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Mars' Atmosphere Is Being 'Blown Into Space' Says Nasa

The Huffington Post UK | By Christopher York
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The thin atmosphere of Mars is but a straggly reminder of what it used to be, according to Nasa scientists.

In news that will give you the jitters every time you feel a stiff breeze, Nasa now has proof that most of the gas on Mars has was blown into space - and escaped from the planet, leaving behind a toxic and near vacuous atmosphere.

Mars' atmosphere is only a hundredth as dense as that of Earth, and is composed mainly of carbon dioxide. Needless to say, it would be impossible for a human to breathe on the planet, and the chance of any life still existing on its surface is extremely slim. But it wasn't always like this.

Evidence gathered by the Curiosity Rover has given further weight to the theory that Mars once had a much thicker atmosphere, and that most of it has now escaped from the planet.

The findings confirm theories from earlier missions

To confirm the theory Rover has been using its Sample Analysis at Mars (SAM) instrument to examine isotopes of argon.

SAM found four times as much of a lighter stable isotope (argon-36) compared to a heavier one (argon-38).

This is much lower than the ratio predicted for the original solar system - and indicates Mars has lost the lighter isotope over the heavier one.

Sushil Atreya, a SAM co-investigator at the University of Michigan, Ann Arbor, said: "We found arguably the clearest and most robust signature of atmospheric loss on Mars.

Curiosity's SAM suite

The latest news was also accompanied by more information on temperature, humidity and winds on Mars.

The first systematic measurements of humidity on Mars have shown it varies greatly depending on location, whereas temperature does not.

Dust in wind patterns has also been examined using the laser-firing Chemistry and Camera (ChemCam) instrument to glean information about the chemical composition of the surface.

ChemCam Deputy Principal Investigator, Sylvestre Maurice, said: "We knew that Mars is red because of iron oxides in the dust.

"ChemCam reveals a complex chemical composition of the dust that includes hydrogen, which could be in the form of hydroxyl groups or water molecules."

Curiosity will spend the rest of April carrying out instructions beamed up in March. After this the Rover will have a break of sorts, as Mars disappears behind the Sun.