

## Job Title: Avionics Engineer

Req ID 5741 - Posted 05/04/2018



### EUROPEAN SPACE AGENCY

Vacancy in the Directorate of Telecommunications and Integrated Applications.

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

Avionics Engineer

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

#### Location

ESTEC, Noordwijk, The Netherlands with an initial period of resident assignment in Luxembourg.

#### Description

Avionics Engineer in the AOCS and Pointing Systems Section, GNC, AOCS and Pointing Division, Systems Department, Directorate of Technology, Engineering & Quality (D/TEC).

The AOCS and Pointing Systems Section provides functional support to ESA projects in the technical field of AOCS and carries out technological research in competitive, innovative and high-accuracy control systems, attitude sensors and magnetic actuators.

Assigned as integrated support to ESAIL and Triton-X project in the Telecommunication Satellite Programmes Department, Directorate of Telecommunications & Integrated Applications (D/TIA), the postholder is responsible for coordinating and steering all avionics-related tasks under that project. Liaising closely with the project's internal engineering resources, especially the platform engineer and the quality engineer, D/TEC engineering support services within ESA, and the ESAIL/Triton-X prime and its subcontractors. Training and familiarisation with the parent Department's mandate, processes and procedures will be provided at the start of this assignment.

The avionic system encompasses:

- Attitude and orbit control subsystem (AOCS)
- Data handling subsystem (DHS) for the platform and for the payload command and control
- On-board software (OBSW)
- Electrical ground support equipments (EGSE), special check-out equipment (SCOE) and overall check-out equipment (OCOE)
- System reference database (SRDB)
- Verification activities, verification control documentation (VCD), functional chain verification (software and avionics test benches, flat sat).

The Avionics Engineer will have in addition an active role in supporting the:

- Flight dynamics (FDS) and mission analysis tasks in particular in the case of interface (physical and functional) with the space segment avionics subsystem
- Platform engineer for the platform and spacecraft MAIT.

#### Duties

Reporting hierarchically to the Triton-X and functionally to the ESAIL Project Managers, the postholder will carry out main tasks and responsibilities which include:

- Ensuring the spacecraft's electrical compatibility with the selected launchers;
- Consolidating the platform avionics requirements derived from market product line requirements
- Coordinating the platform avionics level engineering activities, performing in conjunction with the project internal engineering team and the industrial prime and its partners;
- Direct supervising the design, development, manufacturing and testing of the AOCS subsystem and its sensors/actuators, performed in conjunction with the industrial prime,
- Ensuring compliance and verification of the platform avionics with platform-level technical and performance requirements;
- Ensuring coherence of the platform's overall avionics design, development, procurement, and avionics AIV/AIT activities;
- Monitoring the design, development, procurement in these fields, including related scheduling and cost aspects;
- Maintaining the relevant technical budgets at project level;
- Monitoring the schedule and risks of the relevant procurements, providing early warning of potential problem areas, ensuring appropriate mitigation actions are identified and implemented;
- Supporting definition and implementation of the overall operational concept at mission level; operations constraints and procedures, and preparation and implementation of the launch/commissioning phase;
- Supporting preparation and implementation of all major reviews at system/space segment/payload levels;
- Internally coordinating at project level all avionics activities related to spacecraft-level reviews ;
- Actively supporting the prime for all reviews according to the postholder's assigned duties;
- Coordinating the specialised engineering support from the Directorate of Technical, Engineering & Quality as required;
- Ensuring the liaison between the ESA and industry project teams
- Participating in periodic meetings with the parent section, contributing to the transfer of technical knowledge and lessons learned across the Agency.

In performing these tasks, the postholder will liaise closely and pro-actively with the rest of the project team and with colleagues within the Telecommunications Satellite Programmes Department. The postholder will regularly liaise with the parent section (AOCS and Pointing Systems Section ) for general technical knowledge, sharing and lessons-learned matters of significance to D/TEC.

#### Technical competencies

General background and specific experience in the technical domains covered by the position

Breadth of exposure coming from past and/or current research/activities

Experience in AOCS activities

Experience in the management and monitoring of industrial activities, including participation in reviews

Hands-on hardware experience

Experience of managing technical interfaces between subsystems both within ESA project team environment and for the industrial consortium

#### Behavioural competencies

Teamwork

Customer Focus

Problem Solving

Results Orientation

Responsible Decision-Making

Innovation & Creativity

#### Education

A Master's degree or equivalent qualification in control, electrical and aerospace engineering is required.

#### Additional requirements

Applicants should have at least ten years' experience in development of satellite AOCS subsystems, with direct exposure to data handling, software, avionics verification and operations.

With a view to future assignments in the parent section, strong expertise in two or more of the following related areas will be a distinct advantage:

- Understanding of related AOCS technologies, R&D trends and the industrial landscape
- Experience in preparing procurement activities for technology development and innovation (statements of work, proposal evaluation, etc.)
- AOCS hardware technology development, starting from low TRL, up to hardware qualification

- Incremental verification of avionics systems on a variety of test benches up to satellite level.

**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 3 May 2018.**

If you require support with your application due to a disability, please email [contact.human.resources@esa.int](mailto: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 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.  
(<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.