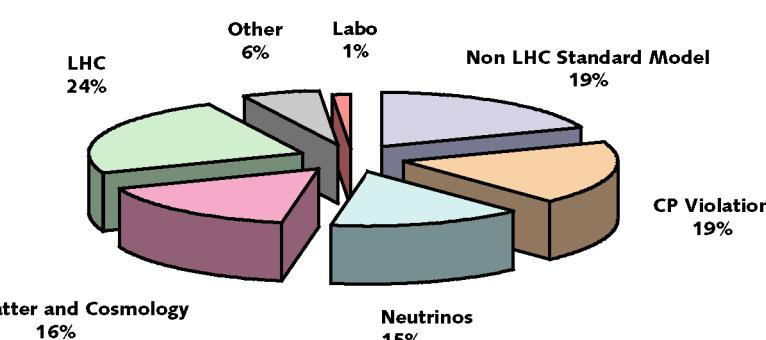


SPP : Service de Physique des Particules

Astrophysics
Particle Physics
Nuclear Physics
Associated Instrumentation

Breakdown of SPP activities per physics theme (2003)



~110 physicists

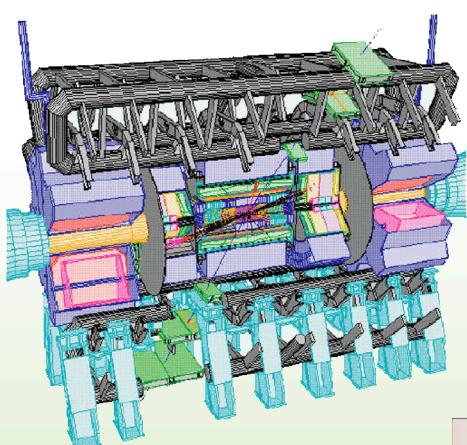
The Standard Model and beyond

Cern/LEP : Aleph, Delphi
Cern/LHC : Atlas, CMS
FNAL : D0
Desy : H1
R&D : Felice at the future ELC

CP Violation

Cern : NA48
Slac : Babar

Neutrinos

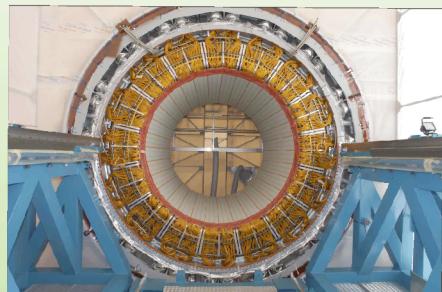


Antares
R&D Lens
K2K and JHF (Japan)

Dark Matter and Cosmology

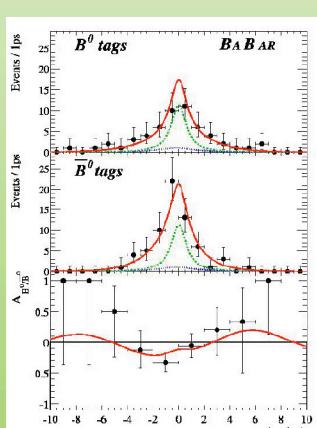
Eros / SNLS
Edelweiss
Archeops/
Olimpo/Planck

The ATLAS barrel electromagnetic calorimeter

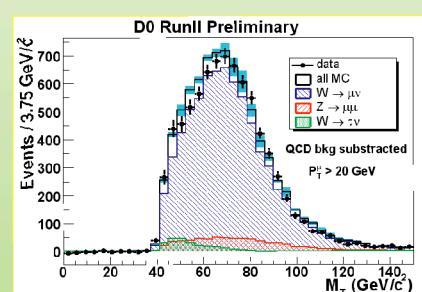


3-D display of a simulated H → ZZ* → μ+μ- e+e- event in ATLAS using the interactive software PERSINT developed by the Saclay group.

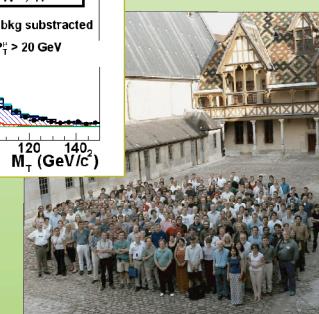
Installation of the laser pulse optical fiber distribution system on the first CMS ECAL supermodule (1700 lead tungstate crystals) by the Saclay team.



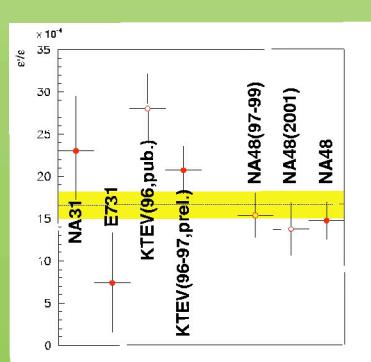
Study of CP violation at the BaBar experiment at SLAC. The plots show the time distributions of reconstructed $p_6 p_7$ candidates tagged as B^0 or \bar{B}^0 , and the associated asymmetry (sum of a sine term and cosine term). This channel can lead to the determination of the angle α of the unitarity triangle.



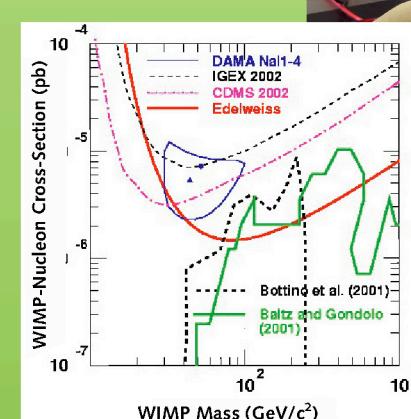
Transverse W mass for the $W \rightarrow \mu\nu$ selection (DPF' 03)



World results of $\text{Re}(\varepsilon'/\varepsilon)$ measurements. The line corresponds to the average value: $(16.661.6) \times 10^{-4}$ with $\chi^2/\text{ndf} = 6.2/3$



90% exclusion limit for the experiments DAMA, IGEX, CDMS, EDELWEISS and ZEPLIN (preliminary). Two regions spanned by supersymmetric calculations are shown.



One of the 320g bolometers of Edelweiss

A DAPNIA division:

- Technical support (mechanics, electronics, cryogenics, computing)
- Relations with Nuclear Physics and Astrophysics