

The Observer's Challenge Objects

Submitted by Larry McHenry, Pittsburgh, PA, USA. <http://stellar-journeys.org>

September: **NGC 6540** – Globular Cluster - Sagittarius; mag_v=+9.3; RA: 18h 06m 09s Dec: -27° 45' 55" (bonus) **NGC 6544** – Globular Cluster - Sagittarius; mag_v=+7.5; RA: 18h 07m 21s Dec: -24° 59' 50"

The 9th magnitude globular cluster **NGC6540** is located in the summer constellation of Sagittarius. It is about 12,070 light years distant. Due to the very rich Milky-Way star field the globular is located in, with a number of foreground stars in direct line-of-sight, it was originally thought to be an open cluster. Not until 1994 was NGC6540 determined to actually be a globular cluster.

William Herschel discovered NGC2419 (H2 198) on May 24th, 1784 using his 20 ft reflector at his home in Slough near Windsor Castle. Herschel described the cluster as: *"Pretty faint, not large, crookedly elongated. Easily resolved"*.

EAA Observation:

07/20/2025 from from ORAS Observatory dark sky site, PA.

Using an 8" SCT optical tube @ f6.3 on a GEM mount, with a CMOS/USB color camera and broadband filter @ 15-second guided exposure livestacked for 10 minutes.



Using EAA techniques, visually on the monitor the globular appears near the center of a line of field stars, standing out as a slightly brighter clump. (bright knot of stars, center upper left in image).

(extra bonus observation – because, why not! ☺)

NGC 6544 – Globular Cluster - Sagittarius; $\text{mag}_v = +7.5$; RA: 18h 07m 21s Dec: $-24^\circ 59' 50''$

The 7th magnitude globular cluster **NGC6544** is located in the summer constellation of Sagittarius, near the bright emission nebula – M8. The cluster is about 9,450 light years distant. While embedded in a rich Milky-Way star field, being fairly close in distance, the small globular stands out well from its surrounding starfield. NGC6544 is one of the smallest globular clusters known, with a diameter of only about 10.5 light-years. It's also one of the closest to the galactic plane of the Milky-Way.

William Herschel discovered NGC2419 (H2 197) in 1784 using his 20 ft reflector at his home in Slough near Windsor Castle. Herschel described the cluster as: *“fairly bright and large object, circular and resolvable into stars”*.

EAA Observation:

07/20/2025 from from ORAS Observatory dark sky site, PA.

Using an 8" SCT optical tube @ f6.3 on a GEM mount, with a CMOS/USB color camera and broadband filter @ 15-second guided exposure livestacked for 10 minutes.



Using EAA techniques, visually on the monitor the small globular cluster, while mixing-in somewhat with the numerous foreground stars, still stands out well in the FOV.