# VN 21/24 Spacecraft Operations Engineer

Working within the LEO Spacecraft Operations Team of the Flight Operations (FLO) Division, the Spacecraft Operations Engineer will support the operations preparation and operations of the future Metop Second Generation satellites, as well as the routine operations and monitoring of the Metop First Generation satellites. The main areas of focus will be the Attitude and Orbit Control (AOCS) subsystem, as well as the management of On-board Software (OBSW) and its maintenance process.

EUMETSAT operates a growing fleet of Earth Observation satellites in Low Earth and geostationary orbits (currently comprising seven EUMETSAT Meteosat Second Generation and Metop satellites, and three satellites for the Copernicus Sentinel-3 and Sentinel-6 missions). In parallel, EUMETSAT is working towards the launch of the next generation of Meteosat Third Generation (MTG) and Metop Second Generation (Metop-SG) satellites.

Within the LEO Spacecraft Operations Team of the Flight Operations (FLO) Division, the LEO Spacecraft Operations Engineers support flight operations of the Metop satellites and the development and operations preparation of future LEO satellite systems, in particular EPS/Metop-Second Generation.

#### **Duties**

The main duties will be as follows, with a focus on the AOCS and OBSW related aspects:

- Support Metop-SG
   satellite and ground
   segment reviews to
   ensure the correct
   implementation of
   operational requirements,
   and as a project team
   member (i.e. timely
   provision of inputs to
   review data packs and
   responding to identified
   discrepancies);
- Support system-level validation of the mission

- Support the definition and implementation of training for the Flight Control Team;
- Support the definition and lead the operational implementation and execution of special operations such as Metop-SG Satellite In-Orbit Verification and commissioning activities, and Metop/Metop-SG deorbiting;



LOCATION

Darmstadt,

Germany



**QUALIFICATIONS** 

University degree or equivalent in aerospace engineering or other relevant discipline.



LANGUAGES

The official languages of EUMETSAT are English and French. Candidates must be able to work effectively in English and have some knowledge of French.



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- control centre facilities;
- Contribute to the development, validation and maintenance of the operational base-line (Flight Control Procedures, Operational Database, Automated Spacecraft Monitoring Scripts, etc.) for both Metop and Metop-SG;
- Contribute to the planning and execution of Operations Validation activities for Metop-SG. In particular Satellite-System Validation Tests (connecting the EUMETSAT mission control system to flight hardware on ground) and the Operational Scenario Validation campaign (utilising the Satellite Simulator);

- Provide on-call support for the Routine Phase of the mission;
- Provide support to Anomaly investigations both at Spacecraft and Ground Segment Level;
- Provide inputs for Ground Segment evolutions and ad-hoc tools as necessary to continuously improve the efficiency and reliability of Spacecraft Operations and Monitoring;
- Support concept definition for future LEO satellite systems.

## Skills and Experience

- Minimum 5 years experience in the field of satellite operations, gained during both operations preparation and routine operations of a complex space system;
- Knowledge of satellite system design and/or of satellite monitoring and control principles for safe and efficient operations, and demonstrated ability to apply that knowledge;
- Solid understanding of Attitude and Orbit Dynamics and Control principles, preferably as applied to Sun-synchronous Low Earth Orbit satellites;
- Solid understanding of On-board Software Maintenance principles, and constraints applicable to different types of Memory Devices (RAM/Flash/EEPROM);
- Ability to work to broad objectives with minimal supervision;
- Ability to synthesise complex technical concepts for presentation to non-experts;
- Excellent interpersonal and communication skills, with a proven ability to apply these to interactions within a team and between teams:
- Ability to use scripting languages such as Python, VBA or MATLAB to perform da-ta analysis and develop ad-hoc or prototype tools.

#### Additionally, the following skills and experience would be a distinct advantage:

- Experience in the use of a satellite Mission Control System based on SCOS-2000;
- Experience developing an operational baseline around an ECSS Packet Utilisation Standard (PUS) compliant satellite;

• Solid understanding of Space Debris Mitigation Guidelines applicable to Low Earth Orbit Satellites, and their practical application to a satellite mission.

## **Employment Conditions**

The initial contract will be of 4 years' duration, with subsequent 5 year contracts being awarded thereafter, subject to individual performance and organisation requirements. There is no limit to the amount of follow-up contracts a staff member can receive up to the EUMETSAT retirement age of 63 and there are certainly opportunities to establish a long career perspective at EUMETSAT.

This post is graded A2/A4 on the EUMETSAT salary scales. The minimum basic salary for this post is EURO 5,363 per month (net of internal tax but excluding pension contribution and insurances) which may be negotiable on the basis of skills and experience. The salary scale provides for increments on the anniversary of taking up employment, and scales are reviewed by the EUMETSAT Council with effect from 1 January each year. In addition to basic salary, EUMETSAT offers attractive benefits. Further information, including salary details, is available on the EUMETSAT web site.

EUMETSAT is committed to providing an equal opportunities work environment for men and women.

Please note that only nationals of EUMETSAT Member States may apply. The EUMETSAT Convention requires that Staff shall be recruited on the basis of their qualifications, account being taken of the international character of EUMETSAT.

### **About EUMETSAT**

EUMETSAT is Europe's meteorological satellite agency. Its role is to establish and operate meteorological satellites to monitor the weather and climate from space - 24 hours a day, 365 days a year. This information is supplied to the National Meteorological Services of the organisation's Member States in Europe, as well as other users worldwide.

EUMETSAT also operates several Copernicus missions on behalf of the European Union and provide data services to the Copernicus marine and atmospheric services and their users.

As an intergovernmental European Organisation, EUMETSAT has 30 Member States (Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, The Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.)

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