

P2IO

Physics of the two infinities and the Origins (P2IO) is a consortium of laboratories

The Valley (Orsay) :

- Centre de Spectrométrie Nucléaire et de Spectrométrie de Masse (CSNSM), UMR UPS-CNRS,
- Institut d'Astrophysique Spatiale (IAS), UMR UPS-CNRS,
- Laboratoire Imagerie et Modélisation en Neurobiologie et Cancérologie (IMNC), UMR UPS-CNRS,
- Institut de Physique Nucléaire d'Orsay (IPNO), UMR UPS-CNRS,
- Laboratoire de l'Accélérateur Linéaire (LAL), UMR UPS-CNRS,
- Laboratoire de Physique Théorique (LPT), UMR UPS-CNRS

The plateau (Saclay and Palaiseau)

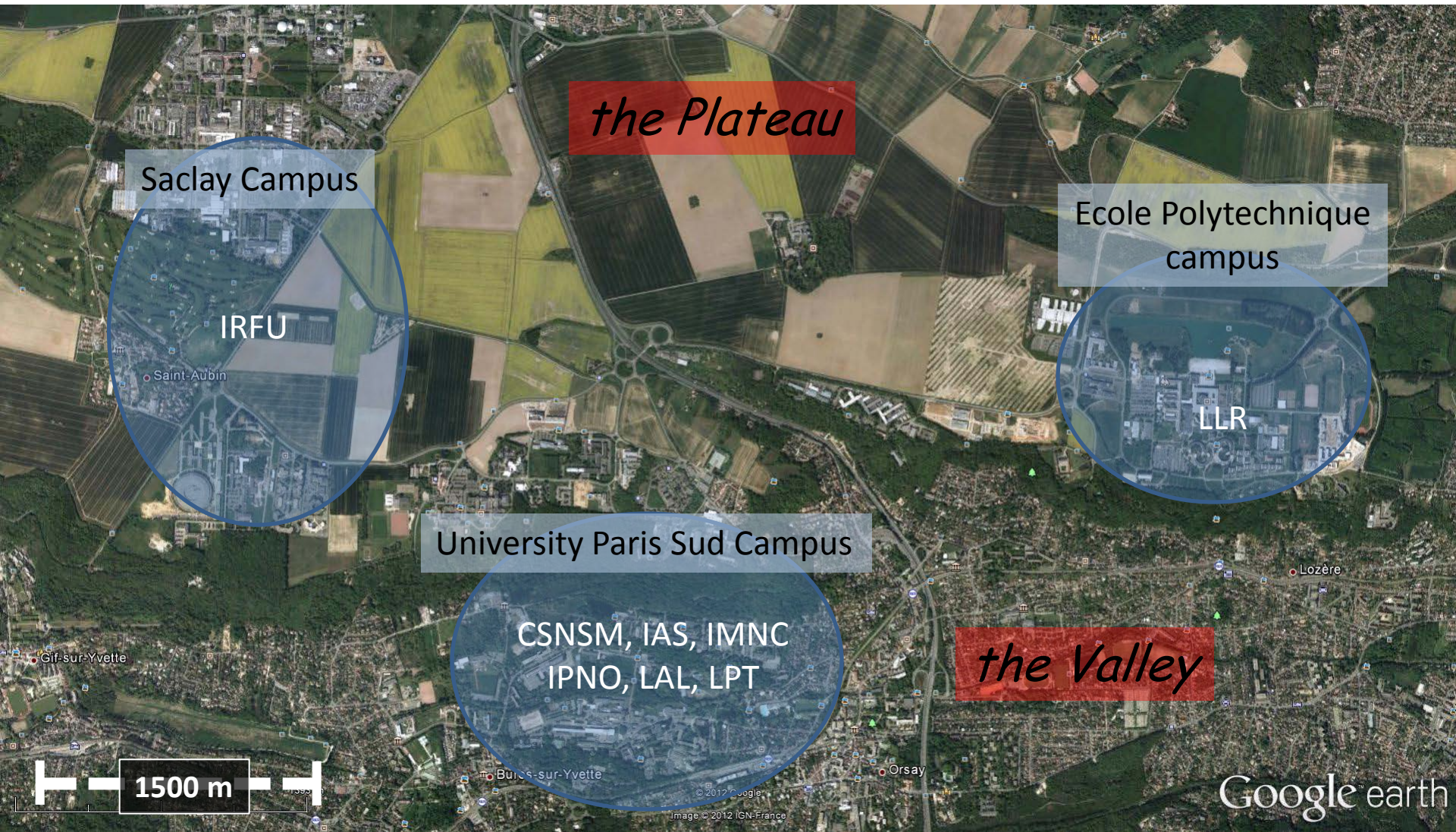
- Institut de Recherche sur les lois Fondamentales de l'Univers (IRFU) - CEA,
- Laboratoire Leprince Ringuet (LLR), UMR Ecole Polytechnique-CNRS, - Ecole Polytechnique

Through the 'TRANSFORM' objective, the **Labex P2IO** is meant to **enhance synergies, identify and create common platforms and infrastructures** and possibly new structures and frameworks.

« coordination of two Equipex » : **ThomX** (10MEuros) , **Andromède** (4MEuros).

P210 - Location

CSNSM, IAS, IMNC, IPNO, IRFU, LAL, LLR, LPT



P2IO - Staff and Area

	Staff	Halls	White rooms	workshops	Laboratories	Storage space	offices	Meeting-seminar rooms	Teaching rooms	TOTAL
		(in m ²)								
P2IO Valley	930	9630	1955	9359	7695	3099	22902	2714	1231	58585
LLR	117	150		500	225	200	1200	70		2505
IRFU	871	11170	1995	4988	5274	6779	11738	1844	360	44148

P2IO Valley

LLR

IRFU

930

117

871

9630

150

11170

1955

1995

9359

500

4988

(in m²)

7695

225

5274

3099

200

6779

22902

1200

11738

2714

70

1844

1231

360

58585

2505

44148

P2IO - projects

1- The Plateau of Saclay is the home base of P2IO

The application for funding of this project was not successful!

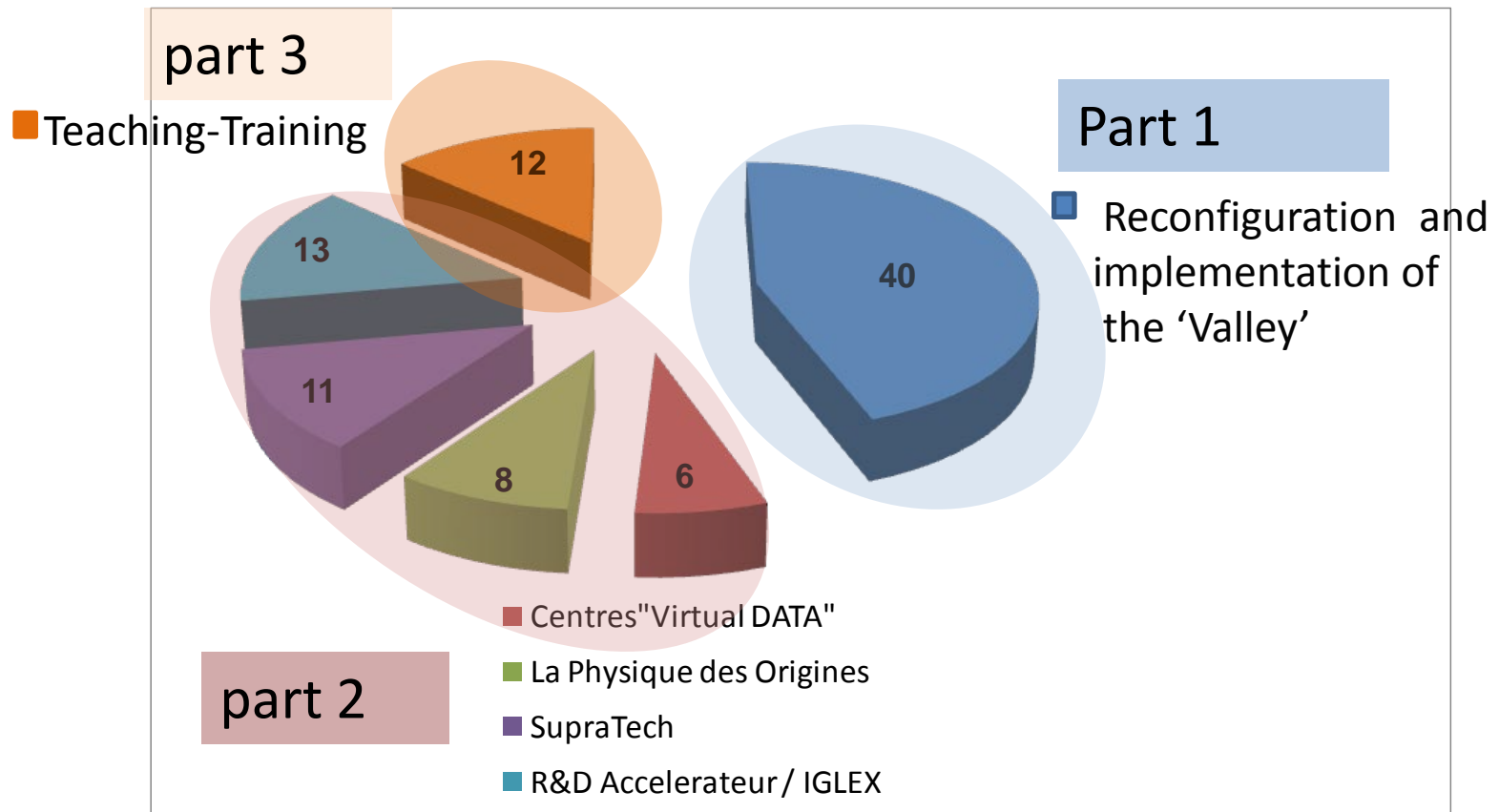
Although only **260 M€** were asked for!

(relocation, dismantling and decommissioning costs were not included)

2- **P2IO valley-plateau Project**

Enhancing the coherence of the Valley component of P2IO
and optimizing synergies and complementarities within the
valley and between the valley and the plateau

P2IO valley-plateau Project



Evaluated cost 90 M€

PART 1

PART 1

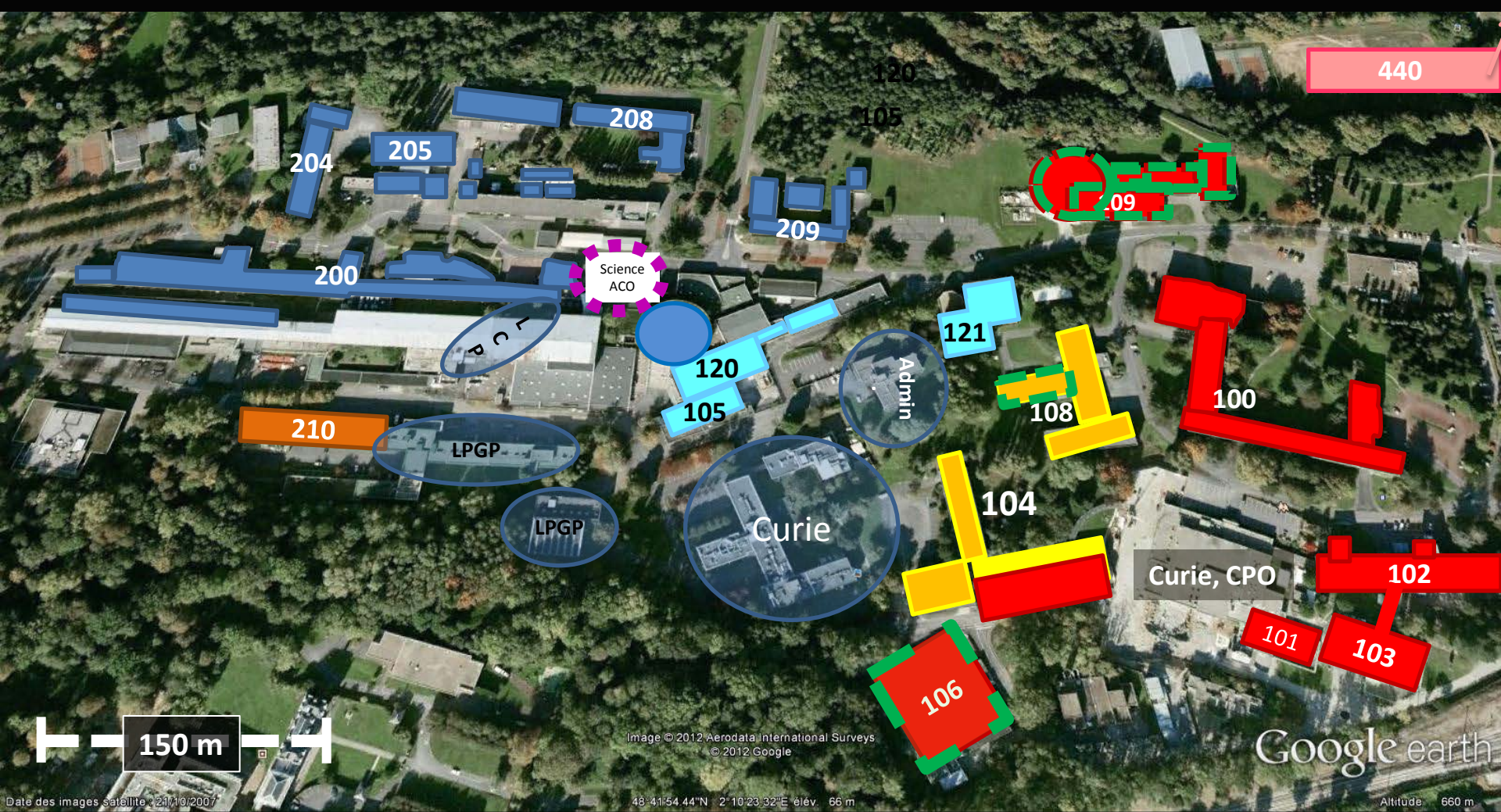
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Reconfiguration, reimplementation of the Valley component of P2IO

Aiming at increasing science and innovation output and impact

P2IO valley- NOW

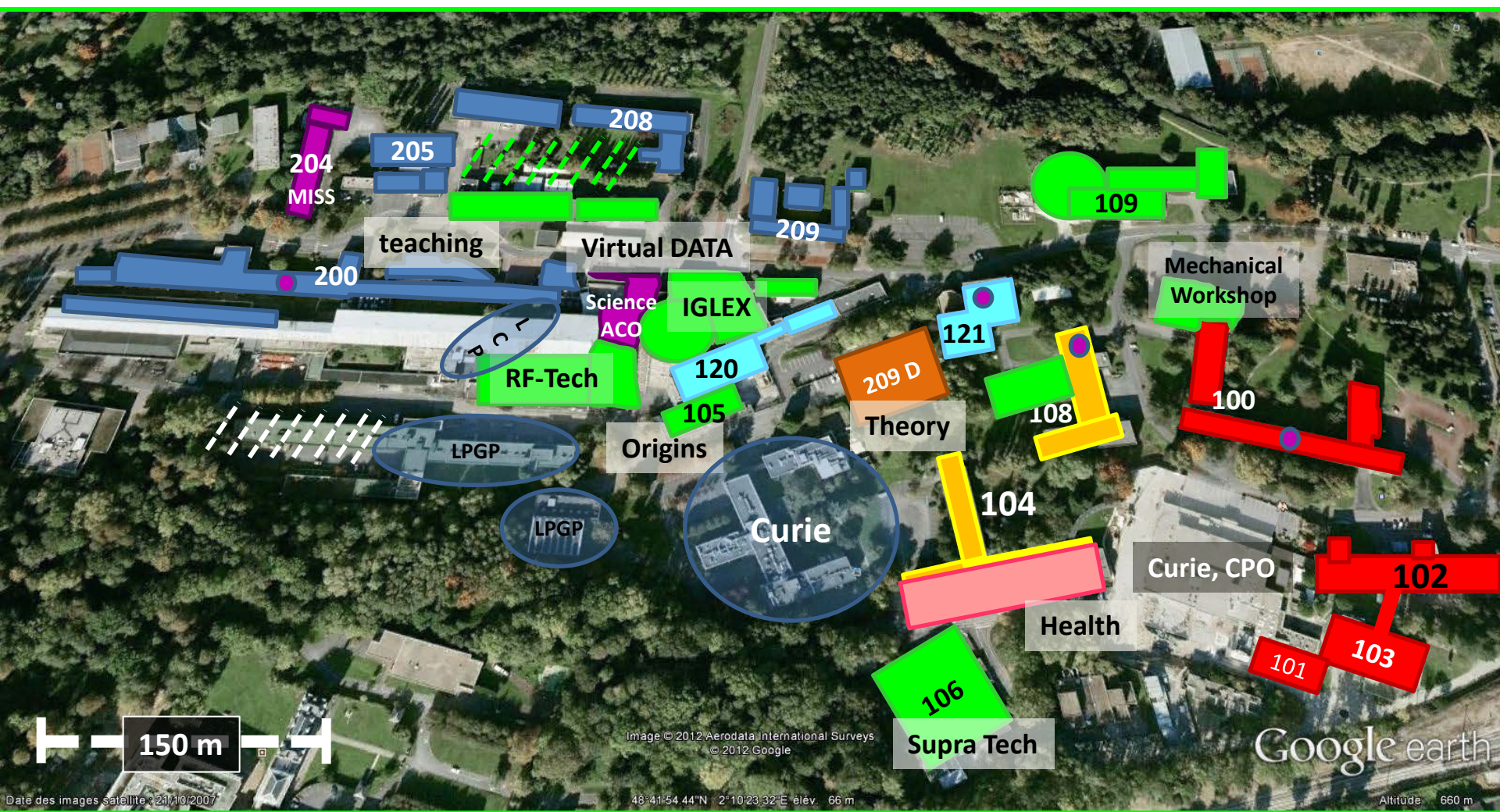


Particles Cosmology Astrophysics Origins Nuclear health Theory...

Already open access to P2IO labs



P210 Valley - AS PLANNED



LAL

IAS

CSNSM

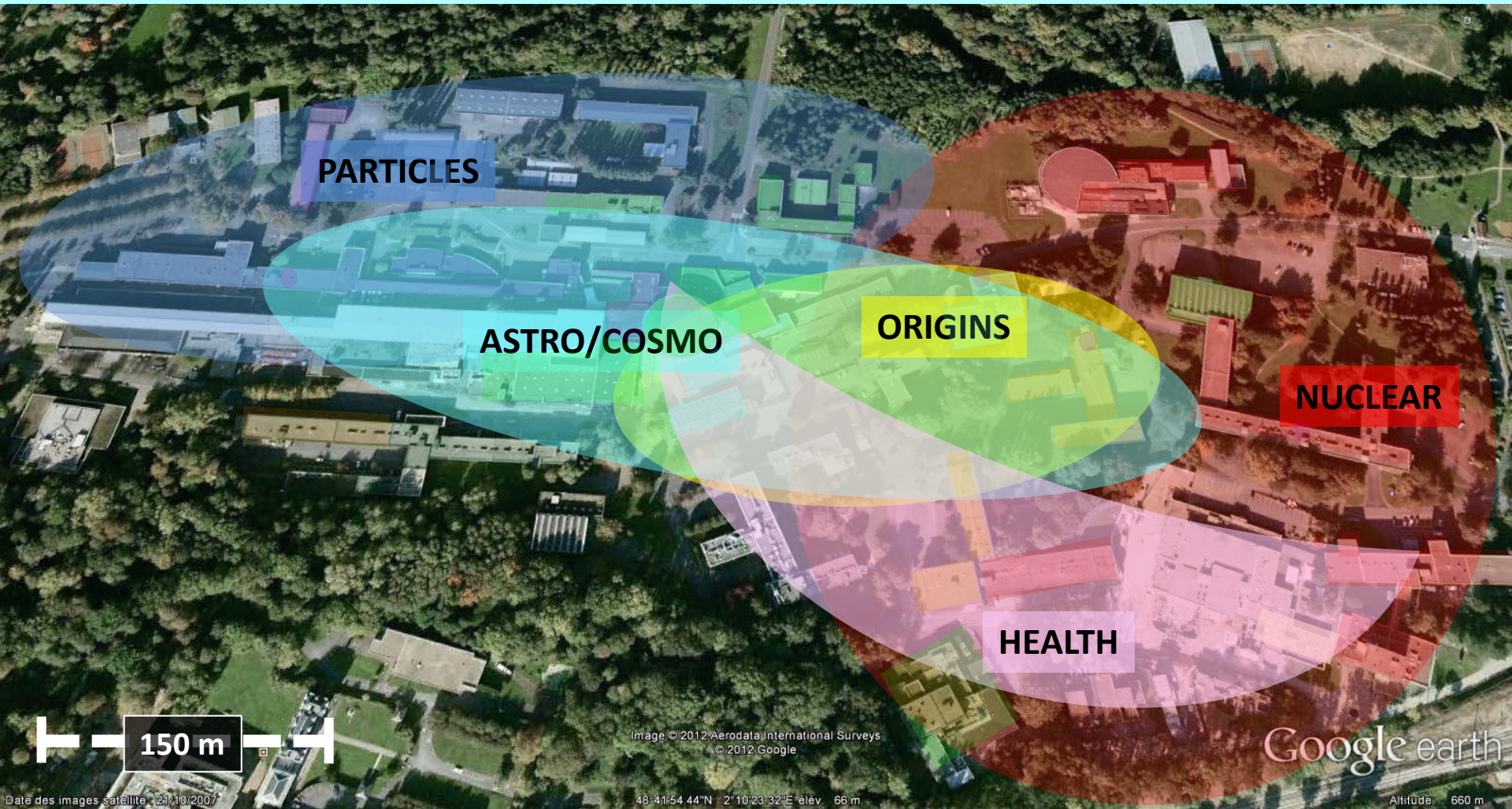
IPNO

IMNC

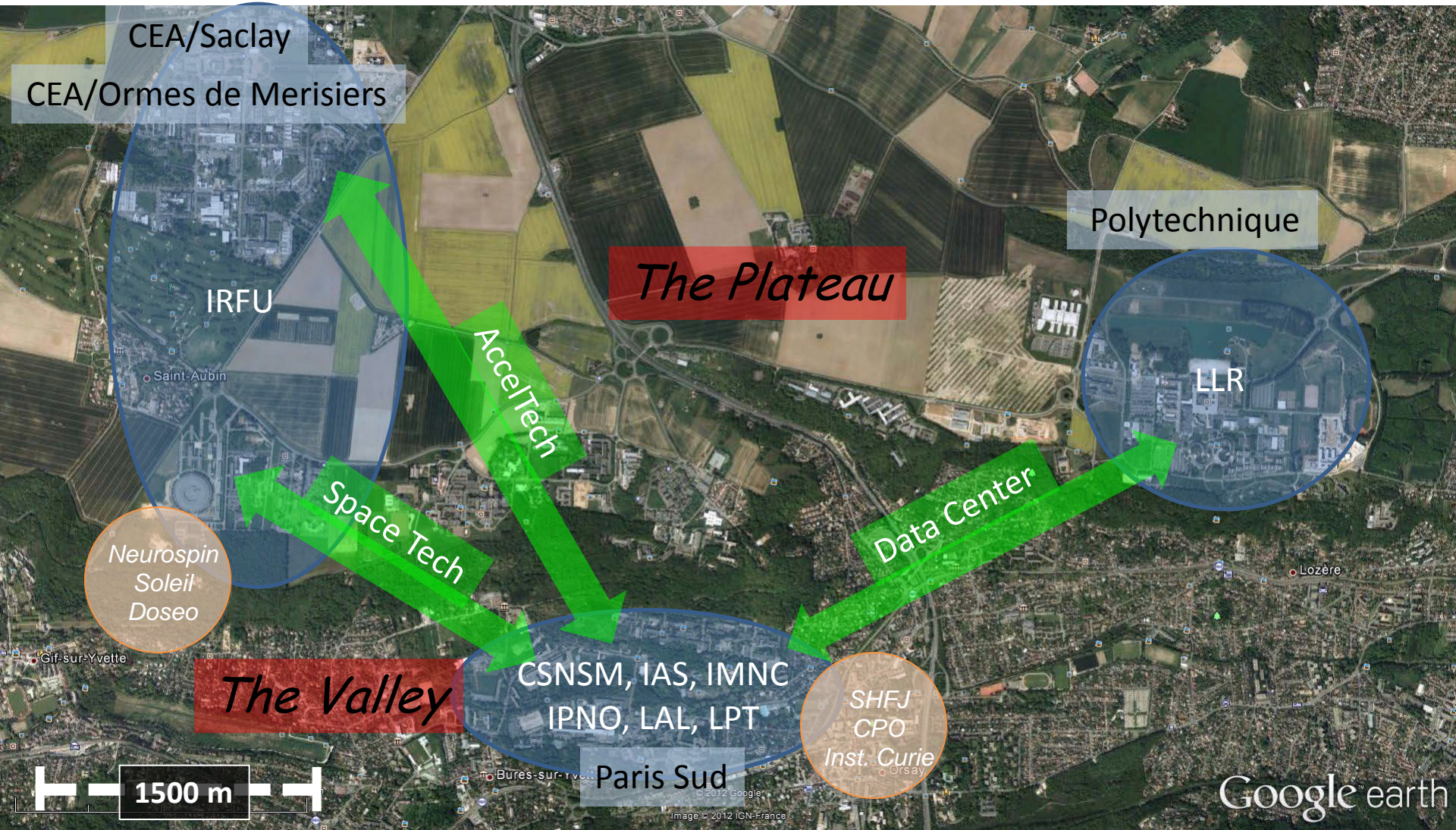
LPT

Particles Cosmology Astrophysics Origins Nuclear Health Theory...

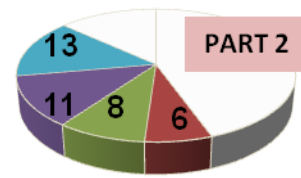
P2IO valley – research and development fields



P2IO Synergies Plateau-Valley

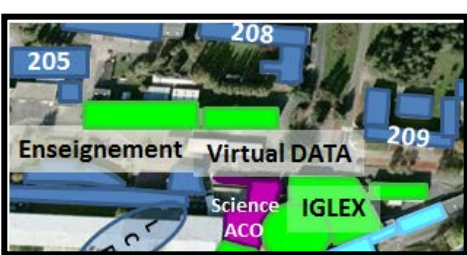


PART 2



Creation of shared technological platforms at the Valley and installation of enhanced capabilities platforms at the Plateau.

- Centers « Virtual Data
- « La Physique des Origines »
- SupraTech
- R&D Accelerators/ IGLEX



«Virtual Data Centers»

Planning for the VDC@valley :

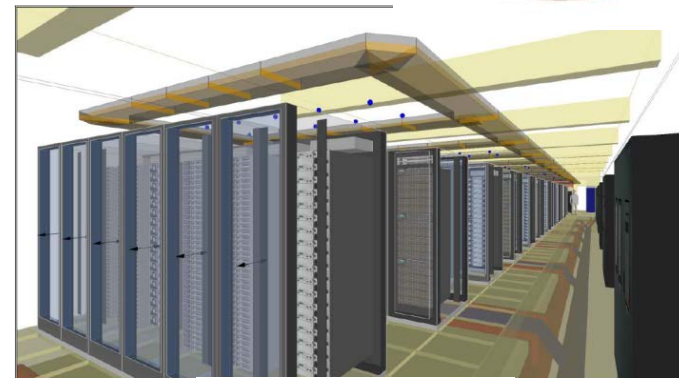
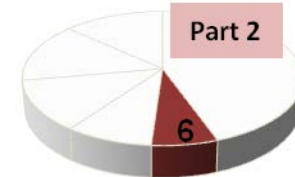
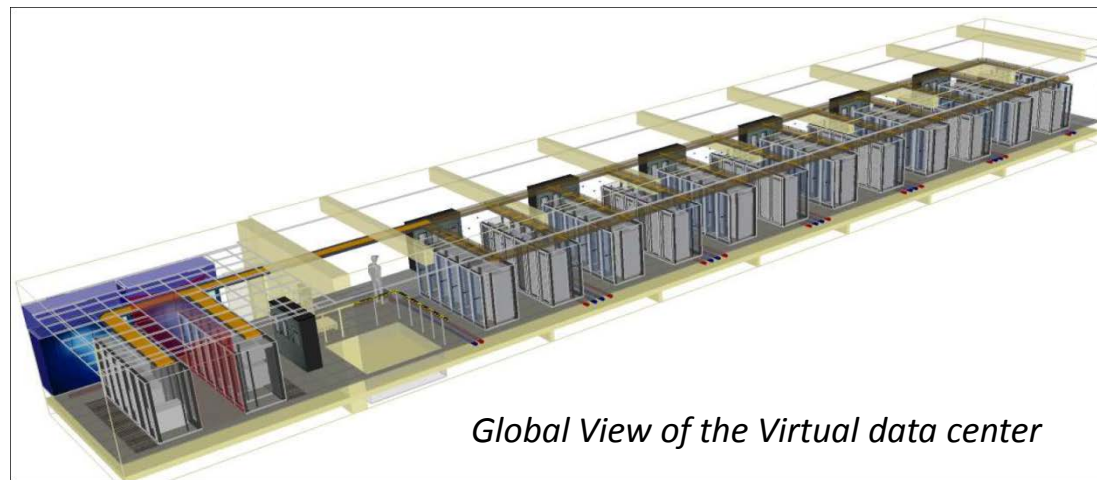
Phase 0 (1/10/2013) 100m² / 400KW coût 800K€

Work in progress

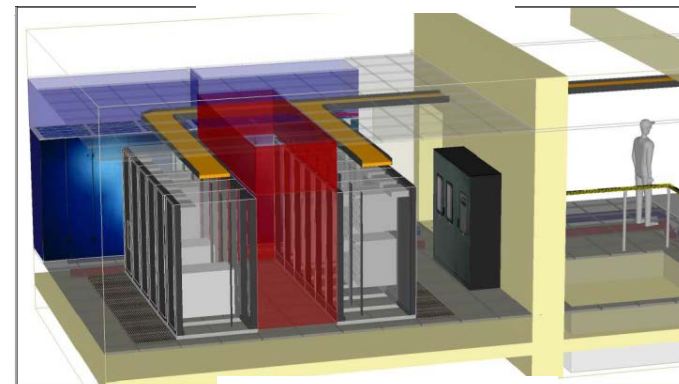
relocation of the various small computer centers at the Virtual Data Center is foreseen in spring 2013

Phase 1 250m² / 1,5MW coût 2,2M€

total cost 3,0M€

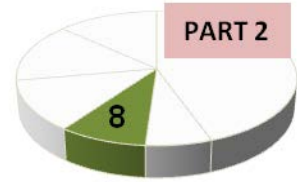


View of the big room



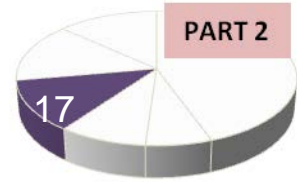
View of the small room

The total cost of the two VD Centers (Valley and Plateau) : 6M€



Physics of Origins

- Creation of a center of excellence in the research field of Exo-biology & Exo-planets
- Test bunch for spatial tests using X and UV beam line at 'Soleil'

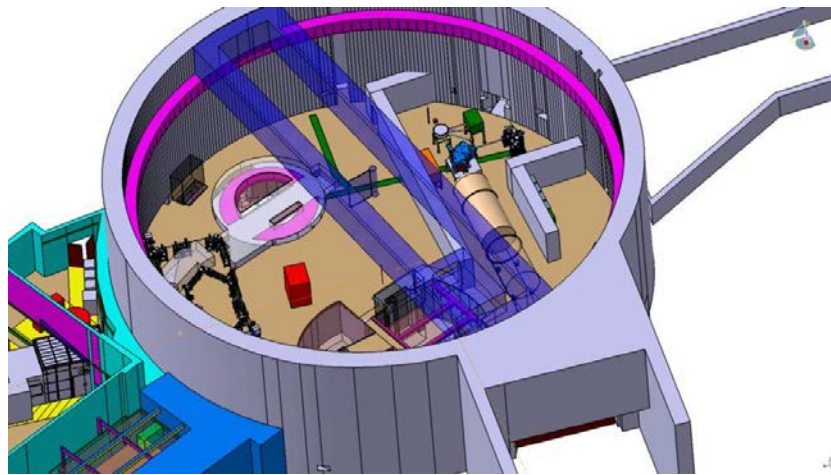


R&D on Accelerator science and technology

Enhancing capabilities and performances of the SUPRATECH platforms in the valley and the plateau

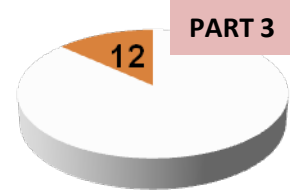
SUPRA-TECH and RF-TECH

IGLEX and SAMBA: platforms for multidisciplinary research and applications



*Schematic view of the Installation of **ThomX** and **Andromède** in the Igloo*

PART 3



Teaching and training in the fields of science and technologies of P2IO

Aiming at:

- Training highly qualified researchers , engineers and technicians in various domains of activities of P2IO.*
- Offer a more attractive teaching and training programs for the best students.*

A dedicated building (2000 m²), already identified, in the Valley