

Radiation threat to man's Mars mission

Exposure Akin To 50 CT Scans May Up Cancer Risk

Kounteya Sinha | TNN

London: Humans, who travel to Mars, will be blasted with high cosmic radiation equivalent to 50 full body CT scans that would increase the risk of cancer by about 3%, Nasa's Mars Science Laboratory (MSL) mission's measurements have revealed.

The radiation from the Sun would seriously damage brain tissues as rocket ships presently are incapable of protecting astronauts visiting the red planet. The MSL, which used robots for the mission, said Nasa needs to design systems to protect human explorers from radiation.

Going to Mars is seen as the next big thing for human space exploration with many companies announcing plans to take volunteers to the planet.

"Understanding the radiation environment inside a spacecraft carrying humans to Mars or other deep space destinations is critical for planning future crewed missions," said San Antonio-based Southwest Research Institute's Cary Zeitlin.

MSL's Radiation Assessment Detector (RAD) is the first instrument to measure the radiation environment during a Mars cruise mission from inside a spacecraft



REUTERS

A geologist at the Mars Desert Research Station (MDRS) in the US's Utah desert. The MDRS aims to probe the feasibility of a human exploration of Mars and uses the desert's Mars-like terrain to simulate working conditions on the Red Planet

that is similar to potential human exploration spacecraft.

Scientists have vowed to overcome the hurdles. "As this nation (the US) strives to reach an asteroid and Mars in our lifetimes, we're working to solve every puzzle nature poses to keep astronauts safe so they can explore the unknown and return home," said William Gerstenmaier, NASA's associate administrator for human exploration and operations. "We learn more about the human body's ability to adapt to space ev-

eryday aboard the International Space Station."

Gerstenmaier said they will continue to make advances needed to reduce risks for explorers as they build the Orion spacecraft and Space Launch System rocket to carry and shelter them in deep space. "Curiosity's RAD instrument is giving us critical data we need so that we humans, like the rover, can dare mighty things to reach the Red Planet."

The Curiosity rover landed on Mars in August.

Curiosity finds signs of stream on Red Planet

Kounteya Sinha | TNN

London: In a significant finding that confirms the theory of possibility of life on Mars, scientists have found rounded pebbles on the surface of the planet indicating that a stream once flowed on it.

The finding is the first on-site evidence of sustained water flow on Mars and supports prospects that the planet could once have been able to host life. According to the latest data from Nasa's Curiosity rover mission, rounded pebbles of this size are known to form only when transported through water over long distances. They were discovered between the north rim of the planet's Gale Crater and the base of Mount Sharp, a mountain inside the crater.

Speaking to TOI, Danish physicist Morten Bo Madsen, head of the Mars research group at the Niels Bohr Institute said, "We seem to have found the first indications of a place for which later missions could be targeted with the aim of looking for fossils. We know from studies of streams on Earth that rounded pebbles and rocks like those now found on Mars can only form in streams of flowing water carrying sand and small rocks of a speed sufficient to move particles of the sizes seen."