

AQMEII4 Activity 2 Call Notes, 10/03/2023

Attendance: Christian Hogrefe, Jesse Bash, Laurens Ganzeveld, Paul Makar, Kenjiro Toyota, Anam Khan, Colin Lee

Anam reported that all groups who had contributed to Olivia's paper have confirmed either verbally during previous calls or via email that they plan to participate in the proposed sensitivity simulations setting different values for certain parameters and stress functions related to water stress. To date, results from STAGE and GEM-MACH and test data from MLC-Chem have been uploaded. Based on feedback from modeling groups, contributions are expected through at least late October.

There was a request to clarify the units for all requested variables, as well as the units of all parameters to be perturbed. While most of the output variables had previously been requested for the base model simulations analyzed in Olivia's paper and no changes to requested units have been made, Anam said that she would prepare and send out an updated version of the spreadsheet listing all requested variables and perturbed parameters settings and include units for all of them. [post-call update: Anam mailed the revised spreadsheet on Thursday, October 5]

Christian will follow-up with Jon, Limei, and Anam to initiate a conversation on prioritizing potential M3Dry (and M3Dry-psn) simulations given a recent offline conversation with Jon in which he expressed some concern about the amount of effort that would be required to perform the full set of simulations.

Anam has begun to read files uploaded so far to set up her analysis workflow. She reported that she may have initial results to show at the next meeting.

Jesse noted that in the STAGE simulations exploring the sensitivity to wilting point, he applied the perturbations only to the calculation of the stomatal resistance but not to calculation of soil uptake which in STAGE (and M3Dry) is also a function of soil moisture, expecting that the focus of the analysis is on stomatal uptake. Anam confirmed that this is consistent with her intentions, though the group then also discussed how the interaction between these two different soil-moisture dependent pathways, and the dependence of that interaction on soil moisture, might be an interesting topic for future analysis.

Kenjiro reported that he is working on testing the implementation of a soil moisture dependency for the stomatal pathway in one of the GEM-MACH schemes and asked how to interpret and use the soil moisture data provided at the ozone flux sites. Christian said he would share the metadata files that had previously been developed for each site and that are stored on the GoAnywhere site. [post-call update: Christian emailed the eight metadata files to Kenjiro and Paul and also pointed them to Table S19 in the supplemental material of Olivia's manuscript that also documents the soil moisture measurements and assumptions at each site]

Colin reported that he is making good progress in his analysis, is seeing interesting initial results, and may have some results to share in future calls.

Next call: Tuesday November 7, 10:00 EST / 15:00 GMT / 16:00 CET.