

# Astronaut

**Job Req ID:** 12355

**Closing Date:** 28 May 2021

**Publication:** Internal & External

**Vacancy Type:** Permanent

**Date Posted:** 31 March 2021

Vacancy in the Directorate of Human and Robotic Exploration Programmes.

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

EAC, Porz-Wahn (Germany) with the possibility of multi-year postings in Houston (USA) or Star City (Russia).

## Description

The European Space Agency (ESA) is looking for professionals who are able to conduct spaceflight missions to low Earth orbit and the Moon and to fulfil technical, scientific, managerial, or administrative tasks in support of the human spaceflight programme, in particular, and ESA, in general.

ESA astronauts make up the European Astronaut Corps, which is the single corps of astronauts that represent all the ESA Member States. ESA astronauts are, first and foremost, representatives of Europe in space. The corps consists currently of seven astronauts who can be assigned by ESA to spaceflight missions. Through their training and spaceflight experience, the European Astronaut Corps, both individually and collectively, is a resource of European expertise of human spaceflight operations.

ESA astronauts are amongst the most visible players in human spaceflight, working under the authority of the Leader of the LEO Exploration Group. Due to their high visibility, astronauts are natural ambassadors of the Agency and its programmes. ESA astronauts need to have sound practical skills (kind of "generalist") and excellent communication abilities, including public speaking.

For more information on the work of the ESA astronauts, on the selection and the applicable criteria, please refer to the [Astronaut Applicant Handbook](#).

## Duties

As one of the ESA Astronauts, you will perform a wide range of duties, including:

- Training for space flight at the European Astronaut Centre (EAC), at the training centres of ESA's partner agencies and at other locations, including industry or research laboratories.

- Executing space missions to the ISS and beyond Low Earth Orbit, which may require one or more of the following detailed tasks:
  - Operating and maintaining on-board systems
  - Launch, rendezvous, docking and landing operations
  - Extra-Vehicular Activities (EVA) and robotic operations
  - Conducting scientific and technological experiments
  - Participating in life science experiments as test subjects
  - Participating in health and medical operations activities.
- Providing operational support to space missions, including:
  - Supporting the flight crew as part of the distributed European flight control community
  - Developing detailed operational concepts for a given mission
  - Developing operational products (e.g. procedures, timelines, etc.).
- Providing general or technical support at the European Astronaut Centre (related to the activities of the Directorate of Human Spaceflight and Robotic Exploration Programmes), for other ESA Directorates and at other locations.
- Supporting the definition and development of future ESA human spaceflight activities, or other related programmes conducted by partner agencies or organisations (e.g. for future space transportation systems).
- Engaging in outreach and communication activities, both on ground and during your space flights.

The tasks above may evolve as the ESA Human Spaceflight Programme is further developed in the coming years.

### **Qualifications**

- Education: at least one of the following qualifications is required:
  1. Minimum of a Master's(\*\*) degree from a recognised academic institution in Natural Sciences (including Physical Sciences; Earth, Atmosphere or Ocean Sciences; Biological Sciences), Engineering or Mathematics/Computer Sciences;
  2. A medical qualification from a recognised academic institution, authorising the autonomous practice of medicine as general practitioner or as medical specialist in the country where it has been obtained;
  3. A PhD or equivalent degree or additional Master's degrees in the aforementioned subject areas are considered an asset;
  4. A degree as Experimental Test Pilot and/or Test Engineer from an official Experimental Test Pilot School(\*\*\*) in addition to a Bachelor in the disciplines listed in the first bullet.
- Three years of professional relevant experience after graduation in the aforementioned subject areas, with evidence of a progressive increase in responsibilities.
- Fluency in English (minimum CEFR C1) is required.
- Knowledge of one or more other language(s) (minimum CEFR B1) is an asset.(\*\*\*\*)

### **Technical Competencies**

Fine motor skills

Strong analytical and reporting skills

Ability to rapidly assimilate and synthesise complex information

Ability to perform public relation and educational activities (targeting especially children and students)

Ability to learn additional languages as operationally required

## **Behavioural competencies**

Fostering Cooperation  
Continuous Improvement  
Result Orientation  
Relationship Management  
Operational Efficiency  
Forward Thinking

## **Additional requirements**

As one of the ESA astronauts, you will need to show strong motivation and be able to cope with extended periods of high workload, irregular working hours, frequent travel, and long absences from home, your family and normal social life. Flexibility with regards to the place of work (inside or outside Europe) is required. An ability to act calmly under pressure is essential as well as strict adherence to ethical values, such as integrity, fair and equal treatment, social dialogue and transparency.

You need to be willing to be an operator for animal research that has been approved by all required ethical boards and you need to be willing to participate in life science experiments as a test subject.

As one of the ESA Astronauts you are expected to

- Undergo training at ESA's training centres or those of its partners agencies or commercial entities;
- Travel extensively for training, public relations, development and programmatic activities and be prepared to support such activities over long periods, in some cases years.

When you apply to this vacancy, you will be required to upload a medical certificate for private airplane pilots (aeromedical certificate class 2 for Europe or equivalent(\*\*\*\*)). Furthermore, you will need to pass a selection process consisting of several stages as well as undergo medical, psychological and other aptitude tests.

## **Specificities**

It is considered highly desirable if you have experience in or have been previously exposed to one or more of the below areas:

- Field experience of at least six weeks. In this context, "field" is considered to be an expedition-type of endeavour in an extreme environment. Examples include but are not limited to: desert, jungle, pole, marine, alpine, or upper atmosphere.
- Experience in non-office work environments, including but not limited to scientific laboratories, machineries, control centres, or similar.
- Experience in leadership functions.
- Experience in environments requiring a strong sense of responsibility, ideally in operational situations within a team, e.g. rescue teams, firefighting, scuba dive teams, airline or ship crews, etc.
- Experience in participating in life science experiments as a test subject, as an operator on other human beings and/or on animals (approved by all required ethical boards).
- International experience, defined as working or living in countries outside of your home country for a minimum of two consecutive months.

It is a definite advantage to already possess one or more of the following technical skills. However, it is not strictly necessary to have previous experience in all of these areas as you will be evaluated on the basis of your potential to perform and learn these skills through the appropriate training activities:

- Ability to be a productive crewmember in a variety of boundary conditions;
- Ability to operate and maintain and repair systems, robotics, and other equipment;
- Ability to perform mission operations (not restricted to space missions);
- Ability to handle complex operational systems, knowledge of flight dynamics;
- Ability to participate in the development of detailed operational concepts for a given mission;
- Ability to provide operational support to space missions from ground.

ESA Astronauts can be assigned to partner space agencies for up to several years. Such assignments usually entail relocating to another (non-European) country.

#### **Footnotes**

(\*) The meaning of the term “astronaut reserve” is described in the [Astronaut Applicant Handbook](#).

(\*\*) Master's degree according to the Bologna Declaration (1999), and further applicable regulations

(\*\*\*) These schools include EPNER (France), ETPS (UK), USAF TPS (US Air Force) and USNTPS (US Navy), as well as NTPS (US). Candidates with these qualifications will be assessed on a case-by-case basis and may be asked to provide a copy of their diploma or statement from their school regarding the level of the qualification.

(\*\*\*\*) Language proficiency according to the Common European Framework of Reference for Languages (CEFR)

(\*\*\*\*\*) For the purpose of the astronaut selection ESA will accept European Part MED, UK CAA and Canada CAR certificates for private pilots (class 2). USA FAA certificates for private pilots (class 3) can also be accepted by equivalence.

#### **Other information**

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

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 and Slovenia.

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.