HUMAN EXPLORATION OF THE SOLAR SYSTEM SYMPOSIUM (A5)
Human Exploration of the Moon and Cislunar Space (1)

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LUNAR SKYLIGHT 3D MODELING

Abstract

When human go to the Moon for constructing the base, suitable place is the cave. Three cave entrance of maximum 100m diameter found by SELENE(SELenelogical ENgineering Exploration) in 2007 and LRO(Lunar Reconnaissance Orbiter) in 2009 is called skylight. Although skylight morphology depends on optical image, we are possible to survey a skylight easily if we have a data of skylight structure. So we make a 3D model of skylight in this study. The object is a skylight of Mare Tranquillitatis(8.33N, 33.22E) that is the largest of three skylight. It has 100m diameter and 100m depth. We calculate parameter to need a modeling for using the optical image data at different time. Because optical image data does not know the form of sublunar region in skylight interior, we make a model to a assume that skylight's interior has a cave and make a miniature using 3D printer. A miniature through modeling can be understood to people for skylight structure and will be used to promote lunar exploration and basic data of Korean lunar exploration mission in 2017 and 2020.