

Astronaut (with a physical disability)

Job Req ID: 12354

Closing Date: 18 June 2021

Publication: Internal & External

Vacancy Type: Various Agreements

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.

Location

Should the "Parastronaut Fly!" Feasibility Project successfully lead to an opportunity to fly into space, the successful candidate will be offered a post abiding by the location conditions applicable for astronauts positions. This includes: European Astronaut Centre (EAC), Porz-Wahn (Germany) with the possibility of multi-year postings in Houston (USA) or Star City (Russia).

Description

This special vacancy notice is a call for interest to people with a physical disability to be selected for the European Space Agency's (ESA) astronaut reserve(*). The successful candidate will become part of the "Parastronaut Fly!" Feasibility Project, an initiative investigating the feasibility of bringing, for the first time in history, an astronaut with a physical disability into space to perform professional duties.

We are looking for professionals who would be able to conduct spaceflight missions to low Earth orbit and the Moon and to fulfil technical, scientific, managerial and administrative tasks to support the Human Spaceflight Programme in particular, and ESA in general.

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 for the Agency and its programmes. ESA astronauts need to have sound practical skills and excellent communication abilities, including public speaking. Supporting the "Parastronaut-Fly!" Feasibility Project and working towards enabling professional astronauts with a physical disability to participate to space missions will require from you the willingness to be a spokesperson, not just for the space programme but also for the worldwide community of people with a disability.

ESA is establishing for the first time an astronaut reserve. All applicants for this vacancy will need to pass the selection process after which the successful candidate(s) will be offered a place in the reserve.

Any person wishing to be selected as the first astronaut with a physical disability in the ESA astronaut reserve must have an eligible disability. The following disabilities are considered to be eligible:

- Lower limb deficiency (e.g. due to amputation or congenital limb deficiency) as follows:
 - Single or double foot deficiency through ankle

- Single or double leg deficiency below the knee
- Leg length difference (shortened limbs at birth or as a result of trauma)
- Short stature (<130 cm)

If you fail to meet the above eligible disability criteria, it does not call into question whether or not you have a genuine disability. It merely means that you do not meet the eligibility requirements to compete in the selection process for the astronaut with a physical disability.

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

If you do not have a physical disability or one of the eligible disabilities, we encourage you to consider the second vacancy notice that ESA has published to recruit candidates for the ESA astronaut corps.

Duties

Astronauts in the reserve will receive introductory training and be called and trained for missions when and if these arise. They will remain employed by their current employers with a letter of agreement with ESA covering their participation in the reserve. If and when asked to conduct a mission, they will need to sign a letter of appointment with ESA for the duration of the mission. Furthermore, while in the reserve, the astronaut(s) with a physical disability will participate in the "Parastronaut-Fly!" Feasibility Project.

If the project successfully leads to an opportunity to fly into space and consequently to being recruited 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, authorizing 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 a potential ESA astronaut, 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.

You are expected to

- Undergo training at ESA's training centres or those of its partner 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 delivered by any physician stating that, if not for your disability, you would fulfil the criteria for a medical certificate for private airplane pilots (aeromedical certificate class 2 for Europe or equivalent(*****)).

You will also receive separate instructions how to securely upload the medical documentation describing your disability to the extent necessary for the eligible disability criteria to be verified. On the basis of the evidence submitted with the application, the ESA Medical Board will determine your eligibility to participate in the astronaut selection process. Furthermore, you will need to pass a selection process consisting of several stages as well as undergo medical, psychological and other aptitude tests.

For more information on the rationale behind the selection of eligible disabilities, the additional training requirements and selection criteria, please refer to the [Astronaut Applicant Handbook](#).

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.

Upon recruitment, ESA Astronauts can be assigned to partner space agencies for up to several years. Such assignment 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 (with a physical disability) selection ESA will accept certificates based on the criteria defined for any of the European Part MED, UK CAA and Canada CAR certificates for private pilots (class 2). Medical criteria for 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 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, Latvia, Lithuania 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.