**The** [**Affiliated Big Science Organisations**](https://www.bsbf2024.org/acknowledgements/) **(ABSOs) in Europe**

***About*** [***DTT***](https://www.dtt-project.it/)  ***(short boilerplate)***

*The Divertor Tokamak Test (DTT) is a nuclear fusion facility under construction at ENEA. The project aims at developing advanced divertor solutions for future fusion power plants, addressing critical challenges in plasma exhaust and material interactions. DTT is a collaborative effort involving many research institutions and industries. DTT will operate with deuterium plasma and is expected to provide valuable insights into the performance and feasibility of various divertor configurations for a sustainable, clean power source*

***About DTT (long boilerplate)***

*The Divertor Tokamak Test (DTT) facility is a fusion device under construction at the Frascati ENEA Research Center. It is a key facility in the EURATOM fusion program and aims to study innovative solutions for the extraction of heat generated by fusion at heat fluxes comparable to those of a power plant. The facility is designed to integrate advanced technologies such as superconducting magnets and high-power flux components for the divertor. It will produce DEMO plasma relevant conditions in pulses lasting about 100 seconds to study various divertor configurations and innovative materials like liquid metals. The DTT project is based on decades of experience in fusion research from Italian laboratories and universities and involves significant involvement from the European community through the EUROfusion Consortium.*

***Highlights for Press:***

***Prof. Francesco Romanelli, President DTT - available for interviews***

**European Solar Telescope (EST)**

***About*** [European Solar Telescope (EST)](https://est-east.eu/) ***(short boilerplate)***

*The European Solar Telescope (EST) is a project to construct and operate a large aperture solar telescope in the Canary Islands, scientifically promoted by the European Association for Solar Telescopes. With its 4.2 m primary mirror, it will become the most powerful European ground-based facility to study the Sun in the coming decades in visible and near-infrared bands. Composed of 10 research institutions from 8 European countries, the EST Foundation confers legal status to the project consortium and sets an appropriate framework for the EST development.*

***About*** European Solar Telescope (EST) ***(long boilerplate)***

*Promoted by the European Association for Solar Telescopes, the European Solar Telescope (EST) will become part of the next-generation ground-based facilities tailored for observing the Sun’s activity in visible and infrared wavelengths. EST will be optimised for studies of the magnetic coupling of the solar atmosphere through the analysis of the thermal, dynamical and magnetic properties of the solar plasma at different layers of the solar atmosphere with the highest achievable spatial and temporal resolutions.*

*To achieve it scientific goals, the design of EST uses the most innovative technological advances: the first adaptive secondary mirror ever devised for a solar telescope, a complex multi-conjugated adaptive optics with deformable mirrors that form part of the optical train in a natural way, a polarimetrically compensated telescope that eliminates the complex temporal variation and wavelength dependence of the polarimetic performance of the telescope, and a complete instrument suite containing several (etalon-based) Tunable Imaging Spectropolarimeters and several Integral Field Unit Spectropolarimeters.*

*Composed of 10 research institutions from 8 European countries, the EST Foundation confers legal status to the project consortium and sets an appropriate framework for the EST development.*

***Highlights for Press:***

*MigueL Nuñez is the systems engineer for the European Solar Telescope - available for interviews*

[**ESS Bilbao – Strategic hub for neutron science and technologies**](https://www.essbilbao.org/es/)

***About*** [**ESS Bilbao – Strategic hub for neutron science and technologies**](https://www.essbilbao.org/es/) ***(short boilerplate)***

ESS Bilbao is an international research and development center for Particle Accelerator and Neutron Science and Technologies which generates knowledge and added value by leveraging the Spanish In-Kind contribution to the European Spallation Source ERIC. ESS Bilbao is a public consortium of the Spanish and Basque Governments. ESS Bilbao is the unique organisation in charge of channelling all Spanish In-Kind contribution to the European Spallation Source-ERIC. The scientific and technological advances that are being generated as a part of the design, production and testing currently undergoing at ESS Bilbao facilities play a key role in the ESS project.

***About*** [**ESS Bilbao – Strategic hub for neutron science and technologies**](https://www.essbilbao.org/es/) ***(long boilerplate)***

ESS Bilbao is an international research and development center for Particle Accelerator and Neutron Science and Technologies, established as a public consortium of the Spanish and Basque governments. It generates knowledge and added value by leveraging the Spanish In-Kind contribution to the European Spallation Source ERIC, currently being built in Lund (Sweden). ESS Bilbao is also actively collaborating in other projects worldwide in the sector of particle accelerators and neutron scattering science and technologies such as MYRRHA (SCK-CEN), ISOLDE (CERN), ITER and IFMIF-DONES. In addition, ESS Bilbao is committed to promoting technological developments and innovation in collaboration with industry through different public programmes from CDTI (prototypes and feasibility studies for some target components, Misiones NEURON-DONES) and from Basque Country (Hazitek-high speed neutron choppers and BENMACON).

***Highlights for Press:***

*Mario Perez ESS Executive Director - available for interviews*

[**CTAO (Cherenkov Telescope Array Observatory)**](https://www.ctao.org/)

***About*** [***CTAO (Cherenkov Telescope Array Observatory)***](https://www.ctao.org/) ***(short boilerplate)***

***The CTAO (Cherenkov Telescope Array Observatory)*** *will be the world’s largest and most sensitive observatory for gamma-ray astronomy. With more than 60 telescopes located in the northern and southern hemispheres, the CTAO will explore the very high-energy Universe within an unprecedented energy range and unparallel accuracy. It will also be the first of its kind to operate as an open, proposal-driven observatory providing public access to its high-level science data and software products.*

***About*** [**ESS Bilbao – Strategic hub for neutron science and technologies**](https://www.essbilbao.org/es/) ***(long boilerplate)***

ESS Bilbao is an international research and development center for Particle Accelerator and Neutron Science and Technologies, established as a public consortium of the Spanish and Basque governments. It generates knowledge and added value by leveraging the Spanish In-Kind contribution to the European Spallation Source ERIC, currently being built in Lund (Sweden). ESS Bilbao is also actively collaborating in other projects worldwide in the sector of particle accelerators and neutron scattering science and technologies such as MYRRHA (SCK-CEN), ISOLDE (CERN), ITER and IFMIF-DONES. In addition, ESS Bilbao is committed to promoting technological developments and innovation in collaboration with industry through different public programmes from CDTI (prototypes and feasibility studies for some target components, Misiones NEURON-DONES) and from Basque Country (Hazitek-high speed neutron choppers and BENMACON).

***Highlights for Press:***

Prof. Federico Ferrin Director of[***CTAO (Cherenkov Telescope Array Observatory)***](https://www.ctao.org/), Professor of Astrophysics at the University of Pisa *- available for interviews*

*Regarding Prof. Federico Ferrini's availability: He will be available during the conference for interviews or meetings, both with organizers/media or industry. Additionally, it is quite probable that our other Managing Director, Dr. Stuart McMuldroch, will join Federico during the conference, as well as our Procurement Officer, Francesca Calise.*

[**IFMIF-DONES**](https://ifmif-dones.es/)

***About*** [***IFMIF-DONES***](https://ifmif-dones.es/) ***(International Fusion Materials Irradiation Facility – Demo Oriented NEutron Source (short boilerplate)***

One of the key challenges in the realization of fusion energy is the development of neutron tolerant materials that can maintaining adequate structural and other physical properties over long periods.

The IFMIF-DONES Facility will address this need being the central element of the DONES Programme, which aims at establishing an extensive database on fusion materials.

The IFMIF-DONES Facility will provide an accelerator-based D-Li neutron source to produce high energy neutrons to simulate as closely as possible the first wall neutron spectrum of future nuclear fusion reactors.

***About*** [***IFMIF-DONES***](https://ifmif-dones.es/) ***(International Fusion Materials Irradiation Facility – Demo Oriented NEutron Source (long boilerplate)***

One of the key challenges in the realisation of fusion energy is the development of neutron tolerant materials that can maintaining adequate structural and other physical properties over long periods. The IFMIF-DONES Facility will address this need being the central element of the DONES Programme, which aims at establishing an extensive database on fusion materials. The IFMIF-DONES Facility will provide an accelerator-based D-Li neutron source to produce high energy neutrons to simulate as closely as possible the first wall neutron spectrum of future nuclear fusion reactors.

***Highlights for Press:***

Mr. Angel Ibarra IFMIF-DONES España Director - *available for interviews*

[**MYRRHA, the Multipurpose Hybrid Research Reactor for High-tech Applications**](https://myrrha.be/)

***About*** [**MYRRHA, the Multipurpose Hybrid Research Reactor for High-tech Applications**](https://myrrha.be/) ***(short boilerplate)***

Multipurpose hYbrid Research Reactor for High-tech Applications in Belgium The Multipurpose hYbrid Research Reactor for High-tech Applications (MYRRHA) is a cutting-edge research facility based on Accelerator Driven System concept. Initiated by the Belgian nuclear research center SCK CEN in 1998, it is the world’s first pre-industrial scale ADS under construction. MYRRHA research portfolio includes: R&D for advanced solutions for HLW treatment through Partitioning & Transmutation, development and production of innovative medical radioisotopes, creation of reliable powerful radioactive ion beams (RIB) for fundamental research, R&D for materials for fusion and Gen.IV reactors, R&D on accelerator reliability and energy efficiency.

***About*** [**MYRRHA, the Multipurpose Hybrid Research Reactor for High-tech Applications**](https://myrrha.be/) ***(International Fusion Materials Irradiation Facility – Demo Oriented NEutron Source (long boilerplate)***

Multipurpose hYbrid Research Reactor for High-tech Applications Belgium is renowned to be a pioneer in nuclear research and technology. The objective of Myrrha aisbl/ivzw is to build MYRRHA a cutting-edge research facility, jointly with SCK CEN and international partners. MYRRHA, will be the first pre-industrial scale prototype in the world of an Accelerator Driven System. MYRRHA is a world-class international research infrastructure in nuclear sciences and technologies, designed to operate for at least the next 40 years. It is based on the ADS concept, coupling a sub-critical Pb-Bi cooled reactor with a thermal power of 70 MW and a SC LINAC delivering a proton beam of 4 mA at 600 MeV. MYRRHA, is a highly innovative and multidisciplinary research infrastructure allowing: • Testing and developing the transmutation of long-lived and highly radiotoxic nuclides in spent fuel to significantly reduce their volume (by a factor of 100) and radiotoxicity duration (from hundreds of thousands of years to a few centuries – a factor of 1,000). • Serving as an Experimental and Technological Test Platform for SMR technologies, particularly those based on HLM technology • Conducting materials R&D for current and future nuclear fusion and fission reactors • Ensuring the production of innovative medical radioisotopes that are crucial for cancer therapy • Providing a multifunctional accelerator for fundamental and applied research.

***Highlights for Press:***

Hamid Aït Abderrahim | General Manager Myrha - *available for interviews*

[**Extreme Light Infrastructure (ELI ERIC)**](https://eli-laser.eu/)

***About*** [**Extreme Light Infrastructure (ELI ERIC)**](https://eli-laser.eu/) ***(short boilerplate)***

Extreme Light Infrastructure (ELI ERIC) is the world's largest and most advanced high-power laser infrastructure and a world leader in technology and innovation in high-power, high-intensity, short-pulse laser systems. The infrastructure located in the Czech Republic and Hungary provides access to state-of-the-art instrumentation enabling cutting-edge research in the physical, chemical, material and medical sciences as well as breakthrough technological innovation.

***About*** [**Extreme Light Infrastructure (ELI ERIC)**](https://eli-laser.eu/) ***(long boilerplate)***

The Extreme Light Infrastructure (ELI ERIC), is the world’s largest and most advanced high-power laser infrastructure and a global technology and innovation leader in high-power, high-intensity, and short-pulsed laser systems. ELI’s international user facility accomodates some of the most intense lasers in the world producing ultra-short pulses of high energy photons, electrons, protons, neutrons, muons and neutrinos in the (sub-) attosecond regimes on demand. In terms of research, ELI’s lasers enable a broad range of discovery possibilities from pioneering research in physics to applications and engineering. As the technology develops and spreads, ELI will become one of the more cost-effective means to conduct ‘big science’ in physics, biology, medicine and materials science. ELI ERIC consists of two facilities hosting operational world-class high-power, high-repetition rate laser systems, specialised in different fields of research with extreme light beams: the ELI Beamlines Facility in Dolní Břežany (Czech Republic) with the ERIC Statutory seat, and the ELI ALPS Facility for Attosecond Physics in Szeged (Hungary). The forthcoming third facility ELI-NP for Nuclear Physics is under commissioning in Măgurele (Romania). During the period 2024-2028, significant investments in the following technological areas are foreseen: diagnostics, detectors, sensors, optics, and instruments, complex building, constructions, and safety related systems, electrical, power electronics, electromechanical and RF systems, high precision and large mechanical components, information and communication technologies, instrumentation, control and CODAC.

***Highlights for Press:***

Hala Ales Head of Technology Transfer and Industrial Liaison Office - *available for interviews*

[**Elettra - Sincrotrone Trieste**](https://www.elettra.eu/it/index.html)

***About*** [**Elettra - Sincrotrone Trieste**](https://www.elettra.eu/it/index.html) ***(short boilerplate)***

Dive into cutting-edge research at Elettra Sincrotrone Trieste! This multidisciplinary center uses powerful synchrotron light beams, from infrared to X-rays, to study materials at atomic and molecular levels. With our FERMI Free Electron Laser, we explore ultrafast processes with unparalleled precision. Over 1500 international scientists conduct pioneering experiments here annually. Discover Elettra 2.0, our new project for the future of research!

***About*** [**Elettra - Sincrotrone Trieste**](https://www.elettra.eu/it/index.html) ***(long boilerplate)***

Elettra Sincrotrone Trieste is a multidisciplinary research center located in Trieste, dedicated to studying materials at the atomic and molecular levels. Since 1993, Elettra has been producing intense beams of light spanning a broad spectrum, from infrared to X-rays. Researchers from various scientific fields use these beams to investigate a wide range of phenomena, from material properties to biological structures and environmental processes.

One of the center's jewels is the FERMI Free Electron Laser (FEL), an innovative laser facility that generates ultrashort, intense pulses of coherent light in the extreme ultraviolet (XUV) and soft X-rays. FERMI allows scientists to study ultrafast processes at the molecular and electronic levels with unprecedented precision.

Each year, over 1500 international scientists and experts visit Elettra to conduct experiments using the advanced instrumentation available. The center is a hub for collaborative research, promoting scientific advancements with far-reaching implications across multiple disciplines.

With the Elettra 2.0 project, the center is preparing for an even brighter future, implementing new technologies and enhancing existing infrastructures to stay at the forefront of scientific research. Elettra 2.0 aims to further boost research capabilities and provide new opportunities for scientists worldwide.

Visiting Elettra Synchrotron Trieste offers the opportunity to understand the facility's significance in advancing fundamental scientific principles and technological innovation. The center represents a crossroads of scientific collaborations that foster significant advancements with implications across various fields.

***Highlights for Press:***

Giorgio Paolucci Chief Scientific Officer - *available for interviews*

[**Istituto Nazionale di Fisica Nucleare (INFN)**](https://home.infn.it/it/)

***About*** [**Istituto Nazionale di Fisica Nucleare (INFN)**](https://home.infn.it/it/) ***(short boilerplate)***

INFN - Istituto Nazionale di Fisica Nucleare is the Italian research institute dedicated to the study of the fundamental constituents of matter and their interactions. INFN carries out research, both theoretical and experimental, in the fields of subnuclear, nuclear and astroparticle physics, and technological applications. These research activities require the use of cutting-edge technologies that INFN develops both in its own laboratories and in collaboration with the industry, and that often lead to useful outcomes for society.

***About*** [**Istituto Nazionale di Fisica Nucleare (INFN)**](https://home.infn.it/it/) ***(long boilerplate)***

Founded in 1951, INFN - Istituto Nazionale di Fisica Nucleare is the Italian research institute dedicated to the study of the fundamental constituents of matter and their interactions. Today it is a community of over six thousand people committed to making basic research a national excellence: historic achievements such as the Nobel Prize-winning discoveries of the Higgs boson and the gravitational waves are just a few examples. INFN carries out research, both theoretical and experimental, in the fields of subnuclear, nuclear and astroparticle physics. Fundamental research in these fields requires the use of cutting-edge technologies and tools that INFN develops both in its own laboratories and in collaboration with the industry. These frontier technologies, although born for basic research, often lead to useful outcomes for society, for instance in the medical field, in the cultural heritage sector or in environmental protection.

***Highlights for Press:***

Diego Bettoni Executive Board member - *available for interviews*