



u^b

b
UNIVERSITÄT
BERN

PhD student position for the development of a next-generation water vapor radiometer within the Swiss H2O Hub: High-quality water vapor measurements from ground to space

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 December 2022 until it is filled with a successful candidate.

Responsibilities

The PhD candidate is expected to actively contribute to the development and operation of a novel millimeter-wave radiometer for continuous and autonomous water vapor monitoring in the middle atmosphere. The candidate will work closely with a group of experienced scientists supporting the required CAD work to design the optics of the instrument and calibration targets. Furthermore, the candidate contributes to the operation and adaption of water vapor retrievals as well as scientific data analysis.

Applicants are involved in laboratory work and are supposed to participate in field campaigns in Switzerland. The successful candidate will support balloon flights conducted in Switzerland with our project partners EMPA, ETH-Zürich, and MeteoSwiss. The scientific data analysis includes the compilation of harmonized water vapor profiles leveraging data from the RALMO Lidar system at Payerne (MeteoSwiss), two balloon-borne sensors (ETH-Zürich, and EMPA), and the microwave radiometer.

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 is a clear advantage (e.g. Matlab, Fortran, Python). 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 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).

The salary will be determined according to the regulations of the Swiss Science Foundation SNSF (starting salary 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 and has a beautiful historic old town center. The Berner Oberland with its high Alpine environment is easily accessible by public transport.

Dr. Gunter Stober

Group Leader Atmospheric Dynamics and Meteor Physics
Institute of Applied Physics
University of Bern
CH-3012 Bern