

# **Introduction to NEO Impact's Detection and Mitigation Techniques. Challenges and State of the Art.**

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We propose to make an introduction of Near Earth Object (NEO) problems. Current international activities range from the object's observation, to the detection of impact, and mitigation techniques.

The observation of an NEO plays a key role, although observations are scarce. The modelisation plays then an important role in the prediction of the asteroid trajectory, and the impact detection. We shows that currently modelisation is difficult because of the many unknowns about the object, and thus it is not possible to accurately describe an asteroid trajectory. The detection and prediction of an Earth's impact by a NEO requires robust methods. We will review some of the main methods, and emphasise the main challenges.

We also focus on mitigation techniques, that should allow to deflect Potentially Hazardous Asteroids.