Stephen R Rintoul

List of Publications by Year in descending order

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24978 22764 13,788 144 57 citations h-index papers

g-index 150 150 150 10559 docs citations times ranked citing authors all docs

112

#	Article	IF	CITATIONS
1	A mesoscale phytoplankton bloom in the polar Southern Ocean stimulated by iron fertilization. Nature, 2000, 407, 695-702.	13.7	1,417
2	Climate change cascades: Shifts in oceanography, species' ranges and subtidal marine community dynamics in eastern Tasmania. Journal of Experimental Marine Biology and Ecology, 2011, 400, 17-32.	0.7	525
3	The response of the Antarctic Circumpolar Current to recent climate change. Nature Geoscience, 2008, 1, 864-869.	5.4	495
4	Climate change and Southern Ocean ecosystems I: how changes in physical habitats directly affect marine biota. Global Change Biology, 2014, 20, 3004-3025.	4.2	448
5	The Southern Ocean Limb of the Global Deep Overturning Circulation*. Journal of Physical Oceanography, 2001, 31, 143-173.	0.7	320
6	The Diabatic Deacon Cell*. Journal of Physical Oceanography, 2000, 30, 3212-3222.	0.7	311
7	Circulation, Renewal, and Modification of Antarctic Mode and Intermediate Water*. Journal of Physical Oceanography, 2001, 31, 1005-1030.	0.7	297
8	Variations in behavior and condition of a Southern Ocean top predator in relation to <i>in situ</i> oceanographic conditions. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 13705-13710.	3.3	291
9	South Atlantic interbasin exchange. Journal of Geophysical Research, 1991, 96, 2675-2692.	3.3	285
10	Circumpolar structure and distribution of the Antarctic Circumpolar Current fronts: 1. Mean circumpolar paths. Journal of Geophysical Research, 2009, 114, .	3.3	283
11	The GEOTRACES Intermediate Data Product 2017. Chemical Geology, 2018, 493, 210-223.	1.4	257
12	Structure of Southern Ocean fronts at 140°E. Journal of Marine Systems, 2002, 37, 151-184.	0.9	228
13	Global biogeography of SAR11 marine bacteria. Molecular Systems Biology, 2012, 8, 595.	3.2	215
14	Mercury in the Southern Ocean. Geochimica Et Cosmochimica Acta, 2011, 75, 4037-4052.	1.6	209
15	Southern Ocean Thermocline Ventilation. Journal of Physical Oceanography, 2010, 40, 509-529.	0.7	206
16	Zonally asymmetric response of the Southern Ocean mixed-layer depth to the Southern Annular Mode. Nature Geoscience, 2010, 3, 273-279.	5.4	203
17	A late winter hydrographic section from Tasmania to Antarctica. Deep-Sea Research Part I: Oceanographic Research Papers, 1999, 46, 1417-1454.	0.6	193
18	Polar research: Six priorities for Antarctic science. Nature, 2014, 512, 23-25.	13.7	189

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19	The global influence of localized dynamics in the Southern Ocean. Nature, 2018, 558, 209-218.	13.7	181
20	Multiple Jets of the Antarctic Circumpolar Current South of Australia*. Journal of Physical Oceanography, 2007, 37, 1394-1412.	0.7	180
21	On the relationship between fronts of the Antarctic Circumpolar Current and surface chlorophyll concentrations in the Southern Ocean. Journal of Geophysical Research, 2007, 112, .	3.3	178
22	Circumpolar structure and distribution of the Antarctic Circumpolar Current fronts: 2. Variability and relationship to sea surface height. Journal of Geophysical Research, 2009, 114, .	3.3	178
23	Chapter 4.6 The antarctic circumpolar current system. International Geophysics, 2001, , 271-XXXVI.	0.6	177
24	Rapid freshening of Antarctic Bottom Water formed in the Indian and Pacific oceans. Geophysical Research Letters, 2007, 34, .	1.5	176
25	Choosing the future of Antarctica. Nature, 2018, 558, 233-241.	13.7	172
26	Baroclinic transport variability of the Antarctic Circumpolar Current south of Australia (WOCE) Tj ETQq0 0 0 rgB	T /9.3erloc	k 10 Tf 50 46 167
27	Localized subduction of anthropogenic carbon dioxide in the Southern Hemisphere oceans. Nature Geoscience, 2012, 5, 579-584.	5.4	166
28	Ekman Transport Dominates Local Air–Sea Fluxes in Driving Variability of Subantarctic Mode Water. Journal of Physical Oceanography, 2002, 32, 1308-1321.	0.7	159
29	A roadmap for Antarctic and Southern Ocean science for the next two decades and beyond. Antarctic Science, 2015, 27, 3-18.	0.5	158
30	Southern Ocean frontal structure and sea-ice formation rates revealed by elephant seals. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 11634-11639.	3.3	152
31	On the Origin and Influence of Adélie Land Bottom Water. Antarctic Research Series, 0, , 151-171.	0.2	150
32	Eddy Variability and Energetics from Direct Current Measurements in the Antarctic Circumpolar Current South of Australia. Journal of Physical Oceanography, 2000, 30, 3050-3076.	0.7	146
33	State of the Climate in 2015. Bulletin of the American Meteorological Society, 2016, 97, Si-S275.	1.7	142
34	Ocean heat drives rapid basal melt of the Totten Ice Shelf. Science Advances, 2016, 2, e1601610.	4.7	140
35	Seasonal evolution of the mixed layer in the Subantarctic zone south of Australia. Journal of Geophysical Research, 2001, 106, 31447-31462.	3.3	138
36	Wind forced low frequency variability of the East Australia Current. Geophysical Research Letters, 2008, 35, .	1.5	131

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37	Circulation and seasonal evolution of polar waters south of Australia: implications for iron fertilization of the Southern Ocean. Deep-Sea Research Part II: Topical Studies in Oceanography, 2001, 48, 2439-2466.	0.6	130
38	Seasonal evolution of upper ocean thermal structure between Tasmania and Antarctica. Deep-Sea Research Part I: Oceanographic Research Papers, 1997, 44, 1185-1202.	0.6	126
39	Freshening by glacial meltwater enhances melting of ice shelves and reduces formation of Antarctic Bottom Water. Science Advances, 2018, 4, eaap9467.	4.7	125
40	Advection shapes Southern Ocean microbial assemblages independent of distance and environment effects. Nature Communications, 2013, 4, 2457.	5.8	123
41	A Two-Dimensional Gravest Empirical Mode Determined from Hydrographic Observations in the Subantarctic Front. Journal of Physical Oceanography, 2001, 31, 2186-2209.	0.7	118
42	Formation and export of dense shelf water from the Ad $\tilde{\mathbb{A}}$ Olie Depression, East Antarctica. Journal of Geophysical Research, 2008, 113, .	3.3	114
43	Observations: Ocean Pages. , 2014, , 255-316.		113
44	Freshening of the Adélie Land Bottom Water near 140°E. Geophysical Research Letters, 2005, 32, .	1.5	111
45	Circulation and water masses of the southwest Pacific: WOCE Section P11, Papua New Guinea to Tasmania. Journal of Marine Research, 2000, 58, 223-268.	0.3	108
46	A persistent subsurface chlorophyll maximum in the Interpolar Frontal Zone south of Australia: Seasonal progression and implications for phytoplankton-light-nutrient interactions. Journal of Geophysical Research, 2001, 106, 31543-31557.	3.3	103
47	Antarctic Bottom Water from the Adélie and George V Land coast, East Antarctica (140–149°E). Journal of Geophysical Research, 2010, 115, .	3. 3	98
48	Mass, heat, oxygen and nutrient fluxes and budgets in the North Atlantic Ocean. Deep-sea Research Part A, Oceanographic Research Papers, 1991, 38, S355-S377.	1.6	93
49	Freshening drives contraction of Antarctic Bottom Water in the Australian Antarctic Basin. Geophysical Research Letters, 2014, 41, 1657-1664.	1.5	85
50	Biogeographic partitioning of <scp>S</scp> outhern <scp>O</scp> cean microorganisms revealed by metagenomics. Environmental Microbiology, 2013, 15, 1318-1333.	1.8	82
51	Recent wind-driven change in Subantarctic Mode Water and its impact on ocean heat storage. Nature Climate Change, 2018, 8, 58-63.	8.1	76
52	Glacier tongue calving reduced dense water formation and enhanced carbon uptake. Geophysical Research Letters, 2013, 40, 904-909.	1.5	71
53	Decadal changes in the South Pacific western boundary current system revealed in observations and ocean state estimates. Journal of Geophysical Research, 2011, 116, .	3.3	70
54	Recent recovery of Antarctic Bottom Water formation in the Ross Sea driven by climate anomalies. Nature Geoscience, 2020, 13, 780-786.	5.4	70

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55	Estimating the Four-Dimensional Structure of the Southern Ocean Using Satellite Altimetry. Journal of Atmospheric and Oceanic Technology, 2011, 28, 548-568.	0.5	65
56	Subantarctic mode water: distribution and circulation. Ocean Dynamics, 2011, 61, 103-126.	0.9	64
57	Circulation of modified <scp>C</scp> ircumpolar <scp>D</scp> eep <scp>W</scp> ater and basal melt beneath the <scp>A</scp> mery <scp>I</scp> ce <scp>S</scp> helf, <scp>E</scp> ast <scp>A</scp> ntarctica. Journal of Geophysical Research: Oceans, 2015, 120, 3098-3112.	1.0	64
58	Perfluorinated compounds in the Antarctic region: Ocean circulation provides prolonged protection from distant sources. Environmental Pollution, 2010, 158, 2985-2991.	3.7	63
59	Strong export of Antarctic Bottom Water east of the Kerguelen plateau. Nature Geoscience, 2010, 3, 327-331.	5 . 4	60
60	Distribution of water masses and meltwater on the continental shelf near the <scp>T</scp> otten and <scp>M</scp> oscow <scp>U</scp> niversity ice shelves. Journal of Geophysical Research: Oceans, 2017, 122, 2050-2068.	1.0	60
61	Ocean-lce Shelf Interaction in East Antarctica. , 2016, 29, 130-143.		59
62	Oceanic evidence of climate change in southern Australia over the last three centuries. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	58
63	Abyssal connections of Antarctic Bottom Water in a Southern Ocean State Estimate. Geophysical Research Letters, 2013, 40, 2177-2182.	1.5	57
64	Dynamics of the Southern Ocean Circulation. International Geophysics, 2013, 103, 471-492.	0.6	56
65	Rebound of shelf water salinity in the Ross Sea. Nature Communications, 2019, 10, 5441.	5.8	56
66	Sustained Antarctic Research: A 21st Century Imperative. One Earth, 2019, 1, 95-113.	3 . 6	54
67	Southern Ocean overturning across streamlines in an eddying simulation of the Antarctic Circumpolar Current. Ocean Science, 2007, 3, 491-507.	1.3	53
68	Delivering 21st century Antarctic and Southern Ocean science. Antarctic Science, 2016, 28, 407-423.	0.5	51
69	Impacts of Climate Change on the Subduction of Mode and Intermediate Water Masses in the Southern Ocean. Journal of Climate, 2009, 22, 3289-3302.	1.2	49
70	Influence of Ross Sea Bottom Water changes on the warming and freshening of the Antarctic Bottom Water in the Australian-Antarctic Basin. Ocean Science, 2012, 8, 419-432.	1.3	49
71	Controls on phytoplankton production in the Australasian sector of the subtropical convergence. Deep-Sea Research Part I: Oceanographic Research Papers, 1998, 45, 1627-1661.	0.6	48
72	Changes in the Subduction of Southern Ocean Water Masses at the End of the Twenty-First Century in Eight IPCC Models. Journal of Climate, 2010, 23, 6526-6541.	1.2	48

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73	A 6 year record of baroclinic transport variability of the Antarctic Circumpolar Current at $140 {\hat A}^{\circ} E$ derived from expendable bathythermograph and altimeter measurements. Journal of Geophysical Research, 2002, 107, 19-1.	3.3	45
74	Estimates of Area-Averaged Diapycnal Fluxes from Basin-Scale Budgets. Journal of Physical Oceanography, 2000, 30, 2320-2341.	0.7	44
75	Sensitivity of Antarctic Circumpolar Current Transport and Eddy Activity to Wind Patterns in the Southern Ocean. Journal of Physical Oceanography, 2015, 45, 1051-1067.	0.7	44
76	Cold-core anomalies at the subantarctic front, south of Tasmania. Deep-Sea Research Part I: Oceanographic Research Papers, 2004, 51, 1417-1440.	0.6	42
77	Estimating the biodiversity of the East Antarctic shelf and oceanic zone for ecoregionalisation: Example of the ichthyofauna of the CEAMARC (Collaborative East Antarctic Marine Census) CAML surveys. Polar Science, 2010, 4, 115-133.	0.5	39
78	Oceanic Data Analysis Using a General Circulation Model. Part II: A North Atlantic Model. Journal of Physical Oceanography, 1992, 22, 1458-1485.	0.7	38
79	Do Box Inverse Models Work?. Journal of Physical Oceanography, 1997, 27, 291-308.	0.7	38
80	On the zonal and meridional circulation and ocean transports between Tasmania and Antarctica. Journal of Geophysical Research, 2001, 106, 2795-2814.	3.3	37
81	Tracking the Polar Front south of New Zealand using penguin dive data. Deep-Sea Research Part I: Oceanographic Research Papers, 2006, 53, 591-607.	0.6	36
82	Introduction to special section: SAZ Project. Journal of Geophysical Research, 2001, 106, 31425-31429.	3.3	35
83	Regional circulation and its impact on upper ocean variability south of Tasmania. Deep-Sea Research Part II: Topical Studies in Oceanography, 2011, 58, 2071-2081.	0.6	35
84	Direct observations of the <scp>A</scp> ntarctic <scp>S</scp> lope <scp>C</scp> urrent transport at 113°E. Journal of Geophysical Research: Oceans, 2016, 121, 7390-7407.	1.0	35
85	Mean-flow and topographic control on surface eddy-mixing in the Southern Ocean. Journal of Marine Research, 2011, 69, 753-777.	0.3	34
86	Frontal movements and property fluxes: Contributions to heat and freshwater trends in the Southern Ocean. Journal of Geophysical Research, 2011, 116, .	3.3	33
87	The Dynamics of Southern Ocean Storm Tracks. Journal of Physical Oceanography, 2015, 45, 884-903.	0.7	33
88	Fronts and upper ocean thermal variability south of New Zealand. Antarctic Science, 2003, 15, 141-152.	0.5	32
89	Seasonality of Warm Water Intrusions Onto the Continental Shelf Near the Totten Glacier. Journal of Geophysical Research: Oceans, 2019, 124, 4272-4289.	1.0	32
90	Sea Ice Meltwater and Circumpolar Deep Water Drive Contrasting Productivity in Three Antarctic Polynyas. Journal of Geophysical Research: Oceans, 2019, 124, 2943-2968.	1.0	31

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91	The Southern Ocean Observing System. Oceanography, 2012, 25, 68-69.	0.5	30
92	Widespread freshening in the Seasonal Ice Zone near $140 \hat{A}^{\circ}$ E off the Ad \hat{A}° Clie Land Coast, Antarctica, from 1994 to 2012. Journal of Geophysical Research: Oceans, 2013, 118, 6046-6063.	1.0	30
93	Animal Borne Ocean Sensors – AniBOS – An Essential Component of the Global Ocean Observing System. Frontiers in Marine Science, 2021, 8, .	1.2	30
94	A high resolution transect of dissolved barium in the Southern Ocean. Geophysical Research Letters, 2004, 31, .	1.5	27
95	Seasonal and interannual evolution of the mixed layer in the Antarctic Zone south of Tasmania. Deep-Sea Research Part I: Oceanographic Research Papers, 2004, 51, 2047-2072.	0.6	27
96	Subantarctic Mode Water variability influenced by mesoscale eddies south of Tasmania. Journal of Geophysical Research, 2010, 115 , .	3.3	27
97	Summer hydrography on the shelf off Terre Ad $ ilde{A}$ ©lie/George V Land based on the ALBION and CEAMARC observations during the IPY. Polar Science, 2011, 5, 88-103.	0.5	27
98	Stationary Rossby waves dominate subduction of anthropogenic carbon in the Southern Ocean. Scientific Reports, 2017, 7, 17076.	1.6	27
99	New insights into prime Southern Ocean forage grounds for thriving Western Australian humpback whales. Scientific Reports, 2019, 9, 13988.	1.6	27
100	Antarctic Circumpolar Current transport and barotropic transition at Macquarie Ridge. Geophysical Research Letters, 2014, 41, 7254-7261.	1.5	26
101	Ocean Heat Storage in Response to Changing Ocean Circulation Processes. Journal of Climate, 2020, 33, 9065-9082.	1.2	26
102	Carbon uptake and biogeochemical change in the Southern Ocean, south of Tasmania. Biogeosciences, 2017, 14, 5217-5237.	1.3	26
103	A Mean Synoptic View of the Subantarctic Front South of Australia. Journal of Physical Oceanography, 2002, 32, 1536-1553.	0.7	24
104	Barotropic and baroclinic contributions to along-stream and across-stream transport in the Antarctic Circumpolar Current. Journal of Geophysical Research: Oceans, 2014, 119, 8011-8028.	1.0	24
105	Eddies revealed by SeaWiFS ocean color images in the Antarctic Divergence zone near 140°E. Geophysical Research Letters, 2003, 30, .	1.5	22
106	Summertime physical and biological controls on O 2 and CO 2 in the Australian Sector of the Southern Ocean. Journal of Marine Systems, 2015, 147, 21-28.	0.9	22
107	Change in Dense Shelf Water and Adélie Land Bottom Water Precipitated by Iceberg Calving. Geophysical Research Letters, 2018, 45, 2380-2387.	1.5	22
108	Some Remarks on Interpolation of Nonstationary Oceanographic Fields. Journal of Atmospheric and Oceanic Technology, 1999, 16, 1434-1449.	0.5	20

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109	Controls on circulation, crossâ€shelf exchange, and dense water formation in an Antarctic polynya. Geophysical Research Letters, 2016, 43, 7089-7096.	1.5	20
110	Changes in water properties and flow regime on the continental shelf off the <scp>A</scp> dA©lie/ <scp>G</scp> eorge <scp>V</scp> <scp>L</scp> and coast, <scp>E</scp> ast <scp>A</scp> ntarctica, after glacier tongue calving. Journal of Geophysical Research: Oceans, 2017, 122, 6277-6294.	1.0	20
111	Regional Changes in Icescape Impact Shelf Circulation and Basal Melting. Geophysical Research Letters, 2017, 44, 11,519.	1.5	20
112	Regional circulation around Heard and McDonald Islands and through the Fawn Trough, central Kerguelen Plateau. Deep-Sea Research Part I: Oceanographic Research Papers, 2010, 57, 653-669.	0.6	19
113	Parameterization of eddy-induced subduction in the Southern Ocean surface-layer. Ocean Modelling, 2011, 39, 146-153.	1.0	19
114	Tasman Leakage of intermediate waters as inferred from Argo floats. Geophysical Research Letters, 2013, 40, 5456-5460.	1.5	19
115	A series of cyclonic eddies in the Antarctic Divergence off Ad $\tilde{\mathbb{A}}$ ©lie Coast. Journal of Geophysical Research, 2007, 112, .	3.3	17
116	Variability and mesoscale activity of the Southern Ocean fronts: Identification of a circumpolar coordinate system. Ocean Modelling, 2011, 39, 79-96.	1.0	17
117	Subsurface structure of interannual temperature anomalies in the Australian sector of the Southern Ocean. Journal of Geophysical Research, 2003, 108, .	3.3	16
118	Brief communication: Impacts of a developing polynya off Commonwealth Bay, East Antarctica, triggered by grounding of iceberg B09B. Cryosphere, 2016, 10, 2603-2609.	1.5	16
119	The Neodymium Isotope Fingerprint of Adélie Coast Bottom Water. Geophysical Research Letters, 2018, 45, 11,247.	1.5	16
120	Deep Argo Reveals Bottom Water Properties and Pathways in the Australianâ€Antarctic Basin. Journal of Geophysical Research: Oceans, 2021, 126, .	1.0	16
121	Rapid response of the East Australian Current to remote wind forcing: The role of barotropic-baroclinic interactions. Journal of Marine Research, 2010, 68, 413-431.	0.3	15
122	Continuous shipboard measurements of oceanic \hat{l} (180, \hat{l}) and \hat{l} (13CDIC along a transect from New Zealand to Antarctica using cavity ring-down isotope spectrometry. Journal of Marine Systems, 2014, 137, 21-27.	0.9	15
123	Spatial Variability of Antarctic Bottom Water in the Australian Antarctic Basin From 2018–2020 Captured by Deep Argo. Geophysical Research Letters, 2020, 47, e2020GL089467.	1.5	15
124	Warm Modified Circumpolar Deep Water Intrusions Drive Ice Shelf Melt and Inhibit Dense Shelf Water Formation in Vincennes Bay, East Antarctica. Journal of Geophysical Research: Oceans, 2021, 126, e2020JC016998.	1.0	15
125	Upper ocean temperature and the baroclinic transport stream function relationship in Drake Passage. Journal of Geophysical Research, 2004, 109, .	3.3	13
126	Detecting and Characterizing Ekman Currents in the Southern Ocean. Journal of Physical Oceanography, 2015, 45, 1205-1223.	0.7	13

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127	Ocean circulation and frontal structure near the southern Kerguelen Plateau: The physical context for the Kerguelen Axis ecosystem study. Deep-Sea Research Part II: Topical Studies in Oceanography, 2020, 174, .	0.6	12
128	Rapid development and persistence of a massive Antarctic sea ice tongue. Journal of Geophysical Research, 2008, 113 , .	3.3	11
129	Alongâ€Slope Variability of Crossâ€Slope Eddy Transport in East Antarctica. Geophysical Research Letters, 2019, 46, 8224-8233.	1.5	11
130	Near-bottom current direction inferred from comatulid crinoid feeding postures on the Terre Adélie and George V shelf, East Antarctica. Deep-Sea Research Part II: Topical Studies in Oceanography, 2011, 58, 163-169.	0.6	10
131	Atlantic–Pacific asymmetry of subsurface temperature change and frontal response of the Antarctic Circumpolar Current for the recent three decades. Journal of Oceanography, 2015, 71, 623-636.	0.7	10
132	Residence Time and Transformation of Warm Circumpolar Deep Water on the Antarctic Continental Shelf. Geophysical Research Letters, 2021, 48, e2021GL096092.	1.5	9
133	Antarctic Circumpolar Current. , 2019, , 248-261.		7
134	A Continental Shelf Pump for CO ₂ on the Adélie Land Coast, East Antarctica. Journal of Geophysical Research: Oceans, 2020, 125, e2020JC016302.	1.0	6
135	Bathymetryâ€Constrained Navigation of Argo Floats Under Sea Ice on the Antarctic Continental Shelf. Geophysical Research Letters, 2020, 47, e2020GL087019.	1.5	6
136	Subpolar Southern Ocean Response to Changes in the Surface Momentum, Heat, and Freshwater Fluxes under 2xCO2. Journal of Climate, 2021, 34, 8755-8775.	1.2	6
137	The Role of the Oceans in Southern Hemisphere Climate. , 1998, , 283-306.		6
138	The Southern Ocean in the Earth System. , 2011, , 175-187.		6
139	Seasonal Transformation and Spatial Variability of Water Masses Within MacKenzie Polynya, Prydz Bay. Journal of Geophysical Research: Oceans, 2021, 126, .	1.0	5
140	Dynamics of a Standing Meander of the Subantarctic Front Diagnosed from Satellite Altimetry and Along-Stream Anomalies of Temperature and Salinity. Journal of Physical Oceanography, 2022, 52, 1073-1089.	0.7	2
141	Distribution of Hydrocorals Along the George V Slope, East Antarctica. , 2012, , 717-726.		1
142	Hydrothermal Heat Enhances Abyssal Mixing in the Antarctic Circumpolar Current. Geophysical Research Letters, 2019, 46, 812-821.	1.5	1
143	Large-Scale Ocean Circulation: Deep Circulation and Meridional Overturning. , 2013, , 199-232.		1
144	Atlantic–Pacific asymmetry of subsurface temperature change and frontal response of the Antarctic Circumpolar Current for the recent three decades. , 2016, , 157-170.		0