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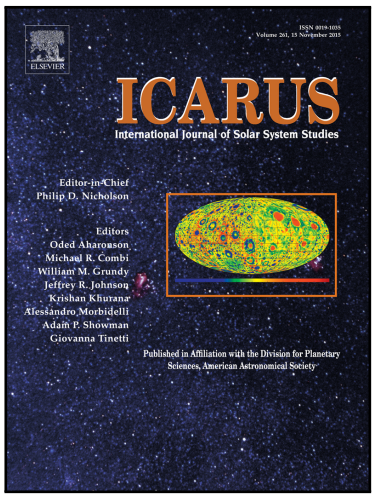

Planetary surface dating from crater size-frequency distribution measurements: Poisson timing analysis

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Highlights

- Exact evaluation of crater chronology models using Poisson statistics and Bayesian inference, yielding a likelihood function with an intrinsic uncertainty
- Poisson timing analysis technique supersedes binning/fitting approaches to crater-count dating
- Technique permits order-of-magnitude estimate of age for surface units showing no craters at all
- New notation makes chronology model calibration errors inseparable from stated crater model ages

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