

India makes history with successful maiden voyage to Mars

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Indian space agency's low-cost mission to Mars has successfully entered the red planet's orbit, crowning India as first country to execute such a project in its maiden attempt

India has triumphed in its first interplanetary attempt by successfully putting a satellite into orbit around Mars.

Scientists broke into wild cheers on Wednesday morning as the orbiter's engines completed 24 minutes of burn time and maneuvered into its designated place around the red planet.

The success of India's Mars Orbiter Mission, affectionately nicknamed MOM, brings India into an elite club of Martian explorers that includes United States, the European Space Agency and the former Soviet Union.

The success of the Mars Orbiter Mission, lauded for its low price tag of \$74 million, will boost India's five-decade-old space programme that newly-elected Prime Minister Narendra Modi aims to expand with better infrastructure and technology.

"We have navigated our craft through a route known to very few," Mr Modi said, congratulating both the scientists and "all my fellow Indians on this historic occasion."

Scientists described the Mars Orbiter Mission, affectionately nicknamed MOM, as flawless. The success marks a milestone for the space program in demonstrating that it can conduct complex missions and act as a global launch pad for commercial, navigational and research satellites.

It's also a major feat for the developing country of 1.2 billion people, most of whom are poor. At the same time, India has a robust scientific and technical educational system that has produced millions of software programmers, engineers and doctors, catapulting many into the middle class.

More than half the world's previous attempts - 23 out of 41 missions - have failed, including one by Japan in 1999. The United States had its first success with a 1964 flyby by a spacecraft called Mariner 4, returning 21 images of the surface of the planet. The former Soviet Union reached the planet in 1971, and the European Space Agency in 2003.

India was particularly proud that MOM was developed with homegrown technology and for a bargain price of about \$75 million. NASA's much larger Mars Atmosphere and Volatile Evolution mission, or Maven, which reached its position around the red planet on Sunday, cost nearly 10 times as much at \$671 million.

MOM will now circle the planet for at least six months, with five solar-powered instruments gathering scientific data that may shed light on Martian weather systems as well as what happened to the water that is believed to have existed once on Mars in large quantities.