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**News**

# The chances of finding life on Mars just got slimmer

NASA's rover Curiosity hasn't found methane, a calling card of life, in the Martian atmosphere

By [Sharon Gaudin](#)

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Computerworld - NASA's Mars rover Curiosity has not found a single trace of methane in the Martian atmosphere, decreasing the odds that there is life on Mars.

"It would have been exciting to find methane, but we have high confidence in our measurements, and the progress in expanding knowledge is what's really important," said Chris Webster, NASA's manager of Planetary Sciences Instruments. "We measured repeatedly from Martian spring to late summer, but with no detection of methane."

NASA reported today that Curiosity has been running tests to search for traces of methane and, so far, has come up empty.

The rover has been working on the Martian surface [for more than a year now](#) in the search for signs that the planet does, or ever was able to, support life. Towards that goal, Curiosity has [found evidence](#) that water coursed over the planet's surface thousands of years ago and that certain chemicals necessary for life as we know it are present in Martian soil.

Some scientists had thought it possible that microbial life exists on Mars today. However, many microbes here on Earth produce methane.

No methane on Mars. Not much chance of life.

"This important result will help direct our efforts to examine the possibility of life on Mars," said Michael Meyer, NASA's lead scientist for Mars exploration, in a statement. "It reduces the probability of current methane-producing Martian microbes, but this addresses only one type of microbial metabolism. As we know, there are many types of terrestrial microbes that don't generate methane."

According to NASA, Curiosity analyzed samples of the Martian atmosphere in search of methane six times between October 2012 and June 2013. Nothing was detected, leading scientists to calculate that the amount of

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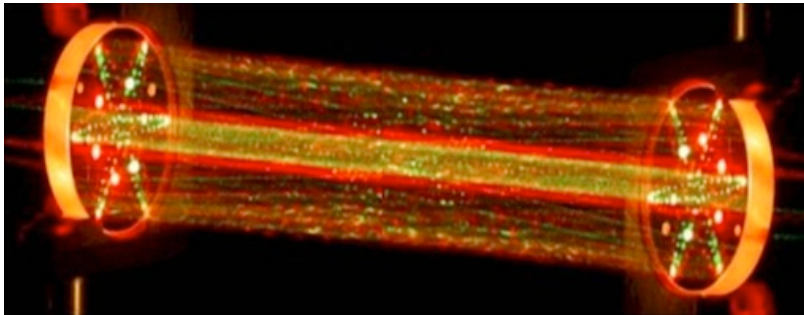
methane must be no more than 1.3 parts per billion.

That, the space agency noted, is one-sixth of the amount that scientists had expected to find.

Curiosity's controllers now will adjust its analysis tools to search for methane at concentrations well below 1 part per billion.

Scientists are a bit let down by the findings after Martian atmospheric measurements made from Earth and by NASA spacecraft orbiting Mars had previously shown methane concentrations up to 45 parts per billion.

"Methane is persistent. It would last for hundreds of years in the Martian atmosphere," said Sushil Atreya, a researcher on the Curiosity team. "Without a way to take it out of the atmosphere quicker, our measurements indicate there cannot be much methane being put into the atmosphere by any mechanism, whether biology, geology, or by ultraviolet degradation of organics delivered by the fall of meteorites or interplanetary dust particles."



The image shows a lab demonstration of a measurement chamber used inside the Mars rover Curiosity. (Image: NASA)

**Sharon Gaudin** covers the Internet and Web 2.0, emerging technologies, and desktop and laptop chips for Computerworld. Follow Sharon on Twitter at [@sgaudin](#), on [Google+](#) or subscribe to [Sharon's RSS feed](#). Her email address is [sgaudin@computerworld.com](mailto:sgaudin@computerworld.com).

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