Elizabeth A Barnes

List of Publications by Citations

102 papers	3,939 citations	35 h-index	61 g-index
143 ext. papers	4,679 ext. citations	5 avg, IF	6.42 L-index

#	Paper	IF	Citations
102	Response of the Midlatitude Jets, and of Their Variability, to Increased Greenhouse Gases in the CMIP5 Models. *Journal of Climate*, **2013**, 26, 7117-7135	4.4	312
101	Revisiting the evidence linking Arctic amplification to extreme weather in midlatitudes. *Geophysical Research Letters*, **2013**, 40, 4734-4739	4.9	264
100	The impact of Arctic warming on the midlatitude jet-stream: Can it? Has it? Will it?. *Wiley Interdisciplinary Reviews: Climate Change*, **2015**, 6, 277-286	8.4	244
99	Storm track processes and the opposing influences of climate change. *Nature Geoscience*, **2016**, 9, 656-66[illegible]	13.3	240
98	Exploring recent trends in Northern Hemisphere blocking. *Geophysical Research Letters*, **2014**, 41, 638-644	4.9	154
97	CMIP5 Projections of Arctic Amplification, of the North American/North Atlantic Circulation, and of Their Relationship. *Journal of Climate*, **2015**, 28, 5254-5271	4.4	147
96	All-Season Climatology and Variability of Atmospheric River Frequencies over the North Pacific. *Journal of Climate*, **2016**, 29, 4885-4903	4.4	132
95	Quantifying the Role of Internal Climate Variability in Future Climate Trends. *Journal of Climate*, **2015**, 28, 6443-6456	4.4	112
94	Contrasting interannual and multidecadal NAO variability. *Climate Dynamics*, **2015**, 45, 539-556	4.2	95
93	Extreme moisture transport into the Arctic linked to Rossby wave breaking. *Journal of Geophysical Research D: Atmospheres*, **2015**, 120, 3774-3788	4.4	94
92	A methodology for the comparison of blocking climatologies across indices, models and climate scenarios. *Climate Dynamics*, **2012**, 38, 2467-2481	4.2	94
91	The Influence of the Madden□ulian Oscillation on Northern Hemisphere Winter Blocking. *Journal of Climate*, **2016**, 29, 4597-4616	4.4	92
90	Skillful empirical subseasonal prediction of landfalling atmospheric river activity using the Madden□ulian oscillation and quasi-biennial oscillation. *Npj Climate and Atmospheric Science*, **2018**, 1,	8	84
89	Dynamical Feedbacks and the Persistence of the NAO. *Journals of the Atmospheric Sciences*, **2010**, 67, 851-865	2.1	79
88	Advancing atmospheric river forecasts into subseasonal-to-seasonal time scales. *Geophysical Research Letters*, **2017**, 44, 7528-7536	4.9	76
87	Detection of Rossby wave breaking and its response to shifts of the midlatitude jet with climate change. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		65
86	Rossby Wave Scales, Propagation, and the Variability of Eddy-Driven Jets. *Journals of the Atmospheric Sciences*, **2011**, 68, 2893-2908	2.1	62

85	Variability of moisture recycling using a precipitationshed framework. *Hydrology and Earth System Sciences*, **2014**, 18, 3937-3950	5.5	58
84	Primary Modes of Global Drop Size Distributions. *Journals of the Atmospheric Sciences*, **2018**, 75, 1453-1476	2.6	54
83	Delayed Southern Hemisphere Climate Change Induced by Stratospheric Ozone Recovery, as Projected by the CMIP5 Models. *Journal of Climate*, **2014**, 27, 852-867	4.4	54
82	ARTMIP-early start comparison of atmospheric river detection tools: how many atmospheric rivers hit northern California Russian River watershed?. *Climate Dynamics*, **2019**, 52, 4973-4994	4.2	54
81	Memory Matters: A Case for Granger Causality in Climate Variability Studies. *Journal of Climate*, **2018**, 31, 3289-3300	4.4	51
80	Surface ozone variability and the jet position: Implications for projecting future air quality. *Geophysical Research Letters*, **2013**, 40, 2839-2844	4.9	51
79	Windows of Opportunity for Skillful Forecasts Subseasonal to Seasonal and Beyond. *Bulletin of the American Meteorological Society*, **2020**, 101, E608-E625	6.1	46
78	Influence of eddy-driven jet latitude on North Atlantic jet persistence and blocking frequency in CMIP3 integrations. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	46
77	Periodic variability in the large-scale Southern Hemisphere atmospheric circulation. *Science*, **2014**, 343, 641-5	33.3	45
76	Physically Interpretable Neural Networks for the Geosciences: Applications to Earth System Variability. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2019MS002002	7.1	45
75	Daily to Decadal Modulation of Jet Variability. *Journal of Climate*, **2018**, 31, 1297-1314	4.4	44
74	New-particle formation, growth and climate-relevant particle production in Egbert, Canada: analysis from 1 year of size-distribution observations. *Atmospheric Chemistry and Physics*, **2014**, 14, 8647-8663	6.8	40
73	Viewing Forced Climate Patterns Through an AI Lens. *Geophysical Research Letters*, **2019**, 46, 13389-13398	4.9	40
72	Modulation of atmospheric rivers near Alaska and the U.S. West Coast by northeast Pacific height anomalies. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 12,751-12,765	4.4	38
71	Prediction of the Midlatitude Response to Strong Madden-Julian Oscillation Events on S2S Time Scales. *Geophysical Research Letters*, **2018**, 45, 463-470	4.9	37
70	Testing a theory for the effect of latitude on the persistence of eddy-driven jets using CMIP3 simulations. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	36
69	The Consistency of MJO Teleconnection Patterns: An Explanation Using Linear Rossby Wave Theory. *Journal of Climate*, **2019**, 32, 531-548	4.4	36
68	Dynamical Feedbacks of the Southern Annular Mode in Winter and Summer. *Journals of the Atmospheric Sciences*, **2010**, 67, 2320-2330	2.1	35

67	Modeled and Observed Multidecadal Variability in the North Atlantic Jet Stream and Its Connection to Sea Surface Temperatures. *Journal of Climate*, **2018**, 31, 8313-8338	4.4	34
66	Seasonal Sensitivity of the Eddy-Driven Jet to Tropospheric Heating in an Idealized AGCM. *Journal of Climate*, **2016**, 29, 5223-5240	4.4	32
65	Detection of trends in surface ozone in the presence of climate variability. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 6112-6129	4.4	32
64	Effect of latitude on the persistence of eddy-driven jets. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	31
63	Skillful Subseasonal Forecasts of Weekly Tornado and Hail Activity Using the Madden-Julian Oscillation. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 12,661	4.4	28
62	Behaviour of the winter North Atlantic eddy-driven jet stream in the CMIP3 integrations. *Climate Dynamics*, **2013**, 41, 995-1007	4.2	26
61	Influence of ENSO and the NAO on terrestrial carbon uptake in the Texas-northern Mexico region. *Global Biogeochemical Cycles*, **2015**, 29, 1247-1265	5.9	26
60	Recent Warming of Landfalling Atmospheric Rivers Along the West Coast of the United States. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 6810-6826	4.4	25
59	Scaling in river corridor widths depicts organization in valley morphology. *Geomorphology*, **2007**, 91, 198-215	4.3	25
58	Model projections of atmospheric steering of Sandy-like superstorms. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 15211-5	11.5	24
57	Isentropic transport and the seasonal cycle amplitude of CO2. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 8106-8124	4.4	23
56	Robust Wind and Precipitation Responses to the Mount Pinatubo Eruption, as Simulated in the CMIP5 Models. *Journal of Climate*, **2016**, 29, 4763-4778	4.4	23
55	Tropospheric and Stratospheric Causal Pathways Between the MJO and NAO. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 9356-9371	4.4	22
54	Estimating Linear Trends: Simple Linear Regression versus Epoch Differences. *Journal of Climate*, **2015**, 28, 9969-9976	4.4	21
53	Assessment of Numerical Weather Prediction Model Reforecasts of the Occurrence, Intensity, and Location of Atmospheric Rivers along the West Coast of North America. *Monthly Weather Review*, **2018**, 146, 3343-3362	2.4	20
52	Reconciling the observed and modeled Southern Hemisphere circulation response to volcanic eruptions. *Geophysical Research Letters*, **2016**, 43, 7259-7266	4.9	19
51	Environmental Conditions, Ignition Type, and Air Quality Impacts of Wildfires in the Southeastern and Western United States. *Earth's Future*, **2018**, 6, 1442-1456	7.9	19
50	Seasonal Sensitivity of the Northern Hemisphere Jet Streams to Arctic Temperatures on Subseasonal Time Scales. *Journal of Climate*, **2017**, 30, 10117-10137	4.4	17

49	Indicator Patterns of Forced Change Learned by an Artificial Neural Network. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2020MS002195	7.1	17
48	A Census of Atmospheric Variability From Seconds to Decades. *Geophysical Research Letters*, **2017**, 44, 11,201	4.9	17
47	Towards neural Earth system modelling by integrating artificial intelligence in Earth system science. *Nature Machine Intelligence*, **2021**, 3, 667-674	22.5	17
46	A Barotropic Mechanism for the Response of Jet Stream Variability to Arctic Amplification and Sea Ice Loss. *Journal of Climate*, **2018**, 31, 7069-7085	4.4	16
45	Size of the Atmospheric Blocking Events: Scaling Law and Response to Climate Change. *Geophysical Research Letters*, **2019**, 46, 13488-13499	4.9	16
44	The Future of Climate Epidemiology: Opportunities for Advancing Health Research in the Context of Climate Change. *American Journal of Epidemiology*, **2019**, 188, 866-872	3.8	15
43	Comparing the Roles of Barotropic versus Baroclinic Feedbacks in the Atmosphere Response to Mechanical Forcing. *Journals of the Atmospheric Sciences*, **2014**, 71, 177-194	2.1	15
42	A study of links between the Arctic and the midlatitude jet stream using Granger and Pearl causality. *Environmetrics*, **2019**, 30, e2540	1.3	14
41	The Global Teleconnection Signature of the Madden-Julian Oscillation and Its Modulation by the Quasi-Biennial Oscillation. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2020JD032653	4.4	13
40	The Global Distribution of Atmospheric Eddy Length Scales. *Journal of Climate*, **2012**, 25, 3409-3416	4.4	12
39	Past Variance and Future Projections of the Environmental Conditions Driving Western U.S. Summertime Wildfire Burn Area. *Earth's Future*, **2020**, 9, e2020EF001645	7.9	12
38	Prediction of Northern Hemisphere Regional Surface Temperatures Using Stratospheric Ozone Information. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 5922-5933	4.4	11
37	The Consistency of MJO Teleconnection Patterns on Interannual Time Scales. *Journal of Climate*, **2020**, 33, 3471-3486	4.4	10
36	Connections between the Spring Breakup of the Southern Hemisphere Polar Vortex, Stationary Waves, and Air Sea Roughness. *Journals of the Atmospheric Sciences*, **2013**, 70, 2137-2151	2.1	10
35	New Insights on Subseasonal Arctic Midlatitude Causal Connections from a Regularized Regression Model. *Journal of Climate*, **2020**, 33, 213-228	4.4	10
34	Introduction to Special Collection: Bridging Weather and Climate: Subseasonal-to-Seasonal (S2S) Prediction *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2019JD031833	4.4	8
33	Skillful All-Season S2S Prediction of U.S. Precipitation Using the MJO and QBO. *Weather and Forecasting*, **2020**, 35, 2179-2198	2.1	7
32	Moisture- Versus Wind-Dominated Flavors of Atmospheric Rivers. *Geophysical Research Letters*, **2020**, 47, e2020GL090042	4.9	7

31	Subseasonal Forecasts of Opportunity Identified by an Explainable Neural Network. *Geophysical Research Letters*, **2021**, 48, e2020GL092092	4.9	7
30	Quantifying Regional Sensitivities to Periodic Events: Application to the MJO. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 3671-3683	4.4	6
29	Upscaling river biomass using dimensional analysis and hydrogeomorphic scaling. *Geophysical Research Letters*, **2007**, 34,	4.9	6
28	Thoughtfully Using Artificial Intelligence in Earth Science. *Eos*, **2019**, 100,	1.5	6
27	A machine-learning approach to human footprint index estimation with applications to sustainable development. *Environmental Research Letters*, **2021**, 16, 044061	6.2	6
26	Intraseasonal Periodicity in the Southern Hemisphere Circulation on Regional Spatial Scales. *Journals of the Atmospheric Sciences*, **2017**, 74, 865-877	2.1	5
25	The Seasonality and Regionality of MJO Impacts on North American Temperature. *Geophysical Research Letters*, **2019**, 46, 9193-9202	4.9	5
24	Assessing Decadal Predictability in an Earth-System Model Using Explainable Neural Networks. *Geophysical Research Letters*, **2021**, 48, e2021GL093842	4.9	5
23	Quantifying the role of land□tmosphere feedbacks in mediating near-surface temperature persistence. *Quarterly Journal of the Royal Meteorological Society*, **2017**, 143, 1620-1631	6.4	4
22	Quantifying Isentropic Mixing Linked to Rossby Wave Breaking in a Modified Lagrangian Coordinate. *Journals of the Atmospheric Sciences*, **2018**, 75, 927-942	2.1	4
21	2018 International Atmospheric Rivers Conference: Multi-disciplinary studies and high-impact applications of atmospheric rivers. *Atmospheric Science Letters*, **2019**, 20, e935	2.4	4
20	Quantifying the Lead Time Required for a Linear Trend to Emerge from Natural Climate Variability. *Journal of Climate*, **2017**, 30, 10179-10191	4.4	4
19	Barotropic Impacts of Surface Friction on Eddy Kinetic Energy and Momentum Fluxes: An Alternative to the Barotropic Governor. *Journals of the Atmospheric Sciences*, **2012**, 69, 3028-3039	2.1	4
18	Subseasonal midlatitude prediction skill following Quasi-Biennial Oscillation and Madden□ulian Oscillation activity. *Weather and Climate Dynamics*, **2020**, 1, 247-259	3.3	4
17	The Importance of Past MJO Activity in Determining the Future State of the Midlatitude Circulation. *Journal of Climate*, **2020**, 33, 2131-2147	4.4	4
16	North Pacific zonal wind response to sea ice loss in the Polar Amplification Model Intercomparison Project and its downstream implications. *Climate Dynamics*, **2020**, 55, 1779-1792	4.2	4
15	Strengthened Causal Connections Between the MJO and the North Atlantic With Climate Warming. *Geophysical Research Letters*, **2021**, 48, e2020GL091168	4.9	4
14	Neural network attribution methods for problems in geoscience: A novel synthetic benchmark dataset **2022**, 1,		4

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13	A Role for Barotropic Eddy–Mean Flow Feedbacks in the Zonal Wind Response to Sea Ice Loss and Arctic Amplification. *Journal of Climate*, **2019**, 32, 7469-7481	4.4	3
12	Investigating Recent Changes in MJO Precipitation and Circulation in Multiple Reanalyses. *Geophysical Research Letters*, **2020**, 47, e2020GL090139	4.9	3
11	Synoptic Formation of Double Tropopauses. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 693-707	4.4	3
10	Estimating the Spread in Future Fine Dust Concentrations in the Southwest United States. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2019JD031735	4.4	2
9	Oceanic Harbingers of Pacific Decadal Oscillation Predictability in CESM2 Detected by Neural Networks. *Geophysical Research Letters*, **2021**, 48, e2021GL095392	4.9	2
8	Bridging the Weather-to-Climate Prediction Gap. *Eos*, **2019**, 100,	1.5	2
7	Mapping Large-Scale Climate Variability to Hydrological Extremes: An Application of the Linear Inverse Model to Subseasonal Prediction. *Journal of Climate*, **2021**, 34, 4207-4225	4.4	2
6	Detecting Climate Signals Using Explainable AI With Single-Forcing Large Ensembles. *Journal of Advances in Modeling Earth Systems*, **2021**, 13, e2021MS002464	7.1	2
5	Working with Daily Climate Model Output Data in R and the futureheatwaves Package. *R Journal*, **2017**, 9, 124-137	3.3	1
4	Drivers of uncertainty in future projections of Madden–Julian Oscillation teleconnections. *Weather and Climate Dynamics*, **2021**, 2, 653-673	3.3	1
3	Predicting Slowdowns in Decadal Climate Warming Trends With Explainable Neural Networks. *Geophysical Research Letters*, **2022**, 49,	4.9	0
2	Wintertime Rossby Wave Breaking Persistence in Extended-range Seasonal Forecasts of Atlantic Tropical Cyclone Activity. *Journal of Climate*, **2022**, 1-49	4.4	
1	Role of the Tropics in State-Dependent Improvements of US West Coast NOAA Unified Forecast System Precipitation Forecasts. *Geophysical Research Letters*, **2022**, 49,	4.9	