# Andrew Gettelman

List of Publications by Year
in descending order

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Version: 2024-02-01

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|---|---|---|---|
| 194 papers | 20,462 citations | 12322 69 h-index | 12258 133 g-index |
| 237 all docs | 237 docs citations | 237 times ranked | 12224 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A New Two-Moment Bulk Stratiform Cloud Microphysics Scheme in the Community Atmosphere Model, Version 3 (CAM3). Part I: Description and Numerical Tests. Journal of Climate, 2008, 21, 3642-3659. | 1.2 | 962 |
| 2 | The Community Earth System Model Version 2 (CESM2). Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001916. | 1.3 | 935 |
| 3 | Toward a minimal representation of aerosols in climate models: description and evaluation in the Community Atmosphere Model CAM5. Geoscientific Model Development, 2012, 5, 709-739. | 1.3 | 807 |
| 4 | Climate model genealogy: Generation CMIP5 and how we got there. Geophysical Research Letters, 2013, 40, 1194-1199. | 1.5 | 670 |
| 5 | CloudSat mission: Performance and early science after the first year of operation. Journal of Geophysical Research, 2008, 113, . | 3.3 | 578 |
| 6 | The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018. Atmospheric Environment, 2021, 244, 117834. | 1.9 | 491 |
| 7 | Bounding Global Aerosol Radiative Forcing of Climate Change. Reviews of Geophysics, 2020, 58, e2019RG000660. | 9.0 | 424 |
| 8 | Aerosol indirect effects â€“ general circulation model intercomparison and evaluation with satellite data. Atmospheric Chemistry and Physics, 2009, 9, 8697-8717. | 1.9 | 418 |
| 9 | Assessment of temperature, trace species, and ozone in chemistry-climate model simulations of the recent past. Journal of Geophysical Research, 2006, 111, . | 3.3 | 414 |
| 10 | Sensitivity of chemical tracers to meteorological parameters in the MOZARTâ€3 chemical transport model. Journal of Geophysical Research, 2007, 112, . | 3.3 | 395 |
| 11 | Global simulations of ice nucleation and ice supersaturation with an improved cloud scheme in the Community Atmosphere Model. Journal of Geophysical Research, 2010, 115, . | 3.3 | 361 |
| 12 | Horizontal transport and the dehydration of the stratosphere. Geophysical Research Letters, 2001, 28, 2799-2802. | 1.5 | 357 |
| 13 | The Art and Science of Climate Model Tuning. Bulletin of the American Meteorological Society, 2017, 98, 589-602. | 1.7 | 343 |
| 14 | Cloud influence on and response to seasonal Arctic sea ice loss. Journal of Geophysical Research, 2009, 114, . | 3.3 | 342 |
| 15 | Evaluation of cloud and water vapor simulations in CMIP5 climate models using NASA â€œAâ€Trainâ€• satellite observations. Journal of Geophysical Research, 2012, 117, . | 3.3 | 316 |
| 16 | Multimodel projections of stratospheric ozone in the 21st century. Journal of Geophysical Research, 2007, 112, . | 3.3 | 308 |
| 17 | The contribution of cloud and radiation anomalies to the 2007 Arctic sea ice extent minimum. Geophysical Research Letters, 2008, 35, . | 1.5 | 290 |
| 18 | THE EXTRATROPICAL UPPER TROPOSPHERE AND LOWER STRATOSPHERE. Reviews of Geophysics, 2011, 49, . | 9.0 | 284 |

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| 19 | Transport above the Asian summer monsoon anticyclone inferred from Aura Microwave Limb Sounder tracers. Journal of Geophysical Research, 2007, 112, . | 3.3 | 283 |
| 20 | Chemistryâ€“Climate Model Simulations of Twenty-First Century Stratospheric Climate and Circulation Changes. Journal of Climate, 2010, 23, 5349-5374. | 1.2 | 280 |
| 21 | Advanced Two-Moment Bulk Microphysics for Global Models. Part I: Off-Line Tests and Comparison with Other Schemes. Journal of Climate, 2015, 28, 1268-1287. | 1.2 | 267 |
| 22 | The Whole Atmosphere Community Climate Model Version 6 (WACCM6). Journal of Geophysical Research D: Atmospheres, 2019, 124, 12380-12403. | 1.2 | 261 |
| 23 | Exposing Global Cloud Biases in the Community Atmosphere Model (CAM) Using Satellite Observations and Their Corresponding Instrument Simulators. Journal of Climate, 2012, 25, 5190-5207. | 1.2 | 251 |
| 24 | High Climate Sensitivity in the Community Earth System Model Version 2 (CESM2). Geophysical Research Letters, 2019, 46, 8329-8337. | 1.5 | 249 |
| 25 | A Climatology of the Tropical Tropopause Layer.. Journal of the Meteorological Society of Japan, 2002, 80, 911-924. | 0.7 | 248 |
| 26 | Distribution and influence of convection in the tropical tropopause region. Journal of Geophysical Research, 2002, 107, ACL 6-1-ACL 6-12. | 3.3 | 246 |
| 27 | Climate Change Projections in CESM1(CAM5) Compared to CCSM4. Journal of Climate, 2013, 26, 6287-6308. | 1.2 | 243 |
| 28 | Climate variability and conflict risk in East Africa, 1990â€“2009. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 18344-18349. | 3.3 | 237 |
| 29 | The effect of horizontal resolution on simulation quality in the <scp>C</scp>ommunity <scp>A</scp>tmospheric <scp>M</scp>odel, <scp>CAM</scp>5.1. Journal of Advances in Modeling Earth Systems, 2014, 6, 980-997. | 1.3 | 233 |
| 30 | Multi-model assessment of stratospheric ozone return dates and ozone recovery in CCMVal-2 models. Atmospheric Chemistry and Physics, 2010, 10, 9451-9472. | 1.9 | 215 |
| 31 | Strong constraints on aerosolâ€“cloud interactions from volcanic eruptions. Nature, 2017, 546, 485-491. | 13.7 | 191 |
| 32 | A New Two-Moment Bulk Stratiform Cloud Microphysics Scheme in the Community Atmosphere Model, Version 3 (CAM3). Part II: Single-Column and Global Results. Journal of Climate, 2008, 21, 3660-3679. | 1.2 | 189 |
| 33 | The Chemistry Mechanism in the Community Earth System Model Version 2 (CESM2). Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001882. | 1.3 | 189 |
| 34 | Exploratory High-Resolution Climate Simulations using the Community Atmosphere Model (CAM). Journal of Climate, 2014, 27, 3073-3099. | 1.2 | 184 |
| 35 | Impact of monsoon circulations on the upper troposphere and lower stratosphere. Journal of Geophysical Research, 2004, 109, n/a-n/a. | 3.3 | 183 |
| 36 | Advanced Two-Moment Bulk Microphysics for Global Models. Part II: Global Model Solutions and Aerosolâ€“Cloud Interactions*. Journal of Climate, 2015, 28, 1288-1307. | 1.2 | 177 |

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| 37 | Global volcanic aerosol properties derived from emissions, 1990â€“2014, using CESM1(WACCM). Journal of Geophysical Research D: Atmospheres, 2016, 121, 2332-2348. | 1.2 | 175 |
| 38 | Multimodel assessment of the upper troposphere and lower stratosphere: Tropics and global trends. Journal of Geophysical Research, 2010, 115, . | 3.3 | 171 |
| 39 | Higher-Order Turbulence Closure and Its Impact on Climate Simulations in the Community Atmosphere Model. Journal of Climate, 2013, 26, 9655-9676. | 1.2 | 165 |
| 40 | Radiation balance of the tropical tropopause layer. Journal of Geophysical Research, 2004, 109, . | 3.3 | 156 |
| 41 | Review of the formulation of presentâ€generation stratospheric chemistryâ€climate models and associated external forcings. Journal of Geophysical Research, 2010, 115, . | 3.3 | 150 |
| 42 | Impact of geoengineered aerosols on the troposphere and stratosphere. Journal of Geophysical Research, 2009, 114, . | 3.3 | 141 |
| 43 | The Evolution of Climate Sensitivity and Climate Feedbacks in the Community Atmosphere Model. Journal of Climate, 2012, 25, 1453-1469. | 1.2 | 140 |
| 44 | A Strategy for Process-Oriented Validation of Coupled Chemistryâ€“Climate Models. Bulletin of the American Meteorological Society, 2005, 86, 1117-1134. | 1.7 | 139 |
| 45 | Climate change projections and stratosphereâ€“troposphere interaction. Climate Dynamics, 2012, 38, 2089-2097. | 1.7 | 137 |
| 46 | The Influence of Local Feedbacks and Northward Heat Transport on the Equilibrium Arctic Climate Response to Increased Greenhouse Gas Forcing. Journal of Climate, 2012, 25, 5433-5450. | 1.2 | 133 |
| 47 | Radiative and Chemical Response to Interactive Stratospheric Sulfate Aerosols in Fully Coupled CESM1(WACCM). Journal of Geophysical Research D: Atmospheres, 2017, 122, 13,061. | 1.2 | 128 |
| 48 | Seasonal variation of water vapor in the lower stratosphere observed in Halogen Occultation Experiment data. Journal of Geophysical Research, 2001, 106, 14313-14325. | 3.3 | 126 |
| 49 | Challenges in constraining anthropogenic aerosol effects on cloud radiative forcing using present-day spatiotemporal variability. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5804-5811. | 3.3 | 120 |
| 50 | Climate impacts of ice nucleation. Journal of Geophysical Research, 2012, 117, . | 3.3 | 118 |
| 51 | Stratosphereâ€troposphere coupling and annular mode variability in chemistryâ€climate models. Journal of Geophysical Research, 2010, 115, . | 3.3 | 107 |
| 52 | Constraining the aerosol influence on cloud liquid water path. Atmospheric Chemistry and Physics, 2019, 19, 5331-5347. | 1.9 | 104 |
| 53 | Observations of Clouds, Aerosols, Precipitation, and Surface Radiation over the Southern Ocean: An Overview of CAPRICORN, MARCUS, MICRE, and SOCRATES. Bulletin of the American Meteorological Society, 2021, 102, E894-E928. | 1.7 | 103 |
| 54 | The Global Distribution of Supersaturation in the Upper Troposphere from the Atmospheric Infrared Sounder. Journal of Climate, 2006, 19, 6089-6103. | 1.2 | 102 |

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| 55 | Transport of water vapor in the tropical tropopause layer. Geophysical Research Letters, 2002, 29, 9-1. | 1.5 | 95 |
| 56 | Impact of Aviation on Climate: FAAâ€™s Aviation Climate Change Research Initiative (ACCRI) Phase II. Bulletin of the American Meteorological Society, 2016, 97, 561-583. | 1.7 | 93 |
| 57 | NCAR Release of CAMâ€SE in CESM2.0: A Reformulation of the Spectral Element Dynamical Core in Dryâ€Mass Vertical Coordinates With Comprehensive Treatment of Condensates and Energy. Journal of Advances in Modeling Earth Systems, 2018, 10, 1537-1570. | 1.3 | 91 |
| 58 | Diagnosis of regimeâ€dependent cloud simulation errors in CMIP5 models using â€œAâ€Trainâ€•satellite observations and reanalysis data. Journal of Geophysical Research D: Atmospheres, 2013, 118, 2762-2780. | 1.2 | 90 |
| 59 | The climate impact of aviation aerosols. Geophysical Research Letters, 2013, 40, 2785-2789. | 1.5 | 88 |
| 60 | Two-moment bulk stratiform cloud microphysics in the GFDL AM3 GCM: description, evaluation, and sensitivity tests. Atmospheric Chemistry and Physics, 2010, 10, 8037-8064. | 1.9 | 87 |
| 61 | Volcanic Radiative Forcing From 1979 to 2015. Journal of Geophysical Research D: Atmospheres, 2018, 123, 12491-12508. | 1.2 | 87 |
| 62 | Climate Forcing and Trends of Organic Aerosols in the Community Earth System Model (CESM2). Journal of Advances in Modeling Earth Systems, 2019, 11, 4323-4351. | 1.3 | 87 |
| 63 | Mass fluxes of O3, CH4, N2O and CF2Cl2in the lower stratosphere calculated from observational data. Journal of Geophysical Research, 1997, 102, 19149-19159. | 3.3 | 85 |
| 64 | Validation of Aqua satellite data in the upper troposphere and lower stratosphere with in situ aircraft instruments. Geophysical Research Letters, 2004, 31, . | 1.5 | 83 |
| 65 | Climatology of Upper-Tropospheric Relative Humidity from the Atmospheric Infrared Sounder and Implications for Climate. Journal of Climate, 2006, 19, 6104-6121. | 1.2 | 83 |
| 66 | Sensitivity studies of dust ice nuclei effect on cirrus clouds with the Community Atmosphere Model CAM5. Atmospheric Chemistry and Physics, 2012, 12, 12061-12079. | 1.9 | 83 |
| 67 | Subnational violent conflict forecasts for sub-Saharan Africa, 2015â€“65, using climate-sensitive models. Journal of Peace Research, 2017, 54, 175-192. | 1.5 | 82 |
| 68 | Processes Responsible for Cloud Feedback. Current Climate Change Reports, 2016, 2, 179-189. | 2.8 | 81 |
| 69 | The Tropical Tropopause Layer 1960â€“2100. Atmospheric Chemistry and Physics, 2009, 9, 1621-1637. | 1.9 | 79 |
| 70 | Development of two-moment cloud microphysics for liquid and ice within the NASA Goddard Earth Observing System Model (GEOS-5). Geoscientific Model Development, 2014, 7, 1733-1766. | 1.3 | 78 |
| 71 | Constraining the instantaneous aerosol influence on cloud albedo. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4899-4904. | 3.3 | 77 |
| 72 | Simulated differences in 21st century aridity due to different scenarios of greenhouse gases and aerosols. Climatic Change, 2018, 146, 407-422. | 1.7 | 76 |

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| 73 | Microphysical implications of cloudâ€precipitation covariance derived from satellite remote sensing. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6521-6533. | 1.2 | 74 |
| 74 | El NiÃ±o as a Natural Experiment for Studying the Tropical Tropopause Region. Journal of Climate, 2001, 14, 3375-3392. | 1.2 | 71 |
| 75 | The Impact of Stratospheric Ozone Recovery on Tropopause Height Trends. Journal of Climate, 2009, 22, 429-445. | 1.2 | 68 |
| 76 | Direct Diagnoses of Stratosphereâ€“Troposphere Exchange. Journals of the Atmospheric Sciences, 2000, 57, 3-16. | 0.6 | 67 |
| 77 | Relative humidity over Antarctica from radiosondes, satellites, and a general circulation model. Journal of Geophysical Research, 2006, 111, . | 3.3 | 67 |
| 78 | Multimodel assessment of the upper troposphere and lower stratosphere: Extratropics. Journal of Geophysical Research, 2010, 115, . | 3.3 | 67 |
| 79 | On the characteristics of aerosol indirect effect based on dynamic regimes in global climate models. Atmospheric Chemistry and Physics, 2016, 16, 2765-2783. | 1.9 | 67 |
| 80 | Insights into Tropical Tropopause Layer processes using global models. Journal of Geophysical Research, 2007, 112, . | 3.3 | 66 |
| 81 | Microphysical process rates and global aerosolâ€“cloud interactions. Atmospheric Chemistry and Physics, 2013, 13, 9855-9867. | 1.9 | 66 |
| 82 | The path to CAM6: coupled simulations with CAM5.4 and CAM5.5. Geoscientific Model Development, 2018, 11, 235-255. | 1.3 | 66 |
| 83 | Sensitivity of 21st century stratospheric ozone to greenhouse gas scenarios. Geophysical Research Letters, 2010, 37, . | 1.5 | 62 |
| 84 | A modeling study of the effects of aerosols on clouds and precipitation over East Asia. Theoretical and Applied Climatology, 2011, 106, 343-354. | 1.3 | 61 |
| 85 | Unified parameterization of the planetary boundary layer and shallow convection with a higher-order turbulence closure in the Community Atmosphere Model: single-column experiments. Geoscientific Model Development, 2012, 5, 1407-1423. | 1.3 | 61 |
| 86 | The Boundary Layer Response to Recent Arctic Sea Ice Loss and Implications for High-Latitude Climate Feedbacks. Journal of Climate, 2011, 24, 428-447. | 1.2 | 60 |
| 87 | Processes controlling Southern Ocean shortwave climate feedbacks in CESM. Geophysical Research Letters, 2014, 41, 616-622. | 1.5 | 58 |
| 88 | Temperature and Water Vapor Variance Scaling in Global Models: Comparisons to Satellite and Aircraft Data. Journals of the Atmospheric Sciences, 2011, 68, 2156-2168. | 0.6 | 57 |
| 89 | Putting the clouds back in aerosolâ€“cloud interactions. Atmospheric Chemistry and Physics, 2015, 15, 12397-12411. | 1.9 | 57 |
| 90 | Northern winter stratospheric temperature and ozone responses to ENSO inferred from an ensemble of Chemistry Climate Models. Atmospheric Chemistry and Physics, 2009, 9, 8935-8948. | 1.9 | 56 |

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| 91 | Variability in HDO/H<sub>2</sub>O abundance ratios in the tropical tropopause layer. Journal of Geophysical Research, 2007, 112, . | 3.3 | 55 |
| 92 | Projections of future tropical cyclone damage with a high-resolution global climate model. Climatic Change, 2018, 146, 575-585. | 1.7 | 55 |
| 93 | An Evaluation of the Largeâ€Scale Atmospheric Circulation and Its Variability in CESM2 and Other CMIP Models. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032835. | 1.2 | 55 |
| 94 | Validation of satellite ozone profile retrievals using Beijing ozonesonde data. Journal of Geophysical Research, 2007, 112, . | 3.3 | 54 |
| 95 | Impact of Antarctic mixed-phase clouds on climate. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 18156-18161. | 3.3 | 54 |
| 96 | Contributions of Clouds, Surface Albedos, and Mixed-Phase Ice Nucleation Schemes to Arctic Radiation Biases in CAM5. Journal of Climate, 2014, 27, 5174-5197. | 1.2 | 50 |
| 97 | 100 Years of Earth System Model Development. Meteorological Monographs, 2019, 59, 12.1-12.66. | 5.0 | 48 |
| 98 | Simulated climatology and evolution of aridity in the 21st century. Journal of Geophysical Research D: Atmospheres, 2015, 120, 5795-5815. | 1.2 | 47 |
| 99 | Midlatitude Cyclone Compositing to Constrain Climate Model Behavior Using Satellite Observations. Journal of Climate, 2008, 21, 5887-5903. | 1.2 | 44 |
| 100 | Opportunistic experiments to constrain aerosol effective radiative forcing. Atmospheric Chemistry and Physics, 2022, 22, 641-674. | 1.9 | 44 |
| 101 | Simulations of water vapor in the lower stratosphere and upper troposphere. Journal of Geophysical Research, 2000, 105, 9003-9023. | 3.3 | 43 |
| 102 | Simulated radiative forcing from contrails and contrail cirrus. Atmospheric Chemistry and Physics, 2013, 13, 12525-12536. | 1.9 | 42 |
| 103 | Arctic Radiative Fluxes: Present-Day Biases and Future Projections in CMIP5 Models. Journal of Climate, 2015, 28, 6019-6038. | 1.2 | 42 |
| 104 | Simulating Observations of Southern Ocean Clouds and Implications for Climate. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032619. | 1.2 | 42 |
| 105 | Observationally derived and general circulation model simulated tropical stratospheric upward mass fluxes. Journal of Geophysical Research, 2008, 113, . | 3.3 | 41 |
| 106 | Observed and Simulated Upper-Tropospheric Water Vapor Feedback. Journal of Climate, 2008, 21, 3282-3289. | 1.2 | 41 |
| 107 | Regional Climate Simulations With the Community Earth System Model. Journal of Advances in Modeling Earth Systems, 2018, 10, 1245-1265. | 1.3 | 41 |
| 108 | Processes regulating shortâ€lived species in the tropical tropopause layer. Journal of Geophysical Research, 2009, 114, . | 3.3 | 40 |

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| 109 | Record of tropical interannual variability of temperature and water vapor from a combined AIRS-MLS data set. Journal of Geophysical Research, 2011, 116, . | 3.3 | 39 |
| 110 | Surprising similarities in model and observational aerosol radiative forcing estimates. Atmospheric Chemistry and Physics, 2020, 20, 613-623. | 1.9 | 39 |
| 111 | New Generation of Climate Models Track Recent Unprecedented Changes in Earth's Radiation Budget Observed by CERES. Geophysical Research Letters, 2020, 47, e2019GL086705. | 1.5 | 39 |
| 112 | A unified parameterization of clouds and turbulence using CLUBB and subcolumns in the Community Atmosphere Model. Geoscientific Model Development, 2015, 8, 3801-3821. | 1.3 | 39 |
| 113 | Climate Impacts of COVIDâ€19 Induced Emission Changes. Geophysical Research Letters, 2021, 48, e2020GL091805. | 1.5 | 38 |
| 114 | Tropical thin cirrus and relative humidity observed by the Atmospheric Infrared Sounder. Atmospheric Chemistry and Physics, 2008, 8, 1501-1518. | 1.9 | 37 |
| 115 | Cloudy and clearâ€sky relative humidity in the upper troposphere observed by the Aâ€train. Journal of Geophysical Research, 2009, 114, . | 3.3 | 36 |
| 116 | Process-Oriented Evaluation of Climate and Weather Forecasting Models. Bulletin of the American Meteorological Society, 2019, 100, 1665-1686. | 1.7 | 36 |
| 117 | The Single Column Atmosphere Model Version 6 (SCAM6): Not a Scam but a Tool for Model Evaluation and Development. Journal of Advances in Modeling Earth Systems, 2019, 11, 1381-1401. | 1.3 | 36 |
| 118 | Evaluating the Diurnal Cycle of Upper-Tropospheric Ice Clouds in Climate Models Using SMILES Observations. Journals of the Atmospheric Sciences, 2015, 72, 1022-1044. | 0.6 | 35 |
| 119 | Changes in terrestrial aridity for the period 850â€“2080 from the Community Earth System Model. Journal of Geophysical Research D: Atmospheres, 2016, 121, 2857-2873. | 1.2 | 35 |
| 120 | Machine Learning the Warm Rain Process. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002268. | 1.3 | 35 |
| 121 | The future of Earth system prediction: Advances in model-data fusion. Science Advances, 2022, 8, eabn3488. | 4.7 | 35 |
| 122 | Contributions of the Liquid and Ice Phases to Global Surface Precipitation: Observations and Global Climate Modeling. Journals of the Atmospheric Sciences, 2020, 77, 2629-2648. | 0.6 | 34 |
| 123 | Exploring dimethyl sulfide (DMS) oxidation and implications for global aerosol radiative forcing. Atmospheric Chemistry and Physics, 2022, 22, 1549-1573. | 1.9 | 33 |
| 124 | Parametric behaviors of <scp>CLUBB</scp> in simulations of low clouds in the <scp>C</scp>ommunity <scp>A</scp>tmosphere <scp>M</scp>odel (<scp>CAM</scp>). Journal of Advances in Modeling Earth Systems, 2015, 7, 1005-1025. | 1.3 | 32 |
| 125 | Influences of Recent Particle Formation on Southern Ocean Aerosol Variability and Low Cloud Properties. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033529. | 1.2 | 32 |
| 126 | On the relationship of polar mesospheric cloud ice water content, particle radius and mesospheric temperature and its use in multi-dimensional models. Atmospheric Chemistry and Physics, 2009, 9, 8889-8901. | 1.9 | 30 |

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| 127 | Comparison of ice cloud properties simulated by the Community Atmosphere Model (CAM5) with in-situ observations. Atmospheric Chemistry and Physics, 2014, 14, 10103-10118. | 1.9 | 29 |
| 128 | Arctic and Antarctic Sea Ice Mean State in the Community Earth System Model Version 2 and the Influence of Atmospheric Chemistry. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015934. | 1.0 | 29 |
| 129 | CAM6 simulation of mean and extreme precipitation over Asia: sensitivity to upgraded physical parameterizations and higher horizontal resolution. Geoscientific Model Development, 2019, 12, 3773-3793. | 1.3 | 28 |
| 130 | The global impact of supersaturation in a coupled chemistry-climate model. Atmospheric Chemistry and Physics, 2007, 7, 1629-1643. | 1.9 | 27 |
| 131 | The Benefits of Reduced Anthropogenic Climate changE (BRACE): a synthesis. Climatic Change, 2018, 146, 287-301. | 1.7 | 27 |
| 132 | Climate Feedback Variance and the Interaction of Aerosol Forcing and Feedbacks. Journal of Climate, 2016, 29, 6659-6675. | 1.2 | 26 |
| 133 | Improvements in Global Climate Model Microphysics Using a Consistent Representation of Ice Particle Properties. Journal of Climate, 2017, 30, 609-629. | 1.2 | 26 |
| 134 | How Well Do Largeâ€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, 2020, 12, e2020MS002205. | 1.3 | 26 |
| 135 | Ten new insights in climate science 2021: a horizon scan. Global Sustainability, 2021, 4, . | 1.6 | 26 |
| 136 | LGM Paleoclimate Constraints Inform Cloud Parameterizations and Equilibrium Climate Sensitivity in CESM2. Journal of Advances in Modeling Earth Systems, 2022, 14, . | 1.3 | 26 |
| 137 | Simulations of water isotope abundances in the upper troposphere and lower stratosphere and implications for stratosphere troposphere exchange. Journal of Geophysical Research, 2005, 110, . | 3.3 | 25 |
| 138 | The potential to narrow uncertainty in projections of stratospheric ozone over the 21st century. Atmospheric Chemistry and Physics, 2010, 10, 9473-9486. | 1.9 | 25 |
| 139 | Structural diagnostics of the tropopause inversion layer and its evolution. Journal of Geophysical Research D: Atmospheres, 2015, 120, 46-62. | 1.2 | 25 |
| 140 | Dependence of the Ice Water Content and Snowfall Rate on Temperature, Globally: Comparison of in Situ Observations, Satellite Active Remote Sensing Retrievals, and Global Climate Model Simulations. Journal of Applied Meteorology and Climatology, 2017, 56, 189-215. | 0.6 | 25 |
| 141 | CO<sub>2</sub> Increase Experiments Using the CESM: Relationship to Climate Sensitivity and Comparison of CESM1 to CESM2. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002120. | 1.3 | 25 |
| 142 | Impact of aerosol radiative effects on 2000â€“2010 surface temperatures. Climate Dynamics, 2015, 45, 2165-2179. | 1.7 | 24 |
| 143 | Icelandic volcanic emissions and climate. Nature Geoscience, 2015, 8, 243-243. | 5.4 | 24 |
| 144 | Toward a Consistent Definition between Satellite and Model Clear-Sky Radiative Fluxes. Journal of Climate, 2020, 33, 61-75. | 1.2 | 22 |

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| 145 | Convective Transition Statistics over Tropical Oceans for Climate Model Diagnostics: GCM Evaluation. Journals of the Atmospheric Sciences, 2020, 77, 379-403. | 0.6 | 22 |
| 146 | An intercomparative study of the effects of aircraft emissions on surface air quality. Journal of Geophysical Research D: Atmospheres, 2017, 122, 8325-8344. | 1.2 | 21 |
| 147 | A single ice approach using varying ice particle properties in global climate model microphysics. Journal of Advances in Modeling Earth Systems, 2017, 9, 2138-2157. | 1.3 | 21 |
| 148 | Wave activity in the tropical tropopause layer in seven reanalysis and four chemistry climate model data sets. Journal of Geophysical Research, 2012, 117, . | 3.3 | 20 |
| 149 | Improved cirrus simulations in a general circulation model using CARMA sectional microphysics. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,679. | 1.2 | 20 |
| 150 | Assessment of marine boundary layer cloud simulations in the CAM with CLUBB and updated microphysics scheme based on ARM observations from the Azores. Journal of Geophysical Research D: Atmospheres, 2016, 121, 8472-8492. | 1.2 | 20 |
| 151 | Simulated responses of terrestrial aridity to black carbon and sulfate aerosols. Journal of Geophysical Research D: Atmospheres, 2016, 121, 785-794. | 1.2 | 19 |
| 152 | Variability of subtropical upper tropospheric humidity. Atmospheric Chemistry and Physics, 2008, 8, 2643-2655. | 1.9 | 18 |
| 153 | Spatial Decomposition of Climate Feedbacks in the Community Earth System Model. Journal of Climate, 2013, 26, 3544-3561. | 1.2 | 17 |
| 154 | Simulated 2050 aviation radiative forcing from contrails and aerosols. Atmospheric Chemistry and Physics, 2016, 16, 7317-7333. | 1.9 | 17 |
| 155 | The Impact of Rimed Ice Hydrometeors on Global and Regional Climate. Journal of Advances in Modeling Earth Systems, 2019, 11, 1543-1562. | 1.3 | 17 |
| 156 | Cloud, Aerosol, and Boundary Layer Structure across the Northeast Pacific Stratocumulusâ€“Cumulus Transition as Observed during CSET. Monthly Weather Review, 2019, 147, 2083-2103. | 0.5 | 17 |
| 157 | The Brewerâ€Dobson Circulation During the Last Glacial Maximum. Geophysical Research Letters, 2020, 47, e2019GL086271. | 1.5 | 17 |
| 158 | Better calibration of cloud parameterizations and subgrid effects increases the fidelity of the E3SM Atmosphere Model version 1. Geoscientific Model Development, 2022, 15, 2881-2916. | 1.3 | 17 |
| 159 | Comparison of Equilibrium Climate Sensitivity Estimates From Slab Ocean, 150â€Year, and Longer Simulations. Geophysical Research Letters, 2020, 47, e2020GL088852. | 1.5 | 16 |
| 160 | Impact of Cloud Physics on the Greenland Ice Sheet Nearâ€Surface Climate: A Study With the Community Atmosphere Model. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031470. | 1.2 | 16 |
| 161 | The climate impact of COVID-19-induced contrail changes. Atmospheric Chemistry and Physics, 2021, 21, 9405-9416. | 1.9 | 16 |
| 162 | Lowâ€Cloud Feedback in CAM5â€CLUBB: Physical Mechanisms and Parameter Sensitivity Analysis. Journal of Advances in Modeling Earth Systems, 2018, 10, 2844-2864. | 1.3 | 15 |

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