

## **Master thesis: Retrieving atmospheric temperature from FTS measurements**

The IUP operates FT Spectrometers on several places worldwide from the tropics to the Arctic. The FT spectrometers measure radiation from the atmosphere which can be used to determine properties of the atmosphere. Those measurements are routinely used to observe trace gas abundances, e.g. O<sub>3</sub>, CO<sub>2</sub>, but also short lived pollutants like Ammonia, NH<sub>3</sub>.

The measurements have been used in several publications to monitor the performance of international treaties, like the Montreal protocol or to asses the performance of satellite instruments. The measurements are also used to determine effects, which may not or inadequately be present in models of the atmosphere.

In this Master thesis the measured spectra will be used to determine temperature profiles in the atmosphere to asses the corrected temperature on the performance of trace gas retrievals. The topic of this MSc thesis is data analysis and comparison of the results with independent measurements.

Skills needed:

Basic physics knowledge and an interest in atmospheric science is mandatory.

Advantageous background skills:

- Basic knowledge in atmospheric science
- Basic knowledge in spectroscopy
- script programming, e.g. python, matlab or idl

The FTIR group in the IUP is cooperating with groups worldwide and offers an open and supportive working environment.

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