

Formation of lunar craters: analyses with remote sensing data

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Lunar Imager/Spectrometer (LISM), which onboard SELENE (SELenological and Engineering) Explorer, will provide high-resolution and multi-spectral mapping data of the Moon. The main purpose of this study is to reveal many aspects of impact cratering processes with the data from LISM. To reconstruct three sub-stages of impact cratering, we will focus on several features related to a crater. Distributions of impact melt and secondary craters will give clues to understand elemental processes at the contact stage and the excavation stage, such as impact melting, excavation flow, and spalling. Identification of geological units at a central peak, crater walls, and cliffs of multi rings will give information to reconstruct the pre-impact geological subsurface structure and motion of these units during the modification stage.