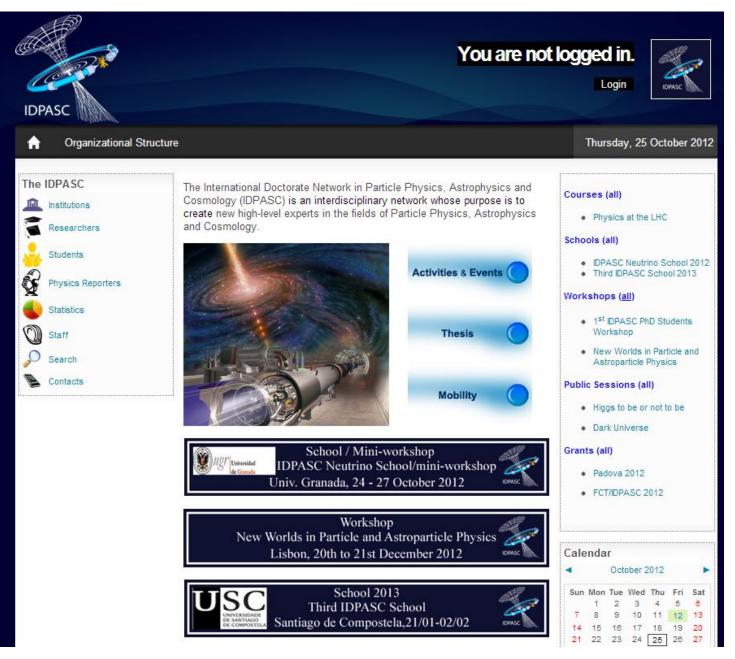


International Doctorate Network in Particle Physics, Astrophysics and Cosmology



Mário Pimenta Lisboa, March 2014

## www.idpasc.lip.pt



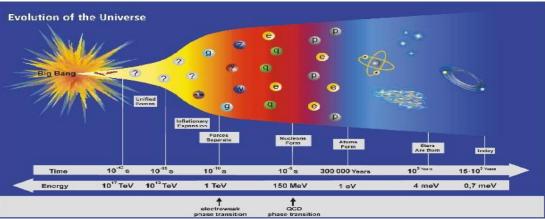
### **Particle Physics:**

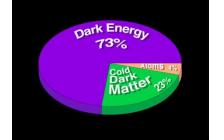
"Matter" and Interactions



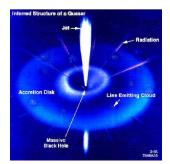
# Astronomy/ astrophysics:

"Objects" in the sky



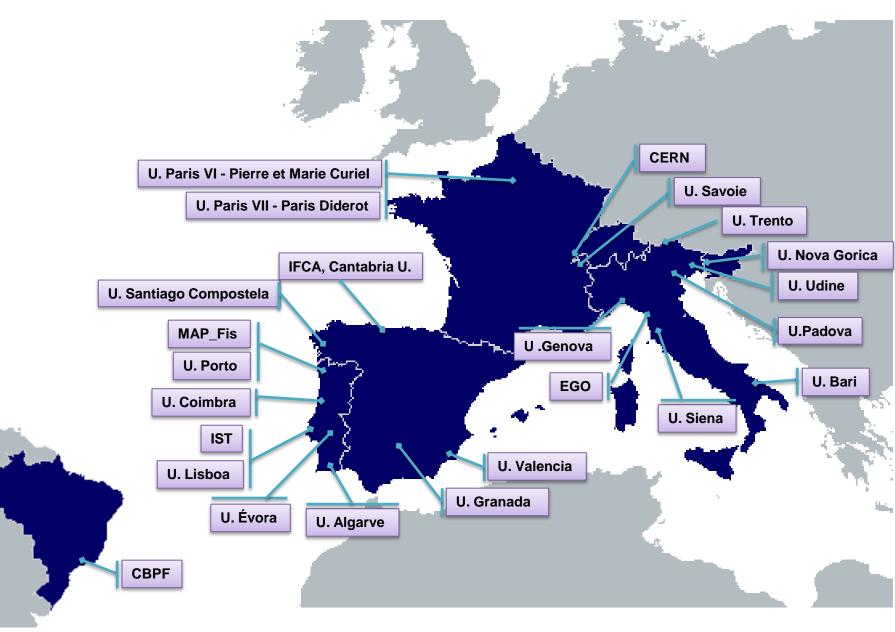


### Cosmology: Origin and evolution of the Universe



## The network:

PhD Students: **115** Researchers : **164** countries of origin: **19** 



# Activities

Schools and Workshops

 ✓ A general IDPASC school every year
 (2 weeks: mornings lectures/afternoon
 exercises/exam at the end)

 ✓ Thematic schools

•Courses

✓ Specific courses via video-conference

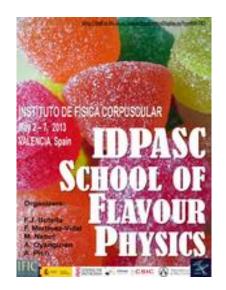
Public sessions

✓ General public (in particular last years high school students and teachers)

Doctoral Scholarships

✓ 2010/2011/2012 FCT/IDPASC call – 21 grants
 2014 FCT PhD program call –"IDPASC-Portugal"
 EJD H2020 call - "IDPASC: instrumentation and technologies"

### **IDPASC** Posters ...





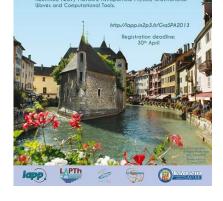
SECRETARIAT: Sandra Dias NEUTICE CONTINUES OF CONTINUES

STROPARTICLE

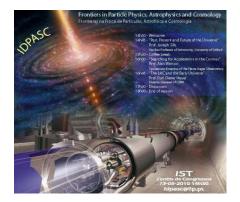
PHYSICS

Graduate School in Particle and Astroparticle physics of Annecy-le-Vieux

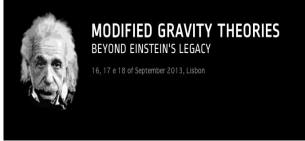
22 – 26 July 2013 Introductory course aimed at <sup>4%</sup> year, or advanced <sup>3/d</sup> year, physics students, Topics covered include LHC Physics, Neutrinos, Neavy Rovoux, Astroparticle Physics, Cravitational



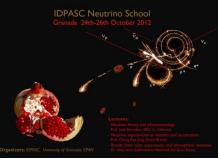


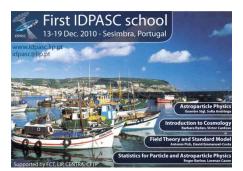




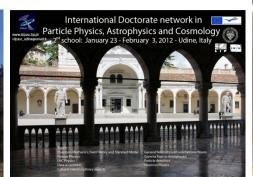




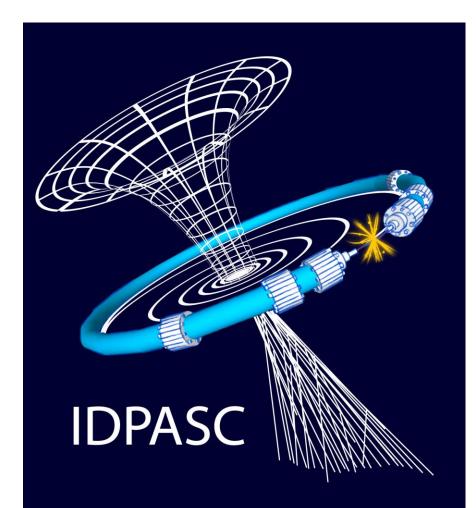




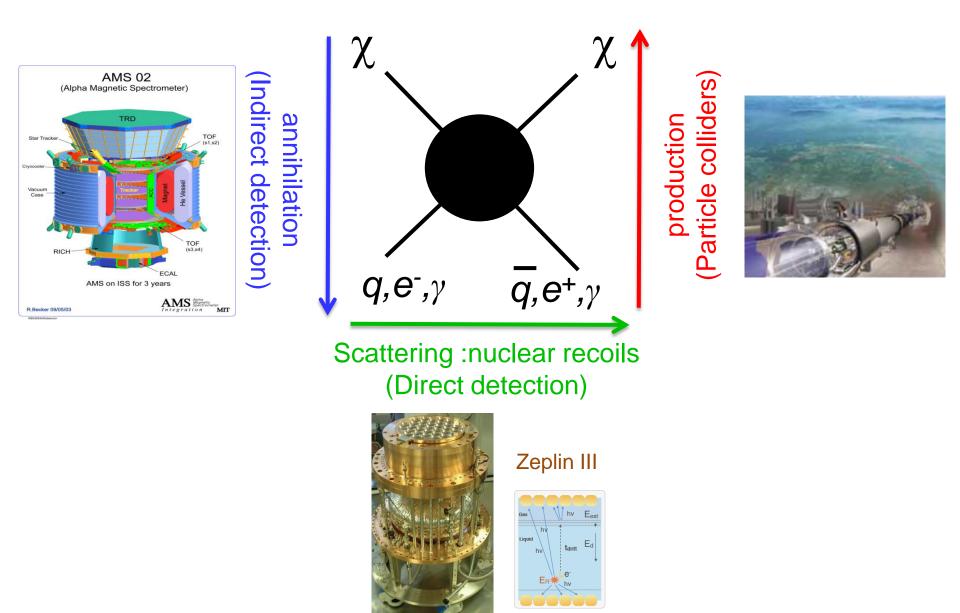


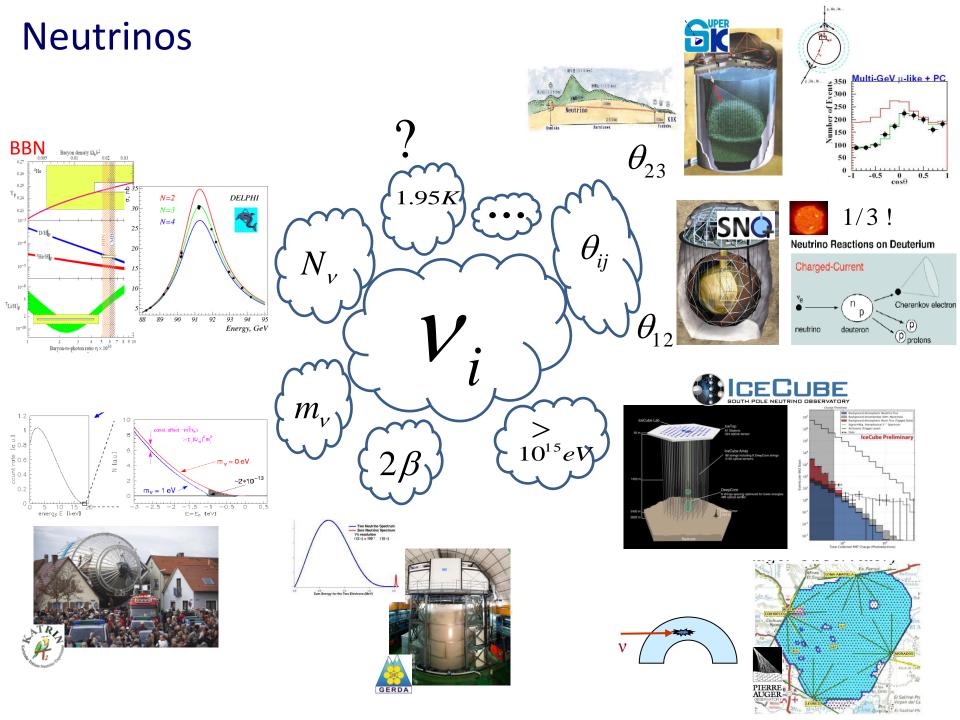






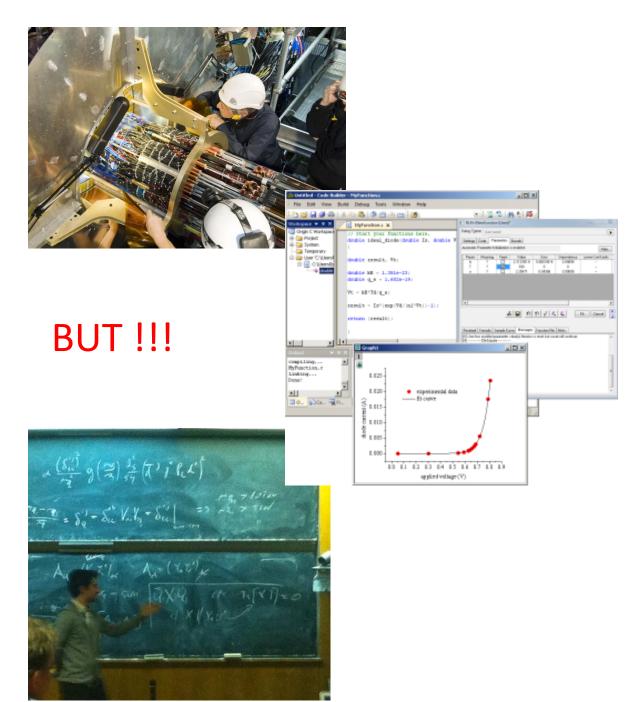
# Dark matter searches





# Not really a super Man/Woman ...





Baryon-antiBaryon asymmetry

# **Lorentz Invariance Violation**

# Gravitational waves

# **Extra-dimensions**

**Dark Energy** 

### Purpose

The International Doctorate Network in Particle Physics, Astrophysics and Cosmology (IDPASC) is an interdisciplinary network whose purpose is to create new high-level experts in the fields of Particle Physics, Astrophysics and Cosmology.

The doctorate network in particle physics, astrophysics and cosmology will appear in the overall range of doctorates offered by each partner university.

# Student profiles

Several scientific profiles have to co-exist!

from the experimental physics students interested in the development of new detectors or data acquisition and readout systems to the theoretical physics student interested in the development of string theories.

to all students a minimum common scientific background should be provided.

This common background will favour the future mobility and employment of the students either in scientific research projects and institutions or in the society at large.

### grants

#### 2010/2011/2012 Call FCT/IDPASC for Applications for Doctoral Scholarships

for thesis subjects proposed by IDPASC researchers and taking place in the Portuguese Universities members of the IDPASC network, in Particle and Astroparticle Physics, Astrophysics and Cosmology.

PhD scholarships granted: 21