

## **The Observer's Challenge Objects**

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**October: NGC7027** – Planetary Nebula – “Jewel Bug Nebula”, **Cygnus**; Mag. V=10;  
RA: 21h 07m 2s Dec. +42° 14' 11"

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Planetary Nebula NGC7027 is located in the summer constellation of **Cygnus** - 'The Swan', about 5.5 deg from the bright star Deneb near NGC7000 – the “North American Nebula”. It is one of the brightest planetary nebula in the sky and is about 2,870 light years distant, and is estimated to be only about 600 years old. It is also one of the smallest planetary nebula known with a diameter of only about 0.1 x 0.2 of a light-year across.

NGC7027 was first discovered in 1878 by French astronomer Eduard Stephan with the Marseille Observatory's 31" reflector, but was not widely reported on at the time in the astronomical world. In November of 1879, the planetary nebula was then independently re-discovered by the English amateur astronomer Reverend Thomas W. Webb, (author of the 19<sup>th</sup> century guidebook “Celestial Objects for Common Telescopes”), using his 3.7" refractor. NGC7027 was described by Webb as: “*Planetary, like a [magnitude] 8.5 star, about 4".*” Webb promptly communicated his new object to the astronomical community, where the nebula was widely studied and reported upon. It was not until later in the spring of 1890 that it was determined that this nebula had actually been discovered a year earlier by Stephan. For some years afterwards this object was credited to both, but eventually Webb's name was dropped from use.

**Video-Capture/EAA:** 08/04/2019, from ORAs Observatory in Western Pennsylvania.  
Using a 14" SCT @ f10 on a fork/wedge mount, with a CMOS color camera and IR filter, 15-second unguided exposure, live-stacked for 3 minutes. Visually, the planetary was a bright, double-lobed object.

