UNIVERSITÄT BERN

Astronomisches Institut, Sidlerstrasse 5, CH - 3012 Bern

Bern, January 1, 2024

Philosophisch-naturwissenschaftliche Fakultät

Astronomisches Institut

The **Space Weather group of the Astronomical Institute of the University of Bern (AIUB)** is inviting applications for a

Postdoc

to work on

observational solar physics

The University of Bern hosts many domains of astronomy, from solar physics, to exoplanets, and satellite observations. The successful candidate will work in the space weather group, which focuses on understanding solar flares with machine learning, building astronomical instrumentation, and on researching the physics of the Sun. This position is funded via a SERI-funded ERC Consolidator grant.

The goal of this postdoc position is to carry out research in observational solar physics, particularly by leading observations at the Swedish Solar Telescope (SST) for the ERC project, by analyzing these observations using inversions and machine learning techniques, and publishing the research results in journals. Applications for further observing time, e.g. by writing proposals for DKIST, are possible. The scientific focus lies on solar flares and on the evolution of active regions and the goal is to contribute to the following research questions: "*What are the origins and mechanisms of solar flares?*", "*When and where will a flare occur?"* While certain work packages are defined by the research plan of the ERC grant, it is desired to combine them with own ideas and own research.

We are looking for highly motivated candidates with previous experience in observations, data analysis, inversions, and machine learning. You will be part of a research group of >10 people who collaboratively work on understanding several aspects of space weather. Support for conferences and collaborations is available.

Requirements:

- PhD degree in physics, astronomy, or a similar discipline.
- Experience with observational solar physics, ideally by having led observing runs as a PI at large solar telescopes. While our SST observing time is guaranteed, knowledge of successful observing proposal writing is considered a bonus.
- Experience with data reduction and data interpretation, particularly inversions.
- Knowledge of polarimetry.
- Knowledge of machine learning, e.g. normalizing flows, is considered a bonus.
- Knowledge of programming in Python and/or IDL would be beneficial.
- Strong verbal and written communication skills in English.
- Teamplayer who likes to work with other group members and students.

Appointment: As soon as possible, upon mutual agreement. Funding for initially 2 years with a possibility for extension.

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Application: deadline: **February 3, 2024**, via email to L. Kleint, containing (**as one pdf file**):

- CV
- list of publications
- motivation letter **for this specific position**
- max. 2-page research statement, which shows links of your past work to the requirements of this position and your ideas to carry out future research.
- names of 3 references that can be contacted. No reference letters are required in advance.

Salary: Based on the regulations of the University of Bern, starting at 87 kCHF/year

Contact: Prof. Dr. Lucia Kleint (email lucia.kleint@unibe.ch).

An equal opportunity environment is important to us, and we welcome applicants from groups that are traditionally underrepresented in physics and astronomy. We will be particularly pleased to receive applications from women for the advertised position.