Not just water, Chandrayaan's NASA radar now finds ice deposits on moon

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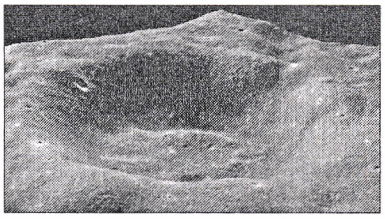
New analysis of scientific data from a NASA instrument aboard the 2008 Indian moon mission Chandrayaan-1 has detected more than 40 ice-filled craters in the lunar north pole, reviving hopes for colonization of the moon by humans in future.

The new data, published in the *Geophysical Research Letters* by US and Indian scientists, suggests that there could be at least 600 million metric tons of water ice in the craters.



Over 40 ice-filled craters detected

"Using data from a NASA radar that flew aboard India's Chandrayaan-1 spacecraft, scientists have detected ice deposits near the moon's north pole. It's estimated there could be at least 600 million metric tons of water ice," NASA reported on Tuesday.

"The new discoveries by Chandrayaan-1 and other lunar missions show that the moon is an even more interesting and attractive scientific, exploration and operational destination than people had previously thought," Prof Paul Spudis, Principal Investigator of the Mini-SAR, was quoted as saying in an ISRO statement.

Though Chandrayaan-1 and NASA missions like the Lunar Crater Observation and Sensing Satellite (LCROSS)

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Ice on moon

have reported the presence of water on the moon, this is the first time that evidence has emerged of the presence of large quantities of lunar water. "Once you have such large quantities of water it will help in setting up colonies," said ISRO spokesperson S Satish on the publication of the Mini-SAR finding.

Among Indian co-authors of the finding are Prof J N Goswami, Principal Scientist, Chandrayaan-1 from the Physical Research Laboratory, Ahmedabad and Dr M Chakrabarty of the Space Applications Centre, Ahmedabad.

"The Mini-SAR instrument found more than 40 small craters (2-15 km in diameter) with sub-surface water ice located at their base. The interior of these craters is in permanent sun shadow," ISRO said in an official statement. The Mini-SAR mapped the permanently shadowed polar craters of the moon that are not visible from earth.

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