

Payload Validation Engineer

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Vacancy in the Directorate of Science.

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.

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

Location

ESTEC, Noordwijk, The Netherlands

Description

The Future Missions Department (SCI-F) is in charge of mission preparation activities for the Science Programme, including mission definition studies (Phases 0/A/B1) and technology development activities. The Department's Payload Validation Section (SCI-FIV) is responsible for conducting laboratory-based payload element validation activities, with the emphasis on imaging focal plane technologies, to provide support for development of the instrumentation for future ESA space science missions. The main aim of the validation activities is to verify performance requirements under operational conditions, including assessing the influence of radiation. The majority of these activities take place during Phase 0/A/B1. The Section also provides general support to the Directorate's other departments in relation to specific validation activities and to missions under development (phase B2/C/D) or during operations (phase E). Furthermore, the Section provides general payload expertise support to the Directorate's other entities and supports the development of new payload technologies.

Further details on the Section's work can be found at <http://sci.esa.int/sci-fv/57057-payload-technology-validation/>

Duties

You will report to the Head of the Payload Validation Section (SCI-FIV) and your responsibilities will include:

- Leading the laboratory-based validation activities primarily in (but not limited to) near-to long-wave infrared focal plane technologies, including both detector and readout electronics aspects, through:
 - coordinating with the mission study team, project team or operations team regarding definition of the validation activities
 - preparing test documentation (test requirements, test plan and test report)
 - defining payload validation activity test setups
 - implementing validation activity setups, with the emphasis on infrared imaging detectors and the associated control electronics
 - performing commissioning of the validation activity setup
 - performing tests using the validation activity setup
 - performing test data analysis and reporting to the relevant study team, project team or operations team;
- Supporting the development and maintenance of the general technical infrastructure needed to validate payload technologies;
- Defining and implementing, under the overall supervision of the Head of Section and in close collaboration with the Department's other Sections, ESA-funded payload activities and pre-

- developments, for nationally and/or ESA-provided payload elements, such that the required definition maturity and technology readiness levels are reached at the time of mission adoption;
- Identifying and producing new instrument technologies required for the Science Directorate's programmes; participating in the preparation and implementation of the Cosmic Vision and Voyage 2050 technology development plan;
 - Providing payload expertise and support to studies and projects under development as required, e.g. through participation in reviews/ working groups or technical support.

Technical competencies

Excellent understanding of infra-red detection technologies, in particular HgCdTe, as currently used in space science instrumentation

Knowledge of space radiation effects upon imaging detectors

Demonstrated hands-on expertise in the performance testing, under representative space conditions, of imaging detectors and associated control electronics of the type typically used in space science payloads

Demonstrated hands-on experience in the definition, design and utilisation of instrument technology validation setups, in the space domain

Demonstrated hands-on experience in opto-electronic performance measurements including the associated instrumentation and data analysis

Knowledge of payload technologies and general space science instrumentation

Behavioural competencies

Result Orientation

Operational Efficiency

Fostering Cooperation

Relationship Management

Continuous Improvement

Forward Thinking

Communication

Education

A PhD or Master's in physics or engineering is required.

Additional requirements

You should also:

- be able to work in a small multi-disciplinary team, be flexible and able to multi-task;
- have the necessary relationship management skills to balance interactions with various ESA stakeholders, including scientific institutions and industry;
- be self-motivated.

International experience is an asset, i.e. outside your home country, as well as experience in diverse functional areas relevant to ESA activities.

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 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.

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