Joint Winter Meeting of CESM Atmosphere Model, Whole Atmosphere and Chemistry-Climate Working Groups
9 – 11 March 2020
Mesa Lab, Main Seminar Room
National Center for Atmospheric Research – Boulder, Colorado

To access the meeting remotely using Zoom:
https://ncar-cgd.zoom.us/j/589575911
Meeting ID: 589 575 911
Dial by your location
+1 669 900 6833 US (San Jose)
+1 929 205 6099 US (New York)
Find your local number: https://ncar-cgd.zoom.us/u/acYvK5Jf0A

MONDAY, 9 March:

12:00   *Lunch (on your own)*

Overview

1:00   Julio Bacmeister - Status of CAM

1:20   Rolando Garcia/Mike Mills - Status of WACCM

1:40   Louisa Emmons - Status of CAM-Chem & MUSICA

Model Evaluation

2:00   Thomas Toniazzo - Sensitivity of climatology and climate sensitivity of NorESM2 to changes in CAM

2:20   Po-Lun Ma - Better cloud calibration leads to improved realism in global atmospheric simulation (***Remote***)

2:40   Shaocheng Xie - Toward Understanding the Characteristics of Mixed-Phase Clouds Simulated in E3SM ***(Remote)***

3:00   *Break*

3:30

3:50   Brian Medeiros – Clouds in CESM2

4:10   Nick Davis - Whole atmosphere modeling and science in MUSICA

Simpler Models

4:30   Xiaoning Wu - Tropical Cyclones and Ocean Heat Transport on an Aquaplanet with Dynamic Ocean

4:50   Kevin Reed - Reduced Complexity Frameworks for Investigating the Geographic Controls of Severe Local Storm Environments in CAM6

5:10   *Discussion of Evaluation and Simpler Models*

5:30   *Adjourn*

TUESDAY, 10 March:

Chemistry and Aerosols
8:00   *Coffee*
8:30   Rebecca Schwantes - Evaluating the Importance of Increased Chemical Complexity at Varying Horizontal Resolutions on Simulated Ozone and Secondary Organic Aerosol
8:50   Benjamin Gaubert - Importance of boundary conditions for AQ modelling with CAM-Chem
9:10   Duseong Jo - Isoprene-derived secondary organic aerosols under future climatic conditions
9:30   Rebecca Buchholz - How fire emission factor uncertainty relates to inter-inventory differences in modeled atmospheric composition.
9:50   Wenfu Tang - Investigating global fire behavior, variability, trends, and driving factors using an interactive fire module coupled with CESM2
10:10   Doug Kinnison - UTLS Chemical Evolution of the 2019 Asian Summer Monsoon: Model Perspective
10:30   *Break*
11:00   Jessica Neu - Decadal-scale variability in the stratosphere
11:20   *Discussion (Possible topic: Chemistry/aerosol forcing files for CAM)*
12:00   *Lunch (on your own)*

Parameterization Development
1:00   David Mitchell - Constraining WACCM6 Cirrus Cloud Microphysics with CALIPSO (IIR-CALIOP) Effective Diameter Retrievals: A Need for More Wave-Induced Cirrus?
1:20   Xiaohong Liu - Update on aerosol developments for CESM2
1:40   Charles Bardeen - Using TUV for inline photolysis in CESM

Frameworks & Numerics
2:00   Adam Herrington - Climate and Computational Savings of the Lower Resolution Physics Grid in CAM-SE-CSLAM
2:20   Hui Wan - Numerical coupling of atmospheric processes and its impact on subtropical marine clouds in EAMv1 (***Remote***)
2:40   Shixuan Zhang - Implementing and evaluating reduced-precision calculations in EAMv1 (***Remote***)
3:00   *Break*

Priorities & bigger picture
3:30   Monica Morrison - Model Priorities and Model Representational Perspectives: A Framework for Considering Future Development
3:50   *Discussion: 1) Pros and Cons of CMIP; 2) CAM7/WACCM7 Unification; 3) Are we missing the boat on resolution?*
5:30   *Reception in Damon Room*

WEDNESDAY, 11 March:

Parameterization Development
8:00   *Coffee*
8:30   Andrew Gettelman - Parameterization of Unified Microphysics Across Scales (PUMAS):
           Evolution of Cloud Microphysics for CESM (***Remote***)
8:50   Mikael Witte - Results from preliminary implementation of EDMF+CLUBB in CAM6 ***(Remote)***
9:10   Colin Zarzycki - Early insights into momentum flux impacts on tropical cyclones in CAM6
9:30   Mitch Moncrieff - Organized Convection Parameterization for GCMs
10:00 *Break*
10:20 Günther Hübler - Parallelizing SILHS and Microphysics to Run on GPUs

Future Plans/Analysis
10:40 Rich Neale - Ongoing analysis of MJO variability in CESM
11:00 Peter Lauritzen - Coupled simulations with FV, FV3 and SE-CSLAM
11:20 Cecile Hannay – Future of analysis packages for CAM
11:40 *Wrap-up Discussion*
12:15 Lunch on your own (or working lunch in closed off cafeteria section)
1:00   Patrick Callaghan - Regional Refinement tools demonstration
2:00   **End of Meeting**