

# AQMEII4 Activity 3 Participant Call September 15, 2020

Attendees: Jesse Bash, Christian Hogrefe, Sam Silva, Olivia Clifton, Chris Holmes, Jon Pleim, Johannes Fleming, Paul Makar, Kiran Alapaty

- Data
  - Updates
    - Borden Forest units corrected in metadata
      - Jon - measured deposition velocities have a large peak at 7 or 8 in the morning and seem very high (higher than model can get) - spikes up to over 1.5
        - Olivia - Zhiyong touches on this in his paper; also happening in the SO<sub>2</sub> values as well
        - Paul - could be a chemical effect - NO<sub>x</sub> effect - not if it is happening in SO<sub>2</sub>
        - Jesse - could be an artifact of gradient method
        - Maybe get Ralf, Zhiyong, Leiming to sit in on the next call
  - Issues
    - Auchencorth Moss - soil moisture units?
    - Borden forest - a few hours with some issues
- The AQMEII4 special issue in ACP has now been created and will be open for submissions through August 31, 2022. You can find it listed along with other special issues at the following link: [https://www.atmospheric-chemistry-and-physics.net/special\\_issues/schedule.html](https://www.atmospheric-chemistry-and-physics.net/special_issues/schedule.html)
- Remember to review guidelines for publishing that are associated with each data set

- Modeling Updates

Name	Organization	Model	Status
Jesse Bash	US EPA	CMAQ-STAGE	Results presented
Paul Makar	ECCC	GEM-MACH - Robichaud	N/A
Paul Makar	ECCC	GEM-MACH - Zhang	N/A
Jon Pleim	US EPA	CMAQ-M3DRY	Bugapucsta, Borden - working on these
Jon Pleim	US EPA	Photosynthesis model	No updates
Roberto San Jose	Tech Univ of Madrid	WRF/Chem - Wesely (basically)	Results presented
Johannes Fleming	CAMS/ECMWF		No updates

- CMAQ-STAGE results (Jesse)
  - Auchencorth - Soil moisture issue
    - Olivia Clifton: this is what I have from Mhairi Coyle about the soil moisture at Auchencorth Moss. "Auchencorth - SWC, $\frac{1}{n}$ , Average of TDR measurements from

four probes at 6, 18, 30 and 34 cm. The reference to sonics was a mistake in the Auchencorth metadata, sorry. The units are the fractional volume, so volume water/volume soil, this is what the sensors record as." Later she says values are high but more like 40-50%. If you are seeing completely saturated values then we need to talk to Mhairi

- Bugacpuszta - soil and leaf temperature would be really helpful
- Borden
  - Leaf temperature would be helpful - add other temperature heights that could be used as a surrogate
  - LAI measurements may be available - Paul will check
- WRF-Chem (Roberto)
  - Borden Forest results
    - WRF-Chem/Wesely
    - R-Model - from data site - Donna's code from original m3dry runs for the Borden Forest paper
- Kiran
  - Would appreciate boundary layer heights for any of the sites