UNIVERSITETET I OSLO

Jobbnorge ID: 274588
Deadline: 3/15/2025
Website: http://www.uio.no/
Scope: Fulltime
Duration: Project

Postdoctoral Research Fellow in Star-Planet Interactions: Atmospheric Escape Processes

About the position / About the job

Position as Postdoctoral Research Fellow available at the Centre for Planetary Habitability, Department of Geosciences, Faculty of Mathematics and Natural Sciences, University of Oslo (UiO).

Starting date no later than October 1, 2025.

The appointment is a fulltime position and is for a period of four years (25 % of which is devoted to required duties, usually in the form of teaching activities).

No one can be appointed for more than one Postdoctoral Research Fellowship at the University of Oslo.

Job description / Project description / Development plan:

The upper atmospheres of rocky (Earth-like) planets are influenced by two key energy sources originating from their host stars: (i) the stellar photon flux in the X-ray and XUV bands, which ionizes the upper atmosphere and drives atmospheric heating, altering conductance, and increasing atmospheric escape, and (ii) the interaction between the stellar wind and the exoplanet's intrinsic magnetic field, which transfers energy to the atmosphere via field-aligned currents and Poynting flux, leading to atmospheric inflation and an enhanced atmospheric escape rate. This project will broadly focus on the processes that lead to atmospheric escape (in the solar system and beyond) and shed light on the role of planetary magnetic fields in the different escape mechanisms.

Tasks:

- Modeling atmospheric escape processes and linking the modeling results to observations (including scientific data interpretation from e.g., CHEOPS, JWST and preparation for PLATO, Ariel, and other future missions).
- Publication and support in proposal writing activities.
- Bring your own twist.

Postdoctoral fellows who are appointed for a period of four years are expected to acquire basic pedagogical competency in the course of their fellowship period within the duty component of 25 %.

The main purpose of a postdoctoral fellowship is to provide the candidates with enhanced skills to pursue a scientific top position within or beyond academia. To promote a strategic career path, all postdoctoral research fellows are required to submit a professional development plan no later than one month after commencement of the postdoctoral period.

Qualifications

The Faculty of Mathematics and Natural Sciences has a strategic ambition to be among Europe’s leading communities for research, education and innovation. Candidates for these fellowships will be selected in accordance with this, and expected to be in the upper segment of their class with respect to academic credentials.

Qualification requirements

- Applicants must hold a degree equivalent to a Norwegian doctoral degree in astrophysics, solar system science, geosciences or physics. Doctoral dissertation must be submitted for evaluation by the closing date. Only applicants with an approved doctoral thesis and public defence are eligible for appointment.
- Fluent oral and written communication skills in English.

Desired qualifications

- Experiences in atmospheric escape and planetary magnetic field modeling.
- Interpreting ground based and space instrumentation data.
- Scientific programming and publishing

Personal skills

- Independent thinking, creativity, leadership, and mentoring abilities.
- Good communication and interpersonal skills.
- Ability to create and contribute to a well-functioning, inclusive and productive research environment.
- Strong quantitative and analytical skills.

We can offer you

- Professionally stimulating working environment
- Vibrant international academic environment
- Postdoctoral development programmes
- Good welfare schemes.
- Opportunity of up to 1.5 hours a week of exercise during working hours.
- A workplace with good development and career opportunities
- Membership in the Statens Pensjonskasse, which is one of Norway's best pension schemes with beneficial mortgages and good insurance schemes
- Salary in position as Postdoctoral Fellow, position code 1352 in salary range NOK from 579 700 to 657 300, depending on competence and experience. From the salary, 2 percent is deducted in statutory contributions to the State Pension Fund

Inclusive worklife and diversity at UiO

Inclusion and diversity are a strength. The University of Oslo has a personnel policy objective of achieving a balanced gender composition. Furthermore, we want employees with diverse professional expertise, life experience and perspectives.

If there are qualified applicants with disabilities, employment gaps or immigrant background, we will invite at least one applicant from each of these categories to an interview.

We hope that you will apply for the position.

More information about gender equality initiatives at UiO can be found here.

Application

Your application should include:

- Cover letter (statement of motivation, summarizing scientific work and research interest)
- CV (summarizing education, positions, pedagogical experience, administrative experience and other qualifying activity)
- A research plan related to the above-described research focus (up to 2 pages)
- Copies of educational certificates, academic transcript of records
- A complete list of publications and up to 5 academic works that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number)

Application with attachments must be submitted via our recruitment system Jobbnorge, click "Apply for the position".

When applying for the position, we ask you to retrieve your education results from Vitnemålsportalen.no. If your education results are not available through Vitnemålsportalen, we ask you to upload copies of your transcripts or grades. Please note that all documentation must be in English or a Scandinavian language.

In assessing the applications, special emphasis will be placed on the documented, academic qualifications, the project description (whenever this is required in the call for applicants), and the quality of the project as well as the candidates motivation and personal suitability.

Interviews with the best qualified candidates will be arranged.

It is expected that the successful candidate will be able to complete the project in the course of the period of employment.

General information

The best qualified candidates will invited for interviews.

If an applicant has applied for and been granted funding for a fulltime research stay abroad while being employed as a Postdoctoral Research Fellow, the employment will be prolonged with the equivalent time as the research stay, but for no longer than of twelve months (thus extending the employment to a maximum of four years)

Applicant lists can be published in accordance with Norwegian Freedom of Information Act § 25. When you apply for a position with us, your name will appear on the public applicant list. It is possible to request to be excluded from this list. You must justify why you want an exemption from publication and we will then decide whether we can grant your request. If we can't, you will hear from us.

Please refer to Regulations for the Act on universities and colleges chapter 3 (Norwegian) and Guidelines concerning appointment to post doctoral and research posts at UiO (Norwegian).

The University of Oslo has a transfer agreement with all employees that is intended to secure the rights to all research results etc.

University of Oslo

The University of Oslo is Norway’s oldest and highest rated institution of research and education with 28 000 students and 7000 employees. Its broad range of academic disciplines and internationally esteemed research communities make UiO an important contributor to society.

The geosciences are the studies of the planet Earth and its comparative planetology; the atmosphere, the hydrosphere and cryosphere, the Earth's surface and its interior. The Department of Geosciences conducts research and teaching in most of the domains of geoscience; geology, geophysics, physical geography, geomatics, hydrology, meteorology and oceanography. The Department is the broadest geoscience research and education environment in Norway. We perform research at a high international standard and have five ERC (European Research Council) research projects ongoing.

The Department encompasses six scientific sections; Meteorology and Oceanography, Geography and Hydrology, Study of sedimentary basins, Environmental geosciences. and Crustal Processes. We host now a third in the line of three Centre of Excellences: PHAB - Centre for Planetary Habitability, and have a Norwegian Research School for PhD students (Research School for Dynamics and Evolution of Earth and Planets, DEEP).

The Department aims to contribute to the new and important UN Sustainability Development Goals, and are important contributors to IPCC (UN’s Inter-governmental Panel on Climate Change). The staff consists of 40 professors and associate professors, in addition to postdoctoral fellows, PhD students, researchers, technical- and administrative staff. The Department has around 200 employees.

Additional information

Contact persons:

- For further information please contact Trond H. Torsvik (Director of PHAB),
  Phone: | E-mail: t.h.torsvik@geo.uio.no
- Stephanie C. Werner (Deputy Director of PHAB,
  Phone: | E-mail: stephanie.werner@geo.uio.no
- Konstantin Herbst (PI: Atmospheres),
  Phone: | E-mail: konstantin.herbst@geo.uio.no
- For questions regarding Jobbnorge, please contact HR Adviser Ørjan Pretorius,
  Phone: | E-mail: orjan.pretorius@mn.uio.no

Place of service:

Problemveien 7 0313 Oslo (Oslo Municipality)