

Transcom Meeting Announcement

25 January 2012

Dear Transcom researchers and colleagues:

After deliberations within the organizing committee, we are pleased to announce that the next Transcom meeting will be held on 4-8 June 2012 in Nanjing, China (in the Year of Dragon with celestial blessings!).

Important dates:

Formal announcement: 25 January 2012
Travel Assistance Application, 29 February 2012
Abstract submission: 10 April 2012*
Program announcement: 30 April 2012*
Meeting: 4-8 June 2012

* Please note that we would like to make the program and send invitation letters for visa applications in advance, so there will be no delays in getting travel documents. However, we will accommodate late submissions to the extent we can.

Meeting themes:

The following four themes are suggested for this meeting and theme leaders are identified:

1. Satellite column CO₂ data inversion and calibration with TCCON (Sander Houweling, Frederique Chevallier)
2. Evaluation of inversions with independent data, such as multiple gas species of HIPPO/upper-air observations (Prabir Patra, Steve Wofsy)
3. Progress and Synthesis of inversion results (Philippe Peylin, Andy Jacobson)
4. Data assimilation and model parameter optimization techniques (Wouter Peters, Yong Li)

We plan to spend half a day on each theme with some presentations and a lot of time for discussion. We encourage paper submissions on these themes. However, we also encourage paper submissions on the following topics or anything related to use of atmospheric measurements to infer terrestrial and ocean greenhouse gas fluxes:

1. Inversion and data assimilation:
 - regularization: spatial and temporal correlation between fluxes in the grid boxes or regions, truncation, reduced rank Kalman filters
 - data uncertainty, use of ensembles for data uncertainty/covariance estimation
 - Lagrangian inverse modeling
 - use of trace gases and isotopes (COS, SF₆, ¹³C, ¹⁴C, CO ¹³C, ¹⁴C, O₂/N₂) as additional constraints
 - CH₄ and N₂O inversions
 - ecosystem parameter optimization in regional and global carbon assimilation systems
 - data assimilation methods for optimizing fluxes
2. Use of satellite/ground FTS data in inversion:
 - accuracy assessment of existing satellite GHG column data
 - TCCON measurements and their usage
 - prior profiles and averaging kernels used in retrieving CO₂ and other GHGs
 - estimation of aggregation and bias errors
 - synergetic of use of GlobalView and satellite data in inversion and data assimilation

3. Bottom-up estimates of various fluxes
 - fossil fuel emission estimation
 - fire emission estimation
 - ocean flux estimation
 - land ecosystem flux estimation
 - the use of trace gases and isotopes for flux separations (COS, SF₆, ¹³C, ¹⁴C, CO, etc.)
 - new GHG measurement techniques and applications
4. Transport modeling
 - forward transport modeling methodology and model intercomparisons
 - backward transport modeling methodology and model intercomparisons
 - forward modeling of satellite column data
 - upper air data - CONTRAIL, HIPPO forward transport modeling
 - PBL experiments and height inter-comparison
 - vertical CO₂ profiles in high latitude's free troposphere - effect of numerically induced non-adiabatic mixing?
5. Synthesis of global and regional carbon budgets
 - comparisons of top-down and bottom-up results
 - intercomparison of inversion and data assimilation results

General meeting structure:

- Two days for four selected themes (a few more themes may be added if some abstract submissions are clustered)
- Two days for presentations and discussions of other topics
- One evening for training of data assimilation techniques
- One day excursion and sightseeing:

Funding for postdoctoral fellows and graduate students:

We will provide travel and lodging assistance to several participants, depending on the cost of air tickets, due to limited funds available for this purpose. We advice that you propose the cheapest means of travel to facilitate larger participation. If a travel assistance of USD\$1000 each can be a good leverage for you to get additional support, it would be much appreciated. Please send your application or direct enquiries to Ms. Yan Wu at korcee1231@163.com by 29 February 2012. Your application should include an abstract of your presentation, your cv, and travel budget.

Organizing committee:

Jing Chen, Frederic Chevallier, Kevin Gurney, Sander Houweling, Andy Jacobson, Yong Li, Shamil Maksyutov, Prabir Patra, Philippe Peylin, Wouter Peters