

## **India's low-cost space mission reaches Mars orbit**

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India has become the first nation to reach Mars on its maiden attempt after its Mars Orbiter Mission completed its 10-month journey and successfully entered the Red Planet's orbit. bit.

The Indian Space Research Organization's unmanned drone, also called Mangalyaan, was programmed by Indian engineers to fire its main engine and eight smaller thrusters for 24 minutes, starting at 0147 GMT in order to make the spacecraft's final maneuvers into Mars' orbit.

The spacecraft was executing the arrival sequence autonomously with engineers receiving the telemetry with 12-and-a-half minute delay at ISRO's control center in Bangalore due to the 139 million miles separating Earth and Mars.

On the orbit, the unnamed probe is set to study Mars' surface and scan its atmosphere for evidence of some sort of life. The probe is expected to circle Mars for six months, about 500 kilometres (310 miles) from its surface. Its five scientific instruments will collect data and send it back to Earth.

The Mangalyaan is equipped with a color imaging camera, a thermal infrared spectrometer to measure the chemical composition of the surface, and instruments to assess the Mars atmosphere, including a methane detector.

The Mars Orbiter Mission, a low-cost \$72 million project, blasted off from Earth on November 5, 2013, aboard an Indian Polar Satellite Launch Vehicle. At its initial stage, the rocket booster placed the probe into Earth's orbit before the craft fired the engines to break free of Earth's gravity en route to Mars.

This is India's first mission into such deep space to search for evidence of life on the Red Planet. But the mission's primary objective is technological – if successful, the country will be joining an elite club of nations: the United States, Russia and Europe.