

**PDC2023
Vienna, Austria**

Please submit your abstract at <https://atpi.eventsair.com/23a01---8th-planetary-defense-conference/abstractsubmission>

You may visit <https://iaaspace.org/pdc> for more information

*(please select the topic that best fits your abstract from the list below)
(you may also add a general comment - see end of this document)*

**Ongoing and Upcoming Mission Highlights
Key International and Policy Developments
Near-Earth Object (NEO) Discovery
NEO Characterization
Deflection / Disruption Modeling & Testing
Space Mission & Campaign Design
Impact Effects & Consequences
Disaster Management & Impact Response
Public Education and Communication
The Decision to Act: Political, Legal, Social, and Economic Aspects**

NEOROCKS: the 2020-2023 EU programme for planetary defence

**E. Dotto¹, M. Banaszkiwicz², S. Banchi³, M.A. Barucci⁴, F. Bernardi⁵, M. Birlan⁶, B. Carry⁷, A. Cellino⁸, J. De Leon⁹, M. Lazzarin¹⁰, E. Mazzotta Epifani¹, A. Mediavilla¹¹, D. Perna¹, E. Perozzi¹², P. Pravec¹³, C. Snodgrass¹⁴, C. Teodorescu¹⁵
and the NEOROCKS team***

1INAF – Osservatorio Astronomico di Roma, I (elisabetta.dotto@inaf.it)

2NEOSPACE sp. z o.o., PL

3Resolvo s.r.l., I

4LESIA – Observatoire de Paris, F

5Space Dynamics Services s.r.l., I

6MCCE – Observatoire de Paris, F

7Observatoire de la Côte d’Azur, F

8INAF – Osservatorio Astrofisico di Torino, I

9Instituto de Astrofisica de Canarias, S

10Università di Padova, I

11DEIMOS Space, S

12ASI-Agenzia Spaziale Italiana, I

13Astronomický Ústav AV ČR, CZ

14University of Edinburgh, UK

15DEIMOS Space s.r.l., RO

***A full list of authors appears at the end of the abstract**

Keywords: asteroids; NEO; physical characterization

ABSTRACT

“NEOROCKS - The NEO Rapid Observation, Characterization and Key Simulations project” is an EU-funded project, started in January 2020, to address the topic c) “Improvement of our knowledge of the physical characteristics of the NEO population” of the call SU-SPACE-23-SEC-2019 from the Horizon 2020 - Work Programme 2018-2020 Leadership in Enabling and Industrial Technologies – Space.

To address the challenges posed by the NEO investigation for planetary defence, a radically new approach has been carried out, in which the theoretical work on orbital dynamics has driven the scientific/observational activity devoted to physical characterization – two domains usually kept separate.

To this end, the technical and scientific work packages have been integrated into a coherent research and development scheme and the ambitions of our project, addressing the challenges and scopes of the topic have been:

Ambition 1: Networking large aperture telescopes

Ambition 2: Advancing NEO physical properties modelling and simulations

Ambition 3: Improving the orbit determination process

Ambition 4: Addressing the imminent impactors monitoring

Ambition 5: Establishing a NEO physical properties data centre

Ambition 6: Fostering international cooperation for follow-up observations

Ambition 7: Raise the public awareness on NEO and impact hazard

A few months before the conclusion of the project, an overview of the activities carried out and the legacy that NEOROCKS leaves to the Planetary Defence community will be presented and discussed.

*NEOROCKS Team: S. Anghel, A. Bertolucci, F. Calderini, F. Colas, A. Del Vigna, A. Dell’Oro, A. Di Cecco, L. Dimare, I. Di Pietro, P. Fatka, S. Fornasier, E. Frattin, P. Frosini, M. Fulchignoni, R. Gabryszewski, M. Giardino, A. Giunta, T. Hromakina, J. Huntingford, S. Ieva, J.P. Kotlarz, F. La Forgia, J. Licandro, H. Medeiros, F. Merlin, J. Nomen Torres, V. Petropoulou, F. Pina, G. Polenta, M. Popescu, A. Rozek, P. Scheirich, A. Sergeev, A. Sonka, G.B. Valsecchi, P. Wajer, A. Zinzi.

Acknowledgement: This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 870403.