

A stylized graphic of a solar system on a dark blue background. At the top left is a large yellow sun. Several planets of various colors (orange, blue, white, yellow) are shown on elliptical orbits. A satellite is depicted in the middle. At the bottom right, there are two teal planets, one with a ring system. The overall style is clean and modern.

eur  **PLANET 2024**
Research Infrastructure



Europlanet – A Distributed Research Infrastructure Building an International Community in Planetary Sciences

GMAP Planetary Geologic Mapping Winter School

7 -11 February 2022

A brief history..

Europlanet – founded in 2004 to support planetary research in Europe.

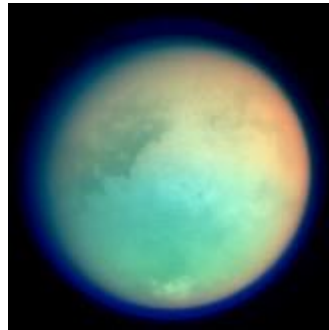
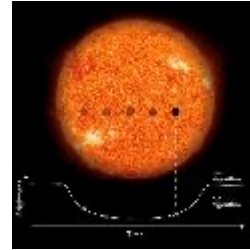
NASA/ESA/ASI Cassini-Huygens mission to Saturn from July 2004 to September 2017.

Huygens: 1st European spacecraft to the outer planets; designed to land on icy moon, Titan.



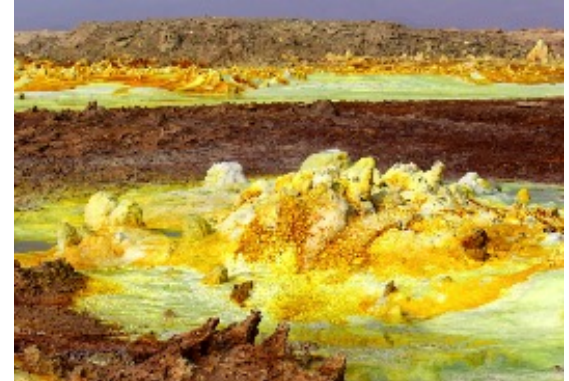
Europlanet – The Science

- Astrobiology
- Comets and Asteroids
- Early Earth
- Exoplanets
- Meteorites
- Planetary atmospheres and surfaces
- Space exploration and exploitation



Europlanet – The Science

Studies of microorganisms that live in extreme salty environments with volcanic origin at Danakil Depression, Ethiopia, analogous to conditions on Mars.



Isolation of salt-tolerant extremophilic algae that make lake in Spain **turn pink** (*Dunaliella salina* (EP-1) *Europlanet-1*).



Planetary Field Analogue sites

Europlanet – The Science

Investigations of dust in martian atmosphere and testing of instrumentation for rovers (Perseverance, ExoMars etc).

Wind Tunnel Facility Aarhus

Simulations and calibrations to support spectroscopic data from missions (Tianwen-1, TGO, BepiColombo, EnVision etc)

DLR and IPAG Spectroscopic Lab Facilities



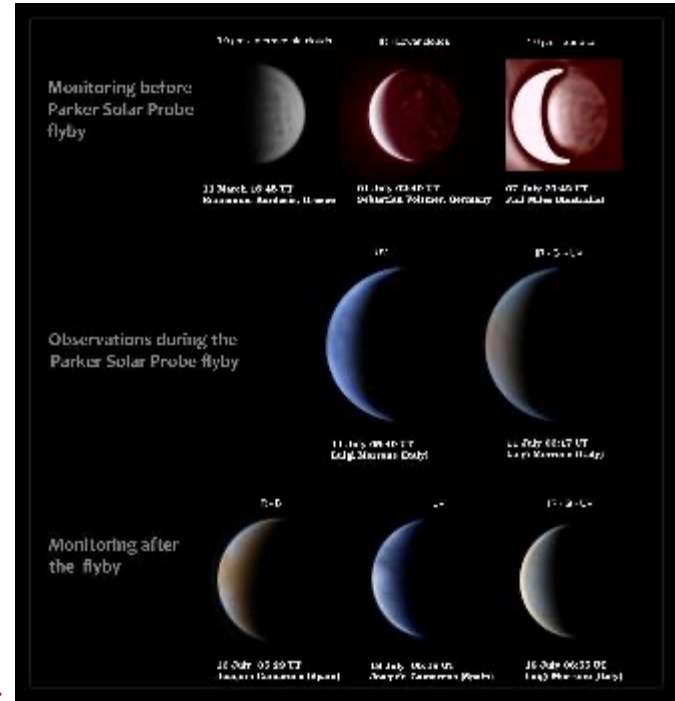
Europlanet – The Science

Techniques for non-destructive or minimally invasive characterization/analysis of meteorites/returned samples.

NHM, VU Amsterdam, ETH Zurich, OU

Ground-based campaigns in support of missions (BepiColombo, Parker Solar Probe, Akatsuki) enable multi-level studies of the atmosphere of Venus.

VESPA (PVOL), Europlanet Telescope Network



Part of the European 'Space' Triangle

Missions



Academia

Industry

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Research Infrastructure

Europlanet RIs 2009 -2021 supporting European planetary science

- **Community support and development (NA programme)**
Industry, Global Collaboration, Early Career, Media, Policy, Education, Outreach, Europlanet Telescope Network.
- **Access to facilities for benefit of wider community (TA programme)**
Planetary Field Analogues, Laboratories.
- **International infrastructure for OPEN data sharing/analysis (VA programme)**
VESPA – over 50 simulation tools/models/databases; SPIDER – planetary space weather services; **GMAP – geological mapping; Machine Learning.**

Extending our reach and sustainability



- **Europlanet Society**
 - **10 regional hubs**
 - **Europlanet Early Career (EPEC) Network**
 - **Europlanet Science Congress (EPSC) Granada September 18-23, 2022 (in person !!)**
 - **Diversity Committee**
 - **Industry and Outreach Working Groups**
 - **Elected Executive Board.**

So what next?

Through EU programme support, Europlanet has:

- Created a pan European and international community.
- Created a unique distributed infrastructure.
- Performed world leading research by mobilising European research/innovation base.

EU funding for Europlanet has created the largest collection of planetary simulation & analysis facilities in the world



FP6



41 beneficiaries

2005

EuroPlaNet

FP7



27 beneficiaries

2009

Europlanet RI



5 TA PFA
11 TA labs

H2020



33 beneficiaries

2015

Europlanet 2020 RI



5 TA PFA
12 TA labs



57 beneficiaries

2020

Europlanet 2024 RI



6 TA PFA
24 TA labs (+11 in South Korea)



eur PLANET SOCIETY

Going global - our strategy

- Develop contacts and collaborations
- More field sites and laboratories
- Extend Ground based telescope network
- Create larger RI with Astrophysics (chETEC)
Astrochemistry and Astrobiology/origins of life
- Educations (**schools** – universities – **Early Career**
Postgrad training network submitted today)



Thank you!

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<http://europlanet-2024-ri.eu>

And

<https://www.epsc2022.eu/>