

Messier Marathon List (Don Machholz Order)

Seq	ID	Constellation	Type	Size	Mag	S.B.	Best Time	Dark Time	Rises	Dark Start	Transit	Trans Alt	Dark End	Sets	Name	R.A.	Declination	User Notes
1	M77	Cetus	Galaxy	7x6	10.5	23.2	19:45		08:40	01:00	14:43	57	01:00	20:46		02:42:42	-00°01'00"	
2	M74	Pisces	Galaxy	10.2x9.5	10.5	24.1	19:30		06:51	01:00	13:37	72	01:00	20:23	The Phantom	01:36:42	+15°47'00"	
3	M33	Triangulum	Galaxy	73x45	7.0	24.4	20:45		05:59	01:00	13:34	87	01:00	21:09	Triangulum Galaxy, Pinwheel Ga	01:33:54	+30°39'00"	
4	M31	Andromeda	Galaxy	178x178	4.5	24.4	04:45		04:18	01:00	12:43	82	01:00	21:08	Andromeda Galaxy	00:42:42	+41°16'00"	
5	M32	Andromeda	Galaxy	8x6	10.0	22.8	04:45		04:20	01:00	12:43	82	01:00	21:06		00:42:42	+40°52'00"	
6	M110	Andromeda	Galaxy	17x10	10.0	24.2	04:45		04:13	01:00	12:41	82	01:00	21:09		00:40:24	+41°41'00"	
7	M52	Cassiopeia	Open	13x13	8.0	22.2	04:45		01:00	01:00	11:25	62	01:00	01:00	The Scorpion	23:24:12	+61°35'00"	
8	M103	Cassiopeia	Open	6x6	7.0	19.5	20:45		01:00	01:00	13:34	63	01:00	01:00		01:33:12	+60°42'00"	
9	M76	Perseus	P Neb	2.7x1.8	12.0	22.3	20:45		03:51	01:00	13:43	72	01:00	23:35	Little Dumbbell Nebula	01:42:24	+51°34'00"	
10	M34	Perseus	Open	35x35	6.0	22.3	20:45		06:08	01:00	14:42	81	01:00	23:17		02:42:00	+42°47'00"	
11	M45	Taurus	Open	110x110	1.4	20.2	20:45		08:36	01:00	15:47	81	01:00	22:59	Pleiades, Seven Sisters	03:47:00	+24°07'00"	
12	M79	Lepus	Globular	8.7x8.7	8.5	21.8	20:45		12:32	22:00	17:25	32	22:00	22:18		05:24:30	-24°33'00"	
13	M42	Orion	Open+E Neb	85x60	5.0	22.9	20:45		11:47	01:00	17:36	51	01:00	23:24	Orion Nebula	05:35:24	-05°27'00"	
14	M43	Orion	E Neb	20x15	7.0	21.8	20:45		11:47	01:00	17:36	51	01:00	23:25	part of Orion Nebula	05:35:36	-05°16'00"	
15	M78	Orion	D Neb	8x6	8.0	20.8	20:45		11:44	01:00	17:47	57	01:00	23:50		05:46:42	+00°03'00"	
16	M41	Canis Major	Open	38x38	5.0	21.5	20:45		13:42	01:00	18:47	36	01:00	23:53	Little Beehive	06:47:00	-20°44'00"	
17	M93	Puppis	Open	22x22	6.5	21.8	20:45		14:50	22:00	19:45	33	22:00	00:40		07:44:36	-23°52'00"	
18	M47	Puppis	Open	30x30	4.5	20.5	20:45		14:13	21:27	19:37	42	21:30	01:01		07:36:36	-14°30'00"	
19	M46	Puppis	Open	27x27	6.5	22.3	20:45	0.1	14:19	21:27	19:42	42	21:33	01:05		07:41:48	-14°49'00"	
20	M50	Monoceros	Open	16x16	7.0	21.6	20:45	0.1	13:23	21:27	19:04	48	21:34	00:44		07:03:12	-08°20'00"	
21	M48	Hydra	Open	54x54	5.5	22.8	20:45	1.5	14:27	21:27	20:14	51	22:56	02:02		08:13:48	-05°48'00"	
22	M1	Taurus	SNR	6x4	9.0	21.1	20:45	0.2	10:30	21:27	17:35	79	21:41	00:40	Crab Nebula	05:34:30	+22°01'00"	
23	M35	Gemini	Open	28x28	5.5	21.4	20:45	0.9	10:57	21:27	18:09	81	22:20	01:22		06:08:54	+24°20'00"	
24	M37	Auriga	Open	24x24	6.0	21.5	20:45	0.9	10:10	21:27	17:53	89	22:19	01:36		05:52:24	+32°33'00"	
25	M36	Auriga	Open	12x12	6.5	20.5	20:45	0.6	09:47	21:27	17:36	89	22:05	01:26		05:36:06	+34°08'00"	
26	M38	Auriga	Open	21x21	7.0	22.2	20:45	0.6	09:32	21:27	17:29	87	22:01	01:26		05:28:42	+35°50'00"	
27	M44	Cancer	Open	95x95	4.0	22.5	20:45	3.2	13:42	21:27	20:40	77	00:41	03:39	Praesepe, Beehive Cluster	08:40:06	+19°59'00"	
28	M67	Cancer	Open	30x30	7.5	23.5	20:45	3.1	14:16	21:27	20:51	68	00:32	03:25	King Cobra	08:50:24	+11°49'00"	
29	M95	Leo	Galaxy	4.4x3.3	11.0	22.5	22:45	5.0	16:10	21:27	22:44	68	02:25	05:18		10:44:00	+11°42'00"	
30	M96	Leo	Galaxy	6x4	10.5	22.6	22:45	5.0	16:13	21:27	22:47	68	02:28	05:22		10:46:48	+11°49'00"	
31	M105	Leo	Galaxy	2x2	11.0	21.1	22:45	5.1	16:12	21:27	22:48	69	02:31	05:25		10:47:48	+12°35'00"	
32	M65	Leo	Galaxy	8x1.5	10.5	21.8	23:15	5.6	16:41	21:27	23:19	70	03:04	05:57		11:18:54	+13°05'00"	
33	M66	Leo	Galaxy	8x2.5	10.0	21.9	23:15	5.6	16:43	21:27	23:21	70	03:05	05:58		11:20:12	+12°59'00"	
34	M81	Ursa Major	Galaxy	21x10	8.5	22.9	21:45	5.7	01:00	21:27	21:56	54	03:08	01:00	Bode's Galaxy	09:55:36	+69°04'00"	
35	M82	Ursa Major	Galaxy	9x4	9.5	22.0	21:45	5.7	01:00	21:27	21:56	54	03:08	01:00		09:55:48	+69°41'00"	
36	M97	Ursa Major	P Neb	3.4x3.3	12.0	23.3	23:15	6.8	12:20	21:27	23:15	68	04:14	10:10	Owl Nebula	11:14:48	+55°01'00"	
37	M108	Ursa Major	Galaxy	8x1	11.0	21.9	23:00	6.7	11:53	21:27	23:12	68	04:11	10:30		11:11:30	+55°40'00"	

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38	M109	Ursa Major	Galaxy	7x4	11.0	23.2	24:00	7.4	13:39	21:27	23:58	70	04:53	10:17		11:57:36	+53°23'00"	
39	M40	Ursa Major	Dbl	0.8x0.8	9.0	17.1	00:15	7.4	01:00	21:27	00:23	65	04:53	01:00	Double Star WNC4, Winnecke 4	12:22:24	+58°05'00"	
40	M106	Canes Venatici	Galaxy	19x8	9.5	23.6	00:15	7.4	15:12	21:27	00:19	76	04:53	09:27		12:19:00	+47°18'00"	
41	M94	Canes Venatici	Galaxy	7x3	9.5	21.4	00:45	7.4	16:27	21:27	00:51	82	04:53	09:16	Croc's Eye Galaxy	12:50:54	+41°07'00"	
42	M63	Canes Venatici	Galaxy	10x6	8.5	21.6	01:15	7.4	16:46	21:27	01:16	81	04:53	09:46	Sunflower Galaxy	13:15:48	+42°02'00"	
43	M51	Canes Venatici	Galaxy	11x7	8.0	21.3	01:30	7.4	16:24	21:27	01:30	76	04:53	10:37	Whirlpool Galaxy	13:29:54	+47°12'00"	
44	M101	Ursa Major	Galaxy	22x22	8.5	23.8	02:00	7.4	15:25	21:27	02:04	69	04:53	12:42	Pinwheel Galaxy	14:03:18	+54°21'00"	
45	M102	Draco	Galaxy	5.2x2.3	10.5	21.8	03:00	6.8	15:44	22:03	03:07	68	04:53	14:29	Spindle Galaxy	15:06:30	+55°45'00"	
46	M53	Coma Berenices	Globular	12.6x12.6	8.5	22.6	01:15	7.4	18:21	21:27	01:13	75	04:53	08:06		13:12:54	+18°10'00"	
47	M64	Coma Berenices	Galaxy	9.3x5.4	9.0	21.9	00:45	7.4	17:53	21:27	00:57	78	04:53	08:01	Black Eye Galaxy	12:56:42	+21°41'00"	
48	M3	Canes Venatici	Globular	16.2x16.2	7.0	21.7	01:45	7.4	18:16	21:27	01:43	85	04:53	09:09		13:42:12	+28°23'00"	
49	M98	Coma Berenices	Galaxy	9.5x3.2	11.0	23.3	00:15	6.6	17:31	21:27	00:14	72	04:03	06:57		12:13:48	+14°54'00"	
50	M99	Coma Berenices	Galaxy	5.4x4.8	10.5	22.7	00:15	6.7	17:37	21:27	00:19	71	04:07	07:01		12:18:48	+14°25'00"	
51	M100	Coma Berenices	Galaxy	7x6	10.5	23.2	00:15	6.8	17:37	21:27	00:23	72	04:14	07:09	The Mirror of M99	12:22:54	+15°49'00"	
52	M85	Coma Berenices	Galaxy	7.1x5.2	10.5	23.0	00:15	6.9	17:33	21:27	00:26	75	04:22	07:19		12:25:24	+18°11'00"	
53	M84	Virgo	Galaxy	5x5	11.0	23.1	00:15	6.7	17:48	21:27	00:25	70	04:09	07:03		12:25:06	+12°53'00"	
54	M86	Virgo	Galaxy	7.5x5.5	11.0	23.7	00:15	6.7	17:49	21:27	00:27	70	04:10	07:04		12:26:12	+12°57'00"	
55	M87	Virgo	Galaxy	7x7	11.0	23.9	00:30	6.8	17:55	21:27	00:31	69	04:14	07:07	Virgo A	12:30:48	+12°24'00"	
56	M89	Virgo	Galaxy	4x4	11.5	23.1	00:30	6.9	18:00	21:27	00:36	69	04:19	07:13		12:35:42	+12°33'00"	
57	M90	Virgo	Galaxy	9.5x4.5	11.0	23.7	00:30	6.9	17:59	21:27	00:37	70	04:22	07:15		12:36:48	+13°10'00"	
58	M88	Coma Berenices	Galaxy	7x4	11.0	23.2	00:30	6.9	17:51	21:27	00:32	71	04:20	07:14		12:32:00	+14°25'00"	
59	M91	Coma Berenices	Galaxy	5.4x4.4	11.5	23.6	00:30	6.9	17:54	21:27	00:36	71	04:23	07:18	Missing Messier Object	12:35:24	+14°30'00"	
60	M58	Virgo	Galaxy	5.5x4.5	11.0	23.1	00:30	6.9	18:04	21:27	00:38	68	04:19	07:12		12:37:42	+11°49'00"	
61	M59	Virgo	Galaxy	5x3.5	11.5	23.2	00:45	6.9	18:08	21:27	00:42	68	04:23	07:16		12:42:00	+11°39'00"	
62	M60	Virgo	Galaxy	7x6	10.5	23.2	00:45	6.9	18:10	21:27	00:44	68	04:24	07:18		12:43:42	+11°33'00"	
63	M49	Virgo	Galaxy	9x7.5	10.0	23.2	00:30	6.6	18:06	21:27	00:30	65	04:01	06:54		12:29:48	+08°00'00"	
64	M61	Virgo	Galaxy	6x5.5	10.5	22.9	00:15	6.2	18:08	21:27	00:22	61	03:42	06:37	Swelling Spiral	12:21:54	+04°28'00"	
65	M104	Virgo	Galaxy	9x4	9.5	22.0	00:30	4.4	19:09	22:26	00:40	45	02:52	06:12	Sombrero Galaxy	12:40:00	-11°37'00"	
66	M68	Hydra	Globular	12x12	9.0	23.0	00:30		19:54	22:00	00:40	30	22:00	05:26		12:39:30	-26°45'00"	
67	M83	Hydra	Galaxy	11x10	8.5	22.2	01:30		21:03	22:00	01:37	27	22:00	06:12		13:37:00	-29°52'00"	
68	M5	Serpens	Globular	17.4x17.4	7.0	21.8	03:15	4.8	21:11	00:03	03:19	59	04:53	09:27		15:18:36	+02°05'00"	
69	M13	Hercules	Globular	16.6x16.6	7.0	21.7	04:30	4.8	20:42	00:06	04:42	87	04:53	12:42	Great Hercules Cluster	16:41:42	+36°28'00"	
70	M92	Hercules	Globular	11.2x11.2	7.5	21.4	04:30	4.4	20:41	00:30	05:17	80	04:53	13:54		17:17:06	+43°08'00"	
71	M57	Lyra	P Neb	1.4x1	9.5	18.5	04:45	2.5	23:09	02:23	06:54	90	04:53	14:39	Ring Nebula	18:53:36	+33°02'00"	
72	M56	Lyra	Globular	7.1x7.1	9.5	22.4	04:45	2.0	23:44	02:51	07:17	87	04:53	14:50		19:16:36	+30°11'00"	
73	M29	Cygnus	Open	7x7	9.0	21.9	04:45	1.1	00:14	03:44	08:24	85	04:53	16:35		20:23:54	+38°32'00"	
74	M39	Cygnus	Open	32x32	5.5	21.7	04:45	0.3	00:15	04:37	09:33	75	04:53	18:50		21:32:12	+48°26'00"	

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75	M27	Vulpecula	P Neb	8x5.7	7.5	20.3	04:45	1.1	00:53	03:49	08:00	79	04:53	15:07	Dumbbell Nebula	19:59:36	+22°43'00"	
76	M71	Sagitta	Globular	7.2x7.2	8.5	21.4	04:45	1.0	01:00	03:51	07:54	75	04:53	14:49		19:53:48	+18°47'00"	
77	M12	Ophiuchus	Globular	14.5x14.5	8.0	22.4	04:30	3.1	22:50	01:46	04:48	55	04:53	10:45	Gumball Globular	16:47:12	-01°57'00"	
78	M10	Ophiuchus	Globular	15.1x15.1	7.5	22.0	04:30	2.8	23:06	02:04	04:57	53	04:53	10:49		16:57:06	-04°06'00"	
79	M14	Ophiuchus	Globular	11.7x11.7	9.5	23.5	04:45	2.2	23:44	02:41	05:38	53	04:53	11:32		17:37:36	-03°15'00"	
80	M107	Ophiuchus	Globular	10x10	10.0	23.6	04:30	2.4	23:05	02:27	04:33	44	04:53	10:01		16:32:30	-13°03'00"	
81	M9	Ophiuchus	Globular	9.3x9.3	9.0	22.5	04:45	0.9	00:08	04:00	05:20	38	04:53	10:32		17:19:12	-18°31'00"	
82	M4	Scorpius	Globular	26.3x26.3	7.5	23.2	04:15		23:37	22:00	04:24	30	22:00	09:11	Cat's Eye	16:23:36	-26°32'00"	
83	M80	Scorpius	Globular	8.9x8.9	8.5	21.9	04:15		23:19	22:00	04:17	34	22:00	09:16		16:17:00	-22°59'00"	
84	M19	Ophiuchus	Globular	13.5x13.5	8.5	22.8	04:30		00:16	22:00	05:03	30	22:00	09:50		17:02:36	-26°16'00"	
85	M62	Ophiuchus	Globular	14.1x14.1	8.0	22.4	04:30		00:28	22:00	05:02	27	22:00	09:35	Flickering Globular	17:01:12	-30°07'00"	
86	M6	Scorpius	Open	15x15	4.5	19.0	04:45		01:15	22:00	05:40	24	22:00	10:06	Butterfly Cluster	17:40:06	-32°13'00"	
87	M7	Scorpius	Open	80x80	3.5	21.6	04:45		01:39	22:00	05:54	22	22:00	10:09	Ptolemy's Cluster	17:53:54	-34°49'00"	
88	M11	Scutum	Open	14x14	7.0	21.4	04:45	0.8	01:05	04:08	06:51	50	04:53	12:38	Wild Duck Cluster	18:51:06	-06°16'00"	
89	M26	Scutum	Open	15x15	9.5	24.0	04:45	0.6	01:08	04:17	06:46	47	04:53	12:23		18:45:12	-09°24'00"	
90	M16	Serpens	Open+E Neb	7x7	6.5	19.4	04:45	0.6	00:53	04:18	06:19	43	04:53	11:45	The Ghost, Eagle Nebula, Star Qu	18:18:48	-13°47'00"	
91	M17	Sagittarius	Open+E Neb	11x11	7.0	20.8	04:45	0.2	01:02	04:38	06:21	40	04:53	11:40	Omega Nebula, Horseshoe Nebu	18:20:48	-16°11'00"	
92	M18	Sagittarius	Open	9x9	8.0	21.4	04:45	0.1	01:04	04:46	06:20	40	04:53	11:36	Black Swan	18:19:54	-17°08'00"	
93	M24	Sagittarius	Star Cl+Open	5x5	11.5	23.6	04:45		01:05	01:00	06:17	38	01:00	11:29	Small Sagittarius Star Cloud	18:16:54	-18°29'00"	
94	M25	Sagittarius	Open	40x40	4.9	21.5	04:45		01:22	01:00	06:32	37	01:00	11:42		18:31:36	-19°15'00"	
95	M23	Sagittarius	Open	27x27	6.0	21.8	04:45	0.1	00:47	04:44	05:57	38	04:53	11:08		17:56:48	-19°01'00"	
96	M21	Sagittarius	Open	13x13	7.0	21.2	04:45		01:05	22:00	06:05	34	22:00	11:05		18:04:36	-22°30'00"	
97	M20	Sagittarius	Neb+Open	28x28	5.0	20.9	04:45		01:05	22:00	06:03	34	22:00	11:01	Trifid Nebula, The Clover	18:02:36	-23°02'00"	
98	M8	Sagittarius	D Neb+Open	60x35	5.0	21.9	04:45		01:10	22:00	06:04	32	22:00	10:58	Lagoon Nebula	18:03:48	-24°23'00"	
99	M28	Sagittarius	Globular	11.2x11.2	8.5	22.4	04:45		01:33	22:00	06:25	32	22:00	11:17		18:24:30	-24°52'00"	
100	M22	Sagittarius	Globular	24x24	6.5	22.0	04:45		02:02	22:00	06:37	27	22:00	11:11	Great Sagittarius Cluster, Cracke	18:36:24	-29°54'00"	
101	M69	Sagittarius	Globular	7.1x7.1	9.0	21.9	04:45		02:10	22:00	06:35	24	22:00	11:00		18:34:24	-32°21'00"	
102	M70	Sagittarius	Globular	7.8x7.8	9.0	22.1	04:45		02:18	22:00	06:44	24	22:00	11:09		18:43:12	-32°18'00"	
103	M54	Sagittarius	Globular	9.1x9.1	8.5	21.9	04:45		02:23	22:00	06:55	26	22:00	11:28		18:55:06	-30°29'00"	
104	M55	Sagittarius	Globular	19x19	7.0	22.0	04:45		03:10	22:00	07:40	26	22:00	12:11		19:40:00	-30°58'00"	
105	M75	Sagittarius	Globular	6x6	9.5	22.0	04:45		03:05	22:00	08:06	35	22:00	13:08		20:06:06	-21°55'00"	
106	M15	Pegasus	Globular	12.3x12.3	7.5	21.6	04:45		02:55	01:00	09:30	69	01:00	16:06	Great Pegasus Cluster	21:30:00	+12°10'00"	
107	M2	Aquarius	Globular	12.9x12.9	7.5	21.7	04:45		03:29	01:00	09:34	57	01:00	15:39		21:33:30	+00°49'00"	
108	M72	Aquarius	Globular	5.9x5.9	10.0	22.5	04:45		03:25	01:00	08:54	44	01:00	14:23		20:53:30	-12°32'00"	
109	M73	Aquarius	Asterism	2.8x2.8	9.0	19.9	04:45		03:30	01:00	08:59	44	01:00	14:28	Asterism	20:58:54	-12°38'00"	
110	M30	Capricornus	Globular	11x11	8.5	22.3	05:00		04:43	22:00	09:41	33	22:00	14:38		21:40:24	-23°11'00"	