

14th HUMAN EXPLORATION OF THE MOON AND MARS SYMPOSIUM (A5)
Near Term Strategies for Lunar Surface Infrastructure (1)

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IDENTIFYING AND CHARACTERIZING VXB EVENTS ON THE LUNAR SURFACE FROM THE
SUPRATHERMAL ION DETECTOR EXPERIMENT (SIDE) THAT WAS PART OF APOLLO 14
MISSION.

Abstract

In 1969, NASA launched a series of Apollo Lunar Surface Experiments Package (ALSEP) missions to the moon to further understand the lunar surface. The SIDE was a part of the ALSEP package and consists of two positive ion sensors, the mass analyzer (MA) and the total ion detector (TID). As part of the Dynamic Response to the Environment at the Moon (DREAM) project, potential VXB events were identified in the TID data from the Apollo 14 mission along with other electrical phenomenon. These potential events were then compared to OMNI IMF data to check validity. More extensive analysis is currently underway to identify all potential VxB events, verify them and extend analysis to other Apollo missions. As part of the continued analysis, MA data files from the same Apollo mission have been read and will be analyzed in conjunction with the TID data. An analysis involving TID, MA, OMNI data, and other supporting resources will provide researchers with a better understanding of the exosphere on the moon for future missions and simulations.