



# Radiation Protection Officer

Deadline: 16 May 2024

Ref: EA/24/22

## Background

Elettra Sincrotrone Trieste is an international multidisciplinary research center operated as a user facility, featuring a 2.0/2.4 GeV, third-generation synchrotron light source (Elettra), a new free-electron laser light source (FERMI) and a variety of support laboratories. The extremely high quality of the machines and beamlines has set new performance records and has been producing results of great scientific and technological interest. In order to allow the laboratory to remain competitive in the next 20 years, an entirely new source - Elettra 2.0 - belonging to the new generation of storage rings (DLSR or Diffraction Limited Storage Ring) is being developed. The new source will exhibit a major increase in the brilliance and coherence fraction of the photon beams. The Elettra 2.0 optics is based on our enhanced symmetric six bend achromat structure (S6BA-E) with a 12-fold symmetry and an emittance of 200 pm-rad at 2.4 GeV. The new structure creates also straight sections in the arcs permitting the installation of additional insertion devices, thus increasing the number of beamlines. Existing beamlines will have to be upgraded and new beamlines developed to take full advantage of the characteristics of Elettra 2.0. The new machine is scheduled for commissioning in the second half of 2026. See <http://www.elettra.eu> for more information.

## Beamline/Activity/Project description

The radiation protection service of an accelerator facility performs several duties ranging from personnel risk evaluation and environmental radiation monitoring to shielding calculations, and oversees the design and implementation of personnel safety systems.

## Job description

As member of the Radiation Protection team, the successful candidate will be involved in the management of the different radiation protection issues, including those related to the design and construction of the new Elettra 2.0 source and to the decommissioning of the existing Elettra storage ring.

Using Monte Carlo simulations, he/she will contribute to the calculation of the activation radionuclides in the existing machine components (bending magnets, quadrupole and other machine components) and will perform Monte Carlo simulations to upgrade the shielding of the beamline hutches in the experimental hall for the new Elettra 2.0 machine.

Furthermore, the successful candidate will be involved in radiological measurements and analysis of radiation protection safety aspects of the machine and beamlines.

## Qualifications

Bachelor's degree in Physics, Nuclear Engineering, Chemistry or in Prevention techniques in the environment. Degree or PhD in Physics, Engineering or Chemistry would be considered a plus.

Knowledge of the following topics is expected:

- Radiation protection aspects
- Legislative decree n. 101/2020 and Italian radioactive waste legislation
- Data analysis

The following skills will be considered as additional assets:

- Knowledge of Monte Carlo simulation codes (e.g. FLUKA, MCNP, GEANT4) applicable to radiation protection aspects
- Experience in dosimetry

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- Knowledge of shielding calculations
- Knowledge of AUTOCAD applications

Very good oral and written communication skills in Italian and English are essential.

Good time management skills and ability to prioritize are expected, together with the ability to interact with staff members and to work as part of a multi-disciplinary team.

## General information

The appointment will be a fixed term contract with an initial duration of 24 months in accordance with the National Metalworkers Collective Labour Agreement and the Company Agreement, ex. art. 8 of the Decree Law 138/2011, dated 28th March 2024.

The salary will be commensurate with the previous experience and qualifications of the candidate.

Applications should include full curriculum vitae signed by the applicant (preferably using the European Curriculum Vitae Format in PDF), with the names and contact information (including electronic mail) of at least two professional references.

The interviews may be held via video conferencing.

The deadline for the submission of the application is May 16, 2024.

In accordance with the provisions of article 21 of the Italian legislative decree no. 39/2013 and in conjunction with article 53 (subsection 16ter) of Italian legislative decree no. 165/2001, employees or former employees of any Italian Public Entity who have exercised authority over Elettra Sincrotrone Trieste S.C.p.A. or have negotiated with Elettra - Sincrotrone Trieste S.C.p.A. within the last three years will be excluded from the present selection procedure. We thank all applicants in advance.

For more information, please contact Giovanni Scian (email: [giovanni.scian@elettra.eu](mailto:giovanni.scian@elettra.eu)).

To apply for this position please visit the following link:

<https://www.elettra.trieste.it/it/about/careers/working-withus.html?id=4101>

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