EUROPEAN SPACE AGENCY

Microwave Payload Engineer

Job Req ID: 12977
Closing Date: 04 July 2022
Publication: Internal & External
Vacancy Type: Permanent
Date Posted: 20 June 2022

Vacancy in the Directorate of Earth Observation Programmes.

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

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

Location
ESTEC, Noordwijk, Netherlands

Description
Under the Copernicus Programme, Earth Observation Projects Department, Directorate of Earth Observation Programmes, the Microwave Payload Engineer will work on both the Copernicus CRISTAL and Sentinel-3 projects (shared resource).

You will report to the Payload Managers of the two missions.

Duties
You will be responsible for all altimeter and microwave instrument engineering aspects falling within the perimeter of the CRISTAL and Sentinel-3CD projects.
You will liaise closely with the industrial prime contractors, and with the ESTEC project teams and supporting sections in the ESA-ESTEC -TEC department. CRISTAL and Sentinel-3 are Earth Observation missions in the framework of ESA's Copernicus programme.

For CRISTAL:

CRISTAL (Copernicus Polar Ice and Snow Topography Altimeter) has a planned launch date of 2027. CRISTAL will carry a Ku/Ka bands interferometric radar altimeter to measure and monitor sea-ice thickness and overlying snow depth. It will also embark a microwave radiometer to provide the wet tropospheric correction for ocean applications and the ice/snow type classification for cryosphere applications. Your main tasks and responsibilities will include:

- Monitoring the industrial activities related to procurement of the radar payload and associated equipment, in particular critical subsystems, ensuring suitable planning and progress of work;
- Supervising the radar payload definition process, ensuring that robust architecture, design and interfaces are established, consistently and cost-effectively;
- Monitoring and controlling performance evolution at radar payload level down to lower levels, ensuring requirements are met at payload and system levels during all programme phases up to in-orbit commissioning;

- Monitoring and controlling correct implementation of the radar payload development and verification processes from the equipment and subsystem level, consistent with spacecraft level verification, and coordinating the Instrument Verification Control Boards;
- Supervising definition of the radar instrument characterisation, calibration and validation approach and execution of related on-ground and in-orbit activities;
- Working with other project members and coordinating the technical specialists to ensure timely and consistent support throughout the radar payload definition, procurement and verification phases;
- Providing regular reporting and support to the Payload Manager with regard to all aspects of radar payload design, development, procurement and scheduling, identifying risks and potential problem areas, and proposing mitigation actions where appropriate.

For Sentinel 3:

The Copernicus Sentinel-3 satellite hosts 3 instruments relevant for its topography mission: SRAL (SAR Radar Altimeter), MWR (Microwave Radiometer) and DORIS (precise orbit determination). Whereas satellites A and B are already operating since 2016 and 2018 respectively, satellites C and D are just completing the Phase D after which they will be stored until launch, scheduled in the timeframe 2023 to 2028. You will provide support to the Sentinel-3 topo mission, and your main tasks and responsibilities will consist of:

- Following up Sentinel-3 C&D storage/de-storage and launch preparation activities as affecting SRAL, MWR and DORIS. The work will be based on the evaluation of health & functional test data taken either during storage or at de-storage. In case of anomalies, supporting the investigation and coordinating further ESA expert support as needed.
- Supporting Sentinel-3 C&D commissioning phase preparation as relevant to the S3 topographic mission. In close collaboration with supporting teams, you will be in charge of rehearsals as well as providing inputs for the in-flight commissioning activities plan.
- Supporting the Sentinel-3 C&D commissioning phase. Ensuring that in-flight activities are executed as planned, data is provided to and analysed by support teams. In the event of anomalies, supporting their investigation and coordinating further ESA expert support.

Technical competencies
Knowledge of industrial costs and schedule aspects
Complex project risk management processes
Space system development and PA standards
Multidisciplinary knowledge of area of responsibility
Experience in instrument performance and verification
Experience of managing technical interfaces between subsystems both within ESA project team environment and for the industrial consortium
Instrument system AIV
Knowledge and experience in development and verification of microwave Earth Observation payloads

Behavioural competencies
Result Orientation
Operational Efficiency
Fostering Cooperation
Relationship Management
Continuous Learning
Forward Thinking

Education

A master's degree or equivalent certification in engineering and/or physics is required for this position.

Additional requirements
You should demonstrate a proven ability to co-operate with industrial partners in achieving common goals. You are expected to demonstrate excellent technical and system level coordination skills, and the ability to sum up complex technical information. You should also have:

- good interpersonal skills with the ability to work effectively in a diverse team environment;
- a proactive attitude to solving problems and achieving solutions in line with team objectives;
- good communication skills, both verbal and written;
- an interest in innovative technologies;
- a vision for improving overall efficiency of the development process.

A good knowledge of topographic mission payloads engineering and/or its operation are considered an important 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.

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 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, Spain, Sweden, Switzerland, the United Kingdom and Canada, Latvia, Lithuania 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.