

Scientific Council, June 6th 2016

Ph. BUSSON (LLR) et P.O LAGAGE (AIM)



# 2015-mid 2016: 18 months of intensive work

#### **Main outcomes**

- New governance at work
- Mid-term review passed
- Flagship projects selected

## P2IO: bridging the two infinites

- A broad disciplinary spectrum ranging from particle and nuclear physics, astroparticle to astrophysics, experiment and theory, accelerator science, instrumentation and associated interfaces
- A network of 12 laboratories:
  - belonging to 5 different organisms: CEA, CNRS, Ecole
     Polytechnique, Paris Sud University, Paris Diderot University
  - located in a small area in Orsay, Palaiseau, Saclay
  - 2000 people
- 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)

### **P210 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

#### **P2IO** Goals

#### Goals:

- Create a world class pole in the Paris-Saclay University framework
- Foster the emergence of **breakthroughs** in our 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 was funded in 2011 with a 14 M€ budget [04/2011-12/2019]

# Mid-term evaluation June 2015\*

\* Prepared with Anne-Isabelle Etienvre and Laurent Verstraete; (previous P2IO director and deputy director)

# Mid-term evaluation: Roadmap presented

- Phase 1 [2011-2014]: « building the basements »
  - Create technological platforms (« Transform »)
  - Strengtheng or foster emergence of collaborations between members by allocating post-docs (« Transform »)
  - Support upstream R&D and participate to the formation of PhD students by half-grants (« Explore &Transform »)
- Phase 2 [2015-2019]: « taking the lead »
  - Foster further internal collaborations, increase visibility of P2IO actions by launching 5 « flagship projects »
  - Structure by accompanying the Paris-Saclay University launch with a new governance organisation and by launching new actions
  - Pursue « Explore &Transform » actions
  - Monitor the newly created platforms

### Mid-term evaluation: Report

#### Report:

#### 1. Noteworthy productions

#### 1.1. Outstanding progress regarding research

P2IO is a success. The scientific ambitions are being met, with research positions, and excellent science resulting. The positions are linking across labs, providing new science which would not otherwise exist. Substantial integrating success in IT infrastructure provision has already been delivered. Much promising science is supported, and starting to deliver on that promise.

#### 1.2 Striking progress in other "Labex" fields

#### a. Formation

The educational programmes are in place, have a very high international quality and are attracting world-class people. Many high-quality PhD projects are starting, linked to exciting science.

#### b. Valorization

the wider impact is strong - the major exciting projects are being explained widely across the country. The investment in modern computing will prove very cost-effective, in operation costs and carbon impact.

#### c. International (outreach, attraction, networking...)

The labs are leaders in international projects - this labex introduces new opportunities across the labs, especially for students and postdocs.

### Mid-term evaluation: report

- P2IO is a success
- Many high-quality PhD projects are starting, linked to exciting science
- The labs are leaders in international projects this LabEx introduces new opportunities across the labs, especially for students and postdocs.
- There are no substantial weaknesses.
- The management team has in place a thoughtful and potentially excellent plan to enhance and strengthen inter-lab collaboration, building on the special opportunity provided by the LabEx brand.

→ We continue!

→ Flagship projects

### **New Governance**

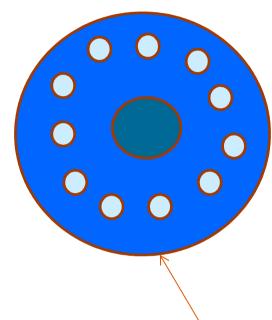
#### P2IO New executive structure



A director:
Ph. Busson
A deputy director:
P.-O. Lagage

+ a management board made of 11 experts (no longer lab. directors)

- P1: Gautier HAMEL de MONCHENAULT
- → Marco ZITO (SPP)
- P2: François COUCHOT (LAL)
- P3: Georgi GEORGIEV (CSNSM)
- P4: Emmanuel **DARTOIS** (IAS)
- R1: Sébastien BOUSSON (IPNO)
- R2: Sébastien PROCUREUR (SPhN)
- →To be replaced
- R3: Michel MUR (SEDI)
- Theory: Samuel WALLON (LPT)
- Health: Laurent **MENARD** (IMNC)
- Energy: Jean-Christophe TRAMA (SERMA)
- Teaching & Outreach: Laurent VERSTRAETE (IAS)



CSST
Scientific et Technical
Advisory committee

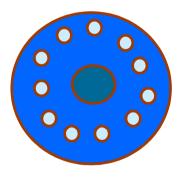
→ A better link with the scientific community



## Un changement gouvernance demandé par les tutelles

Le Directeur et Directeur Adjoint sont entourés de 11 **experts** pour former le comité de Direction (CoDir)

Auparavant c'étaient le comité de direction (comité de pilotage) était formé d'un direct et de **Directeurs d'Unités** 



CoDir

- P1: Gautier **HAMEL de MONCHENAULT** (SPP)
- P2: François COUCHOT (LAL)
- P3: Georgi GEORGIEV (CSNSM)
- P4: Emmanuel **DARTOIS** (IAS)
- R1: Sébastien **BOUSSON** (IPNO)
- R2: Sébastien **PROCUREUR** (SPhN)
- R3: Michel MUR (SEDI)
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Déjà 8 réunions en 2015 Fonctionne bien, par consensus

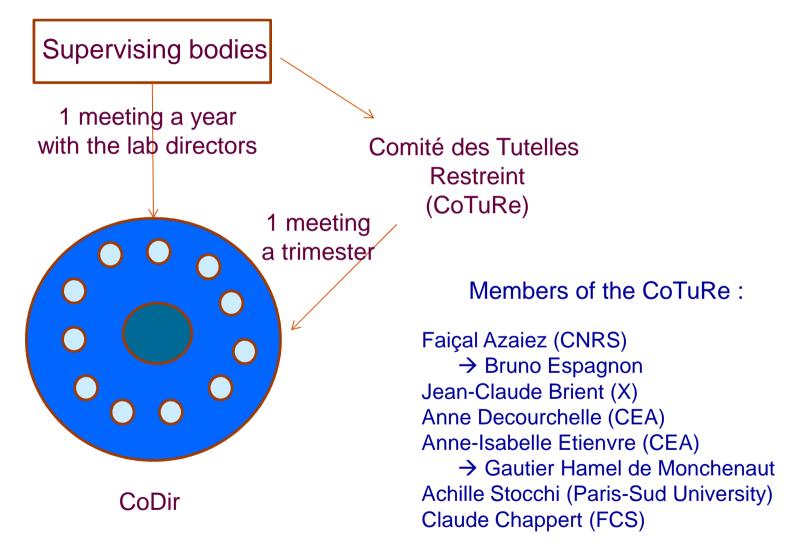
## Comité de Sélection Scientifique et Technique

- Created on request of supervising bodies («Tutelles»: CEA, CNRS, Université Paris-Sud, Université Paris-Diderot, Ecole polytechnique)
- How: reunion of two existing committees (<u>Comité de Sélection Post-Docs et Comité de Sélection R&D</u>)
- Board of 8 members gathering the two boards of CSPD and CSRD
- New: CSPD dynamical pool of experts for evaluating the proposals
- Performs the evaluations of post-doctoral/doctoral grants, R&D projects as during phase 1 and participated to the evaluation of the « emblematic projects »

Plus presentation by Dirk

Scientific Council, June 6th 2016





# After 17 months of practisse we can say that it is heavy; but it is working

### Flagship projects

Multi-years project (Mid 2015 to the end of the Labex Dec 2019) aiming at

bringing a high visibility to the LabEx having an important structuring effect for the P2IO labs

More than half of the remaining P2IO budget for the flagship projects

→ 3.2 M€

#### P2IO Selection process of flagship projects



A single call in 2015 (launched in March 2015), start of the selected projects in Q2 2016

Call for Short (2-3 pages) descriptions of potential proposals for large projects. [20/03/2015]



Management Board selects no more than 8 candidate proposals for full development

[Reception of the proposals 04/09/2015]; [selection by CODIR];[publication of the preselected proposals 10/2015]



Full proposals are developed by the community and validated by Directors.

[Reception of full proposals mid-12/2015]



Validation of the selected projects by the supervising bodies and the Directors [03/2016]



Selection of 3-4 emblematic projects by the Management Board

[Audition of the full proposals by enlarged CODIR 01/2016]; [final selection by CODIR 02/2016]



Scientific evaluation of the merits of submitted proposals by the CSST

[Evaluation of full proposals by CSST + external experts 12/2015-01/2016]



# Emblematic projects: first selection step

- 15 eligible and 2 non-eligible pre-projects received on the 4th of September (66 labs directors signatures)
- Down selection done by the CoDir
  - 2 CODIR members/pre-project for evaluation
  - 53 supporting letters from the labs directors
  - 8 pre-projects were selected, after consultation (1st of October) of the supervising bodies 9 pre-projects were asked to develop the full version of their proposals

### Pre-projects after first down selection

Nom du projet	Porteur	Thèmes scientifiques/technolo giques	scientifiques/technolo ( <u>porteur souligné</u> )	
Evolution de la matière du milieu interstellaire aux exoplanètes avec le JWST	Abergel et al.	P4	IAS, CSNSM, IPN, SAp	870
Plateforme pour la Recherche et ses Applications avec des Electrons	Barsuk et al.	P3, R1, R2, Health	LAL, IMNC, IPN	900
Structuration de l'Univers des petites aux grandes échelles	Elbaz et al.	P2	SAp, IAS, IPhT, LPT, LAL, SPP	900
Charting Terra Incognita of Exotic Nuclei	Franchoo et al.	P3, R1	IPN, CSNSM, SPhN	897
MAjorana Next Generation Underground Experiment	Giuliani et al.	P1, R2	CSNSM, LAL, SEDI, SIS, SPP	497
CAmera NEctarcam VAlidation at Paris-Saclay	Glicenstein et al.	P2	SPP, IPN, LLR, SAp, SEDI, SIS	893.25
Next-Gen Gluonométrie	Sabatié et al.	P3, R2	SPhN, CPhT, IPhT, IPN, LPT, SEDI	765
TecHnology Innovations for INtelligent Trackers	Schwemling et al.	P1, R2	<u>SPP</u> , LAL, SEDI	900
High Granularity Calorimeters for Future Colliders	Sirois et al.	P1, R2	LLR, LAL, SEDI, SPP	900
	Validée	en réunion du comit restreint 01/10/20		7522 (835 par projet)

# Emblematic projects: second selection step

- Based on evaluation grids (internal/external experts) generated by the CODIR
- CSST board nominated 3 experts/proposal
- On proposals by the labs directors the CODIR established a list of external experts to be contacted (~ 90 were contacted, 25 externals experts found)
- Proposals were received on the 14th of December 2015
- Evaluation by the CSST in parallel with the evaluation by the external experts
- Audition of the 9 proposals during a two-day special meeting of the CODIR (13 members + 8 CSST board members + groups experts) on the 28-29th of January 2016 (20' oral presentation, 40' for questions and 30' discussion among the reviewers)
- On the 19th of February the CODIR classified the 9 proposals in 3 categories:
   2 « CODIR priority », 5 « to be done », 2 « not selected by the CODIR »
- On the 11th of March 2016: final list has been established during a meeting with representative of the supervising bodies (COTURE)
- On the 23rd of March 2016: validation of the final list during a special meeting with all labs directors and supervising bodies present
- A dedicated session is organized for presenting the 5 emblematic projects

Validée en réunion du comité des tutelles restreint 01/10/2015

### **Projects after final selection**

Projet	Budget k€	Budget -15% k€	LabEx k€	CEA k€	CNRS k€	UPSud k€	X k€	IPN/LA L k€	Budge t final k€	%
Abergel	743	631	547.8	0	0	50 <sup>a</sup>	0	0	597,8	80.5
Barsuk	900	765	664.1	0	50 <sup>b</sup>	0	0	100 <sup>c</sup>	814.1	90.5
Franchoo	900	765	664.1	0	100 <sup>d</sup>	0	0	70 <sup>c</sup>	834.1	93.7
Glicenstein	894	760	659.8	0	50 <mark>e</mark>	0	0	0	709.8	79.4
Sirois	900	765	664.1	0	50 <mark>e</mark>	0	50e	0	764.1	84.9
Total	4337	3686	3199,9	0	250	50	50	170	3719.9	85.8

a: une demi bourse doctorale pour l'IAS

b: une année de bourse post-doctorale pour l'IMNC (2018)

c: sur équipement; voir répartition avec les DUs

d: deux années de bourse post-doctorale pour le CSNSM (2017)

e: une année de bourse post-doctorale pour le LLR

Réunion comité des tutelles restreint 31/05/2016

# Emblematic project: Abergel et al. (P4)



L'équipe Abergel et al. lors de l'audition en Janvier 2016 © JCT

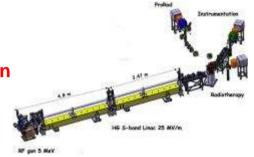


The launch in late 2018 of the James Webb Space Telescope (JWST) will profoundly change our current understanding of the evolution of extraterrestrial material as it passes from the most diffuse regions of the interstellar medium of our Galaxy to star formation sites, protoplanetary disks and exoplanets. The largest ever launched space telescope (mirror diameter of 6.5 m), the JWST will observe in the infrared with a sensitivity and a spatial resolution better than one to two orders of magnitude than its predecessors. P2IO teams working on extraterrestrial matter have come together to propose a project combining observations with the JWST, numerical modeling and laboratory experiments in order to prepare for the interpretation of the JWST observations. This project brings together a unique set of complementary skills (at the IAS, SAp-AIM, CSNSM, IPNO) which, federated, will place the P2IO community in a leading international position for the scientific exploitation of the JWST. The leverage will be very strong, since the last year of the project will coincide with the first year of operations of the JWST that will then continue at least until 2024 and probably beyond. A budget of 743 k€ is required over the period mid 2016 - end 2019 to fund the training of PhD students and postdocs, complete laboratory equipment, provide animation and to present scientific results.

## Emblematic project: Barsuk et al.(P3, R1, R2, Health)



L'équipe Barsuk et al. lors de l'audition en Janvier 2016 © JCT



The PRAE project aims at constructing a multidisciplinary R&D scientific site at Orsay campus based on an electron accelerator delivering a high-performance beam with energy up to 70 MeV (phases 1 and 2), upgradeable to 140 MeV (phase 3) and allowing a possibility to reach 300 MeV, for the completion of unique measurements in the fields of nuclear physics, radiotherapy and instrumentation. In the energy range 30-70 MeV, the PRAE beam will host experiments on the electron elastic scattering off the proton in a kinematical region of crucial importance for the determination of the proton charge radius. In the 50-140 MeV range preclinical studies to develop new methods of potentially better cancer treatment will be performed. The PRAE beams (30-140 MeV) will provide the tools essential to validate and characterize instrumentation techniques considered for the next generation of experiments at future high energy accelerators. In addition PRAE will provide a major education and training asset for students and engineers yielding a local instrument of advanced technology at the heart of the scientific, technological and academic complex of the Paris-Saclay University. The P2IO financial contribution is crucial to ensure the 50 Hz operation of PRAE as well as the beam diagnostics and key instrumentation of the beam lines. In addition, the contribution of P2IO to this project will allow to hire two post-doctorates to support the key experiments.

# Emblematic project: Franchoo et al. (P3, R1)



L'équipe Franchoo et al. lors de l'audition en Janvier 2016 © JCT



We propose key innovative detection and R&D in P2IO laboratories that will be implemented during first experiments at the Alto platform in Orsay on masses, radii, spins, shapes, moments and lifetimes of nuclear ground and excited states of exotic nuclei, in the perspective of the coming Spiral-2 facility at Ganil. The measurement of these basic properties over a large range of the nuclear chart will permit to test theoretical models. Single-particle states in nuclei are decisive for this and a powerful tool for their elucidation is the study of exotic nuclei in spin-oriented states. These states can be obtained by on-line nuclear orientation with the Polarex set-up. At the same time we intend to install the MLLTrap Penning-trap mass spectrometer with both high-accuracy and in-trap detection capabilities. A novel set-up for collinear laser spectroscopy Lino will give access to charge radii and electromagnetic moments of isomeric states in exotic nuclei. The acquired experience of the various set-ups will be applied to the physics programme of fission and fusion-evaporation products that subsequently will be extended to more proton-rich as well as superheavy elements at the S3 spectrometer coupled with the Desir area at Ganil. We therefore focus much on preparing the first experiments at S<sup>3</sup>, aiming at the fundamental properties of the nuclear ground state (masses, lifetimes, magnetic moments, etc.) along with detailed structural information that is available only through precision spectroscopic measurements.

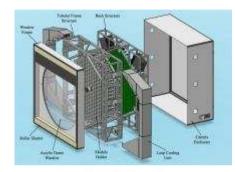
We request 900 kE equally distributed among the participating laboratories CSNSM, IPN, and Irfu/SPhN.

Réunion extraordinaire comité des tutelles 23/03/2016

### Emblematic project: Glicenstein et al. (P2)



L'équipe Glicenstein et al. lors de l'audition en Janvier 2016 © JCT

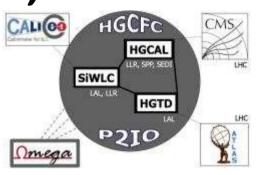


NectarCAM is a modular camera design for the Medium Sized Telescopes (MST) of the future Imaging Cherenkov Telescope Array CTA. It covers a 8° field of view, corresponding to an area on the sky twice as large as that of the H.E.S.S. cameras, and is a major french contribution to CTA. The P2IO Labex includes CEA-IRFU, LLR and IPNO, all of which are members of the NectarCAM consortium. The aim of the CANEVAS project is to build the first partially equipped NectarCAM. It will include a full scale mechanical frame, data acquisition system, slow control, calibrating devices and roughly one third of the detection modules, giving a field of view of more than 4°, sufficient for scientific observations. The CANEVAS camera will be used to prepare for the transfer of subcomponents to the industry, and to perfom a true integration, a full calibration and in the end validate the whole assembly chain with scientific data obtained by mounting the camera on a telescope at a CTA site. With this instrument, the P2IO Labex will be associated to a major instrument for the very high energy astronomy in the next decade. The total budget requested is 894 k€ dispatched as follows: 579 k€ for hardware, 250 k€ for PhD and post-doctoral grants and 65 k€ for education and outreach. The duration of the CANEVAS proposal is 3 years.

### Emblematic project: Sirois et al. (P1)



L'équipe Sirois et al. lors de l'audition en Janvier 2016 © JCT



High granularity calorimetry represents a major evolution in detector techniques for the future experiments in high energy physics. Originally invented in the laboratories of the LabEx P2IO for precision physics at a future linear collider (ILC or CLIC), the technique can be adapted to tame the collision pile-up effects in the environment with high hadronic flux of the high luminosity LHC (HL-LHC).

This emblematic project aims to develop synergies between the laboratories of Paris-Saclay (LAL-IN2P3 Orsay, LLR-IN2P3 Palaiseau, SEDI and SPP-IRFU Saclay) in high granularity calorimetry with silicon-based sensors resistant to radiation. This is a particularly timely period for common developments that could allow the P2IO groups to assume a leadership worldwide. Building a final prototype Si-W of the CALICE (SiWLC) electromagnetic calorimeter (ECAL) will allow full validation of this technology, with the first complete performance testing. The adoption in 2015 of a high-granularity solution (HGCAL) by the CMS experiment, and granular silicon detector option with precise time measurement (HGTD) in ATLAS, is a paradigm shift at hadron colliders and involves intense R&D during the coming four years.

### « Business as usual »

## Actions « Explore & Transform »: R&D

- Call for « small » R&D projects: 3 selected projects for a total amount of 187 k€
  - C. BRUNI et al. (LAL, inter-LabEx),R1, DRUM; coupling a femtolaser laser to the photoinjector PHIL, femtoseconds electrons buckets
  - V. SHARYY et al. (Irfu/SPP, LAL), R2, detectors of 511 keV photons from the positron annihilation which provide simultaneously the extremely high resolution in time and large efficiency
  - R. DUPRE et al. (IPN, Irfu/SEDI), R2,P3,CLAS12; develop a new detector offering better timing and spatial resolution as well as better particle identification than the previous RTPCs, wire chamber based on carbon fibers wires (cf presentation)
- Evaluation is done by the CSRD ((~ 20 experts) in the framework of the CSST, final selection by the CODIR, validation by the COTURE

# Actions « Explore & Transform » : Post-doc

- Call for post-doctorals grants 3 selected projects for a total amount of 300 k€
  - F. FLEURET et al. (LLR, LAL), P3, Charm In Heavy Ion Collisions @
     LHCb
  - C. ENGRAND et al. (CSNSM, IAS), P4, Poussières cométaires et disques protoplanétaires
  - L. AUDOUIN (IPN, Irfu/SPhN), R2, T1, Mesures de fission et instrumentation associée
- Evaluation is done by the CSPD (~ 20 experts) in the framework of the CSST, final selection by the CODIR, validation by the COTURE
- Poster session this afternoon

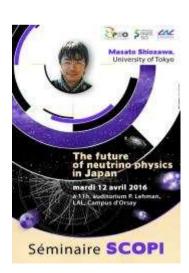
## Actions « Explore & Transform » : PhD

- Call for half doctorals grants: 4 selected projects for a total amount of 200 k€
  - F. BEAUDETTE (LLR), P1, « Study of events with tau pairs and b jets in CMS »
  - F. CAVALIER (LAL), P2, « Battre la Limite Quantique pour le détecteur Virgo »
  - X. DE LA BROISE (Irfu/SEDI), R2, « Intégration de capteurs TES haute impédance », TES= superconducting transition thermometer
  - E. MAZZUCATO (Irfu/SPP), R2, « Une TPC à argon liquide double phase pour WA105 »
- Evaluation is done by the CSPD (~ 20 experts) in the framework of the CSST, final selection by the CODIR, validation by the COTURE
- Poster session this afternoon

### **Teachnig & Outreach**

- Annual budget ~ 180 k€
- Cf talks by J.C. TRAMA and L. VERSTRAETE







Scientific Council, June 6th 2016

### **Actions for phase 2**

- Organize follow-up procedure of the 5 emblematic projects (3.2 M€) to insure the best return in term of international visibility of the LabEx:
  - preliminary ideas have been discussed with the representative of the supervising bodies
  - we expect the Scientific Council to help the CODIR in defining this procedure

### **Actions for phase 2**

• Organize the « Explore & Transform » actions insuring the best possible coverage of scientific sub-domains undercovered in the 5 emblematic projects, while supporting Outreach & Formation (2.6 M€)

### R&D/platform calls

Année	Date AO	Prévision budget	Date Remise	Date AE	Année CP1	Année CP2	Année CP3
2016 plateforms	15/02/2016	350 k€	15/06/2016	09/2016	2016	2017	2018
2017 « Small » projects	15/03/2017	250 k€	15/05/2017	07/2017	2017	2018	2019
2018	No call						

600 k€

### Technological platforms

- 5 technological groups:
  - AccelTech (group leader: S. BOUSSON from IPNO),
  - VirtualData (group leader: M. JOUVIN from LAL),
  - CaptInnov (group leader: R. CORNAT from LLR),
  - RadioMatter (group leader: F. FORTUNA from CSNSM),
  - SpaceTech (group leader: A. CHARDIN from IAS)
- Pierre-Olivier LAGAGE + P. BUSSON conducted an audit of the 5 technologogical groups
- Result: there are very dynamical groups (cf presentation of PANAMA), some less dynamical
- Action for second half of 2016: call for 2-3 R&D projects (120 to 200 k€ each) supported by existing technological platforms, total budget 350 k€

### PhD calls

Année	Date AO	Prévision budget	Date Remise	Date AE	Année CP1	Année CP2	Année CP3	Année CP4
«2016»	15/09/2015	4 X 50 k€	10/12/2015	06/2016	2016	2017	2018	2019
«2017»	15/09/2016	4 X 50 k€	10/12/2016	06/2017	2017	2018	2019	
«2018»	15/09/2017	4 X 40 k€	10/12/2017	06/2018	2018	2109		

1/2 grant = 50 k€/3 ans

560 k€

Réunion comité des tutelles 08/12/2015

### Post-doc calls

Année	Date AO	Prévision budget	Date Remise	Date AE	Année CP1	Année CP2	Année CP3
«2016»	15/07/2015	3 X 100 k€	18/09/2015	05/2016	2016	2017	2018
«2017»	15/07/2016	4 X 100 k€	18/09/2016	05/2017	2017	2018	2019
«2018»	No call						

Post-doctoral grant :100 k€ (about 2 years)

700 k€

Réunion comité des tutelles 08/12/2015

# Outreach, formation, governance

Année	Attractivité	Formation	Gouvernance	Année CP
2016 (prévision)	50 k€	130 k€	20 k€	2016
2017 (prévision)	50 k€	130 k€	5 k€	2017
2018 (prévision)	50 k€	130 k€	20 k€	2018
2019 (prévision)	50 k€	130 k€	5 k€	2019

770 k€

## **Summary of the proposed spending of the 2.6 M€ remaining out of flagship proects**

R&D/platform calls : 600 k€

(2 calls 1 platform in 2016 : 350 k€; 1 R&D : 250 k€ in 2017)

PhD calls: 560 k€

(3 calls 2016, 2017, 2018; 4 ½ PhD funding;

for the 2018 call: only 15 months until the end of P2IO)

Post-doc calls: 700 k€

( 2 calls: 3 post\_docs in 2016; 4 post-docs in 2017)

Outreach, formation, governance : 770 k€

(2016, 2017, 2018, 2019)

Grand total = 2.63 M€

Scientific Council, June 6th 2016

### **Actions for phase 2**

P2IO played/plays/will play a crucial role in the structuration of UPSaclay departments P2I and SPU. In view of the results of the recent UPSaclay mid-term evaluation, defining a strategy insuring the best return from P2IO in the context of UPSaclay is challenging. We expect the Scientific Council to help the CODIR in defining this strategy (cf special session dedicated to UPSaclay)

#### lundi 6 juin 2016 09:15 - 10:00 Closed session (members of the Scientific Council only) 45' (Salle 129) 10:00 - 10:45 Introduction 45' Intervenant(s): Dr. Philippe BUSSON (LLR Palaiseau), Dr. Pierre-Olivier LAGAGE (Irfu/SAp Orme les Merisers) 10:45 - 11:10 Coffee break 25' 11:10 - 12:00 Teaching and Outreach 50' Teaching 25' Intervenant: Dr. Laurent VERSTRAETE (IAS Orsay) Outreach 25' Intervenant: Mr. Jean-Christophe TRAMA (SERMA Saclay) 12:00 - 14:00 Lunch 2h0'

14:00 - 14:30	A Low Energy nuclear Recoil Tracker for CLAS12 at Jefferson Laboratory 30' Intervenant: Dr. Raphaël DUPRE (IPN Orsay)				
14:30 - 15:00	HIgh Granularity HodoScope for Particle Identification 30' Intervenant: Dr. TBN (IPN Orsay or SPhN Saclay)				
15:00 - 15:30	Coffee break 30'				
15:30 - 16:10	PANAMA platform 40' Intervenant: Dr. Sébastien BOUSSON (IPN Orsay)				
16:15 - 17:40	Poster session 1h25' Intervenant(s): Pradipta GHOSH (LPT Orsay), Saranya GHOSH (Irfu/SPP Saclay), Alessandro MINOTTI (Irfu/SPhN Saclay), Yusuke TANIMURA (IPN Orsay), Nicola TAMANINI (IPhT Orme les Merisers) Jean-Baptiste DURRIVE (IAS Orsay), Loïc THULLIEZ (Irfu/SPhN Saclay), Arnand RAICHOOR (Irfu/SPP Saclay), Luiz VALE SILVA (LPT Orsay), Julia CASANUEVA (LAL Orsay), Noël MARTIN (IPN Orsay), Pauline ZARROUK (Irfu/SPP Saclay), Giacomo ORTONA (LLR Palaiseau), Takashi TOMA (LTP Orsay), Damian RALET (CSNSM Orsay)				
17:40 - 17:45	End of the public session 5'				
17:45 - 18:45	Closed session (members of the Scientific Council only) 1h0' (Salle 129)				
19:00 - 23:00	Dinner 4h0'				

Scientific Council, June 6th 2016

mardi 7 juir	2016
09:00 - 09:35	JWST: Evolution of matter from the interstellar medium to exoplanets with the JWST by A. Abergel et al. 35' Intervenant: Dr. Alain ABERGEL (IAS Orsay)
09:35 - 10:10	PRAE: Platform for Research and Applications with Electrons by S. Barsuk et al. 35' Intervenant: Dr. Sergey BARSUK (LAL Orsay)
10:10 - 10:40	Coffee break 30'
10:40 - 11:15	Charting Terra Incognita of Exotic Nuclei by S. Franchoo et al. 35' Intervenant: Dr. Serge FRANCHOO (IPN Orsay)
11:15 - 11:50	CANEVAS: CAmera NEctarcam VAlidation at Paris-Saclay by J.F. Glicenstein et al. 35' Intervenant: Dr. Jean-François GLICENSTEIN (Irfu/SPP Saclay)
11:50 - 12:25	HGCFC: High Granularity Calorimetry for Future Collider Experiments in High Energy Physics by S. Sirois et al. 35' Intervenant: Prof. Yves SIROIS (LLR Palaiseau)
12:25 - 13:45	Lunch 1h20'
13:45 - 14:45	P2IO in the context of Université Paris-Saclay (UPSaclay) 1h0'
	Overall presentation 30' Intervenant: Dr. Gilles BLOCH (Université Paris-Saclay)

13:45 - 14:45	P2IO in the context of Université Paris-Saclay (UPSaclay) 1h0'					
	Overall presentation 30' Intervenant: Dr. Gilles BLOCH (Université Paris-Saclay)					
	Conseil Académique 30' Intervenant: Dr. Guy WORMSER (LAL Orsay)					
14:45 - 15:05	Coffee break 20'					
15:05 - 15:10	End of the public session 5'					
15:10 - 15:40	Closed session with laboratories directors and supervising bodies (ie "Tutelles") 30' (Salle 129)					
15:40 - 16:55	Closed session (members of the Scientific Council only) 1h15' (Salle 129)					
16:55 - 17:30	Close-out 35'					