

**TALLAHASSEE
ASTRONOMICAL
SOCIETY**

Messier Certificate Observing Log

Introduction:

Almost every amateur astronomer begins to be aware of the Messier Catalog as soon as he or she opens his or her first book. The novice is sure to find some spectacular object pictured and designated by its "Messier Number" with the universal abbreviation "M". Of the myriad of star clusters and nebulae scattered over the sky only about 100 (perhaps 110 at most) can claim membership to this celebrated list. However, this happens to include most, but not quite all, of the finest of these objects observable from mid-northern latitudes.

There is nothing in the catalog that the owner of so humble an instrument as a three-inch reflector cannot reach under good observing conditions. Many of the objects can be seen with binoculars and some with the naked eye. Thus, the Messier Catalog is a happy hunting ground for any amateur with a taste for deep sky objects.

Even an extremely brief review of the history of Messier's Catalog will explain why it contains so many bright and easy clusters and nebulae.



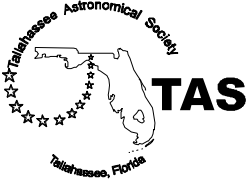
Charles Messier (1730-1817) was a French astronomer who developed an intense interest in comet hunting. While he had other achievements to his credit, this was his chief occupation during his long observing career. In this, he was so successful that he probably observed half of the comets known in his time. He discovered about twenty. It was to keep track of the star clusters and nebulae that might have otherwise confused him by their comet-like appearance, that he began to catalog and describe them. In commenting on his catalog in later years, he frankly stated that he had compiled it in order to aid other comet hunters. There is a slight touch of irony in the fact that Messier's chief claim to immortality grew out of his efforts to rid himself of a nuisance to what, he felt, was his important life's work. As might be expected, Messier's telescopes were all modest instruments, none of them exceeding the capacity of telescopes amateurs can expect to own today.

Messier did not discover all the objects in his catalog and he never made any such claim. His contemporaries, notably Pierre Méchain, called many of the objects to his attention and the fact was always carefully noted. The catalog was published in several stages as additions were made to it, the first 45 entries being printed in 1771. In its classic form, it contained 103 entries. Studies of Messier's papers and correspondence (Dr. Helen Sawyer Hogg and Dr. Owen Gingerich) suggest that another four to six objects should be added to bring the total to 110.

The prospective observer should be warned that if he follows the older editions of the catalog, or many of the older charts, he may find nothing in the position indicated. More recent editions have corrected these errors but there are a few entries about which there is some doubt.

The Messier Club.

The Tallahassee Astronomical Society in conjunction with the Astronomical League offers special recognition in the form of a Messier Club Certificate for those that have observed most or all of the Messier objects. To qualify you must be a member of TAS, which is affiliated with the League. To obtain an award you must observe the following rules:



TALLAHASSEE
ASTRONOMICAL
SOCIETY

Messier Certificate Observing Log

Rule 1:

Observe 70 Messier objects and keep a record of your observations. Your notes must show:

- a. Date of observation*
- b. Time of observation;*
- c. Seeing conditions;*
- d. Aperture size of telescope;*
- e. Power used;*
- f. A short note describing your observation of the object.*

Rule 2:

Have your notebook or records examined by an officer of TAS and have this party forward a letter to the effect that you have made the necessary number of observations. This letter should be addressed to:

*Kathy Machin
4845 N. Smalley Ave.
Kansas City, MO 64119
(816) 452-2086*

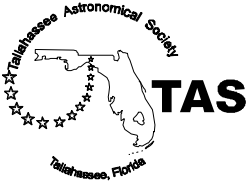
A Certificate of Membership in the Messier Club will be forwarded to your Society for presentation at a meeting. The letter should specify the address to which the Certificate should be mailed. The certificate will be suitable for framing.

Rule 3:

When you have observed the balance of the Messier Objects, have your notebook or records examined again and a letter forwarded to Ms. Machin again, indicating that you have completed the observations of the Messier Catalog. Be sure to include your present Membership Certificate. The Certificate will be endorsed for **Honorary** membership by the current President of the League. Be sure to indicate the return address.

Note:

Since the purpose of the Messier Club is to familiarize the observer with the nature and location of the objects in the sky, the use of an automated telescope which finds the objects without effort on the part of the observer is not acceptable. Also "Messier marathon" sessions where all the objects are found in one occasion is to be discouraged if the beginning observer depends on other experienced observers to find the object to be observed.

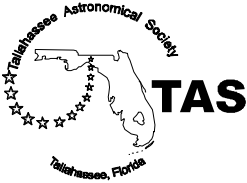


**TALLAHASSEE
ASTRONOMICAL
SOCIETY**

**Messier Certificate
Observing Log**

The Messier List

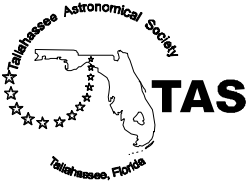
Group	NGC#	R.A.		Dec.		Mag	Type	Constellation	Size	Messier#
		hrs	min	deg	min					
Winter	224	0	42.8	41	16	4.5	Galaxy	Andromeda	178'	31
Winter	221	0	42.8	40	52	10.0	Galaxy	Andromeda	8' X 6'	32
Winter	205	0	40.4	41	41	10.0	Galaxy	Andromeda	17' X 10'	110
Winter	598	1	33.9	30	40	7.0	Galaxy	Triangulum	73' X 45'	33
Winter	7654	23	24.2	61	35	8.0	Open Cluster	Cassiopeia	13.0'	52
Winter	581	1	33.2	60	42	7.0	Open Cluster	Cassiopeia	6.0'	103
Winter	1039	2	42.0	42	47	6.0	Open Cluster	Perseus	35.0'	34
Winter	650	1	42.4	51	34	12.0	Planetary Nebula	Perseus	163" X 107"	76
Winter	1952	5	34.5	22	01	9.0	Planetary Nebula	Taurus	6' X 4'	1
Winter	1432	3	47.0	24	07	1.4	Open Cluster	Taurus	110.0'	45
Winter	1960	5	36.1	34	08	6.5	Open Cluster	Auriga	12.0'	36
Winter	2099	5	52.4	32	33	6.0	Open Cluster	Auriga	24.0'	37
Winter	1912	5	28.7	35	50	7.0	Open Cluster	Auriga	21.0'	38
Winter	1976	5	35.3	-5	23	5.0	Emission Nebula	Orion	85' X 60'	42
Winter	1982	5	35.5	-5	16	7.0	Emission Nebula	Orion	20' X 15'	43
Winter	2068	5	46.8	0	04	8.0	Nebula	Orion	8' X 6'	78
Winter	1904	5	24.5	-24	33	8.5	Globular Cluster	Lepus	8.7'	79
Winter	2168	6	08.9	24	20	5.5	Open Cluster	Gemini	28.0'	35
Winter	2323	7	03.2	-8	20	7.0	Open Cluster	Monoceros	16.0'	50
Winter	2287	6	47.0	-20	44	5.0	Open Cluster	Canus Major	38.0'	41
Winter	2437	7	41.8	-14	49	6.5	Open Cluster	Pupus	27.0'	46
Winter	2422	7	36.6	-14	30	4.5	Open Cluster	Pupus	30.0'	47
Winter	2447	7	44.6	-23	52	6.5	Open Cluster	Pupus	22.0'	93
Early Spring	2632	8	40.1	19	59	4.0	Open Cluster	Cancer	95.0'	44
Early Spring	2682	8	50.4	11	49	7.5	Open Cluster	Cancer	30.0'	67
Early Spring	2548	8	13.8	-5	48	5.5	Open Cluster	Hydra	54.0'	48
Early Spring	3031	9	55.6	69	04	8.5	Galaxy	Ursa Major	21' X 10'	81
Early Spring	3034	9	55.9	69	41	9.5	Galaxy	Ursa Major	9' X 4'	82
Early Spring	3587	11	14.8	55	01	12.0	Planetary Nebula	Ursa Major	202" X 196"	97
Early Spring	3556	11	11.6	55	41	11.0	Galaxy	Ursa Major	8' X 1'	108
Early Spring	3992	11	57.6	53	23	11.0	Galaxy	Ursa Major	7' X 4'	109
Early Spring	5457	14	03.3	54	22	8.5	Galaxy	Ursa Major	22.0'	101
Early Spring	WIN4	12	20.0	58	22	9.0	Double Star	Ursa Major	49"	40
Early Spring	3623	11	18.9	13	06	10.5	Galaxy	Leo	8' X 1.5'	65
Early Spring	3627	11	20.2	13	00	10.0	Galaxy	Leo	8' X 2.5'	66
Early Spring	3351	10	43.9	11	42	11.0	Galaxy	Leo	4.4' X 3.3'	95
Early Spring	3368	10	46.7	11	49	10.5	Galaxy	Leo	6' X 4'	96
Early Spring	3379	10	47.8	12	35	11.0	Galaxy	Leo	2.0'	105
Early Spring	5272	13	42.2	28	23	7.0	Globular Cluster	Canes Venatici	16.2'	3
Early Spring	5194	13	30.0	47	11	8.0	Galaxy	Canes Venatici	11' X 7'	51
Early Spring	5055	13	15.8	42	02	8.5	Galaxy	Canes Venatici	10' X 6'	63
Early Spring	4736	12	50.9	41	08	9.5	Galaxy	Canes Venatici	7' X 3'	94
Early Spring	4258	12	18.9	47	19	9.5	Galaxy	Canes Venatici	19' X 8'	106
Late Spring	4472	12	29.8	8	01	10.0	Galaxy	Virgo	9' X 7.5'	49
Late Spring	4579	12	37.8	11	50	11.0	Galaxy	Virgo	5.5' X 4.5'	58



**TALLAHASSEE
ASTRONOMICAL
SOCIETY**

**Messier Certificate
Observing Log**

Group	NGC#	R.A.		Dec.		Mag	Type	Constellation	Size	Messier#
		hrs	min	deg	min					
Late Spring	4621	12	42.1	11	39	11.5	Galaxy	Virgo	5' X 3.5'	59
Late Spring	4649	12	43.7	11	34	10.5	Galaxy	Virgo	7' X 6'	60
Late Spring	4374	12	25.1	12	54	11.0	Galaxy	Virgo	5.0'	84
Late Spring	4406	12	26.3	12	57	11.0	Galaxy	Virgo	7.5' X 5.5'	86
Late Spring	4486	12	30.9	12	24	11.0	Galaxy	Virgo	7.0'	87
Late Spring	4552	12	35.7	12	34	11.5	Galaxy	Virgo	4.0'	89
Late Spring	4569	12	36.9	13	10	11.0	Galaxy	Virgo	9.5' X 4.5'	90
Late Spring	4303	12	22.0	4	29	10.5	Galaxy	Virgo	6' X 5.5'	61
Late Spring	4594	12	39.9	-11	37	9.5	Galaxy	Virgo	9' X 4'	104
Late Spring	5024	13	12.9	18	10	8.5	Globular Cluster	Coma Berenices	12.6'	53
Late Spring	4826	12	56.7	21	41	9.0	Galaxy	Coma Berenices	9.3' X 5.4'	64
Late Spring	4382	12	25.5	18	12	10.5	Galaxy	Coma Berenices	7.1' X 5.2'	85
Late Spring	4501	12	32.1	14	26	11.0	Galaxy	Coma Berenices	7' X 4'	88
Late Spring	4192	12	13.9	14	55	11.0	Galaxy	Coma Berenices	9.5' X 3.2'	98
Late Spring	4254	12	18.9	14	26	10.5	Galaxy	Coma Berenices	5.4' X 4.8'	99
Late Spring	4321	12	23.0	15	50	10.5	Galaxy	Coma Berenices	7' X 6'	100
Late Spring	4548	12	35.5	14	30	11.5	Galaxy	Coma Berenices	5.4' X 4.4'	91
Late Spring	4590	12	39.5	-26	45	9.0	Globular Cluster	Hydra	12.0'	68
Mid-Summer	5236	13	37.1	-29	52	8.5	Galaxy	Hydra	11' X 10'	83
Mid-Summer	5904	15	18.6	2	05	7.0	Globular Cluster	Serpens	17.4'	5
Mid-Summer	5866	15	06.5	55	45	10.5	Galaxy	Draco	5.2' X 2.3'	102
Mid-Summer	6205	16	41.7	36	28	7.0	Globular Cluster	Hercules	16.6'	13
Mid-Summer	6341	17	17.1	43	08	7.5	Globular Cluster	Hercules	11.2'	92
Mid-Summer	6333	17	19.2	-18	31	9.0	Globular Cluster	Ophiuchus	9.3'	9
Mid-Summer	6254	16	57.1	-4	06	7.5	Globular Cluster	Ophiuchus	15.1'	10
Mid-Summer	6218	16	47.2	-1	57	8.0	Globular Cluster	Ophiuchus	14.5'	12
Mid-Summer	6402	17	37.6	-3	15	9.5	Globular Cluster	Ophiuchus	11.7'	14
Mid-Summer	6273	17	02.6	-26	16	8.5	Globular Cluster	Ophiuchus	13.5'	19
Mid-Summer	6266	17	01.2	-30	07	8.0	Globular Cluster	Ophiuchus	14.1'	62
Mid-Summer	6171	16	32.5	-13	03	10.0	Globular Cluster	Ophiuchus	10.0'	107
Mid-Summer	6121	16	23.6	-26	32	7.5	Globular Cluster	Scorpio	26.3'	4
Mid-Summer	6093	16	17.0	-22	59	8.5	Globular Cluster	Scorpio	8.9'	80
Mid-Summer	6405	17	40.1	-32	13	4.5	Open Cluster	Scorpio	15.0'	6
Mid-Summer	6475	17	53.9	-34	49	3.5	Open Cluster	Scorpio	80.0'	7
Late Summer	6705	18	51.1	-6	16	7.0	Open Cluster	Scutum	14.0'	11
Late Summer	6694	18	45.2	-9	24	9.5	Open Cluster	Scutum	15.0'	26
Late Summer	6611	18	18.8	-13	47	6.5	Nebula	Serpens	7.0'	16
Late Summer	6618	18	20.8	-16	11	7.0	Nebula	Sagittarius	11.0'	17
Late Summer	6613	18	19.9	-17	08	8.0	Open Cluster	Sagittarius	9.0'	18
Late Summer	6603*	18	18.4	-18	25	11.5	Open Cluster	Sagittarius	2 Degrees	24
Late Summer	6514	18	02.3	-23	02	5.0	C/Nebula	Sagittarius	28.0'	20
Late Summer	6531	18	04.6	-22	30	7.0	Open Cluster	Sagittarius	13.0'	21
Late Summer	6523	18	03.1	-24	23	5.0	C/Nebula	Sagittarius	60' X 35'	8
Late Summer	6656	18	36.4	-29	54	6.5	Globular Cluster	Sagittarius	24.0'	22
Late Summer	6626	18	24.5	-24	52	8.5	Globular Cluster	Sagittarius	11.2'	28
Late Summer	6494	17	56.8	-19	01	6.0	Open Cluster	Sagittarius	27.0'	23
Late Summer	4725	18	28.8	-19	17	4.9	Open Cluster	Sagittarius	40.0'	25



**TALLAHASSEE
ASTRONOMICAL
SOCIETY**

**Messier Certificate
Observing Log**

Group	NGC#	R.A.		Dec.		Mag	Type	Constellation	Size	Messier#
		hrs	min	deg	min					
Late Summer	6715	18	55.1	-30	29	8.5	Globular Cluster	Sagittarius	9.1'	54
Late Summer	6809	19	40.0	-30	58	7.0	Globular Cluster	Sagittarius	19.0'	55
Late Summer	6637	18	34.4	-32	21	9.0	Globular Cluster	Sagittarius	7.1'	69
Late Summer	6681	18	43.2	-32	18	9.0	Globular Cluster	Sagittarius	7.8'	70
Late Summer	6864	20	06.1	-21	55	9.5	Globular Cluster	Sagittarius	6.0'	75
Fall/Early Winter	6779	19	16.6	30	11	9.5	Globular Cluster	Lyra	7.1'	56
Fall/Early Winter	6720	18	53.6	33	02	9.5	Planetary Nebula	Lyra	85.6" X 61.6"	57
Fall/Early Winter	6913	20	23.9	38	32	9.0	Open Cluster	Cygnus	7.0'	29
Fall/Early Winter	7092	21	32.2	48	26	5.5	Open Cluster	Cygnus	32.0'	39
Fall/Early Winter	6853	19	59.6	22	43	7.5	Planetary Nebula	Vulpecula	480" X 340"	27
Fall/Early Winter	6838	19	53.8	18	47	8.5	Globular Cluster	Sagitta	7.2'	71
Fall/Early Winter	7099	21	40.4	-23	11	8.5	Globular Cluster	Capricornus	11.0'	30
Fall/Early Winter	7089	21	33.5	-0	49	7.5	Globular Cluster	Aquarius	12.9'	2
Fall/Early Winter	6981	20	53.5	-12	32	10.0	Globular Cluster	Aquarius	5.9'	72
Fall/Early Winter	6994	20	59.0	-12	38	9.0	Open Cluster	Aquarius	2.8'	73
Fall/Early Winter	7078	21	30.0	12	10	7.5	Globular Cluster	Pegasus	12.3'	15
Fall/Early Winter	628	1	36.6	15	48	10.5	Galaxy	Pisces	10.2' X 9.5'	74
Fall/Early Winter	1068	2	42.7	-0	02	10.5	Galaxy	Cetus	7' X 6'	77

- NGC 6603 is only part of M24.



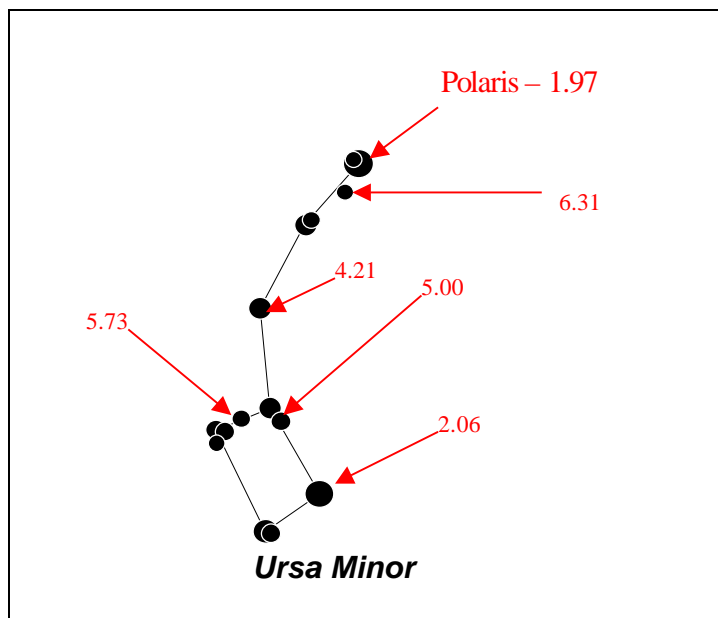
TAS

**TALLAHASSEE
ASTRONOMICAL
SOCIETY**

Messier Certificate Observing Log

Determining Seeing Conditions

Transparency: is the clarity of the air. It is determined by finding the faintest naked-eye star visible in the vicinity of Polaris. Outstanding clarity will yield stars in the range of 6.2 to 6.8 magnitude. The measurement is somewhat subjective since it will vary from site to site and observer to observer. Below is a diagram of Ursa Minor and some of the magnitudes of its most identifiable stars.



Steadiness: refers to the steadiness of the image and relates directly to the turbulence in the atmosphere. If the image appears to be shimmering or boiling, you are observing turbulence. This may be caused by a telescope that has not come to equilibrium with its surroundings, or it could be due to thermals rising from a hot city in the process of cooling down. Steadiness can be rated on a scale from 0 to 10. A “10” night, with perfectly sharp, unwavering images is rare and long remembered. Alternatively the terms perfect, excellent, good, moderate, fair, poor and hopeless are sufficient to distinguish the varying degrees of steadiness. Steadiness is usually best overhead and worst near the horizon.