

PhD student position for investigating continuous middle atmospheric soundings of ozone, water vapor and winds at polar latitudes in Microwave Atmospheric Remote Sensing

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 April 2021 until it is filled with a successful candidate.

Responsibilities

The PhD candidate is expected to actively contribute to the development and operation of novel millimeter-wave radiometers for ozone, water vapor, wind, and temperature soundings in the middle atmosphere on Svalbard and Bern, in the development of the retrieval algorithms and the scientific data analysis. The SNF project investigates how the trace gas volume mixing ratio of ozone and water vapor is affected by transport and mixing processes driven by planetary waves in the polar region on time scales of days to weeks and how these changes affect the excitation of atmospheric tides.

The PhD curriculum contains experimental work in the laboratory and during field campaigns to Svalbard and Northern Norway or Russia with international partners, as well as numerical 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 are 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@iap.unibe.ch).

Further information

The IAP Microwave Division has 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 salary will be determined according to the regulations of the Swiss Science Foundation SNSF. 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.

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