Users and Projects

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Name /contact	Institute/ Organization	Description of project/s	Date updated
Rebecca Buchholz	NCAR/ACOM	CESM Chemistry Climate Working Group (CCWG) Community Science Liaison. MUSICA Evaluation and Data Assimilation working group co-lead. Research interests include understanding fire pollution impact on local and distant air quality as well as quantifying the two-way feedback between climate and chemistry. Regional refined grid over Australia to study the 2019/2020 extreme wildfire season.	2023-01-25
Louisa Emmons	NCAR/ACOM	Evaluating updated chemistry mechanisms with field campaign observations, such as FIREX-AQ and KORUS-AQ. Designing a multi-region refined grid to study urban air quality in North America, Europe and Asia.	2022-05-31
Sebastian Eastham	MIT	Interfacing CESM and GEOS-Chem	2023-01-25
David Fillmore		Aerosol nudging with MODIS aerosol retrievals to contribute to CERES dataset.	2023-01-25
Benjamin Gaubert	NCAR/ACOM	Chemical data assimilation, ensemble forecasting, model evaluation and intercomparison, MUSICA Evaluation and Data Assimilation working group co-lead.	2023-01-25
Hannah Horowitz	University of Washington	Adding blowing snow sea salt emissions to study its radiative effects and predict changes in future climate.	2019-02-27
Duseong Jo	NCAR/ACOM	Improve alkane chemistry (TS3). Secondary organic aerosol improvements, semi-volatile POA. Adding new fire emissions in IVOC, SVOC categories. Chemistry-cloud interactions.	2023-01-25
Forrest Lacey	NCAR/ACOM	Implementing chemistry into spectral elements grid with regional refinement. Research focus includes modeling anthropogenic influences on ambient air quality and estimating the related health impacts.	2018-06-13
Behrooz Roozitalab	NCAR/ACOM	Adding Very Short Lived (VSL) halogen chemistry in CAM-chem and MUSICA.	2023-01-25
Rebecca Schwantes	NOAA	Improving simulated surface Ozone in CAM-chem by 1) Updating and adding more complexity to the current chemical mechanism for isoprene and terpene oxidation, 2) Testing different NO emission inventories and assumptions, and 3) Testing the impact of model resolution including using the new Spectral Element version of CAM-chem, which has the capability for regional refinement.	2018-04-03
Warren (Ren) Smith	NCAR/ACOM	Convective transport of chemical tracers and model evaluation. ACCLIP 2022 field campaign analysis.	2023-01-25
Wenfu Tang	NCAR/ACOM	(1) Improving simulations of fires and fire impacts in MUSICA and CAM-chem; (2) MUSICA and CAM-chem application in Africa	2023-07-05
Simone Tilmes	NCAR/ACOM	CESM Chemistry Climate Working Group Co-chair. Works on CAM-chem development, evaluation, chemistry-aerosol-climate interactions. CESM/CARMA development.	2023-01-25

Haipeng Lin	Harvard University	Intercomparison of CAM-chem and GEOS-Chem chemistry within CESM; Implementation of the Harmonized Emissions Component (HEMCO) in CAM-chem/MUSICA.	2023-01-25
Maria Val Martin	Leverhulme Centre for Climate Change Mitigation (LC3M), University of Sheffield	Works on atmosphere/biosphere/climate interactions; currently using CESM2 (CAM-chem/CLM5) to quantify unintended feedbacks on the Earth system from land-based CO2 removal strategies.	2019-03-13
Francis Vitt	NCAR/ACOM	Developing CAM-chem on MPAS regional refined.	2023-01-25
Antonio Viudez-Mora	NASA Langley Research Center	Nudging assimilated MODIS/VIIRS AODs with the CAM-Chem aerosol scheme for CERES SARB Edition 5 Aerosol Products.	2023-04-15
Siyuan Wang	NOAA/CIRES	Developing an online air-sea exchange module for trace gases for CESM, in order to better understand the broader impacts of ocean on the atmospheric budgets of an array of compounds of interests, such as oxygenated volatile organic compounds (OVOCs), halogenated VOCs, etc.	2018-04-15
Najib Yusuf	NASRDA Centre for Atmospheric Research, Nigeria	Using CAM-chem with different emissions inventories to compare with ground-based, aircraft and satellite observations in order to study AQ and climate impacts over Nigeria.	2018-09-28
Haipeng Zhang	Nanjing University	Using CAM-chem to investigate what causes the variation in low-cloud cover over China in recent years.	2018-09-29
Jun Zhang	NCAR/ACOM	MUSICA evaluation, NOx tagging. Evaluating L58 model. Using ACCLIP field campaign measurements.	2023-01-25
Yuqiang Zhang	Duke University	Using CAM-Chem to investigate regional emission changes on global tropospheric ozone burden; To study the intercontinental transport of air pollution from China to western US.	2018-10-10