

**Tuesday, March 24, 2009**  
**SPECIAL SESSION: LUNAR MISSIONS:**  
**RESULTS FROM KAGUYA, CHANG'E-1, AND CHANDRAYAAN-1, PART I**  
**8:30 a.m. Waterway Ballroom 4**

**Chairs:** Clive Neal  
 Alian Wang

- 8:30 a.m. Goswami J. N. \* Annadurai M.  
[Chandrayaan-1: India's First Planetary Science Mission to the Moon](#) [#2571]  
 The first Indian planetary exploration mission, Chandrayaan-1, was launched on 22 October, 2008. We will present a brief summary of the science objectives, various payloads, mission details and observational plans.
- 9:00 a.m. Gopala Krishna B. \* Amitabh Sanjay S. Srivastava P. K. Kiran Kumar A. S.  
[Digital Elevation Models of the Lunar Surface from Chandrayaan-1 Terrain Mapping Camera \(TMC\) Imagery — Initial Results](#) [#1694]  
 Initial results of digital elevation model obtained from the stereo triplet images acquired by the Terrain Mapping Camera onboard the Chandrayaan-1 spacecraft are discussed.
- 9:15 a.m. Kiran Kumar A. S. \* Roy Chowdhury A. Murali K. R. Sarkar S. S. Joshi S. R. Patel V. D. Dave A. B. Shah K. J. Banerjee A. Arya A. S. Chauhan P. Mathew K. Sharma B. N.  
[The Terrain Mapping Camera on Chandrayaan-1](#) [#1584]  
 The Terrain Mapping Camera on Chandrayaan-1, acquires stereo triplet images of Moon in visible band. With the successful launch, spacecraft reached the 100 kilometer polar orbit around the moon and has since been returning images of Moon.
- 9:30 a.m. Dachev Ts. P. \* Tomov B. T. Matviichuk Yu. N. Dimitrov Pl. S. Angelis G. De. Spurny F. Vadawale S.  
[Monitoring of the Earth and Moon Radiation Environment by the RADOM Instrument on Indian Chandrayaan-1 Satellite. Preliminary Results](#) [#1274]  
 This paper describes preliminary scientific results from the measurements of the Earth and Moon radiation environment by RADOM instrument since 22nd October 2008.
- 9:45 a.m. De Angelis G. \* Dachev Ts. P. Tomov B. Matviichuk Yu. Dimitrov Pl. Spurny F. Vadawale S.  
[Modeling of the Moon Radiation Environment at the Altitude of the Indian Chandrayaan-1 Satellite and a Comparison with the RADOM Experiment Data](#) [#1310]  
 These results for the moon radiation environment as well as for the cruise phase have been obtained in the framework of the Radom investigation that is on-board the Chandrayaan-1 mission by the Indian Space Agency ISRO.
- 10:00 a.m. Spudis P. D. \* Bussey D. B. J. Butler B. Carter L. Gillis-Davis J. Goswami J. Heggy E. Kirk R. Misra T. Nozette S. Robinson M. Raney R. K. Thomson B. Ustinov E.  
[The Mini-SAR Imaging Radar on the Chandrayaan-1 Mission to the Moon](#) [#1098]  
 The Mini-SAR is an imaging radar instrument on the Indian Chandrayaan-1 mission to the Moon. It will map both lunar poles, revealing terrain in permanently dark areas and characterizing the backscattering properties of these areas, looking for evidence of ice.
- 10:15 a.m. Senthil Kumar A. Kiran Kumar A. S. \* Goswami J. N. Pieters C. M. Krishna B. G. Chauhan P.  
[Lunar Orientale Basin: Topology and Morphology of Impact Melt Region from Chandrayaan-1 TMC and HYSI](#) [#1505]  
 Initial results of Chandrayaan-1 Terrain Mapping Camera and Hyperspectral Imager data acquired the Orientale Basin of lunar surface are presented.

- 10:30 a.m. Kamalakar J. A. \* Laxmi Prasad A. S. Bhaskar K. V. S. Selvaraj P. Sridhar Raja V. L. N. Goswami A. Kalyani K. Ravikumar K. Jain Y. K. Daniel D. A. Gopinath N. S.  
[Laser Ranging Experiment Aboard Chandrayaan-1: Instrumentation and Preliminary Results](#) [#1487]  
This paper presents the instrumentation details, end-to-end testing of the Lunar Laser Range Instrument (LLRI) aboard Indian lunar mission Chandrayaan-1 and focus on the present status and preliminary results obtained by the instrument.
- 10:45 a.m. Grande M. \* Kellett B. J. Maddison B. J. Sreekumar P. Huovelin J. Howe C. J. Crawford I. A. Narendranath S.  
[Initial Results from the C1XS X-Ray Spectrometer on Chandrayaan-1](#) [#1840]  
C1XS in flight calibration shows the instrument is performing well. C1XS observed the Moon during an A class flare on 12-12-2008; characteristic X-ray lines at Mg, Al and Si are clearly resolved. Analysis shows that C1XS easily meets spec.
- 11:00 a.m. Pieters C. M. \* Moon Mineralogy Mapper Team  
[Mineralogy of the Lunar Crust in Spatial Context: First Results from the Moon Mineralogy Mapper \(M<sup>3</sup>\)](#) [#2052]  
Mineralogy across the Orientale Basin measured with initial M<sup>3</sup> data indicate the peak ring exposed a massive crustal layer of almost pure anorthosite. This is underlain by noritic materials. More mineralogy data of the lunar crust is being acquired.
- 11:15 a.m. Green R. O. \* Pieters C. M. Boardman J. Barr D. Bruce C. Bousman J. Chatterjee A. Eastwood M. Essandoh V. Geier S. Glavich T. Green R. Haemmerle V. Hyman S. Hovland L. Koch T. Lee K. Lundeen S. Motts E. Mouroulis P. Paulson S. Plourde K. Racho C. Robison D. Rodriguez J. Rothman P. Sellar G. Smith C. Sobel H. Stamp J. Tseng H. Varanasi P. Wilson D. White M.  
[The Moon Mineralogy Mapper \(M<sup>3</sup>\) Imaging Spectrometer: Early Assessment of the Spectral, Radiometric, Spatial, and Uniformity Characteristics](#) [#2307]  
The Moon Mineralogy Mapper is a high uniformity and high signal-to-noise ratio NASA imaging spectrometer that is a guest instrument on the Indian Chandrayaan-1 Moon Mission. We present an early assessment of the M<sup>3</sup> science measurement performance.
- 11:30 a.m. Li C. L. \* Liu J. J. Mu L. L. Ren X. Zou Y. L. Zhang H. B. Lu C. Liu J. Z. Zuo W. Su Y. Wen W. B. Bian W. Zou X. D. Ouyang Z. Y.  
[A New Global Image of the Moon by Chinese Chang'E Probe](#) [#2568]  
Mapping procedure of the global image of the Moon is described, including introduction of data, data processing and map-making. The results shows that the Chinese global image map provides new and highly precise data for lunar topographic demonstration and research.
- 11:45 a.m. Liu J. J. \* Ren X. Mu L. L. Zhao B. C. Xiangli B. Yang J. F. Zou Y. L. Zhang H. B. Lu C. Liu J. Z. Zuo W. Su Y. Wen W. B. Bian W. Zou X. D. Li C. L.  
[Automatic DEM Generation from CE-1's CCD Stereo Camera Images](#) [#2570]  
The goal of the CCD Stereo Camera is to acquire 3D-images of lunar surface between 70S and 70N. We describe the process of the images acquired, configuration of imaging system, camera sensor model, camera trajectory model and EFP photogrammetric triangulation algorithm.