



A beautiful life
Rachel Dwyer

The Indian EXPRESS

Updated: Fri, 19 Jul 2013, 18:22 IST

Follow Like 215k

Search

ASTROLOGY CRICKET SHOPPING

Home India World Business Cities Photos Sports Entertainment Lifestyle Tech Opinions Talk Videos Archive

Mars had a much thicker atmosphere than today, says Indian origin scientist

PTI : Washington, Fri Jul 19 2013, 15:32 hrs



Like 11 G+ SU Reddit



A panoramic view of the red planet. (AP Photo/NASA)

RELATED

NASA launches sun-watching satellite from US

Blue planet, like hell on Earth, 63 light-years away, discovered by NASA

Next Mars mission may search for past microbial life

TOP STORIES

BJP's Team Narendra Modi to lead charge during Lok Sabha elections unveiled

The first really high-precision measurements of the composition of Mars' atmosphere suggest that the Red planet's atmosphere was much thicker than it is today, researchers, including an Indian origin scientist, say.

New findings from NASA's Curiosity rover provide clues to how Mars lost its original atmosphere, which scientists believe was much thicker than the one left today.

"The beauty of these measurements lies in the fact that these are the first really high-precision measurements of the composition of Mars' atmosphere," said Sushil Atreya, professor of atmospheric, oceanic and space sciences at the University of Michigan.

Atreya is co-author of two related papers published in the journal Science, and co-investigator on Curiosity's Sample Analysis at Mars (SAM) suite of instruments, considered the rover's cornerstone lab.

EDITORS' PICK



Brain ultrasound may boost mood: study



BJP's Team Narendra Modi to lead charge during Lok Sabha elections unveiled



Hindu girl rescued after gun battle with kidnapers in Karachi



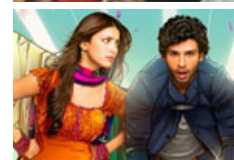
BJP is communal, never praised Modi as secular: Hazare



Narendra Modi unlikely to get Shiv Sena support as BJP PM candidate



Food Bill to have similar fate as mid-day meal: Ramdev



Movie review: Ramaiya Vastavaiya



Photos: Stylish girls Shruti, Alia on a movie date



Photos: First Look: Grand Masti coming your way!

Bihar mid-day-meal tragedy: Probe report blames principal

Narendra Modi unlikely to get Shiv Sena support as BJP PM candidate

It is time to celebrate the best in Indian journalism once again

After Bihar horror, scorpion in mid-day meal sickens 39 children in Odisha

SAM measured the abundances of different gases and isotopes in samples of Martian air, according to NASA.

Isotopes are variations of the same chemical element that contain different numbers of neutrons, such as the most common carbon isotope, carbon-12, and a heavier stable isotope, carbon-13, which contains an additional neutron.

SAM analysed the ratios of heavier to lighter isotopes of carbon and oxygen in the carbon dioxide that makes up most of Mars' atmosphere today.

Measurements showed that heavy isotopes of carbon and oxygen were more abundant in today's thin atmosphere compared with the proportions in the raw material that formed the planet (which

scientists can deduce from proportions in the Sun and other parts of the solar system).

This provides not only supportive evidence for the loss of much of Mars' original atmosphere, but also gives clues to how the loss occurred. It suggests that the planet's atmosphere escaped from the top, rather than due to the lower atmosphere

interacting with the ground, NASA's said.

"The isotope data are unambiguous and robust, having been independently confirmed by the quadrupole mass spectrometer and the tunable laser spectrometer, two of the SAM suite instruments," Atreya said.

... contd.

Recommend

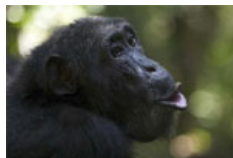
11 people recommend this. [Sign Up](#) to see what your friends recommend.

Page : 1 2

Single Page Format

Tags: [Mars atmosphere](#) [Mars Rover curiosity](#) [Indian origin scientist](#) [NASA](#) [science news](#)

ALSO READ



Chimps, orangutans remember distant past events



Google Q2 results hit by falling ad rates, Motorola business



Astronaut with flooded helmet felt like goldfish



Sweat machine: Now, machine that turns sweat into safe-to-drink water



Photos: Jacqueline, Girish watch Ramaiya Vastavaiya



Movie review: D-Day

Today's Paper

Edits & Columns

Modi gets a grip on BJP leadership

Ramban deaths: Protests rock J&K, curfew in major towns

Brace for tough year, growth to slow: PM

It is time to celebrate the best in Indian journalism once again

BSF fired suddenly, I could've been killed myself: SP

Plot thickens, CBI silent on whereabouts of 4 crucial links

Wary of Modi but Sena to stick to BJP's PM choice

Most Commented

Dhoni's finishing act, the magic and the math

US citizen asked to leave India for meeting ISI agent in jail

At least 4 killed as BSF men open fire on protesters in J&K town

Narendra Modi and Congress are brothers: Mamata Banerjee

How Modi undoes the political math

Please read our [terms of use](#) before posting comments