

Prospective Imaging Objects – September 16 2023

Astronomical Data

Sunrise	Sunset	Astronomical Dusk	Astronomical Dawn	Imaging	New Moon
06:11 am	06:32 pm	07:55 pm	04:48 am	07:53	Sep 16

Hardware Info

Configuration	FL	FOV	FOV°	Image Scale (1 – 1.5) ideal
C11HD ZWO ASI-6200 mono Pro	2800mm	45' x 30'	0.75° x 0.5°	0.280"/pix (Oversampled)
C11HD 0.7xReducer ZWO6200MCc	1960mm	60' x 45'	1.0° x 0.75°	0.393"/pix (Oversampled)
C11HD HS-v4 ZWO6200MCc	540mm	228' x 150'	3.8° x 2.5°	1.4"/pix (Undersampled)

How to use this document


Sculptor Galaxy (NGC 253)
Config: C11 | LF Corr |128c

Type: **Galaxy**
 Peak: **Oct 02**
 Constellation: **Sculptor**
 Coordinates:
00hr 47' 33"
-25° 17' 15"

Close Star: SAO-147420
 Catalog Objects: [NGC 253](#)

Imaging Window: *10:44 – 02:44
 Transit: **12:48**

Primary Focus



01: Background Fill Color - Items that I have previously imaged will have a fill color of grey, Images not yet imaged will have a white background color.

02: Object Name and catalog number – Common name long with one of the reference catalog numbers associated with this object.

03: Config – The optimal configuration to image this object, and the configuration the provided image is based on based on what hardware I own. Configuration will either be the Celestron C-11 Primary focus (with focal reducer) or C-11 with HyperStar.

04: Object Image – If this is an object I have already imaged, the thumbnail is my photo. It is hyperlinked to my website, so selecting the image should open a larger image in your browser. If the object has not yet been imaged by me the image displayed is for the identified configuration as obtained from <http://www.telescopious.com>.

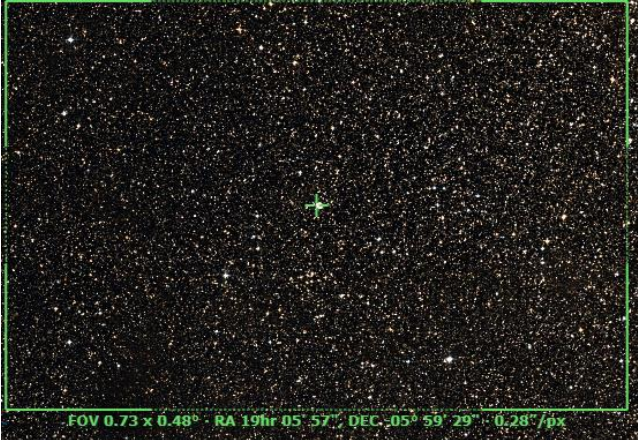
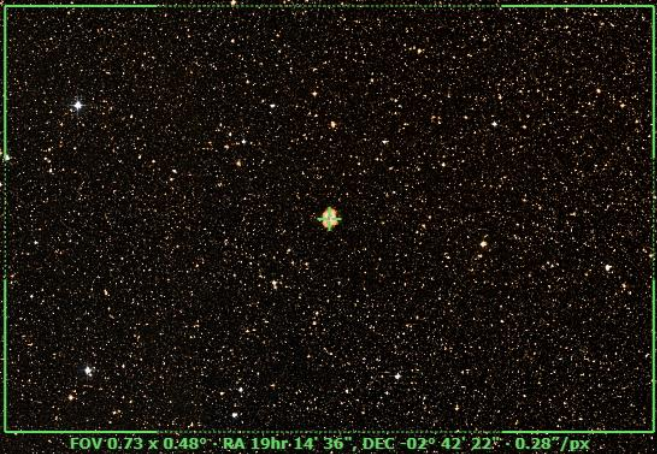

05: Close Star – A fairly bright star close to the target that can be used to check focus and sync the telescope before the imaging session begins.

06: Catalog Objects – List of objects that should appear in the field of view. When possible they are hyperlinked to <http://www.telescopious.com> where more information can be obtained.


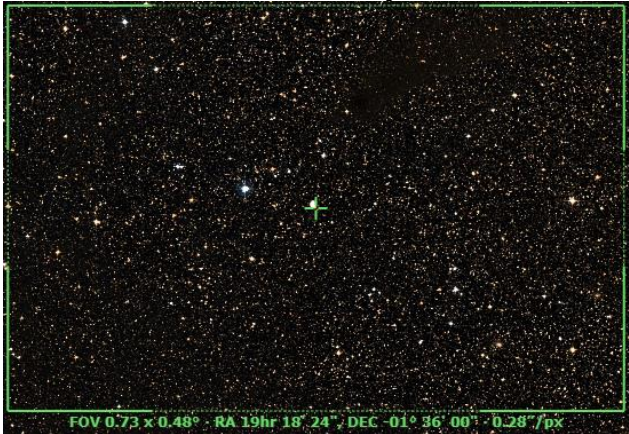
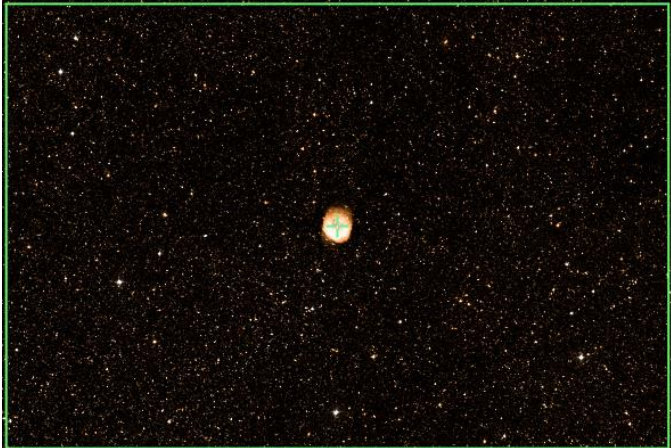
07: Imaging Window – Ideally the time the object is 45° above the horizon. Southern objects with negative DEC that do not peak above 45° are indicated with a *. Imaging window for these objects may be based on 30° or even 25° above horizon for the imaging window.

08: Transit – When the object is at the highest point in the sky for the night. For equatorial mounts this is when the meridian flip will occur.




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<p>NGC-6751 (PK 29-5.1) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Aquila Coordinates: 19h 05' 57" -05° 59' 29"</p> <p>Close Star: SAO-142931 (i Aquilae) Catalog Objects: NGC-6751 Imaging Window: *07:55 – 11:01 Transit: 07:56 51°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>NGC-6772 (PK 33-6.1) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Aquila Coordinates: 19h 14' 36" -02° 42' 22"</p> <p>Close Star: SAO-142931 (i Aquilae) Catalog Objects: NGC-6772 Imaging Window: *07:55 – 11:23 Transit: 08:04 54°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>Barnard's Black Lizard (B-138) Config: C11-HD HS ZWO6200MC</p> <p>Type: Dark Nebula</p> <p>Constellation: Aquila Coordinates: 19h 15' 59" 00° 13' 00"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: B-138 Imaging Window: 07:55 – 10:15 Transit: 08:06 57°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p> 




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<p>M-56 (NGC-6779) Config: C11HD ZWO6200MC </p> <p>Type: Globular Cluster</p> <p>Constellation: Lyra Coordinates: 19h 16' 35" 30° 11' 07"</p> <p>Close Star: SAO-67663 (Sulafat) Catalog Objects: M-56/NGC-6779 Imaging Window: 07:55 – 11:39 Transit: 08:06 87°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>NGC-6778 (PK 34-6.1) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Aquila Coordinates: 19h 18' 24" -01° 36' 00"</p> <p>Close Star: SAO-124068 (Alya) Catalog Objects: NGC-6778/PK 34-6.1 Imaging Window: 07:55 – 10:08 Transit: 08:08 55°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>NGC-6781 Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Aquila Coordinates: 19h 18' 28" 06° 32' 25"</p> <p>Close Star: SAO-125122 (Altar) Catalog Objects: NGC-6781/PK 41-2.1 Imaging Window: 07:55 – 10:44 Transit: 08:08 63°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 

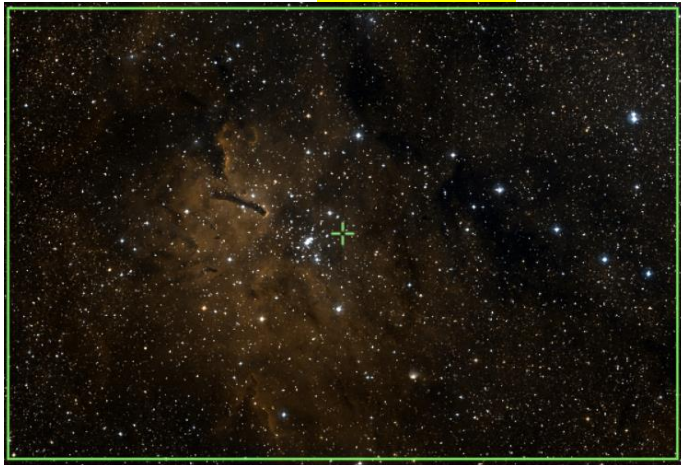
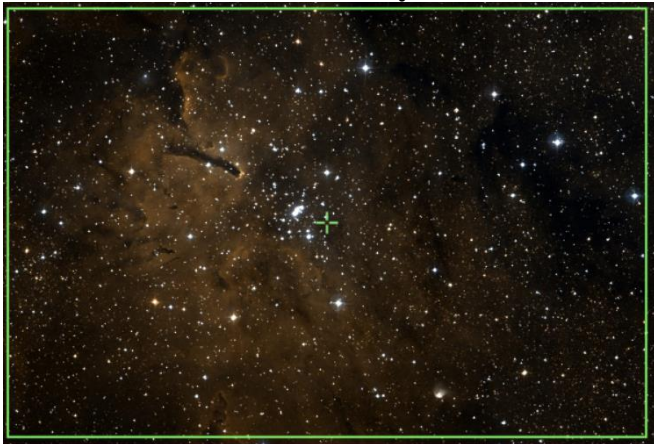
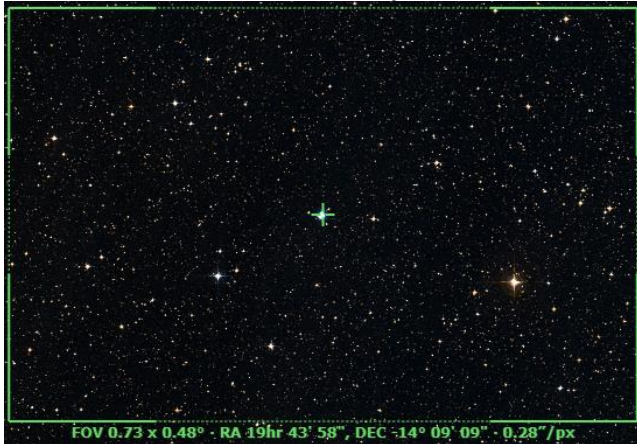
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<p>LDN-673 Config: C11-HD HS ZWO6200MC</p> <p>Type: Dark Nebula</p> <p>Constellation: Aquila Coordinates: 19h 18' 14" 11° 15' 40"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: LDN-673 Imaging Window: 07:55 – 11:02 Transit: 08:11 68°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p> 
<p>Lot Ness Monster (LDN-772) Config: C11-HD HS ZWO6200MC</p> <p>Type: Dark Nebula</p> <p>Constellation: Vulpecula Coordinates: 19h 26' 46" 23° 08' 59"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: LDN-772 Imaging Window: 07:55 – 11:35 Transit: 08:15 80°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="font-size: small; text-align: center;"> Lot Ness Monster (LDN-772) Constellation: Vulpecula RA = 19h 26m 46s DEC = 23deg 08' 59" Size = 1.12 x 2.14 deg (Observation: 300kg, E of N, FWHM scale = 2.28 arcsecond, F1-60mm) </p>
<p>NGC6804 Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Aquila Coordinates: 19h 31' 35" 09° 13' 33"</p> <p>Close Star: SAO-104728 (Omega Aq) Catalog Objects: NGC-6826 Imaging Window: 07:55 – 12:25 Transit: 08:34 66°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small; text-align: center;"> FOV 0.73 x 0.48° RA 19hr 31' 35", DEC 09° 13' 33" - 0.28"/px </p>

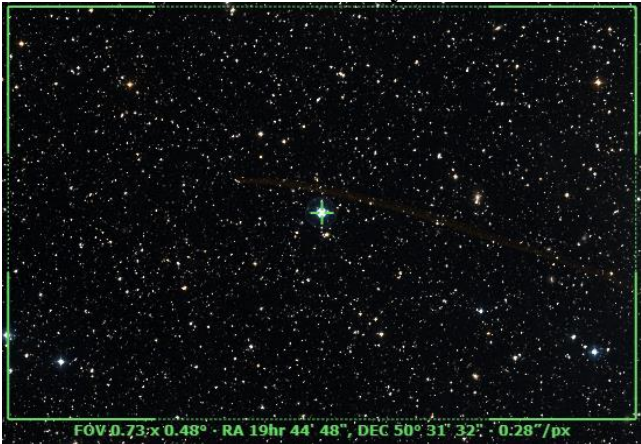


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<p>M-55 Config: C11HD ZWO6200MC </p> <p>Type: Globular Cluster</p> <p>Constellation: Sagittarius Coordinates: 19h 39' 59" -30° 57' 42"</p> <p>Close Star: SAO-191524 (Formalhaut) Catalog Objects: M-55/NGC-6809 Imaging Window: *07:55 – 10:28 Transit: 08:30 26°</p>	<p>C-11 HD: Primary Focus</p> 
<p>Barnard's E (B-143) Config: C11-HD FR ZWO6200MC </p> <p>Type: Dark Nebula</p> <p>Constellation: Aquila Coordinates: 19h 40' 47" 11° 01' 12"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: B-143/LDN-694 Imaging Window: 07:55 – 11:22 Transit: 08:31 67°</p>	<p>C-11 HD: Focal Reducer</p> 
<p>NGC-6820 (LDN-772) Config: C11-HD HS ZWO6200MC</p> <p>Type: Open Cluster & Nebula</p> <p>Constellation: Vulpecula Coordinates: 19h 43' 37" 23° 19' 29"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: NGC-6820 Imaging Window: 07:55 – 12:25 Transit: 08:34 80°</p>	<p>C-11 HD: HyperStar v4</p> 

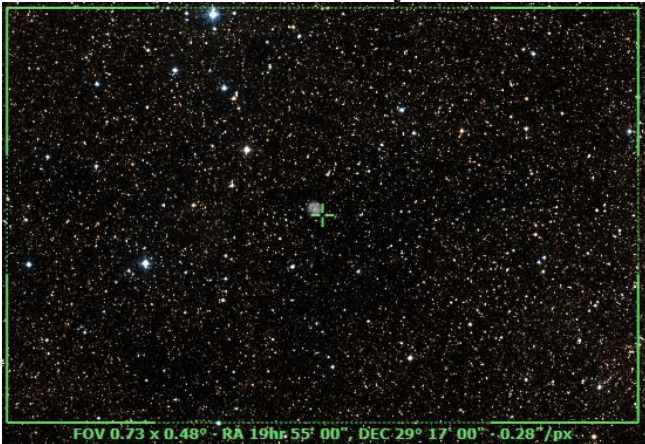
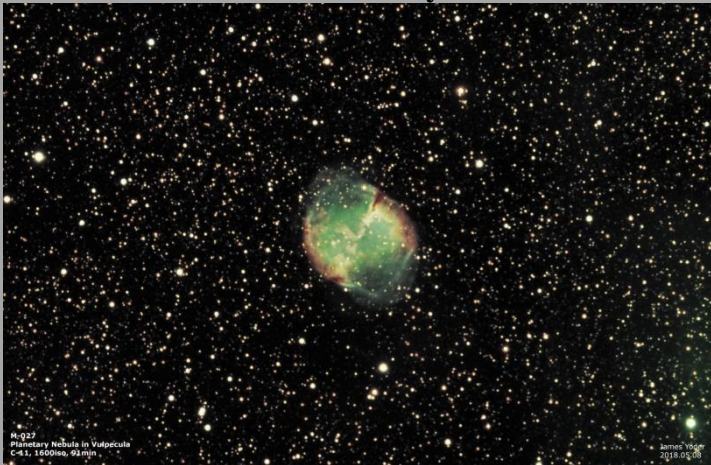
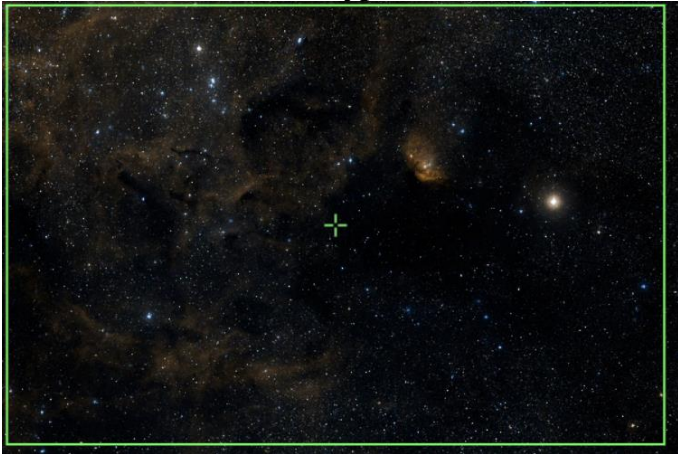
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<p>NGC-6820 (LDN-772) Config: C11-HD FR ZWO6200MC </p> <p>Type: Open Cluster & Nebula</p> <p>Constellation: Vulpecula Coordinates: 19h 42' 56" 23° 18' 43"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: NGC-6820 Imaging Window: 07:55 – 12:25 Transit: 08:34 80°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p> 
<p>NGC-6820 (LDN-772) Config: C11HD ZWO6200MC </p> <p>Type: Open Cluster & Nebula</p> <p>Constellation: Vulpecula Coordinates: 19h 43' 01" 23° 17' 12"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: NGC-6820 Imaging Window: 07:55 – 12:25 Transit: 08:34 80°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>Little Gem (NGC-6818) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Sagittarius Coordinates: 19h 43' 58" -14° 09' 09"</p> <p>Close Star: SAO-143021 (16 Aql) Catalog Objects: NGC-6818/PK 25-17.1 Imaging Window: *07:55 – 11:07 Transit: 08:34 43°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="text-align: center; font-size: small;">FOV 0.73 x 0.48° · RA 19hr 43' 58", DEC -14° 09' 09" · 0.28"/px</p>




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<p>Blinking Planetary (NGC-6826) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Cygnus Coordinates: 19h 44' 48" 50° 31' 32"</p> <p>Close Star: SAO-31815 (13 Cyg) Catalog Objects: NGC-6826/NGC-6826 Imaging Window: 07:55 – 12:25 Transit: 08:34 73°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="text-align: center;"><small>FOV 0.73 x 0.48° - RA 19hr 44' 48", DEC 50° 31' 32" - 0.28"/px</small></p>
<p>Barnard's Galaxy (NGC 6822) Config: C11HD ZWO6200MC </p> <p>Type: Galaxy</p> <p>Constellation: Sagittarius Coordinates: 19h 44' 57" -14° 48' 23"</p> <p>Close Star: SAO-191524 (Formalhaut) Catalog Objects: NGC-6822 Imaging Window: *07:55 – 11:01 Transit: 08:35 42°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>M-71 (NGC-6838) Config: C11HD ZWO6200MC </p> <p>Type: Globular Cluster</p> <p>Constellation: Sagitta Coordinates: 19h 53' 46" 18° 46' 43"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: M-71/NGC-6838 Imaging Window: 07:55 – 11:54 Transit: 08:43 75°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 




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<p>NGC 6842 (PK 65+0.1) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Vulpecula Coordinates: 19h 55' 00" 29° 17' 00"</p> <p>Close Star: SAO-68637 (12 Cyg) Catalog Objects: NGC-6842/PK 65+0.1 Imaging Window: 07:55– 12:16 Transit: 08:45 86°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="text-align: center; font-size: small;">FOV 0.73 x 0.48° - RA 19h 55' 00", DEC 29° 17' 00" - 0.28"/px</p>
<p>Dumbbell Nebula (M-27, NGC-6853) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Vulpecula Coordinates: 19h 59' 36" 22° 43' 17"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: M-27/NGC-6853 Imaging Window: 07:55 – 12:09 Transit: 08:49 79°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="text-align: left; font-size: x-small;">M-27 Planetary Nebula in Vulpecula C-11 1400mm, 62mm</p> <p style="text-align: right; font-size: x-small;">James Webb 2023-07-08</p>
<p>Fish on the Platter (B-144) Config: C11-HD HS ZWO6200MC</p> <p>Type: Dark Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 02' 28" 34° 57' 42"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: B-144, SH2-101 Imaging Window: 07:55 – 12:28 Transit: 08:49 89°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p> 



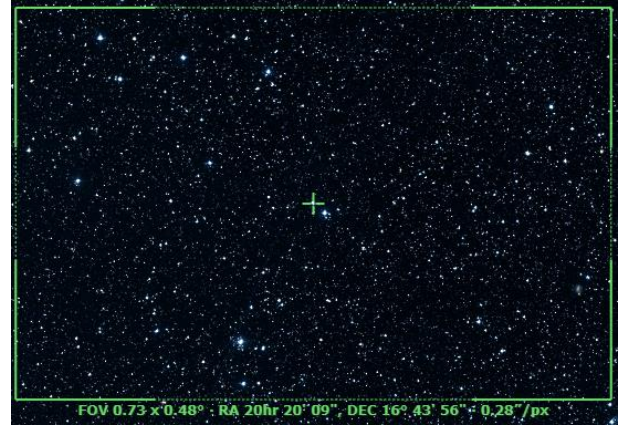
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<p>Tulip Nebula (SH2-101) Config: C11-HD FR ZWO6200MC </p> <p>Type: Diffuse Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 00' 58" 35° 16' 30"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: SH2-101 Imaging Window: 07:55 – 12:28 Transit: 08:49 89°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p> 
<p>Tulip Nebula (SH2-101) Config: C11HD ZWO6200MC </p> <p>Type: Diffuse Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 00' 57" 35° 20' 11"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: B-144 Imaging Window: 07:55 – 12:28 Transit: 08:49 89°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>NGC-6852 (PK 42-14.1) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Aquila Coordinates: 20h 00' 39" 01° 43' 43"</p> <p>Close Star: SAO-144150 (65 Aql) Catalog Objects: NGC-6852/PK 42-14.1 Imaging Window: 07:55 – 11:07 Transit: 08:50 58°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 



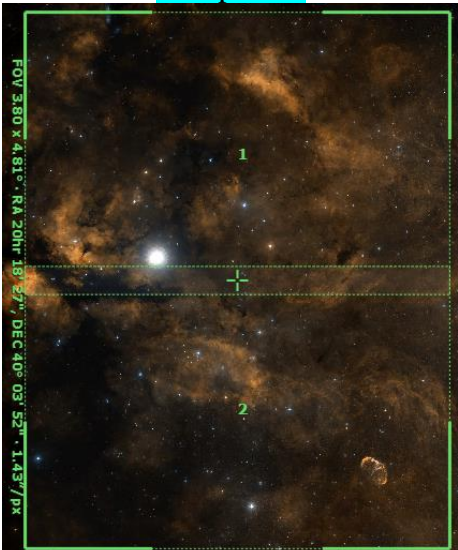
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<p>M-75 (NGC-6864) Config: C11HD ZWO6200MC </p> <p>Type: Globular Cluster</p> <p>Constellation: Sagittarius Coordinates: 20h 06' 05" -21° 55' 15"</p> <p>Close Star: SAO-191524 (Formalhaut) Catalog Objects: M-75/NGC-6864 Imaging Window: *07:55 – 10:34 Transit: 08:56 35°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>Crescent Nebula (NGC-6888) Config: C11HD ZWO6200MC </p> <p>Type: Diffuse Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 12' 06" 38° 21' 00"</p> <p>Close Star: SAO-125122 (Altair) Catalog Objects: NGC-6888/Sh2-105 Imaging Window: 07:55 – 12:45 Transit: 09:02 85°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>Propeller Nebula (DWB-111) Config: C11HD ZWO6200MC </p> <p>Type: Diffuse Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 16' 09" 43° 41' 47" Close Ref Object: LDN 891 Close Star: SAO-048796 (Al Fawaris) Catalog Objects: Simeis-57/DWB-111 Imaging Window: 07:55 – 12:50 Transit: 09:03 79°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small; text-align: center;">Propeller Nebula (DWB 111) Constellation: Cygnus the Swan</p> <p style="font-size: x-small; text-align: right;">Image: 2023-07-13 20:16:09 Location: Chandler, AZ Config: C11 Starizona LP Camera Astrodon 8.25" f/6.3 QHY170C Exposure: 10s 2.00sec/Frame Gain: 1000 Offset: 100</p>

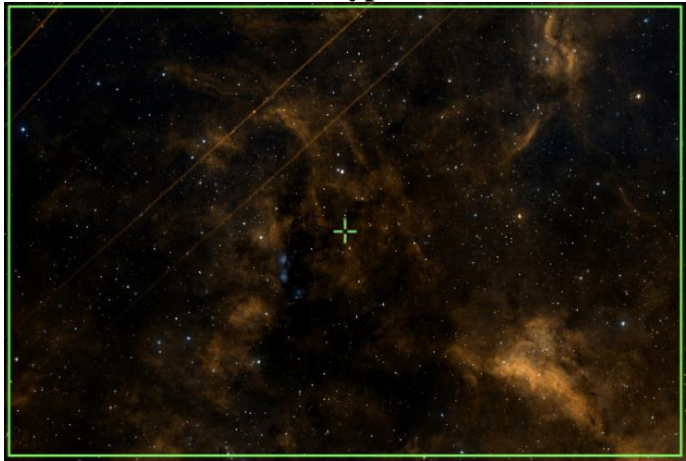

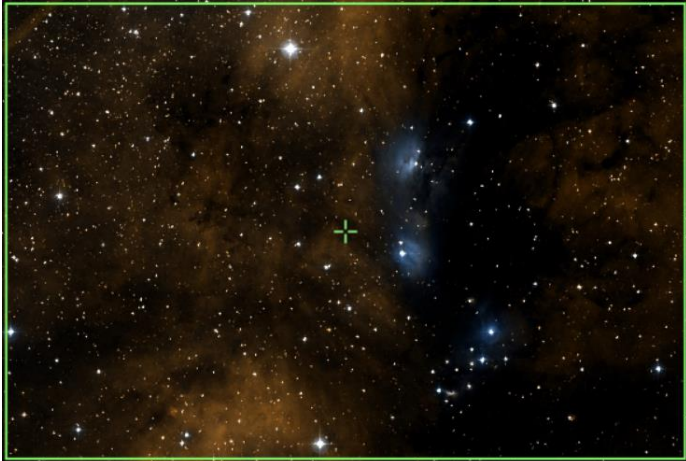
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<p>NGC 6891 (PK 54-12.1) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Delphinus Coordinates: 20h 15' 09" 12° 42' 17"</p> <p>Close Star: SAO-106230 (2 Del) Catalog Objects: NGC-6991 Imaging Window: 07:55 – 12:00 Transit: 09:05 77°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p>FOV 0.73 x 0.48° · RA 20hr 15' 09", DEC 12° 42' 17" · 0.28"/px</p>
<p>NGC-6894 (PK 69-2.1) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 16' 24" 30° 33' 57"</p> <p>Close Star: SAO-71070 (64 Cyg) Catalog Objects: NGC-6994 Imaging Window: 07:55 – 12:39 Transit: 09:06 87°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p>FOV 0.73 x 0.48° · RA 20hr 16' 24", DEC 30° 33' 57" · 0.28"/px</p>
<p>IC-4997 (PK 58-10.1) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Sagitta Coordinates: 20h 20' 09" 16° 43' 56"</p> <p>Close Star: SAO-106316 (Rotanev) Catalog Objects: IC-4997 Imaging Window: 07:55 – 12:16 Transit: 09:10 87°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p>FOV 0.73 x 0.48° · RA 20hr 20' 09", DEC 16° 43' 56" · 0.28"/px</p>

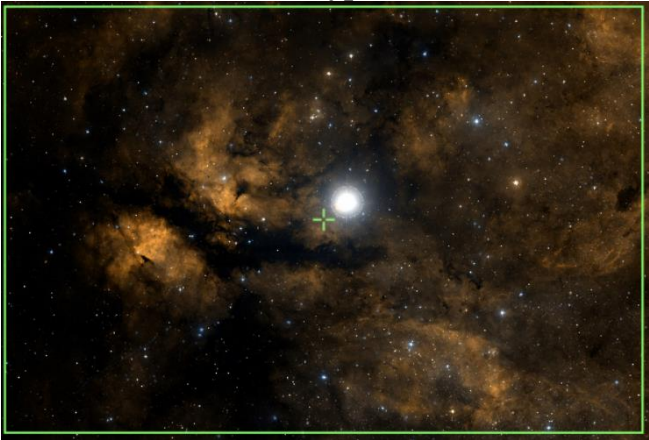
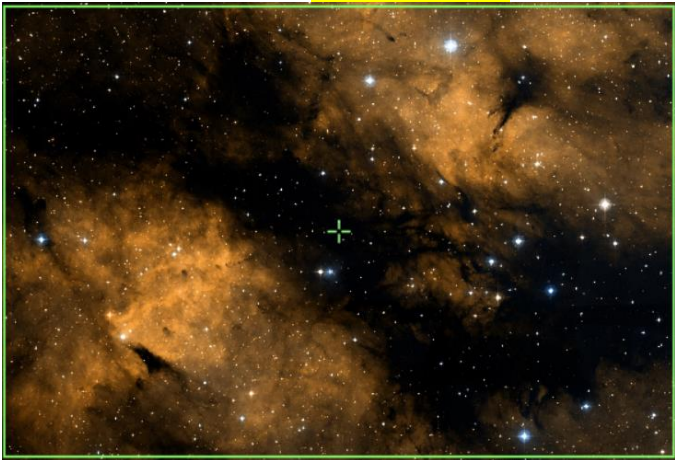

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<p>Blue Flash Nebula (NGC-6905) Config: C11HD ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Delphinus Coordinates: 20h 22' 24" 20° 06' 18"</p> <p>Close Star: SAO-108378 (Markab) Catalog Objects: NGC-6905 Imaging Window: 07:55 – 12:26 Transit: 09:12 77°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="text-align: center;"><small>Blue Flash Nebula (NGC-6905) Constellation: Delphinus Coordinates: 20h 22m 24s RA, 20° 06' 18" DEC FOV: 3.80 x 4.81° RA 20h 18m 27s DEC 41° 12' 10" RA 20h 18m 38s DEC 38° 55' 33" RA 20h 18m 27s DEC 41° 12' 10" RA 20h 18m 38s DEC 38° 55' 33" RA 20h 18m 27s DEC 41° 12' 10" RA 20h 18m 38s DEC 38° 55' 33"</small></p>
<p>Cooling Tower (M-29 (NGC-6913) Config: C11HD ZWO6200MC </p> <p>Type: Open Cluster</p> <p>Constellation: Cygnus Coordinates: 20h 24' 06" 38° 29' 36"</p> <p>Close Star: SAO-90981 (Scheat) Catalog Objects: M-29/NGC-6913 Imaging Window: 07:55 – 12:57 Transit: 09:14 85°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>NGC-6914 Region Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: Frame 1: RA=20hr 18' 27" DEC=41°12'10" Frame 2: RA=20hr 18' 38" DEC=38°55'33"</p> <p>Close Star: SAO-49941 (Deneb) Catalog Objects: NGC-6914 Imaging Window: 07:55 – 01:01 Transit: 09:14 81°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4 Composite!</p>  <p style="text-align: center;"><small>FOV: 3.80 x 4.81° RA 20h 18m 27s DEC 41° 12' 10" RA 20h 18m 38s DEC 38° 55' 33" RA 20h 18m 27s DEC 41° 12' 10" RA 20h 18m 38s DEC 38° 55' 33" RA 20h 18m 27s DEC 41° 12' 10" RA 20h 18m 38s DEC 38° 55' 33"</small></p>



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<p>NGC-6914 Region Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 22' 52" 42° 38' 53"</p> <p>Close Star: SAO-49941 (Deneb) Catalog Objects: NGC-6914 Imaging Window: 07:55 – 01:01 Transit: 09:14 81°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p> 
<p>NGC-6914 Region Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 24' 48" 42° 29' 00"</p> <p>Close Star: SAO-49941 (Deneb) Catalog Objects: NGC-6914 Imaging Window: 07:55 – 01:01 Transit: 09:14 81°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p> 
<p>NGC-6914 Region Config: C11HD ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 25' 07" 42° 24' 34"</p> <p>Close Star: SAO-49941 (Deneb) Catalog Objects: NGC-6914 Imaging Window: 07:55 – 01:01 Transit: 09:14 81°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 


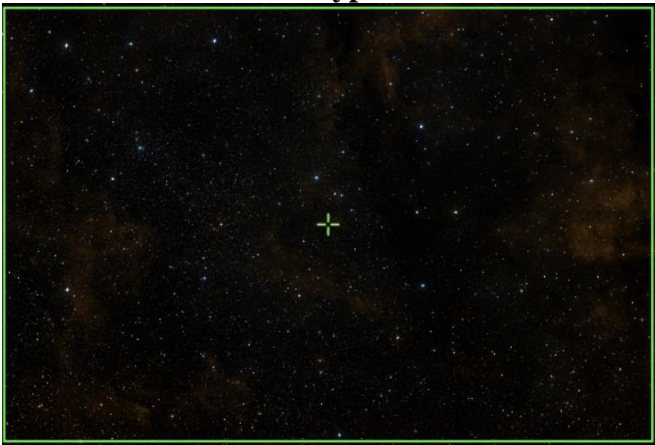
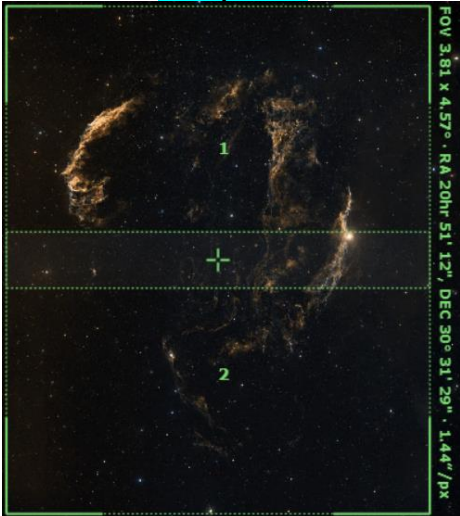
Prospective Imaging Objects – September 16 2023

<p>Butterfly Nebula (IC-1318) Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 22' 57" 40° 09' 33"</p> <p>Close Star: SAO-67174 (Vega) Catalog Objects: IC-1318 Imaging Window: 07:55 – 01:01 Transit: 09:15 80°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p> 
<p>Butterfly Nebula (IC-1318) Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 26' 59" 40° 06' 52"</p> <p>Close Star: SAO-67174 (Vega) Catalog Objects: IC-1318 Imaging Window: 07:55 – 01:01 Transit: 09:15 80°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p> 
<p>Butterfly Nebula (IC-1318) Config: C11HD ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 25' 40" 40° 17' 34"</p> <p>Close Star: SAO-67174 (Vega) Catalog Objects: IC-1318 Imaging Window: 07:55 – 01:01 Transit: 09:15 80°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">Butterfly Nebula (IC-1318) Constellation: Cygnus (IC-1318) RA = 20h 25m 40.00s DEC = 40deg 17' 34.00" Date = 2023-07-13 21:00:00 UT (19:00:00 Local Time) Filter: H-alpha (656.3nm) H-beta (486.1nm) H-gamma (434.0nm) H-delta (410.1nm) H-epsilon (390.0nm) H-zeta (373.5nm) H-eta (379.8nm) H-theta (377.0nm) H-epsilon (377.0nm) H-delta (377.0nm) H-gamma (377.0nm) H-beta (377.0nm) H-alpha (377.0nm)</p>

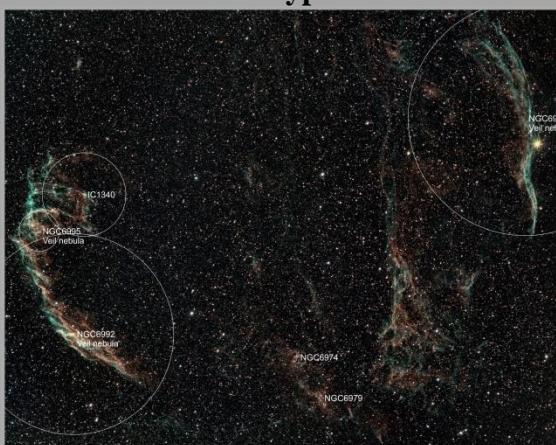
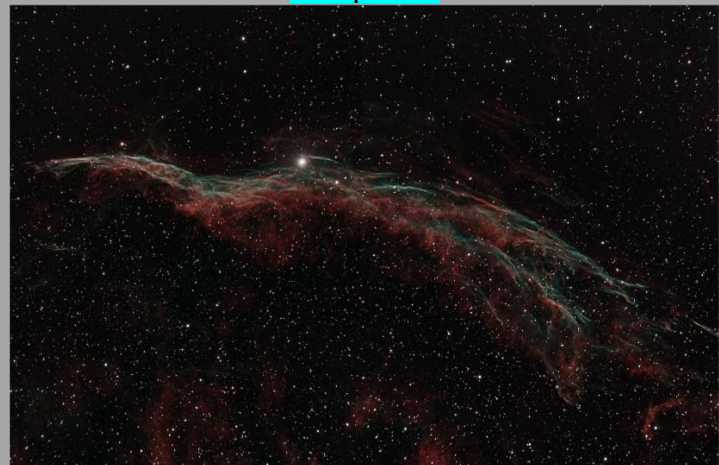
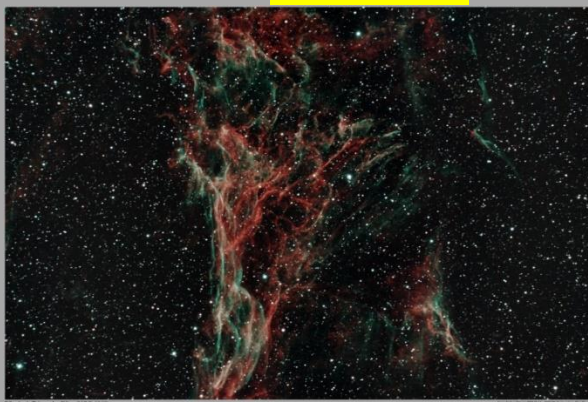
Prospective Imaging Objects – September 16 2023

<p>Fireworks Galaxy (NGC-6946) Config: C11HD ZWO6200MC </p> <p>Type: Galaxy</p> <p>Constellation: Cepheus Coordinates: 20° 34' 54" 60° 08' 60"</p> <p>Close Star: SAO-19302 (Alderamin) Catalog Objects: NGC-6946 Imaging Window: 07:55 – 01:09 Transit: 09:24 63°</p>	<p>C-11 HD: Primary Focus</p> 
<p>Pelican & N. America Nebula (IC-5070) Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: Frame 1: RA=20hr56'10" DEC=44°55'07" Frame 2: RA=20hr56'10" DEC=42°37'57"</p> <p>Close Star: SAO-50180 (57 Cygni) Catalog Objects: IC5070 Imaging Window: 07:55 – 01:29 Transit: 09:40 79°</p>	<p>C-11 HD: HyperStar v4 Composite!</p>  <p><small>North America (NGC-7600) and Pelican (IC-5070) Nebula Constellation: Cygnus the Swan RA = 20h 56m 12s DEC = 44° 55' 07" Size = 200 x 270 arcmin (Observation: 6/16/21 at 9:11 PM local time UT - 04:00min)</small></p> <p><small>James Yeiler / Data: 2022-08-28-2022-09-06 Location: Chandler, AZ Config: C-11HD HyperStar V4 OPT Radian Triad Ultra 2780x4200MC Exposure Info: Mount: 101 R 121 Imaging: Swin Gain: 100 Offset: 50</small></p>


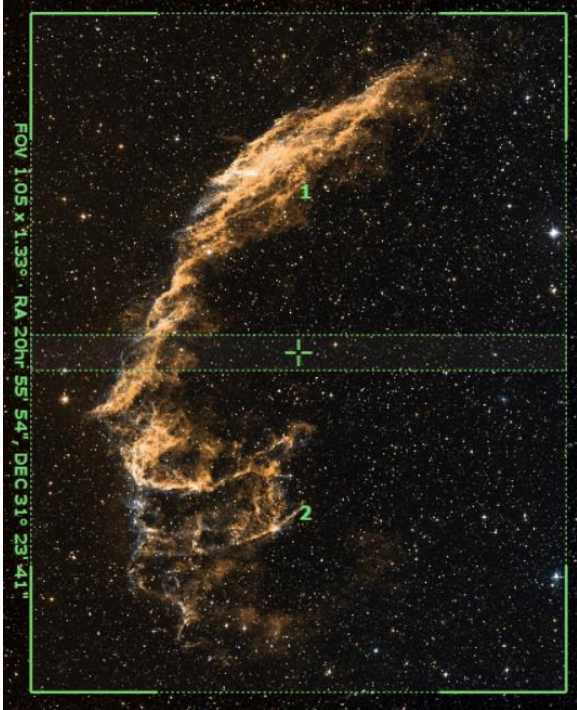
Prospective Imaging Objects – September 16 2023

<p>Pelican & N. America Nebula (IC-5070) Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 57' 29" 44° 10' 10"</p> <p>Close Star: SAO-50180 (57 Cygni) Catalog Objects: IC5070 Imaging Window: 07:55 – 01:29 Transit: 09:40 79°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="font-size: small; text-align: center;">North American Nebula (NGC 7000) Pelican Nebula (IC 5070) and Open Star Cluster (NGC 6997) Constellation: Cygnus the Swan James Yee 2019.09.20 Config: C11 HyperStar Astronomik C15-CCD QHY174C Exposure Info: 35frames/sum Gain: 3200 Offset: 100</p>
<p>Northern Coal Sack (LDN-904) Config: C11-HD HS ZWO6200MC</p> <p>Type: Dark Nebula</p> <p>Constellation: Cygnus Coordinates: 20h 51' 52" 39° 13' 34"</p> <p>Close Star: SAO-49941 (Deneb) Catalog Objects: LDN-904 Imaging Window: 07:55 – 01:27 Transit: 09:42 84°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p> 
<p>Veil Nebula (NGC-6960) Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: P1: RA: 20h51'12" DEC: 31°32'26" P2: RA: 20h51'12" DEC: 29°30'31"</p> <p>Close Star: SAO-70467 (52 Cygni) Catalog Objects: NGC-6960, 6992, 6995 Imaging Window: 07:55 – 01:17 Transit: 09:42 80°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4 Composite!</p> 




Prospective Imaging Objects – September 16 2023

<p>Veil Nebula (NGC-6960) Config: C11-HD HS ZWO6200MC</p> <p>Type: Supernova Remnant</p> <p>Constellation: Cygnus Coordinates: 20h 51' 15" 31° 03' 60"</p> <p>Close Star: SAO-70467 (52 Cygni) Catalog Objects: NGC-6960, 6992, 6995</p> <p>Imaging Window: 07:55 – 01:17 Transit: 09:42 80°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="text-align: center;">Veil Nebula Complex Constellation: Cygnus the Swan</p> <p style="text-align: right; font-size: small;"> <small>Image credit: James Todd Config: C11 HyperStar / Astrodon 1.1kC / QHY126C Exposure: 100s / 11000000000 / Gain: 1200 / Offset: 100</small> </p>
<p>Witch's Broom (NGC-6960) Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: P1: RA=20hr 46' 20" DEC=30° 54' 54" P2: RA=20hr 46' 20" DEC=30° 17' 06"</p> <p>Close Star: SAO-70467 (52 Cygni) Catalog Objects: NGC-6960</p> <p>Imaging Window: 07:55 – 01:17 Transit: 09:42 80°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer Composite!</p>  <p style="text-align: center; font-size: small;"> <small>Witch's Broom Nebula (NGC-6960) Image credit: James Todd Config: C11 HyperStar / Astrodon 1.1kC / QHY126C Exposure: 100s / 11000000000 / Gain: 1200 / Offset: 100</small> </p>
<p>Pickering's Triangular Wisp (NGC-6960) Config: C11-HD FR ZWO6200MC </p> <p>Type: Supernova Remnant Constellation: Cygnus Coordinates: 20h 48' 16" 31° 37' 17"</p> <p>Close Star: SAO-70467 (52 Cygni) Catalog Objects: NGC-6960</p> <p>Imaging Window: 07:55 – 01:17 Transit: 09:42 80°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p>  <p style="text-align: center; font-size: small;"> <small>Pickering's Triangular Wisp (NGC-6960) Image credit: James Todd Config: C11 HyperStar / Astrodon 1.1kC / QHY126C Exposure: 100s / 11000000000 / Gain: 1200 / Offset: 100</small> </p>



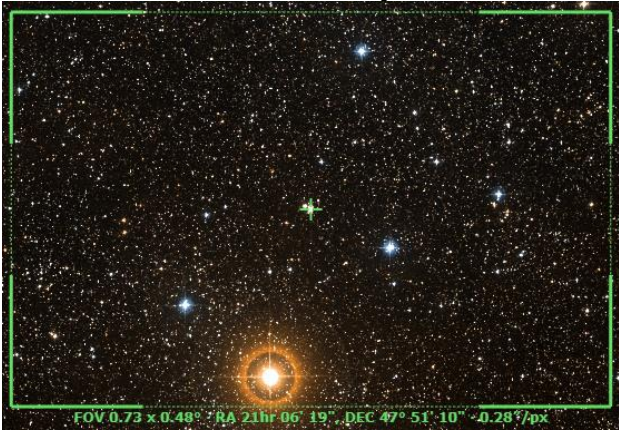
Prospective Imaging Objects – September 16 2023

<p>M-72 (NGC-6981) Config: C11HD ZWO6200MC </p> <p>Type: Globular Cluster</p> <p>Constellation: Aquarius Coordinates: 20h 53' 28" -12° 32' 11"</p> <p>Close Star: SAO-108378 (Markab) Catalog Objects: M-72/NGC-6981 Imaging Window: *07:55 – 12:24 Transit: 09:43 44°</p>	<p>C-11 HD: Primary Focus</p> 
<p>Network Nebula (NGC-6992) Config: C11-HD FR ZWO6200MC </p> <p>Type: Supernova Remnant</p> <p>Constellation: Cygnus Coordinates: P1: RA= 20hr 55' 54" DEC= 31° 42' 35" P2: RA= 20hr 55' 54" DEC= 31° 04' 47"</p> <p>Close Star: SAO-70474 (Gienah) Catalog Objects: NGC-6992 Imaging Window: 07:55 – 01:21 Transit: 09:46 88°</p>	<p>C-11 HD: Focal Reducer Composite!</p> 

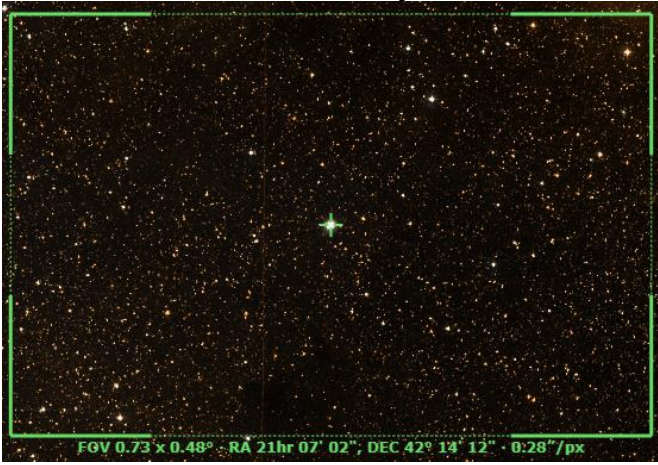


Prospective Imaging Objects – September 16 2023

<p>M-73 (NGC-6994) Config: C11HD ZWO6200MC </p> <p>Type: Open Cluster</p> <p>Constellation: Aquarius Coordinates: 20h 59' 00" -12° 37' 60"</p> <p>Close Star: SAO-108378 (Markab) Catalog Objects: M-73/NGC-6994 Imaging Window: *07:55 – 12:30 Transit: 09:48 44°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>Fetus Nebula (NGC-7008) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Cygnus Coordinates: 21h 00' 33" 54° 32' 38"</p> <p>Close Star: SAO-49941 (Deneb) Catalog Objects: NGC-7008 Imaging Window: 07:55 – 01:40 Transit: 09:50 69°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">Planetary Nebula NGC-7008 Constellation: Cygnus RA = 21h 00m 33.00s DEC = +54° 32' 38.00" Size = 75.0 x 17.0 arcmin Orientation: 0.28deg (to N) Pixel size = 0.177 arcsec/pixel (0.177"/pixel)</p> <p style="font-size: x-small;">Axis: Y-axis: Dec(21:00:33.00) X-axis: RA(21:00:33.00) Config: C-11 HD: ZWO6200MC Exposure: 00:00:00 (00:00:00) (00:00:00)</p>
<p>Iris Nebula (NGC 7023) Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cepheus Coordinates: 21h 01' 36" 68° 10' 00"</p> <p>Close Star: SAO-19302 (Alderamin) Catalog Objects: NGC-7023 Imaging Window: 07:55 – 01:13 Transit: 09:51 55°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p> 


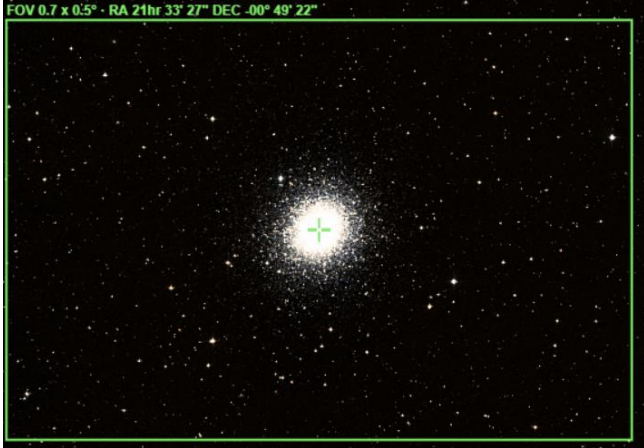
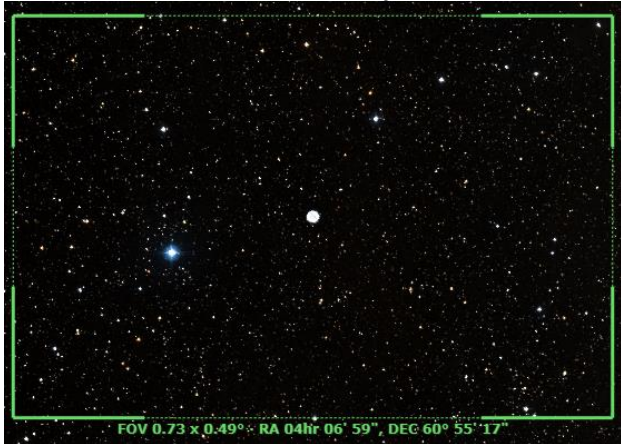
Prospective Imaging Objects – September 16 2023

<p>Iris Nebula (NGC 7023) Config: C11HD ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cepheus Coordinates: 21h 01' 36" 68° 10' 00"</p> <p>Close Star: SAO-19302 (Alderamin) Catalog Objects: NGC-7023 Imaging Window: 07:55 – 01:13 Transit: 09:51 55°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>Saturn Nebula (NGC-7009) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Aquarius Coordinates: 21h 04' 11" -11° 21' 47"</p> <p>Close Star: SAO-191524 (Fomalhaut) Catalog Objects: NGC-7009 Imaging Window: *07:55 – 12:41 Transit: 09:54 45°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>NGC-7026 Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Cygnus Coordinates: 21h 06' 19" 47° 51' 10"</p> <p>Close Star: SAO-50456 Catalog Objects: NGC-7026 Imaging Window: 07:55 – 01:46 Transit: 09:56 45°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 


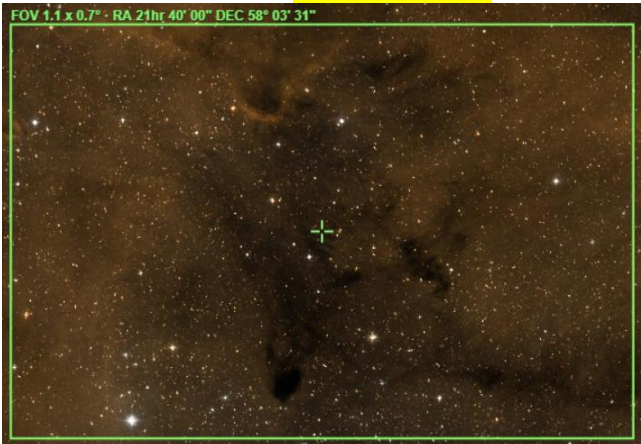

Prospective Imaging Objects – September 16 2023

<p>NGC-7027 Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Cygnus Coordinates: 21h 07' 02" 42° 14' 12"</p> <p>Close Star: SAO-50456 Catalog Objects: NGC-7027 Imaging Window: 07:55 – 01:43 Transit: 09:56 45°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>NGC-7048 (PK 88-1.1) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Cygnus Coordinates: 21h 14' 15" 46° 17' 21"</p> <p>Close Star: SAO-49941 (Deneb) Catalog Objects: NGC-7048 Imaging Window: 07:55 – 01:53 Transit: 10:04 77°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>Pegasus Cluster (M-15) Config: C11HD ZWO6200MC </p> <p>Type: Globular Cluster</p> <p>Constellation: Cepheus Coordinates: 21h 29' 58" 12° 10' 03"</p> <p>Close Star: SAO-127029 (Enif) Catalog Objects: M-15/NGC-7078 Imaging Window: 07:55 – 02:11 Transit: 10:21 69°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 

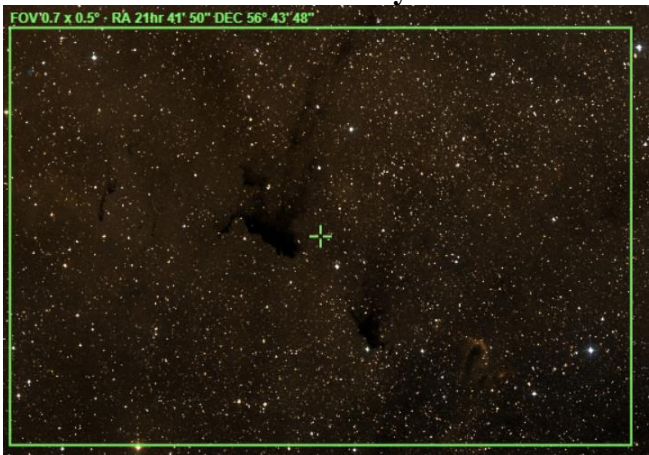
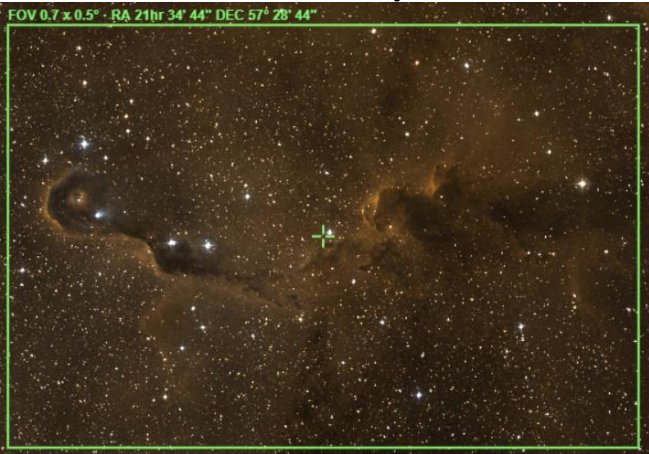
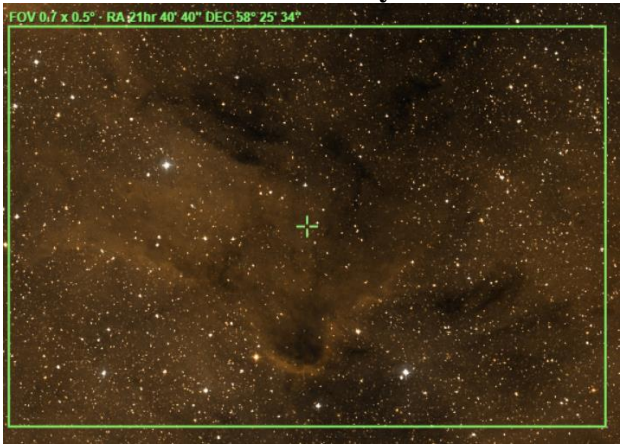
Prospective Imaging Objects – September 16 2023

<p>M-39 (NGC-7092) Config: C11-HD FR ZWO6200MC </p> <p>Type: Open Cluster</p> <p>Constellation: Cygnus Coordinates: 21h 31' 56" 48° 26' 46"</p> <p>Close Star: SAO-49941 (Deneb) Catalog Objects: M-39/NGC-7092 Imaging Window: 07:55 – 02:11 Transit: 10:21 75°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p> 
<p>M-2 (NGC-7089) Config: C11HD ZWO6200MC </p> <p>Type: Globular Cluster</p> <p>Constellation: Aquarius Coordinates: 21h 33' 27" 00° 49' 22"</p> <p>Close Star: SAO-127029 (Enif) Catalog Objects: M-2/NGC-7089 Imaging Window: 07:55 – 12:27 Transit: 10:23 56°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>NGC-7094 Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Pegasus Coordinates: 21h 36' 53" 12° 47' 22"</p> <p>Close Star: SAO-127029 (Enif) Catalog Objects: NGC-7094 Imaging Window: 07:55 – 01:18 Transit: 10:22 69°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 



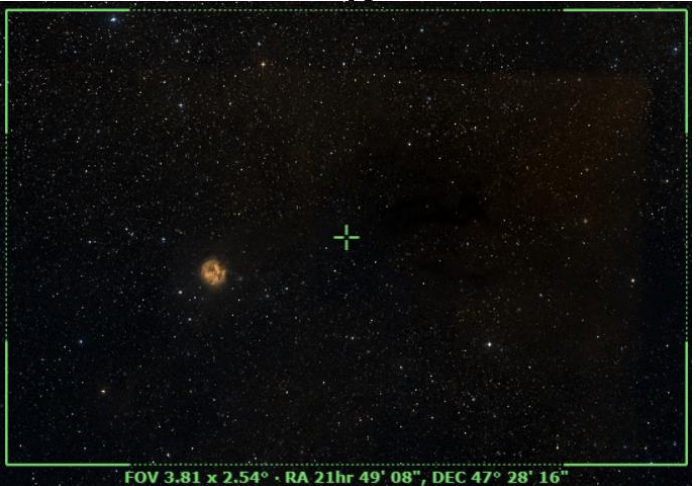
Prospective Imaging Objects – September 16 2023

<p>Elephant Trunk (IC-1396) Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright Nebula</p> <p>Constellation: Cepheus Coordinates: 21h 39' 58" 57° 33' 34"</p> <p>Close Star: SAO-19302 (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: 07:55 – 02:16 Transit: 10:28 66°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="font-size: small; text-align: center;">Elephant Trunk Nebula (IC-1396) Constellation: Cepheus</p> <p style="font-size: x-small; text-align: right;">Image Name: 2023_09_12 Location: Cepheus_42 Config: C11 HyperStar v4 ZWO6200MC Exposure Info: 240sec/Frame Gain: 1300 Offset: 100</p>
<p>Elephant Trunk (IC-1396) Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright & Dark Nebula</p> <p>Constellation: Cepheus Coordinates: 21h 40' 00" 58° 03' 31"</p> <p>Close Star: SAO-19302 (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: 07:55 – 02:16 Transit: 10:28 66°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p>  <p style="font-size: x-small; text-align: center;">FOV 1.1 x 0.7° - RA 21hr 40' 00" DEC 58° 03' 31"</p>
<p>Elephant Trunk (IC-1396) Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cepheus Coordinates: 21h 34' 39" 57° 29' 02"</p> <p>Close Star: SAO-19302 (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: 07:55 – 02:16 Transit: 10:28 66°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p>  <p style="font-size: x-small; text-align: center;">FOV 1.1 x 0.7° - RA 21hr 34' 39" DEC 57° 29' 02"</p>




Prospective Imaging Objects – September 16 2023

<p>Elephant Trunk (IC-1396) Config: C11HD ZWO6200MC </p> <p>Type: Bright & Dark Nebula</p> <p>Constellation: Cepheus Coordinates: 21h 41' 50" 56° 43' 48"</p> <p>Close Star: SAO-19302 (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: 07:55 – 02:16 Transit: 10:28 66°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p>FOV 0.7 x 0.5° - RA 21hr 41' 50" DEC 56° 43' 48"</p>
<p>Elephant Trunk (IC-1396) Config: C11HD ZWO6200MC </p> <p>Type: Bright & Dark Nebula</p> <p>Constellation: Cepheus Coordinates: 21h 34' 44" 57° 28' 44"</p> <p>Close Star: SAO-19302 (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: 07:55 – 02:16 Transit: 10:28 66°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p>FOV 0.7 x 0.5° - RA 21hr 34' 44" DEC 57° 28' 44"</p>
<p>Elephant Trunk (IC-1396) Config: C11HD ZWO6200MC </p> <p>Type: Bright & Dark Nebula</p> <p>Constellation: Cepheus Coordinates: 21h 40' 40" 58° 25' 34"</p> <p>Close Star: SAO-19302 (Alderamin) Catalog Objects: IC-1396/Sh2-131 Imaging Window: 07:55 – 02:16 Transit: 10:28 66°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p>FOV 0.7 x 0.5° - RA 21hr 40' 40" DEC 58° 25' 34"</p>




Prospective Imaging Objects – September 16 2023

<p>M-30 (NGC-7099) Config: C11HD ZWO6200MC </p> <p>Type: Globular Cluster</p> <p>Constellation: Capricornus Coordinates: 21h 40' 22" -23° 10' 43"</p> <p>Close Star: SAO-164644 (Scheddi) Catalog Objects: M-30/NGC-7099 Imaging Window: *09:00 – 11:57 Transit: 10:30 34°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>NGC 7139 Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Cepheus Coordinates: 21h 46' 07" +63° 47' 54"</p> <p>Close Star: SAO-019302 (Alderamin) Catalog Objects: NGC-7139 Imaging Window: 07:55 – 02:13 Transit: 10:35 60°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>Dark Cocoon (B-168, IC 5146) Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright & Dark Nebula</p> <p>Constellation: Cygnus Coordinates: 21h 49' 08" 47° 28' 16"</p> <p>Close Star: SAO-5105 (Rho Cygni) Catalog Objects: B-168, IC-5146 Imaging Window: 07:55 – 02:33 Transit: 10:43 76°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p> 

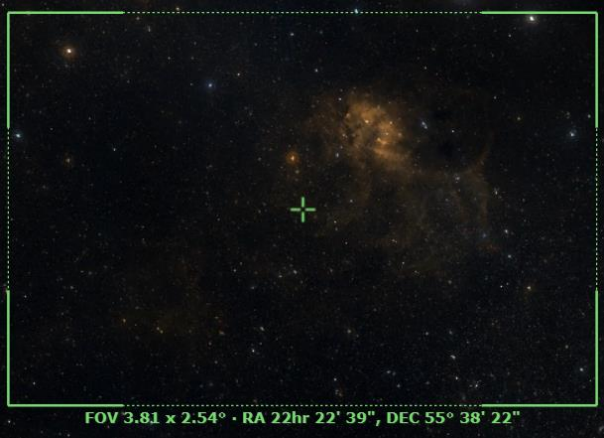
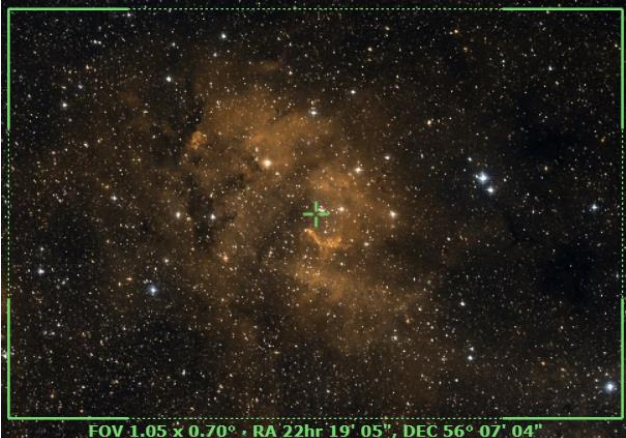
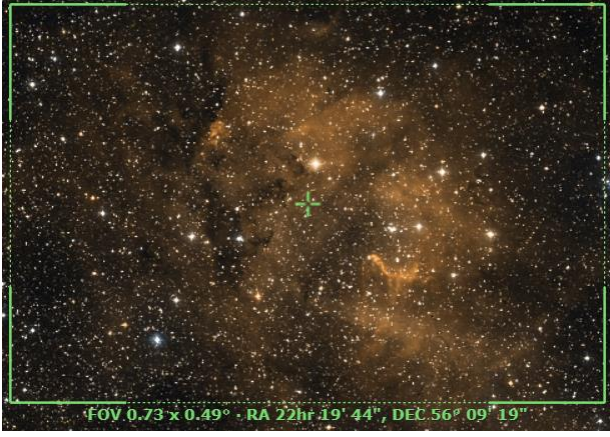
Prospective Imaging Objects – September 16 2023

<p>Cocoon Nebula (IC-5146) Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: 21h 52' 00" 47° 22' 37"</p> <p>Close Star: SAO-5105 (Rho Cygni) Catalog Objects: IC-5146 Imaging Window: 07:55 – 02:33 Transit: 10:43 76°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p> 
<p>Cocoon Nebula (IC-5146) Config: C11HD ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cygnus Coordinates: 21h 53' 24" 47° 16' 00"</p> <p>Close Star: SAO-5105 (Rho Cygni) Catalog Objects: IC-5146 Imaging Window: 07:55 – 02:33 Transit: 10:43 76°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>Dark Shark (LDN-1235) Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright & Dark Nebula</p> <p>Constellation: Cepheus Coordinates: 22h 11' 49" 73° 12' 16"</p> <p>Close Star: SAO-20268 (Iota Cephei) Catalog Objects: LDN-1235 Imaging Window: 08:21 – 01:47 Transit: 11:04 50°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p> 


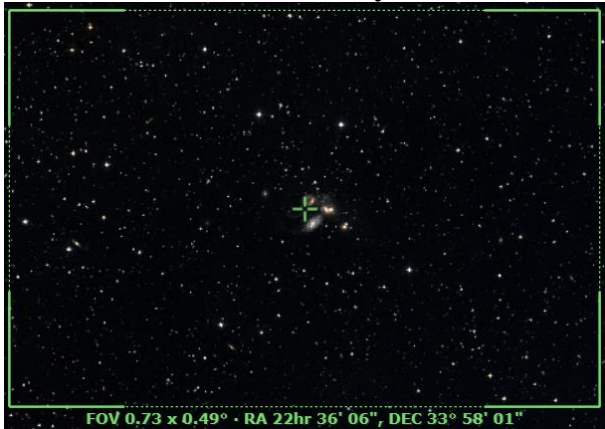

Prospective Imaging Objects – September 16 2023

<p>Helix Nebula (NGC-7293) Config: C11HD ZWO6200MC </p> <p>Type: Planetary nebula</p> <p>Constellation: Aquarius Coordinates: 22h 29' 39" -20° 48' 36"</p> <p>Close Star: SAO-164644 (Delta Cap) Catalog Objects: NGC-7293 Imaging Window: *09:27 – 01:09 Transit: 11:19 36°</p>	<p>C-11 HD: Primary Focus</p>  <p><small>James Yoder 2019-09-21 Location: Chandler, AZ Config: C11 LF Corrector Astronomik CLS-CCD (QHY128) Exposure Info: 11f/8m 5min Gain: 2200 Offset: 180 </small></p>
<p>Wolf's Cave (VdB-152) Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright & Dark Nebula</p> <p>Constellation: Cepheus Coordinates: 22h 17' 03" 70° 21' 54"</p> <p>Close Object: Cave Nebula (SH2-155) Close Star: SAO-20268 (Iota Cephei) Imaging Window: 08:06 – 03:26 Transit: 11:46 76°</p>	<p>C-11 HD: HyperStar v4</p>  <p><small>James Yoder 2019-09-21 Location: Chandler, AZ Config: C11 HyperStar v4 Astronomik CLS-CCD (QHY128) Exposure Info: 11f/8m 5min Gain: 2200 Offset: 180 </small></p>
<p>Wolf's Cave (VdB-152) Config: C11-HD FR ZWO6200MC </p> <p>Constellation: Cepheus Coordinates: 22h 13' 42" 70° 30' 32" 90° Rotation</p> <p>Close Object: Cave Nebula (SH2-155) -44min differential Close Star: SAO-20268 (Iota Cephei) Catalog Objects: B-168, IC-5146</p> <p>Imaging Window: 08:21 – 01:47 Transit: 11:04 50°</p>	<p>C-11 HD: Focal Reducer</p>  <p><small>FOV: 1.05 x 0.70" - RA: 22h 13' 42" - DEC: 70° 30' 32"</small></p>

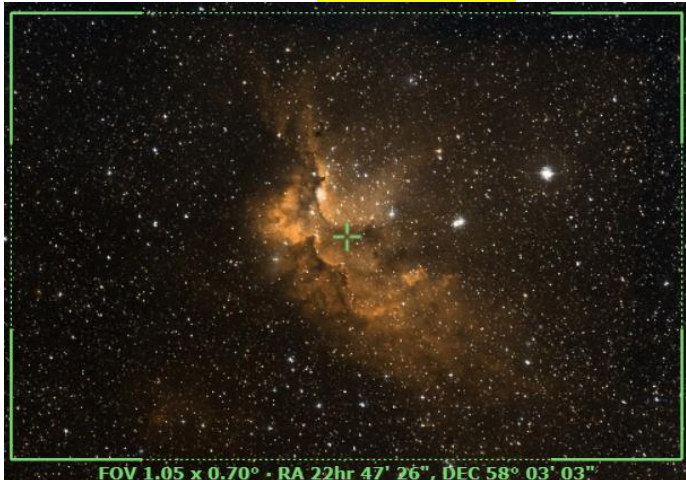


Prospective Imaging Objects – September 16 2023

<p>SH2-132 Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright Nebula</p> <p>Constellation: Cepheus Coordinates: 22h 22' 39" 55° 38' 22"</p> <p>Close Star: SAO-20268 (Iota Cephei) Catalog Objects: SH2-132 Imaging Window: 07:55 – 02:57 Transit: 11:08 67°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="text-align: center;">FOV 3.81 x 2.54° · RA 22hr 22' 39", DEC 55° 38' 22"</p>
<p>SH2-132 Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cepheus Coordinates: 22h 19' 05" 56° 07' 04"</p> <p>Close Star: SAO-20268 (Iota Cephei) Catalog Objects: SH2-132 Imaging Window: 07:55 – 02:57 Transit: 11:08 67°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p>  <p style="text-align: center;">FOV 1.05 x 0.70° · RA 22hr 19' 05", DEC 56° 07' 04"</p>
<p>SH2-132 Config: C11HD ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Cepheus Coordinates: 22h 19' 44" 56° 09' 19"</p> <p>Close Star: SAO-20268 (Iota Cephei) Catalog Objects: SH2-132 Imaging Window: 07:55 – 02:57 Transit: 11:08 67°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="text-align: center;">FOV 0.73 x 0.49° · RA 22hr 19' 44", DEC 56° 09' 19"</p>

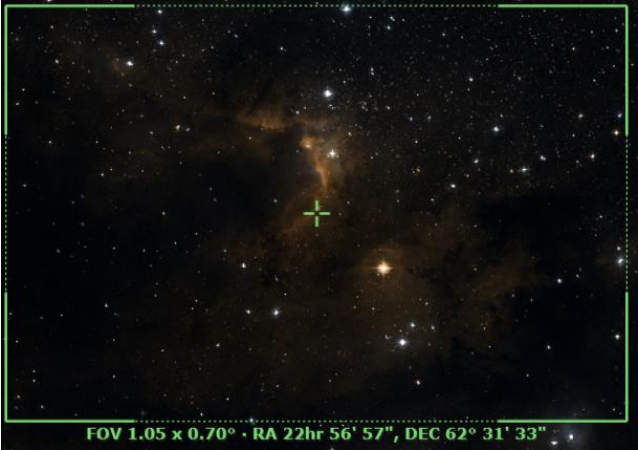
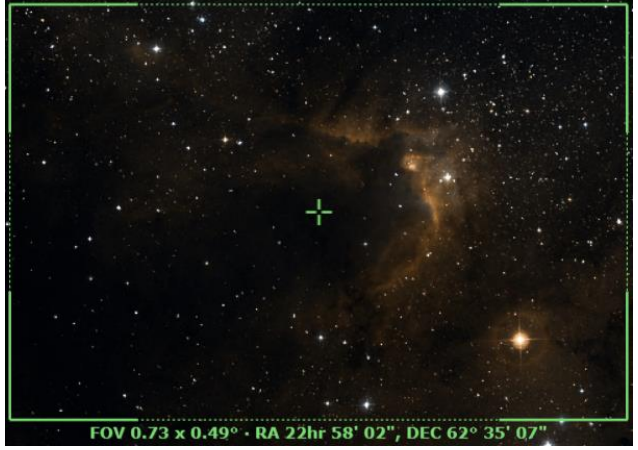

Prospective Imaging Objects – September 16 2023

<p>Stephan's Quintet & NGC 7331 (NGC 7317, 7331) Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Pegasus Coordinates: 22h 36' 40" 34° 13' 25" Camera Rotation = 115° East (-245)</p> <p>Close Star: SAO-72191 (1 Lacertae) Catalog Objects: NGC7317, NGC7331</p> <p>Imaging Window: 07:55 – 03:03 Transit: 11:25 89°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p> 
<p>Stephan's Quintet Config: C11HD ZWO6200MC </p> <p>Type: Bright Nebula</p> <p>Constellation: Pegasus Coordinates: 22h 36' 06" 33° 58' 01"</p> <p>Close Star: SAO-72191 (1 Lacertae) Catalog Objects: NGC7317</p> <p>Imaging Window: 07:55 – 03:03 Transit: 11:25 89°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>NGC-7331 Group (NGC-7331) Config: C11HD ZWO6200MC </p> <p>Type: Galaxy Cluster</p> <p>Constellation: Pegasus Coordinates: 22h 37' 15" 34° 24' 51"</p> <p>Close Star: SAO-72191 (1 Lacertae) Catalog Objects: NGC-7331</p> <p>Imaging Window: 07:55 – 03:03 Transit: 11:26 89°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 


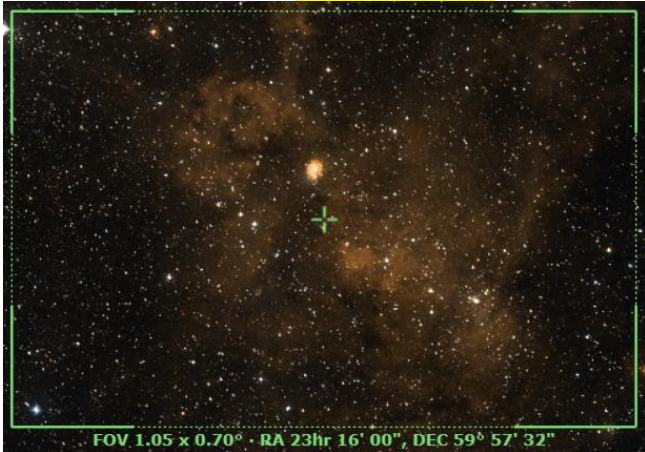

Prospective Imaging Objects – September 16 2023

<p>Wizard Nebula (SH 2-142)</p> <p>Config: C11-HD FR ZWO6200MC </p> <p>Type: Diffuse Nebula</p> <p>Constellation: Cepheus</p> <p>Coordinates: 22h 47' 26" 58° 03' 03"</p> <p>Close Star: SAO-20268 (Iota Cephei)</p> <p>Catalog Objects: SH2-142</p> <p>Imaging Window: 07:55 – 03:22</p> <p>Transit: 11:34 89°</p>	<p>C-11 HD: Focal Reducer</p>  <p>FOV 1.05 x 0.70° - RA 22hr 47' 26", DEC 58° 03' 03"</p>
<p>Wizard Nebula (SH 2-142)</p> <p>Config: C11HD ZWO6200MC </p> <p>Type: Diffuse Nebula</p> <p>Constellation: Cepheus</p> <p>Coordinates: 22h 47' 26" 58° 03' 03"</p> <p>Close Star: SAO-20268 (Iota Cephei)</p> <p>Catalog Objects: SH2-142</p> <p>Imaging Window: 07:55 – 03:22</p> <p>Transit: 11:34 89°</p>	<p>C-11 HD: Primary Focus</p>  <p>Wizard Nebula (NGC-7380) Constellation: Cepheus RA = 22h 47m 26.0s DEC = 58° 03' 03.0" Size = 40.8 x 27.1 arcmin Orientation: 82deg E of N; Pixel scale = 0.441 arcsecond (F1.200mm)</p> <p>James Webb (Hubble) 2018 03 01 2018 03 01 Config: C11 HD AuroraMk C11A CCD QHY128K Exposure: 100 10000000 Gain: 2000 Offset: 100</p>
<p>Cave Nebula (SH2-155)</p> <p>Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright & Dark Nebula</p> <p>Constellation: Cepheus</p> <p>Coordinates: 23h 00' 57" 62° 04' 09"</p> <p>Close Star: SAO-20268 (Iota Cephei)</p> <p>Catalog Objects: SH2-155</p> <p>Imaging Window: 08:06 – 03:26</p> <p>Transit: 11:46 61°</p>	<p>C-11 HD: HyperStar v4</p>  <p>SH2-155 (Cave Nebula) Constellation: Cepheus RA = 23h 00m 57.0s DEC = 62° 04' 09.0" Size = 40.8 x 27.1 arcmin Orientation: 82deg E of N; Pixel scale = 0.441 arcsecond (F1.200mm)</p> <p>James Webb (Hubble) 2018 03 01 2018 03 01 Config: C11 HD AuroraMk C11A CCD QHY128K Exposure: 100 10000000 Gain: 2000 Offset: 100</p>



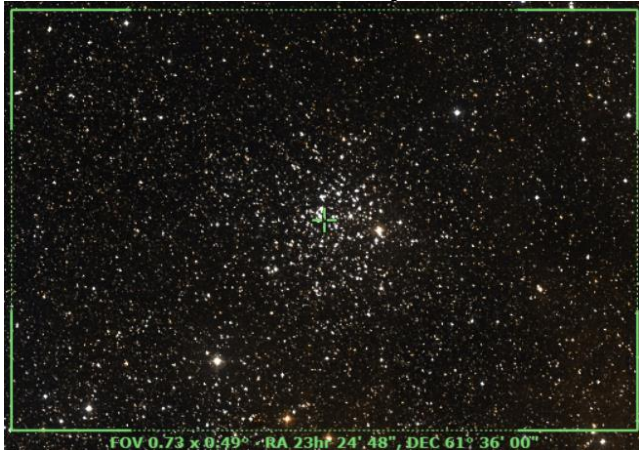
Prospective Imaging Objects – September 16 2023

<p>Cave Nebula (SH2-155) Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright & Dark Nebula</p> <p>Constellation: Cepheus Coordinates: 22h 56' 57" 62° 31' 33"</p> <p>Close Star: SAO-20268 (Iota Cephei) Catalog Objects: SH2-155 Imaging Window: 08:06 – 03:26 Transit: 11:46 61°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p>  <p style="text-align: center;">FOV 1.05 x 0.70° · RA 22hr 56' 57", DEC 62° 31' 33"</p>
<p>Cave Nebula (SH2-155) Config: C11HD ZWO6200MC </p> <p>Type: Bright & Dark Nebula</p> <p>Constellation: Cepheus Coordinates: 22h 56' 57" 62° 31' 33"</p> <p>Close Star: SAO-20268 (Iota Cephei) Catalog Objects: SH2-155 Imaging Window: 08:06 – 03:26 Transit: 11:46 61°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="text-align: center;">FOV 0.73 x 0.49° · RA 22hr 58' 02", DEC 62° 35' 07"</p>
<p>NGC-7479 (PGC-70419) Config: C11HD ZWO6200MC </p> <p>Type: Barred Spiral Galaxy</p> <p>Constellation: Pegasus Coordinates: 23h 04' 58" 12° 18' 37"</p> <p>Close Star: SAO-127340 (Baham) Catalog Objects: NGC-7479 Imaging Window: 09:00 – 02:48 Transit: 11:54 62°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="text-align: center;">NGC-7479 <small>Constellation: Pegasus [RA = 23h 04m 58.2s, DEC = +12deg 18' 37.7"]; Size = 31.4 x 21.0 arcmin Orientation: 0.0 deg E of N Pixel scale = 0.440 arcsec/pixel FL = 2000mm James Yoder Location(s): Maunaloa Ground(2020-10-16), Chandler(2020-10-19), AZ Config: C-11 HD Binalu Skyline 08Y128c Exposure Info: 1600ms/Frame (Gain: 3200) (QSNr: 180)</small></p>

Prospective Imaging Objects – September 16 2023

<p>Lobster Claw and Bubble Nebula (SH2-157) Config: C11-HD HS ZWO6200MC</p> <p>Type: Diffuse Nebula</p> <p>Constellation: Cassiopeia Coordinates: 23h 18' 25.8" 60° 31' 17.8"</p> <p>Close Star: SAO-21133 (Caph) Catalog Objects: SH2-157, NGC-7635 Imaging Window: 08:20 – 03:50 Transit: 12:05 63°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="font-size: small;">Lobster Claw and Bubble Nebula(NGC-7635) Constellation: Cassiopeia RA = 23h 18m 25.8s DEC = +60deg 31' 17.8" Size = 2.68 x 1.79 deg Orientation: 0deg E of N Pixel scale = 2.28 arcsecond FL=540mm James Yoder Date(s) 2020-10-21 Location: Chandler, AZ Config: C-11HD HyperStar V4 Astronomik CLS-CCD QHY128c Exposure Info: 360ms@3min Gain: 3200 Offset: 180</p>
<p>Lobster Claw (SH2-157) Config: C11-HD FR ZWO6200MC </p> <p>Type: Diffuse Nebula</p> <p>Constellation: Cassiopeia Coordinates: 23h 16' 00" 59° 57' 32"</p> <p>Close Star: SAO-21133 (Caph) Catalog Objects: SH2-157 Imaging Window: 08:20 – 03:50 Transit: 12:05 63°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p>  <p style="font-size: small;">FOV 1.05 x 0.70° - RA 23hr 16' 00", DEC 59° 57' 32"</p>
<p>Bubble Nebula (NGC-7635) Config: C11HD ZWO6200MC </p> <p>Type: Bright & Dark Nebula</p> <p>Constellation: Cepheus Coordinates: 23h 20' 12" 61° 11' 00"</p> <p>Close Star: SAO-21133 (Caph) Catalog Objects: NGC-7635, SH2-162 Imaging Window: 08:26 – 03:52 Transit: 12:09 62°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">Bubble Nebula (NGC-7635) Constellation: Cassiopeia James Yoder 2018-09-12 Location: Chandler, AZ Config: C11 Svbony L3 Filterless Dual Filter QHY128c Exposure Info: 300ms@3min Gain: 1100 Offset: 170</p>

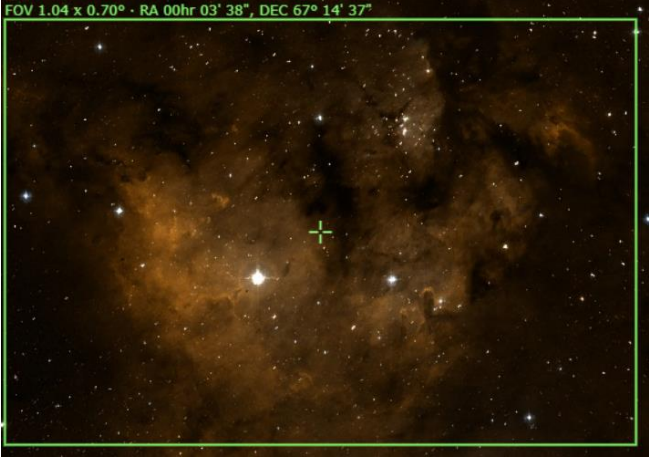


Prospective Imaging Objects – September 16 2023

<p>Pegasus Cluster (NGC-7619) Config: C11-HD FR ZWO6200MC </p> <p>Type: Cluster of Galaxies</p> <p>Constellation: Pegasus Coordinates: 23h 20' 13" 08° 11' 08"</p> <p>Close Star: SAO-128085 (g Piscium) Catalog Objects: NGC-7619 Imaging Window: 09:28 – 02:51 Transit: 12:09 65°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p>  <p style="text-align: center;">FOV 1.05 x 0.70° · RA 23hr 20' 13", DEC 08° 11' 08"</p>
<p>Pegasus Cluster (NGC-7619) Config: C11HD ZWO6200MC </p> <p>Type: Cluster of Galaxies</p> <p>Constellation: Pegasus Coordinates: 23h 20' 13" 08° 10' 57"</p> <p>Close Star: SAO-128085 (g Piscium) Catalog Objects: NGC-7619 Imaging Window: 12:39 – 04:03 Transit: 03:21 65°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="text-align: center;">FOV 0.73 x 0.49° · RA 23hr 20' 13", DEC 08° 10' 57"</p>
<p>M-52 (NGC-7654) Config: C11HD ZWO6200MC </p> <p>Type: Open Cluster</p> <p>Constellation: Cassiopeia Coordinates: 23h 24' 48" 61° 36' 00"</p> <p>Close Star: SAO-21133 (Caph) Catalog Objects: M-52 Imaging Window: 08:32 – 03:56 Transit: 12:14 62°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="text-align: center;">FOV 0.73 x 0.49° · RA 23hr 24' 48", DEC 61° 36' 00"</p>


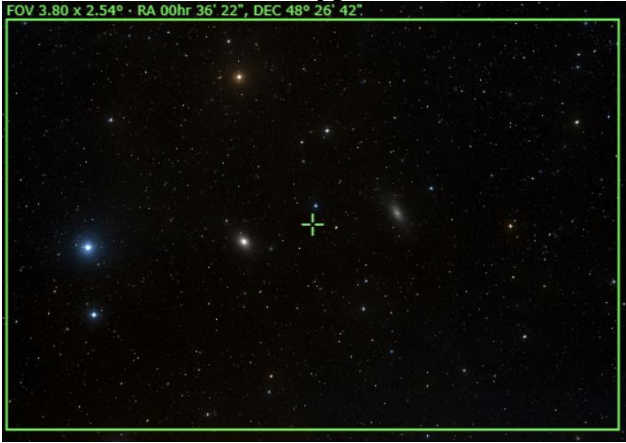

Prospective Imaging Objects – September 16 2023

<p>Blue Match Nebula (SH2-155) Config: C11-HD HS ZWO6200MC</p> <p>Type: Reflection Nebula</p> <p>Constellation: Andromeda Coordinates: 23h 39' 24" 48° 51' 37" Nearby: NGC-7686 Close Star: SAO-73765 (Alpheratz) Catalog Objects: VdB 158/LBN 534 Imaging Window: 08:29 – 04:09 Transit: 12:19 81°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>
<p>Caroline's Rose (NGC-7789) Config: C11HD ZWO6200MC </p> <p>Type: Open Cluster</p> <p>Constellation: Cassiopeia Coordinates: 23h 57' 37" 56° 42' 21"</p> <p>Close Star: SAO-21607 (Shedar) Catalog Objects: NGC-7789 Imaging Window: 08:58 – 04:35 Transit: 12:46 65°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>




Prospective Imaging Objects – September 16 2023

<p>NGC-7822 (CED-214) Config: C11-HD FR ZWO6200MC </p> <p>Type: Diffuse Nebula</p> <p>Constellation: Cepheus Coordinates: 00h 03' 38" 67° 14' 37"</p> <p>Close Star: SAO-20268 Catalog Objects: NGC-7822/CED-214 Imaging Window: 09:26 – 04:16 Transit: 12:51 56°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p> 
<p>NGC-7822 (CED-214) Config: C11HD ZWO6200MC </p> <p>Type: Emission Nebula Constellation: Cepheus Coordinates: 00h 01' 56" 67° 23' 05"</p> <p>Close Star: SAO-10818 Catalog Objects: Ced 214, NGC 7822, SH2-171 Imaging Window: 09:26 – 04:16 Transit: 12:51 56°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">Bright Nebula NGC-7822 (Ced 214) Constellation: Cepheus RA: 00h 03m 38.00s, DEC: 67° 14' 37.00\"</p>
<p>Bow-Tie Nebula (NGC-40) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula</p> <p>Constellation: Cepheus Coordinates: 00h 13' 01" 72° 31' 21"</p> <p>Close Star: SAO-20268 Catalog Objects: NGC-40 Imaging Window: 10:10 – 03:54 Transit: 01:02 51°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 


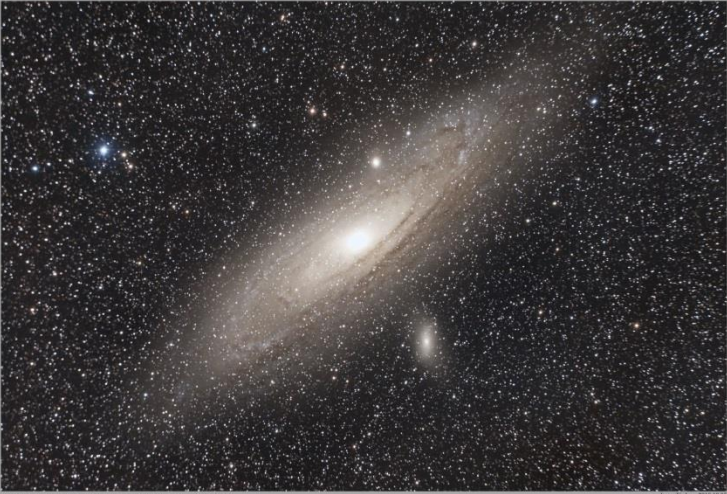
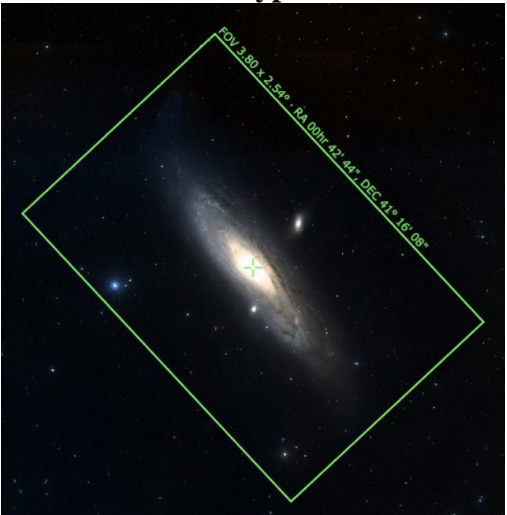
Prospective Imaging Objects – September 16 2023

<p>Andromeda Galaxy Group Config: C11HD ZWO6200MC </p> <p>Type: Cluster of dim galaxies Peak: Constellation: Andromeda Coordinates: 00h 17' 58" 30° 03' 03"</p> <p>Close Star: SAO-73765 (Alpheratz) Catalog Objects: NGC 67-72 et. El.</p> <p>Imaging Window: 09:34 – 04:40 Transit: 01:07 87°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>NGC-147 & NGC-185 Config: C11-HD HS ZWO6200MC</p> <p>Type: Galaxy Pair</p> <p>Constellation: Cassiopeia Coordinates: 00h 36' 22" 48° 26' 42"</p> <p>Close Star: SAO-21609 (Shedar) Catalog Objects: NGC-147, NGC-185 Imaging Window: 09:32 – 04:48 Transit: 01:22 75°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p> 
<p>NGC-147 & NGC-185 Config: C11-HD FR ZWO6200MC</p> <p>Type: Galaxy Pair</p> <p>Constellation: Cassiopeia Coordinates: Frame 01 RA: 00hr 38' 33" DEC: 48° 25' 44" Frame 02 RA: 00hr 33' 21" DEC: 48° 25' 44"</p> <p>Close Star: SAO-21609 (Shedar) Catalog Objects: NGC-147, NGC-185 Imaging Window: 09:32 – 04:48 Transit: 01:22 75°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer Composite!</p> 


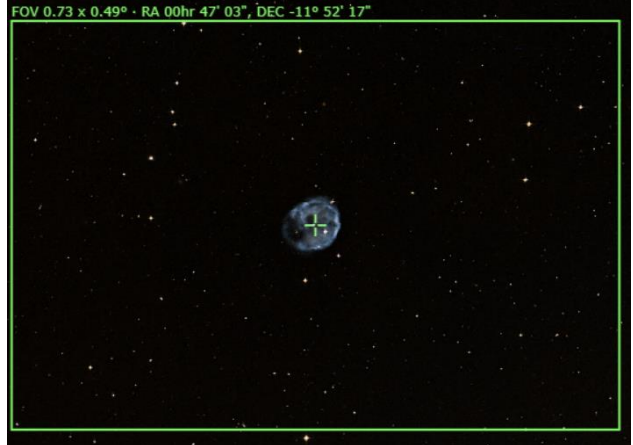

Prospective Imaging Objects – September 16 2023

<p>NGC-147 Config: ZWO6200MC </p> <p>Type: Galaxy Peak: Constellation: Cassiopeia Coordinates: 00h 33' 07.245" 48° 30' 18.030"</p> <p>Close Star: SAO-37375 Catalog Objects: NGC-147</p> <p>Imaging Window: 09:32 – 04:48 Transit: 01:22 75°</p>	<p style="text-align: center;">Primary Focus</p>  <p style="font-size: small; text-align: center;">Dwarf Galaxy NGC-147 Constellation: Cassiopeia RA = 00h 33m 07.245s DEC = +48deg 30' 18.030" Size = 49.7 x 33.5 arcmin (Pixel scale = 0.579 arcsec/pixel)</p> <p style="font-size: x-small; text-align: right;">James VanDyke 2018-07-22 Location: Mesaicastro Grande, Truth or Dare, AZ Config: C11 L1 Camera Broadband Filter (QB7125) Exposure Info: (348min) Gain: 1200 Offset: 100</p>
<p>NGC-185 Config: C11-HD ZWO6200MC</p> <p>Type: Dwarf Spheroidal Galaxy</p> <p>Constellation: Cassiopeia Coordinates: 00h 38' 58" 48° 20' 14"</p> <p>Close Star: SAO-21609 (Shedar) Catalog Objects: NGC-147 Imaging Window: 09:32 – 04:48 Transit: 01:22 75°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small; text-align: center;">FOV 0.73 x 0.49° - RA 00hr 38' 58", DEC 48° 20' 14"</p> <p style="font-size: x-small; text-align: right;">James VanDyke 2018-07-22 Location: Mesaicastro Grande, Truth or Dare, AZ Config: C11 L1 Camera Broadband Filter (QB7125) Exposure Info: (348min) Gain: 1200 Offset: 100</p>
<p>M-110 Config: C11-HD ZWO6200MC</p> <p>Type: Elliptical Galaxy</p> <p>Constellation: Andromeda Coordinates: 00h 40' 22" 41° 41' 07"</p> <p>Close Star: SAO-73765 (Sirrah) Catalog Objects: M-110 Imaging Window: 09:43 – 04:48 Transit: 01:29 82°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: x-small; text-align: center;">M-110 (NGC-205) Constellation: Andromeda RA = 00h 40m 21.6s DEC = +41deg 41' 07" Size = 41.2 x 27.5 arcmin (Orientation: 9.5deg E of N) (Pixel scale = 0.448 arcsec/pixel) (F1-C1700nm)</p> <p style="font-size: x-small; text-align: right;">James VanDyke 2018-07-22 Location: Mesaicastro Grande, Truth or Dare, AZ Config: C11 L1 Camera Broadband Filter (QB7125) Exposure Info: (348min) Gain: 1200 Offset: 100</p>



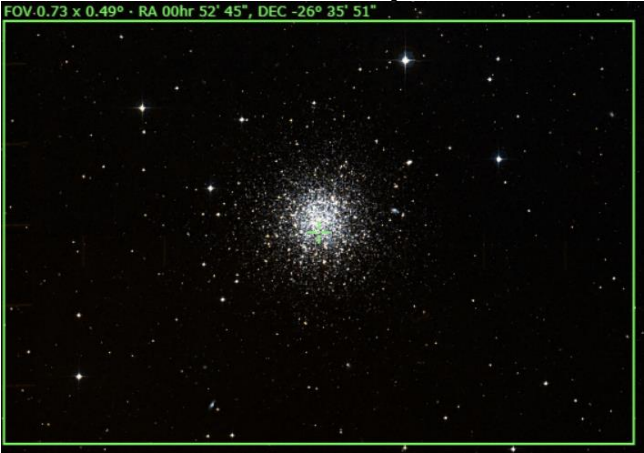
Prospective Imaging Objects – September 16 2023

<p>M-32 Config: C11-HD ZWO6200MC</p> <p>Type: Elliptical Galaxy</p> <p>Constellation: Andromeda Coordinates: 00h 42' 42" 40° 51' 57"</p> <p>Close Star: SAO-73765 (Sirrah) Catalog Objects: M-32 Imaging Window: 09:45 – 04:48 Transit: 01:31 83°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="text-align: center;">FOV 0.73 x 0.49° • RA 00hr 42' 42", DEC 40° 51' 57"</p>
<p>Andromeda Galaxy (M 31) Config: C11 HS ZWO6200MC </p> <p>Type: Galaxy Peak: Oct 1 Constellation: Andromeda Coordinates: 00h 43' 03.089" 41° 18' 37.05"</p> <p>Close Star: SAO-54281 Catalog Objects: M-31, M-32, M-110, NGC-224, NGC-206</p> <p>Imaging Window: 09:45 – 04:48 Transit: 01:31 82°</p>	<p style="text-align: center;">Hyperstar</p>  <p style="text-align: center;">The Great Andromeda Galaxy (M-31 & M32)</p> <p style="text-align: right;"><small>Image taken: 2023-07-13 Location: Mercury Ground, Tisbury, UK Camera: C-11 Hyperstar (Q17-176) Exposure info: 4x1800/30s Gain 100 (0f50, 176)</small></p>
<p>M-31, M-32 Config: C11-HD HS ZWO6200MC</p> <p>Type: Andromeda Galaxy</p> <p>Constellation: Andromeda Coordinates: 00h 42' 44" 41° 16' 08" Angle: 133° East</p> <p>Close Star: SAO-73765 (Sirrah) Catalog Objects: M-31, M-32 Imaging Window: 09:45 – 04:48 Transit: 01:31 82°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="text-align: center;">FOV 2.80 x 2.56° • RA 00hr 42' 44" DEC 41° 16' 08"</p>




Prospective Imaging Objects – September 16 2023

<p>NGC246, NGC255, PGC 2689 Config: C11-HD HS ZWO6200MC</p> <p>Type: Planetary Nebula, 2 Galaxies</p> <p>Constellation: Cetus Coordinates: 00h 47' 00" -11° 40' 40"</p> <p>Close Star: SAO-147420 (Diphda) Catalog Objects: NGC-246 Imaging Window: *11:23 – 04:17 Transit: 01:36 45°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p>  <p style="font-size: small;">Skull Nebula (NGC-246) and Galaxy NGC-255 Constellation: Cetus the Whale RA = 00h 47m 00s, DEC = -11deg 40' 40" Size = 51.7 x 34.5 arcmin Orientation: 190deg E of N Pixel scale = 0.579 arcsec/pixel F1-1900nm James VanDer (Date: 2023-09-26 Location: Chandler, AZ Config: C11-HD 0" Reducer Filter: Double-Stack Camera: QHY128C Exposure Info: 2100ms/Frame Gain: 2000 Offset: 100</p>
<p>Skull Nebula (NGC-246) Config: C11-HD ZWO6200MC</p> <p>Type: Planetary Nebula</p> <p>Constellation: Cetus Coordinates: 00h 47' 03" -11° 52' 17"</p> <p>Close Star: SAO-147420 (Diphda) Catalog Objects: NGC-246 Imaging Window: *11:23 – 04:17 Transit: 01:36 45°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">FOV 0.73 x 0.49" - RA 00hr 47' 03" , DEC -11° 52' 17" James VanDer (Date: 2023-09-26 Location: Chandler, AZ Config: C11-HD 0" Reducer Filter: Double-Stack Camera: QHY128C Exposure Info: 2100ms/Frame Gain: 2000 Offset: 100</p>
<p>Needle's Eye Galaxy (NGC 247) Config: C11HD ZWO6200MC </p> <p>Type: Galaxy Peak: Constellation: Cetus Coordinates: 00hr 47' 12" -20° 44' 38"</p> <p>Close Star: SAO-147420 Catalog Objects: NGC 247</p> <p>Imaging Window: *11:01 – 04:00 Transit: 01:36 36°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">Needle's Eye Galaxy (NGC-247) Constellation: Cetus RA = 00h 47m 12s, DEC = -20deg 44' 38" Size = 41.1 x 27.5 arcmin Orientation: 63deg E of N Pixel scale = 0.446 arcsec/pixel F1-2000nm James VanDer (Date: 2023-09-21 Location: Chandler, AZ Config: C-11 HD Double-Stack QHY128C Exposure Info: 2000ms/Frame Gain: 2000 Offset: 100</p>



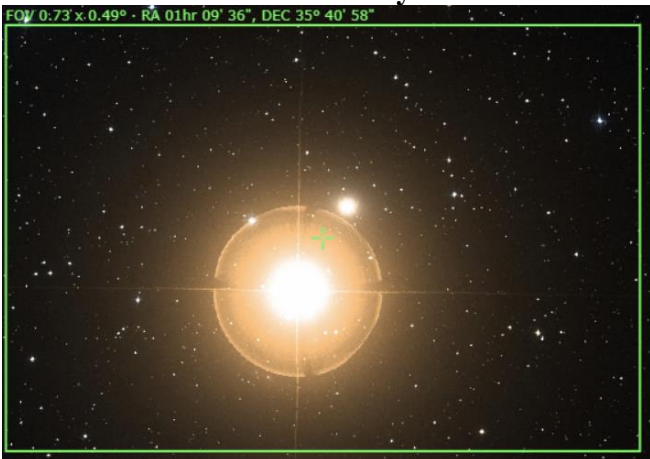
Prospective Imaging Objects – September 16 2023

<p>NGC-288, NGC-253 Config: C11-HD HS ZWO6200MC</p> <p>Type: Globular and Galaxy</p> <p>Constellation: Sculptor Coordinates: 00h 50' 03" -25° 54' 37"</p> <p>Close Star: SAO-147420 (Diphda) Catalog Objects: NGC-288, NGC-253 Imaging Window: *11:51 – 03:22 Transit: 01:41 31°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="font-size: small;">Sculptor galaxy (NGC-253) and Globular Cluster (NGC-288) James Webb (Dance) 2020.02.14 Location: Mountain Central Trailhead, AZ Constellation: Sculptor Config: C-11HD HyperStar V4 Baader Masker QHY126 <small>RA= 00h 49m 57.3s DEC= -25deg 54' 45.8" Size = 1.14 x 2.09 deg Orientation: Mag 8.4 of N Pixel scale = 2.28 arcsec/pixel FL=540mm Exposure Info: 210ms/5min Gain: 3200 Offset: 180</small></p>
<p>Sculptor Galaxy (NGC-253) Config: C11-HD ZWO6200MC</p> <p>Type: Spiral Galaxy</p> <p>Constellation: Sculptor Coordinates: 00h 47' 33" -25° 17' 15"</p> <p>Close Star: SAO-147420 (Diphda) Catalog Objects: NGC-253 Imaging Window: *11:35 – 02:27 Transit: 01:36 30°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">Sculptor Galaxy (NGC 253) James Webb 2020.08.21 Constellation: Sculptor Location: Chandler, AZ <small>Config: C11 Statons L3 Corrector Baader Masker Filter QHY126 Exposure Info: 100ms/5min Gain: 3200 Offset: 180</small></p>
<p>NGC-288 Config: C11-HD ZWO6200MC</p> <p>Type: Globular Cluster</p> <p>Constellation: Sculptor Coordinates: 00h 52' 45" -26° 35' 51"</p> <p>Close Star: SAO-147420 (Diphda) Catalog Objects: NGC-288 Imaging Window: *11:51 – 03:22 Transit: 01:41 31°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">FOV: 0.73 x 0.49° - RA 00hr 52' 45", DEC -26° 35' 51"</p>




Prospective Imaging Objects – September 16 2023

<p>NGC-188 Config: C11-HD FR ZWO6200MC</p> <p>Type: Open Cluster</p> <p>Constellation: Cepheus Coordinates: 00h 47' 30" 85° 15' 30"</p> <p>Close Star: SAO-308 (Polaris) Catalog Objects: NGC-188 Imaging Window: *07:55 – 04:48 Transit: 01:36 38°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p>  <p>FOV 1.04 x 0.70° · RA 00hr 47' 30", DEC 85° 15' 30"</p>
<p>NGC-281 Config: C11-HD FR ZWO6200MC</p> <p>Type: Diffuse Nebula</p> <p>Constellation: Cassiopeia Coordinates: 00h 53' 00" 56° 37' 00"</p> <p>Close Star: SAO-11482 (Navi) Catalog Objects: NGC-281 Imaging Window: 09:53 – 04:48 Transit: 01:42 67°</p>	<p style="text-align: center;">C-11 HD: Focal Reducer</p>  <p>NGC-281 Pacman Nebula</p> <p style="text-align: right;">James Wyder 2015.09.11</p>
<p>IC-59, IC-63 Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright Nebula</p> <p>Constellation: Cassiopeia Coordinates: 01h 03' 11" 60° 42' 24"</p> <p>Close Star: SAO-11482 (Navi) Catalog Objects: IC-59, IC-63 Imaging Window: 10:03 – 04:48 Transit: 01:46 62°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p>FOV 3.80 x 2.54° · RA 01hr 03' 11", DEC 60° 42' 24"</p>



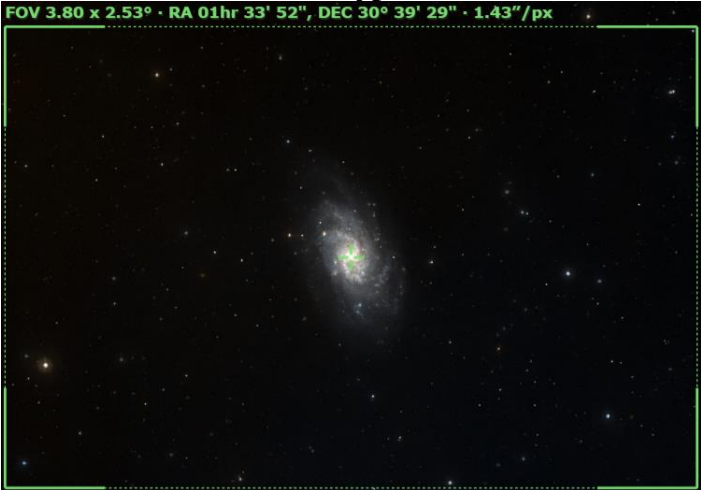
Prospective Imaging Objects – September 16 2023

<p>IC-59, IC-63 Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright Nebula</p> <p>Constellation: Cassiopeia Coordinates: 00h 58' 48" 61° 04' 02"</p> <p>Close Star: SAO-11482 (Navi) Catalog Objects: IC-59, IC-63 Imaging Window: 10:03 – 04:48 Transit: 01:46 62°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> <p style="font-size: small; text-align: center;">FOV 0.73 x 0.49° · RA 00hr 58' 48", DEC 61° 04' 02"</p> 
<p>IC-1613 Config: C11-HD ZWO6200MC</p> <p>Type: Irregular Dwarf Galaxy</p> <p>Constellation: Cetus Coordinates: 01h 04' 48" 02° 07' 07"</p> <p>Close Star: SAO-75151 (Hamal) Catalog Objects: IC-1613 Imaging Window: 11:35 – 04:48 Transit: 01:53 59°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> <p style="font-size: small; text-align: center;">FOV 0.73 x 0.49° · RA 01hr 04' 48", DEC 02° 07' 07"</p> 
<p>Mirachs Ghost (NGC-404) Config: C11-HD ZWO6200MC</p> <p>Type: Elliptical Galaxy</p> <p>Constellation: Andromeda Coordinates: 01h 09' 36" 35° 40' 58"</p> <p>Close Star: SAO-544471 (Mirach) Catalog Objects: NGC-404 Imaging Window: 10:18 – 04:48 Transit: 01:58 88°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> <p style="font-size: small; text-align: center;">FOV 0.73 x 0.49° · RA 01hr 09' 36", DEC 35° 40' 58"</p> 




Prospective Imaging Objects – September 16 2023

<p>NGC-457 & Dolphin Nebula Config: C11-HD HS ZWO6200MC</p> <p>Type: Open Cluster & Nebula</p> <p>Constellation: Cassiopeia Coordinates: 01° 23' 38" 58° 12' 54"</p> <p>Close Star: SAO-22268 (Ruchbah) Catalog Objects: NGC-457 Imaging Window: 10:21 – 04:48 Transit: 02:08 65°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="font-size: small;">Firefox Nebula (SH-2188), Owl Cluster(NGC-457), NGC-436 <small>Constellation: Cassiopeia RA: 01h 23m 38.75s, DEC: +58° 12' 54.00" Size: 2.3 x 2.3 deg. Observation: May 6, 2023. Filter: H-alpha. Exposure: 15.00sec. Total Exp: 15.00sec. Gain: 200. Offset: 100.</small></p>
<p>Owl Cluster (NGC-457) Config: C11-HD ZWO6200MC</p> <p>Type: Open Cluster & Nebula</p> <p>Constellation: Cassiopeia Coordinates: 01h 23' 38" 58° 12' 54"</p> <p>Close Star: SAO-22268 (Ruchbah) Catalog Objects: NGC-457 Imaging Window: 10:21 – 04:48 Transit: 02:08 65°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> <p style="font-size: small;">FOV 0.73 x 0.49° - RA 01hr 19' 33", DEC 58° 17' 42"</p> 
<p>Minkowski's Object (Arp-133) Config: C11-HD HS ZWO6200MC</p> <p>Type: Galaxy Cluster Constellation: Cetus Coordinates: 01h 25' 27" -01° 29' 03"</p> <p>Close Star: SAO-75151 (Hamal) Catalog Objects: ARP-133 Imaging Window: 12:13 – 04:48 Transit: 02:14 55°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> <p style="font-size: small;">FOV 0.73 x 0.49° - RA 01hr 25' 27", DEC -01° 29' -3"</p> 




Prospective Imaging Objects – September 16 2023

<p>Firefox Nebula (Sh 2-188) Config: C11HD ZWO6200MC </p> <p>Type: Diffuse Nebula Peak: Constellation: Cassiopeia Coordinates: 01h 31' 37" 58° 21' 22"</p> <p>Close Star: SAO-22268 (Ruchbah) Catalog Objects: Sh 2-188</p> <p>Imaging Window: 10:32 – 04:48 Transit: 02:19 65°</p>	<p>C-11 HD: Primary Focus</p> 
<p>M-103 (NGC-581) Config: C11HD ZWO6200MC </p> <p>Type: Open Cluster Constellation: Cassiopeia Coordinates: 01h 33' 31" 60° 39' 44"</p> <p>Close Star: ISO-22268 (Ruchbah) Catalog Objects: M-103/NGC-581</p> <p>Imaging Window: 10:38 – 04:48 Transit: 02:22 63°</p>	<p>C-11 HD: Primary Focus</p> 
<p>Triangulum Galaxy (M-33) Config: C11 HS ZWO6200MC</p> <p>Type: Galaxy Constellation: Triangulum Coordinates: 01h 33' 52" 30° 39' 29"</p> <p>Close Star: SAO-74996 Catalog Objects: M33, NGC598</p> <p>Imaging Window: 10:49 – 04:48 Transit: 02:22 87°</p>	<p>C-11 HD: HyperStar v4</p> 




Prospective Imaging Objects – September 16 2023

<p>Triangulum Galaxy (M-33) Config: C11-HD FR ZWO6200MC </p> <p>Type: Galaxy Peak: Oct 14 Constellation: Triangulum</p> <p>Camera Rotation - 90° Coordinates: 01h 33' 52" 30° 39' 29"</p> <p>Close Star: SAO-74996 Catalog Objects: M33, NGC598</p> <p>Imaging Window: 10:49 – 04:48 Transit: 02:22 87°</p>	<p>CH11-HD Focal Reducer 90° Rotation</p> 
<p>Triangulum Galaxy (M-33) Config: ZWO6200MC </p> <p>Type: Galaxy Peak: Oct 14 Constellation: Triangulum Coordinates: 01° 34' 53.37" 30° 45' 11.2"</p> <p>Close Star: SAO-74996 Catalog Objects: M33, NGC598</p> <p>Imaging Window: 10:49 – 04:48 Transit: 02:22 87°</p>	<p>Primary Focus</p> 
<p>M-74 Config: C11HD ZWO6200MC </p> <p>Type: Spiral Galaxy Peak: Constellation: Pisces Coordinates: 01h 36' 42" 15° 46' 60"</p> <p>Close Star: ISO-91781 (Algenib) Catalog Objects: M-74</p> <p>Imaging Window: 11:18 – 04:48 Transit: 02:21 72°</p>	<p>C-11 HD: Primary Focus</p> 

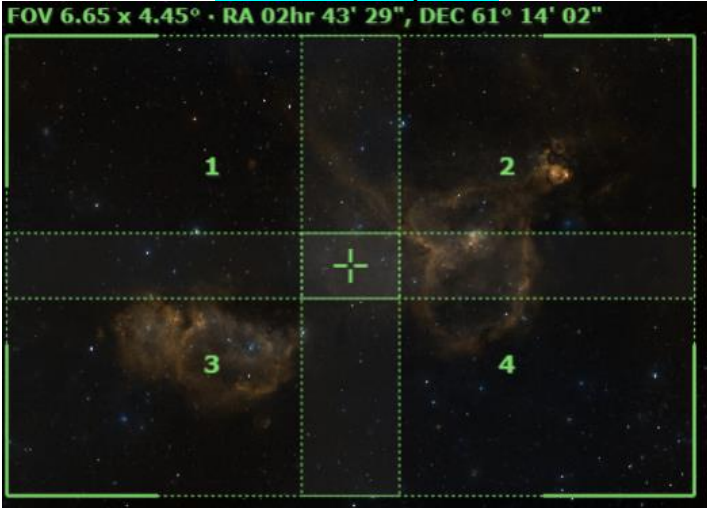


Prospective Imaging Objects – September 16 2023

<p>Little Dumbbell Nebula (M-76) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula Peak: Constellation: Perseus Coordinates: 01h 42' 18" 51° 34' 17"</p> <p>Close Star: ISO-37375 Catalog Objects: M-76</p> <p>Imaging Window: 10:36 – 04:48 Transit: 02:27 72°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">Little Dumbbell Nebula (M-76, NGC-650) Constellation: Perseus RA = 01h 42m 17.9s (RA) = +15deg 37' 48.5" (Dec) Size = 36.8 x 24.5 arcmin (Orientation: 0.4deg E of N) Pixel scale = 0.446 arcsec/pixel (11-200mm) James VanDer (Location): Massacre Grounds (2020.09.14), Chandler (2020.09.19), AZ Config: C-11 HD (Shade) SkyStar (GRT) 184 Exposure Info: 480ms@5mm (Gain: 3200) (Offset: 180)</p>
<p>Nautilus Galaxy (NGC-772) Config: C11HD ZWO6200MC </p> <p>Type: Galaxy Peak: Constellation: Aries Coordinates: 01h 59' 19" 19° 00' 27"</p> <p>Close Star: ISO-75012 (Sheratan) Catalog Objects: NGC-772</p> <p>Imaging Window: 11:32 – 04:48 Transit: 02:44 76°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">772</p>
<p>Hand chi Persei (NGC 869, 884) Config: C11-HD HS ZWO6200MC</p> <p>Type: Double Open Cluster Peak: October 28 Constellation: Perseus Coordinates: 02hr 20' 31" 56° 54' 05"</p> <p>Close Star: SAO-22258 (Ruchbah) Catalog Objects: NGC 869, 884</p> <p>Imaging Window: 11:19 – 04:48 Transit: 03:07 66°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="font-size: small;">869</p>

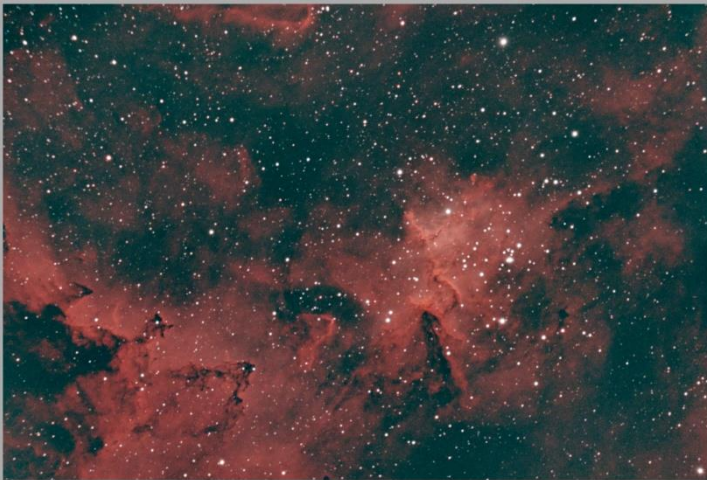

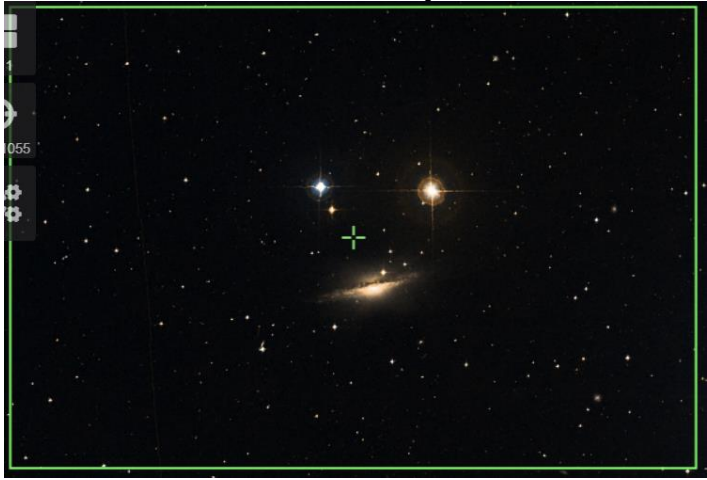
Prospective Imaging Objects – September 16 2023

<p>Edge On Galaxy (NGC 891) Config: C1 LF ZWO6200MC </p> <p>Type: Galaxy Peak: Oct 27 Constellation: Andromeda Coordinates: 02h 23' 43.29" 42° 25' 46.4"</p> <p>Close Star: SAO-37734 Catalog Objects: NGC891</p> <p>Imaging Window: 11:20 – 04:48 Transit: 03:07 81°</p>	<p>Primary Focus</p>  <p>Edge On Spiral Galaxy NGC 891</p> <p>James Yoder 2014.11.23</p>
<p>NGC-925 (PGC 9332) Config: C11-HD ZWO6200MC </p> <p>Type: Galaxy Constellation: Triangulum Coordinates: 02h 27' 17" 33° 34' 44"</p> <p>Close Star: SAO-55306 (Beta Trianguli) Catalog Objects: NGC925/PGC9332</p> <p>Imaging Window: 11:34 – 04:48 Transit: 03:12 90°</p>	<p>Primary Focus</p>  <p>NGC-925</p>
<p>Fish Head Nebula (IC-1795) Config: C11-HD FR ZWO6200MC </p> <p>Type: Bright Nebula Constellation: Cassiopeia</p> <p>Coordinates: 02h 27' 03" 62° 02' 31"</p> <p>Close Star: SAO-38787 (Mirfak) Catalog Objects: IC-1795</p> <p>Imaging Window: 11:29 – 04:48 Transit: 03:10 87°</p>	<p>CH11-HD Focal Reducer</p>  <p>Fish Head Nebula (IC-1795)</p>




Prospective Imaging Objects – September 16 2023

<p>Heart and Soul Nebulas Config: C11 HS ZWO6200MC</p> <p>Type: Diffuse Nebula</p> <p>Constellation: Cassiopeia Coordinates (RA, DEC): Pane 1: 02hr 55' 41", 62° 09' 11" Pane 2: 02hr 31' 16", 62° 09' 11" Pane 3: 02hr 54' 58", 60° 15' 00" Pane 4: 02hr 31' 59", 60° 15' 00"</p> <p>Close Star: SAO-38787 (Mirfak) Catalog Objects: IC-1848</p> <p>Imaging Window: 11:52 – 04:48 Transit: 03:36 63°</p>	<p>C-11 HD: HyperStar v4 SUPER-4 Composite!</p> <p>FOV 6.65 x 4.45° · RA 02hr 43' 29", DEC 61° 14' 02"</p> 
<p>Heart Nebula (IC 1805) Config: C11-HD HS ZWO6200MC</p> <p>Type: Diffuse Nebula Peak: October 31 Constellation: Cassiopeia Coordinates: 02hr 31' 16" 61° 21' 36"</p> <p>Close Star: SAO-12031 Catalog Objects: IC 1805</p> <p>Imaging Window: 11:52 – 04:48 Transit: 03:36 63°</p>	<p>C-11 HD: HyperStar v4</p>  <p>Heart Nebula (IC 1805) Constellation: Cassiopeia</p> <p><small>James Webb - 2019.09.20 Location: Chandler, AZ Config: C11 HyperStar Atronomik C13-CXD QHY128L Exposure: 16x 270sec/Frame Gain: 3200 Offset: 100V</small></p>
<p>Heart Nebula (IC 1805) Config: C11-HD FR ZWO6200MC </p> <p>Type: Diffuse Nebula Constellation: Cassiopeia Coordinates: 02hr 26' 36" 62° 06' 53"</p> <p>Close Star: SAO-12031 Catalog Objects: IC 1805</p> <p>Imaging Window: 11:52 – 04:48 Transit: 03:36 63°</p>	<p>CH11-HD Focal Reducer</p>  <p>Heart Nebula core (IC-1805) Constellation: Cassiopeia</p> <p><small>James Webb - 2019.09.20 Location: Chandler, AZ Config: C-11HD F-Reducer Atronomik C13-CXD QHY128L Exposure: 16x 270sec/Frame Gain: 3200 Offset: 100V</small></p>




Prospective Imaging Objects – September 16 2023

<p>Heart Nebula (IC-1805) Config: C1 LF ZWO6200MC </p> <p>Type: Diffuse Nebula Peak: October 31 Constellation: Cassiopeia Coordinates: 02hr 32' 42" 61° 27' 00"</p> <p>Close Star: SAO-12031 Catalog Objects: IC 1805</p> <p>Imaging Window: 11:52 – 04:48 Transit: 03:36 63°</p>	<p style="text-align: center;">Primary Focus</p>  <p style="font-size: small;">Heart Nebula Core (IC-1805) Constellation: Cassiopeia</p> <p style="font-size: x-small; text-align: right;">James Yoder 2018-09-14 Location: Chandler, AZ Config: C1 Shimizu LF Reducer OPT Tint Filter (00Y126) Exposure Info: 200ms/Star Gain: 100 Offset: 171</p>
<p>M-77, NGC 1055 Config: C11-HD FR ZWO6200MC </p> <p>Type: Galaxy Peak: Constellation: Cetus Coordinates: 02hr 42' 14" 00° 14' 28" Angle: 90°</p> <p>Close Star: SAO-110665 Catalog Objects: M-77, NGC-1055, NGC-1068</p> <p>Imaging Window: 01:16 – 04:48 Transit: 03:26 57°</p>	<p style="text-align: center;">CH11-HD Focal Reducer</p>  <p style="font-size: small;">Galaxies NGC-1055, M-77, NGC-1072 Constellation: Cetus RA = 02h 42m 26.5s J2000 = 0deg 14' 13.8" Size = 55.2 x 39.3 arcmin Orientation: -96 Mag E of N Pixel scale = 0.579 arcsec/pixel FL=495mm</p> <p style="font-size: x-small; text-align: right;">James Yoder Duesny 2020 12 20 21 22 Location: Chandler, AZ Reducer: Skyglens C5.5-CCD EDAS 1.85-420 Camera: QHY120C Exposure Info: 418ms/Star Gain: 3200 Offset: 180</p>
<p>NGC-1055 Config: C11HD ZWO6200MC </p> <p>Type: Galaxy Peak: Constellation: Cetus Coordinates: 02hr 41' 50" 00° 29' 48"</p> <p>Close Star: SAO-110665 Catalog Objects: NGC-1055</p> <p>Imaging Window: 01:16 – 04:48 Transit: 03:26 57°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 

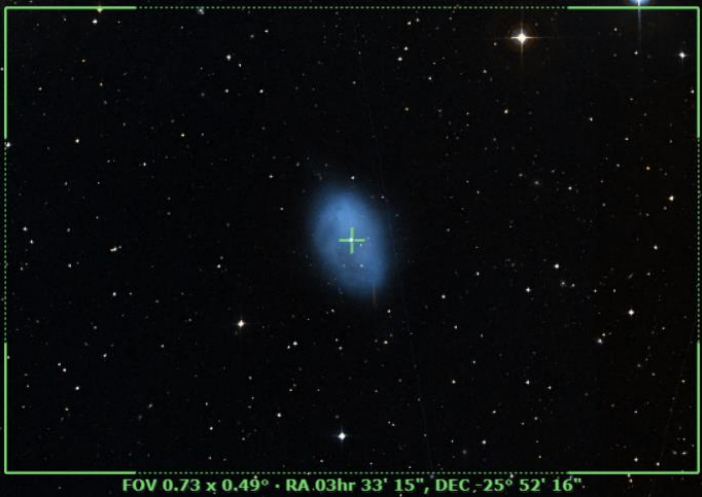

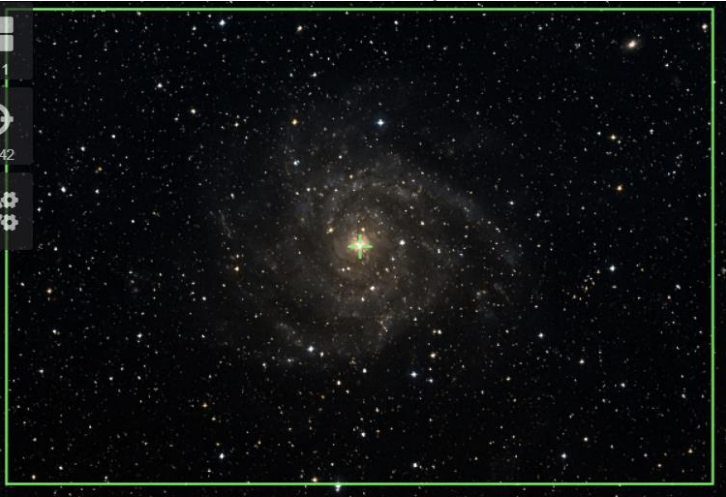
Prospective Imaging Objects – September 16 2023

<p>M 77 (NGC 1068) Config: C11HD ZWO6200MC </p> <p>Type: Galaxy Peak: Constellation: Cetus Coordinates: 02hr 42' 34" 00° 02' 07"</p> <p>Close Star: SAO-110665 Catalog Objects: M 77, NGC-1068</p> <p>Imaging Window: 01:19 – 04:48 Transit: 03:27 57°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>M-34 (NGC-1039) Config: C11-HD ZWO6200MC </p> <p>Type: Open Cluster Constellation: Perseus Coordinates: 02h 42' 05" 42° 45' 42"</p> <p>Close Star: SAO-38592 (Algol) Catalog Objects: M-34/NGC-1039</p> <p>Imaging Window: 11:39 – 04:48 Transit: 03:27 81°</p>	<p style="text-align: center;">Primary Focus</p> 
<p>Soul Nebula (IC-1848) Config: C11-HD HS ZWO6200MC</p> <p>Type: Diffuse Nebula Peak: Constellation: Cassiopeia Coordinates: 02hr 57' 16" 60° 37' 37"</p> <p>Close Star: SAO-38787 (Mirfak) Catalog Objects: IC 1848</p> <p>Imaging Window: 11:52 – 04:48 Transit: 03:36 63°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="font-size: small;">Soul Nebula (IC-1848) Constellation: Cassiopeia</p> <p style="font-size: x-small; text-align: right;">James Yoder 2018.09.20 Location: Chandler, AZ Config: C11 HyperStar Antaresmk-LHC QHY128K Exposure: 10x2000/5min (Gain: 3200) OffSet: 180 </p>




Prospective Imaging Objects – September 16 2023

<p>Soul Nebula (IC-1848) Config: C1 LF ZWO6200MC </p> <p>Type: Diffuse Nebula Peak: Constellation: Cassiopeia Coordinates: 02hr 57' 16" 60° 37' 37"</p> <p>Close Star: SAO-38787 (Mirfak) Catalog Objects: IC 1848</p> <p>Imaging Window: 11:52 – 04:48 Transit: 03:36 63°</p>	<p style="text-align: center;">Primary Focus</p>  <p style="font-size: small;">Soul Nebula (IC-1848) Constellation: Cassiopeia</p> <p style="font-size: x-small; text-align: right;"> Peak: 2023-11-13 Location: Cassiopeia, AZ Config: C1 LF ZWO6200MC Exposure: 10000 Gain: 1000 Offset: 100 </p>
<p>Perseus Galaxy Cluster Config: C11HD ZWO6200MC </p> <p>Type: Galaxy Cluster Peak: Constellation: Perseus Coordinates: 03hr 19' 58" 41° 29' 13"</p> <p>Close Star: SAO-38592 (Algol) Catalog Objects: Abell-426, NGC1275, 1278, 1272, Et. Et.</p> <p>Imaging Window: 12:18 – 04:48 Transit: 04:04 82°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">275</p>
<p>NGC-1333 Config: C11HD ZWO6200MC </p> <p>Type: Bright Nebula Peak: November 13 Constellation: Perseus Coordinates: 03hr 29' 15" 31° 20' 12"</p> <p>Close Star: SAO-56799 Catalog Objects: NGC 1333</p> <p>Imaging Window: 12:39 – 04:48 Transit: 04:14 88°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p>  <p style="font-size: small;">1 333</p>

Prospective Imaging Objects – September 16 2023

<p>Robins Egg Nebula (NGC-1360) Config: C11HD ZWO6200MC </p> <p>Type: Planetary Nebula Peak: Constellation: Fornax Coordinates: 03hr 33' 15" -25° 52' 16"</p> <p>Close Star: SAO-168460 Catalog Objects: NCC-1360</p> <p>Imaging Window: *02:21 – 04:48 Transit: 04:18 31°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>IC-348 Config: C11HD ZWO6200MC </p> <p>Type: Bright Nebula Peak: Constellation: Perseus Coordinates: 03hr 44' 26" 32° 10' 54"</p> <p>Close Star: SAO-147420 Catalog Objects: IC-348</p> <p>Imaging Window: 12:53 – 04:48 Transit: 04:29 89°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 
<p>IC-342 Config: C11HD ZWO6200MC </p> <p>Type: Barred Spiral Galaxy Peak: Constellation: Camelopardalis Coordinates: 03hr 46' 48" 68° 05' 44"</p> <p>Close Star: SAO-12031 (Segin) Catalog Objects: IC-342</p> <p>Imaging Window: 01:09 – 04:48 Transit: 04:31 55°</p>	<p style="text-align: center;">C-11 HD: Primary Focus</p> 

Prospective Imaging Objects – September 16 2023

<p>Pleiades (M 45) Config: C11-HD HS ZWO6200MC</p> <p>Type: Bright Nebula Peak: November 16 Constellation: Taurus Coordinates: 03hr 46' 07" 24° 11' 18"</p> <p>Close Star: SAO-56799 Catalog Objects: M45</p> <p>Imaging Window: 01:09 – 04:48 Transit: 04:31 81°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="font-size: small;">The Pleiades (M-45) Constellation: Taurus</p> <p style="font-size: x-small; text-align: right;">James Taylor 2019-11-16 Location: Mountain View, CA, 37.5° N, 122.3° W Config: C11 HyperStar (QHY126) Exposure Info: (20img)/Sum (Gain: 3100) (Offset: 170)</p>
<p>Pleiades (M-45) Config: C1 LF ZWO6200MC </p> <p>Type: Bright Nebula Peak: November 16 Constellation: Taurus Coordinates: 03hr 46' 15.932" 24° 12' 07.154"</p> <p>Close Star: SAO-56799 Catalog Objects: M45</p> <p>Imaging Window: 01:09 – 04:48 Transit: 04:31 81°</p>	<p style="text-align: center;">Primary Focus</p>  <p style="font-size: small;">The Pleiades (M-45) Constellation: Taurus</p> <p style="font-size: x-small; text-align: right;">James Taylor 2019-09-27 Location: Mountain View, CA, 37.5° N, 122.3° W Config: C1 LF ZWO6200MC Exposure Info: (20img)/Sum (Gain: 3200) (Offset: 180)</p>
<p>California Nebula (NGC 1499) Config: C11-HD HS ZWO6200MC</p> <p>Type: Diffuse Nebula Peak: November 22 Constellation: Perseus Coordinates: 04hr 01' 22" 36° 21' 19"</p> <p>Close Star: SAO-56840 Catalog Objects: NGC 1499</p> <p>Imaging Window: 01:06 – 04:48 Transit: 04:47 87°</p>	<p style="text-align: center;">C-11 HD: HyperStar v4</p>  <p style="font-size: small;">California Nebula (NGC-1499) Constellation: Perseus</p> <p style="font-size: x-small; text-align: right;">James Taylor 2019-08-31 Location: Chandler, AZ Config: C11 HyperStar (Astromark C3.8-C7) QHY126 Exposure Info: (22img)/Sum (Gain: 3200) (Offset: 180)</p>

Prospective Imaging Objects – September 16 2023

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Prospective Imaging Objects – September 16 2023

Imaging Summary September 16, 2023

Astronomical Dusk = 07:55

Astronomical Dawn = 04:48

HyperStar: Nebula

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
HyperStar	Nebula	Nebula	NGC-6820	07:55 – 12:25	08:34	05	Vulpecula: LDN-772
HyperStar	Nebula	Nebula	B-144	07:55 – 12:28	08:49	08	Cygnus: Fish on the Platter
HyperStar	Nebula	Nebula	NGC-6914	07:55 – 01:01	09:14	12	Composite2! Cygnus: Bright Nebula
HyperStar	Nebula	Nebula	NGC-6914	07:55 – 01:01	09:14	13	Cygnus: Bright Nebula
HyperStar	Nebula	Nebula	IC-1318	07:55 – 01:01	09:15	14	Cygnus: Butterfly Nebula
HyperStar	Nebula	Nebula	IC-5070	07:55 – 01:29	09:40	15	Composite2! Cygnus: Pelican & N America Nebula
HyperStar	Nebula	Nebula	IC-5070	07:55 – 01:29	09:40	16	Cygnus: Pelican & N America Nebula
HyperStar	Nebula	Nebula	NGC-6960	07:55 – 01:17	09:42	16	Composite2! Cygnus: Veil Nebula
HyperStar	Nebula	Nebula	NGC-6960	07:55 – 01:17	09:42	17	Cygnus: Veil Nebula
HyperStar	Nebula	Nebula	IC-1396	07:55 – 02:16	10:28	23	Cepheus: Elephant Trunk
HyperStar	DN, Nebula	Nebula	B-168	07:55 – 02:33	10:43	25	Cygnus: Dark Cocoon
HyperStar	Nebula	Nebula	SH2-132	07:55 – 02:57	11:08	28	Cepheus: Bright Nebula
HyperStar	Nebula	Nebula	SH2-155	08:06 – 03:26	11:46	30	Cepheus: Cave Nebula
HyperStar	Nebula	Nebula	SH2-157	08:20 – 03:50	12:05	32	Cassiopeia: Lobster Claw and Bubble Nebula
HyperStar	Nebula	Nebula	NGC-7822	09:26 – 04:16	12:51	35	Composite2! Cepheus: Nebula
HyperStar	Nebula	Nebula	NGC-7822	09:26 – 04:16	12:51	35	Cepheus: Nebula
HyperStar	Nebula	Neb, OC	NGC-457	10:21 – 04:48	02:08	44	Cassiopeia: Open Cluster NGC-457 & Dolphin Neb
HyperStar	Nebula	Nebula	IC-1848, 1805	11:52 – 04:48	03:36	49	Composite4! Cassiopeia: Heart and Soul Nebulas
HyperStar	Nebula	Nebula	IC-1805	11:52 – 04:48	03:36	49	Cassiopeia: Heart Nebula
HyperStar	Nebula	Nebula	IC-1848	11:52 – 04:48	03:36	51	Cassiopeia: Soul Nebula
HyperStar	Nebula	Nebula	NGC-1499	01:06 – 04:48	04:47	54	Perseus: California Nebula

Prospective Imaging Objects – September 16 2023

Imaging Summary September 16, 2023

Astronomical Dusk = 07:55

Astronomical Dawn = 04:48

HyperStar: Broad Spectrum

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
HyperStar	Broad Spectrum	Dark Neb	B-138	07:55 – 10:15	08:06	02	Aquila: Barnard's Black Lizard
HyperStar	Broad Spectrum	Dark Neb	LDN-673	07:55 – 11:02	08:11	04	Aquila: Dark Nebula
HyperStar	Broad Spectrum	Dark Neb	LDN-772	07:55 – 11:35	08:15	04	Vulpecula: Lot Ness Monster
HyperStar	Broad Spectrum	Dark Neb	LDN-904	07:55 – 01:27	09:42	16	Cygnus: Northern Coal Sack (LDN-904)
HyperStar	Broad Spectrum	Dark Neb	B-168	08:06 – 03:26	11:46	27	Cepheus: Wolf's Cave
HyperStar	Broad Spectrum	Ref Neb	NGC-7686	08:29 – 04:09	12:19	34	Andromeda: Blue Match Nebula
HyperStar	Broad Spectrum	Galaxies	NGC-147	09:32 – 04:48	01:22	37	Cassiopeia: Galaxy Pair NGC-147 & NGC-185
HyperStar	Broad Spectrum	Galaxy	M-31	09:45 – 04:48	01:31	39	Andromeda: The Great Andromeda Galaxy
HyperStar	Broad Spectrum	Galaxy	M-31	09:45 – 04:48	01:31	39	Rotation! Andromeda: The Great Andromeda Galaxy
HyperStar	Broad Spectrum	Gal & GC	NGC-288, 253	*11:51-03:22	01:41	41	Sculptor: Galaxy and Globular pair
HyperStar	Broad Spectrum	Ref Neb	IC-59	10:03 – 04:48	01:46	42	Cassiopeia: Bright Nebula
HyperStar	Broad Spectrum	Galaxy	M-33	10:49 – 04:48	02:22	45	Triangulum: Triangulum Galaxy
HyperStar	Broad Spectrum	OC	NGC-869, 884	11:19 – 04:48	03:07	47	Perseus: Hand chi Persei
HyperStar	Broad Spectrum	Refl Neb	M-45	01:09 – 04:48	04:31	54	Taurus: Pleiades Open Cluster

Prospective Imaging Objects – September 16 2023

Imaging Summary September 16, 2023

Astronomical Dusk = 07:55

Astronomical Dawn = 04:48

Focal Reducer: Nebula

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Focal Reducer	Nebula	Nebula	NGC-6820	07:55 – 12:25	08:34	06	Vulpecula: LN-772
Focal Reducer	Nebula	Nebula	SH2-101	07:55 – 12:28	08:49	09	Cygnus: Tulip Nebula
Focal Reducer	Nebula	Nebula	NGC-6914 Reg	07:55 – 01:01	09:14	13	Cygnus: NGC-6914 Region
Focal Reducer	Nebula	Nebula	IC-1318	07:55 – 01:01	09:15	14	Cygnus: Butterfly Nebula
Focal Reducer	Nebula	Nebula	NGC-6960	07:55 – 01:17	09:42	17	Composite 2! Cygnus: Witch's Broom
Focal Reducer	Nebula	Nebula	NGC-6960	07:55 – 01:17	09:42	17	Cygnus: Pickering's Triangular Wisp
Focal Reducer	Nebula	Nebula	NGC-6992	07:55 – 01:21	09:46	18	Composite 2! Cygnus: Network Nebula
Focal Reducer	Nebula	Nebula	NGC-7023	07:55 – 01:13	09:51	19	Cepheus: Iris Nebula
Focal Reducer	Nebula	Nebula	IC-1396-1	07:55 – 02:16	10:28	23	Cepheus: Bright & Dark Nebula Region-1
Focal Reducer	Nebula	Nebula	IC-1396-2	07:55 – 02:16	10:28	23	Cepheus: Bright & Dark Nebula Region-2
Focal Reducer	Nebula	Nebula	IC-5146	07:55 – 02:33	10:43	26	Cygnus: Cocoon Nebula
Focal Reducer	Nebula	Nebula	SH2-132	07:55 – 02:57	11:08	28	Cepheus: Bright Nebula
Focal Reducer	Nebula	Nebula	SH2-142	07:55 – 03:22	11:34	30	Cepheus: Wizard Nebula
Focal Reducer	Nebula	Nebula	SH2-155	08:06 – 03:26	11:46	31	Cepheus: Cave Nebula
Focal Reducer	Nebula	Nebula	SH2-157	08:20 – 03:50	12:05	32	Cassiopeia: Lobster Claw
Focal Reducer	Nebula	Nebula	NGC-7822	09:26 – 04:16	12:51	36	Cepheus: Diffuse Nebula
Focal Reducer	Nebula	Nebula	NGC-246, 255	*11:23-04:17	01:36	40	Cetus: Planetary Nebula & 2 Galaxies
Focal Reducer	Nebula	Nebula	NGC-281	09:52 – 04:48	01:42	42	Cassiopeia: Pack Man Nebula
Focal Reducer	Nebula	Nebula	IC-1795	11:29 – 04:48	03:10	48	Cassiopeia: Fish Head Nebula
Focal Reducer	Nebula	Nebula	IC-1805	11:52 – 04:48	03:36	40	Cassiopeia: Heart Nebula

Prospective Imaging Objects – September 16 2023

Imaging Summary September 16, 2023

Astronomical Dusk = 07:55

Astronomical Dawn = 04:48

Focal Reducer: Broad Spectrum

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Focal Reducer	Broad Spectrum	Dark Neb	B-143	07:55 – 11:22	08:31	05	Aquila: Barnard's E
Focal Reducer	Broad Spectrum	Open Cl	M-39	07:55 – 02:11	10:21	22	Cygnus: Open Cluster M-39
Focal Reducer	Broad Spectrum	Dark Neb	LDN-1235	08:21 – 01:47	11:04	26	Cepheus: Dark Shark
Focal Reducer	Broad Spectrum	Ref Neb	VdB-152	08:21 – 01:47	11:04	27	Rotation! Cepheus: Wolf's Cave
Focal Reducer	Broad Spectrum	Galaxies	NGC-7331 et. El.	07:55 – 03:03	11:25	29	Rotation! Pegasus: Stephan's Quintet & NGC 7331
Focal Reducer	Broad Spectrum	Galaxies	NGC-7619 et. El.	09:28 – 02:51	12:09	33	Pegasus: Pegasus Cluster of Galaxies
Focal Reducer	Broad Spectrum	Galaxies	NGC-147, 185	09:32 – 04:48	01:22	37	Composite 2! Cassiopeia: Galaxy Pair
Focal Reducer	Broad Spectrum	Open Cl	NGC-188	*07:55-04:48	01:36	42	Cepheus: Open Star Cluster NGC-188
Focal Reducer	Broad Spectrum	Galaxy	M-33	10:49 – 04:49	02:22	46	Rotation! Triangulum: Triangulum Galaxy
Focal Reducer	Broad Spectrum	Galaxies	M-77, NGC-1055	01:16 – 04:48	03:26	50	Cetus: Galaxy Pair

Prospective Imaging Objects – September 16 2023

Imaging Summary September 16, 2023

Astronomical Dusk = 07:55

Astronomical Dawn = 04:48

Primary Focus: Nebula

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Nebula	PN	NGC-6751	&07:55-11:01	07:56	02	Aquila: PK 29-5.1 Small PN
Primary Focus	Nebula	PN	NGC-6772	*07:55-11:23	08:04	02	Aquila: PK 33-6.1 Med PN
Primary Focus	Nebula	PN	NGC-6778	07:55 – 10:08	08:08	03	Aquila: PK 34-61 Small PN
Primary Focus	Nebula	PN	NGC-6781	07:55 – 10:44	08:08	03	Aquila: PK 41-2.1 Med PN
Primary Focus	Nebula	PN	NGC-6804	07:55 – 12:25	08:34	04	Aquila: Small PN
Primary Focus	Nebula	Nebula	NGC-6820	07:55 – 12:25	08:34	06	Vulpecula: Open Cluster and Nebula
Primary Focus	Nebula	PN	NGC-6818	*07:55-11:07	08:34	06	Sagittarius: Little Gem Small PN
Primary Focus	Nebula	PN	NGC-6826	07:55 – 12:25	08:34	07	Cygnus: Blinking Planetary Small PN
Primary Focus	Nebula	PN	NGC-6842	07:55 – 12:16	08:45	08	Vulpecula PK 65+0.1 Med PN
Primary Focus	Nebula	PN	M-27	07:55 – 12:09	08:49	08	Vulpecula: Dumbbell Nebula
Primary Focus	Nebula	Nebula	SH2-101	07:55 – 12:28	08:49	09	Cygnus: Tulip Nebula
Primary Focus	Nebula	PN	NGC-6852	07:55 – 11:07	08:50	09	Aquila: PK 42-14.1 Small PN
Primary Focus	Nebula	Nebula	NGC-6888	07:55 – 12:45	09:02	10	Cygnus: Crescent Nebula
Primary Focus	Nebula	Nebula	DWB-111	07:55 – 12:50	09:03	10	Cygnus: Propeller Nebula
Primary Focus	Nebula	PN	NGC-6891	07:55 – 12:00	09:05	11	Delphinus: PK 54-12.1 Small PN
Primary Focus	Nebula	PN	NGC-6894	07:55 – 12:39	09:06	11	Cygnus: PK 69-2.1 Small PN
Primary Focus	Nebula	PN	IC-4997	07:55 – 12:16	09:10	11	Saitta: PK 58-10.1 Small PN
Primary Focus	Nebula	PN	NGC-6905	07:55 – 12:26	09:12	12	Delphinus: Blue Flash Nebula Small PN
Primary Focus	Nebula	Nebula	NGC-6914 Reg	07:55 – 01:01	09:14	13	Cygnus: NGC-6914 Region
Primary Focus	Nebula	Nebula	IC-1318	07:55 – 01:01	09:15	14	Cygnus: Butterfly Nebula
Primary Focus	Nebula	PN	NGC-7008	07:55 – 01:40	09:50	19	Cygnus: Fetus Nebula Med PN
Primary Focus	Nebula	Nebula	NGC-7023	07:55 – 01:13	09:51	20	Cepheus: Iris Nebula
Primary Focus	Nebula	PN	NGC-7009	*07:55-12:41	09:54	20	Aquarius: Saturn Nebula
Primary Focus	Nebula	PN	NGC-7026	07:55 – 01:46	09:56	20	Cygnus: Small Planetary Nebula

Prospective Imaging Objects – September 16 2023

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Nebula	PN	NGC-7027	07:55 – 01:43	09:56	21	Cygnus: Small Planetary Nebula
Primary Focus	Nebula	PN	NGC-7048	07:55 – 01:53	10:04	21	Cygnus: Small PN PK 88-1.1
Primary Focus	Nebula	PN	NGC-7094	07:55 – 01:18	10:22	22	Pegasus: Small/Med Planetary
Primary Focus	Nebula	DN & BN	IC-1396-1	07:55 – 02:16	10:28	24	Cepheus: Elephant Trunk Region of Interest
Primary Focus	Nebula	Nebula	IC-1396-2	07:55 – 02:16	10:28	24	Cepheus: Elephant Trunk Region of Interest
Primary Focus	Nebula	Nebula	IC-1396-3	07:55 – 02:16	10:28	24	Cepheus: Elephant Trunk Region of Interest
Primary Focus	Nebula	PN	NGC-7139	07:55 – 02:13	10:35	25	Cepheus: Med Planetary Nebula
Primary Focus	Nebula	Nebula	IC-5146	07:55 – 02:33	10:43	26	Cygnus: Cocoon Nebula (IC-5146)
Primary Focus	Nebula	PN	NGC-7293	*09:27-01:09	11:19	27	Aquarius: Helix Nebula
Primary Focus	Nebula	Nebula	SH2-132	07:55 – 02:57	11:08	28	Cepheus: Bright Nebula
Primary Focus	Nebula	Nebula	SH2-142	07:55 – 03:22	11:34	30	Cepheus: Wizard Nebula
Primary Focus	Nebula	Nebula	SH2-155	08:06 – 03:26	11:46	31	Cepheus: Cave Nebula
Primary Focus	Nebula	Nebula	NGC-7635	08:26 – 03:52	12:09	32	Cepheus: Bubble Nebula
Primary Focus	Nebula	Nebula	NGC-7822	09:26 -04:16	12:51	36	Cepheus: Emission Nebula
Primary Focus	Nebula	PN	NGC-40	10:10 – 03:54	01:02	36	Cepheus: Bow-Tie Nebula
Primary Focus	Nebula	PN	NGC-246	*11:23-04:17	01:36	40	Cetus: Skull Nebula
Primary Focus	Nebula	Nebula	IC-59	10:03 – 04:48	01:46	43	Cassiopeia: Reflection Nebula
Primary Focus	Nebula	Nebula	SH2-188	10:32 – 04:48	02:19	45	Cassiopeia: Firefox Nebula
Primary Focus	Nebula	PN	M-76	10:36 – 04:48	02:27	47	Perseus: Little Dumbbell Nebula
Primary Focus	Nebula	Nebula	IC-1805	11:52 – 04:48	03:36	50	Cassiopeia: Heart Nebula
Primary Focus	Nebula	Nebula	IC-1848	11:52 – 04:48	03:36	52	Cassiopeia: Soul Nebula
Primary Focus	Nebula	Nebula	NGC-1333	12:39 – 04:48	04:14	52	Perseus: Reflection Nebula
Primary Focus	Nebula	Nebula	NGC-1360	*02:21-04:48	04:18	53	Fornax: Robins Egg Nebula
Primary Focus	Nebula	Nebula	IC-348	12:53 - 04:48	04:29	53	Perseus: Reflection Nebula
Primary Focus	Nebula	Nebula					

Prospective Imaging Objects – September 16 2023

Imaging Summary September 16, 2023

Astronomical Dusk = 07:55

Astronomical Dawn = 04:48

Primary Focus: Broad Spectrum

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Broad Spectrum	GC	M-56	07:55 – 11:39	08:06	03	Lyra: Med Globular NGC-6779
Primary Focus	Broad Spectrum	GC	M-55	*07:55–10:28	08:30	05	Sagittarius: Large Globular
Primary Focus	Broad Spectrum	Galaxy	NGC-6822	*07:55-11:01	08:35	07	Sagittarius: Barnard’s Galaxy
Primary Focus	Broad Spectrum	GC	M-71	07:55 – 11:54	08:43	07	Sagitta: Med Globular NGC-6838
Primary Focus	Broad Spectrum	GC	M-75	*07:55-10:34	08:56	10	Sagittarius: Small GC NGC-6864
Primary Focus	Broad Spectrum	OC	M-29	07:55 – 12:57	09:14	12	Cygnus: Cooling Tower, Open Cluster NGC-6913
Primary Focus	Broad Spectrum	Galaxy	NGC-6946	07:55 – 01:09	09:24	15	Cepheus: Fireworks Galaxy
Primary Focus	Broad Spectrum	GC	M-72	*07:55-12:24	09:43	18	Aquarius: NGC-6981 Small Globular
Primary Focus	Broad Spectrum	OC	M-73	*07:55-12:30	09:48	19	Aquarius: NGC-6994 Small Open Cluster
Primary Focus	Broad Spectrum	GC	M-15	07:55 – 02:11	10:21	21	Cepheus: Pegasus Cluster Small Globular Cluster
Primary Focus	Broad Spectrum	GC	M-2	07:55 – 12:27	10:23	22	Aquarius: Med-Large Globular NGC-7089
Primary Focus	Broad Spectrum	GC	M-30	*09:00-11:57	10:30	25	Capricornus: Small-Med Globular NGC-7099
Primary Focus	Broad Spectrum	Galaxies	NGC-7317	07:55 – 03:03	11:25	29	Pegasus: Stephan’s Quintet
Primary Focus	Broad Spectrum	Galaxies	NGC-7331	07:55 – 03:05	11:26	29	Pegasus: Galaxy Group NGC-7331
Primary Focus	Broad Spectrum	Galaxy	NGC-7479	09:00 – 02:48	11:54	31	Pegasus: Galaxy PGC-70419
Primary Focus	Broad Spectrum	Galaxies	NGC-7619 Et. El.	12:39 – 04:03	03:21	33	Pegasus: Pegasus Cluster of galaxies
Primary Focus	Broad Spectrum	OC	M-52	08:32 – 03:56	12:14	33	Cassiopeia: Open Cluster NGC-7654
Primary Focus	Broad Spectrum	OC	NGC-7789	08:58 – 04:35	12:46	34	Cassiopeia: Caroline’s Rose
Primary Focus	Broad Spectrum	Galaxies	NGC 67-72 et. El.	09:34 – 04:40	01:07	37	Andromeda: Andromeda Galaxy Group
Primary Focus	Broad Spectrum	Galaxy	NGC-147	09:32 – 04:48	01:22	38	Cassiopeia: Med Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-185	09:32 – 04:48	01:22	38	Cassiopeia: Sm Elipical Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-110	09:43 – 04:48	01:29	38	Andromeda: Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-32	09:45 – 04:48	01:31	39	Andromeda: Companion to M-31
Primary Focus	Broad Spectrum	Galaxy	NGC-247	*11:01-04:00	01:36	40	Cetus: Needle’s Eye Galaxy

Prospective Imaging Objects – September 16 2023

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Broad Spectrum	Galaxy	NGC-253	*11:35-02:27	01:36	41	Sculptor: Sculptor Galaxy
Primary Focus	Broad Spectrum	Globular	NGC-288	*11:51-03:22	01:41	41	Sculptor: Med-Large Globular
Primary Focus	Broad Spectrum	Galaxy	IC-1613	11:35 – 04:48	01:53	43	Cetus: Irregular Dwarf Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-404	10:18 – 04:48	01:58	43	Andromeda: Mirachs Ghost
Primary Focus	Broad Spectrum	OC	NGC-457	10:21 – 04:48	02:08	44	Cassiopeia: Owl Cluster
Primary Focus	Broad Spectrum	Galaxies	Arp-133	12:13 – 04:48	02:14	44	Cetus: Minkowski's Object
Primary Focus	Broad Spectrum	OC	M-103	10:38 – 04:48	02:22	45	Cassiopeia: Open Cluster
Primary Focus	Broad Spectrum	Galaxy	M-33	10:49 – 04:48	02:22	46	Triangulum: Triangulum Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-74	11:18 – 04:48	02:21	46	Pisces: Med Face on Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-772	11:32 – 04:48	02:44	47	Aries: Nautilus Galaxy
Primary Focus	Broad Spectrum	OC	NGC-869, 884	11:19 – 04:48	03:07	47	Perseus: Hand chi Peersei Open Cluster
Primary Focus	Broad Spectrum	Galaxy	NGC-891	11:20 – 04:48	03:07	48	Andromeda: Edge on Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-925	11:34 – 04:48	03:12	48	Triangulum: Small Galaxy PGC-9332
Primary Focus	Broad Spectrum	Galaxy	NGC-1055	01:16 – 04:48	03:25	50	Cetus: Edge on Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-77	01:19 – 04:48	03:27	51	Cetus: Galaxy NGC-1068
Primary Focus	Broad Spectrum	OC	M-34	11:39 – 04:48	03:27	51	Perseus: Open Cluster NGC-1039
Primary Focus	Broad Spectrum	Galaxies	Abell-426	12:18 – 04:48	04:04	52	Perseus: Perseus Galaxy Cluster
Primary Focus	Broad Spectrum	Galaxy	IC-342	01:09 – 04:48	04:32	53	Camelopardalis: Large Face-On Galaxy
Primary Focus	Broad Spectrum	OC	M-45	01:09 – 04:48	04:31	54	Taurus: Pleiades
Primary Focus	Broad Spectrum	Galaxy					

Prospective Imaging Objects – September 16 2023

Imaging Summary September 16, 2023

Astronomical Dusk = 07:55

Astronomical Dawn = 04:48

Primary Prospects

Plan	Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
HS3a	HyperStar	Nebula	Nebula	NGC-6820	07:55 – 12:25	08:34	05	Vulpecula: Star cloud and nebula
HS1a	HyperStar	Nebula	Nebula	B-144	07:55 – 12:28	08:49	08	Cygnus: Fish on the Platter
HS2a	HyperStar	Nebula	Nebula	NGC-6914 Region	07:55 – 01:01	09:14	12	Composite2 Cygnus: NGC-6914 Region
	HyperStar	Nebula	Nebula	NGC-6914 Region	07:55 – 01:01	09:14	13	Cygnus: NGC-6914 Region
	HyperStar	Nebula	Nebula	IC-1318	07:55 – 01:01	09:15	14	Cygnus: Butterfly Nebula
	HyperStar	Nebula	Nebula	NGC-6960	07:55 – 01:17	09:42	16	Composite2 Cygnus: Veil Nebula
	HyperStar	Nebula	Nebula, DN	B-168, IC-5146	07:55 – 02:33	10:43	25	Cygnus: Dark Cocoon
	HyperStar	Nebula	Nebula	SH2-132	07:55 – 02:57	11:08	28	Cepheus: Bright Nebula
HS1b	HyperStar	Nebula	Nebula	IC-59,63	10:03 – 04:48	01:46	42	Cassiopeia: Bright Nebula
HA2a	HyperStar	Broad Spectrum	Galaxy	M-33	10:49 – 04:48	02:22	45	Triangulum: Triangulum Galaxy
HS3b	HyperStar	Nebula	Nebula	IC-1848	11:52 – 04:48	03:36	49	Composite4 Cassiopeia: Heart & Soul
	Focal Reducer	Broad Spectrum	DN	B-143	07:55 – 11:22	08:31	05	Aquila: Barnard's E
FR3a	Focal Reducer	Nebula	Nebula	NGC-6820	07:55 – 12:25	08:34	06	Vulpecula: Open Cluster & Nebula
	Focal Reducer	Nebula	Nebula	SH2-101	07:55 – 12:28	08:49	09	Cygnus: Tulip Nebula
	Focal Reducer	Nebula	Nebula	NGC-6914 Region	07:55 – 01:01	09:14	13	Cygnus: NGC-6914 Region
	Focal Reducer	Nebula	Nebula	IC-1318	07:55 – 01:01	09:15	14	Cygnus: Butterfly Nebula region
	Focal Reducer	Nebula	Nebula	NGC-6992	07:55 – 01:21	09:46	18	Composite2 Cygnus: Network Nebula
	Focal Reducer	Nebula	R Nebula	NGC-7023	07:55 – 01:13	09:51	19	Cepheus: Iris Nebula
	Focal Reducer	Nebula	Nebula	IC-1396	07:55 – 02:16	10:28	23	Cepheus: Elephant Trunk ROI (2)
	Focal Reducer	Nebula	Nebula, DN	IC-5146	07:55 – 02:33	10:43	26	Cygnus: Dark Cocoon
	Focal Reducer	Nebula	Nebula	SH2-132	07:55 – 02:57	11:08	28	Cepheus: Bright Nebula
	Focal Reducer	Broad Spectrum	Galaxies	NGC-7331 et. El.			29	Rotation Pegasus: Stephan's Quintet & NGC-7331

Prospective Imaging Objects – September 16 2023

Plan	Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
	Focal Reducer	Nebula	Nebula	SH2-142	07:55 – 03:22	11:34	30	Cepheus: Wizard Nebula
FR1	Focal Reducer	Nebula	Nebula	Sh2-155	08:06 – 03:26	11:46	31	Cepheus: Cave Nebula
	Focal Reducer	Broad Spectrum	Galaxies	NGC-7619	09:28 – 02:51	12:09	33	Pegasus: Pegasus Cluster of Galaxies
FR2	Focal Reducer	Nebula	Nebula	NGC-7822	09:26 – 04:16	12:51	36	Cepheus: Diffuse Nebula
FR3b	Focal Reducer	Broad Spectrum	Galaxy	M-33	10:49 – 04:48	02:22	46	Rotation Triangulum: Triangulum Galaxy
GC-1a	Primary Focus	Broad Spectrum	GC	M-56	07:55 – 11:39	08:06	03	Lyra: Sm/Med Globular NGC-6779
	Primary Focus	Broad Spectrum	GC	M-55	*07:55-10:28	08:30	05	Sagittarius: Large GC NGC-6809
M-1a	Primary Focus	Broad Spectrum	GC	M-71	07:55 – 11:54	08:43	07	Sagitta: Sm Globular NGC-6838
	Primary Focus	Broad Spectrum	GC	M-75	*07:55-10:34	08:56	10	Sagittarius: Sm Globular NGC-6864
	Primary Focus	Broad Spectrum	GC	M-72	*07:55-12:24	09:43	18	Aquarius: Sm Globular NGC-6981
M-2a	Primary Focus	Broad Spectrum	GC	M-2	07:55 – 12:27	10:23	22	Aquarius: Large Globular
	Primary Focus	Broad Spectrum	GC	M-30	*09:00-11:57	10:30	25	Capricornus: Med Globular
GC-1b	Primary Focus	Broad Spectrum	GC	NGC-288	*11:51-03:22	01:41	41	Sculptor: Med/Large Globular
	Primary Focus	Nebula	PN	NGC-6751	*07:55-11:23	07:56	02	Aquila: Small Planetary
PN-1a	Primary Focus	Nebula	PN	NGC-6772	*07:55 – 11:23	08:04	02	Aquila: Med Planetary Nebula
	Primary Focus	Nebula	PN	NGC-6778	07:55 – 10:08	08:08	03	Aquila: Small Planetary
	Primary Focus	Nebula	PN	NCC-6781	07:55 – 10:44	08:08	03	Aquila: Med Planetary
	Primary Focus	Nebula	PN	NGC-6804	07:55 – 12:25	08:34	04	Aquila: Small/Med Planetary
	Primary Focus	Nebula	PN	NGC-6818	*07:55-11:07	08:34	06	Sagittarius: Small Planetary
	Primary Focus	Nebula	PN	NGC-6826	07:55 – 12:25	08:34	07	Cygnus: Small Planetary
	Primary Focus	Nebula	PN	NGC-6842	07:55 – 12:16	08:45	08	Vulpecula: Small PN
	Primary Focus	Nebula	PN	NGC-6852	07:55 – 11:07	08:50	09	Aquila: Small Planetary
	Primary Focus	Nebula	PN	NGC-6894	07:55 – 12:39	09:06	11	Cygnus: Sm/Med Planetary
	Primary Focus	Nebula	PN	NGC-7009	*07:55-12:41	09:54	20	Aquarius: Saturn Nebula, Small PN
	Primary Focus	Nebula	PN	NGC-7026	07:55 – 01:46	09:56	20	Cygnus: Small Planetary
PN-2a	Primary Focus	Nebula	PN	NGC-7048	07:55 – 01:53	10:04	21	Cygnus: Sm-med PN

Prospective Imaging Objects – September 16 2023

Plan	Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
	Primary Focus	Nebula	PN	NGC-7094	07:55 – 01:18	10:22	22	Pegasus: Sm/Med Planetary
M-2b	Primary Focus	Nebula	PN	NGC-40	10:10 – 03:54	01:02	36	Cepheus: Bow-Tie Nebula
M-1b PN-1b	Primary Focus	Nebula	PN	NGC-246	*11:23-04:17	01:36	40	Cetus: Skull Nebula
PN-2b	Primary Focus	Nebula	PN	NGC-1360	*02:21-04:48	04:18	53	Fornax: Robins Egg Nebula
	Primary Focus	Nebula	Nebula	NGC-6820	07:55 – 12:25	08:34	06	Vulpecula: Nebula
	Primary Focus	Broad Spectrum	Galaxy	NGC-6822	*07:55-11:01	08:35	07	Sagittarius: Barnard's Galaxy
	Primary Focus	Nebula	Nebula	SH2-101	07:55 – 12:28	08:49	09	Cygnus: Tulip Nebula
PF3a	Primary Focus	Nebula	Nebula	NGC-6888	07:55 – 12:45	09:02	10	Cygnus: Crescent Nebula
	Primary Focus	Nebula	Nebula	NGC-6914	07:55 – 01:01	09:14	13	Cygnus: Nebula ROI
	Primary Focus	Broad Spectrum	Galaxy	NGC-6946	07:55 – 01:09	09:24	15	Cepheus: Fireworks Galaxy
	Primary Focus	Nebula	DN	IC-1396	07:55 – 02:16	10:28	24	Cepheus: Elephant Trunk ROI (3)
	Primary Focus	Nebula	Nebula	SH2-132	07:55 – 02:57	11:08	28	Cepheus: Bright Nebula
	Primary Focus	Broad Spectrum	Galaxy	NGC 7331 Etl El.	07:55 – 03:03	11:25	29	Pegasus: Stephan's Quintet
PF2	Primary Focus	Nebula	Nebula	SH2-155	08:06 – 03:26	11:46	31	Cepheus: Cave Nebula
	Primary Focus	Broad Spectrum	Galaxies	NGC-7619 Et. El.	12:39 – 04:03	03:21	33	Pegasus: Pegasus Cluster of Galaxies
PF1	Primary Focus	Broad Spectrum	Galaxies	NGC 67-72	09:34 – 04:40	01:07	37	Andromeda: Andromeda Galaxy Group
	Primary Focus	Nebula	Nebula	IC-59, 63	10:03 – 04:48	01:46	43	Cassiopeia: Bright Nebula
	Primary Focus	Broad Spectrum	Galaxy	IC-1613	11:35 – 04:48	01:53	43	Cetus: Irregular Dwarf Galaxy
	Primary Focus	Broad Spectrum	Galaxies	Arp-133	12:13 – 04:48	02:14	44	Cetus: Minkowski's Object
	Primary Focus	Nebula	Nebula	SH2-188	10:32 – 04:48	02:19	45	Cassiopeia: Firefox Nebula
	Primary Focus	Broad Spectrum	Galaxy	NGC-772	11:32 – 04:48	02:44	47	Aries: Nautilus Galaxy
	Primary Focus	Broad Spectrum	Galaxy	NGC-1055	01:16 – 04:48	03:26	60	Cetus: Edge on Galaxy
	Primary Focus	Broad Spectrum	Galaxy	M-77	01:19 – 04:48	03:27	51	Cetus: Galaxy
	Primary Focus	Broad Spectrum	Galaxies	Abell-426	12:18 – 04:48	04:04	52	Perseus: Perseus Galaxy Cluster
	Primary Focus	Nebula	Nebula	NGC-1333	12:39 – 04:48	04:15	52	Perseus: Bright Nebula
PF3b	Primary Focus	Nebula	Nebula	IC-348	12:53 – 04:48	04:29	53	Perseus: Bright Nebula

Prospective Imaging Objects – September 16 2023

Plan	Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
	Primary Focus	Broad Spectrum	Galaxy	IC-342	01:09 – 04:48	04:31	53	Camelopardalis: Face On Galaxy

Prospective Imaging Objects – September 16 2023

Imaging Summary September 16, 2023

Astronomical Dusk = 07:55

Astronomical Dawn = 04:48

Imaging Plans

Plan	Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Imaging Schedule
HS1a	HyperStar	Nebula	Nebula	B-144	07:55 – 12:28	08:49	08	07:55 – 12:00
HS1b	HyperStar	Nebula	Nebula	IC-59, 63	10:03 – 04:48	01:46	42	12:00 – 04:48
HS2a	HyperStar	Nebula	Nebula	NGC-6914 Region	07:55 – 01:01	09:14	12	07:55 – 12:00
HS2b	HyperStar	Broad Spectrum	Galaxy	M-33	10:49 – 04:48	02:22	45	12:00 – 04:48
HS3a	HyperStar	Nebula	Nebula	NGC-6820	07:55 – 12:25	08:34	05	07:55 – 12:00
HS3b	HyperStar	Nebula	Nebula	IC-1848	11:52 – 04:48	03:36	49	12:00 – 04:48
FR1	Focal Reducer	Nebula	Nebula	SH2-155	08:06 – 03:26	11:46	31	All Night
FR2	Focal Reducer	Nebula	Nebula	NGC-7822	09:26 – 04:16	12:51	36	All Night
FR3a	Focal Reducer	Nebula	Nebula	NGC-6820	07:55 – 12:25	08:34	06	07:55 – 12:00
FR3b	Focal Reducer	Nebula	Galaxy	M-33	10:49 – 04:48	02:22	46	12:00 – 04:48
GC1a	Primary Focus	Broad Spectrum	GC	M-36	07:55 – 11:39	08:06	03	07:55 – 11:30
GC-1b	Primary Focus	Broad Spectrum	GC	NGC-288	*11:51-03:22	01:41	41	11:50 – 03:22
M-1a	Primary Focus	Broad Spectrum	GC	M-71	07:55 – 11:54	08:43	07	07:55 – 12:00
M-1b	Primary Focus	Nebula	Nebula	NGC-246	*11:23-04:17	01:36	40	12:00 – 04:17
M-2a	Primary Focus	Broad Spectrum	GC	M-2	07:55 – 12:27	10:23	22	07:55 – 11:30
M-2b	Primary Focus	Nebula	PN	NGC-40	10:10 – 03:54	01:02	36	11:30 – 03:54
PN1a	Primary Focus	Nebula	PN	NGC-6772	*07:55-11:23	07:56	02	07:55 – 11:00
PN1b	Primary Focus	Nebula	PN	NGC-246	*11:23-04:17	01:36	40	11:00 – 04:17
PN2a	Primary Focus	Nebula	PN	NGC-7048	07:55 – 01:53	10:04	21	07:55 – 12:00
PN2b	Primary Focus	Nebula	PN	NGC-1360	*02:21-04:48	04:18	53	12:00 – 04:48

Prospective Imaging Objects – September 16 2023

Plan	Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Imaging Schedule
PF1	Primary Focus	Nebula	Galaxies	NGC 67-72	09:34 – 04:40	01:07	37	All Night
PF2	Primary Focus	Nebula	Nebula	SH2-155	08:06 – 03:26	11:46	31	All Night
PF3a	Primary Focus	Nebula	Nebula	NGC-6888	07:55 – 12:45	09:02	10	07:55 – 12:00
PF3b	Primary Focus	Nebula	Nebula	IC-348	12:53 – 04:48	04:29	53	12:00 – 04:29
	Primary Focus	Nebula	Nebula					