

Spitzer image and spectrum from NASA/JPL-Caltech/A. Noriega-Crespo (SSC/Caltech).

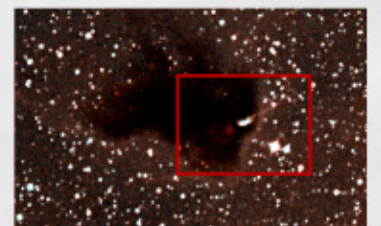
June 2007



SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
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Herbig-Haro 46/47

This object is called Herbig-Haro 46/47. Detecting near-infrared light (or light with wavelengths roughly 10 times longer than those seen by the human eye), the Spitzer Space Telescope transforms a dark cloud (as in the visible-light image at right) into a silky translucent veil, revealing the outflow of material from an otherwise hidden newborn star. Herbig-Haro objects are bright, nebulous regions of gas and dust usually buried within dark clouds. They are formed when supersonic gas ejected from a forming star (a protostar) interacts with the surrounding interstellar medium. These young stars are often detected only in the infrared. In the visible light image, the box denotes the area in the Spitzer image above.



Visible light image from the California Institute of Technology's Digitized Sky Survey.

Along with the image is a spectrum obtained with Spitzer's infrared spectrograph instrument. Spectra are light from objects spread out into various wavelengths like a rainbow. Their bumps and dips, or features, help astronomers identify the object's chemical composition.

The spectrum shows silicates, chemically similar to beach sand. The depth of the silicate dip indicates that the dusty cocoon surrounding the protostar star is extremely thick. Other absorption dips are produced by water ice (blue) and carbon dioxide ice (green). In addition, the Spitzer spectrum includes the chemical signatures of methane (red) and methyl alcohol (orange). For more information on these and other images, see www.spitzer.caltech.edu.

