

The three million body problem

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In recent years, J. Llibre and others from the celestial mechanics community have been using the tools we have developed to examine serious astrodynamics concerns. In this talk, a different, important challenge for our community will be described: it involves the about 1100 satellites that need to be protected from collisions with around three million pieces of space debris. This difficult, complex concern was the topic of a September 2012 US National Research Council report; aspects of this report will be described.