

## Development of a Lab-prototype CI-TOF Instrument for the Airborne Detection of Ultra-trace Gases in the UTLS

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### Abstract

We have developed a new transfer stage for an airborne CI-TOF instrument aiming for high sensitivity and a soft ion transfer, which are in contrast to each other.

A combination of two ion funnels working at 100 and 5 hPa and two quadrupoles has been modeled, built and tested. In addition, we are developing a DBD ion source as a replacement for the standard radioactive source.

First results on the transmission efficiency and ion chemistry in the transfer stage will be discussed in comparison to results of fluid-dynamical and electro-dynamical simulations.

**Wednesday, June 25th**

**3:15 p.m. Refreshments**

**3:30 p.m. – Seminar**

**FL2-1001, Small Auditorium**