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**Mutual perturbations of 1:1 commensurable small bodies with the use of the canonical relative coordinates. I.** (English) [Zbl 0599.70004](#)

Resonances in the motion of planets, satellites and asteroids, Math. Dyn. Astron. Ser. 3, 53-66 (1985).

[For the entire collection see [Zbl 0591.00019](#).]

Mutually perturbing motion of two small bodies with 1:1 commensurability of their mean motions is considered.

It is assumed that neither of the masses of small bodies vanishes. In this case a principal part of Hamiltonian differs of that of the restricted three-body problem. Taking the principal part of the Hamiltonian into account an intermediate orbit is found. It is shown that the intermediary is the same as that of the restricted problem except for mass dependence.

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**MSC:**

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[70K20](#) Stability for nonlinear problems in mechanics  
[70F07](#) Three-body problems

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