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- Key International and Political Developments**
- Advancements and Progress in NEO Discovery**
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The near-Earth object segment of ESA's Space Situational Awareness programme - achievements and outlook for Period 3

Detlef Koschny^(1,2), Gerhard Drolshagen^(1,3), Gian-Piero di Girolamo⁽⁴⁾, Gunther Sessler⁽⁴⁾, Ettore Perozzi^(1,5,6), Laura Faggioli^(1,7), Marta Ceccaroni^(1,7), Marco Micheli^(1,8)

⁽¹⁾ *ESA SSA-NEO Coordination Centre, Via Galileo Galilei, 00044 Frascati (RM), Italy,*

⁽²⁾ *ESA/ESTEC, Keplerlaan 1, 2201 AZ Noordwijk, The Netherlands,
Detlef.Koschny@esa.int*

⁽³⁾ *Space Environment Studies, University of Oldenburg, 26111 Oldenburg, Germany*

⁽⁴⁾ *ESA/ESOC, Robert-Bosch-Strasse 5, 64293 Darmstadt, Germany*

⁽⁵⁾ *Deimos Space Romania, Strada Buzești 75-77, București 011013, Romania*

⁽⁶⁾ *INAF IAPS, Via del Fosso del Cavaliere, 100, 00133 Roma (RM), Italy*

⁽⁷⁾ *SpaceDyS s.r.l., Via Mario Giuntini, 63, 56023 Navacchio di Cascina (PI), Italy*

⁽⁸⁾ *INAF OAR, Via Frascati, 33, 00040 Monte Porzio Catone (RM), Italy*

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ABSTRACT

The European Space Agency (ESA) has been building up an activity called the near-Earth object (NEO) segment as part of its Space Situational Awareness programme

(SSA-NEO) since 2008. Major progress in establishing the initially envisaged services have been achieved:

- A technical web portal has been established at <http://neo.ssa.esa.int>. This portal federates existing European assets to perform orbit computations and impact warnings (NEODyS, Pisa), a physical properties database (DLR, Berlin), a priority list for observations (INAF, Rome). Additional tools have been developed and are available, e.g. an orbit visualisation tool, an overview of NEO statistics, and others.
- A NEO Coordination Centre has been established at ESA's site ESRIN in Frascati near Rome, Italy.
- We have established excellent connections to different European and international observatories. We coordinate and support observations with (to name only a few) the Klet observatory in Czech Republic, the Calar Alto Observatory in Spain, telescopes in Brasil, South Korea, the Large Binocular Telescope in Arizona and the European Southern Observatory's Very Large Telescope.
- ESA is commissioning additional small telescopes for both NEO and space debris observations. Furthermore, we have started building an NEO survey telescope, called fly-eye telescope, with an 1-m effective aperture and $6.7 \times 6.7 \text{ deg}^2$ field of view. The site selection for this telescope is ongoing.
- A procedure on how to disseminate information in the case of a realistic asteroid impact threat has been agreed with the relevant ESA member countries. This interface is in the process of being established.
- ESA is active in the UN-mandated International Asteroid Warning Network and chairing the Space Mission Planning Advisory Group. We are actively supporting to expand further international collaboration.

At the ESA Council Meeting on Ministerial Level in Dec 2016, new funding for the next period of the SSA programme (called Period 3) has been approved. The continuation of the SSA-NEO segment is secure. Work will focus on continuing the observations and starting operations of the first fly-eye telescope; start the development of a second fly-eye telescope, migrating the NEODyS system completely to the NEO Coordination Centre, finalizing the interfaces to the emergency response agencies within Europe, and to expand the international collaboration.

This paper will present a top-level overview of the activities, with details provided in several other presentations.

Comments:

An oral talk would be preferred, suggested for session 1.