

Jennifer E Kay

List of Publications by Year in descending order

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91
papers

13,078
citations

47006

47
h-index

43889

91
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102
all docs

102
docs citations

102
times ranked

11564
citing authors

#	ARTICLE	IF	CITATIONS
1	Climate Sensitivity is Sensitive to Changes in Ocean Heat Transport. <i>Journal of Climate</i> , 2022, 35, 2653-2674.	3.2	6
2	The Balance Between Heterogeneous and Homogeneous Nucleation of Ice Clouds Using CAM5/CARMA. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	3.3	5
3	Less Surface Sea Ice Melt in the CESM2 Improves Arctic Sea Ice Simulation With Minimal Non-Polar Climate Impacts. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	3.8	9
4	LGM Paleoclimate Constraints Inform Cloud Parameterizations and Equilibrium Climate Sensitivity in CESM2. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	3.8	26
5	An underestimated negative cloud feedback from cloud lifetime changes. <i>Nature Climate Change</i> , 2021, 11, 508-513.	18.8	51
6	The Polar Radiant Energy in the Far Infrared Experiment: A New Perspective on Polar Longwave Energy Exchanges. <i>Bulletin of the American Meteorological Society</i> , 2021, 102, E1431-E1449.	3.3	14
7	The climate response to increased cloud liquid water over the Arctic in CESM1: a sensitivity study of Wegener-Bergeron-Findeisen process. <i>Climate Dynamics</i> , 2021, 56, 3373-3394.	3.8	8
8	Quantifying the role of ocean coupling in Arctic amplification and sea-ice loss over the 21st century. <i>Npj Climate and Atmospheric Science</i> , 2021, 4, .	6.8	10
9	Quantifying student engagement in learning about climate change using galvanic hand sensors in a controlled educational setting. <i>Climatic Change</i> , 2020, 159, 17-36.	3.6	11
10	Arctic Clouds and Precipitation in the Community Earth System Model Version 2. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD032521.	3.3	17
11	Quantifying the Influence of Cloud Radiative Feedbacks on Arctic Surface Warming Using Cloud Locking in an Earth System Model. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089207.	4.0	25
12	Fasting season length sets temporal limits for global polar bear persistence. <i>Nature Climate Change</i> , 2020, 10, 732-738.	18.8	68
13	Arctic and Antarctic Sea Ice Mean State in the Community Earth System Model Version 2 and the Influence of Atmospheric Chemistry. <i>Journal of Geophysical Research: Oceans</i> , 2020, 125, e2019JC015934.	2.6	29
14	Going with the floe: tracking CESM Large Ensemble sea ice in the Arctic provides context for ship-based observations. <i>Cryosphere</i> , 2020, 14, 1259-1271.	3.9	3
15	The Community Earth System Model Version 2 (CESM2). <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2019MS001916.	3.8	935
16	Insights from Earth system model initial-condition large ensembles and future prospects. <i>Nature Climate Change</i> , 2020, 10, 277-286.	18.8	436
17	Improved clouds over Southern Ocean amplify Antarctic precipitation response to ozone depletion in an earth system model. <i>Climate Dynamics</i> , 2020, 55, 1665-1684.	3.8	3
18	Early climate models successfully predicted global warming. <i>Nature</i> , 2020, 578, 45-46.	27.8	20

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19	Present-day and future Greenland Ice Sheet precipitation frequency from CloudSat observations and the Community Earth System Model. <i>Cryosphere</i> , 2020, 14, 2253-2265.	3.9	14
20	When Will Spaceborne Cloud Radar Detect Upward Shifts in Cloud Heights?. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 7270-7285.	3.3	8
21	Thicker Clouds and Accelerated Arctic Sea Ice Decline: The Atmosphere–Sea Ice Interactions in Spring. <i>Geophysical Research Letters</i> , 2019, 46, 6980-6989.	4.0	47
22	Cloud Response to Arctic Sea Ice Loss and Implications for Future Feedback in the CESM1 Climate Model. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 1003-1020.	3.3	56
23	An Ensemble Covariance Framework for Quantifying Forced Climate Variability and Its Time of Emergence. <i>Journal of Climate</i> , 2018, 31, 4117-4133.	3.2	11
24	The Combined Influence of Observed Southern Ocean Clouds and Sea Ice on Top-of-Atmosphere Albedo. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 4461-4475.	3.3	11
25	Isolating the Liquid Cloud Response to Recent Arctic Sea Ice Variability Using Spaceborne Lidar Observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 473-490.	3.3	63
26	Process-Based Model Evaluation Using Surface Energy Budget Observations in Central Greenland. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 4777-4796.	3.3	15
27	The influence of extratropical cloud phase and amount feedbacks on climate sensitivity. <i>Climate Dynamics</i> , 2018, 50, 3097-3116.	3.8	68
28	How Well Are Clouds Simulated over Greenland in Climate Models? Consequences for the Surface Cloud Radiative Effect over the Ice Sheet. <i>Journal of Climate</i> , 2018, 31, 9293-9312.	3.2	12
29	Scale-Aware and Definition-Aware Evaluation of Modeled Near-Surface Precipitation Frequency Using CloudSat Observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 4294-4309.	3.3	50
30	Influence of the Atlantic Meridional Overturning Circulation on the Northern Hemisphere Surface Temperature Response to Radiative Forcing. <i>Journal of Climate</i> , 2018, 31, 9207-9224.	3.2	17
31	Quantifying climate feedbacks in polar regions. <i>Nature Communications</i> , 2018, 9, 1919.	12.8	254
32	Evaluation of current and projected Antarctic precipitation in CMIP5 models. <i>Climate Dynamics</i> , 2017, 48, 225-239.	3.8	125
33	How will precipitation change in extratropical cyclones as the planet warms? Insights from a large initial condition climate model ensemble. <i>Climate Dynamics</i> , 2017, 49, 1765-1781.	3.8	41
34	Direct atmosphere opacity observations from CALIPSO provide new constraints on cloud–radiation interactions. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 1066-1085.	3.3	38
35	Greenland Clouds Observed in CALIPSO-GOCCP: Comparison with Ground-Based Summit Observations. <i>Journal of Climate</i> , 2017, 30, 6065-6083.	3.2	18
36	Do Southern Ocean Cloud Feedbacks Matter for 21st Century Warming?. <i>Geophysical Research Letters</i> , 2017, 44, 12,447.	4.0	27

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37	The Abisko Polar Prediction School. <i>Bulletin of the American Meteorological Society</i> , 2017, 98, 445-447.	3.3	2
38	The Cloud Feedback Model Intercomparison Project (CFMIP) contribution to CMIP6. <i>Geoscientific Model Development</i> , 2017, 10, 359-384.	3.6	186
39	Evaluating lossy data compression on climate simulation data within a large ensemble. <i>Geoscientific Model Development</i> , 2016, 9, 4381-4403.	3.6	56
40	Recent Advances in Arctic Cloud and Climate Research. <i>Current Climate Change Reports</i> , 2016, 2, 159-169.	8.6	120
41	Evaluating and improving cloud phase in the Community Atmosphere Model version 5 using spaceborne lidar observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 4162-4176.	3.3	98
42	Global Climate Impacts of Fixing the Southern Ocean Shortwave Radiation Bias in the Community Earth System Model (CESM). <i>Journal of Climate</i> , 2016, 29, 4617-4636.	3.2	224
43	How predictable is the timing of a summer ice-free Arctic?. <i>Geophysical Research Letters</i> , 2016, 43, 9113-9120.	4.0	147
44	Atmospheric drying as the main driver of dramatic glacier wastage in the southern Indian Ocean. <i>Scientific Reports</i> , 2016, 6, 32396.	3.3	29
45	The Curious Nature of the Hemispheric Symmetry of the Earth's Water and Energy Balances. <i>Current Climate Change Reports</i> , 2016, 2, 135-147.	8.6	41
46	Mapping the future expansion of Arctic open water. <i>Nature Climate Change</i> , 2016, 6, 280-285.	18.8	137
47	Influence of internal variability on Arctic sea-ice trends. <i>Nature Climate Change</i> , 2015, 5, 86-89.	18.8	235
48	The Role of Clouds in Modulating Global Aerosol Direct Radiative Effects in Spaceborne Active Observations and the Community Earth System Model. <i>Journal of Climate</i> , 2015, 28, 2986-3003.	3.2	30
49	The Community Earth System Model (CESM) Large Ensemble Project: A Community Resource for Studying Climate Change in the Presence of Internal Climate Variability. <i>Bulletin of the American Meteorological Society</i> , 2015, 96, 1333-1349.	3.3	1,723
50	How much snow falls on the Antarctic ice sheet?. <i>Cryosphere</i> , 2014, 8, 1577-1587.	3.9	124
51	Contributions of Clouds, Surface Albedos, and Mixed-Phase Ice Nucleation Schemes to Arctic Radiation Biases in CAM5. <i>Journal of Climate</i> , 2014, 27, 5174-5197.	3.2	50
52	Can regional climate engineering save the summer Arctic sea ice?. <i>Geophysical Research Letters</i> , 2014, 41, 880-885.	4.0	32
53	Processes controlling Southern Ocean shortwave climate feedbacks in CESM. <i>Geophysical Research Letters</i> , 2014, 41, 616-622.	4.0	58
54	Diagnosing shortwave cryosphere radiative effect and its 21st century evolution in CESM. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 1356-1362.	3.3	13

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55	Observational constraints on Arctic Ocean clouds and radiative fluxes during the early 21st century. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 7219-7236.	3.3	114
56	The Community Earth System Model: A Framework for Collaborative Research. <i>Bulletin of the American Meteorological Society</i> , 2013, 94, 1339-1360.	3.3	1,848
57	Climate Change Projections in CESM1(CAM5) Compared to CCSM4. <i>Journal of Climate</i> , 2013, 26, 6287-6308.	3.2	243
58	Sensitivity to Glacial Forcing in the CCSM4. <i>Journal of Climate</i> , 2013, 26, 1901-1925.	3.2	153
59	Spatial Decomposition of Climate Feedbacks in the Community Earth System Model. <i>Journal of Climate</i> , 2013, 26, 3544-3561.	3.2	17
60	The Arctic response to remote and local forcing of black carbon. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 211-224.	4.9	87
61	Initial value predictability of Antarctic sea ice in the Community Climate System Model 3. <i>Geophysical Research Letters</i> , 2013, 40, 2121-2124.	4.0	64
62	DART/CAM: An Ensemble Data Assimilation System for CESM Atmospheric Models. <i>Journal of Climate</i> , 2012, 25, 6304-6317.	3.2	69
63	Exposing Global Cloud Biases in the Community Atmosphere Model (CAM) Using Satellite Observations and Their Corresponding Instrument Simulators. <i>Journal of Climate</i> , 2012, 25, 5190-5207.	3.2	251
64	The Influence of Local Feedbacks and Northward Heat Transport on the Equilibrium Arctic Climate Response to Increased Greenhouse Gas Forcing. <i>Journal of Climate</i> , 2012, 25, 5433-5450.	3.2	133
65	True to Milankovitch: Glacial Inception in the New Community Climate System Model. <i>Journal of Climate</i> , 2012, 25, 2226-2239.	3.2	38
66	The Evolution of Climate Sensitivity and Climate Feedbacks in the Community Atmosphere Model. <i>Journal of Climate</i> , 2012, 25, 1453-1469.	3.2	140
67	Late-Twentieth-Century Simulation of Arctic Sea Ice and Ocean Properties in the CCSM4. <i>Journal of Climate</i> , 2012, 25, 1431-1452.	3.2	99
68	A Characterization of the Present-Day Arctic Atmosphere in CCSM4. <i>Journal of Climate</i> , 2012, 25, 2676-2695.	3.2	77
69	Ubiquitous low-level liquid-containing Arctic clouds: New observations and climate model constraints from CALIPSO-GOCCP. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	168
70	Tropospheric clouds in Antarctica. <i>Reviews of Geophysics</i> , 2012, 50, .	23.0	124
71	The Arctic's rapidly shrinking sea ice cover: a research synthesis. <i>Climatic Change</i> , 2012, 110, 1005-1027.	3.6	1,277
72	Coupling between Arctic feedbacks and changes in poleward energy transport. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	147

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73	Arctic Inversion Strength in Climate Models. <i>Journal of Climate</i> , 2011, 24, 4733-4740.	3.2	67
74	Interannual to multi-decadal Arctic sea ice extent trends in a warming world. <i>Geophysical Research Letters</i> , 2011, 38, .	4.0	227
75	The Boundary Layer Response to Recent Arctic Sea Ice Loss and Implications for High-Latitude Climate Feedbacks. <i>Journal of Climate</i> , 2011, 24, 428-447.	3.2	60
76	Cloud influence on and response to seasonal Arctic sea ice loss. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	342
77	Processes regulating short-lived species in the tropical tropopause layer. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	40
78	Timescale analysis of aerosol sensitivity during homogeneous freezing and implications for upper tropospheric water vapor budgets. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	53
79	The contribution of cloud and radiation anomalies to the 2007 Arctic sea ice extent minimum. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	290
80	Evolution of the 2007-2008 Arctic sea ice cover and prospects for a new record in 2008. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	24
81	CloudSat mission: Performance and early science after the first year of operation. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	578
82	Physical controls on orographic cirrus inhomogeneity. <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 3771-3781.	4.9	7
83	Microphysical and dynamical controls on cirrus cloud optical depth distributions. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	26
84	Accuracy and uncertainty of thermal-infrared remote sensing of stream temperatures at multiple spatial scales. <i>Remote Sensing of Environment</i> , 2006, 100, 427-440.	11.0	113
85	ASSESSING SATELLITE-BASED AND AIRCRAFT-BASED THERMAL INFRARED REMOTE SENSING FOR MONITORING PACIFIC NORTHWEST RIVER TEMPERATURE. <i>Journal of the American Water Resources Association</i> , 2005, 41, 1149-1159.	2.4	43
86	ACCURACY OF LAKE AND STREAM TEMPERATURES ESTIMATED FROM THERMAL INFRARED IMAGES. <i>Journal of the American Water Resources Association</i> , 2005, 41, 1161-1175.	2.4	53
87	Spatial relationships between snow contaminant content, grain size, and surface temperature from multispectral images of Mt. Rainier, Washington (USA). <i>Remote Sensing of Environment</i> , 2003, 86, 216-231.	11.0	14
88	Comment on evidence for surface-initiated homogeneous nucleation. <i>Atmospheric Chemistry and Physics</i> , 2003, 3, 1439-1443.	4.9	39
89	AMBASSADOR: Asteroid sample return mission to 7 Iris. <i>Acta Astronautica</i> , 1999, 45, 415-422.	3.2	3
90	Phoebe: Albedo Map and Photometric Properties. <i>Icarus</i> , 1999, 138, 249-258.	2.5	57

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91	The Community Earth System Model: A Framework for Collaborative Research. Bulletin of the American Meteorological Society, 0, , 130204122247009.	3.3	103