

Orion Nebula

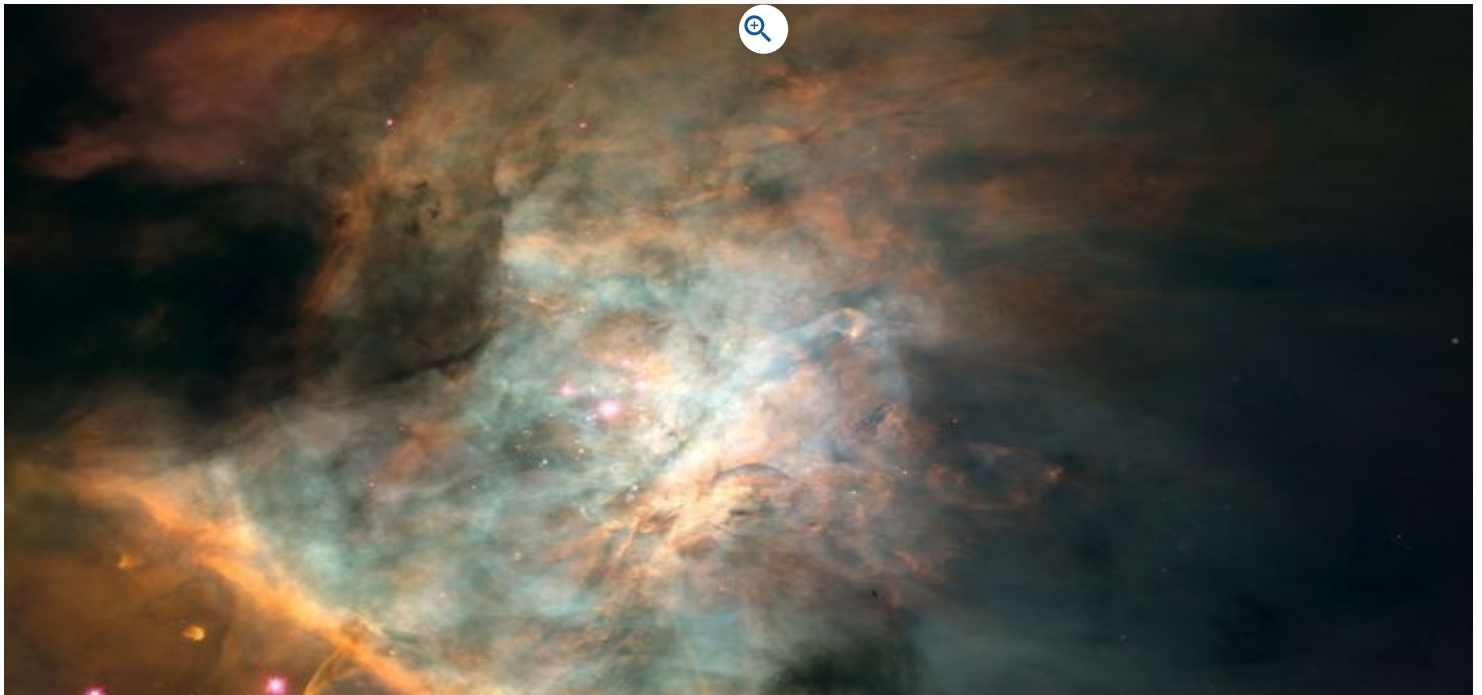
astronomy

Alternate titles: *M42*, *NGC 1976*



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Orion Nebula, (catalog numbers NGC 1976 and [M 42](#)), bright [diffuse nebula](#), faintly visible to the unaided eye in the sword of the hunter's figure in the [constellation Orion](#). The [nebula](#) lies about 1,350 light-years from [Earth](#) and contains hundreds of very hot (O-type) young stars clustered about a nexus of four massive stars known as the Trapezium. Radiation from these stars excites the nebula to glow. It was discovered in 1610 by the French scholar [Nicolas-Claude Fabri de Peiresc](#) and independently in 1618 by the Swiss astronomer Johann Cysat. It was the first nebula to be photographed (1880), by [Henry Draper](#) in the United States.



Orion Nebula (M42)

Centre of the Orion Nebula (M42). Astronomers have identified some 700 young stars in this 2.5-light-year-wide area. They have also detected over 150 protoplanetary disks, or proplyds, which are believed to be embryonic solar systems that will eventually form planets. These stars and proplyds generate most of the nebula's light. This picture is a mosaic combining 45 images taken by the Hubble Space Telescope.

Image: NASA, C.R. O'Dell and S.K. Wong (Rice University)

Images of the nebula continued to improve, and technological advances in the late 1980s enabled scientists to photograph infrared-emitting objects in the Orion Nebula that had never before been observed optically. The [Hubble Space Telescope](#) in 1991 revealed the sharpest details yet available of known features of the nebula, including what appeared to be a jet (an energetic outflow) related to the birth of a young [star](#).

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