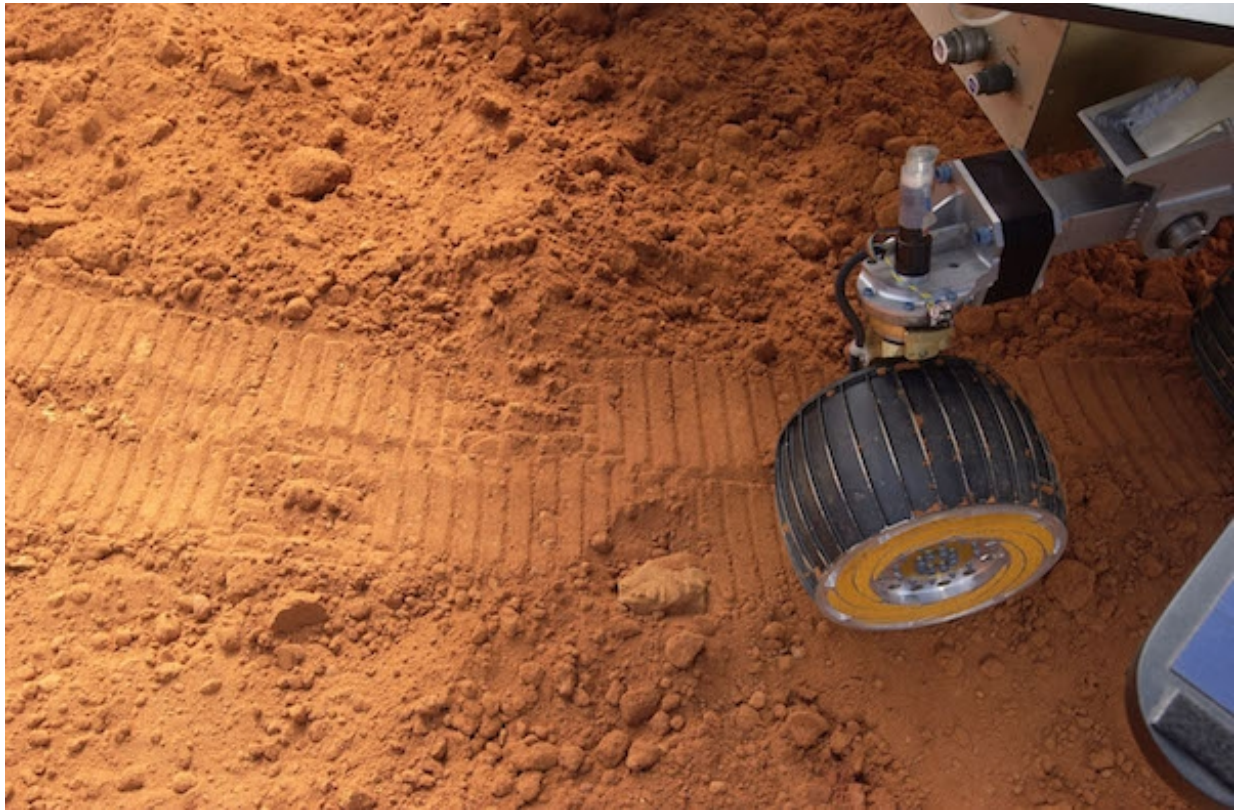


NASA Confirms Methane On Mars - Hints At Past Life



(Photo : Getty Images) NASA's Curiosity rover has confirmed the presence of methane on Mars environment - hinting that life once existed on the Red Planet.

NASA's Curiosity rover has confirmed the presence of methane on Mars environment - hinting that life once existed on the Red Planet.

The tunable laser spectrometer in the SAM (Sample Analysis at Mars) instrument of the Curiosity robot detected an episodic increase in the concentration of methane in Mars' atmosphere, writes [The Business Insider](#).

This puts an end to the long controversy over the presence of methane on Mars, which began over a decade ago when this gas was first detected with telescopes from the Earth, the authors from the Mars Science Laboratory (MSL) reported.

Methane can be the product of biological activity - nearly all methane found in the Earth's atmosphere originates in this way, stemming the belief that Martian methane could originate this way.

"It is a finding that puts paid to the question of the presence of methane in the Martian atmosphere but it does pose some other more complex and far-reaching questions, such as the nature of its sources," [said](#) study co-author Francisco Javier Martin-Torres from the Andalusian Institute of Earth Sciences (CSIC-UGR) at the University of Granada, Spain.

"The sources, we believe, must lie in one or two additional sources that were not originally contemplated in the models used so far. Among these sources, we must not rule out biological methanogenesis," he added.

According to current models, if methane existed on Mars, it could remain there for an average of 300 years as it was distributed across the atmosphere.

SAM has been detected basal levels of methane concentration - confirming an event of episodic increase of up to

10 times this value during a period of 60 Martian days.

The new data are based on observations during almost one Martian year (almost two Earth years), during which Curiosity rover surveyed about 5 miles of the Gale crater.

The newly arrived MAVEN (Mars Atmosphere and Volatile Evolution) from NASA will provide continuity for the study of this subject, the US space agency said in a statement.

The Trace Gas Orbiter (TGO), a joint development by the European Space Agency (ESA) and the Russian Space Agency (Roscosmos) will measure the concentration of methane on Mars at a larger scale.

The paper was published in the journal [Science](#).

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