

One of the most viewed deep space objects in the summer sky is the Great Globular Cluster in Hercules, otherwise known as M13. M13 is one of the first deep space objects found by most beginning astronomers. It is located on the west side of Hercules' famous Keystone asterism, can readily be found in binoculars, and in clear, dark skies can even be seen with the unaided eye. However, to truly appreciate this celestial jewel, it should be viewed with a telescope.

Besides M13, there are two other globular clusters located in the constellation Hercules that can be seen in an 8-inch telescope: M92 and NGC 6229. All three clusters should be viewed and compared as they vary considerably in size and brightness.

Globular clusters are highly compact groupings of tens of thousands to millions of stars. There are approximately 150 of these clusters forming a spherical halo around our Milky Way galaxy. Globular clusters are also known to exist in other galaxies. The Andromeda galaxy probably has two to three times as

# DEEP SKY OBJECTS

## FOURTH OF A SERIES

### THREE GLOBULAR CLUSTERS IN HERCULES

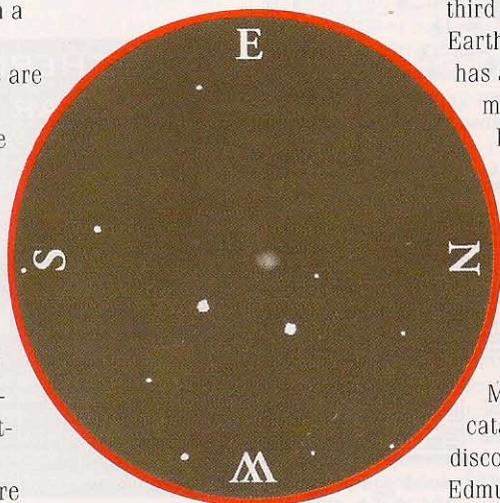
By Dr. James Dire, Kauai Educational Association for Science & Astronomy

many as the Milky Way.

M13 is the brightest globular cluster visible in the northern hemisphere and the third brightest visible from Earth. At magnitude 5.8, it has a diameter of 25 arc minutes, nearly as large as the Moon. In comparison, at magnitude 6.4, M92 is roughly half as bright. It spans 15 arc minutes.

Although both appear in Charles Messier's famous catalog, he did not discover either of them. Edmund Halley discovered M13 in the year 1715 and Johann Bode discovered M92 in 1777.

M92 is found 6.25 degrees north of the Keystone, fairly centered above the Keystone's two northernmost stars Pi and Eta Herculis. Like M13, M92 can easily be spied in 50mm binoculars or finder scopes.



*Drawing of NGC 6229 as seen through an 8-inch reflector showing a 40-minute field.*

Many stars can be resolved in both clusters using telescopes. Larger apertures will reveal more individual stars. I recommend eyepieces that yield 100x, or higher if the seeing is steady.

At magnitude 9.4, NGC 6229 is quite a bit more challenging to find than M92. NGC 6229 is located just north of the center of Hercules' club, or 11 degrees north of M13. The easiest way to find it is to center the 5th magnitude star 42 Herculis in the eyepiece and hop two-degrees to the southeast. William Herschel discovered NGC 6229 in 1787.

NGC 6229 spans slightly more than 5 arc minutes. At low power, NGC 6229 may appear fuzzy, which distinguishes it from the two 8th magnitude stars in the same field of view. At 100x, some individual cluster stars should be resolved, reviewing the true globular cluster nature of this deep space object.

An interesting piece of trivia about NGC 6229 is that due to procession of Earth's spin axis, around the year 17,150 A.D. the cluster will lie 10 arc minutes from the north celestial pole. That's much closer than Polaris is to the pole today! ✨



*The author took these images of M92, top, and NGC 6229 on June 26, 2008, using an SBIG ST-2000XCM CCD camera on an 8-inch f/7 Newtonian telescope. Both are 5-minute exposures taken minutes apart to compare two globular clusters.*

2011

**Okie-Tex**  
Star Party

Sept 24- Oct 2, 2011  
Kenton, OK  
[www.Okie-Tex.com](http://www.Okie-Tex.com)

Okie-Tex Star Party  
September 30, 2008  
Howard Edin