

NASA decommissions Spitzer Space Telescope after 16 years of operation

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NASA has decommissioned the Spitzer Space Telescope, one of its greatest observatories which have studied the universe by detecting cosmic infrared radiation for more than 16 years, the US space agency said in a statement. Spitzer, which was launched in 2003, studied some of the most distant galaxies ever detected with the light from some of the cosmic bodies travelling for billions of years to reach the telescope.

By detecting infrared light, with wavelengths ranging from about 700 nanometres — too small to see with the naked eye — to about a millimetre, Spitzer could help astronomers unveil the presence of cosmic entities which are too cold to emit much visible light, including planets outside our solar system, and cold matter found in the space between stars, the US space agency noted.

Spitzer had also found a previously undetected ring around Saturn, composed of sparse dust particles that visible-light observatories cannot see. This is helpful because there are many objects in space — such as exoplanets and brown dwarf stars — that are too dim for telescopes to see in visible light. By combining the Spitzer's infrared data with the visible light images from the Hubble Space Telescope, scientists can form a more complete representation of space.

Spitzer's infrared sensors also helped it to analyze interstellar dust. Over immense lengths of time, gravity pulls these particles

together, eventually forming stars and planets. Analyzing the chemical makeup of this dust has helped NASA learn more about their composition and the origins of our own solar system.

According to NASA, the original mission planners didn't expect Spitzer to operate for 16-plus years. During the 2016 NASA Senior Review process, the agency had said, they made a decision to close out the Spitzer mission, which was initially planned for 2018 in anticipation of the launch of the James Webb Space Telescope (JWST), which will also conduct infrared astronomy.

However, as the launch of the JWST was postponed, the Spitzer mission was granted its fifth and final extension, which ended recently.

SOURCE: *The Hindu*, www.nasa.org