

Least-action Principle Applied to the Kepler Problem

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The least-action principle is examined for the two-body Kepler problem. This examination allows one to couple the eccentricity parameter of the Kepler orbit with the size of the major semiaxis of that orbit. The obtained formula is applied to an estimate of eccentricities characteristic for a set of the planetary and satellitary tracks.

Key words: Eccentricity of the Kepler Orbits; Least-action Principle.