

YI MING

YI MING

Schiller Institute for Integrated Science and Society
Department of Earth and Environmental Sciences
Boston College
Chestnut Hill, MA 02467
E: Yi.Ming@bc.edu P: (617) 552-3763

Education

Ph.D. in Civil and Environmental Engineering, Princeton University	2003
Certificate in Science and Environmental Policy Princeton School of Public and International Affairs, Princeton University	2003
B.E. in Chemical Engineering (with a second B.E. in Environmental Engineering) Tsinghua University , Beijing, China	1998

Employment

Boston College	
Institute Professor of Climate Science and Society , Schiller Institute for Integrated Science and Society	9/22-Present
Professor , Department of Earth and Environmental Sciences	9/22-Present
NOAA/Geophysical Fluid Dynamics Laboratory (GFDL)	
Senior Scientist	7/19-08/22
Leader, Division of Atmospheric Physics	5/20-08/22
Deputy Leader, Division of Atmospheric Physics	4/18-04/20
Leader, Atmospheric Physics and Climate Group	10/12-3/18
Project Scientist II	8/05-10/10
Visiting Scientist	10/03-7/05
Princeton University	
Lecturer , Program in Atmospheric and Oceanic Sciences (AOS), Department of Geosciences	7/13-8/22
University of Delaware	
Postdoctoral Researcher , Department of Chemistry	11/02-9/03

Honors

NOAA/OAR Outstanding Scientific Paper Award	11/18
American Geophysical Union (AGU) Ascent Award	7/18
American Meteorological Society (AMS) Henry G. Houghton Award	9/14
Department of Commerce Group Gold Medal for Scientific Achievement	10/12
World Meteorological Organization (WMO) Norbert Gerbier-MUMM International Award	7/12

YI MING

Presidential Early Career Award for Scientist and Engineers (PECASE) - *“The highest honor bestowed by the U.S. government on outstanding scientists and engineers beginning their independent careers”* 12/08
National Science Foundation (NSF) Science Policy Fellowship 9/00-6/03
First-Grade Prize, National Challenge Cup Science and Technology Competition for College Students 5/97

Professional Experience

Co-chair, Working Group on Theories and Processes, White House Office of Science and Technology Policy (OSTP) Initiative on Earth System Predictability

Editor, Monsoons and Climate, Current Climate Change Reports

Chair, GFDL 5-10 Year Strategic Science Plan Writing Team

Co-lead, GFDL Cloud-Climate Initiative

Co-lead, NOAA Model Diagnostics Task Force

Review Panelist, NOAA/Atmospheric Composition and Climate (ACC), NOAA/Earth’s Radiation Budget (ERB), DOE/Regional and Global Climate Modeling Program, DOE/Atmospheric Science Research (ASR) Program, Lawrence Berkeley National Laboratory (LBNL) Climate Science Focus Area Review, Pacific Northwest National Laboratory (PNNL) Climate Science Focus Area Review, SciDAC, E3SM Phase III, NASA/ Atmospheric Composition Modeling and Analysis Program (ACMAP), Schmidt Futures.

Grant Reviewer, European Research Council, DOE/Atmospheric Science Program (ASP), Atmospheric Radiation Measurement (ARM), Atmospheric System Research (ASR), National Science Foundation (NSF), Canadian Foundation for Climate and Atmospheric Sciences (CFCAS), Israel Science Foundation (ISF), Research Council of Norway, Swiss National Science Foundation.

Tenure/Promotion Reviewer for a number of universities and institutes

Journal Reviewer for Nature, Nature Geoscience, Nature Climate Change, Science, Proceedings of the National Academy of Sciences, Journal of Geophysical Research – Atmosphere, Geophysical Research Letters, Atmospheric Chemistry and Physics, Tellus, Journal of Atmospheric Sciences, Journal of Climate, Climate Dynamics, Atmospheric Research, Atmospheric Environment, Journal of Applied Meteorology and Climatology, International Journal of Climatology, Theoretical and Applied Meteorology, Environmental Research Letters.

Co-convener, 2014 2015 2016 2017 2018 2019 AGU Fall Meeting, 2013 AOGS-AGU (WPGM) Joint Assembly, 2016 AMS Annual Meeting, 2018 AOGS Annual Meeting

Session Chair, 2012 2013 AMS Annual Meeting, 2012 EGU General Assembly

Participant, American Meteorological Society (AMS) Summer Policy Colloquium

Steering Committee, Model Development Team (MDT) of GFDL/CM4, Geophysical Fluid Dynamics Laboratory

Core Member, Global Atmospheric Model Development Team (GAMDT) of GFDL/CM3, Geophysical Fluid Dynamics Laboratory

Member, AeroCom working group of aerosol-climate simulation

Member, AeroCom working group of indirect effects

YI MING

Member, Committee on cloud, chemical and climate interactions, Atmospheric Chemistry and Climate (AC&C) Initiative, WCRP/IGBP

Member, CLIVAR-GEWEX Working Group on Asian-Australian Monsoon (WG-AAM)

Member, NOAA CPO/ESSM Council

Member, GFDL Award Nomination Committee

Member, GFDL Minority Internship Committee

Vice President, GFDL Employee Association (GFDLEA)

University Service

Boston College

Member, Schiller Institute Health Faculty Search Committee

Member, EES Ice Sheet Faculty Search Committee

Member, Scientific Computing Committee

Princeton University

Member, Graduate Work Committee

Teaching Experience

Boston College

EESC1147 Climate Change and Society

Princeton University

AOS 527 Atmospheric Radiative Transfer

GEO 503 Responsible Conduct of Research in Geosciences

AOS 580 Special Topics: Aerosol, Climate and Climate Change

Current Students/Postdocs Supervised

Undergraduate students:

Andrew Vagra (BC)

Ph.D. students:

Cameron MacDonald (Princeton, advisor)

Parker Hunt (BC, advisor)

Ilan Valencius (BC, advisor)

Yuyang Liu (BC, advisor)

Bastian Münch (BC, advisor)

Postdocs:

Chanil Park (BC)

Clare Singer (BC/LDEO, supported by the NOAA Climate and Global Change Postdoctoral Fellowship)

YI MING

Past Students/Postdocs Supervised

Ph.D. students:

Geeta Persad (Princeton, advisor, graduated in 2016 with Ph.D., Assistant Professor at the University of Texas at Austin)
Spencer Hill (Princeton, advisor, graduated in 2016 with Ph.D., Assistant Professor at the City University of New York)
Zhaoyi Shen (Princeton, advisor, graduated in 2018 with Ph.D., Associate Research Scholar at Caltech)
Xin Rong Chua (Princeton, advisor, graduated in 2019 with Ph.D., Research Scientist at Centre for Climate Research Singapore)
Spencer Clark (Princeton, advisor, graduated in 2019 with Ph.D., Data Scientist at Vulcan)
Michelle Frazer (Princeton, advisor, graduated in 2021, Postdoc at Rice University)
Jane Smyth (Princeton, advisor, graduated in 2021, Climate Scientist at Man Group)

Postdocs:

Massimo Bollasina (Senior Lecturer at the University of Edinburgh, the recipient of the 2013 AGU James R. Holton Junior Scientist Award)
Pu Lin (Associate Research Scholar, Princeton)
Angel Adames (Assistant Professor at the University of Wisconsin, the recipient of the 2018 AGU James R. Holton Junior Scientist Award)
Wenhao Dong (Project Scientist, University Corporation for Atmospheric Research)
Naser Mahfouz (Postdoc, Pacific Northwest National Laboratory)
Youtong Zheng (Assistant Professor, University of Houston)
Akshaya Nikumbh (Assistant Professor, Indian Institute of Technology Bombay)
Veeshan Narinesingh (Physical Scientist, NOAA/GFDL)

Summer interns:

Geeta Persad (Stanford, Geophysics, Junior)
Spencer Hill (UCLA, Atmospheric and Oceanic Sciences and Applied Mathematics, Junior)
Pranay Nadella (West Windsor-Plainsboro High School South, Junior)
Colin Raymond (Cornell, Atmospheric Science, Junior)
Michelle Frazer (Cedarville, Physics, Junior)
Lei Yin (UT-Austin, Graduate Student)
Patrick Brown (Duke, Graduate Student)
Jane Smyth (Yale, Geology and Geophysics, Junior)
Bridgette Befort (University of Kansas, Chemical Engineering, Junior)
Eric Roy (University of Massachusetts Lowell, Applied Mathematics, Junior)

Ph.D. Thesis Committee

Ilissa Ocko (Princeton)
Claire Radley (Princeton)
Patrick Brown (Duke)

YI MING

Jiaxi Hu (Texas A&M)
Xiaoyuan Li (Princeton)
Jenny Chang (Princeton)
Shiv Priyam Raghuraman (Princeton)
Cindy Wang (Princeton)
Veeshan Narinesingh (The City University of New York)
Tianshu Kong (BC)

Peer-reviewed Publications

*First-authored by students or postdocs supervised.

1. **Ming, Y.**, and L.M. Russell, 2001: Predicted Hygroscopic Growth of Sea Salt Aerosol. *Journal of Geophysical Research -Atmosphere*, 106, 28259-28274.
2. Prenni, A.J., P.J. DeMott, S.M. Kreidenweis, D.E. Sherman, L.M. Russell and **Y. Ming**, 2001: The Effect of Low Molecular Weight Dicarboxylic Acids on Cloud Formation, *Journal of Physical Chemistry A*, 105, 11240-11248.
3. **Ming, Y.**, and L.M. Russell, 2002: Thermodynamic Equilibrium of Aqueous Solutions of Organic-Electrolyte Mixtures in Aerosol Particles. *AIChE Journal*, 48, 1331.
4. Russell, L.M., and **Y. Ming**, 2002: Deliquescence of Small Particles, *Journal of Chemical Physics*, 116, 311-321.
5. **Ming, Y.**, and L.M. Russell, 2004: Organic Aerosol Effects on Fog Droplet Spectra, *Journal of Geophysical Research –Atmosphere*, 109, 10.1029/2003JD004427.
6. **Ming, Y.**, G. Lai, C. Tong, R.W. Wood, and D.J. Doren, 2004: Free Energy Perturbation Study of Water Dimer Dissociation Kinetics, *Journal of Chemical Physics*, 121, 773-777.
7. **Ming, Y.**, L.M. Russell, and D.F. Bradford, 2005: Health and Climate Policy Impacts on Sulfur Emission Control, *Review of Geophysics*, 43, doi:10.1029/2004RG000167.
8. **Ming, Y.**, V. Ramaswamy, P.A. Ginoux and L.W. Horowitz, 2005: Geophysical Fluid Dynamics Laboratory General Circulation Model Investigation of the Indirect Radiative Effects of Anthropogenic Sulfate Aerosol, *Journal of Geophysical Research - Atmosphere*, 110, doi:10.1029/2005JD006161.
9. **Ming, Y.**, V. Ramaswamy, P.A. Ginoux and L.W. Horowitz, 2005: Direct Radiative Forcing of Anthropogenic Organic Aerosols, *Journal of Geophysical Research - Atmosphere*, 110, doi:10.1029/2004JD005573.
10. **Ming, Y.**, V. Ramasway, L.J. Donner, and V.T.J. Phillips, 2006: A New Parameterization of Cloud Droplet Activation Applicable to General Circulation Models, *Journal of the Atmospheric Sciences*, 63, 1348-1356.
11. **Ming, Y.**, V. Ramaswamy, L.J. Donner, V.T.J. Phillips, S.A. Klein, P.A. Ginoux, and L.W. Horowitz, 2007: Modeling the Interactions between Aerosols and Liquid Water Clouds with a Self-consistent Cloud Scheme in a General Circulation Model, *Journal of the Atmospheric Sciences*, 64, 1189-1209.
12. Lee, S. S., L. J. Donner, V. T. J. Phillips, and **Y. Ming**, 2008: Examination of aerosol effects on precipitation in deep convective clouds during the 1997 ARM summer experiment. *Quarterly Journal of the Royal Meteorological Society*, 134, 1201-1220.

YI MING

13. Lee, S.S., L.J. Donner, V.T.J. Phillips, and **Y. Ming**, 2008: The dependence of aerosol effects on clouds and precipitation on cloud-system organization, shear and stability. *Journal of Geophysical Research*, 113, doi:10.1029/2007JD009224.
14. **Ming, Y.**, and V. Ramaswamy, 2009: Nonlinear Climate and Hydrological Responses to Aerosol Effects. *Journal of Climate*, 22, 1329-1339.
15. Magi, B. I., P. A. Ginoux, V. Ramaswamy, and **Y. Ming**, 2009: Evaluation of Tropical and Extratropical Southern Hemisphere African Aerosol Properties Simulated by a Climate Model. *Journal of Geophysical Research – Atmosphere*, 114, doi:10.1029/2008JD011128.
16. Quaas, J., **Y. Ming**, and coauthors, 2009: Aerosol Indirect Effects – General Circulation Model Intercomparison and Evaluation with Satellite Data. *Atmospheric Chemistry and Physics*, 9, 8697-8717.
17. **Ming, Y.**, V. Ramaswamy, and G. Persad, 2010: Two Opposing Effects of Absorbing Aerosols on Global-mean Precipitation. *Geophysical Research Letters*, 37, doi:10.1029/2010GL042895.
18. Salzmann, M., **Y. Ming**, J.-C. Golaz, P.A. Ginoux, H. Morrison, A. Gettelman, M. Krämer, and L.J. Donner, 2010: Two-moment Bulk Stratiform Cloud Microphysics in the GFDL AM3 GCM: Description, Evaluation, and Sensitivity Tests. *Atmospheric Chemistry and Physics*, 10, 8037-8064.
19. Shindell, D., M. Schulz, **Y. Ming**, T. Takemura, G. Faluvegi, and V. Ramaswamy, 2010: Spatial Scales of Climate Response to Inhomogeneous Radiative Forcing. *Journal of Geophysical Research – Atmosphere*, 115, doi:10.1029/2010JD014108.
20. Chen, G., **Y. Ming**, N. Singer, and J. Lu, 2010: Aerosol-induced Changes in Mean and Extreme Precipitation. *Geophysical Research Letters*, 38, doi:10.1029/2010GL046435.
21. Donner, L.J., B. Wyman, R.S. Hemler, L.W. Horowitz, **Y. Ming**, and coauthors, 2010: The Dynamical Core, Physical Parameterizations, and Basic Simulation Characteristics of the Atmospheric Component of the GFDL Global Coupled Model CM3. *Journal of Climate*, 24, doi:10.1175/2011JCLI3955.1.
22. Golaz, J.-C., M. Salzmann, L.J. Donner, L.W. Horowitz, **Y. Ming**, and M. Zhao, 2010: Sensitivity of the Aerosol Indirect Effect to Subgrid Variability in the Cloud Parameterization of the GFDL Atmosphere General Circulation Model AM3. *Journal of Climate*, 24, doi:10.1175/2010JCLI3945.1.
23. **Ming, Y.**, and V. Ramaswamy, 2011: A Model Investigation of Aerosol-induced Changes in Tropical Circulation. *Journal of Climate*, doi:10.1175/2011JCLI4108.1.
24. **Ming, Y.**, V. Ramaswamy, and G. Chen, 2011: A Model Investigation of Aerosol-induced Changes in Boreal Winter Extratropical Circulation. *Journal of Climate*, doi:10.1175/2011JCLI4111.1.
25. Ghan, S.J., H. Abdul-Razzak, **Y. Ming**, X. Liu, M. Ovchinnikov, A. Nenes, N. Meskhidze, J. Xu, and X. Shi, 2011: Droplet Nucleation: Physically-Based Parameterization and Validation. *Journal of Advances in Modeling Earth Systems*, doi:10.1029/2011MS000074.
26. Bollasina*, M.A., **Y. Ming**, and V. Ramaswamy, 2011: Anthropogenic Aerosols and the Weakening of the South Asian Monsoon. *Science*, doi:10.1126/science.1204994.
27. Persad*, G., **Y. Ming**, and V. Ramaswamy, 2012: Tropical Tropospheric-only Responses to Absorbing Aerosols. *Journal of Climate*, 25(7), doi:10.1175/JCLI-D-

- 11-00122.1.
28. Bollasina*, M.A., and **Y. Ming**, 2012: Precipitation Bias over the Western Indian Ocean in an Atmospheric GCM: Role of the Meridional SST Gradient. *Climate Dynamics*, doi:10.1007/s00382-012-1347-7.
 29. Hill*, S., and **Y. Ming**, 2012: Nonlinear climate response to regional brightening of tropical marine stratocumulus. *Geophysical Research Letters*, doi:10.1029/2012GL052064.
 30. Zhou, C., J. E. Penner, **Y. Ming**, and X. Huang, 2012: Aerosol Forcing Based on CAM5 and AM3 Meteorological Fields. *Atmospheric Chemistry and Physics Discussion*, 12, 10679-10727, doi:10.5194/acpd-12-10679-2012.
 31. Huang, X., H. Chuang, A. Dessler, X. Chen, K. Minschwaner, V. Ramaswamy, and **Y. Ming**, 2012: A radiative-convective equilibrium perspective of the weakening of tropical Walker circulation in response to global warming. *Journal of Climate*, doi:10.1175/JCLI-D-12-00288.1.
 32. Ocko, I., V. Ramaswamy, P. Ginoux, **Y. Ming**, and L. Horowitz, 2012: Sensitivity of the aerosol direct radiative forcing balance to physical climate factors. *Journal of Geophysical Research*, 117, doi:10.1029/2012JD018019.
 33. **Ming, Y.**, and V. Ramaswamy, 2012: Nonlocal component of radiative flux perturbation. *Geophysical Research Letters*, 39, doi:1029/2012GL054050.
 34. S. Fan, J. P. Schwarz, J. Liu, D.W. Fahey, P. Ginoux, L. W. Horowitz, H. Levy II, **Y. Ming**, J. R. Spackman, 2012: Inferring ice formation processes from global-scale black carbon profiles observed in the remote atmosphere and model simulations. *Journal of Geophysical Research*, 117, doi:10.1029/2012JD018126.
 35. Bollasina*, M.A., and **Y. Ming**, 2012: The role of land-surface processes in modulating the Indian monsoon annual cycle. *Climate Dynamics*, doi:10.1007/s00382-012-1634-3.
 36. Lin, Y., M. Zhao, V. Ramaswamy, **Y. Ming**, J.-C. Golaz, L.J. Donner, S.A. Klein, S. Xie, and M. Deng, 2013: Impact of cumulus and cloudiness parameterization on Tropical cloud, radiation and precipitation in GFDL AM2. *Journal of Climate*, doi:10.1175/JCLI-D-12-00442.1.
 37. Levy II, H., L.W. Horowitz, M.D. Schwarzkopf, **Y. Ming**, J.-C Golaz, V. Naik, and V. Ramaswamy, 2013: The Roles of Aerosol Effects, both Direct and Indirect, in Past and Future Climate Change. *Journal of Geophysical Research*, doi:10.1002/jgrd.50192.
 38. Zhang, R., T.L. Delworth, R. Sutton, D.L.R. Hodson, K.W. Dixon, I.M. Held, Y. Kushnir, J. Marshall, Y. Ming, and coauthors, 2013: Have Aerosols Caused the Observed Atlantic Multidecadal Variability? *Journal of Atmospheric Sciences*, doi:10.1175/JAS-D-12-0331.1.
 39. Lin, Y., M. Zhao, **Y. Ming**, J.-C. Golaz, L.J. Donner, S.A. Klein, V. Ramaswamy, and S. Xie, 2013: Precipitation Partitioning, Tropical Clouds and Intraseasonal Variability in GFDL AM2. *Journal of Climate*, 26(15), doi:10.1175/JCLI-D-12-00442.1.
 40. Huang, X., H. Chuang, **Y. Ming**, and G.L. Potter, 2013: A Constraint for Ice Cloud Feedback over the Tropical Pacific in Future Climate Change. Submitted to *Nature Climate Change*.
 41. Bollasina*, M.A., **Y. Ming**, and V. Ramaswamy, 2013: Earlier onset of the Indian

YI MING

- Monsoon in the late 20th century: The role of anthropogenic aerosols. *Geophysical Research Letter*, doi: 10.1002/grl.50719.
42. Bollasina*, M.A., **Y. Ming**, V. Ramaswamy, D. Schwarzkopf, and V. Naik, 2013: Contribution of Local and Remote Anthropogenic Aerosols to the 20th Century Weakening of the South Asian Monsoon. *Geophysical Research Letters*, 41, 680–687, doi:10.1002/2013GL058183.
 43. Hill*, S., **Y. Ming**, and I.M. Held, 2014: Mechanisms of forced tropical meridional energy flux change. *Journal of Climate*, doi:10.1175/JCLI-D-14-00165.1.
 44. Persad*, G., **Y. Ming**, and V. Ramaswamy, 2014: The Role of Aerosol Absorption in Driving Solar Dimming. *Journal of Geophysical Research*, 27(14), doi:10.1175/JCLI-D-13-00401.1.
 45. Brown, P.T., L. Li, W. Li and **Y. Ming**, 2014: Unforced Top-of-Atmosphere Net Radiation Variability and its Relationship with Global Mean Surface Temperature, *Geophysical Research Letter*, 41(14), doi:10.1002/2014GL060625.
 46. Ocko, I., V. Ramaswamy, **Y. Ming**, 2013: Contrasting climate responses to the scattering and absorbing features of anthropogenic aerosol forcings. *Journal of Climate*, 27(14), doi:10.1175/JCLI-D-13-00401.1.
 47. Ban-Weiss, G.A., L. Jin, S. Bauer, R. Bennartz, X. Liu, K. Zhang, **Y. Ming** and J. Jiang, 2014: Evaluating clouds, aerosols, and their interactions in three global climate models using COSP and satellite observations, *Journal of Geophysical Research*, 119(18), doi:10.1002/2014JD021722.
 48. Rotstayn, L.D., E.L. Plymin, M.A. Collier, J.-J. Luo, O. Boucher, J.-L. Dufresne, M.-A. Foujols, L.W. Horowitz, S.J. Jeffrey, **Y. Ming** and K. von Salzen, 2014, Declining aerosols in CMIP5 projections: effects on atmospheric temperature structure and midlatitude jets, *Journal of Climate*, 27(18), doi:10.1175/JCLI-D-14-00258.1.
 49. Lin*, P., **Y. Ming** and V. Ramaswamy, 2015: Tropical climate change control of the lower stratospheric circulation, *Geophysical Research Letter*, 42(3), doi:10.1002/2014GL062823.
 50. Li, Z., and co-authors, 2016: Aerosol and Monsoon Climate Interactions over Asia. *Reviews of Geophysics*, 54(4), doi:10.1002/2015RG000500 .
 51. Zhao, M., J.-C. Golaz, I.M. Held, V. Ramaswamy, S.-J. Lin, **Y. Ming**, P.A. Ginoux, B. Wyman, L.J. Donner, D.J. Paynter, and H. Guo, 2015: Uncertainty in model climate sensitivity traced to representations of cumulus precipitation microphysics, *Journal of Climate*, doi:10.1175/JCLI-D-15-0191.1.
 52. Dong, W., Y. Lin, J.S. Wright, **Y. Ming**, and coauthors, 2016: Summer rainfall over the southwestern Tibetan Plateau controlled by deep convection over the Indian subcontinent. *Nature Communications*, 7, doi:10.1038/ncomms10925.
 53. Lin*, P., D.J. Paynter, **Y. Ming** and V. Ramaswamy, 2017: Changes of the tropical tropopause layer under global warming. 30(4), *Journal of Climate*, doi:10.1175/JCLI-D-16-0457.1.
 54. Lin*, P., D.J. Paynter, L.M. Polvani, G. Correa, **Y. Ming**, and V. Ramaswamy, 2017: Dependence of model-simulated response to ozone depletion on stratospheric polar vortex climatology. *Geophysical Research Letters*, 44(12), doi:10.1002/2017GL073862 .
 55. Shen*, Z., **Y. Ming**, L.W. Horowitz, V. Ramaswamy, and M. Lin, 2017: On the Seasonality of Arctic Black Carbon. *Journal of Climate*, 30(12), doi:10.1175/JCLI-D-

YI MING

- 16-0580.1.
56. Pan, F., X. Huang, S.S. Leroy, P. Lin, L.L. Strow, **Y. Ming** and V. Ramaswamy, 2017: The stratospheric changes inferred from 10 years of AIRS and AMSU-A radiances. *Journal of Climate*, 30(15), doi:10.1175/JCLI-D-17-0037.1.
 57. Lee, J.E., A. Shen, B. Fox-Kemper, and **Y. Ming**: Hemispheric sea ice distribution sets the glacial tempo. *Geophysical Research Letters*, 44(2), doi:10.1002/2016GL071307.
 58. Hill*, S., **Y. Ming**, I.M. Held and M. Zhao, 2017: A moist static energy budget-based analysis of the Sahel rainfall response to uniform oceanic warming. *Journal of Climate*, 30(15), doi:10.1175/JCLI-D-16-0785.1.
 59. Persad*, G., D.J. Paynter, **Y. Ming**, and V. Ramaswamy, 2017: Competing Atmospheric and Surface-Driven Impacts of Absorbing Aerosols on the East Asian Summertime Climate. *Journal of Climate*, 30(22), doi:10.1175/JCLI-D-16-0860.1.
 60. Brown*, P.T., **Y. Ming**, W. Li and S.A. Hill, 2017: Change in the magnitude and mechanisms of unforced low-frequency surface temperature variability in a warmer climate. *Nature Climate Change*, 7, doi:10.1038/nclimate3381.
 61. Wang, Y., Y. Xie, W. Dong, and **Y. Ming**, J. Wang and L. Shen, 2017: Adverse Effects of Increasing Drought on Air Quality via Natural Processes. *Atmospheric Chemistry and Physics Discussions*, doi:10.5194/acp-2017-234.
 62. Shin*, H., **Y. Ming**, M. Zhao, J.-C. Golaz, B. Xiang and H. Guo, 2018: Evaluation of Planetary Boundary Layer Simulation in GFDL Atmospheric General Circulation Models, *Journal of Climate*. 31(13), DOI:10.1175/JCLI-D-17-0543.1.
 63. Xiang, B., M. Zhao, **Y. Ming**, W. Yu and S. Kang, 2018: Contrasting Impacts of radiative forcing in the Southern Ocean versus Southern Tropics on ITCZ position and energy transport in one GFDL climate model. *Journal of Climate*. 31(14), DOI:10.1175/JCLI-D-17-0566.1.
 64. Adames*, A., and **Y. Ming**, 2018: Moisture and moist static energy budgets of South Asian monsoon low pressure systems in GFDL AM4.0. *Journal of Atmospheric Sciences*. 75(6), DOI:10.1175/JAS-D-17-0309.1.
 65. Adames*, A., and **Y. Ming**, 2018: Interactions between water vapor and potential vorticity in synoptic-scale monsoonal disturbances: Moisture vortex instability. *Journal of Atmospheric Sciences*. 75(6), DOI:10.1175/JAS-D-17-0310.1.
 66. Zhao, M., and coauthors, 2018: The GFDL Global Atmosphere and Land Model AM4.0/LM4.0 - Part I: Simulation Characteristics with Prescribed SSTs. *Journal of Advances in Modeling Earth Systems*. 10(3), DOI:10.1002/2017MS001208.
 67. Zhao, M., and coauthors, 2018: The GFDL Global Atmosphere and Land Model AM4.0/LM4.0 - Part II: Model Description, Sensitivity Studies, and Tuning Strategies. *Journal of Advances in Modeling Earth Systems*. 10(3), DOI:10.1002/2017MS001209.
 68. Clark*, S.K., **Y. Ming** and I.M. Held, 2018: The role of the water vapor feedback in the ITCZ response to hemispherically asymmetric forcings. *Journal of Climate*, 31(9), DOI:10.1175/JCLI-D-17-0723.1.
 69. Shen*, Z., and **Y. Ming**, 2018: The Influence of Aerosol Absorption on the Extratropical Circulation. *Journal of Climate*. 31(15), DOI:10.1175/JCLI-D-17-0839.1.
 70. Undorf, S., D. Polson, M.A. Bollasina, **Y. Ming**, A. Schurer and G.C. Hegerl, 2018:

YI MING

- Detectable impact of local and remote anthropogenic aerosols on the 20th century changes of West African and South Asian monsoon precipitation. *Journal of Geophysical Research –Atmosphere*. 123, 4871-4889.
71. Persad*, G., **Y. Ming**, and V. Ramaswamy, 2018: Spatially similar surface energy flux perturbations by greenhouse gases and aerosols, *Nature Communications*, 9, 3247, DOI:10.1038/s41467-018-05735-y.
 72. Dong, W., and coauthors, 2018: Regional disparities in warm season rainfall changes over arid eastern–central Asia. *Scientific Reports*, 8, 13051, DOI:10.1038/s41598-018-31246-3.
 73. Smyth*, J., S.A. Hill and **Y. Ming**, 2018: Simulated response of the African monsoon and zonal-mean tropical precipitation to Holocene orbital forcing. *Geophysical Research Letters*, 45(21), DOI:10.1029/2018GL080494.
 74. Shin*, H., **Y. Ming**, M. Zhao, X. Chen and S.-J. Lin, 2018: Improved surface layer simulation using refined vertical resolution in the GFDL atmospheric generalcirculation model. *Journal of Advances in Modeling Earth Systems*, 11(4), DOI:10.1029/2018MS001437.
 75. Hill*, S., **Y. Ming** and M. Zhao, 2018: Robust responses of the Sahelian hydrological cycle to global warming. *Journal of Climate*, 31(24), DOI:10.1175/JCLI-D-18-0238.1.
 76. **Ming, Y.**, and I.M Held, 2018: Modeling Water Vapor and Clouds as Passive Tracers in an Idealized GCM. *Journal of Climate*, 31(2), DOI:10.1175/JCLI-D-16-0812.1.
 77. Naud, C.M., J.F. Booth, J. Jeyaratnam, L.J. Donner, C.J. Seman, M. Zhao, H. Guo, and **Y. Ming**, 2019: Extratropical Cyclone Clouds in the GFDL climate model: diagnosing biases and the associated causes. *Journal of Climate*, 32(20), DOI:10.1175/JCLI-D-19-0421.1.
 78. Lin, P., I.M. Held and **Y. Ming**, 2018: The early development of the 2015/2016 Quasi-Biennial Oscillation disruption. *Journal of the Atmospheric Sciences*, 76(3), DOI:10.1175/JAS-D-18-0292.1.
 79. Chua*, X.R., **Y. Ming** and N. Jeevanjee, 2018: Investigating the Fast Response of Precipitation Intensity and Boundary Layer Temperature to Atmospheric Heating Using a Cloud-Resolving Model. *Geophysical Research Letters*, 46(15), DOI:10.1029/2019GL082408.
 80. Maloney, E.D. and coauthors, 2018: Process-Oriented Evaluation of Climate and Weather Forecasting Models. *Bulletin of the American Meteorological Society*, 100(9), DOI:10.1175/BAMS-D-18-0042.1.
 81. Xie, Y., J. Huang, and **Y. Ming**, 2019: Robust Regional Warming Amplifications Directly Following the Anthropogenic Emission. *Earth's Future*, 7(4), DOI:10.1029/2018EF001068.
 82. Adames, A.F., D. Kim, S.K. Clark, **Y. Ming**, and K. Inoue, 2019: Scale analysis of moist thermodynamics in a simple model and the relationship between moisture modes and gravity waves. *Journal of the Atmospheric Sciences*. DOI:10.1175/JAS-D-19-0121.1.
 83. Lee, J.E., B. Fox-Kemper, C. Horvat, and **Y. Ming**, 2019: The response of East Asian monsoon to the precessional cycle: A new study using the Geophysical Fluid Dynamics Laboratory model. *Geophysical Research Letters*. DOI:10.1029/2019GL082661.

YI MING

84. Li, Y., Y. Deng, S. Yang, H. Zhang, **Y. Ming**, and Z. Shen, 2019: Multi-scale temporal-spatial variability of the East Asian summer monsoon frontal system: observation versus its representation in the GFDL HiRAM. *Climate Dynamics*, 52(11), DOI:10.1007/s00382-018-4546-z.
85. Kuo, Y.-H., and co-authors, 2019: Convective transition statistics over tropical oceans for climate model diagnostics: GCM evaluation. *Journal of the Atmospheric Sciences*, 77(1), DOI:10.1175/JAS-D-19-0132.1.
86. *Clark, S, **Y. Ming**, and A.F. Adames, 2019: Monsoon low pressure system like variability in an idealized Clark. *Journal of Climate*, 33(6), DOI:10.1175/JCLI-D-19-0289.1.
87. Li, X., M. Ting, Y. You, D.-E. Lee, D.M. Westervelt, and **Y. Ming**, 2019: South Asian summer monsoon response to aerosol-forced sea surface temperatures. *Geophysical Research Letters*, 47(1), DOI:10.1029/2019GL085329.
88. Loeb, N.G., and co-authors, 2019: New Generation of Climate Models Track Recent Unprecedented Changes in Earth's Radiation Budget Observed by CERES, *Journal of Climate*, 47(5), DOI:10.1029/2019GL086705.
89. Held, I.M., and co-authors, 2019: Structure and Performance of GFDL's CM4.0 Climate Model. *Journal of Advances in Modeling Earth Systems*, 11(11), DOI:10.1029/2019MS001829.
90. Liu, Z., and co-authors, 2020: Contribution of local and remote anthropogenic aerosols to a record-breaking torrential rainfall event in Guangdong Province, China. *Atmospheric Chemistry and Physics*, 20(1), DOI:10.5194/acp-20-223-2020.
91. Narinesingh, V., J.F. Booth, S. Clark, and **Y. Ming**, 2020: Atmospheric Blocking: The Impact of Topography in an Idealized General Circulation Model. *Weather and Climate Dynamics*, 1(2), DOI:10.5194/wcd-1-293-2020.
92. Westervelt, D.M., Y. You, X. Li, M. Ting, D. Lee, and **Y. Ming**, 2020: Relative importance of greenhouse gases, sulfate, organic carbon, and black carbon aerosol for South Asian monsoon rainfall changes. *Geophysical Research Letters*, 47(13), DOI:10.1029/2020GL088363.
93. *Smyth, J.E., and **Y. Ming**, 2020: Characterizing drying in the South American monsoon onset season with the moist static energy budget. *Journal of Climate*, 33(22), 9735-9748.
94. *Dong, W., **Y. Ming**, and V. Ramaswamy, 2020: Future changes in Indian monsoon low pressure systems, *Journal of Climate*, 33(17), DOI:10.1175/JCLI-D-20-0168.17275-7287.
95. *Shen, Z., **Y. Ming**, and I.M. Held, 2020: Detecting the disparate impacts of anthropogenic aerosols on regional land temperature, *Science Advances*, 6(32), DOI:10.1126/sciadv.abb5297.
96. *Chua, X.-R., and **Y. Ming**, 2020: Convective invigoration traced to warm-rain microphysics. *Geophysical Research Letters*, 47(23), DOI:10.1029/2020GL089134.
97. **Ming, Y.**, and co-authors, 2021: Assessing the influence of COVID-19 on the shortwave radiative fluxes over the East Asian Marginal Seas. *Geophysical Research Letters*, 48(3), DOI:10.1029/2020GL091699.
98. Chemke, R., and **Y. Ming**, 2020: Large atmospheric waves will get stronger while small waves will get weaker by the end of the 21st century, *Geophysical Research Letters*, 47(22), e2020GL090441.

99. Atlas, R.L., C.S. Bretherton, P.N. Blossey, A. Gettelman, C. Bardeen, P. Lin, **Y. Ming**, 2020: How well do large-eddy simulations and global climate models represent observed boundary layer structures and low clouds over the summertime Southern Ocean? *Journal of Advances in Modeling Earth Systems*, 12(11), DOI:10.1029/2020MS002205.
100. Zhou, X., R.L. Atlas, I.L. McCoy, C.S. Bretherton, C. Bardeen, A. Gettelman, P. Lin, **Y. Ming**, 2021: Evaluation of cloud and precipitation simulations in CAM6 and AM4 using observations over the Southern Ocean. *Earth and Space Science*, 8(2), DOI:10.1029/2020EA001241.
101. Lin, P., and **Y. Ming**, 2021: Enhanced climate response to ozone depletion from ozone-circulation coupling. *Journal of Geophysical Research -Atmosphere*, 126(7), DOI:10.1029/2020JD034286.
102. Loeb, N.G., W. Su, N. Bellouin, and Y. Ming, 2021: Changes in clear-sky shortwave aerosol direct radiative effects since 2002. *Journal of Geophysical Research -Atmosphere*, 126(5), DOI:10.1029/2020JD034090.
103. *Dong, W., Z. Ming, **Y. Ming**, and V. Ramaswamy, 2021: Representation of tropical mesoscale convective systems in a general circulation model: Climatology and response to global warming, *Journal of Climate*, 34(14), DOI:10.1175/JCLI-D-20-0535.1.
104. *Smyth, J.E., and **Y. Ming**, 2021: Investigating the impact of land surface characteristics on monsoon dynamics with idealized model simulations and theories. *Journal of Climate*, 34(19), DOI:10.1175/JCLI-D-20-0954.1.
105. Zhang, P., G. Chen, and **Y. Ming**, 2021: Quantifying the mechanisms of atmospheric circulation response to greenhouse gas increases in a forcing-feedback framework. *Journal of Climate*, 34(17), DOI:10.1175/JCLI-D-20-0778.17005-7022.
106. Zhang, P., G. Chen, W. Ma, **Y. Ming**, and Z. Wu, 2021: Robust atmospheric river response to global warming in idealized and comprehensive climate models. *Journal of Climate*, 34(18), DOI:10.1175/JCLI-D-20-1005.17717-7734.
107. Guo, H., **Y. Ming**, S. Fan, L. Zhou, L. Harris, and M. Zhao, 2021: Two-moment bulk cloud microphysics with prognostic precipitation in GFDL's Atmosphere Model AM4.0: configuration and performance. *Journal of Advances in Modeling Earth Systems*, 13(6), DOI:10.1029/2020MS002453.
108. *Frazer, M.E., and **Y. Ming**, 2022: Understanding the extratropical liquid water path feedback in mixed-phase clouds with an idealized global climate model. *Journal of Climate*, 35(8), 2391-2406.
109. *Frazer, M.E., and **Y. Ming**, 2022: Understanding Controlling Factors of Extratropical Humidity and Clouds with an Idealized General Circulation Model. *Journal of Climate*, 35(16), 5321-5337.
110. Chemke, R., **Y. Ming** and J. Yuval, 2022, The intensification of winter mid-latitude storm tracks in the Southern Hemisphere, *Nature Climate Change*, 12, 553-557, DOI:10.1038/s41558-022-01368-8.
111. *Zheng, Y., and **Y. Ming**, 2022: Low-Level Cloud Budgets Across Sea Ice Edges, *Journal of Climate*, DOI:10.1175/JCLI-D-22-0301.1.
112. *MacDonald, C.G., and **Y. Ming**, 2022: Tropical Intraseasonal Variability Response to Zonally Asymmetric Forcing in an Idealized Moist GCM, *Journal of Climate*, 35(24), 4479-4501.

YI MING

113. Narinesingh, V., J.F. Booth, and **Y. Ming**, 2022: Blocking and general circulation in GFDL comprehensive climate models. *Journal of Climate*, 35(12), DOI:10.1175/JCLI-D-21-0486.13687-3703.
114. *Mahfouz, N.G.A., S.A. Hill, H. Guo, and **Y. Ming**, 2022: The Radiative and Cloud Responses to Sea Salt Aerosol Engineering in GFDL Models, *Geophysical Research Letters*, 50(2), DOI:10.1029/2022GL102340.
115. Dong, W., and **Y. Ming**, 2022: Seasonality and variability of snowfall to total precipitation ratio over high mountain Asia simulated by the GFDL high-resolution AM4. *Journal of Climate*, 35(17), DOI:10.1175/JCLI-D-22-0026.15573-5589.
116. Dong, W., M. Zhao, **Y. Ming**, and V. Ramaswamy, 2022: Significant increase in sea surface temperature at the genesis of tropical mesoscale convective systems. *Geophysical Research Letters*, 49(24), DOI:10.1029/2022GL101950.
117. Narinesingh, V., J.F. Booth, and **Y. Ming**, 2023: Northern hemisphere heat extremes in a warmer climate: More probable but less colocated with blocking. *Geophysical Research Letters*, 50(2), DOI:10.1029/2022GL101211.
118. Dong, W., M. Zhao, **Y. Ming**, J.P. Krasting, and V. Ramaswamy, 2023: Simulation of United States mesoscale convective systems using GFDL's new high-resolution general circulation model. *Journal of Climate*, DOI:10.1175/JCLI-D-22-0529.1.
119. Neelin, J D., and co-authors: Process-oriented diagnostics: principles, practice, community development and common standards. *Bulletin of the American Meteorological Society*, DOI:10.1175/BAMS-D-21-0268.1.

Assessment Report

Contributing author, *Climate Projections Based on Emissions Scenarios for Long-Lived and Short-Lived Radiatively Active Gases and Aerosols*. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. H. Levy II, D.T. Shindell, A. Gilliland, M.D. Schwarzkopf, L.W. Horowitz, (eds.). Department of Commerce, NOAA's National Climatic Data Center, Washington, D.C., USA.

Book Chapter

Aerosols. The Encyclopedia of Climate and Weather 2nd Edition. S.H. Schneider, (eds.). University of Oxford Press, New York, N.Y., USA.

Lectures, Seminars and Conference Presentations

*Invited

CFMIP Meeting, Paris, France (7/23)

*University of Puerto Rico/Department of Physics (3/23)

*University of Trento/Department of Civil, Environmental and Mechanical Engineering (12/22)

*MIT/PAOC/Sack lunchtime seminar series (SLS) (10/22)

*MIT/Program in Atmospheres, Oceans, & Climate (PAOC) Colloquium (10/22)

*Simons Foundation Solar Geoengineering Workshop (9/22)

YI MING

- *NOAA/Chemical Sciences Laboratory (8/21)
- *U.S. Climate Modeling Summit (4/20)
- *Atmospheric Science Seminar, UC Berkeley (4/20)
- *Mechanical Engineering and Applied Mechanics Colloquium, University of Pennsylvania (2/20)
- AGU Fall Meeting, Washington D.C. (12/19)
- CFMIP Meeting, Mykonos, Greece (9/19)
- *Gordon Research Conference on Atmospheric Chemistry, Newry, Maine (7/19)
- *Imperial College, London, UK (4/19)
- AGU Fall Meeting, Washington D.C. (12/18)
- *Understanding and modeling the Earth's climate, A symposium in honor of Isaac Held (10/18)
- *Noble Seminar, University of Toronto (10/18)
- *Division of Ocean and Climate Physics, Lamont-Doherty Earth Observatory, Columbia University (11/17)
- *International Coupled Data Assimilation Symposium, Qingdao, China (11/17)
- CFMIP Workshop, University of Tokyo (9/17)
- *School of Earth and Atmospheric Sciences, Georgia Institute of Technology (9/17)
- *Imperial College, London, UK (6/17)
- *GEWEX Aerosol Precipitation (GAP) Workshop, Oxford University (6/17)
- *CERES Science Meeting, NASA Langley (5/17)
- *National Center for Scientific Research "Demokritos", Athens, Greece (4/17)
- *AMS Annual Meeting, Seattle (1/17)
- *CCliCS Workshop on Earth System Modeling, Academia Sinica, Taipei (10/16)
- *Workshop on "Grand Challenges in monsoon modeling: representation of processes in climate models", Trieste, Italy (6/16)
- *Earth and Ocean Science Division, Nicholas School of Environment, Duke University (4/16)
- *Department of Meteorology, University of Hawaii (4/16)
- *Department of Applied Physics and Applied Mathematics, Columbia University (3/16)
- *Department of Chemistry, University of Crete (9/15)
- *School of Atmospheric Science, Nanjing University (9/15)
- *Workshop on "Annual cycle of monsoons and ICTZs in the Holocene and the future", Columbia University (9/15)
- *Workshop on "Monsoon: past, present and future", California Institute of Technology (5/15)
- *Department of Applied Physics and Applied Mathematics, Columbia University (3/15)
- AMS Annual Meeting, Phoenix (1/15)
- AGU Fall Meeting, San Francisco (12/14)
- *Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology (10/14)
- *Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Science (8/14)
- *Department of Hydraulic Engineering, Tsinghua University (8/14)
- *College of Atmospheric Sciences, Lanzhou University (8/14)
- *College of Global Change and Earth System Science, Beijing Normal University (8/14)

YI MING

*First Institute of Oceanography, State Oceanic Administration, Qingdao (8/14)
*National Climate Center, China Meteorological Administration, Beijing (7/14)
*Institute of Atmospheric Physics, Chinese Academy of Science (7/14)
*Department of Atmospheric and Oceanic Science, Peking University (7/14)
*Center for Earth System Science, Tsinghua University (7/14)
*Institute for Atmospheric and Climate Science, ETH Zurich (5/14)
*EGU General Assembly, Vienna, Austria (4/14)
*Department of Atmospheric Sciences, The Hebrew University of Jerusalem (3/14)
*Department of Atmospheric Sciences, Texas A&M University (2/14)
*Department of Geological Sciences, University of Texas at Austin (2/14)
AMS Annual Meeting, Atlanta (2/14)
AGU Fall Meeting, San Francisco (12/13)
*Institute of Meteorology, University of Leipzig (10/13)
*Center of Excellence for Climate System Science, Australian National University and University of New South Wales (8/13)
Gordon Research Conference on Radiation and Climate (7/13)
*AGU Meeting of the Americans, Cancun, Mexico (5/13)
*Department of Global Ecology, Carnegie Institute, Stanford University (4/13)
AMS Annual Meeting, New Orleans (1/13)
AGU Fall Meeting, San Francisco (12/12)
*Climate Modeling Workshop, Hong Kong University of Science and Technology and Xi'an Jiaotong University (11/12)
*Department of Atmospheric and Oceanic Science, University of Maryland (8/12)
*AOGS-AGU (WPGM) Joint Assembly, Singapore (8/12)
*Division of Environment, Hong Kong University of Science and Technology (8/12)
*Department of Atmospheric and Oceanic Sciences, University of McGill (7/12)
*GFDL Summer School on Atmospheric Modeling (7/12)
*EGU General Assembly, Vienna, Austria (4/12)
*Jet Propulsion Laboratory, California Institute of Technology (4/12)
*Department of Atmospheric Sciences, University of California at Los Angeles (2/12)
*Department of Atmospheric Sciences, University of Illinois (1/12)
*AMS Annual Meeting, New Orleans (1/12)
*AGU Fall Meeting, San Francisco (12/11)
*GFDL Climate Modeling and Research Symposium (10/11)
AeroCom Meeting, Fukuoka, Japan (10/11)
*Summer Institute, Program on Climate Change, University of Washington (9/11)
*NOAA OAR Senior Management Meeting, Princeton (8/11)
Goldschmidt Meeting, Prague, Czech Republic (8/11)
HTAP Meeting, Milan, Italy (6/11)
*Center for Land-Ocean-Atmosphere Studies (COLA) (5/11)
*School of Marine and Atmospheric Sciences, Stony Brook University (3/11)
*School of Atmospheric Physics, Nanjing University of Information Science and Technology (1/11)
*Department of Atmospheric, Oceanic, and Space Sciences, University of Michigan (10/10)
EGU General Assembly, Vienna, Austria (5/10)

YI MING

MOCA-09, Montreal, Canada (7/09)
*Gordon Research Conference on Radiation and Climate (7/09)
HTAP Meeting, Paris, France (6/09)
*Department of Chemical Engineering and School of Environment, Tsinghua University (5/09)
*Institute of Atmospheric Physics, Chinese Academy of Science (5/09)
The 11th International Conference on Atmospheric Sciences and Applications to Air Quality (ASAAQ), Jinan, China (5/09)
*NOAA Central Library Brown Bag Seminar Series, Silver Spring (4/09)
*Climate and Radiation Branch Seminar, NASA Goddard Space Flight Center (2/09)
AGU Fall Meeting, San Francisco (12/08)
ARM Fall Meeting, Princeton (11/08)
The 10th Scientific Conference of the IGAC Project, Annecy, France (9/08)
HTAP/ACC Joint Workshop, Washington D.C. (6/08)
A-Train Symposium, Lille, France (10/07)
AGU Fall Meeting, San Francisco (12/06)
AeroCom Workshop, Virginia Beach (10/06)
NASA Goddard Space Flight Center (5/06)
*Rosenstiel School of Marine and Atmospheric Science, University of Miami (6/05)
International Young Scientist Network for Earth System Science, Breckenridge (6/05)
AeroCom Workshop, New York (12/04)
AAAR Annual Conference, Anaheim (03)
*University of Delaware (02)
*Rutgers University (02)
AGU Fall Meeting, San Francisco (01)
AIChE Annual Conference, Los Angeles (00)
AAAR Annual Conference, St. Louis (00)