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

Messier Minutes

a guide to completing RASC's Messier Observing Certificate

Part 4 -

March 15th – 28th, 2022

The following pages include a list of objects discussed in the March 15th, 2022, episode of Messier Minutes. Including finder charts and log pages.

List of Targets Discussed:

Evening Targets (after 9 pm)

March 15 is almost the full moon. In the evening (after 9 pm) catch bright Messiers:

Messier #	Constellation	Magnitude	Type	NGC	Name
44	Cnc	3.1	OC	2632	Beehive/Praesepe Cluster
40	UMa	8.0	DS	-	Winnecke 4
67	Cnc	6.9	OC	2682	Golden-Eye/Pac-man Cluster
81	UMa	6.9	SG	3031	Bode's Galaxy
82	UMa	8.4	IG	3034	Cigar Galaxy/Arp 337
97	UMa	9.9	PN	3587	Owl Nebula
108	UMa	10.7	SG	3556	Surfboard Galaxy
109	UMa	10.6	SG	3992	Vacuum Cleaner Galaxy
106	CVn	8.4	SG	4258	PGC 39600

Notes:

M44:

Easy dark sky naked eye, binoculars, any telescope. Twice size of full moon! Above/between Regulus and Procyon, just to upper right (west) of midpoint between Asellus Australis (Delta Cnc) and Asellus Borealis (Gamma Cnc). Count brighter stars, note ones that differ, close pairs, etc. Use low power!

M40:

Any telescope. Located 1.5 degrees northeast of Megrez (inner rim star of Big Dipper's bowl). Maybe an accident? Some people consider nearby galaxy NGC 4290 to the west to be the true Messier 40

M67:

Hard naked eye, but binoculars and any telescope. Well south of M44, 3 degrees above midpoint between Regulus and Procyon, in the region north of Hydra's head (Zeta, Rho, Epsilon, and Delta Hya). Count brighter stars, look for different stars, golden eye, overall shape

Get an early start on brighter, easier galaxies near zenith now, or wait for dark skies starting around March 24

M81:

Small telescope and maybe binoculars. Bright enough for the suburbs. Big spiral galaxy is partly tilted. Double the line drawn from Phecda to Dubhe across dipper's bowl. Telescope-close to fainter, smaller M82. Can look for tiny NGC3077 galaxy to SE

M82:

Target for small telescopes. Bright enough for the suburbs. Small edge-on spiral galaxy. Double the line drawn from Phecda to Dubhe across dipper's bowl. Telescope-close to brighter, larger M81, but closer to Polaris. Look for distortions

M97:

Larger telescope and/or very dark skies helps, plus higher magnification. Put telrad rings on the Phecda side of Merak and almost a degree under the dipper's pan. Use an OIII nebula to brighten and enhance it. Look for shape and the "eyes". Telescope-close to M108

M108:

Larger telescope and/or very dark skies helps. Only 1.5° from Merak on line to Phecda. Nearly edge-on, so good surface brightness. Look for structure/non-uniformity. Telescope-close to M97 Owl Nebula

M109:

Larger telescope and/or very dark skies helps. Telescope-close to Phecda, towards the southeast (i.e., along handle end of Dipper's pan). Small, but pretty. Use averted vision. Look for arms, overall shape.

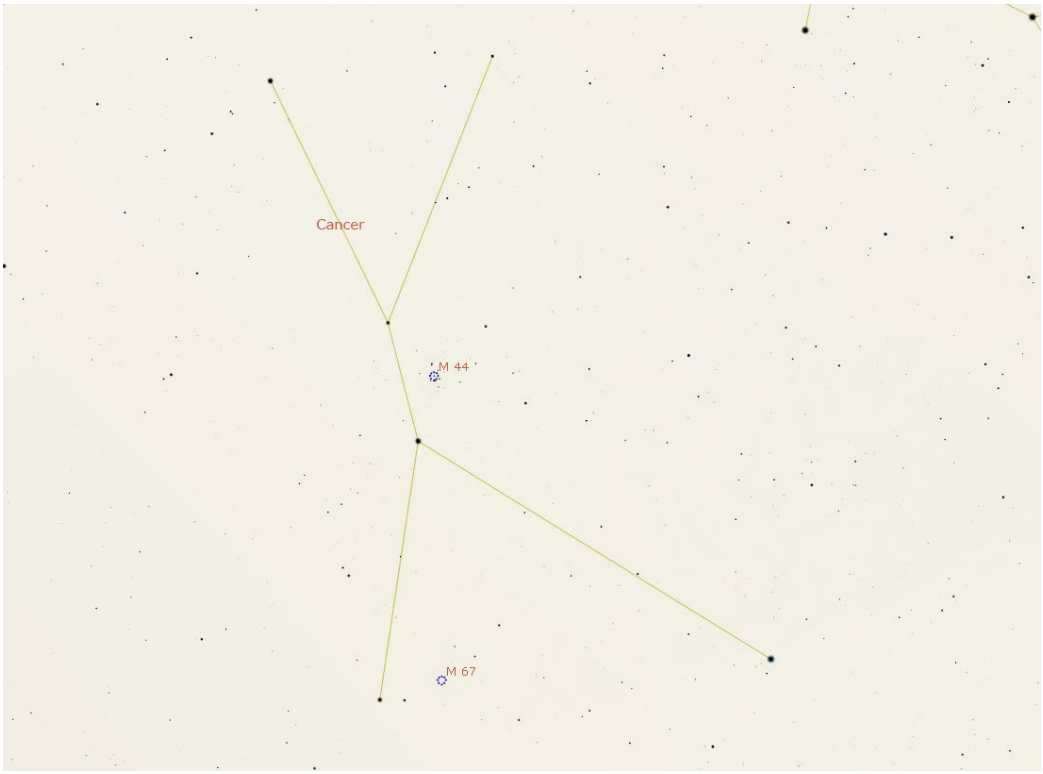
M106:

Target for small telescopes. Bright enough for the suburbs. Large, partially open spiral. Double the line drawn from Dubhe to Phecda across dipper's bowl. Watch for arm structure, overall shape, nearby small galaxies

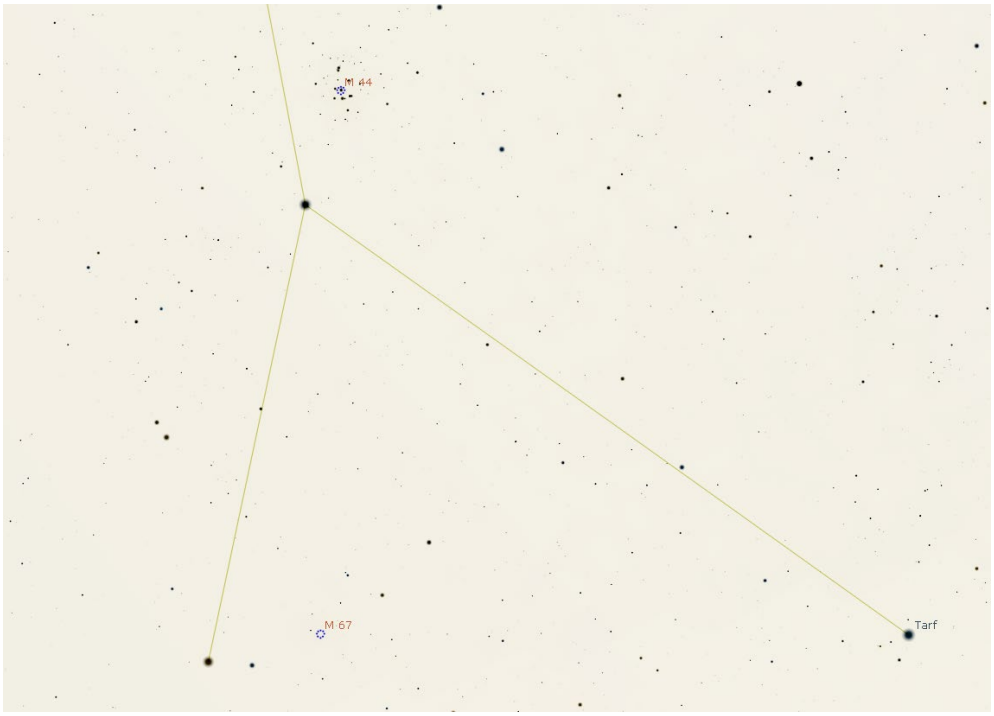
Early Evening Targets Finder Charts:

Overview of Targets (not including M44 & M67) –

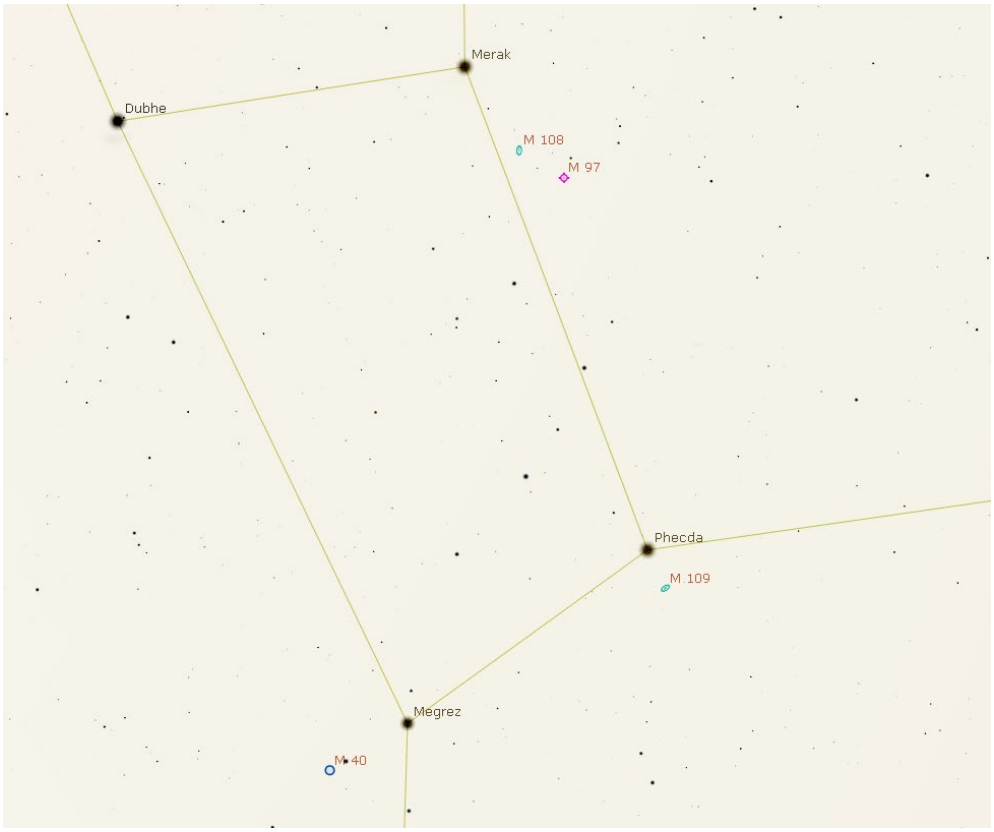
Overview of M44 & M67 –



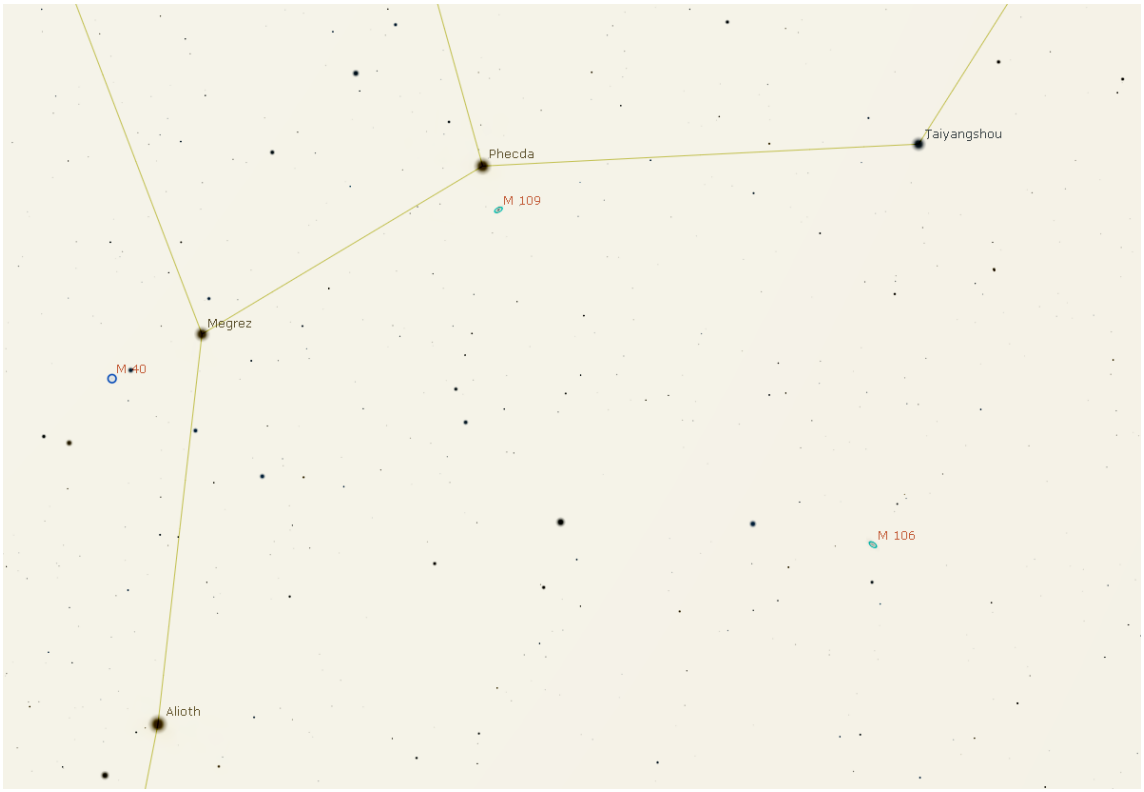
M44 & M67 Closer View –



M40, M97, M108, M109 Closer View –



M106 Closer View –

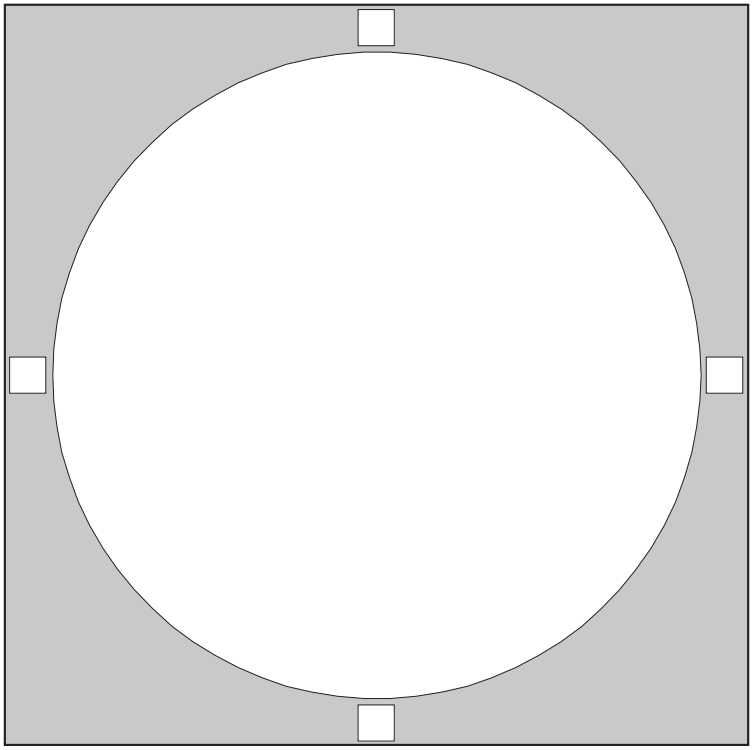


M81 & M82 Closer View –

RASC Messier Objects - M40

Winnecke 4

Messier Object	**M40**		
NGC	**Win4**		
Constellation	**Ursa Major**		
Type	**Double star**		
Magnitude	**8.0**		
Distance (Kilo light-years)	**0.51**		
RA	**12 22.4**		
Dec	**+58:05**		
Size			
UM I	UM II	**47**	**24**
SA	**2**		
Remarks	**double star Winnecke 4; seperation 50 seconds**		
Time (hh:mm)			
Seeing	1 2 3 4 5		
Transparency	1 2 3 4 5		
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



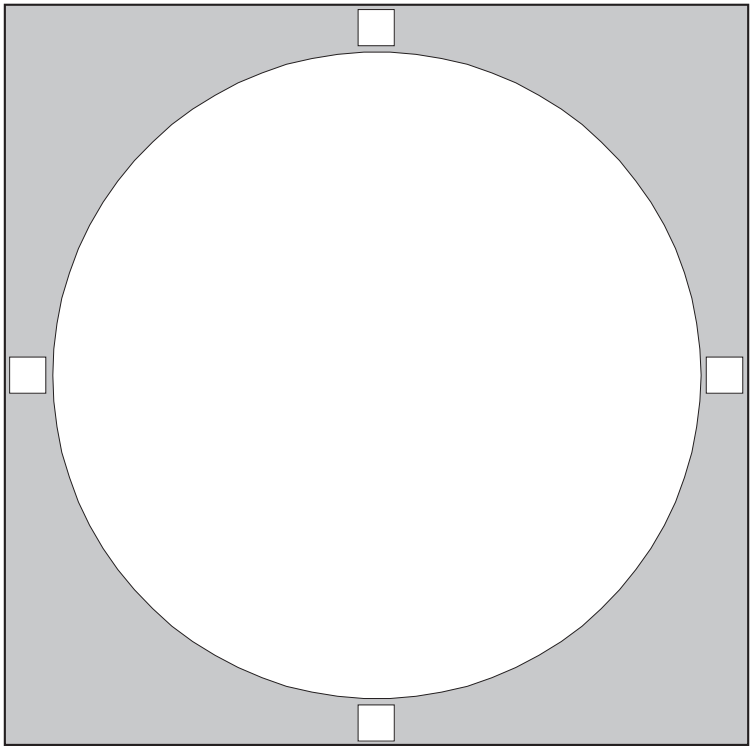
Notes

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 - M44

Beehive Cluster. Praesepe

Messier Object	**M44**		
NGC	**2632**		
Constellation	**Cancer**		
Type	**Open Cluster**		
Magnitude	**3.1**		
Distance (Kilo light-years)	**0.577**		
RA	**08 40.1**		
Dec	**+19:59**		
Size	**95'**		
UM I	UM II	**141**	**74,75**
SA	**6, 12**		
Remarks	**!! Beehive or Praesepe; 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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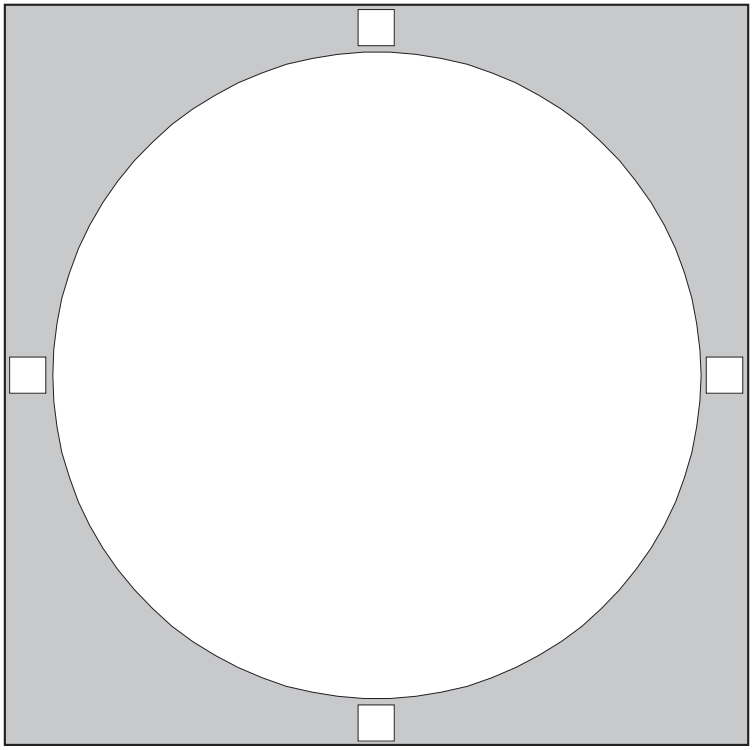
RASC Messier Objects - M67

Messier Object	**M67**		
NGC	**2682**		
Constellation	**Cancer**		
Type	**Open Cluster**		
Magnitude	**6.9**		
Distance (Kilo light-years)	**2.7**		
RA	**08 50.4**		
Dec	**+11:49**		
Size	**29'**		
UM I	UM II	**186,187**	**94**
SA	**12**		
Remarks	**one of the oldest start clusters known**		
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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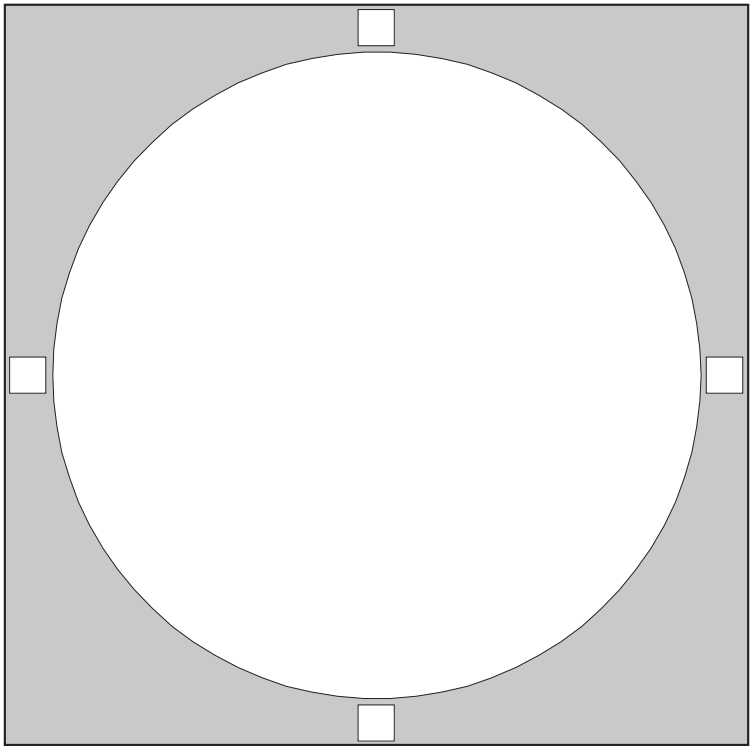
RASC Messier Objects - M81

Bode's Galaxy

Messier Object	**M81**		
NGC	**3031**		
Constellation	**Ursa Major**		
Type	**Spiral Galaxy (G-SAab)**		
Magnitude	**6.9**		
Distance (Kilo light-years)	**12000**		
RA	**09 55.6**		
Dec	**+69:04**		
Size	**24' x 13'**		
UM I	UM II	**23**	**14**
SA	**1, 2**		
Remarks	**!! bright spiral visible in binoculars**		
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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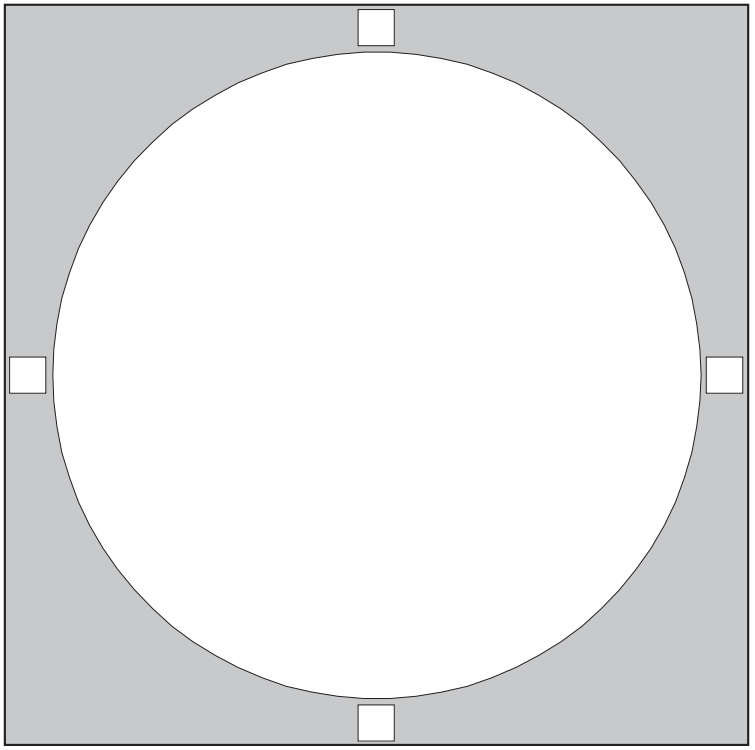
RASC Messier Objects - M82

Cigar Galaxy

Messier Object	**M82**		
NGC	**3034**		
Constellation	**Ursa Major**		
Type	**Irregular Galaxy (G-I0)**		
Magnitude	**8.4**		
Distance (Kilo light-years)	**12000**		
RA	**09 55.8**		
Dec	**+69:41**		
Size	**12' x 6'**		
UM I	UM II	**23**	**14**
SA	**1, 2**		
Remarks	**!! the "exploding" gallaxy; M81 1/2 degree south**		
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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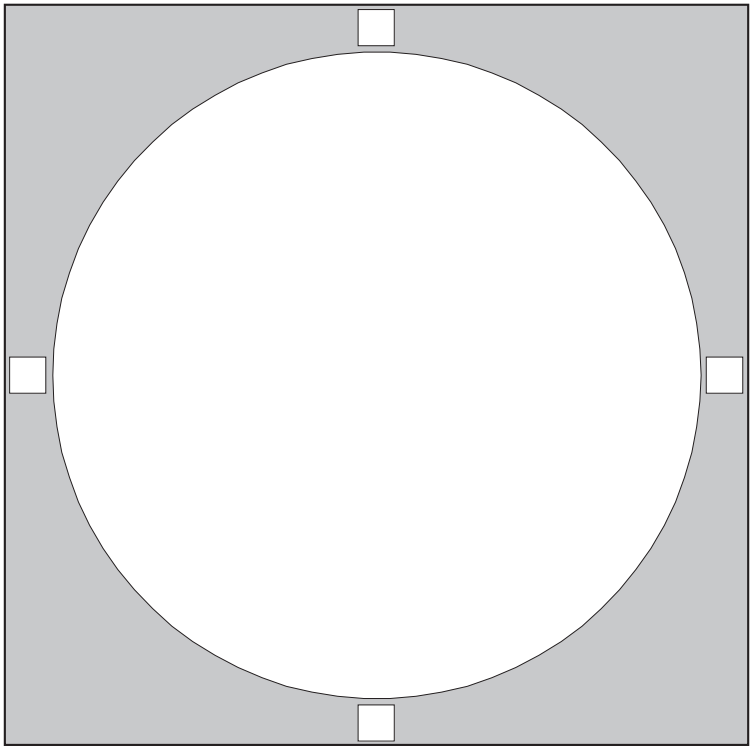
RASC Messier Objects - M97

Owl Nebula

Messier Object	**M97**		
NGC	**3587**		
Constellation	**Ursa Major**		
Type	**Planetary Nebula**		
Magnitude	**9.9**		
Distance (Kilo light-years)	**2.6**		
RA	**11 14.8**		
Dec	**+55:01**		
Size	**3' 14"**		
UM I	UM II	**46**	**24**
SA	**2, 6**		
Remarks	**!! Owl Nebula; distinct grey oval**		
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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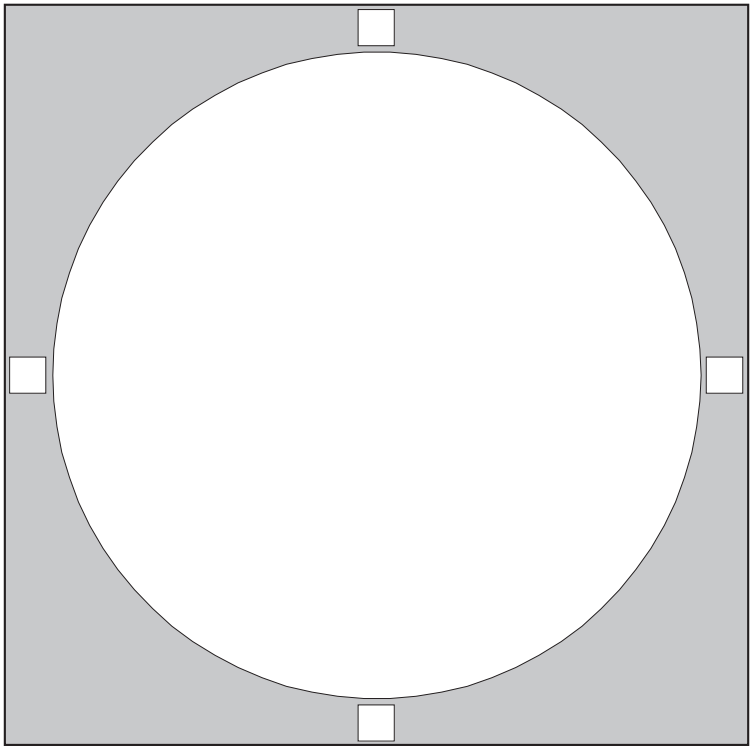
RASC Messier Objects - M108

Messier Object	**M108**		
NGC	**3556**		
Constellation	**Ursa Major**		
Type	**Spiral Galaxy (G-SBcd)**		
Magnitude	**10.0**		
Distance (Kilo light-years)	**45000**		
RA	**11 11.5**		
Dec	**+55:40**		
Size	**8.1' x 2.1'**		
UM I	UM II	**46**	**24**
SA	**2, 6**		
Remarks	**nearly edge-on; paired with M97 3/4 degree south east**		
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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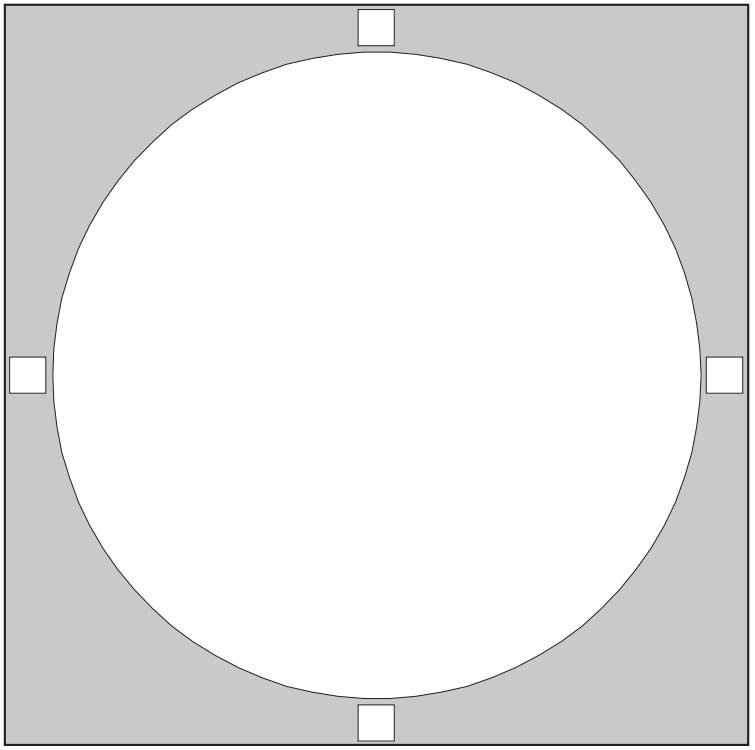
OC: Open Cluster	E/RN: Diffuse emission and reflection Nebula	Date: Specify Time Zone or UT	http://www.rasc.ca

RASC Messier Objects - M109

Messier Object	**M109**		
NGC	**3992**		
Constellation	**Ursa Major**		
Type	**Spiral Galaxy (G-SBbc)**		
Magnitude	**9.8**		
Distance (Kilo light-years)	**55000**		
RA	**11 57.6**		
Dec	**+53:23**		
Size	**7.6' x 4.3'**		
UM I	UM II	**47**	**24**
SA	**2, 6, 7**		
Remarks	**barred spiral near Gamma UMa**		
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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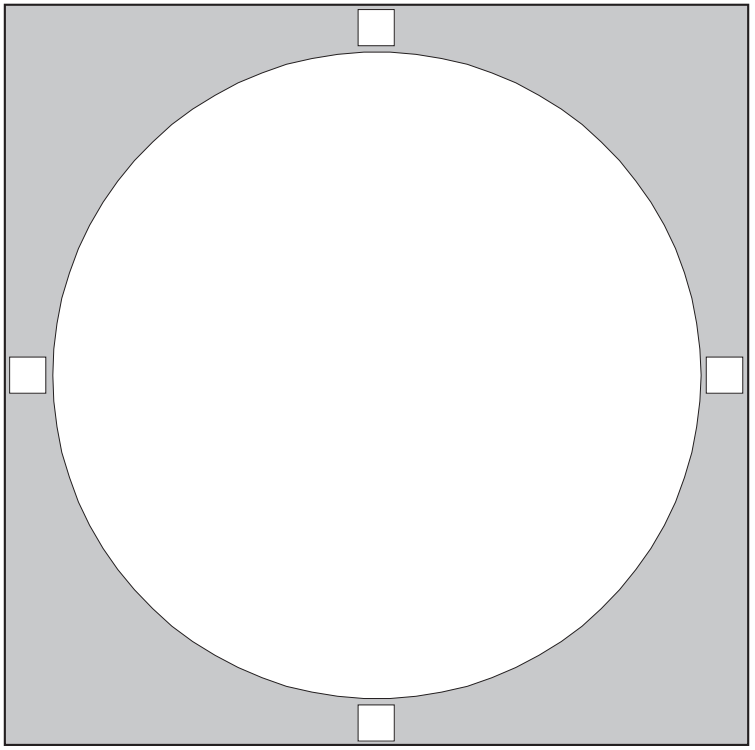
RASC Messier Objects - M106

Messier Object	**M106**		
NGC	**4258**		
Constellation	**Canes Venatici**		
Type	**Spiral Galaxy (G-SABbc)**		
Magnitude	**8.4**		
Distance (Kilo light-years)	**25000**		
RA	**12 19.0**		
Dec	**+47:18**		
Size	**20.0' x 8.0'**		
UM I	UM II	**74,75**	**37**
SA	**2, 6, 7**		
Remarks	**!! Superb large. bright spiral**		
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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