2nd GEOS-CHEM USERS' MEETING
Harvard University, April 4-6, 2005
Maxwell-Dworkin building, room G115
Updated Agenda – 3/30/05

Monday, April 4

8:30 Continental Breakfast

Model Overview (Daniel Jacob, chair)

9:00 Welcome (Daniel Jacob, Harvard)
9:05 The GEOS-CHEM model: present state, future directions (Daniel Jacob, Harvard)
9:30 GEOS-CHEM code management and benchmarking (Bob Yantosca, Harvard)
9:50 Data distribution and model performance (Jack Yatteau, Harvard)
10:00 GEOS meteorological and chemical data assimilation (Steven Pawson, NASA/GMAO)
10:15 GEOS-CHEM near-real-time simulation (Solene Turquety, Harvard)
10:30 Break

Global Tropospheric Chemistry (Qinbin Li, chair)

10:45 IPCC AR4 results (Jerome Drevet, EPFL)
11:00 Evolving simulation of OH and ozone in GEOS-CHEM (Jennifer Logan, Harvard)
11:15 Radiative effects of clouds on tropospheric chemistry (Hongyu Liu, NASA/LaRC)
11:30 Comparison of GEOS-CHEM with OH observations (Mat Evans, Leeds)
11:45 Evaluation of GEOS-CHEM with GOME tropospheric ozone column observations (Xiong Liu, CFA)
12:00 Comparison of TES ozone with GEOS-CHEM, and global budget of methanol (Daniel Jacob, Harvard)
12:15 Lunch (Law School cafeteria)

Global Aerosols (Randall Martin, chair)

1:15 Background aerosols in North America. (Rokjin Park, Harvard)
1:30 Sea salt chemistry and sulfate formation pathways (Becky Alexander, Harvard)
1:45 Global simulation of secondary organic carbon aerosols (Hong Liao, Caltech)
2:00 Global dust modeling (Duncan Fairlie, LaRC/Harvard)
2:15 Evaluation of GEOS-CHEM AOTs: comparisons to satellite data (POLDER, MODIS) (Sylvia Generoso, EPFL)
2:30 Aerosol phase transitions and radiative implications (Scot Martin, Harvard)
2:45 Use of GEOS-CHEM backscattered radiances for comparison to MODIS (Easan Drury, Harvard)
3:00 Aerosol microphysics simulation (Win Trivitayanurak, CMU)
3:15 Size-resolved carbonaceous and dust aerosols (Peter Adams, CMU)
3:30 Break

Intercontinental transport (Prasad Kasibhatla, chair)

4:00 Transpacific transport of Asian pollution aerosols and effects on U.S. air quality (Colette Heald, Harvard)
4:15 Meteorological indices for transpacific transport of Asian pollution (Qing Liang, U. Washington)
4:30 Trapping of convective outflow by upper-level anticyclones (Qinbin Li, JPL)

4:45 Export of North American ozone and NO_y constrained from ICARTT observations (Rynda Hudman, Harvard)
5:00 Evaluation of ozone production and loss rates using aircraft observations (Marion Auvray, EPFL)
5:15 Transatlantic transport of tropospheric ozone and its precursors (Guerguana Guerova, EPFL)
5:30 Adjourn

5:30 Reception (Maxwell-Dworkin building, ground floor)

Tuesday April 5

8:30 Continental Breakfast

Inverse modeling of emissions: CO, CO_2, black carbon (Jennifer Logan, chair)

9:00 CO inverse modeling (Avelino Arellano, Duke)
9:15 Effect of boreal forest fires on CO (Fok-Yan Leung, Harvard)
9:30 Inverse modeling of North American CO sources during ICARTT (Solene Turquety, Harvard)
9:45 Inverse modeling of Asian CO and NO_x emissions (Yuxuan Wang, Harvard)
10:00 Constraints on Asian carbon sources from a coupled CO-CO_2 inversion (Paul Palmer, Harvard)
10:15 Chemical pump effect on atmospheric CO_2 inversions (Parvadha Suntharalingam, Harvard)
10:30 Exploiting satellite observations of tropospheric trace gases (Dylan Jones, U. Toronto)
10:45 Break

Inverse modeling of emissions: NO_x and VOCs (Yuhang Wang, chair)

11:15 Global partitioning of NO_x emissions using satellite observations (Lyatt Jaeglé, U. Washington)
11:30 North American NO_x emission inventory (Randall Martin, Dalhousie)
11:45 Modeling oxygen isotopes of nitrate with GEOS-CHEM (Meredith Hastings, U. Washington)
12:00 Constraints from GOME HCHO on global isoprene emission (Changshub Shim, Georgia Tech)
12:15 Constraints on Asian VOC sources from GOME HCHO observations (May Fu, Harvard)
12:30 HCHO columns over Europe as proxy for biogenic emissions (Gabriele Curci, L'Aquila)
12:45 Variability of HCHO during ICARTT : implications for GOME/OMI interpretation (Dylan Millet, Harvard)

1:00 Lunch (Law School cafeteria)

Expanding model capabilities (Dylan Jones, chair)

2:00 Linking GEOS-CHEM with CMAQ: consistency in meteorology and chemistry (Daewon Byun, U. Houston)
2:15 Evaluation of the GEOS-CHEM/CMAQ interface over China and US (Zuopan Li, U. Tennessee)
2:30 Running GEOS-CHEM with GISS GCM fields (Loretta Mickley, Harvard)
2:45 Parallelization of GEOS-CHEM on a 1024-node Linux cluster based on MPI (Kevin Bowman, JPL)
3:00 GEOS-CHEM adjoint development using TAF (Monika Kopacz, Harvard)
3:15 Constructing an adjoint for GEOS-CHEM (Daven Henze, Caltech)
3:30 Break

Regional air quality (Daewon Byun, chair)

4:00 Sensitivity of surface ozone in the U.S. to isoprene emissions and chemistry (Arlene Fiore, GFDL)
4:15 Aerosol simulation over North America (Aaron Van Donkelaar, Dalhousie)
4:30 Impact of trans-boundary transport of aerosols on regional air quality (Heejin In, U. Houston)
4:45 Nesting GEOS-CHEM with a regional air pollution model for Greece (Maria Tombrou-Tzella, Athens)
5:00 Origin and distribution of ozone for the Eastern Mediterranean region (Christos Giannakopoulos, Athens)
5:15 Effects of climate change on air quality (Shiliang Wu, Harvard)
5:30 Adjourn

Wednesday April 6

8:30 Continental breakfast
Global chemical budgets (Lyatt Jaeglé, chair)

9:00 Role of ocean emissions in the mercury budget (Sarah Strode, U. Washington)
9:15 Global mercury modeling (Noelle Eckley, Harvard)
9:30 Global simulation of H_2 and HD with GEOS-CHEM (Heather Price, U. Washington)
9:45 Coupled simulations of CO-ethane-HCN-acetylene (Yaping Xiao, Harvard)
10:00 Global sources and distributions of CH_3Cl (Yasuko Yoshida, Georgia Tech)
10:15 Tracer correlation of ethane and propane (Yuhang Wang, Georgia Tech)
10:30 Global 3-D simulation of reactive bromine chemistry (Tim Canty, JPL)
10:45 Modeling persistent organic pollutants (POPs) with GEOS-CHEM (Jordi Dachs, CSIC – Barcelona)
11:00 Break

Model Issues, Model Future (Daniel Jacob, chair)

11:15 Emissions (Jennifer Logan, discussion leader)
11:35 Aerosols (Peter Adams, discussion leader)
11:55 Chemistry (Mat Evans, discussion leader)

12:15 Lunch at Law School cafeteria

1:15 Multimedia modeling (Lyatt Jaeglé, discussion leader)
1:35 Nesting with regional models (Daewon Byun, discussion leader)
1:55 Data assimilation (Dylan Jones, discussion leader)
2:15 Hardware/software issues (Bob Yantosca, discussion leader)

2:45 Action items (Daniel Jacob)
3:00 Adjourn