Jason Cole

List of Publications by Year in descending order

65 papers	4,821 citations	159585 30 h-index	106344 65 g-index
92 all docs	92 docs citations	92 times ranked	5456 citing authors

#	Article	IF	Citations
1	The Canadian Earth System Model version 5 (CanESM5.0.3). Geoscientific Model Development, 2019, 12, 4823-4873.	3.6	581
2	The EarthCARE Satellite: The Next Step Forward in Global Measurements of Clouds, Aerosols, Precipitation, and Radiation. Bulletin of the American Meteorological Society, 2015, 96, 1311-1332.	3.3	443
3	Volcanic contribution to decadal changes in tropospheric temperature. Nature Geoscience, 2014, 7, 185-189.	12.9	364
4	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
5	The Canadian Fourth Generation Atmospheric Global Climate Model (CanAM4). Part I: Representation of Physical Processes. Atmosphere - Ocean, 2013, 51, 104-125.	1.6	304
6	Climate model response from the Geoengineering Model Intercomparison Project (GeoMIP). Journal of Geophysical Research D: Atmospheres, 2013, 118, 8320-8332.	3.3	226
7	Intercomparison of model simulations of mixedâ€phase clouds observed during the ARM Mixedâ€Phase Arctic Cloud Experiment. I: singleâ€layer cloud. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 979-1002.	2.7	224
8	The hydrological impact of geoengineering in the Geoengineering Model Intercomparison Project (GeoMIP). Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,036.	3.3	202
9	Effective radiative forcing and adjustments in CMIP6 models. Atmospheric Chemistry and Physics, 2020, 20, 9591-9618.	4.9	149
10	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.	3.2	134
11	The impact of abrupt suspension of solar radiation management (termination effect) in experiment G2 of the Geoengineering Model Intercomparison Project (GeoMIP). Journal of Geophysical Research D: Atmospheres, 2013, 118, 9743-9752.	3.3	129
12	The Continual Intercomparison of Radiation Codes: Results from Phase I. Journal of Geophysical Research, 2012, 117, .	3.3	112
13	A multi-model assessment of regional climate disparities caused by solar geoengineering. Environmental Research Letters, 2014, 9, 074013.	5.2	101
14	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.	3.3	90
15	Intercomparison of model simulations of mixedâ€phase clouds observed during the ARM Mixedâ€Phase Arctic Cloud Experiment. II: Multilayer cloud. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 1003-1019.	2.7	84
16	A multimodel examination of climate extremes in an idealized geoengineering experiment. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3900-3923.	3.3	75
17	An energetic perspective on hydrological cycle changes in the Geoengineering Model Intercomparison Project. Journal of Geophysical Research D: Atmospheres, 2013, 118, 13,087.	3.3	63
18	The impact of parametrized convection on cloud feedback. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140414.	3.4	63

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19	CAUSES: Attribution of Surface Radiation Biases in NWP and Climate Models near the U.S. Southern Great Plains. Journal of Geophysical Research D: Atmospheres, 2018, 123, 3612-3644.	3.3	62
20	CAUSES: On the Role of Surface Energy Budget Errors to the Warm Surface Air Temperature Error Over the Central United States. Journal of Geophysical Research D: Atmospheres, 2018, 123, 2888-2909.	3.3	60
21	Radiative flux and forcing parameterization error in aerosolâ€free clear skies. Geophysical Research Letters, 2015, 42, 5485-5492.	4.0	57
22	The impact of equilibrating hemispheric albedos on tropical performance in the HadGEM2â€ES coupled climate model. Geophysical Research Letters, 2016, 43, 395-403.	4.0	54
23	Solar radiation management impacts on agriculture in China: A case study in the Geoengineering Model Intercomparison Project (GeoMIP). Journal of Geophysical Research D: Atmospheres, 2014, 119, 8695-8711.	3.3	53
24	Introduction to CAUSES: Description of Weather and Climate Models and Their Nearâ€Surface Temperature Errors in 5Âday Hindcasts Near the Southern Great Plains. Journal of Geophysical Research D: Atmospheres, 2018, 123, 2655-2683.	3.3	53
25	Significant impact of forcing uncertainty in a large ensemble of climate model simulations. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	46
26	Investigating the spread in surface albedo for snowâ€covered forests in CMIP5 models. Journal of Geophysical Research D: Atmospheres, 2016, 121, 1104-1119.	3.3	43
27	The Climate Response to Emissions Reductions Due to COVIDâ€19: Initial Results From CovidMIP. Geophysical Research Letters, 2021, 48, e2020GL091883.	4.0	43
28	New Generation of Climate Models Track Recent Unprecedented Changes in Earth's Radiation Budget Observed by CERES. Geophysical Research Letters, 2020, 47, e2019GL086705.	4.0	39
29	Response to marine cloud brightening in a multi-model ensemble. Atmospheric Chemistry and Physics, 2018, 18, 621-634.	4.9	37
30	Evaluating the Diurnal Cycle of Upper-Tropospheric Ice Clouds in Climate Models Using SMILES Observations. Journals of the Atmospheric Sciences, 2015, 72, 1022-1044.	1.7	35
31	A quantitative assessment of precipitation associated with the ITCZ in the CMIP5 GCM simulations. Climate Dynamics, 2016, 47, 1863-1880.	3.8	33
32	Robustness, uncertainties, and emergent constraints in the radiative responses of stratocumulus cloud regimes to future warming. Climate Dynamics, 2016, 46, 3025-3039.	3.8	31
33	Vertical structure and physical processes of the Maddenâ€Julian Oscillation: Biases and uncertainties at short range. Journal of Geophysical Research D: Atmospheres, 2015, 120, 4749-4763.	3.3	26
34	Estimation of Errors in Two-Stream Approximations of the Solar Radiative Transfer Equation for Cloudy-Sky Conditions. Journals of the Atmospheric Sciences, 2015, 72, 4053-4074.	1.7	25
35	Extreme temperature and precipitation response to solar dimming and stratospheric aerosol geoengineering. Atmospheric Chemistry and Physics, 2018, 18, 10133-10156.	4.9	25
36	Bias in CMIP6 models as compared to observed regional dimming and brightening. Atmospheric Chemistry and Physics, 2020, 20, 16023-16040.	4.9	25

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37	Assessing Simulated Clouds and Radiative Fluxes Using Properties of Clouds Whose Tops are Exposed to Space. Journal of Climate, 2011, 24, 2715-2727.	3.2	24
38	Comparing different generations of idealized solar geoengineering simulations in the Geoengineering Model Intercomparison Project (GeoMIP). Atmospheric Chemistry and Physics, 2021, 21, 4231-4247.	4.9	22
39	Effects of forcing differences and initial conditions on inter-model agreement in the VolMIP volc-pinatubo-full experiment. Geoscientific Model Development, 2022, 15, 2265-2292.	3.6	22
40	Simulation of black carbon in snow and its climate impact in the Canadian Global Climate Model. Atmospheric Chemistry and Physics, 2015, 15, 10887-10904.	4.9	21
41	Shortwave radiative forcing, rapid adjustment, and feedback to the surface by sulfate geoengineering: analysis of the Geoengineering Model Intercomparison ProjectÂG4 scenario. Atmospheric Chemistry and Physics, 2017, 17, 3339-3356.	4.9	21
42	The climate effects of increasing ocean albedo: an idealized representation of solar geoengineering. Atmospheric Chemistry and Physics, 2018, 18, 13097-13113.	4.9	19
43	Forcings and feedbacks in the GeoMIP ensemble for a reduction in solar irradiance and increase in CO₂. Journal of Geophysical Research D: Atmospheres, 2014, 119, 5226-5239.	3.3	19
44	Full-Spectrum Correlated-k Distribution for Shortwave Atmospheric Radiative Transfer. Journals of the Atmospheric Sciences, 2004, 61, 2588-2601.	1.7	18
45	Constraints on interactions between aerosols and clouds on a global scale from a combination of MODIS-CERES satellite data and climate simulations. Atmospheric Chemistry and Physics, 2010, 10, 9851-9861.	4.9	18
46	The diurnal cycle of marine cloud feedback in climate models. Climate Dynamics, 2015, 44, 1419-1436.	3.8	18
47	Fast responses on pre-industrial climate from present-day aerosols in a CMIP6 multi-model study. Atmospheric Chemistry and Physics, 2020, 20, 8381-8404.	4.9	18
48	A Global Climatology of Outgoing Longwave Spectral Cloud Radiative Effect and Associated Effective Cloud Properties. Journal of Climate, 2014, 27, 7475-7492.	3.2	17
49	Longwave Band-By-Band Cloud Radiative Effect and Its Application in GCM Evaluation. Journal of Climate, 2013, 26, 450-467.	3.2	14
50	Simulation of convective moistening of the extratropical lower stratosphere using a numerical weather prediction model. Atmospheric Chemistry and Physics, 2020, 20, 2143-2159.	4.9	14
51	How Well Are Clouds Simulated over Greenland in Climate Models? Consequences for the Surface Cloud Radiative Effect over the Ice Sheet. Journal of Climate, 2018, 31, 9293-9312.	3.2	12
52	Key factors governing uncertainty in the response to sunshade geoengineering from a comparison of the GeoMIP ensemble and a perturbed parameter ensemble. Journal of Geophysical Research D: Atmospheres, 2014, 119, 7946-7962.	3.3	11
53	A parametrization of 3â€Ð subgridâ€scale clouds for conventional GCMs: Assessment using Aâ€Train satellite data and solar radiative transfer characteristics. Journal of Advances in Modeling Earth Systems, 2016, 8, 566-597.	3.8	11
54	Evaluation of a highâ€resolution numerical weather prediction model's simulated clouds using observations from CloudSat, GOESâ€13 and in situ aircraft. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 1681-1694.	2.7	11

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55	Evaluation of CMIP5 upper troposphere and lower stratosphere geopotential height with GPS radio occultation observations. Journal of Geophysical Research D: Atmospheres, 2015, 120, 1678-1689.	3.3	10
56	Cloud Feedbacks from CanESM2 to CanESM5.0 and their influence on climate sensitivity. Geoscientific Model Development, 2021, 14, 5355-5372.	3.6	10
57	Quantifying CanESM5 and EAMv1 sensitivities to Mt. Pinatubo volcanic forcing for the CMIP6 historical experiment. Geoscientific Model Development, 2020, 13, 4831-4843.	3.6	9
58	An Observational Constraint on Aviationâ€Induced Cirrus From the COVIDâ€19â€Induced Flight Disruption. Geophysical Research Letters, 2021, 48, e2021GL095882.	4.0	8
59	Assessing the quality of activeâ€“passive satellite retrievals using broadâ€band radiances. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 1294-1305.	2.7	7
60	Decadal Covariability of the Northern Wintertime Land Surface Temperature and Atmospheric Circulation. Journal of Climate, 2014, 27, 633-651.	3.2	5
61	Accounting for Several Infrared Radiation Processes in Climate Models. Journal of Climate, 2019, 32, 4601-4620.	3.2	5
62	Modelling the relationship between liquid water content and cloud droplet number concentration observed in low clouds in the summer Arctic and its radiative effects. Atmospheric Chemistry and Physics, 2020, 20, 29-43.	4.9	5
63	Application of a Monte Carlo solar radiative transfer modelin the McICA framework. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 3130-3139.	2.7	4
64	A comparison of two representations of subgridâ€scale cloud structure in a global model: radiative effects as a function of cloud characteristics. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 2551-2561.	2.7	2
65	Convective response to large-scale forcing in the tropical western Pacific simulated by spCAM5 and CanAM4.3. Geoscientific Model Development, 2019, 12, 2107-2117.	3.6	1