

Yahoo!7

# Telescope finds hole in space

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A gaping hole in the clouds surrounding a batch of young stars has been found by the Herschel Space Observatory.

The hole has provided astronomers with a surprising glimpse into the end of the star-forming process.

Stars are born hidden in dense clouds of dust and gas, which can now be studied in remarkable detail with Herschel, a European Space Agency mission in association with NASA.

## **Gallery: NASA captures solar storm**

Although jets and winds of gas have been seen streaming from young stars in the past, it has always been a mystery exactly how a star uses the jets to blow away its surroundings and emerge from its birth cloud.

For the first time, Herschel may be seeing an unexpected step in this process.

A cloud of bright reflective gas known to astronomers as NGC 1999 sits next to a black patch of sky.

For most of the 20th century, such black patches were known to be dense clouds of dust and gas that block light from passing through.

When Herschel looked in its direction to study nearby young stars, astronomers were surprised to see the cloud continued to look black, which shouldn't have been the case.

Tom Megeath of the University of Toledo, Ohio, said something has blown a hole right through the cloud.

"No one has ever seen a hole like this," he said.

"It's as surprising as knowing you have worms tunnelling under your lawn, but finding one morning that they have created a huge, yawning pit."

The astronomers think that the hole must have been opened when the narrow jets of gas from some of the young stars in the region punctured the sheet of dust and gas that forms NGC 1999.

The powerful radiation from a nearby adolescent star may also have helped to clear the hole.

Whatever the precise chain of events, it could be an important glimpse into the way newborn stars rip apart their birth clouds.