

Job Title: Optical Engineer

Requisition ID 12185 - Posted 19/02/2021



EUROPEAN SPACE AGENCY

Vacancy in the Directorate of Technology, Engineering and Quality.

ESA is an equal opportunity employer, committed to achieving diversity within the workforce and creating an inclusive working environment. For this purpose, we welcome applications from all qualified candidates irrespective of gender, sexual orientation, ethnicity, beliefs, age, disability or other characteristics. Applications from women are encouraged.

Post Optical Engineer

This post is classified A2-A4 on the Coordinated Organisations' salary scale.

Location

ESTEC, Noordwijk, The Netherlands

Description

Optical Engineer in the Optics Section, Mechatronics and Optics Division, Mechanical Department, Directorate of Technology, Engineering and Quality.

The Optics Section provides functional support to ESA projects and carries out technology research (R&D) in optics for space applications. The Optics Section's activities cover the development of novel optical systems, such as spectro-radiometric imaging instruments, operating from the UV to the infrared spectral range, and interferometers, including the relevant optical ground equipment.

The Optics Section is responsible for developing a broad range of technologies addressing optical components and processes, such as polarisers, gratings, coatings, polishing methodologies, and the metrology of optical components. Significant work is also done on the development of technologies for the next generation of X-ray space telescopes.

Duties

You will report to the Head of Section and your main tasks and responsibilities will include:

- Providing expert technical support and consultancy to ESA projects, programmes and general studies regarding the development of optical space instrumentation throughout all project phases;
- Participating in feasibility studies, project reviews and the evaluation of procurement proposals;
- Identifying critical development problems and assisting in their resolution;
- Contributing to the definition of technology development requirements and work plans for the Agency's technology programmes;
- Defining, initiating and managing R&D activities covering both long- and short-term needs;
- Fostering new application areas for multidisciplinary activities, with the emphasis on innovative concepts, cutting-edge technologies and system architectures;
- Laboratory activities as required;
- Monitoring applicable scientific and technological trends and maintaining state-of-the-art expertise;
- Contributing to dissemination of the results of the activities performed and the transfer of knowledge across the Agency.

Your duties may also include providing support for other activities within your area of competence.

Technical competencies

- General background and specific experience in the technical domains covered by the position
- Hands-on experience in hardware testing and in Assembly Integration and Verification (AIV) of optical payloads for space
- Experience with the design, development and application of relevant CAD tools and analytical methods
- Understanding of related technologies, R&D trends and the industrial landscape
- Experience with laboratory testing of optical equipment
- Experience in the management and monitoring of industrial activities, including participation in reviews

Behavioural competencies

- Result Orientation
- Operational Efficiency
- Fostering Cooperation
- Relationship Management
- Continuous Improvement
- Forward Thinking

Education

A Master's degree in optical engineering or applied physics is required for this post.

Additional requirements

- You should have at least 10 years' industrial experience in the design and development of optical instruments, preferably for space.
- In-depth experience of the assembly, integration and verification of optical payloads.
- Experience in optical component manufacturing technologies and the associated challenges, and knowledge of state-of-the-art performance.
- Knowledge of testing and verification methods with respect to high-precision optical components and instrumentation.
- Hands-on experience in the STOP analysis of large optomechanical systems, as well as proficiency in one or more CAD tools for optics design and analysis, such as ZEMAX, Code V, ASAP, FRED, is highly desirable.

Having one or more of the following is considered an asset:

- Experience in participating in a large team working on the development of optical payloads for space;
- The ability to perform conceptual and detailed optical design and/or performance analysis of optical instrumentation using appropriate software tools;
- Basic knowledge of other engineering areas, such as mechanical, thermal, and materials engineering.

Other information

For behavioural competencies expected from ESA staff in general, please refer to the ESA Competency Framework.

The working languages of the Agency are English and French. A good knowledge of one of these is required. Knowledge of another Member State language would be an asset.

The Agency may require applicants to undergo selection tests.

The closing date for applications is 19 March 2021.

At the Agency we value diversity and we welcome people with disabilities. Whenever possible, we seek to accommodate individuals with disabilities by providing the necessary support at the workplace. The Human Resources Department can also provide assistance during the recruitment process. If you would like to discuss this further please contact us at contact.human.resources@esa.int.

Please note that applications are only considered from nationals of one of the following States: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, the United Kingdom and Canada, Latvia and Slovenia.

According to the ESA Convention the recruitment of staff must take into account an adequate distribution of posts among nationals of the ESA Member States. When short-listing for an interview, priority will first be given to internal candidates and secondly to external candidates from under-represented Member States. (<https://esamultimedia.esa.int/docs/careers/NationalityTargets.pdf>)

In accordance with the European Space Agency's security procedures and as part of the selection process, successful candidates will be required to undergo basic screening before appointment.

Recruitment will normally be at the first grade in the band (A2); however, if the candidate selected has little or no experience, the position may be filled at A1 level.