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The Computation of Earth Impact Probabilities

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The computation of Earth impact probability ies is an important consideration for the population of near-Earth objects (comets and asteroids) whose orbits allow them to closely approach the Earth. During the routine orbit updates for these near-Earth objects, the resulting covariance matrices can be mapped to future times of close approach to note whether or notthe Earth impact probability is non-zero. Upon finding anon-zero impact probability, Monte Carlo analyses can be conducted to verify the covariance analyses.

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