Activities at Santiago de Compostela University

Diego Gonzalez Diaz
(on behalf of Instituto Gallego de Física de Altas Energías)

Formal application to RD51 membership
(CERN-14/12/2016)

File Edit View Go Window Help (72%) Spanish – ISO Wed 2:40 PM Diego Gonzalez

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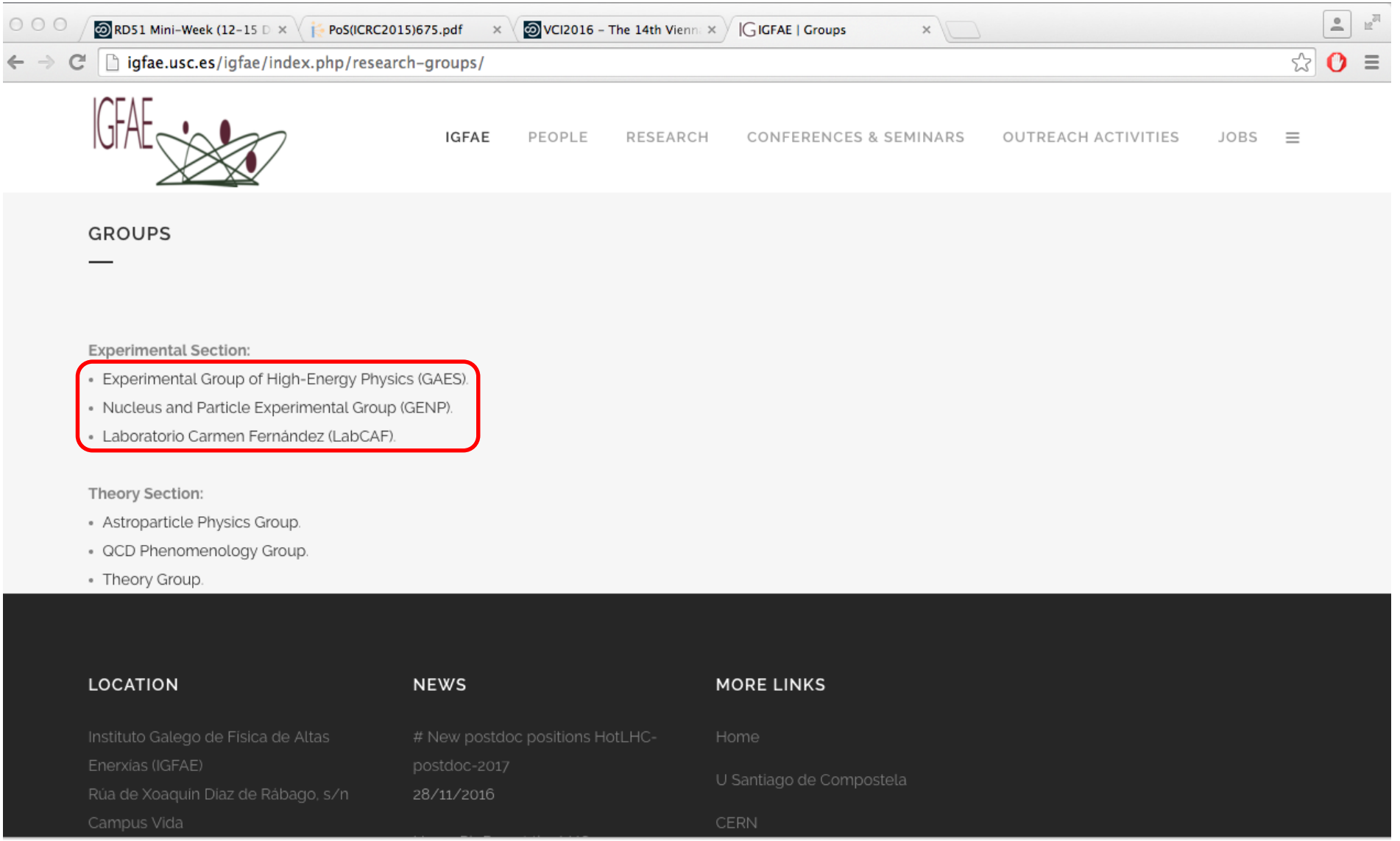
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Experimental Section:
Experimental Group of High-Energy Physics (GAES).
Nucleus and Particle Experimental Group (GENP).
Laboratorio Carmen Fernández (LabCAF).
Theory Section:
Astroparticle Physics Group.
QCD Phenomenology Group.
Theory Group.
LOCATION
Instituto Galego de Física de Altas Enerxías (IGFAE)
Rúa de Xoaquín Díaz de Rábago, s/n
Campus Vida
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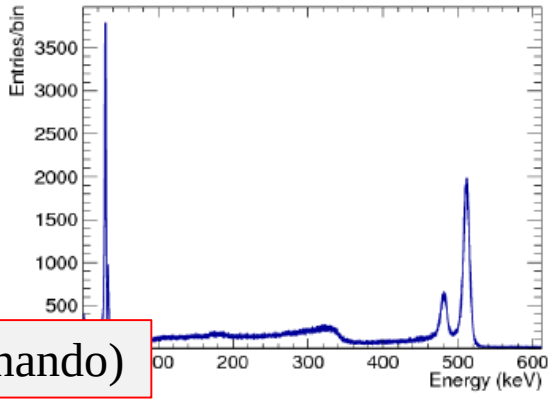
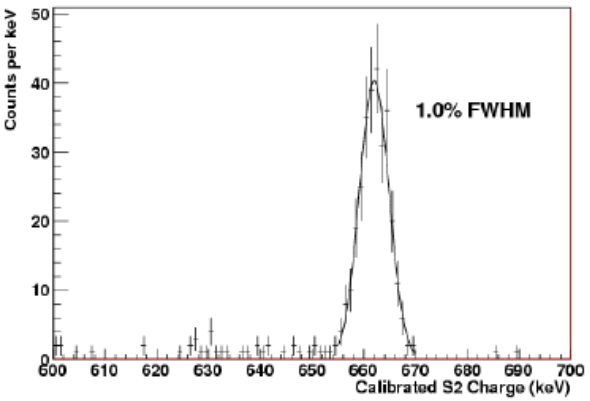
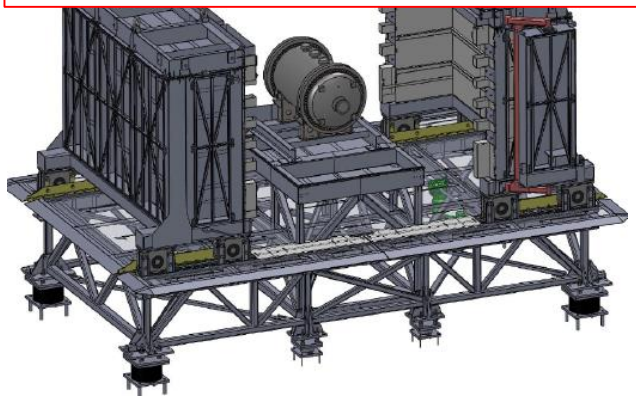


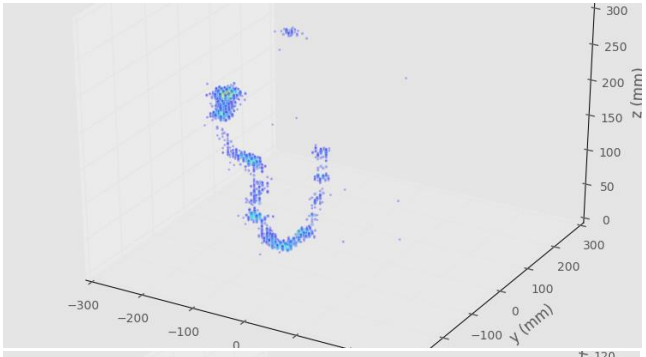


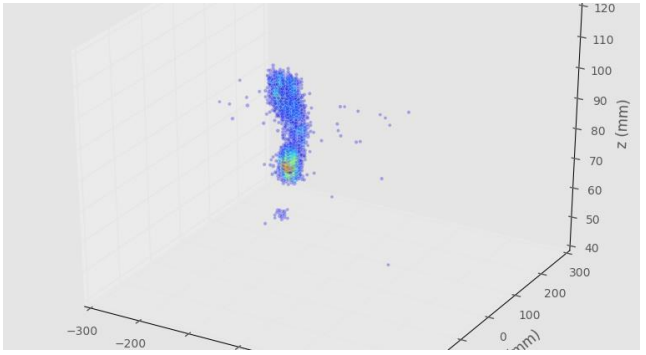
IGAES/NEW-NEXT100 (J. A. Hernando)

Neutrino-less double beta decay
at the technology frontier

NEW already taking data
underground since 1st of December!!







LabCaf group (J. A. Garzon)

cosmic muons studies of the correlation with atmosphere properties, space weather, geomagnetic field… (collaboration agreement with EEE experiment signed recently)

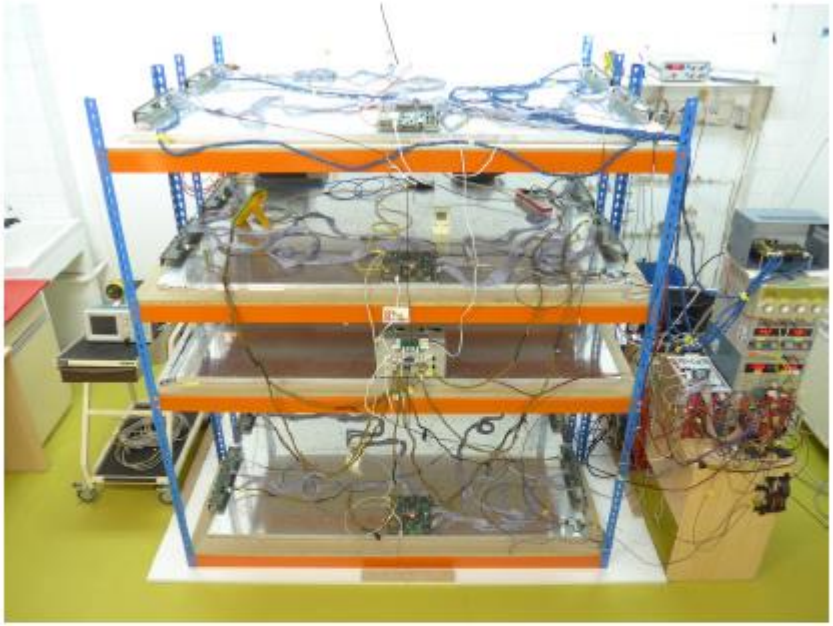


Figure 5: Present layout of the TRAGALDABAS detector. Starting from the top, only the 1st., 2nd. and 4th. planes are fully instrumented with the read-out electronics. Trigger is done by coincidences in planes 2nd. and 4th.

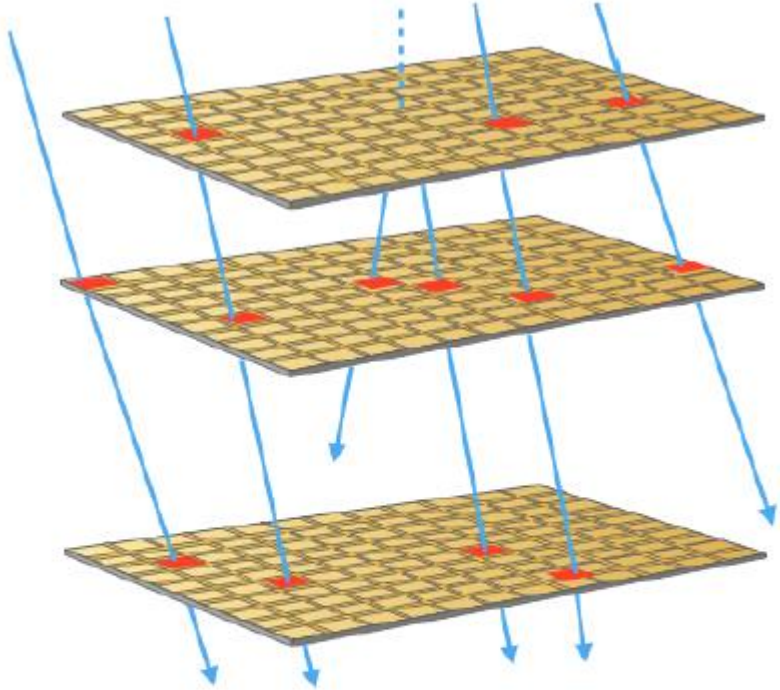


Figure 6: Example of the tracking performances of the TRAGALDABAS detector for a high multiplicity event. Electromagnetic component will be partially separated by software.

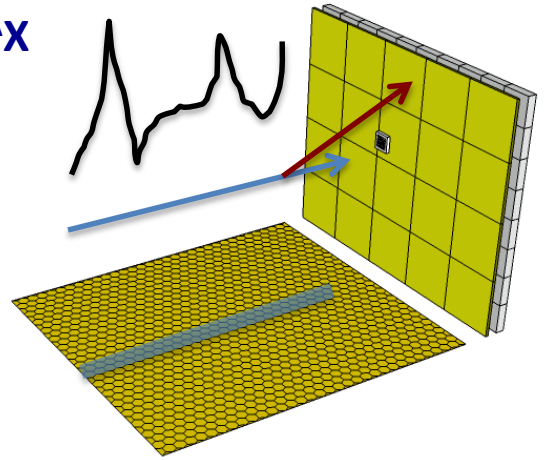
RESONANCE (IN)ELASTIC SCATTERING

RES: Suited for studies of the structure of unbound nuclei : ^{A}X

ACTIVE TARGET: INVERSE KINEMATIC THICK TARGET (TTIK)

$^{A}X+p->^{A+1}Y->^{A}X+p$

$^{A}X+p->^{A+1}Y->^{A}X(2^{+})+p'$

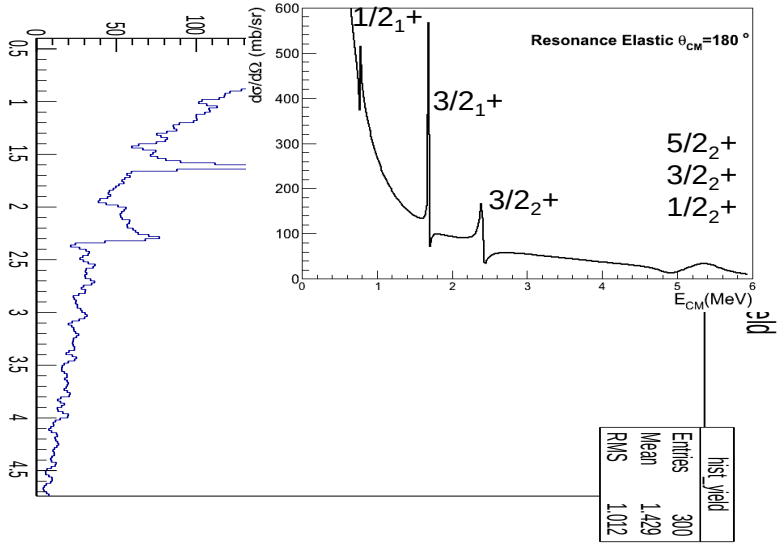


R-Matrix analysis of the excitation function

Spectroscopic Properties: E_r, J^{π}, Γ

Why an ACTIVE TARGET?

Total Path (TP) -> ΔTP ~ 2mm



- **Thick target + weak I ~ 100 pps**
- **Selects in/elastic channel**
  ΔE≈1.87 MeV
- **Removes background**

- **Large angular coverage**