

The subsurface water distribution in Gale crater from DAN instrument onboard NASA Curiosity rover.

M.L. Litvak (1), I.G. Mitrofanov (1), D. Lisov (1), S.Y. Nikiforov (1), A.B. Sanin (1), M. V. Djachkova (1)
(1) Space Research Institute of the Russian Academy of Sciences (IKI), 117997, 84/32 Profsoyuznaya st., Moscow, Russia,
(litvak@mx.iki.rssi.ru)

Abstract

In our study we have used data gathered from Dynamic Albedo of Neutron (DAN) instrument installed onboard NASA Curiosity rover for 6 years of surface observations. The main objective is to study variations of the bound water in subsurface layer along rover traverse (more than 20 km). We have reconstructed continuous profile of subsurface water using DAN passive and active observations and compared it with other Curiosity observations, stratigraphy column, geological patterns and distribution of different minerals.