

# Observing Globular Clusters

*By Cliff Hedgepeth*

Having just completed the requirements for the Astronomical League's globular cluster Club, I thought I would pass on some of the things I have learned.

First of all, the majority of globular clusters are located in a ring in the outer reaches of our galaxy. There are 150 of these and these are the galactic globular clusters. There are also globular clusters that are visible located in M31, M33 and Fornax. These are extra galactic. There are others but these are the ones that can be seen with amateur equipment. The Astronomical League compiled a list of objects. There are 191 objects in it. All 150 of the clusters are galactic globulars and 41 extragalactic. I narrowed the list further, eliminating those dimmer than 15th magnitude and those below  $-40$  Declination. Works out to be 133 objects.

Now of the galactic clusters, 29 are Messiers, so that means one only has to view 21 NGC to qualify. Piece of cake, right? Wrong! First off you need to revisit the Messiers and study them. Most of us just found them at low power and didn't really look at them. To qualify for the AL program, you need to use at least 100x to study them. I use 214X. Globulars are classified by the Shapely-Sawyer System. There are 12 classifications. A type I is a very tight globular, type XII is very loose. M2 is a type II, M13 is a V, 107 is an X. Their scale is very unstructured and leaves a lot to the observer. Each observed globular must be classified.



M2 Type II



M13 Type V



M107 Type X

As you can see from the DSS images above M2 is denser than M13 and both are denser than M107. That's about all the guidelines there are for classification.

Another point is that the Messiers are, for the most part, large and bright. Even M107 is larger and brighter than most NGC globulars. Most will look like fuzzy stars at low power.

I found, though, that they are quite interesting to observe. Once you sharpen your observing skills. I found a high power, wide field eyepiece a must as most plossls of 10mm and smaller are nearly impossible to use. The Apogee wide view work very well and are inexpensive. My favorite cost me more than my first scope but is well worth it. It's a 7mm Type 6 Nagler . It gives me 214X with my scope with a 23' FOV. M13 fills it and makes you able to resolve stars so you can see how the globular is structured. The DSS images of the objects make finding them easier, along with software, such as WinStars, Astroplanner or SkyTools that gives you an accurate star field. Remember, these aren't going to hop out at you like the Messiers.

Another valuable aid is *Star Clusters*, by Brent Archinal and Steven Hines also Burnham's Celestial Handbook is a valuable tool for any observing project.

I am by no means an expert on the subject but the AL program has made a better observer of me as have all of the ones I have done.