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- Key International and Political Developments
- Advancements and Progress in NEO Discovery
- NEO Characterization Results
- Deflection and Disruption Models & Testing
- Mission & Campaign Designs
- Impact Consequences
- Disaster Response
- Decision to Act
- Public Education & Communication

KLENOT PROJECT IN THE FRAMEWORK OF ESA-SSA NEO PROGRAMME

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ABSTRACT

The number of known Near Earth Objects (NEOs) exceeded 15 000 bodies in the end of last year. Majority of discoveries and astrometric data was obtained by the U.S. observatories and institutions. There was only a small progress regarding NEO observations and especially NEO coordination activities by European facilities for many years.

The first complex European project regarding NEOs was established by European Space Agency (ESA) in 2012. The project belongs to the ESA Space System Awareness Program (ESA-SSA). One of three ESA-SSA segments is devoted to NEOs. It contains ESA/ESRIN NEO Coordination Centre, network of observatories and astronomers with telescopes of various sizes dealing with NEO observing campaigns, as well as development of wide-field-of-view telescope and observing satellite in future.

One of ESA-SSA NEO segment cooperating sensors is the KLENOT Project of the Klet Observatory, South Bohemia, Czech Republic. It uses 1.06-m KLENOT Telescope equipped with a 2k x 2k CCD camera for follow-up astrometry of NEOs. The 1.06-m KLENOT telescope is still the largest telescope in continental Europe used exclusively for observations of asteroids and comets. Full observing time is dedicated to the KLENOT team. The KLENOT Project of the Klet Observatory has been undertaking confirmation, early follow-up, long-arc follow-up and recovery of NEOs since 2002. Tens of thousands of astrometric measurements were obtained to inventory of NEOs as well as to understand a distribution of NEO population.

We will present here results obtained in the framework of ESA-SSA NEO Programme by the KLENOT Project of the Klet Observatory since 2014. For example 3757 astrometric measurements of 223 NEOs were sent both to the Minor Planet Center of the IAU and the ESA/ESRIN SSA NEO Coordination Centre only during 2016. HW and SW, technology, workflow of the KLENOT Project and our long-time experience in the field of NEO follow-up will be introduced. Future plans will also be mentioned.

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