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

Messier Minutes

a guide to completing RASC's Messier Observing Certificate

Part 14 -

September 13th – October 10th, 2022

The following pages include a list of objects discussed in the September 13th, 2022, episode of Messier Minutes. Including finder charts and log pages.

List of Targets Discussed:

September 13 approaching 3rd Quarter; twilight ends after 9 pm; last of the summer Messiers

Messier #	Constellation	Magnitude	Type	NGC	Name
55	Sgr	7.4	GC	6809	Specter / Summer Rose Cluster
29	Cyg	6.6	OC	6913	Cooling Tower Cluster
57	Lyr	8.8	PN	6720	Ring Nebula
56	Lyr	8.4	GC	6779	Melotte 220
27	Vul	7.4	PN	6853	Dumbbell Nebula
71	Sge	6.1	GC	6838	Angelfish Cluster
39	Cyg	4.6	OC	7092	Melotte 236
75	Sgr	9.2	GC	6864	Melotte 228

Notes:

M55:

(19 arc-minutes)

A summer gem! Large and close to us at 17,600 l-y, it sits relatively low in the sky for Canadians. It can be seen in binoculars on a good night and in any size of telescope with a haze-free southern horizon and a dark sky. Larger telescopes can resolve the core and halo stars. To find it, triple the line from Nunki to Namalsadirah II (Tau Sgr), which form the Teapot's handle - or double the line from Polis through Nunki. Take note of its shape and density profile, and look for variety in its stars.

Culminates at 9:30 pm – don't wait too long!

M29:

(10 arc-minutes)

A loose cluster that is small but visible in good binoculars and with any size of telescope. It is nearly overhead in late summer. M29 looks especially nice at about 100x. It was nick-named for two curved chains of bright stars. It sits a thumb's width south of bright Sadr (in the direction towards Delphinus), and is about 5,000 l-y away. Note the rich star fields and nebulosity around it, count the main stars, note any differently coloured members. What shape do YOU see?.

M57:

(~3 arc-minutes)

A summer gem! Small, but bright, putting it within reach of any telescope, even from the suburbs, although bigger is better. Located approximately midway between Sulafat and Sheliak. Use an OIII or UHC filter to brighten its smoke ring form, and more

magnification if seeing conditions allow it. Note the shape and structural details, and look for the central white dwarf star. 2,300 l-y away.

M56:

(9 arc-minutes)

A small cluster that is possibly visible in large binoculars and certainly in any telescope. A larger aperture will be needed to resolve the core stars. It is located almost exactly midway between Sulafat and Albireo, but slightly closer to Albireo. 32,900 l-y away, possibly a captured object. Note the density profile, star colours, overall shape, and look out for the nearby red star HR 7302..

M27:

(8x5.5 arc-minutes)

A summer gem! Large and relatively bright, but diffuse. Large binoculars or a small telescope will show it under a dark sky. A larger aperture will show it even in the suburbs. The Helix Nebula is the only brighter PN. M27 is located 3° above (north) of the bright star Gamma Sge, or take the line from Sulafat to Albireo and double it. Use an OIII or UHC filter to better show the apple core shape. Note and/or sketch its shape and use averted vision to look for the central white dwarf star. About 1200 l-y away.

M71:

(19 arc-minutes)

Small in size, but bright enough for binoculars in a dark sky, and visible in any size of telescope. Larger apertures will be needed to resolve the stars. It is very easy to find just below the midpoint between Gamma and Delta Sge. Look for the rich fields of stars around it, the cluster's shape, and profile density. A very close 13,000 l-y.

M39:

(31 arc-minutes)

A very large, but sparse open cluster, it can be seen in binoculars in a dark sky, and in any size of telescope - preferably at low power - even from the suburbs. There are no bright stars nearby to guide you, but it sits midway between Deneb and Alpha Lacerta - or double the line from Iota Cep to Zeta Cep (the eastern side of Cepheus' box). Count the major stars and note any patterns they make. About 825 l-y away.

M75:

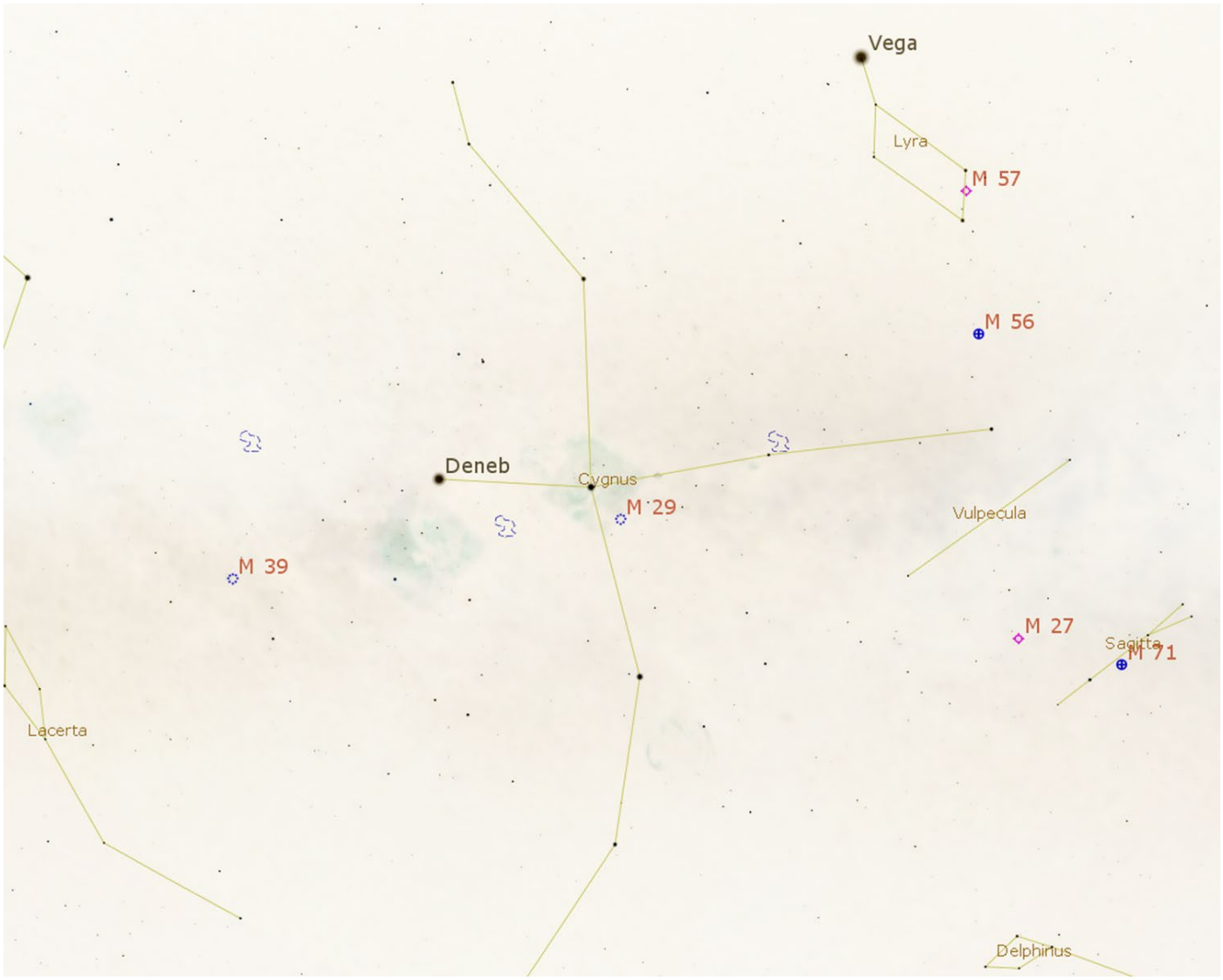
(6 arc-minutes)

The most easterly of the summer Messiers, so it's last in our 110 Things book! It's medium-sized and relatively faint. Big binoculars might work, but a dark sky or a larger aperture telescope is needed to see it well. It is not near any bright stars. (I star hopped

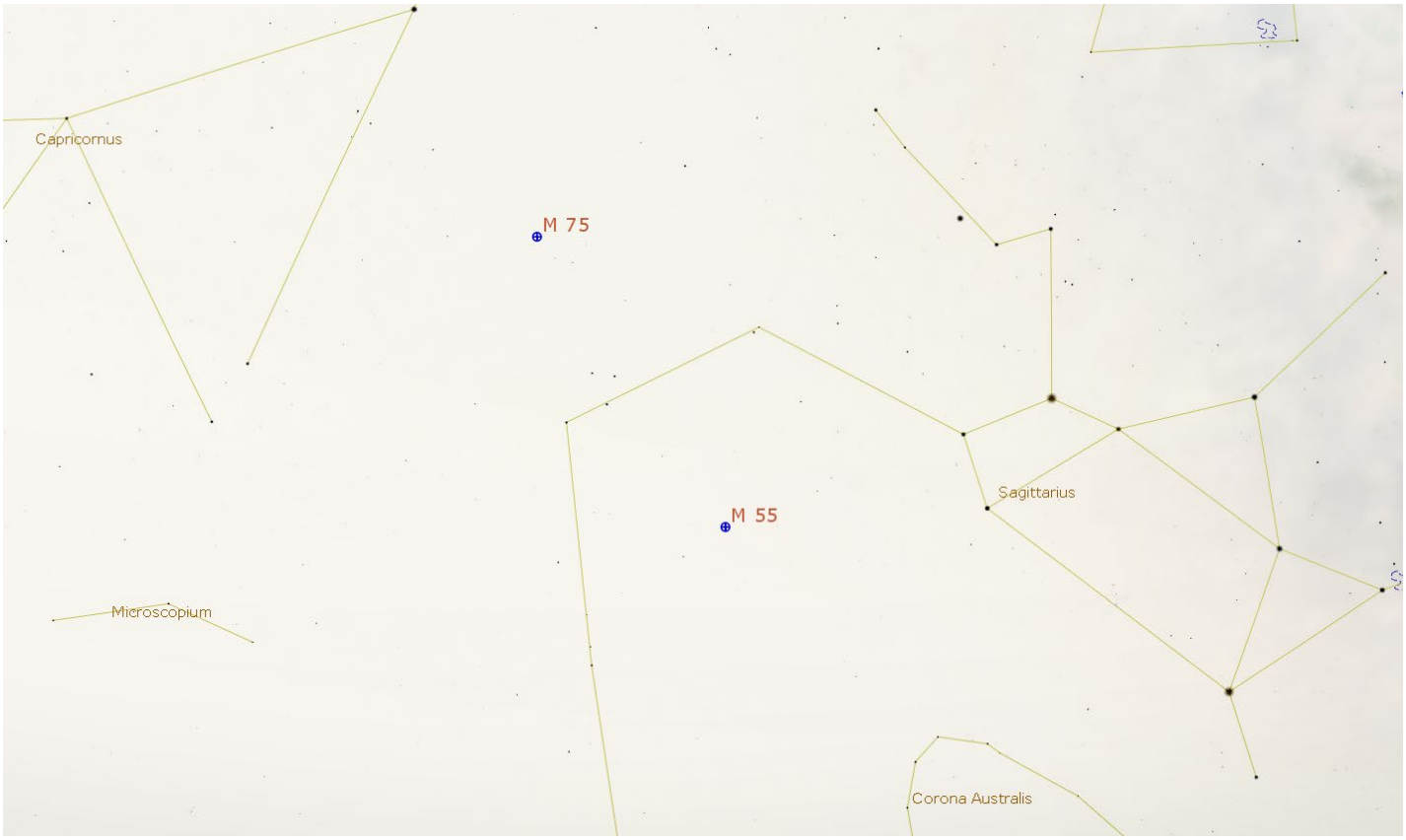
to it using a low power eyepiece all the way from Dabih.) To find it faster, try doubling the line from Al Nasl (Teapot spout) to Namalsadirh II (Tau Sgr) and slew a little north. The core is too collapsed to resolve the stars. Can you tell? Note the shape and any unusual stars. A very far 67,500 l-y away!

Target Finder Charts:

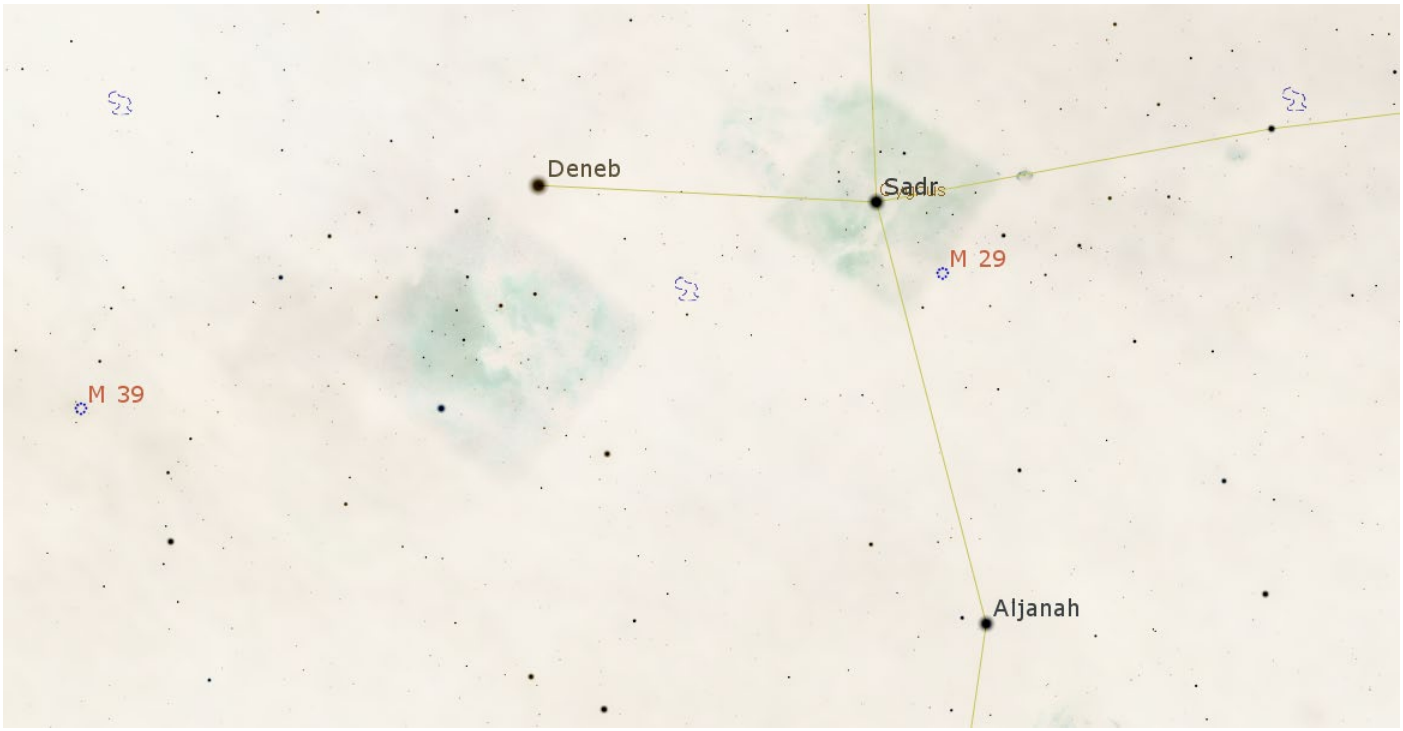
Overview of Targets (minus M55 & M75) -



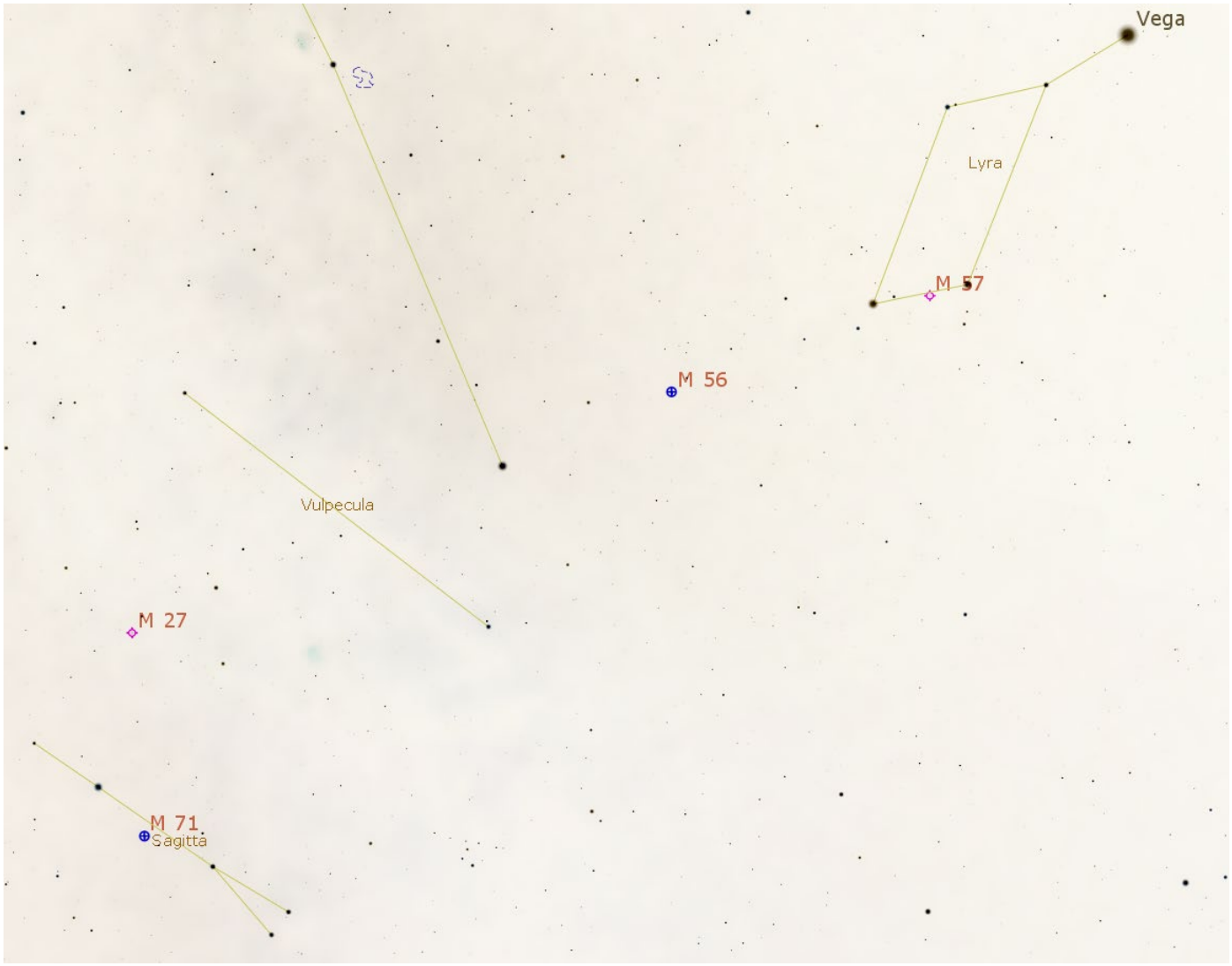
M55 & M75 Closer View –



M39 & M29 Closer View –

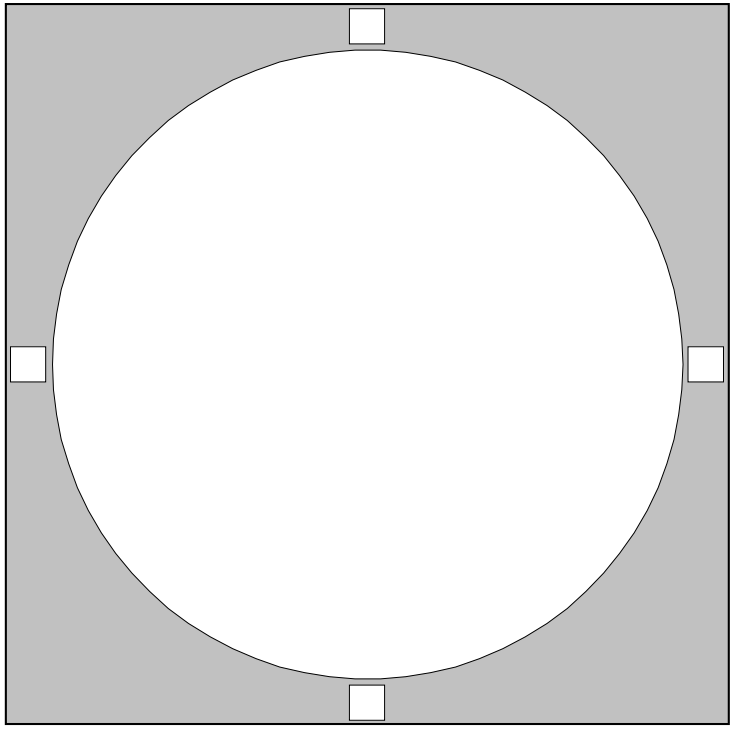


M71, M27, M56, & M57 Closer View –



RASC Messier Objects - M55

Messier Object	**M55**		
NGC	**6809**		
Constellation	**Sagittarius**		
Type	**Globular Cluster**		
Magnitude	**6.4**		
Distance (Kilo light-years)	**17.6**		
RA	**19 40.0**		
Dec	**-30:58**		
Size	**19.0'**		
UM I	UM II	**379,380**	**162**
SA	**22, 23**		
Remarks	**bright, loose globular cluster**		
Time (hh:mm)			
Seeing	1 2 3 4 5		
Transparency	1 2 3 4 5		
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

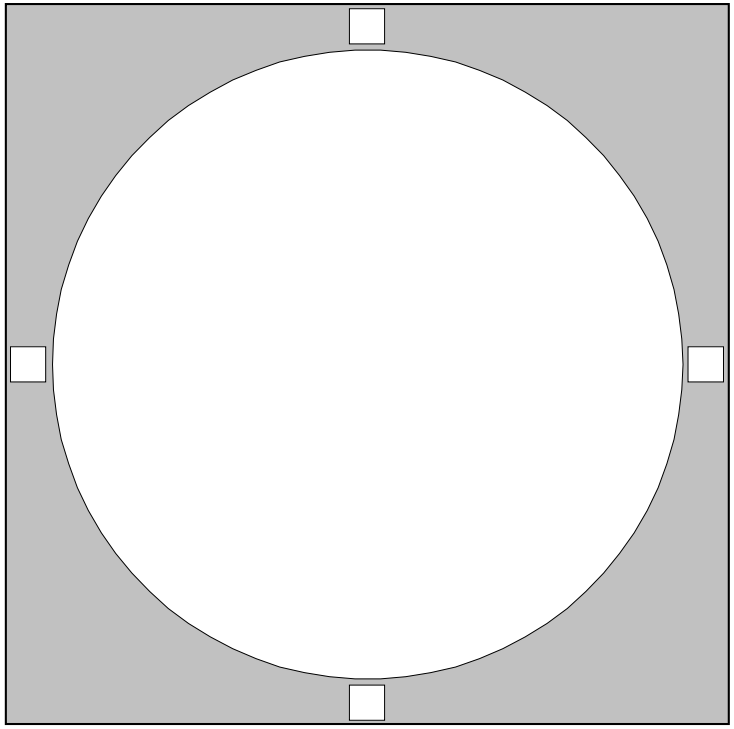


Notes

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

RASC Messier Objects - M29

Messier Object	**M29**		
NGC	**6913**		
Constellation	**Cygnus**		
Type	**Open Cluster**		
Magnitude	**6.6**		
Distance (Kilo light-years)	**4.0**		
RA	**20 23.9**		
Dec	**+38:32**		
Size	**6.0'**		
UM I	UM II	**84,85,119,120**	**48,A2**
SA	**8, 9**		
Remarks	**small, poor open cluster two degrees south of Gamma Cygni**		
Time (hh:mm)			
Seeing	1 2 3 4 5		
Transparency	1 2 3 4 5		
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



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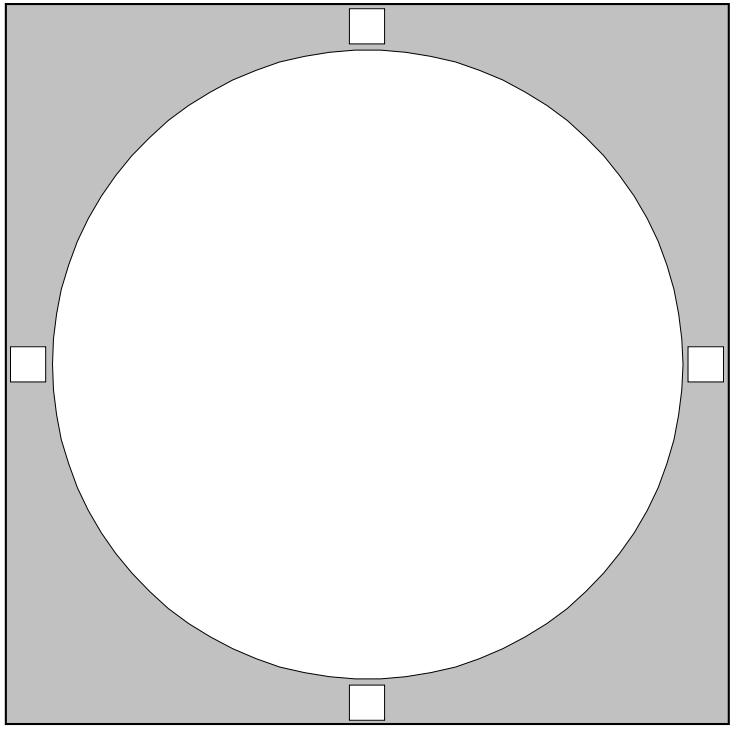
RASC Messier Objects - M57

Ring Nebula

Messier Object	**M57**		
NGC	**6720**		
Constellation	**Lyra**		
Type	**Planetary Nebula**		
Magnitude	**8.8**		
Distance (Kilo light-years)	**2.3**		
RA	**18 53.6**		
Dec	**+33:02**		
Size	**> 1' 11"**		
UM I / UM II	**117**	**49**	
SA	**8**		
Remarks	**!! Ring Nebula; an amazing smoke ring**		
Time (hh:mm)			
Seeing	1 2 3 4 5		
Transparency	1 2 3 4 5		
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



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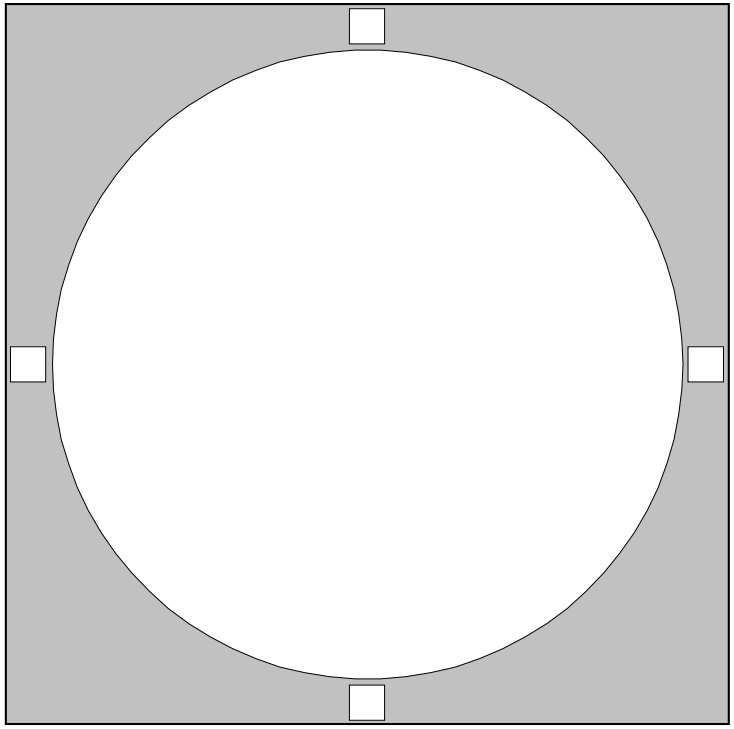
RASC Messier Objects - M56

Messier Object	**M56**		
NGC	**6779**		
Constellation	**Lyra**		
Type	**Globular Cluster**		
Magnitude	**8.3**		
Distance (Kilo light-years)	**32.9**		
RA	**19 16.6**		
Dec	**+30:11**		
Size	**7.1'**		
UM I	UM II	**118**	**48,49**
SA	**8**		
Remarks	**within a rich dark field**		
Time (hh:mm)			
Seeing	1 2 3 4 5		
Transparency	1 2 3 4 5		
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



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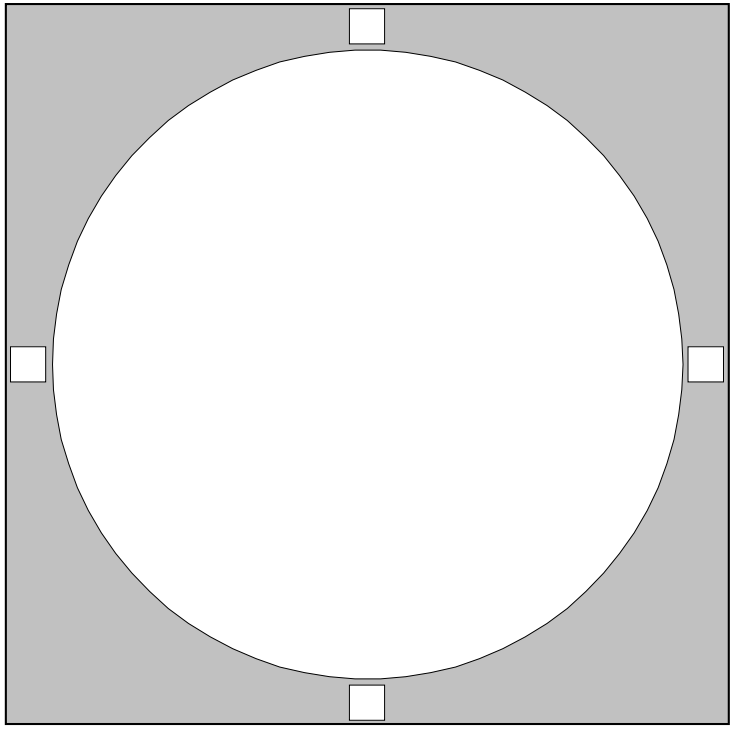
RASC Messier Objects - M27

Dumbbell Nebula

Messier Object	**M27**		
NGC	**6853**		
Constellation	**Vulpecula**		
Type	**Planetary Nebula**		
Magnitude	**7.3**		
Distance (Kilo light-years)	**1.25**		
RA	**19 59.6**		
Dec	**+22:43**		
Size	**> 5' 48"**		
UM I	UM II	**162,163**	**66**
SA	**8, 9**		
Remarks	**!! Dumbbell Nebula; a superb object**		
Time (hh:mm)			
Seeing	1 2 3 4 5		
Transparency	1 2 3 4 5		
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



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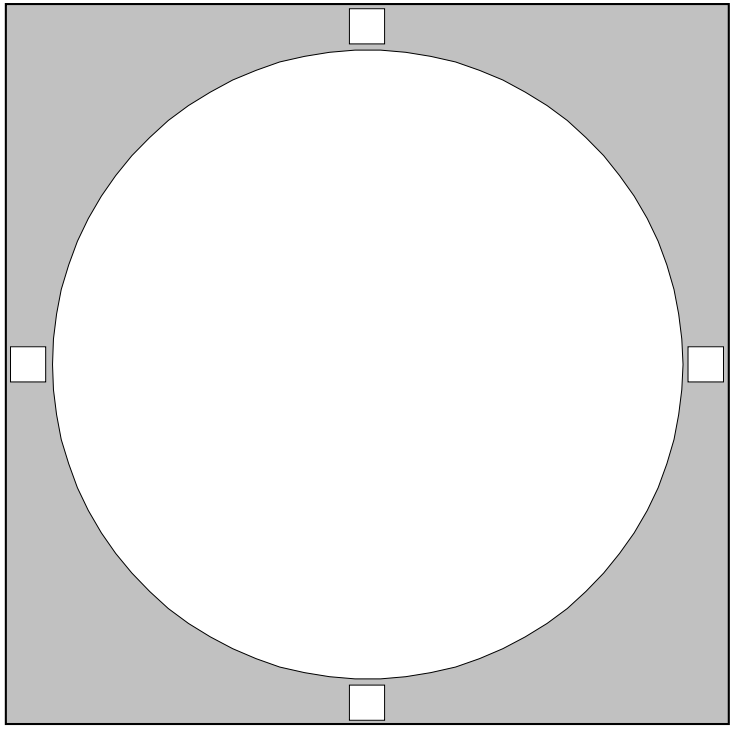
RASC Messier Objects - M71

Messier Object	**M71**		
NGC	**6838**		
Constellation	**Sagitta**		
Type	**Globular Cluster**		
Magnitude	**8.0**		
Distance (Kilo light-years)	**12.7**		
RA	**19 53.8**		
Dec	**+18:47**		
Size	**7.2'**		
UM I	UM II	**162**	**66**
SA	**8, 16**		
Remarks	**loose globular; looks like and open cluster**		
Time (hh:mm)			
Seeing	1 2 3 4 5		
Transparency	1 2 3 4 5		
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



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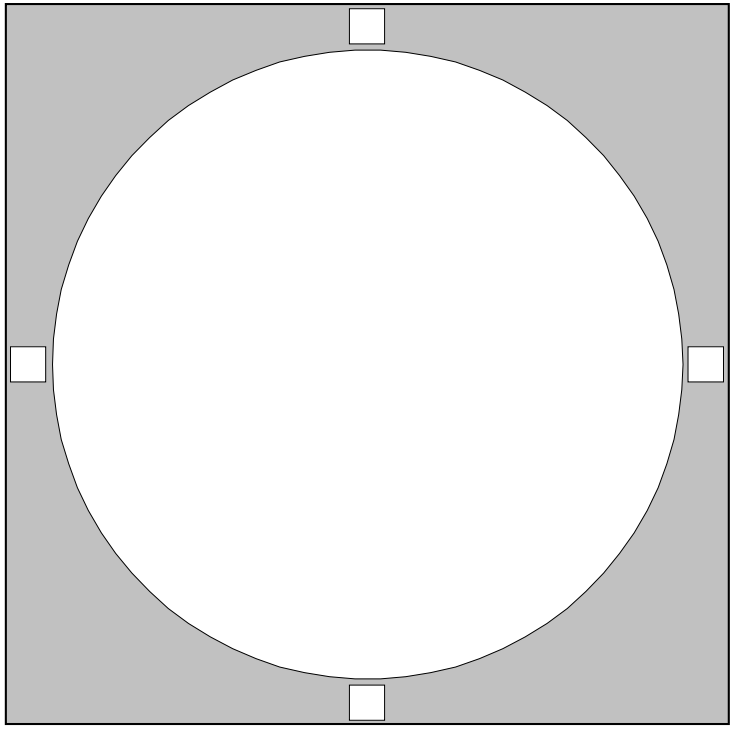
RASC Messier Objects - M39

Messier Object	**M39**		
NGC	**7092**		
Constellation	**Cygnus**		
Type	**Open Cluster**		
Magnitude	**4.6**		
Distance (Kilo light-years)	**0.825**		
RA	**21 32.2**		
Dec	**+48:26**		
Size	**31.0'**		
UM I	UM II	**86**	**32**
SA	**9**		
Remarks	**very sparse cluster; use low power**		
Time (hh:mm)			
Seeing	1 2 3 4 5		
Transparency	1 2 3 4 5		
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



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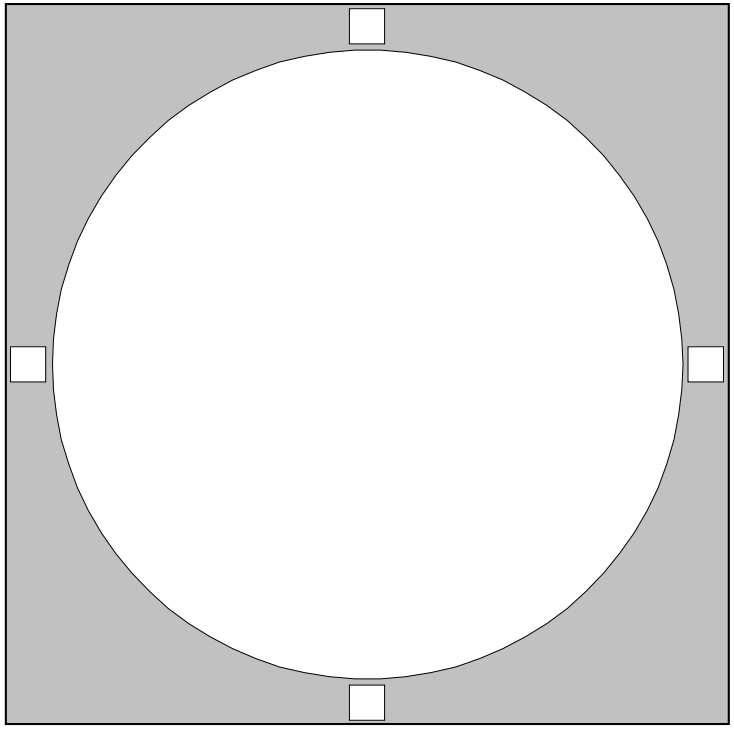
RASC Messier Objects - M75

Messier Object	**M75**		
NGC	**6864**		
Constellation	**Sagittarius**		
Type	**Globular Cluster**		
Magnitude	**8.5**		
Distance (Kilo light-years)	**59.0**		
RA	**20 06.1**		
Dec	**-21:55**		
Size	**6.0'**		
UM I	UM II	**343**	**144**
SA	**22, 23**		
Remarks	**small and distant; 59 000 ly away**		
Time (hh:mm)			
Seeing	1 2 3 4 5		
Transparency	1 2 3 4 5		
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



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