

Chandrayaan-1 starts observations of the Moon

November 24 2008



Picture of the lunar polar region taken by Chandrayaan-1's Terrain Mapping Camera (TMC) on 15 November 2008. Taken over the polar region of the moon, the picture shows many large and small craters. To the lower left, is the brightly-lit rim of 117 km-wide Moretus crater. Credit: ISRO

(PhysOrg.com) -- The Indian Space Research Organisation's lunar orbiter Chandrayaan-1 released a probe that impacted close to the lunar south pole on 14 November. Following this, the instruments on the spacecraft are being switched on to get the science observations started.

The Moon Impact Probe was dropped close to Shackleton crater, a place close to the south pole, where ice may exist in areas that are never illuminated by the Sun. It carried three instruments: a video imaging system, a radar altimeter and a mass spectrometer. The imaging system took pictures of the Moon as it approached the surface, the radar was used to determine the altitude, and the mass spectrometer was used to study the thin lunar atmosphere.

The probe was released from the spacecraft at 15:36 CET (20:06 Indian Standard Time), on 14 November and took 25 minutes to reach the surface. As it descended, the probe transmitted pictures to the orbiter that were later downloaded to Earth.

The Terrain Mapping Camera, TMC, and the Radiation Dose Monitor, RADOM, were functional by that time on the orbiter. After the impact of the probe, the remaining orbiter instruments were switched on consecutively for their commissioning activities.

During commissioning all standard operating modes of an instrument are exercised and the data and housekeeping parameters are examined to verify that everything is working properly.

The European near-infrared spectrometer SIR-2 was commissioned successfully on 19 November. The instrument was switched on and sent back housekeeping data indicating normal functionality. Science observations were started successfully on 20 November.

The Chandrayaan-1 X-ray Spectrometer, C1XS, was first activated on 23 November, and its commissioning is in progress.

The Sub-keV Atom Reflecting Analyser, SARA will be commissioned from 7 to 10 December. The commissioning for this instrument will take longer than usual because the instrument operates at a high-voltage,

which will be increased in steps.

Provided by European Space Agency

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