



# The NEO Rapid Observation, Characterization and Key Simulations

## Results

### Project Information

#### NEOROCKS

Grant agreement ID: 870403

[Project website](#)

#### DOI

[10.3030/870403](https://doi.org/10.3030/870403)

Project closed

#### EC signature date

22 November 2019

#### Start date

1 January 2020

#### End date

30 June 2023

#### Funded under

INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies – Space

#### Total cost

€ 2 114 725,00

#### EU contribution

€ 2 071 975,00

#### Coordinated by

ISTITUTO NAZIONALE DI  
ASTROFISICA

 Italy

CORDIS provides links to public deliverables and publications of HORIZON projects.

Links to deliverables and publications from FP7 projects, as well as links to some specific result types such as dataset and software, are dynamically retrieved from [OpenAIRE](#) .

## Deliverables

[Technical Report on data management](#)

Document detailing management of data

[Final report on radar observations](#)

Document detailing findings on radar observations and photometric spectroscopic observations done in support of radar observations

[Progress report on NEO observations from space](#)

Document detailing first findings on NEO observations from space and data exploitation

[Final Report on Spectro-photometric Observations carried out and analysis results obtained](#)

Document detailing findings and analysis of results on Spectrophotometric Observations

[Final Report on international cooperation for NEO physical characterization and rapid response systems](#)

Document detailing the cooperation with European and international partners for NEO physical characterization and rapid response systems

[Final Report on observations of active NEOs](#)

Document detailing findings on observations of active NEOs

[Final Report on data mining](#)

Document detailing the relative merits of the surveys considered for data mining together with a comprehensive listing of the extracted astrometry and photometry of NEOs from the surveys selected for mining

[Final report, including taxonomic classification of the NEO objects observed in the framework of the project, and determination of the mean regolith particle sizes based on the observed polarimetric behaviour](#)

Document detailing taxonomic classification of the NEO objects observed in the framework of the project and determination of the mean regolith particle sizes based on the observed polarimetric behaviour

[Intermediate observations and analysis progress report for EC reporting on all observations carried out and analysis results obtained so far by all participating observers](#)

Intermediate document detailing observations carried out and results obtained by all parties involved

[Final Report on physical characterization](#)

Document detailing findings on physical characterization

[Final Report on Rotations, shapes and binaries](#)

Document detailing findings on rotations shapes and binaries

[Final Report on the orbit determination work package](#)

Document detailing findings on the orbit determination work package

[Final Report on Spectroscopic Observations carried out and analysis results obtained](#)

Document detailing findings and analysis of results on Spectroscopic Observations

[Final Report: NEO observations from space and data exploitation.](#)

Document detailing final findings on NEO observations from space and data exploitation

## Websites, patent fillings, videos etc. (4)



[Final Technical Web Portal and Database release](#)

Technical Web Portal for data handling

[NEOROCKS project material](#)

Posters flyers presentation templates newsletters with common layout

[Release of preliminary Technical Web Portal](#)

Preliminary version of the Technical Web Portal for data handling

[Project Web Site](#)

Project website to allow access to information about the project findings implementation and latest news

## Other (2)



[Orbit Determination and ephemerides products delivery](#)

Delivery of orbit determination and ephemerides products

[Imminent Impactors priority list availability, alerts, dissemination and updates](#)

Priority list of the Imminent Impactors delivery Data dissemination products

# Publications

## Other (17)



(326732) 2003 HB\_6

**Author(s):** P. Pravec, K. Hornoch, H. Kucakova, P. Kusnirak, P. Fatka, E. Jehin, M. Ferrais, M. Devogele, T. Kareta, N. Moskovitz

**Published in:** CBET (Central Bureau Electronic Telegrams), Issue 5039, 2021 September 18, 2021

**Publisher:** International Astronomical Union, Central Bureau for Astronomical Telegrams

Simultaneous observations in four optical bands for near-Earth asteroids using TCS/MuSCAT2 instrument

**Author(s):** Popescu, Marcel; de León, Julia; Licandro, Javier; Simion, Gabriel; Morate, David; Vaduvescu, Ovidiu; Rizos-Garcia, Juan Luis; Medeiros, Hissa; Gherase, Radu

**Published in:** 7th IAA Planetary Defense Conference (held virtually), Issue 26-30 April, 2021, 2021

**Publisher:** N/A

(31346) 1998 PB\_1

**Author(s):** P. Pravec, P. Kusnirak, K. Hornoch, P. Fatka, H. Kucakova, C. Snodgrass

**Published in:** CBET (Central Bureau Electronic Telegrams), Issue 4978, 2021 June 16, 2021

**Publisher:** International Astronomical Union, Central Bureau for Astronomical Telegrams

Complementary observations in the optical of NEAs observed with the Arecibo radar

**Author(s):** Julia de León; Javier Licandro; Marcel Popescu; Hissa Medeiros; David Morate; Noemí Pinilla-Alonso; the NEOROCKS Team

**Published in:** "#TeamRadarCon23", Issue 17-19 May, 2023, 2023

**Publisher:** N/A

Spectro-photometric studies of near-Earth asteroids using broad-band filters over the visible wavelengths

**Author(s):** Marcel Popescu; Gabriel N. Simion; Javier Licandro; Julia de León; David Morate; Ovidiu Vaduvescu; Juan Rizos; Hissa Medeiros; Radu M. Gherase

**Published in:** AAS Division of Planetary Science meeting, Issue "#53, id. 306.08. Bulletin of the American Astronomical Society. Vol. 53, No. 7", 2021

**Publisher:** N/A

EPN-TAP parameters for NEOROCKS project

**Author(s):** Ilaria Di Pietro, Marco Giardino, Ettore Perozzi, Angelo Zinzi, Alessio Giunta, Martina Vicinanza, Gianluca Polenta, Elisabetta Dotto and the NEOROCKS team

**Published in:** VESPA Implementation Workshop 2023, Issue 30 May - 2 June 2023, 2023

**Publisher:** N/A

"Spectroscopic and photometric properties of (98943) 2001 CC21, the target of Hayabusa2# space mission"

**Author(s):** Marcel Popescu; Eri Tatsumi; Julia de León; Javier Licandro; David Morate; Gabriel N. Simion; Miguel Rodríguez Alarcón; J. Beniyama; M. Hirabayashi

**Published in:** Japan Geoscience Union Meeting (hybrid), Issue 21-26 May, 2023, 2023

**Publisher:** N/A

"The NEOROCKS ""Rapid Response Experiment"""

**Author(s):** Davide Perna, Ettore Perozzi, Anabel Mediavilla, Fabrizio Bernardi, Elisabetta Dotto, Mirel Birlan, Julia de León, Marcel Popescu, Tetiana Hromakina, Simone Ieva, Monica Lazzarin, Alessandro Nastasi, Vasiliki Petropoulou, Petr Pravec, Claudiu Teodorescu, Marek Banaszkiwicz, Sara Banchi, Maria Antonietta Barucci, Benoit Carry, Alberto Cellino, Elena Mazzotta Epifani, Jaime Nomen Torres, Colin Sno

**Published in:** XVIII Congresso Italiano di Scienze Planetarie, Issue 6-10 February, 2023, 2023

**Publisher:** N/A

Optical counterpart of NEAs observed with radar in the frame of the EU NEOROCKS project

**Author(s):** Julia de León; Javier Licando; Marcel Popescu; Hissa Medeiros; David Morate; Noemí Pinilla-Alonso; the Arecibo Team; the NEOROCKS Team

**Published in:** Asteroids, Comets, Meteors Conference 2023, Issue 18-23 June, 2023, 2023

**Publisher:** N/A

Photometric analysis of NEOs in Arecibo supporting from NEOROCKS Project

**Author(s):** Medeiros, Hissa; de León, Julia; Licandro, Javier; Serra-Ricart, Miquel; Popescu, Marcel; Pinilla-Alonso, Noemí; Devogéle, Maxime

**Published in:** 7th IAA Planetary Defense Conference (held virtually), Issue 26-30 April, 2021, 2021

**Publisher:** N/A

The physical properties of the near-Earth asteroid 2001 SG286

**Author(s):** Radu Gherase; Ovidiu Vaduvescu; Julia de León; Marcel Popescu; Javier Licandro; David Morate; Gabriel Simion

**Published in:** 7th IAA Planetary Defense Conference, Issue 26-30 April, 2021, 2021

**Publisher:** N/A

European perspectives for Apophis observing campaigns

**Author(s):** Julia de León; Javier Licandro; Marcel Popescu; Elisabetta Dotto

**Published in:** Apophis T-7 Years: Knowledge Opportunities for the Science of Planetary Defense, Issue (held virtually) 10-12 May, 2023, 2023

**Publisher:** N/A

(143649) 2003 QQ\_47

**Author(s):** P. Pravec, P. Kusnirak, K. Hornoch, P. Fatka, C. Snodgrass, T. Hinse, J. Tregloan-Reed, M. Devogele, N. Moskovitz

**Published in:** CBET (Central Bureau Electronic Telegrams), Issue 5037, 2021 September 17, 2021

**Publisher:** International Astronomical Union, Central Bureau for Astronomical Telegrams

The NEOROCKS Rapid Response Experiment: lessons learned and future developments

**Author(s):** Elisabetta Dotto, Ettore Perozzi and the NEOROCKS team

**Published in:** EU ESA Workshop on Imminent Impactors Warning Coordination, Issue 12-14 December 2022, 2022

**Publisher:** N/A

"The NEOROCKS ""Rapid Response Experiment"""

**Author(s):** Davide Perna, Ettore Perozzi, Anabel Mediavilla, Fabrizio Bernardi, Elisabetta Dotto, Mirel Birlan, Julia de León, Marcel Popescu, Tetiana Hromakina, Simone Ieva, Monica Lazzarin, Alessandro Nastasi, Vasiliki Petropoulou, Petr Pravec, Claudiu Teodorescu, Marek Banaszekiewicz, Sara Banchi, Maria Antonietta Barucci, Benoit Carry, Alberto Cellino, Elena Mazzotta Epifani, Jaime Nomen Torres, Colin Sno

**Published in:** VIII IAA Planetary Defense Conference, Issue 3-7 April, 2023, 2023

**Publisher:** N/A

A Rapid Response Experiment carried out by the EU NEOROCKS project

**Author(s):** Davide Perna, Ettore Perozzi, Anabel Mediavilla, Fabrizio Bernardi, Elisabetta Dotto, Mirel Birlan, Julia De León, T. Hromakina, S. Ieva, M. Lazzarin, A. Nastasi, V. Petropoulou, Petr Pravec, Claudiu Teodorescu, Marek Banaszekiewicz, Sara Banchi, Maria Antonietta Barucci, Benoit Carry, Alberto Cellino, Elena Mazzotta Epifani, Jaime Nomen Torres, Colin Snodgrass, and the NEOROCKS team

**Published in:** 2nd ESA NEO and debris detection conference, Issue 24-26  
January, 2023, 2023

**Publisher:** N/A

Shape and spin properties of NEAs (2100) Ra-Shalom, (3103) Eger, (12711) Tukmit and (161989) Cacus

**Author(s):** Javier Rodríguez-Rodríguez; Enrique Díez Solano; Francisco J. de Cos Juez; Javier Licandro; Miguel Rodríguez Alarcón

**Published in:** "#TeamRadarCon23", Issue 17-19 May, 2023, 2023

**Publisher:** N/A

## Conference proceedings (38)

NEOROCKS: COMPOSITIONAL PROPERTIES OF NEAR-EARTH OBJECTS FROM SKY SURVEYS

**Author(s):** A. Sergeev, B. Carry and the NEOROCKS team

**Published in:** Planetary Defense Conference, Issue Vienna 3-7 April 2023, 2023

**Publisher:** N/A

Visible spectroscopic survey of Near-Earth Asteroids from the Asiago Observatory within the NEOROCKS project

**Author(s):** Lazzarin, Monica; Frattin, Elisa; La Forgia, Fiorangela; Ochner, Paolo; Siviero, Alessandro

**Published in:** Europlanet Science Congress 2021, Virtual meeting, 2021

**Publisher:** EPSC2021-387

[Physical characterization of near-Earth asteroid \(159402\) 1999 AP10 in support of the Arecibo Planetary Radar Program within the NEOROCKS project !\[\]\(f219cfc00b8db0cd1a81ae1fc9afaf28\_img.jpg\)](#)

**Author(s):** Medeiros, Hissa; de León, Julia; Licandro, Javier; Popescu, Marcel; Pinilla-Alonso, Noemi; and the Arecibo Planetary Radar Team and NEOROCKS Team

**Published in:** Europlanet Science Congress 2021, Virtual meeting, 2021

**Publisher:** EPSC2021-783

**DOI:** 10.5194/epsc2021-783

The EU Project NEOROCKS — NEO Rapid Observation, Characterization, and Key Simulations Project

**Author(s):** Dotto, Elisabetta; Banaszekiewicz, Marek; Banchi, Sara; Barucci, Maria Antonietta; Bernardi, Fabrizio; Birlan, Mirel; Carry, Benoit; Cellino, Alberto; De León, Julia; Lazzarin, Monica; Mazzotta Epifani, Elena; Mediavilla, Anabel; Nomen Torres, Jaime; Perna, Davide; Perozzi, Ettore; Pravec, Petr; Snodgrass, Colin; Teodorescu, Claudiu

**Published in:** Europlanet Science Congress 2021 , Virtual meeting, 2021

**Publisher:** EPSC2021-389

[Physical characterization of asteroid \(4660\) Nereus](#) 

**Author(s):** J. M. Alexandru; M. Popescu; J. de León; D. Beresteanu; D. Morat; O. Vaduvescu; J. Licandro; D. A. Dimitru; G. N. Simion; R. M. Gheras; V. Pinter; E. Tatsumi

**Published in:** 16th Europlanet Science Congress 2022, Issue 18-23 September 2022, id.EPSC2022-984, 2022

**Publisher:** N/A

**DOI:** 10.5194/epsc2022-984

NEOROCKS: An innovative and pragmatic approach to planetary defense

**Author(s):** V. Petropoulou, E. Dotto, M. Banaszekiewicz, S. Banchi, M.A. Barucci, F. Bernardi, M. Birlan, B. Carry, A. Cellino, J. de Leon, M. Lazzarin, E. Mazzotta Epifani, S. Ieva, A. Mediavilla Garay, J. Nomen Torres, D. Perna, E. Perozzi, P. Pravec, C. Snodgrass, C. Teodorescu and the NEOROCKS team

**Published in:** 44th COSPAR Scientific Assembly, Issue 16-24 July, 2022, 2022

**Publisher:** N/A

The NEO Physical Properties Database of the Neorocks EU Project

**Author(s):** Angelo Zinzi, Marco Giardino, Alessio Giunta, Ettore Perozzi, Alessandra Di Cecco, Gianluca Polenta and the NEOROCKS team

**Published in:** 7th IAA Planetary Defense Conference, Issue 26-30 April 2021, 2021

**Publisher:** N/A

The EU H2020 project “NEOROCKS -The NEO Rapid Observation, Characterization and Key Simulations”

**Author(s):** V. Petropoulou, E. Dotto, M. Banaszekiewicz, S. Banchi, M.A. Barucci, F. Bernardi, M. Birlan, B. Carry, A. Cellino, J. de Leon, M. Lazzarin, E. Mazzotta Epifani, S. Ieva, A. Mediavilla Garay, J. Nomen Torres, D. Perna, E. Perozzi, P. Pravec, C. Snodgrass, C. Teodorescu and the NEOROCKS team

**Published in:** XXXIst General Assembly of international Astronomical Union, Issue 2-11 August , 2022, 2022

**Publisher:** N/A

NEO Data Services at SSDC

**Author(s):** Angelo Zinzi, Marco Giardino , Alessio Giunta, Ettore Perozzi, Ilaria Di Pietro, Martina Vicinanza, Gianluca Polenta, Elisabetta Dotto and the NEOROCKS team

**Published in:** IVOA Northern Spring May 2023 Interoperability Meeting, Issue 7-12 May 2023, 2023

**Publisher:** N/A



Physical characterization of 2020 AV2, the first known asteroid orbiting inside Venu's orbit

**Author(s):** Popescu, Marcel; Vaduvescu, Ovidiu; de León, Julia; de la Fuente Marcos, Carlos; de la Fuente Marcos, Raul; Licandro, Javier; Pinter, Victoria; Zamora, Olga

**Published in:** Apophis T-9 Years: Knowledge Opportunities for the Science of Planetary Defense (held virtually), Issue 4-6 November, 2020, 2020

**Publisher:** Apophis T-9 Years: Knowledge Opportunities for the Science of Planetary Defense

A NEO Physical Properties Database @SSDC

**Author(s):** Marco Giardino, Angelo Zinzi , Alessio Giunta, Ettore Perozzi, Gianluca Polenta, Elisabetta Dotto and the NEOROCKS team

**Published in:** The IVOA May 2021 Interoperability Meeting, Issue 25-28 May 2021, 2021

**Publisher:** N/A

Statistical clustering analysis of NEOs using their orbital parameters to find correlations with spectral classes

**Author(s):** Prasanna Deshapriya, Jasinghege Don ; Perna, Davide ; Bott, Nicolas ; Hasselmann, Pedro Henrique ; Giunta, Alessio ; Dotto, Elisabetta ; Perozzi, Ettore ; Ieva, Simone ; Mazzotta Epifani, Elena

**Published in:** Europlanet Science Congress 2021, Virtual meeting, 2021

**Publisher:** EPSC2021-614

NEOROCKS: Investigating the physical nature of the small asteroid population

**Author(s):** V. Petropoulou, D. Perna, S.Ieva, E. Dotto, M. Banaszekiewicz , S. Banchi , M. A. Barucci , F. Bernardi , M. Birlan , B. Carry , A. Cellino , J. De León , M. Lazzarin , E. Mazzotta Epifani , A. Mediavilla Garay , J. Nomen Torres , E. Perozzi , P. Pravec , C. Snodgrass , C. Teodorescu , and the NEOROCKS team

**Published in:** XVIII Congresso Italiano di Scienze Planetarie, Issue 6-10 February, 2023, 2023

**Publisher:** N/A

[New near-infrared spectra of \(594913\) 'Aylo'chaxnim, the first known asteroid orbiting inside Venus orbit](#) 

**Author(s):** Marcel Popescu; Carlos de la Fuente Marcos; Ovidiu Vaduvescu; Raul de la Fuente Marcos; Schelte Bus; Julia de León; Javier Licandro; Eri Tatsumi; Gabriel N. Simion

**Published in:** 16th Europlanet Science Congress 2022, Issue 18-23 September 2022, id.EPSC2022-804, 2022

**Publisher:** N/A

**DOI:** 10.5194/epsc2022-804

**Author(s):** Zinzi, A. ; Giardino, M. ; Giunta, A. ; Perozzi, E. ; Di Cecco, A. ; Polenta, G.; and the NEOROCKS team

**Published in:** 5th Planetary Data Workshop & Planetary Science Informatics & Analytics (Held virtually), Issue June 28-July 2, 2021, 2021

**Publisher:** 5th Planetary Data and PSIDA 2021

The NEOROCKS physical properties database present status and future perspectives

**Author(s):** Angelo Zinzi, Anabel Mediavilla, Elisabetta Dotto, Ettore Perozzi, Marco Giardino, Alessio Giunta, Benjamin Teodorescu, Antonio Flores-Garcia, Davide Perna, Vasiliki Petropoulou, Elena Mazzotta Epifani, Ilaria Di Pietro

**Published in:** 2nd ESA NEO and debris detection conference, Issue 24-26 January, 2023, 2023

**Publisher:** N/A

[Spectral characterization of near-Earth asteroids on cometary orbits](#) 

**Author(s):** Simion, Gabriel; Popescu, Marcel; Licandro, Javier; Vaduvescu, Ovidiu; de León, Julia

**Published in:** Europlanet Science Congress 2020, Virtual Meeting, 2020

**Publisher:** EPSC2020-351

**DOI:** 10.5194/epsc2020-351

The 99942 Apophis observational campaign at the Canary Islands observatories during its 2021 close approach: preliminary results

**Author(s):** Javier Licandro; Julia de León; David Morate; Marcel Popescu; Hissa Medeiros; Miquel Serra Ricart; Alex Oscoz-Abad

**Published in:** 7th IAA Planetary Defense Conference 2021,, Issue Online, id.1 26-30 April, 2021, 2021

**Publisher:** N/A

NEOROCKS: Investigating the physical nature of the small asteroid population

**Author(s):** V. Petropoulou, D. Perna, S. Ieva, E. Dotto, M. Banaszkiewicz, S. Banchi, M. A. Barucci, F. Bernardi, M. Birlan, B. Carry, A. Cellino, J. De León, M. Lazzarin, E. Mazzotta Epifani, A. Mediavilla Garay, J. Nomen Torres, E. Perozzi, P. Pravec, C. Snodgrass, C. Teodorescu, and the NEOROCKS team

**Published in:** VIII IAA Planetary Defense Conference, Issue 3-7 April, 2023, 2023

**Publisher:** N/A

Observations of the DART impact from Kenya and Chile

**Author(s):** Colin Snodgrass; Cyrielle Opitom; Agata Rožek; Samuel L. Jackson; Brian Murphy; Petr Pravec; James E. Robinson; Abbie Donaldson; Léa Ferellec; Daniel Gardener; Woto Huka; Calvince Juma; Willice Obonyo; Vincent Okoth; Rashid Shisia; Acacia Leakey; Paul Baki; Richard Vaughan; Martyn Wells; Susan Murabana; Chu Owen; Peter Kušnirák; Kamil Hornoch; Julia de Leon; Alessandra

Migliorini; Stefano Bagn

**Published in:** 8th Planetary Defence Conference, Issue 3 - 7 April 2023, Vienna, 2023

**Publisher:** N/A

[NEOROCKS Characterization Program of Near-Earth Asteroids Previously Observed with Radar](#)

**Author(s):** de León, Julia; Licandro, Javier; Popescu, Marcel; Medeiros, Hissa; Morate, David; Pinilla-Alonso, N.; Pérez-Toledo, Fabricio

**Published in:** XV Reunión de la Sociedad Española de Astronomía, Issue 2, 2022

**Publisher:** N/A

**DOI:** 10.5281/zenodo.7040470

[Spectral properties of 2020 AV2, the first known asteroid orbiting inside Venus orbit](#)

**Author(s):** Popescu, Marcel; de León, Julia; de la Fuente Marcos, Carlos; Văduvescu, Ovidiu; de la Fuente Marcos, Raúl; Licandro, Javier; Pinter, Viktoria; Tatsumi, Eri; Curelaru, Lucian

**Published in:** Europlanet Science Congress 2020, Virtual Meeting, 2020

**Publisher:** EPSC2020-549

**DOI:** 10.5194/epsc2020-549

[NEOROCKS characterization programme of near-Earth asteroids previously observed with radar](#)

**Author(s):** Hissa Medeiros; Julia de León; Javier Licandro; Marcel Popescu; David Morate; Noemi Pinilla-Alonso

**Published in:** 16th Europlanet Science Congress 2022, Issue 18-23 September 2022, id.EPSC2022-570, 2022

**Publisher:** N/A

**DOI:** 10.5194/epsc2022-570

[NEOROCKS characterization programme of near-Earth asteroids previously observed with radar](#)

**Author(s):** de León, Julia; Licandro, Javier; Popescu, Marcel; Medeiros, Hissa; Morate, David; Pinilla-Alonso, Noemi; Perez-Toledo, Fabricio; Arecibo Planetary Radar Team and the NEOROCKS Team

**Published in:** Europlanet Science Congress 2021, Virtual meeting, 2021

**Publisher:** EPSC2021-221

**DOI:** 10.5194/epsc2021-221

A NEO Physical Properties database within the NEOROCKS EU project

**Author(s):** Alessio Giunta, Marco Giardino, Ettore Perozzi, Gianluca Polenta, Angelo Zinzi and the NEOROCKS\*

**Published in:** Europlanet Science Congress 2020, Issue 21 September - 9 October 2020, 2020

**Publisher:** N/A

NEOROCKS project: results from photometric survey of Near-Earth objects

**Author(s):** Hromakina, Tetiana; Birlan, Mirel; Barucci, Maria Antonietta; Fulchignoni, Marcello; Colas, François; Fornasier, Sonia; Merlin, Frédéric; Sonka, Adrian; Petrescu, Elisabeta; Perna, Davide; Dotto, Elisabetta

**Published in:** Europlanet Science Congress 2021, Virtual meeting, 2021

**Publisher:** EPSC2021-114

[Simultaneous observations in four optical bands of near-Earth asteroids using TCS/MuSCAT2 instrument](#)

**Author(s):** Popescu, Marcel; de León, Julia; Licandro, Javier; Simion, Gabriel Nicolae; Morate, David; Văduvescu, Ovidiu; Rizos, Juan Luis; Medeiros, Hissa; and Gherase, Radu Mihai

**Published in:** Europlanet Science Congress 2021, Virtual meeting, 2021

**Publisher:** EPSC2021-820

**DOI:** 10.5194/epsc2021-820

Physical properties of 5 near-Earth asteroids observed with the Arecibo Planetary Radar within NEOROCKS project.

**Author(s):** Medeiros, Hissa ; de Leon, Julia ; Licandro, Javier ; Popescu, Marcel ; Pinilla-Alonso, Noemí ; Arecibo Planetary Team ; Neorocks Team

**Published in:** "AAS Division of Planetary Science meeting #53, id. 303.01. Bulletin of the American Astronomical Society.", Issue Vol. 53, No. 7, 2021

**Publisher:** BAAS

The NEO Physical Properties Database of the Neorocks EU Project

**Author(s):** Angelo Zinzi, Marco Giardino, Alessio Giunta, Ettore Perozzi, Alessandra Di Cecco, Gianluca Polenta and the NEOROCKS team,

**Published in:** 5th Planetary Data and PSIDA 2021 (LPI Contrib. No. 2549), Issue 28 June-2 July 2021, 2021

**Publisher:** N/A

[The physical properties of the near-Earth asteroid 2001 SG286](#)

**Author(s):** Radu Gherase; Ovidiu Vaduvescu; Thomas Wilson; Marcel Popescu; Julia de León; Vania Lorenzi; Javier Licandro; David Morate; Amadeo Aznar; Gabriel Simion

**Published in:** 16th Europlanet Science Congress 2022, Issue 18-23 September 2022, id.EPSC2022-1056, 2022

**Publisher:** N/A

**DOI:** 10.5194/epsc2022-1056

A Rapid Response Experiment carried out by the EU NEOROCKS project

**Author(s):** Ettore Perozzi, Davide Perna, Anabel Mediavilla, Fabrizio Bernardi, Elisabetta Dotto, Jaime Nomen Torres, Mirel Birlan, Julia De León, T. Hromakina, M. Lazzarin, A. Nastasi, V. Petropoulou, Petr Pravec, Beniamin Teodorescu,

Marek Banaszekiewicz, Sara Banchi, Maria Antonietta Barucci, Benoit Carry, Alberto Cellino, Elena Mazzotta Epifani, Colin Snodgrass, and the NEOROCKS team

**Published in:** 2nd ESA NEO and debris detection conference, Issue 24-26 January, 2023, 2023

**Publisher:** N/A

NEOROCKS: Investigating the physical nature of the small asteroid population

**Author(s):** V. Petropoulou, D. Perna, S. Ieva, E. Dotto, M. Banaszekiewicz, S. Banchi, M. A. Barucci, F. Bernardi, M. Birlan, B. Carry, A. Cellino, J. De León, M. Lazzarin, E. Mazzotta Epifani, A. Mediavilla Garay, J. Nomen Torres, E. Perozzi, P. Pravec, C. Snodgrass, C. Teodorescu, and the NEOROCKS team

**Published in:** Asteroids, Comets, Meteors Conference 2023, Issue 18-23 June, 2023, 2023

**Publisher:** N/A

NEOROCKS: COLOR AND COMPOSITIONAL CHARACTERISTICS OF NEAR-EARTH OBJECTS DERIVED FROM DIGITAL SKY OBSERVATIONS

**Author(s):** A. Sergeev, B. Carry and the NEOROCKS team

**Published in:** Asteroids, Comets, Meteors, Issue June 18-23, Flagstaff, 2023

**Publisher:** N/A

[Mineralogical analysis of 14 PHAs from ViNOS data](#)

**Author(s):** David Morate; Marcel Popescu; Julia de León; Javier Licandro

**Published in:** 16th Europlanet Science Congress 2022, Issue 18-23 September 2022, id.EPSC2022-722, 2022

**Publisher:** N/A

**DOI:** 10.5194/epsc2022-722

Application of NoiseChisel to detecting faint small-body activity with the LSST

**Author(s):** Agata Rożek

**Published in:** UK National Astronomy Meeting, Issue 11 - 15 July 2022, Warwick, 2022

**Publisher:** N/A

The 2021 Apophis Close Approach Observational Campaign at the Canary Islands Observatories

**Author(s):** Javier Licandro; Julia de León; David Morate; Marcel Popescu; Hissa Medeiros; Miquel Serra-Ricart; Miguel Rodríguez Alarcón; Eri Tatsumi

**Published in:** Apophis T-7 Years: Knowledge Opportunities for the Science of Planetary Defense, Issue (held virtually) 11-12 May, 2022, 2022

**Publisher:** N/A

Spectroscopic Investigation of the Large Potentially Hazardous Asteroid (52768) 1998OR2 within NEOROCKS EU Project

**Author(s):** Lazzarin, M. ; La Forgia, F. ; Siviero, A. ; Frattin, E. ; Ochner, P. ; Pravec, P. ; Devogele, M. ; Fatka, P.

**Published in:** 2021

**Publisher:** USRA

A NEO Physical Properties database within the NEOROCKS EU project

**Author(s):** Giunta, Alessio; Giardino, Marco; Perozzi, Ettore; Polenta, Gianluca; Zinzi, Angelo

**Published in:** Europlanet Science Congress 2020, Virtual Meeting, 2020

**Publisher:** EPSC2020-1047

## Peer reviewed articles (14)

[Observations of two super fast rotator NEAs: 2021 NY<sub>1</sub> and 2022 AB !\[\]\(e1d6102fe77919492c04879c8450f1f5\_img.jpg\)](#)

**Author(s):** Javier Licandro; Marcel Popescu; Eri Tatsumi; Miguel R Alarcon; Miquel Serra-Ricart; Hissa Medeiros; David Morate; Fernando Tinaut-Ruano; Julia de León

**Published in:** Monthly Notices of the Royal Astronomical Society, Issue Vol. 521, Issue 3, 2023, ISSN 0035-8711

**Publisher:** Blackwell Publishing Inc.

**DOI:** 10.1093/mnras/stad708

[Physical characterization of 2020 AV<sub>2</sub>, the first known asteroid orbiting inside Venus orbit !\[\]\(104fbf564e2e5a8fbd84f31656d114c7\_img.jpg\)](#)

**Author(s):** M Popescu, J de León, C de la Fuente Marcos, O Vaduvescu, R de la Fuente Marcos, J Licandro, V Pinter, E Tatsumi, O Zamora, C Fariña, L Curelaru

**Published in:** Monthly Notices of the Royal Astronomical Society, Issue Volume 496, Issue 3, 2020, Page(s) 3572–3581, ISSN 0035-8711

**Publisher:** Blackwell Publishing Inc.

**DOI:** 10.1093/mnras/staa1728

[Apophis Planetary Defense Campaign !\[\]\(097cdd6c9c875b64d9b8c9a2409491c4\_img.jpg\)](#)

**Author(s):** Reddy, Vishnu; Kelley, Michael S.; Dotson, Jessie; Farnocchia, Davide; Erasmus, Nicolas ; Polishook, David ; Masiero, Joseph ; Benner, Lance A. M. ; Bauer, James ; Alarcon, Miguel R. ; Balam, David ; Bamberger, Daniel ; Bell, David ; Barnardi, Fabrizio ; Bressi, Terry H. ; Brozovic, Marina ; Brucker, Melissa J. ; Buzzi, Luca ; Cano, Juan ; Cantillo, David ; Cennamo, Ramona ; Chastel, Serge ; Ching

**Published in:** The Planetary Science Journal Vol. 3, Issue 5 2022, 2022, ISSN 2632-3338

**Publisher:** IOP Publishing on behalf of the American Astronomical Society

**DOI:** 10.3847/psj/ac66eb

[Spectral properties of near-Earth objects with low-Jovian Tisserand invariant](#) 

**Author(s):** N G Simion, M Popescu, J Licandro, O Vaduvescu, J de León, R M Gherase

**Published in:** Monthly Notices of the Royal Astronomical Society, Issue Volume 508, Issue 1, 2021, Page(s) 1128–1147, ISSN 0035-8711

**Publisher:** Blackwell Publishing Inc.

**DOI:** 10.1093/mnras/stab2561


[Extended photometric survey of near-Earth objects](#) 

**Author(s):** S. Ieva, E. Dotto, E. Mazzotta Epifani, D. Perna, C. Fanasca, M. Lazzarin, I. Bertini, V. Petropoulou, A. Rossi, M. Micheli and E. Perozzi

**Published in:** Astronomy and Astrophysics, Issue Volume 644, 2020, ISSN 0004-6361

**Publisher:** Springer Verlag

**DOI:** 10.1051/0004-6361/202038968

[Physical properties of near-Earth asteroid \(2102\) Tantalus from multi-wavelength observations](#) 

**Author(s):** Agata Rożek; Stephen C Lowry; Benjamin Rozitis; Lord R Dover; Patrick A Taylor; Anne Virkki; Simon F Green; Colin Snodgrass; Alan Fitzsimmons; Justyn Campbell-White; Sedighe Sajadian; Valerio Bozza; Martin J Burgdorf; Martin Dominik; R Figuera Jaimes; Tobias C Hinse; Markus Hundertmark; Uffe G Jørgensen; Penélope Longa-Peña; Markus Rabus; Sohrab Rahvar; Jesper Skottfelt; John Southworth

**Published in:** Monthly Notices of the Royal Astronomical Society,, Issue Volume 515, Issue 3, September 2022,, 2022, Page(s) Pages 4551–4564, ISSN 0035-8711

**Publisher:** Blackwell Publishing Inc.

**DOI:** 10.1093/mnras/stac1835

[Photometric survey of 55 near-earth asteroids](#) 

**Author(s):** Hromakina, T. ; Birlan, M. ; Barucci, M. A. ; Fulchignoni, M. ; Colas, F. ; Fornasier, S. ; Merlin, F. ; Sonka, A. ; Petrescu, E. ; Perna, D. ; Dotto, E. ; Neorocks Team

**Published in:** Astronomy & Astrophysics, Issue Volume 656, 2021, ISSN 0004-6361

**Publisher:** Springer Verlag

**DOI:** 10.1051/0004-6361/202141600

[NEOROCKS project: surface properties of small near-Earth asteroids](#) 

**Author(s):** Hromakina, T.; Birlan, M.; Barucci, M. A.; Fulchignoni, M.; Colas, F.; Fornasier, S.; Merlin, F.; Sonka, A.; Anghel, S.; Poggiali, G.; Belskaya, I.; Perna, D.; Dotto, E.; team, the NEOROCKS

**Published in:** Monthly Notices of the Royal Astronomical Society,, Issue Volume 520, Issue 2, April 2023, Pages 3143–3150, 2023, ISSN 0035-8711

**Publisher:** Blackwell Publishing Inc.

**DOI:** 10.48550/arxiv.2302.01165

[Mineralogical analysis of 14 PHAs from VINOS data](#)

**Author(s):** David Morate; Marcel Popescu; Javier Licandro; Fernando Tinaut-Ruano; Eri Tatsumi; Julia de León

**Published in:** Monthly Notices of the Royal Astronomical Society, Issue Vol. 519, Issue 2, 2023, Page(s) Pages 1677–1687, ISSN 0035-8711

**Publisher:** Blackwell Publishing Inc.

**DOI:** 10.1093/mnras/stac3530

[Multi-filter photometry of Solar System Objects from the SkyMapper Southern Survey](#)

**Author(s):** A. Sergeev, B. Carry, C. A. Onken, H. A. R. Devillepoix, C. Wolf & S.-W. Chang

**Published in:** Astronomy & Astrophysics, Issue 658, February 2022, A109, 2022, ISSN 0004-6361

**Publisher:** Springer Verlag

**DOI:** 10.1051/0004-6361/202142074

[Orbital Period Change of Dimorphos Due to the DART Kinetic Impact](#)

**Author(s):** Cristina A. Thomas; Shantanu P. Naidu; Peter Scheirich; Nicholas A. Moskovitz; Petr Pravec; Steven R. Chesley; Andrew S. Rivkin; David J. Osip; Tim A. Lister; Lance A. M. Benner; Marina Brozović; Carlos Contreras; Nidia Morrell; Agata Rožek; Peter Kušnirák; Kamil Hornoch; Declan Mages; Patrick A. Taylor; Andrew D. Seymour; Colin Snodgrass; Uffe G. Jørgensen; Martin Dominik; Brian Skiff; Tom P

**Published in:** Nature, Issue Volume 616, 2023, ISSN 0028-0836

**Publisher:** Nature Publishing Group

**DOI:** 10.48550/arxiv.2303.02077

[Discovery and physical characterization as the first response to a potential asteroid collision: The case of 2023 DZ2](#)

**Author(s):** Marcel Popescu; Ovidiu Vaduvescu; Julia de León; Carlos de la Fuente Marcos; Raul de la Fuente Marcos; M. O. Stanescu; Miguel Rodriguez Alarcón; Miquel Serra Ricart; Javier Licandro; Dimitri Bertesteanu, M. Predatu; L. Curelaru; F. Barwell; K. Jhass; C. Boldea; A. Aznar Macías; L. Hudin; B. A. Dumitru

**Published in:** Astronomy & Astrophysics, 2023, ISSN 0004-6361

**Publisher:** Springer Verlag

**DOI:** 10.1051/0004-6361/202346751

[A million asteroid observations in the Sloan Digital Sky Survey](#)

**Author(s):** Alexey V. Sergeev and Benoit Carry

**Published in:** Astronomy and Astrophysics, Issue Volume 652, 2021, ISSN



0004-6361

**Publisher:** Springer Verlag

**DOI:** 10.1051/0004-6361/202140430

[A comprehensive study of the opposition effect on 15 NEOs](#) 

**Author(s):** S Ieva; P Arcoverde; E Rondón; A Giunta; E Dotto; D Lazzaro; E Mazzotta Epifani; D Perna; C Fanasca; T Rodrigues; F Monteiro; H Medeiros; J S Silva-Cabrera; A Di Paola

**Published in:** Monthly Notices of the Royal Astronomical Society,, Issue Volume 513, Issue 2, June 2022, Pages 3104–3112, 2022, ISSN 0035-8711

**Publisher:** Blackwell Publishing Inc.

**DOI:** 10.1093/mnras/stac1117

## Non-peer reviewed articles (1)

[Clustering the properties of near-Earth objects: Physico-dynamical links among NEOs](#) 

**Author(s):** Jasinghege Don Prasanna Deshapriya, Davide Perna, Nicolas Bott, Pedro Henrique Hasselmann, Mikael Granvik, Elisabetta Dotto, Marcello Fulchignoni, Alessio Giunta, Ettore Perozzi, Simone Ieva, Vasiliki Petropoulou and Elena Mazzotta Epifani

**Published in:** Astronomy and Astrophysics, Issue Volume 674, id.A50, 2023, ISSN 0004-6361

**Publisher:** Springer Verlag

**DOI:** 10.1051/0004-6361/202245316

## Datasets

### Datasets via OpenAIRE (2)



[Individual colors of the NEOROCKS objects observed between 2022 and 2023.](#) 

**Author(s):** BIRLAN, Mirel

**Published in:** Zenodo

[SDSS Solar System Objects](#) 

**Author(s):** Sergeyev, A.; Carry, B.

**Published in:** Centre de Données Strasbourg (CDS)

# Other Research Products

Other Research Products via OpenAire (11)



[NEOROCKS characterization programme of near-Earth asteroids previously observed with radar](#)

**Author(s):** de León, Julia; Licandro, Javier; Popescu, Marcel; Medeiros, Hissa; Morate, David; Pinilla-Alonso, Noemi; Perez-Toledo, Fabricio; Planetary Radar Team\*, Arecibo

[Physical characterization of near-Earth asteroid \(159402\) 1999 AP10 in support of the Arecibo Planetary Radar Program within the NEOROCKS project.](#)

**Author(s):** Medeiros, Hissa; de León, Julia; Licandro, Javier; Popescu, Marcel; Pinilla-Alonso, Noemi

[Spectral characterization of near-Earth asteroids on cometary orbits](#)

**Author(s):** Simion, Gabriel; Popescu, Marcel; Licandro, Javier; Vaduvescu, Ovidiu; de León, Julia

[New near-infrared spectra of \(594913\) 'Aylo'chaxnim, the first known asteroid orbiting inside Venus orbit](#)

**Author(s):** Popescu, Marcel; de la Fuente Marcos, Carlos; Văduvescu, Ovidiu; de la Fuente Marcos, Raul; Bus, Schelte; de León, Julia; Licandro, Javier; Tatsumi, Eri; Simion, Gabriel N.

[Physical characterization of asteroid \(4660\) Nereus](#)

**Author(s):** Mansour, Jad Alexandru; Popescu, Marcel; de León, Julia; Berteşteanu, Daniel; Morate, David; Văduvescu, Ovidiu; Licandro, Javier; Dumitru, Bogdan Alexandru; Simion, Gabriel Nicolae; Gherase, Radu Mihai; Pinter, Viki; Tatsumi, Eri

[Simultaneous observations in four optical bands of near-Earth asteroids using TCS/MuSCAT2 instrument](#)

**Author(s):** Popescu, Marcel; de León, Julia; Licandro, Javier; Nicolae Simion, Gabriel; Morate, David; Văduvescu, Ovidiu; Luis Rizos, Juan; Medeiros, Hissa; Mihai Gherase, Radu

[Mineralogical analysis of 14 PHAs from ViNOS data](#)

**Author(s):** Morate, David; Popescu, Marcel; De León, Julia; Licandro, Javier

[Individual colors of the NEOROCKS objects observed between 2022 and 2023.](#)

**Author(s):** BIRLAN, Mirel

**Published in:** Zenodo

[Spectral properties of 2020 AV2, the first known asteroid orbiting inside Venus orbit](#) 

**Author(s):** Popescu, Marcel; de León, Julia; de la Fuente Marcos, Carlos; Văduvescu, Ovidiu; de la Fuente Marcos, Raúl; Licandro, Javier; Pinter, Viktoria; Tatsumi, Eri; Curelaru, Lucian

[NEOROCKS characterization programme of near-Earth asteroids previously observed with radar](#) 

**Author(s):** Medeiros, Hissa; de León, Julia; Licandro, Javier; Popescu, Marcel; Morate, David; Pinilla-Alonso, Noemi

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