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**UNIVERSITÄT
BERN**

Astronomisches Institut, Sidlerstrasse 5, CH-3012 Bern

Philosophisch-
naturwissenschaftliche Fakultät

Astronomisches Institut
Bern, 21. Dezember 2016

Open Position at the Astronomical Institute of the University of Bern

The group "Satellite Geodesy" of the Astronomical Institute of the University of Bern (AIUB) offers the position for a

Ph.D.-Candidate

The focus will be on studying the electron content of the plasmasphere, the outer region of the co-rotating Earth's upper atmosphere, from GPS data collected onboard a multitude of low Earth orbiting (LEO) satellites, e.g. Swarm, Sentinel, and the upcoming COSMIC-2 satellites additionally also providing GLONASS data.

The work will mainly focus on science issues, but includes technical issues as well, e.g., LEO orbit determination including improved pre-processing techniques. Based on clean and properly calibrated slant TEC pseudo-observations derived from many LEO satellites, the specification of the 3-D plasmasphere electron density shall be envisaged. In view of a greatly improved spatial coverage offered by current LEO satellites, different approaches for reconstructing 3-D plasmasphere electron densities may be investigated to reduce dependencies on a priori models to the extent possible.

Education:

The candidate is expected to have successfully completed the master thesis (diploma/"Lizentiat"/Master) in astronomy, geodesy, physics, or a related topic. Experience in GPS data processing and ionosphere research is an advantage. Background in computer science (coding in Fortran90, C++, or perl) is not a requirement, but beneficial for working in this project. The candidate should speak and write English fluently.

The candidate should start working in Bern as soon as possible. In the frame of this Ph.D position, research stays are also foreseen at other European countries.

The position is scheduled for three years. The salary follows the guidelines of the University of Bern.

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Application:

Applications (including CV, university diploma copies, possible references) should be received as soon as possible but no later than January 31, 2017 at the following address:

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Informal information may be obtained at the above address as well.

The University of Bern is an equal opportunity employer and encourages in particular women to apply for open positions.