Call for applications for postdoctoral fellowships in astrophysics at Paris Observatory-PSL

Applications are solicited for up to three post-doctoral fellowships in astrophysics at Paris Observatory-PSL. The positions are funded for one year, renewable for a second year.

Paris Observatory is one of the largest astronomical centres in the world with 850 employees and 840 publications per year. It represents one fourth of French astronomy with teams covering a wide range of research fields and participating in the largest instrumental, theoretical, numerical and experimental projects of modern astronomy. Research teams are located on three main sites, amongst which two are in the Paris area (Paris and Meudon). The third one is the Nançay astronomical radio observatory. Paris Observatory-PSL is part of a rich astronomical environment in the Paris area comprising about 800 scientists.

Paris Observatory is a founding member of Paris Sciences et Lettres – PSL, a young university federating nine prestigious research and higher education institutions in the fields of sciences, humanities, and arts, such as the Paris École Normale Supérieure, or Paris-Dauphine University, and involving as well ten associate institutions.

Applicants are expected to conduct research related to the Strengths, “Pépites”, and Emergences of the Paris Observatory.

The Strengths cover fields of excellence of the Paris Observatory:
- From planetology to exoplanetary systems;
- Laws of gravitation, compact objects and high energies;
- Galaxies: from stars to large structures;
- Instrumentation : research and engineering;
- Data processing pipelines.

The “Pépites” are the fields in which Paris Observatory Teams are unique in France, and recognized at national and international level:
- Celestial mechanics and reference systems;
- Time-frequency metrology and atomic interferometry;
- Interstellar medium: laboratory experiments, AI, modelling;
- Stellar physics: from seismology to galactic archaeology;
- Heliospheric plasmas and Earth-Sun relations;
- Scientific computing;
- Virtual Observatory and data dissemination;
- TeraHertz detectors;
- Flight software;
- New real-time computing architectures;
- History of Science and Astronomy;
- Land surfaces and atmospheres.

The Emergences are fields with a strong potential of rupture:
- Exoplanetary magnetospheres: advent of low frequency radioastronomy;
- Stellar winds and magnetosphere: space UV spectropolarimetry;
- From heavy simulations to large surveys: reionisation and cosmology;
- Optical/Near Infrared inductance imaging spectrometers.
Fellowships are open to applicants of any nationality. The gross monthly salary for a full-time position is roughly 3,450 €, health insurance benefits included. Fellowships should normally start between September and December 2023.

Selection criteria and procedure

Applications will be selected according to the following criteria:

a) Scientific interest of the project in the context of the specific field of research and how it fits within the priorities of the Paris Observatory and of the research laboratory;

b) Scientific track record of the applicant and relevance of the proposed project in his/her employability and longer-term career. IMPORTANT: selected candidates are invited to apply for permanent positions in one the Paris Observatory laboratories during their stay.

c) Proposed work plan: pertinence and consistency with respect to the scientific objectives;

d) Synergy of the project with the host team;

e) Clarity and quality of the application documents.

Applications will be selected following a three-step procedure:

1. Candidates must apply online at the dedicated website https://call-cs-postdoc.obspm.fr/. No applications will be accepted by email. Letters of recommendation must be sent separately to postdoc.reference@observatoiredeparis.psl.eu and must be received before the deadline (see calendar below). Incomplete applications will not be considered in the selection process.

2. Pre-selection of applications by the Paris Observatory research laboratories: each laboratory can select a limited number of applications depending on its size (number of research teams and number of researchers). Criteria (a), (b), and (d) are used during this pre-selection step. A maximal number of 30 applications are pre-selected and transmitted to the Scientific Council of the Paris Observatory;

3. Each pre-selected application is ranked according to criteria (a), (b), (c), (d) and (e) by three reviewers selected within the Scientific Council. Each criterion carries equal weight in the evaluation of an average grade. Applications are ranked according to the average grades (scores) and the 70% best applications are selected to pass this second step of the selection process;

4. The remaining applications are discussed during the Fall session of the Paris Observatory Scientific Council, from which about 10 applications are finally selected. The first ranked applications, depending on the exact number of positions offered that year, are contacted right after to be offered a position. Applications ranked up to the 10th rank (waiting list) are contacted;

5. If a candidate to whom a position was offered declines, the position is offered to the next candidates on the waiting list until the position is fulfilled.

Calendar of the call for applications

August 30, 2022: publication of the call
October 11, 2022: closure of the call
October 13 to 27, 2022: pre-selection step
December 2, 2022: Final selection (second and final selection steps)

The results will be communicated to the candidates after each step of the selection process.