

Future of the Labex UnivEarthS



The « Laboratoire d'Excellence » UnivEarthS : a unique partnership developing innovative interdisciplinarity projects in the fields of Earth Sciences and Physics of the Universe.

The consortium brings together the research groups of its three founding members (IPGP, APC and AIM) and the French aerospace center ONERA.

The Labex was launched in 2011 and renewed in 2019 for 5 more years

It is financed by ANR and coordinated by Université Paris Cité

Multidisciplinary research topics:

The primordial universe, the organization of the structures of the universe, the violent phenomena associated with stellar explosions and black holes, the development of planetary systems, the differentiation and dynamics of the proto-Earth, the origin and primitive life on Earth, or the study of geological and astronomical catastrophes (volcanic eruptions, earthquakes, planetary collisions)

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12 Projects led by an APC researcher and supported by the Labex (2020 and 2021):

Direct dark matter with DarkSide Davide Franco

At the heart of our galaxy with multi-messenger astronomy: turning back the cosmic clock on SgrA activity* Anne Lemièr *PhD student*

Prompt Gravity and Seismic/Newtonian Noise Matteo Barsuglia

Research of astroparticles, geological and oceanographic studies ARGOS Véronique Van Elewyck *Engineer + Postdoc*

Binary rEvolution: from binaries to gravitational waves Sylvain Chaty *Postdoc*

Multi-messenger Analysis Package to Model Extreme Cosmic Accelerators (MAPMECA) Bruno Khélifi *Engineer*

Multi-Messenger Observatory on the cloud (MMO) Andrii Neronov *Engineer*

Multi-Messenger Observations of Supermassive Accreting systems (MIMOSA) Alexis Coleiro *Postdoc + PhD student*

Low Energy Astrophysics with KM3NeT (LEAK) Sonia El Hedri *Postdoc*

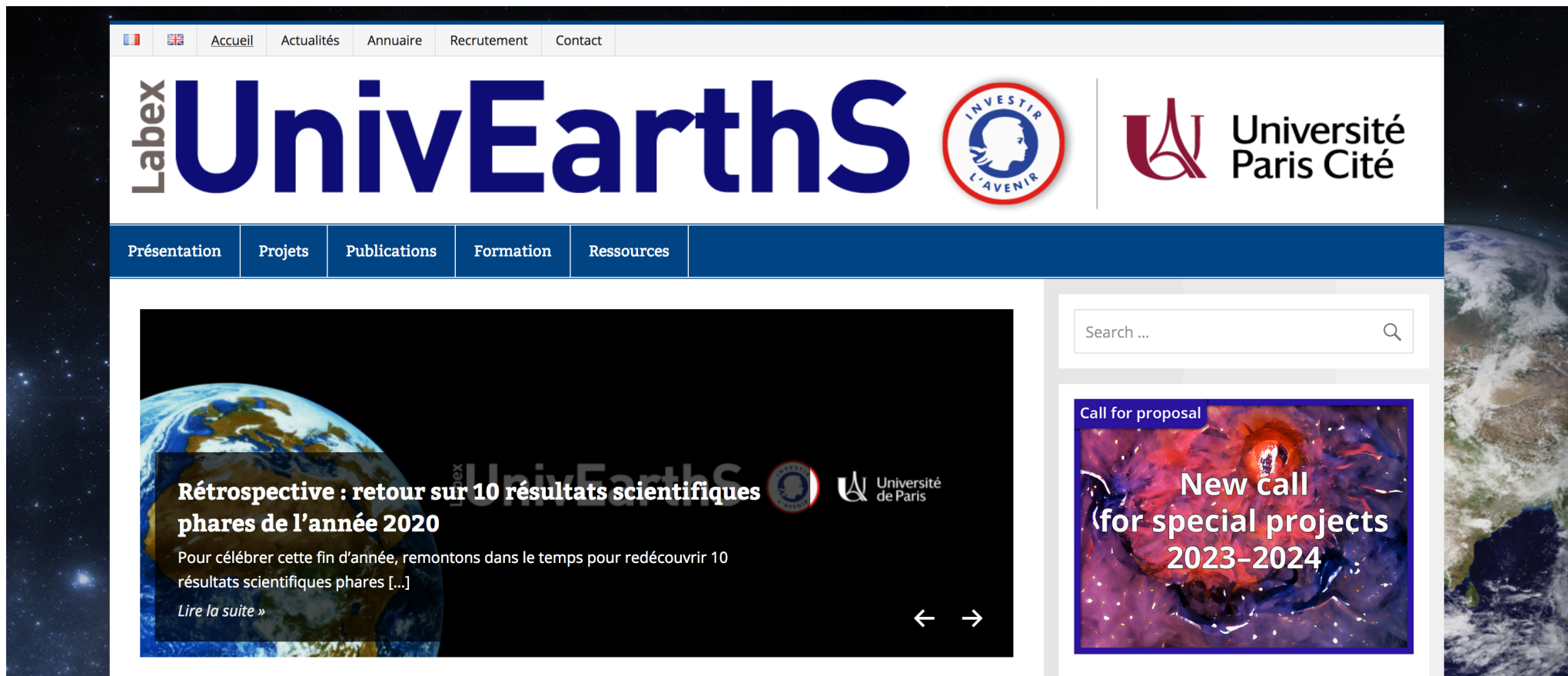
Exploring the future of Virgo Eleonora Capocasa

Development of New Generation KIDs detection chain NGKIDs Michel Piat *Engineer*

Support to the education / outreach activities of the Paris Centre for Cosmological Physics Matteo Barsuglia *Postdoc*

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More informations on: www.univearths.fr



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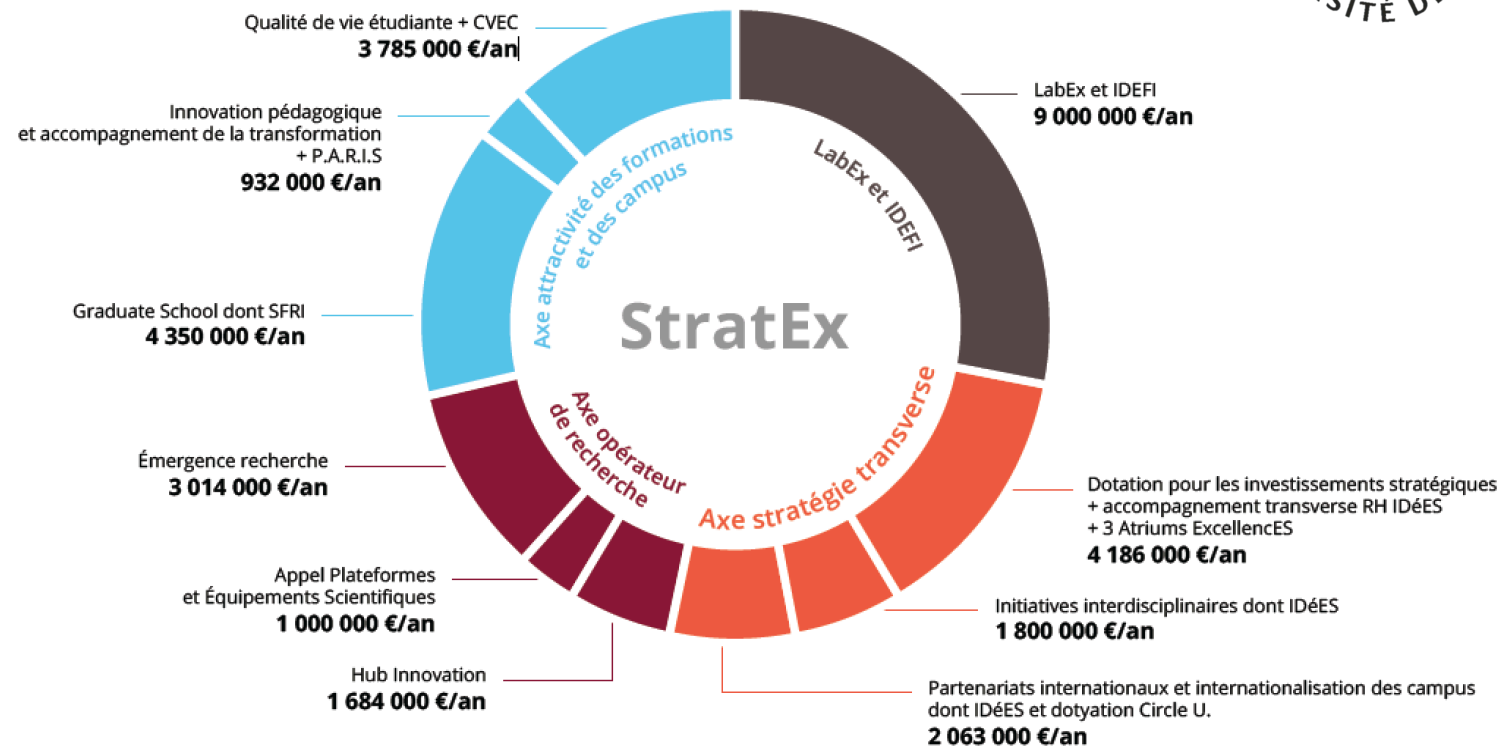
Context

March 2022: the permanent labeling of Université Paris Cité as an Initiative d'Excellence (Idex) has been confirmed by the Prime Minister

- Launch of a new strategic action plan called Stratex (Stratégie d'Excellence) which will manage all the Idex grants
- Rearrangement of the funds allocations
- No guarantee on the Labex UnivEarthS funding after December 2024

→ *We need to propose new projects*

Distribution des financements stratégiques (31,8 M€)



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New call for proposals launched in February (deadline September 12, 2022 www.univearths.fr)

- ➔ Opportunity for APC
- ➔ Fundings for the next two years (2023 and 2024)
- ➔ Collaborations between APC and an other lab of UPC
- ➔ Could prepare/prefigure the Labex post-2024



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Ideas for new projects

Topic	Collaboration
GW detection on the Moon	APC / IPGP?
Seismology with fiber optics on the next KM3NeT site	APC / IPGP?
Cosmic rays and the chiral puzzle of life	APC / Noemie Globus
Solar physics / space weather	APC / AIM / IPGP?
Study of density and (maybe) orbits of small bodies in the near-Earth orbit	APC
Study/detection of the exoplanets in the wide-dwarf binaries in our Galaxy	APC / AIM ?
Possible detection of the core or bulk mass motion inside the Earth with "marionetta" suspension in Virgo detectors	APC
Einstein telescope	APC / ?
Exploring a new type of PET (with DarkSide technology)	APC / ?
Data sciences	
Diversity and education inequality	APC / IPGP / AIM / ?
Outreach (podcasts/video)	
Open science / open data	

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Ideas for future actions

- ➔ Organization of a large workshop with all the Labex partners (APC, AIM, IPGP, ONERA)
- ➔ Opening and/or integration of other UPC research teams / Labex in the new call for proposals

Working group Future of the Labex UnivEarthS

[Faculty of Science laboratories @ UPC](#)

[Faculty of Health laboratories @ UPC](#)

[Humanity and Social Sciences laboratories @ UPC](#)

Working group Future of the Labex UnivEarthS

Research @ IPGP



Intérieurs de la Terre
et des planètes
Earth and planetary interiors



Risques naturels
Natural hazards



Origines
Origins



Système Terre
Earth system science