

# The 110 Messier Objects

## Strategies for the Beginning Marathoner

By Alex McConahay

Because of a quirk in the location of the objects in Messier's list of 110 "Greatest Hits," observers at our latitude may be able to see all of them in one evening. The moon is not cooperating this year, but we are going to try anyway on March 8, when the club will be holding its annual Messier Marathon.

It is too late to start the good training for this event, but maybe there is hope yet!

By "training," I mean getting to know where all the objects are and what they look like in your scope. Over the course of the year, you should be starhopping to these famous objects, getting to know the constellations, the pointer stars, how they hide, their neighborhood, and all that. We all can find M42, the Orion Nebula in the winter sky, and M45 is naked eye. But

**Charles Messier is one of the most interesting astronomers. He found many objects that looked like Comets....and are now our "Greatest Hits" of the night sky.**

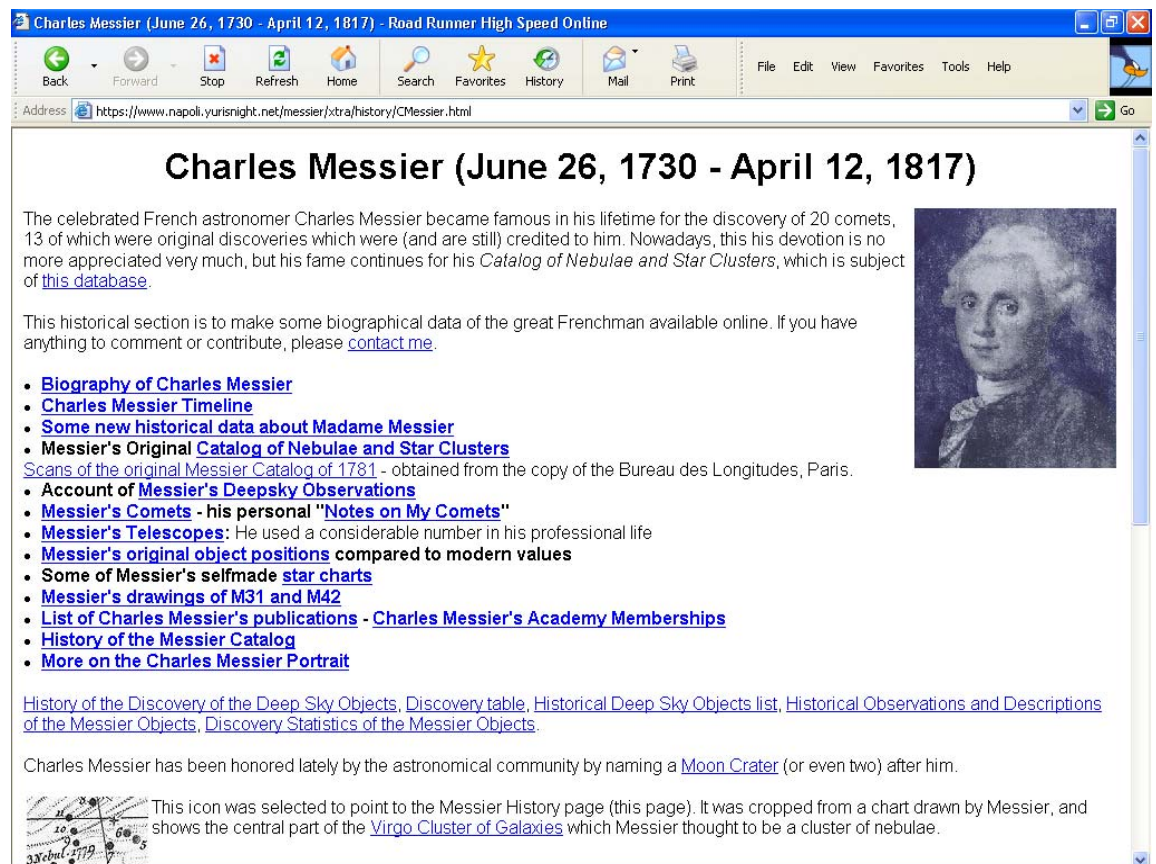
**Google him, and you find lots of information about the marathon.**

how about M4, or M1, or.... The really good marathoners pretty much know where all 110 of Messier's targets are, and with a good star chart can zip right to them. (The GREAT ONE doesn't even use the chart!)

But if you are already behind in your "Training" you can fake it pretty well with some advice.

**Plan before you go.** Get your "equipment" in order. Of course you will need a telescope of some sort (or binoculars, but you will probably only be able to get about half the objects). Messier and Mechain found all their objects

with a three incher—and not of the quality available to us. You will also need a table, flashlight, and most importantly, some good reference materials. I find Don Macholz' book (*Messier Marathon Observer's Guide Handbook and Atlas*) a great resource, while others use commercially available 5x8 laminated charts with all 110 objects. I also have handy a photographic atlas to give me a hint of what I am looking for. I use *The Messier Album*, buy Mallas and Kreimer, (Sky Publishing), but could just as easily use a large wall chart, or copies of the web pages you can find by starting at <http://www.delphes.net/messier/xtra/>



**Charles Messier (June 26, 1730 - April 12, 1817)**

The celebrated French astronomer Charles Messier became famous in his lifetime for the discovery of 20 comets, 13 of which were original discoveries which were (and are still) credited to him. Nowadays, this his devotion is no more appreciated very much, but his fame continues for his *Catalog of Nebulae and Star Clusters*, which is subject of [this database](#).

This historical section is to make some biographical data of the great Frenchman available online. If you have anything to comment or contribute, please [contact me](#).


- [Biography of Charles Messier](#)
- [Charles Messier Timeline](#)
- [Some new historical data about Madame Messier](#)
- [Messier's Original Catalog of Nebulae and Star Clusters](#)

*Scans of the original Messier Catalog of 1781 - obtained from the copy of the Bureau des Longitudes, Paris.*

- [Account of Messier's Deepsky Observations](#)
- [Messier's Comets - his personal "Notes on My Comets"](#)
- [Messier's Telescopes](#): He used a considerable number in his professional life
- [Messier's original object positions compared to modern values](#)
- [Some of Messier's selfmade star charts](#)
- [Messier's drawings of M31 and M42](#)
- [List of Charles Messier's publications - Charles Messier's Academy Memberships](#)
- [History of the Messier Catalog](#)
- [More on the Charles Messier Portrait](#)

[History of the Discovery of the Deep Sky Objects](#), [Discovery table](#), [Historical Deep Sky Objects list](#), [Historical Observations and Descriptions of the Messier Objects](#), [Discovery Statistics of the Messier Objects](#).

Charles Messier has been honored lately by the astronomical community by naming a [Moon Crater](#) (or even two) after him.

 This icon was selected to point to the Messier History page (this page). It was cropped from a chart drawn by Messier, and shows the central part of the [Virgo Cluster of Galaxies](#) which Messier thought to be a cluster of nebulae.

marathon/marathon.html.

And I find it quite useful to have a good overall star chart (like Sky Atlas 2000), marked with the objects, Study these thing **before** the event!

**Be familiar with your equipment.** If you have never done so, learn the field of view in your telescope, tel-rad, and finders, and how this relates to your charts. At various points in the night, you will need to move your scope three quarters of a degree south, or something. Just how far is that in your scope? Which direction moves it south? What does it look like?

**Set up in the right place.** If you have a Joshua Tree or a van in the wrong place, you may not be able to get your objects when you need them. Be sure to think out where

everything will eventually be. (Yes, it does happen.)

**Be ready to find or forego.** On the night of the event, Mark Melnyk will distribute a list of the 110 so you can check them off, and turn it in the next morning for your certificate. (It is similar to the list you will find in Macholz or on the web). The list is in viewing order; that is, try for the first ones on the list first. They will be setting earliest, and if you don't find them pretty fast, they will have disappeared.

For the first two dozen or so on the list, move along at a brisk clip. You need to catch them before they move beyond the horizon. And here is a strategy: be ready to forego one or two of them if they are too elusive. The twenty minutes you spend trying to find

the ever dim M74 at the beginning may mean you will also lose the next three on the list. It is better to give up completely on M74 than have a half dozen objects set in the meantime.

**Be aware of what you are looking for.** This is the other part of the preparation. Most of us mortals cannot memorize the appearance of all the objects, no matter how much we prepare beforehand. So, use the resource materials you have gathered beforehand... It should be obvious that a glob will look different from a galaxy or an double. But think hard about what your information is telling you. It is not enough to know that a galaxy (M33 for instance) has a should-be-obvious magnitude of 6.2 (— naked eye if it were a star!!). If your reference materials tell you the light is spread over an area of 22 x 18 arc minutes, a third of a degree, you realize that it is extremely dim in surface brightness. Don't rely on the pictures!

**Identify and move on.** Be sure you are on target, and that the target looks like what it should. Here you can use photos, descriptions in your reference materials, and the guy at the scope next to you. Mark it on your list, with the time observed, and a description. And then go to the next object. Use your information to tell

**M1, the Crab, was first on Messier's list, but not the first one to look for on March 9. If your eye-piece is wide enough, you can catch 97 and 108 in the same field (see the next page).**



you how far you have to move, and get there.

**Move North and South and to the Virgo Cluster.** The observing list will suggest a search pattern that leads you to objects that set first, and then to those which are grouped together. The object of the game this evening is not to observe 110 objects, but to find them and check them off the list! Just follow the list as rapidly as you can until you get to the Virgo cluster. (This will help you search most efficiently.) Then take a break.

**Galaxy Hopping in Virgo.** When you get to the Virgo/Coma Berenices galaxy clusters, you may need to shift from star hopping to galaxy hopping. Bill Patton will be talking about this at the February general meeting—so be sure to attend. The concept is the same as star hopping, but you use galaxies instead. Another piece of advice—instead of trying to find M98 (a good place to begin the Virgo galaxy hop) from Virgo, it is easier to come east from the Beta, (on the edge of Leo). When you are finished with the galaxies in this area, continue on as far to the east as you can get on your list. And, depending on what time of night it is, you may have earned a nap.

**Morning Objects are again hurry-up time.** Some of these objects barely get up before the sun. Therefore, be prepared once again to move quickly.

**Some general comments:**

If this is your first marathon, join the team at Capella. Sometimes it is the blind leading the blind over there on the club 22 incher, but cooperative learning can be productive.

Use your analog setting circles if so equipped. Analog circles seem to be acceptable to the marathon rules, but most people think Digital Setting Circles cross the line. (I mean is it possible to do an Olympic (running) marathon in a golf cart or bicycle. I suppose so, but it does not count!). And Goto? Well!

Use different scopes if you like. There is nothing that says all your objects must come on the same scope. Use your neighbors' and form teams.... Don't cheat. Yes, with a widefield eyepiece it is possible to see half a dozen galaxies in Virgo at the same time—but unless you actually go to the trouble of determining which is which,

you should not count them. Keep warm, and keep up your energy. Eat and drink as you like.

Practice the night before. If you set up on Friday, and try out the first ten objects, then go to sleep for the evening, and get up at 4:00 in the morning on Saturday to practice the early morning stuff, you will know what you are into for the real marathon on Saturday. (Don't stay up so late Friday practicing that you are out of it for the big show.)

Be sure to find Mark (or one of the other club officers) in the morning and turn in your list so we can make an appropriate certificate!

And most importantly—**HAVE FUN.**

I did not finish my first Messier Marathon, which I had begun in March, until the following September—but I did get it done!

