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## Highlights Year in Review

Main efforts so far

* Emission line data gathering for nebulae and galaxy analysis with continuum subtraction
  + M33
  + M42
  + M109
  + M51
* Planetary observations

## January

### 2021-Jan-06 (Jan-075 UT): M42 Wide Angle, Narrowband Blue Regime

Last Updated 1/9/2021

Transparency was excellent (4/5) and seeing was good (3/5).

|  |  |
| --- | --- |
|  |  |
| M42-20210107UT-486HIB-sum29m45s-Flattened-Log.png | M42-20210107UT-501OIII-sum30m00s-Flattened-Log.png |
|  |  |
| M42-20210107UT-467HeII-sum29m45s-Flattened-Log.png | M42-20210107UT-540CNT-sum29m30s-Flattened-Log.png |
|  |  |
| M42-20210107UT-540CNT-sum5m30s-Saturated-Flattened-Log.png | M42-20210107UT-XXX-R(486)G(467)B(501).png |

**Data Disposition:**

* Raw data is zipped and archived on the 4TB drive.
* Processed data is in appropriate project directories on the Astronomy SD card.

### 2021-Jan-10 (Jan-11 UT): M42 Huygens Region Video – 730OIII

Last Updated 1/12/2021

Transparency was good (3/5) and seeing was very good (4/5).

~30% top images (300 per avi file)

Dark frame multiplied by 0.5 (50%) worked superbly to remove artifacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Video File** | **Exposure** | **Gain** | **Gamma** | **Binning** | **Capture Area** |
| 2021-01-11-0241\_9-M42\_730OIII.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-01-11-0354\_1-M42\_730OIII.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-01-11-0430\_4-M42\_Dark.avi | 0.999 | 100 | 50 | 1 | 1280x960 |

|  |  |
| --- | --- |
|  |  |
| 2021-01-11-0XXX\_X-M42-730OIII-Stack1800Dark50pct-Lin.png | 2021-01-11-0XXX\_X-M42-730OIII-Stack1800Dark50pct-Log.png |

**Data Disposition:**

* Raw data is zipped and archived on the 4TB drive.
* Processed data is in appropriate project directories on the Astronomy SD card.

### 2021-Jan-11 (Jan-12 UT): M42 Huygens Region Video – 550GRN, 380NUV, 1000NIR

Last Updated 1/12/2021

Transparency was good (3/5) and seeing was very good (4/5).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Video File** | **Exposure** | **Gain** | **Gamma** | **Binning** | **Capture Area** |
| 2021-01-12-0249\_0-M42\_550GRN.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0251\_2-M42\_550GRN.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0253\_3-M42\_550GRN.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0255\_6-M42\_550GRN.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0301\_8-M42\_550GRN.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0315\_3-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0336\_1-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0356\_4-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0421\_0-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0450\_2-M42\_1000NIR.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0513\_0-M42\_1000NIR.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0534\_1-M42\_1000NIR.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0643\_8-Dark\_999ms.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-01-12-0646\_2-Dark\_200ms.avi | 0.2 | 100 | 50 | 1 | 1280x960 |

|  |  |
| --- | --- |
|  |  |
| 2021-01-12-0XXX\_R(1000)G(550)B(380)-Lin.png | 2021-01-12-0XXX\_R(1000)G(550)B(380)-Log-ClrBal.png |

|  |  |
| --- | --- |
|  |  |
| 2021-01-12-0XXX\_0-M42\_1000NIR-Stack900Dark50%-Lin.png | 2021-01-12-0XXX\_0-M42\_1000NIR-Stack900Dark999ms50%-Log.png |
|  |  |
| 2021-01-12-0XXX\_X-M42\_550GRN-Stack1000Dark999ms50%-Lin.png | 2021-01-12-0XXX\_X-M42\_550GRN-Stack1000Dark999ms50%-Log.png |
|  |  |
| 2021-01-12-0XXX\_X-M42\_380NUV-Stack1200Dark50%-Lin.png | 2021-01-12-0XXX\_X-M42\_380NUV-Stack1200Dark50%-Log.png |

**Data Disposition:**

* Raw data is zipped and archived on the 4TB drive.
* Processed data is in appropriate project directories on the Astronomy SD card.

### 2021-Jan-19 (Jan-20 UT): M42 Wide Angle Spectrum

Last Updated 1/12/2021

Transparency was good (3/5) and seeing was very good (4/5).

|  |
| --- |
|  |
|  |
| M42-Spectrum-20210120UT-685NIR-sum1h55m30s-Cropped-HalfSize.jpg |

## February

### 2021-Feb-24 (Feb-23 UT): M42 Video

Last Updated 3/3/2021

Transparency was excellent (4/5) and seeing was good (3/5).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Video File** | **Exposure** | **Gain** | **Gamma** | **Binning** | **Capture Area** |
| 2021-02-23-0255\_4-M42-656HIA.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0257\_6-M42\_656HIA.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0304\_3-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0306\_7-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0309\_1-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0312\_2-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0318\_3-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0322\_4-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0325\_3-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0327\_6-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0329\_8-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0343\_3-M42\_647CNT.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0345\_5-M42\_647CNT.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0351\_3-M42\_647CNT.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0354\_0-M42\_647CNT.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0356\_1-M42\_647CNT.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0404\_1-M42\_656HIA.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0406\_8-M42\_656HIA.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0413\_2-M42\_656HIA.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0415\_8-M42\_656HIA.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0418\_0-M42\_656HIA.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0429\_1-Dark\_200ms.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0430\_2-Dark\_999ms.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0437\_4-Flat\_656HIA.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0438\_7-Flat\_647CNT.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0441\_4-Flat\_672SII.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-02-23-0442\_8-Flat\_658NII.avi | 0.999 | 100 | 50 | 1 | 1280x960 |

|  |  |
| --- | --- |
|  |  |
| 2021-02-23-0324\_7-M42\_672SII-200msDark50pctStack1000-Lin.jpg | 2021-02-23-0324\_7-M42\_672SII-200msDark50pctStack1000-Log.jpg |
|  |  |
| 2021-02-23-0308\_1-M42\_658NII-200msDark50pctStack800-Lin.jpg | 2021-02-23-0308\_1-M42\_658NII-200msDark50pctStack800-Log.jpg |
|  |  |
| 2021-02-23-0350\_1-M42\_656HIA-200msDark50pctStack1400-Lin.jpg | 2021-02-23-0350\_1-M42\_656HIA-200msDark50pctStack1400-Log.jpg |

|  |  |
| --- | --- |
|  |  |
| 2021-02-23-0350\_0-M42\_647CNT-200msDark50pctStack1000-Lin.jpg | 2021-02-23-0350\_0-M42\_647CNT-200msDark50pctStack1000-Log.jpg |

**Data Disposition:**

* Raw data is zipped and archived on the 4TB drive.
* Processed data is in appropriate project directories on the Astronomy SD card.

## March

### 2021-Mar-01 (Mar-02 UT): M42 Video

Last Updated 3/3/2021

Transparency was excellent (4/5) and seeing was excellent (4.5/5).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Video File** | **Exposure** | **Gain** | **Gamma** | **Binning** | **Capture Area** |
| 2021-03-02-0223\_7-M42\_650RED.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0225\_8-M42\_650RED.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0227\_8-M42\_650RED.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0230\_4-M42\_650RED.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0232\_6-M42\_650RED.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0240\_0-M42\_450BLU.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0242\_9-M42\_450BLU.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0245\_1-M42\_450BLU.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0247\_2-M42\_450BLU.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0254\_9-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0257\_1-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0259\_2-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0301\_6-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0303\_8-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0306\_3-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0309\_0-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0311\_2-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0313\_4-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0315\_6-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0317\_8-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0320\_0-M42\_380NUV.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0324\_3-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0326\_6-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0328\_9-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0331\_1-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0333\_4-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0335\_7-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0338\_0-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0340\_1-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0344\_7-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0347\_2-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0349\_4-M42\_672SII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0352\_0-M42\_672SII.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0354\_2-M42\_672SII.avi | 0.999 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0400\_2-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0402\_5-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0404\_7-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0407\_5-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0409\_7-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0411\_9-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0415\_0-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0417\_2-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0419\_6-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0422\_2-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0424\_4-M42\_658NII.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0436\_0-M42\_Dark\_200ms.avi | 0.2 | 100 | 50 | 1 | 1280x960 |
| 2021-03-02-0437\_6-M42\_Dark\_999ms.avi | 0.999 | 100 | 50 | 1 | 1280x960 |

|  |  |
| --- | --- |
|  |  |
| 2021-03-02-0353\_1-M42\_672SII-999msDark50pctStack80-Lin.jpg | 2021-03-02-0353\_1-M42\_672SII-999msDark50pctStack80-Log.jpg |
|  |  |
| 2021-03-02-0336\_3-M42\_672SII-200msDark50pctStack2200-Log.jpg | 2021-03-02-0336\_3-M42\_672SII-200msDark50pctStack2200-Log.jpg |

|  |  |
| --- | --- |
|  |  |
| 2021-03-02-0412\_3-M42\_658NII-200msDark50pctStack2200-Lin.jpg | 2021-03-02-0412\_3-M42\_658NII-200msDark50pctStack2200-Log.jpg |
|  |  |
| 2021-03-02-0228\_0-M42\_650RED-200msDark50pctStack1000-Lin.jpg | 2021-03-02-0228\_0-M42\_650RED-200msDark50pctStack1000-Log.jpg |

|  |  |
| --- | --- |
|  |  |
| 2021-03-02-0243\_8-M42\_450BLU-200msDark50pctStack800-Lin.jpg | 2021-03-02-0243\_8-M42\_450BLU-200msDark50pctStack800-Log.jpg |
|  |  |
| 2021-03-02-0307\_5-M42\_380NUV-999msDark50pctStack480-Lin.jpg | 2021-03-02-0307\_5-M42\_380NUV-999msDark50pctStack480-Log.jpg |

**Data Disposition:**

* Raw data is zipped and archived on the 4TB drive.
* Processed data is in appropriate project directories on the Astronomy SD card.

### 2021-Mar-02 (Mar-03 UT): M42 Video

Last Updated 3/3/2021

Transparency was excellent (4/5) and seeing was excellent (4/5).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Video File** | **Exposure** | **Gain** | **Gamma** | **Binning** | **Capture Area** |
| 2021-03-03-0212\_2-M42\_501OIII.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0214\_6-M42\_501OIII.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0216\_9-M42\_501OIII.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0219\_1-M42\_501OIII.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0221\_3-M42\_501OIII.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0223\_4-M42\_501OIII.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0225\_5-M42\_501OIII.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0227\_7-M42\_501OIII.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0229\_8-M42\_501OIII.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0237\_4-M42\_486HIB.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0239\_6-M42\_486HIB.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0241\_7-M42\_486HIB.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0243\_9-M42\_486HIB.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0246\_1-M42\_486HIB.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0248\_7-M42\_486HIB.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0251\_2-M42\_486HIB.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0253\_4-M42\_486HIB.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0257\_1-M42\_486HIA.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0259\_5-M42\_486HIA.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0301\_7-M42\_486HIA.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0303\_9-M42\_486HIA.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0306\_2-M42\_486HIA.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0311\_5-M42\_658NII.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0315\_4-M42\_658NII.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0322\_3-M42\_658NII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0324\_4-M42\_658NII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0326\_5-M42\_658NII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0329\_7-M42\_672SII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0331\_8-M42\_672SII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0334\_6-M42\_672SII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0336\_8-M42\_672SII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0339\_1-M42\_672SII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0341\_6-M42\_672SII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0343\_8-M42\_672SII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0346\_5-M42\_672SII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0349\_1-M42\_672SII.avi | 0.999 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0355\_2-M42\_685NIR.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0357\_8-M42\_685NIR.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0359\_9-M42\_685NIR.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0402\_0-M42\_685NIR.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0404\_1-M42\_685NIR.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0406\_3-M42\_685NIR.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0408\_8-M42\_685NIR.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0412\_2-M42\_200msDark.avi | 0.2 | 50 | 100 | 1 | 1280x960 |
| 2021-03-03-0413\_8-M42\_999msDark.avi | 0.999 | 50 | 100 | 1 | 1280x960 |

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|  |  |
| 2021-03-03-0221\_2-M42\_501OIII-200msDark50pctStack1400-Lin.jpg | 2021-03-03-0221\_2-M42\_501OIII-200msDark50pctStack1400-Log.jpg |
|  |  |
| 2021-03-03-0245\_3-M42\_486HIB-200msDark50pctStack1600-Lin.jpg | 2021-03-03-0245\_3-M42\_486HIB-200msDark50pctStack1600-Log.jpg |

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|  |  |
| 2021-03-03-0301\_7-M42\_656HIA-200msDark50pctStack1000-Lin.jpg | 2021-03-03-0301\_7-M42\_656HIA-200msDark50pctStack1000-Log.jpg |
|  |  |
| 2021-03-03-0313\_5-M42\_658NII-200msDark50pctStack400-Lin.jpg | 2021-03-03-0313\_5-M42\_658NII-200msDark50pctStack400-Log.jpg |

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|  |  |
| 2021-03-03-0324\_4-M42\_658NII-999msDark50pctStack120-Lin.jpg | 2021-03-03-0324\_4-M42\_658NII-999msDark50pctStack120-Log.jpg |
|  |  |
| 2021-03-03-0339\_2-M42\_672SII-999msDark50pctStack360-Lin.jpg | 2021-03-03-0339\_2-M42\_672SII-999msDark50pctStack360-Log.jpg |
|  |  |
| 2021-03-03-0402\_0-M42\_685NIR-200msDark50pctStack1400-Lin.jpg | 2021-03-03-0402\_0-M42\_685NIR-200msDark50pctStack1400-Log.jpg |

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|  |  |
| 2021-0X-XX-0XXX\_X-M42-R(RED)G(GRN)B(BLU)-16bit-Gam50pct.png | 2021-03-0X-0XXX\_X-M42\_XXX-R(672)G(656)B(501)-16bit-Gam50pct.png |
|  |  |
| 2021-0X-XX-0XXX\_X-M42\_XXX-R(730)G(486)B(501)-Gam50pct.png | 2021-0X-XX-0XXX\_X-M42\_XXX-R(672)G(486)B(1000)-Gam50pct.png |

### 2021-Mar-03 (Mar-04 UT): Flame and Horsehead Imaging

Last Updated 4/8/2021

Transparency was excellent (4/5) and seeing was excellent (4/5).

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|  |  |
| Flame-20210304UT-550OPN-sum04m12s.jpg | HH-20210304UT-550OPN-sum00m50s.jpg |
|  |  |
| NGC2023-20210304UT-550OPN-sum02m30s.jpg | HH-20210304UT-658NII-sum04m50s-Flattened.jpg |

## April

### 2021-Mar-31 (Apr -01 UT): M97 Imaging

Last Updated 3/3/2021

Transparency was excellent (4/5) and seeing was excellent (4.5/5).

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|  |  |
| M97--20210401UT-sum17m20s-550OPN-Flattened.jpg | M97--20210401UT-sum01h14m00s-658NII-Flattened.jpg |

### 2021- Apr -01 (Apr -02 UT): M108 Imaging – 467HeII, 550OPN, 658NII, 730OIII

Last Updated 3/3/2021

Transparency was excellent (4/5) and seeing was excellent (4.5/5).

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|  |  |
| M108--20210402UT-2x2-550OPN-sum0h27m00s-Flattened.jpg | M108--20210402UT-2x2-658NII-sum1h07m30s-Flattened.jpg |
|  |  |
| M108--20210402UT-2x2-467HeII-sum10m40s-Flattened.jpg | M108--20210402UT-2x2-730OII-sum09m10s-Flattened.jpg |

### 2021- Apr -07 (Apr-08 UT): M108 Imaging – 467HeII

Last Updated 3/3/2021

Transparency was fair (4/5) and seeing was good (3.5/5). High cirrus to the south, but the north seemed fully at least for most of the integration time.

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| M108--20210408UT-2x2-467HeII-sum51m50s-Flattened.jpg | M108--2021040XUT-2x2-467HeII-sum01h02m30s-Flattened.jpg |

### 2021- Apr -08 (Apr-09 UT): M108 Imaging – 672SII

Last Updated 3/3/2021

Transparency was fair (4/5) and seeing was good (3.5/5). Accidentally took 1x1 binned image rather than 2x2 so signal-to-noise is very low.

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| M108--20210409UT-1x1-672SII-sum30m00s-HalfSize-Flattened.jpg |

## References