

Laboratoire de Physique Nucléaire et de Hautes Energies

CNRS/IN2P3, Univ Pierre et Marie Curie (UPMC) and Univ. Paris-Diderot



Laboratoire de Physique Nucléaire et de Hautes Energies CNRS/IN2P3, Univ Pierre et Marie Curie and Univ Paris-Diderot

Located in historical Paris (Vth district)



North West corner of the UPMC campus

Laboratoire de Physique Nucléaire et de Hautes Energies

CNRS/IN2P3, Univ Pierre et Marie Curie and Univ Paris-Diderot



Particle Physics, Particle Astrophysics and Cosmology

- About 100 Researchers, Faculty and PhD Students (50 permanent)
 - 25 CNRS researchers
 - 25 University Faculty
 - 10 Postdocs
 - 15 Associates
 - 25 PhD students
- About 50 Technical Staff
 - Computing
 - Electronics and Instrumentation
 - Mechanics and Logistics
 - Administration and Communication

Total : $\sim 150 + \sim 50$ visitors and interns/yr

Laboratoire de Physique Nucléaire et de Hautes Energies CNRS/IN2P3, Univ Pierre et Marie Curie and Univ Paris-Diderot

Experimental Particle physics, Particle Astrophysics and Cosmology

Particle Physics : Masses and Interactions

(Physics at the TeVatron : CDF et D0)

Physics at LHC : ATLAS

Future/R&D activities : SLHC/SVT, ILD/CALICE



Particle Physics : Matter Antimatter Asymmetry and Flavors

B physics, CP Violation : (BABAR), LHCb

Neutrino Physics : NA61, T2K

Phenomenology : QCD, g-2



Cosmology : Dark Matter and Dark Energy

Cosmological parameters : SN Ia programs (SCP, SNF, SNLS)

Future projects : LSST, EUCLID

Phenomenology : n-body gravity



Particle Astrophysics : High Energy Cosmic Rays

High energy gamma rays : HESS

High energy cosmic rays : AUGER

Future/R&D activities : CTA, upgrades AUGER

Laboratoire de Physique Nucléaire et de Hautes Energies

CNRS/IN2P3, Univ Pierre et Marie Curie and Univ Paris-Diderot

Experimental context : work on large international installations



Large Accelerators

- CERN/LHC : ATLAS & LHCb
- SLAC, Fermilab : BaBar, D0 & CDF
- TOKAI : T2K
- ? : ILC



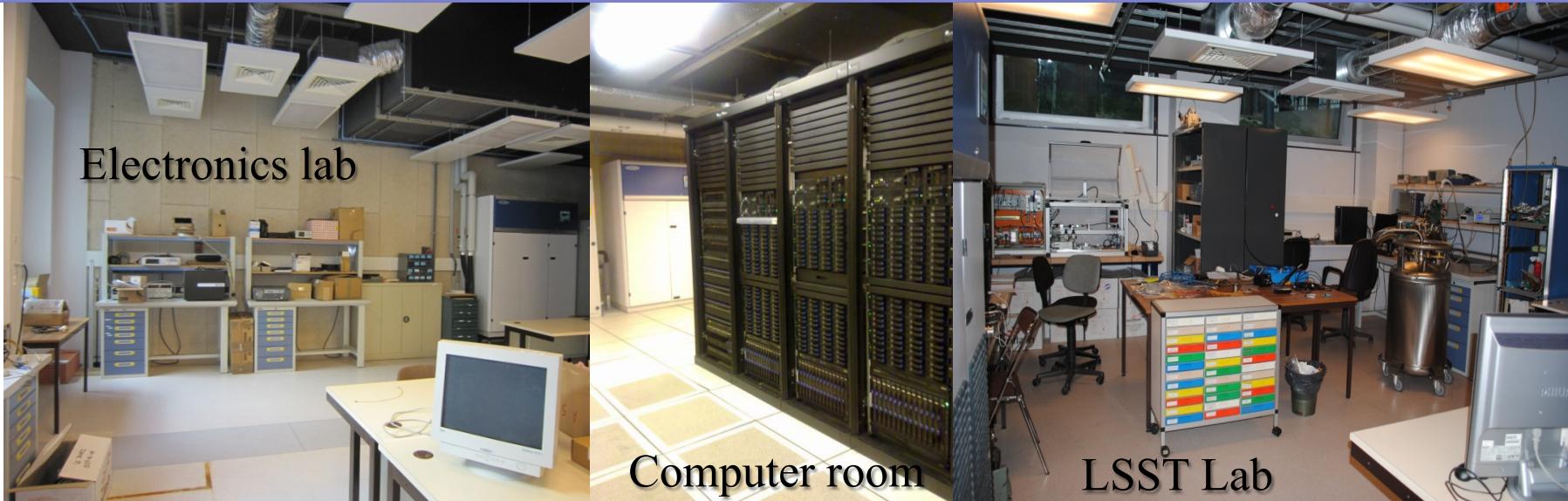
Large Observatories

- Namibia : HESS
- Argentina : Auger
- Hawaii, Chile, Australia : SN, LSST
- Space : Euclid



Laboratoire de Physique Nucléaire et de Hautes Energies

CNRS/IN2P3, Univ Pierre et Marie Curie and Univ Paris-Diderot



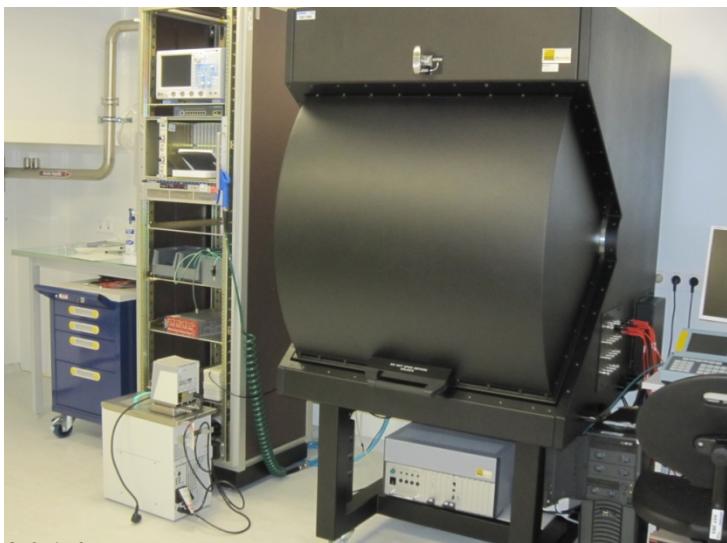
Laboratoire de Physique Nucléaire et de Hautes Energies

CNRS/IN2P3, Univ Pierre et Marie Curie and Univ Paris-Diderot

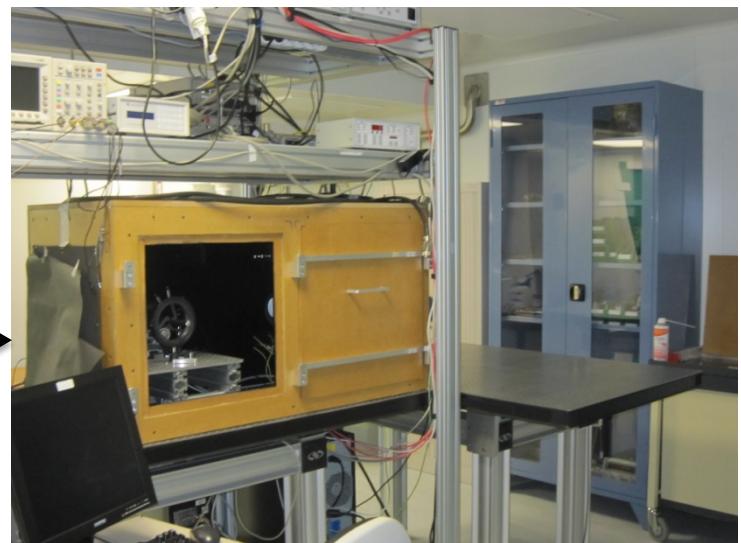


Clean
rooms

ILD (ISO8)
LSST (ISO6)



LHC (ISO7)
LSST (ISO7)



LPNHE

2014

Laboratoire de Physique Nucléaire et de Hautes Energies

CNRS/IN2P3, Univ Pierre et Marie Curie and Univ Paris-Diderot



Part of GRIF since
2005

Strong support from
the Lab & UPMC
(Infrastructure +
hardware +
2 Ing. + Scientists)

2 Computer rooms

~800 jobs, 1pB

Mostly ATLAS :
80% CPU
95% Storage

Laboratoire de Physique Nucléaire et de Hautes Energies

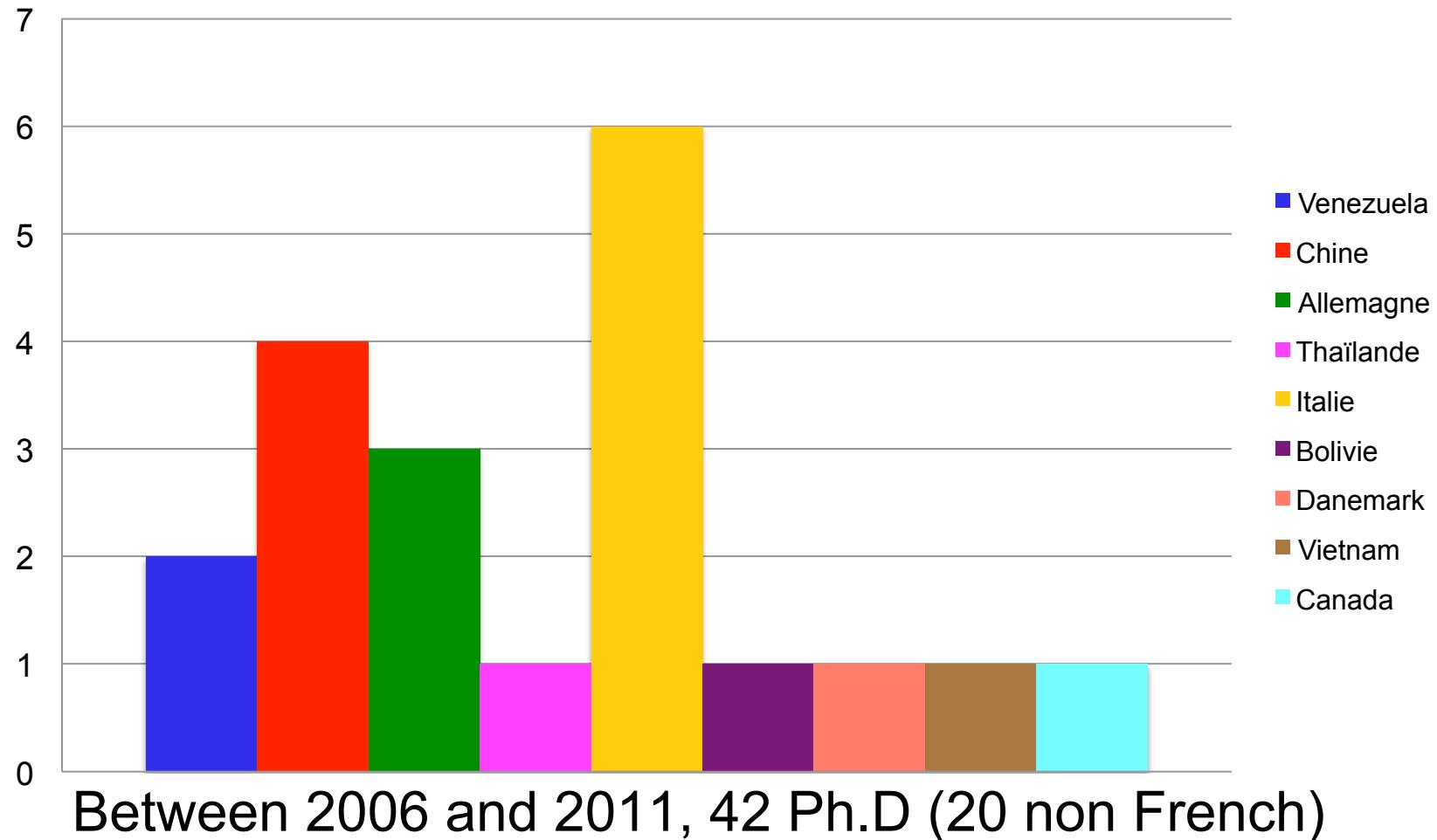
CNRS/IN2P3, Univ Pierre et Marie Curie and Univ Paris-Diderot



PhD. Students at LPNHE

- Up to 10 new PhD students per year
- Half of them financed by « Contrat Doctoral Ministère » obtained by applying to Doctoral schools :
 - The other half funded thru « projects grants » (and enrolled in the same doctoral schools)
- Thesis subjects range from theory to data analysis and experimental measurements

Ph.D. students from all over the world



Welcome to
~~IHEP~~
LPNHE !