

My Messier Album

A detailed record of my journey through the Royal Astronomical Society of Canada's Messier list

Name: _____ **Centre or Home Location:** _____

The Messier Catalogue was developed in the 1700's by Charles Messier (1730 - 1817). Messier was a comet hunter working with speculum metal reflectors and small refractors that were the equivalent of a modern 80 - 100 mm reflector. As a result of the limited tools that he had to work with, he could not see the true nature of many of his "faint fuzzies" that are revealed in today's modern instruments. Once you have observed all of the objects on this list application forms can be found on the RASC website at www.rasc.ca. The Messier Certificate has been awarded since 1981.

Here is an overview of the Messier Observing List

Messier Objects	Number	Notes
Open Clusters	28	Includes many beautiful open clusters like M6, M7, The Beehive, The Pleiades and The Wild Duck.
Globular Clusters	29	Includes the showpiece objects M13, M22, M5 and M3.
Bright Nebulae	8	Includes the great Orion Nebula as well as the Lagoon, Swan, Eagle and Trifid Nebulae.
Planetary Nebulae	4	Includes the impressive Ring Nebula as well as the Dumbbell and Owl planetary nebulae.
Galaxies	40	Includes the amazing Andromeda Galaxy as well as M51, M33, M81/M82 and many others.
Double Stars	1	This is M40, an unusual Messier object.
Total	110	The Messier list can be started during any season.

Why Record Your Observations?

Recording observations is important for two reasons. It gives you a permanent record of all the great times you had while observing and recording scientific details of an observation can help researchers.

Recording Observations Overview

Very few, if any, astronomers remember everything that they have observed through the years, and for that reason alone it is wise to keep a record of your observations. Many experienced astronomers have commented on how much they enjoy looking through their logbooks and recalling the many precious memories that are contained there. It is truly worth the effort to write down your observations.

How to Record Observations

One of the most practical ways of recording observations is to have a template form completed ahead of time that contains all of the known data, like the object's name, number, location, size, magnitude, and so on. You then simply write down your description of the object in the space provided, and then use the time saved to explore other treasures in the night sky. The template can also include an area to make a drawing. The Messier Album has all of those features

Drawing at the Eyepiece

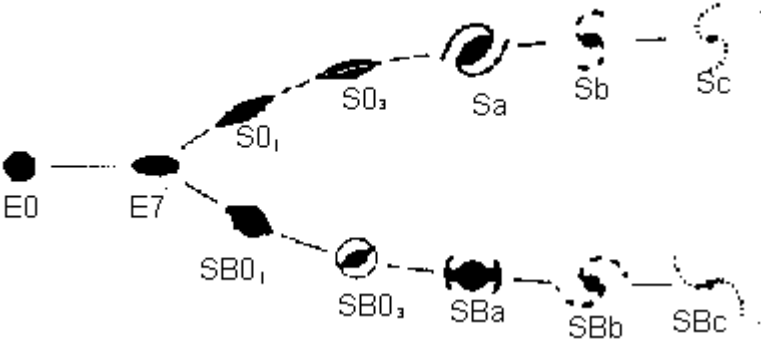
Drawing at the eyepiece can be a very rewarding experience for all the same reasons as making notes. The added bonus of a drawing is that it will clearly show what you saw to other people who may visualize a text description differently than you. Drawing is also the best way to learn how to see the fine detail in the astronomical objects you observe.

How to qualify for the Certificate

All of the objects in the Messier list have to be found by the certificate applicant without assistance from other observers. Many new telescopes are being sold with built-in "Go To" systems and while they are very useful for people who are trying to see many objects in a short time, the "Go To" approach does not allow for the full development of observing skills and abilities. By their very nature

they eliminate the challenge that the certificate recognizes and that is the ability to seek out and find astronomical objects using only your eyes, finder scope and star charts (all directed by an inquisitive mind). As a result, observations made with "Go To" telescopes, while fine for learning about the night sky, are not eligible for RASC Observing Certificates. The only exception may be to turn off the "Go To" system while doing your certificate list.

Description of fields on the log forms

FIELD	DESCRIPTION
NGC Number:	This is the New General Catalogue designation that consists of a 1-4 digit number.
IC Number:	This is the Index Catalogue designation that is a supplement to the New General Catalogue.
Constellation:	These are the official three letter designations for the 88 recognized constellations.
Type:	<p>PN = Planetary Nebula. OC = Open Cluster. GC = Globular Cluster. SNR = Supernova Remnant. EN= Emission Nebula. RN = Reflection Nebula. E/RN = Emission and Reflection Nebula. G = Galaxies as per diagram below:</p> 

Description of fields on the log forms (continued)

FIELD	DESCRIPTION
Visual Magnitude:	Apparent visual magnitude is a measurement of the objects brightness as seen using average human eyesight.
Size:	Dimensions of an object using degrees, minutes of arc (1/60 degree) and seconds of arc (1/60 minute.)
Distance:	Distance of object measured in light years. Note that these are estimates and sources of this data can vary.
R.A. (Epoch 2000.0):	Coordinates in Right Ascension, divided into 24 hourly sections as they rise in the east.
Dec. (Epoch 2000.0):	Coordinates in Declination as measured +90 degrees north and -90 degrees south of the celestial equator.
UM I:	Map number where you can find the object in the first edition of Uranometria 2000.
UM II:	Map number where you can find the object in the second edition of Uranometria 2000.
Sky Atlas 2000:	Map number where you can find the object in Sky Atlas 2000.
Season:	Season of the year when the object is best seen after dusk.
Remarks:	Brief description of the object and some key observing tips.
Date:	Field for recording the date of the observation.
Time:	Field for recording the time of the observation. Please specify Time Zone or Universal Time.
Seeing:	Place a circle around or an X on top of one number that best describes the stability of the atmosphere. 1 = Best 2 = Above Average 3 = Average 4 = Below Average 5 = Poor Note: A somewhat hazy sky may provide good seeing; therefore use this for measuring stability only.
Transparency:	Place a circle around or an X on top of one number that best describes how clear the sky is. 1 = Best 2 = Above Average 3 = Average 4 = Below Average 5 = Poor Note: A crystal clear sky may provide less than perfect seeing; therefore use this for measuring clarity only.
Telescope:	Field for recording the aperture and type of telescope used. Example: 25 cm reflector.
Eyepiece:	Field for recording the focal length and type of eyepiece used. Example: 17mm Plossel.
Magnification:	Field for recording the magnification of the telescope/eyepiece combination used. Magnification equals the focal length of the telescope as measured in millimeters divided by the focal length of the eyepiece in millimeters. To calculate the focal length of your telescope in millimetres, use this formula: (Aperture in inches multiplied by the focal ratio) then multiply by 25.4. For example an 8 inch aperture scope with a focal ratio of F6 would have a focal length of (8 x 6 = 48 inches) Conversion: 48 inches x 25.4 = 1219.2 mm.
Observing Location:	Field for recording the location of the observing site.

Credits for the development of these forms

This project began when Stan Runge of the Winnipeg Centre approached the Observing Committee in regards to creating some detailed observing forms that would be specific to the RASC Messier and Finest NGC lists. He then presented prototypes that were made in conjunction with members of the Saskatoon Centre. The committee was impressed and we very much liked the idea that was presented. Soon after that work started on the project and during the time frame from autumn 2002 to spring 2004, as time allowed, we proceeded to further develop the forms and to provide enhanced content.

Dan Williams of the London Centre and Christopher Fleming, Chair of the Committee worked together on many cloudy evenings to perfect the design as much as possible and to do the tedious work of entering the data for each object. Dan is a computer professional and he managed the various database, graphics and word processing software programs that were used to bring the whole project together. Christopher acted as the astronomical content advisor and source of the data for the objects as well as the reference material. We hope you enjoy the results of our efforts.

Clear Skies,

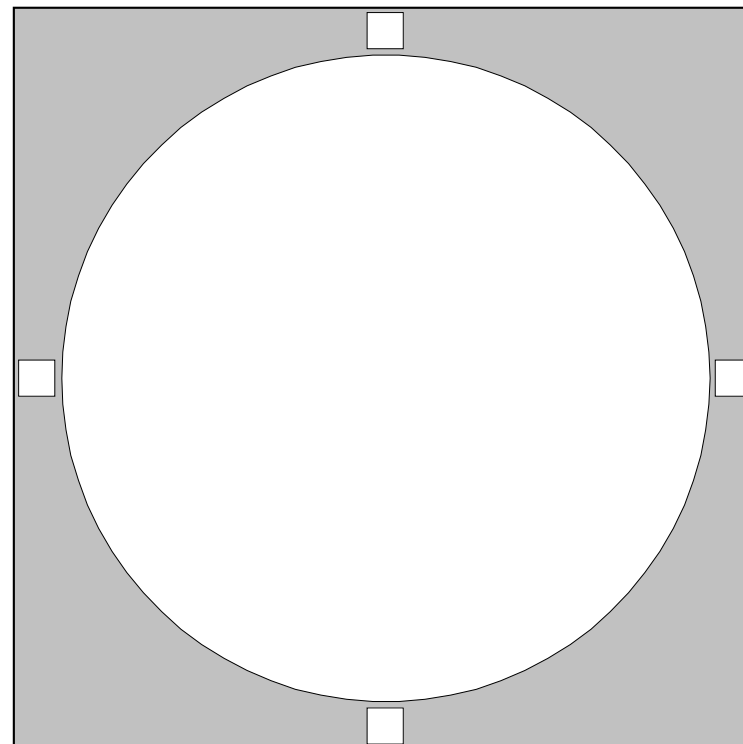
RASC Observing Committee,

Summer 2004

RASC Messier Objects - M1

Crab Nebula

Messier Object	M1		
NGC	1952		
Constellation	Taurus		
Type	Supernova Remnant		
Magnitude	8.4		
Distance (Kilo light-years)	6.3		
RA	05 34.5		
Dec	+22:01		
Size	6' x 4'		
UM I	UM II	135,136	77
	SA	16, 17	
Remarks	!! Famous Crab Nebula, Supernova Remnant		
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

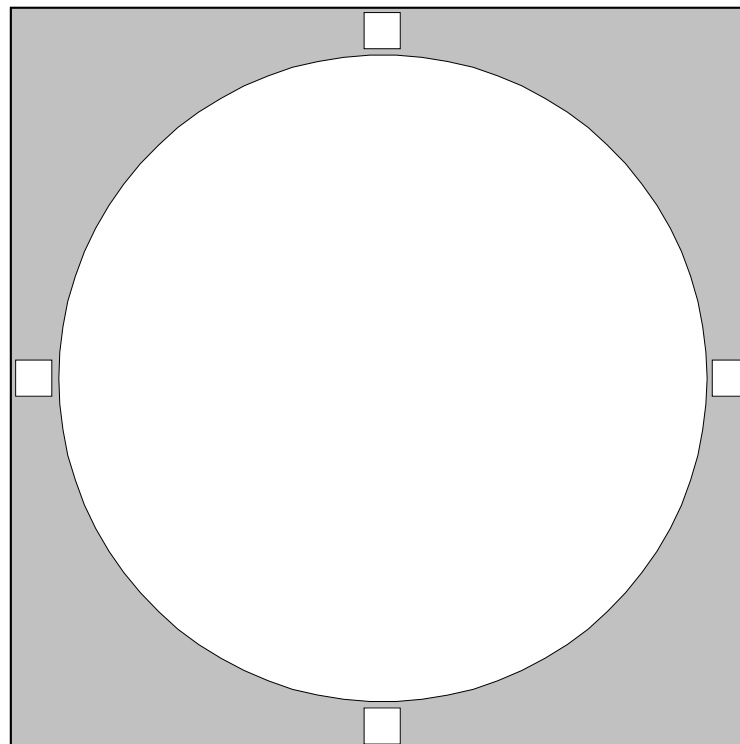
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

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RASC Messier Objects - M2

Messier Object	M2		
NGC	7089		
Constellation	Aquarius		
Type	Globular Cluster		
Magnitude	6.4		
Distance (Kilo light-years)	37.9		
RA	21 33.5		
Dec	-00:49		
Size	12.9		
UM I	UM II	255,256	103
	SA	7	
Remarks	200-mm telescope needed to resolve		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

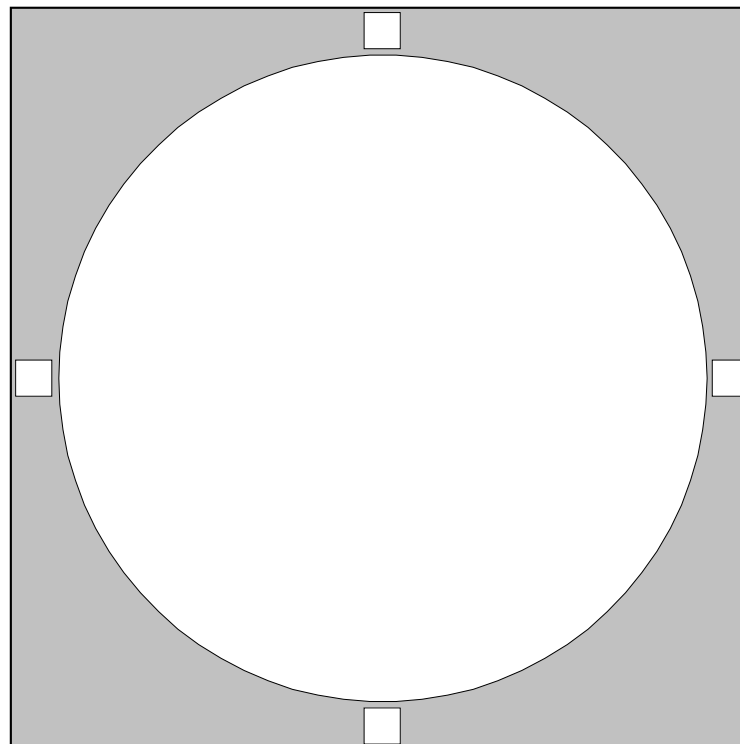
** p = Photographic Magnitude

*** !! = Showpiece Object

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RASC Messier Objects - M3

Messier Object	M3		
NGC	5272		
Constellation	Canes Venatici		
Type	Globular Cluster		
Magnitude	5.9		
Distance (Kilo light-years)	33.9		
RA	13 42.2		
Dec	+28:23		
Size	16.2'		
UM I	UM II	109,110,151	71
SA	22		
Remarks	!! contains many variable stars		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

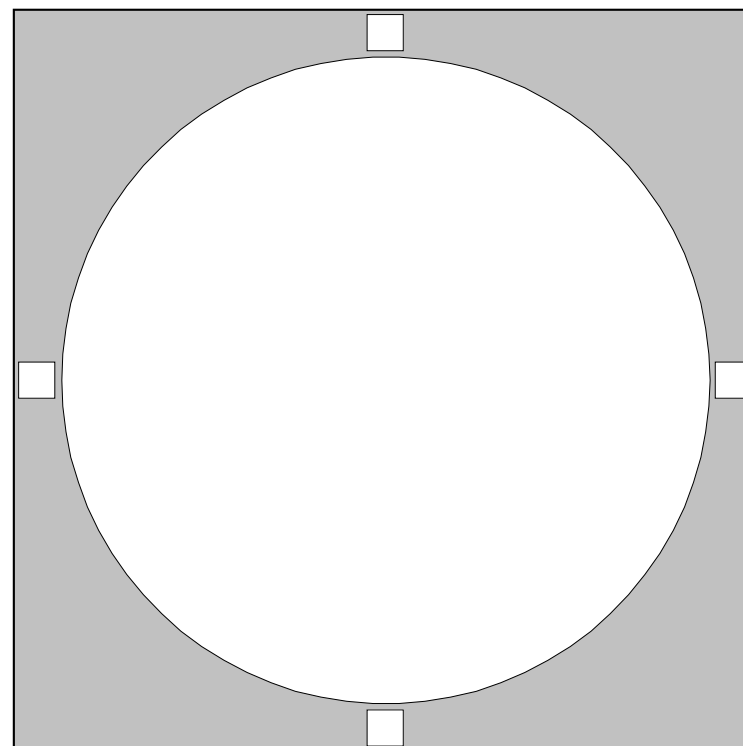


Notes

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 - M4

Messier Object	M4		
NGC	6121		
Constellation	Scorpius		
Type	Globular Cluster		
Magnitude	5.8		
Distance (Kilo light-years)	7.2		
RA	16 23.6		
Dec	-26:32		
Size	26.3'		
UM I	UM II	336	147
SA	4, 15		
Remarks	bright globular near Antares		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

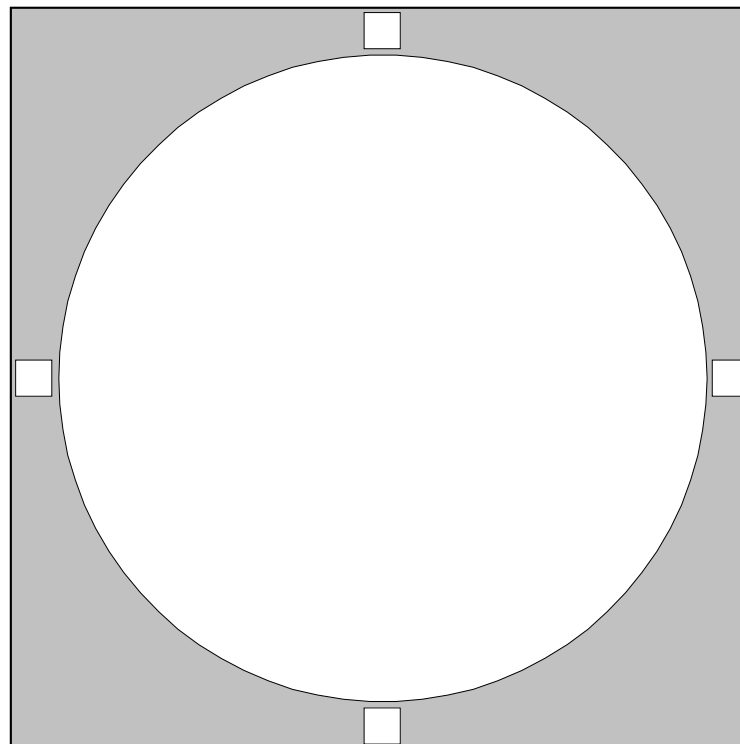
** p = Photographic Magnitude

*** !! = Showpiece Object

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RASC Messier Objects - M5

Messier Object	M5		
NGC	5904		
Constellation	Serpens		
Type	Globular Cluster		
Magnitude	5.7		
Distance (Kilo light-years)	24.5		
RA	15 18.6		
Dec	+02:05		
Size	17.4'		
UM I	UM II	244	108
SA	22		
Remarks	!! one of the sky's finest globulars		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

** p = Photographic Magnitude

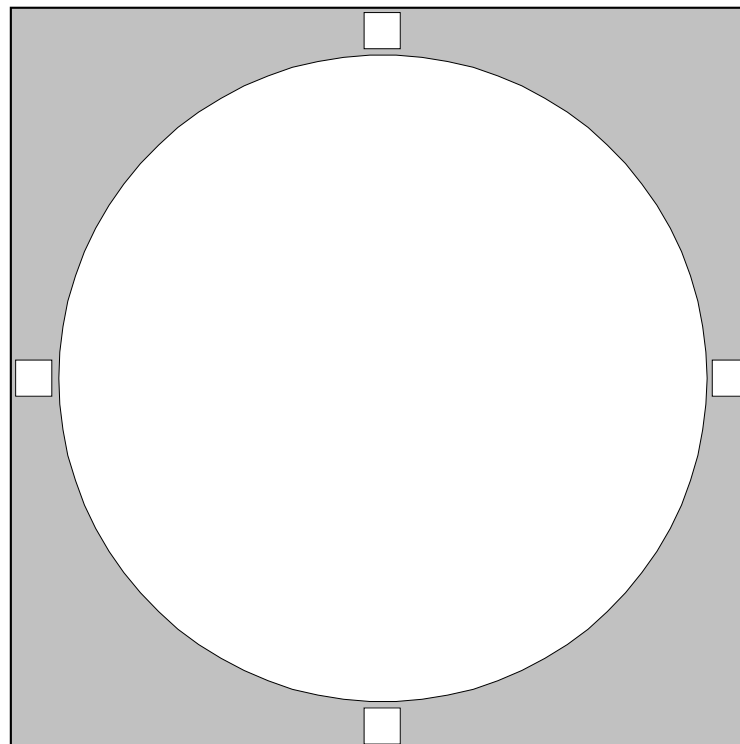
*** !! = Showpiece Object

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RASC Messier Objects - M6

Butterfly Cluster

Messier Object	M6		
NGC	6405		
Constellation	Scorpius		
Type	Open Cluster		
Magnitude	4.2		
Distance (Kilo light-years)	2		
RA	17 40.1		
Dec	-32:13		
Size	33.0'		
UM I	UM II	376,377	164,A20
SA	22		
Remarks	!! Butterfly Cluster; best at low power		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

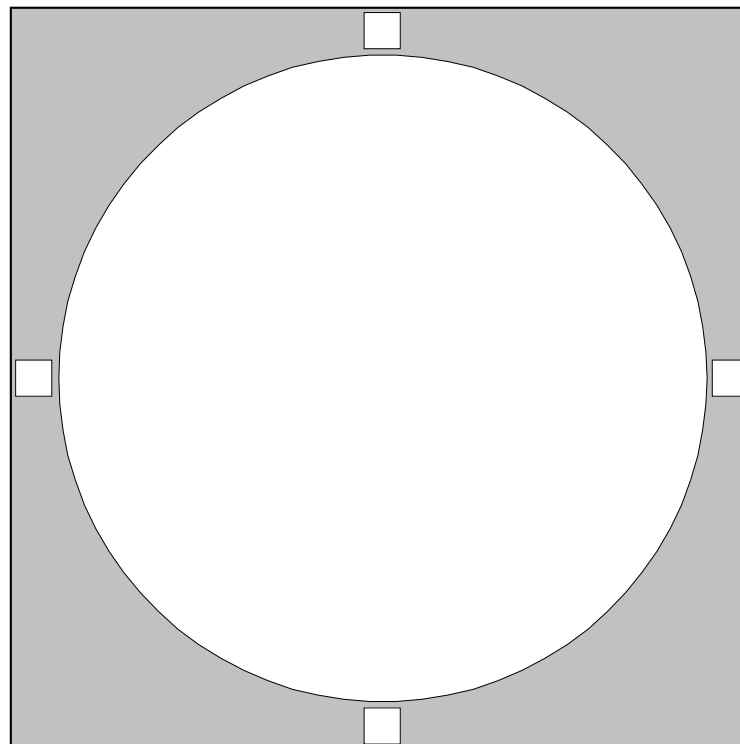


Notes

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 - M7

Messier Object	M7		
NGC	6475		
Constellation	Scorpius		
Type	Open Cluster		
Magnitude	3.3		
Distance (Kilo light-years)	0.8		
RA	17 53.9		
Dec	-34:49		
Size	80.0'		
UM I	UM II	377	164,A20
	SA	22	
Remarks	!! excellent in binoculars or rich-field scope		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



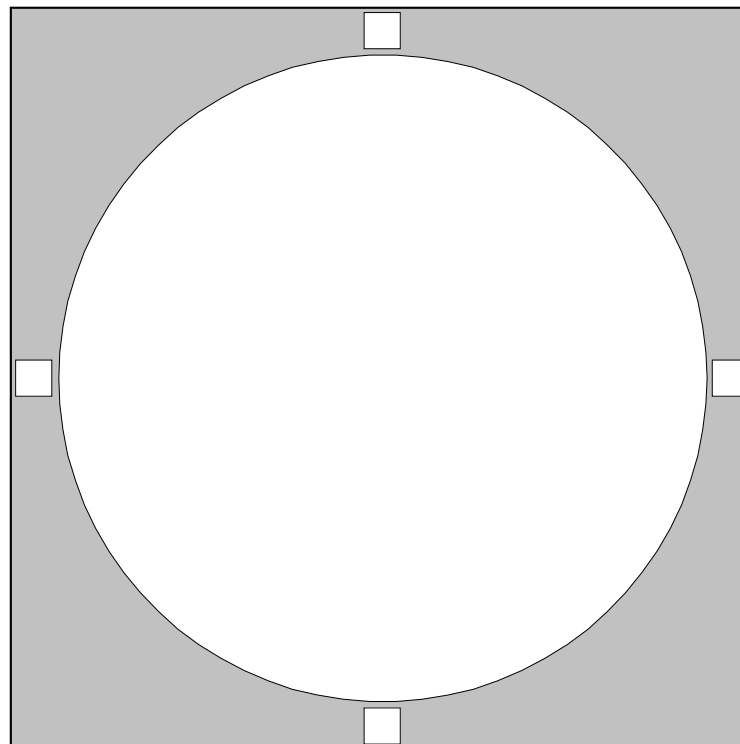
Notes

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 - M8

Lagoon Nebula

Messier Object	M8		
NGC	6523		
Constellation	Sagittarius		
Type	Emission Nebula		
Magnitude	na		
Distance (Kilo light-years)	5.2		
RA	18 03.8		
Dec	-24:23		
Size	45.0' x 30.0'		
UM I	UM II	339	145,146
	SA	22	
Remarks	!! Lagoon Nebula with Open Cluster NGC 6530		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

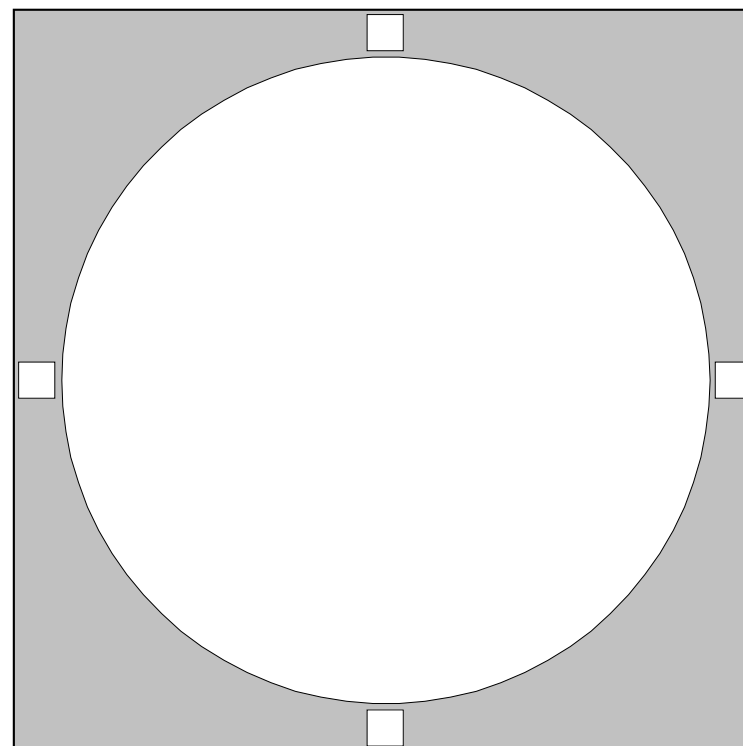
** p = Photographic Magnitude

*** !! = Showpiece Object

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RASC Messier Objects - M9

Messier Object	M9		
NGC	6333		
Constellation	Ophiuchus		
Type	Globular Cluster		
Magnitude	7.6		
Distance (Kilo light-years)	26.7		
RA	17 19.2		
Dec	-18:31		
Size	9.3'		
UM I	UM II	337,338	146
	SA	15, 22	
Remarks	smallest of Ophiuchus globulars		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

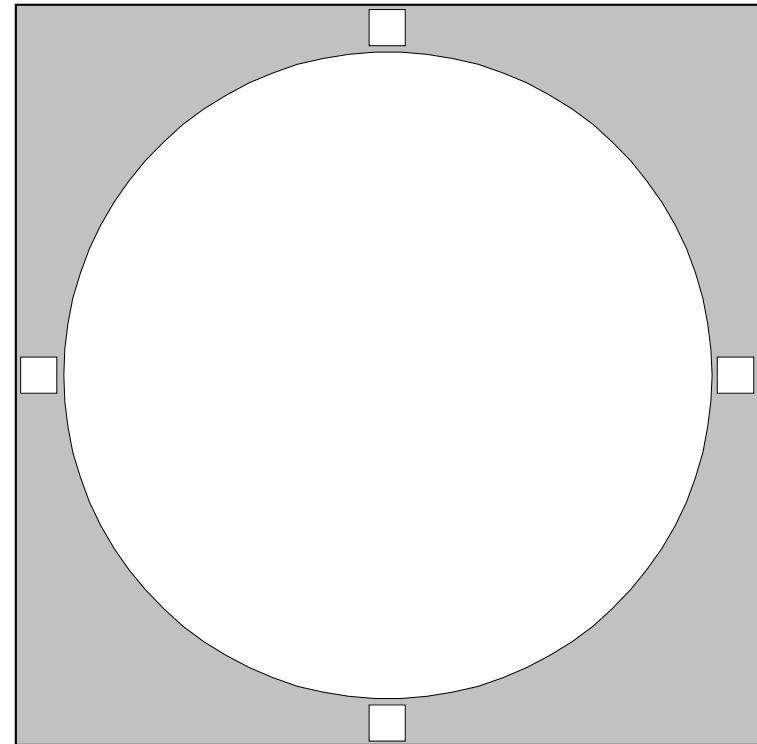
** p = Photographic Magnitude

*** !! = Showpiece Object

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RASC Messier Objects - M10

Messier Object	M10		
NGC	6254		
Constellation	Ophiuchus		
Type	Globular Cluster		
Magnitude	6.6		
Distance (Kilo light-years)	14.4		
RA	16 57.1		
Dec	-04:06		
Size	15.1'		
UM I	UM II	247	107
SA	15		
Remarks	rich globular cluster; M12 is three degrees north west		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



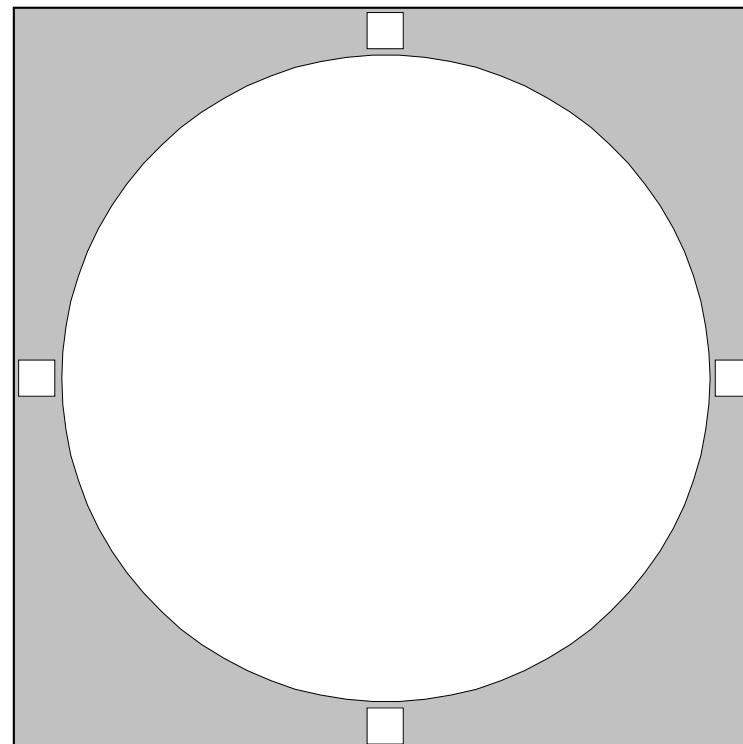
Notes

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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
OC: Open Cluster	E/RN: Diffuse emission and reflection Nebula	Date: Specify Time Zone or UT	http://www.rasc.ca

RASC Messier Objects - M11

Wild Duck Cluster

Messier Object	M11		
NGC	6705		
Constellation	Scutum		
Type	Open Cluster		
Magnitude	5.8		
Distance (Kilo light-years)	6		
RA	18 51.1		
Dec	-06:16		
Size	13.0'		
UM I	UM II	295	125,A14
SA	15, 16		
Remarks	!! Wild Duck cluster; the best open cluster?		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

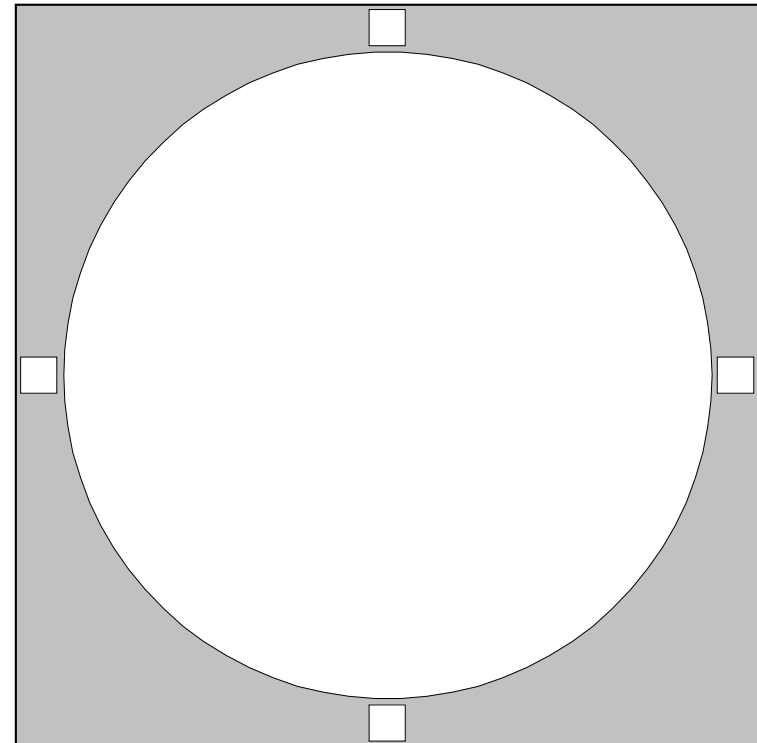


Notes

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 - M12

Messier Object	M12		
NGC	6218		
Constellation	Ophiuchus		
Type	Globular Cluster		
Magnitude	6.8		
Distance (Kilo light-years)	16.0		
RA	16 47.2		
Dec	-01:57		
Size	14.5'		
UM I	UM II	246,247	107
SA	15		
Remarks	loose globular cluster near M10		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

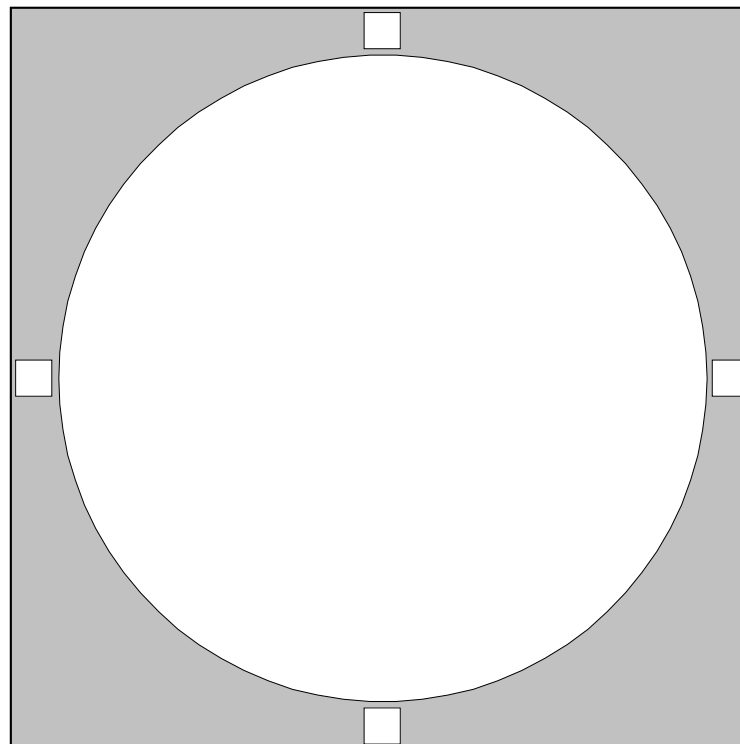


Notes

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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
OC: Open Cluster	E/RN: Diffuse emission and reflection Nebula	Date: Specify Time Zone or UT	http://www.rasc.ca

RASC Messier Objects - M13
Hercules Globular Cluster

Messier Object	M13		
NGC	6205		
Constellation	Hercules		
Type	Globular Cluster		
Magnitude	5.7		
Distance (Kilo light-years)	25.1		
RA	16 41.7		
Dec	+36:28		
Size	16.6'		
UM I	UM II	114	50,51
SA	8		
Remarks	!! Hercules Cluster; NGC6207 half degree north east		
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
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

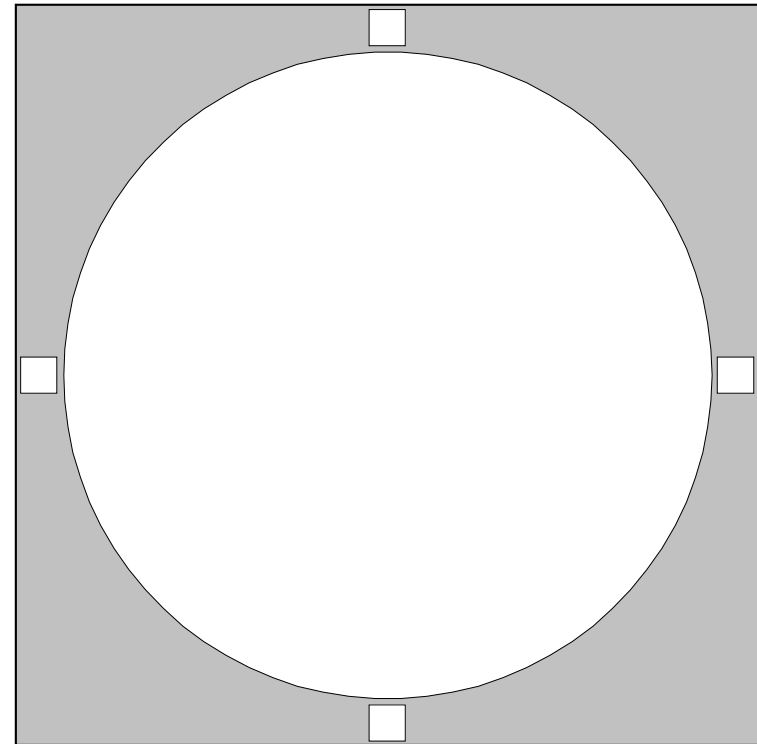
RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

RASC Messier Objects - M14

Messier Object	M14		
NGC	6402		
Constellation	Ophiuchus		
Type	Globular Cluster		
Magnitude	7.6		
Distance (Kilo light-years)	29.0		
RA	17 37.6		
Dec	-03:15		
Size	11.7'		
UM I	UM II	248	106
SA	15		
Remarks	200-mm telescope needed to resolve		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

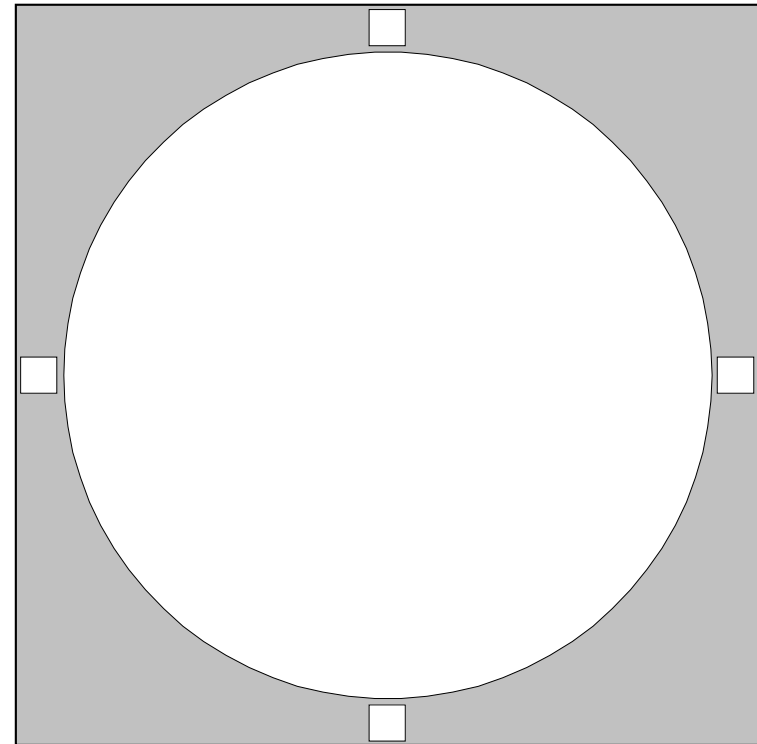
** p = Photographic Magnitude

*** !! = Showpiece Object

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RASC Messier Objects - M15

Messier Object	M15		
NGC	7078		
Constellation	Pegasus		
Type	Globular Cluster		
Magnitude	6.0		
Distance (Kilo light-years)	33.6		
RA	21 30.0		
Dec	+12:10		
Size	12.3'		
UM I	UM II	210	83
SA	16, 17		
Remarks	rich, compact globular		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



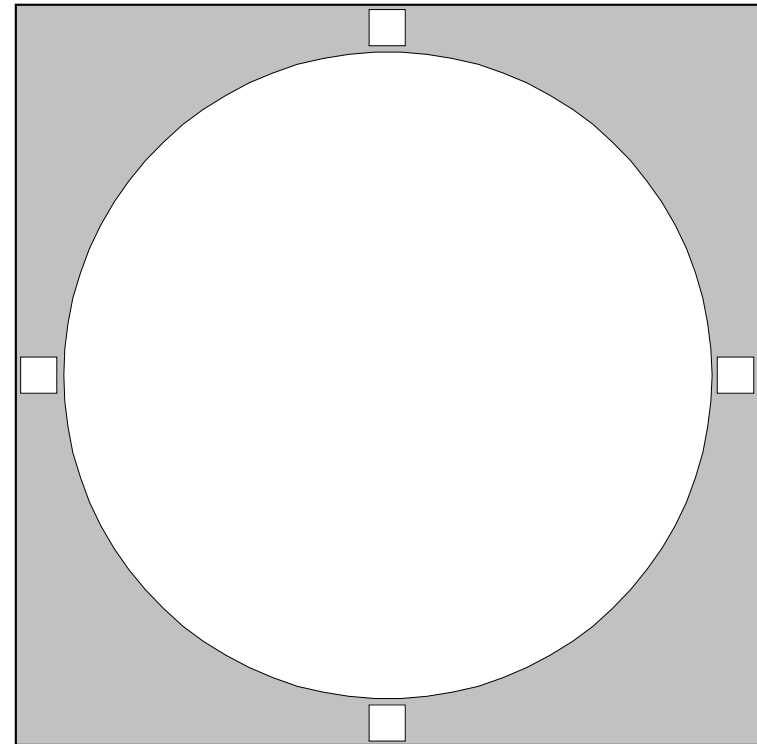
Notes

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 - M16

Eagle Nebula

Messier Object	M16		
NGC	6611		
Constellation	Serpens		
Type	Emission Nebula+Open Cluster		
Magnitude	na		
Distance (Kilo light-years)	7		
RA	18 18.6		
Dec	-13:58		
Size	35.0' x 28.0'		
UM I	UM II	294	126
SA	15, 16		
Remarks	Eagle Nebula with Open Cluster; use nebular filter		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

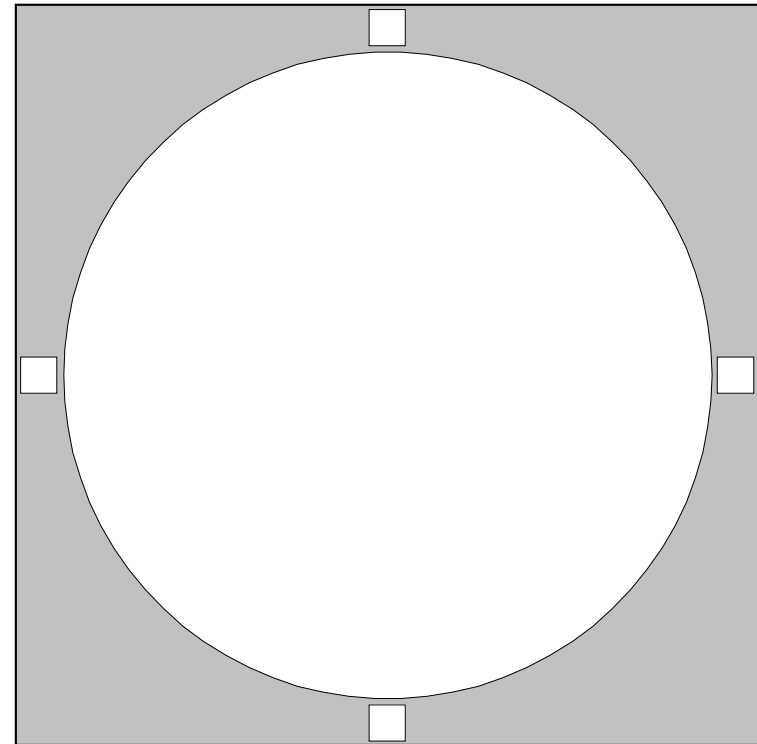


Notes

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

Omega. Swan. Horseshoe. or Lobster Nebula

Messier Object	M17		
NGC	6618		
Constellation	Sagittarius		
Type	Emission Nebula		
Magnitude	na		
Distance (Kilo light-years)	5		
RA	18 20.8		
Dec	-16:11		
Size	20.0' x 15.0'		
UM I	UM II	294,295,339,340	126
	SA	15, 16	
Remarks	!! Swan or Omega nebula; use nebular filter		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

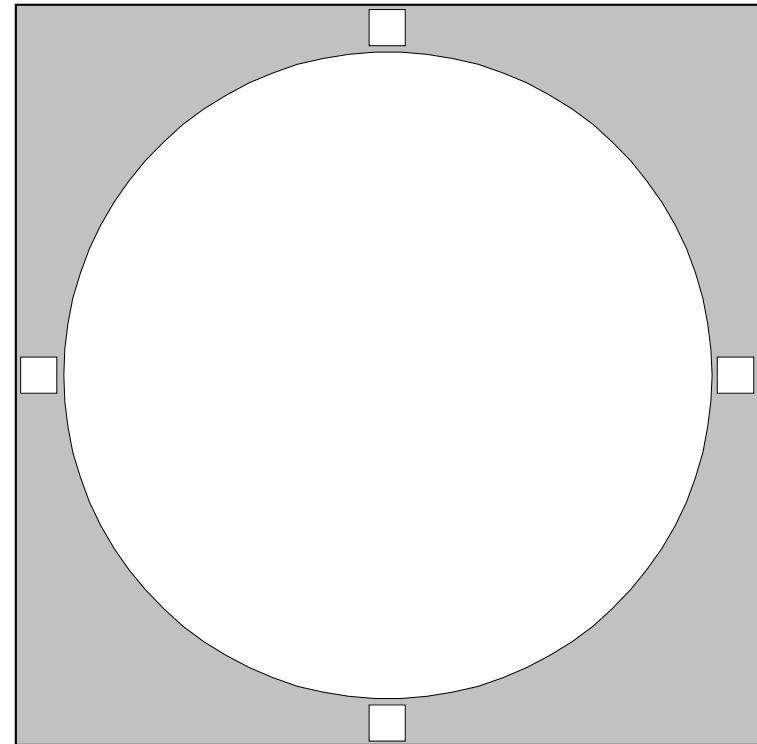


Notes

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 - M18

Messier Object	M18		
NGC	6613		
Constellation	Sagittarius		
Type	Open Cluster		
Magnitude	6.9		
Distance (Kilo light-years)	4.9		
RA	18 19.9		
Dec	-17:08		
Size	10.0'		
UM I	UM II	294,295,339,340	126,145
	SA	15, 16, 22	
Remarks	sparse cluster; one degree south of M17		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

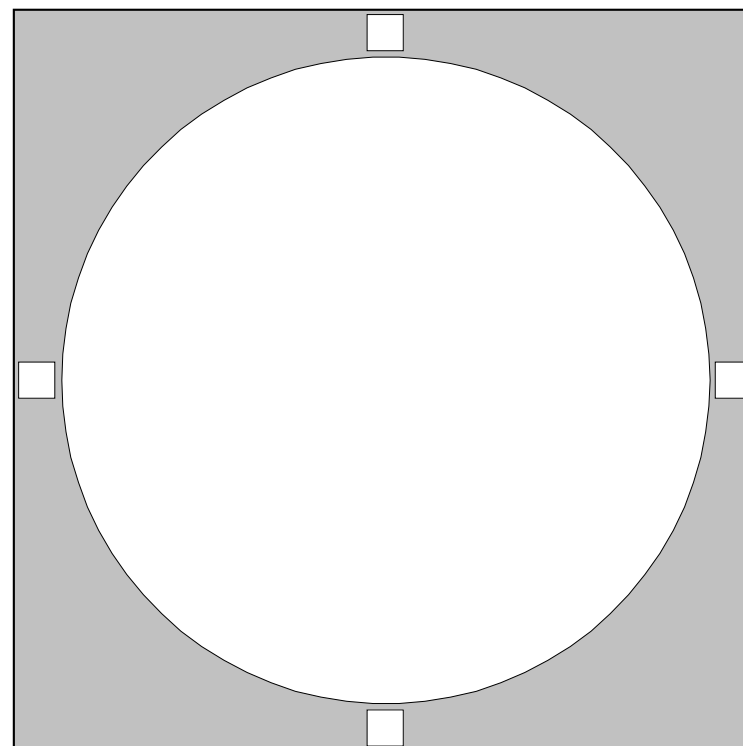
** p = Photographic Magnitude

*** !! = Showpiece Object

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RASC Messier Objects - M19

Messier Object	M19		
NGC	6273		
Constellation	Ophiuchus		
Type	Globular Cluster		
Magnitude	6.7		
Distance (Kilo light-years)	28.4		
RA	17 02.6		
Dec	-26:16		
Size	13.5'		
UM I	UM II	337	146
	SA	22	
Remarks	oblate globular; M62 four degrees south		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

** p = Photographic Magnitude

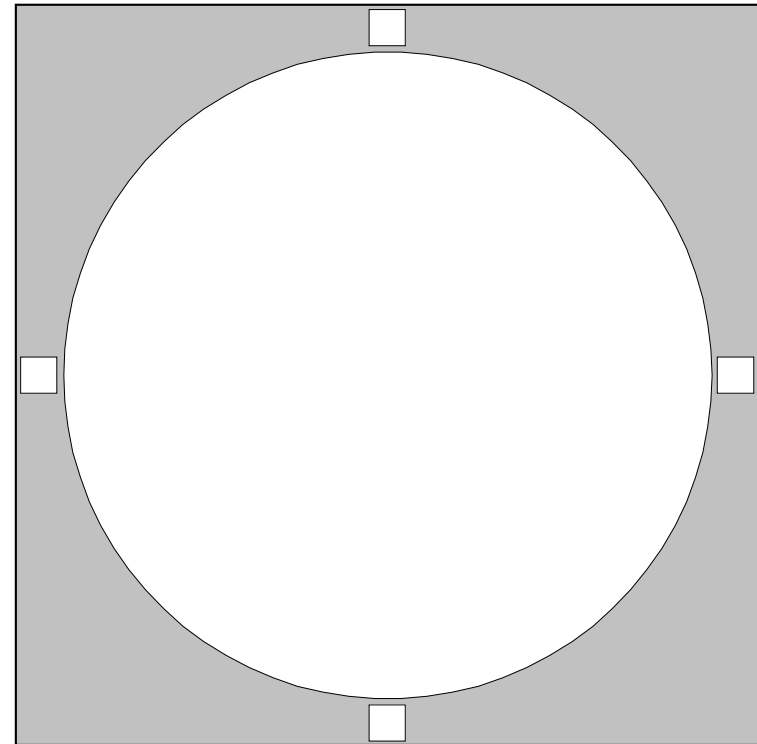
*** !! = Showpiece Object

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RASC Messier Objects - M20

Trifid Nebula

Messier Object	M20		
NGC	6514		
Constellation	Sagittarius		
Type	Emission/Reflection Nebula		
Magnitude	na		
Distance (Kilo light-years)	5.2		
RA	18 02.3		
Dec	-23:02		
Size	20.0' x 20.0'		
UM I	UM II	339	145,146,A17
	SA	22	
Remarks	!! Trifid Nebula; look for dark lanes		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

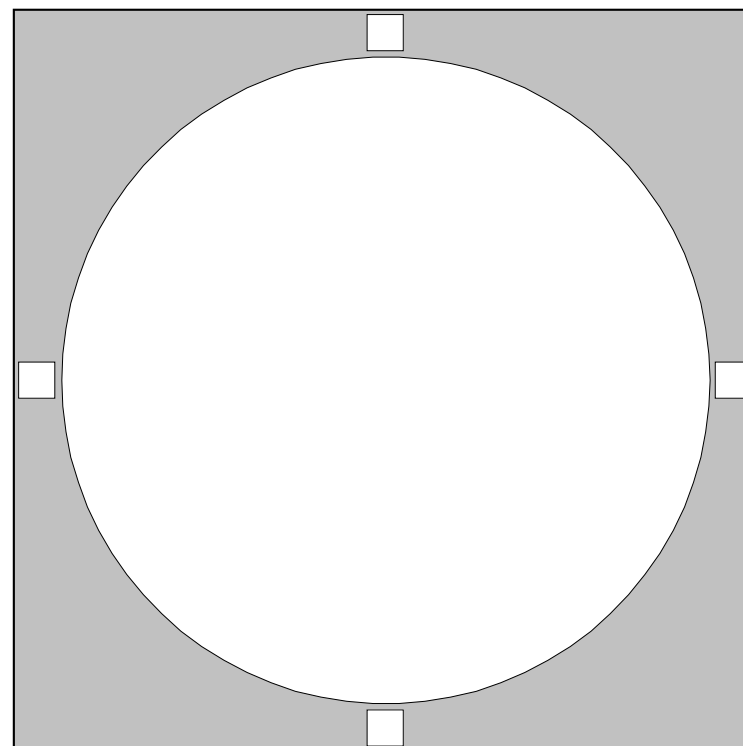


Notes

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 - M21

Messier Object	M21		
NGC	6531		
Constellation	Sagittarius		
Type	Open Cluster		
Magnitude	5.9		
Distance (Kilo light-years)	4.25		
RA	18 04.6		
Dec	-22:30		
Size	13.0'		
UM I	UM II	339	145,A17
SA	22		
Remarks	0.7' noth east of M20; sparse 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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

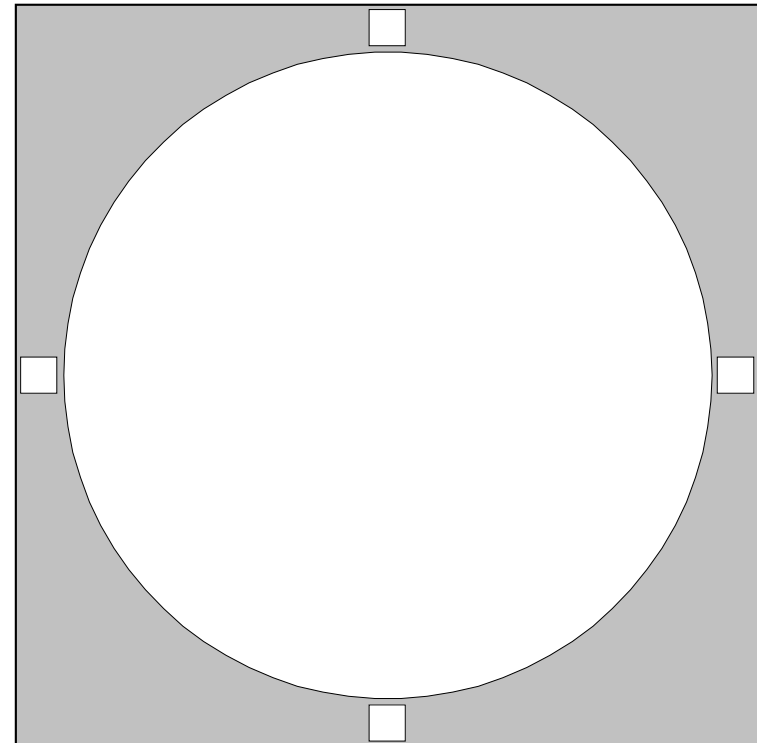
** p = Photographic Magnitude

*** !! = Showpiece Object

<http://www.rasc.ca>

RASC Messier Objects - M22

Messier Object	M22		
NGC	6656		
Constellation	Sagittarius		
Type	Globular Cluster		
Magnitude	5.1		
Distance (Kilo light-years)	10.4		
RA	18 36.4		
Dec	-23:54		
Size	24.0'		
UM I	UM II	340	145
SA	22		
Remarks	spectacular from southern lattitude		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

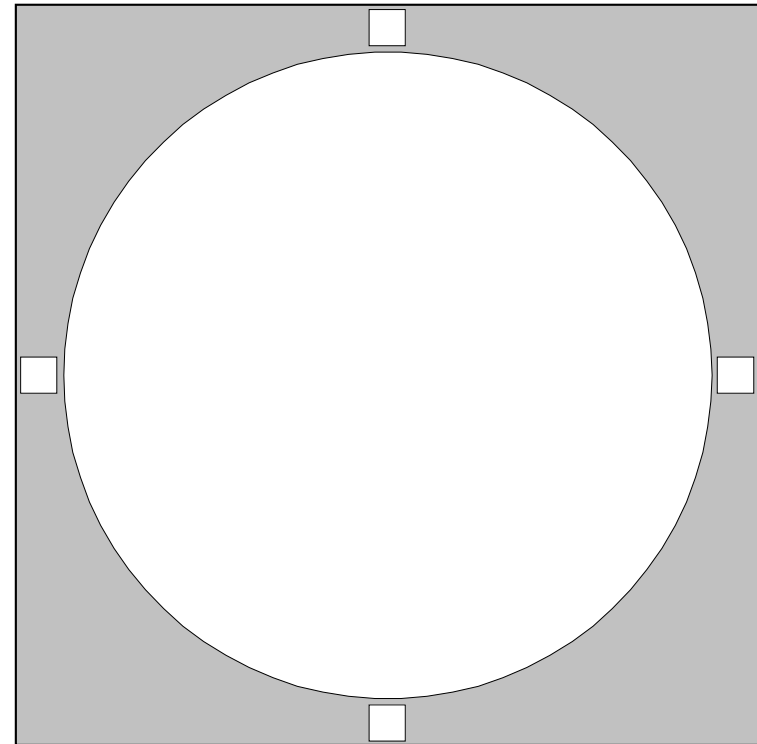


Notes

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 - M23

Messier Object	M23		
NGC	6494		
Constellation	Sagittarius		
Type	Open Cluster		
Magnitude	5.5		
Distance (Kilo light-years)	2.15		
RA	17 56.8		
Dec	-19:01		
Size	27.0'		
UM I	UM II	388,339	145,146
SA	15, 22		
Remarks	bright, loose open 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
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

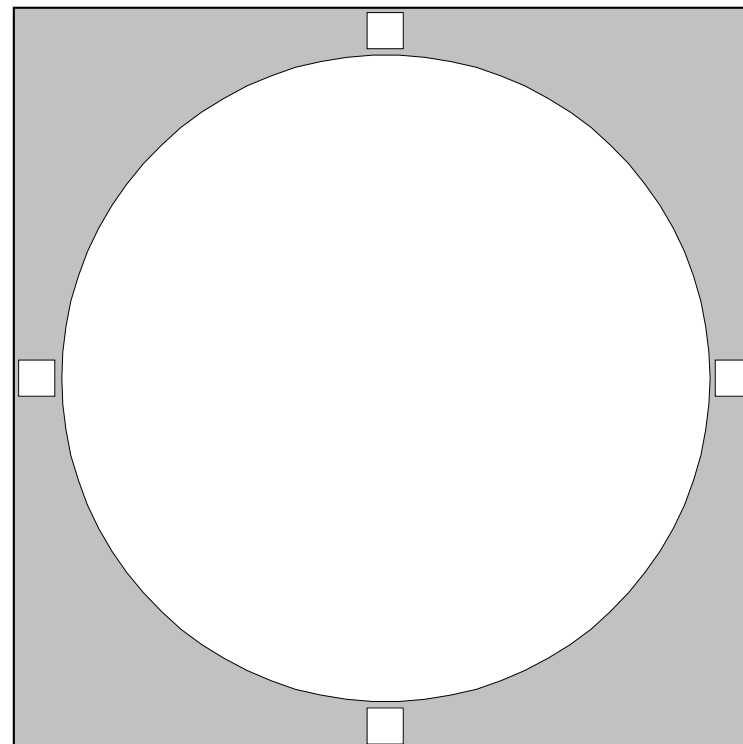
RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

RASC Messier Objects - M24
Sagittarius Star Cloud. Delle Caustiche

Messier Object	M24		
NGC	>6603		
Constellation	Sagittarius		
Type	Star Cloud		
Magnitude	4.6		
Distance (Kilo light-years)	10		
RA	18 16.5		
Dec	-18:50		
Size	95.0' x 35.0'		
UM I	UM II	294,339,340	145
SA	15, 16, 22		
Remarks	rich star cloud; best in big binoculars		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

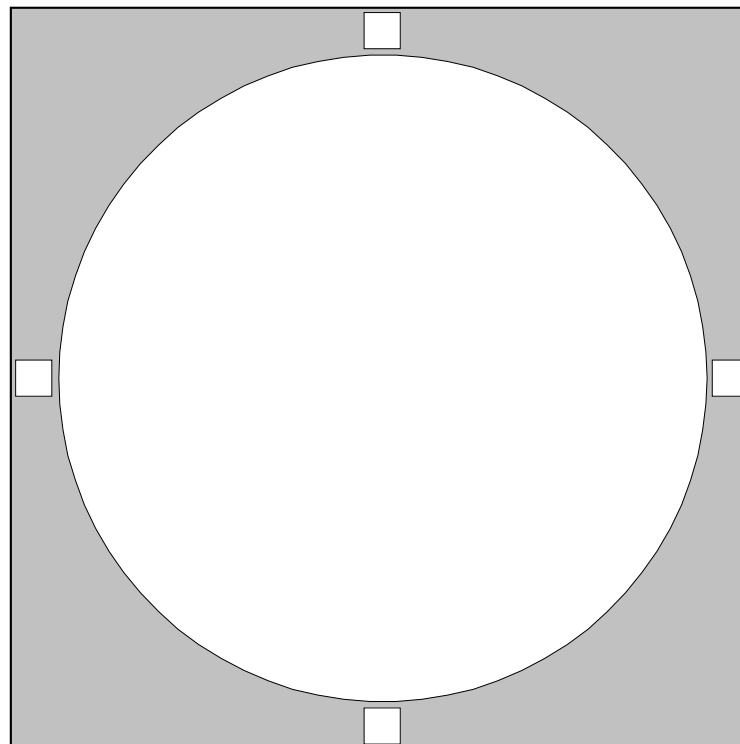


Notes

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 - M25

Messier Object	M25		
NGC	IC4725		
Constellation	Sagittarius		
Type	Open Cluster		
Magnitude	4.6		
Distance (Kilo light-years)	2		
RA	18 31.6		
Dec	-19:15		
Size	32.0'		
UM I	UM II	340	145
SA	15, 16, 22		
Remarks	bright but sparse open cluster		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

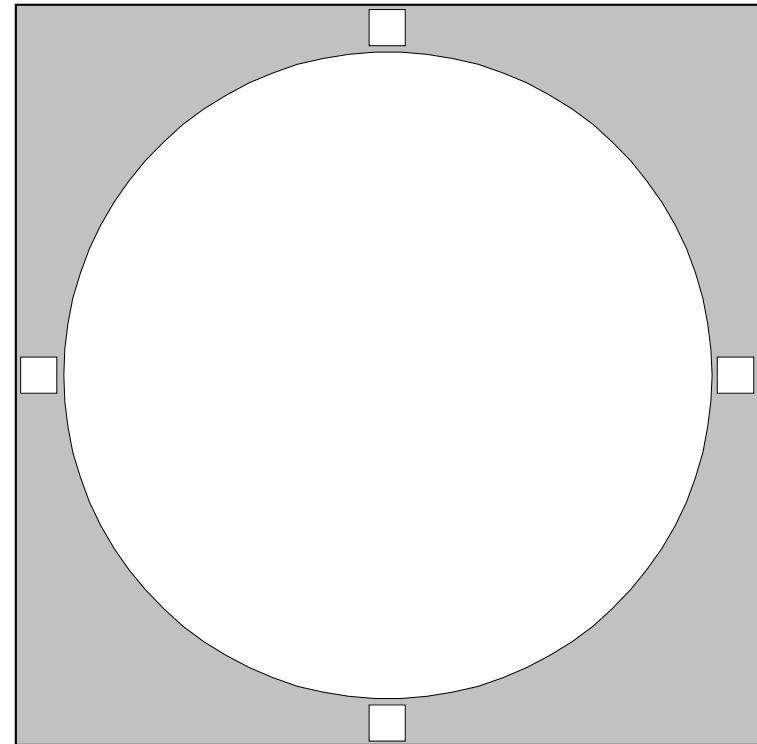


Notes

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 - M26

Messier Object	M26		
NGC	6694		
Constellation	Scutum		
Type	Open Cluster		
Magnitude	8.0		
Distance (Kilo light-years)	5		
RA	18 45.2		
Dec	-09:24		
Size	14.0'		
UM I	UM II	295	125
SA	15, 16		
Remarks	bright, course 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
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

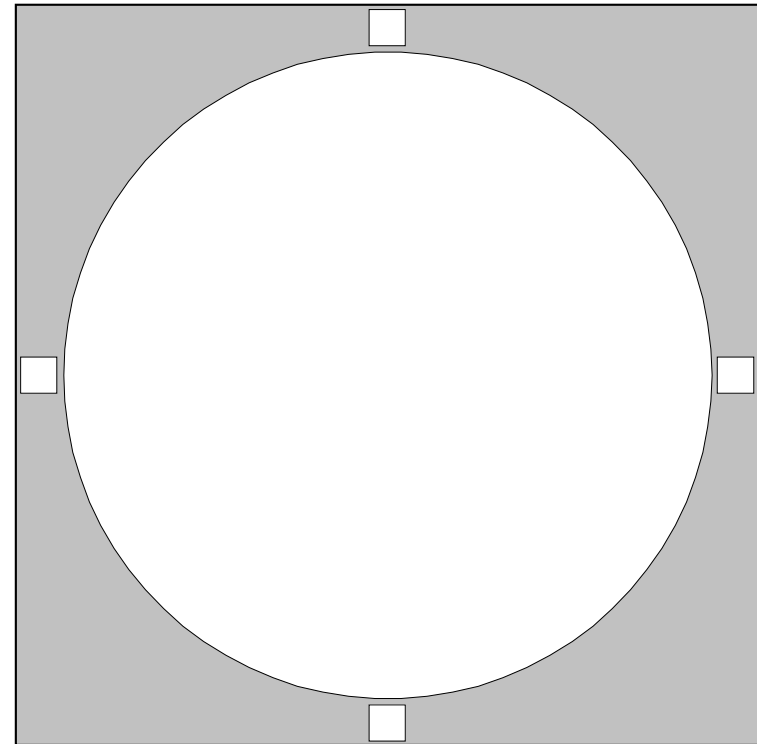
Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

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)			

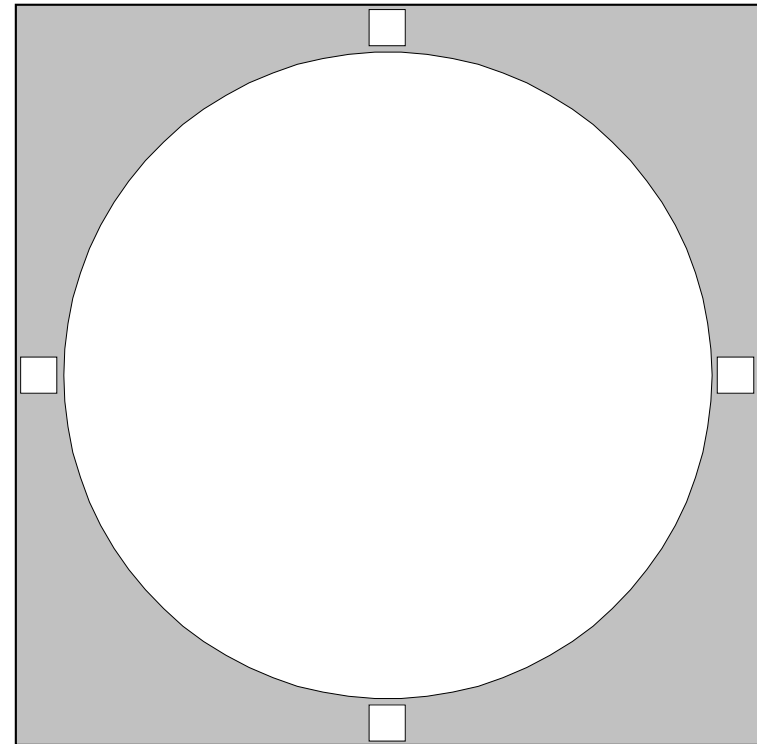


Notes

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 - M28

Messier Object	M28		
NGC	6626		
Constellation	Sagittarius		
Type	Globular Cluster		
Magnitude	6.8		
Distance (Kilo light-years)	18.6		
RA	18 24.5		
Dec	-24:52		
Size	11.2'		
UM I	UM II	339,340	145
SA	22		
Remarks	compact globular near M22		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

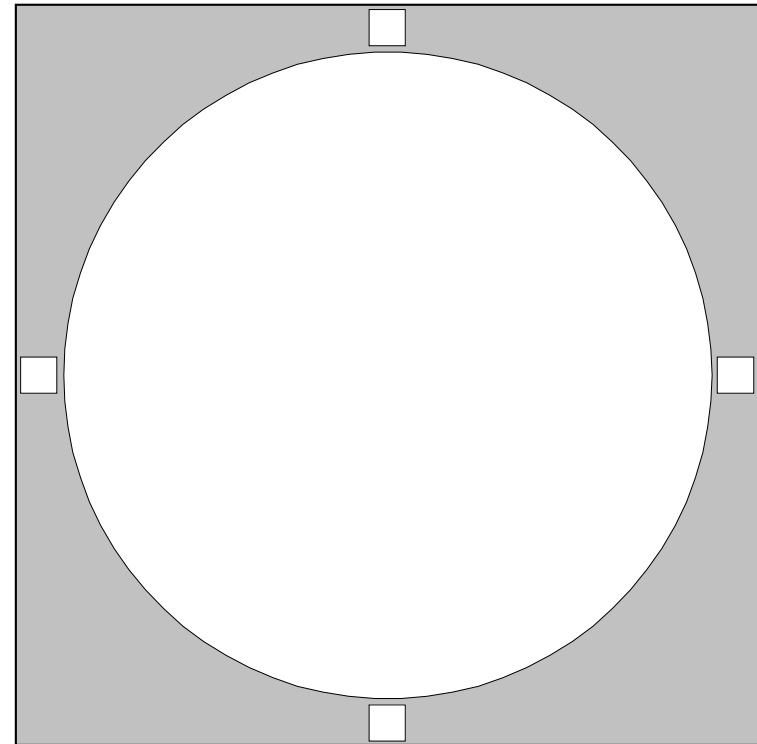


Notes

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)			



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

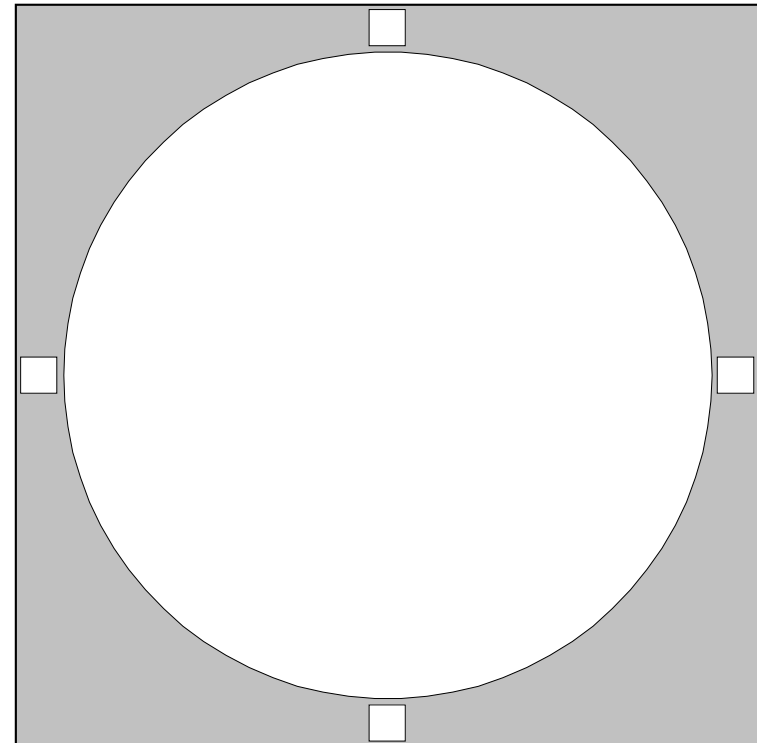
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M30

Messier Object	M30		
NGC	7099		
Constellation	Capricornus		
Type	Globular Cluster		
Magnitude	7.3		
Distance (Kilo light-years)	26.1		
RA	21 40.4		
Dec	-23:11		
Size	11.0'		
UM I	UM II	345,346	143
SA	23		
Remarks	toughest in 1-night Messier marathon		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



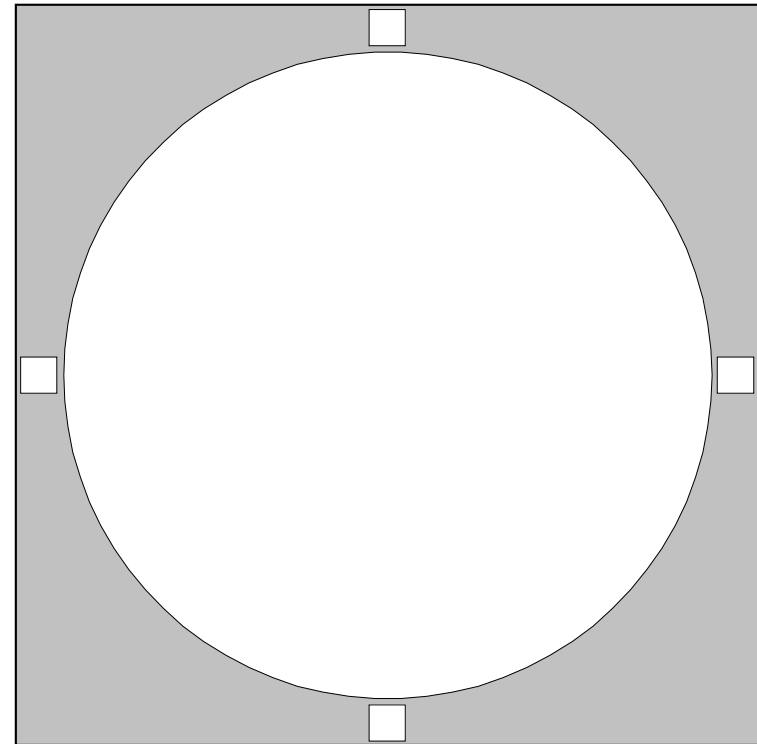
Notes

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 - M31

Andromeda Galaxy

Messier Object	M31		
NGC	224		
Constellation	Andromeda		
Type	Spiral Galaxy (G-SAb)		
Magnitude	3.4		
Distance (Kilo light-years)	2900		
RA	00 42.7		
Dec	+41:16		
Size	185.0' x 75.0'		
UM I	UM II	60	30
	SA	4, 9	
Remarks	!! Andromeda Galaxy; look for dust lanes		
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

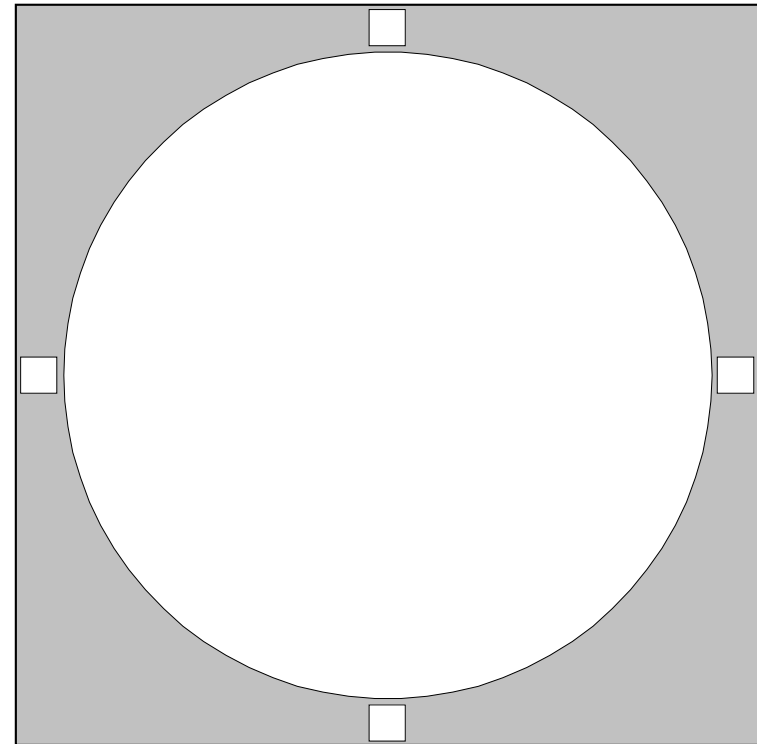
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M32

Messier Object	M32		
NGC	221		
Constellation	Andromeda		
Type	Elliptical Galaxy (G-E5 peculiar)		
Magnitude	8.1		
Distance (Kilo light-years)	2900		
RA	00 42.7		
Dec	+40:52		
Size	110.0' x 7.0'		
UM I	UM II	60	30,45,62
	SA	4, 9	
Remarks	closest companion to M31		
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

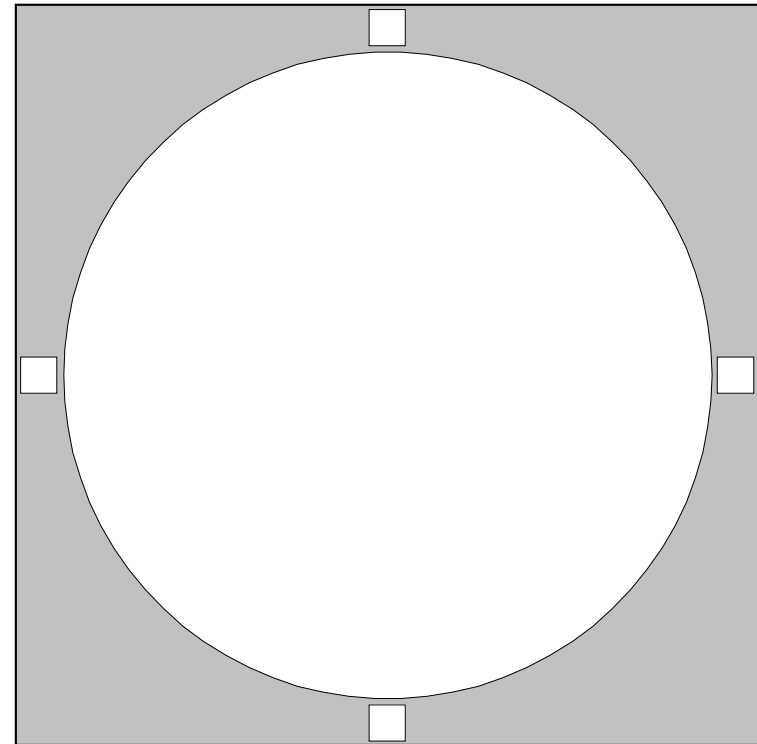
Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M33

Triangulum Galaxy

Messier Object	M33		
NGC	598		
Constellation	Triangulum		
Type	Spiral Galaxy (G-SAc)		
Magnitude	5.7		
Distance (Kilo light-years)	3000		
RA	01 33.9		
Dec	+30:39		
Size	67.0' x 42.0'		
UM I	UM II	91	62
	SA	4	
Remarks	large, diffuse spiral; requires dark sky		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

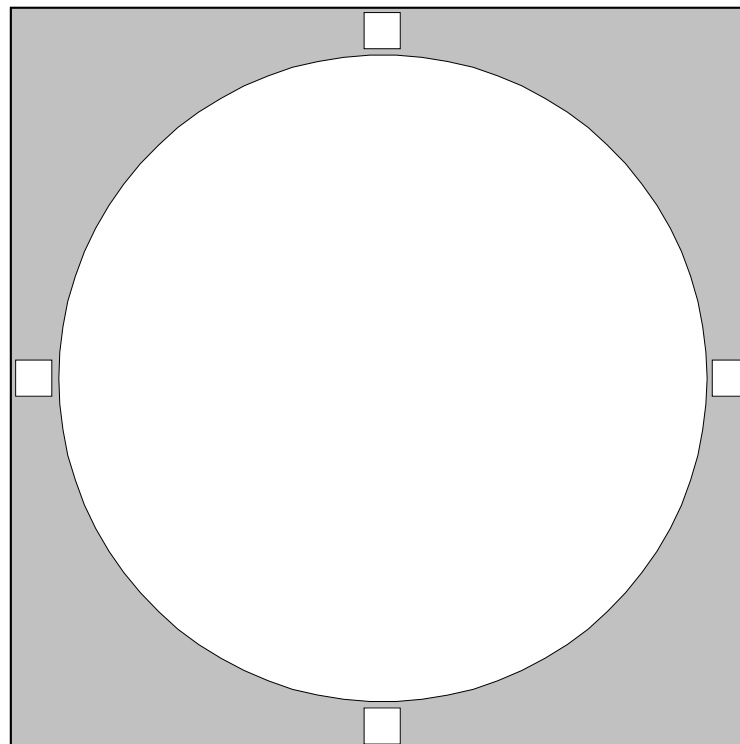


Notes

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 - M34

Messier Object	M34		
NGC	1039		
Constellation	Perseus		
Type	Open Cluster		
Magnitude	5.2		
Distance (Kilo light-years)	1.4		
RA	02 42.0		
Dec	+42:47		
Size	35.0'		
UM I	UM II	62	43
	SA	1, 4	
Remarks	best at low power		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

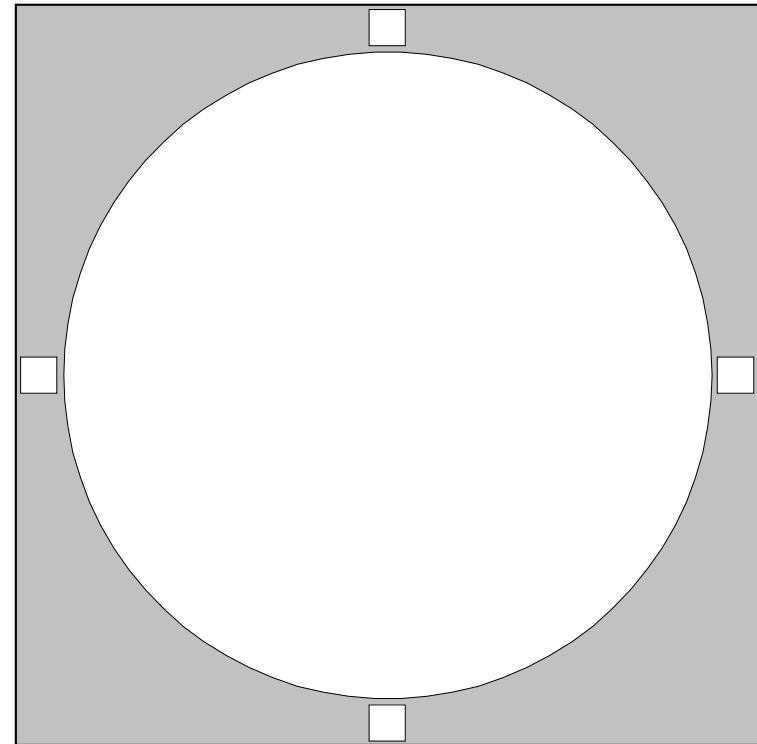


Notes

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 - M35

Messier Object	M35		
NGC	2168		
Constellation	Gemini		
Type	Open Cluster		
Magnitude	5.1		
Distance (Kilo light-years)	2.8		
RA	06 08.9		
Dec	+24:20		
Size	28'		
UM I	UM II	136,137	76
SA	5		
Remarks	!! look for small cluster NGC 2158 1/4 degree south		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

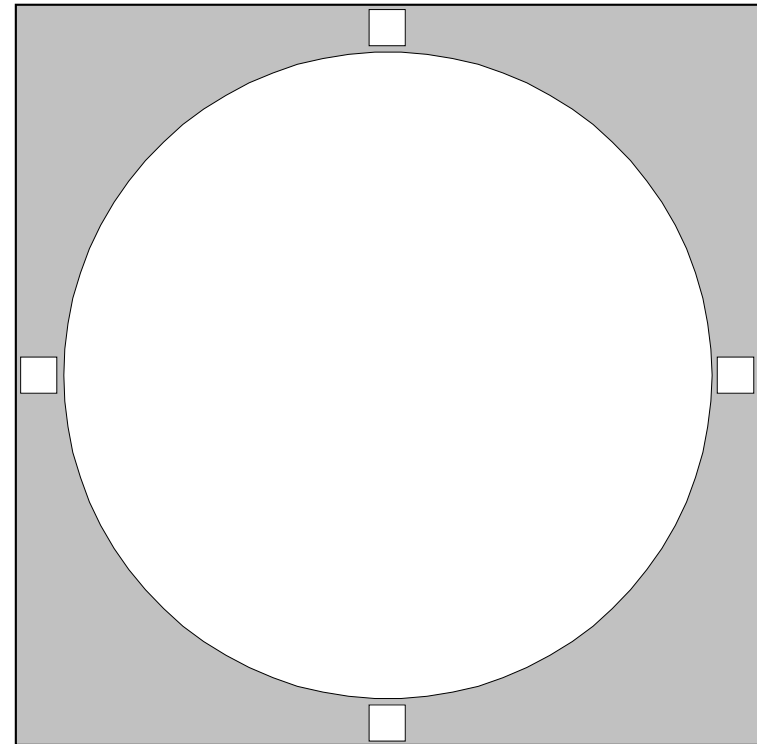


Notes

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 - M36

Messier Object	M36		
NGC	1960		
Constellation	Auriga		
Type	Open Cluster		
Magnitude	6.0		
Distance (Kilo light-years)	4.1		
RA	05 36.1		
Dec	+34:08		
Size	12'		
UM I	UM II	97,98	59
SA	5		
Remarks	Bright but scattered group;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)			



Notes

PN: Planetary Nebula
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

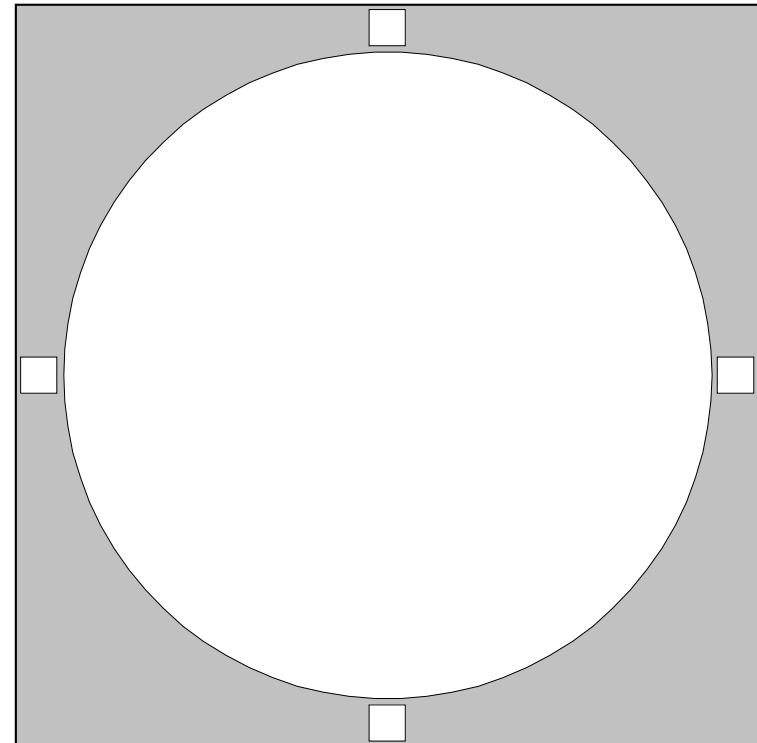
RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

RASC Messier Objects - M37

Messier Object	M37		
NGC	2099		
Constellation	Auriga		
Type	Open Cluster		
Magnitude	5.6		
Distance (Kilo light-years)	4.4		
RA	05 52.4		
Dec	+32:33		
Size	20'		
UM I	UM II	98	59
SA	5		
Remarks	!! finest of three Auriga clusters; very rich		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

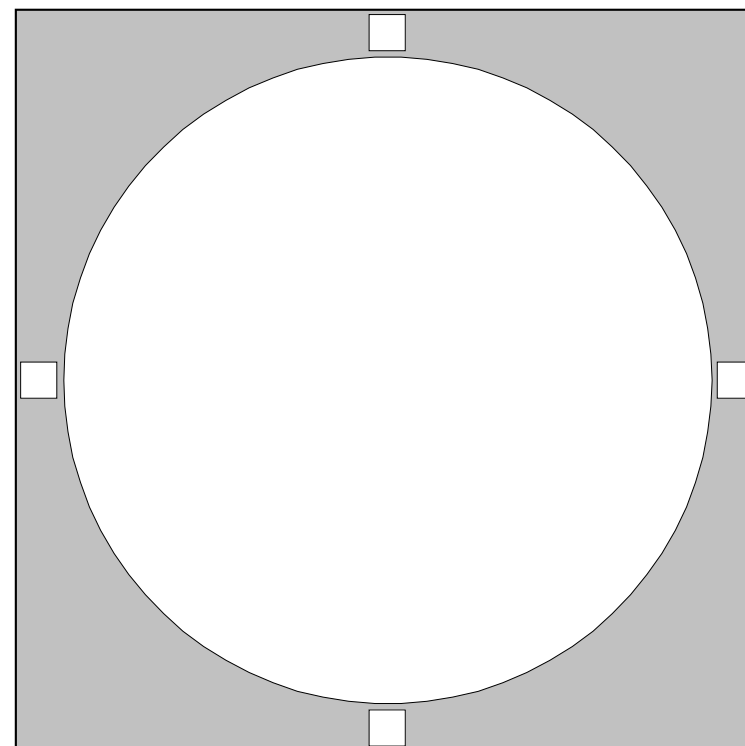


Notes

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 - M38

Messier Object	M38		
NGC	1912		
Constellation	Auriga		
Type	Open Cluster		
Magnitude	6.4		
Distance (Kilo light-years)	4.2		
RA	05 28.7		
Dec	+35:50		
Size	21'		
UM I	UM II	97	59
SA	5		
Remarks	look for small cluster NGC1907 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)			



Notes

PN: Planetary Nebula

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

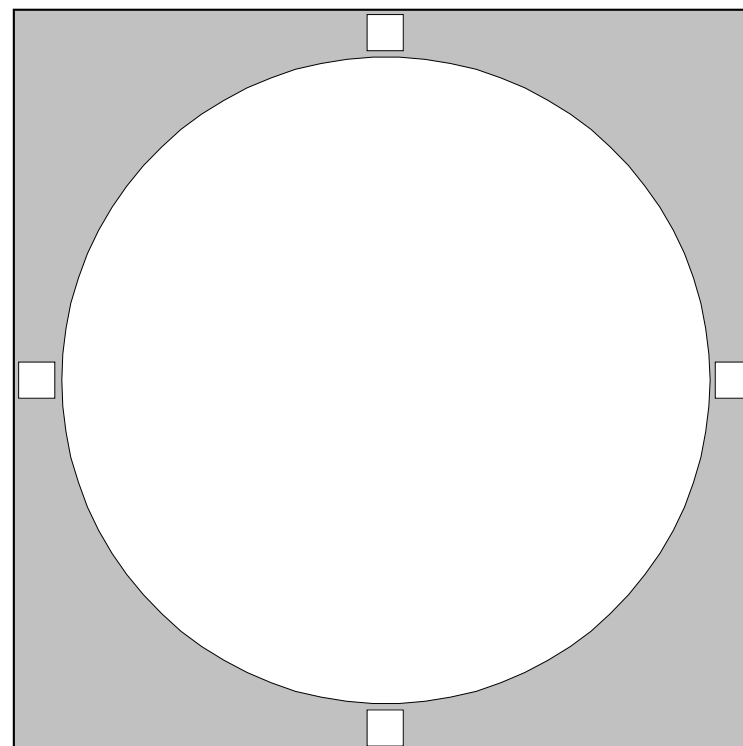
** p = Photographic Magnitude

*** !! = Showpiece Object

<http://www.rasc.ca>

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)			



Notes

PN: Planetary Nebula

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

** p = Photographic Magnitude

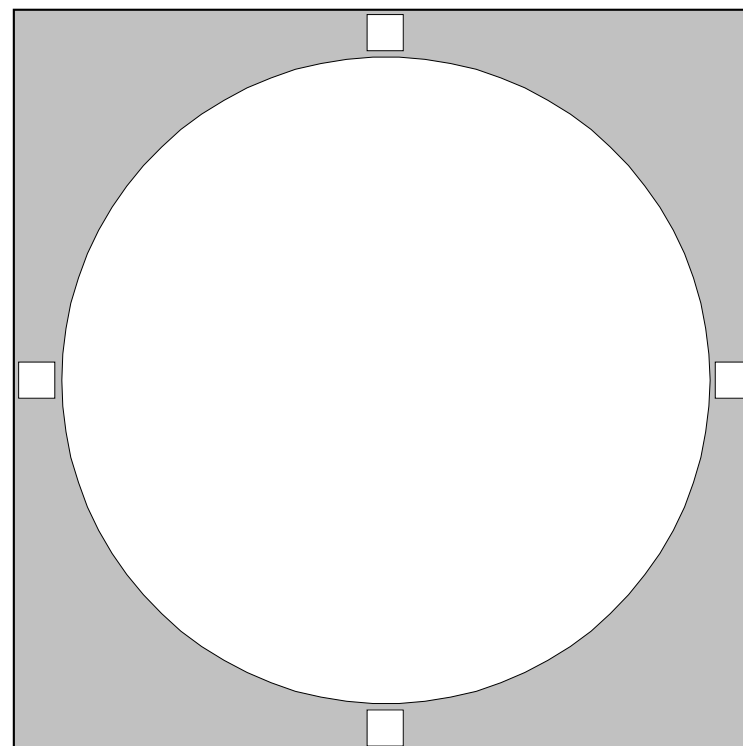
*** !! = Showpiece Object

<http://www.rasc.ca>

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

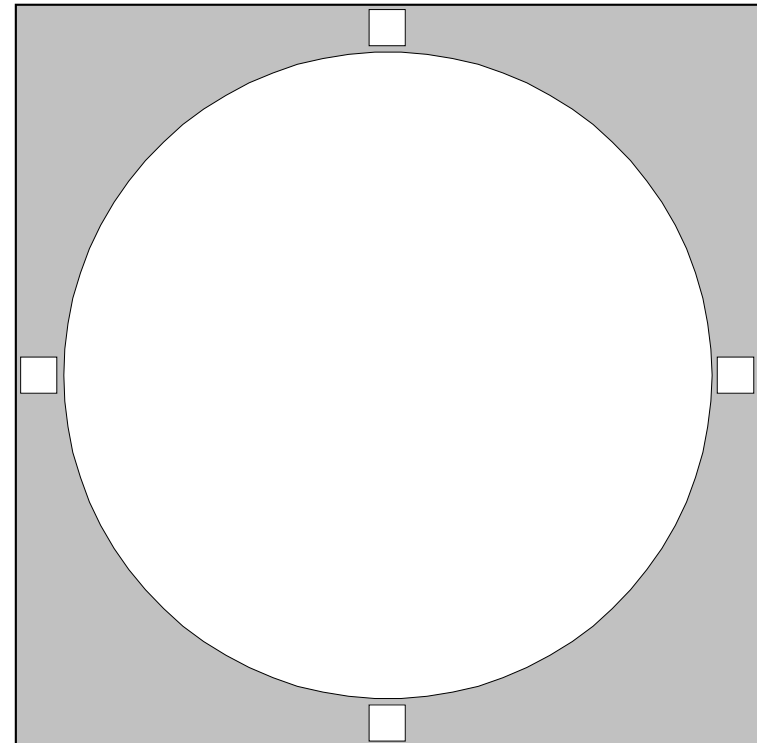
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M41

Messier Object	M41		
NGC	2287		
Constellation	Canis Major		
Type	Open Cluster		
Magnitude	4.5		
Distance (Kilo light-years)	2.3		
RA	06 47.0		
Dec	-20:44		
Size	38'		
UM I	UM II	318	154
SA	19		
Remarks	4 degrees south of sirius; bright but coarse		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



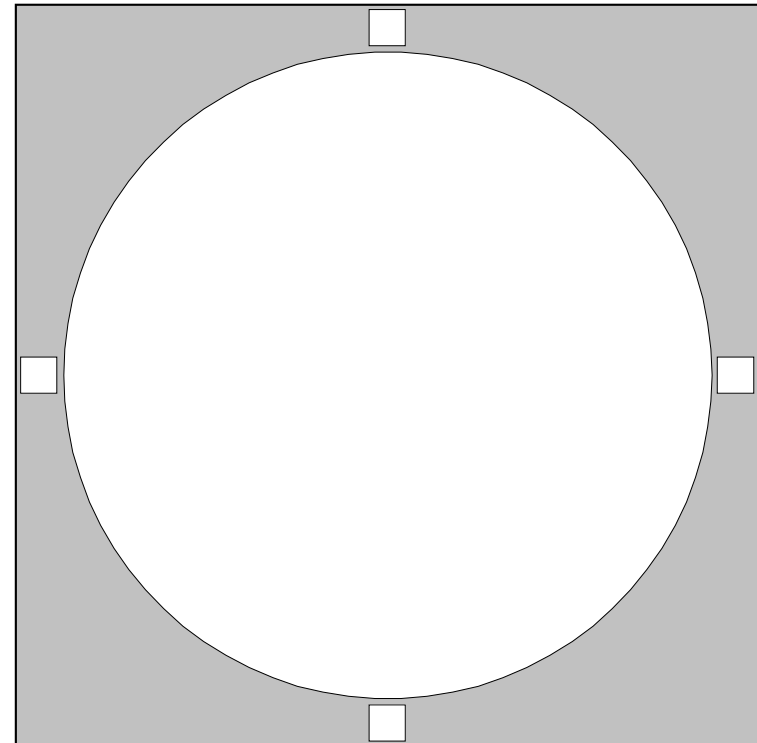
Notes

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 - M42

Orion Nebula

Messier Object	M42		
NGC	1976		
Constellation	Orion		
Type	Emission/Reflection Nebula		
Magnitude	4.0		
Distance (Kilo light-years)	1.6		
RA	05 35.4		
Dec	-05:27		
Size	65' x 60'		
UM I	UM II	225,226,270,271	116,136
SA	11, B2		
Remarks	!! Orion Nebula; finest in northern sky		
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

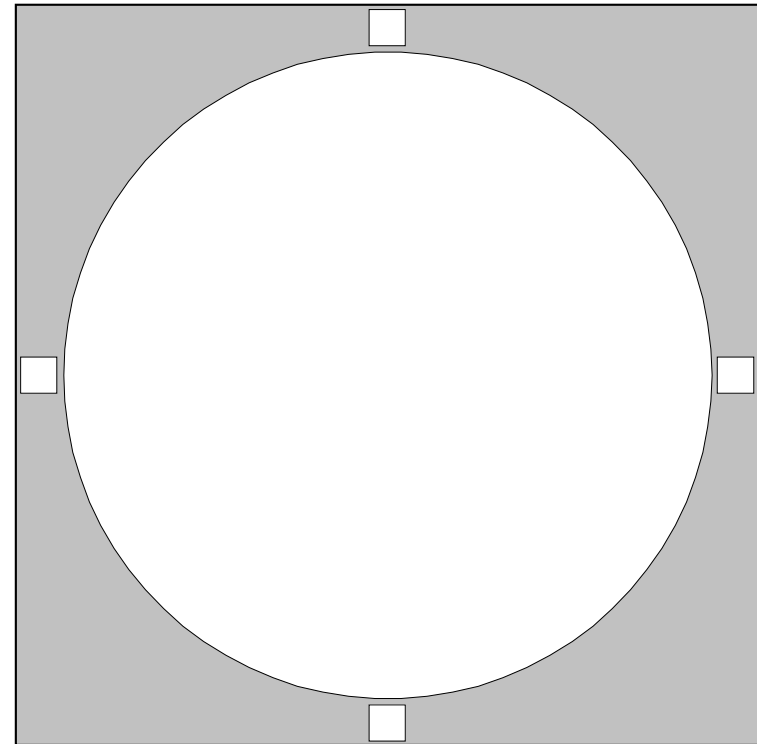
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RASC Messier Objects - M43

De Mairan's Nebula

Messier Object	M43		
NGC	1982		
Constellation	Orion		
Type	Emission/Reflection Nebula		
Magnitude	9.0		
Distance (Kilo light-years)	1.6		
RA	05 35.6		
Dec	-05:16		
Size	20' x 15'		
UM I	UM II	225,226,270,271	116,136
	SA	11, B2	
Remarks	detached part of Orion Nebula; De Mairan's Nebula		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

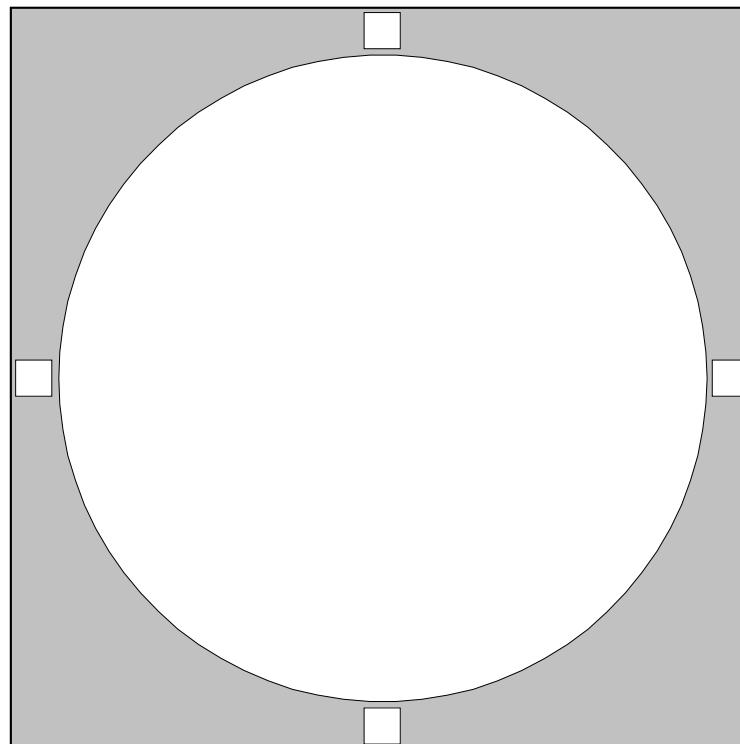


Notes

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)			



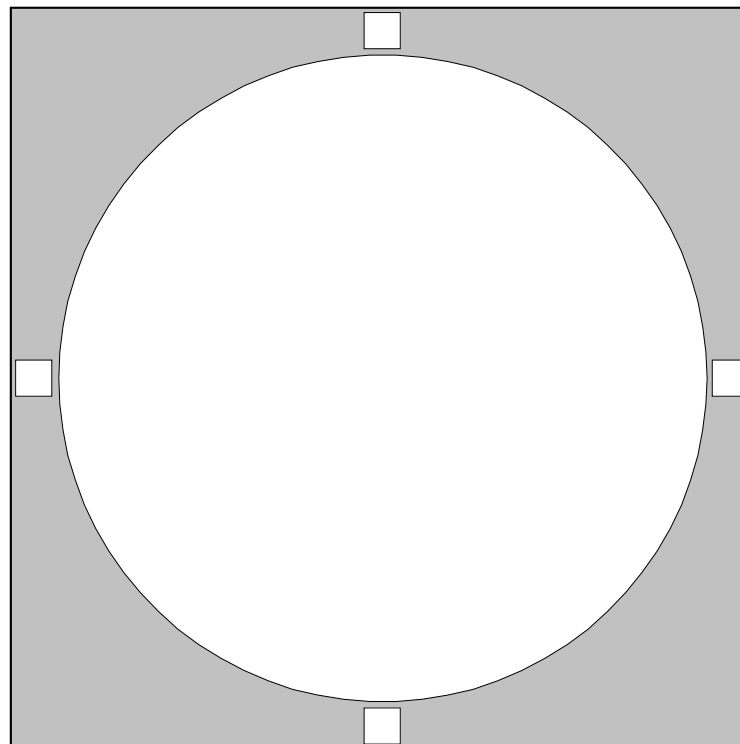
Notes

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 - M45

Pleiades

Messier Object	M45		
NGC	-		
Constellation	Taurus		
Type	Open Cluster		
Magnitude	1.2		
Distance (Kilo light-years)	0.38		
RA	03 47.0		
Dec	+24:07		
Size	110'		
UM I	UM II	132	78,A12
SA	4, A2		
Remarks	!! Pleiades; look for subtle nebulosity		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

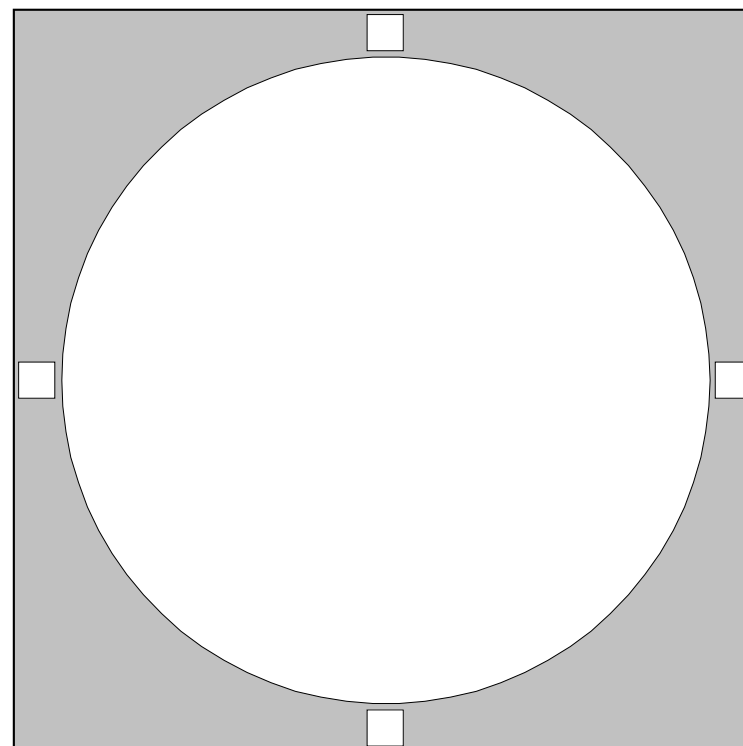


Notes

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 - M46

Messier Object	M46		
NGC	2437		
Constellation	Puppis		
Type	Open Cluster		
Magnitude	6.1		
Distance (Kilo light-years)	5.4		
RA	07 41.8		
Dec	-14:49		
Size	27'		
UM I	UM II	274,275	135
	SA	12, 19	
Remarks	!! contains planetary nebula NGC 2438		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

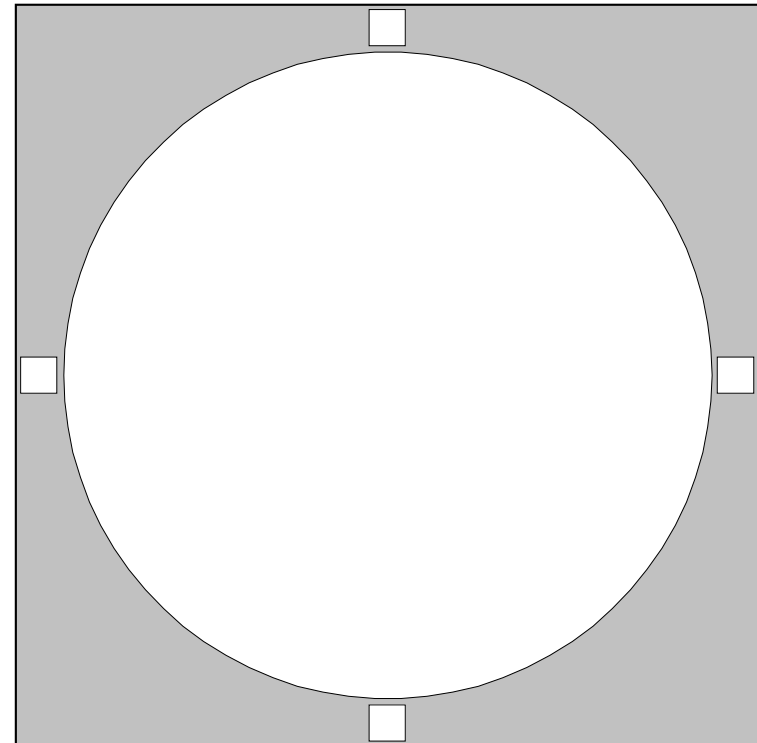
** p = Photographic Magnitude

*** !! = Showpiece Object

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RASC Messier Objects - M47

Messier Object	M47		
NGC	2422		
Constellation	Puppis		
Type	Open Cluster		
Magnitude	4.4		
Distance (Kilo light-years)	1.6		
RA	07 36.6		
Dec	-14:30		
Size	29'		
UM I	UM II	274	135
	SA	12, 19	
Remarks	coarse cluster 1.5 degrees west of M46		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

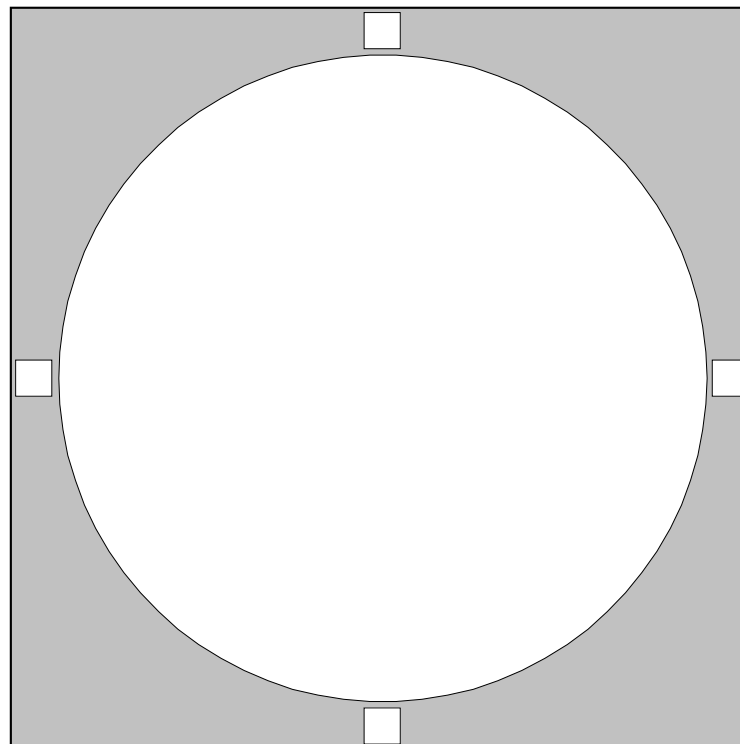


Notes

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 - M48

Messier Object	M48		
NGC	2548		
Constellation	Hydra		
Type	Open Cluster		
Magnitude	5.8		
Distance (Kilo light-years)	1.5		
RA	08 13.8		
Dec	-05:48		
Size	54'		
UM I	UM II	230,231,275,276	114,134
	SA	12	
Remarks	former "lost" Messier; large sparse 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

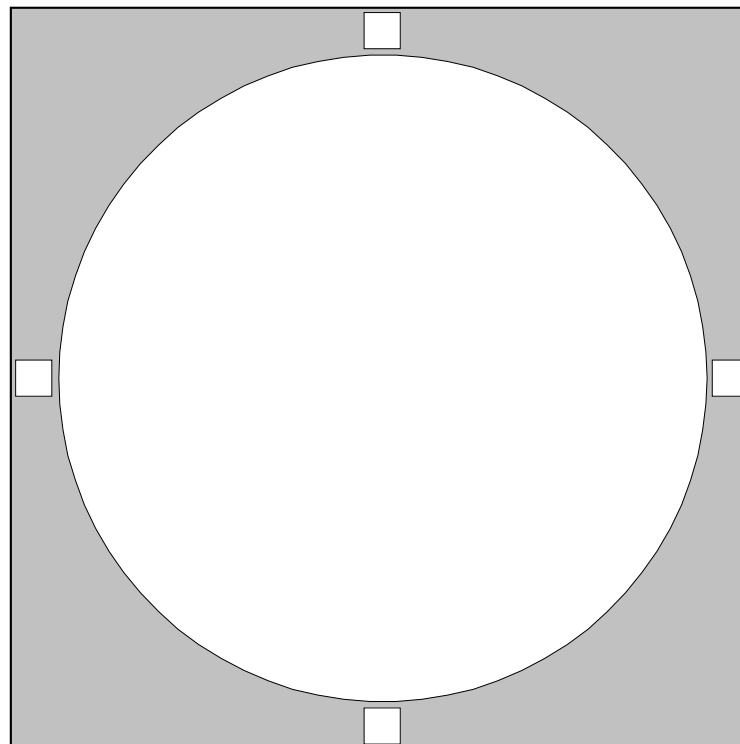
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

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RASC Messier Objects - M49

Messier Object	M49		
NGC	4472		
Constellation	Virgo		
Type	Elliptical Galaxy (G-E2)		
Magnitude	8.4		
Distance (Kilo light-years)	60000		
RA	12 29.8		
Dec	+08:00		
Size	8.1' x 7.1'		
UM I	UM II	193,194	91,A15
	SA	13, 14, B1	
Remarks	very bright elliptical		
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

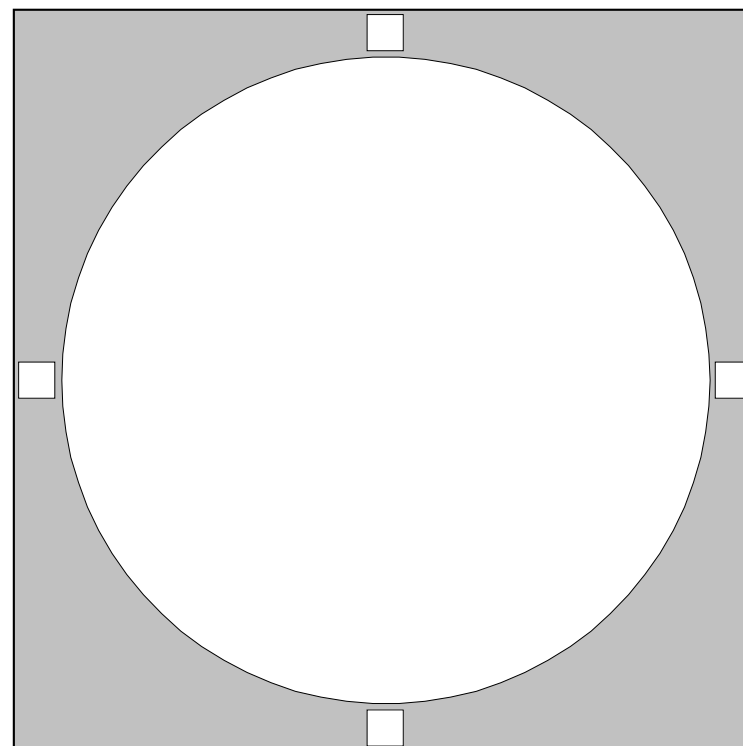
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

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RASC Messier Objects - M50

Messier Object	M50		
NGC	2323		
Constellation	Monoceros		
Type	Open Cluster		
Magnitude	5.9		
Distance (Kilo light-years)	3		
RA	07 03.2		
Dec	-08:20		
Size	16'		
UM I	UM II	273	135
	SA	12	
Remarks	between sirius and Procyon; use low magnification		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

** p = Photographic Magnitude

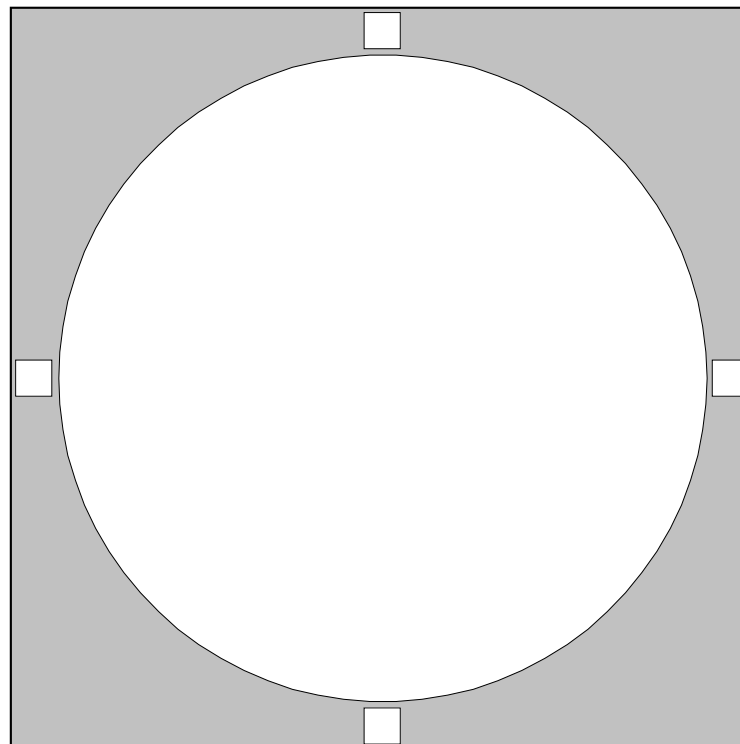
*** !! = Showpiece Object

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RASC Messier Objects - M51

Whirlpool Galaxy

Messier Object	M51		
NGC	5194/5		
Constellation	Canes Venatici		
Type	Spiral Galaxy (G-SAbc)		
Magnitude	8.4		
Distance (Kilo light-years)	37000		
RA	13 29.9		
Dec	+47:12		
Size	8.0' x 7.0'		
UM I	UM II	76	37
	SA	7	
Remarks	!! Whirlpool Galaxy; superb in big scope		
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

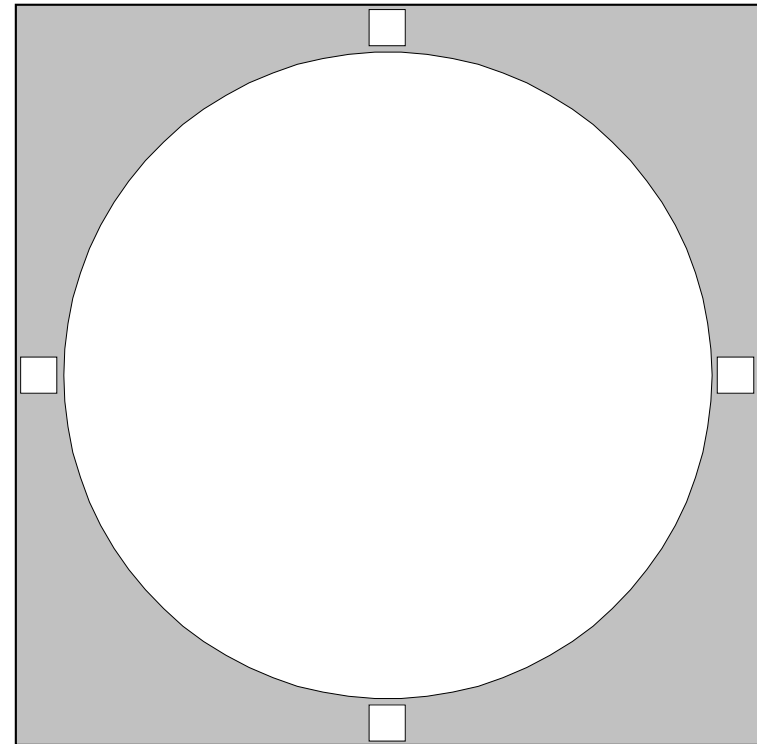
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M52

Messier Object	M52		
NGC	7654		
Constellation	Cassiopeia		
Type	Open Cluster		
Magnitude	6.9		
Distance (Kilo light-years)	5.0		
RA	23 24.2		
Dec	+61:35		
Size	12.0'		
UM I	UM II	15,34,58	18
	SA	3	
Remarks	young, rich cluster; faint Bubble Nebula near by		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

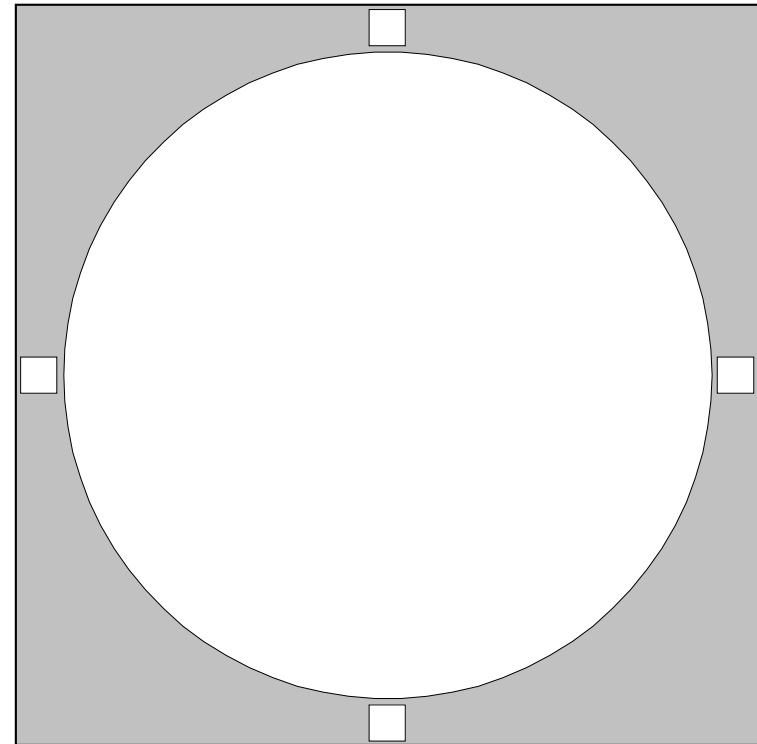


Notes

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 - M53

Messier Object	M53		
NGC	5024		
Constellation	Coma Berenices		
Type	Globular Cluster		
Magnitude	7.5		
Distance (Kilo light-years)	59.7		
RA	13 12.9		
Dec	+18:10		
Size	12.6'		
UM I	UM II	150,195	71
SA	7, 14		
Remarks	150-mm telescope needed to resolve		
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
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

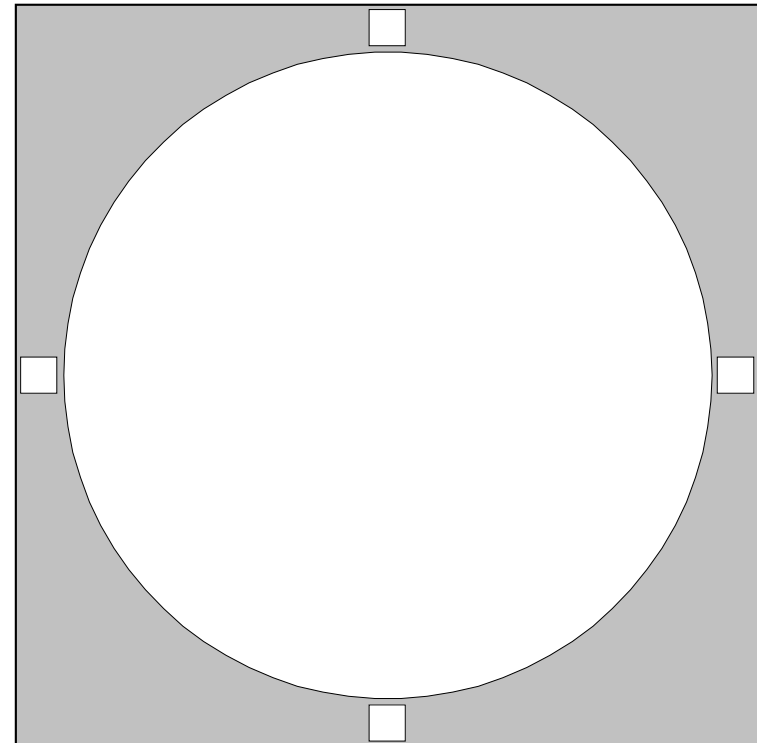
RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

RASC Messier Objects - M54

Messier Object	M54		
NGC	6715		
Constellation	Sagittarius		
Type	Globular Cluster		
Magnitude	7.6		
Distance (Kilo light-years)	88.7		
RA	18 55.1		
Dec	-30:29		
Size	9.1'		
UM I	UM II	378	163
SA	22		
Remarks	not easily resolved		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

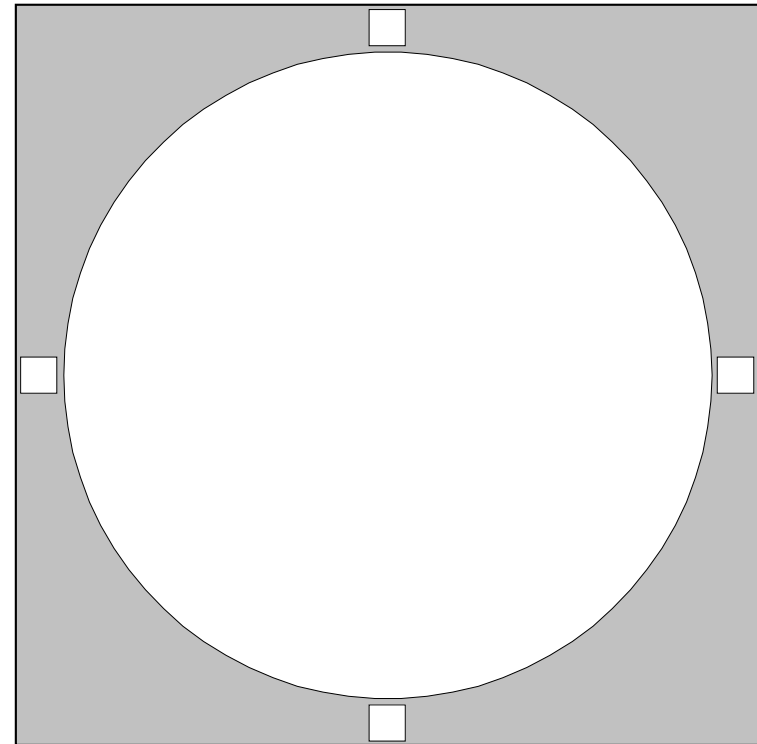


Notes

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 - 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)			

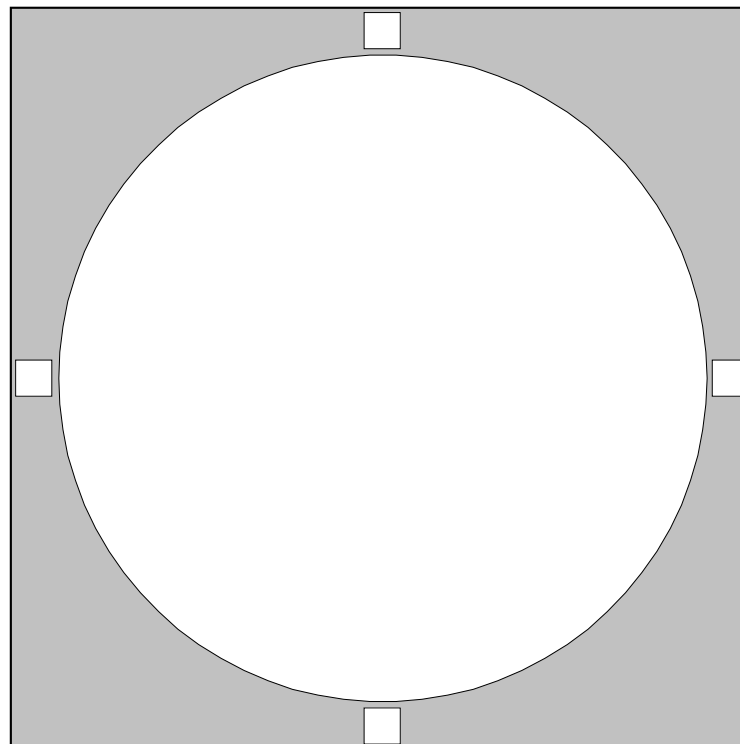


Notes

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 - 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)			



Notes

PN: Planetary Nebula

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

** p = Photographic Magnitude

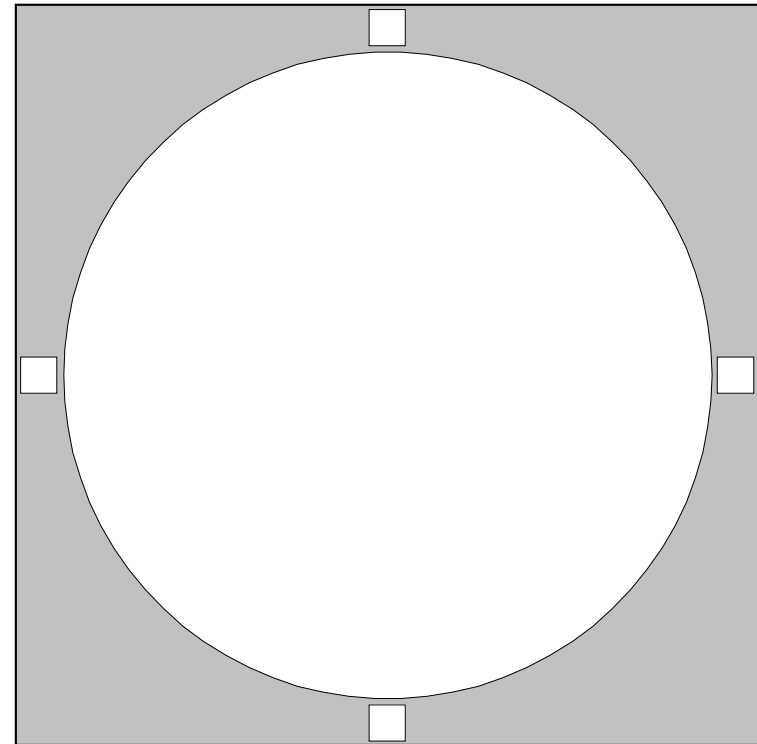
*** !! = Showpiece Object

<http://www.rasc.ca>

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)			



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

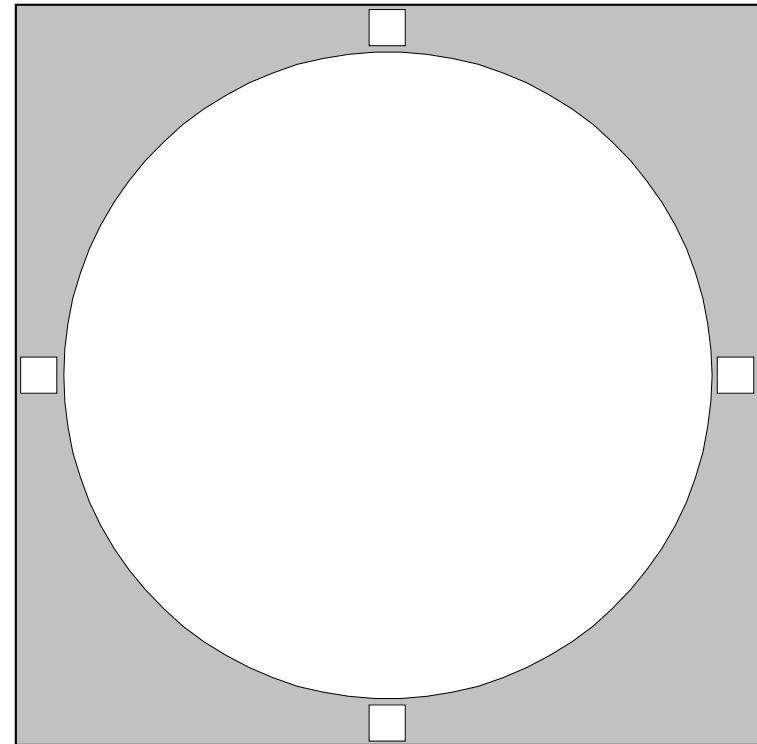
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M58

Messier Object	M58		
NGC	4579		
Constellation	Virgo		
Type	Spiral Galaxy (G-SABb)		
Magnitude	9.7		
Distance (Kilo light-years)	60000		
RA	12 37.7		
Dec	+11:49		
Size	5.5' x 4.6'		
UM I	UM II	194	
	SA	13, 14, B1	
Remarks	bright barred spiral; M59 and M60 one degree E		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

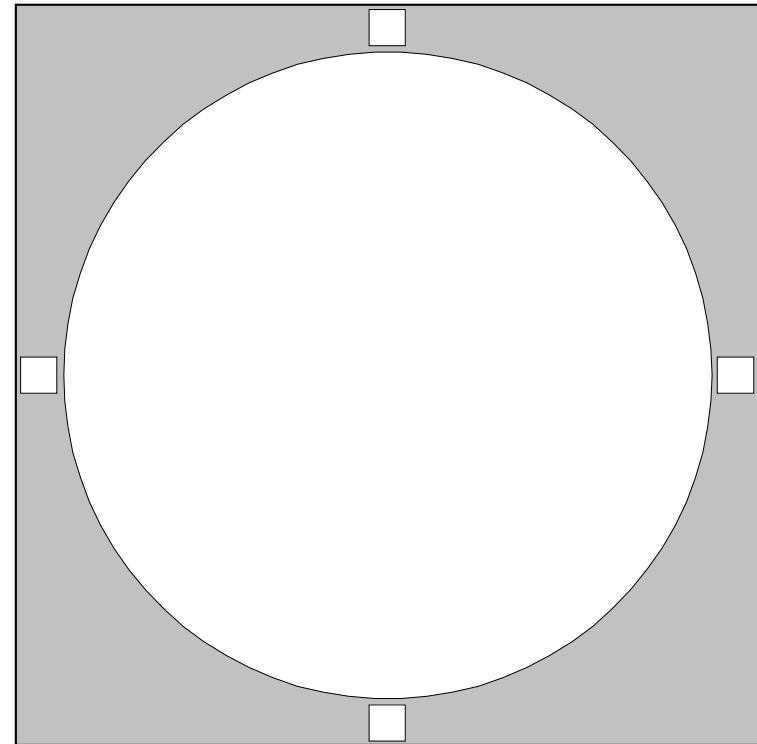


Notes

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 - M59

Messier Object	M59		
NGC	4621		
Constellation	Virgo		
Type	Elliptical Galaxy (G-E5)		
Magnitude	9.6		
Distance (Kilo light-years)	60000		
RA	12 42.0		
Dec	+11:39		
Size	4.6' x 3.6'		
UM I	UM II	194	90
	SA	13, 14, B1	
Remarks	bright elliptical paired with M60		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

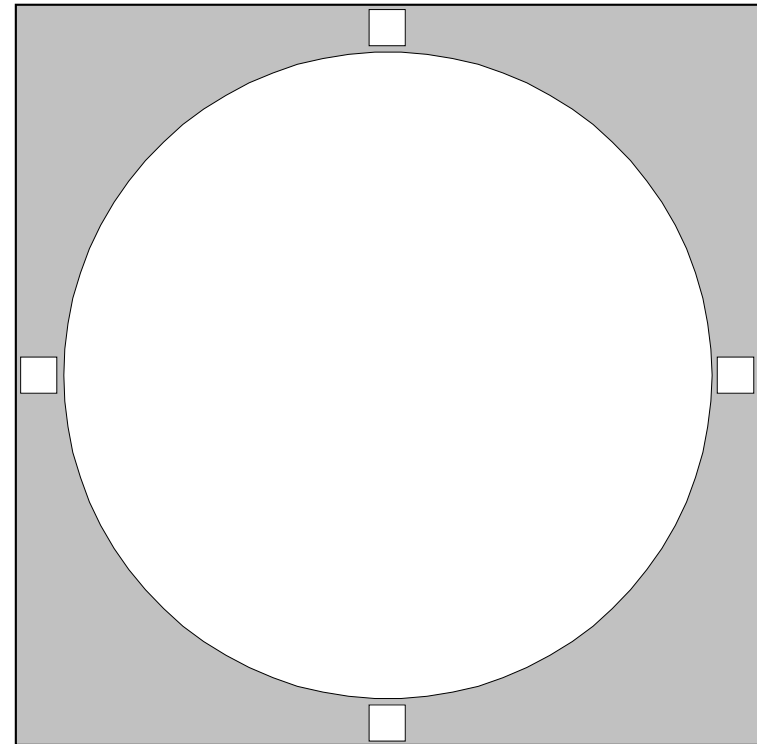
** p = Photographic Magnitude

*** !! = Showpiece Object

<http://www.rasc.ca>

RASC Messier Objects - M60

Messier Object	M60		
NGC	4649		
Constellation	Virgo		
Type	Elliptical Galaxy (G-E2)		
Magnitude	8.8		
Distance (Kilo light-years)	60000		
RA	12 43.7		
Dec	+11:33		
Size	7.1' x 6.1'		
UM I	UM II	194	90
	SA	13, 14, B1	
Remarks	bright elliptical with M59 and NGC 4647		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

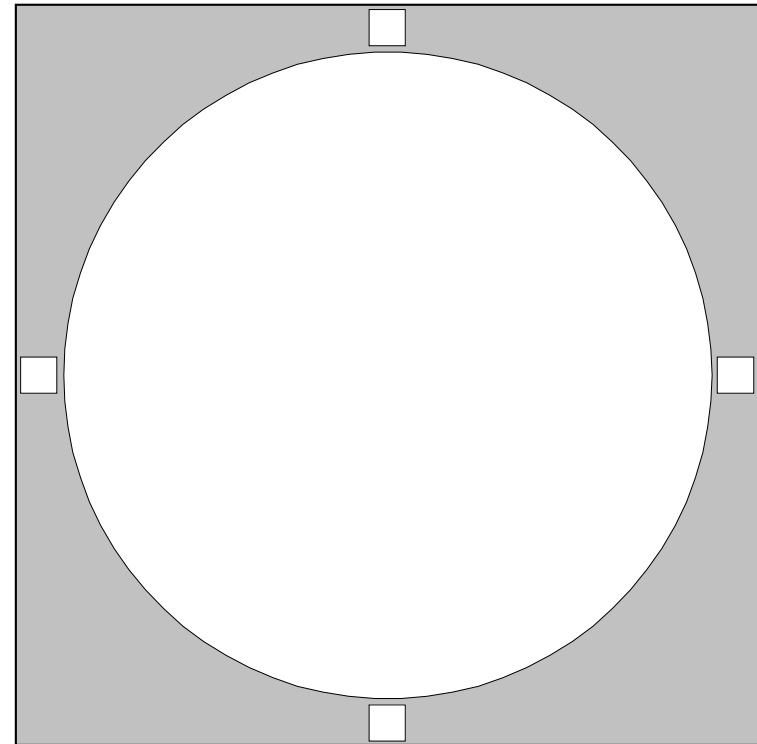
** p = Photographic Magnitude

*** !! = Showpiece Object

<http://www.rasc.ca>

RASC Messier Objects - M61

Messier Object	M61		
NGC	4303		
Constellation	Virgo		
Type	Spiral Galaxy (G-SABbc)		
Magnitude	9.7		
Distance (Kilo light-years)	60000		
RA	12 21.9		
Dec	+04:28		
Size	6.0' x 5.9'		
UM I	UM II	238	111,A15
	SA	13, 14, B1	
Remarks	face-on two-armed spiral		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

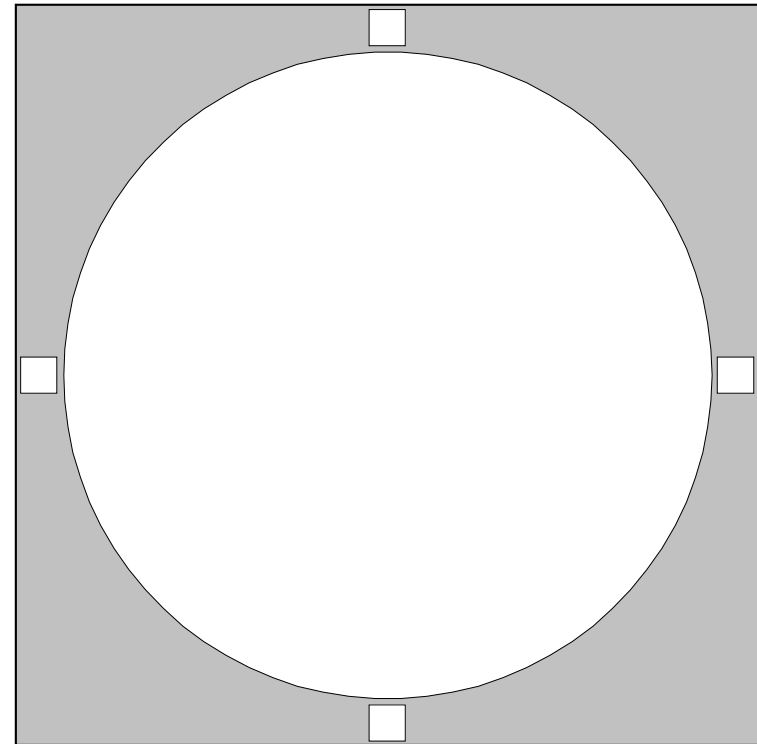


Notes

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 - M62

Messier Object	M62		
NGC	6266		
Constellation	Ophiuchus		
Type	Globular Cluster		
Magnitude	6.7		
Distance (Kilo light-years)	22.5		
RA	17 01.2		
Dec	-30:07		
Size	14.1'		
UM I	UM II	375,376	164
SA	22		
Remarks	asymmetrical; in rich field		
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

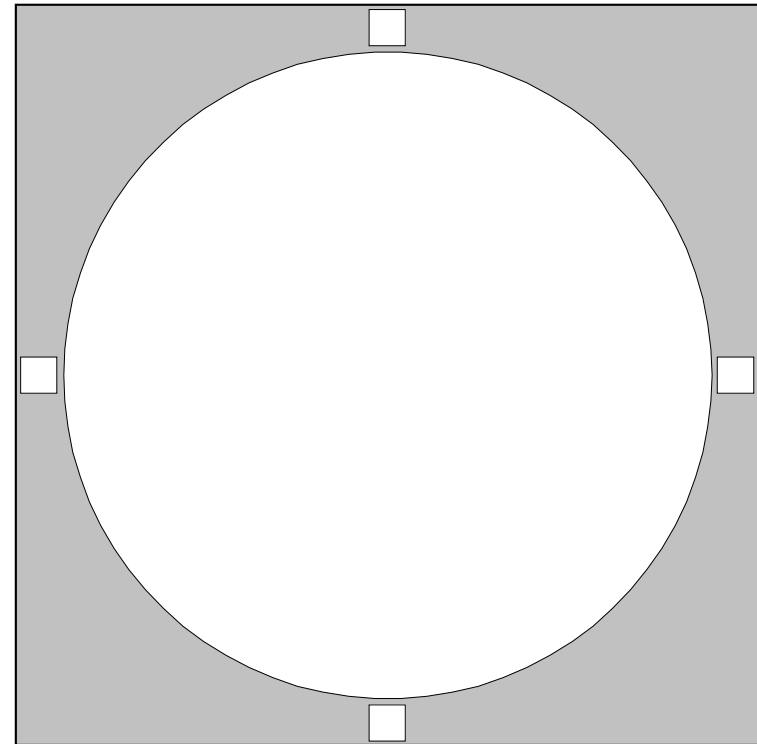
Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M63

Sunflower Galaxy

Messier Object	M63		
NGC	5055		
Constellation	Canes Venatici		
Type	Spiral Galaxy (G-SAbc)		
Magnitude	8.6		
Distance (Kilo light-years)	37000		
RA	13 15.8		
Dec	+42:02		
Size	14.0 x 8.0'		
UM I	UM II	75,76	37
	SA	7	
Remarks	!! Sunflower Galaxy; bright, elongated		
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

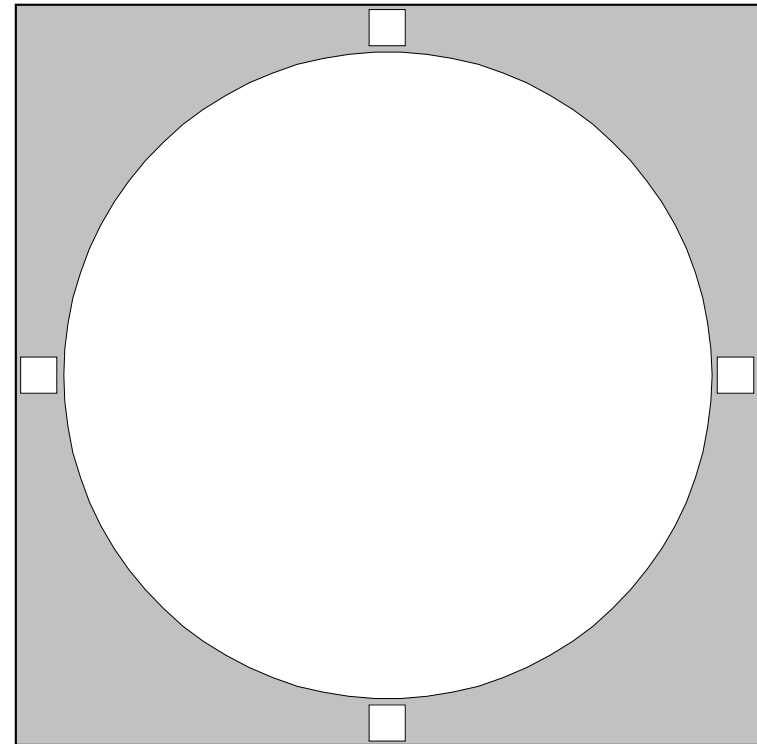
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

Black Eye Galaxy. Sleeping Beauty Galaxy

Messier Object	M64		
NGC	4826		
Constellation	Coma Berenices		
Type	Spiral Galaxy (G-SAab)		
Magnitude	8.5		
Distance (Kilo light-years)	19000		
RA	12 56.7		
Dec	+21:41		
Size	9.2' x 4.6'		
UM I	UM II	149	71
	SA	7	
Remarks	!! Black Eye Galaxy; eye needs big scope		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

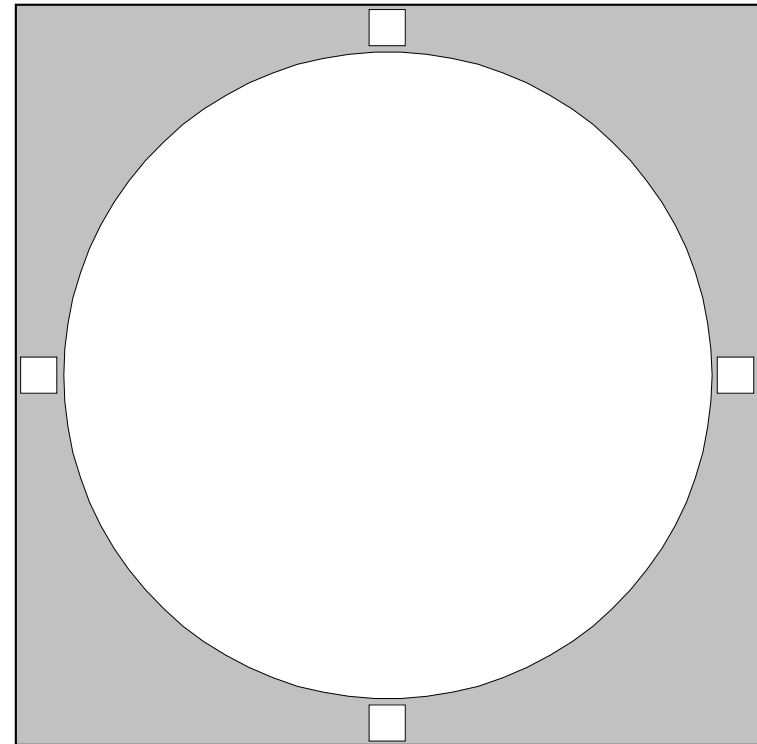


Notes

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 - M65

Messier Object	M65		
NGC	3623		
Constellation	Leo		
Type	Spiral Galaxy (G-SABa)		
Magnitude	9.3		
Distance (Kilo light-years)	35000		
RA	11 18.9		
Dec	+13:05		
Size	8.7' x 2.2'		
UM I	UM II	191	92
	SA	13	
Remarks	!! bright elongated spiral		
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
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

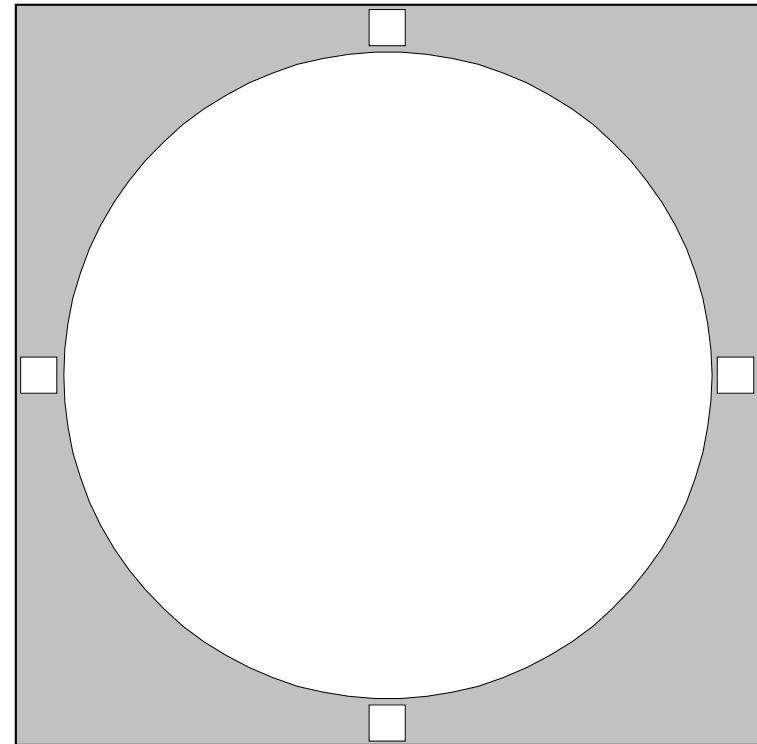
RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

RASC Messier Objects - M66

Messier Object	M66		
NGC	3627		
Constellation	Leo		
Type	Spiral Galaxy (G-SABb)		
Magnitude	8.9		
Distance (Kilo light-years)	35000		
RA	11 20.2		
Dec	+12:59		
Size	8.2' x 3.9'		
UM I	UM II	191	91,92
	SA	13	
Remarks	!! M65 and NGC 3628 in same field		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

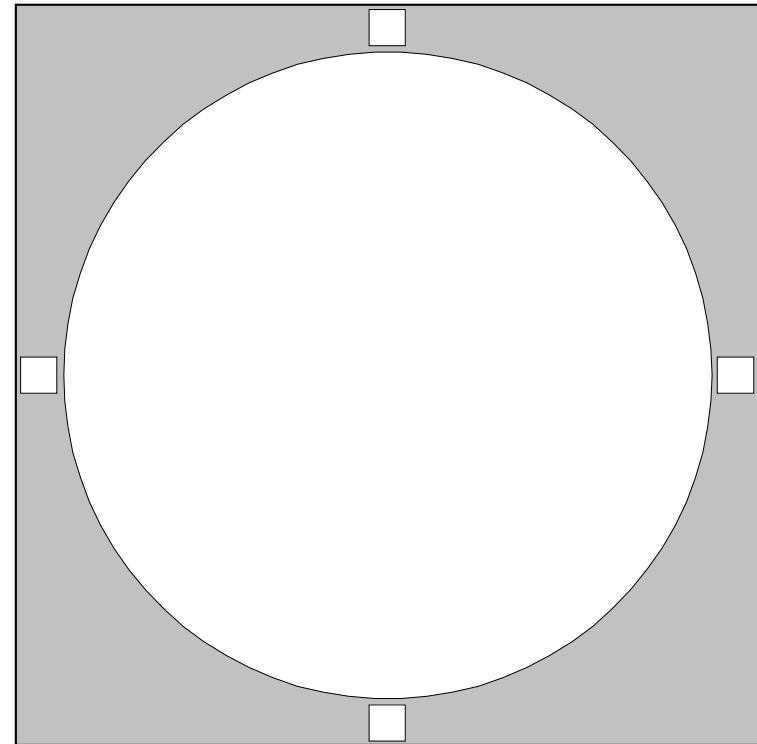


Notes

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 - 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 star clusters known		
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
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

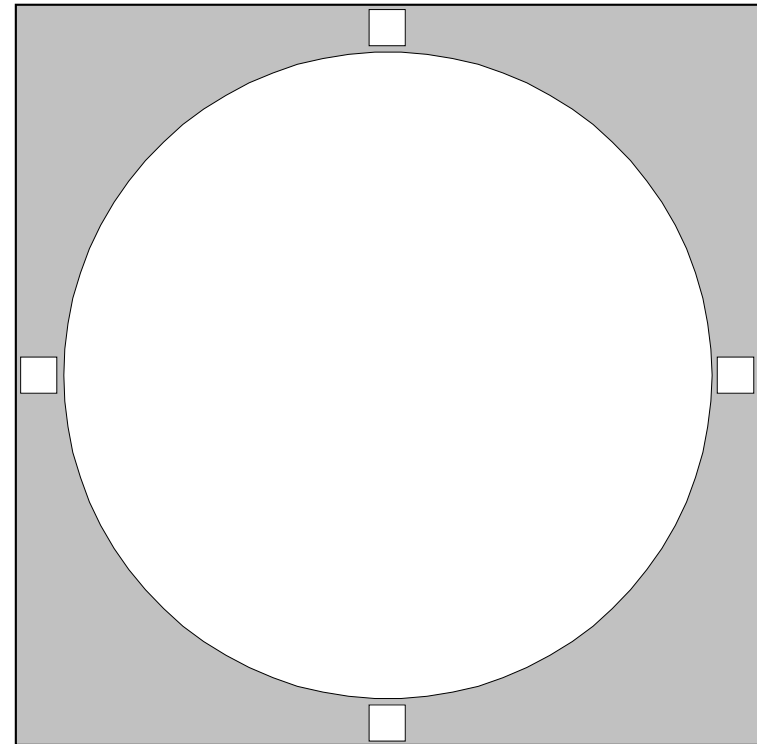
RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

RASC Messier Objects - M68

Messier Object	M68		
NGC	4590		
Constellation	Hydra		
Type	Globular Cluster		
Magnitude	7.7		
Distance (Kilo light-years)	33.3		
RA	12 39.5		
Dec	-26:45		
Size	12.0'		
UM I	UM II	329	149,150
	SA	21	
Remarks	150-mm telescope needed to resolve		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

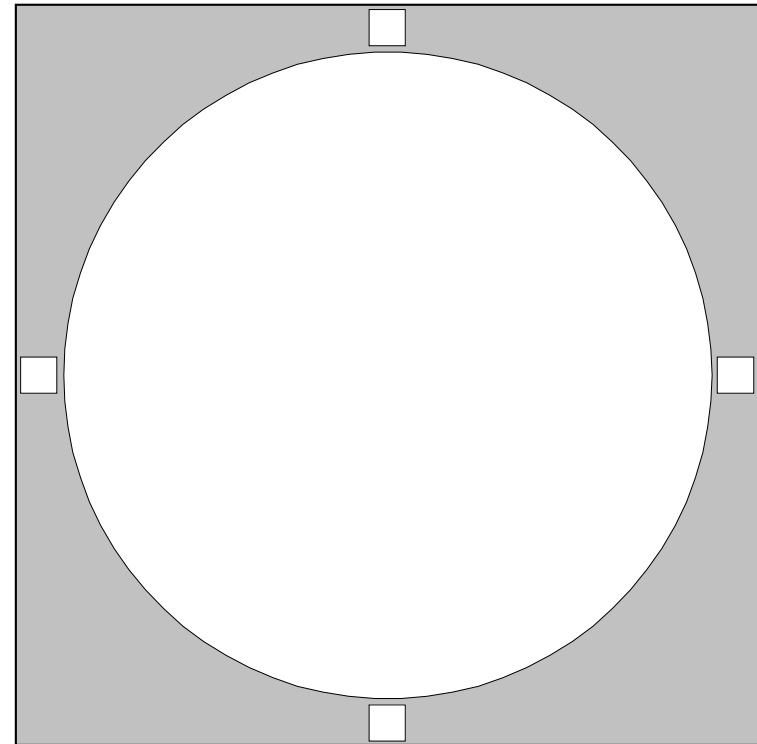
** p = Photographic Magnitude

*** !! = Showpiece Object

<http://www.rasc.ca>

RASC Messier Objects - M69

Messier Object	M69		
NGC	6637		
Constellation	Sagittarius		
Type	Globular Cluster		
Magnitude	7.6		
Distance (Kilo light-years)	28.0		
RA	18 31.4		
Dec	-32:21		
Size	7.1'		
UM I	UM II	378	163
SA	22		
Remarks	small. poor 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

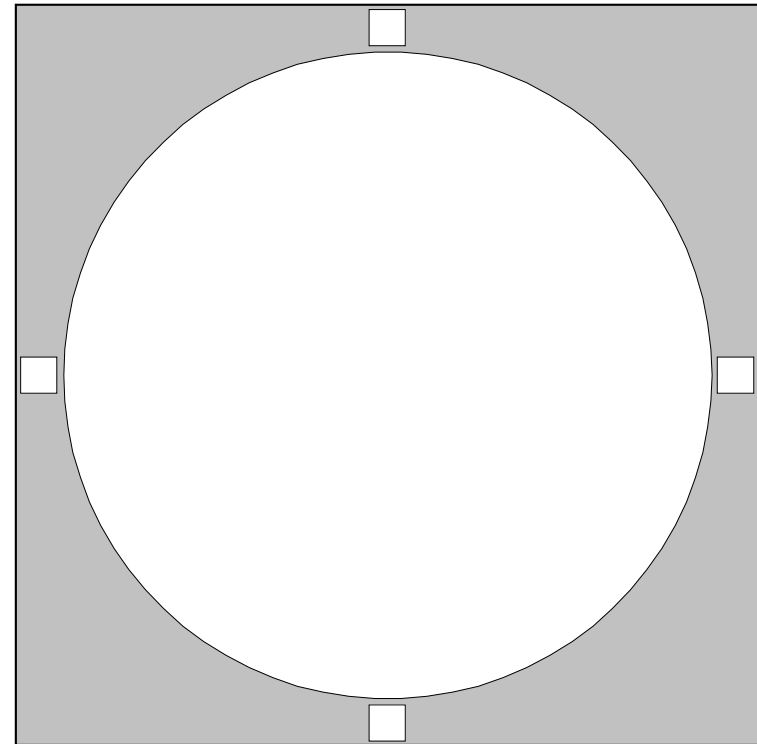
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M70

Messier Object	M70		
NGC	6681		
Constellation	Sagittarius		
Type	Globular Cluster		
Magnitude	8.0'		
Distance (Kilo light-years)	29.4		
RA	18 43.2		
Dec	-32:18		
Size	7.8'		
UM I	UM II	378	163
SA	22		
Remarks	small globular two degrees east of M69		
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
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

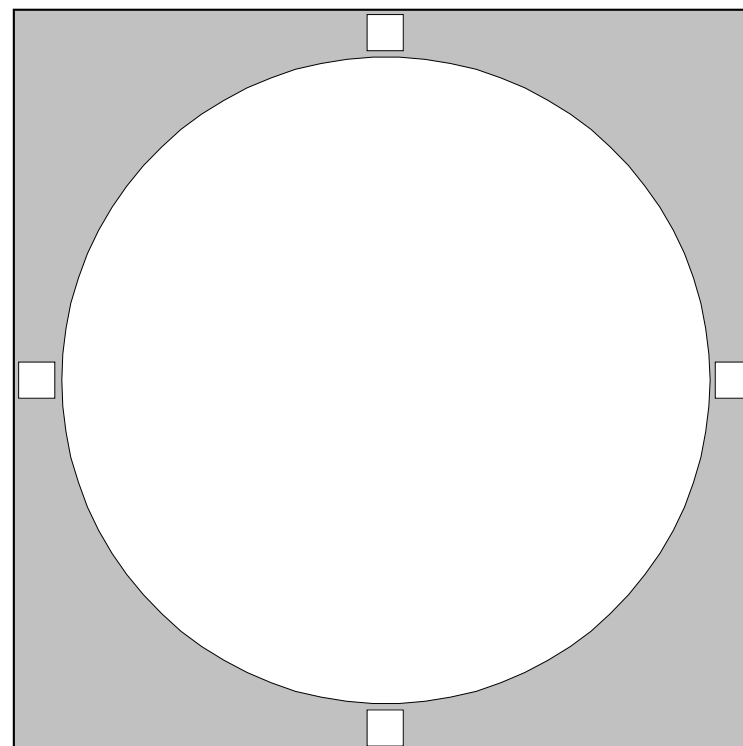
RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

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)			



Notes

PN: Planetary Nebula

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

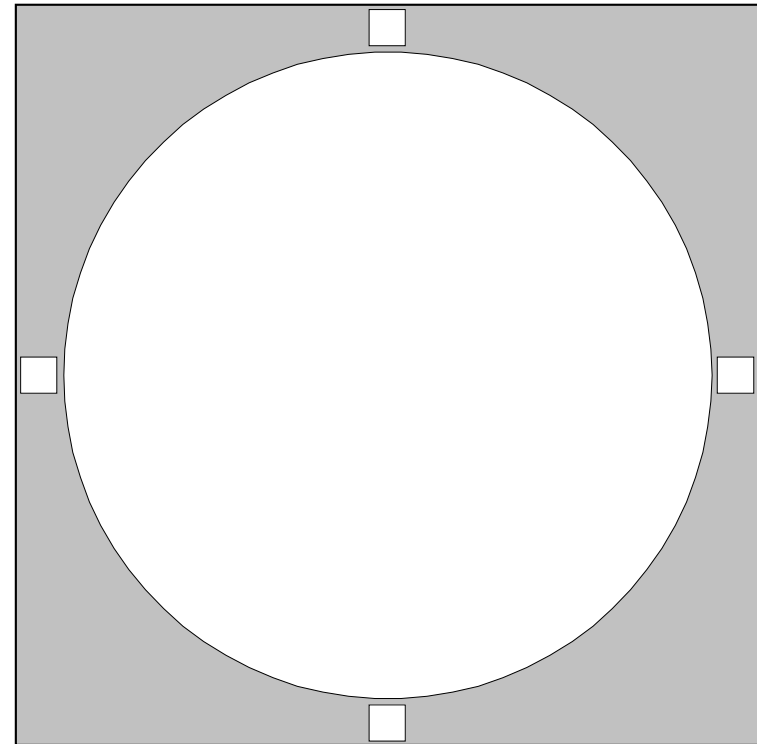
** p = Photographic Magnitude

*** !! = Showpiece Object

<http://www.rasc.ca>

RASC Messier Objects - M72

Messier Object	M72		
NGC	6981		
Constellation	Aquarius		
Type	Globular Cluster		
Magnitude	9.3		
Distance (Kilo light-years)	55.4		
RA	20 53.5		
Dec	-12:32		
Size	5.9'		
UM I	UM II	299	124
SA	16		
Remarks	near the Saturn Nebula, NGC 7009		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

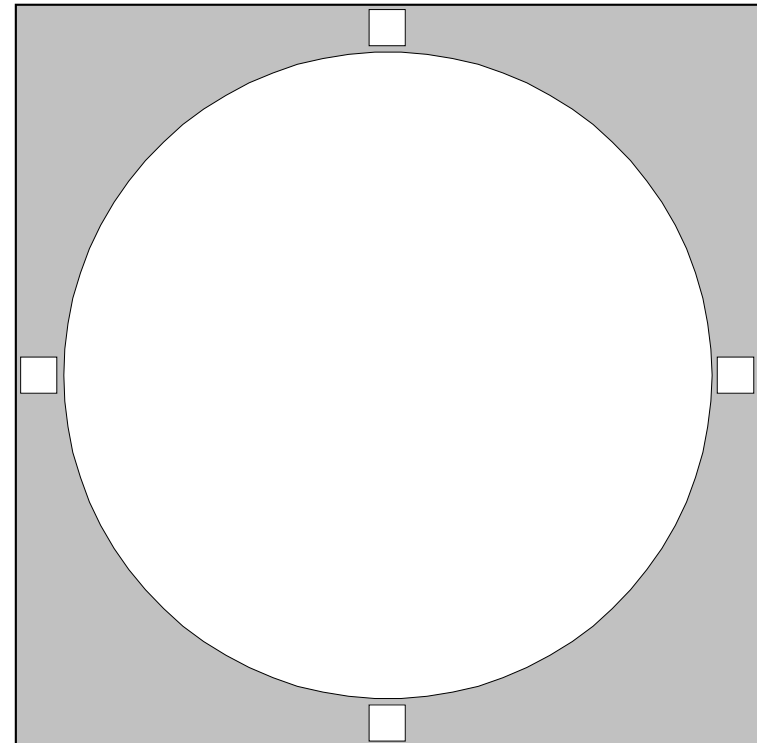


Notes

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 - M73

Messier Object	M73		
NGC	6994		
Constellation	Aquarius		
Type	Open Cluster		
Magnitude	8.9p		
Distance (Kilo light-years)	2.0		
RA	20 59.0		
Dec	-12:38		
Size	2.8'		
UM I	UM II	299	123,124
SA	16		
Remarks	group of 4 stars only; an "Asterism"		
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

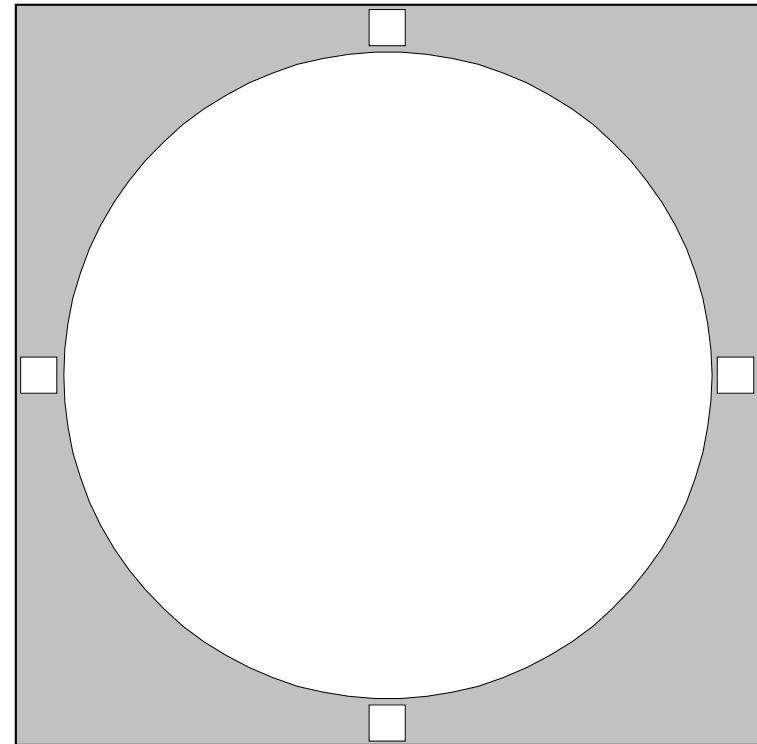
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M74

Messier Object	M74		
NGC	628		
Constellation	Pisces		
Type	Spiral Galaxy (G-SAc)		
Magnitude	9.4		
Distance (Kilo light-years)	35000		
RA	01 36.7		
Dec	+15:47		
Size	11.0' x 11.0'		
UM I	UM II	173	100
	SA	10	
Remarks	faint. elusive spiral; tough in small scope		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

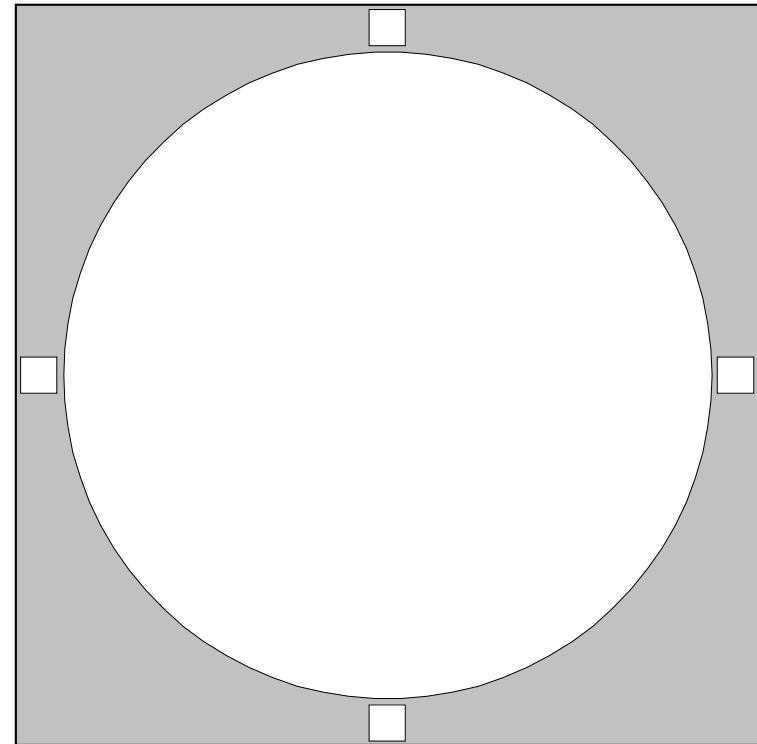


Notes

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 - 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)			

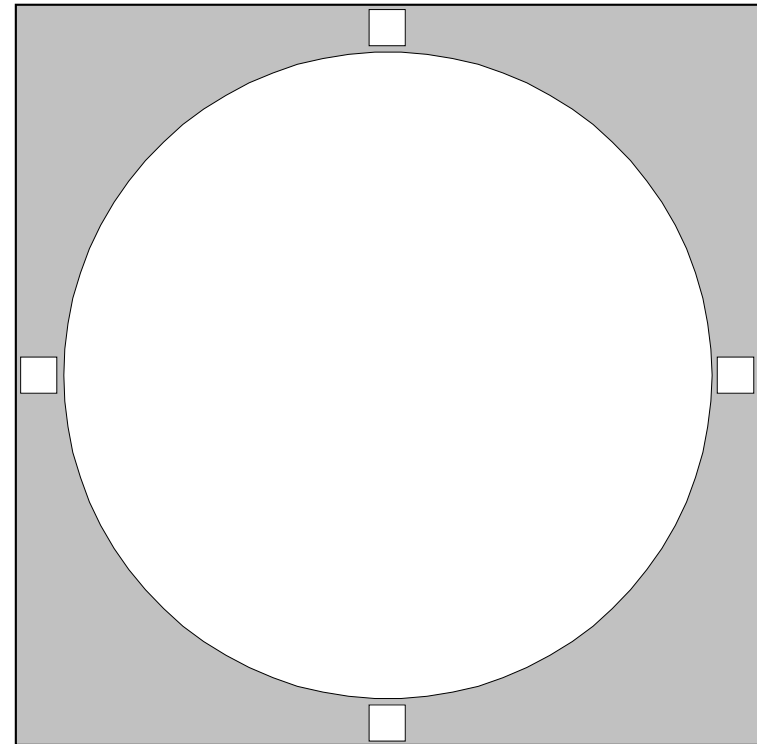


Notes

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 - M76
Little Dumbbell Nebula

Messier Object	M76		
NGC	650/51		
Constellation	Perseus		
Type	Planetary Nebula		
Magnitude	10.1		
Distance (Kilo light-years)	3.4		
RA	01 42.4		
Dec	+51:34		
Size	> 1' 5"		
UM I	UM II	37	29,44
	SA	1, 4	
Remarks	Little Dumbbell; faint but distinct		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



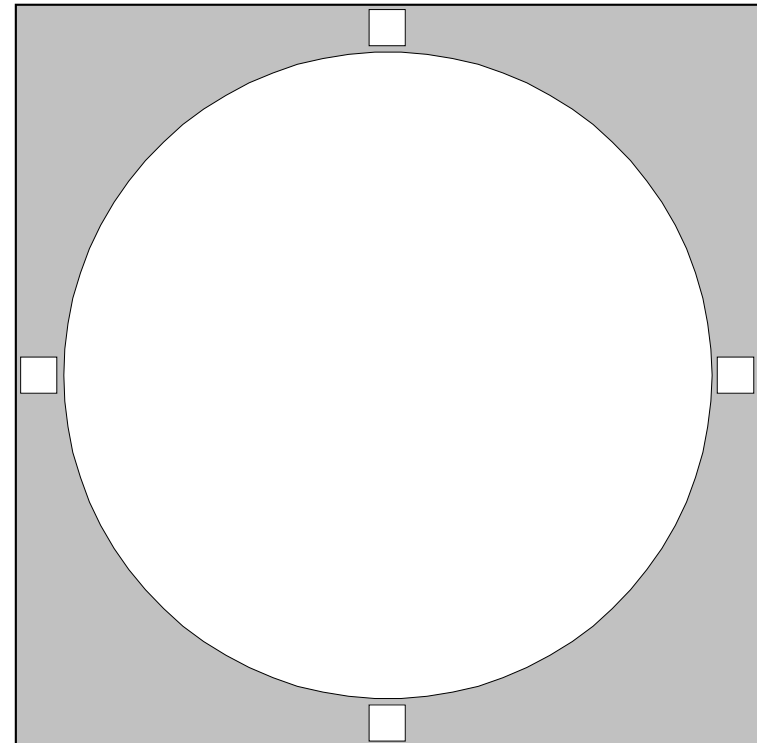
Notes

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 - M77

Cetus A

Messier Object	M77		
NGC	1068		
Constellation	Cetus		
Type	Spiral Galaxy (G-SABab)		
Magnitude	8.9		
Distance (Kilo light-years)	60000		
RA	02 42.7		
Dec	-00:01		
Size	8.2' x 7.3'		
UM I	UM II	220	119
	SA	10	
Remarks	a Seyfert galaxy; with starlike nucleus		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

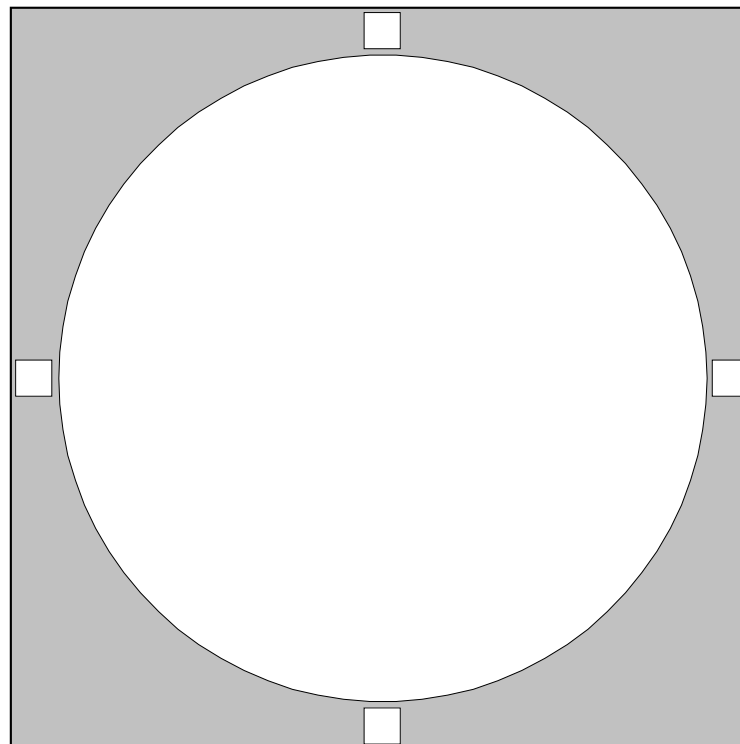


Notes

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 - M78

Messier Object	M78		
NGC	2068		
Constellation	Orion		
Type	Reflection Nebula		
Magnitude	8.3		
Distance (Kilo light-years)	1.6		
RA	05 46.7		
Dec	+00:03		
Size	8' x 6'		
UM I	UM II	226	116
SA	11, B2		
Remarks	bright featureless reflection nebula		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

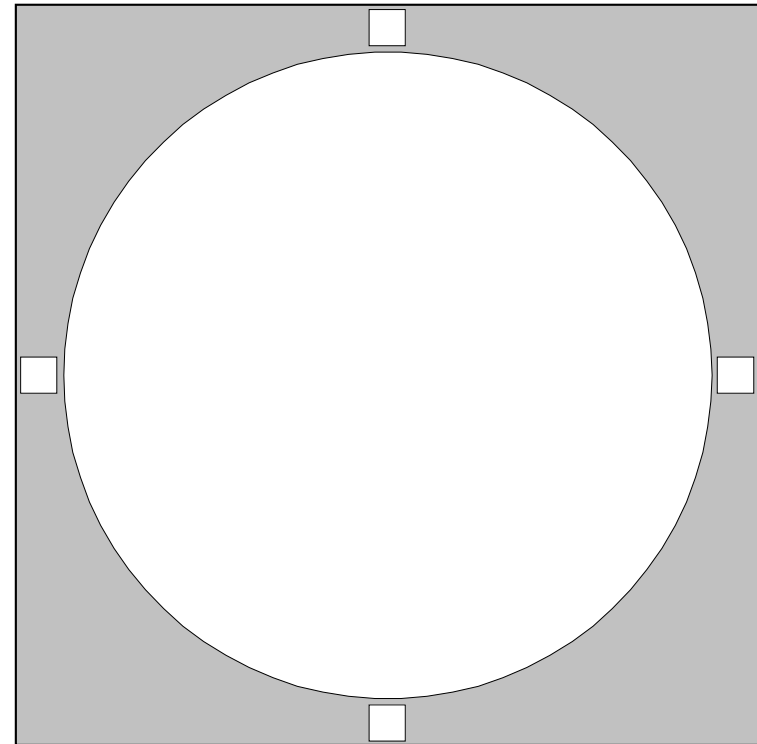
** p = Photographic Magnitude

*** !! = Showpiece Object

<http://www.rasc.ca>

RASC Messier Objects - M79

Messier Object	M79		
NGC	1904		
Constellation	Lepus		
Type	Globular Cluster		
Magnitude	7.8		
Distance (Kilo light-years)	42.1		
RA	05 24.5		
Dec	-24:33		
Size	8.7'		
UM I	UM II	315	155
	SA	19	
Remarks	200-mm telescope needed to resolve		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

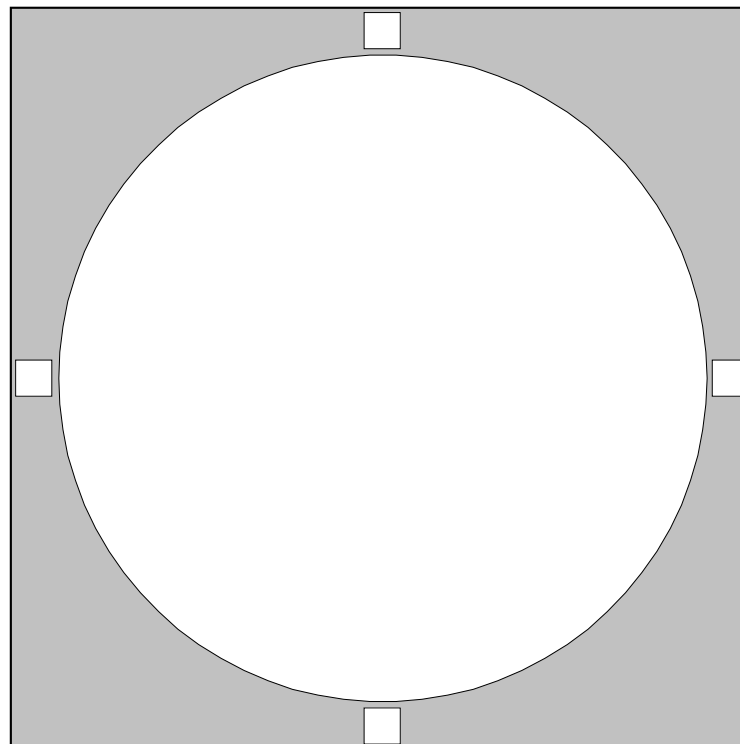


Notes

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 - M80

Messier Object	M80		
NGC	6093		
Constellation	Scorpius		
Type	Globular Cluster		
Magnitude	7.3		
Distance (Kilo light-years)	32.6		
RA	16 17.0		
Dec	-22:59		
Size	8.9'		
UM I	UM II	335,336	147
SA	22		
Remarks	very compressed globular		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



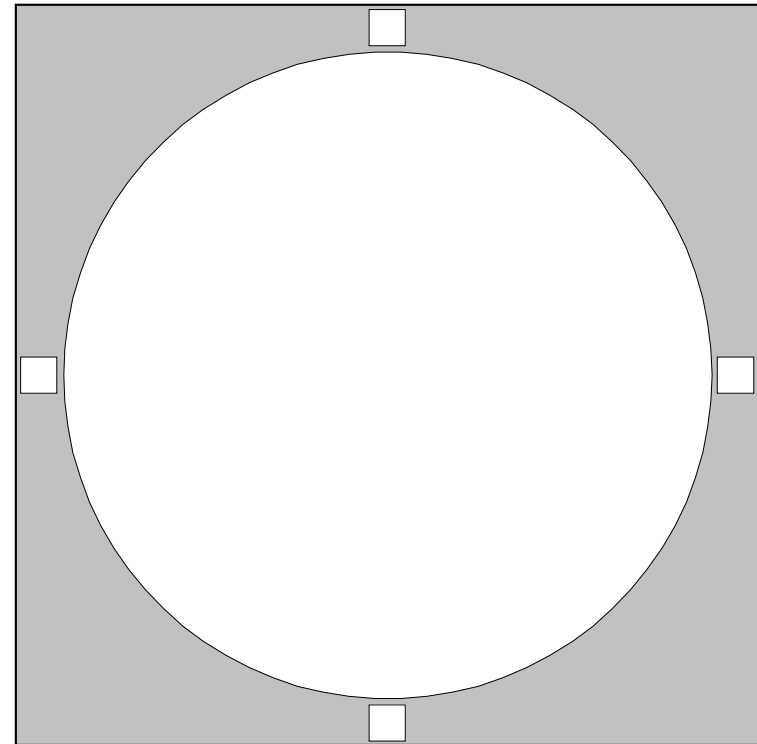
Notes

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 - 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)			



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

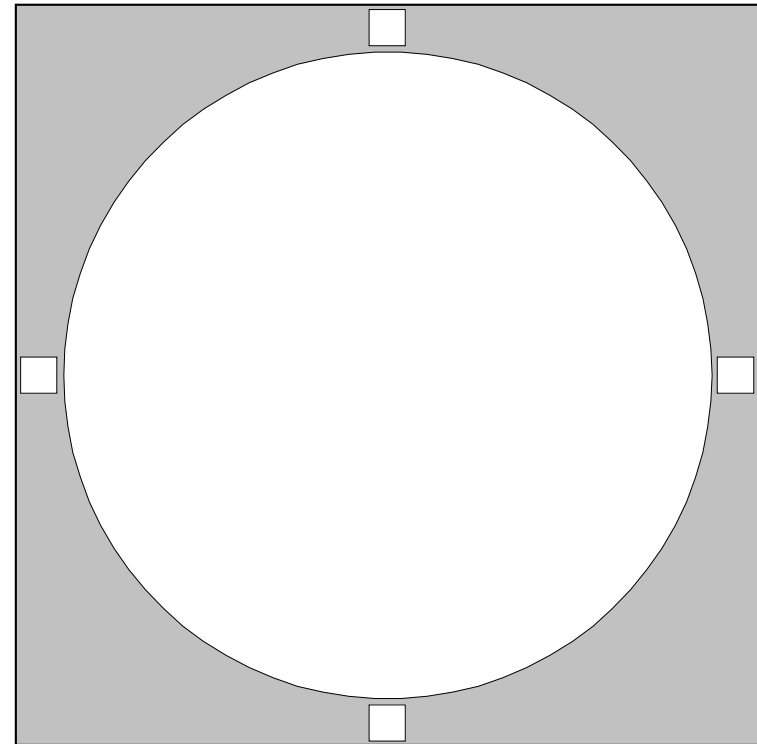
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RASC Messier Objects - M82

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" galaxy; 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)			



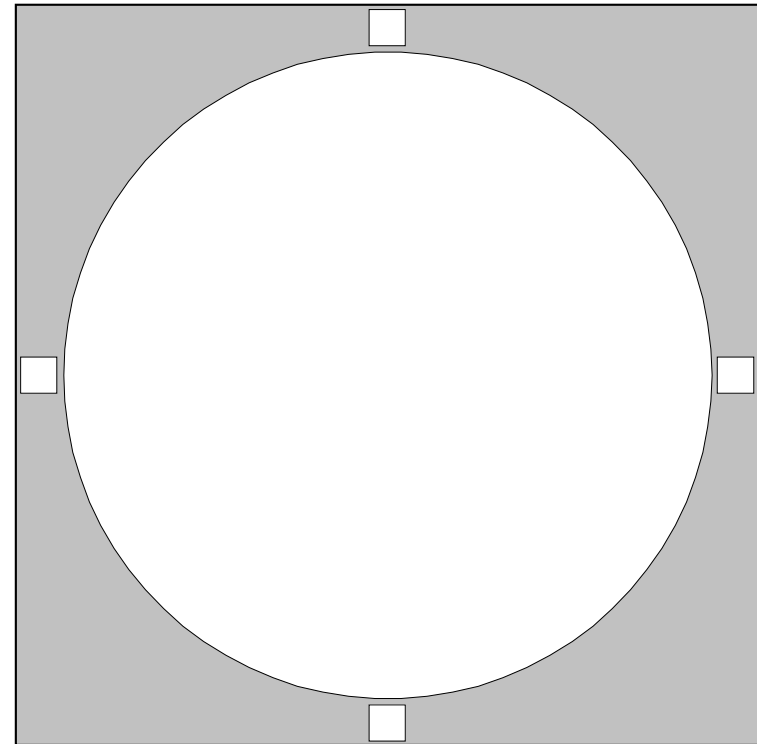
Notes

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 - M83

Southern Pinwheel

Messier Object	M83		
NGC	5236		
Constellation	Hydra		
Type	Spiral Galaxy (G-SABc)		
Magnitude	7.6		
Distance (Kilo light-years)	15000		
RA	13 37.0		
Dec	-29:52		
Size	16.0' x 13.0'		
UM I	UM II	370,371	149,167
	SA	21	
Remarks	large and diffuse; superb from far south		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

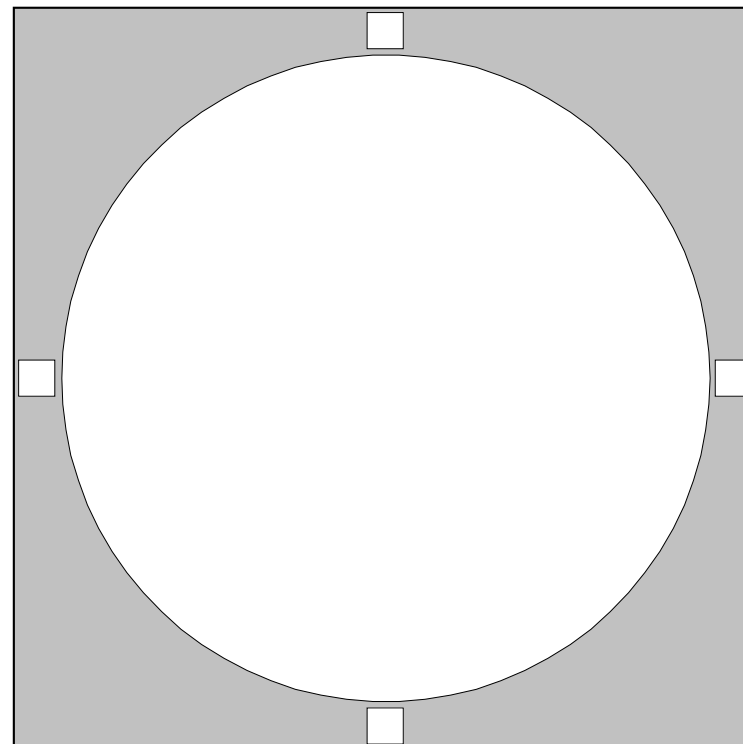


Notes

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 - M84

Messier Object	M84		
NGC	4374		
Constellation	Virgo		
Type	Elliptical Galaxy (G-E1)		
Magnitude	9.1		
Distance (Kilo light-years)	60000		
RA	12 25.1		
Dec	+12:53		
Size	5.1' x 4.1'		
UM I	UM II	193	91,A13
	SA	13, 14, B1	
Remarks	!! with M86 in Markarian's Chain		
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

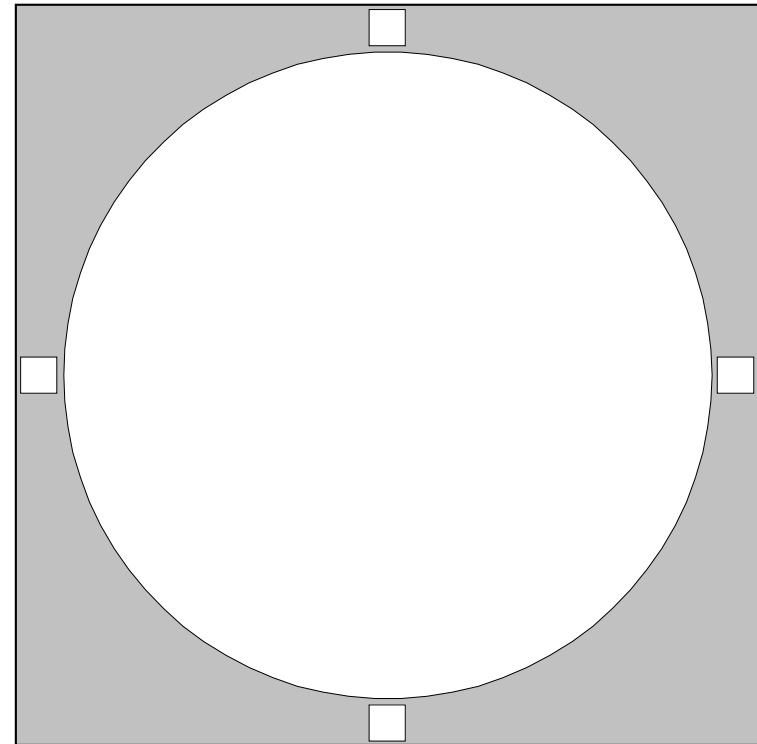
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

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RASC Messier Objects - M85

Messier Object	M85		
NGC	4382		
Constellation	Coma Berenices		
Type	Spiral Galaxy (G-Sa0+)		
Magnitude	9.1		
Distance (Kilo light-years)	60000		
RA	12 25.4		
Dec	+18:11		
Size	7.5' x 5.7'		
UM I	UM II	148	72
SA	7, 13, 14, B1		
Remarks	bright elliptical shape		
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
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

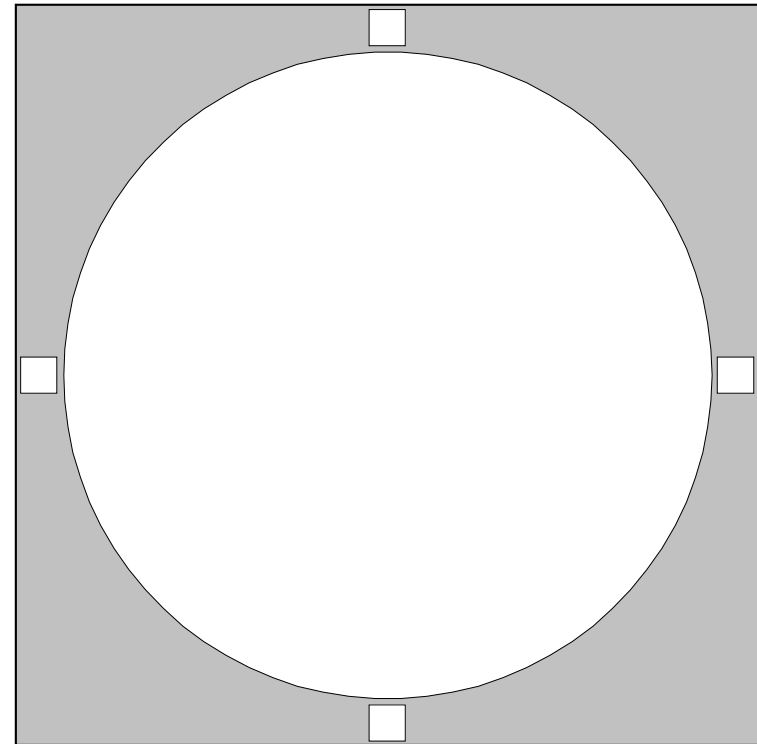
RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

RASC Messier Objects - M86

Messier Object	M86		
NGC	4406		
Constellation	Virgo		
Type	Elliptical Galaxy (G-E3)		
Magnitude	8.9		
Distance (Kilo light-years)	60000		
RA	12 26.2		
Dec	+12:57		
Size	12.0' x 9.0'		
UM I	UM II	193	91,A13
	SA	13, 14, B1	
Remarks	!! with many NGC galaxies in Chain		
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

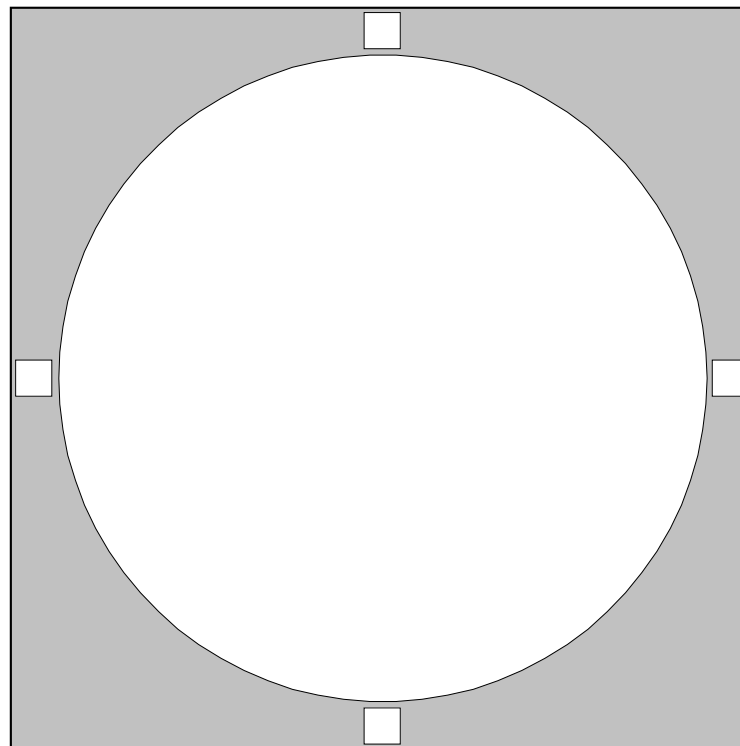
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RASC Messier Objects - M87

Virgo A

Messier Object	M87		
NGC	4486		
Constellation	Virgo		
Type	Elliptical Galaxy (G-E0-1)		
Magnitude	8.6		
Distance (Kilo light-years)	60000		
RA	12 30.8		
Dec	+12:24		
Size	7.1' x 7.1'		
UM I	UM II	193,194	91,A13
	SA	13, 14, B1	
Remarks	the one with famous jet and black hole		
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

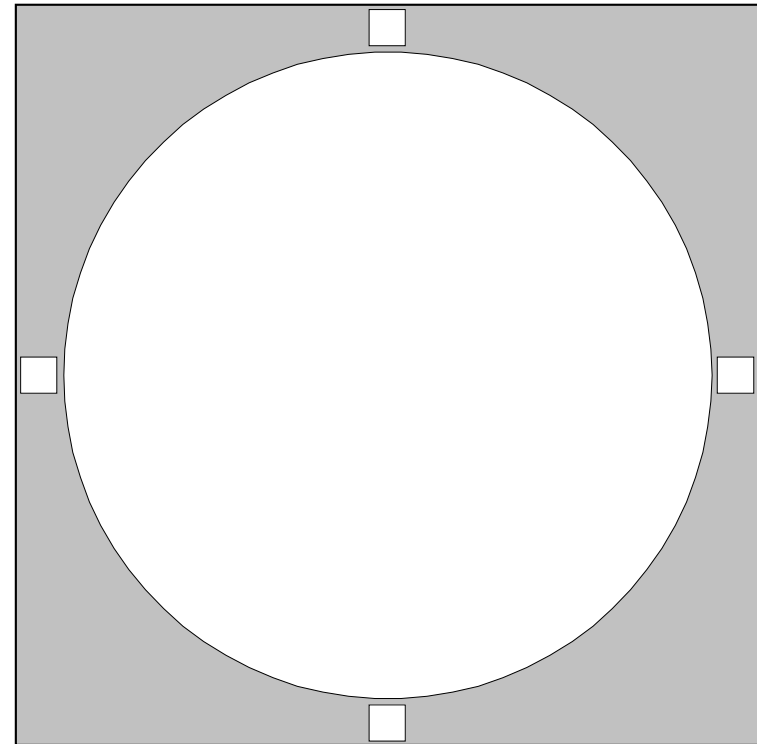
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M88

Messier Object	M88		
NGC	4501		
Constellation	Coma Berenices		
Type	Spiral Galaxy (G-SAb)		
Magnitude	9.6		
Distance (Kilo light-years)	60000		
RA	12 32.0		
Dec	+14:25		
Size	6.1' x 2.8'		
UM I	UM II	193,194	90,91,A13
	SA	13, 14, B1	
Remarks	bright multiple arm spiral		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

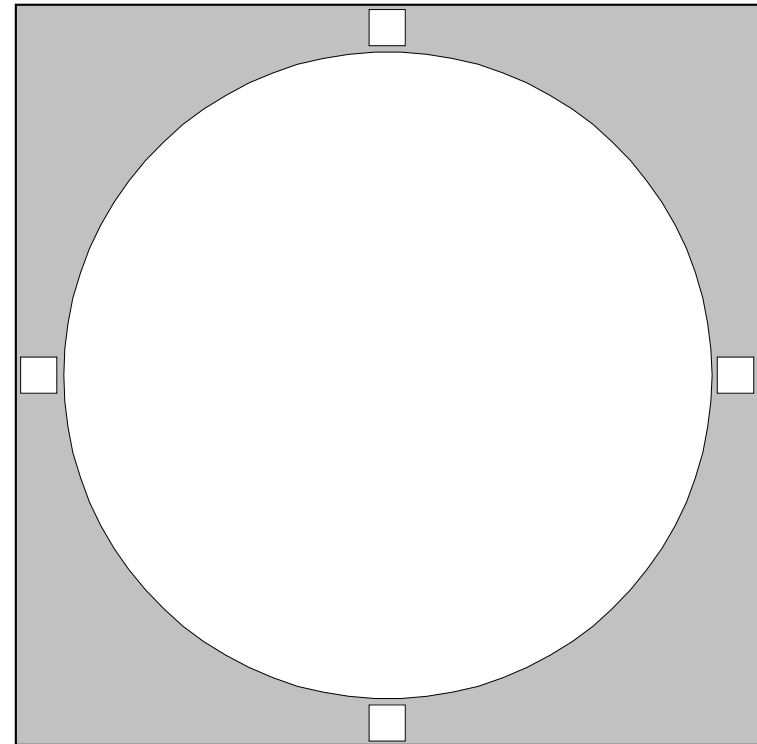


Notes

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 - M89

Messier Object	M89		
NGC	4552		
Constellation	Virgo		
Type	Elliptical Galaxy (G-E)		
Magnitude	9.8		
Distance (Kilo light-years)	60000		
RA	12 35.7		
Dec	+12:33		
Size	3.4' x 3.4'		
UM I	UM II	193,194	90,91,A13
	SA	13, 14, B1	
Remarks	elliptical; resembles M86 but smaller		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

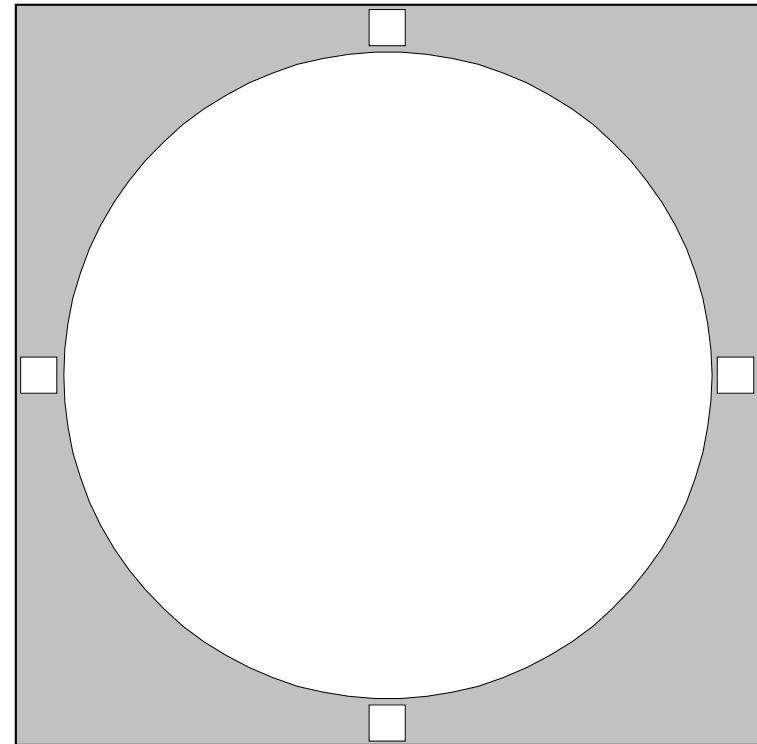


Notes

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 - M90

Messier Object	M90		
NGC	4569		
Constellation	Virgo		
Type	Spiral Galaxy (G-SABab)		
Magnitude	9.5		
Distance (Kilo light-years)	60000		
RA	12 36.8		
Dec	+13:10		
Size	10.0' x 4.0'		
UM I	UM II	194	
		90,91,A13	
	SA	13, 14, B1	
Remarks	bright barred spiral near M89		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

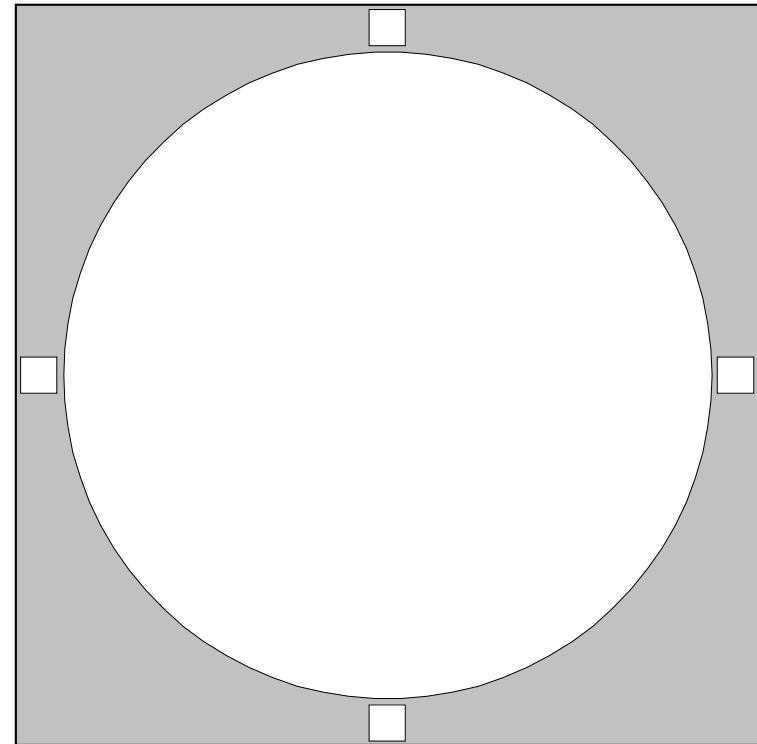


Notes

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 - M91

Messier Object	M91		
NGC	4548		
Constellation	Coma Berenices		
Type	Spiral Galaxy (G-SBb)		
Magnitude	10.2		
Distance (Kilo light-years)	60000		
RA	12 35.4		
Dec	+14:30		
Size	5.0' x 4.1'		
UM I	UM II	193,194	90,91,A13
	SA	13, 14, B1	
Remarks	some lists say M91 = M58, not NGC 4548		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

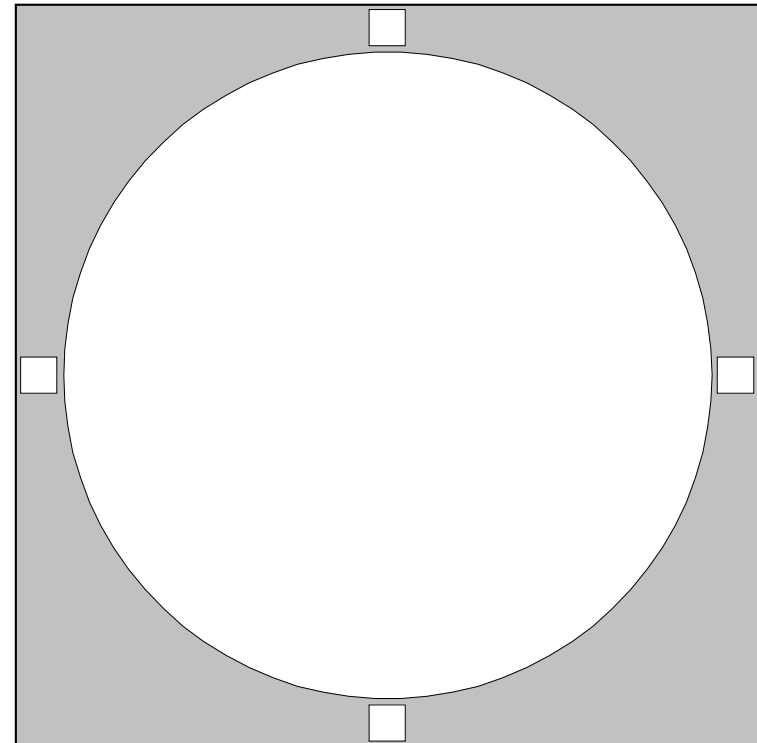


Notes

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 - M92

Messier Object	M92		
NGC	6341		
Constellation	Hercules		
Type	Globular Cluster		
Magnitude	6.4		
Distance (Kilo light-years)	26.7		
RA	17 17.1		
Dec	+43:08		
Size	11.2'		
UM I	UM II	81	34
SA	8		
Remarks	nine degrees noth east of M13; fine but often overlooked		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

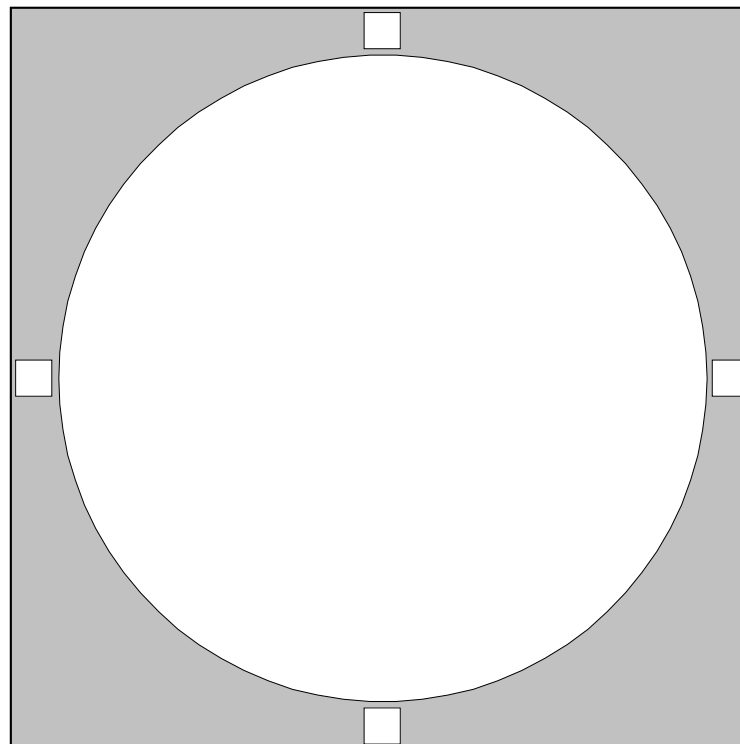


Notes

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 - M93

Messier Object	M93		
NGC	2447		
Constellation	Puppis		
Type	Open Cluster		
Magnitude	~ 6.2		
Distance (Kilo light-years)	3.6		
RA	07 44.6		
Dec	-23:52		
Size	22'		
UM I	UM II	319,320	153
	SA	19	
Remarks	compact, bright cluster;fairly rich		
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
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

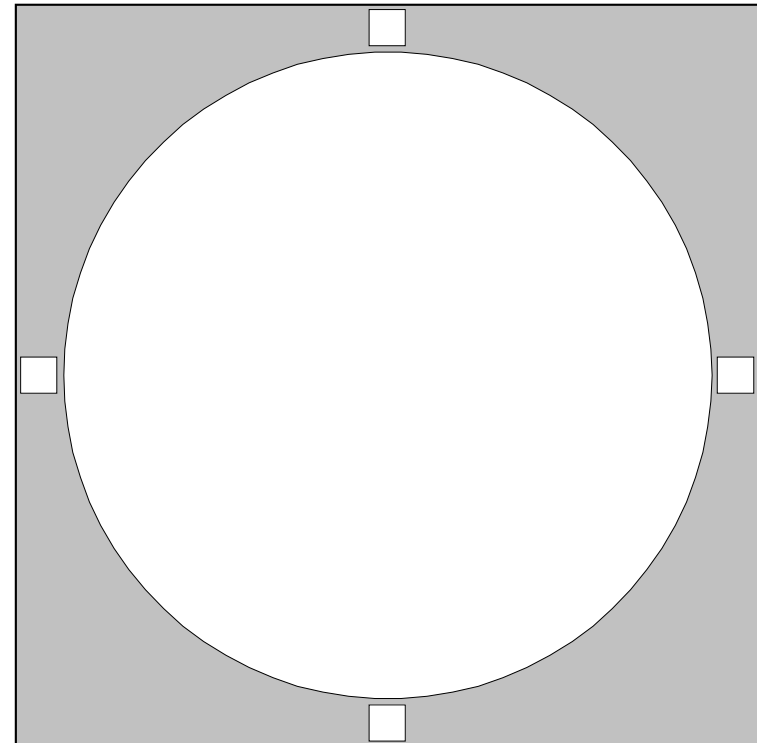
RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

RASC Messier Objects - M94

Messier Object	M94		
NGC	4736		
Constellation	Canes Venatici		
Type	Spiral Galaxy (G-SAab)		
Magnitude	8.2		
Distance (Kilo light-years)	14500		
RA	12 50.9		
Dec	+41:07		
Size	13.0' x 11.0'		
UM I	UM II	75	37
	SA	7	
Remarks	very bright and comet-like		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

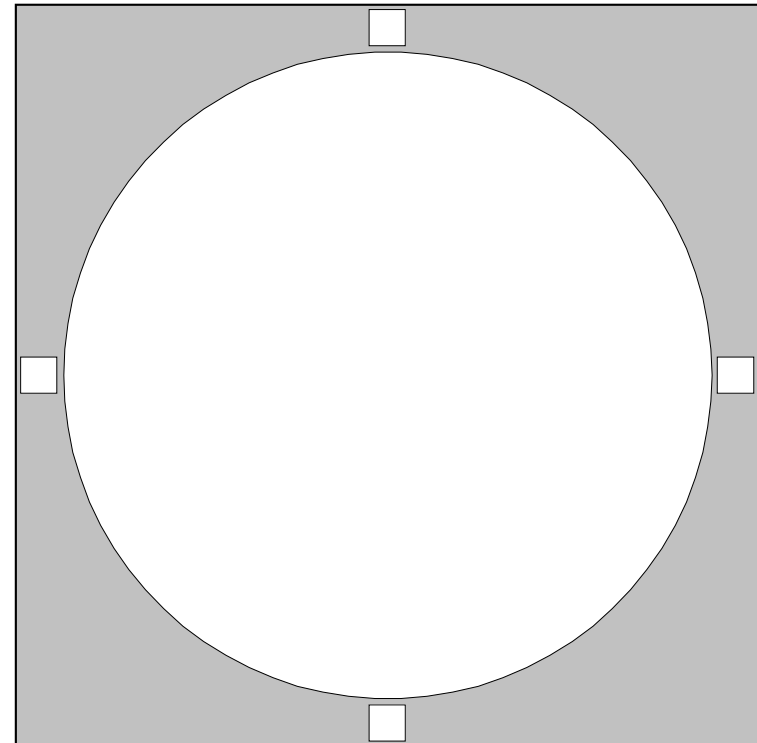


Notes

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 - M95

Messier Object	M95		
NGC	3351		
Constellation	Leo		
Type	Spiral Galaxy (G-SBb)		
Magnitude	9.7		
Distance (Kilo light-years)	38000		
RA	10 44.0		
Dec	+11:42		
Size	7.8' x 4.6'		
UM I	UM II	190	92
	SA	13	
Remarks	bright barred spiral		
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
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

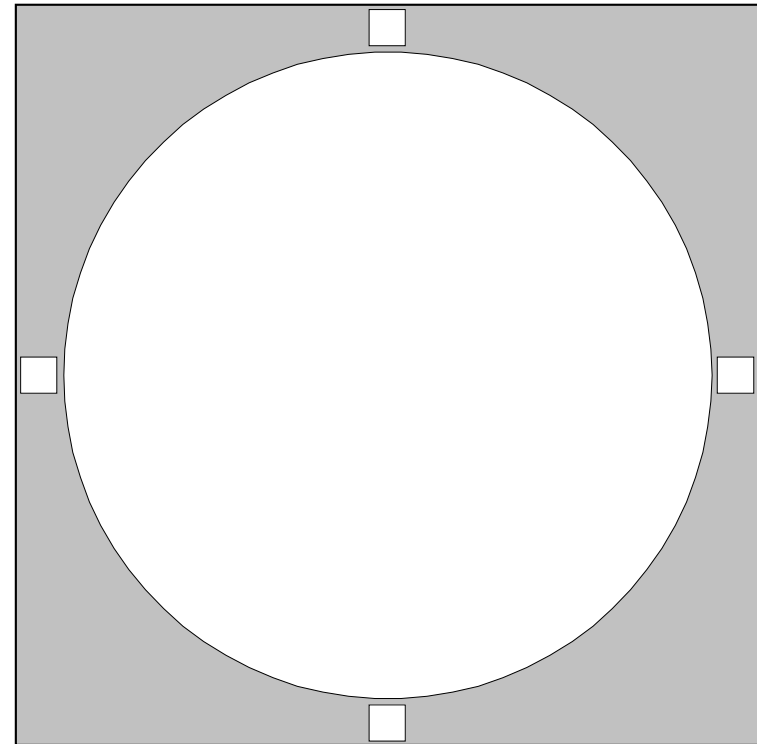
RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

RASC Messier Objects - M96

Messier Object	M96		
NGC	3368		
Constellation	Leo		
Type	Spiral Galaxy (G-SABab)		
Magnitude	9.2		
Distance (Kilo light-years)	38000		
RA	10 46.8		
Dec	+11:49		
Size	6.9' x 4.6'		
UM I	UM II	190	92
	SA	13	
Remarks	M95 in same field		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			



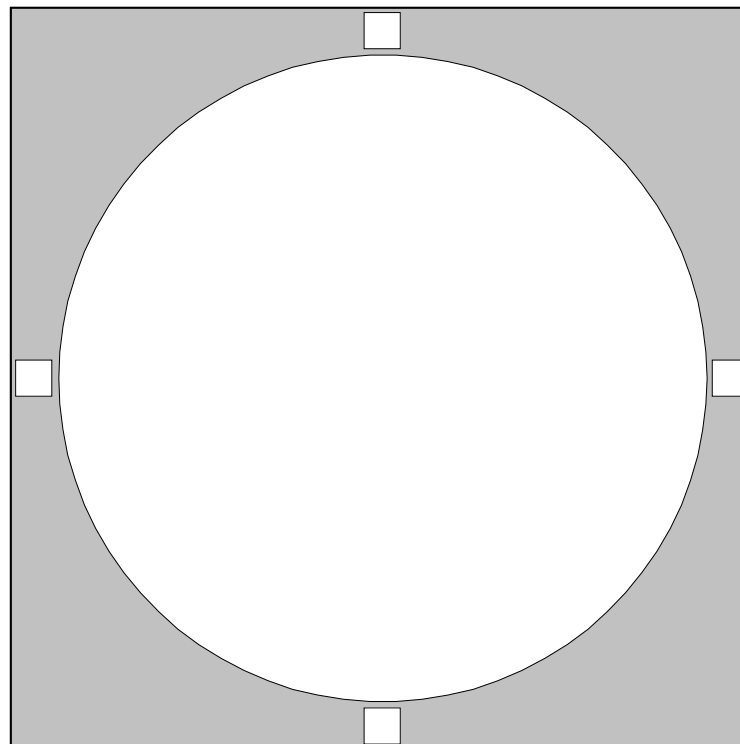
Notes

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 - 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)			

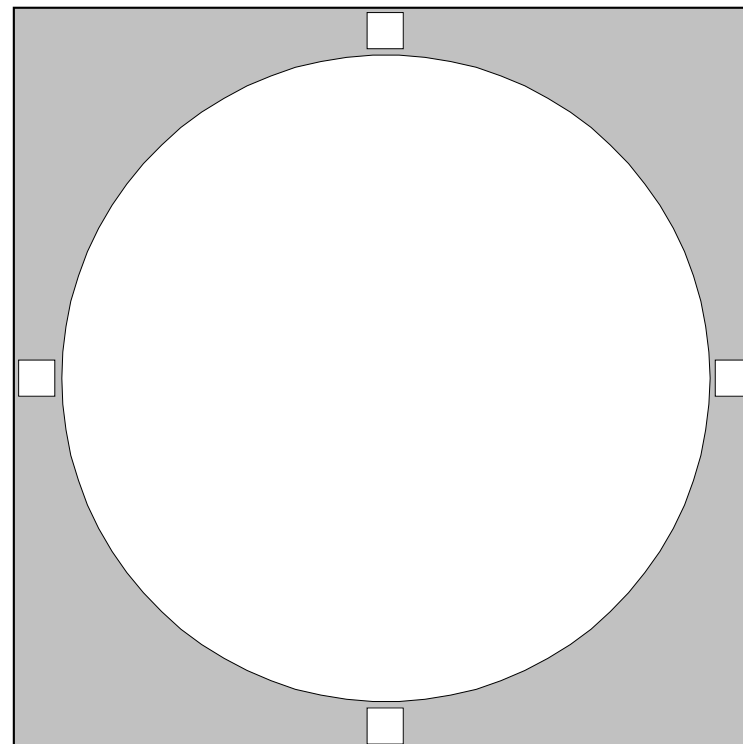


Notes

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 - M98

Messier Object	M98		
NGC	4192		
Constellation	Coma Berenices		
Type	Spiral Galaxy (G-SABab)		
Magnitude	10.1		
Distance (Kilo light-years)	60000		
RA	12 13.8		
Dec	+14:54		
Size	9.1' x 2.1'		
UM I	UM II	193	91
	SA	7, 13, 14, B1	
Remarks	nearly edge-on spiral near star 6 Comae Berenices		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

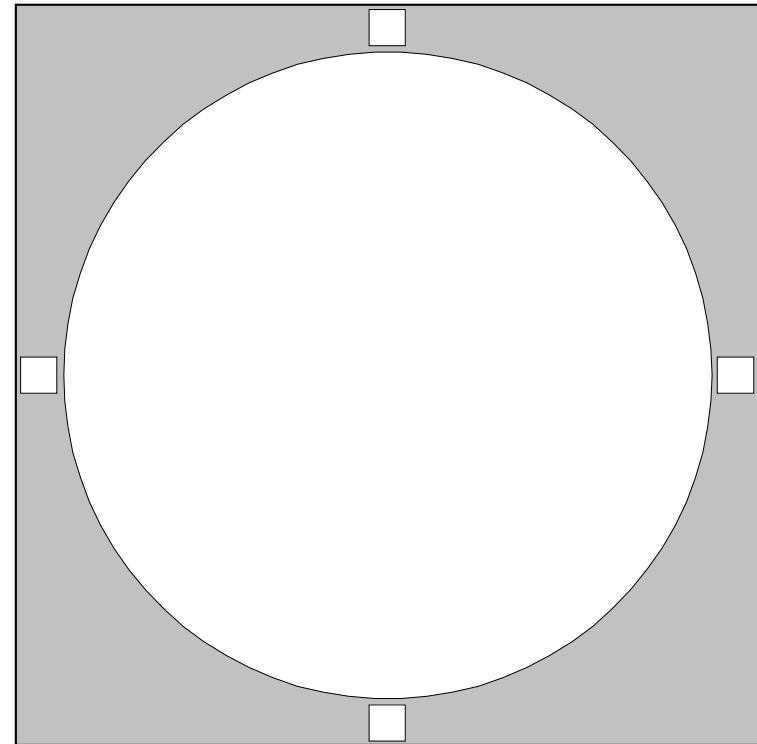
** p = Photographic Magnitude

*** !! = Showpiece Object

<http://www.rasc.ca>

RASC Messier Objects - M99

Messier Object	M99		
NGC	4254		
Constellation	Coma Berenices		
Type	Spiral Galaxy (G-SAC)		
Magnitude	9.9		
Distance (Kilo light-years)	60000		
RA	12 18.8		
Dec	+14:25		
Size	4.6' x 4.3'		
UM I	UM II	193	91,A13
	SA	7, 13, 14, B1	
Remarks	nearly face-on spiral near M98		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

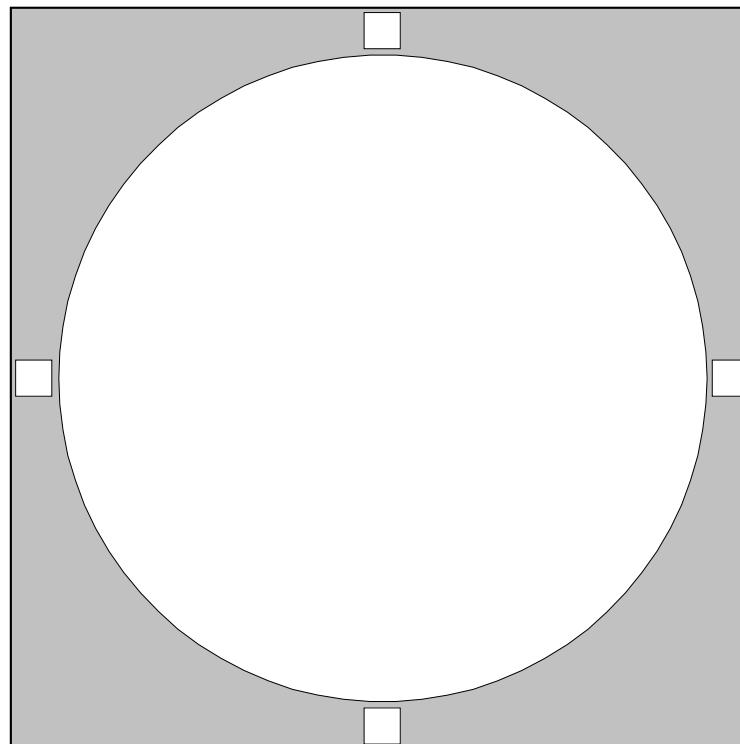


Notes

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 - M100

Messier Object	M100		
NGC	4321		
Constellation	Coma Berenices		
Type	Spiral Galaxy (G-SABbc)		
Magnitude	9.3		
Distance (Kilo light-years)	60000		
RA	12 22.9		
Dec	+15:49		
Size	6.2' x 5.3'		
UM I	UM II	193	91,A13
	SA	7, 13, 14, B1	
Remarks	face-on spiral with starlike nucleus		
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

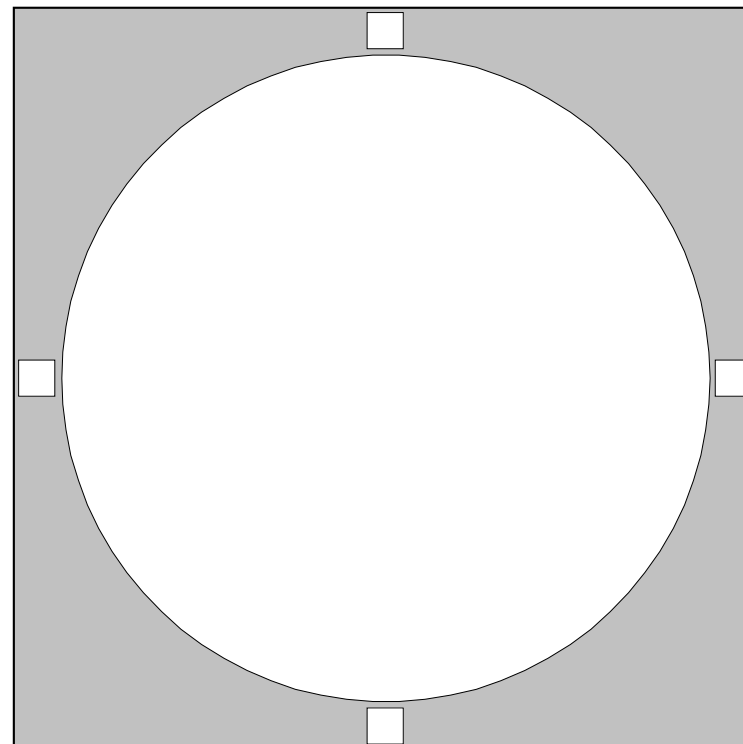
Date: Specify Time Zone or UT

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RASC Messier Objects - M101

Pinwheel Galaxy

Messier Object	M101		
NGC	5457		
Constellation	Ursa Major		
Type	Spiral Galaxy (G-SABcd)		
Magnitude	7.9		
Distance (Kilo light-years)	27000		
RA	14 03.2		
Dec	+54:21		
Size	26' x 26'		
UM I	UM II	49	23
	SA	2, 7	
Remarks	!! Pinwheel Galaxy; diffuse face-on spiral		
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

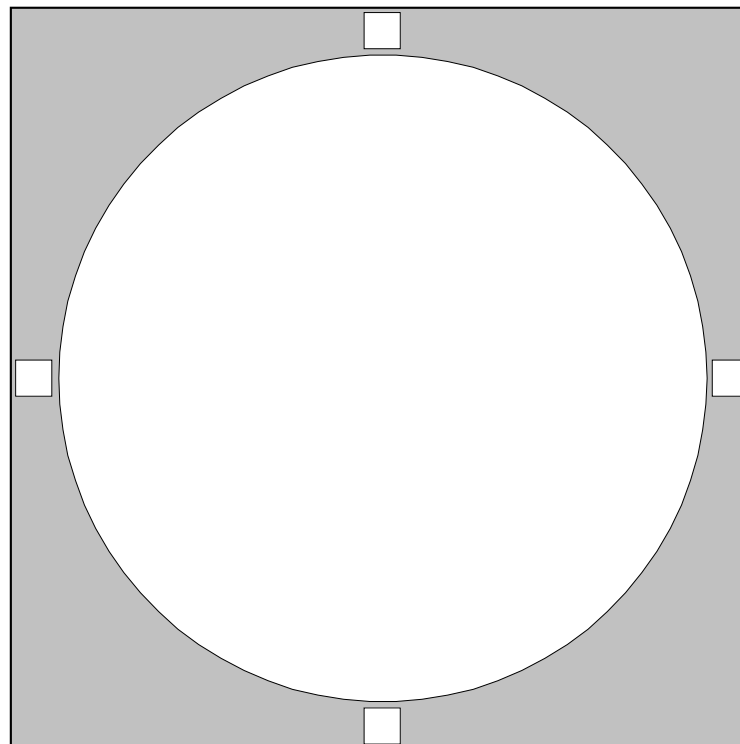
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M102?
NGC 5866 Spindle Galaxy

Messier Object	M102?		
NGC	5866?		
Constellation	Draco		
Type	Spiral Galaxy (G-SA0)		
Magnitude	9.9		
Distance (Kilo light-years)	40000		
RA	15 06.5		
Dec	+55:46		
Size	6.6' x 3.2'		
UM I	UM II	50	22
SA			
Remarks	or is M102 = M101? (look for 5907)		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

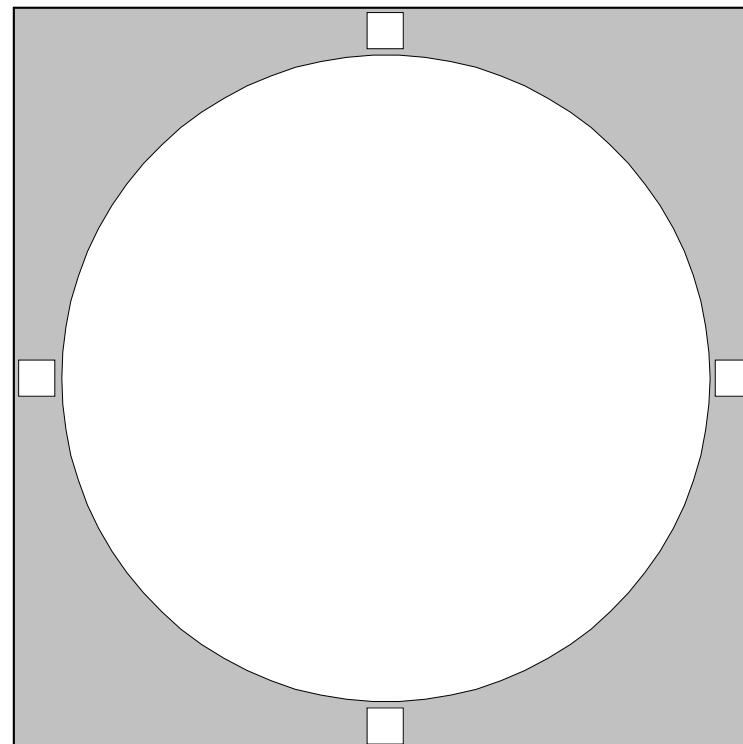


Notes

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 - M103

Messier Object	M103		
NGC	581		
Constellation	Cassiopeia		
Type	Open Cluster		
Magnitude	7.4		
Distance (Kilo light-years)	8.5		
RA	01 33.2		
Dec	+60:42		
Size	6.0'		
UM I	UM II	16,36,37	29
	SA	1	
Remarks	three NGC open clusters near by		
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

SNR: Supernova Remnant

GC: Globular Cluster

OC: Open Cluster

RN: (diffuse) Reflection Nebula

EN: (diffuse) Emission Nebula

G-: Galaxy, with Hubble type given

E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor

Transparency: 1 = Best 5 = Poor

Time: DD:MM:YYYY

Date: Specify Time Zone or UT

* = Number of stars in cluster

** p = Photographic Magnitude

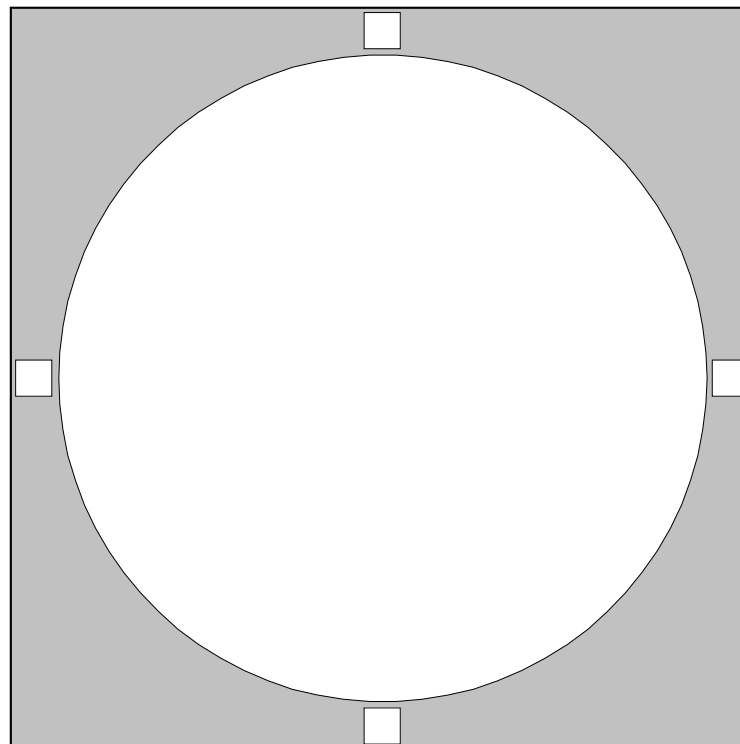
*** !! = Showpiece Object

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RASC Messier Objects - M104

Sombrero Galaxy

Messier Object	M104		
NGC	4594		
Constellation	Virgo		
Type	Spiral Galaxy (G-SA)		
Magnitude	8.0		
Distance (Kilo light-years)	50000		
RA	12 40.0		
Dec	-11:37		
Size	7.1' x 4.4'		
UM I	UM II	284	130,131
	SA	13, 14	
Remarks	!! Sombrero Galaxy; look for dust lane		
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

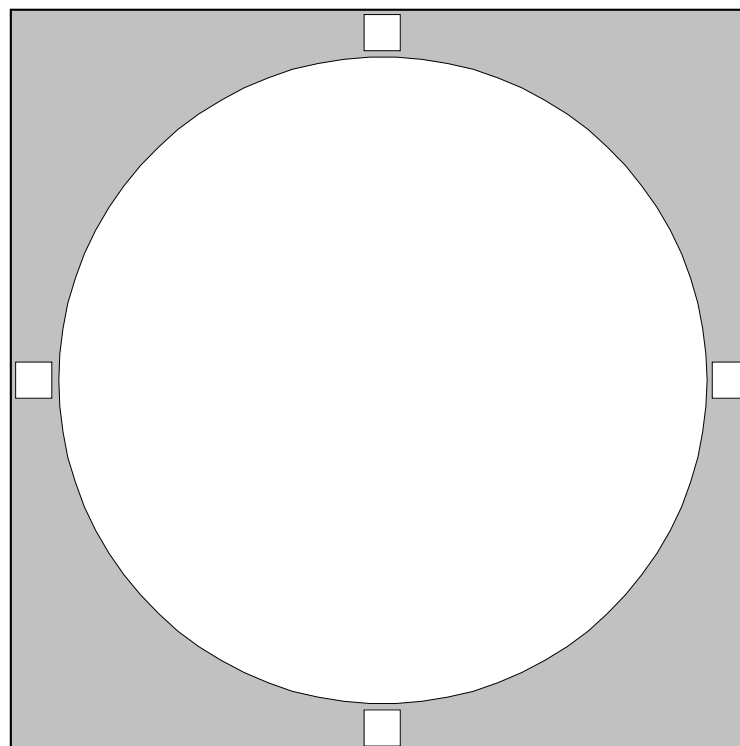
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - M105

Messier Object	M105		
NGC	3379		
Constellation	Leo		
Type	Elliptical Galaxy (G-E1)		
Magnitude	9.3		
Distance (Kilo light-years)	38000		
RA	10 47.8		
Dec	+12:35		
Size	3.9' x 3.9'		
UM I	UM II	190	92
	SA	13	
Remarks	bright ellipical near M95 and M96		
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

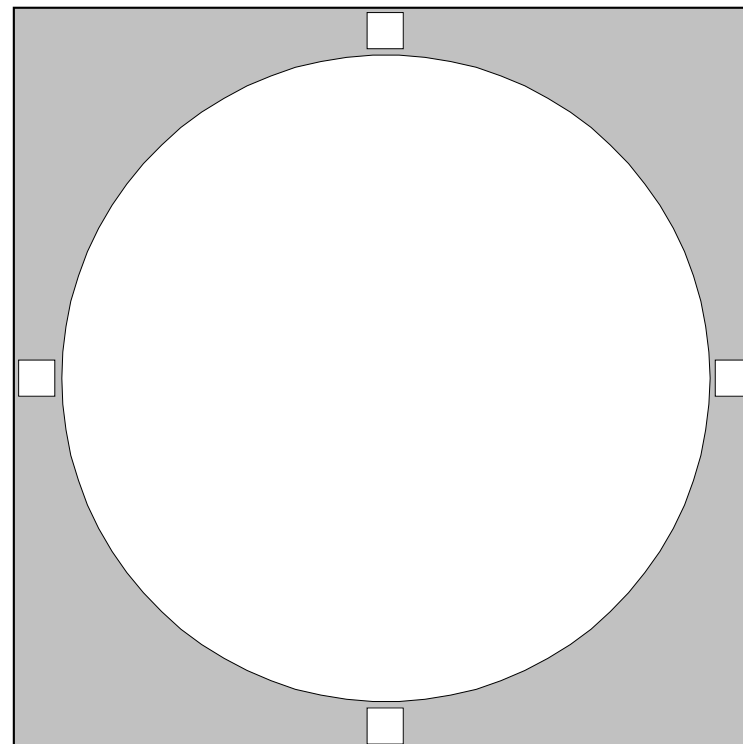
E/RN: Diffuse emission and reflection Nebula

Date: Specify Time Zone or UT

<http://www.rasc.ca>

RASC Messier Objects - 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)			



Notes

PN: Planetary Nebula
 SNR: Supernova Remnant
 GC: Globular Cluster
 OC: Open Cluster

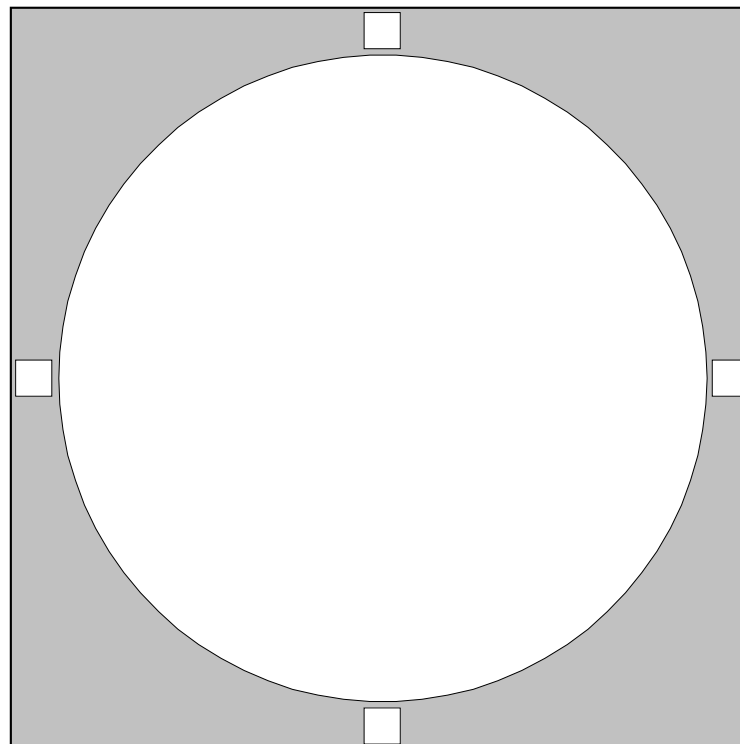
RN: (diffuse) Reflection Nebula
 EN: (diffuse) Emission Nebula
 G-: Galaxy, with Hubble type given
 E/RN: Diffuse emission and reflection Nebula

Seeing: 1 = Best 5 = Poor
 Transparency: 1 = Best 5 = Poor
 Time: DD:MM:YYYY
 Date: Specify Time Zone or UT

* = Number of stars in cluster
 ** p = Photographic Magnitude
 *** !! = Showpiece Object
<http://www.rasc.ca>

RASC Messier Objects - M107

Messier Object	M107		
NGC	6171		
Constellation	Ophiuchus		
Type	Globular Cluster		
Magnitude	8.1		
Distance (Kilo light-years)	20.9		
RA	16 32.5		
Dec	-13:03		
Size	10.0'		
UM I	UM II	291	127
SA	15		
Remarks	small. faint globular		
Time (hh:mm)			
Seeing	1	2	3 4 5
Transparency	1	2	3 4 5
Observing Location			
Telescope			
Date (dd:mm:yyyy)			

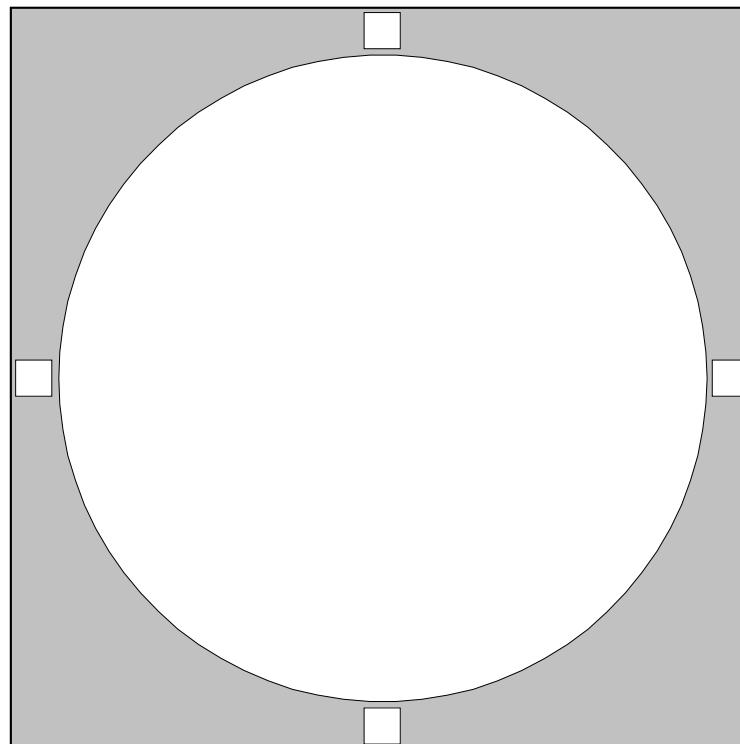


Notes

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 - 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)			

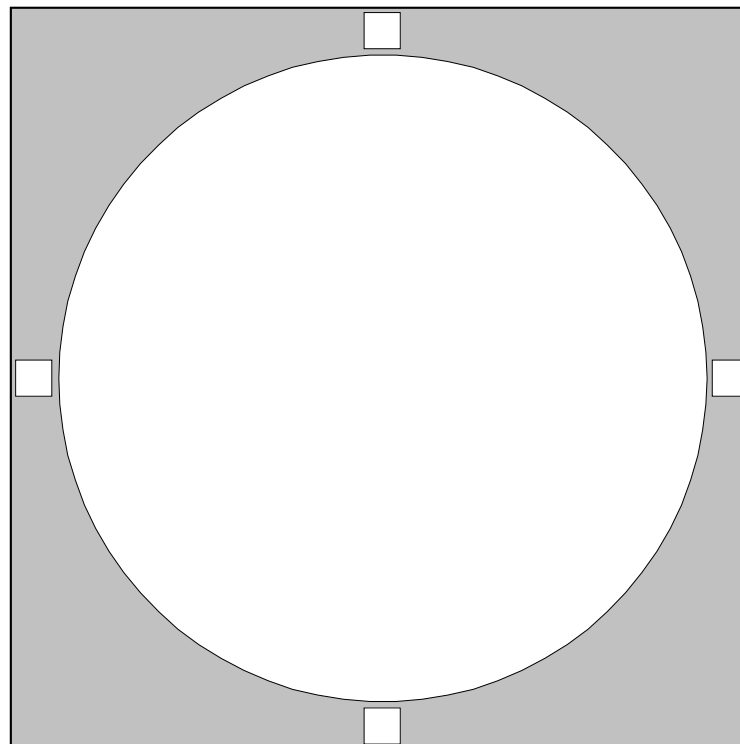


Notes

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 - 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)			

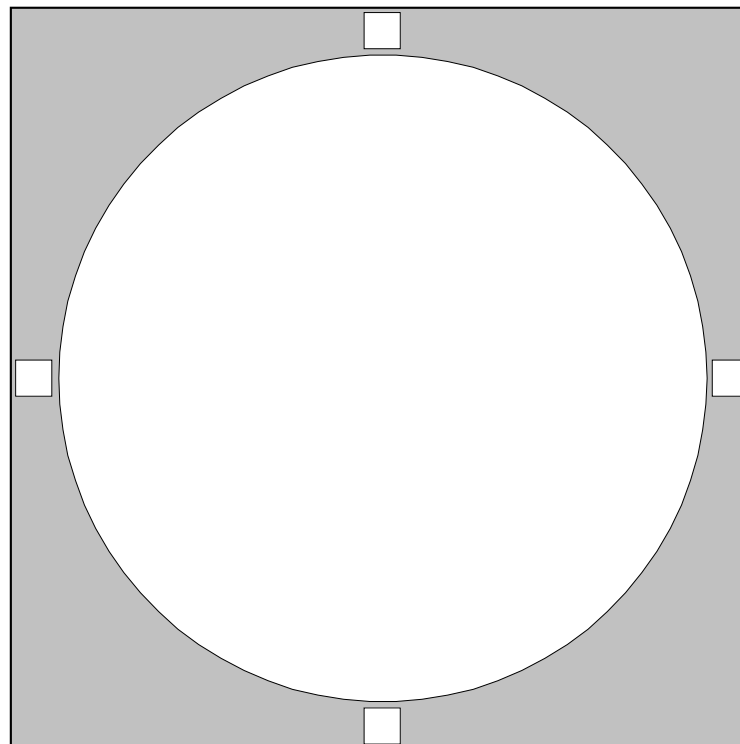


Notes

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 - M110

Messier Object	M110		
NGC	205		
Constellation	Andromeda		
Type	Elliptical Galaxy (G-E3 peculiar)		
Magnitude	8.1		
Distance (Kilo light-years)	2900		
RA	00 40.4		
Dec	+41:41		
Size	20.0' x 12.0'		
UM I	UM II	60	30
	SA	4, 9	
Remarks	more distant companion to M31		
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
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