



Global mapping of lunar neutron flux by LEND/LRO

M. Litvak (1), I. Mitrofanov (1), A. Sanin (1), W. Boynton (2), K. Harshman (2), J. Droege (2), A. Malakhov (1), D. Golovin (1), R. Starr (3), and L. Evans (4)

(1) Space Research Institute, Laboratory, Moscow, Russian Federation (litvak@mx.iki.rssi.ru), (2) University of Arizona, Tucson, USA, (3) Catholic University of America, Washington DC, USA, (4) Computer Sciences Corporation, Lanham, USA

The latest neutron spectrometer measurements with the Lunar Exploration Neutron Detector (LEND) onboard the Lunar Reconnaissance Orbiter (LRO) during more than 1 year of mapping starting on 15 September 2009, are used to create global maps of lunar neutron fluxes in different energy ranges with various spatial resolutions. In our analyses we have created global maps showing regional variations in the flux of thermal, epithermal and fast neutrons. We have compared these fluxes to variances in soil elemental composition, and with previous results obtained by the Lunar Prospector Neutron Spectrometer (LPNS).