
P2iO
Physique des 2 Infinis et des Origines
ÉCOLE POLYTECHNIQUE
PARIS DIDEROT
UNIVERSITÉ PARIS-SUD 11
cea
cnrs

P2IO: a « LabEx » bridging the two infinites

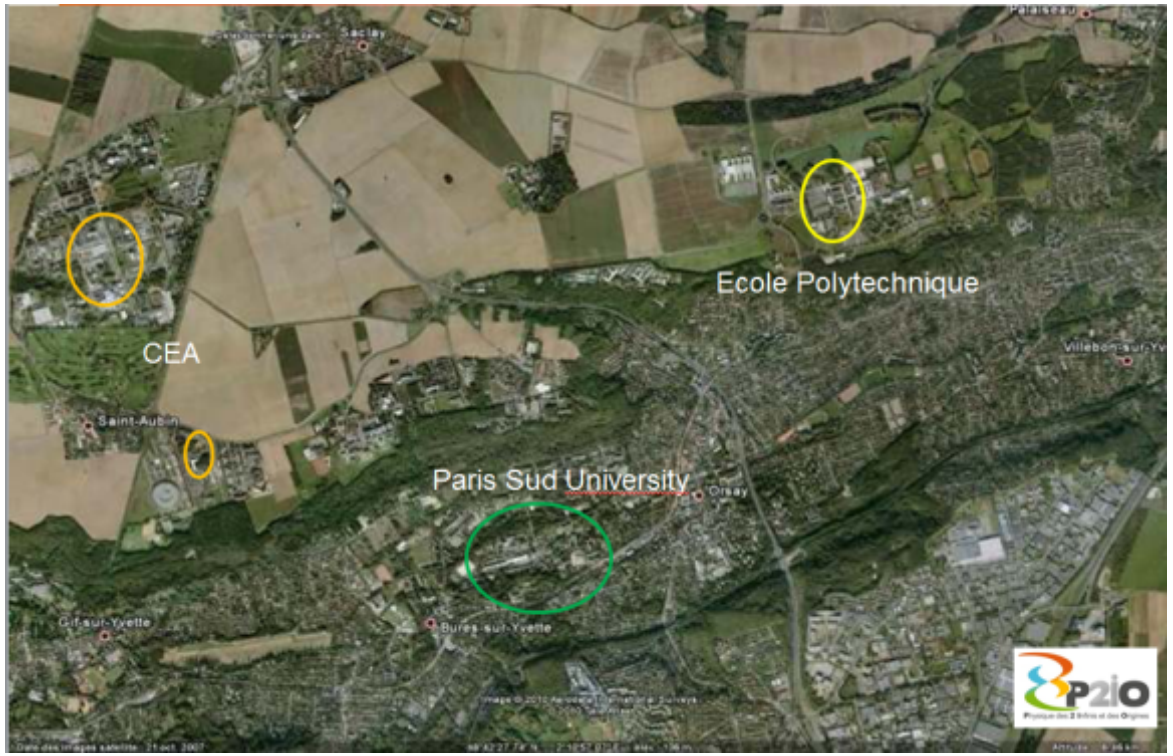
- A **network of 12 laboratories**
  - belonging to 5 different organisms (CEA, CNRS, Ecole Polytechnique, Paris Sud University, Paris Diderot University)
  - covering a **broad disciplinary spectrum** ranging from particle and nuclear physics, astroparticle to astrophysics, experiment and theory, accelerator science, instrumentation and associated interfaces

- selected in 2011 to receive **a special funding** from the French government (in the framework of the call for Laboratories of Excellence) for an amount of 14 M€, spread over 9 years (2011 → end of 2019).

P2IO partners geographic localisation

A unique concentration on Paris-Saclay Campus of world leading laboratories covering a large fraction of national effort
(25% origin physics, 40% subatomic physics, 90% accelerators physics)

About 2000 people (Researchers & professors, engineers and technicians, post-docs, phD students)



P2IO Goals

- Goals:
  - Create a **world class pole** in the Paris-Saclay University framework
  - Foster the emergence of **breakthroughs** in the scientific priorities
  - Enhance the **collective visibility** of P2IO members in the large international programs present and future

- Guidelines for actions summarized by the motto:
  - « Explore »: support for **innovative initiatives**
  - « Transform »: enhance/foster emergence of **collaboration** between members, create **common platforms**
  - « Structure »: governance acts as a **point of contact** between members and with the departments of Paris-Saclay University

P2IO Scientific priorities

- 4 **scientific** themes:
  - Symmetries in the subatomic world,
  - Dark Universe and high energy gamma ray astronomy,
  - Strongly coupled nuclear matter,
  - Formation of stellar systems, conditions emergence of life

- 3 **technological** themes:
  - Innovations in accelerator science and related spinoffs,
  - Advanced sensors and spinoffs,
  - Data mining and simulation

- 2 **interdisciplinary** themes:
  - Energy : nuclear energy for the future
  - Health : new methods in imagery and therapy

Actions funded by P2IO

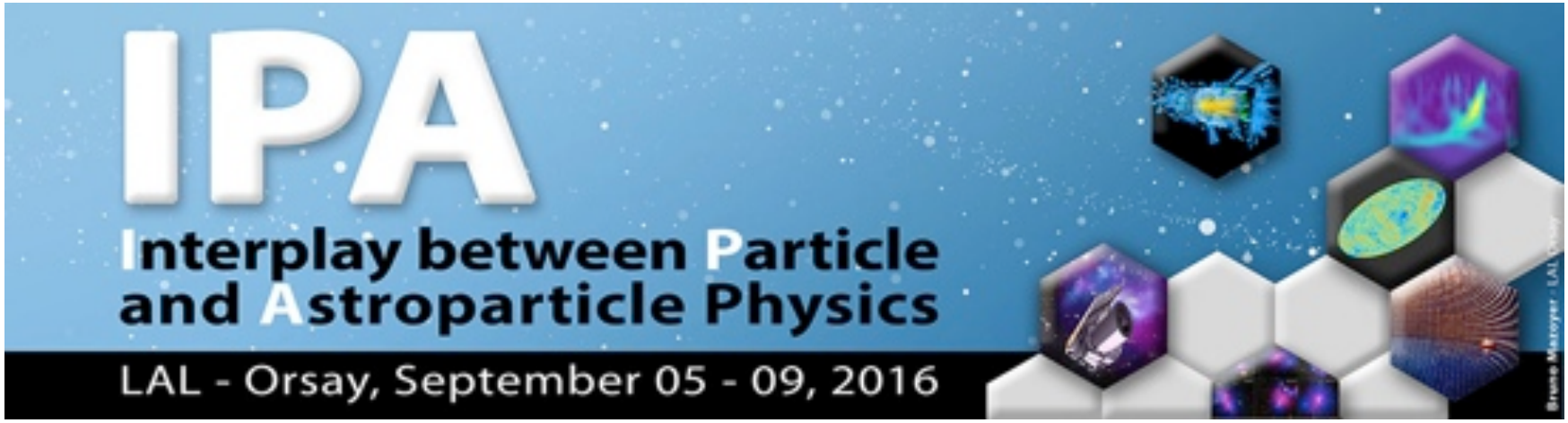
- **Upstream R&D**
- **Technological platforms**
- **Post-docs**
- **PhD students** half-grants + teaching and outreach activities
- **'attractivity' actions** :
  - visit of high-level scientists
  - conferences organized by P2IO members within Paris-Saclay area,

The Virtual Data computing room in Orsay after refurbishment

Actions funded by P2IO: Flagship projects

In 2016, to foster further internal collaborations, and increase the visibility of P2IO, 5 « flagship » projects have been selected with a mean funding by P2IO of about 650 k€ each.

Project	PI	Themes	Labos/services Underligned: the lab of the PI
Evolution of matter from the interstellar medium to exoplanets with the JWST	Abergel et al.	Formation of stellar systems, conditions emergence of life	IAS, CSNSM, IPN, SAp
Platform for Research and applications with electrons	Barsuk et al.	Strongly coupled nuclear matter; Innovations in accelerator science and related spinoffs; Advanced sensors and spinoffs Health	LAL, IMNC, IPN
Charting Terra Incognita of Exotic Nuclei	Franchoo et al.	Strongly coupled nuclear matter; Innovations in accelerator science and related spinoffs	IPN, CSNSM, SPhN
NEctarcam CAmera VAlidation at Paris-Saclay	Glicenstein et al.	Dark Universe and high energy gamma ray astronomy	SPP, IPN, LLR, SAp, SEDI, SIS
High Granularity Calorimeters for Future Colliders	Sirois et al.	Symmetries in the subatomic world; Advanced sensors and spinoffs	LLR, LAL, SEDI, SPP



The IPA conference is perfectly in line with what P2IO wants to support and we are happy to do so. We wish you a very fruitful conference.

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