

A Special Publication of

The American Association of Amateur Astronomers

Messier Marathon 2005

Maps and Recording Sheets

Primary Date: March 12-13, 2005

Alternate Dates: March 5-6 and April 9-10, 2005

Based on the Messier Marathon Observer's Guide by Don Machholz

The Messier Marathon presents an opportunity to view the entire Messier List in one night. Each Spring, the period around the Spring Equinox on March 21 allows observers to view all 110 of the Messier objects in one observing session. In 2005, the new moon weekends fall on March 12-13 and April 9-10, allowing for a full night of observing. During other weekends in March, the appearance of the moon during part of the night will hinder observers from viewing the whole list.

You may use any size telescope or binoculars for the Marathon, since the object is to SEE the object, rather than to OBSERVE and LOG it. For this reason, it is OK to use setting circles and other electronic devices, even though such observations would not qualify you for the Astronomical League's Messier Certificate.

This packet contains a check list and observing sheet for you to use to keep track of your observations. This is intended to be a fun project, so observing and recording on the checklist is done on the honor system. Finding objects and sharing observations with other observers is OK.

The attached map is intended to help you find the relative positions of the Messier Objects across the sky and in the constellations in which they are located. Start with M77 right after sunset, and continue on to M30 just before dawn. Use your own star charts and maps to help you find the individual objects if you do not already know where they are. You will find there will be periods of inactivity while you wait for the next object to come up, and periods of frantic activity trying to find that one last object before it sets. While the objective is to see all 110 objects, a very difficult project, whatever total number of objects you observe will be a successful night. And if you do not see all of the objects in one night, you can always try again next year!

You do not have to conduct you own Messier Marathon on the dates indicated. These are just the ideal weekend dates for this year. But you can observe anytime during March or April that you have an opportunity to be out. The objects will be up!

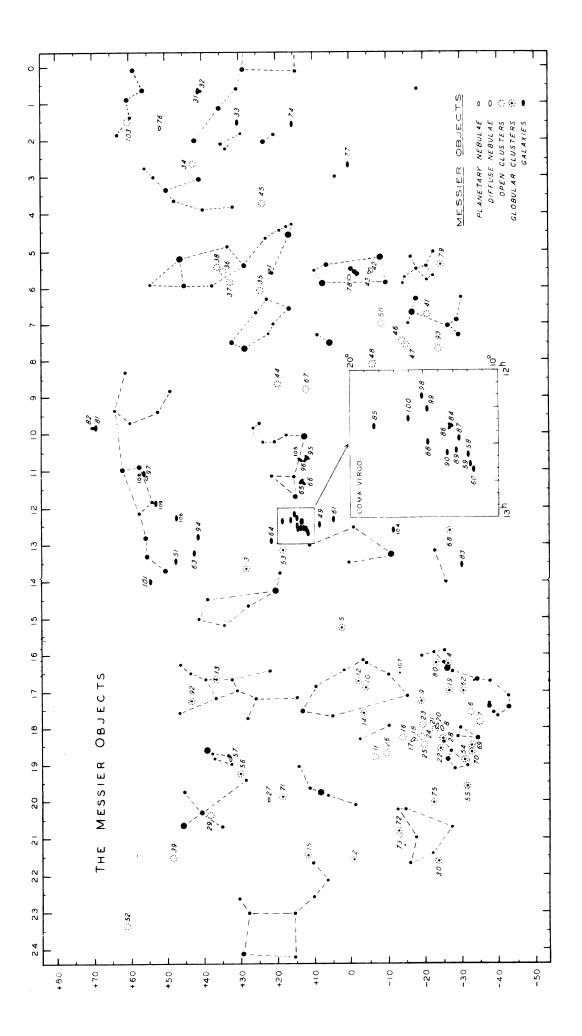
This is a great club project for any astronomy club. Get you friends together and get out and observe!

American Association of Amateur Astronomers – www.AstroMax.com

Messier Marathon Checklist

Objects are listed in the order they are most efficiently observed. Based on a sequence devised by Don Macholz.

Manaine	Constallation	Turns	Dating	Magain	. Constallation	Tyme	Dating
Messier	Constellation	Туре	Rating	Messie		Type	Rating
I Farly	Evening Obj	iects		M87	Virgo	Galaxy	Moderate
-			D://: 1/	M89	Virgo.	Galaxy	Difficult,
M77	Cetus	Galaxy	Difficult	M90	Virgo	Galaxy	Difficult
M74	Pisces	Galaxy	Difficult	M88	Coma Berenices	Galaxy	Difficult
M33	Triangulum	Galaxy	Difficult	M91	Coma Berenices	Galaxy	Difficult
M31	Andromeda	Galaxy	Easy	M58	Virgo	Galaxy	Moderate
M32	Andromeda	Galaxy	Difficult	M59	Virgo	Galaxy	Moderate
M110	Andromeda	Galaxy	Difficult	M60	Virgo	Galaxy	Moderate
M52	Cassiopeia	Open Cluster	Moderate	M49	Virgo	Galaxy	Moderate
M103	Cassiopeia	Open Cluster	Moderate	M61	Virgo.	Galaxy	Moderate
M76	Perseus	Planetary Nebula	Moderate	M104	4 Virgo	Galaxy	Moderate
M34	Perseus	Open Cluster	Easy	IV/ A	ftor Midnight		
M45	Taurus	Open Cluster	Easy		fter Midnight		
M79	Lepus	Globular Cluster	Moderate	M5	Serpens,	Globular Cluster	Moderate
M42	Orion	Diffuse Nebula	Easy	M13	Hercules	Globular Cluster	Easy
M43	Orion	Diffuse Nebula	Easy	M92	Hercules	Globular Cluster	Moderate
M78	Orion	Diffuse Nebula	Moderate	M57	Lyra	Planetary Nebula	Moderate
M1	Taurus	Supernova Remnant	Difficult	M56	Lyra	Globular Cluster	Difficult
M35	Gemini	Open Cluster	Easy	M29	Cygnus	Open Cluster	Moderate
M37	Auriga	Open Cluster	Moderate	M39	Cygnus	Open Cluster	Moderate
M36	Auriga	Open Cluster	Moderate	M27	Vulpecula	Planetary Nebula	Easy
M38	Auriga	Open Cluster	Moderate	M71	Sagitta	Globular Cluster	Moderate
M41	Canis Major	Open Cluster	Easy	M10	7 Ophiuchus	Globular Cluster	Moderate
M93	Puppis	Open Cluster	Moderate	M12	Ophiuchus	Globular Cluster	Moderate
M47	Puppis	Open Cluster	Moderate	M10	Ophiuchus	Globular Cluster	Moderate
M46	Puppis	Open Cluster	Moderate	M14	Ophiuchus	Globular Cluster	Moderate
M50	Monoceros	Open Cluster	Moderate	M9	Ophiuchus	Globular Cluster	Moderate
M48	Hydra	Open Cluster	Moderate				
M44	Cancer	Open Cluster	Easy	v. Sc	corplus and Sag	gittarius Regio	n
M67	Cancer	Open Cluster	Moderate	M4	Scorpius	Globular Cluster	Easy
11 1 00 0	and the Die F	linner Desien		M80	Scorpius	Globular Cluster	Moderate
II. Leo a	and the Big [Jibber Kealon		1/1/0	Onhiughua	Globular Cluster	Moderate
	3			M19	Ophiuchus	Giobulai Ciustei	Moderate
M95	Leo	Galaxy	Difficult	M62	Ophiuchus	Globular Cluster	Moderate
M95 M96	_		Difficult Difficult	M62 M6	•		
M95 M96 M105	Leo	Galaxy		M62 M6 M7	Ophiuchus	Globular Cluster	Moderate
M95 M96 M105 M65	Leo Leo	Galaxy Galaxy	Difficult Difficult Difficult	M62 M6 M7 M11	Ophiuchus Scorpius	Globular Cluster Open Cluster Open Cluster Open Cluster	Moderate Moderate Easy Easy
M95 M96 M105 M65 M66	Leo Leo Leo	Galaxy Galaxy Galaxy	Difficult Difficult	M62 M6 M7 M11 M26	Ophiuchus Scorpius Scorpius	Globular Cluster Open Cluster Open Cluster	Moderate Moderate Easy
M95 M96 M105 M65 M66 M81	Leo Leo Leo Leo Ursa Major	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy	Difficult Difficult Difficult Difficult Moderate	M62 M6 M7 M11 M26 M16	Ophiuchus Scorpius Scorpius Scutum Scutum Serpens	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC	Moderate Moderate Easy Easy Difficult Easy
M95 M96 M105 M65 M66 M81 M82	Leo Leo Leo Leo	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate	M62 M6 M7 M11 M26 M16 M17	Ophiuchus Scorpius Scorpius Scutum Scutum	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster	Moderate Moderate Easy Easy Difficult
M95 M96 M105 M65 M66 M81 M82 M97	Leo Leo Leo Leo Ursa Major	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult	M62 M6 M7 M11 M26 M16 M17 M18	Ophiuchus Scorpius Scorpius Scutum Scutum Serpens Sagittarius Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster	Moderate Moderate Easy Easy Difficult Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108	Leo Leo Leo Leo Ursa Major Ursa Major Ursa Major Ursa Major Ursa Major	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate	M62 M6 M7 M11 M26 M16 M17 M18 M24	Ophiuchus Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud	Moderate Moderate Easy Easy Difficult Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109	Leo Leo Leo Leo Ursa Major Ursa Major Ursa Major Ursa Major Ursa Major Ursa Major	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula	Difficult Difficult Difficult Difficult Moderate Moderate Difficult	M62 M6 M7 M11 M26 M16 M17 M18 M24 M25	Ophiuchus Scorpius Scorpius Scutum Scutum Serpens Sagittarius Sagittarius Sagittarius Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40	Leo Leo Leo Leo Ursa Major	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Galaxy Double Star	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult	M62 M6 M7 M11 M26 M16 M17 M18 M24 M25 M23	Ophiuchus Scorpius Scorpius Scutum Scutum Serpens Sagittarius Sagittarius Sagittarius Sagittarius Sagittarius Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109	Leo Leo Leo Leo Ursa Major Canes Venatici	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Galaxy Double Star Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate	M62 M6 M7 M11 M26 M16 M17 M18 M24 M25 M23 M21	Ophiuchus Scorpius Scorpius Scutum Scutum Serpens Sagittarius Sagittarius Sagittarius Sagittarius Sagittarius Sagittarius Sagittarius Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Galaxy Double Star Galaxy Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate	M62 M6 M7 M11 M26 M16 M17 M18 M24 M25 M23 M21 M20	Ophiuchus Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Galaxy Double Star Galaxy Galaxy Galaxy Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate	M62 M6 M7 M11 M26 M16 M17 M18 M24 M25 M23 M21 M20 M8	Ophiuchus Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula Diffuse Nebula	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Canes Venatici	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Galaxy Double Star Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate	M62 M6 M7 M11 M26 M17 M18 M24 M25 M23 M21 M20 M8 M28	Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula Diffuse Nebula Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Galaxy Double Star Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	M62 M6 M7 M11 M26 M16 M17 M18 M24 M25 M23 M21 M20 M8 M28 M22	Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula Diffuse Nebula Globular Cluster Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101 M102	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Galaxy Double Star Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate Moderate Moderate Moderate Difficult	M62 M6 M7 M11 M26 M16 M17 M18 M24 M25 M23 M21 M20 M8 M28 M22 M69	Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula Diffuse Nebula Globular Cluster Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101 M102 M53	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Galaxy Double Star Galaxy Golbular Cluster	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate	M62 M6 M7 M11 M26 M16 M17 M18 M24 M25 M23 M21 M20 M8 M28 M22 M69 M70	Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula Diffuse Nebula Globular Cluster Globular Cluster Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101 M102 M53 M64	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices Coma Berenices	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Galaxy Double Star Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate	M62 M6 M7 M11 M26 M17 M18 M25 M23 M21 M20 M8 M22 M69 M70 M54	Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula Diffuse Nebula Globular Cluster Globular Cluster Globular Cluster Globular Cluster Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101 M102 M53 M64 M3	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices Canes Venatici	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Galaxy Double Star Galaxy Golbular Cluster Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate	M62 M6 M7 M11 M26 M16 M17 M18 M24 M25 M23 M21 M20 M8 M22 M69 M70 M54 M55	Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101 M102 M53 M64 M3 M68	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices Canes Venatici Hydra	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Double Star Galaxy Gobular Cluster Galaxy Globular Cluster	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate Difficult Moderate Difficult	M62 M6 M7 M11 M26 M17 M18 M25 M23 M21 M20 M8 M22 M69 M70 M54	Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula Diffuse Nebula Globular Cluster Globular Cluster Globular Cluster Globular Cluster Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101 M102 M53 M64 M3	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices Canes Venatici	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Galaxy Double Star Galaxy Golbular Cluster Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate	M62 M6 M7 M11 M26 M16 M17 M18 M24 M25 M23 M21 M20 M8 M22 M69 M70 M54 M55 M75	Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95M96M105M65M66M81M82M97M108M109M40M106M94M63M51M101M102M53M64M3M68M83	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices Coma Berenices Canes Venatici Hydra Hydra	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Double Star Galaxy Globular Cluster Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate Difficult Moderate Difficult		Ophiuchus Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula Diffuse Nebula Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101 M102 M53 M64 M3 M68 M83 III. Virg	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices Coma Berenices Canes Venatici Hydra Hydra	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Double Star Galaxy Globular Cluster Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate Difficult Difficult Difficult Difficult	M62M6M7M11M26M16M17M18M24M25M21M20M8M22M69M70M54M55M75 VI. Ea	Ophiuchus Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101 M102 M53 M64 M3 M68 M83 III. Virg M98	Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices Coma Berenices Canes Venatici Hydra Hydra Coma Berenices	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Double Star Galaxy Globular Cluster Galaxy Globular Cluster Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate Difficult Moderate Difficult Moderate Difficult Difficult Difficult		Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101 M102 M53 M64 M3 M68 M83 III. Virg M98 M99	Leo Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices Coma Berenices Canes Venatici Hydra Hydra Coma Berenices Coma Berenices Coma Berenices	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Double Star Galaxy Gobular Cluster Galaxy Globular Cluster Galaxy Globular Cluster Galaxy Galaxy Globular Cluster Galaxy Galaxy Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate Difficult Moderate Difficult Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Difficult Difficult Difficult	M62M6M7M11M26M17M18M24M25M21M20M8M22M69M70M54M55M75 VI. Ea	Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101 M102 M53 M64 M3 M68 M83 III. Virg M98 M99 M100	Leo Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices Coma Berenices Canes Venatici Hydra Hydra Coma Berenices Coma Berenices Coma Berenices Coma Berenices Coma Berenices Coma Berenices	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Double Star Galaxy Gobular Cluster Galaxy Globular Cluster Galaxy Globular Cluster Galaxy Globular Cluster Galaxy Galaxy Galaxy Galaxy Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate Difficult Moderate Difficult Difficult Difficult Difficult		Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Serpens Sagittarius Aguarius Aquarius Aquarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula Diffuse Nebula Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M63 M51 M101 M102 M53 M64 M3 M68 M83 III. Virg M98 M99 M100 M85	Leo Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices Coma Berenices Canes Venatici Hydra Hydra O Cluster Re Coma Berenices	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Double Star Galaxy Gobular Cluster Galaxy Globular Cluster Galaxy Globular Cluster Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate Difficult Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Difficult Difficult Difficult Difficult	M62M6M7M11M26M17M18M24M25M21M20M8M22M69M70M54M55M75 VI. Ea	Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Serpens Sagittarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy
M95 M96 M105 M65 M66 M81 M82 M97 M108 M109 M40 M106 M94 M63 M51 M101 M102 M53 M64 M3 M68 M83 III. Virg M98 M99 M100	Leo Leo Leo Leo Leo Ursa Major Canes Venatici Canes Venatici Canes Venatici Ursa Major Draco Coma Berenices Coma Berenices Canes Venatici Hydra Hydra Coma Berenices Coma Berenices Coma Berenices Coma Berenices Coma Berenices Coma Berenices	Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Galaxy Planetary Nebula Galaxy Double Star Galaxy Gobular Cluster Galaxy Globular Cluster Galaxy Globular Cluster Galaxy Globular Cluster Galaxy Galaxy Galaxy Galaxy Galaxy	Difficult Difficult Difficult Difficult Moderate Moderate Difficult Difficult Difficult Difficult Difficult Moderate Moderate Moderate Moderate Moderate Moderate Difficult Moderate Difficult Moderate Difficult Difficult Difficult Difficult		Ophiuchus Scorpius Scorpius Scorpius Scutum Scutum Serpens Sagittarius Aguarius Aquarius Aquarius	Globular Cluster Open Cluster Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula + OC Diffuse Nebula Open Cluster Star Cloud Open Cluster Open Cluster Open Cluster Open Cluster Diffuse Nebula Diffuse Nebula Globular Cluster	Moderate Moderate Easy Easy Difficult Easy Easy Easy Easy Easy Easy Easy Easy



THE MESSIER OBJECTS

This chart shows the distribution of the Messier objects across the sky, and their relative Messier objects range in declination from 70 degrees north to 35 degrees south. A star positions. Constellation and star names have been omitted from this chart for simplicity. atlas is needed for locating the less conspicuous Messier objects.

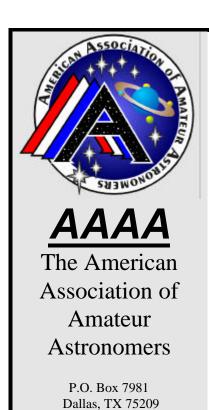


The American Association of Amateur Astronomers

Observing Log

Observer:		Location:		Page:	
-----------	--	-----------	--	-------	--

INDEX	Period ·	- Instrument	Notes
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		
Object	Date	Time	
	Power	Seeing	
	Type Instrument		



Postage
PAID
Plano, TX
75075

A Special Service of The American Association of Amateur Astronomers

You MUST be a member of the Astronomical League, either through membership in an affiliated astronomical society or as a Member-at-Large, to receive certification for any of the AL observing programs.

As a member of the AAAA, not only are you eligible to earn any of the AL observing awards, but you will also get your own subscription to the Astronomical League's newsletter, the REFLECTOR, as well as our own quarterly newsletter, *The American Astronomer*.

Join the AAAA, the first nationwide astronomy club for all amateur astronomers.

Tell Your Friends the Benefits of Joining
The American Association of Amateur Astronomers!

Observing Awards. Quarterly Newsletter. Astronomy News and Special Publications. Full Membership in the Astronomical League. Discounts on Astronomical Publications.



Visit our Web Page: http://www.AstroMax.com E-mail: aaaa@astromax.com