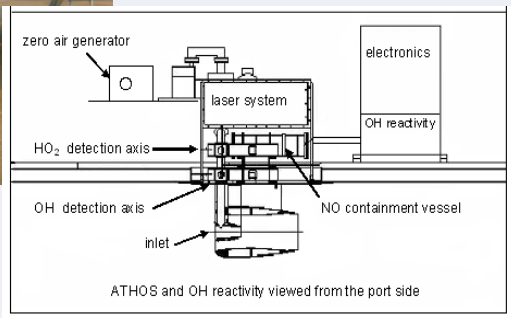
ATHOS and OH Reactivity

William Brune (PI), David Miller (Co-PI), Alex Thames, Alexandra Brosious



ATHOS and OH reactivity viewed from the port side

Current Status

DC3 Operational Level

Experience gained from DC3 and ground campaigns (SOAS, FIX) helping us optimize instrument operation and design improvements.

Modifications currently underway:

- Inlet
- Improved calibrations
- Faster OHR scans

ATHOS and OH Reactivity Measurement Characteristics

	minimum integration time	*limit-of-detection*	*accuracy (2σ, 1 min.)*
OH	20 s	0.01 pptv	**± 32 %**
HO_2	0.2 s to 20 s	0.1 pptv	**± 32 %**
OH reactivity	20 s	~ 1 s^{-1}	**~ ± 15 %**

Deliverables

Deliver consistent data set of OH, HO_2, and OH reactivity for the entire KORUS study on schedule.

Provide a test of modeled atmospheric oxidation capacity – both box and global.

Examine the dependence of any missing OH reactivity on location and time of year.