[구SS-03] Analysis of landing site for lander and rover on Moon and Mars

Haingja Seo, Eojin Kim, Joo Hyeon Kim, Joo Hee Lee,
Gihyuk Choi, Eun-Sup Sim
Korea Aerospace Research Institute

Moon and Mars have been explored by landers and rovers. Apollo missions landed five times on Lunar surface, and various rovers, including Curiosity landed and explored Mars.

The selection of landing site have to be considered engineering and scientific side: the landing site to be available to land stably? the obstacle is not around the rover such as rocks and pothole? the landing site is valuable with scientific? And then landing site have to be the place which is satisfied two objects.

We search the information about landing sites of Moon and Mars, and compile the conditions of landing sites. We expect that these data are useful when the landing site of Moon or Mars for Korean mission is selected.

[구SS-04] Analysis of Martian topside ionospheric data obtained from Mars Advanced Radar for Subsurface and Ionospheric Sounding onboard Mars Express

Eojin Kim, Haingja Seo, Joo Hyeon Kim, Joo Hee Lee,
Gihyuk Choi, Eun-Sup Sim
Korea Aerospace Research Institute

The upper ionosphere of Mars has been explored by many spacecraft like Mariners, Mars, Viking, and recently by MGS and MEX. MARSIS (Mars Advanced Radar for Subsurface and Ionospheric Sounding) aboard Mars Express Orbiter is operating from August 2005. MARSIS provides topside ionospheric traces, of which yield electron density profiles for altitudes above the primary ionospheric peak. A large amounts of data is useful for investigation of the Martian ionospheric environments under the changing conditions like solar activity, seasons, and solar zenith angle.

We studied the characteristics of the Martian ionosphere through analysis of MARSIS data in the various conditions. We expect that our results contribute for understanding of the Martian ionospheric environment.