

## Agenda for GCE1 (First GEOS-Chem Europe User's Meeting) 1-2 September 2020

[http://acmg.seas.harvard.edu/geos/meetings/2020\\_GCE/index.html](http://acmg.seas.harvard.edu/geos/meetings/2020_GCE/index.html)

Keynote and science talks are in the main webinar room.

Networking with speakers and poster sessions are in separate Zoom sessions.

Times are in BST (GMT+1).

### Day 1, Tuesday 1 September

#### Day 1 Morning Session: Air Quality

Session Chair: Mat Evans, U. York

- 09:40-10:00 Technology test for all session speakers
- 10:00-10:10 Meeting Welcome and Overview, Chair
- 10:10-10:40 **KEYNOTE:** Reducing planetary health risks through short-lived climate forcer mitigation, Nadine Unger, U. Exeter
- 10:40-11:40 **Science Talks Session 1** (10 min each)
  - T.1 Online two-way coupling of WRF and GEOS-Chem for regional modelling, Xu Feng, Peking U.
  - T.2 Historical assessment of anthropogenic PM<sub>2.5</sub> health impacts, Lulu Chen, Peking U.
  - T.3 Air quality and climate forcing of the charcoal industry in Africa, Alfred Bockarie, U. Birmingham
  - T.4 Variations in surface PM<sub>2.5</sub> and health risks in China in 2013-2019, Zhongjing Jiang, Peking U.
  - T.5 Sources of air pollution over the East China Sea, Adedayo Adedeji, U. York
  - T.6 Hg from coal combustion in Thailand: emission update and implications to ecosystems, Win Trivitayanurak, Chulalongkorn U.
- 11:40-12:00 **Network with speakers** (parallel session)
- 11:40-12:00 **Poster Session 1** *mediated by Karn Vohra* (parallel session)
  - P.1 Impact of new sources and sinks of atmospheric H<sub>2</sub> using a CTM, Maria Pérez-Peña, U. NSW
  - P.2 Global high-resolution emissions of soil NO<sub>x</sub>, sea salt, and BVOCs, Hongjian Weng, Peking U.
  - P.3 GEOS-Chem vs observed CO<sub>2</sub> in Asia, Yawen Kong, CAS
  - P.4 Assessing strict seasonal emission controls on N. China air quality, Gongda Lu, U. Birmingham

#### Day 1 Afternoon Session: Greenhouse Gases

Session Chair: Paul Palmer, U. Edinburgh

- 13:40-14:00 Technology test for all session speakers
- 14:00-14:02 Webinar Etiquette Reminder, Chair
- 14:02-14:30 **KEYNOTE:** GEOS-Chem model overview, Daniel Jacob, Harvard
- 14:30-15:40 **Science Talks Session 2** (10 min each)
  - T.7 Impacts of model resolution on the remote marine troposphere, Ryan Pound, U. York
  - T.8 CO<sub>2</sub> fluxes in the Southern Ocean from GEOS-Chem-LETKF, Zhaohui Chen, U.E.A.
  - T.9 Estimating CH<sub>4</sub> emissions using nested grid GEOS-Chem simulations, Mark Lunt, U. Edinburgh
  - T.10 Global CH<sub>4</sub> budget and trends in 2010-2017: comparison and inversion of suborbital and satellite observations, Xiao Lu, Harvard
  - T.11 Global CH<sub>4</sub> budget constrained with TROPOMI, Zhen Qu, Harvard

T.12 Multi-Inversion Framework for Upper Midwest CH<sub>4</sub> Sources, Xueying Yu, U. Minnesota

T.13 CH<sub>4</sub> isotope ratios in GEOS-Chem, Alice Drinkwater, U. Edinburgh

15:50-16:10 **Network with speakers**

16:20-16:50 **Poster Session 2** *mediated by Tomas Sherwen*

P.5 Understanding UK air quality with a CTM, Luke Fakes, U. York

P.6 Long-term trends in air quality in tropical megacities using EO, Karn Vohra, U. Birmingham

P.7 Characterising upper troposphere reactive N with aircraft measurements, Nana Wei, U. Leicester

P.8 Air quality and CO<sub>2</sub> emission impacts from large point sources in India, Raj Lal, Georgia Tech/IIT-Bombay

P.9 The 2014-2018 global C cycle as seen from OCO-2 using EnKF, Mehliyar Sadiq, U. Edinburgh

P.10 Impact of DMS oxidation on the marine atmosphere, Linia Tashmim, UC Riverside

## Day 2, Wednesday 2 September

### Day 2 Morning Session: Interface of Models and Satellites

Session Chair: Mat Evans, U. York

- 9:40-10 Technology test for all session speakers
- 10-10:02 Webinar Etiquette Reminder, Chair
- 10:02-10:30 **KEYNOTE:** Changing NO<sub>x</sub> chemistry over The Netherlands due to decreasing NO<sub>x</sub> emissions and increases in ozone between 2005 and 2018 - evidence from OMI, surface measurements, and emission inventories, Folkert Boersma, Wageningen/KNMI
- 10:30-11:30 **Science Talks Session 3** (10 min each)
  - T.14 NO<sub>2</sub> spatiotemporal differences across multiple satellite products, Yuhang Zhang, Peking U.
  - T.15 A new TROPOMI product of tropospheric NO<sub>2</sub> over East Asia with explicit aerosol correction, Jintai Lin, Peking U.
  - T.16 Impacts of biomass burning on air quality in Southeast Asia, Maggie Marvin, U. Edinburgh
  - T.17 Trends and drivers of surface and tropospheric O<sub>3</sub> over Southeast Asia in 2005-2014, Xiaolin Wang, Peking U.
  - T.18 Reformulating a widely used ozone sensitivity indicator, Amir Souri, Harvard-Smithsonian CfA
  - T.19 UK NH<sub>3</sub> emissions derived with IASI and GEOS-Chem, Alok Pandey, U. Leicester
- 11:30-11:50 **Network with speakers**

### Day 2 Afternoon Session: Aerosols

Session Chair: Eloise Marais, UCL

- 13:40-14 Technology test for all session speakers
- 14:00-14:02 Webinar Etiquette Reminder, Chair
- 14:02-14:30 **KEYNOTE:** Past and future radiative forcing from small-magnitude volcanic eruptions, Anja Schmidt, U. Cambridge
- 14:30-15:30 **Science Talks Session 4** (10 min each)
  - T.20 Aerosol growth through ion-mass flux, Irina Thaler, Hebrew U.
  - T.21 Climatic effects of absorbing aerosols in the atmosphere and on snow, Paolo Tuccella, U. L'Aquila
  - T.22 Links between cosmic rays and cloud formation with a new ion-aerosol mechanism, Irma Riádigos, U. Santiago de Compostela
  - T.23 Aerosol-radiation interactions in China in winter using a coupled chemistry-climate model, Jonathan Moch, Harvard
  - T.24 Evaluating quantitative techniques to assess policy impacts on air quality in changing meteorological conditions, Minghao Qiu, MIT
  - T.25 Nuclear power plant shutdowns: Impact on PM and O<sub>3</sub> across the US, Lyssa Freese, MIT
- 15:30-15:50 Network with speakers
- 16:00-16:30 **Poster Session 3** *mediated by Maggie Marvin*
  - P.11 Framework for combining process- and data-driven models to reduce biases in PM<sub>2.5</sub> from satellite AOD, Fei Yao, U. Edinburgh
  - P.12 20 years of spatial and seasonal variability in tropical O<sub>3</sub> and CO, Maria Tsvilidou, CNRS
  - P.13 Letting the BAT fly in GEOS-Chem: RH-dependent OA formation., Camilo S. Damha, McGill U.
  - P.14 Long-term composition trends at Cape Verde, Matthew Rowlinson, U. York
  - P.15 Understanding biomass burning's impact on O<sub>3</sub> in South Africa, Tomas Sherwen, NCAS/U. York
- 16:30-17 **Close-out session**