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NEOROCKS: the 2020-2023 EU programme for planetary defence

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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.

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