

► CIEMAT

MADRID



GOBIERNO
DE ESPAÑA

MINISTERIO
DE ECONOMÍA, INDUSTRIA
Y COMPETITIVIDAD

Ciemat

Centro de Investigaciones
Energéticas, Medioambientales
y Tecnológicas

Phone: 91 346 60 00
Fax: 91 346 64 80
Email: contacto@ciemat.es

Avenida Complutense 40,
28040 Madrid - Spain

<http://www.ciemat.es>



MISSIONS OF THE LABORATORY

- THE CIEMAT AS PUBLIC BODY FOR RESEARCH IN THE FIELDS OF ENERGY, ENVIRONMENT AND TECHNOLOGY, DEVELOPS ITS R&D AROUND TECHNOLOGICAL PROJECTS WHICH FORM A BRIDGE BETWEEN R&D&I AND SOCIAL INTEREST GOALS.
- ITS MISSION IS TO CONTRIBUTE TO SUSTAINABLE DEVELOPMENT OF THE COUNTRY AND TO THE QUALITY OF LIFE OF ITS CITIZENS THROUGH THE GENERATION AND APPLICATION OF SCIENTIFIC AND TECHNOLOGICAL KNOWLEDGE.
- ITS GOAL IS TO MAINTAIN ITS POSITION AS A CENTRE OF EXCELLENCE IN ENERGY, ENVIRONMENT AND TECHNOLOGY AND IN BASIC RESEARCH.

ACTIONS

Fundamental Research:

- Nuclear fission.
- Elementary particles and astroparticles.
- Biology and biomedicine.
- Nuclear fusion.

Applied Research:

- Renewable energies and energy savings.
- Energy Conversion of fuels and wastes.
- Environment.
- Ionizing radiations.
- Scientific instrumentation and medical physics.
- Materials analysis and characterization.
- Computation and information technology sciences.
- Energy and environmental system studies.

Innovation activities:

- Scientific instrumentation.
- Energy technologies.

Technology Transfer:

- Patents: 11.
- Licensing: 1.
- Technologies to be transferred: medical imaging, instrumentation in nuclear medicine, electronics, mechanical engineering, accelerators and electromagnetism.
- Valorization/selling (to other labs or to industry) of products developed for our physics.

Services:

- Training courses. The Centre provides a wide range of training, given in different forms (in person and online, including e-learning and b-learning) and lengths, in the areas in which CIEMAT is a leader (radiological protection, energy, environment, biotechnology...). CIEMAT organises the Master of Applied Nuclear Engineering. A total of

698 external students have participated in 37 courses with a total of 2247 lecturing hours.

- Workshops. CIEMAT organises a large variety of meetings : 232 national and 204 international with 1443 participants.
- Expertises. CIEMAT has performed 552 technical services to industry with a turnover above 1.3 M€ (in one year) in the following areas : renewable energies and energy savings, nuclear fission, nuclear fusion, biology and biomedicine, environment, ionizing radiations, scientific instrumentation and medical physics, materials analysis and characterisation, computation and information technology sciences, energy and environmental system studies and knowledge management.

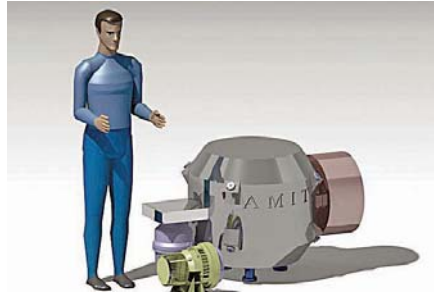
KEY DATA (2016)

- **Staff: 1340**
- **Users: for accelerator facilities**
- **Available Beams: none at present time.**
- **Scientific Production: 304 SCI papers, 39 non SCI papers, 323 communications to congresses, 25 books, 42 technical reports, 68 external and internal reports, 30 theses.**

- **R&D&I funding scheme:**

During 2015 CIEMAT submitted 77 projects with an approximate budget of 6.76 million € in 13 State Plan programme competitions. In 2015, 96 projects have been granted with a funding granted of 11.97 million € in 17 programme competitions judged during the year.

The main instrument of R&D&I funding of the European Union is the HORIZON 2020 Programme (H2020). During 2015 CIEMAT submitted 71 projects with a budget of 4.23 million € to 42 call of proposals. Moreover,



CIEMAT is building a cyclotron with an 8 MeV low-energy proton beam for producing single-patient doses of both ^{18}F and ^{11}C in particular.

25 projects (7 in EURATOM programme) with a total funding of 6.49 million €, (0.93 from EURATOM programme) were approved in 42 judged call of proposals in 2015. Besides, there are 29 projects still ongoing in the European Seventh Framework R&D&I, 4 of which are coordinated by the CIEMAT.

The CIEMAT develops a significant part of its R&D&I activities in collaboration with businesses and institutions upon request. So, in 2015, 174 agreements were signed.



MOdular Neutron SpectromETER (MONSTER) for neutron spectroscopy studies. Part of the detectors have been built by CIEMAT and the Spanish company Scientifica Internacional S.L.



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