

# Director's Report 17 April 2023





# Topics in the Report

- Major News Items from the Partners
- NCCR Structural News
- Flagships and Bonus Initiatives
- Working Group Reviews





## • Ravit Helled:

- Promotion to full professor
- Listed as one of the most prominent people in Basel and Zürich 2023 (science section), Who is Who Zurich (2023).





## • Lucio Meyer:

- an elected member of the Swiss Commission for Astronomy (SCFA) and the representative of SCFA in CHIPP
- an elected member of the new International Advisory Board for Supercomputing and Data Science Infrastructure of the Italian Institute for Astrophysics.

### Ben Moore:

- UZH is involved in the ARRAKIHS mission (next ESA F mission https://www.cosmos.esa.int/web/call-for-missions-2021/selection-of-f2) with Ben being the Swiss Co-PI.
- "Analysis of Resolved Remnants of Accreted galaxies as a Key Instrument for Halo Surveys"





#### • ETH Zurich

- JWST MIRI was successfully commissioned and MIRI GTO started (Adrian)
- ELT METIS had a very successful FDR and is currently closing out a few remaining RIXs; overall METIS is well on track as 1st generation ELT instrument.
- VLT ERIS was successfully commissioned and is in operation at Paranal Observatory (PlanetS contributed money for hardware here)
- Sascha Quanz secured a ~3 MEUR PRODEX grant to fund NICE (Nulling Interferometer Cryogenic Experiment) in preparation of the LIFE mission. (More later....)
- Caroline Dorn received an ERC Starting Grant and has joined with this as an associated project.





## UGE

#### • Science:

- Signature of the Phase B contract of ANDES by INAF with ESO in August 2022, Consortium agreement end of 2023
- End of ESPRESSO GTO after 4.5 years on March 31st 2023
- Edith Müller Award 2022 of the Swiss Academy of Sciences (ScNat) attributed to Julia V. Seidel (now ESO fellow) for her thesis «Exoplanet winds –Modelling atmospheric dynamics via resolved spectral lines»

#### Personnel:

- SNF Ambizione by Julia Venturini, nomination to Collaboratrice Scientifique II on October 1st, 2023
- SNF Starting Grant by Adrien Leleu, nomination to Professeur Assistant on June 1st 2023 being processed.
- Nomination of Jean-Baptiste Delisle as Scientific Collaborator II (permanent position created in support of PlanetS)

#### • Events:

- 250th anniversary of the Observatoire de Genève in 2022-2023:
  - Open Doors on 16th and 17th of June 2022 with 2000-3000 visitors
  - Exhibition 'Art, science et fiction': https://www.versoix.ch/agenda/bolero-galerie/exoplanetes-art-science-fiction-%7C-jusqu-au-30-avril-2023-%7C-galerie-du-bolero-5767
  - Special guests at the Geneva book fare 2023 (Planetarium, 3D glasses, Cheops, book presentations), and many other activities)

Swiss National Science Foundation



## **UBE**

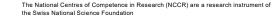
- Personnel issues: ---- all change
  - Peter Wurz took over the Physikalisches Inst. directorship per 1. August 2022.
  - Chris Mordasini took over the Space Research and Planetology Division per 1. August 2022.
  - Susanne Wampfler and Yann Alibert are now jointly leading the CSH after Kevin Heng moved to LMU.

#### • ERC:

- Brice-Olivier Demory and Jonas Kuehn won ERC Consolidator Grants (now associate projects to the NCCR) and will present these later.
- You might have noticed that 1 BEuro was sent into space on Friday with UBE participation on three instruments. The event drew ~250 people.
- CHEOPS has been extended to mid-2026. (The Trace Gas Orbiter CaSSIS also).
- Nacht der Forschung (Sept. 22) ~ 10000 visitors with strong PlanetS presence.
- UBE also hosted a visit by the US ambassador to Switzerland.







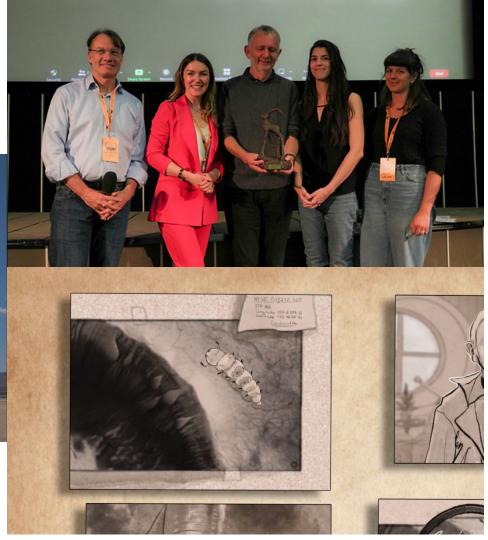


# Swiss Science Film Academy – 5<sup>th</sup> Global Science Film Festival

## Best Short Film:

**Cassis: Mars Demystified by Tatiana Keller (Drozhzhova)** 







## **Board Membership**

- Willy Benz has formally left the Board per 1 June 2022.
- Klaus Mezger left the Board per 31 January 2023.
  - The Board would like to thank Klaus for his support over the past 9 years.
- Yann Alibert has taken responsibility for the Communications (with David Ehrenreich as deputy and UGE rep.) and the CHEOPS/Future Flagships platform and now has voting rights.
- Christoph Mordasini has replaced Willy Benz on the Board.
- An additional Uni Zurich representative will be appointed to the Board (probably tonight!)
- The Director now only has a casting vote on the Board.
- All participating schools have the same number of votes but the Director has a casting vote..... Just in case.



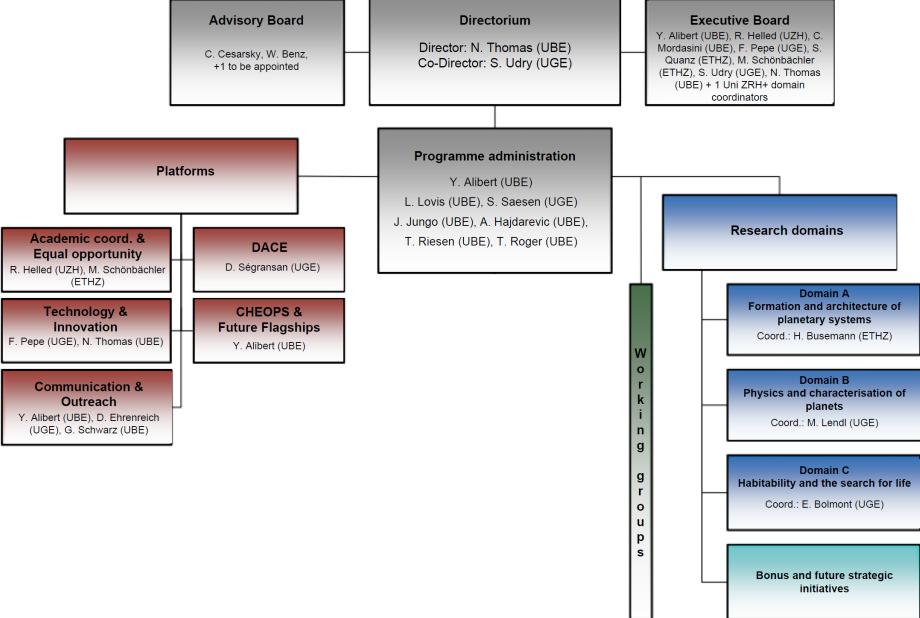


# Advisory Board Membership

- Michel Mayor and Brian Schmidt both requested to leave the Advisory Board for Phase 3.
  - We take this opportunity to thank them both for their willingness to support our activities.
- Willy Benz has agreed to serve. ©
- Thanks to Catherine Cesarsky for agreeing to continue.
- We have/are asking other senior persons to support us for the rest of Phase 3.









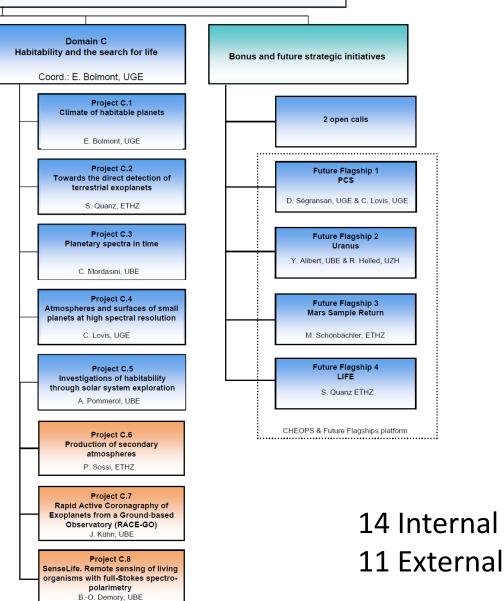
#### Research domains

#### Domain A Domain B Formation and architecture of planetary Physics and characterisation of planets systems Coord.: H. Busemann, ETHZ Coord.: M. Lendl, UGE Project B.1 Project A.1 The nature of gas-rich planets The composition of planetary building blocks R Helled UZH M. Schönbächler, ETHZ Project A.2 Project B.2 Planetary system architecture Interiors of warm planets: preparing PLATO with TESS and CHEOPS F. Bouchy, UGE D. Ségransan, UGE Project A.3 Project B.3 Extreme atmospheres Numerical laboratory for planet formation D. Ehrenreich, UGE J. Stadel, UZH Project A.4 Project B.4 Meteorite analysis enabling the Diversity of exospheres assessment of asteroidal and martian sample return P. Wurz, UBE H. Busemann, ETHZ Project B.5 Project A.5 Spectrophotometric inquiry in close-The solar system as an exo-system: in exoplanets around the desert formation, dynamics, composition V. Bourrier, UGE Y. Alibert, UBE Project A.6 Project B.6 Heliosphere and dust: Time variability as a new window on Characterisation of the solar and exoplanet climates interstellar neighbourhood V. Sterken, ETHZ M. Lendl, UGE Project A.7 Project B.7 Planet and moon factory Signal correction to reveal other Earths J. Szulágvi, ETHZ X. Dumusque, UGE Project A.8 Isotope astrochemistry: linking star Project B.8 formation with the solar system Planets and their deep volatile record reservoirs S. Wampfler, UBE C. Dorn, ETHZ

Project A.9

Architecture of Resonant Exoplanetary Systems (ARES)

A. Leleu, UGE







# Future Flagships and Bonus Programme

- The Bonus was not funded at the level we wanted/proposed.
- The Board decided to support the Bonus by initiating 4 Bonus-theme related projects within the Future Flagships remit at the 250 kCHF level.
  - A ground-based spectro-imaging facility: Planetary Camera and Spectrograph (ELT-PCS)
  - A mission (or a series of missions) towards the outer part of the solar system (Uranus Decadal Flagship)
  - A mission (or a series of missions) aiming at bringing back to Earth samples from potentially habitable worlds (in particular from Mars) (MSR) (ESA entering Phase C for the Earth Return Orbiter at the moment)
  - A space-based interferometer (LIFE/Proto-LIFE)
- Project choice is a direct output of the SIPS Research Vision document.
- Presentations on these will be given today and tomorrow.
- In addition, the Board has approved two **Open Call**s for projects to supplement these strategic initiatives. Total funding available ~500 kCHF.
  - Results of the first call will come out after the GA. (Board decision required.)
  - Second call in May/June. Strong emphasis on Frontiers in Extra-Terrestrial Life.

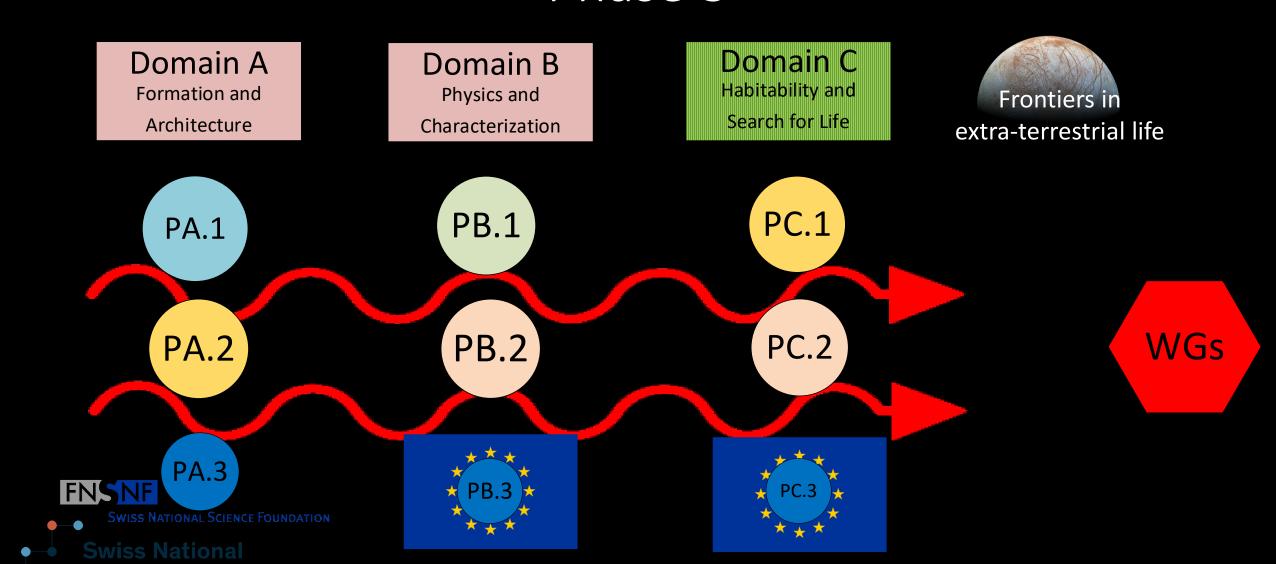








# Phase 3





## • 8 WGs were part of the Phase 3 proposal allocated ~12 kCHF each.

Working	Title	Working Group Coordinator	Host
Group identifier			
WG1	Spectroscopic biosignatures in planetary surfaces & atmospheres	Björn Konrad	ETHZ
WG2	Evolution, composition and structure of super-Earths to sub-Neptunian worlds	Dr. Julia Venturini	UGE
WG3	Volatile and refractory inventory in protoplanetary discs	TBD	TBD
WG4	Planetary system architecture and its impact on habitability	Prof. Emeline Bolmont	UGE
WG5	How to robustly detect characterisable Earth-analogues?	Prof. Monika Lendl	UGE
WG6	Complex dust	Prof. Hans-Martin Schmid	ETHZ
WG7	PlanetS JWST observer hub	Prof. Brice-Olivier Demory	UBE
WG8	Radio/millimetre expertise hub (ALMA, SKAO)	Prof. Susanne Wampfler	UBE





- WGs are <u>temporary structures</u> that bring together the expertise needed to address specific issues and which are dissolved upon completion of their task.
   WGs receive a limited amount of funding essentially for exchanges, networking, etc.
- Extensions are possible but please note.
  - The Board expects tangible output from the WGs.
  - It is part of our updated (SNSF approved) Rules and Regulations (Oct. 2022) that WGs should report to the Board on an annual basis.
- We expect to offer possibility for new WGs to be initiated after this GA.





- The Site Visit is scheduled for May 22-23 in Geneva.
- Open sessions will have emphasis will be on showing work of the younger members.
- This is probably going to be the last Site Visit.
  - The Panel may well be invited to the final meeting in April/May 2026 but that is still TBD.

