The Curious Dynamics of Small-Bodies During the Very Early Evolution of the Solar System

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There are many distinct populations of small bodies in our solar system. Several of these are dynamically linked with the planets through resonances. Examples of such resonant populations include Trojan-type companions trapped in 1:1 mean-motion resonance with Mars, Jupiter, and Neptune. In many cases these resonant bodies are trapped on orbits that are stable over the 4.5 Gyr age of the solar system. By studying the dynamics of these bodies under conditions that are thought to have existed in the very early solar system we may be able to help constrain theories of the formation and early evolution of the planets.

In this talk I will present a few examples of the curious dynamical behaviour of these resonant bodies when subject to planetary migration and gas drag from the early solar nebula.