

## LEAG Annual Meeting

15-18 November, 2009  
LPI, Houston, Texas

### Executive Summary

Date Prepared: 10/9/09

Presenter's Name: Carlton Allen

Presenter's Title: Astromaterials Curator / Member, Diviner Science Team

Presenter's Organization/Company: NASA Johnson Space Center

### Presentation Title

**Infrared (DIVINER) – rock abundance/composition**

### Key Ideas

Rock abundances can be calculated from nighttime temperature data. Diviner rock abundance calculations will be compared to published rock counts based on orbital and surface imagery.

Mineral composition can be calculated from the position of the “Christiansen feature”, a portion of the thermal infrared. Three of Diviner’s spectral channels were specifically chosen to provide estimates of this feature position. Calculations will be compared to other orbital data and ground truth from the Apollo sites.

### Supporting Information

Published paper:

D.A. Paige · M.C. Foote · B.T. Greenhagen · J.T. Schofield · S. Calcutt · A.R. Vasavada · D.J. Preston · F.W. Taylor · C.C. Allen · K.J. Snook · B.M. Jakosky · B.C. Murray · L.A. Soderblom · B. Jau · S. Loring · J. Bulharowski · N.E. Bowles · I.R. Thomas · M.T. Sullivan · C. Avis · E.M. De Jong · W. Hartford · D.J. McCleese (2009) **The Lunar Reconnaissance Orbiter Diviner Lunar Radiometer Experiment**, *Space Science Reviews*, DOI 10.1007/s11214-009-9529-2 online at:  
<http://www.springerlink.com/content/y2633v4619834462/fulltext.pdf>

Diviner Lunar Radiometer Experiment website: <http://www.diviner.ucla.edu/>