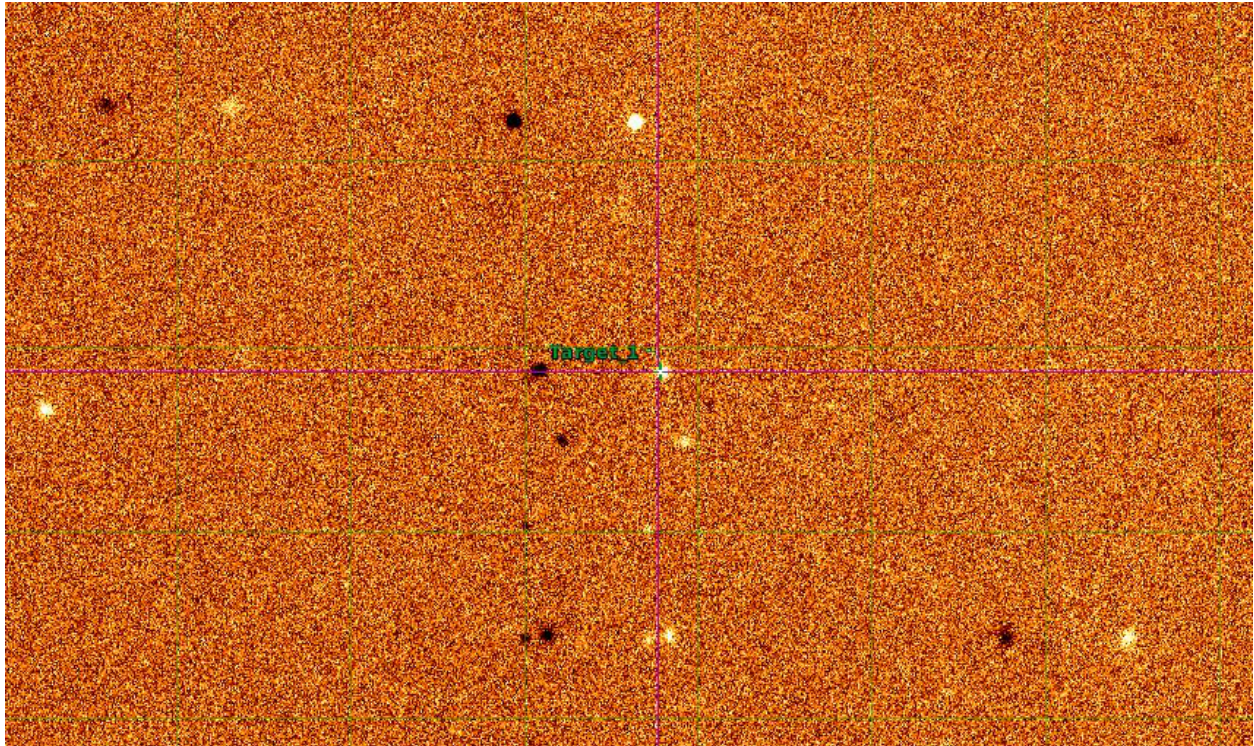
Brightness: 1

Jump to object:

Custom catalog upload (FITS or CSV; RA,Dec,[name,color,radius]):

No file chosen

- Images
 - + Legacy Surveys DR10 images
 - + Legacy Surveys DR9 images
 - + Older Legacy Surveys
 - + unWISE W1/W2 NEO7
 - + More surveys
- Overlays
 - + Boundaries
 - + Imaging catalogs
 - + Spectroscopy
 - DESI
 - DESI Footprint
 - DESI Fibers
 - DESI EDR tiles
 - DESI EDR spectra
 - DESI DR1 tiles
 - DESI DR1 spectra
 - DESI daily observations
 - + DESI Targets
 - + Bright Objects



Long Slit Result				
X-shift:	<input type="text" value="-0.1944"/>	as	<input type="text" value="-1.6500"/>	px
Y-shift:	<input type="text" value="-0.0295"/>	as	<input type="text" value="-0.2500"/>	px
Angle:	<input type="text" value="0.0000"/>	deg		
<input type="button" value="reset LS"/>		<input type="button" value="calculate"/>		<input type="button" value="send"/>

Long Slit Result				
X-shift:	<input type="text" value="-2.3336"/>	as	<input type="text" value="-19.6100"/>	px
Y-shift:	<input type="text" value="0.0119"/>	as	<input type="text" value="0.1000"/>	px
Angle:	<input type="text" value="0.0000"/>	deg		
<input type="button" value="reset LS"/>		<input type="button" value="calculate"/>		<input type="button" value="send"/>

Slight adjustments needed on both sides to center on the slits.

05:50 UT Starting science. Seeing 0.5-0.8" on the guiders. Conditions clear.
luci1/2.20251115.0006-11
Image luci2.20251115.0110 shows an image jump.

Reconfig & LBC Collimation(7:01-7:52)

07:01 UT Reconfig to LBCs

07:10 UT TMS Lasers on

07:18 UT TMS Loop started

07:20 UT Sending preset to copointing field, whoops forgot to connect telescope. Connected and resending.

07:24 UT dof pia

07:38 UT runaway on focus. Riccardo is backing that out. Doing some manual collimation.

LBCB Coma z7 +3000

LBCB Focus z4 -15000

Lots of focus and z7 needed.

ND_sn09ig

SN09ig (7:52-8:53)

07:52 UT Copointing

07:56 UT Script error in copointing script. Taking 3x300s exp for LBC Blue. Remaking.

07:59 UT Resending copointing,

08:04 UT Starting science.

08:15 UT Seeing is 0.7-0.8 on the images, 0.9" on the DIMM

08:50 UT IQ on DX is starting to degrade a bit. Seeing remains about 0.8" on red and just over an 1" on blue.

OSU_monitor

N925 (8:53-9:31)

08:53 UT Sending preset to N925 for copointing and collimation, starting with copointing.

08:57 UT Copointed and starting Collimation

Some focus for the red and blue needed, but all else looked good. Est seeing 0.55-0.65 on dof pia.

09:05 UT Starting science. Seeing is 0.91" on the DIMM, clear skies.

09:27 UT IQ on images 0.6-0.7", DIMM 0.9", clear

OSU_ASASSN_LSB

ALSBG1 (9:31-10:28)

09:31 UT Sending preset for copointing. Big slew. IQ has been holding so we will not collimate.

09:37 Moonrise (20.0% illumination)

09:39 UT Starting science with the ALSBG1_UandV.xml script.

09:51 UT The IQ on the right side appears soft, although ellipticity looks good. Recollimating. Looks like Red needs some focus. This was confirmed with dofpa.

10:01 UT Science started on ALSBG1_UandR.xml script. Seeing 0.8-0.9" on the LBC guiders, 0.95" on the DIMM. Clear.

10:15 UT Starting last script, ALSBG1_BandI.xml. Seeing is 0.6-0.7" on the images.

OSU_monitor

N2403 (10:28-10:46)

10:28 UT Sending Copoint preset. IQ continues to hold so we won't collimate.

10:34 UT Sending Science for N2403. Seeing is 1.0" on the DIMM and LBC guiders.

10:44 UT Seeing 0.8-0.9" on the images. IQ still looks good.

I2574 (10:46-11:08)

10:46 UT Slewing to copointing field. IQ is holding so we won't collimate.

10:51 UT Sending science.

11:00 UT lbc too few downloaded pixels image lbc.20251115.105615

11:03 UT Taking one additional image to recover the scrambled image.

N3077 (11:08-11:37)

11:08 UT Sending preset for copointing and collimation.

11:12 UT Starting collimation. LBC blue was looking a touch soft. Focus was oscillating on the right.

11:22 UT Starting science.

11:32 UT Seeing is a bit worse but IQ looks good. Seeing is 1-1.1" on the images now

M81 (11:37-11:53)

11:37 UT Sending copointing preset for M81

11:41 UT Starting science on M81.

11:45 UT Seeing has deteriorated, about 1.1-1.3" on the guiders now.

M82 (11:53-12:12)

11:53 UT Preset for copointing on M82

11:59 UT Starting science. Seeing looks like its improving again, 1" on the DIMM and Guiders.

12:09 UT We finished early so repeating IC2574 which had a scrambled image in the mix.

IC2574 extra (12:12-12:42)

12:12 UT Sending Preset for collimation

12:20 UT Accidentally send science script while reference was taken. Pose failed. RTMS chugged along. Need to recollimate. Whoops

12:25 UT 18 degree morning twilight

12:27 UT Science started. Seeing ~1" on DIMM and images.

Sky Flats

12:42 UT Sending preset to sky flat field

12:54 UT 12 degree morning twilight

V & R Flats PA 0 - Full set 5 complete

V & R Flats PA 180 - Set of 4 good,
lbc.20251115.131308 scrambled image, IT8489

B & V Flats PA 180 - Full set complete

Another scrambled image lbc.20251115.131930

B & V Flats PA 0 - Set of 4 good

USpec & Y Fan PA 0 - Set of 4 complete
Pushed out luck... No time to do the other PA

13:45 UT Sunrise