David P Stevens

List of Publications by Year
in descending order

96 papers	4,401 citations	87888 38 h-index	114465 63 g-index
119 all docs	119 docs citations	119 times ranked	4454 citing authors

#	Article	IF	Citations
1	Propagation of the Maddenâ€“Julian Oscillation through the Maritime Continent and scale interaction with the diurnal cycle of precipitation. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 814-825.	2.7	229
2	U.K. HiGEM: The New U.K. High-Resolution Global Environment Modelâ€"Model Description and Basic Evaluation. Journal of Climate, 2009, 22, 1861-1896.	3.2	214
3	Southern Ocean bottom water characteristics in CMIP5 models. Geophysical Research Letters, 2013, 40, 1409-1414.	4.0	179
4	Modelling the dynamics and thermodynamics of icebergs. Cold Regions Science and Technology, 1997, 26, 113-135.	3.5	167
5	On the export of Antarctic Bottom Water from the Weddell Sea. Deep-Sea Research Part II: Topical Studies in Oceanography, 2002, 49, 4715-4742.	1.4	163
6	Modification and pathways of Southern Ocean Deep Waters in the Scotia Sea. Deep-Sea Research Part I: Oceanographic Research Papers, 2002, 49, 681-705.	1.4	152
7	On open boundary conditions for three dimensional primitive equation ocean circulation models. Geophysical and Astrophysical Fluid Dynamics, 1990, 51, 103-133.	1.2	127
8	The Open Boundary Condition in the United Kingdom Fine-Resolution Antarctic Model. Journal of Physical Oceanography, 1991, 21, 1494-1499.	1.7	108
9	Variability of the southern Antarctic Circumpolar Current front north of South Georgia. Journal of Marine Systems, 2002, 37, 87-105.	2.1	107
10	On the fate of the Antarctic Slope Front and the origin of the Weddell Front. Journal of Geophysical Research, 2004, 109, .	3.3	104
11	Variability of Subantarctic Mode Water and Antarctic Intermediate Water in the Drake Passage during the Late-Twentieth and Early-Twenty-First Centuries. Journal of Climate, 2009, 22, 3661-3688.	3.2	100
12	High mixing rates in the abyssal Southern Ocean. Nature, 2002, 415, 1011-1014.	27.8	97
13	The Role of Eddies in the Southern Ocean Temperature Response to the Southern Annular Mode. Journal of Climate, 2009, 22, 806-818.	3.2	95
14	Current structure of the south Indian Ocean. Journal of Geophysical Research, 1996, 101, 6377-6391.	3.3	83
15	Impact of Resolution on the Tropical Pacific Circulation in a Matrix of Coupled Models. Journal of Climate, 2009, 22, 2541-2556.	3.2	82
16	Short-circuiting of the overturning circulation in the Antarctic Circumpolar Current. Nature, 2007, 447, 194-197.	27.8	81
17	Southern Ocean fronts: Controlled by wind or topography?. Journal of Geophysical Research, 2012, 117, .	3.3	80
18	Mechanisms driving variability in the ocean forcing of Pine Island Glacier. Nature Communications, 2017, 8, 14507.	12.8	78

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19	The Dynamics of the Antarctic Circumpolar Current. Journal of Physical Oceanography, 1996, 26, 753-774.	1.7	77
20	The zonal momentum balance in an eddy-resolving general-circulation model of the southern ocean. Quarterly Journal of the Royal Meteorological Society, 1997, 123, 929-951.	2.7	66
21	A New Tracer Advection Scheme for Bryan and Cox Type Ocean General Circulation Models. Journal of Physical Oceanography, 1995, 25, 1731-1741.	1.7	64
22	Eddy formation behind the tropical island of Aldabra. Deep-Sea Research Part I: Oceanographic Research Papers, 1996, 43, 555-578.	1.4	63
23	Prediction of iceberg trajectories for the North Atlantic and Arctic oceans. Geophysical Research Letters, 1996, 23, 3587-3590.	4.0	63
24	Changes in Global Ocean Bottom Properties and Volume Transports in CMIP5 Models under Climate Change Scenarios*. Journal of Climate, 2015, 28, 2917-2944.	3.2	63
25	Mixing and convection in the Greenland Sea from a tracer-release experiment. Nature, 1999, 401, 902-904.	27.8	61
26	A dynamical framework for the origin of the diagonal South Pacific and South Atlantic Convergence Zones. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 1997-2010.	2.7	60
27	The Antarctic Circumpolar Current between the Falkland Islands and South Georgia. Journal of Physical Oceanography, 2002, 32, 1914-1931.	1.7	58
28	Tracking passive drifters in a high resolution ocean model: implications for interannual variability of larval krill transport to South Georgia. Deep-Sea Research Part I: Oceanographic Research Papers, 2004, 51, 909-920.	1.4	58
29	Physiological state of phytoplankton communities in the Southwest Atlantic sector of the Southern Ocean, as measured by fast repetition rate fluorometry. Polar Biology, 2005, 29, 44-52.	1.2	58
30	Interannual variability of the tropical Atlantic independent of and associated with ENSO: Part I. The North Tropical Atlantic. International Journal of Climatology, 2006, 26, 1937-1956.	3.5	58
31	Ocean Rossby waves as a triggering mechanism for primary Maddenâ€"Julian events. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 514-527.	2.7	57
32	Water Mass Conversion, Fluxes, and Mixing in the Scotia Sea Diagnosed by an Inverse Model. Journal of Physical Oceanography, 2003, 33, 2565-2587.	1.7	54
33	Propagation of the Maddenâ€"Julian Oscillation and scale interaction with the diurnal cycle in a high-resolution GCM. Climate Dynamics, 2015, 45, 2901-2918.	3.8	51
34	An additional deep-water mass in Drake Passage as revealed by 3He data. Deep-Sea Research Part I: Oceanographic Research Papers, 2003, 50, 1079-1098.	1.4	48
35	The Importance of Planetary Rotation Period for Ocean Heat Transport. Astrobiology, 2014, 14, 645-650.	3.0	47
36	Importance of ocean salinity for climate and habitability. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 4278-4283.	7.1	47

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37	Circulation and Water Mass Modification in the Brazilâ€"Malvinas Confluence. Journal of Physical Oceanography, 2010, 40, 845-864.	1.7	46
38	Ocean processes at the Antarctic continental slope. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130047.	3.4	45
39	Short-term climate response to a freshwater pulse in the Southern Ocean. Geophysical Research Letters, 2005, 32, .	4.0	41
40	Marine iodine emissions in a changing world. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2021, 477, 20200824.	2.1	41
41	Spatial and Temporal Scales of Sverdrup Balance*. Journal of Physical Oceanography, 2014, 44, 2644-2660.	1.7	38
42	The flow of the Antarctic Circumpolar Current over the North Scotia Ridge. Deep-Sea Research Part I: Oceanographic Research Papers, 2010, 57, 14-28.	1.4	36
43	Between the Devil and the Deep Blue Sea: The Role of the Amundsen Sea Continental Shelf in Exchanges Between Ocean and Ice Shelves. , 2016, 29, 118-129.		36
44	Antarctic Circumpolar Current response to zonally averaged winds. Journal of Geophysical Research, 2001, 106, 2743-2759.	3.3	35
45	Interannual variability of the Tropical Atlantic independent of and associated with ENSO: Part II. The South Tropical Atlantic. International Journal of Climatology, 2006, 26, 1957-1976.	3.5	34
46	The effects of different sudden stratospheric warming types on the ocean. Geophysical Research Letters, 2014, 41, 7739-7745.	4.0	34
47	Why the South Pacific Convergence Zone is diagonal. Climate Dynamics, 2016, 46, 1683-1698.	3.8	34
48	Variation in the Distribution and Properties of Circumpolar Deep Water in the Eastern Amundsen Sea, on Seasonal Timescales, Using Sealâ€Borne Tags. Geophysical Research Letters, 2018, 45, 4982-4990.	4.0	33
49	A note on leapfrogging vortex rings. Fluid Dynamics Research, 1993, 11, 235-244.	1.3	31
50	Simulations of two Last Glacial Maximum ocean states. Paleoceanography, 1998, 13, 340-351.	3.0	31
51	A Decomposition of the Atlantic Meridional Overturning. Journal of Physical Oceanography, 2006, 36, 2253-2270.	1.7	31
52	Deep and Bottom Waters in the Eastern Scotia Sea: Rapid Changes in Properties and Circulation. Journal of Physical Oceanography, 2001, 31, 2157-2168.	1.7	30
53	Decadal prediction of the North Atlantic subpolar gyre in the HiGEM high-resolution climate model. Climate Dynamics, 2018, 50, 921-937.	3.8	30
54	Rossby wave dynamics of the North Pacific extra-tropical response to El NiÃ±o: importance of the basic state in coupled GCMs. Climate Dynamics, 2011, 37, 391-405.	3.8	28

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55	The Impact of Overturning and Horizontal Circulation in Pine Island Trough on Ice Shelf Melt in the Eastern Amundsen Sea. Journal of Physical Oceanography, 2019, 49, 63-83.	1.7	28
56	Increasing vertical mixing to reduce Southern Ocean deep convection in NEMO3.4. Geoscientific Model Development, 2015, 8, 3119-3130.	3.6	26
57	Dynamical Ocean Forcing of the Maddenâ€"Julian Oscillation at Lead Times of up to Five Months. Journal of Climate, 2012, 25, 2824-2842.	3.2	21
58	Mixed Layer Temperature Response to the Southern Annular Mode: Mechanisms and Model Representation. Journal of Climate, 2010, 23, 664-678.	3.2	20
59	Importance of oceanic resolution and mean state on the extra-tropical response to El NiÃ±o in a matrix of coupled models. Climate Dynamics, 2013, 41, 1439-1452.	3.8	20
60	A numerical ocean circulation model of the Norwegian and Greenland Seas. Progress in Oceanography, 1991, 27, 365-402.	3.2	17
61	Optimisation of a parallel ocean general circulation model. Annales Geophysicae, 1997, 15, 1369-1377.	1.6	17
62	Eddy heat fluxes from direct current measurements of the Antarctic Polar Front in Shag Rocks Passage. Geophysical Research Letters, 2008, 35, .	4.0	17
63	Decadal predictions with the HiGEM high resolution global coupled climate model: description and basic evaluation. Climate Dynamics, 2017, 48, 297-311.	3.8	16
64	A Global Model for Iodine Speciation in the Upper Ocean. Global Biogeochemical Cycles, 2020, 34, e2019GB006467.	4.9	16
65	Climate Response to Increasing Antarctic Iceberg and Ice Shelf Melt. Journal of Climate, 2020, 33, 8917-8938.	3.2	16
66	The importance of interocean exchange south of Africa in a numerical model. Journal of Geophysical Research, 1997, 102, 3303-3315.	3.3	15
67	A Greenland Sea Perspective on the Dynamics of Postconvective Eddies*. Journal of Physical Oceanography, 2008, 38, 2755-2771.	1.7	15
68	Upper ocean manifestations of a reducing meridional overturning circulation. Geophysical Research Letters, 2012, 39, .	4.0	15
69	Topographic Control of Southern Ocean Gyres and the Antarctic Circumpolar Current: A Barotropic Perspective. Journal of Physical Oceanography, 2019, 49, 3221-3244.	1.7	15
70	Coupled Oceanâ€"Atmosphere Interactions between the Maddenâ€"Julian Oscillation and Synoptic-Scale Variability over the Warm Pool. Journal of Climate, 2005, 18, 2004-2020.	3.2	14
71	Winter seal-based observations reveal glacial meltwater surfacing in the southeastern Amundsen Sea. Communications Earth & Environment, 2021, 2, .	6.8	14
72	Comparison of two time-variant forced eddy-permitting global ocean circulation models with hydrography of the Scotia Sea. Ocean Modelling, 2005, 9, 105-132.	2.4	12

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73	The South Atlantic in the Fine-Resolution Antarctic Model. Annales Geophysicae, 1994, 12, 826-839.	1.6	11
74	Temporal Variability of Diapycnal Mixing in Shag Rocks Passage. Journal of Physical Oceanography, 2012, 42, 370-385.	1.7	11
75	The Role of Anthropogenic Aerosol Forcing in the 1850â€“1985 Strengthening of the AMOC in CMIP6 Historical Simulations. Journal of Climate, 2022, 35, 3243-3263.	3.2	11
76	The influence of diabatic heating in the South Pacific Convergence Zone on Rossby wave propagation and the mean flow. Quarterly Journal of the Royal Meteorological Society, 2016, 142, 901-910.	2.7	10
77	Interconnectivity Between Volume Transports Through Arctic Straits. Journal of Geophysical Research: Oceans, 2018, 123, 8714-8729.	2.6	10
78	Oxidation of iodide to iodate by cultures of marine ammonia-oxidising bacteria. Marine Chemistry, 2021, 234, 104000.	2.3	10
79	Can limited ocean mixing buffer rapid climate change?. Tellus, Series A: Dynamic Meteorology and Oceanography, 2005, 57, 676-690.	1.7	10
80	Direct observations of the Antarctic circumpolar current transport on the northern flank of the Kerguelen Plateau. Journal of Geophysical Research: Oceans, 2013, 118, 1333-1348.	2.6	9
81	Glacial thermohaline circulation states of the northern Atlantic: the compatibility of modelling and observations. Journal of the Geological Society, 2000, 157, 655-665.	2.1	9
82	Sensitivity of the North Atlantic to Surface Forcing in an Ocean General Circulation Model. Journal of Physical Oceanography, 1996, 26, 1129-1141.	1.7	8
83	Surface Inorganic Iodine Speciation in the Indian and Southern Oceans From 12Â°N to 70Â°S. Frontiers in Marine Science, 2020, 7, .	2.5	8
84	North Atlantic climate responses to perturbations in Antarctic Intermediate Water. Climate Dynamics, 2011, 37, 297-311.	3.8	6
85	Passive tracers in a general circulation model of the Southern Ocean. Annales Geophysicae, 1999, 17, 971-982.	1.6	5
86	Can limited ocean mixing buffer rapid climate change?. Tellus, Series A: Dynamic Meteorology and Oceanography, 2005, 57, 676-690.	1.7	5
87	Meridional heat transport across the Antarctic Circumpolar Current by the Antarctic Bottom Water overturning cell. Geophysical Research Letters, 2007, 34, .	4.0	5
88	North Atlantic Oscillation response to the Maddenâ€“Julian Oscillation in a coupled climate model. Weather, 2022, 77, 201-205.	0.7	5
89	Seasonal extrema of sea surface temperature in CMIP6 models. Ocean Science, 2022, 18, 839-855.	3.4	5
90	FORTE 2.0: a fast, parallel and flexible coupled climate model. Geoscientific Model Development, 2021, 14, 275-293.	3.6	3

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91	Implementing finite difference ocean circulation models on MIMD, distributed memory computers. Future Generation Computer Systems, 1993, 9, 11-18.	7.5	1
92	Tracking passive drifters in a high resolution ocean model: implications for interannual variability of larval krill transport to South Georgia. Deep-Sea Research Part I: Oceanographic Research Papers, 2004, 51, 909-909.	1.4	1
93	The Impacts of the Oceans on Climate Change. , 2008, , .		1
94	Nonlinear Climate Responses to Changes in Antarctic Intermediate Water. Journal of Climate, 2013, 26, 9175-9193.	3.2	1
95	The zonal momentum balance in an eddy-resolving general-circulation model of the Southern Ocean. Quarterly Journal of the Royal Meteorological Society, 1997, 123, 929-951.	2.7	1
96	Interactions between Increasing CO2 and Antarctic Melt Rates. Journal of Climate, 2020, 33, 8939-8956.	3.2	1