The Insider's Guide to the Galaxy Presents...

Finest Minutes

a guide to completing RASC's Finest NGC Objects Observing List

Part 3 -

January 17th – January 31st, 2023

The following pages include a list of objects discussed on January 17th, 2023. Including finder charts and log pages.

List of Targets Discussed:

Jan 17 – astronomical twilight ends around 6:30 pm, predawn crescent moon

View this one around 7 pm now or wait until August pre-dawn

NGC	Constellation	Magnitude	Type	FNGC	Name
0246	Cet	10.9	PN	015	Skull / Soap Bubble Nebula

View this one around 9 pm now

NGC	Constellation	Magnitude	Type	FNGC	Name
0936	Cet	10.2	SG	016	Darth Vader's Starfighter

The rest are all-night objects in January

NGC	Constellation	Magnitude	Type	FNGC	Name
0869/84	Per	4.5	OC	017	The Double Cluster
1023	Per	9.5	SG	018	Perseus Lenticular Gal
1491	Per	-	EN	019	Fossil Footprint Nebula

FNGC = Finest NGC List Number

Notes:

NGC 0246:

(3.7 arc-minutes)

Faint planetary nebula discovered by WH on Nov 27, 1785 (V-25). Seeing the nebula requires a relatively large telescope or dark skies. Also Caldwell 56, it sits relatively low in the sky for Canadians. It is located in western Cetus within a triangle formed by the medium-bright stars Diphda (Beta Ceti), Dheneb (Eta Ceti), and Deneb Kaitos Schemali (Iota Ceti), but I found the fainter wide pair Phi1,2 Set and aimed my finder one degree south of them. Nice at about 65x. Note the shape and structure of the nebulosity, how it is situated compared to the 12th magnitude central star. Note the superimposed field stars, plus more around the nebulosity. The dark voids that suggest a wide mouth and eye are much more obvious through an OIII / UHC filter. About 1600 l-y away.

NGC 0936:

(3.3 arc-minutes)

A small, but condensed barred spiral galaxy in Cetus' neck between Mira and M77. It was discovered by WH on Jan 6, 1785 (IV-23). Its elongated core is bright enough for smaller telescopes, but a larger scope will show the surrounding ring-like halo. It sits about midway between the bright star Delta Ceti and mag 5.65 star 66 Ceti. Or, starhop southwest from Delta to the mag 5.35 star 75 Ceti and then nudge the telescope west by 1°. Use averted vision. Note its shape and orientation, and surrounding field stars.

Look for the fainter galaxies NGC 955 and NGC 941 in the same 1° field. Use about 100x on it, but no filters! 54 million l-y away.

NGC 0869/84

(30 & 30 arc-minutes)

Autumn Showpiece! Two open clusters, each about 30 arc-minutes wide and 0.5° centre to centre, were discovered in ancient times but recorded by WH on Nov 1, 1788 (VI-33, VI-34). They are also designated Caldwell 14. The pair is visible with unaided eyes in dark skies, and easily in binoculars and any size of telescope from suburbs, but use low mag, ~35x for both and double that for each one. Located in northern Perseus near the border with Cassiopeia, midway between the bright stars Mirfak and Navi (Gamma Cas) in the centre of W. Study each cluster individually. Viewed during the evening, lower NGC 884 is less dense, higher NFC 869 is denser. Note which cluster is brighter, their star patterns and overall shape, count the stars, look for dominant star colours and any stars that differ from the norm. About 7,100 l-y away.

NGC 1023

(6x2 arc-minutes)

Medium-sized, lens-shaped barred lenticular galaxy near Algol and M34 discovered by WH on Oct 18, 1786 (I-156). It is condensed enough to be visible in 4” or larger telescopes from dark skies. The galaxy is about midway between Algol and Mizan (Beta Tri), and is just 1° to the right (celestial south) of the mag 4.9 star named 12 Per. Several medium-bright field stars sit nearby. Use 60x to 100x and no filter. Note the size, shape, and orientation of the core and halo. Considered to be peculiar (Arp 135). Can you see any distortion and the small fragment off to one end? About 34 million l-y away. While there, perhaps re-visit the nearby Silver Needle Galaxy NGC 891 (FN012).

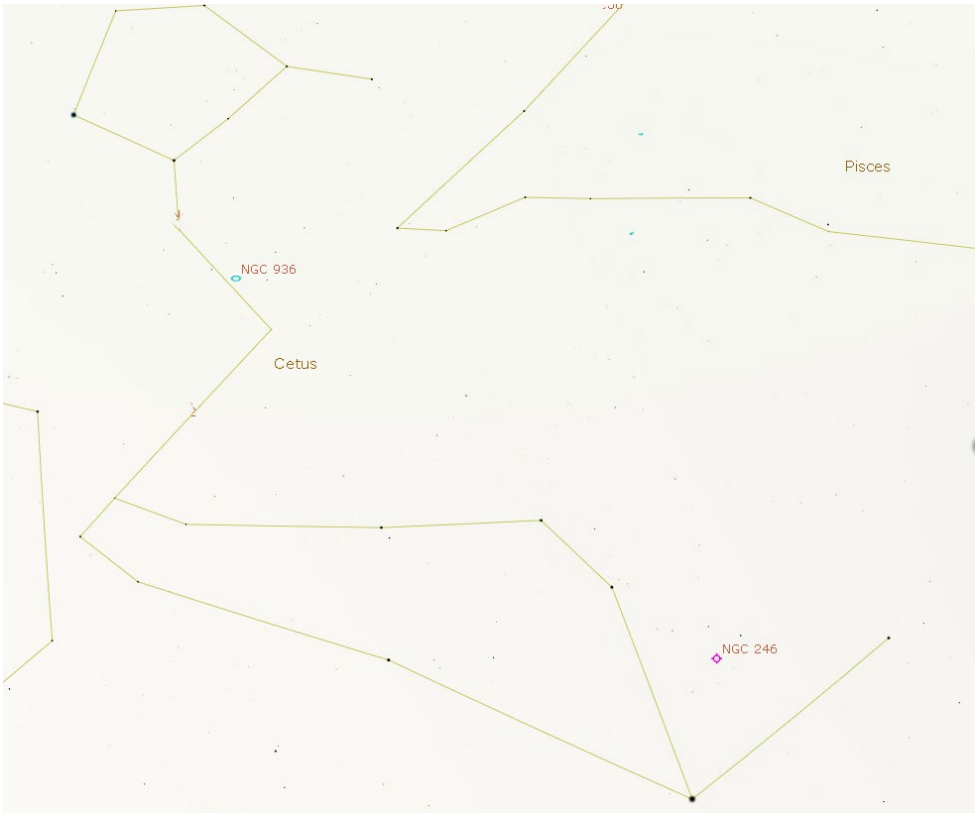
NGC 1491

(6x9 arc-minutes)

According to Stephen O’Meara, this is a visually small, but photographically large emission nebula discovered by WH on Dec 28, 1790 (I-258). It is located in Perseus’ eastern arm, only 1° from the medium-bright star Lambda Persei. You could also aim your scope midway between Epsilon Aurigae (the Kid star closest to Capella) and Miram (Eta Per). The very small centre is bright enough for 4”-6” telescopes. A larger aperture will be needed to see the fainter portions stretching on the eastern side. Using 35x will encompass the faint gas around the core. Magnify more to inspect the stars within. Note the shape and structures of the nebula, and the embedded stars. Averted vision and UHC filters will help. Watch for dark lanes, streaks of brighter gas, and lobes. About 12,000 l-y away.

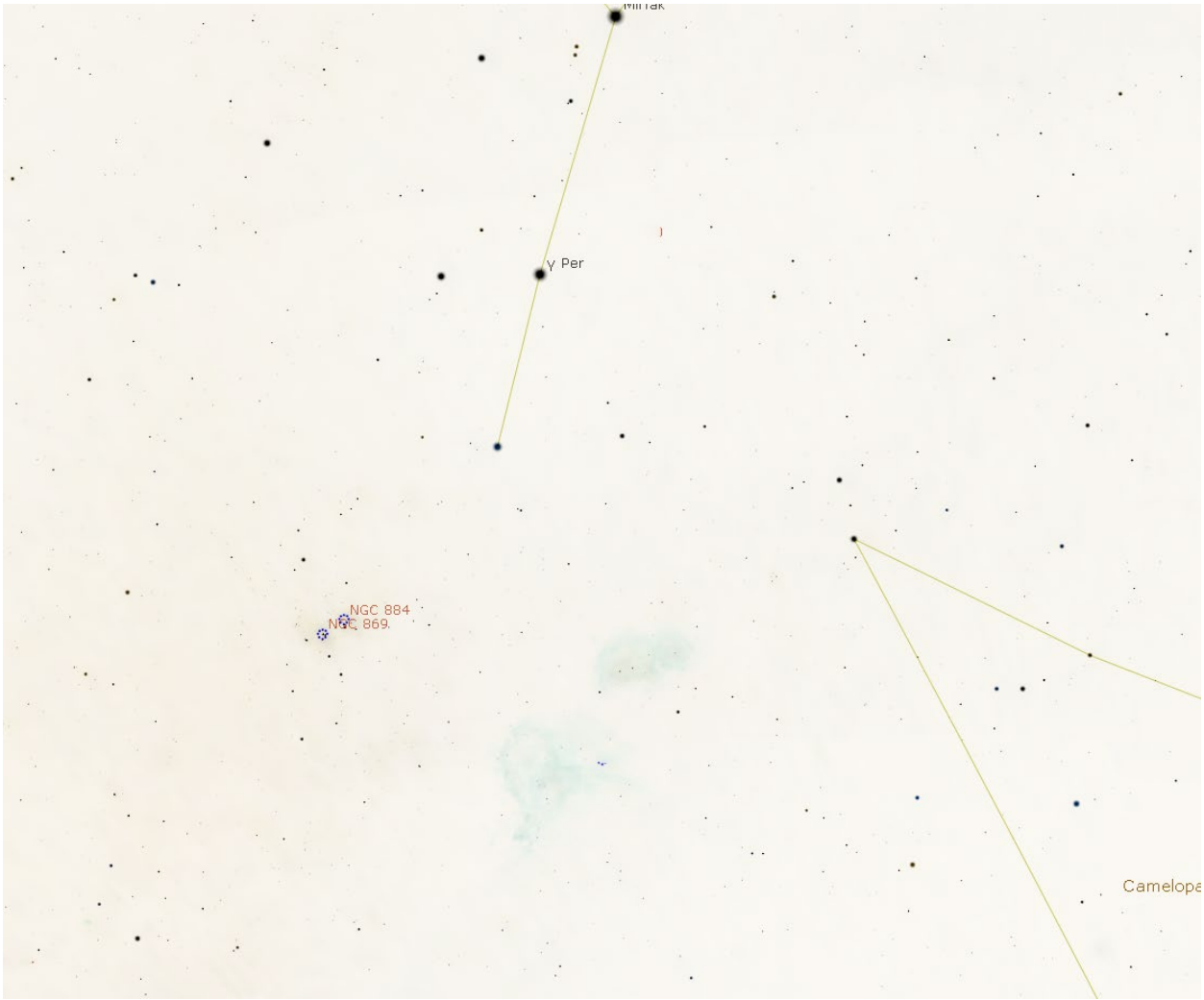
Target Finder Charts:

NGC 0936, NGC 0246 Closer View –

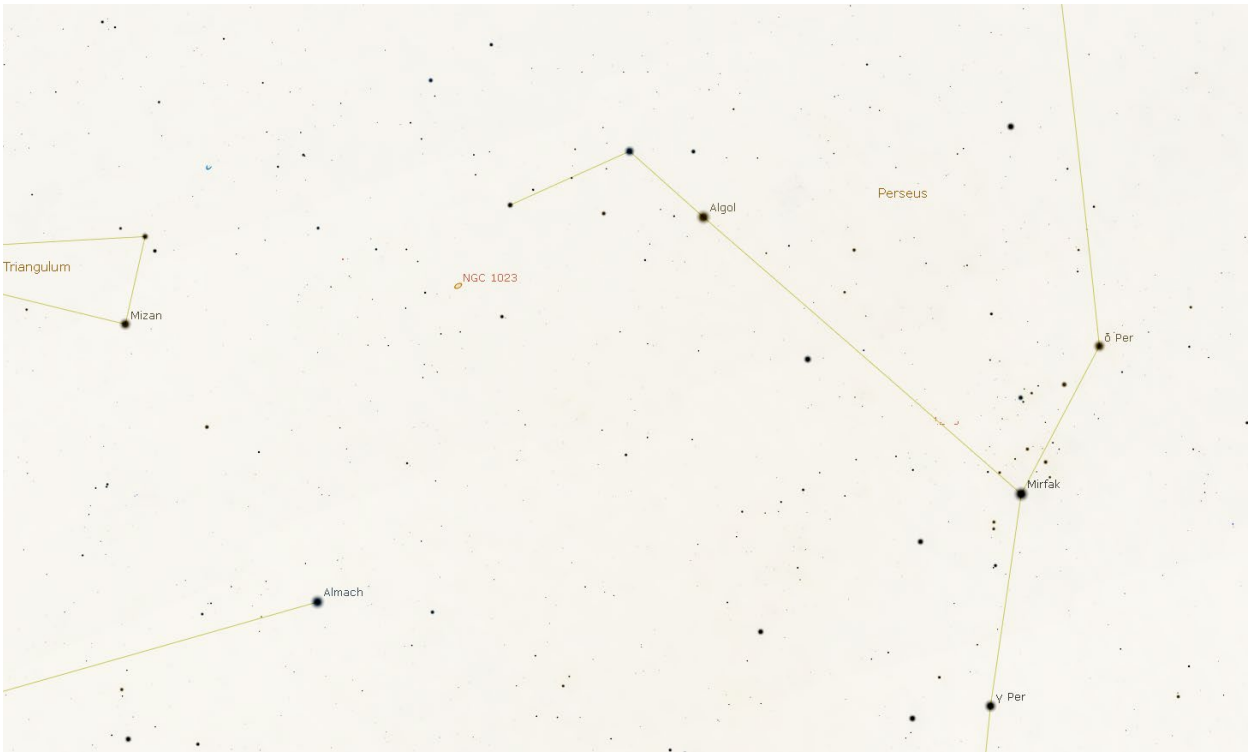


NGC 1023, NGC 1491, NGC 0884 & NGC 0869 Closer View –

NGC 0869 & NGC 0884 Closer View –

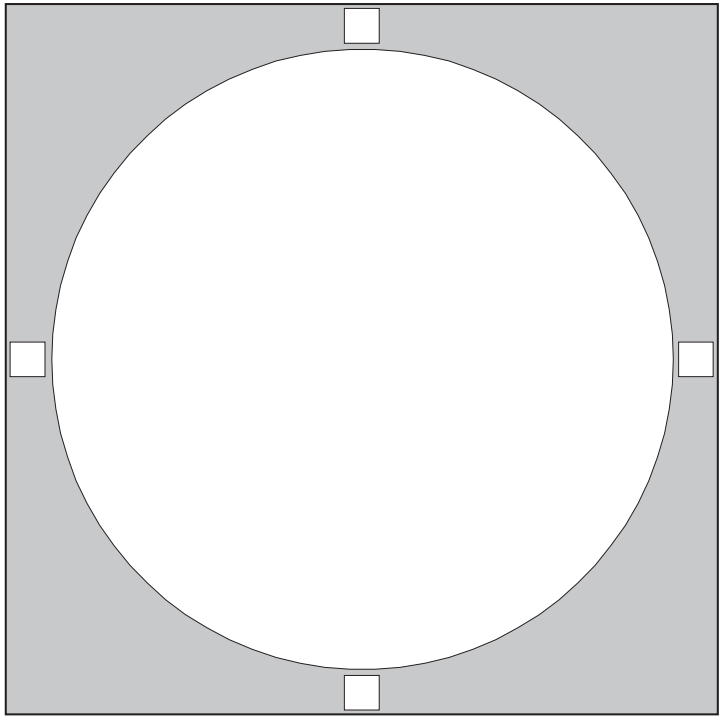


NGC 1023 Closer View –



NGC 1491 Closer View –

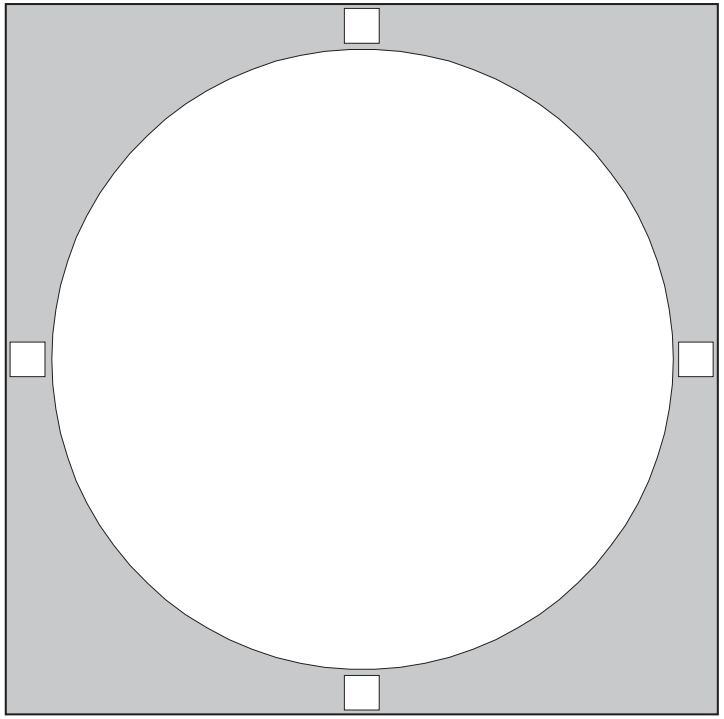
NGC Number		**246**	
Constellation		**Cetus**	
Type		**PN**	
Visual Magnitude**		**10.9**	
Size	Distance	**3.0' 45"**	**1,300 ly**
RA (Epoch 2000.0)		**00:47.0**	
Dec (Epoch 2000.0)		**-11:53**	
UM I	UM II	**261, 262**	**140**
Sky Atlas 2000		**10, 17**	
Season		**Autumn**	
Remarks***		**large and faint with mottled structure**	
Date	Time		
Seeing		1 2 3 4 5	
Transparency		1 2 3 4 5	
Telescope			
Eyepiece	Magnification		
Observing Location			



Notes

PN: Planetary Nebula	RN: (diffuse) Reflection Nebula	Seeing: 1 = Best 5 = Poor	* = Number of stars in cluster
SNR: Supernova Remnant	EN: (diffuse) Emission Nebula	Transparency: 1 = Best 5 = Poor	** p = Photographic Magnitude
GC: Globular Cluster	G-: Galaxy, with Hubble type given	Time: DD:MM:YYYY	*** !! = Showpiece Object
OC: Open Cluster	E/RN: Diffuse emission and reflection Nebula	Date: Specify Time Zone or UT	http://www.rasc.ca

NGC Number		**936**	
Constellation		**Cetus**	
Type		**G-SB**	
Visual Magnitude**		**10.2**	
Size	Distance	**5.7' x 4.6'**	**59 million ly**
RA (Epoch 2000.0)		**02:27.6**	
Dec (Epoch 2000.0)		**-01:09**	
UM I	UM II	**219, 220**	**119**
Sky Atlas 2000		**10**	
Season		**Autumn**	
Remarks***		**near M77; NGC 941 in the same field**	
Date	Time		
Seeing		1 2 3 4 5	
Transparency		1 2 3 4 5	
Telescope			
Eyepiece	Magnification		
Observing Location			



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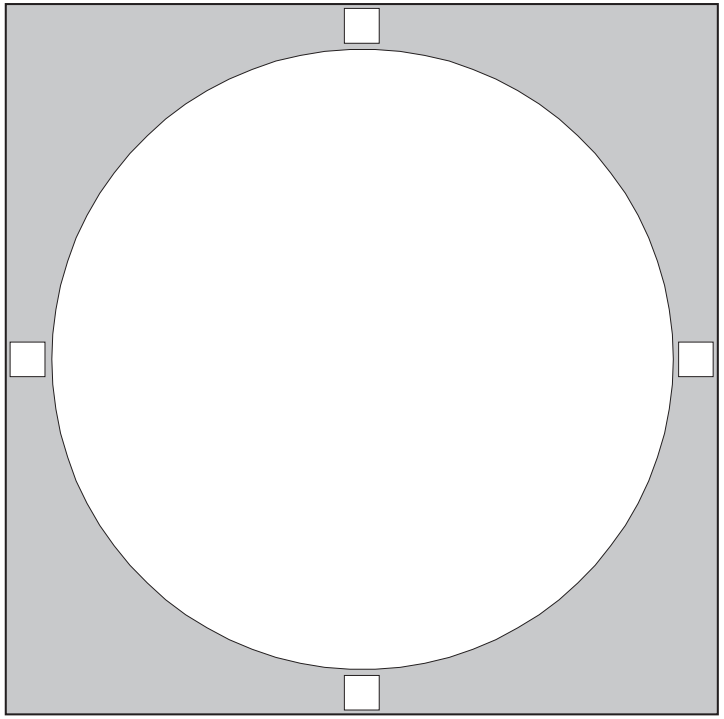
RASC Finest NGC - 17

Double Cluster

NGC Number		**869/884**	
Constellation		**Perseus**	
Type		**OC**	
Visual Magnitude**		**5.3/6.1**	
Size	Distance	**30.0' / 30.0'**	**7,200/7500 ly**
RA (Epoch 2000.0)		**02:21.0**	
Dec (Epoch 2000.0)		**+57:08**	
UM I	UM II	**37**	**29**
Sky Atlas 2000		**1**	
Season		**Autumn**	
Remarks***		**!! Double Cluster; 315*; use low power.**	
Date	Time		
Seeing		1 2 3 4 5	
Transparency		1 2 3 4 5	
Telescope			
Eyepiece	Magnification		
Observing Location			



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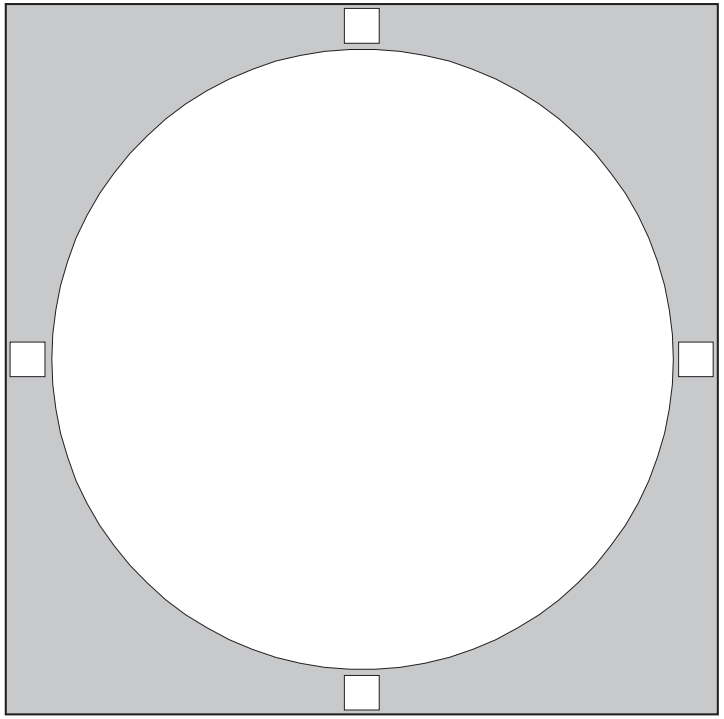
NGC Number		**1023**	
Constellation		**Perseus**	
Type		**G-SB(rs)0-**	
Visual Magnitude**		**9.3**	
Size	Distance	**8.6' x 4.2'**	**34 million ly**
RA (Epoch 2000.0)		**02:40.4**	
Dec (Epoch 2000.0)		**+39:04**	
UM I	UM II	**62, 93**	**61**
Sky Atlas 2000		**1, 4**	
Season		**Autumn**	
Remarks***		**bright lens-shaped galaxy near M34**	
Date	Time		
Seeing		1 2 3 4 5	
Transparency		1 2 3 4 5	
Telescope			
Eyepiece	Magnification		
Observing Location			



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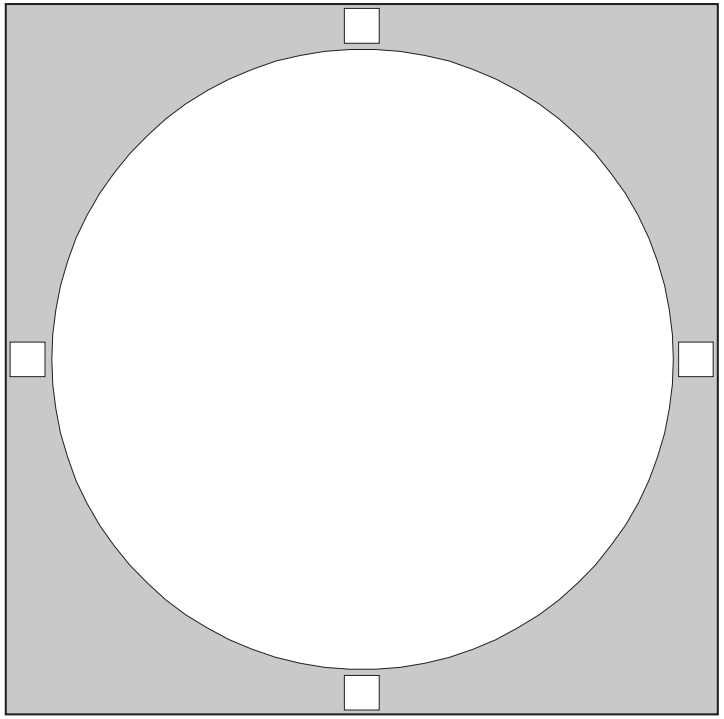
NGC Number		**1491**	
Constellation		**Perseus**	
Type		**EN**	
Visual Magnitude**		**na**	
Size	Distance	**25.0' x 25.0'**	**2,500 ly**
RA (Epoch 2000.0)		**04:03.4**	
Dec (Epoch 2000.0)		**+51:19**	
UM I	UM II	**39**	**28, 42, 43**
Sky Atlas 2000		**1, 4, 5**	
Season		**Autumn**	
Remarks***		**visually small and faint emission nebula**	
Date	Time		
Seeing		1 2 3 4 5	
Transparency		1 2 3 4 5	
Telescope			
Eyepiece	Magnification		
Observing Location			



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