



Postdoctoral Position in Planetary Sciences at KU Leuven, Department of Geology

The Department of Earth and Environmental Sciences at KU Leuven invites applications for a postdoctoral position in Planetary Sciences, focusing on research related to the planet Mercury. This position is funded by the European Research Council Consolidator Grant "IronHeart" and offers a unique opportunity to contribute to cutting-edge research in understanding Mercury's internal structure through experimental and computational approaches.

Project Description:

The successful candidate will have the opportunity to integrate both experimental investigations, utilizing a multi-anvil press to simulate extreme pressure and temperature conditions within Mercury's interior, and computational modeling into the project. However, the project's focus will be tailored to the candidate's preference. By combining experimental and computational approaches, the project aims to provide comprehensive insights into the formation and dynamics of Mercury's interior.

Responsibilities:

Experimental Studies:

- Design and conduct high-pressure experiments using a multi-anvil press to simulate conditions within Mercury's interior.
- Characterize the mineralogical phase assemblages and physical properties of materials under high-pressure conditions.
- Analyze experimental and thermodynamic data to infer constraints on Mercury's composition and internal structure.

Computational Modeling:

- Develop and implement numerical models to simulate Mercury's internal structure and dynamics.
- Integrate experimental data into computational frameworks to constrain Mercury's interior properties.
- Analyze model outputs to investigate the thermal evolution, core-mantle interactions, and geophysical properties of Mercury.

Qualifications:

- Ph.D. in a relevant field such as Experimental Petrology, Mineral Physics, Planetary Sciences, Geophysics, or Computational Physics.
- Strong background in planetary sciences with a focus on Mercury or related fields.
- Experience with experimental techniques (e.g., high-pressure experiments, multi-anvil press) and/or numerical modeling and simulation techniques.
- Proficiency in programming languages such as Python, MATLAB, or Fortran.
- Excellent analytical and problem-solving skills, with a demonstrated ability to conduct independent research and contribute to collaborative projects.
- Strong written and oral communication skills in English, with a track record of scientific publications and presentations.

Appointment Details:

- Position: Postdoctoral Researcher
- Duration: 2 years, with the possibility of extension based on performance and funding availability.
- Salary: Commensurate with qualifications and experience, in accordance with KU Leuven's postdoctoral salary scale (~ 3000 EUR after tax).
- Start Date: Flexible, preferably in October 2024.

Application Procedure:

Interested candidates should submit a single PDF file containing a cover letter outlining their research interests and relevant experience, a curriculum vitae, a list of publications, and contact information for three references. Please apply through the vacancy website of the KU Leuven.

Deadline for Applications:

The application deadline is June 15 2024. Review of applications will begin immediately and will continue until the position is filled.

Further Information:

For inquiries about the position or the IronHeart project, please contact Olivier Namur at Olivier.namur@kuleuven.be.

About KU Leuven:

KU Leuven is a leading European research university located in Leuven, Belgium, consistently ranked among the top universities worldwide. With a rich history dating back to 1425, KU Leuven is renowned for its high-quality education, cutting-edge research, and international academic community. The Department of Geology at KU Leuven is at the forefront of Earth and planetary sciences research, offering state-of-the-art facilities and a collaborative environment for interdisciplinary exploration. Join us at KU Leuven to be part of a vibrant academic community dedicated to advancing knowledge and shaping the future of science.

