

# **VO study for the improvement of orbits of Near-Earth Objects**

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The Near-Earth objects (NEOs), which will be the targets of future interplanetary exploration, actually require to be better physically and dynamically characterized. In particular, the determination of their orbits is often poorly accurate because of the difficulty to observe them from Earth (faint objects in fast relative motion). One of the goal is the determination of their mass and density. A clue to improve our knowledge of NEOs' orbits is to extract new data from the astronomical archives. The Virtual Observatory is a perfect framework to achieve such a task and to drastically improve the determination of their orbits. The space astrometric mission Gaia which is supposed to make thousands of discoveries of new Solar System objects will get benefit from this process. We will describe our project and explain the work now in progress to achieve the first step: the data mining of surveys.