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

Finest Minutes

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

Part 3 -

February 14th – February 27th, 2023

The following pages include a list of objects discussed February 14th. Including finder charts and log pages.

List of Targets Discussed:

Feb 14 – New moon. Astronomical twilight is over by 7:30 pm

NGC	Constellation	Magnitude	Type	FNGC	Name
2024	Ori	7.2	EN	028	Flame Nebula
2022	Ori	11.6	PN	027	Kissing Crescents Nebula
1501	Cam	10.5	PN	020	Oyster / Camel's Eye Nebula
2403	SAm	~8.0	SAB	037	Caldwell 7
2655	Cam	10.1	G-Sa	038	Arp 225

FNGC = Finest NGC List Number

Notes:

NCG 2024:

(30x30 arc-minutes+)

NGC 2024 is a relatively bright combination of HII emission nebulosity and dark dust, but it is challenging to see due to the glow from nearby Alnitak (Zeta Ori). It was discovered by WH on Jan 1, 1786 (V-28). Some have claimed to see its glow in big binoculars, but I recommend 4" or larger apertures to see the shape that the branches of foreground dust have created - evoking fire, maple leaf, and more. It is easily located. The dark lane runs north-south just 15 arc-minutes northeast of Alnitak. Use lower power of 35x at first. At 65x, you can nicely hide Alnitak beyond the FOV and fill the rest of the FOV with the nebula. The dimensions will grow with larger aperture. I found that a UHC filter didn't help, but it's worth a try. Look for the young stars surrounding the dust, part of its central cluster. Take note of the size and shape, where it's brightest, and sketch the dark dust. Don't forget to enjoy the Alnitak double itself. The Horsehead Nebula is nearby, too. About 1,300 l-y away.

NGC 2022:

(22x17 arc-seconds+)

NGC 2022 is a very small planetary, discovered by WH in Dec 28, 1785 (IV-34). You need a medium to large aperture telescope to see it. It is located 1.3° east of Psi2 Orionis, which is part of the Meissa complex, or Orion's head. (That, too, is well worth viewing at lower magnification). Locate naked-eye Meissa and the row of three stars leading to bright Psi1 Ori, then hop east to Psi2 Ori and a little ways beyond. NGC 2022 will just share a 1.5° FOV with Psi2. Once centred, crank up the power to 100x and beyond. I found it looked faint, but clearly a planetary nebula. Use an OIII filter to brighten it, and averted vision to see the blinking effect. Do you see a central star, and the internal structure? Note the shape and the rich background star field. About 7,600 l-y away.

NGC 1501

(51.8 arc-seconds)

NGC 1501 is a medium-bright, medium-sized planetary nebula discovered by WH on Nov 3, 1787 (IV-53). It has an interesting dense structure with a central star. It is visible in any size of telescope, but a larger aperture will be needed to see its form. Find the bright Jolly Roger Cluster NGC 1502 first by doubling the line from Caph to Segin, and then hop south by 1.4°. Once located, crank up the power to 100x and beyond. Use an OIII or UHC filter to brighten it. Note the size and shape, look for the central star, internal structure, and nearby field stars. Check out NGC 1502 and Kemble's Cascade just to the north. About 5,000 l-y away.

NGC 2403

(24x13 arc-minutes)

NGC 2403 is a very large and bright galaxy visible in binoculars and any size of telescope. It was discovered by WH on Nov 1, 1788 (V-44). It resembles the Fireworks Galaxy NGC 6946 in Cyg. I found it by located mag 4.7 star HR2209 and splitting its distance from Muscida (the bear's nose). Or you could extend the line from Theta UMa to Muscida by 1.6 times. It also sits 1° west of the mag 5.9 star 51 Cam. The galaxy looks great at 35x to 65x. Note the core characteristics, the shape, orientation and texture of the halo, and the embedded and surrounding field stars. About 11 ml-y away.

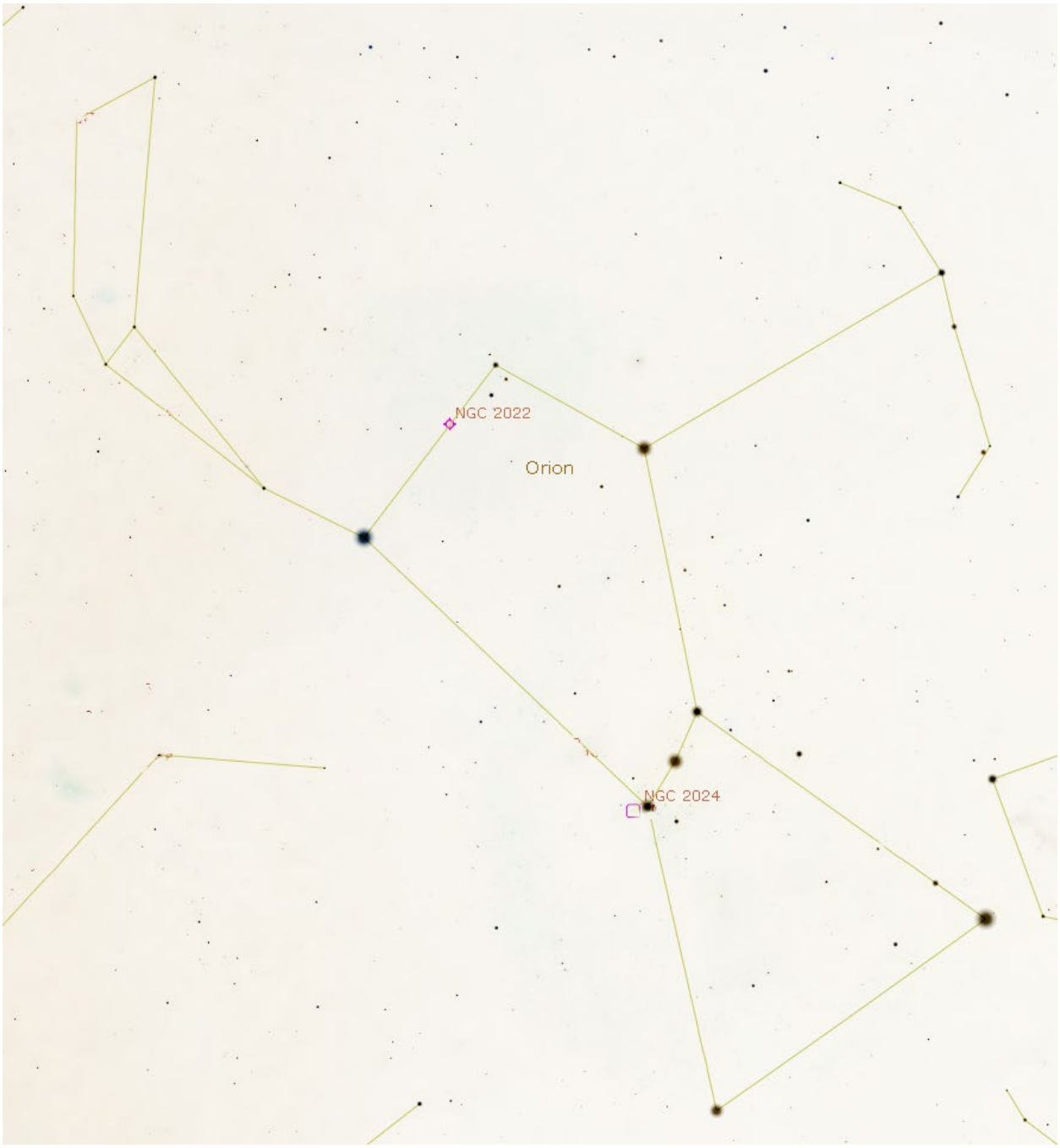
NGC 2655

(3.5x2.8 arc-minutes+)

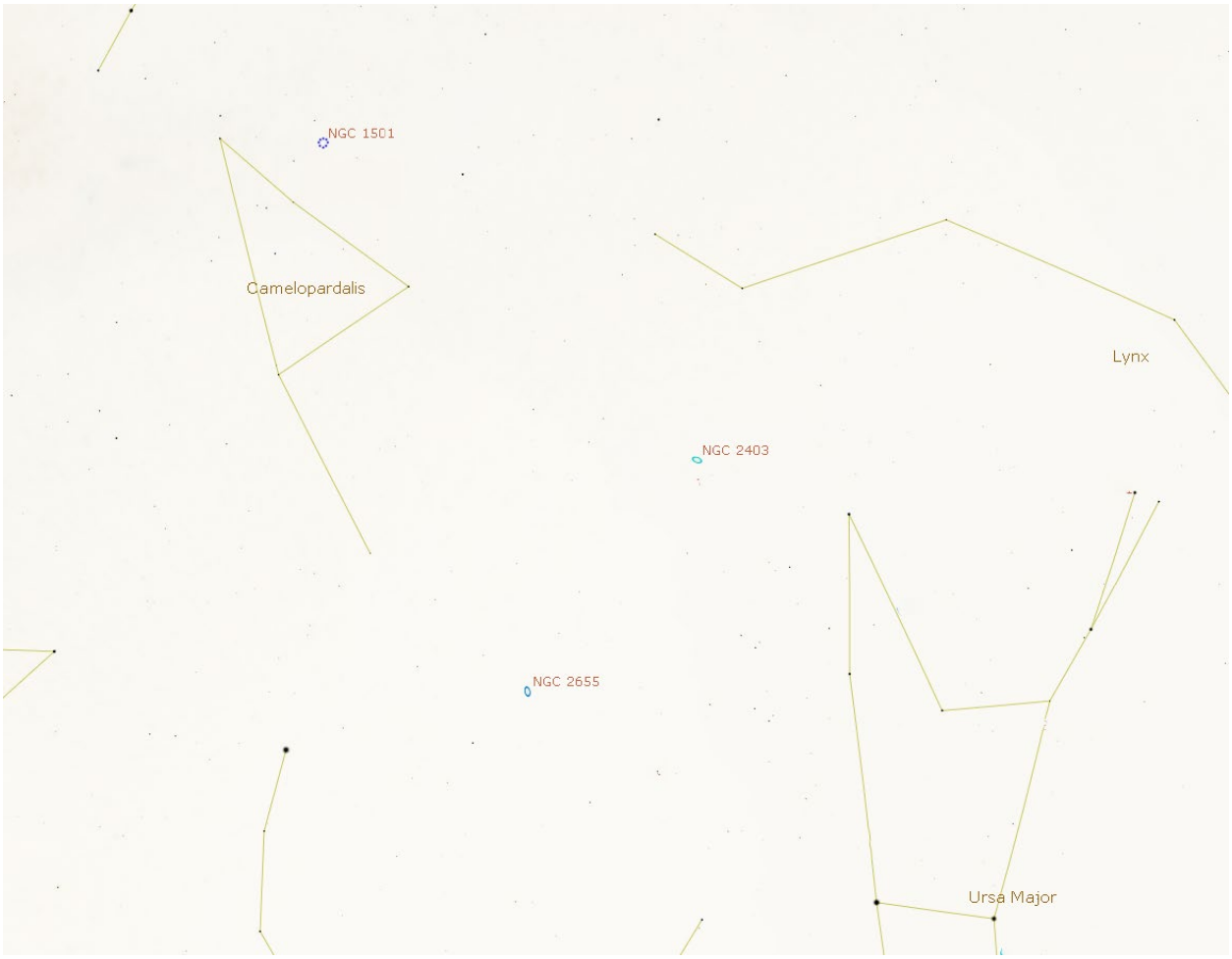
NGC 2655 is a relatively bright lenticular galaxy with spiral structure discovered by WH on Sep 26, 1802 (I-288). The core is visible in any size of good-quality telescope, but larger apertures are needed to see the halo. It's not near any helper stars. I used the mag 4.25 star HR3751 and star-hopped 3.5° SSW. You could also try doubling the line from the dipper bowl star Megrez (Delta UMa) to Giausar (Lambda Dra). Search with low magnification because the bright core will stand out. Then crank up to 65x and higher. Look for the faint halo surrounding the nucleus. Larger apertures can show the arm structure. Use averted vision. Note its core characteristics, orientation and shape of disk, and structure, and the nice field stars. Watch for the galaxy NGC 2715 just to the east. About 80 ml-y away!

Target Finder Charts:

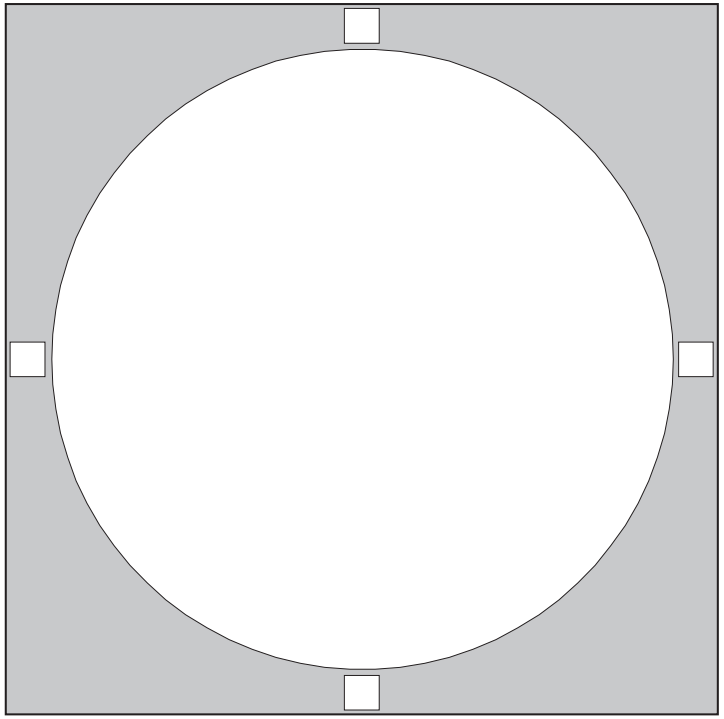
NGC 2024, 2022 Closer View –



NGC 1501, 2403, 2655 Closer View –



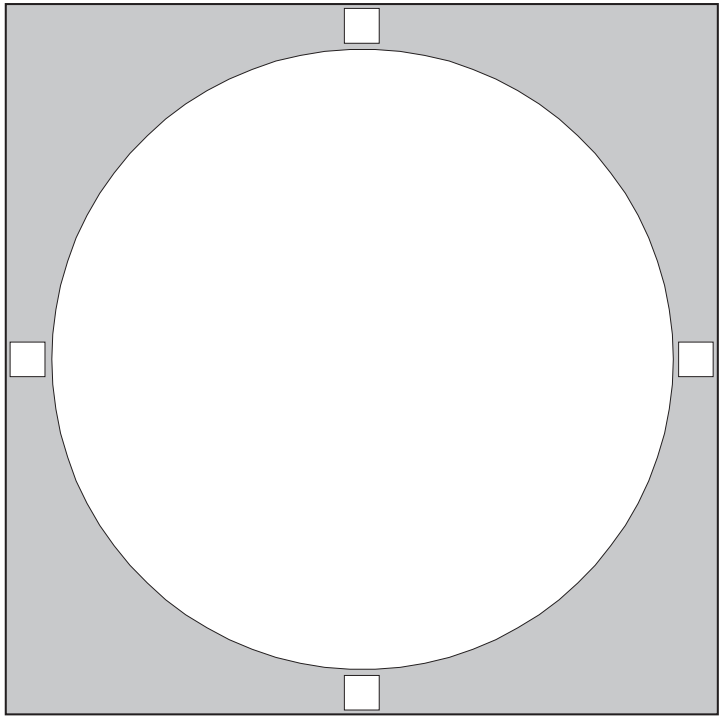
NGC Number		**2024**	
Constellation		**Orion**	
Type		**EN**	
Visual Magnitude**		**na**	
Size	Distance	**30.0' x 30.0'**	**1,500 ly**
RA (Epoch 2000.0)		**05:41.9**	
Dec (Epoch 2000.0)		**-01:51**	
UM I	UM II	**225, 226**	**116**
Sky Atlas 2000		**11**	
Season		**Winter**	
Remarks***		**bright but masked by glow from Zeta Orion**	
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		**2022**	
Constellation		**Orion**	
Type		**PN**	
Visual Magnitude**		**11.9**	
Size	Distance	**>18"**	**6,900 ly**
RA (Epoch 2000.0)		**05:42.1**	
Dec (Epoch 2000.0)		**+09:05**	
UM I	UM II	**181**	**96**
Sky Atlas 2000		**11**	
Season		**Winter**	
Remarks***		**small, faint & distinct with annular form**	
Date	Time		
Seeing		1 2 3 4 5	
Transparency		1 2 3 4 5	
Telescope			
Eyepiece	Magnification		
Observing Location			



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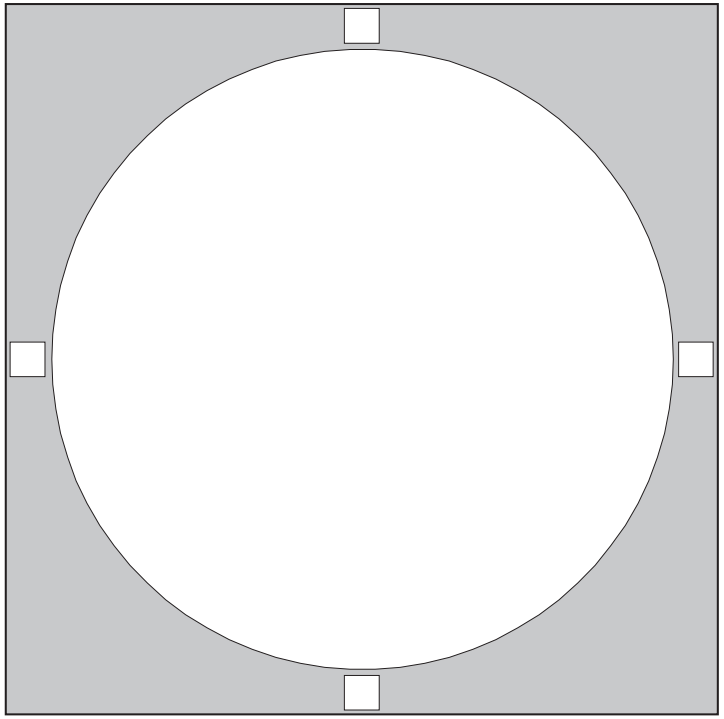
NGC Number		**1501**	
Constellation		**Camelopardalis**	
Type		**PN**	
Visual Magnitude**		**11.5**	
Size	Distance	**52"**	**3,900 ly**
RA (Epoch 2000.0)		**04:07.0**	
Dec (Epoch 2000.0)		**+60:55**	
UM I	UM II	**18, 39**	**28**
Sky Atlas 2000		**1**	
Season		**Autumn**	
Remarks***		**faint; dark center; look for NGC 1502**	
Date	Time		
Seeing		1 2 3 4 5	
Transparency		1 2 3 4 5	
Telescope			
Eyepiece	Magnification		
Observing Location			



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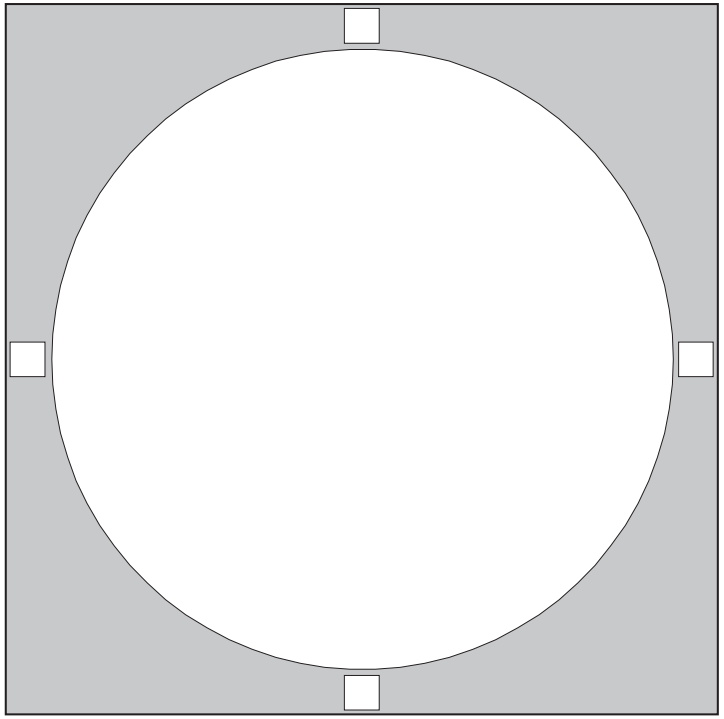
NGC Number		**2403**	
Constellation		**Camelopardalis**	
Type		**G-SABc**	
Visual Magnitude**		**8.5**	
Size	Distance	**26.0' x 13.0'**	**11 million ly**
RA (Epoch 2000.0)		**07:36.9**	
Dec (Epoch 2000.0)		**+65:36**	
UM I	UM II	**8**	**15**
Sky Atlas 2000		**1**	
Season		**Winter**	
Remarks***		**!! very large & bright; visible in binoculars**	
Date	Time		
Seeing		1 2 3 4 5	
Transparency		1 2 3 4 5	
Telescope			
Eyepiece	Magnification		
Observing Location			



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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
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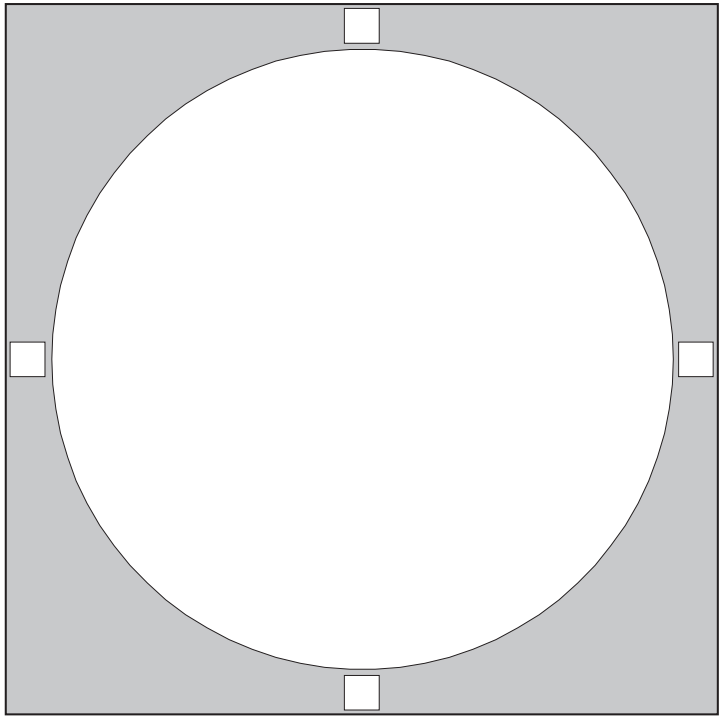
NGC Number		**2655**	
Constellation		**Camelopardalis**	
Type		**G-SAB0**	
Visual Magnitude**		**10.1**	
Size	Distance	**6.0' x 5.3'**	**71 million ly**
RA (Epoch 2000.0)		**08:55.6**	
Dec (Epoch 2000.0)		**+78:13**	
UM I	UM II	**146, 191**	**6**
Sky Atlas 2000		**1, 2**	
Season		**Winter**	
Remarks***		**bright ellipse with star-like nucleus**	
Date	Time		
Seeing		1 2 3 4 5	
Transparency		1 2 3 4 5	
Telescope			
Eyepiece	Magnification		
Observing Location			



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