

Detection of water ice permafrost at lunar poles: new results from LEND instrument onboard LRO

I. Mitrofanov (1), on behalf of the LEND team
(1) Institute for Space Research, Moscow, Russia (imitrofa@space.ru / Fax: +7-495-333-3489)

Abstract

The most recent analysis of local *Neutron Suppression Regions* (NSRs) at lunar poles will be presented based on 3 years data of mapping of epithermal neutrons with high spatial resolution by the LEND instrument onboard NASA's LRO.

The data from another LRO instruments Diviner and LOLA will also be taken into account for modeling the physical origin of found NSRs, as possible spots of *water ice permafrost* on lunar poles.

The content of water ice in the shallow subsurface will be estimated by numerical simulation of neutron emission of the most interesting NSRs in correspondence with LEND observational data for epithermal and fast neutrons.