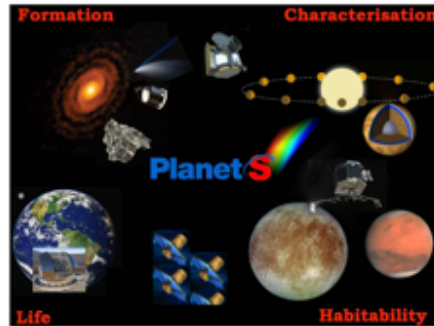


General Assembly 2022 April 25-28, Grindelwald

Mission: Carry out and coordinate leading research to enhance our understanding of the formation, evolution, and habitability of planetary systems (Solar System and exoplanetary systems) and their constituents.



Strategy: The research carried out shall be multi-disciplinary, making best use of the entire spectrum of approaches (observation, laboratory, theory) and methods (experiments, simulations)

The team

General assemblies during phase 2

Beatenberg, 28-30.1.2019



Montreux, 27-29.1.2020



Zoom, 20-22.1.2021



Grindelwald, 25-28.4.2022

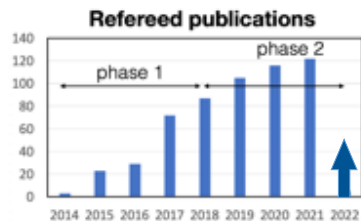


157 registered participants

the Universities of Bern, Geneva, and Zürich and the ETH Zürich

Research output

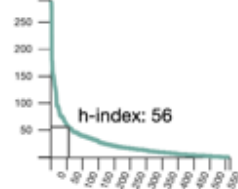
(ADS 13.1.2022)



Over 120 refereed publications per year

✓ Productivity

Citation statistics

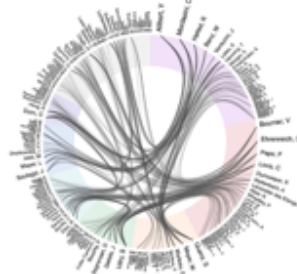


17 papers with > 100 citations

✓ Impact

✓ Networking

Authors network



Many interactions between authors

Hardware projects

(with significant involvement of PlanetS)

- In operations or launched (6)
- Under construction (8)
- In preparation (phase 3 & beyond) (4)

Note:

- Future large projects are increasingly considered at PlanetS rather than at a single institution level

- + smaller projects under study
- NIGHT (Near-Infrared Gatherer of Helium Transits)
- Others

ESPRESSO (UGE, UBE)	ESO, 8.5m Paranal in operation
Saint-Ex (UBE, UGE)	San PedroMartir 1m remote controlled in operation
Cassini (UBE)	ESA in operation around Mars
CHIEOPS (UBE, UGE)	ESA joint with Switzerland in operation
BepiColombo (UBE)	ESA & JAXA launched 20.10.2018, en route to Mercury
MIRI (ETHZ)	NASA JWST in commissioning
ERIS (ETHZ)	ESO, 8.5m Paranal Instrument on the telescope at Paranal
NIRPS (UGE, UBE)	ESO, 3.6m La Silla PAE started, commissioning expected to start 12.2021
RISTRETTO (UGE)	ESO, 8.5m Paranal Currently in design phase, first light foreseen 2024
Plato (UBE, UGE)	ESA Critical milestone achieved in January 2022
Comet Interceptor (UBE)	ESA Adoption scheduled for June 2022
JUICE (UBE)	ESA Launched postponed to 2023 (April)
METIS (ETHZ)	ESO, 39m E-ELT In preparation for FDR planned for fall 2022
HIRES (UGE, UBE)	ESO, 39m E-ELT Final go-ahead received by Council
SPHERE+ (PlanetS, UGE)	ESO 8.5m Paranal Started work with the Consortium
MEPMOZ (PlanetS, UBE)	Switzerland, spectro-polarimetry from ISS First funding attempt not successful
ORIGIN (UBE, PlanetS)	NASA, Europa lander Preparatory work ongoing with potential consortium
LIFE (ETHZ, PlanetS)	Theme identified for ESA Voyage 2050 Establishment of a ruling interferometry lab at ETHZ

April 2022, **NIRPS** IR spectrograph installed on the 3.6m ESO telescope



First thermal cycle on-going
First image expected mid May

PLATO

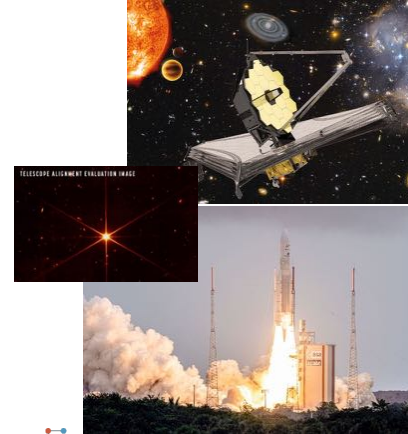
- April 2022: passed critical review
=> green light for building
- Tests (STM) on-going



PLATO TOU Structural & Thermal Model (STM) on UBE shaker (left)
TOU Flight Model (FM) mechanical parts inside UBE thermal chamber. Credit: UBE

At larger scale and important for PlanetS

In space: launch of JWST, 25.12.2021



On the ground: progress of building of the ELT



Activities in the news

since last panel visit (early June 2021)

<https://nccr-planets.ch/news/>

11.1.22 CHEOPS reveals a rugby ball-shaped exoplanet	10.1.22 Spitzer-EX discovers eccentric exoplanet	15.12.21 How did the peculiar moons of Neptune form?	14.12.21 Two-year launch anniversary of CHEOPS	8.12.21 A planet beyond the realm of possibility	30.11.21 "Dust puzzles" wins Global Science Film Festival
3.11.21 The upside-down orbit of a multi-planetary system	30.10.21 ESA Voyage 2050 and PlanetS: it is a match!	20.10.21 Where Predator and Pikachu learn about exoplanets	15.10.21 The planet does not fall far from the star	13.10.21 Did Venus ever have oceans?	8.9.21 Thousands of visitors at Sciencetopia
27.8.21 Unravelling the mystery of brown dwarfs	24.8.21 Like star like planet	28.6.21 Unique exoplanet photobombs CHEOPS study of nearby star	18.6.21 Scientists detect signatures of life remotely		

Space-based observations
 Ground-based observations
 Theory / simulations
 Future missions
 Testing instruments
 Communication

Activities in the news

And more since January....

04 Apr 2022 A closer look at Jupiter's origin story	17 Mar 2022 Imaging an Earthly neighbour	17 Mar 2022 The astronomer in your class room
17 Mar 2022 Martin Turbet's professional path	17 Mar 2022 How Switzerland contributes to PLATO	28 Jan 2022 Extreme exoplanet has a complex and exotic atmosphere

<https://nccr-planets.ch/news/>

Prestigious grants/fellowships

- Brice-Olivier Demory (UBE), ERC Consolidator 2022, *SenseLife*
- Monika Lendl (UGE), *Eccellenza 2021*, *Tatiana (time variability as a window on planet climate)*
- Vincent Bourrier (UGE), ERC starting grant 2021, *Spice Dune* (close-in planets)
- Judith Szulagyi (ETHZ), ERC starting grant 2020, *Planet and Moon factory*
- Xavier Dumusque (UGE), ERC starting grant 2020, *SCORE (Signal COrrrection to Reveal other Earths)*
- Fabio Ferrari (UBE), *Ambizione 2020*, *Dynamics and evolution of small bodies in the Solar System*
- Elspeth Lee (UBE), *Ambizione 2020*, *Exoplanet atmospheres in 3D: Clouds, chemistry and radiative transfer in the JWST era.*

Recent faculty changes (scientific positions)

- **Didier Queloz**
 - Move from UGE to ETHZ (50% ETHZ & 50% U. Cambridge) => *Centre pour la Vie dans l'Univers (CVU) at UGE coordinated by Prof. Emeline Bolmont*
 - Origin and prevalence of life initiative at ETHZ
- **Christoph Mordasini**
 - Appointed full professor at UBE, succession of W. Benz
- **Lucio Mayer**
 - Promoted full professor at UZH
- **Francesco Pepe**
 - Promoted full professor at UGE
- **Kevin Heng**
 - Will be leaving UBE for LMU Munich in summer 2022
 - Resources for his position are secured. Replacement is part of a major faculty renewal plan at UBE (2 oP retirements in ~5 years) which needs faculty approval.
- **Sascha Quanz**
 - Associate professor (ETHZ)
- **Yann Alibert**
 - promoted to associate professor (UBE)
- **Christophe Lovis**
 - promoted to associate professor (UGE)
- **Damien Ségransan**
 - promoted to associate professor (UGE)
- **Henner Busemann**
 - promoted to titular professor (ETHZ)
- **Joachim Stadel**
 - promoted to titular professor (UZH)
- **Antoine Pomerol**
 - Dozent (UBE)

Honours

- Maria Schönbächler (ETHZ), Jessberger award 2021, Meteoritical Society
- Judith Szulagyi (ETHZ), MERAC Prize 2021
- Verle Stern (ETHZ), Christoph Plantin Prize 2021, Belgium
- Monika Lendl (UGE), invited as the "ESA Distinguished Lecturer" 2022 at Space Telescope Science Institute, "highlighting breakthrough results from ESA missions" (CHEOPS)
- Salome Gruchola (UBE), Faculty Prize 2021 for best master thesis in sciences
- Chloe Fischer (UBE), Faculty Prize 2021 for best doctoral thesis in sciences
- Michel Mayor (UGE)
 - Foreign member, Royal Academy of Sciences, Spain
 - Foreign member, Academy of Sciences, Torino, Italy

Finally, it is important to note that young scientists within PlanetS managed to obtain academic positions abroad:

1. Jens Hoeijmakers (UGE and UBE): Assistant professor at Lund University, Sweden
2. Heather Cegla (CHEOPS Fellow): UKRI Future Leaders Fellowship coupled to a future professorship position
3. Pierre Auclair-Desrotour (UBE): Astronomer at the CNAP (France)
4. Martin Turbet (UGE): Researcher at CNRS
5. Others...

Internal call for proposals 2021

- A call was issued (26.10.2021) for the remaining unused reserves totalling ~230 kCHF
 - Open to everyone (members & associates)
- 27 proposals received requesting 704 kCHF in total
- Selection by the Board:
 - 9 proposals funded from reserves: 230 kCHF
 - 4 proposals funded from TECHNO platform: 115 kCHF
 - 1 proposal funded from COMM platform: 28 kCHF
 - 2 proposals funded from UBE reserves: 24 kCHF
 - 2 proposal with matching fund from UGE: 77 kCHF

Total proposals funded: 15
Total amount: 474 kCHF

Budget Phase 2

- under control, i.e. budget used or attributed to well defined purposes
- carry-over for projects/activities ending after the end of phase 2
 - pandemic
 - end of PhD theses or postdoctoral stays
 - delay of instrumental projects or hardware procurements
 - etc

=> Accepted by the SNF (12.04.2022)

Update on Outreach

- Stellarium Gornergrat has won a grant of 200 kCHF from the Swiss Academy to promote STEM education
- Two new activity centres are being constructed/planned with significant implication of PlanetS

S30: Swiss Space & Sustainability Observatory
 (Uecht near Bern)



Funding 90% complete, construction started

51 Peg visitor center (Geneva Observatory)



(feasibility study completed) In the planning

The goal is to ultimately link these centres together with the Gornergrat observatory and provide hands-on activities for school children and the public

Address change for Geneva Observatory



from
 Chemin des Mailletes 51
 to
 Chemin Pegasi 51



Books

Salomé comic books



- 10'000 pupils have been using these books and related activities in 2021
- German translation is in preparation
- Spanish version prepared in collaboration with ESO and the Swiss embassy in Chile

Textbook



- Written by N. Thomas (Springer Verlag)

"This new book is a very welcome and timely addition to the collection... This is an excellent, comprehensive, and up-to-date description of comets, and I thoroughly recommend it."

Division IV of the Research Council also approved the candidature of Prof. Thomas as new Director of NCCR PlanetS starting 1 June 2022.

Moreover, Division IV of the Research Council discussed the pre-proposal for the 3rd funding phase of the NCCR PlanetS. We are pleased to inform you that based on the progress, successful development and future plans of the NCCR PlanetS, the Research Council approved its continuation in phase III. This decision is taken under the condition that the full proposal meets all basic requirements of an NCCR and convincingly addresses the recommendations formulated by the Review Panel (Article 22 of the NCCR contract).

Phases 1 & 2
8 years for building a launch pad for Phase 3 and SIPS

