

Development of the plasma mass spectrometer on board of Selene

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One of the most important physical process around the moon is the desorption of neutral particles and ions. This desorption is thought to be the result of the interaction between the solar wind, solar photon and the lunar surface. Some of the desorbed neutral particles are ionized by solar UV, and picked up by the solar wind. In order to understand this process, the measurement of the three dimensional distribution of the moon originated ions with high mass resolution is necessary. Our newly developed mass spectrometer is designed to have the capability of observing these ions by measuring its time-of-flight in the linear electric field. We will report the result of the numerical calculation of the particle transmission characteristics of the analyzer.

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