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**UNIVERSITÄT
BERN**

PhD Position in Microwave Remote Sensing for Continuous Middle Atmospheric Temperature Sounding

The Microwave Division at the Institute of Applied Physics, University of Bern, is seeking candidates for a PhD in Physics or Climate Sciences. The position is nominally for 3 years with a possible 1-year extension. The position is open from July 2020 until it is filled with a successful candidate.

Project Description

Continuous temperature soundings at the middle atmosphere are essential to understand many vertical coupling processes, which are driven by atmospheric waves at different scales. In particular, atmospheric tides and their intermittency are not yet well-understood and continuous temperature measurements in the stratosphere/upper troposphere are beneficial to investigate this variability at its source region. Microwave remote sensing techniques provide unique observing capabilities in this altitude region.

The successful PhD candidate will participate in the development of a novel millimeter wave radiometer for temperature sounding in the middle atmosphere. This includes initial system tests in the laboratory and an alpine high altitude research station, as well as the deployment of the instrument during field campaigns with international partners. She or he will be responsible for the development of the retrieval algorithm, the scientific data analysis and atmospheric simulations.

Requirements and applications

The position requires a Master of Science degree in physics or a closely related field in engineering or environmental sciences. Experience in instrumentation, lab work, and programming languages (e.g. Matlab, Fortran, Python) are a clear advantage.

Interested applicants should send their curriculum vitae (including professional experience), a one-page motivation letter, the contact details of at least one reference person, and the grades obtained at the Master and Bachelor level to Dr. Gunter Stober.

Further information

The IAP Microwave Division has a world-wide recognized expertise in microwave remote sensing of the atmosphere. It operates a suite of ground-based instruments in Switzerland and on a campaign base at remote observatories measuring ozone, water vapor, winds and temperatures. These observations are conducted in collaboration with national and international partners (e.g. MeteoSwiss, DLR) and are part of an EU Horizon 2020 project. The IAP is a member of the interdisciplinary Oeschger Centre for Climate Change Research (OCCR) at the University of Bern, and the student will benefit from the curriculum and networking activities of the center.

The salary will be determined according to the regulations of the Swiss National Science Foundation SNSF. The IAP is actively seeking to increase the number of women in physics and hence women are strongly encouraged to apply.

About the University of Bern

The University of Bern is located at the heart of Switzerland. The city of Bern is the capital of Switzerland and of the canton Bern and has a beautiful historic old town center. The Bernese Oberland with its high Alpine environment is easily accessible by public transport.

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