Richard B Rood

List of Publications by Year
in descending order

114 papers	8,039 citations	117625 34 h-index	51608 86 g-index
115 all docs	115 docs citations	115 times ranked	6290 citing authors

#	Article	IF	Citations
1	A study on assimilating potential vorticity data. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 50, 490.	1.7	8
2	A Northern Hemispheric Wave Train Associated with Interannual Variations in the Bermuda High during Boreal Summer. Journal of Climate, 2021, 34, 6163-6173.	3.2	2
3	Large lakes in climate models: A Great Lakes case study on the usability of CMIP5. Journal of Great Lakes Research, 2021, 47, 405-418.	1.9	17
4	Increasing the Usability of Climate Models through the Use of Consumer-Report-Style Resources for Decision-Making. Bulletin of the American Meteorological Society, 2020, 101, E1709-E1717.	3.3	6
5	Modeling seasonal onset of coastal ice. Climatic Change, 2019, 154, 125-141.	3.6	3
6	Validation of Climate Models: An Essential Practice. Simulation Foundations, Methods and Applications, 2019, , 737-762.	0.1	1
7	Recent water level changes across Earth's largest lake system and implications for future variability. Journal of Great Lakes Research, 2019, 45, 1-3.	1.9	69
8	The role of meteorological processes in the description of uncertainty for climate change decision-making. Theoretical and Applied Climatology, 2017, 127, 643-654.	2.8	15
9	Using large eddy simulations to reveal the size, strength, and phase of updraft and downdraft cores of an Arctic mixedâ€phase stratocumulus cloud. Journal of Geophysical Research D: Atmospheres, 2017, 122, 4378-4400.	3.3	5
10	Evaluating the Appropriateness of Downscaled Climate Information for Projecting Risks of Salmonella. International Journal of Environmental Research and Public Health, 2016, 13, 267.	2.6	8
11	A decision tree algorithm for investigation of model biases related to dynamical cores and physical parameterizations. Journal of Advances in Modeling Earth Systems, 2016, 8, 1769-1785.	3.8	5
12	An Object-Based Approach for Quantification of GCM Biases of the Simulation of Orographic Precipitation. Part II: Quantitative Analysis. Journal of Climate, 2015, 28, 4863-4876.	3.2	3
13	Potential vorticity: Measuring consistency between <scp>GCM</scp> dynamical cores and tracer advection schemes. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 739-751.	2.7	11
14	Determining the effective resolution of advection schemes. Part II: Numerical testing. Journal of Computational Physics, 2014, 278, 497-508.	3.8	6
15	An Object-Based Approach for Quantification of GCM Biases of the Simulation of Orographic Precipitation. Part I: Idealized Simulations. Journal of Climate, 2014, 27, 9139-9154.	3.2	8
16	Using Forecast and Observed Weather Data to Assess Performance of Forecast Products in Identifying Heat Waves and Estimating Heat Wave Effects on Mortality. Environmental Health Perspectives, 2014, 122, 912-918.	6.0	27
17	Determining the effective resolution of advection schemes. Part I: Dispersion analysis. Journal of Computational Physics, 2014, 278, 485-496.	3.8	16
18	A Trend Analysis of the 1930â€"2010 Extreme Heat Events in the Continental United States. Journal of Applied Meteorology and Climatology, 2014, 53, 565-582.	1.5	28

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19	Moving Climate Information off the Shelf: Boundary Chains and the Role of RISAs as Adaptive Organizations. Weather, Climate, and Society, 2014, 6, 273-285.	1.1	111
20	Coupling climate and hydrological models: Interoperability through Web Services. Environmental Modelling and Software, 2013, 46, 250-259.	4.5	38
21	The Practitioner's Dilemma: How to Assess the Credibility of Downscaled Climate Projections. Eos, 2013, 94, 424-425.	0.1	103
22	An Investigation into the Spatial Variability of Near-Surface Air Temperatures in the Detroit, Michigan, Metropolitan Region. Journal of Applied Meteorology and Climatology, 2012, 51, 1290-1304.	1.5	30
23	Assessing Tracer Transport Algorithms and the Impact of Vertical Resolution in a Finite-Volume Dynamical Core. Monthly Weather Review, 2012, 140, 1620-1638.	1.4	8
24	Downscale cascades in tracer transport test cases: an intercomparison of the dynamical cores in the Community Atmosphere Model CAM5. Geoscientific Model Development, 2012, 5, 1517-1530.	3.6	9
25	Comparing exposure metrics for classifying â€˜dangerous heatâ€™ in heat wave and health warning systems. Environment International, 2012, 46, 23-29.	10.0	61
26	Geostatistical exploration of spatial variation of summertime temperatures in the Detroit metropolitan region. Environmental Research, 2011, 111, 1046-1053.	7.5	42
27	Revisiting projected shifts in the climate envelopes of North American trees using updated general circulation models. Global Change Biology, 2011, 17, 2720-2730.	9.5	110
28	Software Testing and Verification in Climate Model Development. IEEE Software, 2011, 28, 49-55.	1.8	42
29	Impacts of Climate Change on Public Health in India: Future Research Directions. Environmental Health Perspectives, 2011, 119, 765-770.	6.0	66
30	A Stability Analysis of Divergence Damping on a Latitudeâ€"Longitude Grid. Monthly Weather Review, 2011, 139, 2976-2993.	1.4	24
31	A Perspective on the Role of the Dynamical Core in the Development of Weather and Climate Models. Lecture Notes in Computational Science and Engineering, 2011, , 513-537.	0.3	4
32	Climate projections and their impact on policy and practice. Wiley Interdisciplinary Reviews: Climate Change, 2010, 1, 670-682.	8.1	106
33	The Role of the Model in the Data Assimilation System. , 2010, , 351-379.		3
34	Reanalysis: Data Assimilation for Scientific Investigation of Climate. , 2010, , 623-646.		1
35	Climate Change, Heat Waves, and Environmental Justice: Advancing Knowledge and Action. Environmental Justice, 2009, 2, 197-205.	1.5	28
36	Simulated climate near steep topography: Sensitivity to numerical methods for atmospheric transport. Geophysical Research Letters, 2008, 35, .	4.0	8

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37	Evaluation of a CCSM3 Simulation with a Finite Volume Dynamical Core for the Atmosphere at 1Â° Latitude Ã— 1.25Â° Longitude Resolution. Journal of Climate, 2008, 21, 1467-1486.	3.2	15
38	Assimilation of ozone data from the Michelson Interferometer for Passive Atmospheric Sounding. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 2713-2734.	2.7	30
39	Monitoring of observation errors in the assimilation of satellite ozone data. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	27
40	Evaluation of transport in the lower tropical stratosphere in a global chemistry and transport model. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	64
41	High-Frequency Planetary Waves in the Polar Middle Atmosphere as Seen in a Data Assimilation System. Journals of the Atmospheric Sciences, 2003, 60, 2975-2992.	1.7	10
42	Ozone Assimilation. , 2003, , 263-277.		4
43	Reanalysis. , 2003, , 361-372.		3
44	How Can We Advance Our Weather and Climate Models as a Community?. Bulletin of the American Meteorological Society, 2002, 83, 431-434.	3.3	25
45	Applying local discretization methods in the NASA finite-volume general circulation model. Computing in Science and Engineering, 2002, 4, 49-54.	1.2	4
46	Stratospheric temperature trends: Observations and model simulations. Reviews of Geophysics, 2001, 39, 71-122.	23.0	326
47	Global Modeling Initiative assessment model: Model description, integration, and testing of the transport shell. Journal of Geophysical Research, 2001, 106, 1669-1691.	3.3	77
48	The tropical upper troposphere and lower stratosphere in the GEOS-2 GCM. Advances in Space Research, 2001, 27, 1457-1465.	2.6	1
49	The GEOS ozone data assimilation system: Specification of error statistics. Quarterly Journal of the Royal Meteorological Society, 2001, 127, 1069-1094.	2.7	65
50	Lamination Frequencies as a Diagnostic for Horizontal Mixing in a 3D Transport Model*. Journals of the Atmospheric Sciences, 2000, 57, 247-261.	1.7	11
51	Seasonal variability of middle-latitude ozone in the lowermost stratosphere derived from probability distribution functions. Journal of Geophysical Research, 2000, 105, 17793-17805.	3.3	17
52	Atmospheric sulfur cycle simulated in the global model GOCART: Model description and global properties. Journal of Geophysical Research, 2000, 105, 24671-24687.	3.3	525
53	The GCMâ€"Reality Intercomparison Project for SPARC (GRIPS): Scientific Issues and Initial Results. Bulletin of the American Meteorological Society, 2000, 81, 781-796.	3.3	146
54	Seasonal variations of upper tropospheric water vapor and high clouds observed from satellites. Journal of Geophysical Research, 1999, 104, 6193-6197.	3.3	15

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55	Assimilating TOVS Humidity into the GEOS-2 Data Assimilation System. Journal of Climate, 1999, 12, 2983-2995.	3.2	9
56	A study on assimilating potential vorticity data. Tellus, Series A: Dynamic Meteorology and Oceanography, 1998, 50, 490-506.	1.7	5
57	The impact of diabatic initialization on stratospheric analyses, forecasts, and transport experiments. Quarterly Journal of the Royal Meteorological Society, 1998, 124, 297-315.	2.7	0
58	Processes controlling dimethylsulfide over the ocean: Case studies using a 3-D model driven by assimilated meteorological fields. Journal of Geophysical Research, 1998, 103, 8341-8353.	3.3	21
59	Upper tropospheric water vapor from GEOS reanalysis and UARS MLS observation. Journal of Geophysical Research, 1998, 103, 19587-19594.	3.3	9
60	The impact of diabatic initialization on stratospheric analyses, forecasts, and transport experiments. Quarterly Journal of the Royal Meteorological Society, 1998, 124, 297-315.	2.7	1
61	Impact of a Semi-Lagrangian and an Eulerian Dynamical Core on Climate Simulations. Journal of Climate, 1997, 10, 2374-2389.	3.2	14
62	A three-dimensional simulation of the evolution of the middle latitude winter ozone in the middle stratosphere. Journal of Geophysical Research, 1997, 102, 19217-19232.	3.3	29
63	Synoptic-scale mass exchange from the troposphere to the stratosphere. Journal of Geophysical Research, 1997, 102, 23467-23485.	3.3	32
64	An explicit fluxâ€form semiâ€lagrangian shallowâ€water model on the sphere. Quarterly Journal of the Royal Meteorological Society, 1997, 123, 2477-2498.	2.7	279
65	A three-dimensional simulation of the ozone annual cycle using winds from a data assimilation system. Journal of Geophysical Research, 1996, 101, 1463-1474.	3.3	66
66	Measurements of polar vortex air in the midlatitudes. Journal of Geophysical Research, 1996, 101, 12879-12891.	3.3	44
67	Three-dimensional radon 222 calculations using assimilated meteorological data and a convective mixing algorithm. Journal of Geophysical Research, 1996, 101, 6871-6881.	3.3	100
68	Transport-induced interannual variability of carbon monoxide determined using a chemistry and transport model. Journal of Geophysical Research, 1996, 101, 28655-28669.	3.3	88
69	Multidimensional Flux-Form Semi-Lagrangian Transport Schemes. Monthly Weather Review, 1996, 124, 2046-2070.	1.4	1,022
70	Upper-Tropospheric Water Vapor fromUARSMLS. Bulletin of the American Meteorological Society, 1995, 76, 2381-2389.	3.3	76
71	Tracer transport for realistic aircraft emission scenarios calculated using a three-dimensional model. Journal of Geophysical Research, 1995, 100, 5203.	3.3	7
72	Vertical transport by convective clouds: Comparisons of three modeling approaches. Geophysical Research Letters, 1995, 22, 1089-1092.	4.0	15

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73	Two-dimensional and three-dimensional model simulations, measurements, and interpretation of the influence of the October 1989 solar proton events on the middle atmosphere. Journal of Geophysical Research, 1995, 100, 11641.	3.3	70
74	Three-dimensional simulation of the influence of a cutoff low on the distribution of northern hemisphere processed air in late January 1992. Journal of Geophysical Research, 1995, 100, 16431.	3.3	8
75	Stratosphere-troposphere exchange. Reviews of Geophysics, 1995, 33, 403.	23.0	2,184
76	Tracer evolution in winds generated by a global spectral mechanistic model. Journal of Geophysical Research, 1994, 99, 5399.	3.3	9
77	A Comparison of Winds from the STRATAN Data Assimilation System to Balanced Wind Estimates. Journals of the Atmospheric Sciences, 1994, 51, 2309-2315.	1.7	7
78	Satellite observation and mapping of wintertime ozone variability in the lower stratosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 1993, 55, 1081-1088.	0.9	1
79	An Assimilated Dataset for Earth Science Applications. Bulletin of the American Meteorological Society, 1993, 74, 2331-2342.	3.3	476
80	The effects of the October 1989 solar proton events on the stratosphere as computed using a threeâ€dimensional model. Geophysical Research Letters, 1993, 20, 459-462.	4.0	29
81	A 3D simulation of the early winter distribution of reactive chlorine in the north polar vortex. Geophysical Research Letters, 1993, 20, 1271-1274.	4.0	20
82	Implications of threeâ€dimensional tracer studies for twoâ€dimensional assessments of the impact of supersonic aircraft on stratospheric ozone. Journal of Geophysical Research, 1993, 98, 8949-8963.	3.3	16
83	Characteristics of wintertime and autumn nitric acid chemistry as defined by Limb Infrared Monitor of the Stratosphere (LIMS) data. Journal of Geophysical Research, 1993, 98, 18533-18545.	3.3	13
84	Thermodynamic Balance of Three-Dimensional Stratospheric Winds Derived from a Data Assimilation Procedure. Journals of the Atmospheric Sciences, 1993, 50, 2987-2993.	1.7	45
85	The Minor Stratospheric Warming of January 1989: Results from STRATAN, a Stratospheric-Tropospheric Data Assimilation System. Monthly Weather Review, 1992, 120, 221-229.	1.4	2
86	Atmospheres panel report to the payload panel. Global and Planetary Change, 1992, 6, 9-23.	3.5	0
87	Episodic total ozone minima and associated effects on heterogeneous chemistry and lower stratospheric transport. Journal of Geophysical Research, 1992, 97, 7979-7996.	3.3	42
88	Tracer exchange between tropics and middle latitudes. Geophysical Research Letters, 1992, 19, 805-808.	4.0	20
89	Spatial and temporal variability of the extent of chemically processed stratospheric air. Geophysical Research Letters, 1991, 18, 29-32.	4.0	15
90	The influlence of polar heterogeneous processes on reactive chlorine at middle latitudes: Three dimensional model implications. Geophysical Research Letters, 1991, 18, 25-28.	4.0	20

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91	Threeâ€dimensional simulations of wintertime ozone variability in the lower stratosphere. Journal of Geophysical Research, 1991, 96, 5055-5071.	3.3	40
92	The dynamics of the HSCT environment. , 1991, , .		0
93	Application of a Monotonic Upstream-biased Transport Scheme to Three-Dimensional Constituent Transport Calculations. Monthly Weather Review, 1991, 119, 2456-2464.	1.4	65
94	Three-Dimensional Constituent Transport Models and the Study of Interannual Variability. Journal of Geomagnetism and Geoelectricity, 1991, 43, 687-693.	0.9	1
95	Wintertime Nitric Acid Chemistry: Implications from Three-Dimensional Model Calculations. Journals of the Atmospheric Sciences, 1990, 47, 2696-2709.	1.7	17
96	Stratospheric temperatures during AASE: Results from Stratan. Geophysical Research Letters, 1990, 17, 337-340.	4.0	16
97	Global threeâ€dimensional constituent fields derived from profile data. Geophysical Research Letters, 1990, 17, 525-528.	4.0	28
98	Three dimensional simulation of hydrogen chloride and hydrogen fluoride during the Airborne Arctic Stratospheric Expedition. Geophysical Research Letters, 1990, 17, 529-532.	4.0	18
99	Effect of solar proton events on the middle atmosphere during the past two solar cycles as computed using a twoâ€dimensional model. Journal of Geophysical Research, 1990, 95, 7417-7428.	3.3	134
100	Global ozone minima in the historical record. History of Geophysics, 1990, , 217-220.	0.0	0
101	Three Dimensions Simulation of Spatial and Temporal Variability of Stratospheric Hydrogen Chloride. Geophysical Research Letters, 1989, 16, 1149-1152.	4.0	5
102	Chemistry and transport in a threeâ€dimensional stratospheric model: Chlorine species during a simulated stratospheric warming. Journal of Geophysical Research, 1989, 94, 1057-1083.	3.3	31
103	The Use of Assimilated Stratospheric Data in Constituent Transport Calculations. Journals of the Atmospheric Sciences, 1989, 46, 687-702.	1.7	53
104	Nitric acid forecast experiments. Physica Scripta, 1987, 36, 337-354.	2.5	7
105	Numerical advection algorithms and their role in atmospheric transport and chemistry models. Reviews of Geophysics, 1987, 25, 71-100.	23.0	241
106	Global ozone minima in the historical record. Geophysical Research Letters, 1986, 13, 1244-1247.	4.0	8
107	Derivation of photochemical information near 1 mbar from ozone and temperature data. Journal of Geophysical Research, 1986, 91, 13153-13166.	3.3	15
108	A critical analysis of the concept of planetary wave breaking. Pure and Applied Geophysics, 1985, 123, 733-755.	1.9	7

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109	Interpretation of ozone temperature correlations: 1. Theory. Journal of Geophysical Research, 1985, 90, 5733-5743.	3.3	70
110	Interpretation of ozone temperature correlations: 2. Analysis of SBUV ozone data. Journal of Geophysical Research, 1985, 90, 10693-10708.	3.3	44
111	Transport and the seasonal variation of ozone. Pure and Applied Geophysics, 1983, 121, 1049-1064.	1.9	13
112	A mechanistic model of Eulerian, Langrangian mean, and Lagrangian ozone transport by steady planetary waves. Journal of Geophysical Research, 1983, 88, 5208-5218.	3.3	20
113	Ozone transport by diabatic and planetary wave circulations on a Î² plane. Journal of Geophysical Research, 1983, 88, 8491-8504.	3.3	15
114	Fundamentals of Modeling, Data Assimilation, and High-Performance Computing. , 0, , 207-229.		0