

# FORUM Instrument Principal Engineer

**Job Req ID:** 15222

**Closing Date:** 24 June 2022

**Publication:** Internal & External

**Vacancy Type:** Permanent

**Date Posted:** 08 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**

Far-infra-Red Understanding and Monitoring Mission (FORUM) is the 9th Earth Explorer, aiming to provide, through high resolution measurements in the Far Infrared (FIR) spectral range, new insight into the planet's radiation budget and how it is controlled. The balance of the radiation at the top of the atmosphere drives the Earth's surface temperature. FORUM will fill a fundamental gap in measuring the electromagnetic spectrum in the FIR range, where more than half of the Outgoing Long-wave Radiation is concentrated, allowing the understanding of the processes driving global climate evolution and improving existing models.

The FORUM mission consists of a single satellite carrying two optical instruments: the FORUM Sounding Instrument (FSI) and the FORUM Embedded Imager (FEI). The implementation phase has just started with the signature of a 5.5-year development contract for the satellite with a view to a launch by mid-2027.

## **Duties**

You report to the FORUM Payload Manager and will be responsible for the technical aspects related to the development of the FSI and FEI, key sub-systems of the FORUM payload, up to their integration and testing. After delivery of the FEI and FSI, you will contribute to the follow-up of the integration and validation activities for the entire FORUM payload, and its integration at satellite level up to final satellite acceptance. Finally, you will support the inflight calibration and validation of the Payload up to the commissioning review.

The principal tasks and responsibilities will include:

- monitoring of industrial activities related to the specification and procurement of the optical instruments (FSI, FEI) and ensure timely delivery of the flight models;
- ensuring implementation of an efficient development, test and verification programme for the various engineering, qualification, and flight models, considering in particular any activity deemed necessary to mitigate or retire risks;
- supporting the procurement of major items subcontracted by the instrument prime to lower level subcontractors where appropriate;

- coordinating the internal expert support required to assess technical issues and relevant reviews aimed at identifying pragmatic solutions and ensuring efficient usage of the expertise required;
- monitoring of critical instrument technologies;
- supporting the definition of in-flight operation of the optical instruments, and any required onground and in-orbit characterisation and calibration activity;
- supporting the preparation of satellite AIT activities related to the payload by coordinating with the other project sections;
- after delivery of the flight models, supporting the execution of the satellite AIT activities related to the payload during satellite test campaign and later in-orbit commissioning activities;
- defining and ensuring development and maintenance of models, tools and documentation, including characterisation databases and key data required for the definition of the technical payload budgets and for the evaluation of instrument performance;
- participating in project-level meetings when required (e.g. MAG, payload sections);
- liaising closely with the other team members and sections to ensure a consistent approach and the required support through the mission definition, procurement and verification phases;
- supporting general Project reporting tasks (monthly, QSR) and other Department-level support activities as required.

### **Technical competencies**

Proven experience of optical instruments development for space project

Proven experience in optical instrument verification and calibration, in particular in infrared testing

Broad knowledge of space engineering disciplines (e.g. thermal, mechanical and electrical) and manufacturing processes

Proven experience in managing sub-contractors

### **Behavioural competencies**

Result Orientation

Operational Efficiency

Fostering Cooperation

Relationship Management

Continuous Improvement

Forward Thinking

### **Education**

A master's degree in an engineering/scientific discipline is required for this post.

### **Additional requirements**

Specific knowledge of Fourier Transform Spectrometers (FTS) is considered an asset for this position.

Previous experience of functionally managing people and teams within an international environment as well as industrial experience in various functional areas relevant to ESA activities will be an advantage.

### **Other information**

For behavioural competencies expected from ESA staff in general, please refer to the [ESA Competency Framework](#).

For further information please visit: [Professionals](#), [What we offer](#) and [FAQ](#)

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](mailto:contact.human.resources@esa.int).

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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 or balanced 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 conducted by an external background screening service.

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.

\*Member States, Associate Members or Cooperating States.