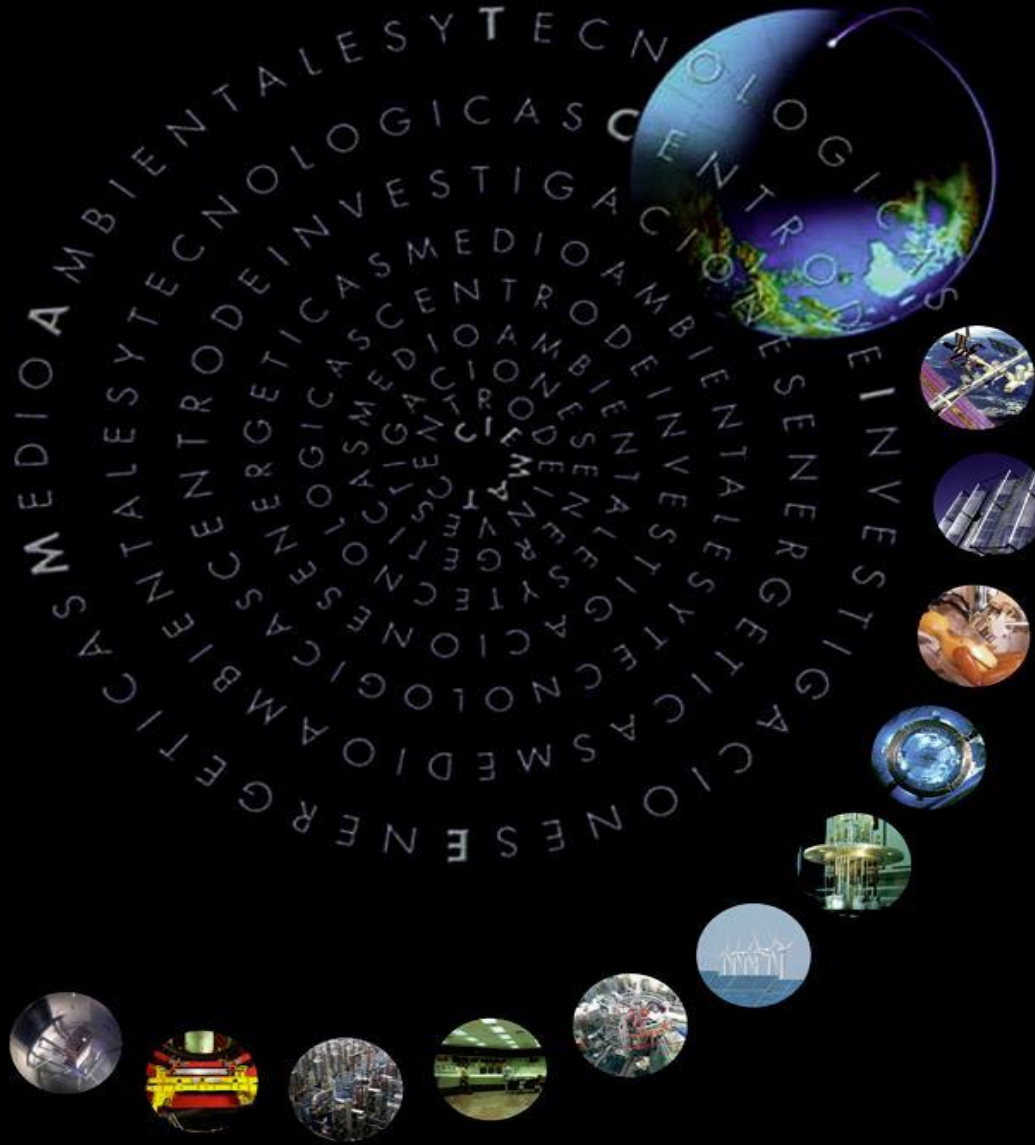


Working at CIEMAT (Madrid - SPAIN)



Madrid



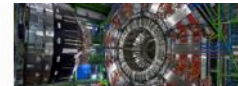
At CIEMAT,
we
participate
in several
projects of
Particle
Physics and
Astrophysics



AMS
Cosmic rays, dark matter



Dark matter
Direct search for dark matter



CMS
Hadron collider physics



Neutrinos
Measurement of neutrino oscillations



CALICE
Calorimeter for a future linear collider



PAU
Accelerating universe, dark energy



WLCG
Worldwide LHC Computing Grid



CTA
Very high energy gamma rays



DES
Dark energy, cosmology



Starbursts

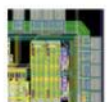


CIEMAT
1400 people
Nearby (20 min in subway)
from Madrid's center

And have access
to plenty of
facilities and
infrastructures



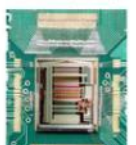
Electronics design:
Altium, Orcad, Kicad...



Analog and digital ASIC
design. Experience with
Europractice



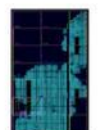
Electronics production and repairation.
Soldering stations, including BGAs



ASIC wire and bump
bonding machine



Equipped laboratories for electronics
testing, inspection and quality control



Firmware development:
Xilinx, Altera, Microsemi



Design of
different stages



Access to radiation facilities



EMI laboratory



PCB prototyping



Data acquisition and
online control software
development



Two
environmental
chambers



Cabling and
large scale
system
production,
assembly and
installation



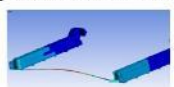
Clean Room equipped for cryo and vacuum



Large calibrated reference tables



Capability for the design,
fabrication and assembly of large
and complex scientific structures:
- End to End project Management
- From prototypes to large
structures
- Collaboration with companies
- Space, underground, etc



Capability of intense computation
mechanical structures analysis and
simulation (structural, thermal ...)



Access to precision
CNC machines



Access to material
strength testing
machines



Access to drilling, punching,
bending, torn machines



Equipped labs for cryo
and vacuum



Access to heavy
duty welding



Access to bridge
coordinate measuring
machines



Design and manufacturing
of control and
automatization systems



Opto-mechanical tests stands for
precise laser alignment systems



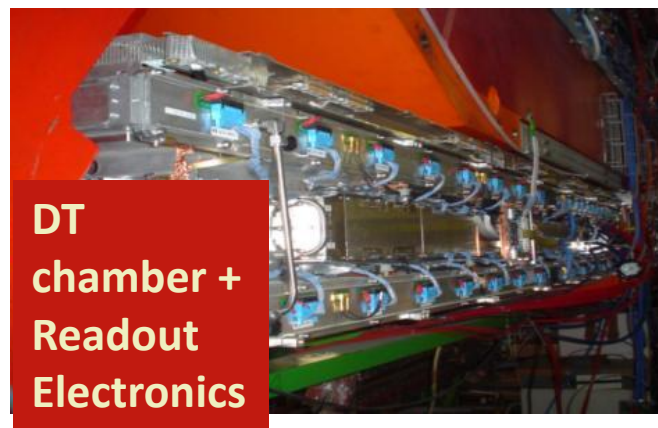
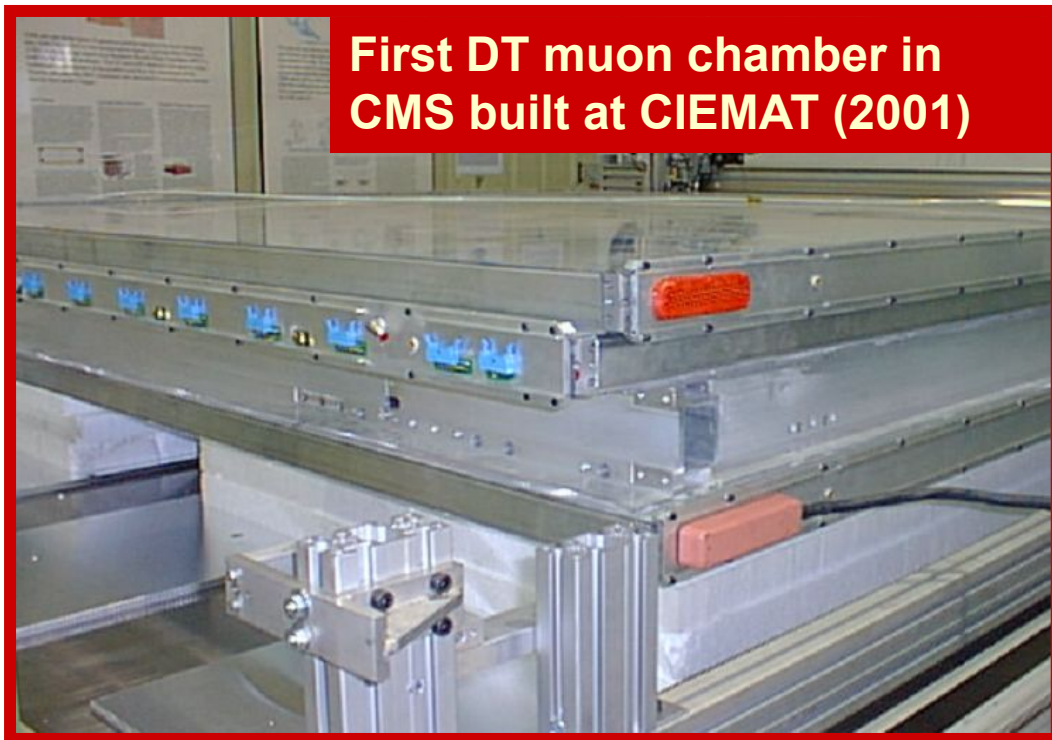
Portable coordinate
measuring machine

CIEMAT participation in CMS

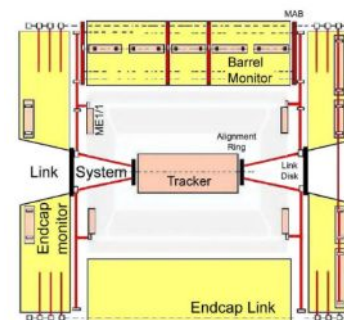
CIEMAT participation in CMS since the early stages
Heavy involvement since more than 20 years in:

- Physic analysis (electroweak, top, Higgs and BSM)
- Detector HW activities (Muon Drift Tubes and Trigger)
- Computing

First DT muon chamber in CMS built at CIEMAT (2001)



DT chamber + Readout Electronics



Link system

CIEMAT's CMS members

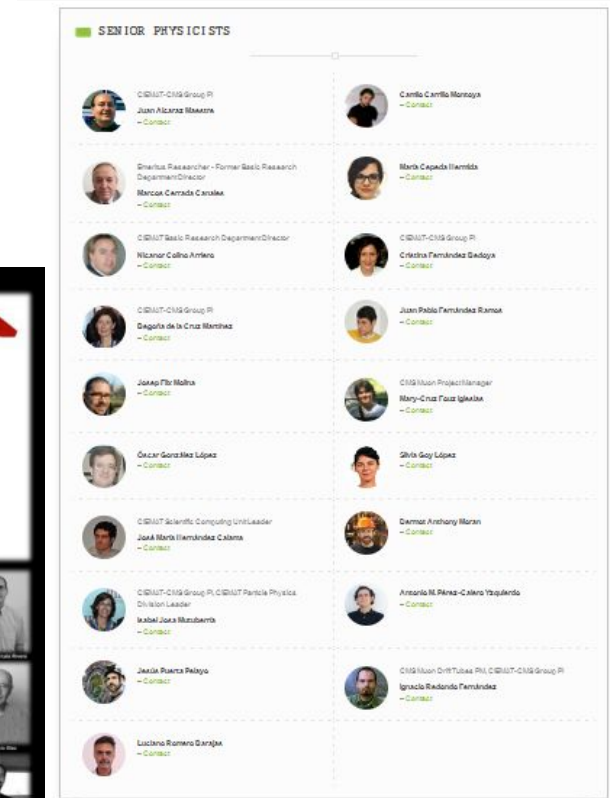
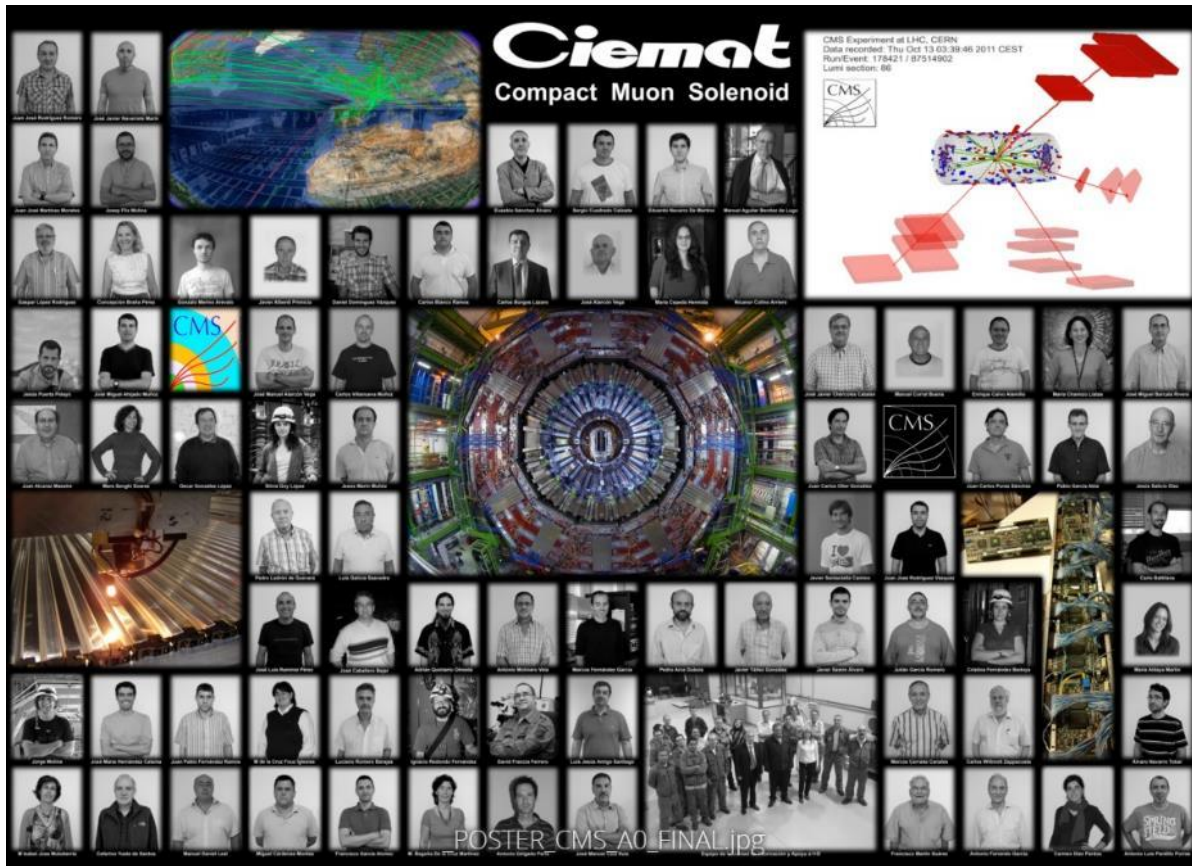
<http://cms.ciemat.es/cms-group>

Large group:

- 19 senior physicists
- 7 engineers
- 6 technicians

+ students, etc

Part of the group is permanent at CERN and part is at Madrid



CIEMAT's job offer:

Some (non-permanent) positions are expected to be opened soon:

- Postdoc: could be junior or senior

The person is expected to contribute in:

- Detector activities, particularly in the HL-LHC upgrade of the Muon DT or Trigger detectors
- Data taking activities during Run 3
- Physics analysis

Experience will be valued both in:

- Pure hardware activities (firmware development, electronics design, installation and commissioning experience)
- Detector performance with CMSSW (data analysis oriented to study the performance of the detector and of the trigger system during Run 3 collisions)

Possibility to stay at CERN or travel frequently could be negotiated

Other (non-permanent) positions:

- Junior Postdoc: Physics analysis
- Engineer: electronics engineer profile
- Students: PhD students