
[EJ] Evening Poster | P (Space and Planetary Sciences) | P-PS Planetary Sciences

[P-PS05]Lunar science and exploration

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Wed. May 23, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

Scientific data sets acquired by not only Japanese lunar mission SELENE (Kaguya), but also other countries' missions, have become new standard for lunar science. Analyses of these data have been providing several new knowledge and changing some hypotheses into the truth of the Moon. In concurrence with these studies, some countries including Japan are planning future lunar missions. In this session, we will discuss scientific results based on newly acquired lunar data, strategy for future missions including SLIM, and theoretical and experimental studies for lunar science.

[PPS05-P15]Magnetic field observation in a lava tube on the Moon: its purpose and significance in Lunar science

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Keywords:Moon, Magnetic field observation, lava tube

Magnetization that exists near the surface of the Moon is related with the magnetic environment of the Moon when the materials obtained magnetization. Thus, the magnetization can provide information on the period when the lunar dynamo operated, the variation of the lunar pole, activity near the lunar surface, and so on. Lunar surface magnetization is measured using rock samples obtained by Apollo projects or estimated from spatial distribution of magnetic anomalies on the lunar surface obtained by satellite magnetic field observations such as Lunar Prospector and SELENE-Kaguya. However, the rock samples and magnetic anomalies represent magnetization of different spatial scale, and the relationship between them are not trivial. There might exist local magnetized regions where no significant magnetic anomalies were observed by satellite observations. Therefore, information on local magnetization obtained by in-situ magnetic field observation can provide new information on the cause of magnetization and the period of lunar dynamo operation. In this presentation, the purpose and significance of magnetic field observation in and around a lava tube, which is considered as a part of UZUME project, for lunar science are discussed with magnetization near Marius Hills Hall as an example.