

Author: V. SIDORENKO

Keldysh Institute of Applied Mathematics RAS (Russia)

Title: *“Dynamics of “jumping” Trojans: a perturbative treatment”*

Abstract. The term “jumping” Trojan was introduced by Tsiganis et al. (2000) in their studies of long-term dynamics exhibited by the asteroid (1868) Thersites: as it turned out, this asteroid may pass from the librations around L4 to the librations around L5. One more example of a “jumping” Trojan was found by Connors et al. (2011): librations of the asteroid 2010 TK7 around Earth’s libration point L4 preceded by its librations around L5. We explore the dynamics of “jumping” Trojans under the scope of the restricted planar elliptical three-body problem. Via double numerical averaging, we construct evolutionary equations which allow to analyze the details of the transition from one regime of the orbital motion to another.