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PhD student position

The Microwave Division at the Institute of Applied Physics, University of Bern, is seeking a candidate for a PhD in Physics or Climate Sciences. The position is nominally for 3 years and will start in January 2025 or until it is filled with a successful candidate.

Responsibilities

The PhD candidate is expected to actively contribute to the data analysis and software development for tomographic retrievals such as the 3DVAR+DIV algorithm for multistatic meteor radar networks. The PhD is part of the GIGAWATT SNSF lead agency project, which will set up a unique suite of instruments including state of the art radiometers for wind, temperature, ozone and water vapor measurements as well as airglow cameras at Alpine observatories to investigate the vertical coupling through gravity waves from the troposphere up to the mesosphere.

The successful candidate is supposed to validate and evolve the existing tomographic 3DVAR+DIV algorithm in collaboration with international partners, to provide mesospheric winds from active and passive remote sensing above the Alpine region to support the tomographic data analysis of the high-resolution multistatic airglow observations and to perform comparisons with General Circulation Models and meteorological reanalysis.

Requirements and applications

The position requires a Master of Science degree in physics (90 ECTS) or a related field in engineering or Environmental Sciences. Experience in instrumentation, lab work, and programming languages is a clear advantage (e.g. Matlab, Fortran, C/C++). Interested applicants should send their curriculum vitae (including professional experience), a one-page motivation letter, the contact details of one reference person, and the grades obtained at the Master level to Gunter Stober (gunter.stober@unibe.ch).

Further information

The IAP Microwave Division has worldwide recognized expertise in active and passive 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, AWI-PEV, German Aerospace Center).

The salary will be determined according to the regulations of the Swiss Science Foundation SNSF (starting salary of 47040 CHF p.a.). The Canton offers 23 days of holiday per year. Public holidays (e.g. Christmas, New Year, Easter, 1 August, etc.) come besides. The Division 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 in the heart of Switzerland. The city of Bern is the capital of Switzerland and the canton Bern has a beautiful historic old town center. The Berner Oberland with its high Alpine environment is easily accessible by public transport.

PD Dr. Gunter Stober

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