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## ISRO, NASA team up to locate water-ice on Moon

Staff Reporter

*Joint experiment focusses on unexplored North Pole*

The Moon's relatively unexplored North Pole became the subject of a unique joint experiment by the National Aeronautics and Space Administration (NASA) and the Indian Space Research Organisation (ISRO) in their quest to locate water-ice on the floor of its permanently shadowed craters.

During the "Bi-Static" experiment, instruments on board Chandrayaan-I and NASA's Lunar Reconnaissance Orbiter (LRO) trained their radars to a specific point on the Erlanger Crater to capture images from different angles and gain better insights into the lunar terrain.

The Mini-SAR (Miniature Synthetic Aperture Radar) on board Chandrayaan-I and the Mini-RF (Miniature Radio Frequency) on the LRO, both developed by NASA, are designed specifically to detect water-ice on the Moon's poles.

At 12.30 a.m. on Friday the two spacecraft, travelling at 1.6 km per second, passed close enough to each other so that they could share information.

The LRO executed a minor manoeuvre to adjust its orbit to Chandrayaan's. The data was collected for about 4 minutes over the lunar North Pole.

Chandrayaan's operations were executed from the Spacecraft Control Centre (SCC) at the ISRO Telemetry, Tracking and Command Network (ISTRAC) at Peenya in Bangalore. Science data was immediately downloaded over the United States' Johns Hopkins University's Applied Physics Laboratory, the ground station that had the visibility.

Later, on Friday morning, data from Chandrayaan-1 was received by giant antennae at the Indian Deep Space Network at Byalalu near Bangalore.

Observations from the experiment are now being analysed by scientists from the ISRO and the NASA.

The possibility of discovering ice deposits on the Moon is viewed as an important resource that can be used for future space exploration.

Scientists have suggested that ice could be trapped in the permanently dark regions of the lunar poles, and possibly brought in by meteorites containing water-bearing minerals.

Keywords: [ISRO](#), [NASA](#), [water](#), [ice](#), [Moon](#)