

NEODyS status and future

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What NEODyS is

NEODyS is a website providing information and services for all Near Earth Asteroids.

In it, each NEA has its own dynamically generated set of pages.

The website was started in early October 1999, at the Department of Mathematics, University of Pisa (UniPi), mostly by Milani and Chesley (<http://web.archive.org/web/19991004165609/http://newton.dm.unipi.it/>).

At the same time, the first generation of impact monitoring program, the software robot CLOMON, came online, as part of NEODyS, based on research by Milani, Chesley and Valsecchi (<http://web.archive.org/web/19991005041138/http://newton.dm.unipi.it/neodys/risk.html>).

NEODyS current status

Starting from late 2011 NEODyS is sponsored by ESA, and is currently maintained by SpaceDyS srl, a company of Cascina (Pisa, Italy), promoted by the same research group that has built and operated NEODyS from its beginning.

The current version of the website is NEODyS-2, with important improvements in the way orbits are computed.

The software used for NEODyS-2 is OrbFit version 5.0.5.

The orbit computations of the website are reproducible by using the free distribution of the OrbFit software suite.

NEODyS and NEOCC

Since the inauguration of the NEO Coordination Centre (NEOCC) of ESA in 2013, NEO orbital data and risk pages are copied from NEODyS to the NEOCC web site (<http://neo.ssa.esa.int/>).

The orbit determination function is being migrated to the NEOCC (software delivered, operational phase coming soon).

The impact monitoring software will be migrated in the coming year, with start of the operational phase not before mid-2019.

The future of NEODyS

As a website of the University of Pisa, NEODyS will shut down on 31 October 2018, the date of retirement of Andrea Milani.

We are looking for ways to ensure:

- a smooth transition to the phase in which impact monitoring will be reliably performed at the NEOCC, particularly for the timespan November 2018 → mid-2019;
- the fruitful exploitation of the orbital and impact monitoring know-how developed in Pisa (UniPi) and Rome (INAF-IAPS) over the last two decades.