NEO ROCKS

Near Earth Object Rapid Observation, Characterization and Key Simulations

The NEO Physical Properties database of the NEOROCKS EU project

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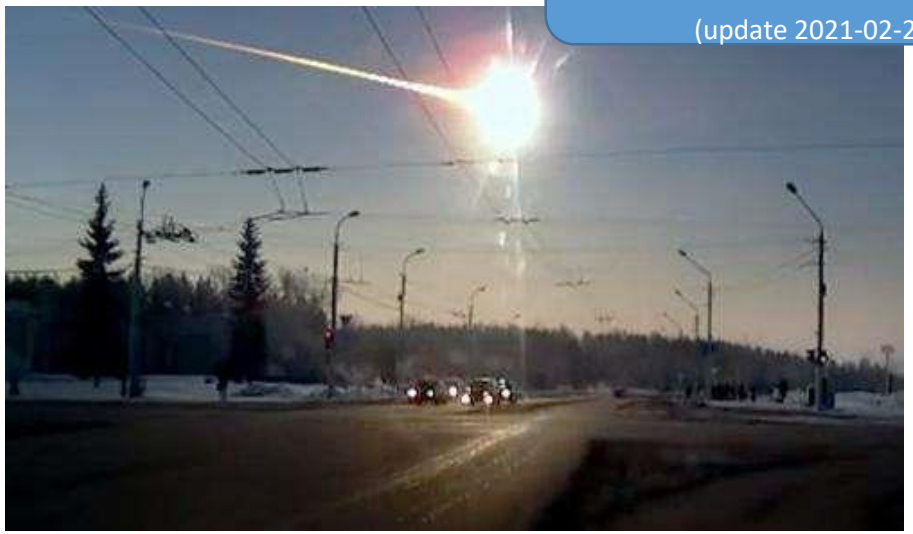
NEO Physical Properties Database

- co-financed by the H2020 programme under the SPACE Topic
- coordinated by INAF started on 01 January 2020 and lasts for 30 months
- brings together 14 partners from 7 countries
- address the challenge of improving our knowledge on physical characterization of NEOs for planetary defense

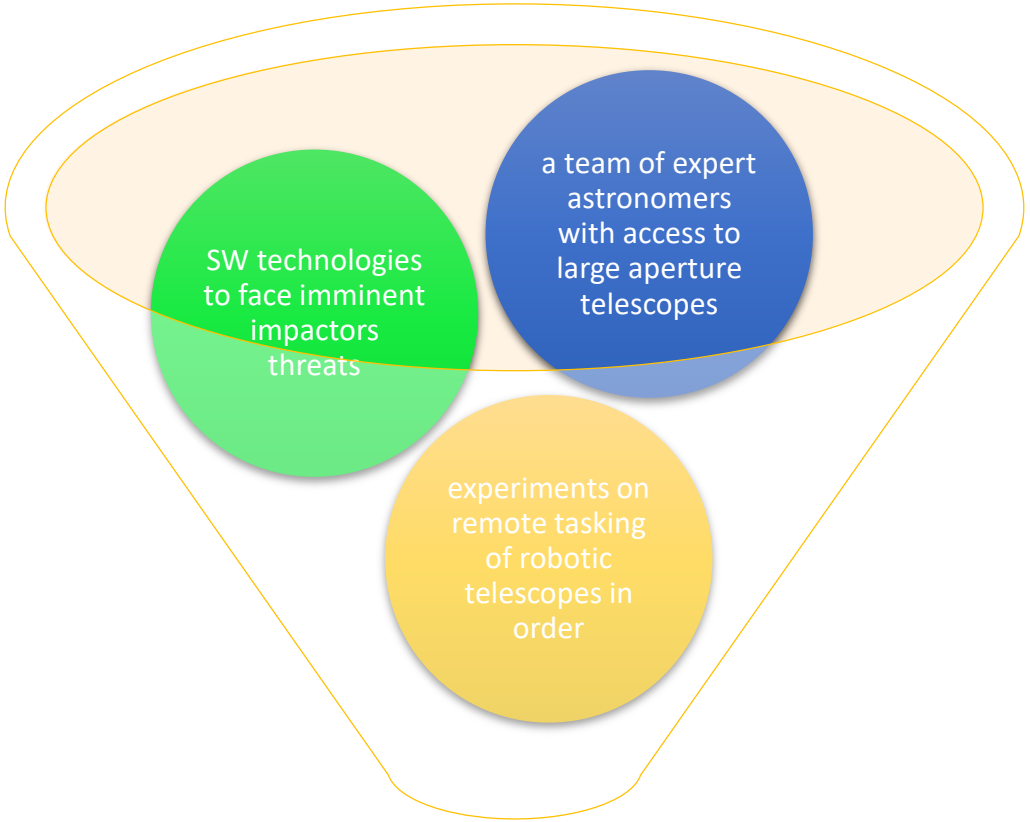
Current number of known NEOs

25153

(update 2021-02-25)



Space Science Data Center



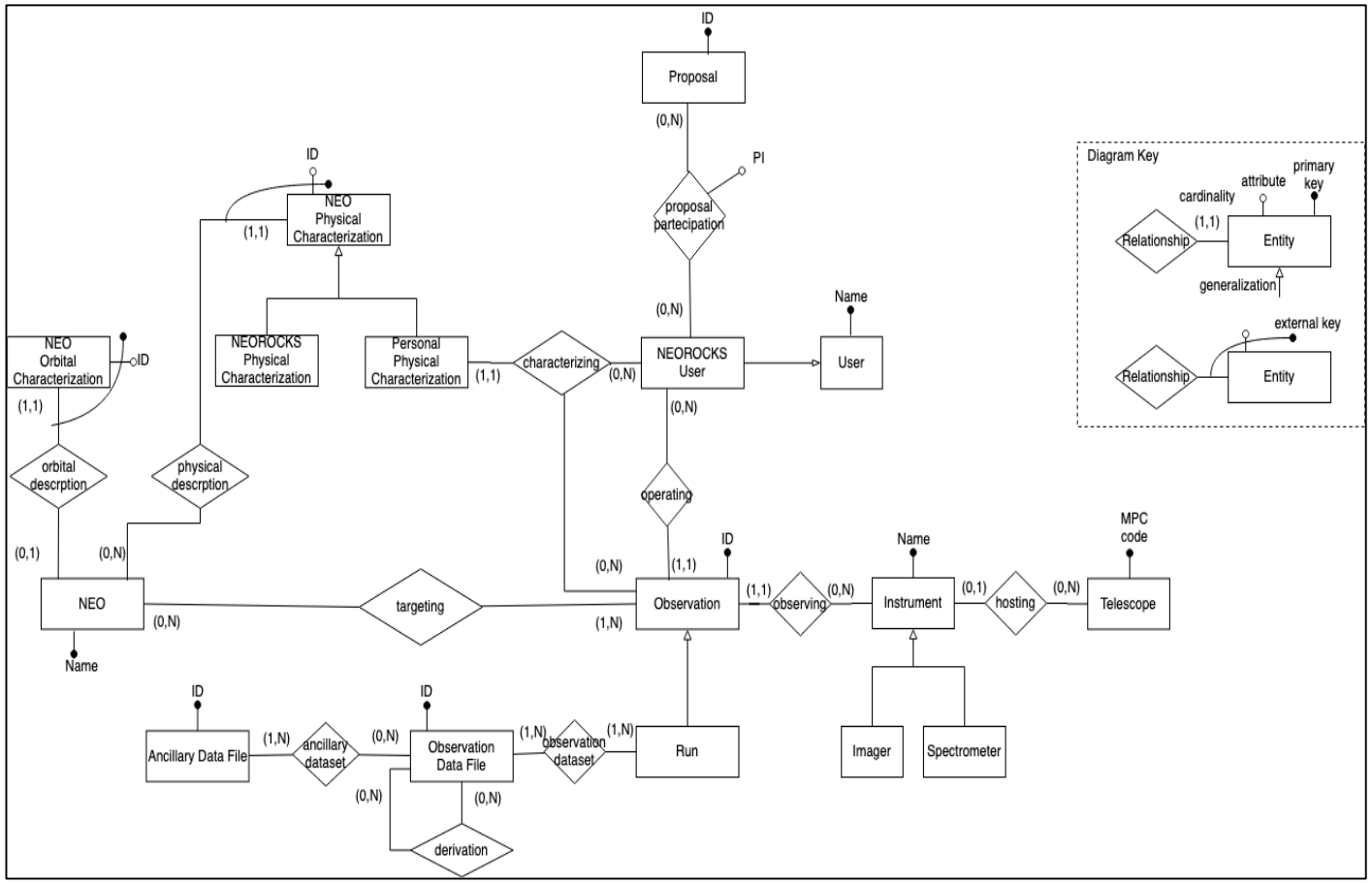
provide a rapid response system and guarantee high standards in data dissemination

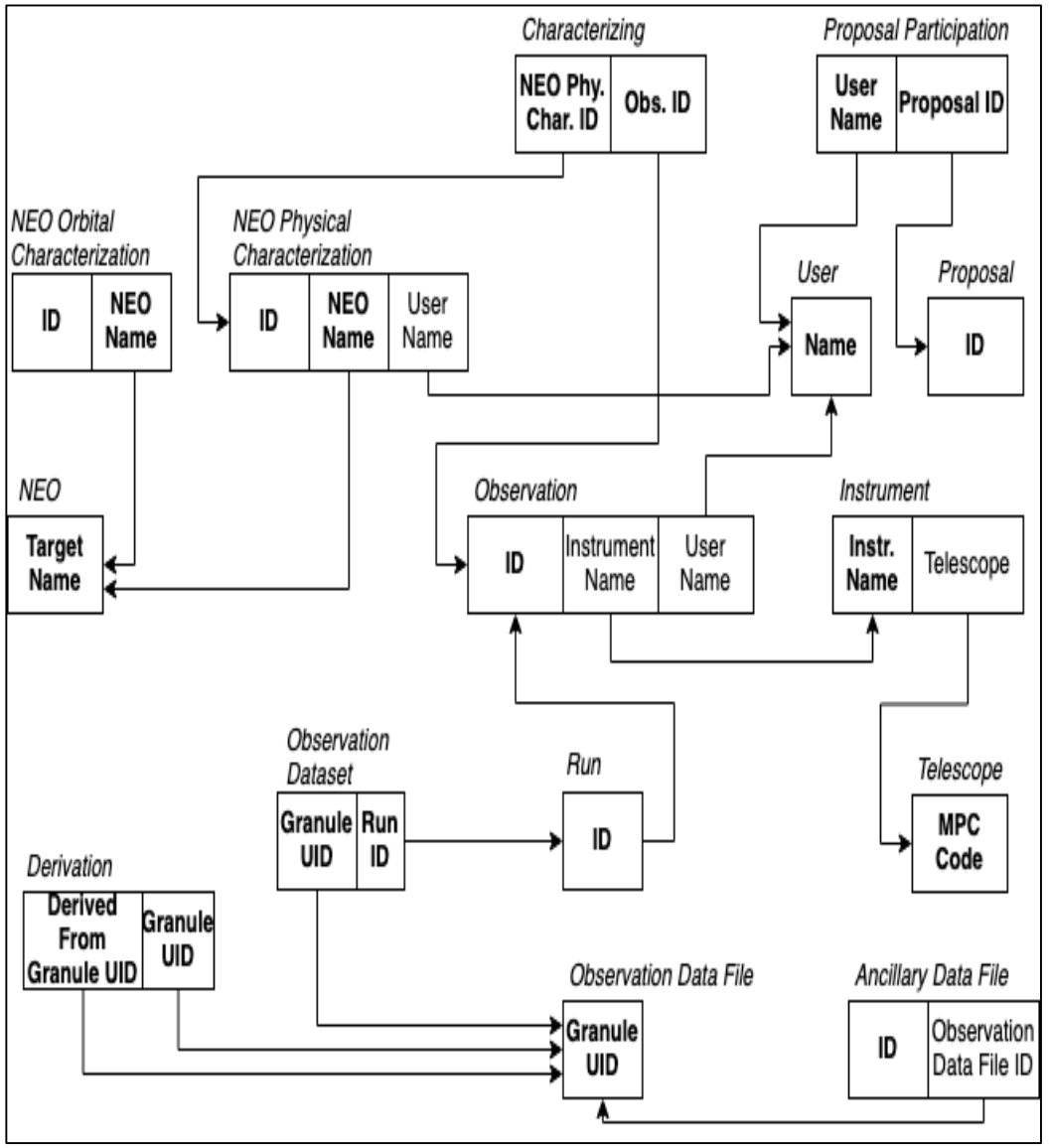
We propose the implementation of a
unique NEO Physical Properties database
hosting all different data products resulting from NEO observations in order to ensure an
efficient data products dissemination,
short/long-term **data storage**
and **data availability**

Data Model

(based on the EPN-TAP standard)

The use of a well-defined and known standard, makes it possible to exploit functionalities of already existing tools

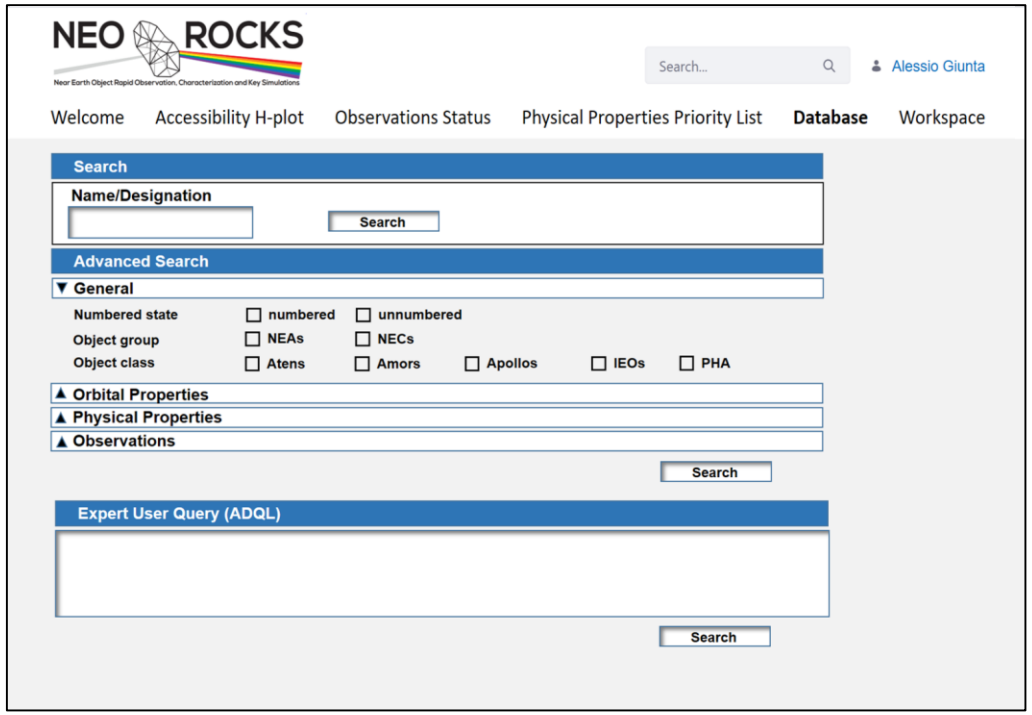




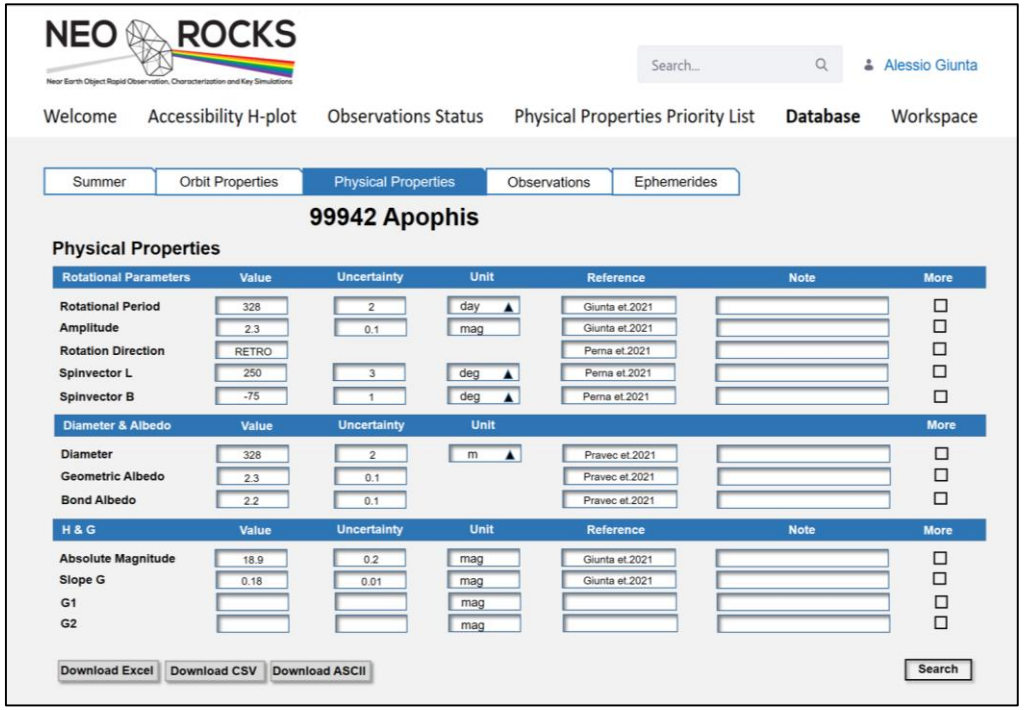
User Interface

(work in progess)

Search and Retrieval



Object Presentation

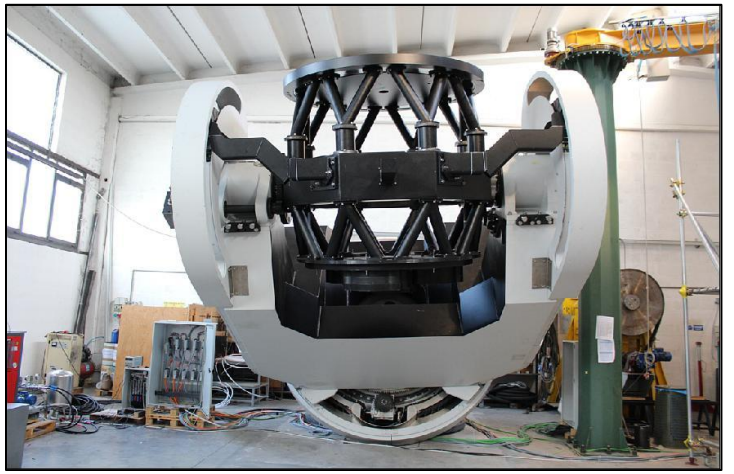


The user interface shall allow the users to customize the query levels (base, advanced, expert), always facilitating data exploitation

https://neorocks.elecnor-deimos.com/web/guest

Data Sources

We are going to use data acquired for and during the project, together with data imported from existing or future archives



- Orbital Parameters
  - EXTERNAL
    - ESA NEO Coordination Centre
- Data for Physical Characterization
  - NEOROCKS
    - Observers
  - EXTERNL
    - Collaborating Observers
    - EARN database
    - Wide Field Telescope archive data mining
    - Gaia Solar System Objects Archive
    - Fly Eye Telescope
    - Worldwide scientific community

Adapting all of these datasets to the IVOA standard the result will be more accessible and interoperable

We are laying the foundation for a future stable NEO physical properties Data Centre at ASI SSDC

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Thank you for the attention

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