Messier Marathons

I have never been one for marathons of any sort. In my opinion, they don't prove anything. However, since I decided to write a book on Messier objects, I thought it would be appropriate to try my hand at a Messier marathon because they have become an annual event in the amateur community.

What is a Messier Marathon?

For those residing in the mid-latitudes of the northern hemisphere, it is the act of viewing every Messier object, except for possibly either M74 or M30, in one night. This can be accomplished only around New Moon during the month of March. Why March? There are two reasons. At this time of the year, the nights are still long, which allows a good portion of the celestial sphere to be viewed. Just as importantly, if not more so, is the fact that the Sun is positioned between the Right Ascensions of 0 and 23 hours, near the circlet of stars in Aquarius, an area devoid, in Declination and nearby Right Ascensions, of Messier objects. So, this is the one time of the year when all the Messier objects can appear in a single night sky. However, M74 or M30 may not be observable because one usually gets lost in the glow of sunlight.

Setup for my first Messier marathon. I found the Messier objects with the refractor on the manual altazimuth mount to the right but had a GO TO telescope, at left, on stand-by, just in case.

Suggestions for your Marathon

Have fun. First and foremost — take steps to make your Messier Marathon fun! Don't let it be a chore or become a struggle. If you are inexperienced with finding Messier objects, join in with more seasoned observers, but participate with people you know and like.

Go manual. You could easily accomplish a Messier Marathon by using a GO TO telescope, but I encourage you to manually find these objects. This will help fill the hours and you will feel more satisfied with your accomplishment. *Some of the following comments are specific to those wanting to manually find Messier objects.*

Country sky. Seek out a dark, unobstructed sky with as little light pollution as possible. I would not try a marathon in light-polluted skies, because some objects, like the Crab Nebula (M1) and Owl Nebula (M97), simply cannot be seen under these conditions. On the other hand, these same objects

are plainly visible under dark skies. All you have to do is pass by them to catch'em.

Star Charts. Don't get too fancy here. Use a set of easy-to-read, uncluttered star charts, like those in this book. Keep a fainter magnitude atlas on hand just in case you need to verify an object.

Finder. Ideally, equip your telescope with a reflex-sight finder like a Telrad instead of a traditional finderscope. This will speed up finding objects because it provides a one-to-one correspondence between the sky and star charts.

Magnifications. Independent of telescope size, stick with an eyepiece yielding magnifications in the range of 25x to 50x. If possible, use magnifications closer to 30x for locating these objects. Higher magnifications, like 75x or above, yield smaller field of views which makes it more difficult to spot and positively identify objects.

Telescope. Use a smaller, 4 to 6-inch diameter telescope. Bigger telescopes are not better for marathons, especially under dark skies. Smaller telescopes achieve a greater range of lower magnification with larger fields of view. Since the Messier objects are the biggest and brightest deep sky objects, they are hard to miss in a large field of view under dark skies.

My first Messier Marathon

Before sunset on Wednesday, March 13, 2002, I set out on my first Messier marathon. Unfortunately, I was at the tail end of a lingering cold, so I was weak and should have been in bed, but duty called. As I drove to a friend's house in Vail, Arizona, where the skies are unobstructed and fairly dark, I reminisced about the Messier marathon of two other friends the previous year. Although I was with them, I spent two-thirds of the night photographing objects for this book. I, however, got to go home early because I finished a few hours before dawn. Marathons are one of the few dusk-to-dawn events, but with numerous rests in between.

Prior to my marathon, I strategized the evening using a software planetarium program, so I had a prioritized list for observing the objects. I set up two telescopes. The first was a complete GO TO system, on standby, in case I needed to verify any object, and also, as I anticipated, to find the last objects which might get "lost" during early dawn. The second telescope was the one I used, a 4-inch Tele Vue 101 refractor on an altazimuth Tele Vue Gibraltar mount. I was determined to manually find all the objects, using and testing the first draft of the star charts in this book.

I treated the Messier marathon as a "find only" expedition, not an outing for studying these objects. The most I did was look at each object for five to ten seconds, noting their beauty and moving on to the next.

It would probably take two to three hours to manually find and view all the objects if they were under one sky. However, because they are spread across the celestial sphere, it takes the entire night, mostly because you must wait for them to rise in the east so they can be observed.

I did this marathon alone. I set up outside a friend's backyard, on a nice concrete pad that I can back my truck up to. I chatted with him a little when he came out to do some observing in the early

evening, and the following morning. Although I stayed out all night, it was comforting to know that safety was just a few feet away.

My observing went smoothly and was uneventful. However, my cold caught up with me in the early morning, so I snoozed in my truck for a few hours between sets of objects. I would have stayed awake if I had not been sick. It was a nice night, with no clouds, a mild temperature and little to no wind. Of course, there wasn't a problem with dew. In fact, there rarely is in southern Arizona. A few hours before sunrise, I heard roosters crow and "houses" starting to stir. That night, the "job" for most of the home dwellers was to sleep, but mine was to stay up and observe a litany of objects from a historically significant catalogue. It seemed ironic that in one night, I saw over 100 objects that took Messier years to catalogue. I can see him smiling now.

The most humorous moment of the marathon was our verbal exchange in the early morning when my friend came out of his house and yelled over his backyard fence.

Friend: "Did you see one hundred and nine?"[1]
Ken: "Yes," I responded. "I saw that one a few hours ago."
Friend: "No," he said. "Did you see one hundred and nine objects?"
Ken: "Oh, yes I did," I replied.
Friend: "Good," he exclaimed.

[1] The number of Messier objects normally seen during a Messier Marathon before I added the honorary M111 and M112 to the list.

It was dawn, and obviously my mind was too tired to pick up on the essence of his meaning, but I felt happy when I understood his question, realizing and recognizing the accomplishment of the night. I was surprisingly content about having experienced something that I normally would not do. I highly recommend the marathon as long as you are not sick, and do it with good company who shares the same goal. Do it for your own needs and in honor and remembrance of the hard work of those who came before us.

Observing list

On the next page is a list of the times and order in which I planned to observe the Messier objects. This order should work for the majority of mid-latitude locations in the northern hemisphere. For the most part, I followed my outline, but at times I skipped around, just for the sheer joy of it, and also because I could not resist my anticipation for observing favorite objects.

The most difficult batch of objects to identify is the Virgo Cluster of Galaxies because you have to use a star chart to "verify" each one. Although I observed these objects much earlier than the time indicated on the list, I highly recommend waiting to view them when they are on your southern meridian, because the up and down and left to right movements of the telescope on an altazimuth mount will correspond to the same directions on Charts T & U. If you are using an SCT or refractor with a 90° diagonal, use the mirror-reversed Chart V.

Have fun, and may you have clear skies for your marathon!

Messier Marathon Checkoff List

8 p.m.[1]	74[4], 77, 52, 31/32/110, 33, 103, 111/112, 76, 34
9 p.m.	79, 41, 42/43, 78, 45, 1
9:30 p.m.	36, 37, 38, 35, 50, 46/47, 93, 48, 67, 44
10:15 p.m.	95/96/105, 65/66
10:45 p.m.	81/82, 97/108, 109, 40, 106, 101, 102, 51, 63, 94
11:15 p.m.	3, 53, 64, 104, 68, 83, 5, 13, 92
1 to 1:30 a.m.[2] (or earlier)	Virgo Galaxy Cluster 85, 100, 99, 98, 88/91, 89/90, 58, 59/60, 87, 84/86, 49, 61
2 to 3 a.m.[3]	12, 10, 107, 80, 4, 14, 57, 56, 9, 19, 62, 29, 39, 27, 71
4 a.m.	11, 26, 16, 17, 18, 24, 25, 23, 20/21, 8, 22, 28, 6, 7
4:30 a.m.	54, 70, 69, 55, 75, 15, 72/73, 2
5:15 to 5:30 a.m.	30[4]

Congratulations. You've completed a marathon of the highest order!

Notes

1 Start when it first gets dark at your location. The actual starting time (as well as the other times indicated) will vary depending on your latitude and location in the time zone.

2 These galaxies will be on or near your southern meridian at about this time.

3 Don't dilly-dally from this point on because dawn will sneak up on you fast. Work ahead as much as possible.

4 Often, either M74 or M30 may not be observed because they get lost in the glow of sunlight. However, they may be visible and located with a "larger" telescope on a GO TO mount.

Excerpt from *The Next Step: Finding & Viewing Messier's* Objects by Ken Graun