



ENIGMASS

Higher-Education status report :

- ESIPAP
- GraSPA
- Subatomic lab pool

European School of Instrumentation in Particle and Astroparticle Physics



- 5-year objective :
 - to become the reference European school of instrumentation in the discipline
 - train 32 master and PhD students per year
2 modules of 4 weeks each



lab sessions at CERN



2017 - 2018 status :

Attendance keeps increasing

2 independent 4-week modules ; 210 hours of lectures in all ; ~50 lecturers and lab session tutors.

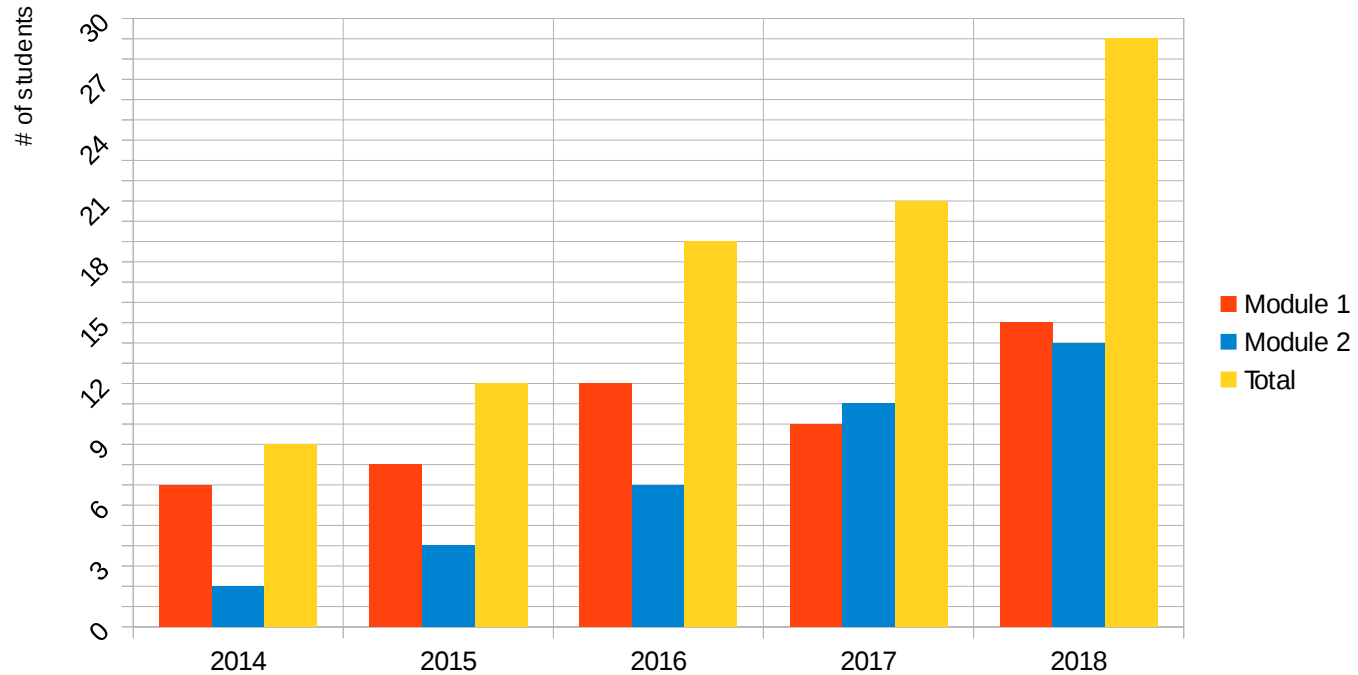
budget 80 k€ (1/2 ENIGMASS, 1/2 ESI + Technopole Archamps)

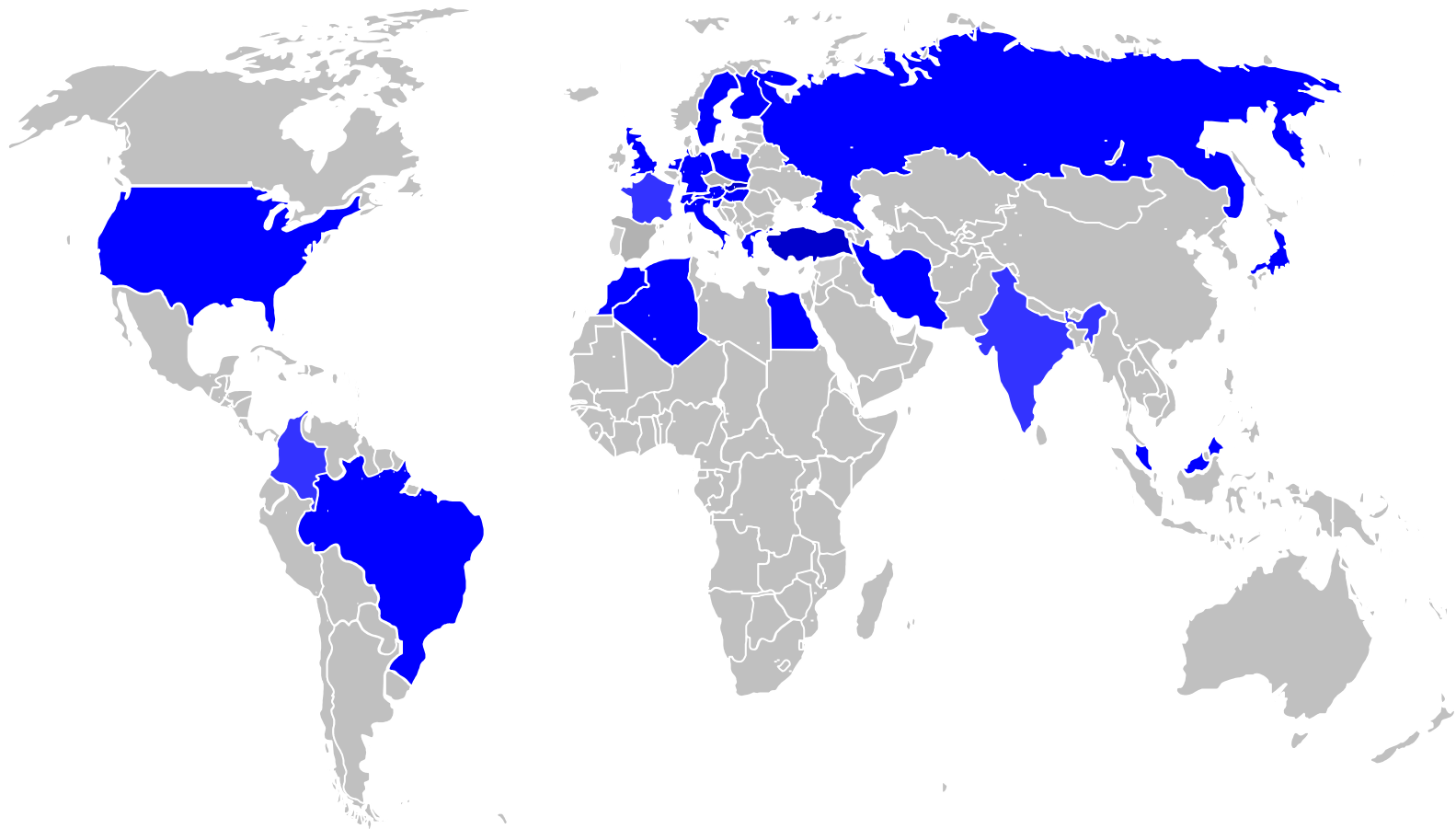
participating institutions : UGA, GINP, USMB, U of Strasbourg, CERN, CPPM, IRFU, U. of Tsukuba, LPSC, LAPP, [Northern Illinois University](#)

<http://www.esi-archamps.eu/Thematic-Schools/ESIPAP>

discover ESIPAP video : <https://youtu.be/f2ggf4P36cc>

Growth of ESIPAP student attendance





Residence countries (26 in total) of ESIPAP alumni

GraSPA Summer School

- **Why?** Decrease in number of Physics students at university \Rightarrow Inspire and help 3rd and 4th year physics students to pursue a career in Particle Physics/Astro/Cosmo \Rightarrow **Summer School!**
- **How?** **31 students, 1 week-long School**, theoretical & experimental introductory courses on few topics: LHC physics, neutrinos, heavy flavours, astroparticles, gravitational waves, computational tools (ROOT), cosmology. Visit of CERN. Mostly local lecturers, a few high-profile guests. Highly subsidized: accommodation and lunches paid by School (~480 €/student). Would not happen without ENIGMASS support.
- **When :** 20-26 July 2017
- **Outcome** Huge success in applications (97 for 16 countries in 2017), very good feedback from students.
- **budget :** 15000 € , 7000 € from ENIGMASS
- **2018 session in preparation**



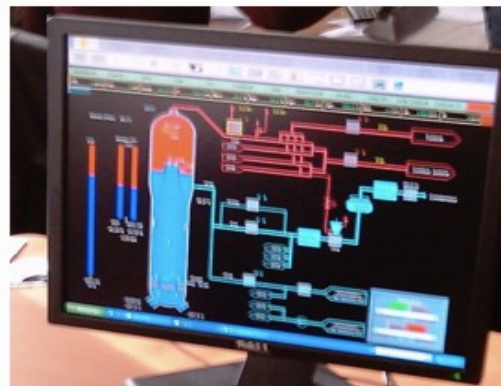
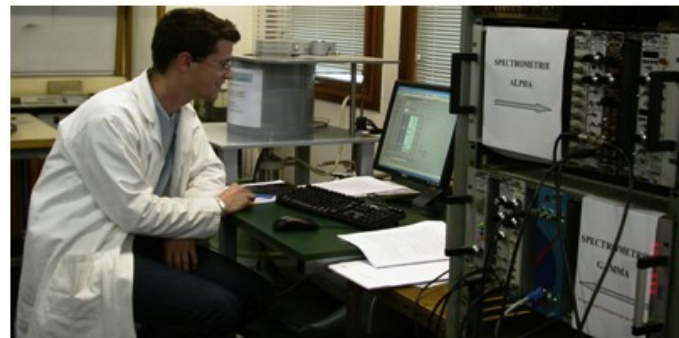


GraSPA 2017

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- 2018 session in preparation

Subatomic lab pool in Grenoble

- 20 lab setups :
 - nuclear, particle physics and medical applications
 - 500 master students per year
- 2 computing rooms :
 - data analysis
 - pressurized nuclear reactor simulator
- Annual investment :
 - 50 k€ from UJF and Grenoble INP
 - 10-20 k€ from ENIGMASS (in average)



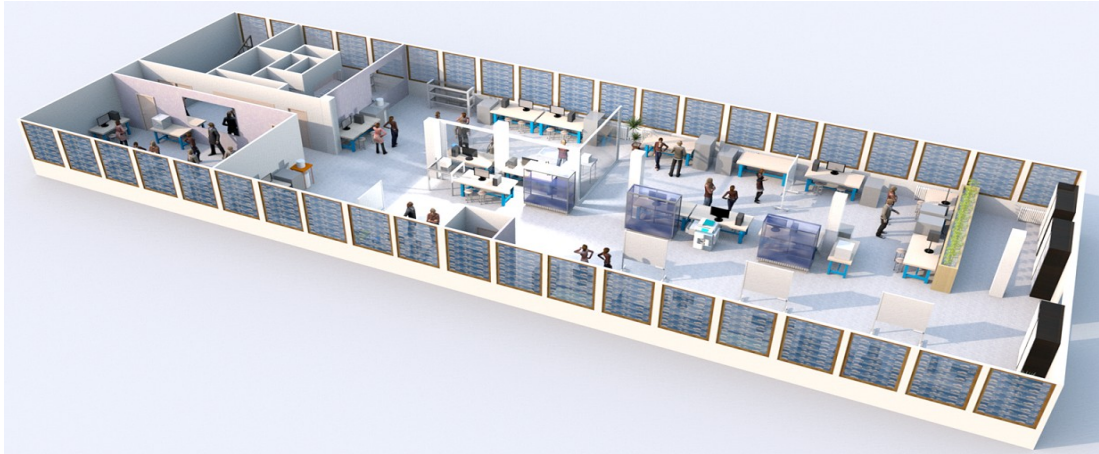
Building restoration & refurbishing (in 2016)

20 dispositifs expérimentaux + 2 salles info sur 240 m²

Budget de 305 k€ dont 150 k€ du LABEX ENIGMASS

Inaugurée le 14/11/2016

L'une des plus importantes plate-formes de TP subatomiques de France



Conclusion and outlook

- ESIPAP : objective of 32 students almost met (29)
- GrasPa : visibility maintained : 97 applications in 2017
- Subatomic lab pool : refurbishing/modernization has open a new era in lab practice
- All these actions are co-funded !
- Need to examine how these actions will survive after end of ENIGMASS (2019)

2016 GIF summer School

La physique souterraine

**CAES du CNRS
Centre Paul Langevin
73500 AUSSOIS**

48e École de GIF

19 - 23 septembre 2016

Comité d'organisation:

J. Billard (IPNL)
D. Duchesneau (LAPP)
F. Mayet (LPSC)
F. Picquemat (LSM)
A. Remoto (LAPP)
J. Riffault (LPSC)
P. Serpico (LAPTH)
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