Rainer Bleck

List of Publications by Year
in descending order

81 papers	7,558 citations	109137 35 h-index	69108 77 g-index
82 all docs	82 docs citations	82 times ranked	6474 citing authors

#	Article	IF	Citations
1	An oceanic general circulation model framed in hybrid isopycnic-Cartesian coordinates. Ocean Modelling, 2002, 4, 55-88.	1.0	1,028
2	The HYCOM (HYbrid Coordinate Ocean Model) data assimilative system. Journal of Marine Systems, 2007, 65, 60-83.	0.9	781
3	Configuration and assessment of the GISS ModelE2 contributions to the CMIP5 archive. Journal of Advances in Modeling Earth Systems, 2014, 6, 141-184.	1.3	597
4	Salinity-driven Thermocline Transients in a Wind- and Thermohaline-forced Isopycnic Coordinate Model of the North Atlantic. Journal of Physical Oceanography, 1992, 22, 1486-1505.	0.7	481
5	US GODAE: Global Ocean Prediction with the HYbrid Coordinate Ocean Model (HYCOM). Oceanography, 2009, 22, 64-75.	0.5	374
6	North Atlantic Simulations with the Hybrid Coordinate Ocean Model (HYCOM): Impact of the Vertical Coordinate Choice, Reference Pressure, and Thermobaricity. Journal of Physical Oceanography, 2003, 33, 2504-2526.	0.7	334
7	Meteorological analysis of long range transport of mineral aerosols over the North Pacific. Journal of Geophysical Research, 1989, 94, 8584-8598.	3.3	306
8	A wind‑driven isopycnic coordinate model of the north and equatorial Atlantic Ocean: 1. Model development and supporting experiments. Journal of Geophysical Research, 1990, 95, 3273-3285.	3.3	277
9	GISS‑E2.1: Configurations and Climatology. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002025.	1.3	234
10	Initial Testing of a Numerical Ocean Circulation Model Using a Hybrid (Quasi-Isopycnic) Vertical Coordinate. Journal of Physical Oceanography, 1981, 11, 755-770.	0.7	224
11	Mesoscale Weather Prediction with the RUC Hybrid Isentropic‑Terrain-Following Coordinate Model. Monthly Weather Review, 2004, 132, 473-494.	0.5	219
12	The Subseasonal Experiment (SubX): A Multimodel Subseasonal Prediction Experiment. Bulletin of the American Meteorological Society, 2019, 100, 2043-2060.	1.7	153
13	Modeling atmospheric transport to the Marshall Islands. Journal of Geophysical Research, 1985, 90, 12927-12936.	3.3	147
14	Wind‑driven spin‑up in eddy‑resolving ocean models formulated in isopycnic and isobaric coordinates. Journal of Geophysical Research, 1986, 91, 7611-7621.	3.3	143
15	CMIP5 historical simulations (1850‑2012) with GISS ModelE2. Journal of Advances in Modeling Earth Systems, 2014, 6, 441-478.	1.3	133
16	North Atlantic simulations in Coordinated Ocean-ice Reference Experiments phase II (CORE-II). Part II: Inter-annual to decadal variability. Ocean Modelling, 2016, 97, 65-90.	1.0	131
17	Regional Weather Prediction with a Model Combining Terrain-following and Isentropic Coordinates. Part I: Model Description. Monthly Weather Review, 1993, 121, 1770-1785.	0.5	117
18	Future climate change under RCP emission scenarios with GISS <scp>M</scp>odelE2. Journal of Advances in Modeling Earth Systems, 2015, 7, 244-267.	1.3	112

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19	A fast, approximative method for integrating the stochastic coalescence equation. Journal of Geophysical Research, 1970, 75, 5165-5171.	3.3	93
20	Hail Growth by Stochastic Collection in a Cumulus Model. Journals of the Atmospheric Sciences, 1972, 29, 135-155.	0.6	88
21	Mixed Layer-Thermocline Interaction in a Three-Dimensional Isopycnic Coordinate Model. Journal of Physical Oceanography, 1989, 19, 1417-1439.	0.7	79
22	Techniques of Lagrangian Trajectory Analysis in Isentropic Coordinates. Monthly Weather Review, 1986, 114, 571-581.	0.5	76
23	A new approximation of the equation of state for seawater, suitable for numerical ocean models. Journal of Geophysical Research, 1999, 104, 1537-1540.	3.3	71
24	Inclusion of Thermobaricity in Isopycnic-Coordinate Ocean Models. Journal of Physical Oceanography, 1999, 29, 2719-2729.	0.7	64
25	A Model Comparison: Numerical Simulations of the North and Equatorial Atlantic Oceanic Circulation in Depth and Isopycnic Coordinates. Journal of Physical Oceanography, 1996, 26, 1849-1867.	0.7	62
26	Observed distribution of radioactivity, ozone, and potential vorticity associated with tropopause folding. Journal of Geophysical Research, 1970, 75, 2353-2361.	3.3	58
27	Turbulent behavior of a fine mesh (1/12°) numerical simulation of the North Atlantic. Journal of Marine Systems, 1999, 21, 307-320.	0.9	55
28	A comparison of data-parallel and message-passing versions of the Miami Isopycnic Coordinate Ocean Model (MICOM). Parallel Computing, 1995, 21, 1695-1720.	1.3	52
29	CMIP6 Historical Simulations (1850–2014) With GISS‐E2.1. Journal of Advances in Modeling Earth Systems, 2021, 13, e2019MS002034.	1.3	49
30	On the Use of Hybrid Vertical Coordinates in Numerical Weather Prediction Models. Monthly Weather Review, 1978, 106, 1233-1244.	0.5	46
31	Jet Streak Dynamics and Geostrophic Adjustment Processes during the Initial Stages of Lee Cyclogenesis. Monthly Weather Review, 1986, 114, 2033-2056.	0.5	45
32	Ocean Prediction with the Hybrid Coordinate Ocean Model (HYCOM). , 2006, , 413-426.		43
33	Short-Range Prediction in Isentropic Coordinates with Filtered and Unfiltered Numerical Models. Monthly Weather Review, 1974, 102, 813-829.	0.5	41
34	Numerical Forecasting Experiments Based on the Conservation of Potential Vorticity on Isentropic Surfaces. Journal of Applied Meteorology, 1973, 12, 737-752.	1.1	39
35	Multi-century simulations with the coupled GISS–HYCOM climate model: control experiments. Climate Dynamics, 2006, 26, 407-428.	1.7	39
36	Sea surface velocities from sea surface temperature image sequences: 1. Method and validation using primitive equation model output. Journal of Geophysical Research, 2000, 105, 19499-19514.	3.3	37

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37	A two-dimensional model of mesoscale frontogenesis in the ocean. Quarterly Journal of the Royal Meteorological Society, 1988, 114, 347-371.	1.0	34
38	Multi-decadal thermohaline variability in an ocean–atmosphere general circulation model. Climate Dynamics, 2004, 22, 573-590.	1.7	34
39	Ocean Modeling in Isopycnic Coordinates. , 1998, , 423-448.		34
40	Numerical Simulation of Lee Cyclogenesis in the Gulf of Genoa. Monthly Weather Review, 1977, 105, 428-445.	0.5	29
41	NAO influence on sea ice extent in the Eurasian coastal region. Geophysical Research Letters, 2002, 29, 10-1-10-4.	1.5	29
42	Natural air–sea flux of CO_2 in simulations of the NASA-GISS climate model: Sensitivity to the physical ocean model formulation. Ocean Modelling, 2013, 66, 26-44.	1.0	27
43	On the conversion between mean and eddy components of potential and kinetic energy in isentropic and isopycnic coordinates. Dynamics of Atmospheres and Oceans, 1985, 9, 17-37.	0.7	26
44	A wind–driven isopycnic coordinate model of the north and equatorial Atlantic Ocean 2. The Atlantic Basin Experiments. Journal of Geophysical Research, 1990, 95, 13105-13128.	3.3	26
45	Factors Affecting Cold-Air Outbreaks East of the Rocky Mountains. Monthly Weather Review, 1991, 119, 2280-2292.	0.5	26
46	Recent changes in the air-sea gas exchange of methyl chloroform. Geophysical Research Letters, 2004, 31, .	1.5	25
47	Thermohaline Circulation Studies with an Isopycnic Coordinate Ocean Model. Journal of Physical Oceanography, 2001, 31, 2761-2782.	0.7	23
48	Atlantic thermohaline circulation and its response to increasing CO_2 in a coupled atmosphere-ocean model. Geophysical Research Letters, 2001, 28, 4223-4226.	1.5	22
49	Depiction of Upper/Lower Vortex Interaction Associated with Extratropical Cyclogenesis. Monthly Weather Review, 1990, 118, 573-585.	0.5	22
50	Ocean State Estimation and Prediction in Support of Oceanographic Research. Oceanography, 2000, 13, 51-56.	0.5	22
51	Future Climate Change Under SSP Emission Scenarios With GISS–E2.1. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	22
52	A numerical model of instabilities in the Florida Current. Journal of Marine Research, 1988, 46, 715-751.	0.3	21
53	The Influence of Layer Outcropping on the Separation of Boundary Currents. Part I: The Wind-driven Experiments. Journal of Physical Oceanography, 1993, 23, 1485-1507.	0.7	21
54	The Impact of Lateral Boundary Conditions and Horizontal Resolution on North Atlantic Water Mass Transformations and Pathways in an Isopycnic Coordinate Ocean Model. Journal of Physical Oceanography, 2000, 30, 137-159.	0.7	21

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55	Evaluation of MJO Predictive Skill in Multiphysics and Multimodel Global Ensembles. Monthly Weather Review, 2017, 145, 2555-2574.	0.5	20
56	On the Use of an Adaptive, Hybrid-Isentropic Vertical Coordinate in Global Atmospheric Modeling. Monthly Weather Review, 2010, 138, 2188-2210.	0.5	19
57	A Vertically Flow-Following Icosahedral Grid Model for Medium-Range and Seasonal Prediction. Part I: Model Description. Monthly Weather Review, 2015, 143, 2386-2403.	0.5	19
58	Subseasonal Forecasting with an Icosahedral, Vertically Quasi-Lagrangian Coupled Model. Part I: Model Overview and Evaluation of Systematic Errors. Monthly Weather Review, 2018, 146, 1601-1617.	0.5	18
59	Tropospheric and Stratospheric Ducting of Stationary Mountain Lee Waves. Journals of the Atmospheric Sciences, 1970, 27, 758-772.	0.6	15
60	Layer Outcropping in Numerical Models of Stratified Flows. Journal of Physical Oceanography, 1993, 23, 1877-1884.	0.7	13
61	Geographic distribution of the diapycnal component of thermohaline circulations in coupled climate models. Ocean Modelling, 2006, 15, 177-199.	1.0	13
62	An Economical Approach to the Use of Wind Data in the Optimum Interpolation of Geo- and Montgomery Potential Fields. Monthly Weather Review, 1975, 103, 807-816.	0.5	11
63	Putting models to the data test: a case study using Indian Ocean CFC-11 data. Ocean Modelling, 2005, 9, 1-22.	1.0	11
64	Subseasonal Forecasting with an Icosahedral, Vertically Quasi-Lagrangian Coupled Model. Part II: Probabilistic and Deterministic Forecast Skill. Monthly Weather Review, 2018, 146, 1619-1639.	0.5	11
65	Simulation of coastal upwelling frontogenesis with an isopycnic coordinate model. Journal of Geophysical Research, 1978, 83, 6163-6172.	3.3	10
66	Diagnostics of the oceanic thermohaline circulation in a coupled climate model. Global and Planetary Change, 2004, 40, 233-248.	1.6	10
67	The Influence of Layer Outcropping on the Separation of Boundary Currents. Part II: The Wind- and Buoyancy-Driven Experiments. Journal of Physical Oceanography, 1995, 25, 2404-2422.	0.7	9
68	A study of the circulation and salinity budget of the Arabian Sea with an isopycnic coordinate ocean model. Deep-Sea Research Part II: Topical Studies in Oceanography, 2003, 50, 2091-2110.	0.6	9
69	Multidimensional Forward-in-Time and Upstream-in-Space-Based Differencing for Fluids. Monthly Weather Review, 1997, 125, 616-630.	0.5	9
70	Removal of Aerosol Particles and Fractional Separation of HDO-H2O During Snowstorms. Journals of the Atmospheric Sciences, 1969, 26, 289-301.	0.6	8
71	The Inclusion of a Surface Mixed Layer in a Large-Scale Circulation Model. Elsevier Oceanography Series, 1988, 46, 51-62.	0.1	8
72	A multistep flux-corrected transport scheme. Journal of Computational Physics, 2010, 229, 9284-9298.	1.9	7

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73	On the Use of Hybrid Vertical Coordinates in Ocean Circulation Modeling. , 2006, , 109-126.		7
74	Trace Constituents in the Vicinity of Jet Streams. Journal of Applied Meteorology, 1969, 8, 348-356.	1.1	6
75	A Comparison of Several Meteorological Analysis Schemes over a Data-Rich Region. Monthly Weather Review, 1977, 105, 1083-1091.	0.5	6
76	Enhancement of Remotely Sensed Temperature Fields by Wind Observations from a VHF Radar Network. Monthly Weather Review, 1984, 112, 1795-1803.	0.5	6
77	Vertical Coordinate Transformation of Vertically-Discretized Atmospheric Fields. Monthly Weather Review, 1984, 112, 2535-2539.	0.5	6
78	GLOBAL OCEAN SIMULATIONS WITH AN ISOPYCNIC COORDINATE MODEL. , 1997, , 297-317.		5
79	Tendency Equations for Shear and Curvature Vorticity in Coordinate-independent Vector Notation. Journals of the Atmospheric Sciences, 1991, 48, 1124-1127.	0.6	4
80	Study of Transport Fluctuations and Meandering of The Florida Current using an Isopycnic Coordinate Numerical Model. Elsevier Oceanography Series, 1987, 45, 149-168.	0.1	1
81	Jet Streak Dynamics and Geostrophic Adjustment Processes During the Initial Stages of Lee Cyclogenesis. , 1986, , 885-901.		0