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- Planetary Defense – Recent Progress & Plans
- NEO Discovery
- NEO Characterization
- Mitigation Techniques & Missions
- Impact Effects that Inform Warning, Mitigation & Costs
- Consequence Management & Education

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**THE NEO SYSTEM OF THE ESA SPACE SITUATIONAL AWARENESS
PROGRAMME**

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ABSTRACT

The NEO System, running at the ESA NEO Coordination Centre (ESRIN, Frascati, Italy), is an evolving environment. The services provided on-line (<http://neo.ssa.esa.int>) are continuously improved in order to support at best the observation of risky objects and to evaluate the associated hazards. The NEO system is organized as a dynamic three-layer structure, a database, the related services and an interface (Web Portal) allowing enquiries to the database and acting as a placeholder for additional services.

It collects information on NEOs and other celestial bodies produced by various European services (e.g. NEODyS, EARN) and makes them available to a variety of users with a particular focus on objects with possible collision solutions with the Earth.

Key functions are the Risk List (a table of all known NEOs with impact solutions), a table of recent and upcoming close approaches, a database of physical properties of NEOs and the so-called Priority List, which allows observers to identify NEOs in most urgent need of observations, and prioritize their observational activities accordingly.

The services and functions provided by the NEO Coordination Centre are designed to ensure complementarity with respect to other NEO systems (e.g. Minor Planet Centre, NASA Near-Earth Object Program) while keeping a high degree of completeness. A general description of the NEO system is given, highlighting recent major updates and future improvements.
