



The role of Foreign Researchers in CNRS/IN2P3

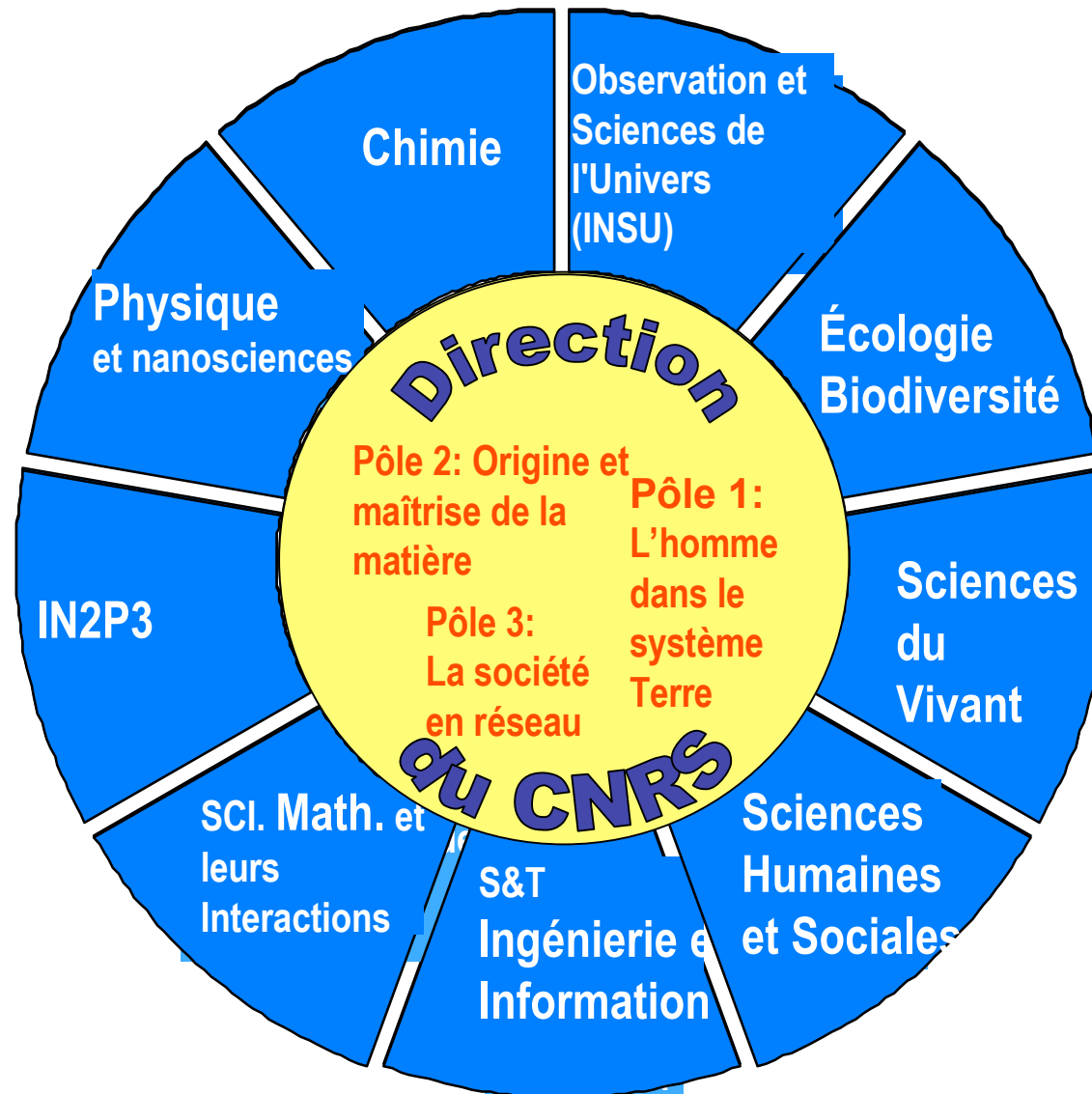
M. Spiro
Director of CNRS/IN2P3
From Brain Drain to Brain Gain
Geneva 12/01/09



Role of Foreign Researchers in IN2P3/CNRS

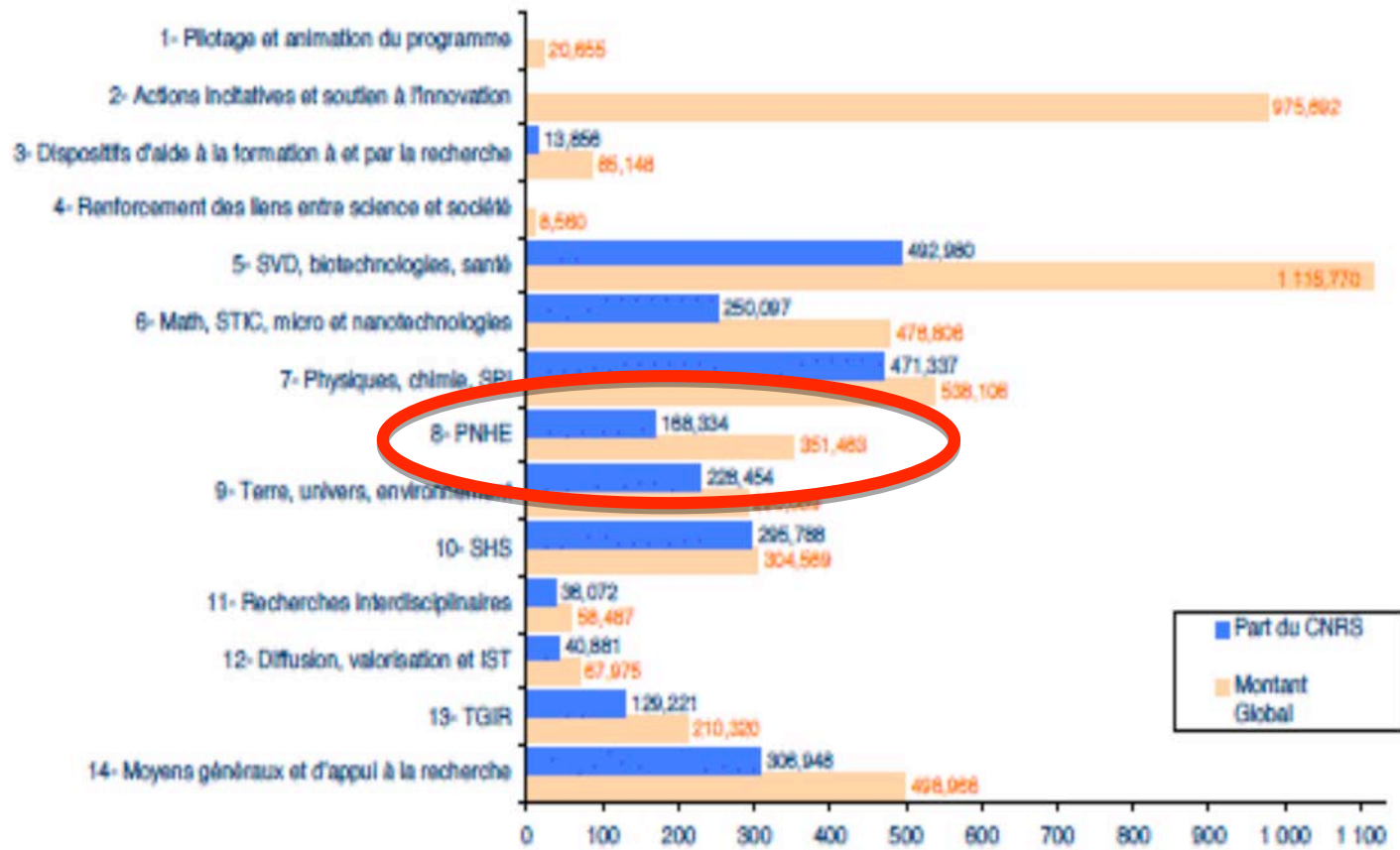
- Bring new cultures in our labs (bring diversity and often excellency)
- Initiate and are the basis for cooperation with their native countries (schools, bilateral agreements, native countries closer to CERN, joint scientific projects in native countries)
- **Contribute to a better world**

CNRS organisation



Budget issues

Place du CNRS dans le programme 172
 Recherches scientifiques et technologiques pluridisciplinaires,
 par action au PLF 2008
 (Credits de paiement en M€)



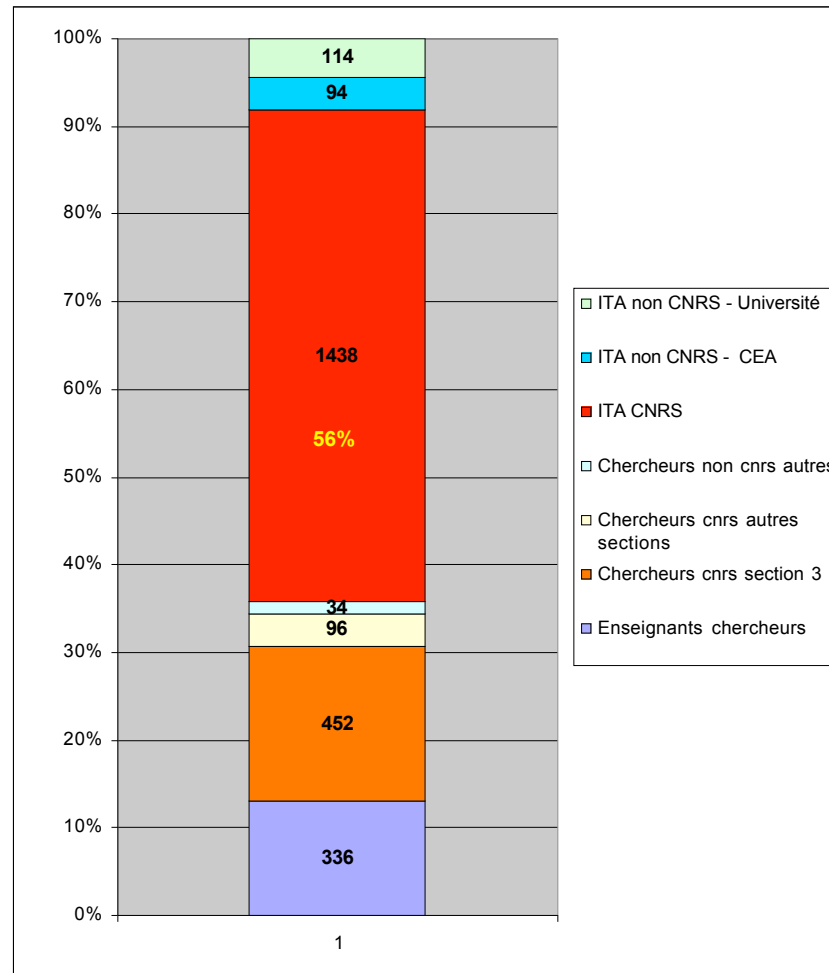
+600 M€ RP



IN2P3 Missions (placed inside) CNRS

- **Coordinate research for Particle and Nuclear Physics for the academic world. Coordinate with CEA.**
- **Coordinate 20 labs (of which 3 large) in network for the construction and operation of 40 large projects (among which 3 very large).**
- **Pluri-annual programming with annual arbitration**
- **National operator for University/CNRS mixed labs responding to international large projects (in coordination with the CEA)**

Permanent personnel



Les personnels
des laboratoires
de l'IN2P3

170 M€

2564 titulaires au 31/12/2006

+ 500 non permanents



IN2P3 laboratories in France

APC
LPNHE

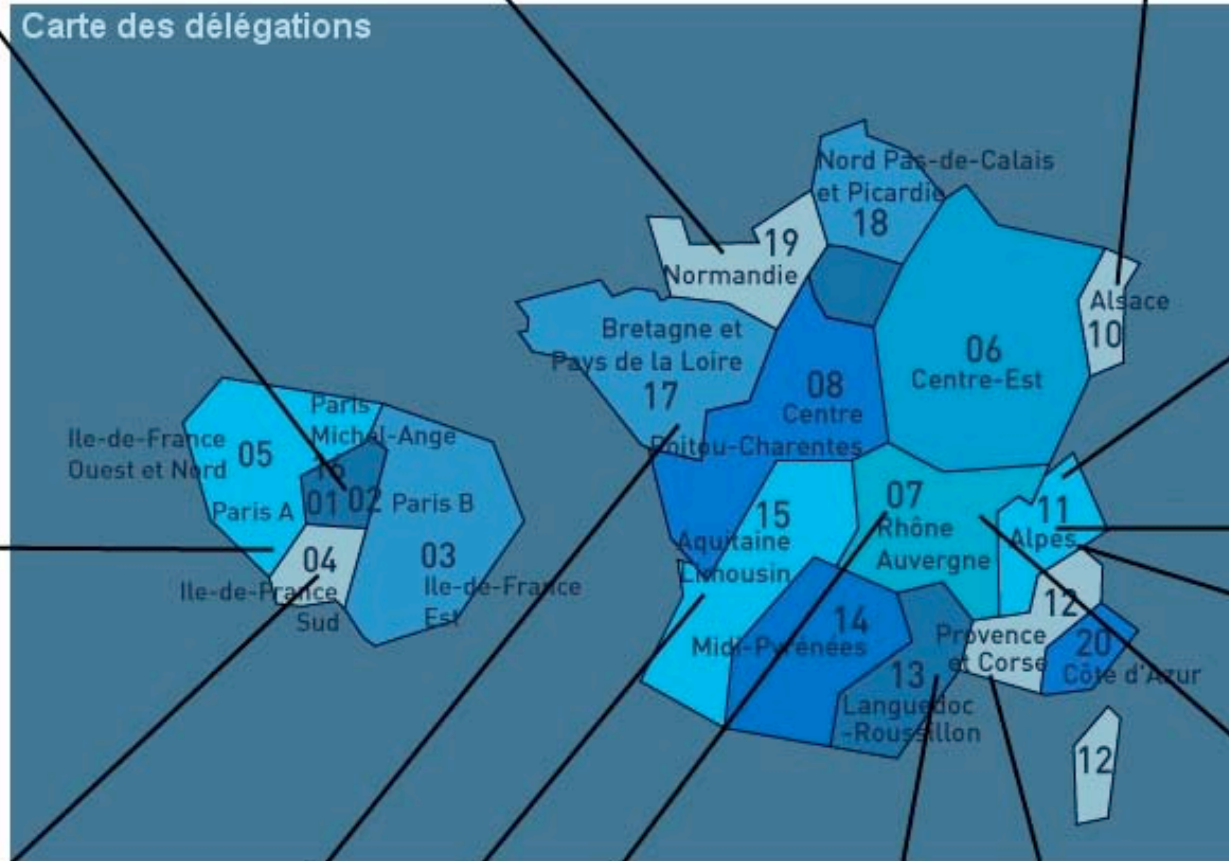
Musée Pierre et Marie Curie,
Frédéric et Irène Joliot

Paris

LPC Caen
GANIL
Caen

IPHC
Strasbourg

Carte des délégations



LAPP
Ulisse
Annecy

LLR
Palaiseau

LPSC
Grenoble

LSM
Modane

CSNSM
IMNC
IPNO
LAL
Orsay

Subatech
Nantes

CENBG
Bordeaux

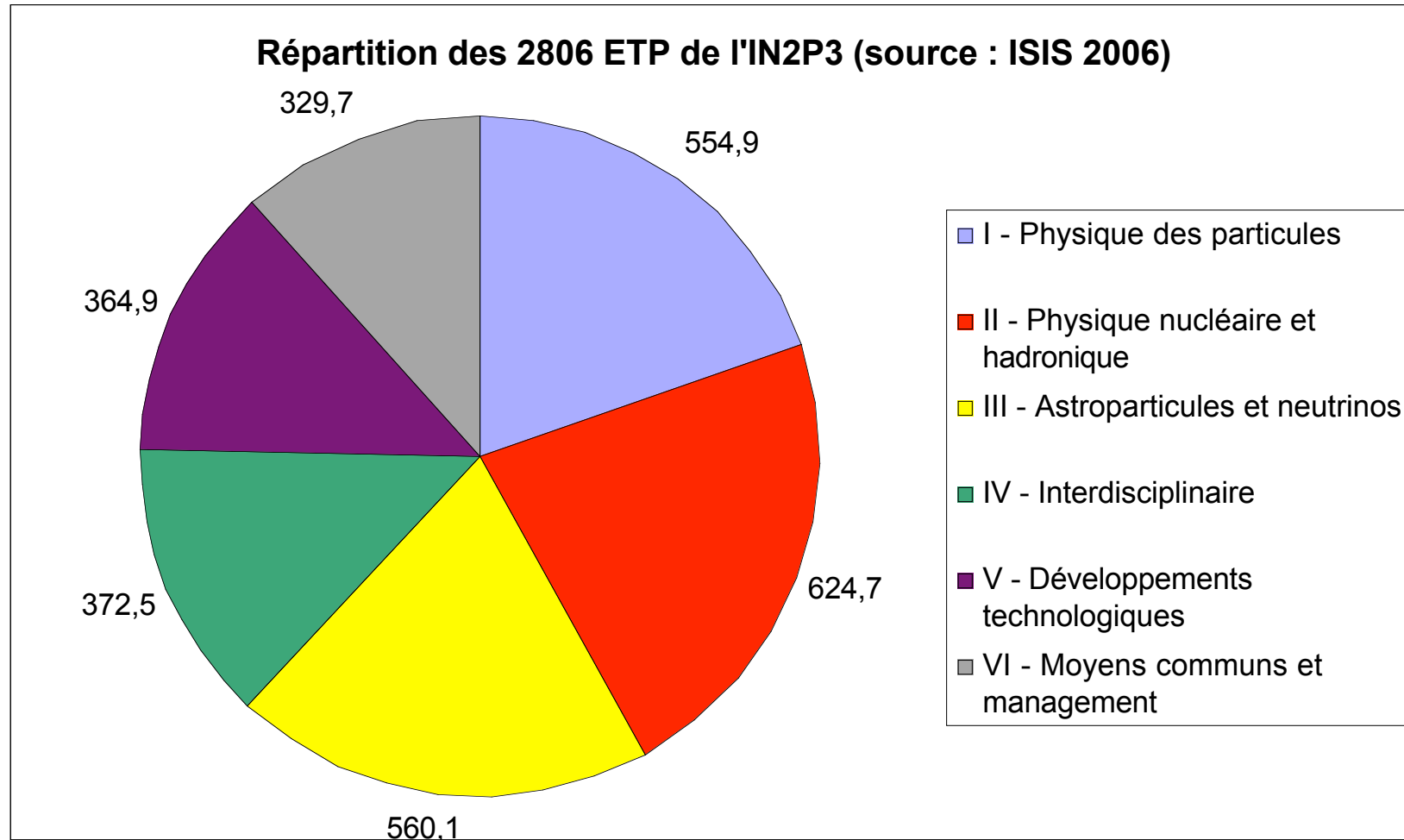
LPC Clermont
Clermont-Ferrand

LPTA
Montpellier

CPPM
Marseille

IPNL
CC IN2P3
LMA
Villeurbanne

Scientific axes of l'IN2P3





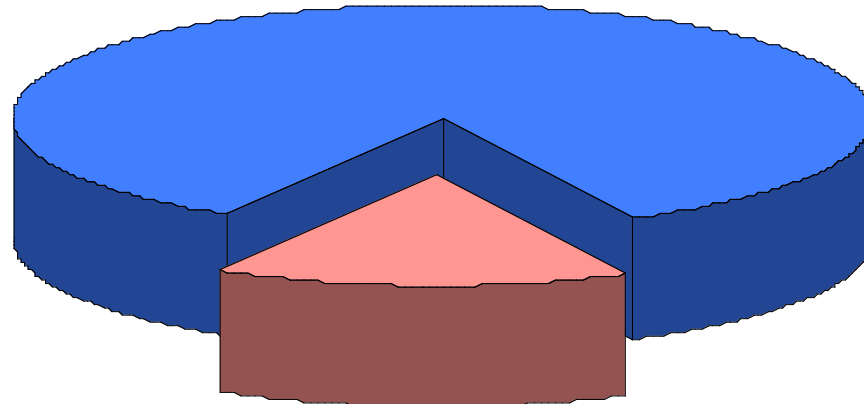
Physicists citizenship

At IN2P3 in 2009

Permanent full time physicists at IN2P3 en 2009

Citizenship

**Nationalité
française
442
85%**



**Nationalité
étrangère
81
15%**

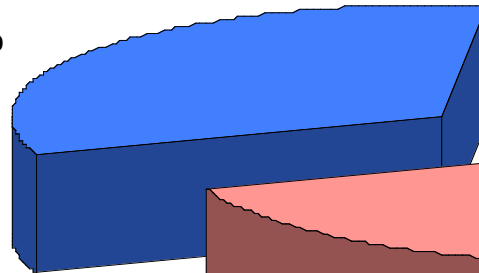


Non permanent physicists at IN2P3 en 2009

Citizenship

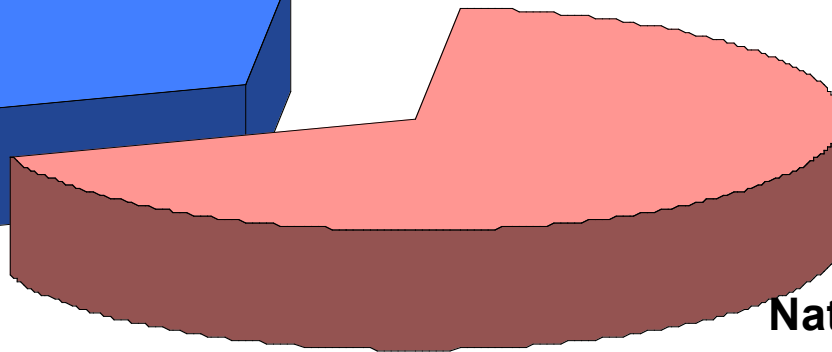
Nationalité
française

19
32%



Nationalité
étrangère

40
68%

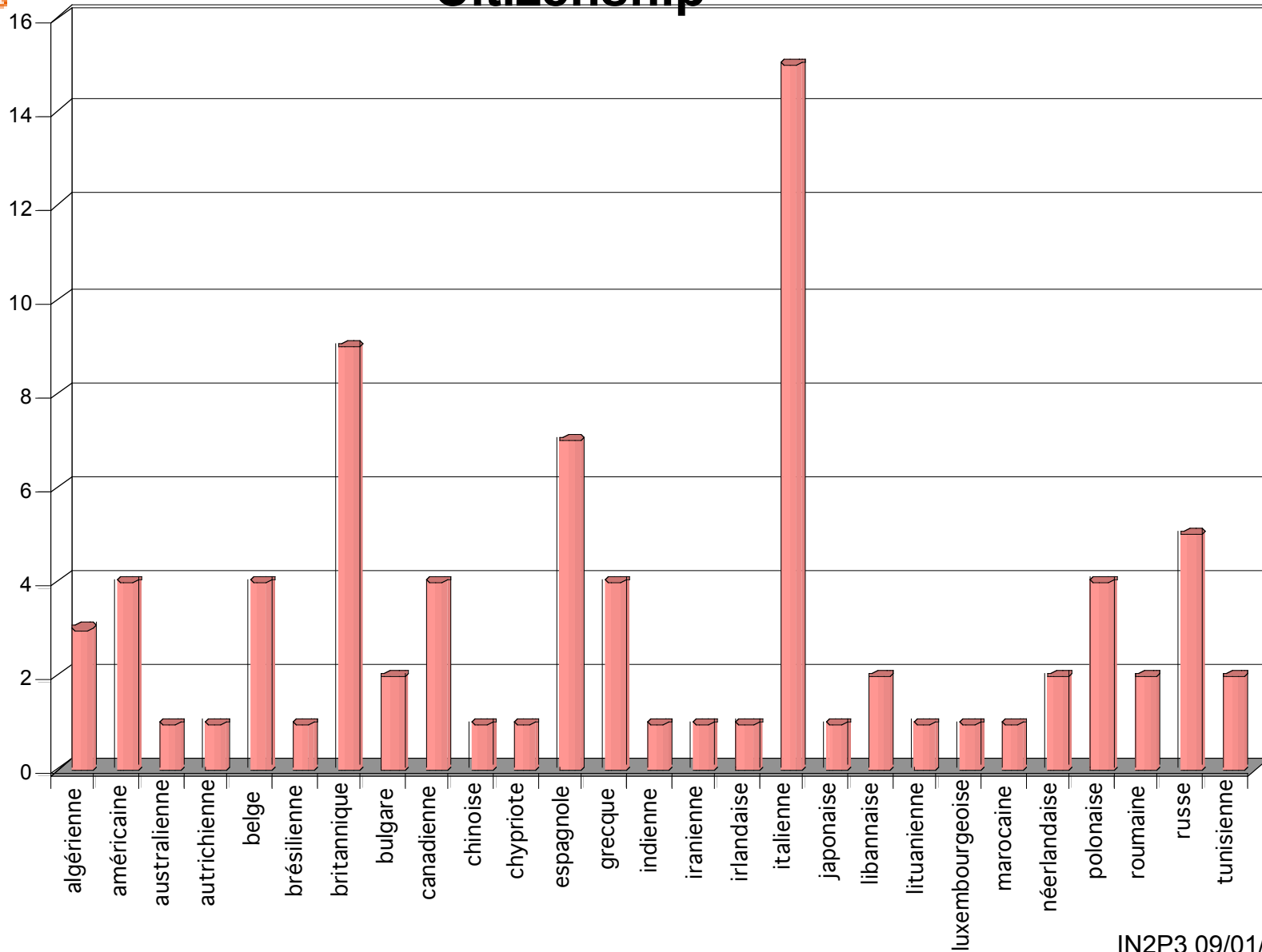




In2p3

Permanent physicists at IN2P3 en 2009

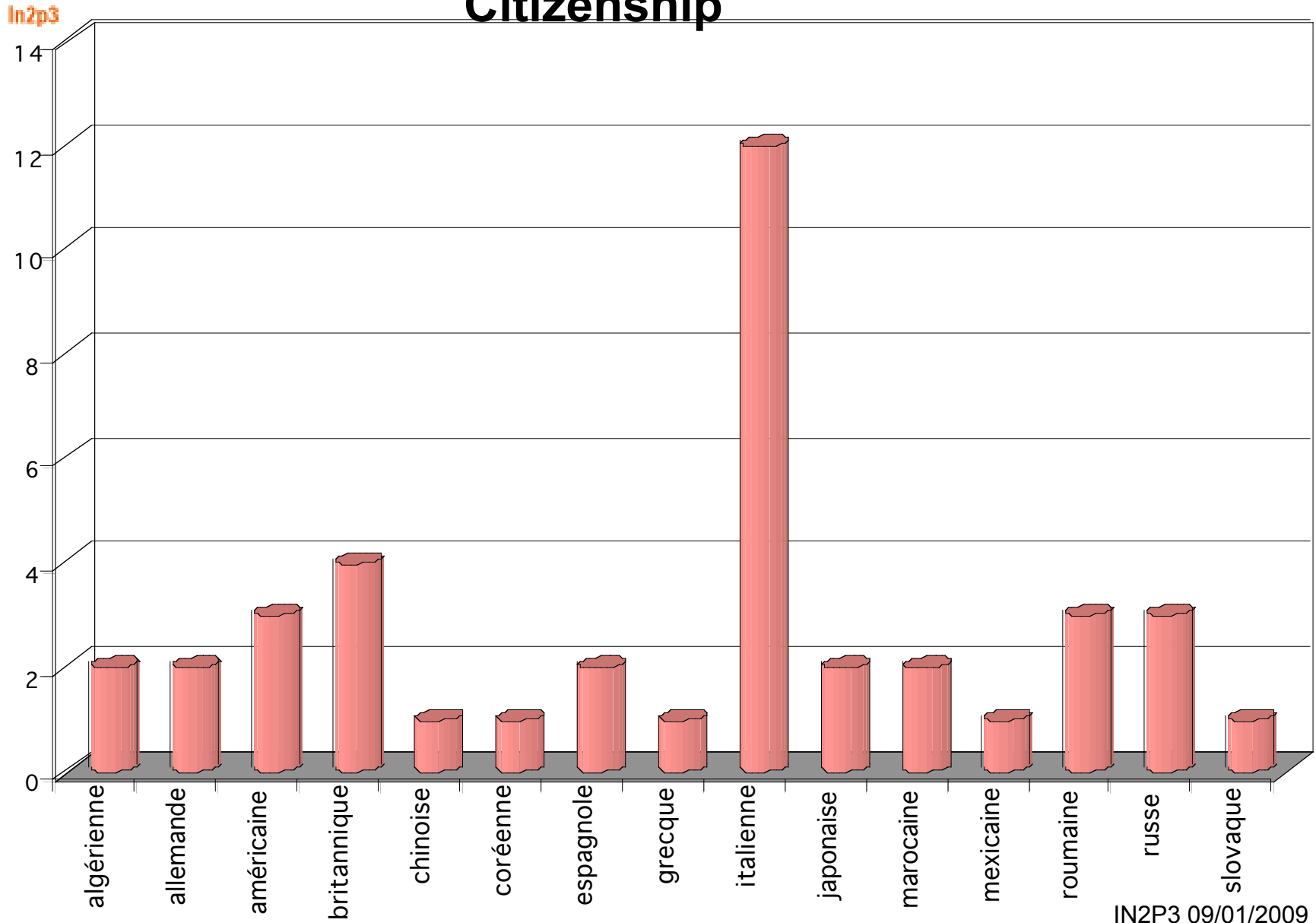
Citizenship



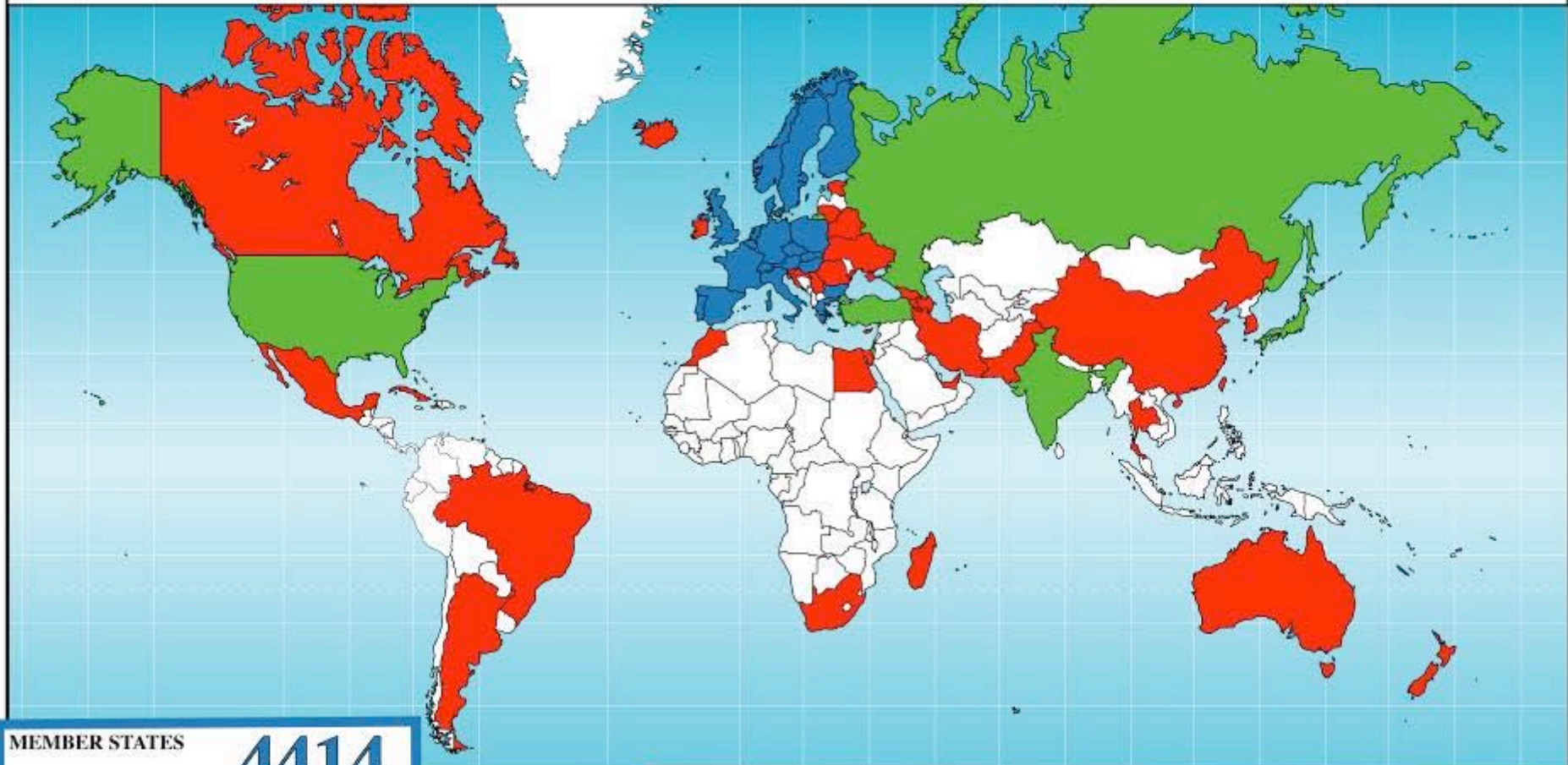


Non permanent physicists at IN2P3 en 2009

Citizenship



Distribution of All CERN Users by Institute on 14 July 2005



MEMBER STATES

4414

AUSTRIA	
BELGIUM	
BULGARIA	
CZECH REPUBLIC	
DENMARK	
FINLAND	
FRANCE	
GERMANY	
GREECE	
HUNGARY	
ITALY	
NETHERLANDS	
NORWAY	
POLAND	
PORTUGAL	
SLOVAKIA	
SPAIN	
SWEDEN	
SWITZERLAND	
UNITED KINGDOM	

OBSERVER STATES

INDIA	54
ISRAEL	39
JAPAN	88
RUSSIA	770
TURKEY	25
USA	737

1713

OTHER STATES

ARGENTINA	1
ARMENIA	11
AUSTRALIA	13
AZERBAIJAN	2
BELARUS	16
BRAZIL	25
CANADA	71
CHINA	46

CROATIA	18
CUBA	2
CYPRUS	7
EGYPT	1
ESTONIA	9
GEORGIA	7
ICELAND	2
IRAN	5
IRELAND	7
KOREA	10

LITHUANIA	1
MADAGASCAR	1
MEXICO	13
MOROCCO	7
NEW ZEALAND	3
PAKISTAN	15
ROMANIA	25
SERBIA AND MONTENEGRO	12
SLOVENIA	8

SOUTH AFRICA	3
TAIWAN	16
THAILAND	1
UKRAINE	12
UNITED ARAB EMIRATES	4

374



In2p3



- Contract with Argonne National Lab. (study of the A/q=6-7 injector, accomplished in April, 2008)
- Recently signed agreements: INFN (LEA), RIKEN (LIA) 30/01/08, MoU with India 26/01/08, MoU with MSU March 2008, Workshop in India in July 2008
- Agreements with Poland (LEA) in the final stage of preparation
- New potential partner: Bulgaria (visit in Sofia April 4th, first contract on the construction of a part of beam line by June 2008)

M. Lewitowicz 4/05/08

4

CNRS, CEA, Local Region

Investment (Total) cost: 136 (190) M€

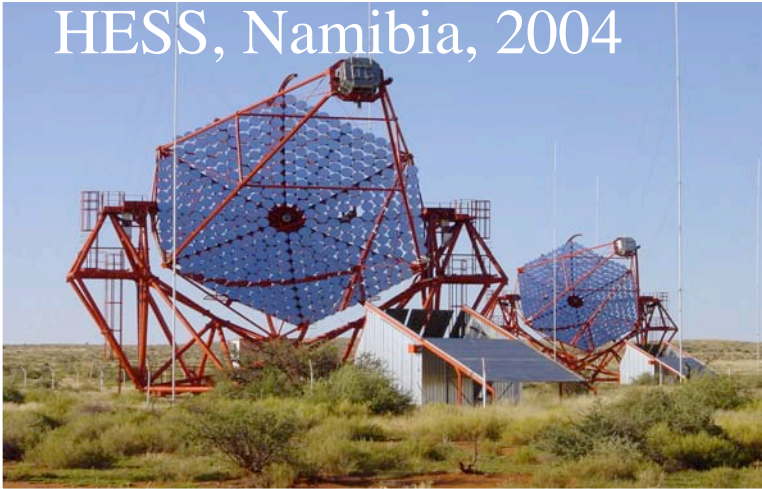
In investment budget 26M€ are expected from EU and international partners



In2p3

A « cosmic ray » program

HESS, Namibia, 2004



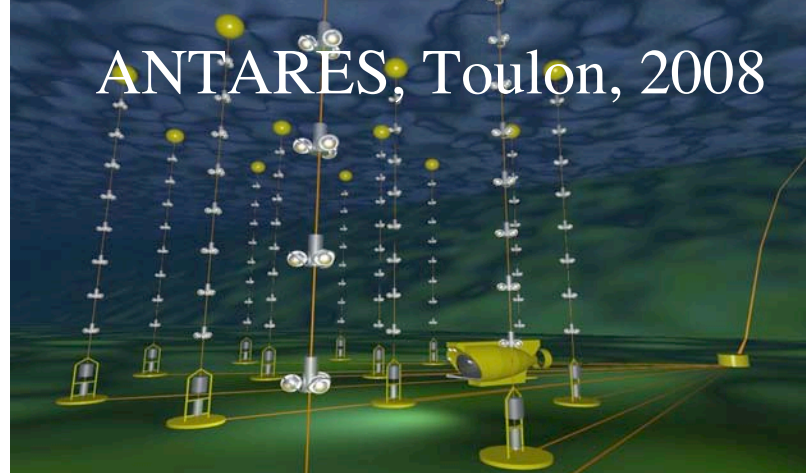
AUGER, Argentina, 2008



VIRGO, Pisa, 2008



ANTARES, Toulon, 2008



High energy gamma, ultra high energy cosmic rays, gravitational waves, neutrinos



INTERNATIONAL ACTIONS



■ **IN2P3 Coordinates 2 ERANETS:**

- ASPERA (Astroparticules: SK) and
- NUPNET (NuclearPhysics: SG),

■ **Founding member of Nupecc and ApPEC (Nuclear and Astroparticle)**

■ **IN2P3 Director**

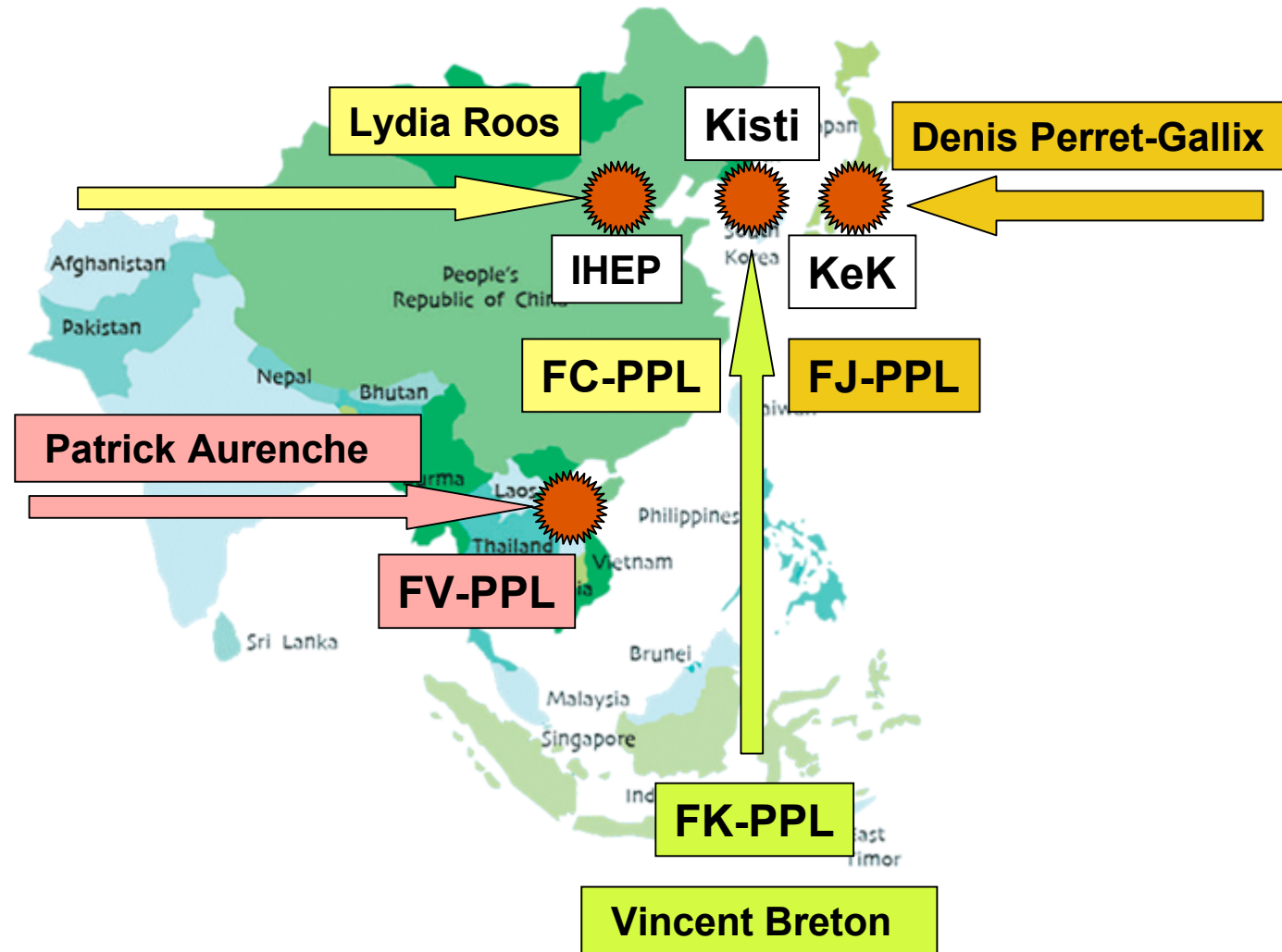
- Representative of France to CERN (with the ambassador),
- represents France to the FALC meeting of international agencies on large colliders.
- initiated a Global Science Forum on Astroparticle (OECD 2009-2010)



OTHER INTERNATIONAL ACTIONS

- **LIA (Associated international laboratory)**
 - Japon, Chine, Corée, soon Vietnam et Berkeley (USA) mostly focussed on particle physics
 - Japon (Riken), Italie (INFN), Pologne, India around Spiral2
 - USA(KIPAC) in particle astrophysics and cosmology
- **LEA (Associated European Laboratory)**
 - Germany around Hess etogether with a GDRI international research network) avec Namibie et Afrique du Sud
 - Joule Dubna-LSM
- **UMI (international joined laboratory)**
 - Argentine astroparticles, cosmology, environment (almost done)
- **Initiative E=MC²:american, canadian and japanese physicists in IN2P3 laboratories for LHC experiments**
- **Schools (Latin america, Africa...)**

X-PPL : LIA with Asia





OTHER INTERNATIONAL ACTIONS

- **Trans-Europe initiative to coordinate research and formation activities between IN2P3 and central Europe (bilateral agreements, Exchanges, GDRE/GDRI, LEA/LIA, Schools)**
 - **Initiative towards Russia (Bilateral agreement , Dubna-GANIL, GDRE Eurea – Try to favour the accession of Russia to CERN membership together with Turkey and Israël)**

- **Mediterranean initiative: formation, try to get Maghreb countries (Morocco, Tunisia, ..) closer to CERN as well as Egypt and few other countries, initiate scientific adventures in these countries**



Cooperation between CNRS/IN2P3 and Mediterranean countries (and Africa) F. Malek, IN2P3





STRATEGY (1)

- **Formation**

- Sub-saharian school on subatomic physics (start 2010) Steve Muanza IN2P3
- Instrumentation Oran (Algeria) F. Djama/A. Lounis
- Nuclear physics and nuclear energy (Mahgreb)
- Nanomed (electronic circuits) Morocco D. Dzahini and F. Rarbi



STRATEGY (2)

- **Closer to CERN**
 - Morocco LHC: GDRI Annecy, Clermont, Grenoble, Marseille, Morocco HEP network of universities: GDRI together with Sweden (J. Collot, JY Hostachy for IN2P3, A Hoummada, J. Derkaoui, ex French PhD for Morocco)
 - Egypt LHC: Ecole Polytechnique (L. Dobrzynski)
 - Algeria SLHC? Orsay, Marseille (F. Djama, A. Lounis)
 - Tunisia OPERA neutrinos I. Lakyineh, D. Denegri (in Tunisia A. Trabelsi ex French PhD)



STRATEGY (3)

- **Scientific initiatives in African countries**
 - HESS in NAMIBIA with HESS2
 - BAO (Baryon Oscillation) Radio project in ATLAS Mountains Morocco: LAL Orsay (and IRFU) Reza Ansari
 - Support of CNRS to SESAME synchrotron in Jordania
 - Support for GRID developments



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- Bring new cultures in our labs (bring diversity and often excellency)
- Initiate and are the basis for cooperation with their native countries (schools, bilateral agreements, native countries closer to CERN, joint scientific projects in native countries)
- **Contribute to a better world**



Thanks