**The Big Science Organisations in Europe**

**The main European research infrastructures that will meet with industry and SMEs to discuss the needs of Big Science in Trieste**

**European Organization for Nuclear Research (CERN)**

***About*** [***CERN***](https://www.home.cern/) ***(short boilerplate)****CERN, the European Laboratory for Particle Physics, uses advanced instruments to study fundamental particles and universal laws. Scientists at CERN develop cutting-edge technologies for accelerators, detectors and computing, requiring a continuous supply of resources and services . Each year, the Organization allocates nearly half of its 1.3 billion CHF budget to industry procurement.*

*CERN’s procurement rules adhere to transparency and impartiality, ensuring balanced industrial returns for its Member States. Any firm based on Member or Associate Member states that can provide evidence of good performance and ethical business practice is encouraged to apply to our* [*upcoming surveys and invitations to tender*](https://forthcoming-ms.app.cern.ch/#!/)*.*

*Contracts are awarded based on compliance with origin, technical, financial, environmental, and delivery requirements, offering the highest overall value to CERN.*

*CERN is looking forward to doing business with you. Register your firm on the* [*CERN's supplier database.*](https://dir-ext-prod.cern.ch/pentaho/api/repos/%3Apublic%3ASupplier%20Database%3ADashboard.wcdf/generatedContent)

***Highlights for Press -*** Interview: Christopher Hartley, Head of Industry, Procurement and Knowledge Transfer Department is disponible

**European Space Agency (ESA)**

***About ESA (short boilerplate)*ESA is Europe’s comprehensive space agency**, active across every area of the space sector; space science, human spaceflight, exploration, earth observation, space transportation, navigation, operations, technology, telecommunications and safety and security from space. ESA promotes a broad competitiveness of European space industries through its industrial policy. ESA also works in close cooperation with the EU and other European organisations as well as space organisations outside Europe. ESA is further increasingly active in stimulating the downstream market that follows from space developments and applications. ESA works with economic operators to carry out projects and activities in all areas mentioned.

***Highlights for Press* Interview to Sandra Vogt, Industrial Policy Officer in the SME section of ESA’s** Directorate of Commercialisation, Industry and Procurement Sandra Vogt | BSBF visits ESA | Road to BSBF <https://youtu.be/GeGHWa68x4E?si=t0d082Da3-XcBpTP>

**News on ESA Website**: Big Science Business Forum 2024: opportunità di collaborazione con l'ESA <https://www.esa.int/Space_in_Member_States/Italy/Big_Science_Business_Forum_2024_opportunita_di_collaborazione_con_l_ESA>

**European Southern Observatory (ESO)**

***About ESO (short boilerplate)*** *The European Southern Observatory (ESO) enables scientists worldwide to discover the secrets of the Universe for the benefit of all. We design, build and operate world-class observatories on the ground — which astronomers use to tackle exciting questions and spread the fascination of astronomy — and promote international collaboration for astronomy. An intergovernmental organisation supported by 16 Member States and two partner countries, ESO has headquarters in Germany and operates three observing sites in Chile.*

***About ESO (long boilerplate)*** *The European Southern Observatory (ESO) enables scientists worldwide to discover the secrets of the Universe for the benefit of all. We design, build and operate world-class observatories on the ground — which astronomers use to tackle exciting questions and spread the fascination of astronomy — and promote international collaboration for astronomy. Established as an intergovernmental organisation in 1962, today ESO is supported by 16 Member States (Austria, Belgium, Czechia, Denmark, France, Finland, Germany, Ireland, Italy, the Netherlands, Poland, Portugal, Spain, Sweden, Switzerland and the United Kingdom), along with the host state of Chile and with Australia as a Strategic Partner. ESO’s headquarters and its visitor centre and planetarium, the ESO Supernova, are located close to Munich in Germany, while the Chilean Atacama Desert, a marvellous place with unique conditions to observe the sky, hosts our telescopes. ESO operates three observing sites: La Silla, Paranal and Chajnantor. At Paranal, ESO operates the Very Large Telescope and its Very Large Telescope Interferometer, as well as survey telescopes such as VISTA. Also at Paranal ESO will host and operate the Cherenkov Telescope Array South, the world’s largest and most sensitive gamma-ray observatory. Together with international partners, ESO operates ALMA on Chajnantor, a facility that observes the skies in the millimetre and submillimetre range. At Cerro Armazones, near Paranal, we are building “the world’s biggest eye on the sky” — ESO’s Extremely Large Telescope. From our offices in Santiago, Chile we support our operations in the country and engage with Chilean partners and society.*

***Highlights for Press -*** [**Matteo Accardo**](https://www.bsbf2024.org/chair-speaker/matteo-accardo/)**: Head of of Instruments and Cryogenic Systems**

**European Spallation Source (ESS)**

***About ESS (short boilerplate)***

*ESS is a research facility under construction in Lund, Sweden, with its data centre in Denmark. When completed it will be the world’s most powerful accelerator-based neutron source. Researchers from academia and industry will ESS to learn about materials, unlocking discoveries and driving innovative solutions for global challenges, from energy to healthcare and sustainability. ESS is being built by 13 countries, with components designed and constructed by technical experts from more than 40 European research institutes with contributions from over 100 laboratories worldwide.*

***About ESS (long boilerplate)***

*ESS is a research facility under construction in Lund, Sweden, with its data management and software centre near Copenhagen, Denmark. When completed, it will be the world’s most powerful accelerator-based neutron source. Every year, thousands of researchers from academia and industry will use ESS to study the structure and behaviour of materials and biological systems, unlocking discoveries and driving innovative solutions to address global challenges.*

*Built by 13 countries, ESS is Europe’s flagship big- science project, with technical components built at more than 40 European research institutes and with the contribution of know-how from more than 100 laboratories and experts worldwide.*

*Research with neutrons is complementary to other techniques, providing insights thanks to the capabilities of going deeper into materials. Neutrons have a high sensitivity to light elements like hydrogen, which is important in biological samples, and lithium, present in batteries. They have a magnetic moment so can reveal magnetic phenomena. They are non-destructive so are suitable for fragile samples. These properties make neutron science a powerful tool for discovery science, driving innovation in medicine, energy, chemistry, transport and more.*

[*www.ess.eu/explore*](http://www.ess.eu/explore) *and* ***leaflet*** [***link***](https://drive.google.com/file/d/1uW5IpkdxrZhpcRBWEQj9oBUPa23fBufg/view?usp=drive_link)

**The Institut Laue-Langevin (ILL)**

***About ILL (short boilerplate)*** *The ILL is the world-leading facility for neutron science and technology, operating the world’s most intense neutron source. Its state-of-the-art suite of 40 instruments enable cutting-edge research across a wide range of domains, including physics, chemistry, biology, and materials science. The ILL hosts 2500 researcher visits each year coming from 40 countries. The ILL works closely with industry and develops an impactful program addressing societal challenges in health, environment, and quantum technologies.*

***About ILL (long boilerplate)***  *The ILL is the world-leading facility for neutron science and technology. Its high-flux reactor delivers the world’s most intense neutron beams to a state-of-the-art suite of more than 40 public instruments. Neutrons are a unique and powerful probe of materials and processes. ILL’s instruments, complemented by a comprehensive suite of labs and scientific support services, enable cutting-edge research across a wide range of scientific domains, including physics, chemistry, biology, and materials science. The ILL works closely with industry and develops an impactful program addressing societal challenges namely in health, energy, sustainability and climate changes, and quantum technologies. The ILL hosts researchers mainly from 14 stakeholder countries in Europe, with 10% coming from about 30 other countries. In total, there are about 2500 researcher visits each year. The ILL is a Landmark Facility on the European Strategy Forum on Research Infrastructures (ESFRI) Roadmap, recognising its central role in the ecosystem of European research facilities.*

**Square Kilometre Array Observatory (SKAO)**

***About SKAO (short boilerplate)***

*The SKA Observatory (SKAO) is an intergovernmental organisation with member states on five continents, headquartered in the UK. Its mission is to build and operate cutting-edge radio telescopes to transform our understanding of the Universe, and deliver benefits to society through global collaboration and innovation. Its two telescopes, under construction in South Africa and Australia, will be the two most advanced radio telescopes on Earth.*

***About SKAO (long boilerplate)***

*The SKA Observatory (SKAO) is an intergovernmental organisation with member states on five continents, headquartered in the UK. Its mission is to build and operate cutting-edge radio telescopes to transform our understanding of the Universe, and deliver benefits to society through global collaboration and innovation. The SKAO's two telescopes, under construction in South Africa and Australia, will be the most advanced radio telescopes on Earth, exploring the frontiers of science and deepening our understanding of key processes, including galaxy evolution, fundamental physics in extreme environments and the origins of life. Through technological innovations and its contribution to addressing societal challenges, the SKAO will help to address the UN Sustainable Development Goals and deliver benefits across its membership and beyond. The SKAO recognises and acknowledges the Indigenous peoples and cultures that have traditionally lived on the lands on which its facilities are loca*

***Highlights for Press:*** *The SKA telescopes are under construction, with the first SKA-Low telescope antennas deployed in Western Australia in early March, and the first SKA-Mid telescope dish being assembled in South Africa in April/May. By October, we anticipate three dishes will have been constructed.*

*Components for both telescopes are being manufactured internationally. Since the approval of the SKAO Construction Proposal in 2021, we have let 85 large value construction contracts, both cash and in-kind to suppliers in every SKAO member country. The value of contracts awarded to date is Euro 700m. We have procured contracts for software development, high-tech electronics, dishes and antennas, receivers, cryo compressors, controllers and lines, infrastructure and construction work at the two sites and most recently a site camp and a contract to operate it. Further general information about the SKAO, its telescopes and science goals can be found at:* [*https://www.skao.int*](https://www.skao.int)

***Dr Simon Berry - Director of the SKAO Director-General’s Office - available for interviews***

***Information on member and partner countries’ contributions to the SKAO (including Italy, which is a member state)*** *can be found here:* [*https://www.skao.int/en/partners*](https://www.skao.int/en/partners) *in collaboration with PERIIA, the Pan-European Network of national ILO – Industry Liaison Officers. Italian ILO is composed from CNR, ENEA, INAF and INFN*

**European Synchrotron Radiation Facility (ESRF)**

***About ESRF (short boilerplate)*** *The ESRF is the world’s most intense X-ray source, a centre of excellence for fundamental and innovation-driven research in condensed and living matter science. Funded by 20 partner countries, the ESRF welcomes around 10,000 scientists each year. In 2020, the ESRF opened a brand-new generation of high-energy x-ray source, ESRF-EBS (Extremely Brilliant Source). Selected as an ESFRI Landmark, ESRF-EBS hails a new era for science, addressing the complex societal challenges, such as health, energy and the environment.*

***About ESRF (long boilerplate)*** *The ESRF, the European Synchrotron, is the world’s most intense X-ray source and a centre of excellence for fundamental and innovation-driven research in condensed and living matter science. Funded by 20 partner countries, the ESRF welcomes around 10,000 scientists each year to carry out leading-edge research, addressing the complex societal challenges, such as health, energy and the environment. It also contributes to the development of new technologies for industry and to preserving humanity's cultural heritage. In 2020, the ESRF opened a brand-new generation of high-energy x-ray source, ESRF-EBS (Extremely Brilliant Source), with X-ray performances multiplied by 100 compared to before. Selected as a Landmark in the ESFRI Roadmap, ESRF-EBS hails a new era for X-ray science in imaging condensed and living matter, such as sub-cellular imaging of human organs, time-resolved serial crystallography, but also with applications for new sustainable materials for energy and industry, and the studies of key molecular components of our universe.*

***Highlights for Press*** *The ESRF produces X-rays 10 trillion times brighter than the X-rays used in hospitals. These 'hard' X-rays, endowed with exceptional properties, are produced by the high energy electrons that race around the storage ring, a circular tunnel measuring 844 metres in circumference. Each year, the demand to use these X-ray beams increases and thousands of scientists from around the world come to Grenoble, to conduct experiments at the 44 ‘beamlines’, each equipped with state-of-the-art instrumentation, and managed by highly qualified scientific and technical experts.*

***Dr. Jean Daillant - DG will be at BSBF and available for interviews***

*21 partners: a model of international cooperation; 13 Member States, including France (27.50%), Germany (24.00%), Italy (13.20%), the United Kingdom (10.50%), Russia (6.00%), Benesync (Belgium, The Netherlands - 5.80%), Nordsync (Denmark, Finland, Norway, Sweden - 5.00%), Spain (4.00%), and Switzerland (4.00%); 9 Associate countries, comprising Austria (1.75%), Israel (1.75%), Poland (1.00%), Portugal (1.00%), India (0.66%), the Czech Republic (0.60%), South Africa (0.30%), and Hungary (0.25%). 4 Nobel prize-winners among the ESRF users. A record number of publications: More than 32,000 refereed articles; Nearly 2,000 publications per year, equivalent to around 5 every day. 30% of the public research involves industrial participation, Credit for the photos: ESRF/stef Candé, except for the drone aerial view ESRF/Vuedici.org* [*https://we.tl/t-plGMfr0uRU*](https://we.tl/t-plGMfr0uRU) *;* [*https://www.esrf.fr/about/press-room/intro-esrf-journalists*](https://www.esrf.fr/about/press-room/intro-esrf-journalists)

**European X-Ray Free Electron Laser (European XFEL)**

*About European XFEL (****short boilerplate****): European XFEL is an international research facility of superlatives and the world’s largest X-ray laser: 27,000 X-ray flashes per second and a brilliance that is a billion times higher than that of the best conventional X-ray sources open up new opportunities for science. Researchers from around the world are able to map the atomic details of viruses, decipher the molecular composition of cells, take three-dimensional “photos” of the nanoworld, “film”chemical reactions, and study processes such as those occurring deep inside planets. For more information on European XFEL go to www.xfel.eu.*

*About European XFEL (****long boilerplate****): European XFEL in the Hamburg area is an international research facility of superlatives and the world’s largest X-ray laser: 27,000 X-ray flashes per second and a brilliance that is a billion times higher than that of the best conventional X-ray sources open up new opportunities for science. Researchers from around the world map the atomic details of viruses, decipher the molecular composition of cells, take three-dimensional “photos” of the nanoworld, “film” chemical reactions, and study processes such as those occurring deep inside planets. European XFEL is a non-profit company that cooperates closely with other research organisations worldwide. It has a workforce of more than 550 employees and started user operation September 2017. At present, 12 countries have signed the European XFEL convention: Denmark, France, Germany, Hungary, Italy, Poland, Russia, Slovakia, Spain, Sweden, Switzerland, and the United Kingdom. For more information on European XFEL go to* [*www.xfel.eu*](http://www.xfel.eu)*.*

***Highlights for Press***

[Antonio Bonucci](https://www.bsbf2024.org/chair-speaker/bonucci-antonio/) *Head of Industrial Liaison Office and In-kind Contributions Industrial Liaison Office is available for interview*

**Facility for Antiproton and Ion Research in Europe (FAIR)**

***About Facility for Antiproton and Ion Research in Europe (FAIR)****(****short boilerplate****):*

*The FAIR (Facility for Antiproton and Ion Research in Europe) is a world-class scientific facility in Darmstadt, Germany, focusing on accelerator-based research. Currently, the project is advancing in constructing new sections and transitioning to the installation phase of its particle accelerator. This phase presents significant opportunities for industrial companies in construction, high-tech engineering, and related fields. These companies can contribute to a pioneering scientific infrastructure that will facilitate cutting-edge experiments in physics and materials science.*

[**https://www.gsi.de/en/media-news/media\_center**](https://www.gsi.de/en/media-news/media_center)

***Highlights for Press: Video*** [**https://vimeo.com/user12127256/review/1009827456/4ba4cd6e3b**](https://vimeo.com/user12127256/review/1009827456/4ba4cd6e3b)

**Fusion for Energy (F4E)**

***About Fusion for Energy (F4E)*** *(****short boilerplate****):*

*Fusion for Energy (F4E) is the European Union’s organisation for Europe’s contribution ITER- the biggest international fusion experiment. One of the main tasks of F4E is to work together with European industry, SMEs and research organisations to develop and provide a wide range of components together with engineering, maintenance and support services. F4E also supports fusion R&D projects through the Broader Approach Agreement signed with Japan and prepares for the construction of demonstration fusion reactors (DEMO). F4E was created by a decision of the Council of the European Union and was established in April 2007 for a period of 35 years. Its headquarters are in Barcelona (Spain) and has offices in Garching (Germany), Rokkasho, Naka (Japan). For more information: htps://www.fusionforenergy.europa.eu/*

***Highlights for Press***

***Interview*** [***Marc Lachaise***](https://www.bsbf2024.org/chair-speaker/lachaise-marc/)

https://fusionforenergy.europa.eu/downloads/mediacorner/publications/reports/Corporate\_leaflet\_Light.pdf

https://fusionforenergy.europa.eu/wp-content/uploads/2020/07/Policy\_leaflet\_A4\_Italian\_light.pdf

https://fusionforenergy.europa.eu/downloads/mediacorner/publications/reports/F4E\_trifold\_0809\_light.pdf