

Asteroids located in the 2:1 mean-motion resonance with Jupiter are classified as stable (called Zhongguos), marginally stable (called Griquas) and unstable (called Zulus) according to their dynamical lifetime. The stable asteroids reside in two separate stable islands in the pseudo-proper element space. In this thesis, we update the resonant population on the basis of up-to-date observational data and we determine orbital and physical properties of the resonant population. Using collisional models, we demonstrate that the observed Zhongguos and Griquas might be up to 4 Gyr old, thus their origin might be related to the planetary migration. Performing dynamical N-body simulations, we test two hypotheses of the origin of the long-lived population: the primordial population scenario, and the asteroidal capture scenario. Our results imply that the resonant population is not primordial but it was rather formed by the asteroids captured from an asteroidal family located in outer main belt.