

# Participant Call October 14, 2021

Participants: Stefano Galmarini, Richard Kranenburg, Aura Lupascu, Saurabh Kumar, Ummugulsum Alyuz Ozdemir, Jesse Bash, Paul Makar, Roberto San Jose

- Technical notes
  - Activity 1 technical note: accepted for publication, received page proofs
  - Point intercomparison / Activity 2 technical note: no updates on potential resubmission of revised technical note.
- Grid intercomparison (Activity 1)
  - Participant updates on postprocessing, data upload, and analysis
    - Summary of current upload status - see table on pages 3-4 of these call minutes
    - Aura: checking some missing variables for 001 and reuploading some missing variables for a few diagnostic cases. Working through remaining issues with wet deposition fields
    - Richard: working through creating the grid-scale diagnostics (012 - 122), expect to upload next week (~October 21)
    - Ummugulsum: Adapting CMAQ post-processing scripts. Will finish all CMAQ runs in 1 month. CMAQ simulations completed so far show NO<sub>2</sub> underestimations in the London area, using TNO emissions. Noticed that TNO NO<sub>x</sub> emissions often are lower than EDGAR. Recommendations from the group: compare to fields already submitted by other groups, don't change emissions.
    - Saurabh: WRF-Chem MOZART+MOSAIC mechanism VOC speciation question. Working through this issue with Roberto.
    - Roberto: uploaded all deposition diagnostics for EU2010 case. Now working on the remaining cases, expect to finish uploads by end of October, early November.
  - Screening plots to check for spatial and seasonal patterns, data ranges
    - Christian continues to download new/updated files as they are uploaded by groups and create screening plots
    - Christian will distribute most recent set of screening plots after the call
  - Receptor processing tool:
    - Code and observational data were initially posted in early June - see email sent by Stefano on June 3 and June, July, and September call minutes for details
    - No groups have started to use the code yet
    - Christian to start processing concentration and met fields for NA domain over the next month

- Manuscripts for special issue:
  - Ioannis will lead overview operational evaluation manuscript
  - Paul: interested in multi-model critical loads exceedance calculations NA - EU
    - Paul reached out to Julian Ahern, Johannes Bieser, Jason Lynch, Chris Clark, Jesse Bash, Robert Sabo, and Donna Schwede and will continue this process
  - Christian: CMAQ-M3DRY and CMAQ-STAGE comparison and analysis
  - Paul: may do GEM-MACH intercomparison
  - Expect several point-model-focused manuscripts (e.g. Olivia, Jesse)
  - Stefano: for groups experiencing issues (especially groups not having completed their simulations yet and/or are post-processing gridded fields), please do not wait for the monthly coordination calls to solve these issues. Instead, please reach out to other participants and/or Christian and Stefano right away. Planning for common analyses cannot start in earnest until all data is available.
- Data download from ENSEMBLE has changed - no longer need user-specific passwords, just use "hidden links" to directly download the data
- Point intercomparison (Activity 2)
  - Last call September 28, [notes are posted on the github site](#)
  - Distributed data to modelers, initial results were presented
  - Group discussed some additional recent updates to datasets
    - Also discussed use of different reference heights in point models - decision: use height of ozone flux measurements
    - Other assumptions also may differ between models and may necessitate iterations after initial data uploads
  - Driving box models with grid model data - no updates since last call
- Next call November 18, 9:00 EST / 15:00 CET

Upload Status October 14, 2021:

	Continent / Year	001 (gases + aerosols)	002 (grid-scale wet and dry dep fluxes)	005 (meteorology)	012 – 122 (grid-scale dry dep diagnostics)	132 -442 (LU-specific dry dep diagnostics)	452 (NH3 bi-directional)	462 (AQMEII4 LU fractions)	462 (native LU fractions)
10700 (EPA CMAQ M3DRY)	NA 2010	x	x	x	x	x	x	x	x
	NA 2016	x	x	x	x	x	x	x	x
10701 (EPA CMAQ STAGE)	NA 2010	x	x	x	x	x	x	x	x
	NA 2016	x	x	x	x	x	x	x	x
10702 (IASS WRF-Chem)	EU 2009	x	x	x	x	x		x	x
	EU 2010	x	x	x	x	x			
	NA 2010	x	x	x	x	x		x	x
	NA 2016	x	x	x	x	x		x	x
10703 (ECCC GEM-MACH BASE)	NA 2010	x	x	x	x	x	x	x	x
	NA 2016	x	x	x	x	x	x	x	x
10704 (ECCC GEM-MACH ZHANG)	NA 2010	x	x	x	x	x	x	x	x
	NA 2016	x	x	x	x	x	x	x	x
10705 (ECCC GEM-MACH OPS)	NA 2010	x	x	x	x	x		x	x
	NA 2016	x	x	x	x	x		x	x
10706 (TROPOS COSMO-MUSCAT)	EU 2009	x	x						
	EU 2010	x	x						
10707 (TNO LOTOS-EUROS) *	EU 2009	x	x	x		x			
	EU 2010	x	x	x		x			
10708 (UPM WRF-Chem)	EU 2009								
	EU 2010	x	x	x	x	x		x	x
	NA 2016								
10709 (UCAR WRF-Chem)	NA 2010	x	x	x				x	x
	NA 2016	x	x	x				x	x
Hertfordshire CMAQ	EU 2009								
	EU2010								
Hertfordshire WRF-Chem	EU2009								
	EU2010								

Browse uploaded files at <https://ensemble.jrc.ec.europa.eu/ensemble/pvt/aqmeii4/> - login required

\* LOTOS-EUROS 10707 0341 files are labeled “2010”, 0351 files are labeled “2011”? For cases 132 – 442 (LU-specific dry deposition diagnostics), 212 – 242 and 392 – 442 are not currently on ENSEMBLE – LU types 5-6 (Deciduous needleleaf forest and Evergreen broadleaf forest) and 14-16 (wetlands, tundra, and snow/ice) not present in LOTOS-EUROS? For uploaded 132 – 442 cases, not all variables are reported

