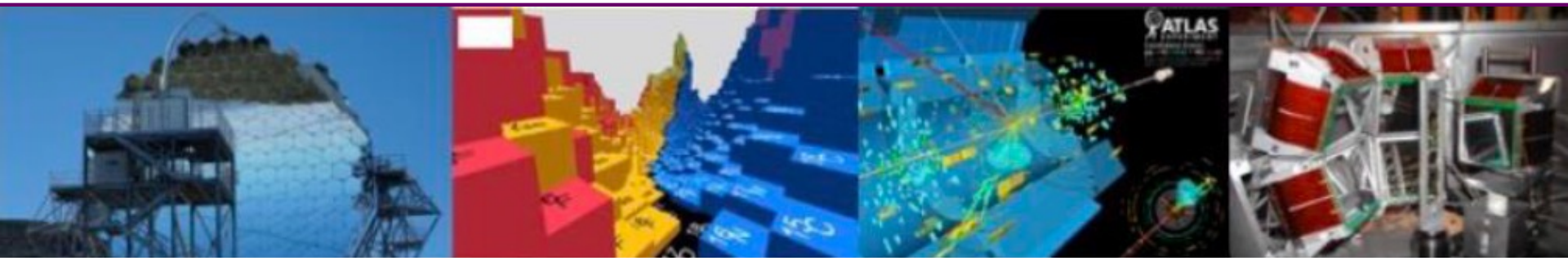
université PARIS-SACLAY
GRADUATE SCHOOL Physique

P2I Physique des deux Infinis



Welcome Address

Tiina Suomijärvi
P2I – GS Physics, Paris-Saclay University

Paris-Saclay Astroparticle Symposium, 2 November 2022

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Paris-Saclay University

FACULTIES AND INSTITUTIONS

université PARIS-SACLAY FACULTÉ JEAN MONNET DROIT-ÉCONOMIE-GESTION
université PARIS-SACLAY FACULTÉ DE MÉDECINE
université PARIS-SACLAY FACULTÉ DE PHARMACIE
université PARIS-SACLAY FACULTÉ DES SCIENCES D'ORSAY
université PARIS-SACLAY FACULTÉ DES SCIENCES DU SPORT
université PARIS-SACLAY IUT DE CACHAN
université PARIS-SACLAY IUT D'ORSAY
université PARIS-SACLAY IUT DE SCEAUX
université PARIS-SACLAY OBSERVATOIRE DES SCIENCES DE L'UNIVERS
université PARIS-SACLAY POLYTECH PARIS SACLAY
AgroParisTech université PARIS-SACLAY
CentraleSupélec université PARIS-SACLAY
école normale supérieure paris-saclay université PARIS-SACLAY
INSTITUT d'OPTIQUE GRADUATE SCHOOL ParisTech université PARIS-SACLAY
IHES Institut des Hautes Études Scientifiques Université Paris-Saclay

16 ACADEMIC RANKING OF WORLD UNIVERSITIES

230 LABORATORIES

13% of French research

500 experimental platforms

48,000 students

20,000 Undergraduate students

12,000 Master students

4,800 PhD students

17 different Graduate Schools

NATIONAL RESEARCH ORGANISATIONS

cea
cnrs
INRAE
Inria
Inserm La science pour la santé From science to health
ONERA THE FRENCH AEROSPACE LAB

Science and Engineering, Life Sciences and Health, and Social Sciences and Humanities.

ASSOCIATE-MEMBER UNIVERSITIES

Université Evry université PARIS-SACLAY
UVSQ université PARIS-SACLAY

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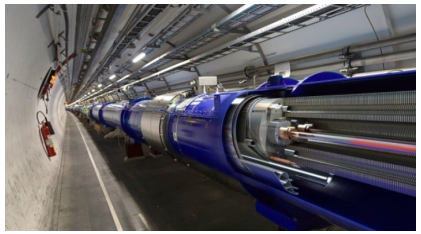
GRADUATE SCHOOL Physique

P2I Physique des deux Infinis

Physics of the 2 Infinities Graduate School of Physics

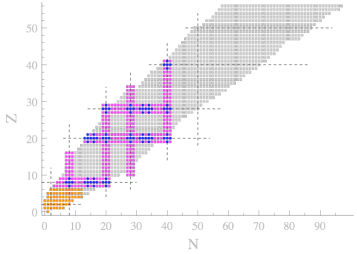
Experimental and theoretical research on fondamental science

Uncover the ultimate, infinitely small components of matter and the fundamental laws that govern their interactions



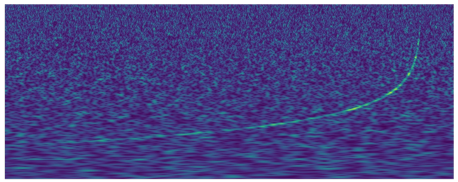
From the Standard Model to new physics

Understanding complexity: strong interaction and the emergence of complexity



Modeling the nuclear chart: a many-body problem

Elucidate the origin and evolution of the infinitely large components of the Universe



Towards multi-messenger observations of the Universe

GW170817

Original interdisciplinary research on societal issues: health and energy

Unique know-how in advanced technologies

1,400 people spread over 11 laboratories managed by 3 supervisory bodies: CEA, CNRS, Paris-Saclay University
About 40% of the national community in our research area

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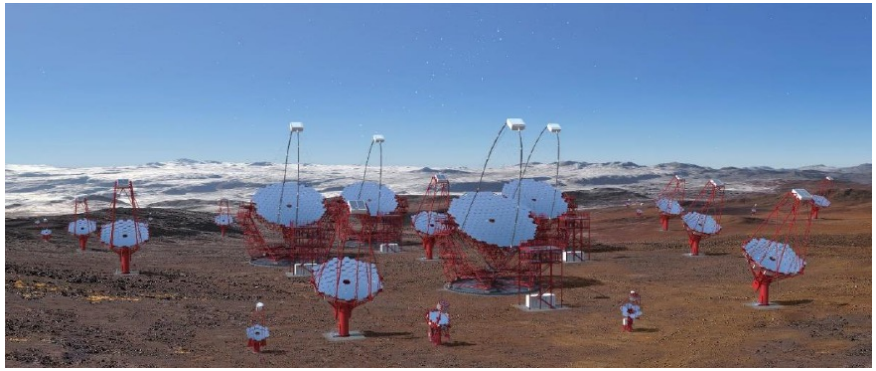
Astroparticles, nuclear astrophysics and cosmology

Astroparticles

Violent phenomena and the origin of cosmic rays

- CTA, flagship project with experience on HESS
- Study of gravitational waves: Virgo, Einstein Telescope on ESFRI, LISA
- Importance of multi-messenger studies: charged particles (AugerPrime), gammas (CTA, SVOM)



Cherenkov Telescope Array

Cosmology

Dark energy and inflation

- Large structures: LSST
- Baryon Acoustic Oscillations: DESI
- Cosmic microwave background: LiteBIRD satellite, CMB-S4 observatory

Dark matter

- EDELWEISS (Modane) and preparation of the European EURECA project

LSST

Nuclear astrophysics

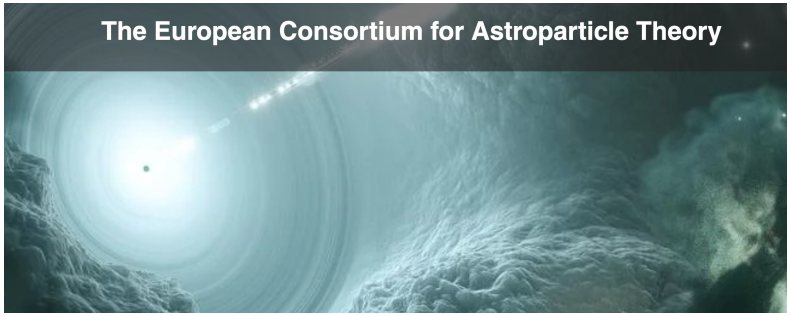
Nucleosynthesis

- Satellite projects and experiments with accelerators

- A rich and diversified program combined with the unique strong interface with astrophysics, particle and nuclear physics, will allow leading original research via multi-messenger and multi-wavelength approaches.
- Development also of space missions

Paris-Saclay Astroparticle Symposium: History

Since 2019, Paris Saclay University is a node of the EuCAPT (The European Consortium for Astroparticle Theory) network of APPEC.
https://www.eucapt.org/



In this framework, the first Paris-Saclay AstroParticle Symposium was organized in 2019.

The symposium is in particular supported by P2I – GS Physics and the LabEx P2IO.

The symposium has become a recurrent event for the Paris-Saclay University and the Pascal Institute.

Paris-Saclay Astroparticle Symposium 2019

Paris-Saclay Astroparticle Symposium: Edition 2022

Many thanks to:

Permanent Organizing Committee:
Yann Mambrini (IJCLab, Theory), Philippe Brax (IPhT, CEA Saclay)
Olivier Deligny (IJCLab, A2C), François Brun (DPhP, CEA Saclay)

Organizing Commitee for 2022:
Fabian Schussler, Fabio Acero, François Brun
Laura Salvati, Olivier Deligny, Philippe Brax
Simon Cléry, Yann Mambrini

Pascal Institute

On behalf of P2I – GS Physics and the Paris-Saclay University,
I wish you a very fruitful symposium!