Phil Rasch

List of Publications by Year
in descending order

227 papers	28,791 citations	8172 76 h-index	6294 158 g-index
255 all docs	255 docs citations	255 times ranked	18265 citing authors

#	Article	IF	Citations
1	The Community Climate System Model Version 4. Journal of Climate, 2011, 24, 4973-4991.	1.2	2,428
2	Present-day climate forcing and response from black carbon in snow. Journal of Geophysical Research, 2007, 112, .	3.3	1,059
3	The National Center for Atmospheric Research Community Climate Model: CCM3*. Journal of Climate, 1998, 11, 1131-1149.	1.2	970
4	The Community Earth System Model Version 2 (CESM2). Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001916.	1.3	935
5	The Formulation and Atmospheric Simulation of the Community Atmosphere Model Version 3 (CAM3). Journal of Climate, 2006, 19, 2144-2161.	1.2	895
6	A global simulation of tropospheric ozone and related tracers: Description and evaluation of MOZART, version 2. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	848
7	Radiative forcing of the direct aerosol effect from AeroCom Phase II simulations. Atmospheric Chemistry and Physics, 2013, 13, 1853-1877.	1.9	779
8	Tropical Intraseasonal Variability in 14 IPCC AR4 Climate Models. Part I: Convective Signals. Journal of Climate, 2006, 19, 2665-2690.	1.2	664
9	The Mean Climate of the Community Atmosphere Model (CAM4) in Forced SST and Fully Coupled Experiments. Journal of Climate, 2013, 26, 5150-5168.	1.2	639
10	CAM-chem: description and evaluation of interactive atmospheric chemistry in the Community Earth System Model. Geoscientific Model Development, 2012, 5, 369-411.	1.3	633
11	Recent advances in understanding secondary organic aerosol: Implications for global climate forcing. Reviews of Geophysics, 2017, 55, 509-559.	9.0	548
12	Springtime warming and reduced snow cover from carbonaceous particles. Atmospheric Chemistry and Physics, 2009, 9, 2481-2497.	1.9	492
13	Improving our fundamental understanding of the role of aerosolâˆ'cloud interactions in the climate system. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5781-5790.	3.3	479
14	A Comparison of the CCM3 Model Climate Using Diagnosed and Predicted Condensate Parameterizations. Journal of Climate, 1998, 11, 1587-1614.	1.2	475
15	Change in atmospheric mineral aerosols in response to climate: Last glacial period, preindustrial, modern, and doubled carbon dioxide climates. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	427
16	Aerosol indirect effects â€" general circulation model intercomparison and evaluation with satellite data. Atmospheric Chemistry and Physics, 2009, 9, 8697-8717.	1.9	418
17	The DOE E3SM Coupled Model Version 1: Overview and Evaluation at Standard Resolution. Journal of Advances in Modeling Earth Systems, 2019, 11, 2089-2129.	1.3	404
18	MOZART, a global chemical transport model for ozone and related chemical tracers: 1. Model description. Journal of Geophysical Research, 1998, 103, 28265-28289.	3.3	402

#	ARTICLE	IF	CITATIONS
19	Impact of anthropogenic atmospheric nitrogen and sulfur deposition on ocean acidification and the inorganic carbon system. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 14580-14585.	3.3	332
20	Short-term modulation of Indian summer monsoon rainfall by West Asian dust. Nature Geoscience, 2014, 7, 308-313.	5.4	324
21	Two-Dimensional Semi-Lagrangian Transport with Shape-Preserving Interpolation. Monthly Weather Review, 1989, 117, 102-129.	0.5	314
22	Description and evaluation of a new four-mode version of the Modal Aerosol Module (MAM4) within version 5.3 of the Community Atmosphere Model. Geoscientific Model Development, 2016, 9, 505-522.	1.3	313
23	Representations of transport, convection, and the hydrologic cycle in chemical transport models: Implications for the modeling of short-lived and soluble species. Journal of Geophysical Research, 1997, 102, 28127-28138.	3.3	287
24	Toward a Minimal Representation of Aerosols in Climate Models: Comparative Decomposition of Aerosol Direct, Semidirect, and Indirect Radiative Forcing. Journal of Climate, 2012, 25, 6461-6476.	1.2	269
25	Evaluation and intercomparison of global atmospheric transport models using222Rn and other short-lived tracers. Journal of Geophysical Research, 1997, 102, 5953-5970.	3.3	267
26	Assessing future nitrogen deposition and carbon cycle feedback using a multimodel approach: Analysis of nitrogen deposition. Journal of Geophysical Research, 2005, 110, .	3.3	266
27	Effects of Convective Momentum Transport on the Atmospheric Circulation in the Community Atmosphere Model, Version 3. Journal of Climate, 2008, 21, 1487-1499.	1.2	265
28	MOZART, a global chemical transport model for ozone and related chemical tracers: 2. Model results and evaluation. Journal of Geophysical Research, 1998, 103, 28291-28335.	3.3	264
29	The influence of large-scale wind power on global climate. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 16115-16120.	3.3	255
30	Integrating Cloud Processes in the Community Atmosphere Model, Version 5. Journal of Climate, 2014, 27, 6821-6856.	1.2	252
31	An overview of geoengineering of climate using stratospheric sulphate aerosols. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 4007-4037.	1.6	251
32	Sulfur chemistry in the National Center for Atmospheric Research Community Climate Model: Description, evaluation, features, and sensitivity to aqueous chemistry. Journal of Geophysical Research, 2000, 105, 1387-1415.	3.3	243
33	Effect of clouds on photolysis and oxidants in the troposphere. Journal of Geophysical Research, 2003, 108, .	3.3	240
34	Climate model response from the Geoengineering Model Intercomparison Project (GeoMIP). Journal of Geophysical Research D: Atmospheres, 2013, 118, 8320-8332.	1.2	226
35	Computational aspects of moisture transport in global models of the atmosphere. Quarterly Journal of the Royal Meteorological Society, 1990, 116, 1071-1090.	1.0	204
36	The hydrological impact of geoengineering in the Geoengineering Model Intercomparison Project (GeoMIP). Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,036.	1.2	202

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37	Radiative forcing due to sulfate aerosols from simulations with the National Center for Atmospheric Research Community Climate Model, Version 3. Journal of Geophysical Research, 2000, 105, 1441-1457.	3.3	201
38	Analysis of Multi-angle Imaging SpectroRadiometer (MISR) aerosol optical depths over greater India during winter 2001-2004. Geophysical Research Letters, 2004, 31, .	1.5	199
39	Global long-range transport and lung cancer risk from polycyclic aromatic hydrocarbons shielded by coatings of organic aerosol. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 1246-1251.	3.3	185
40	A model for studies of tropospheric ozone and nonmethane hydrocarbons: Model description and ozone results. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	174
41	Exploring the geoengineering of climate using stratospheric sulfate aerosols: The role of particle size. Geophysical Research Letters, 2008, 35, .	1.5	173
42	Climate response of the South Asian monsoon system to anthropogenic aerosols. Journal of Geophysical Research, 2012, 117, .	3.3	173
43	A description of the global sulfur cycle and its controlling processes in the National Center for Atmospheric Research Community Climate Model, Version 3. Journal of Geophysical Research, 2000, 105, 1367-1385.	3.3	170
44	Sensitivity of remote aerosol distributions to representation of cloudâ€“aerosol interactions in a global climate model. Geoscientific Model Development, 2013, 6, 765-782.	1.3	169
45	Understanding the Indian Ocean Experiment (INDOEX) aerosol distributions with an aerosol assimilation. Journal of Geophysical Research, 2001, 106, 7337-7355.	3.3	168
46	An Overview of the Atmospheric Component of the Energy Exascale Earth System Model. Journal of Advances in Modeling Earth Systems, 2019, 11, 2377-2411.	1.3	168
47	Global temperature stabilization via controlled albedo enhancement of low-level maritime clouds. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 3969-3987.	1.6	163
48	A model for studies of tropospheric photochemistry: Description, global distributions, and evaluation. Journal of Geophysical Research, 1999, 104, 26245-26277.	3.3	159
49	Increasing water cycle extremes in California and in relation to ENSO cycle under global warming. Nature Communications, 2015, 6, 8657.	5.8	153
50	Transport of222radon to the remote troposphere using the Model of Atmospheric Transport and Chemistry and assimilated winds from ECMWF and the National Center for Environmental Prediction/NCAR. Journal of Geophysical Research, 1997, 102, 28139-28151.	3.3	148
51	Technical Note: On the use of nudging for aerosolâ€“climate model intercomparison studies. Atmospheric Chemistry and Physics, 2014, 14, 8631-8645.	1.9	143
52	Simulation of the Global Hydrological Cycle in the CCSM Community Atmosphere Model Version 3 (CAM3): Mean Features. Journal of Climate, 2006, 19, 2199-2221.	1.2	141
53	Impact of geoengineered aerosols on the troposphere and stratosphere. Journal of Geophysical Research, 2009, 114, .	3.3	141
54	CGILS: Results from the first phase of an international project to understand the physical mechanisms of low cloud feedbacks in single column models. Journal of Advances in Modeling Earth Systems, 2013, 5, 826-842.	1.3	140

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55	Representation of Clouds and Precipitation Processes in the Community Atmosphere Model Version 3 (CAM3). Journal of Climate, 2006, 19, 2184-2198.	1.2	136
56	Tropical and Subtropical Cloud Transitions in Weather and Climate Prediction Models: The GCSS/WGNE Pacific Cross-Section Intercomparison (GPCI). Journal of Climate, 2011, 24, 5223-5256.	1.2	134
57	A model for studies of tropospheric ozone and nonmethane hydrocarbons: Model evaluation of ozone-related species. Journal of Geophysical Research, 2003, 108, .	3.3	131
58	Global chemical weather forecasts for field campaign planning: predictions and observations of large-scale features during MINOS, CONTRACE, and INDOEX. Atmospheric Chemistry and Physics, 2003, 3, 267-289.	1.9	128
59	Quantifying sources, transport, deposition, and radiative forcing of black carbon over the Himalayas and Tibetan Plateau. Atmospheric Chemistry and Physics, 2015, 15, 6205-6223.	1.9	128
60	A physically based framework for modeling the organic fractionation of sea spray aerosol from bubble film Langmuir equilibria. Atmospheric Chemistry and Physics, 2014, 14, 13601-13629.	1.9	124
61	Global transformation and fate of SOA: Implications of lowâ€volatility SOA and gasâ€phase fragmentation reactions. Journal of Geophysical Research D: Atmospheres, 2015, 120, 4169-4195.	1.2	123
62	Dust and pollution transport on global scales: Aerosol measurements and model predictions. Journal of Geophysical Research, 2001, 106, 32555-32569.	3.3	116
63	Direct and semidirect aerosol effects of southern African biomass burning aerosol. Journal of Geophysical Research, 2011, 116, .	3.3	115
64	A comparison of scavenging and deposition processes in global models: results from the WCRP Cambridge Workshop of 1995. Tellus, Series B: Chemical and Physical Meteorology, 2000, 52, 1025-1056.	0.8	113
65	Fast and slow responses of the South Asian monsoon system to anthropogenic aerosols. Geophysical Research Letters, 2012, 39, .	1.5	113
66	Uncertainty quantification and parameter tuning in the CAM5 Zhangâ€McFarlane convection scheme and impact of improved convection on the global circulation and climate. Journal of Geophysical Research D: Atmospheres, 2013, 118, 395-415.	1.2	112
67	Impact of small ice crystal assumptions on ice sedimentation rates in cirrus clouds and GCM simulations. Geophysical Research Letters, 2008, 35, .	1.5	106
68	Understanding Cloud and Convective Characteristics in Version 1 of the E3SM Atmosphere Model. Journal of Advances in Modeling Earth Systems, 2018, 10, 2618-2644.	1.3	105
69	A three-dimensional general circulation model with coupled chemistry for the middle atmosphere. Journal of Geophysical Research, 1995, 100, 9041.	3.3	102
70	A multi-model assessment of regional climate disparities caused by solar geoengineering. Environmental Research Letters, 2014, 9, 074013.	2.2	101
71	Maintenance of the Intertropical Convergence Zones and the Large-Scale Tropical Circulation on a Water-covered Earth. Journals of the Atmospheric Sciences, 1993, 50, 691-713.	0.6	99
72	Geoengineering as a design problem. Earth System Dynamics, 2016, 7, 469-497.	2.7	96

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73	On a fundamental problem in implementing flux-form advection schemes for tracer transport in 3-dimensional general circulation and chemistry transport models. Quarterly Journal of the Royal Meteorological Society, 2001, 127, 1035-1052.	1.0	95
74	On Shape-Preserving Interpolation and Semi-Lagrangian Transport. SIAM Journal on Scientific and Statistical Computing, 1990, 11, 656-687.	1.5	93
75	The balance of effects of deep convective mixing on tropospheric ozone. Geophysical Research Letters, 2003, 30, .	1.5	92
76	Using an explicit emission tagging method in global modeling of sourceâ€receptor relationships for black carbon in the Arctic: Variations, sources, and transport pathways. Journal of Geophysical Research D: Atmospheres, 2014, 119, 12,888.	1.2	92
77	Do biomass burning aerosols intensify drought in equatorial Asia during El NiÃ±o?. Atmospheric Chemistry and Physics, 2010, 10, 3515-3528.	1.9	87
78	Conservative Shape-Preserving Two-Dimensional Transport on a Spherical Reduced Grid. Monthly Weather Review, 1994, 122, 1337-1350.	0.5	86
79	Manipulating marine stratocumulus cloud amount and albedo: a process-modelling study of aerosol-cloud-precipitation interactions in response to injection of cloud condensation nuclei. Atmospheric Chemistry and Physics, 2011, 11, 4237-4249.	1.9	85
80	Determining the UV imaginary index of refraction of Saharan dust particles from Total Ozone Mapping Spectrometer data using a three-dimensional model of dust transport. Journal of Geophysical Research, 2002, 107, AAC 4-1.	3.3	84
81	Parametric sensitivity analysis of precipitation at global and local scales in the Community Atmosphere Model CAM5. Journal of Advances in Modeling Earth Systems, 2015, 7, 382-411.	1.3	80
82	Geoengineering by cloud seeding: influence on sea ice and climate system. Environmental Research Letters, 2009, 4, 045112.	2.2	80
83	A comparison of scavenging and deposition processes in global models: results from the WCRP Cambridge Workshop of 1995. Tellus, Series B: Chemical and Physical Meteorology, 2022, 52, 1025.	0.8	78
84	Climate statistics from the National Center for Atmospheric Research community climate model CCM2. Journal of Geophysical Research, 1994, 99, 20785.	3.3	77
85	Global Modeling Initiative assessment model: Model description, integration, and testing of the transport shell. Journal of Geophysical Research, 2001, 106, 1669-1691.	3.3	77
86	Choosing meteorological input for the global modeling initiative assessment of high-speed aircraft. Journal of Geophysical Research, 1999, 104, 27545-27564.	3.3	76
87	Source attribution of black carbon and its direct radiative forcing in China. Atmospheric Chemistry and Physics, 2017, 17, 4319-4336.	1.9	76
88	Evaluation of observed and modelled aerosol lifetimes using radioactive tracers of opportunity and an ensemble of 19 global models. Atmospheric Chemistry and Physics, 2016, 16, 3525-3561.	1.9	75
89	A new interactive chemistry-climate model: 1. Present-day climatology and interannual variability of the middle atmosphere using the model and 9 years of HALOE/UARS data. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	74
90	Assessing the CAM5 physics suite in the WRF-Chem model: implementation, resolution sensitivity, and a first evaluation for a regional case study. Geoscientific Model Development, 2014, 7, 755-778.	1.3	74

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91	Monotone Advection on the Sphere: An Eulerian Versus Semi-Lagrangian Approach. Journals of the Atmospheric Sciences, 1991, 48, 793-810.	0.6	73
92	Carbonaceous aerosols recorded in a southeastern Tibetan glacier: analysis of temporal variations and model estimates of sources and radiative forcing. Atmospheric Chemistry and Physics, 2015, 15, 1191-1204.	1.9	72
93	Ecosystem Impacts of Geoengineering: A Review for Developing a Science Plan. Ambio, 2012, 41, 350-369.	2.8	69
94	Aerosols in the E3SM Version 1: New Developments and Their Impacts on Radiative Forcing. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001851.	1.3	68
95	A sensitivity study on modeling black carbon in snow and its radiative forcing over the Arctic and Northern China. Environmental Research Letters, 2014, 9, 064001.	2.2	67
96	The roles of cloud drop effective radius and <i>LWP</i> in determining rain properties in marine stratocumulus. Geophysical Research Letters, 2012, 39, .	1.5	66
97	Aerosol optical depth increase in partly cloudy conditions. Journal of Geophysical Research, 2012, 117, .	3.3	65
98	Three-dimensional simulations of long-lived tracers using winds from MACCM2. Journal of Geophysical Research, 1997, 102, 21493-21513.	3.3	64
99	The role of circulation features on black carbon transport into the Arctic in the Community Atmosphere Model version 5 (CAM5). Journal of Geophysical Research D: Atmospheres, 2013, 118, 4657-4669.	1.2	64
100	Water vapor transport in the NCAR CCM2. Tellus, Series A: Dynamic Meteorology and Oceanography, 1994, 46, 34-51.	0.8	63
101	Representation of Arctic mixed-phase clouds and the Wegener-Bergeron-Findeisen process in climate models: Perspectives from a cloud-resolving study. Journal of Geophysical Research, 2011, 116, .	3.3	63
102	An energetic perspective on hydrological cycle changes in the Geoengineering Model Intercomparison Project. Journal of Geophysical Research D: Atmospheres, 2013, 118, 13,087.	1.2	63
103	Extreme Fire Season in California: A Glimpse Into the Future?. Bulletin of the American Meteorological Society, 2015, 96, S5-S9.	1.7	63
104	Water vapor transport in the NCAR CCM2. Tellus, Series A: Dynamic Meteorology and Oceanography, 1994, 46, 34-51.	0.8	62
105	Cumulus parameterizations in chemical transport models. Journal of Geophysical Research, 1995, 100, 26173.	3.3	62
106	How does increasing horizontal resolution in a global climate model improve the simulation of aerosolâ€cloud interactions?. Geophysical Research Letters, 2015, 42, 5058-5065.	1.5	62
107	A three-dimensional simulation of the Antarctic ozone hole: Impact of anthropogenic chlorine on the lower stratosphere and upper troposphere. Journal of Geophysical Research, 1997, 102, 8909-8930.	3.3	61
108	Improvements to the NCAR CSM-1 for Transient Climate Simulations. Journal of Climate, 2001, 14, 164-179.	1.2	61

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109	Characteristics of Atmospheric Transport Using Three Numerical Formulations for Atmospheric Dynamics in a Single GCM Framework. Journal of Climate, 2006, 19, 2243-2266.	1.2	61
110	Tracer Transport in Deep Convective Updrafts: Plume Ensemble versus Bulk Formulations. Journals of the Atmospheric Sciences, 2005, 62, 2880-2894.	0.6	60
111	PARAGON: An Integrated Approach for Characterizing Aerosol Climate Impacts and Environmental Interactions. Bulletin of the American Meteorological Society, 2004, 85, 1491-1502.	1.7	59
112	Global source attribution of sulfate concentration and direct and indirect radiative forcing. Atmospheric Chemistry and Physics, 2017, 17, 8903-8922.	1.9	58
113	Evaluation of Clouds in Version 1 of the E3SM Atmosphere Model With Satellite Simulators. Journal of Advances in Modeling Earth Systems, 2019, 11, 1253-1268.	1.3	55
114	Deducing CCl3F emissions using an inverse method and chemical transport models with assimilated winds. Journal of Geophysical Research, 1997, 102, 28153-28168.	3.3	54
115	Parametric Sensitivity and Uncertainty Quantification in the Version 1 of E3SM Atmosphere Model Based on Short Perturbed Parameter Ensemble Simulations. Journal of Geophysical Research D: Atmospheres, 2018, 123, 13,046.	1.2	53
116	Physicsâ€“Dynamics Coupling in Weather, Climate, and Earth System Models: Challenges and Recent Progress. Monthly Weather Review, 2018, 146, 3505-3544.	0.5	52
117	Unraveling driving forces explaining significant reduction in satellite-inferred Arctic surface albedo since the 1980s. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23947-23953.	3.3	51
118	Short ensembles: an efficient method for discerning climate-relevant sensitivities in atmospheric general circulation models. Geoscientific Model Development, 2014, 7, 1961-1977.	1.3	49
119	Regionally refined test bed in E3SM atmosphere model version 1 (EAMv1) and applications for high-resolution modeling. Geoscientific Model Development, 2019, 12, 2679-2706.	1.3	49
120	Black Carbon Amplifies Haze Over the North China Plain by Weakening the East Asian Winter Monsoon. Geophysical Research Letters, 2019, 46, 452-460.	1.5	49
121	Recent intensification of winter haze in China linked to foreign emissions and meteorology. Scientific Reports, 2018, 8, 2107.	1.6	48
122	Toward reconciling the influence of atmospheric aerosols and greenhouse gases on light precipitation changes in Eastern China. Journal of Geophysical Research D: Atmospheres, 2016, 121, 5878-5887.	1.2	46
123	Upwind-weighted advection schemes for ocean tracer transport: An evaluation in a passive tracer context. Journal of Geophysical Research, 1995, 100, 20763.	3.3	45
124	Midlatitude Cyclone Compositing to Constrain Climate Model Behavior Using Satellite Observations. Journal of Climate, 2008, 21, 5887-5903.	1.2	44
125	Increased Ocean Heat Convergence Into the High Latitudes With CO₂ Doubling Enhances Polarâ€Amplified Warming. Geophysical Research Letters, 2017, 44, 10,583.	1.5	44
126	The sensitivity of a general circulation model climate to the moisture transport formulation. Journal of Geophysical Research, 1991, 96, 13123-13137.	3.3	43

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127	Source Apportionments of Aerosols and Their Direct Radiative Forcing and Longâ€Term Trends Over Continental United States. Earth's Future, 2018, 6, 793-808.	2.4	42
128	Parameterizing deep convection using the assumed probability density function method. Geoscientific Model Development, 2015, 8, 1-19.	1.3	40
129	A Characterization of Tropical Transient Activity in the CAM3 Atmospheric Hydrologic Cycle. Journal of Climate, 2006, 19, 2222-2242.	1.2	39
130	A multiscale modeling framework model (superparameterized CAM5) with a higherâ€order turbulence closure: Model description and lowâ€cloud simulations. Journal of Advances in Modeling Earth Systems, 2015, 7, 484-509.	1.3	39
131	Sulfate Aerosol in the Arctic: Source Attribution and Radiative Forcing. Journal of Geophysical Research D: Atmospheres, 2018, 123, 1899-1918.	1.2	38
132	Observational constraint on cloud susceptibility weakened by aerosol retrieval limitations. Nature Communications, 2018, 9, 2640.	5.8	38
133	Sea spray geoengineering experiments in the geoengineering model intercomparison project (GeoMIP): Experimental design and preliminary results. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,175.	1.2	37
134	Shortâ€term time step convergence in a climate model. Journal of Advances in Modeling Earth Systems, 2015, 7, 215-225.	1.3	37
135	A three-dimensional transport model for the middle atmosphere. Journal of Geophysical Research, 1994, 99, 999.	3.3	36
136	The seasonal cycle of atmospheric CO2: A study based on the NCAR Community Climate Model (CCM2). Journal of Geophysical Research, 1996, 101, 15079-15097.	3.3	36
137	A high resolution global reanalysis highlighting the winter monsoon. Part I, reanalysis fields. Meteorology and Atmospheric Physics, 1997, 64, 123-150.	0.9	35
138	Explicit feedback and the management of uncertainty in meeting climate objectives with solar geoengineering. Environmental Research Letters, 2014, 9, 044006.	2.2	35
139	Geoengineering with stratospheric aerosols: What do we not know after a decade of research?. Earth's Future, 2016, 4, 543-548.	2.4	35
140	Climatic Responses to Future Transâ€Arctic Shipping. Geophysical Research Letters, 2018, 45, 9898-9908.	1.5	34
141	Variability, timescales, and nonlinearity in climate responses to black carbon emissions. Atmospheric Chemistry and Physics, 2019, 19, 2405-2420.	1.9	34
142	Response of Climate Simulation to a New Convective Parameterization in the National Center for Atmospheric Research Community Climate Model (CCM3)*. Journal of Climate, 1998, 11, 2097-2115.	1.2	33
143	Could geoengineering research help answer one of the biggest questions in climate science?. Earth's Future, 2017, 5, 659-663.	2.4	33
144	Impact of numerical choices on water conservation in the E3SM Atmosphere Model version 1 (EAMv1). Geoscientific Model Development, 2018, 11, 1971-1988.	1.3	33

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145	Threeâ€Moment Representation of Rain in a Bulk Microphysics Model. Journal of Advances in Modeling Earth Systems, 2019, 11, 257-277.	1.3	32
146	Parameterizing Vertically Coherent Cloud Distributions. Journals of the Atmospheric Sciences, 2002, 59, 2165-2182.	0.6	32
147	An Evaluation of ENSO Asymmetry in the Community Climate System Models: A View from the Subsurface. Journal of Climate, 2009, 22, 5933-5961.	1.2	31
148	Impact of the summer 2004 Alaska fires on top of the atmosphere clearâ€sky radiation fluxes. Journal of Geophysical Research, 2008, 113, .	3.3	30
149	Toward atmospheres without tops: Absorbing upper boundary conditions for numerical models. Quarterly Journal of the Royal Meteorological Society, 1986, 112, 1195-1218.	1.0	29
150	Numerical issues associated with compensating and competing processes in climate models: an example from ECHAM-HAM. Geoscientific Model Development, 2013, 6, 861-874.	1.3	29
151	The Global Modeling Initiative assessment model: Application to high-speed civil transport perturbation. Journal of Geophysical Research, 2001, 106, 1693-1711.	3.3	28
152	Examination of tracer transport in the NCAR CCM2 by comparison of CFCl3simulations with ALE/GAGE observations. Journal of Geophysical Research, 1994, 99, 12885.	3.3	27
153	A Sourceâ€“Receptor Perspective on the Polar Hydrologic Cycle: Sources, Seasonality, and Arcticâ€“Antarctic Parity in the Hydrologic Cycle Response to CO₂ Doubling. Journal of Climate, 2017, 30, 9999-10017.	1.2	26
154	The Role of Convective Gustiness in Reducing Seasonal Precipitation Biases in the Tropical West Pacific. Journal of Advances in Modeling Earth Systems, 2018, 10, 961-970.	1.3	26
155	Local Radiative Feedbacks Over the Arctic Based on Observed Shortâ€Term Climate Variations. Geophysical Research Letters, 2018, 45, 5761-5770.	1.5	26
156	Increasing large wildfires over the western United States linked to diminishing sea ice in the Arctic. Nature Communications, 2021, 12, 6048.	5.8	26
157	The impact of high altitude aircraft on the ozone layer in the stratosphere. Journal of Atmospheric Chemistry, 1994, 18, 103-128.	1.4	23
158	Analysis of the CEPEX ozone data using a 3D chemistryâ€meteorology model. Quarterly Journal of the Royal Meteorological Society, 1999, 125, 2987-3009.	1.0	23
159	Impacts of ENSO events on cloud radiative effects in preindustrial conditions: Changes in cloud fraction and their dependence on interactive aerosol emissions and concentrations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 6321-6335.	1.2	23
160	The long-term policy context for solar radiation management. Climatic Change, 2013, 121, 487-497.	1.7	22
161	Atmospheric CO2simulated by the National Center for Atmospheric Research Community Climate Model: 1. Mean fields and seasonal cycles. Journal of Geophysical Research, 1998, 103, 13213-13235.	3.3	21
162	Antarctic Clouds and Radiation within the NCAR Climate Models*. Journal of Climate, 2004, 17, 1198-1212.	1.2	21

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163	Process-model simulations of cloud albedo enhancement by aerosols in the Arctic. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20140052.	1.6	21
164	Atmospheric teleconnection processes linking winter air stagnation and haze extremes in China with regional Arctic sea ice decline. Atmospheric Chemistry and Physics, 2020, 20, 4999-5017.	1.9	20
165	Developments in Normal Mode Initialization. Part II: A New Method and its Comparison with Currently Used Schemes. Monthly Weather Review, 1985, 113, 1753-1770.	0.5	19
166	Integrating and Interpreting Aerosol Observations and Models within the PARAGON Framework. Bulletin of the American Meteorological Society, 2004, 85, 1523-1534.	1.7	19
167	A novel approach for determining sourceâ€“receptor relationships in model simulations: a case study of black carbon transport in northern hemisphere winter. Environmental Research Letters, 2013, 8, 024042.	2.2	19
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