Job Title: Space Environments and Effects Engineer

Req ID **4781** - Posted **20/12/2017**

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. Applications from women are encouraged.

Post
Space Environments and Effects Engineer
This position is classified A2-A4 on the Coordinated Organisations' salary scale.

This position forms part of ESA's Advance Recruitment Scheme which is established to provide appropriate staffing resources when requirements materialise. Appointments are therefore made for an initial duration of two years upon which the selected candidate may be appointed to a permanent post in the Agency.

Location
ESTEC, Noordwijk, The Netherlands

Description
Space Environments and Effects Engineer in the Space Environments and Effects Section, Power Systems, EMC & Space Environments Division, Electrical Department, Directorate of Technology, Engineering and Quality.

The Space Environments and Effects Section provides functional support to ESA projects and carries out technological research (R&D) in the field of space environments within which ESA missions will operate, assessing likely effects and defining mitigation methods. Environments addressed include: high-energy radiation from radiation belts, solar-particle events and cosmic rays, plasmas encountered in planetary magnetospheres, the solar wind and artificially-generated charges and fields on spacecraft, micro-meteoroids and non-trackable debris as well as planetary atmospheres. See the Section's web page (http://space-env.esa.int) for more details.

Duties
Reporting to the Head of Section and within the technical fields described above, the main tasks and responsibilities of the post holder will include:

- providing expert technical support and consultancy to ESA projects, programmes and general studies in the field of space environments and their effects throughout all project phases and in particular
  - preparing and maintaining space environment specifications in early project phases;
  - supporting the flight operation of environment monitors and performing analysis of their data
  - supporting the investigation of inflight behavior of spacecraft and payloads;
- participating in feasibility studies, project reviews and 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, in particular to improve the understanding of the environment and its effects in the context of preparing for future missions, including developing models, computational tools and instrumentation;
- fostering new application areas for multidisciplinary activities, placing emphasis on innovative concepts, cutting-edge technologies and system architectures;
- contributing to the support and development of a mixed Linux/Windows IT infrastructure of the Section and its specialist computational tools, including data systems, environment models, radiation effects analysis tools, integrated analysis environments and legacy systems and tools;
- using, and when necessary preparing and maintaining relevant engineering standards;
- monitoring applicable scientific and technological trends and maintaining a state-of-the-art expertise;
- contributing to the dissemination of the results of the activities performed and the transfer of knowledge across the Agency.

Duties may also include supporting other activities within the post holder's field of competence.

Technical competencies
General background and specific experience in the technical domains covered by the position
Understanding of related technologies, R&D trends and the industrial landscape
Project support experience in a relevant domain
Experience with laboratory or field testing of relevant technical equipment
Experience in the management and monitoring of industrial activities, including participation in reviews
Experience with Space Engineering Standards and their preparation and implementation

Behavioural competencies
Communication
Teamwork
Customer Focus
Innovation & Creativity
Results Orientation
Continuous Learning

Education
A Master's degree or equivalent qualification in physics, applied mathematics, engineering, IT technologies, or similar field is required.

Additional requirements
An in-depth knowledge of computational languages, tools and IT infrastructures applicable for the analysis and modelling of space environments and effects is required. Previous experience of space environment instrument design, data analysis and modelling activities would be an asset.

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 31 January 2018.

If you require support with your application due to a disability, please email 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, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, Canada 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. Priority will first be given to internal candidates and secondly to external candidates from under-represented Member States when short-listing for interview.
*(*http://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.