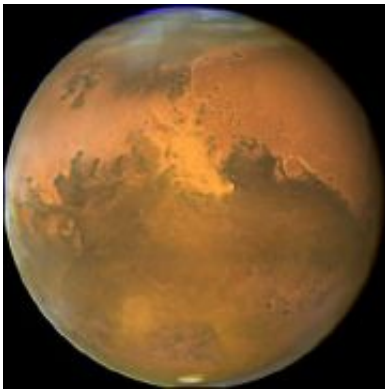


# Mars missions may learn from meteor **Down Under**

May 30 2012

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A discovery about the make-up of the atmosphere of Mars could help inform future missions searching for life there.

Scientists have tried to find out how the planet's environment came to contain [methane gas](#), which contains carbon – a substance found in all living things.

They found that meteorites, which continually bombard the surface of [Mars](#), contain enough carbon compounds to generate methane when they are exposed to sunlight.

Researchers say their findings give valuable insights into the planet's

atmosphere. Scientists planning future missions to Mars could use the findings to fine-tune their experiments, potentially making their trips more valuable.

To reach their findings, researchers carried out experiments on samples from the Murchison meteorite, which fell on Australia more than 40 years ago. The team took particles from the rock – which has a similar composition to meteorites on Mars – and exposed them to levels of ultraviolet radiation equivalent to sunlight on the red planet, which is cooler than Earth.

The team, from the University of Edinburgh, the Max Planck Institute in Germany and Utrecht University, found that the amount of methane given off by the particles was significant, and could account for a large part of the methane in Mars' atmosphere.

The study, published in *Nature*, benefitted from related studies of [methane](#) and ultraviolet radiation supported by a Royal Society Leverhulme Trust Fellowship and the Natural Environment Research Council, with input from the UK Astrobiology Centre.

Dr Andrew McLeod, of the University of Edinburgh's School of GeoSciences, said: "Whether or not Mars is able to sustain life is not yet known, but future studies should take into account the role of sunlight and debris from meteorites in shaping the planet's atmosphere."

Provided by University of Edinburgh

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