# Participant Call September 11, 2025

Participants: Paul Makar, Colin Lee, Christian Hogrefe, Kenjiro Toyota

Special issue manuscript status

- **Recently accepted/published articles:**
  - Activity 2: Khan, Clifton, et al. – observational constraints on stomatal conductance and point model sensitivity simulations (https://acp.copernicus.org/articles/25/8613/2025/)
    - This manuscript was published on August 7.
  - Activity 1: Kioutsioukis, Galmarini et al. – multi-model operational, probabilistic, and diagnostic evaluation and analysis of AQMEII4 grid models (https://egusphere.copernicus.org/preprints/2025/egusphere-2025-1091/)
    - This paper was accepted for publication on July 28.
  - Activity 1: Hogrefe, Galmarini, Makar, Kioutsioukis et al. - multi-model analysis of ozone dry deposition diagnostics (grid-aggregated and LU-specific) and LU information (https://egusphere.copernicus.org/preprints/2025/egusphere-2025-225/)
    - This manuscript was accepted for publication on June 16. Page proofs were returned to Copernicus on August 27.
    - During proofreading, discovered one erroneous statement in Section 3.3 regarding the data subset used in the analysis shown in Section 3.2 (all text and figure legends in Section 3.2 correctly describe the data subset used in this analysis). Waiting for editor approval to correct the erroneous statement.

- **Other active work:**
  - Activity 2: Vogel et al. - error estimation analysis
    - Annika shared via email that she plans to resume the AQMEII4-related work that she started at her previous position soon, first working on a methods manuscript and then a second manuscript describing its application to the AQMEII4 data.
    - The manuscript describing the application of the method to the AQMEII4 data is not expected to be completed by December 31, 2025, the closing date of the special issue. Stefano, Christian, and Olivia expressed a general interest in still being involved in this work, with details to be determined at a later date.
    - During the call, Paul also stated that he would be willing to provide feedback on the work
  - Activity 2 + Activity 1: Toyota et al. - How can results from Activity 2 be used to update the representation of dry deposition in the operational version of GEM-MACH.
    - Kenjiro and Paul shared additional results from this work testing GEM-MACH Ops updates. The goal is still to prepare and submit a manuscript by December 31.
  - Manuscript led by Paul and his postdoc Stefan Miller: analysis and sensitivity of SO2 deposition. Not using AQMEII4 datasets, but the topic is relevant to AQMEII4.
    - Received co-author reviews, also finishing up analysis of some reruns, hopefully will start internal review process soon, also will have to go through policy review, still hope to meet the December submission deadline.

- Activity 2: Lee, Makar et al. – physics-informed machine learning for potentially refining point model parameter values
    - Colin resumed work on this project. One key item to resolve is how to handle the fact that the long-term flux measurement sites used in Activity 2 do not cover all of the land use types needed by the grid models. Trying to obtain and use short-term campaign data from additional sites might be an option, but might also make it difficult to finish this work by December 31.
- Activity 1: Lee, Makar, Soares et al. – hierarchical clustering using AQMEII4 data
    - Starting with the AQMEII4 ozone fields, all required gridded netcdf files are ready. The plan is to look at ozone tendencies and ozone deposition.
    - Colin, Paul, and Joana are having meetings on this work.
- Activity 1: Paul is still considering work another potential manuscript dealing with what the effects of particle aerosol being captured by wet dep measurements but accounted for as dry deposition in the model are when comparing modeled wet deposition to observed wet deposition. Using the AQMEII4 dataset to see what the impact of adding dry deposition would be on model evaluation of wet deposition. Will update the group next month whether this is something he plans to pursue further..
- Activity 2: Potential manuscript based on Vladislavs' and Laurens' work with the MLC-Chem model using the Borden Forest data prepared for Olivia's AQMEII4 paper.
    - Laurens shared via email that he will meet with Vladislavs next week to discuss whether and how they can develop a manuscript from Vladislavs' thesis study on the role of soil moisture in the Borden Forest deposition.

- **Previously published articles:**
    - Galmarini et al. (2021) Activity 1 overview technical note (https://acp.copernicus.org/articles/21/15663/2021/)
    - Hogrefe et al. (2023) analysis of EPA CMAQ NA simulations (https://acp.copernicus.org/articles/23/8119/2023/)
    - Clifton et al. (2023) Activity 2 overview manuscript (https://acp.copernicus.org/articles/23/9911/2023/)
    - Makar et al. (2025) Critical loads ensemble manuscript (https://acp.copernicus.org/articles/25/3049/2025/

**Next Call**

The next call is scheduled for Thursday October 9.