

RESONANCE PROBLEM ON THE PERTURBED MOTION, OF TWO BODIES
UNDER MUTUAL GRAVITATIONAL ATRACTION

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ABSTRACT

The theoretical grounds for the existence of resonances, in the perturbed two bodies problems, is shortly reviewed. Three available methods to evaluate the near-commensurability of two of the natural frequencies of motion are considered: harmonic analysis, anharmonic analysis and correlation analysis. The emphasis is put on the aspect of case of numerical processing. A brief discussion on the use of each method is presented to complement the matter. The material is applicable to any body (planet, comet etc.) of the solar system in a perturbed Keplerian motion.