

The 'Serpent' star-forming cloud hatches new stars

30 May 2014, by Whitney Clavin



Within the swaddling dust of the Serpens Cloud Core, astronomers are studying one of the youngest collections of stars ever seen in our galaxy. Image credit: NASA/JPL-Caltech/2MASS. Credit: NASA/JPL-Caltech/2MASS

(Phys.org) —Stars that are just beginning to coalesce out of cool swaths of dust and gas are showcased in this image from NASA's Spitzer Space Telescope and the Two Micron All Sky Survey (2MASS). Infrared light has been assigned colors we see with our eyes, revealing young stars in orange and yellow, and a central parcel of gas in blue. This area is hidden in visible-light views, but infrared light can travel through the dust, offering a peek inside the stellar hatchery.

The dark patch to the left of center is swaddled in so much dust, even the [infrared light](#) is blocked. It is within these dark wombs that stars are just beginning to take shape.

Called the Serpens Cloud Core, this star-forming region is located about 750 light-years away in Serpens, or the "Serpent," a constellation named after its resemblance to a snake in [visible light](#). The region is noteworthy as it only contains stars of

relatively low to moderate mass, and lacks any of the massive and incredibly bright stars found in larger star-forming regions like the Orion nebula. Our sun is a star of moderate mass. Whether it formed in a low-mass stellar region like Serpens, or a high-mass stellar region like Orion, is an ongoing mystery.

The inner Serpens Cloud Core is remarkably detailed in this image. It was assembled from 82 snapshots representing a whopping 16.2 hours of Spitzer observing time. The observations were made during Spitzer's "warm mission," a phase that began in 2009 after the observatory ran out of liquid coolant, as planned.

Most of the small dots in this image are stars located behind, or in front of, the Serpens nebula.

Provided by JPL/NASA

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