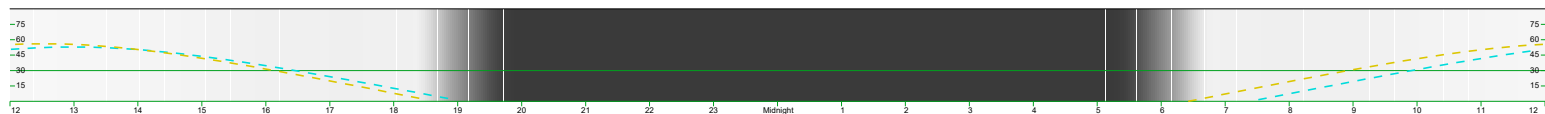


Messier Observing List

Evening of 2021 Mar 13 at Mount Lemmon SkyCenter



Sunset 18:39, Twilight ends 19:52, Twilight begins 05:13, Sunrise 06:25, Moon rise 07:24, Moon set 19:06

Completely dark from 19:52 to 05:13. New Moon. All times local (GMT-7).

Weather: 37.6F, humidity 54%, good seeing.

Listing all classes at any quality (difficulty ignored).

Log	Cls	Primary ID	Alternate ID	Con	Mag	Ang. Size	Distance	Begin	Best	End	Difficulty
	Neb	Crab Nebula	M 1	Tau	8.4	8.0'		20:00	20:02	20:10	apparent
	Gal	M 74	NGC 628	Psc	9.7	10.0' x 9.3'		19:40	19:53	20:20	apparent
	Gal	M 110	NGC 205	And	8.9	16.2' x 9.5'	2.6 Mly	19:40	19:53	20:30	apparent
	Gal	Andromeda Galaxy	M 31	And	4.3	3.0° x 1.2°	2.6 Mly	19:35	19:51	20:35	easy
	Gal	M 32	NGC 221	And	8.9	7.8' x 4.9'	2.6 Mly	19:35	19:50	20:35	easy
	Gal	M 77	NGC 1068	Cet	9.7	6.2' x 5.6'	70.0 Mly	19:35	19:53	20:35	easy
	Gal	Triangulum Galaxy	Triangulum Pinwheel	Tri	6.4	61.7' x 36.3'	2.9 Mly	19:40	19:53	20:40	easy
	PNe	Little Dumbbell	Barbell	Per	10.1	2.7'	2400 ly	19:45	19:56	20:45	easy
	Open	M 52	NGC 7654	Cas	6.8	15.0'	4600 ly	19:35	05:11	20:55	easy
	Open	M 38	NGC 1912	Aur	5.9	20.0'	3500 ly	19:45	19:58	21:05	obvious
	Glob	M 79	NGC 1904	Lep	7.7	9.6'	49000 ly	19:40	19:57	21:10	easy
	Open	M 36	NGC 1960	Aur	6.3	10.0'	4300 ly	19:40	19:57	21:15	obvious
	Open	M 37	NGC 2099	Aur	5.9	14.0'	4500 ly	19:40	19:58	21:30	obvious
	Open	M 35	NGC 2168	Gem	5.2	25.0'	3000 ly	19:40	19:59	21:35	obvious
	Open	M 34	NGC 1039	Per	4.9	35.0'	1600 ly	19:35	19:54	21:45	obvious
	Open	M 103	NGC 581	Cas	6.6	5.0'	7200 ly	19:30	19:52	21:50	obvious
	Neb	M 43	NGC 1982	Ori	9.0	7.0' x 6.0'		19:40	20:01	22:00	apparent
	Open	Pleiades	M 45	Tau	1.2	120.0'	490 ly	19:25	19:51	22:15	obvious
	Neb	M 78	NGC 2068	Ori	8.0	8.0'		19:40	20:02	22:25	apparent
	Neb	Orion Nebula	M 42	Ori	4.0	40.0' x 20.0'		19:30	19:57	22:40	obvious
	Open	M 41	NGC 2287	CMa	4.2	39.0'	2300 ly	19:30	20:01	23:05	obvious
	Gal	Cigar Galaxy	M 82	UMa	9.0	11.0' x 5.1'	12.0 Mly	22:25	22:53	23:25	easy
	Gal	Bode's Galaxy	M 81	UMa	7.8	21.4' x 11.2'	12.0 Mly	22:05	22:52	23:45	easy
	Open	M 67	NGC 2682	Cnc	6.0	25.0'	3000 ly	20:00	21:48	23:45	obvious
	Open	M 93	NGC 2447	Pup	5.8	10.0'	3400 ly	19:30	20:41	23:50	obvious
	Open	Beehive	M 44	Cnc	3.4	70.0'	610 ly	19:45	21:37	23:55	obvious
	Open	M 50	NGC 2323	Mon	6.0	14.0'	3300 ly	19:25	20:07	00:00	obvious
	Open	M 46	NGC 2437	Pup	5.9	20.0'	4500 ly	19:30	20:38	00:15	obvious
	Open	M 47	NGC 2422	Pup	4.4	25.0'	1600 ly	19:25	20:33	00:20	obvious
	Open	M 48	NGC 2548	Hya	5.3	30.0'	2500 ly	19:30	21:10	01:15	obvious
	Gal	M 95	NGC 3351	Leo	10.6	7.2' x 4.5'	45.0 Mly	22:05	23:40	01:20	easy
	Gal	M 96	NGC 3368	Leo	10.1	8.3' x 5.5'	45.0 Mly	22:05	23:43	01:25	easy
	Gal	M 105	NGC 3379	Leo	10.2	4.9' x 4.3'	45.0 Mly	22:00	23:44	01:35	easy
	Gal	M 66	NGC 3627	Leo	9.7	10.2' x 4.6'	41.0 Mly	22:35	00:16	02:05	easy
	Gal	M 65	NGC 3623	Leo	10.1	7.6' x 2.0'	41.0 Mly	22:25	00:15	02:10	easy
	PNe	Owl Nebula	M 97	UMa	9.7	3.4'	2000 ly	22:05	00:11	02:20	easy
	Gal	M 108	NGC 3556	UMa	10.7	4.0' x 1.7'	53.0 Mly	21:50	00:07	02:25	easy

Log	Cls	Primary ID	Alternate ID	Con	Mag	Ang. Size	Distance	Begin	Best	End	Difficulty
	Gal	M 61	NGC 4303	Vir	10.2	6.9' x 6.6'	70.0 Mly	00:05	01:17	02:35	easy
	Gal	M 98	NGC 4192	Com	10.9	11.0' x 2.6'	70.0 Mly	23:35	01:09	02:50	apparent
	Gal	M 109	NGC 3992	UMa	10.5	8.1' x 5.6'	64.0 Mly	22:55	00:53	02:55	easy
	Gal	M 49	NGC 4472	Vir	9.3	10.2' x 8.3'	70.0 Mly	23:55	01:25	03:00	easy
	Gal	St. Katherine's Wheel	Coma Pinwheel	Com	10.4	5.0' x 4.7'	70.0 Mly	23:25	01:14	03:05	easy
	Gal	M 86	NGC 4406	Vir	9.8	11.5' x 8.3'	70.0 Mly	23:45	01:22	03:05	easy
	Gal	M 84	NGC 4374	Vir	10.1	7.4' x 6.5'	70.0 Mly	23:40	01:21	03:05	easy
	Gal	M 89	NGC 4552	Vir	10.7	8.1' x 7.9'	70.0 Mly	00:05	01:31	03:05	apparent
	Gal	M 100	NGC 4321	Com	10.0	6.2' x 5.6'	70.0 Mly	23:25	01:18	03:15	easy
	Gal	M 91	NGC 4548	Com	10.9	5.5' x 4.5'	70.0 Mly	23:50	01:31	03:15	easy
	Gal	M 88	NGC 4501	Com	10.2	8.7' x 4.4'	70.0 Mly	23:45	01:28	03:15	easy
	Gal	M 87	NGC 4486	Vir	9.6	7.1' x 6.6'	70.0 Mly	23:40	01:26	03:15	easy
	Gal	M 85	NGC 4382	Com	10.0	6.9' x 5.4'	70.0 Mly	23:25	01:21	03:20	easy
	Gal	M 90	NGC 4569	Vir	10.1	9.1' x 3.8'	70.0 Mly	23:50	01:32	03:20	easy
	Gal	M 58	NGC 4579	Vir	10.5	5.0' x 3.8'	70.0 Mly	23:50	01:33	03:20	easy
	Gal	M 59	NGC 4621	Vir	10.7	4.6' x 3.2'	70.0 Mly	23:55	01:38	03:25	easy
	Gal	M 60	NGC 4649	Vir	9.8	6.8' x 5.4'	70.0 Mly	23:55	01:39	03:25	easy
	Gal	M 106	NGC 4258	CVn	9.1	17.0' x 7.2'	30.0 Mly	23:00	01:14	03:30	easy
	Gal	Black Eye Galaxy	M 64	Com	9.3	10.5' x 5.4'	12.0 Mly	23:45	01:52	04:00	easy
	Glob	M 53	NGC 5024	Com	7.7	13.0'	65000 ly	00:15	02:08	04:05	easy
	Glob	M 68	NGC 4590	Hya	7.3	11.0'	39000 ly	23:00	01:35	04:15	easy
	Gal	M 94	NGC 4736	CVn	8.7	7.8' x 6.8'	17.0 Mly	23:15	01:46	04:25	obvious
	Gal	Sunflower Galaxy	M 63	CVn	9.3	11.7' x 7.1'	43.0 Mly	23:50	02:11	04:35	easy
	Gal	Whirlpool Galaxy	M 51	CVn	8.7	13.8' x 11.7'	43.0 Mly	00:05	02:25	04:50	easy
	Gal	M 83	NGC 5236	Hya	7.8	13.5' x 13.2'	15.0 Mly	00:10	02:32	05:00	easy
	Gal	Pinwheel Galaxy	M 101	UMa	8.4	24.0' x 22.9'	28.0 Mly	00:55	02:58	05:05	easy
	Glob	M 3	NGC 5272	CVn	6.3	18.0'	42000 ly	00:15	02:37	05:05	obvious
	Glob	M 5	NGC 5904	Ser	5.7	23.0'	29000 ly	02:55	04:14	05:15	obvious
	Glob	M 12	NGC 6218	Oph	6.1	16.0'	23000 ly	04:45	05:03	05:15	obvious
	Gal	Sombrero Galaxy	M 104	Vir	9.1	8.5' x 4.9'	60.0 Mly	22:00	01:36	05:15	easy
	Gal	M 102	NGC 5866	Dra	10.7	6.3' x 2.8'	47.0 Mly	01:55	04:01	05:20	easy
	Neb	Omega Nebula	Swan	Sgr	6.0	11.0'		04:25	05:05	05:20	apparent
	Glob	M 92	NGC 6341	Her	6.5	14.0'	33000 ly	03:40	05:03	05:25	obvious
	Open	M 73	NGC 6994	Aqr	10.4	9.0'	2000 ly	05:10	05:16	05:25	undetectable
	Neb	Eagle Nebula	M 16	Ser	6.0	9.0' x 4.0'		04:10	05:06	05:25	apparent
	Neb	Trifid Nebula	M 20	Sgr	6.3	16.0' x 9.0'		04:15	05:07	05:25	apparent
	Glob	Hercules Globular	Keystone Cluster	Her	5.8	20.0'	26000 ly	03:05	05:02	05:30	obvious
	Glob	M 56	NGC 6779	Lyr	8.4	8.8'	42000 ly	03:05	05:06	05:30	easy
	Glob	M 15	NGC 7078	Peg	6.3	18.0'	42000 ly	04:50	05:14	05:30	easy
	Glob	M 2	NGC 7089	Aqr	6.6	16.0'	49000 ly	05:05	05:17	05:30	apparent
	Glob	M 72	NGC 6981	Aqr	9.2	6.6'	68000 ly	05:05	05:17	05:30	difficult
	Glob	M 107	NGC 6171	Oph	7.8	13.0'	26000 ly	02:05	04:59	05:30	easy
	Open	NGC 6603	Collinder 374	Sgr	9.0	6.0'	12000 ly	04:05	05:08	05:30	easy
	Glob	M 9	NGC 6333	Oph	7.8	12.0'	26000 ly	03:10	05:04	05:30	easy
	Glob	M 75	NGC 6864	Sgr	8.6	6.8'	95000 ly	04:55	05:16	05:30	apparent
	Glob	M 22	NGC 6656	Sgr	5.2	32.0'	9800 ly	04:35	05:12	05:30	easy
	Glob	M 28	NGC 6626	Sgr	6.9	13.8'	16000 ly	04:35	05:10	05:30	easy

Log	Cls	Primary ID	Alternate ID	Con	Mag	Ang. Size	Distance	Begin	Best	End	Difficulty
	Glob	M 19	NGC 6273	Oph	6.8	17.0'	23000 ly	03:20	05:06	05:30	easy
	Glob	M 4	NGC 6121	Sco	5.4	36.0'	9800 ly	02:40	05:01	05:30	easy
	Glob	M 62	NGC 6266	Oph	6.4	15.0'	26000 ly	03:35	05:07	05:30	easy
	Glob	M 54	NGC 6715	Sgr	7.7	12.0'	55000 ly	04:40	05:12	05:30	apparent
	Open	M 7	NGC 6475	Sco	2.5	80.0'	980 ly	04:50	05:15	05:30	obvious
	Open	M 39	NGC 7092	Cyg	4.9	29.0'	1100 ly	04:05	05:12	05:35	obvious
	Open	Cooling Tower	M 29	Cyg	7.3	10.0'	3700 ly	03:35	05:09	05:35	obvious
	PNe	Dumbbell	M 27	Vul	7.3	8.0'	1100 ly	03:50	05:09	05:35	easy
	Glob	M 71	NGC 6838	Sge	8.4	4.0'	16000 ly	03:50	05:09	05:35	easy
	Glob	M 14	NGC 6402	Oph	7.6	11.0'	23000 ly	02:35	05:05	05:35	easy
	Glob	M 10	NGC 6254	Oph	6.6	20.0'	23000 ly	01:55	05:03	05:35	easy
	Open	Wild Duck Cluster	M 11	Sct	5.2	32.0'	6100 ly	03:45	05:11	05:35	obvious
	Open	M 26	NGC 6694	Sct	8.1	7.0'	5200 ly	03:55	05:09	05:35	easy
	Open	M 17	NGC 6618	Sgr	6.2	25.0'	4200 ly	03:50	05:10	05:35	easy
	Open	M 18	NGC 6613	Sgr	8.4	5.0'	4200 ly	03:50	05:11	05:35	easy
	Open	M 23	NGC 6494	Sgr	5.3	29.0'	2000 ly	03:30	05:10	05:35	obvious
	Open	M 25	IC 4725	Sgr	4.5	29.0'	2000 ly	04:05	05:13	05:35	obvious
	Open	M 21	NGC 6531	Sgr	5.9	14.0'	3900 ly	03:50	05:11	05:35	obvious
	Open	M 20	NGC 6514	Sgr	5.2	28.0'	2700 ly	03:55	05:11	05:35	obvious
	Glob	M 80	NGC 6093	Sco	7.3	10.0'	36000 ly	02:20	04:58	05:35	easy
	Neb	Lagoon Nebula	M 8	Sgr	5.0	17.0' x 15.0'		04:00	05:11	05:35	obvious
	Glob	M 55	NGC 6809	Sgr	6.3	19.0'	20000 ly	05:00	05:18	05:35	apparent
	Open	Butterfly Cluster	M 6	Sco	4.5	20.0'	1600 ly	04:15	05:14	05:35	obvious
	Glob	M 70	NGC 6681	Sgr	7.8	8.0'	65000 ly	04:35	05:14	05:35	easy
	Glob	M 69	NGC 6637	Sgr	7.7	9.8'	23000 ly	04:25	05:12	05:35	apparent
	Open	Star Queen	M 16	Ser	6.8	6.0'	5700 ly	03:30	05:12	05:40	obvious
	PNe	Ring Nebula	M 57	Lyr	9.4	1.4'	2600 ly	02:10	05:09	05:45	obvious
	Glob	M 30	NGC 7099	Cap	6.9	12.0'	39000 ly	-	-	-	undetectable

Symbol Key:

Open	Open Cluster	Doub	Double or Multiple Star	Con	Constellation
Glob	Globular Cluster	Bin	Binary Star (with orbit)	MSS	Major Solar System Object
PNe	Planetary Nebula	Var	Variable Star	Com	Comet
Neb	Diffuse Nebula	DVar	Double & Variable	MP	Minor Planet
Gal	Galaxy	BVar	Binary & Variable		
GalCl	Galaxy Cluster				
Dark	Dark Nebula				
QSO	Quasar				

Observation status: Y = observed, N = not observed, R = re-observe
Quality of opportunity (Q): A = optimum, B = near optimum, F = far from optimum