



The department of Atmospheric Remote Sensing at the Institute of Atmospheric Physics (IPA), Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), at Oberpfaffenhofen, Germany, invites applications for a

Ph.D. position on

Ground-based remote sensing of greenhouse gases - quantification of localized carbon dioxide and methane emissions

Observing and understanding the global distribution of the man-made greenhouse gases carbon dioxide and methane is one of the key science questions addressed by our institute. We develop instruments, algorithms, and models to better quantify sources and sinks of greenhouse gases and to enable carbon monitoring in the future.

In particular, we operate a mobile, ground-based Fourier Transform Spectrometer that enables highly accurate observations of the man-made greenhouse gases carbon dioxide and methane. The spectrometer will be part of upcoming international field campaigns that aim at quantifying local emission sources. The next deployment will take place in spring 2017 to explore methane sources in eastern Europe. The Ph.D. candidate will take an active part in operating the instrument during measurement campaigns. The Ph.D. thesis will focus on validation studies and on constraining localized sources based on the ground-based observations.



Mobile spectroscopic measurements of CO₂ and CH₄.

Tasks:

- Operation and further development of a ground-based Fourier Transform Spectrometer
- Participation in upcoming international field campaigns
- Data reduction and refinement of related techniques
- Quantification of localized emission sources

We are looking for a Ph.D. student with a keen interest in atmospheric physics and spectroscopic remote sensing.

Essential skills:

- Master degree (or equivalent) in physics or equivalent
- Knowledge in atmospheric physics and remote sensing
- Experience with spectroscopic methods, preferably Fourier Transform spectroscopy
- Programming knowledge, preferably in FORTRAN, Python
- Excellent English language skills
- Willingness to participate in international, month-long field campaigns

The position is awarded for 3 years (payscale TVöD-13 50%). Interested candidates should send a complete application package (CV; cover letter describing background, training and research interests; certificates; list of publications, contact information of a referee) as a single PDF to Prof. André Butz (andre.butz@dlr.de). Applications are being accepted immediately. The position is open until filled.

For further information please contact Prof. André Butz (andre.butz@dlr.de).