

InGOS/ICOS Technical Experts Workshop on non-CO₂ Eddy-Covariance Greenhouse Gas Flux Measurements.

09.-11.06.2015, Dragør, Denmark



Non CO₂ greenhouse gas (GHG) fluxes are often small and vary substantially in space and time. As a consequence, their measurement pushes existing flux techniques, such as chamber and micrometeorological flux approaches, to the limit. To enhance the quality of services provided by the participating research infrastructures within the InGOS and ICOS networks, this workshop will bring technical experts together to discuss and document the state of the art in non-CO₂ GHG flux measurements. The workshop will support the development of a measurement protocol for Non-CO₂ GHG flux measurements with the eddy covariance method within the ICOS framework.

Specific topics of the workshop

- Challenges to determine non CO₂-GHG concentrations: accuracy and precision, spectral response and noise, cross-sensitivities with other fluctuating gasses (H₂O), fast response sensors (Topic 1)
- Eddy covariance and gradient system design, flux data processing and correction (Topic 2)
- Total uncertainty of flux estimation, flux detection limits and their main factors, flux data gap filling (Topic 3)

Venue and registration

The workshop will be held in the Dragør Badehotellet (Drogdensvej 43, 2791 Dragør Denmark, www.badehotellet.dk, E-mail: ewa@badehotellet.dk), which is very close to Copenhagen Airport. The costs include solely accommodation (2 nights), meals and use of facilities are 400 € per participant, of which InGOS will pay 100 €.

Please register by Monday, 13 April 2015 by mail to Andreas Ibrom (anib@kt.dtu.dk).

Workshop programme and Schedule

09.06.2015	10.06.2015	11.06.2015
	(08:30) Topic 2: 4 scientific presentations (12 + 3 minutes) (09:30) BOSII: continues	(08:30) Plenum: T01- T12 (5+5) reports from BOS
	(10:30) Break	(10:30) Break
	(11:00) BOS III: <i>flux calculation and correction</i> T07: closed-path sensors: cross-sensitivity with H ₂ O and correction for density fluctuations T08: open-path sensors: correction for density fluctuations (WPL) T09: spectral correction and uncertainty estimation	(11:00) Plenum: synthesis and Organisation of work and closing the workshop
(12:00) arrival and registration	(12:30 – 14:00) lunch	12:00 Lunch and departure
(13:00) Plenum: Welcome (5) <i>Andreas</i> Aim and structure of the Non-CO ₂ GHG eddy covariance protocol (20 + 20) <i>Eiko</i> Breakout sessions (BOS) approach and deliverables (15) <i>Andreas</i> (14:00) Topic 1: 4 scientific presentations (12 + 3 minutes)	14:00 Topic 3: 4 scientific presentations (12 + 3 minutes)	(13:30 – 16:00) Meeting of the main authors of the protocol
(15:00) Break	(15:00) break	
(15:30 -17:00) BOS I: <i>theory, sensor and system design</i> T01: definitions of variables and required system specifications T02: closed path sensors set-up T03: open-path sensors set-up (17:00-18:00) BOS II: <i>field measurements and data flow</i> T04: calibration and maintenance T05: ancillary measurements T06: data formats and online data transmission	(15: 30 – 17:00) BOS IV: <i>remaining issues</i> T10: time-lag estimation and detection limit T11: data gap filling T12: compatibility with other standards (17:00-18:00) Preparation of BOS reports	
18:00 Dinner	18:00 Dinner	