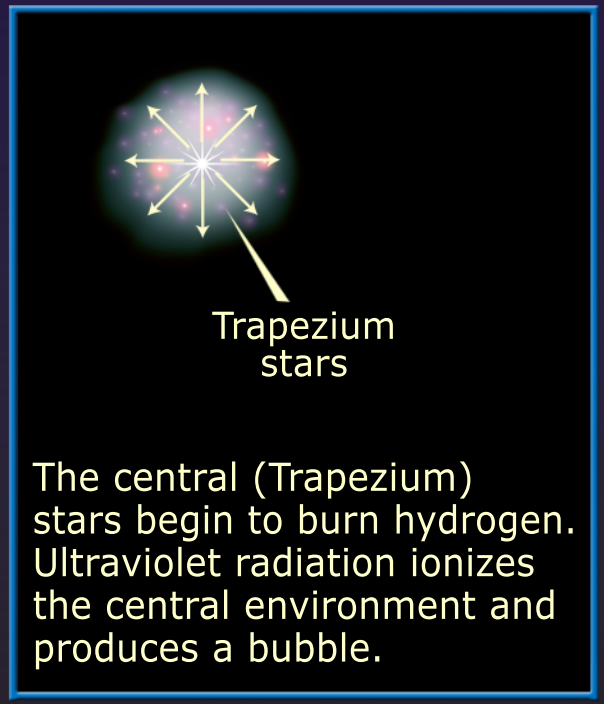
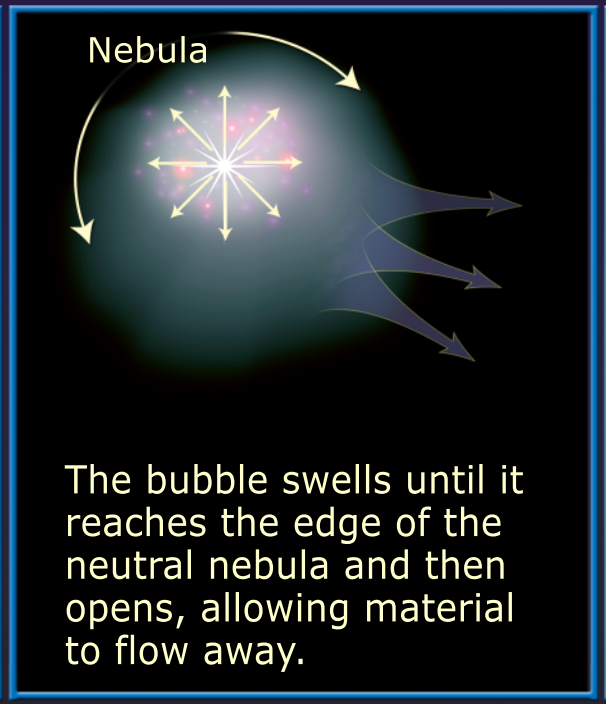
Evolution of the Orion Nebula (M42)*

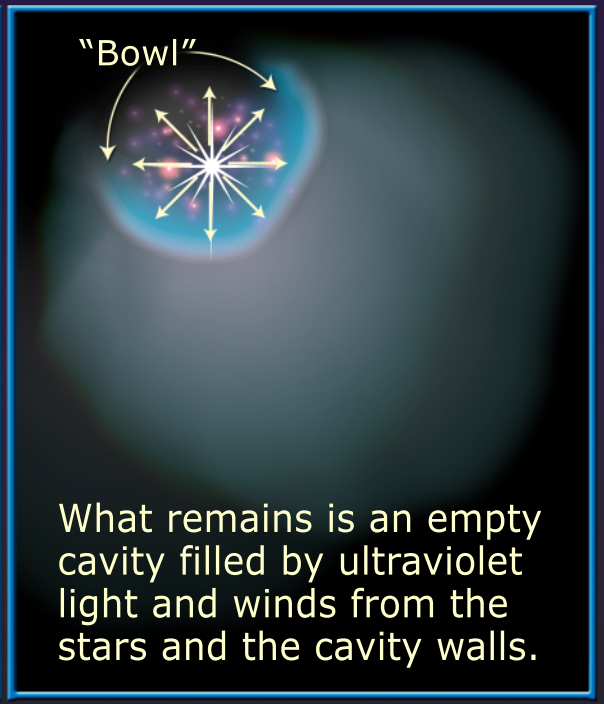
Radiation and wind from a nebula's stars push surrounding gas away, creating cavities within the nebula's cloud. In the Orion Nebula, several hot, young central stars, called the Trapezium, have carved out the core of the nebula. This cavernous core has broken through the part of the cloud that faces Earth, enabling Hubble and other telescopes to observe within.



The central (Trapezium) stars begin to burn hydrogen. Ultraviolet radiation ionizes the central environment and produces a bubble.



The bubble swells until it reaches the edge of the neutral nebula and then opens, allowing material to flow away.



What remains is an empty cavity filled by ultraviolet light and winds from the stars and the cavity walls.

**The Orion Nebula is approximately 1,500 light-years from Earth.*