

NEO hazards : NEOShield and PoDET perspectives

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Abstract

The Chelyabinsk event in 2013 has shown that asteroids – even of moderate size – must be considered as natural disasters that do present a non negligible risk to people and property. At an international level, several actions have been undertaken for developing awareness and warning strategies. The PoDET hub at IMCCE, for instance, encompasses research activities for orbit propagation and ephemerides of space debris, meteorite streams, and NEOs (asteroids, comets, meteoroids). For objects with diameters larger than approximately 100m the potential damage caused by an impact may warrant additional emergency measures, such as the implementation of a mitigation plan. Investigating such a scenario is the aim of the NEOShield FP7 project. In this contribution we present NEO related aspects of the PoDET and NEOShield programs. More specifically, we will discuss issues related to the target selection for an asteroid deflection demonstration mission as well as the post-mitigation orbit propagation for estimating possible changes in the impact risk of such target asteroids.

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