David W J Thompson

List of Publications by Year
in descending order

108	18,210	44069 48	25787 108
papers	citations	h-index	g-index

110	110	110	10276
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The Arctic oscillation signature in the wintertime geopotential height and temperature fields. Geophysical Research Letters, 1998, 25, 1297-1300.	4.0	3,381
2	Annular Modes in the Extratropical Circulation. Part I: Month-to-Month Variability*. Journal of Climate, 2000, 13, 1000-1016.	3.2	2,571
3	Interpretation of Recent Southern Hemisphere Climate Change. Science, 2002, 296, 895-899.	12.6	1,594
4	Annular Modes in the Extratropical Circulation. Part II: Trends. Journal of Climate, 2000, 13, 1018-1036.	3.2	936
5	Signatures of the Antarctic ozone hole in Southern Hemisphere surface climate change. Nature Geoscience, 2011, 4, 741-749.	12.9	781
6	Regional Climate Impacts of the Northern Hemisphere Annular Mode. Science, 2001, 293, 85-89.	12.6	756
7	Simulation of Recent Southern Hemisphere Climate Change. Science, 2003, 302, 273-275.	12.6	519
8	Stratospheric Memory and Skill of Extended-Range Weather Forecasts. Science, 2003, 301, 636-640.	12.6	455
9	Australian Rainfall and Surface Temperature Variations Associated with the Southern Hemisphere Annular Mode. Journal of Climate, 2007, 20, 2452-2467.	3.2	446
10	Stratospheric Connection to Northern Hemisphere Wintertime Weather: Implications for Prediction. Journal of Climate, 2002, 15, 1421-1428.	3.2	409
11	The Life Cycle of the Northern Hemisphere Sudden Stratospheric Warmings. Journal of Climate, 2004, 17, 2584-2596.	3.2	409
12	Observed Relationships between the El NiÃ±oâ€“Southern Oscillation and the Extratropical Zonal-Mean Circulation. Journal of Climate, 2006, 19, 276-287.	3.2	383
13	Can ozone depletion and global warming interact to produce rapid climate change?. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 1412-1417.	7.1	311
14	The Steady-State Atmospheric Circulation Response to Climate Changeâ€“like Thermal Forcings in a Simple General Circulation Model. Journal of Climate, 2010, 23, 3474-3496.	3.2	269
15	A large discontinuity in the mid-twentieth century in observed global-mean surface temperature. Nature, 2008, 453, 646-649.	27.8	265
16	An update of observed stratospheric temperature trends. Journal of Geophysical Research, 2009, 114, .	3.3	260
17	Global Warming and Winter Weather. Science, 2014, 343, 729-730.	12.6	231
18	A critical comparison of stratosphereâ€“troposphere coupling indices. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 1661-1672.	2.7	193

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19	Stratosphereâ€“Troposphere Coupling in the Southern Hemisphere. Journals of the Atmospheric Sciences, 2005, 62, 708-715.	1.7	182
20	The Pacific Center of Action of the Northern Hemisphere Annular Mode: Real or Artifact?. Journal of Climate, 2002, 15, 1987-1991.	3.2	156
21	Stratosphere-troposphere evolution during polar vortex intensification. Journal of Geophysical Research, 2005, 110, .	3.3	156
22	Identifying Signatures of Natural Climate Variability in Time Series of Global-Mean Surface Temperature: Methodology and Insights. Journal of Climate, 2009, 22, 6120-6141.	3.2	150
23	Quantifying the Role of Internal Climate Variability in Future Climate Trends. Journal of Climate, 2015, 28, 6443-6456.	3.2	143
24	Observations of Large-Scale Oceanâ€“Atmosphere Interaction in the Southern Hemisphere. Journal of Climate, 2008, 21, 1244-1259.	3.2	133
25	Seasonal Relationships between Large-Scale Climate Variability and Antarctic Sea Ice Concentration. Journal of Climate, 2012, 25, 5451-5469.	3.2	127
26	Recent Stratospheric Climate Trends as Evidenced in Radiosonde Data: Global Structure and Tropospheric Linkages. Journal of Climate, 2005, 18, 4785-4795.	3.2	112
27	An abrupt drop in Northern Hemisphere sea surface temperature around 1970. Nature, 2010, 467, 444-447.	27.8	110
28	The mystery of recent stratospheric temperature trends. Nature, 2012, 491, 692-697.	27.8	106
29	Four decades of ozonesonde measurements over Antarctica. Journal of Geophysical Research, 2005, 110, .	3.3	102
30	A Global Survey of Static Stability in the Stratosphere and Upper Troposphere. Journal of Climate, 2010, 23, 2275-2292.	3.2	99
31	ATMOSPHERIC SCIENCE: Weather from the Stratosphere?. Science, 2003, 301, 317-319.	12.6	92
32	Australian hot and dry extremes induced by weakenings of the stratospheric polar vortex. Nature Geoscience, 2019, 12, 896-901.	12.9	87
33	On the Tropospheric Response to Anomalous Stratospheric Wave Drag and Radiative Heating. Journals of the Atmospheric Sciences, 2006, 63, 2616-2629.	1.7	86
34	Annular Modes and Climate Prediction. Physics Today, 2002, 55, 28-33.	0.3	77
35	Atmospheric processes governing the Northern Hemisphere annular mode/North Atlantic Oscillation. Geophysical Monograph Series, 2003, , 81-112.	0.1	77
36	Effects of ozone cooling in the tropical lower stratosphere and upper troposphere. Geophysical Research Letters, 2007, 34, .	4.0	75

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37	The signatures of largeâ€scale patterns of atmospheric variability in Antarctic surface temperatures. Journal of Geophysical Research D: Atmospheres, 2016, 121, 3276-3289.	3.3	73
38	Understanding Recent Stratospheric Climate Change. Journal of Climate, 2009, 22, 1934-1943.	3.2	70
39	The Influence of Atmospheric Cloud Radiative Effects on the Large-Scale Atmospheric Circulation. Journal of Climate, 2015, 28, 7263-7278.	3.2	68
40	On the distribution and variability of ozone in the tropical upper troposphere: Implications for tropical deep convection and chemical-dynamical coupling. Geophysical Research Letters, 2005, 32, .	4.0	63
41	Barotropic and Baroclinic Annular Variability in the Southern Hemisphere. Journals of the Atmospheric Sciences, 2014, 71, 1480-1493.	1.7	63
42	Observed connections of Arctic stratospheric ozone extremes to Northern Hemisphere surface climate. Environmental Research Letters, 2017, 12, 024004.	5.2	61
43	Periodic Variability in the Large-Scale Southern Hemisphere Atmospheric Circulation. Science, 2014, 343, 641-645.	12.6	57
44	The Signature of Southern Hemisphere Atmospheric Circulation Patterns in Antarctic Precipitation. Geophysical Research Letters, 2017, 44, 11580-11589.	4.0	56
45	The 2019 Southern Hemisphere Stratospheric Polar Vortex Weakening and Its Impacts. Bulletin of the American Meteorological Society, 2021, 102, E1150-E1171.	3.3	55
46	Does increasing model stratospheric resolution improve extended-range forecast skill?. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	53
47	Seasonal Evolution of Stratosphereâ€Troposphere Coupling in the Southern Hemisphere and Implications for the Predictability of Surface Climate. Journal of Geophysical Research D: Atmospheres, 2018, 123, 12,002.	3.3	53
48	The Signature of the Annular Modes in the Tropical Troposphere. Journal of Climate, 2004, 17, 4330-4342.	3.2	52
49	Isentropic Slopes, Downgradient Eddy Fluxes, and the Extratropical Atmospheric Circulation Response to Tropical Tropospheric Heating. Journals of the Atmospheric Sciences, 2011, 68, 2292-2305.	1.7	52
50	Contrasts between Antarctic and Arctic ozone depletion. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 445-449.	7.1	51
51	The influence of Southern Hemisphere seaâ€ice extent on the latitude of the midâ€latitude jet stream. Geophysical Research Letters, 2011, 38, .	4.0	51
52	Revisiting the Mystery of Recent Stratospheric Temperature Trends. Geophysical Research Letters, 2018, 45, 9919-9933.	4.0	51
53	Stratospheric temperature changes during the satellite era. Journal of Geophysical Research D: Atmospheres, 2016, 121, 664-681.	3.3	44
54	Observed linkages between the northern annular mode/North Atlantic Oscillation, cloud incidence, and cloud radiative forcing. Geophysical Research Letters, 2014, 41, 1681-1688.	4.0	42

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55	Influences of the Antarctic Ozone Hole on Southern Hemispheric Summer Climate Change. Journal of Climate, 2014, 27, 6245-6264.	3.2	42
56	Thermodynamic constraint on the depth of the global tropospheric circulation. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8181-8186.	7.1	42
57	A global survey of the instantaneous linkages between cloud vertical structure and largeâ€scale climate. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3770-3792.	3.3	40
58	Arctic cloud annual cycle biases in climate models. Atmospheric Chemistry and Physics, 2019, 19, 8759-8782.	4.9	38
59	Equatorial Planetary Waves and Their Signature in Atmospheric Variability. Journals of the Atmospheric Sciences, 2012, 69, 857-874.	1.7	35
60	The Three-Dimensional Distribution of Clouds over the Southern Hemisphere High Latitudes. Journal of Climate, 2011, 24, 5799-5811.	3.2	34
61	The Seasonal Cycle and Interannual Variability in Stratospheric Temperatures and Links to the Brewerâ€“Dobson Circulation: An Analysis of MSU and SSU Data. Journal of Climate, 2011, 24, 6243-6258.	3.2	33
62	On the Observed Relationships between Variability in Gulf Stream Sea Surface Temperatures and the Atmospheric Circulation over the North Atlantic. Journal of Climate, 2016, 29, 3719-3730.	3.2	33
63	Widespread changes in surface temperature persistence under climate change. Nature, 2021, 599, 425-430.	27.8	32
64	On the Signatures of Equatorial and Extratropical Wave Forcing in Tropical Tropopause Layer Temperatures. Journals of the Atmospheric Sciences, 2013, 70, 1084-1102.	1.7	31
65	The Importance of Atmospheric Dynamics in the Northern Hemisphere Wintertime Climate Response to Changes in the Earthâ€™s Orbit. Journal of Climate, 2005, 18, 1315-1325.	3.2	30
66	Coupled chemistry climate model simulations of stratospheric temperatures and their trends for the recent past. Geophysical Research Letters, 2009, 36, .	4.0	29
67	On the Role of Radiative Processes in Stratosphereâ€“Troposphere Coupling. Journal of Climate, 2009, 22, 4154-4161.	3.2	27
68	Thermodynamic Control on the Poleward Shift of the Extratropical Jet in Climate Change Simulations: The Role of Rising High Clouds and Their Radiative Effects. Journal of Climate, 2019, 32, 917-934.	3.2	27
69	The signature of the stratospheric Brewerâ€’Dobson circulation in tropospheric clouds. Journal of Geophysical Research D: Atmospheres, 2013, 118, 3486-3494.	3.3	26
70	On the Observed Relationships between Wintertime Variability in Kuroshioâ€“Oyashio Extension Sea Surface Temperatures and the Atmospheric Circulation over the North Pacific. Journal of Climate, 2018, 31, 4669-4681.	3.2	26
71	Baroclinic and Barotropic Annular Variability in the Northern Hemisphere. Journals of the Atmospheric Sciences, 2015, 72, 1117-1136.	1.7	25
72	Comparing variability and trends in observed and modelled globalâ€mean surface temperature. Geophysical Research Letters, 2010, 37, .	4.0	24

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73	Up-gradient eddy fluxes of potential vorticity near the subtropical jet. Geophysical Research Letters, 2013, 40, 5988-5993.	4.0	24
74	Emergence of Southern Hemisphere stratospheric circulation changes in response to ozone recovery. Nature Geoscience, 2021, 14, 638-644.	12.9	24
75	Long-range prediction and the stratosphere. Atmospheric Chemistry and Physics, 2022, 22, 2601-2623.	4.9	24
76	On the Linkages between the Tropospheric Isentropic Slope and Eddy Fluxes of Heat during Northern Hemisphere Winter. Journals of the Atmospheric Sciences, 2012, 69, 1811-1823.	1.7	23
77	North Atlantic Atmosphereâ€“Ocean Interaction on Intraseasonal Time Scales. Journal of Climate, 2004, 17, 1617-1621.	3.2	22
78	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.	1.7	19
79	Observed relationships between the Southern Annular Mode and atmospheric carbon dioxide. Global Biogeochemical Cycles, 2007, 21, .	4.9	18
80	Rare forecasted climate event under way in the Southern Hemisphere. Nature, 2019, 573, 495-495.	27.8	18
81	Observed Changes in the Southern Hemispheric Circulation in May. Journal of Climate, 2017, 30, 527-536.	3.2	16
82	Climate Impacts and Potential Drivers of the Unprecedented Antarctic Ozone Holes of 2020 and 2021. Geophysical Research Letters, 2022, 49, .	4.0	16
83	The Importance of Unresolved Biases in Twentieth-Century Sea Surface Temperature Observations. Bulletin of the American Meteorological Society, 2019, 100, 621-629.	3.3	15
84	On the Identification of the Downward Propagation of Arctic Stratospheric Climate Change over Recent Decades*. Journal of Climate, 2014, 27, 2789-2799.	3.2	14
85	Observed Signatures of the Barotropic and Baroclinic Annular Modes in Cloud Vertical Structure and Cloud Radiative Effects. Journal of Climate, 2016, 29, 4723-4740.	3.2	13
86	What Makes an Annular Mode â€œAnnularâ€?. Journals of the Atmospheric Sciences, 2017, 74, 317-332.	1.7	13
87	Is Antarctic climate most sensitive to ozone depletion in the middle or lower stratosphere?. Geophysical Research Letters, 2007, 34, .	4.0	12
88	Comments on â€œNorthern Hemisphere Teleconnection Patterns during Extreme Phases of the Zonal-Mean Circulationâ€. Journal of Climate, 2000, 13, 1037-1039.	3.2	11
89	Observational Evidence of Reemergence in the Extratropical Southern Hemisphere. Journal of Climate, 2009, 22, 1446-1453.	3.2	11
90	Intraseasonal Periodicity in the Southern Hemisphere Circulation on Regional Spatial Scales. Journals of the Atmospheric Sciences, 2017, 74, 865-877.	1.7	9

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91	Evidence for Predictive Skill of Highâ€Latitude Climate Due to Midsummer Sea Ice Extent Anomalies. Geophysical Research Letters, 2018, 45, 9114-9122.	4.0	9
92	Quantifying the Lead Time Required for a Linear Trend to Emerge from Natural Climate Variability. Journal of Climate, 2017, 30, 10179-10191.	3.2	8
93	The Risks of Contracting the Acquisition and Processing of the Nationâ€™s Weather and Climate Data to the Private Sector. Bulletin of the American Meteorological Society, 2018, 99, 869-870.	3.3	6
94	Quantifying the Role of Ocean Dynamics in Ocean Mixed Layer Temperature Variability. Journal of Climate, 2021, 34, 2567-2589.	3.2	6
95	The Role of Tropical, Midlatitude, and Polar Cloud-Radiative Changes for the Midlatitude Circulation Response to Global Warming. Journal of Climate, 2020, 33, 7927-7943.	3.2	6
96	The Influence of Atmospheric Cloud Radiative Effects on the Large-Scale Stratospheric Circulation. Journal of Climate, 2017, 30, 5621-5635.	3.2	5
97	A Robust Constraint on the Temperature and Height of the Extratropical Tropopause. Journal of Climate, 2019, 32, 273-287.	3.2	5
98	On the effects of the ocean on atmospheric CFC-11 lifetimes and emissions. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, e2021528118.	7.1	5
99	The Simulated Atmospheric Response to Western North Pacific Sea Surface Temperature Anomalies. Journal of Climate, 2022, 35, 3335-3352.	3.2	5
100	Understanding the Role of Ocean Dynamics in Midlatitude Sea Surface Temperature Variability Using a Simple Stochastic Climate Model. Journal of Climate, 2022, 35, 3313-3333.	3.2	5
101	The Key Role of Coupled Chemistryâ€“Climate Interactions in Tropical Stratospheric Temperature Variability. Journal of Climate, 2020, 33, 7619-7629.	3.2	4
102	Evaluating Stratospheric Tropical Width Using Tracer Concentrations. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD033081.	3.3	3
103	A Basic Effect of Cloud Radiative Effects on Tropical Sea Surface Temperature Variability. Journal of Climate, 2020, 33, 4333-4346.	3.2	2
104	Downstream Suppression of Baroclinic Waves. Journal of Climate, 2021, 34, 919-930.	3.2	2
105	On the Southern Hemisphere Stratospheric Response to ENSO and Its Impacts on Tropospheric Circulation. Journal of Climate, 2022, 35, 1963-1981.	3.2	2
106	The Relationship between the Meridional Profile of Zonal-mean Geostrophic Wind and Station Wave at 500 hPa. Advances in Atmospheric Sciences, 2001, 18, 692-700.	4.3	1
107	Observed Linkages Between the Atmospheric Circulation and Oceanicâ€Forced Seaâ€Surface Temperature Variability in the Western North Pacific. Geophysical Research Letters, 2022, 49, .	4.0	1
108	Links between climate sensitivity and the large-scale atmospheric circulation inÂa simple general circulation model. Journal of Climate, 2022, , 1-38.	3.2	0