Karl E Taylor

List of Publications by Citations

111 papers	29,344 citations	56 h-index	115 g-index
115 ext. papers	33,827 ext. citations	10.1 avg, IF	7.58 L-index

#	Paper	IF	Citations
111	An Overview of CMIP5 and the Experiment Design. *Bulletin of the American Meteorological Society*, **2012**, 93, 485-498	6.1	9473
110	Summarizing multiple aspects of model performance in a single diagram. *Journal of Geophysical Research*, **2001**, 106, 7183-7192		4127
109	Overview of the Coupled Model Intercomparison Project Phase 6 (CMIP6) experimental design and organization. *Geoscientific Model Development*, **2016**, 9, 1937-1958	6.3	2373
108	THE WCRP CMIP3 Multimodel Dataset: A New Era in Climate Change Research. *Bulletin of the American Meteorological Society*, **2007**, 88, 1383-1394	6.1	2226
107	Performance metrics for climate models. *Journal of Geophysical Research*, **2008**, 113,		765
106	An Overview of the Results of the Atmospheric Model Intercomparison Project (AMIP I). *Bulletin of the American Meteorological Society*, **1999**, 80, 29-55	6.1	550
105	Forcing, feedbacks and climate sensitivity in CMIP5 coupled atmosphere-ocean climate models. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	490
104	Statistical significance of trends and trend differences in layer-average atmospheric temperature time series. *Journal of Geophysical Research*, **2000**, 105, 7337-7356		482
103	Interpretation of cloud-climate feedback as produced by 14 atmospheric general circulation models. *Science*, **1989**, 245, 513-6	33.3	382
102	Causes of Higher Climate Sensitivity in CMIP6 Models. *Geophysical Research Letters*, **2020**, 47, e2019GL085782	4.9	378
101	Contributions of anthropogenic and natural forcing to recent tropopause height changes. *Science*, **2003**, 301, 479-83	33.3	332
100	A search for human influences on the thermal structure of the atmosphere. *Nature*, **1996**, 382, 39-46	50.4	320
99	Monsoon changes for 6000 years ago: Results of 18 simulations from the Paleoclimate Modeling Intercomparison Project (PMIP). *Geophysical Research Letters*, **1999**, 26, 859-862	4.9	318
98	Volcanic contribution to decadal changes in tropospheric temperature. *Nature Geoscience*, **2014**, 7, 185-189	18.3	304
97	On the contribution of local feedback mechanisms to the range of climate sensitivity in two GCM ensembles. *Climate Dynamics*, **2006**, 27, 17-38	4.2	302
96	An overview of results from the Coupled Model Intercomparison Project. *Global and Planetary Change*, **2003**, 37, 103-133	4.2	275
95	Response of the climate system to atmospheric aerosols and greenhouse gases. *Nature*, **1994**, 369, 734-737	50.4	264

94	The Geoengineering Model Intercomparison Project (GeoMIP). *Atmospheric Science Letters*, **2011**, 12, 162-167	2.4	259
93	Identification of human-induced changes in atmospheric moisture content. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 15248-53	11.5	234
92	Amplification of surface temperature trends and variability in the tropical atmosphere. *Science*, **2005**, 309, 1551-6	33.3	229
91	Contributions of Different Cloud Types to Feedbacks and Rapid Adjustments in CMIP5*. *Journal of Climate*, **2013**, 26, 5007-5027	4.4	209
90	Impact of geoengineering schemes on the global hydrological cycle. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 7664-9	11.5	207
89	Consistency of modelled and observed temperature trends in the tropical troposphere. *International Journal of Climatology*, **2008**, 28, 1703-1722	3.5	183
88	Detecting and Attributing External Influences on the Climate System: A Review of Recent Advances. *Journal of Climate*, **2005**, 18, 1291-1314	4.4	173
87	An assessment of the radiative effects of anthropogenic sulfate. *Journal of Geophysical Research*, **1997**, 102, 3761-3778		172
86	The Decadal Climate Prediction Project (DCPP) contribution to CMIP6. *Geoscientific Model Development*, **2016**, 9, 3751-3777	6.3	162
85	Evaluating the present-day simulation of clouds, precipitation, and radiation in climate models. *Journal of Geophysical Research*, **2008**, 113,		153
84	Behavior of tropopause height and atmospheric temperature in models, reanalyses, and observations: Decadal changes. *Journal of Geophysical Research*, **2003**, 108, ACL 1-1		144
83	Interpretation of snow-climate feedback as produced by 17 general circulation models. *Science*, **1991**, 253, 888-92	33.3	143
82	Context for interpreting equilibrium climate sensitivity and transient climate response from the CMIP6 Earth system models. *Science Advances*, **2020**, 6, eaba1981	14.3	142
81	Incorporating model quality information in climate change detection and attribution studies. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 14778-83	11.5	137
80	Estimating Shortwave Radiative Forcing and Response in Climate Models. *Journal of Climate*, **2007**, 20, 2530-2543	4.4	132
79	OMIP contribution to CMIP6: experimental and diagnostic protocol for the physical component of the Ocean Model Intercomparison Project. *Geoscientific Model Development*, **2016**, 9, 3231-3296	6.3	130
78	Towards the detection and attribution of an anthropogenic effect on climate. *Climate Dynamics*, **1995**, 12, 77-100	4.2	128
77	Climate Forcings and Climate Sensitivities Diagnosed from Coupled Climate Model Integrations. *Journal of Climate*, **2006**, 19, 6181-6194	4.4	127

76	High-resolution simulations of global climate, part 1: present climate. *Climate Dynamics*, **2003**, 21, 371-390	4.2	127
75	Separating signal and noise in atmospheric temperature changes: The importance of timescale. *Journal of Geophysical Research*, **2011**, 116, n/a-n/a		125
74	Forced and unforced ocean temperature changes in Atlantic and Pacific tropical cyclogenesis regions. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 13905-10	11.5	118
73	The Community Climate System Model. *Bulletin of the American Meteorological Society*, **2001**, 82, 2357-2376	3.1	111
72	Uncertainties in observationally based estimates of temperature change in the free atmosphere. *Journal of Geophysical Research*, **1999**, 104, 6305-6333		111
71	CMIP5 Scientific Gaps and Recommendations for CMIP6. *Bulletin of the American Meteorological Society*, **2017**, 98, 95-105	6.1	109
70	Human-induced global ocean warming on multidecadal timescales. *Nature Climate Change*, **2012**, 2, 524-529	12.4	105
69	Identifying human influences on atmospheric temperature. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 26-33	11.5	102
68	Climate Model Intercomparisons: Preparing for the Next Phase. *Eos*, **2014**, 95, 77-78	1.5	100
67	Quantifying components of aerosol-cloud-radiation interactions in climate models. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 7599-7615	4.4	98
66	Identification of anthropogenic climate change using a second-generation reanalysis. *Journal of Geophysical Research*, **2004**, 109, n/a-n/a		92
65	Quantifying underestimates of long-term upper-ocean warming. *Nature Climate Change*, **2014**, 4, 999-1005	12.4	91
64	Accounting for the effects of volcanoes and ENSO in comparisons of modeled and observed temperature trends. *Journal of Geophysical Research*, **2001**, 106, 28033-28059		85
63	Quantifying the Sources of Intermodel Spread in Equilibrium Climate Sensitivity. *Journal of Climate*, **2016**, 29, 513-524	4.4	79
62	Volcanoes and climate: Krakatoa's signature persists in the ocean. *Nature*, **2006**, 439, 675	50.4	79
61	Interpreting differential temperature trends at the surface and in the lower troposphere. *Science*, **2000**, 287, 1227-32	33.3	72
60	Uncertainties in carbon dioxide radiative forcing in atmospheric general circulation models. *Science*, **1993**, 262, 1252-5	33.3	72
59	Krakatoa lives: The effect of volcanic eruptions on ocean heat content and thermal expansion. *Geophysical Research Letters*, **2006**, 33,	4.9	67

58	Overview of the Coupled Model Intercomparison Project Phase 6 (CMIP6) experimental design and organisation		63
57	Human and natural influences on the changing thermal structure of the atmosphere. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 17235-40	11.5	61
56	Relationship between temperature and precipitable water changes over tropical oceans. *Geophysical Research Letters*, **2007**, 34,	4.9	58
55	Influence of satellite data uncertainties on the detection of externally forced climate change. *Science*, **2003**, 300, 1280-4	33.3	56
54	Intercomparison and interpretation of surface energy fluxes in atmospheric general circulation models. *Journal of Geophysical Research*, **1992**, 97, 3711		55
53	Present and future surface climate in the western USA as simulated by 15 global climate models. *Climate Dynamics*, **2004**, 23, 455-472	4.2	51
52	Towards improved and more routine Earth system model evaluation in CMIP. *Earth System Dynamics*, **2016**, 7, 813-830	4.8	48
51	Simulated and observed variability in ocean temperature and heat content. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 10768-73	11.5	46
50	Variability of ocean heat uptake: Reconciling observations and models. *Journal of Geophysical Research*, **2006**, 111,		40
49	A More Powerful Reality Test for Climate Models. *Eos*, **2016**, 97,	1.5	38
48	Comparison of the seasonal change in cloud-radiative forcing from atmospheric general circulation models and satellite observations. *Journal of Geophysical Research*, **1997**, 102, 16593-16603		36
47	An Analysis of Cloud Liquid Water Feedback and Global Climate Sensitivity in a General Circulation Model. *Journal of Climate*, **1992**, 5, 907-919	4.4	36
46	Requirements for a global data infrastructure in support of CMIP6. *Geoscientific Model Development*, **2018**, 11, 3659-3680	6.3	31
45	External Influences on Modeled and Observed Cloud Trends. *Journal of Climate*, **2015**, 28, 4820-4840	4.4	29
44	Quantifying the agreement between observed and simulated extratropical modes of interannual variability. *Climate Dynamics*, **2019**, 52, 4057-4089	4.2	24
43	Evolving Obs4MIPs to Support Phase 6 of the Coupled Model Intercomparison Project (CMIP6). *Bulletin of the American Meteorological Society*, **2015**, 96, ES131-ES133	6.1	24
42	Planktonic dimethylsulfide and cloud albedo: An estimate of the feedback response. *Climatic Change*, **1991**, 18, 1-15	4.5	24
41	Model test of CCN-cloud albedo climate forcing. *Geophysical Research Letters*, **1990**, 17, 607-610	4.9	24

40	The reproducibility of observational estimates of surface and atmospheric temperature change. *Science*, **2011**, 334, 1232-3	33.3	23
39	The Roles of Mean Meridional Motions and Large-Scale Eddies in Zonally Averaged Circulations. *Journals of the Atmospheric Sciences*, **1980**, 37, 1-19	2.1	23
38	The Influence of Subsurface Energy Storage on Seasonal Temperature Variations. *Journal of Applied Meteorology*, **1976**, 15, 1129-1138		23
37	How Can We Advance Our Weather and Climate Models as a Community?. *Bulletin of the American Meteorological Society*, **2002**, 83, 431-434	6.1	22
36	GCM evaluation of a mechanism for El Niño triggering by the El Chichón ash cloud. *Geophysical Research Letters*, **1995**, 22, 2369-2372	4.9	22
35	An Analysis of the Biases in Traditional Cyclone Frequency Maps. *Monthly Weather Review*, **1986**, 114, 1481-1490	2.4	20
34	Observed and Projected Changes to the Precipitation Annual Cycle. *Journal of Climate*, **2017**, 30, 4983-4995	4.4	19
33	Relative detectability of greenhouse-gas and aerosol climate change signals. *Climate Dynamics*, **1998**, 14, 781-790	4.2	18
32	Documenting Climate Models and Their Simulations. *Bulletin of the American Meteorological Society* , **2013**, 94, 623-627	6.1	17
31	Competing influences of anthropogenic warming, ENSO, and plant physiology on future terrestrial aridity. *Journal of Climate*, **2017**, 30, 6883-6904	4.4	15
30	Formulas for calculating available potential energy over uneven topography. *Tellus*, **1979**, 31, 236-245		15
29	Moving beyond the Total Sea Ice Extent in Gauging Model Biases. *Journal of Climate*, **2016**, 29, 8965-8987	4.4	15
28	Upper limit for sea ice albedo feedback contribution to global warming. *Journal of Geophysical Research*, **1991**, 96, 9169		14
27	The CMIP6 Data Request (DREQ, version 01.00.31). *Geoscientific Model Development*, **2020**, 13, 201-224	6.3	13
26	Toward Standardized Data Sets for Climate Model Experimentation. *Eos*, **2018**, 99,	1.5	13
25	Documenting numerical experiments in support of the Coupled Model Intercomparison Project Phase 6 (CMIP6). *Geoscientific Model Development*, **2020**, 13, 2149-2167	6.3	12
24	High-Frequency Intermittency in Observed and Model-Simulated Precipitation. *Geophysical Research Letters*, **2018**, 45, 12,514	4.9	12
23	A data model of the Climate and Forecast metadata conventions (CF-1.6) with a software implementation (cf-python v2.1). *Geoscientific Model Development*, **2017**, 10, 4619-4646	6.3	11

22	Comment on "Climate forcing by the volcanic eruption of Mount Pinatubo" by David H. Douglass and Robert S. Knox. *Geophysical Research Letters*, **2005**, 32,	4.9	11
21	Coupled Climate Model appraisal: A benchmark for future studies. *Eos*, **2006**, 87, 185	1.5	11
20	A Vertical Finite-Difference Scheme for Hydrostatic and Nonhydrostatic Equations. *Monthly Weather Review*, **1984**, 112, 1398-1402	2.4	11
19	Sulphate aerosols and climate. *Nature*, **1989**, 340, 438-438	50.4	10
18	The Decadal Climate Prediction Project **2016**,		10
17	Observations for Model Intercomparison Project (Obs4MIPs): status for CMIP6. *Geoscientific Model Development*, **2020**, 13, 2945-2958	6.3	9
16	The Potential Effect of GCM Uncertainties and Internal Atmospheric Variability on Anthropogenic Signal Detection. *Journal of Climate*, **1998**, 11, 659-675	4.4	8
15	Coupled ocean-atmosphere climate simulations compared with simulations using prescribed sea surface temperature: effect of a "perfect ocean" *Global and Planetary Change*, **2004**, 41, 1-14	4.2	7
14	Limitations of the equivalent CO2 approximation in climate change simulations. *Journal of Geophysical Research*, **2001**, 106, 22593-22603		7
13	Designing and Documenting Experiments in CMIP6 **2019**,		6
12	Scale space methods for climate model analysis. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 5082-5097	4.4	6
11	Correlation approaches to detection. *Geophysical Research Letters*, **2000**, 27, 2973-2976	4.9	6
10	The response of the high-latitude thermosphere to geomagnetic substorms. *Advances in Space Research*, **1985**, 5, 289-292	2.4	6
9	. *Tellus*, **1979**, 31, 236-245		6
8	Experimental and diagnostic protocol for the physical component of the CMIP6 Ocean Model Intercomparison Project (OMIP)		4
7	The effect of horizontal resolution on ocean surface heat fluxes in the ECMWF model. *Climate Dynamics*, **1993**, 9, 17-32	4.2	3
6	The CMIP6 Data Request (version 01.00.31) **2019**,		1
5	Projected Effects of Increasing Concentrations of Carbon Dioxide and Trace Gases on Climate. *ASA Special Publication*, **2016**, 1-17	1.1	1

4	Climate Models for the Study of Paleoclimates **1994**, 21-41		1
3	Observations for Model Intercomparison Project (Obs4MIPs): Status for CMIP6 **2019**,		1
2	Benchmarking performance changes in the simulation of extratropical modes of variability across CMIP generations. *Journal of Climate*, **2021**, 1-70	4.4	0
1	[Comment on On award to Crichton] On the validity climate models. *Eos*, **2007**, 88, 121	1.5	