Prospective Imaging Objects – January

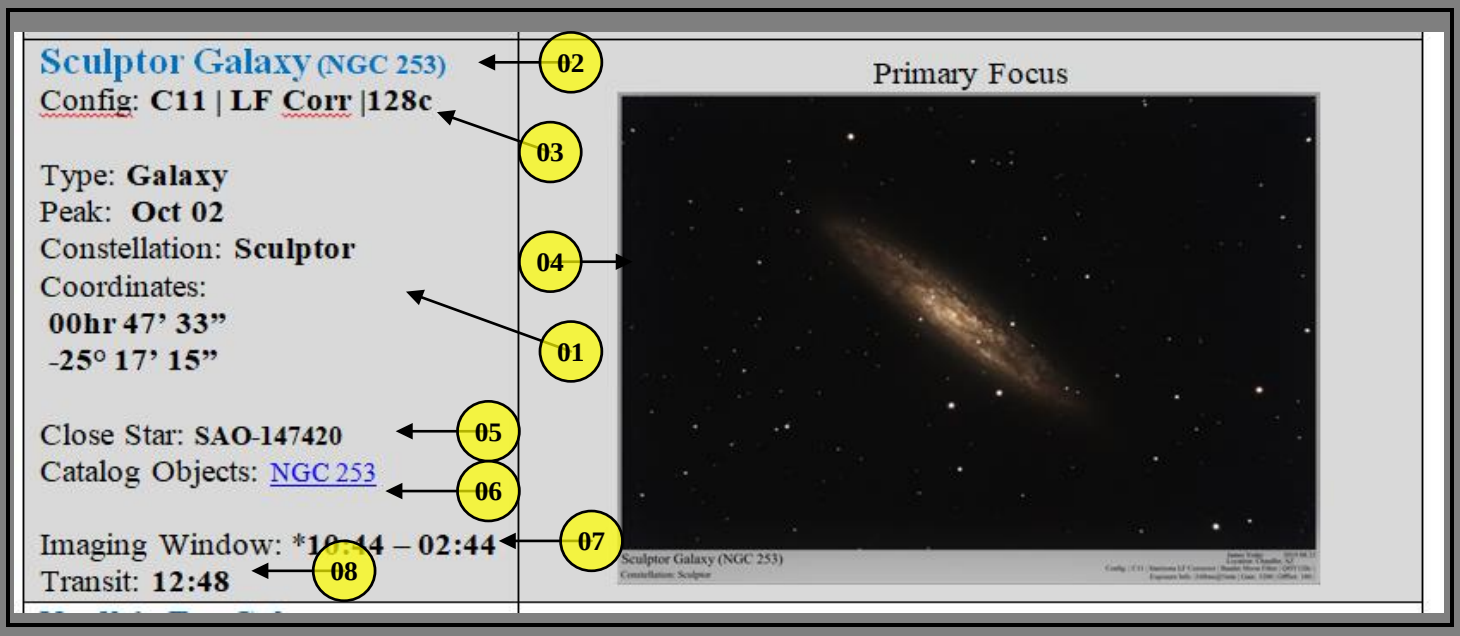
Astronomical Data

Sunrise	Sunset	Astronomical Dusk	Astronomical Dawn	Imaging	Data Date
07:31am	05:43 pm	07:10 pm	06:04 am	10:54	January 15

Hardware Info

Configuration	FL	FOV	FOV°	FR	Image Scale (1 – 1.5) ideal
C11HD | ZWO ASI-6200MC |	2800 mm	45'x 30'	0.75° x 0.5°	10	0.280"/pix (Oversampled)
C11HD | 0.7xReducer | ASI-6200MC |	1960 mm	60' x 45'	1.0° x 0.75°	7	0.393"/pix (Oversampled)
C11HD | HS-v4 | ZWO ASI-6200MC |	540 mm	228' x 150'	3.8° x 2.5°	1.9	1.4"/pix (Undersampled)
C6 | ZWO ASI-6200MC |	1500 mm	83' x 55'	1.38° x 0.92°	10	0.52"/pix (Oversampled)
C6 | 0.63 Corrector | ZWO ASI-6200MC |	1220 mm	131' x 88'	2.18° x 1.46°	6.3	0.82"/pix (Oversampled)
C6 | HS-v4 | ZWO6200MC	300mm	412' x 275'	6.87° x4.58°	2.0	2.59"/pix (Undersampled)

How to use this document



01: Background Fill Color - Items that I have previously images 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.

Prospective Imaging Objects – January

NGC-925 (PGC 9332)

Config: |C11-HD|ZWO6200MC|

Type: **Galaxy**
Constellation: **Triangulum**
Coordinates:
02h 27’ 17”
33° 34’ 44”

Close Star: **SAO-55306** (Beta Trianguli)
Catalog Objects: NGC925/PGC9332

Imaging Window: **07:10 – 10:50**
Transit: **07:10 | 90°**

Primary Focus

Fish Head Nebula (IC-1795)

Config: |C11-HD|FR|ZWO6200MC|

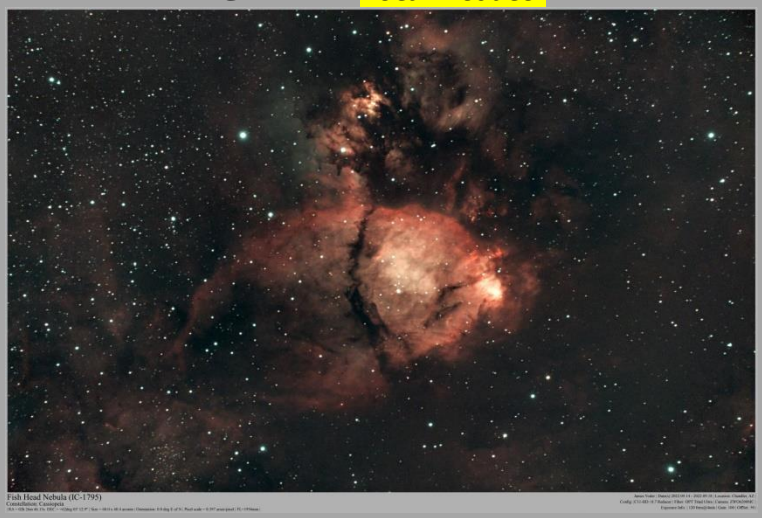
Type: **Bright Nebula**
Constellation: **Cassiopeia**

Coordinates:
02h 27’ 03”
62° 02’ 31”

Close Star: **SAO-38787** (Mirfak)
Catalog Objects: IC-1795

Imaging Window: **07:10 – 10:52**
Transit: **07:08 | 87°**

CH11-HD Focal Reducer



Heart and Soul Nebulas

Config: **C11 | HS | ZWO6200MC**

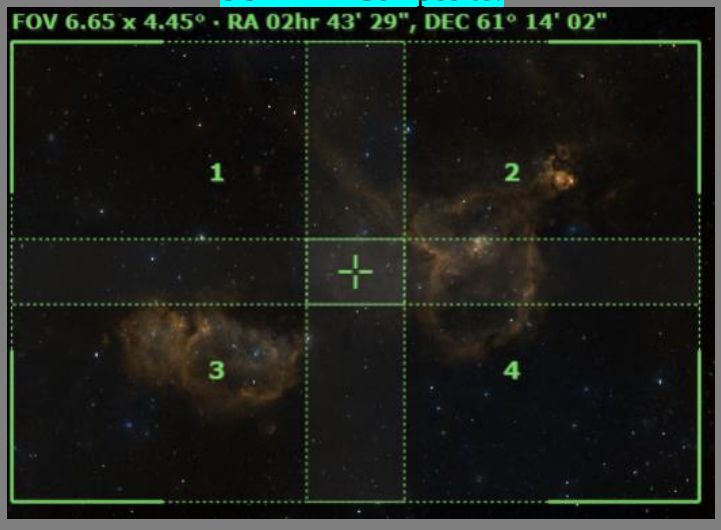
Type: **Diffuse Nebula**

Constellation: **Cassiopeia**
Coordinates (RA, DEC):
Pane 1: **02hr 55' 41", 62º 09' 11"**
Pane 2, **02hr 31' 16", 62º 09' 11**
Pane 3, **02hr 54' 58", 60º 15' 00"**
Pane 4, **02hr 31' 59", 60º 15' 00"**

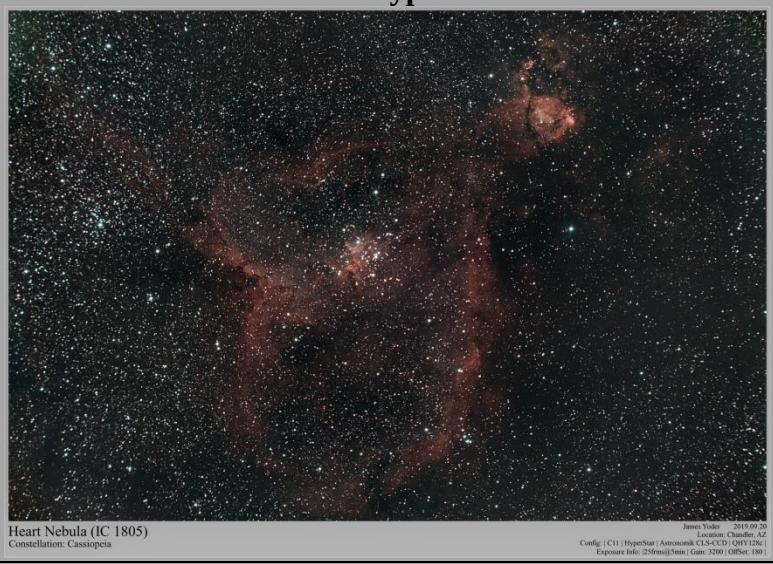
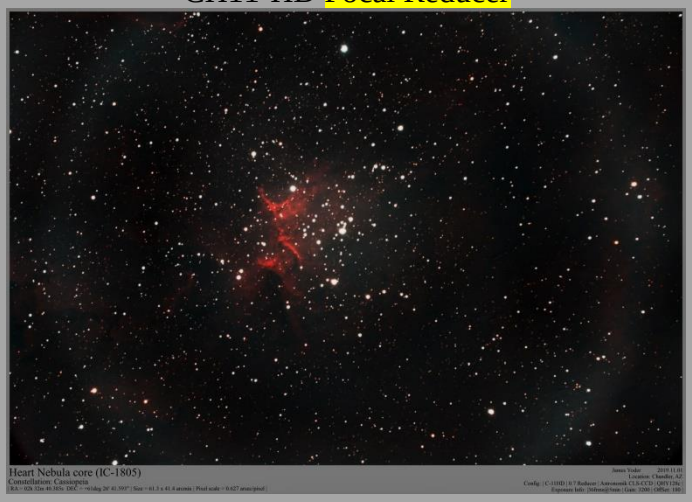
Close Star: **SAO-38787 (Mirfak)**
Catalog Objects: IC-1848

Imaging Window: **07:10 – 11:20**
Transit: **07:34 | 62°**

C-11 HD: HyperStar v4
SUPER-4 Composite!



Prospective Imaging Objects – January

Heart Nebula (IC 1805) Config: **C11-HD | HS | ZWO6200MC** Type: **Diffuse Nebula** Peak: **October 31** Constellation: **Cassiopeia** Coordinates: **02hr 31’ 16”** **61° 21’ 36”** Close Star: SAO-12031 Catalog Objects: IC 1805 Imaging Window: **07:10 – 11:00** Transit: **07:15 | 62°**	**C-11 HD: HyperStar v4** 
Heart Nebula (IC 1805) Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Constellation: **Cassiopeia** Coordinates: **02hr 26’ 36”** **62° 06’ 53”** Close Star: SAO-12031 Catalog Objects: IC 1805 Imaging Window: **07:10 – 11:00** Transit: **07:15 | 62°**	CH11-HD Focal Reducer 
Heart Nebula (IC-1805) Config: |C1|LF|ZWO6200MC| Type: **Diffuse Nebula** Peak: **October 31** Constellation: **Cassiopeia** Coordinates: **02hr 32’ 42”** **61° 27’ 00”** Close Star: SAO-12031 Catalog Objects: IC 1805 Imaging Window: **07:10 – 11:00** Transit: **07:15 | 62°**	Primary Focus 

Prospective Imaging Objects – January

M-77, NGC 1055

Config: |C11-HD|FR|ZWO6200MC|

Type: **Galaxy**
Peak:
Constellation: **Cetus**
Coordinates:
02hr 42’ 14”
00° 14’ 28”
Angle: 90°

Close Star: **SAO-110665**
Catalog Objects: M-77, NGC-1055, NGC-1068

Imaging Window: **07:10 – 09:36**
Transit: **07:25 | 57°**

CH11-HD Focal Reducer

NGC-1055

Config: |C11HD|ZWO6200MC|

Type: **Galaxy**
Peak:
Constellation: **Cetus**
Coordinates:
02hr 41’ 50”
00° 29’ 48”

Close Star: **SAO-110665**
Catalog Objects: NGC-1055

Imaging Window: **07:10 – 09:37**
Transit: **07:24 | 57°**

C-11 HD: Primary Focus

M-34 (NGC-1039)

Config: |C11-HD|ZWO6200MC|

Type: **Open Cluster**
Constellation: **Perseus**
Coordinates:
02h 42’ 05”
42° 45’ 42”

Close Star: **SAO-38592** (Algol)
Catalog Objects: M-34/NGC-1039

Imaging Window: **07:10 – 11:14**
Transit: **07:24 | 81°**

Primary Focus

Prospective Imaging Objects – January

M 77 (NGC 1068)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy**
Peak:
Constellation: **Cetus**
Coordinates:
02hr 42’ 34”
00° 02’ 07”

Close Star: **SAO-110665**
Catalog Objects: M 77, NGC-1068

Imaging Window: **07:10 – 09:36**
Transit: **07:25 | 57°**

C-11 HD: Primary Focus

Soul Nebula (IC-1848)

Config: **C11-HD | HS | ZWO6200MC**

Type: **Diffuse Nebula**
Peak:
Constellation: **Cassiopeia**
Coordinates:
02hr 57’ 16”
60° 37’ 37”

Close Star: **SAO-38787 (Mirfak)**
Catalog Objects: IC 1848

Imaging Window: **07:10 – 11:20**
Transit: **07:34 | 63°**

C-11 HD: HyperStar v4

Soul Nebula (IC-1848)

Config: |C1|LF|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Cassiopeia**
Coordinates:
02hr 57’ 16”
60° 37’ 37”

Close Star: **SAO-38787 (Mirfak)**
Catalog Objects: IC 1848

Imaging Window: **07:10 – 11:20**
Transit: **07:34 | 63°**

Primary Focus

Prospective Imaging Objects – January

Perseus Galaxy Cluster

Config: |C11HD|ZWO6200MC|

Type: **Galaxy Cluster**
Peak:
Constellation: **Perseus**
Coordinates:
03hr 19’ 58”
41° 29’ 13”

Close Star: **SAO-38592** (Algol)
Catalog Objects: Abell-426, NGC1275, 1278, 1272, Et. El.

Imaging Window: **07:10 – 11:51**
Transit: **08:02 | 82°**

C-11 HD: Primary Focus

NGC-1333

Config: |C11HD|ZWO6200MC|

Type: **Bright Nebula**
Peak: **November 13**
Constellation: **Perseus**
Coordinates:
03hr 29’ 15”
31° 20’ 12”

Close Star: **SAO-56799**
Catalog Objects: NGC 1333

Imaging Window: **07:10 – 11:49**
Transit: **08:11 | 88°**

C-11 HD: Primary Focus

NGC-1360

Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**
Peak:
Constellation: **Fornax**
Coordinates:
03hr 33’ 15”
-25° 52’ 16”

Close Star: **SAO-168460**
Catalog Objects: NGC-1360

Imaging Window: ***07:10 – 10:12**
Transit: **08:15 | 31°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

IC-348

Config: |C11HD|ZWO6200MC|

Type: **Bright Nebula**
Peak:
Constellation: **Perseus**
Coordinates:
03hr 44’ 26”
32° 10’ 54”

Close Star: **SAO-147420**
Catalog Objects: IC-348

Imaging Window: **07:10 – 12:05**
Transit: **08:27 | 89°**

C-11 HD: Primary Focus

IC-342

Config: |C11HD|ZWO6200MC|

Type: **Barred Spiral Galaxy**
Peak:
Constellation: **Camelopardalis**
Coordinates:
03hr 46’ 48”
68° 05’ 44”

Close Star: **SAO-12031 (Segin)**
Catalog Objects: IC-342

Imaging Window: **07:10 – 11:54**
Transit: **08:29 | 55°**

C-11 HD: Primary Focus

Pleiades (M 45)

Config: **C11-HD | HS | ZWO6200MC**

Type: **Bright Nebula**
Peak: **November 16**
Constellation: **Taurus**
Coordinates:
03hr 46’ 07”
24° 11’ 18”

Close Star: **SAO-56799**
Catalog Objects: M45

Imaging Window: **07:10 – 11:54**
Transit: **08:29 | 81°**

C-11 HD: HyperStar v4

Prospective Imaging Objects – January

Pleiades (M-45)

Config: |C1|LF|ZWO6200MC|

Type: **Bright Nebula**
Peak: **November 16**
Constellation: **Taurus**
Coordinates:
03hr 46’ 15.932”
24° 12’ 07.154”

Close Star: **SAO-56799**
Catalog Objects: M45

Imaging Window: **07:10 – 11:54**
Transit: **08:29 | 81°**

Primary Focus

California Nebula (NGC 1499)

Config: **C11-HD | HS | ZWO6200MC**

Type: **Diffuse Nebula**
Peak: **November 22**
Constellation: **Perseus**
Coordinates:
04hr 01’ 22”
36° 21’ 19”

Close Star: SAO-56840
Catalog Objects: NGC 1499

Imaging Window: **07:10 – 12:29**
Transit: **08:45 | 87°**

C-11 HD: HyperStar v4

Oyster Nebula (NGC 1501)

Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**
Constellation: **Camelopardalis**
Coordinates:
04hr 06’ 58”
60° 55’ 3.5”

Close Star: **SAO-038787 (Mirfak)**
Catalog Objects: NGC-1501

Imaging Window: **07:10 – 12:35**
Transit: **08:49 | 62°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Crystal Ball Nebula (NGC 1514) Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Taurus** Coordinates: **04hr 09’ 17”** **30° 46’ 35”** Close Star: **SAO-56799** Catalog Objects: NGC-1514 Imaging Window: **07:10 – 12:28** Transit: **08:51 | 87°**	**C-11 HD: Primary Focus** 
Cleopatra’s Eye (NGC 1535) Config: |C11HD |ZWO6200MC| Type: **Planetary Nebula** Constellation: **Eridanus** Coordinates: **04hr 14’ 16”** **-12° 44’ 20”** Close Star: **SAO-131907** (Rigel) Catalog Objects: NGC-1535 Imaging Window: ***07:10 – 11:06** Transit: **08:56 | 44°**	**C-11 HD: Primary Focus** 
Hind’s Variable Nebula (NGC 1555) Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Taurus** Coordinates: **04hr 21’ 54”** **19° 32’ 00”** Close Star: **SAO-94027** (Aldebaran) Catalog Objects: NGC-1555 Imaging Window: **07:10 – 12:20** Transit: **09:04 | 76°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

Hyades (Mel 25) Config: **C11-HD | HS | ZWO6200MC** Type: **Open Cluster** Constellation: **Taurus** Coordinates: **04hr 26’ 34”** **15° 31’ 39”** Close Star: SAO-56840 Catalog Objects: Mel 25 Imaging Window: **07:10 – 12:21** Transit: **09:12 | 73°**	**C-11 HD: HyperStar v4** 
Trifid of the North (NGC 1579) Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Perseus** Coordinates: **04hr 30’ 12”** **35° 16’ 60”** Close Star: **SAO-56799** Catalog Objects: NGC-1579 Imaging Window: **07:10 – 12:55** Transit: **09:12 | 88°**	**C-11 HD: Primary Focus** 
Witch Head Nebula (IC 2118) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright Nebula** Peak: Constellation: **Eridanus** Coordinates: **05hr 05’ 19.872”** **-06° 56’ 00.365”** Close Star: SAO-131794 Catalog Objects: IC 2118 Imaging Window: ***07:12 – 12:19** Transit: **09:44 | 49°**	**C-11 HD: HyperStar v4** 

Prospective Imaging Objects – January

Witch Head Nebula (IC 2118) Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Eridanus** Coordinates: **05hr 07’ 07”** **-06° 20’ 07”** Close Star: SAO-131794 Catalog Objects: IC 2118 Imaging Window: ***07:12 – 12:19** Transit: **09:44 | 49°**	**C-11 HD: Primary Focus** 
Foxface Nebula (NGC 1788) Config: |C11|HS|ZWO6200MCc| Type: **Bright Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 06’ 10”** **-04° 04’ 26”** Close Star: SAO-131794 Catalog Objects: NGC 1788 Imaging Window: **08:01 – 11:42** Transit: **09:49**	**Hyperstar** 
Foxface Nebula (NGC 1788) Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 05’ 52”** **-03° 22’ 22”** Close Star: SAO-131794 Catalog Objects: NGC 1788 Imaging Window: **08:01 – 11:42** Transit: **09:49**	**C-11 HD: Focal Reducer** 

Prospective Imaging Objects – January

Foxface Nebula (NGC 1788)
Config: |C11HD|ZWO6200MC|

Type: **Bright Nebula**
Peak:
Constellation: **Orion**
Coordinates:
05hr 06’ 26”
-03° 20’ 13”

Close Star: SAO-131794
Catalog Objects: NGC 1788

Imaging Window: **08:01 – 11:42**
Transit: **09:49**

C-11 HD: Primary Focus

Flaming Star Nebula (IC-405)
Config: **C11-HD | HS | ZWO6200MC**

Type: **Bright Nebula**
Peak:
Constellation: **Auriga**
Coordinates:
05hr 19’ 38”
33° 49’ 10”

Close Star: SAO-77168 (Elnath)
Catalog Objects: IC 405, IC 410

Imaging Window: **07:10 – 01:41**
Transit: **09:59 | 89°**

C-11 HD: HyperStar v4

Flaming Star Nebula (IC 405)
Config: |C11-HD|FR|ZWO6200MC|

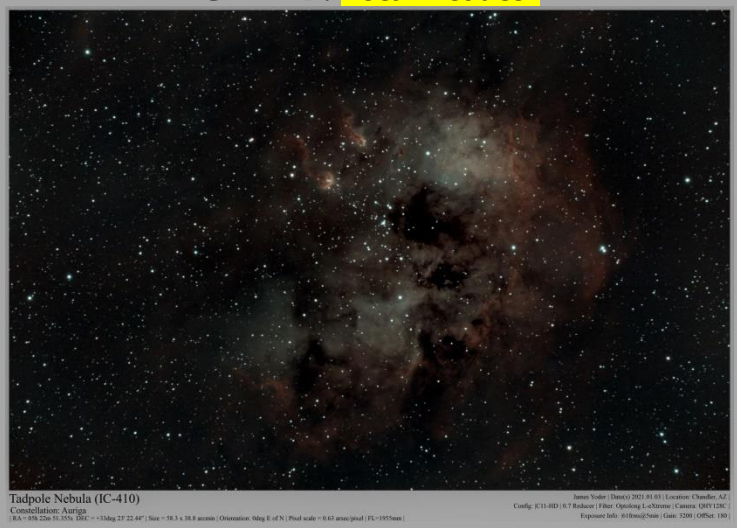
Type: **Bright Nebula**
Peak:
Constellation: **Auriga**
Coordinates:
05hr 15’ 55”
34° 29’ 08”

Close Star: SAO-77168 (Elnath)
Catalog Objects: IC 405

Imaging Window: **07:10 – 01:41**
Transit: **09:59 | 89°**

C-11 HD: Focal Reducer

Prospective Imaging Objects – January

Flaming Star Nebula (IC 405) Config: |C11-HD|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Auriga** Coordinates: **05hr 16’ 37”** **34° 23’ 47”** Close Star: SAO-77168 (Elnath) Catalog Objects: IC 405 Imaging Window: **07:10 – 01:41** Transit: **09:59 | 89°**	**C-11 HD: Primary Focus** 
Tadpoles (IC 410) Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Auriga** Coordinates: **05hr 22’ 54”** **33° 23’ 31”** Close Star: SAO-77168 (Elnath) Catalog Objects: IC 410 Imaging Window: **07:10 – 01:44** Transit: **10:04 | 90°**	**C-11 HD: Focal Reducer** 
Tadpoles (IC 410) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Auriga** Coordinates: **05hr 22’ 37”** **33° 23’ 03”** Close Star: SAO-77168 (Elnath) Catalog Objects: IC 410 Imaging Window: **07:10 – 01:44** Transit: **10:04 | 90°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

M-79 (NGC-1904)

Config: |C11HD|ZWO6200MC|

Type: **Globular Cluster**
Peak:
Constellation: **Lepus**
Coordinates:
05hr 24’ 11”
-24° 31’ 25”

Close Star: SAO-170457
Catalog Objects: M 79

Imaging Window: ***09:03 – 11:17**
Transit: **10:06 | 32°**

C-11 HD: Primary Focus

Spirograph Nebula (IC 418)

Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**
Constellation: **Lepus**
Coordinates:
05hr 27’ 28”
-12° 41’ 48”

Close Star: SAO-132542 (Saiph)
Catalog Objects: IC-418

Imaging Window: ***08:05 – 12:19**
Transit: **10:09 | 44°**

C-11 HD: Primary Focus

The Spider and the Fly

(M-77, NGC-1055, NGC-1931)

Config: |C11-HD|FR|ZWO6200MC|
Type: **Diffuse Nebula**
Peak:
Constellation: **Auriga**

Camera Rotation - 90°
Frame 01
RA: **05hr 30’ 44”**DEC: **34° 20’ 41”**
Frame 02
RA: **05hr 27’ 55”**DEC: **34° 20’ 41”**

Close Star: SAO-77168 (Elnath)
Catalog Objects: IC-417, NGC-1931

Imaging Window: **07:10 – 01:52**
Transit: **10:10 | 89°**

C-11 HD: Focal Reducer
Composite!

Prospective Imaging Objects – January

The Spider (IC 417)
Config: |C11HD|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Auriga**
Coordinates:
05hr 28’ 03”
34° 22’ 58”

Close Star: SAO-77168 (Elnath)
Catalog Objects: IC 417

Imaging Window: **07:10 – 01:52**
Transit: **10:10 | 89°**

C-11 HD: Primary Focus

Starfish Cluster (M-38)
Config: |C11HD|ZWO6200MC|

Type: **Open Cluster**
Constellation: **Auriga**
Coordinates:
05hr 28’ 43”
35° 51’ 18”

Close Star: **SAO-77168** (Elnath)
Catalog Objects: M-38

Imaging Window: **07:10 – 01:54**
Transit: **10:11 | 88°**

C-11 HD: Primary Focus

The Fly (NGC 1931)
Config: |C11HD|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Auriga**
Coordinates:
05hr 31’ 24”
34° 15’ 00”

Close Star: SAO-77168 (Elnath)
Catalog Objects: NGC 1931

Imaging Window: **07:10 – 01:55**
Transit: **10:13 | 89°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Crab Nebula (M 1)

Config: |C1|LF|ZWO6200MC|

Type: **Planetary Nebula**
Peak:
Constellation: **Taurus**
Coordinates:
05hr 34’ 30”
22° 00’ 59.9”

Close Star: SAO-77336
Catalog Objects: M 1

Imaging Window: **07:10 – 01:37**
Transit: **10:16 | 79°**

Primary Focus

The Orion Complex

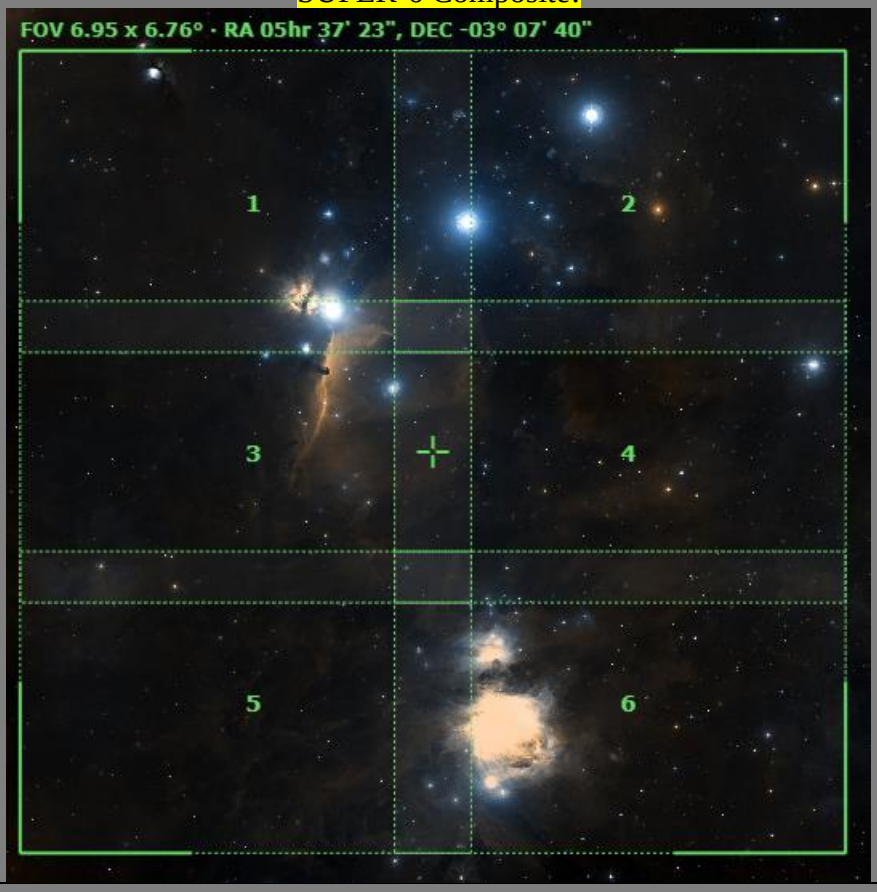
Config: **C11 | HS | ZWO6200MC**

Type: **Diffuse Nebula**
Peak:
Constellation: **Orion**
Coordinates:
Frame 01
RA: **05hr 43' 42"** DEC: **-01° 01' 06"**
Frame 02
RA: **05hr 31’ 05”** DEC: **-01° 01' 06"**
Frame 03
RA: **05hr 43’ 42”** DEC: **-03° 07’ 35”**
Frame 04
RA: **05hr 31’ 04”** DEC: **-03° 07’ 35”**
Frame 05
RA: **05hr 43’ 43”** DEC: **-05° 14’ 05”**
Frame 06
RA: **05hr 31’ 04”** DEC: **-05° 14’ 05”**

Close Star: SAO-132542 (Saiph)
Catalog Objects: M-42

Imaging Window: **08:43 – 11:57**
Transit: **10:17**

C-11 HD: HyperStar v4
SUPER-6 Composite!



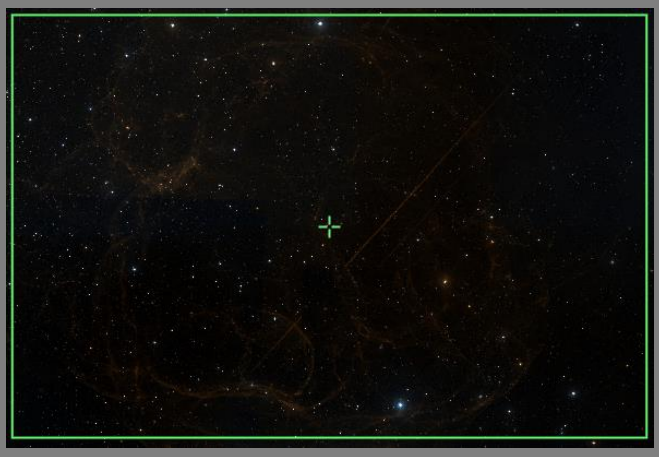
Prospective Imaging Objects – January

The Orion Nebula (M 42) Config: **C11-HD | HS | ZWO6200MC** Type: **Diffuse Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 35’ 46”** **-05° 15’ 34”** Close Star: SAO-132542 (Saiph) Catalog Objects: M-42 Imaging Window: **08:43 – 11:57** Transit: **10:17**	**C-11 HD: HyperStar v4** 
The Orion Nebula (M 42) Config: **C6-SE | HS | ZWO6200MC (Cropped)** Type: **Diffuse Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 35’ 18.4”** **-05° 23’ 51.0”** Close Star: SAO-132542 (Saiph) Catalog Objects: M-42 Imaging Window: **08:43 – 11:57** Transit: **10:17**	**C6-SE: HyperStar v4** 
The Orion Nebula (M 42) Config: |C1|LF|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 35’ 09”** **-05° 24’ 32”** Close Star: SAO-132542 (Saiph) Catalog Objects: M-42 Imaging Window: **08:43 – 11:57** Transit: **10:17**	Primary Focus 

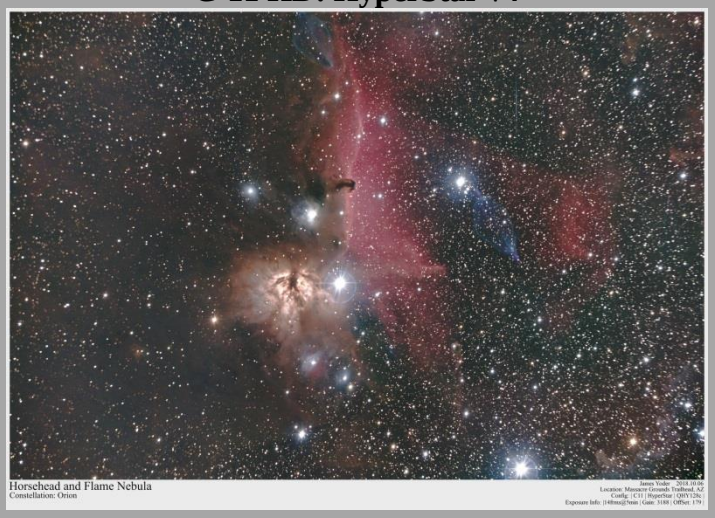
Prospective Imaging Objects – January

Running Man Nebula (NGC 1977) Config: |C6-HD|FR|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 35' 18.1"** **-04° 41' 25.9"** Close Star: SAO-132542 (Saiph) Catalog Objects: NGC-1977 Imaging Window: **08:39 – 12:01** Transit: **10:17 | 52°**	**C-6SE: Primary Focus** 
Running Man Nebula (NGC 1977) Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 35' 27"** **-04° 53' 09"** Close Star: SAO-132542 (Saiph) Catalog Objects: NGC-1977 Imaging Window: **08:39 – 12:01** Transit: **10:17 | 52°**	**C-11 HD: Primary Focus** 
M-36 (NGC-1960) Config: |C11HD|ZWO6200MC| Type: **Open Cluster** Constellation: **Auriga** Coordinates: **05hr 36' 18"** **34° 08' 27"** Close Star: **SAO-77168** (Elnath) Catalog Objects: M-36/NGC-1960 Imaging Window: **07:10 – 02:00** Transit: **10:18 | 89°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

Simeis 147 (SH2-240) Config: **C11-HD | HS | ZWO6200MC** Type: **Diffuse Nebula** Constellation: **Taurus** Camera Rotation - 90° Coordinates: Frame 01 RA: **05hr 45' 38"** DEC: **27º 56' 31"** Frame 02 RA: **05hr 36' 28"** DEC: **27º 56' 31"** Close Star: **SAO-77168** (Elnath) Catalog Objects:SH2-240 Imaging Window: **07:10 – 01:55** Transit: **10:23 | 85°**	**C-11 HD: HyperStar v4** Composite-2 
Simeis 147 (SH2-240) Config: **C11-HD | HS | ZWO6200MC** Type: **Diffuse Nebula** Constellation: **Taurus** Coordinates: **05hr 39' 04"** **28° 00' 00"** Close Star: **SAO-77168** (Elnath) Catalog Objects:SH2-240 Imaging Window: **07:10 – 01:55** Transit: **10:23 | 85°**	**C-11 HD: HyperStar v4** 

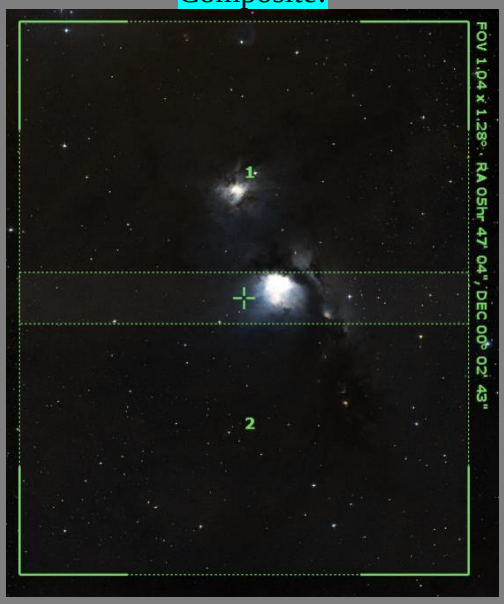
Prospective Imaging Objects – January

Flame and Horsehead Nebula **(NGC 2024, B 33)** Config: **C11-HD | HS | ZWO6200MC** Type: **Diffuse/Dark Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 40’ 04”** **-02° 28’ 13”** Close Star: SAO-132542 (Saiph) Catalog Objects: NGC-2024, B-33 Imaging Window: **08:28 – 12:25** Transit: **10:24 | 55°**	**C-11 HD: HyperStar v4** 
Flame Nebula (NGC 2024) Config: |C11-HD|FR|ZWO6200MC| | Type: **Diffuse Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 41’ 30”** **-01° 45’ 21”** Close Star: SAO-132542 (Saiph) Catalog Objects: NGC-2024 Imaging Window: **08:28 – 12:25** Transit: **10:24 | 55°**	**C-11 HD: Focal Reducer** 
Flame Nebula (NGC 2024) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 41’ 45.843”** **-01° 49’ 31.401”** Close Star: SAO-132542 (Saiph) Catalog Objects: NGC-2024 Imaging Window: **08:28 – 12:25** Transit: **10:24 | 55°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

Horsehead Nebula (B 33) Config: |C1|LF|ZWO6200MC| Type: **Dark Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 40’ 59”** **-02° 31’ 47”** Close Star: SAO-132542 (Saiph) Catalog Objects: B 33 Imaging Window: **08:30 – 12:21** Transit: **10:23 | 54°**	Primary Focus  Horshead Nebula (IC-434) Constellation: Orion
NGC 2022 Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 42’ 07”** **09° 04’ 55”** Close Star: SAO-112740 (Bellatrix) Catalog Objects: NGC-2022 Imaging Window: **07:42 – 01:11** Transit: **10:24 | 66°**	**C-11 HD: Primary Focus**  NGC-2022 Constellation: Orion
NGC 1961 Config: |C11HD|ZWO6200MC| Type: **Spiral Galaxy** Peak: Constellation: **Camelopardalis** Coordinates: **05hr 43’ 27”** **69° 20’ 48”** Close Star: SAO-40750 (Menkalinan) Catalog Objects: NGC-1961 Imaging Window: **07:11 – 01:42** Transit: **10:24 | 54°**	**C-11 HD: Primary Focus**  Galaxy Cluster (NGC-1961 et al.) Constellation: Camelopardalis

Prospective Imaging Objects – January

M-78 Config: |C11-HD|FR|ZWO6200MC| Type: **Dark Nebula** Peak: Constellation: **Orion** Frame 01 RA: **05hr 47’ 05”**DEC: **00° 20’ 09”** Frame 02 RA: **05hr 47’ 05”**DEC: **-00° 14’ 43”** Close Star: SAO-132346 (Alnilam) Catalog Objects: M-78 Imaging Window: **08:23 – 12:40** Transit: **10:29**	**C-11 HD: Focal Reducer** Composite! 
M-78 Config: |C11-HD|FR|ZWO6200MC| Type: **Bright and Dark Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 46’ 59”** **00° 08’ 59”** Close Star: SAO-132346 (Alnilam) Catalog Objects: M-78 Imaging Window: **08:23 – 12:40** Transit: **10:29**	**C-11 HD: Focal Reducer** 

Prospective Imaging Objects – January

M-78

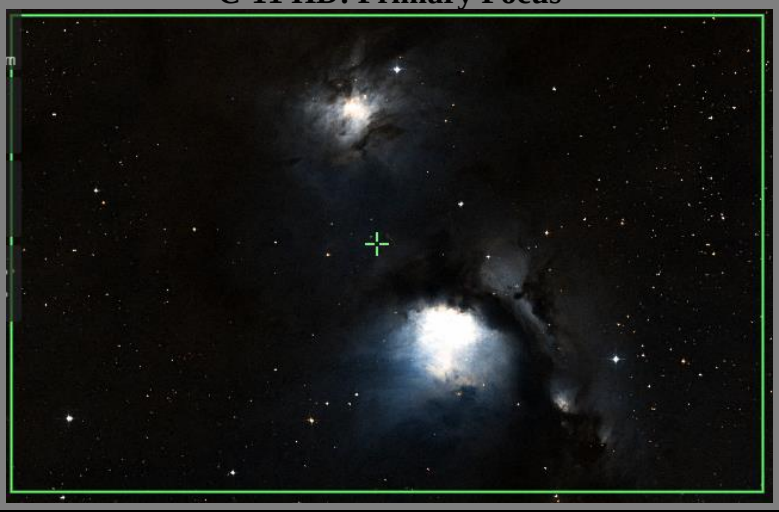
Config: |C11HD|ZWO6200MC|

Type: **Bright and Dark Nebula**
Peak:
Constellation: **Orion**
Coordinates:
05hr 47’ 03”
00° 09’ 46”

Close Star: SAO-132346 (Alnilam)
Catalog Objects: M-78

Imaging Window: **08:23 – 12:40**
Transit: **10:29**

C-11 HD: Primary Focus



Salt and Pepper Cluster(M-37)

Config: |C11HD|ZWO6200MC|

Type: **Open Cluster**
Constellation: **Auriga**
Coordinates:
05hr 52’ 18”
32° 33’ 11”

Close Star: **SAO-77168** (Elnath)
Catalog Objects: M-37/NGC-2099

Imaging Window: **07:10 – 02:13**
Transit: **10:34 | 89°**

C-11 HD: Primary Focus

LDN-1622 (Region 01)

Config: |C11HD|ZWO6200MC|

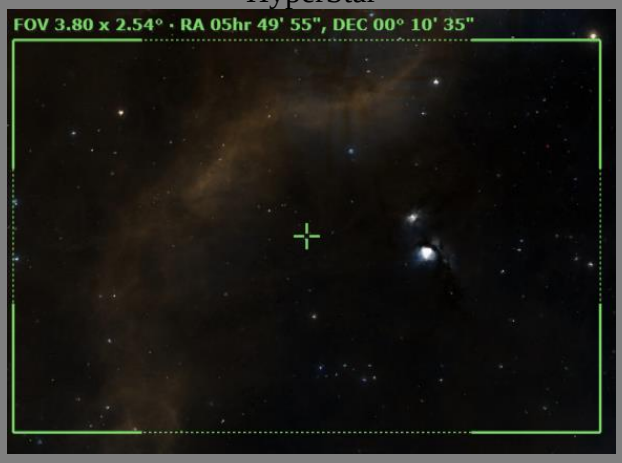
Type: **Dark Nebula & Nebula**
Peak:
Constellation: **Orion**

Coordinates:
Pane 1: **05hr 50' 40", 01° 46' 30"**
Pane 2, **05hr 50' 40", 00° 14' 57**

Close Star: SAO-132346 (Alnilam)
Catalog Objects: LDN-1622
Imaging Window: **08:22 – 12:56**
Transit: **10:36 | 59°**

C-11 HD: HyperStar v4
Composite!

Prospective Imaging Objects – January

LDN-1622 (Region 01) Config: |C11HD|ZWO6200MC| Type: **Dark Nebula & Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 51’ 00”** **00° 59’ 47”** Close Star: SAO-132346 (Alnilam) Catalog Objects: LDN-1622 Imaging Window: **08:22 – 12:56** Transit: **10:36 | 59°**	HyperStar 
LDN-1622 (Region 02) Config: |C11HD|ZWO6200MC| Type: **Dark Nebula & Nebula** Peak: Constellation: **Orion** Coordinates: **05hr 49’ 55”** **00° 10’ 35”** Close Star: SAO-132346 (Alnilam) Catalog Objects: LDN-1622 Imaging Window: **08:22 – 12:56** Transit: **10:36 | 59°**	HyperStar 
LDN-1622 (Region 03) Config: **C11-HD | HS | ZWO6200MC** Type: **Bright and Dark Nebula** Peak: Coordinates: **05hr 54’ 51”** **01° 47’ 10”** Close Star: SAO-112740(Bellatrix) Catalog Objects: LDN-1622 Imaging Window: **08:22 – 12:56** Transit: **10:36 | 59°**	**C-11 HD: HyperStar v4** 

Prospective Imaging Objects – January

LDN 1622
Config: |C11HD|ZWO6200MC|

Type: **Dark Nebula**
Peak:
Constellation: **Orion**

Camera Rotation - 90°
Frame 01
RA: **05hr 56’ 28”**DEC: **01° 58’ 32”**
Frame 02
RA: **05hr 54’ 08”**DEC: **01° 58’ 35”**

Close Star: SAO-132346 (Alnilam)
Catalog Objects: LDN-1622

Imaging Window: **08:22 – 12:56**
Transit: **10:36 | 59°**

C-11 HD: Focal Reducer
Composite!

LDN-1622
Config: |C11HD|FR|ZWO6200MC|

Type: **Bright and Dark Nebula**
Peak:
Constellation: **Orion**
Coordinates:
05hr 54’ 52”
01° 49’ 51”

Close Star: SAO-112740(Bellatrix)
Catalog Objects: LDN-1622

Imaging Window: **08:22 – 12:56**
Transit: **10:36 | 59°**

C-11 HD: Focal Reducer

LDN 1622
Config: |C11HD|ZWO6200MC|

Type: **Dark Nebula**
Peak:
Constellation: **Orion**
Coordinates:
05hr 54’ 55”
01° 49’ 49”

Close Star: SAO-132346 (Alnilam)
Catalog Objects: LDN-1622

Imaging Window: **08:22 – 12:56**
Transit: **10:36 | 59°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Angel Nebula (NGC 2170)
Config: |C11-HD|FR|ZWO6200MC|

Type: **Bright and Dark Nebula**
Peak:
Constellation: **Monoceros**
Coordinates:
06hr 08’ 26”
-06° 25’ 24”

Close Star: SAO-132542 (Saiph)
Catalog Objects: NGC-2170

Imaging Window: **09:24 – 12:22**
Transit: **10:50**

C-11 HD: Focal Reducer

Angel Nebula (NGC 2170)
Config: |C11-HD |ZWO6200MC|

Type: **Bright and Dark Nebula**
Peak:
Constellation: **Monoceros**
Coordinates:
06hr 08’ 26”
-06° 25’ 24”

Close Star: SAO-132542 (Saiph)
Catalog Objects: NGC-2170

Imaging Window: **09:24 – 12:22**
Transit: **10:50**

C-11 HD: Primary Focus

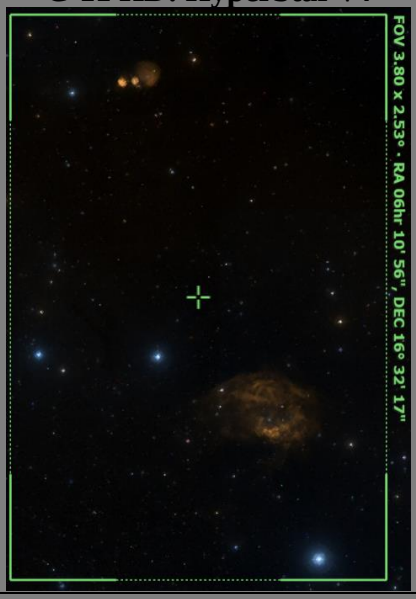
IC-2162 & SH 2-261
Config: |C11HD|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Orion**
Coordinates:
06hr 10’ 56”
16° 32’ 17”
Angle: **90° East**

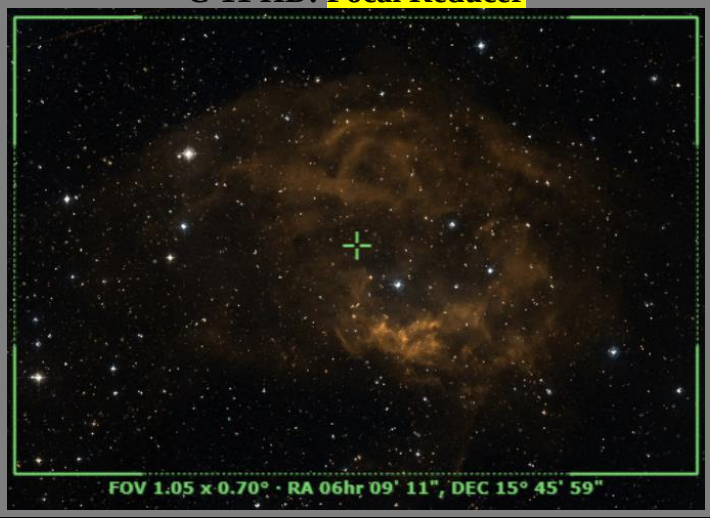
Close Star: SAO-78297 (Calix)
Catalog Objects: IC-2162 Sh 2-261

Imaging Window: **07:50 – 01:57**
Transit: **10:51 | 72°**

C-11 HD: HyperStar v4



Prospective Imaging Objects – January

Lower's Nebula (Sh 2-261) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Orion** Coordinates: **06hr 09' 11"** **15° 45' 59"** Close Star: **SAO-78297** (Calix) Catalog Objects: Sh 2-261 Imaging Window: **07:50 – 01:57** Transit: **10:51 | 72°**	**C-11 HD: Focal Reducer** 
Lower's Nebula (Sh 2-261) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Orion** Coordinates: **06hr 08' 59"** **15° 46' 39"** Close Star: **SAO-78297** (Calix) Catalog Objects: Sh 2-261 Imaging Window: **07:50 – 01:57** Transit: **10:51 | 72°**	**C-11 HD: Primary Focus** 
M-35, NGC-2158 Config: |C11-HD|FR|ZWO6200MC| Type: **Open Cluster Pair** Constellation: **Gemini** Coordinates: **06hr 08' 39"** **24° 14' 48"** Close Star: **SAO-95912** (Alhena) Catalog Objects: M-35/NGC-2168, NGC-2158 Imaging Window: **07:31 – 02:17** Transit: **10:51 | 81°**	**C-11 HD: Focal Reducer** 

Prospective Imaging Objects – January

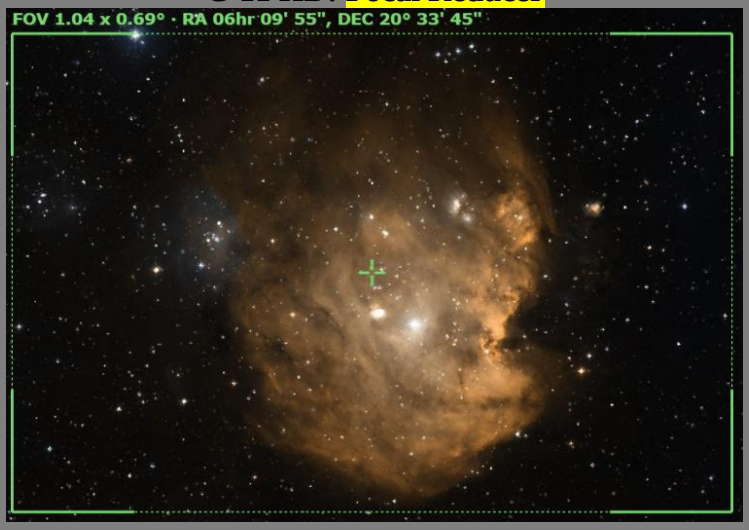
Monkey Head (NGC-2174)
Config: |C11-HD|FR|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Orion**
Coordinates:
06hr 09’ 50”
20° 29’ 50”

Close Star: SAO-78297 (Calix)
Catalog Objects: NGC-2174/Sh 2-252

Imaging Window: **07:39 – 02:09**
Transit: **10:51 | 77°**

C-11 HD: Focal Reducer



Monkey Head (NGC 2174)
Config: |C11HD|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Orion**
Coordinates:
06hr 09’ 50”
20° 29’ 50”

Close Star: SAO-78297 (Calix)
Catalog Objects: NGC-2174/Sh 2-252

Imaging Window: **07:39 – 02:09**
Transit: **10:51 | 77°**

C-11 HD: Primary Focus

IC 2162
Config: |C11HD|ZWO6200MC|

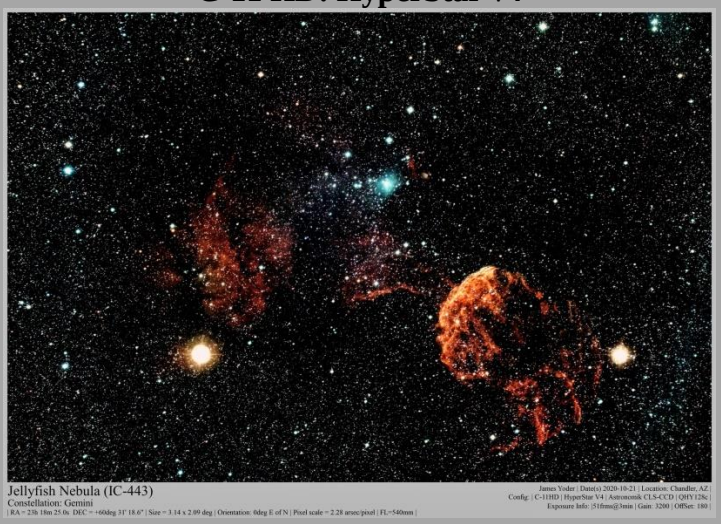
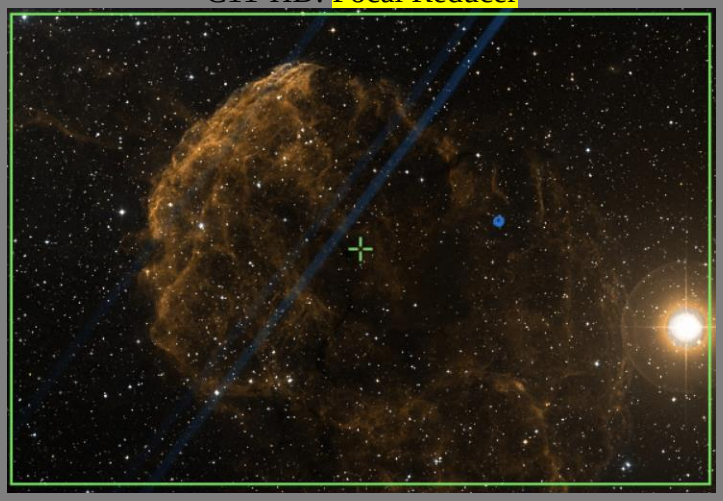
Type: **Bright Nebula**
Peak:
Constellation: **Orion**
Coordinates:
06hr 12’ 25”
17° 59’ 26”

Close Star: SAO-78297 (Calix)
Catalog Objects: IC-2162

Imaging Window: **07:49 – 02:07**
Transit: **10:55 | 75°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Jellyfish Nebula (IC 443) Config: **C11-HD | HS | ZWO6200MC** Type: **Supernova Remnant** Peak: Constellation: **Gemini** Coordinates: **06hr 19’ 56”** **23° 06’ 17”** Close Star: SAO-78297 (Calix) Catalog Objects: IC-443 Imaging Window: **07:43 – 02:21** Transit: **10:59 | 79°**	**C-11 HD: HyperStar v4** 
Jellyfish Nebula (IC 443) Config: |C11-HD|FR|ZWO6200MC| Type: **Supernova Remnant** Peak: Constellation: **Gemini** Coordinates: **06hr 16’ 59”** **22° 37’ 29”** Close Star: SAO-78297 (Calix) Catalog Objects: IC-443 Imaging Window: **07:43 – 02:21** Transit: **10:59 | 79°**	C11-HD: Focal Reducer 
Jellyfish Nebula (IC 443) Config: |C11|LF|ZWO6200MC| Type: **Supernova Remnant** Peak: Constellation: **Gemini** Coordinates: **06hr 16’ 51”** **22° 36’ 34”** Close Star: SAO-78297 (Calix) Catalog Objects: IC-443 Imaging Window: **07:43 – 02:21** Transit: **10:59 | 79°**	Primary Focus 

Prospective Imaging Objects – January

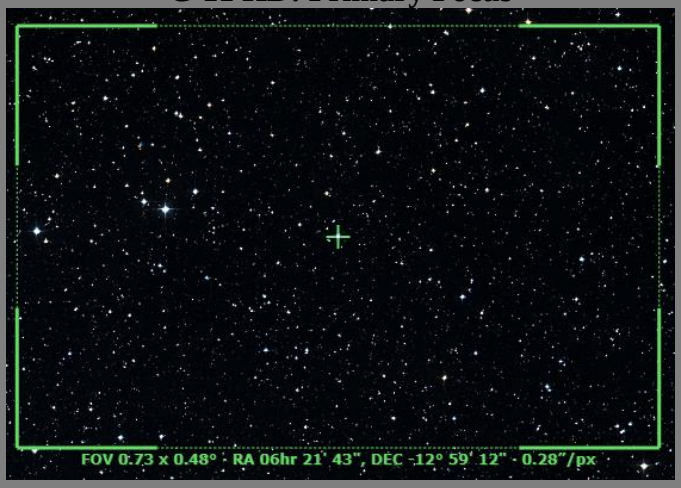
IC-2165
Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**
Peak:
Constellation: **Canis Major**
Coordinates:
06hr 21’ 43”
-12° 59’ 12”

Close Star:
Catalog Objects: IC-2165

Imaging Window: ***08:29 – 01:09**
Transit: **11:03 | 44°**

C-11 HD: Primary Focus



SH 2-249
Config: |C11HD|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Gemini**
Coordinates:
06hr 19’ 15”
23° 24’ 58”

Close Star: SAO-78297 (Calix)
Catalog Objects: SH 2-249

Imaging Window: **07:47 – 02:27**
Transit: **11:04| 80°**

C-11 HD: Primary Focus

Rosette Nebula (NGC 2237)
Config: **C11-HD | HS | ZWO6200MC**

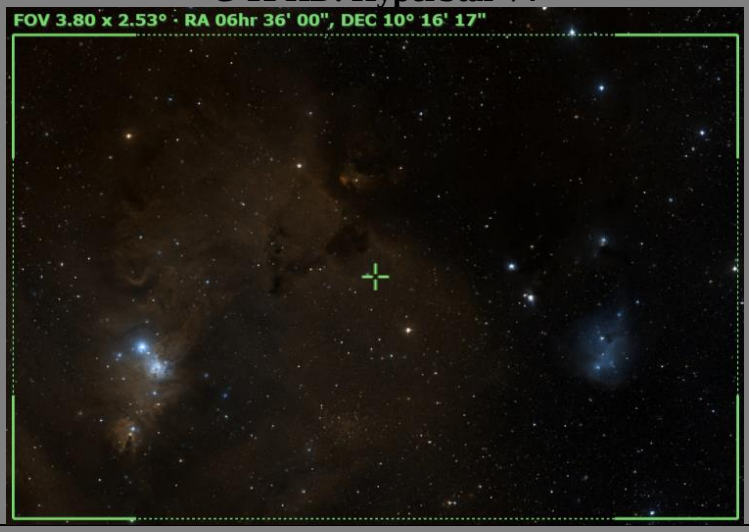
Type: **Diffuse Nebula**
Constellation: **Monoceros**
Coordinates:
06hr 31’ 53.37”
04° 50’ 45.29”

Close Star: SAO-95912 (Alhena)
Catalog Objects: NGC-2237 ,NGC-2244

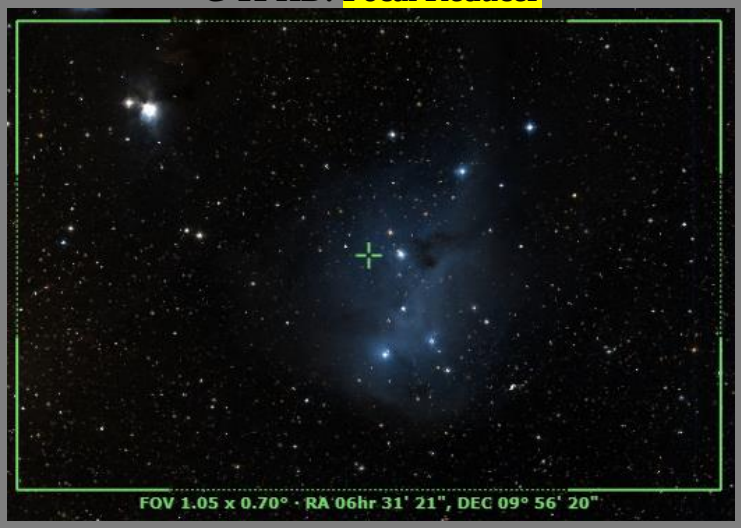
Imaging Window: **08:45 – 01:45**
Transit: **11:12 | 62°**

C-11 HD: HyperStar v4

Prospective Imaging Objects – January

Rosette Nebula (NGC 2237) Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 32’ 01”** **04° 59’ 28”** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC-2237 Imaging Window: **08:45 – 01:45** Transit: **11:12 | 62°**	**C-11 HD: Focal Reducer** 
Rosette Nebula (NGC 2237) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 32’ 02”** **04° 58’ 14”** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC-2237 Imaging Window: **08:45 – 01:45** Transit: **11:12 | 62°**	**C-11 HD: Primary Focus** 
IC-2169 Config: **C11 | HS | ZWO6200MC** Type: **Bright Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 36’ 00”** **10° 16’ 17”** Close Star: SAO-95912 (Alhena) Catalog Objects: IC-2169 Imaging Window: **08:28 – 02:04** Transit: **11:13 | 80°**	**C-11 HD: HyperStar v4** 

Prospective Imaging Objects – January

IC 2169 Config: |C11-HD|FR|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 31' 21"** **09° 56' 20"** Close Star: SAO-95912 (Alhena) Catalog Objects: IC-2169 Imaging Window: **08:28 – 02:04** Transit: **11:13 | 80°**	**C-11 HD: Focal Reducer** 
IC 2169 Config: |C11HD|ZWO6200MC| Type: **Bright Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 31' 36"** **09° 58' 16"** Close Star: SAO-95912 (Alhena) Catalog Objects: IC-2169 Imaging Window: **08:28 – 02:04** Transit: **11:13 | 80°**	**C-11 HD: Primary Focus** 
Hubble's Variable Nebula (NGC 2261) Config: |C11HD| ZWO6200MC| Type: **Reflection Nebula** Constellation: **Monoceros** Coordinates: **06hr 39' 12"** **08° 45' 00"** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC-2261 Imaging Window: **08:41 – 02:07** Transit: **11:21 | 65°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

Christmas Tree & Cone Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Coordinates: Pane 1: **06hr 40' 53", 10º 07' 47"** Pane 2, **06hr 40' 53", 09º 34' 40** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC-2264/Sh 2-273 Imaging Window: **08:39 – 02:13** Transit: **11:23 | 67°**	**C-11 HD: Focal Reducer** Composite! 
Christmas Tree & Cone Config: |C11-HD|FR|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 40' 47"** **09° 42' 40"** Angle: **90° East** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC-2264/Sh 2-273 Imaging Window: **08:39 – 02:13** Transit: **11:23 | 67°**	**C-11 HD: Focal Reducer** 
Christmas Tree Cluster (NGC 2264) Config: |C1|LF|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 40' 58.74"** **09° 53' 32.69"** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC-2264/Sh 2-273 Imaging Window: **08:39 – 02:13** Transit: **11:23 | 67°**	Primary Focus 

Prospective Imaging Objects – January

Christmas Tree & Cone Config: |C6FR|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 40' 51.6"** **09° 40' 25.2"** Angle: **90° East** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC-2264/Sh 2-273 Imaging Window: **08:39 – 02:13** Transit: **11:23 | 67°**	**C-6 HD: Focal Reducer**  NGC-2264 (Cone & Christmas Tree Nebula) Constellation: Monoceros James Yoder | Date(s) 2024.01.26, 27 | Location: Chandler, AZ | Config: | C-6SE | 0.63 Focal Reducer | OPT Radian Triad Ultra | ZWO-6200MC |
Cone Nebula-1 (NGC 2264) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Peak: Constellation: **Monoceros** Coordinates: **06hr 41' 07"** **09° 27' 52"** Close Star: SAO-95912 (Alhena) Catalog Objects: NGC-2264/Sh 2-273 Imaging Window: **08:39 – 02:13** Transit: **11:23 | 67°**	**C-11 HD: Primary Focus** 
M-41 (NGC 2287) Config: |C11HD|ZWO6200MC| Type: **Open Cluster** Constellation: **Canis Major** Coordinates: **06hr 46' 09"** **20° 47' 35"** Close Star: **SAO-151881** (Sirius) Catalog Objects: M-41/NGC 2287 Imaging Window: ***09:38 – 01:20** Transit: **11:28 | 36°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

M-50 (NGC 2323)
Config: |C11HD|ZWO6200MC|

Type: **Open Cluster**
Constellation: **Monoceros**
Coordinates:
07hr 02’ 48”
-08° 22’ 33”

Close Star: **SAO-151881** (Sirius)
Catalog Objects: M-50/NGC 2323

Imaging Window: ***09:14 – 02:14**
Transit: **11:44 | 48°**

C-11 HD: Primary Focus

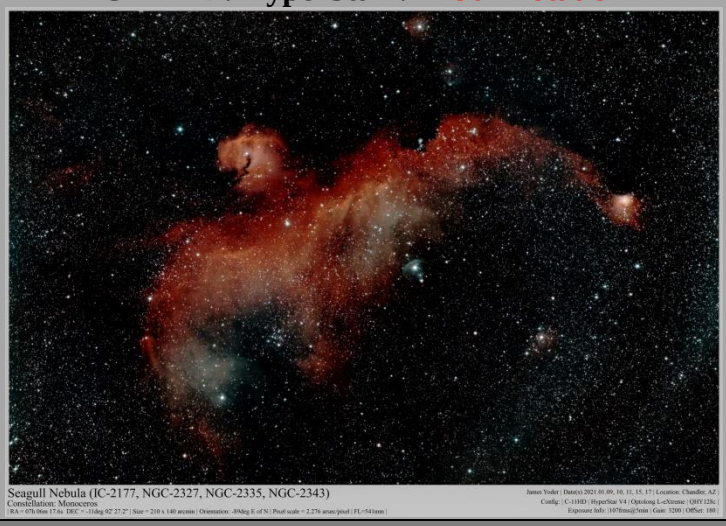
Seagull Nebula (IC-2177)
Config: |C11HD|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Monoceros**
Coordinates:
07hr 06’ 20”
-11° 06’ 56”

Close Star: SAO-151881 (Sirius)
Catalog Objects: IC-2177

Imaging Window: ***09:26 – 02:10**
Transit: **11:46 | 46°**

C-11 HD: HyperStar v4 - 90° Rotation



Seagull Nebula (IC 2177)
Config: |C11HD|ZWO6200MC|

Type: **Diffuse Nebula**
Peak:
Constellation: **Monoceros**
Coordinates:
07hr 04’ 47”
-10° 27’ 49”

Close Star: SAO-151881 (Sirius)
Catalog Objects: IC-2177

Imaging Window: ***09:26 – 02:10**
Transit: **11:46 | 46°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Hourglass Nebula (NGC-2346)
Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**
Peak:
Constellation: **Monoceros**
Coordinates:
07hr 09’ 23”
00° 48’ 22”

Close Star: SAO-115756 (Procyon)
Catalog Objects: NGC-2346

Imaging Window: ***09:18 – 02:29**
Transit: **11:51 | 56°**

C-11 HD: Primary Focus x2

Integral Sign Galaxy (UGC 3697)
Config: |C11HD|FR|ZWO6200MC|

Type: **Galaxy Group**
Constellation: **Camelopardalis**
Coordinates:
07hr 11’ 40”
71° 56’ 04”

Close Star: **SAO-40186** (Capella)
Catalog Objects: UGC-3697, UGC-3714, UGC-3701

Imaging Window: **08:58 – 02:54**
Transit: **11:53 | 52°**

C-11 HD: Focal Reducer

Integral Sign Galaxy (UGC 3697)
Config: |C11HD|ZWO6200MC|

Type: **Galaxy**
Constellation: **Camelopardalis**
Coordinates:
07hr 11’ 50”
71° 48’ 14”

Close Star: **SAO-40186** (Capella)
Catalog Objects: UGC-3697, UGC-3714, UGC-3701

Imaging Window: **08:58 – 02:54**
Transit: **11:53 | 52°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Thor's Helmet (NGC-2359) Config: |C11HD|ZWO6200MC| Type: **Diffuse Nebula** Constellation: **Canis Major** Coordinates: **07h 18' 26.223"** **-13° 15' 29.563"** Close Star: SAO-151881 (Sirius) Catalog Objects: NGC-2359/ Sh2-298/ LBN1041 Imaging Window: ***09:57 – 02:02** Transit: **12:00 | 43°**	**C-11 HD: Primary Focus** 
Candy Wrapper (NGC-2371) Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Gemini** Coordinates: **07° 25' 34"** **29° 29' 18"** Close Star: SAO-151881 (Sirius) Catalog Objects: NGC-2371 Imaging Window: **08:39 – 03:42** Transit: **12:07 | 86°**	**C-11 HD: Primary Focus x2** 
Medusa Nebula (Abell 21) Config: |C11HD|ZWO6200MC| Type: **Planetary Nebula** Constellation: **Gemini** Coordinates: **07h 29' 00"** **13° 15' 00"** Close Star: **SAO-115756** (Procyon) Catalog Objects: Abell 21 Imaging Window: **09:17 – 03:11** Transit: **12:11 | 70°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

Eskimo Nebula (NGC-2392)

Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**

Constellation: **Gemini**
Coordinates:
07h 29’ 11”
20° 54’ 45”

Close Star: **SAO-79666** (Pollux)
Catalog Objects: NGC-2392

Imaging Window: **08:58 – 03:30**
Transit: **12:11 | 70°**

C-11 HD: Primary Focus

M-47 (NGC-2422)

Config: |C11HD|ZWO6200MC|

Type: **Open Cluster**

Constellation: **Puppis**
Coordinates:
07h 36’ 36”
-14° 32’ 19”

Close Star: **SAO-79666** (Pollux)
Catalog Objects: M-47/NGC-2422

Imaging Window: ***10:24 – 02:10**
Transit: **12:18 | 42°**

C-11 HD: Primary Focus

NGC-2403

Config: |C11HD|ZWO6200MC|

Type: **Barred Spiral Galaxy**

Constellation: **Camelopardalis**
Coordinates:
07h 36’ 51”
65° 36’ 06”

Close Star: **SAO-79666** (Pollux)
Catalog Objects: NGC-2403

Imaging Window: **08:49 – 03:54**
Transit: **12:18 | 58°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Intergalactic Wanderer (NGC-2419)
Config: |C11HD|ZWO6200MC|

Type: **Globular Cluster**

Constellation: **Lynx**
Coordinates:
07h 38’ 09”
38° 52’ 57”

Close Star: **SAO-79666** (Pollux)
Catalog Objects: NGC-2419

Imaging Window: **08:39 – 04:07**
Transit: **12:20 | 84°**

C-11 HD: Primary Focus

M-46 (NGC-2437)
Config: |C11HD|ZWO6200MC|

Type: **Open Cluster with PN**

Constellation: **Puppis**
Coordinates:
07h 41’ 45”
-14° 46’ 43”

Close Star: **SAO-151881** (Sirius)
Catalog Objects: M-46/NGC-2437, NGC-2438

Imaging Window: ***10:35 – 02:18**
Transit: **12:23 | 42°**

C-11 HD: Primary Focus

Bow-Tie Nebula (NGC-2440)
Config: |C11HD|ZWO6200MC|

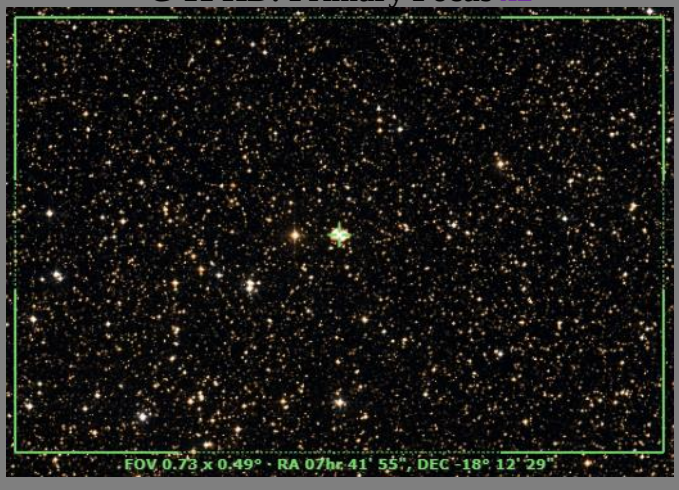
Type: **Planetary Nebula**

Constellation: **Puppis**
Coordinates:
07° 41’ 55”
-18° 12’ 29”

Close Star: **SAO-151881** (Sirius)
Catalog Objects: NGC-2440

Imaging Window: ***10:20 – 02:33**
Transit: **12:23 | 38°**

C-11 HD: Primary Focus x2



Prospective Imaging Objects – January

Butterfly Cluster (M-93, NGC-2447)
Config: |C11HD|ZWO6200MC|

Type: **Open Cluster**

Constellation: **Puppis**
Coordinates:
07h 44’ 46”
-23° 51’ 52”

Close Star: **SAO-151881** (Sirius)
Catalog Objects: M-93/NGC-2447

Imaging Window: ***10:16 – 02:41**
Transit: **12:26 | 33°**

C-11 HD: Primary Focus

M-48 (NGC-2548)
Config: |C11HD|ZWO6200MC|

Type: **Open Cluster**

Constellation: **Hydra**
Coordinates:
08h 13’ 46”
-05° 46’ 05”

Close Star: **SAO-115756** (Procyon)
Catalog Objects: M-48/NGC-2548

Imaging Window: **11:24 – 02:33**
Transit: **12:55 | 51°**

C-11 HD: Primary Focus

NGC-2610
Config: **C11-HD | HS | ZWO6200MC**

Type: **Planetary Nebula**

Constellation: **Hydra**
Coordinates:
08h 33’ 23”
-16° 08’ 55”

Close Star: **SAO-151881** (Sirius)
Catalog Objects: NGC-2610
Imaging Window: **11:36 – 03:00**
Transit: **01:15 | 41°**

C-11 HD: Primary Focus x2

Prospective Imaging Objects – January

Beehive Cluster (NGC-2632)
Config: **C11-HD | HS | ZWO6200MC**

Type: **Open Cluster**

Constellation: **Cancer**
Coordinates:
08h 39’ 59”
19° 39’ 01”

Close Star: **SAO-115756** (Procyon)
Catalog Objects: M-44/NGC-2632

Imaging Window: **10:12 – 04:38**
Transit: **01:22 | 76°**

C-11 HD: HyperStar v4

M-67 (NGC-2682)
Config: |C11HD|ZWO6200MC|

Type: **Open Cluster**

Constellation: **Cancer**
Coordinates:
08h 51’ 18”
11° 48’ 60”

Close Star: **SAO-115756** (Procyon)
Catalog Objects: M-67/NGC-2682

Imaging Window: **10:43 – 04:29**
Transit: **01:33 | 68°**

C-11 HD: Primary Focus

Helix Galaxy (NGC-2685)
Config: |C11HD|ZWO6200MC|

Type: **Galaxy**

Constellation: **Ursa Major**
Coordinates:
08h 55’ 14”
58° 42’ 24”

Close Star: **SAO-27876** (Merak)
Catalog Objects: NGC-2685

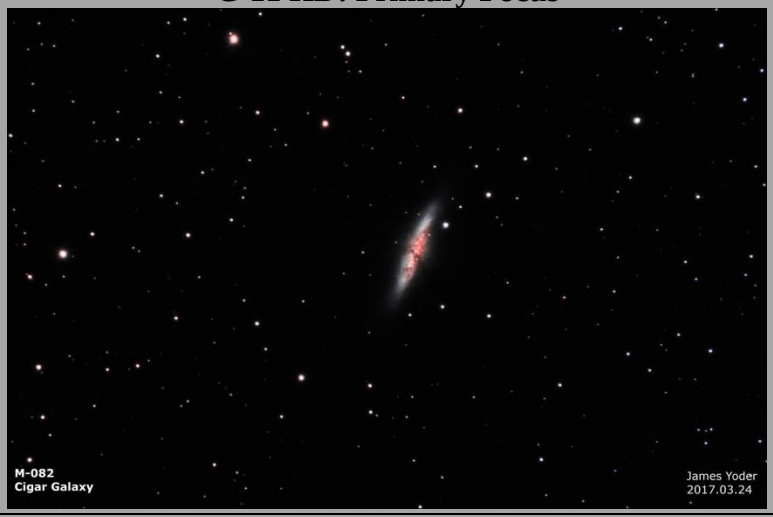
Imaging Window: **09:54 – 05:27**
Transit: **01:37 | 65°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

NGC-2903 Config: |C11HD|ZWO6200MC| Type: **Galaxy** Constellation: **Leo** Coordinates: **09h 32’ 08.949”** **21° 30’ 37.772”** Close Star: **SAO-98967** (Regulus) Catalog Objects: NGC-2903 Imaging Window: **11:00 – 05:34** Transit: **02:13 | 78°**	**C-11 HD: Primary Focus** 
Bode’s Cigar (M81 & M82) Config: **C11-HD | HS | ZWO6200MC** Type: **Galaxy Pair** Peak: Constellation: **Ursa Major** Coordinates: **09hr 54’ 02”** **68° 53’ 32”** Close Star: **SAO-15384** Catalog Objects: M-81 & M-82 Imaging Window: **11:27 – 05:54** Transit: **02:37 | 54°**	**C-11 HD: HyperStar v4** 
Bode’s Cigar (M81 & M82) Config: **C11-HD | HS | ZWO6200MC** Type: **Galaxy Pair** Constellation: **Ursa Major** Coordinates: RA: **09hr 55’ 40”**DEC: **69° 18’ 39”** 90° Rotation Close Star: **SAO-15384** Catalog Objects: M-81 & M-82 Imaging Window: **11:27 – 05:54** Transit: **02:37 | 54°**	**C-11 HD: Focal Reducer** 

Prospective Imaging Objects – January

Bode's Nebula (M-81) Config: |C11HD|ZWO6200MC| Type: **Galaxy** Constellation: **Ursa Major** Coordinates: **09h 55' 24.184"** **69° 05' 18.969"** Close Star: **SAO-15384** Catalog Objects: M-81/NGC-3031 Imaging Window: **11:23 – 05:58** Transit: **02:37 | 54°**	**C-11 HD: Primary Focus** 
Cigar Galaxy (M-82) Config: |C11HD|ZWO6200MC| Type: **Galaxy** Constellation: **Ursa Major** Coordinates: **09h 55' 57.451"** **69° 42' 37.646"** Close Star: **SAO-15384** Catalog Objects: M-82/NGC-3034 Imaging Window: **11:27 – 05:54** Transit: **02:37 | 54°**	**C-11 HD: Primary Focus** 
Spindel Galaxy (NGC-3115) Config: |C11HD|ZWO6200MC| Type: **Galaxy** Constellation: **Sextans** Coordinates: **10h 05' 21"** **-07° 47' 09"** Close Star: **SAO-98967** (Regulus) Catalog Objects: NGC-3115 Imaging Window: ***12:15 – 05:22** Transit: **02:46 | 49°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

Powder keg Galaxy (UGC-5470)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy**

Constellation: **Leo**
Coordinates:
10h 08’ 27”
12° 19’ 49”

Close Star: **SAO-98967** (Regulus)
Catalog Objects: UGC-5470

Imaging Window: **11:59 – 05:48**
Transit: **02:59 | 69°**

C-11 HD: Primary Focus

NGC-3166 & NGC-3169

Config: |C11HD|ZWO6200MC|

Type: **Galaxy pair**

Constellation: **Sextans**
Coordinates:
10h 14’ 01”
03° 25’ 51”

Close Star: **SAO-98967** (Regulus)
Catalog Objects: NGC-3166, NGC-3169

Imaging Window: **12:35 – 05:22**
Transit: **02:55 | 60°**

C-11 HD: Primary Focus

Hickson 44 (NGC-3190, 3189,)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy Group**

Constellation: **Leo**
Coordinates:
10h 17’ 57”
21° 49’ 11”

Close Star: **SAO-98967** (Regulus)
Catalog Objects: NGC-3189, 3190, 3185, 3193, 3187, PGC-2806871

Imaging Window: **11:45 – 06:04**
Transit: **02:59 | 79°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

NGC-3184

Config: |C11HD|ZWO6200MC|

Type: **Face-on Spiral Galaxy**

Constellation: **Ursa Major**
Coordinates:
10h 18’ 17”
41° 25’ 24”

Close Star: **SAO-98967** (Regulus)
Catalog Objects: NGC-3184

Imaging Window: **11:17 – 06:04**
Transit: **02:59 | 82°**

C-11 HD: Primary Focus

NGC-3227 & NGC-3226

Config: |C11HD|ZWO6200MC|

Type: **Interacting Galaxies**

Constellation: **Leo**
Coordinates:
10h 23’ 29”
19° 53’ 07”

Close Star: **SAO-60178** (Castor)
Catalog Objects: NGC-3227, NGC-3226

Imaging Window: **11:55 – 03:05**
Transit: **03:05 | 76°**

C-11 HD: Primary Focus

Ghost of Jupiter (NGC-3242)

Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**

Constellation: **Hydra**
Coordinates:
10h 24’ 46”
-18° 38’ 31”

Close Star: **SAO-98967** (Regulus)
Catalog Objects: NGC-3242

Imaging Window: ***01:01 – 05:14**
Transit: **03:06 | 38°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Galaxy Group 2574
Config: **C11-HD | HS | ZWO6200MC**

Type: **Galaxy Group**

Constellation: **Leo**
Coordinates:
10h 28’ 40”
68° 26’ 14”

Close Star: **SAO-27876** (Merak)
Catalog Objects: IC-2574

Imaging Window: **11:52 – 06:04**
Transit: **03:09 | 55°**

C-11 HD: HyperStar v4

Coddington’s Nebula (IC-2574)
Config: |C11HD|ZWO6200MC|

Type: **Barred Spiral Galaxy**

Constellation: **Leo**
Coordinates:
10h 28’ 40”
68° 26’ 14”

Close Star: **SAO-27876** (Merak)
Catalog Objects: IC-2574

Imaging Window: **11:52 – 06:04**
Transit: **03:09 | 55°**

C-11 HD: Primary Focus

Leo Galaxy Group (M-96, M95 et el.)
Config: **C11-HD | HS | ZWO6200MC**

Type: **Galaxy Grouping**

Constellation: **Leo**
Coordinates:
10h 47’ 23”
12° 23’ 59”

Close Star: **SAO-98967** (Regulus)
Catalog Objects: M-96,M95, NGC3389, NGC3384, M105

Imaging Window: **12:39 – 06:04**
Transit: **03:28 | 68°**

C-11 HD: HyperStar v4

Prospective Imaging Objects – January

M-95, M-96 (NGC-3351, 3368)

Config: |C11-HD|FR|ZWO6200MC|

Type: **Galaxy Pair**

Constellation: **Leo**
Coordinates:
10h 45’ 20”
11° 44’ 30”

Close Star: **SAO-98967** (Regulus)
Catalog Objects: M-95, M-96

Imaging Window: **12:36 – 06:04**
Transit: **03:25 | 68°**

C-11 HD: Focal Reducer

Leo Trio 2 (NGC-3379, 3384, 3389)

Config: |C11HD|ZWO6200MC|

Type: **Trio of Galaxies**

Constellation: **Leo**
Coordinates:
10h 48’ 07.227”
12° 33’ 52.943”

Close Star: **SAO-98967** (Regulus)
Catalog Objects: M-105/NGC3379, NGC-3384, NGC-3389

Imaging Window: **12:37 – 06:04**
Transit: **03:29 | 69°**

C-11 HD: Primary Focus

Ambartsumian’s Knot et el. (NGC-3561, 3558, 3553, 3550, etc.)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy Cluster**

Constellation: **Ursa Major**
Coordinates:
11h 10’ 43”
28° 41’ 41”

Close Star: **SAO-81727** (Zosma)
Catalog Objects: NGC-3561

Imaging Window: **12:25 – 06:04**
Transit: **03:52 | 85°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

M-108 & M-97

Config: |C11HD|ZWO6200MC|

Type: **Irregular Galaxy & Planetary Nebula**

Constellation: **Ursa Major**
Coordinates:
11h 12’ 49”
55° 20’ 57”

Close Star: **SAO-27876** (Merak)
Catalog Objects: M-108/NGC-3555

Imaging Window: **12:07 – 06:04**
Transit: **03:52 | 68°**

C-11 HD: HyperStar v4

M-108 (NGC-3556)

Config: |C11HD|ZWO6200MC|

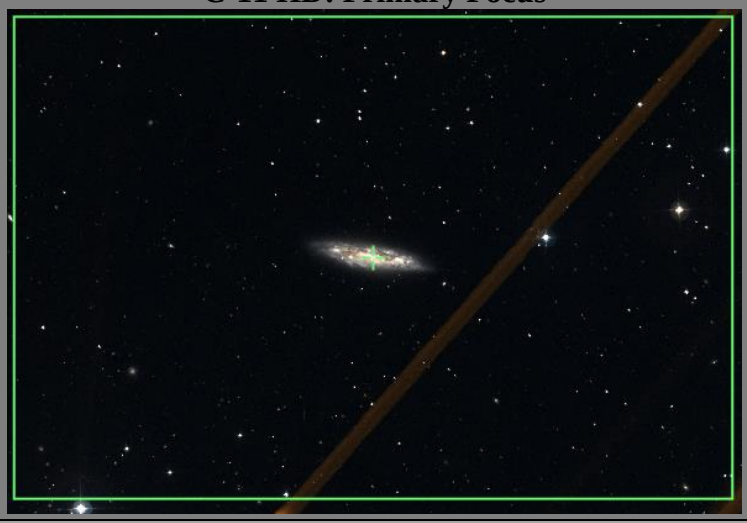
Type: **Irregular Galaxy**

Constellation: **Ursa Major**
Coordinates:
11h 11’ 29”
55° 40’ 22”

Close Star: **SAO-27876** (Merak)
Catalog Objects: M-108/NGC-3555

Imaging Window: **12:07 – 06:04**
Transit: **03:52 | 68°**

C-11 HD: Primary Focus



Owl Nebula (NGC-3587)

Config: |C11HD|ZWO6200MC|
Type: **Planetary Nebula**

Constellation: **Ursa Major**
Coordinates:
11h 14’ 48”
55° 01’ 10”

Close Star: **SAO-27876**
Catalog Objects: M-97/NGC-3587

Imaging Window: **12:10 – 06:04**
Transit: **03:56 | 68°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Owl Nebula (NGC-3587)
Config: |C11HD|Barlow x2|ZWO6200MC|

Type: **Planetary Nebula**
Constellation: **Ursa Major**
Coordinates:
11h 14’ 48”
55° 01’ 10”

Close Star: **SAO-27876**
Catalog Objects: M-97/NGC-3587

Imaging Window: **12:10 – 06:04**
Transit: **03:56 | 68°**

C-11 HD: Primary Focus *x2

Lio Trio of Galaxies
Config: |C11HD|ZWO6200MC|
Type: **Spiral Galaxy**

Constellation: **Leo**
Coordinates:
See Targets Below

NOTE: M-65/ M-66 & NGC-3628 combined to create mosaic

Close Star: **SAO-98967** (Regulus)
Catalog Objects: NGC-3628, M-65

Imaging Window: **01:07 – 06:04**
Transit: **04:01 | 70°**

C-11 HD: Primary Focus Mosaic

Lio Trio of Galaxies
Config: **C11-HD | HS | ZWO6200MC**

Type: **Galaxies**
Constellation: **Leo**
Coordinates:
Frame 01
RA: **11hr 19’ 57”**DEC: **13° 32’ 15”**
Frame 02
RA: **11hr 19’ 57”**DEC: **13° 04’ 57”**

Close Star: **SAO-15384**
Catalog Objects: NGC-3628, 3623, M-65

Imaging Window: **01:07 – 06:04**
Transit: **04:01 | 70°**

C-11 HD: Focal Reducer
Composite!

Prospective Imaging Objects – January

NGC-3628

Config: |C11HD|ZWO6200MC|
Type: **Spiral Galaxy**

Constellation: **Leo**
Coordinates:
11h 19’ 44”
13° 28’ 28”

NOTE: M-65/ M-66 & NGC-3628 can be combined to create mosaic

Close Star: **SAO-98967** (Regulus)
Catalog Objects: NGC-3628,
Imaging Window: **01:07 – 06:04**
Transit: **04:01 | 70°**

C-11 HD: Primary Focus

M-65, M-66

Config: |C11HD|ZWO6200MC|
Type: **Spiral Galaxy**

Constellation: **Leo**
Coordinates:
11h 19’ 44”
13° 04’ 06”
NOTE: M-65/ M-66 & NGC-3628 can be combined to create mosaic

Close Star: **SAO-98967** (Regulus)
Catalog Objects: M-65/NGC-3623, M-66/NGC-3627

Imaging Window: **11:54 – 06:04**
Transit: **04:00 | 70°**

C-11 HD: Primary Focus

Arp-214 (NGC-3718, NGC-3729)

Config: |C11HD|ZWO6200MC|
Type: **Galaxy Pair**

Constellation: **Ursa Major**
Coordinates:
11h 33’ 09”
53° 05’ 02”

Close Star: **SAO-28179** (Phecda)
Catalog Objects: NGC-3718

Imaging Window: **10:46 – 06:04**
Transit: **04:14 | 70°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Copeland's Septet (NGC-3746, 3748, 3750, 3751, 3753, 3754)
Config: |C11HD|ZWO6200MC|
Type: **Galaxy Cluster**

Constellation: **Leo**
Coordinates:
11h 33' 09"
53° 05' 02"
Close Star: **SAO-99809** (Denebola)
Catalog Objects: NGC-3746, 3748, 3750, 3751, 3753, 3754/HCG-57

Imaging Window: **11:53 – 06:04**
Transit: **04:19 | 79°**

C-11 HD: Primary Focus

Abell 1367(NGC-3861, et el.)
Config: |C11HD|ZWO6200MC|

Type: **Galaxy Cluster**

Constellation: **Leo**
Coordinates:
11h 44' 40"
19° 56' 32"

Close Star: **SAO-99809** (Denebola)
Catalog Objects: NGC-3861, 3842, dozens of others.

Imaging Window: **12:04 – 06:04**
Transit: **04:26 | 77°**

C-11 HD: Primary Focus

Wild's Triplet(Arp-248)
Config: |C11HD|ZWO6200MC|

Type: **Galaxy**

Constellation: **Ursa Major**
Coordinates:
11h 46' 41"
-03° 51' 46"

Close Star: **SAO-28179** (Phecda)
Catalog Objects: Arp-248, PGC-36742, 36733, 36723

Imaging Window: **01:13 – 06:04**
Transit: **04:28 | 53°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

M-109 (NGC-3992)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy**

Constellation: **Ursa Major**
Coordinates:
11h 57’ 34”
53° 20’ 59”

Close Star: **SAO-28179** (Phecda)
Catalog Objects: NGC-3992

Imaging Window: **11:10 – 06:04**
Transit: **04:39 | 70°**

C-11 HD: Primary Focus

NGC-4027 (PGC-37773)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy**

Constellation: **Corvus**
Coordinates:
11h 59’ 31”
-19° 15’ 57”

Close Star: **SAO-157923** (Spica)
Catalog Objects: NGC-4027

Imaging Window: ***02:45 – 06:04**
Transit: **04:40 | 37°**

C-11 HD: Primary Focus

Antennae Galaxies (Arp-244)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy Pair**

Constellation: **Corvus**
Coordinates:
12h 01’ 54”
-18° 53’ 08”

Close Star: **SAO-157923** (Spica)
Catalog Objects: Arp-244/
NGC-4038, NGC-4039

Imaging Window: ***02:39 – 06:04**
Transit: **04:43 | 38°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

M-98 (NGC-4192)

Config: |C11HD|ZWO6200MC|

Type: **Barred Spiral Galaxy**

Constellation: **Coma Berenices**
Coordinates:
12h 13’ 48”
14° 53’ 58”

Close Star: **SAO-99809** (Denebola)
Catalog Objects: M-98/NGC-4192

Imaging Window: **01:57 – 06:04**
Transit: **04:55 | 72°**

C-11 HD: Primary Focus

NGC-4236 (UGC 7306)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy**

Constellation: **Draco**
Coordinates:
12h 16’ 42”
69° 28’ 00”

Close Star: **SAO-28553** (Alioth)
Catalog Objects: NGC-4236/UGC-7306

Imaging Window: **01:46 – 06:04**
Transit: **04:57 | 54°**

C-11 HD: Primary Focus

Silver Needle (NGC-4244)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy**

Constellation: **Canes Venatici**
Coordinates:
12h 17’ 30”
37° 48’ 28”

Close Star: **SAO-99809** (Denebola)
Catalog Objects: NGC-4244/UGC-7322
Imaging Window: **01:19 – 06:04**
Transit: **04:58 | 86°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

St. Katherines Wheel
(M99/NGC4254)
Config: |C11HD|ZWO6200MC|

Type: **Spiral Galaxy**

Constellation: **Coma Berenices**
Coordinates:
12h 18’ 49”
14° 25’ 03”

Close Star: **SAO-99809** (Denebola)
Catalog Objects: M-99/NGC-4254
Imaging Window: **02:03 – 06:04**
Transit: **05:00 | 71°**

C-11 HD: Primary Focus

Galaxy Group 106
Config: **C11-HD | HS | ZWO6200MC**

Type: **Galaxy Group**

Constellation: **Canes Venatici**
Coordinates:
12h 17’ 12”
47° 13’ 33”

Close Star: **SAO-28179** (Phecda)
Catalog Objects: M-106, NGC 4248, 4217, 4232, 4331
Imaging Window: **01:14 – 06:04**
Transit: **05:00 | 76°**

C-11 HD: HyperStar v4

M-106(NGC-4258)
Config: |C11-HD|FR|ZWO6200MC|

Type: **Galaxy Group**

Constellation: **Canes Venatici**
Coordinates:
12h 17’ 12”
47° 13’ 33”

Close Star: **SAO-28179** (Phecda)
Catalog Objects: M-106, NGC 4248, 4217, 4232, 4331
Imaging Window: **01:14 – 06:04**
Transit: **05:00 | 76°**

C-11 HD: Focal Reducer

Prospective Imaging Objects – January

M-61 (NGC4303)

Config: |C11HD|ZWO6200MC|

Type: **Face-On Spiral Galaxy**

Constellation: **Virgo**
Coordinates:
12h 21’ 55”
04° 31’ 28”

Close Star: **SAO-100944** (Arcturus)
Catalog Objects: M-61/NGC-4303, NGC-4292, NGC-4301
Imaging Window: **02:39 – 06:04**
Transit: **05:03 | 61°**

C-11 HD: Primary Focus

Winnecke 4(M-40)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy Cluster**

Constellation: **Ursa Major**
Coordinates:
12h 21’ 22”
58° 03’ 05”

Close Star: **SAO-28179** (Phecda)
Catalog Objects: M-40, NGC-4290, NGC-4284
Imaging Window: **01:20 – 06:04**
Transit: **05:03 | 65°**

C-11 HD: Primary Focus

M-100(NGC-4303)

Config: |C11HD|ZWO6200MC|

Type: **Face-On Spiral Galaxy**

Constellation: **Coma Berenices**
Coordinates:
12h 22’ 28”
15° 42’ 40”

Close Star: **SAO-100944** (Arcturus)
Catalog Objects: M-100/NGC-4321, NGC-4312, 4328, 4322, UGC-7425, IC-783A,
Imaging Window: **02:04 – 06:04**
Transit: **05:04 | 72°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Lawn Sprinkler Nebula (NGC-4361)
Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**

Constellation: **Corvus**
Coordinates:
12h 24’ 31”
-18° 47’ 03”

Close Star: **SAO-157176** (Gienah Corvi)
Catalog Objects: NGC-4361
Imaging Window: ***03:04 – 06:04**
Transit: **05:05 | 38°**

C-11 HD: Primary Focus

Markarian Chain(M-84 Et. El.)
Config: **C11-HD | HS | ZWO6200MC**

Type: **Galaxy cluster**

Constellation: **Virgo**
Coordinates:
12h 26’ 29”
12° 52’ 22”

Close Star: **SAO-100944** (Arcturus)
Catalog Objects: M-84/NGC-4374, NGC-4388, 4425, 4402, M-86/NGC4406, 4438, 4435, and more
Imaging Window: **02:14 – 06:04**
Transit: **05:06 | 69°**

C-11 HD: HyperStar v4

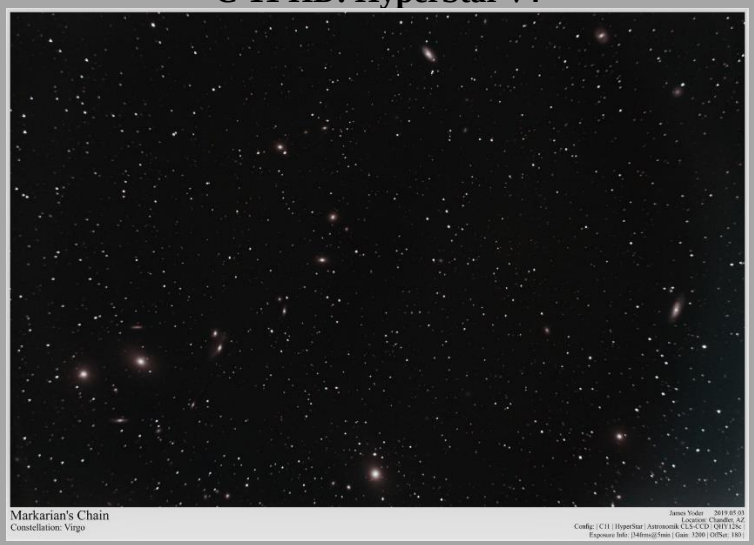
Markarian Chain 2
Config: **C11-HD | HS | ZWO6200MC**

Type: **Galaxy cluster**

Constellation: **Virgo**
Coordinates:
12h 35’ 40”
12° 33’ 22”

Close Star: **SAO-100944** (Arcturus)
Catalog Objects: M-84/NGC-4374, NGC-4388, 4425, 4402, M-86/NGC4406, 4438, 4435, and more
Imaging Window: **02:14 – 06:04**
Transit: **05:06 | 69°**

C-11 HD: HyperStar v4



Prospective Imaging Objects – January

Markarian's Chain (M-84)

Config: |C11-HD|FR|ZWO6200MC|

Type: **Galaxy cluster**

Constellation: **Virgo**
Coordinates:
12h 26' 29"
12° 52' 22"

Close Star: **SAO-100944** (Arcturus)
Catalog Objects: M-84/NGC-4374, NGC-4388, 4425, 4402, M-86/NGC4406, 4438, 4435, and more
Imaging Window: **02:14 – 06:04**
Transit: **05:06 | 69°**

C-11 HD: Focal Reducer

Emission Line Galaxy (NGC-4449/UGC-7592)

Config: |C11HD|ZWO6200MC|

Type: **Irregular Galaxy**

Constellation: **Canes Venatici**
Coordinates:
12h 28' 11"
44° 05' 42"

Close Star: **SAO-28553** (Alioth)
Catalog Objects: NGC-4449/UGC-7592
Imaging Window: **01:25 – 06:04**
Transit: **05:09 | 79°**

C-11 HD: Primary Focus

M-49(NGC-4472)

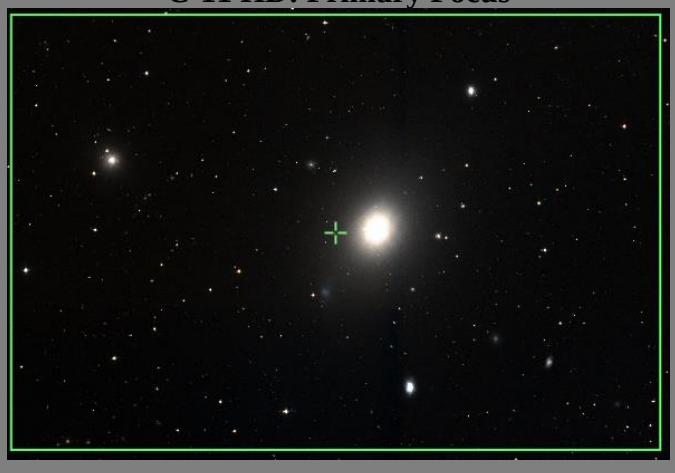
Config: |C11HD|ZWO6200MC|

Type: **Elliptical Galaxy**

Constellation: **Virgo**
Coordinates:
12h 29' 58"
07° 59' 51"

Close Star: **SAO-100944** (Arcturus)
Catalog Objects: M-49/NGC-4472
Imaging Window: **02:34 – 06:04**
Transit: **05:11 | 65°**

C-11 HD: Primary Focus



Prospective Imaging Objects – January

Virgo A(M-87)

Config: |C11HD|ZWO6200MC|

Type: **Elliptical Galaxy**

Constellation: **Virgo**
Coordinates:
12h 30’ 49”
12° 23’ 26”

Close Star: **SAO-100944** (Arcturus)
Catalog Objects: M-87/NGC-4486
Imaging Window: **02:21 – 06:04**
Transit: **05:12 | 69°**

C-11 HD: Primary Focus

Cocoon Galaxy(NGC-4490)

Config: |C11HD|ZWO6200MC|

Type: **Interacting Galaxy Pair**

Constellation: **Canes Venatici**
Coordinates:
12h 30’ 36”
41° 38’ 34”

Close Star: **SAO-28179** (Phecda)
Catalog Objects: NGC-4490, NGC-4485
Imaging Window: **01:29 – 06:04**
Transit: **05:11 | 82°**

C-11 HD: Primary Focus

Lemon Slice Nebula (IC-3568)

Config: |C11HD|ZWO6200MC|

Type: **Planetary Nebula**
Constellation: **Camelopardalis**
Coordinates:
12h 33’ 14”
82° 33’ 22”

Close Star: **SAO-8102** (Kochab)
Catalog Objects: IC-3568/UGC-7731

Imaging Window: ***12:12 – 06:04**
Transit: **05:14 | 41°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

M-91(NGC-4548) Config: |C11HD|ZWO6200MC| Type: **Barred Spiral Galaxy** Constellation: **Coma Berenices** Coordinates: **12h 36’ 04”** **14° 23’ 37”** Close Star: **SAO-100944** (Arcturus) Catalog Objects: M-91/NGC4548, NGC-4571 Imaging Window: **02:20 – 06:04** Transit: **05:16 | 71°**	**C-11 HD: Primary Focus** 
M-89(NGC-4552) Config: |C11HD|ZWO6200MC| Type: **Elliptical Galaxy** Constellation: **Virgo** Coordinates: **12h 35’ 43”** **12° 24’ 24”** Close Star: **SAO-100944** (Arcturus) Catalog Objects: M-89/NGC4552, NGC-4551, NGC-4550, IC-3574, IC-3586 Imaging Window: **02:25 – 06:04** Transit: **05:16 | 69°**	**C-11 HD: Primary Focus** 
NGC-4559 (UGC-7766) Config: |C11HD|ZWO6200MC| Type: **Barred Spiral Galaxy** Constellation: **Coma Berenices** Coordinates: **12h 35’ 58”** **27° 57’ 35”** Close Star: **SAO-44752** (Alkaid) Catalog Objects: NGC-4559/UGC-7766 Imaging Window: **01:51 – 06:04** Transit: **05:17 | 85°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

Siamese Twins (NGC-4567)

Config: |C11HD|ZWO6200MC|

Type: **Elliptical Galaxy**

Constellation: **Virgo**
Coordinates:
12h 36’ 26”
11° 19’ 59”

Close Star: **SAO-100944** (Arcturus)
Catalog Objects: NGC-4567, NGC-4568, NGC-4564
Imaging Window: **02:30 – 06:04**
Transit: **05:17 | 68°**

C-11 HD: Primary Focus

Needle Galaxy (NGC-4565)

Config: |C11HD|ZWO6200MC|

Type: **Edge-on Galaxy**

Constellation: **Coma Berenices**
Coordinates:
12h 36’ 02”
25° 56’ 51”

Close Star: **SAO-44752** (Alkaid)
Catalog Objects: NGC-4565, NGC-4562
Imaging Window: **01:55 – 06:04**
Transit: **05:17 | 83°**

C-11 HD: Primary Focus

M-90 (NGC-4569)

Config: |C11HD|ZWO6200MC|

Type: **Spiral Galaxy**

Constellation: **Virgo**
Coordinates:
12h 37’ 11”
13° 09’ 19”

Close Star: **SAO-100944** (Arcturus)
Catalog Objects: M-90/NGC-4569 IC-3583, NGC-4584
Imaging Window: **02:25 – 06:04**
Transit: **05:18 | 70°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Galaxy Group 58

Config: | C-11HD | HyperStar |

Type: **Galaxy Group**

Constellation: **Virgo**
Coordinates:
12h 37’ 35”
12° 18’ 56”

Close Star: **SAO-100944** (Arcturus)
Catalog Objects: M-58/NGC-4579
Imaging Window: **02:29 – 06:04**
Transit: **05:18 | 68°**

C-11 HD: HyperStar v4

M-58 (NGC-4579)

Config: |C11HD|ZWO6200MC|

Type: **Barred Spiral Galaxy**

Constellation: **Virgo**
Coordinates:
12h 37’ 44”
11° 49’ 06”

close Star: **SAO-100944** (Arcturus)
Catalog Objects: M-58/NGC-4579
Imaging Window: **02:29 – 06:04**
Transit: **05:18 | 68°**

C-11 HD: Primary Focus

M-68 (NGC-4590)

Config: |C11HD||ZWO6200MC|

Type: **Globular Cluster**
Constellation: **Hydra**
Coordinates:
12h 39’ 28”
-26° 44’ 32”

Close Star: **SAO-180915** (Kraz)
Catalog Objects: M-68/NGC-4590

Imaging Window: ***03:36 – 06:04**
Transit: **05:20 | 30°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

Sombrero Galaxy (M-104)

Config: |C11HD|ZWO6200MC|

Type: **Edge-on Spiral Galaxy**

Constellation: **Virgo**
Coordinates:
12h 39’ 44”
-11° 37’ 52”

Close Star: **SAO-100944** (Arcturus)
Catalog Objects: M-104/NGC-4594
Imaging Window: ***02:39 – 06:04**
Transit: **05:34 | 45°**

C-11 HD: Primary Focus

Whale and Hockey Stick (NGC-4631, NGC-4656)

Config: |C11-HD|FR|ZWO6200MC|

Type: **Galaxies**

Constellation: **Canes Venatici**
Coordinates:
12h 42’ 50”
32° 20’ 54”

Close Star: **SAO-99809** (Denebola)
Catalog Objects: NGC-4631, NGC-4656
Imaging Window: **01:51 – 06:04**
Transit: **05:23 | 89°**

C-11 HD: Focal Reducer

M-59, M-60 group

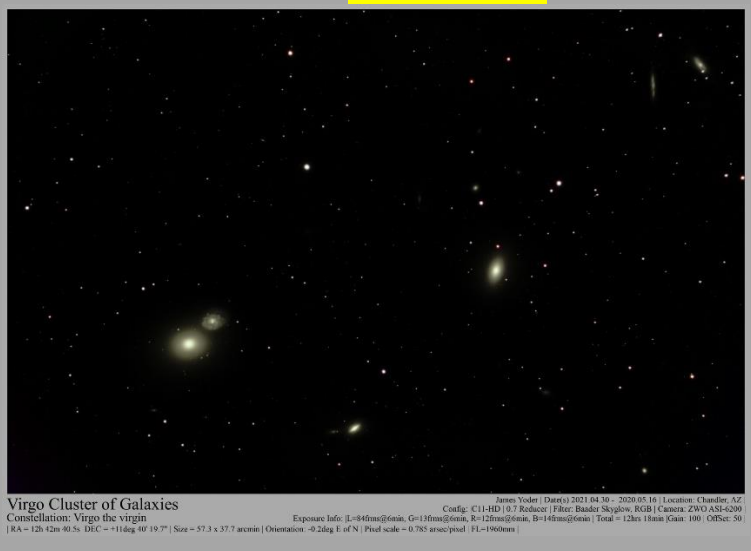
Config: |C11-HD|FR|ZWO6200MC|

Type: **Galaxy Group**

Constellation: **Virgo**
Coordinates:
12h 42’ 42”
11° 40’ 33”

Close Star: **SAO-99809** (Denebola)
Catalog Objects: M-59/NGC-4621, M-60/NGC-4649, NGC-4656, 4647, 4638, 4607, 4606
Imaging Window: **02:34 – 06:04**
Transit: **05:23 | 68°**

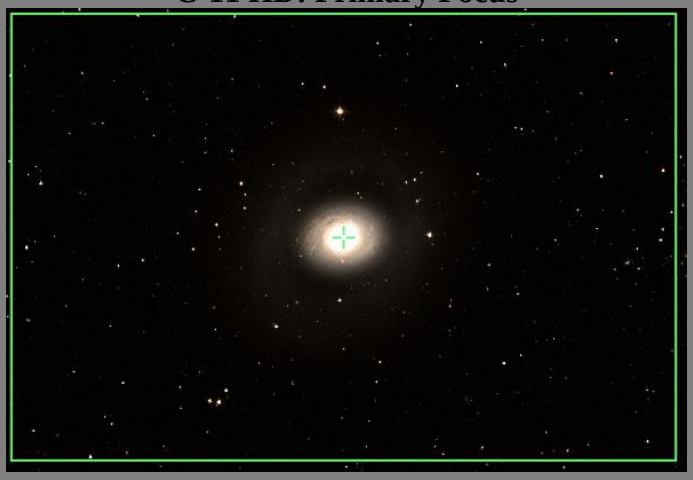
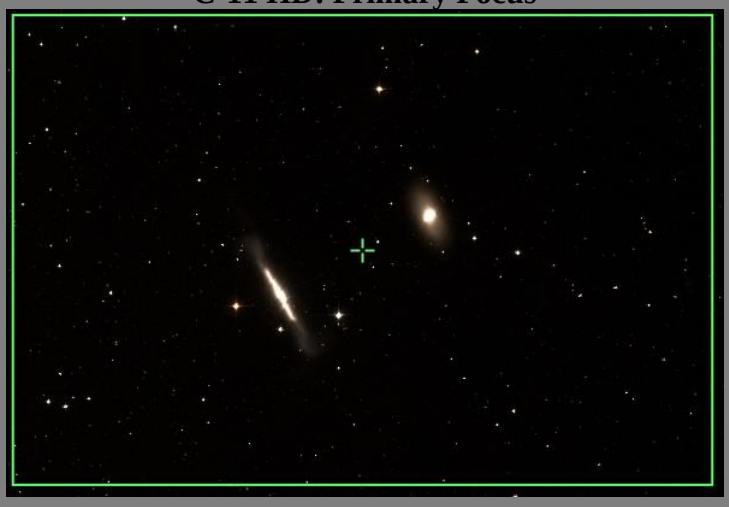
C-11 HD: Focal Reducer



Prospective Imaging Objects – January

TheMice (NGC-4676 A &B) Config: |C11HD|ZWO6200MC| Type: **Interacting Galaxies** Constellation: **Coma Berenices** Coordinates: **12h 46' 07"** **30° 43' 43"** Close Star: **SAO-99809** (Denebola) Catalog Objects: NGC-4676A & B Imaging Window: **01:57 – 06:04** Transit: **05:27 | 87°**	**C-11 HD: Primary Focus** 
NGC-4725 (PGC-43451) Config: |C11-HD|FR|ZWO6200MC| Type: **Galaxy group** Constellation: **Coma Berenices** Coordinates: **12h 50' 55"** **25° 35' 59"** Close Star: **SAO-99809** (Denebola) Catalog Objects: NGC-4725, NGC-4712, NGC-4747 Imaging Window: **02:10 – 06:04** Transit: **05:31 | 82°**	**C-11 HD: Focal Reducer**  Galaxy Cluster NGC-4747, NGC-4725, NGC4712 Constellation: Coma Berenices
NGC-4725 (PGC-43451) Config: |C11HD|ZWO6200MC| Type: **Galaxy group** Constellation: **Coma Berenices** Coordinates: **12h 50' 50"** **25° 35' 23"** Close Star: **SAO-99809** (Denebola) Catalog Objects: NGC-4725, NGC-4712, NGC-4747 Imaging Window: **02:10 – 06:04** Transit: **05:31 | 82°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

M-94 (NGC-4736) Config: |C11HD|ZWO6200MC| Type: **Galaxy** Constellation: **Canes Venatici** Coordinates: **12h 50’ 53”** **41° 07’ 17”** Close Star: **SAO-28553** (Alioth) Catalog Objects: M-94/NGC-4736 Imaging Window: **01:50 – 06:04** Transit: **05:32 | 82°**	**C-11 HD: Primary Focus** 
NGC-4731 (PGC-43507) Config: |C11HD|ZWO6200MC| Type: **Barred Spiral Galaxy** Constellation: **Virgo** Coordinates: **12h 51’ 01”** **-06° 21’ 49”** Close Star: **SAO-157923** (Spica) Catalog Objects: NGC-4731 Imaging Window: ***02:54 – 06:04** Transit: **05:32 | 50°**	**C-11 HD: Primary Focus** 
NGC-4762. 4754 (PGC-43733) Config: |C11HD|ZWO6200MC| Type: **Edge on Galaxy** Constellation: **Virgo** Coordinates: **12h 52’ 35”** **11° 16’ 42”** Close Star: **SAO-99809** (Denebola) Catalog Objects: NGC-4762, NGC-4754 Imaging Window: **02:46 – 06:04** Transit: **05:34 | 68°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

Black Eye Galaxy (M-64)

Config: |C11HD|ZWO6200MC|

Type: **Galaxy**

Constellation: **Coma Berenices**
Coordinates:
12h 56’ 44”
21° 40’ 59”

Close Star: **SAO-99809** (Denebola)
Catalog Objects: M-64/NGC-4826
Imaging Window: **02:24 – 06:04**
Transit: **05:37 | 78°**

C-11 HD: Primary Focus

Coma Galaxy Cluster

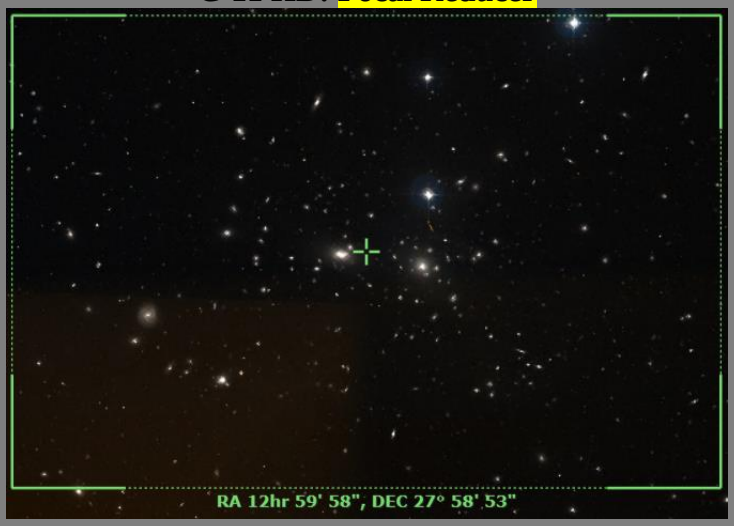
(Abell-1656)
Config: |C11-HD|FR|ZWO6200MC|

Type: **Galaxy Cluster**

Constellation: **Coma Berenices**
Coordinates:
12h 59’ 58”
27° 58’ 53”

Close Star: **SAO-99809** (Denebola)
Catalog Objects: Abell-1656
Imaging Window: **02:15 – 06:04**
Transit: **05:40 | 84°**

C-11 HD: Focal Reducer



Coma Galaxy Cluster

(Abell-1656)
Config: |C11HD|ZWO6200MC|

Type: **Galaxy Cluster**

Constellation: **Coma Berenices**
Coordinates:
13h 00’ 06”
28° 00’ 31”

Close Star: **SAO-99809** (Denebola)
Catalog Objects: Abell-1656
Imaging Window: **02:15 – 06:04**
Transit: **05:40 | 84°**

C-11 HD: Primary Focus

Prospective Imaging Objects – January

M-53 (NGC-5024) Config: |C11HD | ZWO6200MC| Type: **Globular Cluster** Constellation: **Coma Berenices** Coordinates: **13h 12’ 55”** **18° 10’ 11”** Close Star: **SAO-99809** (Denebola) Catalog Objects: M-53/NGC-5024 Imaging Window: **02:48 – 06:04** Transit: **05:54 | 75°**	**C-11 HD: Primary Focus** 
NGC-5033 (PGC-45948) Config: |C11HD|ZWO6200MC| Type: **Spiral Galaxy** Constellation: **Canes Venatici** Coordinates: **13h 13’ 28”** **36° 35’ 36”** Close Star: **SAO-28553** (Alioth) Catalog Objects: NGC-5033/PGC-45948 Imaging Window: **02:17 – 06:04** Transit: **05:54 | 87°**	**C-11 HD: Primary Focus** 
Sunflower Galaxy (M-63) Config: |C11HD|ZWO6200MC| Type: **Spiral Galaxy** Constellation: **Canes Venatici** Coordinates: **13h 15’ 15”** **42° 04’ 41”** Close Star: **SAO-28553** (Alioth) Catalog Objects: M-63/NGC-5055, UGC-8313 Imaging Window: **02:14 – 06:04** Transit: **05:56 | 81°**	**C-11 HD: Primary Focus** 

Prospective Imaging Objects – January

NGC-5053 Config: |C11HD|ZWO6200MC| Type: **Globular Cluster** Constellation: **Coma Berenices** Coordinates: **13h 16’ 27”** **17° 41’ 55”** Close Star: **SAO-99809** (Denebola) Catalog Objects: NGC-5053 Imaging Window: **02:53 – 06:04** Transit: **05:57 | 74°**	**C-11 HD: Primary Focus** 
Whirlpool Galaxy (M-51) Config: |C11HD|ZWO6200MC| Type: **Interacting Galaxies** Constellation: **Canes Venatici** Coordinates: **13h 29’ 53”** **47° 11’ 44”** Close Star: **SAO-28553** (Alioth) Catalog Objects: M-51/NGC-5194, NGC-5195 Imaging Window: **02:25 – 06:04** Transit: **06:10 | 76°**	**C-11 HD: Primary Focus** 

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Prospective Imaging Objects – January

Imaging Summary January 15, 2025

Astronomical Dusk = 07:10 Astronomical Dawn = 06:04

HyperStar: Nebula

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
HyperStar	Nebula	Nebula	IC-1848	07:10 – 11:20	07:34	02	Comp4! Cassiopeia: Heart & Soul Nebula
HyperStar	Nebula	Nebula	IC-1805	07:10 – 11:00	07:15	03	Cassiopeia: Heart Nebula
HyperStar	Nebula	Nebula	IC-1848	07:10 – 11:20	07:34	05	Cassiopeia: Soul Nebula
HyperStar	Nebula	Nebula	NGC-1499	07:10 – 12:29	08:45	08	Perseus: California Nebula
HyperStar	Nebula	Nebula	IC-405	07:10 – 01:41	09:59	12	Auriga: Flaming Star Nebula
HyperStar	Nebula	Nebula	Orion Cmpx	08:43 – 11:57	10:17	16	Comp6! Orion: Orion Complex of objects
HyperStar	Nebula	Nebula	M-42	08:43 – 11:57	10:17	17	Orion: Orion and Running Man Nebula
HyperStar	Nebula	Nebula	M-42	08:43 – 11:57	10:17	17	Orion: Orion and Running Man Nebula
HyperStar	Nebula	Nebula	SH 2-240	07:10 – 01:55	10:23	19	Rot90°, Comp2! Taurus: Simeis 147
HyperStar	Nebula	Nebula	SH 2-240	07:10 – 01:55	10:23	19	Taurus: Simeis 147
HyperStar	Nebula	Nebula	NGC-2024, B-33	08:28 – 12:25	10:24	20	Orion: Horsehead and Flame Nebula
HyperStar	Nebula	Nebula	IC-2162, SH2-261	07:50 – 01:57	10:51	26	Rot90° Orion: Two Nebulas
HyperStar	Nebula	Nebula	IC-443	07:43 – 02:21	10:59	29	Gemini: Jellyfish Nebula
HyperStar	Nebula	Nebula	NGC-2237	08:45 – 01:45	11:12	30	Monoceros: Rosett Nebula
HyperStar	Nebula	Nebula	IC-2169	08:28 – 02:04	11:13	31	Monoceros: DN & Nebulas
HyperStar	Nebula	Nebula	IC-2177	*09:26-02:10	11:46	35	Rot90°Monoceros: Seagull Nebula

Prospective Imaging Objects – January

Imaging Summary January 15, 2025

Astronomical Dusk = 07:10 Astronomical Dawn = 06:04

HyperStar: Broad Spectrum

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
HyperStar	Broad Spectrum	OC, BN	M-45	07:10 – 11:54	08:29	07	Taurus: Pleiades
HyperStar	Broad Spectrum	OC	Mel-25	07:10 – 12:21	09:12	10	Taurus: Hyades
HyperStar	Broad Spectrum	DN	IC-2118	*07:10-12:19	09:44	10	Eridanus: Witch Head Nebula
HyperStar	Broad Spectrum	DN	NGC-1788	08:01 – 11:42	09:49	11	Orion: Foxface Nebula
HyperStar	Broad Spectrum	DN, N	LDN-1622 R1	08:22 – 12:56	10:36	23	Comp2! Orion: DN Band
HyperStar	Broad Spectrum	DN, N	LDN-1622 R2	08:22 – 12:56	10:36	24	Orion: DN Band
HyperStar	Broad Spectrum	DN, N	LDN-1622 R3	08:22 – 12:56	10:36	24	Orion: DN Band
HyperStar	Broad Spectrum	OC	NGC-2632	10:12 – 04:38	01:22	41	Cancer: Beehive Cluster
HyperStar	Broad Spectrum	Galaxies	M-81 & M-82	11:27 – 05:54	02:37	42	Ursa Major: Bode's Cigar
HyperStar	Broad Spectrum	Galaxies	2574 Group	11:52 – 06:04	03:09	46	Leo: Galaxy Group 2574
HyperStar	Broad Spectrum	Galaxies	Leo Group	12:39 – 06:04	03:28	46	Leo: Leo Galaxy Group
HyperStar	Broad Spectrum	G, PN	M-108 & M-97	12:07 – 06:04	03:52	48	Ursa Major: Galaxy & Planetary Nebula
HyperStar	Broad Spectrum	Galaxies	Group 106	01:14 – 06:04	05:00	54	Canes Venatici: Galaxy Group with M-106
HyperStar	Broad Spectrum	Galaxies	Group 84	02:14 – 06:04	05:06	56	Virgo: Markarian Chain
HyperStar	Broad Spectrum	Galaxies	Group 84-2	02:14 – 06:04	05:06	56	Virgo: Markarian Chain
HyperStar	Broad Spectrum	Galaxies	Group 58	02:29 – 06:04	05:18	61	Virgo: Galaxy Group associated with M-58

Prospective Imaging Objects – January

Imaging Summary January 15, 2025

Astronomical Dusk = 07:10 Astronomical Dawn = 06:04

Focal Reducer: Nebula

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Focal Reducer	Nebula	Nebula	IC-1795	07:10 – 10:52	07:08	02	Cassiopeia: Fish Head Nebula
Focal Reducer	Nebula	Nebula	IC-1805	07:10 – 11:00	07:15	03	Cassiopeia: Heart Nebula
Focal Reducer	Nebula	Nebula	IC-405	07:10 – 01:41	09:59	12	Auriga: Flaming Star Nebula
Focal Reducer	Nebula	Nebula	IC-410	07:10 – 01:44	10:04	13	Auriga: Tadpoles
Focal Reducer	Nebula	Nebula	M-77, NGC1055	07:10 – 01:52	10:10	14	Comp2! Auriga: The Spider and the Fly
Focal Reducer	Nebula	Nebula	NGC-2024	08:28 – 12:25	10:24	20	Orion: Flame Nebula
Focal Reducer	Nebula	Nebula	NGC-2170	09:24 – 12:22	10:50	26	Monoceros: Angel Nebula
Focal Reducer	Nebula	Nebula	SH 2-261	07:50 – 01:57	10:51	27	Orion: Lower's Nebula
Focal Reducer	Nebula	Nebula	NGC-2174	07:39 – 02:09	10:51	28	Orion: Monkey Head Nebula
Focal Reducer	Nebula	Nebula	IC-443	07:43 – 02:21	10:59	29	Gemini: Jellyfish Nebula
Focal Reducer	Nebula	Nebula	NGC-2237	08:45 – 01:45	11:12	31	Monoceros: Rosett Nebula Core
Focal Reducer	Nebula	Nebula	NGC-2264	08:39 – 02:13	11:23	33	Comp2! Monoceros: Xmas Tree and Cone Nebula
Focal Reducer	Nebula	Nebula	NGC-2264	08:39 – 02:13	11:23	33	Rot! Monoceros: Xmas Tree and Cone Nebula
Focal Reducer	Nebula	Nebula	NGC-2264	08:39 – 02:13	11:23	34	Monoceros: Xmas Tree and Cone Nebula

Prospective Imaging Objects – January

Imaging Summary January 15, 2025

Astronomical Dusk = 07:10 Astronomical Dawn = 06:04

Focal Reducer: Broad Spectrum

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Focal Reducer	Broad Spectrum	Galaxies	M-77	07:10 – 09:36	07:25	04	Cetus: Galaxies M-77 & NGC-1055
Focal Reducer	Broad Spectrum	DN, BN	NGC-1788	08:01 – 11:42	09:49	11	Orion: Foxface Nebula
Focal Reducer	Broad Spectrum	DN, BN	M-78	08:23 – 12:40	10:29	22	Comp2! Orion: Dark Nebula
Focal Reducer	Broad Spectrum	DN, BN	M-78	08:23 – 12:40	10:29	22	Orion: Dark Nebula
Focal Reducer	Broad Spectrum	DN	LDN-1622	08:22 – 12:56	10:36	25	Comp2! Rot90° Orion: Dark Nebula
Focal Reducer	Broad Spectrum	DN	LDN-1622	08:22 – 12:56	10:36	25	Orion: Dark Nebula
Focal Reducer	Broad Spectrum	OC	M-35, NGC-2158	07:31 – 02:17	10:51	27	Gemini: Open Cluster Pair
Focal Reducer	Borad Spectrum	BN	IC-2169	08:28 – 02:04	11:13	32	Monoceros: Reflection Nebula
Focal Reducer	Broad Spectrum	Galaxies	UGC-3697	08:58 – 02:54	11:53	36	Camelopardalis: Integral Sign Galaxy
Focal Reducer	Broad Spectrum	Galaxies	M-81 & M-82	11:27 – 05:54	02:37	42	Ursa Major: Bode's Cigar
Focal Reducer	Broad Spectrum	Galaxies	M-95 & M-96	12:36 – 06:04	03:25	47	Leo: Galaxy Pair M-95, M-96
Focal Reducer	Broad Spectrum	Galaxies	NGC-3628 et. El.	01:07 – 06:04	04:01	49	Comp2 Leo: Lio Trio of Galaxies
Focal Reducer	Broad Spectrum	Galaxies	M-106	01:14 – 06:04	05:00	54	Canes Venatici: Galaxy Pair
Focal Reducer	Broad Spectrum	Galaxies	M-84 et. El.	02:14 – 06:04	05:06	57	Virgo: Markarian's Chain
Focal Reducer	Broad Spectrum	Galaxies	M-104	*02:39-06:04	05:23	62	Canes Venatici: Whale and Hockey Stick
Focal Reducer	Broad Spectrum	Galaxies	M-59 Group	02:34 – 06:04	05:23	62	Virgo: Galaxy Group M-59 & M-60
Focal Reducer	Broad Spectrum	Galaxies	NGC-4725 et. El.	02:10 – 06:04	05:31	63	Coma Berenices: Galaxy Group NGC-4725
Focal Reducer	Broad Spectrum	Galaxies	Abell-1656	02:15 – 06:04	05:40	65	Coma Berenices: Coma Galaxy Cluster

Prospective Imaging Objects – January

Imaging Summary January 15, 2025

Astronomical Dusk = 07:10 Astronomical Dawn = 06:04

Primary Focus: Nebula

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Nebula	Nebula	IC-1805	07:10 – 11:00	07:15	03	Cassiopeia: Heart Nebula Core
Primary Focus	Nebula	Nebula	IC-1848	07:10 – 11:20	07:34	05	Cassiopeia: Soul Nebula Core
Primary Focus	Nebula	Nebula	NGC-1333	07:10 – 11:49	08:11	06	Perseus: Bright Nebula
Primary Focus	Nebula	Nebula	NGC-1360	*07:10-10:12	08:15	06	Fornax: Egg shaped Nebula
Primary Focus	Nebula	Nebula	IC-348	07:10 – 12:05	08:27	07	Perseus: Bright Nebula
Primary Focus	Nebula	Nebula	M-45	07:10 – 11:54	08:29	08	Taurus: Pleiades
Primary Focus	Nebula	Nebula	NGC-1501	07:10 – 12:35	08:49	08	Camelopardalis: Oyster Nebula
Primary Focus	Nebula	Nebula	NGC-1514	07:10 – 12:28	08:51	09	Taurus: Crystal Ball Nebula
Primary Focus	Nebula	Nebula	NGC-1535	*07:10-11:06	08:56	09	Eridanus: Cleopatra’s Eye
Primary Focus	Nebula	Nebula	NGC-1555	07:10 – 12:20	09:04	09	Taurus: Hind’s Variable Nebula
Primary Focus	Nebula	Nebula	NGC-1579	07:10 – 12:55	09:12	10	Perseus: Trifid of the North
Primary Focus	Nebula	Nebula	IC-2118	*07:10-12:19	09:44	11	Eridanus: Witch Head Nebula
Primary Focus	Nebula	Nebula	NGC-1788	08:01 – 11:42	09:49	12	Orion: Foxface Nebula
Primary Focus	Nebula	Nebula	IC-405	07:10 – 01:41	09:59	13	Auriga: Flaming Star Nebula
Primary Focus	Nebula	Nebula	IC-410	07:10 – 01:44	10:04	13	Auriga: Tadpoles
Primary Focus	Nebula	Nebula	IC-418	*08:05-12:19	10:09	14	Lepus: Spirograph Nebula
Primary Focus	Nebula	Nebula	IC-417	07:10 – 01:52	10:10	15	Auriga: The Spider
Primary Focus	Nebula	Nebula	NGC-1931	07:10 – 01:55	10:13	15	Auriga: The Fly
Primary Focus	Nebula	Nebula	M-1	07:10 – 01:37	10:16	16	Taurus: Crab Nebula
Primary Focus	Nebula	Nebula	M-42	08:43 – 11:57	10:17	17	Orion: The Orion Nebula
Primary Focus	Nebula	Nebula	NGC-1977	08:39 – 12:01	10:17	18	Orion: Running Man Nebula (C-6)
Primary Focus	Nebula	Nebula	NGC-1977	08:39 – 12:01	10:17	18	Orion: Running Man Nebula
Primary Focus	Nebula	Nebula	NGC-2024	08:28 – 12:25	10:24	20	Orion: Flame Nebula
Primary Focus	Nebula	Nebula	B-33	08:30 – 12:21	10:23	21	Orion: Horsehead Nebula

Prospective Imaging Objects – January

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Nebula	Nebula	NGC-2022	07:42 – 01:11	10:24	21	Orion: Planetary Nebula
Primary Focus	Nebula	Nebula	NGC-2170	09:24 – 12:22	10:50	26	Monoceros: Angle Nebula
Primary Focus	Nebula	Nebula	SH 2-261	07:50 – 01:57	10:51	27	Orion: Lower's Nebula
Primary Focus	Nebula	Nebula	NGC-2174	07:39 – 02:09	10:51	28	Orion: Monkey Head Nebula
Primary Focus	Nebula	Nebula	IC-2162	07:49 – 02:07	10:55	28	Orion: Nebula
Primary Focus	Nebula	Nebula	IC-443	07:43 – 02:21	10:59	29	Gemini: Jellyfish Nebula
Primary Focus	Nebula	Nebula	IC-2165	*08:29-01:09	11:03	30	Canis Major: Small Planetary Nebula
Primary Focus	Nebula	Nebula	SH 2-249	07:47 – 02:27	11:04	30	Gemini: Nebula
Primary Focus	Nebula	Nebula	NGC-2237	08:45 – 01:45	11:12	31	Monoceros: Rosette Nebula Core
Primary Focus	Nebula	Nebula	NGC-2261	08:41 – 02:07	11:21	32	Monoceros: Hubble's Variable Nebula
Primary Focus	Nebula	Nebula	NGC-2264	08:39 – 02:13	11:23	33	Monoceros: Xmas Tree Cluster
Primary Focus	Nebula	Nebula	NGC-2264	08:39 – 02:13	11:23	34	Monoceros: Cone Nebula
Primary Focus	Nebula	Nebula	IC-2177	*09:26-02:10	11:46	35	Monoceros: Seagull Nebula head
Primary Focus	Nebula	Nebula	NGC-2346	*09:18-02:29	11:51	36	Monoceros: Hourglass Nebula
Primary Focus	Nebula	Nebula	NGC-2359	*09:57-02:02	12:00	37	Canis Major: Thor's Helmet
Primary Focus	Nebula	Nebula	NGC-2371	08:39 – 03:42	12:07	37	Gemini: Candy Wrapper Nebula
Primary Focus	Nebula	Nebula	Abell-21	09:17 – 03:11	12:11	37	Gemini: Medusa Nebula
Primary Focus	Nebula	Nebula	NGC-2392	08:58 – 03:30	12:11	38	Gemini: Eskimo Nebula
Primary Focus	Nebula	Nebula	M-46	*10:35-02:18	12:23	39	Puppis: Open Cluster and Planetary
Primary Focus	Nebula	Nebula	NGC-2440	*10:20-02:33	12:23	39	Puppis: Bow-Tie Nebula
Primary Focus	Nebula	PN	NGC-2610	11:36 – 03:00	01:15	40	Hydra: NGC-2610 Small PN
Primary Focus	Nebula	PN	NGC-3242	*01:01-05:14	03:06	45	Hydra: Ghost of Jupiter
Primary Focus	Nebula	PN	M-97	12:10 – 06:04	03:56	48	Ursa Major: Owl Nebula
Primary Focus	Nebula	PN	NGC-4361	*03:04–06:04	05:05	56	Corvus: Lawn Sprinkler Nebula
Primary Focus	Nebula	PN	IC-3568	*12:12-06:04	05:14	58	Camelopardalis: Lemon Slice Nebula

Imaging Summary January 15, 2025

Astronomical Dusk = 07:10 Astronomical Dawn = 06:04

Prospective Imaging Objects – January

Primary Focus: Broad Spectrum

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Broad Spectrum	Galaxy	NGC-925	07:10 – 10:50	07:10	02	Triangulum: Face on Galaxy PGC-9332
Primary Focus	Broad Spectrum	Galaxy	NGC-1055	07:10 – 09:37	07:24	04	Cetus: Edge On galaxy
Primary Focus	Broad Spectrum	OC	M-34	07:10 – 11:14	07:24	04	Perseus: Open Cluster NGC-1039
Primary Focus	Broad Spectrum	Galaxy	M-77	07:10 – 09:36	07:25	05	Cetus: Galaxy NGC-1068
Primary Focus	Broad Spectrum	Galaxies	Abell-426	07:10 – 11:51	08:02	06	Perseus: Perseus Galaxy Cluster
Primary Focus	Broad Spectrum	Galaxy	IC-342	07:10 – 11:54	08:29	07	Camelopardalis: Large Face-On
Primary Focus	Broad Spectrum	Globular	M-79	*09:03-11:17	10:06	14	Lepus: Med Globular
Primary Focus	Broad Spectrum	OC	M-38	07:10 - 01:54	10:11	15	Auriga: Starfish Cluster
Primary Focus	Broad Spectrum	OC	M-36	07:10 – 02:00	10:18	18	Auriga: Open Star Cluster NGC-1960
Primary Focus	Broad Spectrum	Galaxy	NGC-1961	07:11 – 01:42	10:24	21	Camelopardalis: Galaxies
Primary Focus	Broad Spectrum	DN	M-78	08:23 – 12:40	10:29	23	Orion: Dark and Bright Nebula
Primary Focus	Broad Spectrum	OC	M-37	07:10 – 02:13	10:34	23	Auriga: Salt and Pepper Cluster
Primary Focus	Broad Spectrum	DN	LDN-1622	08:22 – 12:56	10:36	25	Orion: Dark Nebula
Primary Focus	Broad Spectrum	RN	IC-2169	08:28 – 02:04	11:13	32	Monoceros: Reflection Nebula
Primary Focus	Broad Spectrum	OC	M-41	*09:38-01:20	11:28	34	Canis Major: Open Star Cluster NGC-2287
Primary Focus	Broad Spectrum	OC	M-50	*09:14-02:14	11:44	35	Monoceros: Open Star Cluster NGC-2323
Primary Focus	Broad Spectrum	Galaxy	UGC-3697	08:58 – 02:54	11:53	36	Camelopardalis: Galaxy Cluster
Primary Focus	Broad Spectrum	OC	M-47	*10:24-02:10	12:18	38	Puppis: Open Cluster NGC-2422
Primary Focus	Broad Spectrum	Galaxy	NGC-2403	08:49 – 03:54	12:18	38	Camelopardalis: Med Barred Spiral Galaxy
Primary Focus	Broad Spectrum	GC	NGC-2419	08:39 – 04:07	12:20	39	Lynx: Intergalactic Wanderer
Primary Focus	Broad Spectrum	OC	M-93	*10:16-02:41	12:26	40	Puppis: Butterfly Cluster
Primary Focus	Broad Spectrum	OC	M-48	11:24 – 02:33	12:55	40	Hydra: M-48 (NGC-2548)
Primary Focus	Broad Spectrum	OC	M-67	10:43 – 04:29	01:33	41	Cancer: M-67 (NGC-2682)
Primary Focus	Broad Spectrum	Galaxy	NGC-2685	09:54 – 05:27	01:37	41	Ursa Major: Helix Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-2903	11:00 – 05:34	02:13	42	Leo: Med Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-81	11:23 – 05:58	02:37	43	Ursa Major: Bode’s Nebula
Primary Focus	Broad Spectrum	Galaxy	M-82	11:27 – 05:54	02:37	43	Ursa Major: Cigar Galaxy

Prospective Imaging Objects – January

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Broad Spectrum	Galaxy	NGC-3115	*12:15-05:22	02:46	43	Sextans: Spindel Galaxy
Primary Focus	Broad Spectrum	Galaxy	UGC-5470	11:59 – 05:48	02:59	44	Leo: Powder Keg Galaxy
Primary Focus	Broad Spectrum	Galaxies	NGC-3166, 3169	12:35 – 05:22	02:55	44	Sextans: Galaxy Pair
Primary Focus	Broad Spectrum	Galaxies	Hickson 44	11:45 – 06:04	02:59	44	Leo: Galaxy Cluster
Primary Focus	Broad Spectrum	Galaxy	NGC-3184	11:17 – 06:04	02:59	45	Ursa Major: Face On galaxy
Primary Focus	Broad Spectrum	Galaxies	NGC 3227, 3226	11:55 – 03:05	03:05	45	Leo: Interacting galaxy pair
Primary Focus	Broad Spectrum	Galaxy	IC-2574	11:52 – 06:04	03:09	46	Leo: Coddington's Nebula
Primary Focus	Broad Spectrum	Galaxies	Leo Trio 2	12:37 – 06:04	03:29	47	Leo: NGC-3379, 3384, 3389
Primary Focus	Broad Spectrum	Galaxies	NGC-3561 et. El.	12:25 – 06:04	03:52	47	Ursa Major: Ambartsumian's Knot
Primary Focus	Broad Spectrum	Galaxy	M-108	12:07 – 06:04	03:52	48	Ursa Major: Med Galaxy NGC-3556
Primary Focus	Broad Spectrum	Galaxies	M-65 et. El.	01:07 – 06:04	04:01	49	Comp2 Leo: Lio Trio of Galaxies
Primary Focus	Broad Spectrum	Galaxy	NGC-3628	01:07 – 06:04	04:01	50	Leo: Edge on galaxy
Primary Focus	Broad Spectrum	Galaxies	M-65, M-66	11:54 – 06:04	04:00	50	Leo: Galaxy Pair
Primary Focus	Broad Spectrum	Galaxies	Arp-214	10:46 – 06:04	04:14	50	Ursa Major: Galaxy Pair
Primary Focus	Broad Spectrum	Galaxies	NGC-3746 et. El.	11:53 – 06:04	04:19	51	Leo: Copeland's Septet
Primary Focus	Broad Spectrum	Galaxies	Abell 1367	12:04 – 06:04	04:26	51	Leo: Galaxy Cluster
Primary Focus	Broad Spectrum	Galaxies	Arp-248	01:13 – 06:04	04:28	51	Ursa Major: Wild's Triplet
Primary Focus	Broad Spectrum	Galaxy	M-109	11:10 – 06:04	04:39	52	Ursa Major: Face On Med Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-4027	*02:45–06:04	04:40	52	Corvus: Irregular small Galaxy
Primary Focus	Broad Spectrum	Galaxies	Arp-244	*02:39-06:04	04:43	52	Corvus: Antennae Galaxies
Primary Focus	Broad Spectrum	Galaxy	M-98	01:57 – 06:04	04:55	53	Coma Berenices: Barred Spiral Galaxy NGC-4192
Primary Focus	Broad Spectrum	Galaxy	NGC-4236	01:46 – 06:04	04:57	53	Draco: Galaxy NGC-4236
Primary Focus	Broad Spectrum	Galaxy	NGC-4244	01:19 – 06:04	04:58	53	Canes Venatici: Silver Needle Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-99	02:03 – 06:04	05:00	54	Coma Berenices: St. Katherines Wheel
Primary Focus	Broad Spectrum	Galaxy	M-61	02:39 – 06:04	05:03	55	Virgo: Sm/Med Face-on Spiral Galaxy
Primary Focus	Broad Spectrum	Galaxies	Winnecke 4	01:20 – 06:04	05:03	55	Ursa Major: Galaxy Cluster
Primary Focus	Broad Spectrum	Galaxies	M-100	02:04 – 06:04	05:04	55	Coma Berenices: Face on Galaxy & other galaxies
Primary Focus	Broad Spectrum	Galaxy	NGC-4449	01:25 – 06:04	05:09	57	Candes Venatici: Irregular Galaxy

Prospective Imaging Objects – January

Configuration	Class	Type	Object	Imaging Window	Transit	Page Ref	Comments
Primary Focus	Broad Spectrum	Galaxy	M-49	02:34 – 06:04	05:11	57	Virgo: Elliptical Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-87	02:21 – 06:04	05:12	58	Virgo: Elliptical Galaxy
Primary Focus	Broad Spectrum	Galaxy	NGC-4490	01:29 – 06:04	05:11	58	Canes Venatici: Cocoon Galaxy
Primary Focus	Broad Spectrum	Galaxies	M-91	02:20 – 06:04	05:16	59	Coma Berenices: Galaxy Pair
Primary Focus	Broad Spectrum	Galaxies	M-89	02:25 – 06:04	05:16	59	Virgo: Elliptical Galaxy & two others
Primary Focus	Broad Spectrum	Galaxy	NGC-4559	01:50 – 06:04	05:17	59	Coma Berenices: Barred Spiral Galaxy
Primary Focus	Broad Spectrum	Galaxies	NGC-4567 et. El.	02:30 – 06:04	05:17	60	Virgo: Galaxy Group
Primary Focus	Broad Spectrum	Galaxy	NGC-4565	01:55 – 06:04	05:17	60	Coma Berenices: Edge on Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-90	02:25 – 06:04	05:18	60	Virgo: Galaxy Group
Primary Focus	Broad Spectrum	Galaxy	M-58	02:29 – 06:04	05:18	61	Virgo: Barred Spiral Galaxy NGC-4579
Primary Focus	Broad Spectrum	Globular	M-68	*03:36-06:04	05:20	61	Hydra: Med Globular Cluster
Primary Focus	Broad Spectrum	Galaxy	M-104	*02:39-06:04	05:34	62	Virgo: Sombrero Galaxy
Primary Focus	Broad Spectrum	Galaxies	NGC-4676 A&B	01:57 – 06:04	05:27	63	Coma Berenices: The Mice
Primary Focus	Broad Spectrum	Galaxies	NGC-4725	02:10 – 06:04	05:31	63	Coma Berenices: Galaxy Group
Primary Focus	Broad Spectrum	Galaxy	M-94	01:50 – 06:04	05:32	64	Canes Venatici: Bright Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-4731	*02:54-06:04	05:32	64	Virgo: Barred Spiral Galaxy
Primary Focus	Broad Spectrum	Galaxies	NGC-4762, 4754	02:46 – 06:04	05:34	64	Virgo: Edge on and Elliptical galaxies
Primary Focus	Broad Spectrum	Galaxy	M-64	02:24 – 06:04	05:37	65	Coma Berenices: Bright Galaxy
Primary Focus	Broad Spectrum	Galaxies	Abell-1656	02:15 – 06:04	05:40	65	Coma Berenices: Coma Galaxy Cluster
Primary Focus	Broad Spectrum	Globular	M-53	02:48 – 06:04	05:54	66	Coma Berenices: Med Globular
Primary Focus	Broad Spectrum	Galaxy	NGC-5033	02:17 – 06:04	05:54	66	Canes Venatici: Spiral Galaxy
Primary Focus	Broad Spectrum	Galaxy	M-63	02:14 – 06:04	05:56	66	Canes Venatici: Sunflower Galaxy
Primary Focus	Broad Spectrum	Globular	NGC-5053	02:53 – 06:04	05:57	67	Coma Berenices: Loose Globular
Primary Focus	Broad Spectrum	Galaxy	M-51	02:25 – 06:04	06:10	67	Canes Venatici: Whirlpool Galaxy