



THE DARK ENERGY SURVEY

Astrometry Progress for Version 3 of FNAL Processing

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Status:

Completely Successful Nights:

November: 27, 29, 30

December: 3 – 19, 22– 23, 28 – 31

January: 1, 6 – 20

Partially Successful Nights:

December 1:

Z and y filters are good, g,r,i filters had images fail first phase.

December 31, r:

Image Ftttpprecam_00017315 has an Unsolved error.

November 28:

All filters had some images that failed first phase

November 24, r:

Only r filter was touched, others left alone.
Had images that failed first phase

Status:

Unsucessful Nights:

November 21 – 22 <--- All images did not successfully pass first phase

UncomPLETED Nights:

November 23, 25 - 26 <--- Need to be checked for
Copying to cluster correctly
December 2 <--- Header problems; left alone

Status:

Nights with no data:

November: 15 - 20

December: 20 – 21, 22 z and y, 24- 27
January: 2 – 5, 6 z and y, 15 – 20 g,r,z,y

V3.CAT FILES:

The following is an example of the information added to the headers of the images:

```
# FILTER: i
# OBJECT: precam2081_1
# RADEC: 63.789 (approx. center of PreCam FOV,
degrees)
# DECDEG: -30.807 (approx. center of PreCam FOV,
degrees)
# HADEC: 45.437 (Hour Angle, degrees)
# ALTDEC: 51.116 (altitude, degrees)
# AZDEG: 257.120 (azimuth, degrees)
# AIRMASS: 1.286
# AIRMASS_SLALIB: 1.284
# MJD-OBS: 55574.188144
```

cont. -->

```
# LSTDEG: 109.226556 (Local Sidereal Time, degrees)
# EXPREQ: 65.000 (requested exposure time, seconds)
# MOONUP: 0 (1=yes, 0=no, -1=unknown)
# MOONALTDEG: -1.592 (Moon altitude, degrees)
# MOONAZDEG: 287.490 (Moon azimuth, degrees)
# MOONRADEG: 25.837 (Moon RA, degrees)
# MOONDECDEG: 16.447 (Moon Dec, degrees)
# MOONSEPDEG: 59.698 (angular separation from Moon,
degrees)

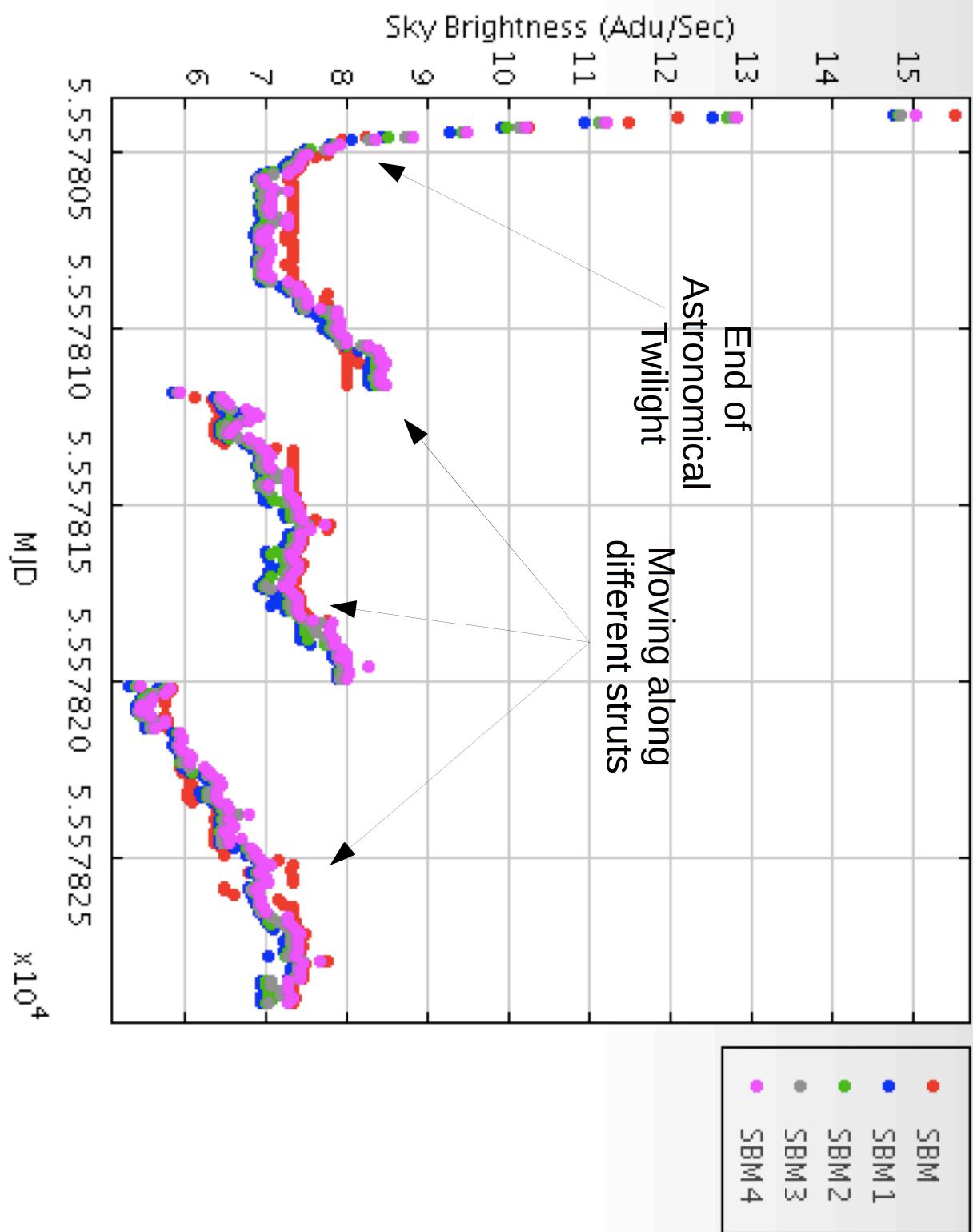
# MOONPHASE: 0.569 (Phase of Moon, 0=New, 1=Full)
# FWHM_MED: 3.409 (median FWHM, arcsec)
# SBM: 192.004 (mean sky background, ADU)
# SBM1: 192.014 (mean sky background in Quarter 1,
ADU)
# SBM2: 192.406 (mean sky background in Quarter 2,
ADU)
# SBM3: 192.120 (mean sky background in Quarter 3,
ADU)

cont -->
```

```
# SBM4: 192.573 (mean sky background in Quarter 4,  
ADU)  
# SBSTD: 1.422 (std dev sky background, ADU)  
# SBSTD1: 0.690 (std dev sky background in Quarter 1,  
ADU)  
# SBSTD2: 0.973 (std dev sky background in Quarter 2,  
ADU)  
# SBSTD3: 1.058 (std dev sky background in Quarter 3,  
ADU)  
# SBSTD4: 1.598 (std dev sky background in Quarter 4,  
ADU)  
# STM: 0.275 (streak mean, ADU)  
# STM1: 0.277 (streak mean in Quarter 1, ADU)  
# STM2: 0.161 (streak mean in Quarter 2, ADU)  
# STM3: 0.236 (streak mean in Quarter 3, ADU)  
# STM4: 0.427 (streak mean in Quarter 4, ADU)  
# STSTD: 6.258 (streak std dev, ADU)  
# STSTD1: 6.560 (streak std dev in Quarter 1, ADU) --->
```

```
# STSTD2: 7.269 (streak std dev in Quarter 2, ADU)
# STSTD3: 5.478 (streak std dev in Quarter 3, ADU)
# STSTD4: 5.615 (streak std dev in Quarter 4, ADU)
# STMIN: -167.573 (streak min, ADU)
# STMAX: 128.712 (streak max, ADU)
# USEIMA: 1 (Use image flag; 1=yes, -1=no)
# USEQ1: 1 (Use Quarter 1 flag; 1=yes, -1=no)
# USEQ2: 1 (Use Quarter 2 flag; 1=yes, -1=no)
# USEQ3: 1 (Use Quarter 3 flag; 1=yes, -1=no)
# USEQ4: 1 (Use Quarter 4 flag; 1=yes, -1=no)
```

Some QA



Something Extra

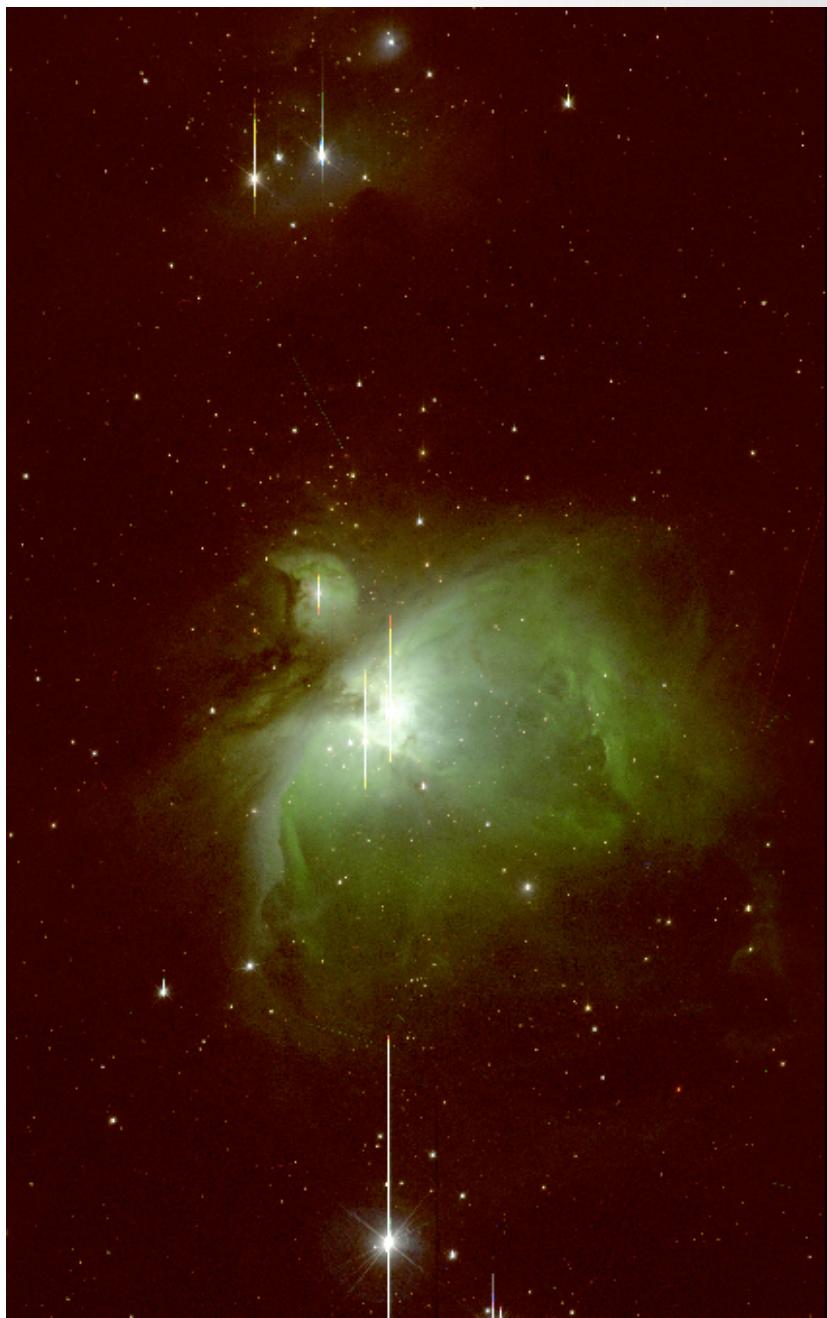


Image of Orion Nebula in gri bands using
logscale, courtesy of Dr. Sahar Allam

Backup Slides: