

The Observer's Challenge Objects

Submitted by Larry McHenry, Pittsburgh, PA.

August: M57 – Planetary Nebula – **Lyra**; Mag. V=8.8; Size 86" x 62"

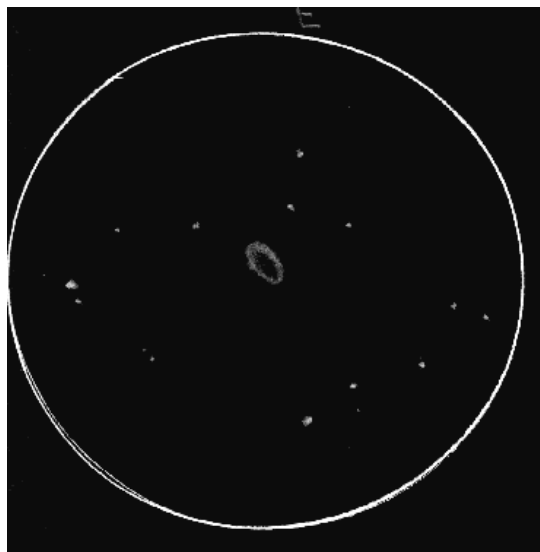
RA: 18h 54m Dec. +33° 02'

M57:

Located in the summer constellation of Lyra, 'The Lyre (Harp)', and is known as the 'Ring Nebula'. It was second planetary nebula discovered by Charles Messier in 1779, (about 15 yrs after M27), and is easy to locate and can be observed with small telescopes, even in suburban skies. It is about 2300 light years distant, and about 6000 years old, and is estimated to have a diameter of about a half-light year, and is expanding at about 12 miles per second. With its high surface brightness, the Ring is one of the best celestial showpieces of the summer sky! While the nebula itself is easy to observe, the central star at 15.4+ magnitude, can be quite difficult to glimpse. Interestingly, 3-D modeling of the structure of M57 shows that it is similar in shape to M27. The differences are a matter of viewing angle perspective. For the Ring, we are looking down the axis of one of its ends. For M27, we are looking at it toward the side, about a 90 degrees rotation.

Visually in the telescope, the Ring Nebula has a smooth oval shape, with the outer edge of the brighter ring fading toward the center.

Visual Eyepiece Sketch:



11/25/1984 from backyard in Louisville, KY, using an 10" f5.6 Dob Reflector and 18mm eyepiece (79x). A little smoke ring in the sky! No hint of the central star.

Video-Capture:



09/05/2010: from Black Forest Star Party at Cherry Springs State Park, PA, with an 8" SCT @ f6.3 on a Fork-Wedge Mount, using an analog video-camera & IR filter @ 30 seconds, unguided single exposure.