

Università degli Studi di Padova

EPN-2024-RI - Europlanet - Research Infrastructure 2020-2024

Investing in space infrastructures such as in the Copernicus and Galileo programmes, Europe has historically been at the forefront of space exploration. The Commission has made ambitious proposals for the period 2021–2027. These include a dedicated Space programme for a total of EUR 16 billion. It is within this context the EU-funded EPN-2024-RI will provide infrastructure necessary to address the major scientific and technological challenges facing modern planetary science. Its aim is to ensure Europe's position is at the forefront of space exploration. To do this, the project will provide Transnational Access (TA) to an enhanced set of world-leading field and laboratory facilities, Virtual Access (VA) to state-of-the-art data services and tools linked to the European Open Science Cloud (EOSC), and Networking Activities (NA) to widen the user base and draw in new partners from around the world.

The Europlanet 2024 Research Infrastructure (EPN-2024-RI) will provide the pan-EU infrastructure needed to address the major scientific and technological challenges facing modern planetary science and strengthen Europe's position at the forefront of space exploration. EPN-2024-RI builds on the foundations of a series of highly successful EU-funded projects that have created the leading Virtual Observatory for planetary data and the largest, most diverse collection in the world today of field and laboratory facilities capable of simulating and analysing planetary environments. EPN-2024-RI will provide Transnational Access (TA) to an enhanced set of world-leading field and laboratory facilities, Virtual Access (VA) to state-of-the-art data services and tools linked to the European Open Science Cloud (EOSC), and Networking Activities (NA) to widen the user base and draw in new partners from Under Represented States (URS), non-EU countries, industry and interdisciplinary fields, and to train the next generation of RI leaders and users. With 56 beneficiaries, from both industry and academic sectors, providing access to 31 TA facilities on 5 continents and 4 VA services linking over 100 data services and catalogues, EPN-2024-RI represents a step-change in ambition for planetary science worldwide. Innovations include the establishment of a ground based observation network to support space based missions, the launch of an interactive mapping service to provide virtual exploration of planetary surfaces, and the development of machine learning tools for data mining to fully exploit and analyse planetary data sets. EPN-2024-RI will establish global collaborations and an international userbase for the RI through inclusion of partners in Africa, Asia and South America. Ultimately, EPN-2024-RI will support the transition of this unique infrastructure to a sustainable future within the structure of the Europlanet Society.

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