

# Basic Training School on Accelerators Applications in Nuclear Physics – BTS25



June 3<sup>rd</sup> – 9<sup>th</sup>, 2025, Seville, Spain



## EURO-LABS Project

It is a pleasure to announce the third **Basic Training School on Accelerators BTS25** in the framework of the EU project **EURO-LABS** (Grant Agreement No: 101057511).

**EURO-LABS** is a network of 33 research and academic institutions from 18 countries from European and non-EU countries, involving 47 Research Infrastructures (RI) in the Nuclear Physics, Accelerators and Detectors for high energy physics pillars. The project brings together, for the first time, the three research communities of nuclear physics, accelerator, and detector technologies for high energy physics, in a pioneering super-community of subatomic scientists. Within it, EURO-LABS ensures diversity and actively supports researchers and research groups to use its RIs.

**EURO-LABS** is committed to improve the efficiency of the use of RIs and to increase its human and institutional basis. To this aim, **EURO-LABS** organizes a system of training activities, at various levels, starting with annual Basic Training schools and Advanced Training schools.

## BTS25 Training Topics

**BTS25** is the third Basic Training School organized within **EURO-LABS**, following BTS23 (IFIN-HH, Bucharest-Mugarele, Romania) and BTS24 (HIL-INCT, Warsaw, Poland). EURO-LABS also promotes complementary advanced schools, ATS24 in CERN and GSI.

**BTS25**, is organized by the **Centro Nacional de Aceleradores (CNA)** and the **University of Seville (US)**, will take place in **June 3<sup>rd</sup> – 9<sup>th</sup>, 2025**, Seville, Spain.

**BTS25** will involve hands-on activities making use of three different accelerators at CNA: the 3 MV tandem accelerator, the 1 MV tandetron accelerator and the 18/9 MV cyclotron. The purpose is to give participants a basic knowledge and develop experimental skills related to accelerators applications in nuclear physics.



#### Scope of BTS25:

- Use of Ion Beam Analysis (IBA) techniques for nuclear targets characterization
- Determination of radioactive isotopes in nature by Accelerator Mass Spectrometry (AMS)
- Proton beam performance and characterization for Medical Physics applications
- Production and use of neutron through an accelerator-based neutron source
- Experimental accelerator measurement preparation
- Use of particle detectors
- Data acquisition and analysis

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#### Venue

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**Seville** is a beautiful city in the south of Spain that seamlessly blends rich history, stunning architecture, and vibrant culture. Famous for its flamenco music, the iconic Alcázar palace, and the majestic Seville Cathedral, it offers a unique atmosphere where tradition and modernity coexist. Participants in the school can complement the stringent training program of the school with enjoying, in the evenings and at the weekend, the picturesque streets of the city centre, the delicious tapas, and the lively street life.

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#### Participation

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**Participants:** Up to 20 Early Stage Researchers (early PhD students or last year master degree students) will be selected and will receive hands-on training on different accelerator related techniques. These include performing ion and neutron beams experiments to acquire basic knowledge and develop skills in beam profile characterization and the use of several nuclear techniques with very different applications such as ion beam analysis, accelerator mass spectrometry or time-of-flight experiments.

**How to apply:** To apply, register online at <https://indico.cern.ch/e/BTS25>. The applicants must send a brief CV with a description of their scientific experience and a letter of recommendation from their supervisor. All submitted applications will be evaluated by a scientific committee and BTS25 participants will be selected.

**Important dates:**

- **2<sup>nd</sup> March 2025** deadline for application
- **24<sup>th</sup> March 2025** information on selected participants

**Financing:** Participants on BTS25 will be financed by EURO-LABS (Grant Agreement No: 101057511): travel with economy class within Europe, accommodation and meals will be cover.

**Travel and accommodation:** The organizers of BTS25 will reimburse within Europe the economy class air or train ticket to Seville (typically 400€). Participants will be

accommodated in a University Residence next to CNA with breakfast and dinner included.

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## Organizers

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Local Organizing Committee:

Begoña Fernández (chair)(US-CNA), Francisco Javier Ferrer (co-chair)(US-CNA), Joaquín Gómez Camacho(US-CNA), Jose Manuel Espino (US-CNA), Elena Chamizo (CNA), Mercedes López (US-CNA)

International Advisory Committee:

Livius Trahe, Maria José García Borge, Adam Maj, Gastón García, Victoria Corregidor, Sandor Biri



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