Brian J Soden

List of Publications by Year
in descending order

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142 papers	20,343 citations	28274 55 h-index	10445 139 g-index
148 all docs	148 docs citations	148 times ranked	13794 citing authors

#	Article	IF	Citations
1	Robust Responses of the Hydrological Cycle to Global Warming. Journal of Climate, 2006, 19, 5686-5699.	3.2	3,753
2	Remote Sea Surface Temperature Variations during ENSO: Evidence for a Tropical Atmospheric Bridge. Journal of Climate, 1999, 12, 917-932.	3.2	1,235
3	Atmospheric Warming and the Amplification of Precipitation Extremes. Science, 2008, 321, 1481-1484.	12.6	1,182
4	Global Warming and the Weakening of the Tropical Circulation. Journal of Climate, 2007, 20, 4316-4340.	3.2	1,036
5	WATERVAPORFEEDBACK ANDGLOBALWARMING. Annual Review of Environment and Resources, 2000, 25, 441-475.	1.2	923
6	Weakening of tropical Pacific atmospheric circulation due to anthropogenic forcing. Nature, 2006, 441, 73-76.	27.8	894
7	An Assessment of Climate Feedbacks in Coupled Oceanâ€“Atmosphere Models. Journal of Climate, 2006, 19, 3354-3360.	3.2	875
8	How Well Do We Understand and Evaluate Climate Change Feedback Processes?. Journal of Climate, 2006, 19, 3445-3482.	3.2	849
9	Quantifying Climate Feedbacks Using Radiative Kernels. Journal of Climate, 2008, 21, 3504-3520.	3.2	612
10	Global Cooling After the Eruption of Mount Pinatubo: A Test of Climate Feedback by Water Vapor. Science, 2002, 296, 727-730.	12.6	424
11	Effect of remote sea surface temperature change on tropical cyclone potential intensity. Nature, 2007, 450, 1066-1070.	27.8	376
12	On the contribution of local feedback mechanisms to the range of climate sensitivity in two GCM ensembles. Climate Dynamics, 2006, 27, 17-38.	3.8	334
13	Evidence for Large Decadal Variability in the Tropical Mean Radiative Energy Budget. Science, 2002, 295, 841-844.	12.6	333
14	Tropospheric Aerosol Climate Forcing in Clear-Sky Satellite Observations over the Oceans. Science, 1999, 283, 1299-1303.	12.6	297
15	Observed changes in top-of-the-atmosphere radiation and upper-ocean heating consistent within uncertainty. Nature Geoscience, 2012, 5, 110-113.	12.9	293
16	Climate Response of the Equatorial Pacific to Global Warming. Journal of Climate, 2009, 22, 4873-4892.	3.2	260
17	The Radiative Signature of Upper Tropospheric Moistening. Science, 2005, 310, 841-844.	12.6	259
18	Achieving Climate Change Absolute Accuracy in Orbit. Bulletin of the American Meteorological Society, 2013, 94, 1519-1539.	3.3	239

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19	Increased tropical Atlantic wind shear in model projections of global warming. Geophysical Research Letters, 2007, 34, .	4.0	235
20	On the Use of Cloud Forcing to Estimate Cloud Feedback. Journal of Climate, 2004, 17, 3661-3665.	3.2	208
21	Upper tropospheric relative humidity from the GOES 6.7 Î¼m channel: Method and climatology for July 1987. Journal of Geophysical Research, 1993, 98, 16669-16688.	3.3	200
22	Examining the Tropical Pacific's Response to Global Warming. Eos, 2008, 89, 81-83.	0.1	198
23	Current changes in tropical precipitation. Environmental Research Letters, 2010, 5, 025205.	5.2	197
24	An Assessment of Satellite and Radiosonde Climatologies of Upper-Tropospheric Water Vapor. Journal of Climate, 1996, 9, 1235-1250.	3.2	168
25	Whither Hurricane Activity?. Science, 2008, 322, 687-689.	12.6	162
26	Importance of the mixed-phase cloud distribution in the control climate for assessing the response of clouds to carbon dioxide increase: a multi-model study. Climate Dynamics, 2006, 27, 113-126.	3.8	156
27	Diurnal cycle of convection, clouds, and water vapor in the tropical upper troposphere: Satellites versus a general circulation model. Journal of Geophysical Research, 2004, 109, .	3.3	149
28	Anthropogenic and Natural Influences in the Evolution of Lower Stratospheric Cooling. Science, 2006, 311, 1138-1141.	12.6	139
29	A Satellite Analysis of Deep Convection, Upper-Tropospheric Humidity, and the Greenhouse Effect. Journal of Climate, 1995, 8, 2333-2351.	3.2	125
30	The vertical distribution of cloud feedback in coupled ocean-atmosphere models. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	123
31	Bimodality in tropical water vapour. Quarterly Journal of the Royal Meteorological Society, 2003, 129, 2847-2866.	2.7	113
32	Understanding Rapid Adjustments to Diverse Forcing Agents. Geophysical Research Letters, 2018, 45, 12023-12031.	4.0	113
33	GFDL's CM2 Global Coupled Climate Models. Part IV: Idealized Climate Response. Journal of Climate, 2006, 19, 723-740.	3.2	110
34	Climatological Variations in North Atlantic Tropical Cyclone Tracks. Journal of Climate, 2012, 25, 657-673.	3.2	107
35	Temperature and humidity biases in global climate models and their impact on climate feedbacks. Geophysical Research Letters, 2007, 34, .	4.0	105
36	The Sensitivity of the Tropical Hydrological Cycle to ENSO. Journal of Climate, 2000, 13, 538-549.	3.2	102

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37	A comparison of low-latitude cloud properties and their response to climate change in three AGCMs sorted into regimes using mid-tropospheric vertical velocity. Climate Dynamics, 2006, 27, 261-279.	3.8	101
38	Large discrepancy between observed and simulated precipitation trends in the ascending and descending branches of the tropical circulation. Geophysical Research Letters, 2007, 34, .	4.0	98
39	Interpretation of TOVS water vapor radiances in terms of layer-average relative humidities: Method and climatology for the upper, middle, and lower troposphere. Journal of Geophysical Research, 1996, 101, 9333-9343.	3.3	96
40	A Comparison of Model- and Satellite-Derived Aerosol Optical Depth and Reflectivity. Journals of the Atmospheric Sciences, 2002, 59, 441-460.	1.7	96
41	Upper-tropospheric moistening in response to anthropogenic warming. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 11636-11641.	7.1	90
42	Anthropogenic Weakening of the Tropical Circulation: The Relative Roles of Direct CO2 Forcing and Sea Surface Temperature Change. Journal of Climate, 2015, 28, 8728-8742.	3.2	87
43	The diurnal cycle of convection, clouds, and water vapor in the tropical upper troposphere. Geophysical Research Letters, 2000, 27, 2173-2176.	4.0	86
44	Reconciling opposing Walker circulation trends in observations and model projections. Nature Climate Change, 2019, 9, 405-412.	18.8	86
45	A re-examination of the projected subtropical precipitation decline. Nature Climate Change, 2017, 7, 53-57.	18.8	85
46	Model projected changes of extreme wind events in response to global warming. Geophysical Research Letters, 2009, 36, .	4.0	84
47	Evaluation of water vapor distribution in general circulation models using satellite observations. Journal of Geophysical Research, 1994, 99, 1187.	3.3	78
48	The response of the Walker circulation to Last Glacial Maximum forcing: Implications for detection in proxies. Paleoceanography, 2011, 26, .	3.0	77
49	Association of Tropical Cirrus in the 10â€“15-km Layer with Deep Convective Sources: An Observational Study Combining Millimeter Radar Data and Satellite-Derived Trajectories. Journals of the Atmospheric Sciences, 2006, 63, 480-503.	1.7	73
50	The Impact of Satellite Winds on Experimental GFDL Hurricane Model Forecasts. Monthly Weather Review, 2001, 129, 835-852.	1.4	68
51	An analysis of satellite, radiosonde, and lidar observations of upper tropospheric water vapor from the Atmospheric Radiation Measurement Program. Journal of Geophysical Research, 2004, 109, n/a-n/a.	3.3	68
52	How robust are observed and simulated precipitation responses to tropical ocean warming?. Geophysical Research Letters, 2009, 36, .	4.0	67
53	Reducing uncertainties in climate models. Science, 2018, 361, 326-327.	12.6	64
54	Global Climate. Bulletin of the American Meteorological Society, 2020, 101, S9-S128.	3.3	61

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55	Global mean cloud feedbacks in idealized climate change experiments. Geophysical Research Letters, 2006, 33, .	4.0	58
56	The Impact of Anthropogenic Climate Change on North Atlantic Tropical Cyclone Tracks*. Journal of Climate, 2013, 26, 4088-4095.	3.2	58
57	Hemispheric climate shifts driven by anthropogenic aerosolâ€“cloud interactions. Nature Geoscience, 2017, 10, 566-571.	12.9	55
58	Tracking upper tropospheric water vapor radiances: A satellite perspective. Journal of Geophysical Research, 1998, 103, 17069-17081.	3.3	54
59	The Impact of Natural and Anthropogenic Climate Change on Western North Pacific Tropical Cyclone Tracks*. Journal of Climate, 2015, 28, 1806-1823.	3.2	54
60	Clear-sky biases in satellite infrared estimates of upper tropospheric humidity and its trends. Journal of Geophysical Research, 2011, 116, .	3.3	53
61	Radiative Forcing of Climate: The Historical Evolution of the Radiative Forcing Concept, the Forcing Agents and their Quantification, and Applications. Meteorological Monographs, 2019, 59, 14.1-14.101.	5.0	52
62	An upper tropospheric humidity data set from operational satellite microwave data. Journal of Geophysical Research, 2008, 113, .	3.3	50
63	The robustness of the atmospheric circulation and precipitation response to future anthropogenic surface warming. Geophysical Research Letters, 2014, 41, 2614-2622.	4.0	50
64	Large-scale ice clouds in the GFDL SKYHI general circulation model. Journal of Geophysical Research, 1997, 102, 21745-21768.	3.3	49
65	An Assessment of Direct Radiative Forcing, Radiative Adjustments, and Radiative Feedbacks in Coupled Oceanâ€“Atmosphere Models*. Journal of Climate, 2015, 28, 4152-4170.	3.2	49
66	Diurnal cycle of summertime deep convection over North America: A satellite perspective. Journal of Geophysical Research, 2005, 110, .	3.3	48
67	Variations in the Tropical Greenhouse Effect during El NiÃ±o. Journal of Climate, 1997, 10, 1050-1055.	3.2	47
68	An investigation of the sensitivity of the clear-sky outgoing longwave radiation to atmospheric temperature and water vapor. Journal of Geophysical Research, 2007, 112, .	3.3	45
69	Observational Evidence of Increasing Global Radiative Forcing. Geophysical Research Letters, 2021, 48, e2020GL091585.	4.0	45
70	The impact of SST biases on projections of anthropogenic climate change: A greater role for atmosphereâ€•only models?. Geophysical Research Letters, 2016, 43, 7745-7750.	4.0	44
71	An Intercomparison of Radiation Codes for Retrieving Upperâ€“Tropospheric Humidity in the 6.3â€“mm Band: A Report from the First GVaP Workshop. Bulletin of the American Meteorological Society, 2000, 81, 797-808.	3.3	43
72	The Sensitivity of the Tropical-Mean Radiation Budget. Journal of Climate, 2005, 18, 3189-3203.	3.2	43

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73	Assessing the quality of humidity measurements from global operational radiosonde sensors. Journal of Geophysical Research D: Atmospheres, 2013, 118, 8040-8053.	3.3	43
74	Creating Climate Reference Datasets: CARDS Workshop on Adjusting Radiosonde Temperature Data for Climate Monitoring. Bulletin of the American Meteorological Society, 2002, 83, 891-899.	3.3	40
75	The impact of tropical convection and cirrus on upper tropospheric humidity: A Lagrangian analysis of satellite measurements. Geophysical Research Letters, 2004, 31, .	4.0	37
76	An assessment of methods for computing radiative forcing in climate models. Environmental Research Letters, 2015, 10, 074004.	5.2	36
77	Global Climate. Bulletin of the American Meteorological Society, 2021, 102, S11-S142.	3.3	36
78	Does the Lack of Coupling in SST-Forced Atmosphere-Only Models Limit Their Usefulness for Climate Change Studies?. Journal of Climate, 2016, 29, 4317-4325.	3.2	35
79	Compensation Between Cloud Feedback and Aerosolâ€Cloud Interaction in CMIP6 Models. Geophysical Research Letters, 2021, 48, e2020GL091024.	4.0	33
80	Observed Modulation of the Tropical Radiation Budget by Deep Convective Organization and Lowerâ€Tropospheric Stability. AGU Advances, 2020, 1, e2019AV000155.	5.4	31
81	An Evaluation of Airâ€“Sea Flux Products for ENSO Simulation and Prediction. Monthly Weather Review, 2002, 130, 723-732.	1.4	29
82	A Comparison of Satellite Observations and Model Simulations of Column-Integrated Moisture and Upper-Tropospheric Humidity. Journal of Climate, 1996, 9, 1561-1585.	3.2	28
83	Will surface winds weaken in response to global warming?. Environmental Research Letters, 2016, 11, 124012.	5.2	28
84	Atmospheric and Oceanic Origins of Tropical Precipitation Variability. Journal of Climate, 2017, 30, 3197-3217.	3.2	28
85	Quantifying the Importance of Rapid Adjustments for Global Precipitation Changes. Geophysical Research Letters, 2018, 45, 11399-11405.	4.0	26
86	Observationâ€Based Radiative Kernels From CloudSat/CALIPSO. Journal of Geophysical Research D: Atmospheres, 2019, 124, 5431-5444.	3.3	26
87	Water vapor and lapse rate feedbacks in the climate system. Reviews of Modern Physics, 2021, 93, .	45.6	25
88	Observational and Model Estimates of Cloud Amount Feedback over the Indian and Pacific Oceans. Journal of Climate, 2014, 27, 925-940.	3.2	24
89	Designing the Climate Observing System of the Future. Earth's Future, 2018, 6, 80-102.	6.3	24
90	Revisiting the determination of climate sensitivity from relationships between surface temperature and radiative fluxes. Geophysical Research Letters, 2010, 37, .	4.0	23

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91	Detection and Correction of Diurnal Sampling Bias in HIRS/2 Brightness Temperatures. Journal of Atmospheric and Oceanic Technology, 2007, 24, 1425-1438.	1.3	22
92	An assessment of the diurnal variation of upper tropospheric humidity in reanalysis data sets. Journal of Geophysical Research D: Atmospheres, 2013, 118, 3425-3430.	3.3	21
93	Does convectively-detrained cloud ice enhance water vapor feedback?. Geophysical Research Letters, 2006, 33, .	4.0	20
94	Evidence for a weakening of tropical surface wind extremes in response to atmospheric warming. Geophysical Research Letters, 2011, 38, .	4.0	20
95	Climate Parameters from Satellite Spectral Measurements. Part 1: Collocated AVHRR and HIRS/2 Observations of Spectral Greenhouse Parameter. Journal of Climate, 1996, 9, 327-344.	3.2	19
96	Lagrangian Diagnostics of Tropical Deep Convection and Its Effect upon Upper-Tropospheric Humidity. Journal of Climate, 2008, 21, 1013-1028.	3.2	19
97	Constraining Climate Model Projections of Regional Precipitation Change. Geophysical Research Letters, 2019, 46, 10522-10531.	4.0	19
98	Comparison of upper tropospheric water vapor from GOES, Raman lidar, and cross-chain loran atmospheric sounding system measurements. Journal of Geophysical Research, 1994, 99, 21005.	3.3	18
99	Model-simulated humidity bias in the upper troposphere and its relation to the large-scale circulation. Journal of Geophysical Research, 2011, 116, .	3.3	17
100	Intercalibrating Microwave Satellite Observations for Monitoring Long-Term Variations in Upper- and Midtropospheric Water Vapor*. Journal of Atmospheric and Oceanic Technology, 2013, 30, 2303-2319.	1.3	17
101	Enlightening water vapour. Nature, 2000, 406, 247-248.	27.8	16
102	The spectral dimension of longwave feedback in the CMIP3 and CMIP5 experiments. Geophysical Research Letters, 2014, 41, 7830-7837.	4.0	16
103	An assessment of climate feedback processes using satellite observations of clearâ€sky OLR. Geophysical Research Letters, 2010, 37, .	4.0	15
104	The Sensitivity of the Hydrological Cycle to Internal Climate Variability versus Anthropogenic Climate Change. Journal of Climate, 2016, 29, 3661-3673.	3.2	15
105	<title>Far-infrared: a frontier in remote sensing of Earth's climate and energy balance</title>. , 2002, 4485, 150.		14
106	Interannual co-variability of tropical temperature and humidity: A comparison of model, reanalysis data and satellite observation. Geophysical Research Letters, 2005, 32, .	4.0	13
107	Shape of Atlantic Tropical Cyclone Tracks and the Indian Monsoon. Geophysical Research Letters, 2018, 45, 10,746.	4.0	13
108	Enhanced hydrological cycle increases ocean heat uptake and moderates transient climate change. Nature Climate Change, 2021, 11, 848-853.	18.8	13

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109	Sea Surface Salinity Response to Tropical Cyclones Based on Satellite Observations. Remote Sensing, 2021, 13, 420.	4.0	13
110	Decadal Variations in Tropical Water Vapor: A Comparison of Observations and a Model Simulation. Journal of Climate, 2000, 13, 3337-3341.	3.2	12
111	Radiative Feedbacks Associated with the Maddenâ€“Julian Oscillation. Journal of Climate, 2019, 32, 7055-7065.	3.2	12
112	The Large-Scale Dynamical Response of Clouds to Aerosol Forcing. Journal of Climate, 2017, 30, 8783-8794.	3.2	11
113	Examining the Role of Cloud Radiative Interactions in Tropical Cyclone Development Using Satellite Measurements and WRF Simulations. Geophysical Research Letters, 2021, 48, e2021GL093259.	4.0	11
114	An assessment of the consistency between satellite measurements of upper tropospheric water vapor. Journal of Geophysical Research D: Atmospheres, 2016, 121, 2874-2887.	3.3	10
115	Signatures of Tropical Cyclone Intensification in Satellite Measurements of Ice and Liquid Water Content. Monthly Weather Review, 2017, 145, 4081-4091.	1.4	10
116	Diagnosing Climate Feedbacks in Coupled Oceanâ€“Atmosphere Models. Surveys in Geophysics, 2012, 33, 733-744.	4.6	9
117	Validation of cloud forcing simulated by the National Center for Atmospheric Research community climate model using observations from the Earth Radiation Budget Experiment. Journal of Geophysical Research, 1992, 97, 18137-18159.	3.3	8
118	An assessment of the tropical humidityâ€temperature covariance using AIRS. Geophysical Research Letters, 2008, 35, .	4.0	8
119	Impact of Ocean Eddy Resolution on the Sensitivity of Precipitation to CO 2 Increase. Geophysical Research Letters, 2018, 45, 7194-7203.	4.0	8
120	Ice Water Content as a Precursor to Tropical Cyclone Rapid Intensification. Geophysical Research Letters, 2020, 47, e2020GL089669.	4.0	8
121	Investigating the Influence of Carbon Dioxide and the Stratosphere on the Long-Term Tropospheric Temperature Monitoring from HIRS. Journal of Applied Meteorology and Climatology, 2010, 49, 1927-1937.	1.5	7
122	Radiative signature of increasing atmospheric carbon dioxide in HIRS satellite observations. Geophysical Research Letters, 2010, 37, .	4.0	7
123	Retrieving Layer-Averaged Tropospheric Humidity From Advanced Technology Microwave Sounder Water Vapor Channels. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 6675-6688.	6.3	7
124	Evaluating Climate Model Simulations of the Radiative Forcing and Radiative Response at Earthâ€™s Surface. Journal of Climate, 2019, 32, 4089-4102.	3.2	7
125	The Role of Radiative Interactions in Tropical Cyclone Development under Realistic Boundary Conditions. Journal of Climate, 2021, 34, 2079-2091.	3.2	7
126	Bimodality in tropical water vapour. Quarterly Journal of the Royal Meteorological Society, 2003, 129, 2847-2866.	2.7	7

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127	On the compensation between cloud feedback and cloud adjustment in climate models. Climate Dynamics, 2018, 50, 1267-1276.	3.8	6
128	A Satellite-Based Assessment of Upper-Tropospheric Water Vapor Measurements during AFWEX. Journal of Applied Meteorology and Climatology, 2009, 48, 2284-2294.	1.5	5
129	On the Correlation between Total Condensate and Moist Heating in Tropical Cyclones and Applications for Diagnosing Intensity. Monthly Weather Review, 2019, 147, 3759-3784.	1.4	5
130	Convective Aggregation and the Amplification of Tropical Precipitation Extremes. AGU Advances, 2020, 1, e2020AV000201.	5.4	5
131	Satellite-Based Reconstruction of the Tropical Oceanic Clear-Sky Outgoing Longwave Radiation and Comparison with Climate Models. Journal of Climate, 2014, 27, 941-957.	3.2	4
132	Influence of Vertical Wind Shear on the Ocean Response to Tropical Cyclones Based on Satellite Observations. Geophysical Research Letters, 2021, 48, e2021GL095451.	4.0	4
133	Evaluation of model-simulated upper troposphere humidity using 6.7 Î¼m satellite observations. Journal of Geophysical Research, 1997, 102, 25737-25749.	3.3	3
134	Correction to â€œDoes convectively-detrained cloud ice enhance water vapor feedback?â€• Geophysical Research Letters, 2006, 33, .	4.0	3
135	Using Satellite Observations to Evaluate the Relationships between Ice Condensate, Latent Heat Release, and Tropical Cyclone Intensification in a Mesoscale Model. Monthly Weather Review, 2021, 149, 113-129.	1.4	3
136	Evaluating Observational Constraints on Intermodel Spread in Cloud, Temperature, and Humidity Feedbacks. Geophysical Research Letters, 2021, 48, e2020GL092309.	4.0	3
137	Variations in atmosphere-ocean solar absorption under clear skies: A comparison of observations and models. Geophysical Research Letters, 1998, 25, 2149-2152.	4.0	1
138	Investigating the Causes and Impacts of Convective Aggregation in a High Resolution Atmospheric GCM. Journal of Advances in Modeling Earth Systems, 0, , e2021MS002675.	3.8	1
139	Diagnosing Climate Feedbacks in Coupled Oceanâ€“Atmosphere Models. Space Sciences Series of ISSI, 2012, , 401-412.	0.0	1
140	Water-vapor observations. , 0, , 285-311.		0
141	Toward a long-term homogenized UTH data set derived from satellite microwave measurements. , 2006, , .		0
142	Evaluation of CloudSat Radiative Kernels Using ARM and CERES Observations and ERA5 Reanalysis. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034510.	3.3	0