

Statistic fluctuation of crater frequencies and the error of the cratering chronology

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Crater size-frequency distributions of various features on terrestrial planets and satellites have been used for determination of its formation ages. However, the crater frequency is complicated by an admixture of secondary craters [e.g., Namiki and Honda, *Earth Planets Space*, 55, 39-51, 2003], horizontal heterogeneity of surface structure [e.g., Schultz et al., *Proc. Lunar Sci. Conf. 8th*, 3539-3564, 1977], the spatial variation in crater production rate [e.g., Morota et al., *Icarus*, 173, 322-324, 2005], and a statistic fluctuation. In this study, we attempt to assess the error in the cratering chronology due to the statistic fluctuation of the crater frequency by a simple numerical simulation.