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Title: *“Inclined Asymmetric librations in planetary dynamics”*

Abstract. Librating motion between two celestial bodies is generally associated with the existence of resonances and it is signified by the oscillation of the resonant angles. When such an oscillation takes place around a value different than 0 or π the libration is called asymmetric. The first asymmetric librations were found by Message (1958) in the planar circular restricted three body problem and for the 1 : 2 exterior resonance. The centers of such librations in phase space consist of linearly stable asymmetric periodic orbits which form a whole family. Markellos (1978) showed that orbits of the above family which are vertically unstable generate families of spatial asymmetric periodic orbits. Beaugé (1994) showed the existence of planar asymmetric librations in all exterior resonances of the form 1 : p . In this work, we study the resonances 1 : p in the spatial restricted three body problem searching for families of linearly stable asymmetric periodic orbits from low up to high inclinations. Our study is applied to the orbital dynamics of trans-Neptunian objects and Centaurs.