

**NON-INTEGRABILITY OF THE PLANAR ELLIPTIC
RESTRICTED THREE BODY PROBLEM**

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ABSTRACT. The planar restricted elliptic three body problem is considered. It is proved that for non-zero values of the eccentricity and the mass ratio the system is not integrable. The proof is based on the analysis of the variational equations for the triangular libration point. The same statement is also proved for the parameters generalization of the system, namely for the planar restricted elliptic photo-gravitational three body problem.