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**UNIVERSITÄT  
BERN**

Astronomisches Institut, Sidlerstrasse 5, CH - 3012 Bern

Bern, October 15, 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

## PhD student

to work on

### **observational solar physics and data analysis**

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 part of a SERI-funded ERC CoG grant.

Flares are eruptions on the Sun, which can influence the Earth by causing power outages, changes of satellite orbits, aurora, and enhanced radiation. However, solar flares can neither be reliably predicted, nor is their physics fully understood. The goal of this PhD project is to carry out research in observational solar physics, particularly by leading observations at the Swedish Solar Telescope (SST) to obtain new data of solar flares and to analyze these data to determine the structure of the solar atmosphere during flares.

The PhD student will learn about space weather, solar observations, solar data reduction, data analysis, radiative transfer, and modeling to interpret the solar atmosphere. The length of a PhD is typically 3-4 years. Support for conferences and collaborations is available.

- Requirements:**
- We are looking for highly motivated candidates with (or obtaining soon) a MSc in physics, astronomy, or a related topic.
  - A strong interest in experimental work is desired, particularly in operating a telescope, analyzing astronomical data, and in programming.
  - A background in programming in Python or IDL is desired.
  - At least a basic knowledge of astronomy is required and knowledge of astronomical data analysis is beneficial.
  - Strong verbal and written communication skills in English.
  - Strong analytical abilities and problem solving/troubleshooting skills.
  - Teamplayer who likes to work with other group members and students.

**Appointment:** Starting in spring 2025, open until filled. Funding for maximally 4 years.

Prof. Dr. Lucia Kleint  
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- Application:** deadline: **December 1, 2024**, via email to L. Kleint, containing (**as one pdf file**):
- CV
  - motivation letter **for this specific PhD position**
  - a copy of BSc and MSc transcripts of courses and grades (scans of official transcripts are sufficient)
  - if available, a pdf of or link to the Master's thesis (if emailed, please < 5 MB).
  - Two letters of recommendation shall be sent before the application deadline directly **by the referees** to L. Kleint.
- Incomplete applications, applications with missing reference letters, or applications written by ChatGPT unfortunately cannot be considered.
- Salary:** Based on the regulations of the University of Bern, starting at 47 kCHF/year
- Contact:** Prof. Dr. Lucia Kleint (email [lucia.kleint@unibe.ch](mailto: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.