

Research Associate (Postdoc position)

Experimental investigation of volatile dynamics and regolith interactions on solar system bodies

The Professorship of Lunar and Planetary Exploration at TUM invites applications for a Research Associate at the level of TV-L E13 (100%, public sector pay scale). The expected starting date is January 2025. The position encompasses the modelling of volatile dynamics and regolith interactions on solar system bodies, with a focus on the Moon. The position is part of a new project funded by the European Commission. The initial contract is limited to 2 years, and an extension is foreseen.

About us: We are strongly dedicated to improving the understanding of the lunar water cycle, with many applications in the field of solar system science and exploration. To this end, we combine both numerical modelling and experimental methods and develop instrumentation to characterise water in situ on the lunar surface. We have recently acquired several high-profile grants to fund this research and are rapidly expanding.

The position: Your task is to develop and build an experimental setup to demonstrate the lunar water cycle in the lab. This includes experiments utilising a thermal vacuum setup and devices for ion implantation and laser ablation to investigate surface interactions of volatiles with regolith. You will work in a team of 4–5 researchers that combines numerical and experimental expertise and works jointly on the project.

Our offer: We offer the opportunity to conduct cutting-edge research in an academic environment at one of the top universities in Europe. You will have the opportunity to engage in the international research community, present your work at international conferences, and publish in leading journals. Through its Graduate Centre and Talent Factory, TUM supports PhD students and Postdocs by providing a dedicated qualification program, as well as interdisciplinary collaboration and networking opportunities.

We look for:

- a team player with the ability to work independently with an excellent doctoral degree in experimental physics, planetary science, space science, engineering, or related fields,
- practical experience in developing and operating thermal-vacuum systems,
- a strong proficiency with measurement techniques and data analysis,
- ideally experience in experimenting with ion implantation, laser ablation, and/or regolith analogues,
- optionally a basic experience with numerical modelling,
- a strong passion and curiosity for space exploration and solar system science,
- excellent organisational and communicational skills in English (oral/writing).

Application: Please send a max. 1-page cover letter, your CV, and relevant university and work certificates in one pdf file by 1 September 2024 to office.lpe@ed.tum.de.

As an equal opportunity employer, TUM explicitly encourages applications from women and all others who would bring additional diversity dimensions to the university. Preference will be given to disabled candidates with essentially the same qualifications.

As part of your application, you provide personal data to the Technical University of Munich (TUM). Please view our privacy policy on collecting and processing personal data in the course of the application process pursuant to Art. 13 of the General Data Protection Regulation of the European Union (GDPR) at <https://portal.mytum.de/kompass/datenschutz/Bewerbung/>. By submitting your application, you confirm you have read and understood the data protection information provided by TUM.