

Joint-like fractures on the floor of a lunar crater Jackson

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Complex systems of fractures are found on the floors of large lunar craters. We investigate the fissure system of Jackson crater with high-resolution images of LISM/SELENE (Kaguya). Morphological analyses suggest that the fractures are cooling joints formed on the thick melt sheet in the crater cavity. The fractures are often found in the peripheral zone of the crater floor. We report the result of extensive investigation on size, fine structure, spectral characteristics, spacial distribution, and orientation of these joint-like fractures. The main implication of this study is conditions and a timescale of solidification of the massive melt sheet in the crater cavity.

Keywords: moon, crater, melt sheet, joint-like fractures, Jackson