Elizabeth A Barnes

List of Publications by Year
in descending order

108 papers	5,652 citations	76196 40 h-index	85405 71 g-index
143 all docs	143 docs citations	143 times ranked	5219 citing authors

#	Article	IF	Citations
1	Response of the Midlatitude Jets, and of Their Variability, to Increased Greenhouse Gases in the CMIP5 Models. Journal of Climate, 2013, 26, 7117-7135.	1.2	380
2	Storm track processes and the opposing influences of climate change. Nature Geoscience, 2016, 9, 656-664.	5.4	370
3	The impact of Arctic warming on the midlatitude jetâ€stream: Can it? Has it? Will it?. Wiley Interdisciplinary Reviews: Climate Change, 2015, 6, 277-286.	3.6	326
4	Revisiting the evidence linking Arctic amplification to extreme weather in midlatitudes. Geophysical Research Letters, 2013, 40, 4734-4739.	1.5	324
5	Exploring recent trends in Northern Hemisphere blocking. Geophysical Research Letters, 2014, 41, 638-644.	1.5	189
6	CMIP5 Projections of Arctic Amplification, of the North American/North Atlantic Circulation, and of Their Relationship. Journal of Climate, 2015, 28, 5254-5271.	1.2	173
7	All-Season Climatology and Variability of Atmospheric River Frequencies over the North Pacific. Journal of Climate, 2016, 29, 4885-4903.	1.2	173
8	Quantifying the Role of Internal Climate Variability in Future Climate Trends. Journal of Climate, 2015, 28, 6443-6456.	1.2	143
9	Physically Interpretable Neural Networks for the Geosciences: Applications to Earth System Variability. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002002.	1.3	140
10	Windows of Opportunity for Skillful Forecasts Subseasonal to Seasonal and Beyond. Bulletin of the American Meteorological Society, 2020, 101, E608-E625.	1.7	124
11	Extreme moisture transport into the Arctic linked to Rossby wave breaking. Journal of Geophysical Research D: Atmospheres, 2015, 120, 3774-3788.	1.2	123
12	Contrasting interannual and multidecadal NAO variability. Climate Dynamics, 2015, 45, 539-556.	1.7	120
13	The Influence of the Maddenâ€"Julian Oscillation on Northern Hemisphere Winter Blocking. Journal of Climate, 2016, 29, 4597-4616.	1.2	116
14	A methodology for the comparison of blocking climatologies across indices, models and climate scenarios. Climate Dynamics, 2012, 38, 2467-2481.	1.7	111
15	Skillful empirical subseasonal prediction of landfalling atmospheric river activity using the Maddenâ€"Julian oscillation and quasi-biennial oscillation. Npj Climate and Atmospheric Science, 2018, 1, .	2.6	111
16	Advancing atmospheric river forecasts into subseasonalâ€toâ€seasonal time scales. Geophysical Research Letters, 2017, 44, 7528-7536.	1.5	98
17	Towards neural Earth system modelling by integrating artificial intelligence in Earth system science. Nature Machine Intelligence, 2021, 3, 667-674.	8.3	98
18	Primary Modes of Global Drop Size Distributions. Journals of the Atmospheric Sciences, 2018, 75, 1453-1476.	0.6	97

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19	Dynamical Feedbacks and the Persistence of the NAO. Journals of the Atmospheric Sciences, 2010, 67, 851-865.	0.6	89
20	Variability of moisture recycling using a precipitationshed framework. Hydrology and Earth System Sciences, 2014, 18, 3937-3950.	1.9	79
21	Viewing Forced Climate Patterns Through an AI Lens. Geophysical Research Letters, 2019, 46, 13389-13398.	1.5	78
22	Detection of Rossby wave breaking and its response to shifts of the midlatitude jet with climate change. Journal of Geophysical Research, 2012, 117, .	3.3	76
23	Rossby Wave Scales, Propagation, and the Variability of Eddy-Driven Jets. Journals of the Atmospheric Sciences, 2011, 68, 2893-2908.	0.6	75
24	Memory Matters: A Case for Granger Causality in Climate Variability Studies. Journal of Climate, 2018, 31, 3289-3300.	1.2	74
25	Delayed Southern Hemisphere Climate Change Induced by Stratospheric Ozone Recovery, as Projected by the CMIP5 Models. Journal of Climate, 2014, 27, 852-867.	1.2	71
26	ARTMIP-early start comparison of atmospheric river detection tools: how many atmospheric rivers hit northern Californiaâ€™s Russian River watershed?. Climate Dynamics, 2019, 52, 4973-4994.	1.7	63
27	Surface ozone variability and the jet position: Implications for projecting future air quality. Geophysical Research Letters, 2013, 40, 2839-2844.	1.5	60
28	Periodic Variability in the Large-Scale Southern Hemisphere Atmospheric Circulation. Science, 2014, 343, 641-645.	6.0	57
29	Prediction of the Midlatitude Response to Strong Maddenâ€Julian Oscillation Events on S2S Time Scales. Geophysical Research Letters, 2018, 45, 463-470.	1.5	57
30	The Consistency of MJO Teleconnection Patterns: An Explanation Using Linear Rossby Wave Theory. Journal of Climate, 2019, 32, 531-548.	1.2	56
31	Daily to Decadal Modulation of Jet Variability. Journal of Climate, 2018, 31, 1297-1314.	1.2	55
32	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.	1.9	50
33	Influence of eddyâ€driven jet latitude on North Atlantic jet persistence and blocking frequency in CMIP3 integrations. Geophysical Research Letters, 2010, 37, .	1.5	49
34	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.	1.2	47
35	Indicator Patterns of Forced Change Learned by an Artificial Neural Network. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002195.	1.3	47
36	Detection of trends in surface ozone in the presence of climate variability. Journal of Geophysical Research D: Atmospheres, 2016, 121, 6112-6129.	1.2	44

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37	Tropospheric and Stratospheric Causal Pathways Between the MJO and NAO. Journal of Geophysical Research D: Atmospheres, 2019, 124, 9356-9371.	1.2	44
38	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.	1.2	43
39	Effect of latitude on the persistence of eddyâ€driven jets. Geophysical Research Letters, 2010, 37, .	1.5	42
40	Dynamical Feedbacks of the Southern Annular Mode in Winter and Summer. Journals of the Atmospheric Sciences, 2010, 67, 2320-2330.	0.6	41
41	Testing a theory for the effect of latitude on the persistence of eddyâ€driven jets using CMIP3 simulations. Geophysical Research Letters, 2010, 37, .	1.5	41
42	Skillful Subseasonal Forecasts of Weekly Tornado and Hail Activity Using the Maddenâ€Julian Oscillation. Journal of Geophysical Research D: Atmospheres, 2018, 123, 12,661.	1.2	41
43	Environmental Conditions, Ignition Type, and Air Quality Impacts of Wildfires in the Southeastern and Western United States. Earth's Future, 2018, 6, 1442-1456.	2.4	38
44	Subseasonal Forecasts of Opportunity Identified by an Explainable Neural Network. Geophysical Research Letters, 2021, 48, e2020GL092092.	1.5	37
45	Seasonal Sensitivity of the Eddy-Driven Jet to Tropospheric Heating in an Idealized AGCM. Journal of Climate, 2016, 29, 5223-5240.	1.2	36
46	Size of the Atmospheric Blocking Events: Scaling Law and Response to Climate Change. Geophysical Research Letters, 2019, 46, 13488-13499.	1.5	35
47	Recent Warming of Landfalling Atmospheric Rivers Along the West Coast of the United States. Journal of Geophysical Research D: Atmospheres, 2019, 124, 6810-6826.	1.2	35
48	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.	0.5	33
49	Estimating Linear Trends: Simple Linear Regression versus Epoch Differences. Journal of Climate, 2015, 28, 9969-9976.	1.2	32
50	Model projections of atmospheric steering of Sandy-like superstorms. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 15211-15215.	3.3	30
51	Isentropic transport and the seasonal cycle amplitude of CO₂. Journal of Geophysical Research D: Atmospheres, 2016, 121, 8106-8124.	1.2	30
52	Robust Wind and Precipitation Responses to the Mount Pinatubo Eruption, as Simulated in the CMIP5 Models. Journal of Climate, 2016, 29, 4763-4778.	1.2	30
53	Past Variance and Future Projections of the Environmental Conditions Driving Western U.S. Summertime Wildfire Burn Area. Earth's Future, 2021, 9, e2020EF001645.	2.4	30
54	Influence of ENSO and the NAO on terrestrial carbon uptake in the Texasâ€northern Mexico region. Global Biogeochemical Cycles, 2015, 29, 1247-1265.	1.9	29

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55	Neural network attribution methods for problems in geoscience: A novel synthetic benchmark dataset. , 2022, 1, .		29
56	Scaling in river corridor widths depicts organization in valley morphology. Geomorphology, 2007, 91, 198-215.	1.1	28
57	A Census of Atmospheric Variability From Seconds to Decades. Geophysical Research Letters, 2017, 44, 11,201.	1.5	28
58	Behaviour of the winter North Atlantic eddy-driven jet stream in the CMIP3 integrations. Climate Dynamics, 2013, 41, 995-1007.	1.7	26
59	A machine-learning approach to human footprint index estimation with applications to sustainable development. Environmental Research Letters, 2021, 16, 044061.	2.2	26
60	Reconciling the observed and modeled Southern Hemisphere circulation response to volcanic eruptions. Geophysical Research Letters, 2016, 43, 7259-7266.	1.5	25
61	Seasonal Sensitivity of the Northern Hemisphere Jet Streams to Arctic Temperatures on Subseasonal Time Scales. Journal of Climate, 2017, 30, 10117-10137.	1.2	25
62	The Future of Climate Epidemiology: Opportunities for Advancing Health Research in the Context of Climate Change. American Journal of Epidemiology, 2019, 188, 866-872.	1.6	25
63	The Global Teleconnection Signature of the Maddenâ€Julian Oscillation and Its Modulation by the Quasiâ€Biennial Oscillation. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032653.	1.2	24
64	A Barotropic Mechanism for the Response of Jet Stream Variability to Arctic Amplification and Sea Ice Loss. Journal of Climate, 2018, 31, 7069-7085.	1.2	22
65	The Consistency of MJO Teleconnection Patterns on Interannual Time Scales. Journal of Climate, 2020, 33, 3471-3486.	1.2	21
66	Comparing the Roles of Barotropic versus Baroclinic Feedbacks in the Atmosphereâ€™s Response to Mechanical Forcing. Journals of the Atmospheric Sciences, 2014, 71, 177-194.	0.6	19
67	A study of links between the Arctic and the midlatitude jet stream using Granger and Pearl causality. Environmetrics, 2019, 30, e2540.	0.6	19
68	Introduction to Special Collection: â€œBridging Weather and Climate: Subseasonalâ€toâ€Seasonal (S2S) Predictionâ€. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031833.	1.2	19
69	Detecting Climate Signals Using Explainable AI With Singleâ€Forcing Large Ensembles. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002464.	1.3	19
70	Prediction of Northern Hemisphere Regional Surface Temperatures Using Stratospheric Ozone Information. Journal of Geophysical Research D: Atmospheres, 2019, 124, 5922-5933.	1.2	18
71	New Insights on Subseasonal Arcticâ€"Midlatitude Causal Connections from a Regularized Regression Model. Journal of Climate, 2020, 33, 213-228.	1.2	15
72	Oceanic Harbingers of Pacific Decadal Oscillation Predictability in CESM2 Detected by Neural Networks. Geophysical Research Letters, 2021, 48, e2021GL095392.	1.5	15

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73	The Global Distribution of Atmospheric Eddy Length Scales. Journal of Climate, 2012, 25, 3409-3416.	1.2	13
74	The Seasonality and Regionality of MJO Impacts on North American Temperature. Geophysical Research Letters, 2019, 46, 9193-9202.	1.5	13
75	Moistureâ€•Versus Windâ€Dominated Flavors of Atmospheric Rivers. Geophysical Research Letters, 2020, 47, e2020GL090042.	1.5	13
76	Skillful All-Season S2S Prediction of U.S. Precipitation Using the MJO and QBO. Weather and Forecasting, 2020, 35, 2179-2198.	0.5	12
77	Connections between the Spring Breakup of the Southern Hemisphere Polar Vortex, Stationary Waves, and Airâ€"Sea Roughness. Journals of the Atmospheric Sciences, 2013, 70, 2137-2151.	0.6	10
78	Quantifying Regional Sensitivities to Periodic Events: Application to the MJO. Journal of Geophysical Research D: Atmospheres, 2019, 124, 3671-3683.	1.2	10
79	The Importance of Past MJO Activity in Determining the Future State of the Midlatitude Circulation. Journal of Climate, 2020, 33, 2131-2147.	1.2	10
80	Assessing Decadal Predictability in an Earthâ€System Model Using Explainable Neural Networks. Geophysical Research Letters, 2021, 48, e2021GL093842.	1.5	10
81	Intraseasonal Periodicity in the Southern Hemisphere Circulation on Regional Spatial Scales. Journals of the Atmospheric Sciences, 2017, 74, 865-877.	0.6	9
82	Strengthened Causal Connections Between the MJO and the North Atlantic With Climate Warming. Geophysical Research Letters, 2021, 48, e2020GL091168.	1.5	9
83	Thoughtfully Using Artificial Intelligence in Earth Science. Eos, 2019, 100, .	0.1	9
84	Subseasonal midlatitude prediction skill following Quasi-Biennial Oscillation and Maddenâ€"Julian Oscillation activity. Weather and Climate Dynamics, 2020, 1, 247-259.	1.2	9
85	Quantifying the role of landâ€"atmosphere feedbacks in mediating nearâ€surface temperature persistence. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 1620-1631.	1.0	8
86	Quantifying the Lead Time Required for a Linear Trend to Emerge from Natural Climate Variability. Journal of Climate, 2017, 30, 10179-10191.	1.2	8
87	Estimating the Spread in Future Fine Dust Concentrations in the Southwest United States. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031735.	1.2	8
88	Upscaling river biomass using dimensional analysis and hydrogeomorphic scaling. Geophysical Research Letters, 2007, 34, .	1.5	7
89	Synoptic Formation of Double Tropopauses. Journal of Geophysical Research D: Atmospheres, 2018, 123, 693-707.	1.2	7
90	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.	1.7	7

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91	Predicting Slowdowns in Decadal Climate Warming Trends With Explainable Neural Networks. Geophysical Research Letters, 2022, 49, .	1.5	7
92	Investigating Recent Changes in MJO Precipitation and Circulation in Multiple Reanalyses. Geophysical Research Letters, 2020, 47, e2020GL090139.	1.5	6
93	Controlled abstention neural networks for identifying skillful predictions for regression problems. Journal of Advances in Modeling Earth Systems, 0, , .	1.3	6
94	Detection of Forced Change Within Combined Climate Fields Using Explainable Neural Networks. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	6
95	2018 International Atmospheric Rivers Conference: Multiâ€disciplinary studies and highâ€impact applications of atmospheric rivers. Atmospheric Science Letters, 2019, 20, e935.	0.8	5
96	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.	1.2	5
97	Drivers of uncertainty in future projections of Maddenâ€“Julian Oscillation teleconnections. Weather and Climate Dynamics, 2021, 2, 653-673.	1.2	5
98	Using Simple, Explainable Neural Networks to Predict the Maddenâ€Julian Oscillation. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	5
99	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.	0.6	4
100	Quantifying Isentropic Mixing Linked to Rossby Wave Breaking in a Modified Lagrangian Coordinate. Journals of the Atmospheric Sciences, 2018, 75, 927-942.	0.6	4
101	Bridging the Weather-to-Climate Prediction Gap. Eos, 2019, 100, .	0.1	4
102	Comparison of Climate Model Large Ensembles With Observations in the Arctic Using Simple Neural Networks. Earth and Space Science, 2022, 9, .	1.1	4
103	A Role for Barotropic Eddyâ€“Mean Flow Feedbacks in the Zonal Wind Response to Sea Ice Loss and Arctic Amplification. Journal of Climate, 2019, 32, 7469-7481.	1.2	3
104	Wintertime Rossby Wave Breaking Persistence in Extended-Range Seasonal Forecasts of Atlantic Tropical Cyclone Activity. Journal of Climate, 2022, 35, 2133-2147.	1.2	3
105	Quantifying the Effect of Climate Change on Midlatitude Subseasonal Prediction Skill Provided by the Tropics. Geophysical Research Letters, 2022, 49, .	1.5	3
106	Role of the Tropics in Stateâ€Dependent Improvements of US West Coast NOAA Unified Forecast System Precipitation Forecasts. Geophysical Research Letters, 2022, 49, .	1.5	2
107	Working with Daily Climate Model Output Data in R and the futureheatwaves Package. R Journal, 2017, 9, 124.	0.7	1
108	Controlled Abstention Neural Networks for Identifying Skillful Predictions for Classification Problems. Journal of Advances in Modeling Earth Systems, 2021, 13, .	1.3	1