Steven C Sherwood

List of Publications by Year
in descending order

136	10,748	46984 47	33869 99
papers	citations	h-index	g-index

145	145	145	10680
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An object-based climatology of precipitation systems in Sydney, Australia. Climate Dynamics, 2023, 60, 1669-1688.	1.7	1
2	Influences of Environmental Relative Humidity and Horizontal Scale of Subcloud Ascent on Deep Convective Initiation. Journals of the Atmospheric Sciences, 2022, 79, 337-359.	0.6	11
3	Spontaneous Aggregation of Convective Storms. Annual Review of Fluid Mechanics, 2022, 54, 133-157.	10.8	21
4	Can We Use 1D Models to Predict 3D Model Response to Forcing in an Idealized Framework?. Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	3
5	Probability of committed warming exceeding 1.5 ^{â˜}C and 2.0 ^{â˜}C Paris targets. Environmental Research Letters, 2022, 17, 064022.	2.2	3
6	Ten new insights in climate science 2020 â€“ a horizon scan. Global Sustainability, 2021, 4, .	1.6	17
7	Are Storm Characteristics the Same When Viewed Using Merged Surface Radars or a Merged Satellite Product?. Journal of Hydrometeorology, 2021, 22, 43-62.	0.7	13
8	Comparing Growth Rates of Simulated Moist and Dry Convective Thermals. Journals of the Atmospheric Sciences, 2021, 78, 797-816.	0.6	8
9	How Strongly Are Mean and Extreme Precipitation Coupled?. Geophysical Research Letters, 2021, 48, e2020GL092075.	1.5	16
10	A multimodel investigation of atmospheric mechanisms for driving Arctic amplification in warmer climates. Journal of Climate, 2021, , 1-55.	1.2	2
11	Characterizing Convection Schemes Using Their Responses to Imposed Tendency Perturbations. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002461.	1.3	6
12	A Doppler radar study of convective draft lengths over Darwin, Australia. Monthly Weather Review, 2021, , .	0.5	1
13	Evaluating Precipitation Errors Using the Environmentally Conditioned Intensityâ€Frequency Decomposition Method. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002447.	1.3	5
14	Clarion call from climate panel. Science, 2021, 373, 719-719.	6.0	0
15	Atmospheric Convection as an Unstable Predatorâ€“Prey Process with Memory. Journals of the Atmospheric Sciences, 2021, 78, 3781-3797.	0.6	3
16	An Assessment of Earth's Climate Sensitivity Using Multiple Lines of Evidence. Reviews of Geophysics, 2020, 58, e2019RG000678.	9.0	498
17	Using Meghaâ€Tropiques satellite data to constrain humidity in regional convective simulations: A northern Australian test case. Quarterly Journal of the Royal Meteorological Society, 2020, 146, 2768-2788.	1.0	3
18	Adapting to the challenges of warming. Science, 2020, 370, 782-783.	6.0	25

#	Article	IF	Citations
19	Mid-level clouds over the Sahara in a convection-permitting regional model. Climate Dynamics, 2020, 54, 3425-3439.	1.7	6
20	Emergent constraints on equilibrium climate sensitivity in CMIP5: do they hold for CMIP6?. Earth System Dynamics, 2020, 11, 1233-1258.	2.7	63
21	Amplified warming of seasonal cold extremes relative to the mean in the Northern Hemisphere extratropics. Earth System Dynamics, 2020, 11, 97-111.	2.7	12
22	Rapidly Evolving Cirrus Clouds Modulated by Convectively Generated Gravity Waves. Journal of Geophysical Research D: Atmospheres, 2019, 124, 7327.	1.2	6
23	Aerosol-induced modification of organised convection and top-of-atmosphere radiation. Npj Climate and Atmospheric Science, 2019, 2, .	2.6	10
24	Identifying the Sources of Convective Memory in Cloud-Resolving Simulations. Journals of the Atmospheric Sciences, 2019, 76, 947-962.	0.6	27
25	The Role of Convective Selfâ€Aggregation in Extreme Instantaneous Versus Daily Precipitation. Journal of Advances in Modeling Earth Systems, 2019, 11, 19-33.	1.3	21
26	Ensemble optimisation, multiple constraints and overconfidence: a case study with future Australian precipitation change. Climate Dynamics, 2019, 53, 1581-1596.	1.7	17
27	Model Hierarchies for Understanding Atmospheric Circulation. Reviews of Geophysics, 2019, 57, 250-280.	9.0	58
28	Taking climate model evaluation to the next level. Nature Climate Change, 2019, 9, 102-110.	8.1	407
29	Consistency of Modeled and Observed Temperature Trends in the Tropical Troposphere. , 2018, , 85-136.		3
30	The Impact of Parameterized Convection on Climatological Precipitation in Atmospheric Global Climate Models. Geophysical Research Letters, 2018, 45, 3728-3736.	1.5	26
31	Temperature and Humidity Effects on Hospital Morbidity in Darwin, Australia. Annals of Global Health, 2018, 81, 333.	0.8	24
32	Changes in relative fit of human heat stress indices to cardiovascular, respiratory, and renal hospitalizations across five Australian urban populations. International Journal of Biometeorology, 2018, 62, 423-432.	1.3	22
33	The Role of Nonlinear Drying above the Boundary Layer in the Mid-Holocene African Monsoon. Journal of Climate, 2018, 31, 233-249.	1.2	5
34	How Important Is Humidity in Heat Stress?. Journal of Geophysical Research D: Atmospheres, 2018, 123, 11,808.	1.2	60
35	On the Role of Entrainment in the Fate of Cumulus Thermals. Journals of the Atmospheric Sciences, 2018, 75, 3911-3924.	0.6	35
36	The global warming potential of near-surface emitted water vapour. Environmental Research Letters, 2018, 13, 104006.	2.2	32

#	Article	IF	Citations
37	Control of ITCZ Width by Lowâ€Level Radiative Heating From Upperâ€Level Clouds in Aquaplanet Simulations. Geophysical Research Letters, 2018, 45, 5788-5797.	1.5	15
38	Comments on â€œtemperatureâ€extreme precipitation scaling: A twoâ€way causality?â€• International Journal of Climatology, 2018, 38, 4661-4663.	1.5	10
39	Future increases in extreme precipitation exceed observed scaling rates. Nature Climate Change, 2017, 7, 128-132.	8.1	242
40	Toward Global Harmonization of Derived Cloud Products. Bulletin of the American Meteorological Society, 2017, 98, ES49-ES52.	1.7	8
41	Natural variations of tropical width and recent trends. Geophysical Research Letters, 2017, 44, 3825-3832.	1.5	43
42	The influence of topography on midlatitude cyclones on Australia's east coast. Journal of Geophysical Research D: Atmospheres, 2017, 122, 9173-9184.	1.2	5
43	Comparative evaluation of human heat stress indices on selected hospital admissions in Sydney, Australia. Australian and New Zealand Journal of Public Health, 2017, 41, 381-387.	0.8	13
44	A cloudâ€resolving model study of aerosolâ€cloud correlation in a pristine maritime environment. Geophysical Research Letters, 2017, 44, 5774-5781.	1.5	10
45	On the role of the stratiform cloud scheme in the interâ€model spread of cloud feedback. Journal of Advances in Modeling Earth Systems, 2017, 9, 423-437.	1.3	19
46	The Robust Relationship Between Extreme Precipitation and Convective Organization in Idealized Numerical Modeling Simulations. Journal of Advances in Modeling Earth Systems, 2017, 9, 2291-2303.	1.3	31
47	The Cloud Feedback Model Intercomparison Project (CFMIP) Diagnostic Codes Catalogue â€“ metrics, diagnostics and methodologies to evaluate, understand and improve the representation of clouds and cloud feedbacks in climate models. Geoscientific Model Development, 2017, 10, 4285-4305.	1.3	16
48	Projected changes in east Australian midlatitude cyclones during the 21st century. Geophysical Research Letters, 2016, 43, 334-340.	1.5	34
49	A Numerical Investigation of Cumulus Thermals. Journals of the Atmospheric Sciences, 2016, 73, 4117-4136.	0.6	56
50	Processes Responsible for Cloud Feedback. Current Climate Change Reports, 2016, 2, 179-189.	2.8	81
51	The influence of local sea surface temperatures on Australian east coast cyclones. Journal of Geophysical Research D: Atmospheres, 2016, 121, 13,352.	1.2	14
52	Prospects for narrowing bounds on Earth's equilibrium climate sensitivity. Earth's Future, 2016, 4, 512-522.	2.4	123
53	Radiative driving of shallow return flows from the ITCZ. Journal of Advances in Modeling Earth Systems, 2016, 8, 831-842.	1.3	13
54	Practical Approximations to Seasonal Fluctuationâ€“Dissipation Operators Given a Limited Sample. Journals of the Atmospheric Sciences, 2016, 73, 2529-2545.	0.6	1

#	Article	IF	Citations
55	Skill in Simulating Australian Precipitation at the Tropical Edge*. Journal of Climate, 2016, 29, 1477-1496.	1.2	6
56	Extreme precipitation in WRF during the Newcastle East Coast Low of 2007. Theoretical and Applied Climatology, 2016, 125, 809-827.	1.3	8
57	Zonal winds and southeast Australian rainfall in global and regional climate models. Climate Dynamics, 2016, 46, 123-133.	1.7	10
58	The impact of parametrized convection on cloud feedback. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140414.	1.6	63
59	Adjustments in the Forcing-Feedback Framework for Understanding Climate Change. Bulletin of the American Meteorological Society, 2015, 96, 217-228.	1.7	239
60	The Sun and the rain. Nature, 2015, 528, 200-201.	13.7	3
61	An Exploration of Multivariate Fluctuation Dissipation Operators and Their Response to Sea Surface Temperature Perturbations. Journals of the Atmospheric Sciences, 2015, 72, 472-486.	0.6	17
62	Impact of Identification Method on the Inferred Characteristics and Variability of Australian East Coast Lows. Monthly Weather Review, 2015, 143, 864-877.	0.5	33
63	Clouds, circulation and climate sensitivity. Nature Geoscience, 2015, 8, 261-268.	5.4	647
64	Atmospheric changes through 2012 as shown by iteratively homogenized radiosonde temperature and wind data (IUKv2). Environmental Research Letters, 2015, 10, 054007.	2.2	35
65	A practical philosophy of complex climate modelling. European Journal for Philosophy of Science, 2015, 5, 149-169.	0.6	37
66	Disentangling the Multiple Sources of Large-Scale Variability in Australian Wintertime Precipitation. Journal of Climate, 2014, 27, 6377-6392.	1.2	24
67	A Drier Future?. Science, 2014, 343, 737-739.	6.0	469
68	Spread in model climate sensitivity traced to atmospheric convective mixing. Nature, 2014, 505, 37-42.	13.7	586
69	Climate Effects of Aerosol-Cloud Interactions. Science, 2014, 343, 379-380.	6.0	347
70	Evaluation and improvement of TAPM in estimating solar irradiance in Eastern Australia. Solar Energy, 2014, 107, 668-680.	2.9	14
71	Climate Processes: Clouds, Aerosols and Dynamics. , 2013, , 73-103.		15
72	Slippery Thermals and the Cumulus Entrainment Paradox*. Journals of the Atmospheric Sciences, 2013, 70, 2426-2442.	0.6	93

#	Article	IF	Citations
73	Robust direct effect of carbon dioxide on tropical circulation and regional precipitation. Nature Geoscience, 2013, 6, 447-451.	5.4	338
74	A Numerical Modeling Study of the Propagation of Idealized Sea-Breeze Density Currents. Journals of the Atmospheric Sciences, 2013, 70, 653-668.	0.6	32
75	Aerosol Cloud-Mediated Radiative Forcing: Highly Uncertain and Opposite Effects from Shallow and Deep Clouds. , 2013, , 105-149.		29
76	Changes in Stratospheric Temperatures and Their Implications for Changes in the Brewerâ€“Dobson Circulation, 1979â€“2005. Journal of Climate, 2012, 25, 1759-1772.	1.2	45
77	Recent Northern Hemisphere tropical expansion primarily driven by black carbon and tropospheric ozone. Nature, 2012, 485, 350-354.	13.7	216
78	The equilibrium response to idealized thermal forcings in a comprehensive GCM: implications for recent tropical expansion. Atmospheric Chemistry and Physics, 2012, 12, 4795-4816.	1.9	32
79	The HDO/H₂O relationship in tropospheric water vapor in an idealized â€œlastâ€saturationâ€• model. Journal of Geophysical Research, 2012, 117, .	3.3	5
80	Exceedance of heat index thresholds for 15 regions under a warming climate using the wetâ€bulb globe temperature. International Journal of Climatology, 2012, 32, 161-177.	1.5	222
81	A quantification of uncertainties in historical tropical tropospheric temperature trends from radiosondes. Journal of Geophysical Research, 2011, 116, .	3.3	48
82	The role of tropical deep convective clouds on temperature, water vapor, and dehydration in the tropical tropopause layer (TTL). Atmospheric Chemistry and Physics, 2011, 11, 3811-3821.	1.9	33
83	Science controversies past and present. Physics Today, 2011, 64, 39-44.	0.3	192
84	The impact of natural versus anthropogenic aerosols on atmospheric circulation in the Community Atmosphere Model. Climate Dynamics, 2011, 36, 1959-1978.	1.7	77
85	Exploring the Landâ€“Ocean Contrast in Convective Vigor Using Islands. Journals of the Atmospheric Sciences, 2011, 68, 602-618.	0.6	39
86	Insights into Cloud-Top Height and Dynamics from the Seasonal Cycle of Cloud-Top Heights Observed by MISR in the West Pacific Region. Journals of the Atmospheric Sciences, 2010, 67, 248-261.	0.6	26
87	Direct versus indirect effects of tropospheric humidity changes on the hydrologic cycle. Environmental Research Letters, 2010, 5, 025206.	2.2	13
88	An adaptability limit to climate change due to heat stress. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 9552-9555.	3.3	744
89	Relative humidity changes in a warmer climate. Journal of Geophysical Research, 2010, 115, .	3.3	185
90	Tropospheric water vapor, convection, and climate. Reviews of Geophysics, 2010, 48, .	9.0	355

#	Article	IF	Citations
91	Aerosolâ€cloud semiâ€direct effect and landâ€sea temperature contrast in a GCM. Geophysical Research Letters, 2010, 37, .	1.5	68
92	A Matter of Humidity. Science, 2009, 323, 1020-1021.	6.0	144
93	How do we tell which estimates of past climate change are correct?. International Journal of Climatology, 2009, 29, 1520-1523.	1.5	6
94	What Can Water Vapor Reveal About Past and Future Climate Change?: AGU Chapman Conference on Water Vapor and Its Role in Climate; Kailuaâ€Kona, Hawaii, 20â€“24 October 2008. Eos, 2009, 90, 122-122.	0.1	3
95	Consistency of modelled and observed temperature trends in the tropical troposphere. International Journal of Climatology, 2008, 28, 1703-1722.	1.5	236
96	Warming maximum in the tropical upper troposphere deduced from thermal winds. Nature Geoscience, 2008, 1, 399-403.	5.4	105
97	Climate Change: A Titanic Challenge. Science, 2008, 319, 900-900.	6.0	2
98	Resonant Response of Deep Convection to Surface Hot Spots. Journals of the Atmospheric Sciences, 2008, 65, 276-286.	0.6	40
99	A Cloud and Precipitation Feature Database from Nine Years of TRMM Observations. Journal of Applied Meteorology and Climatology, 2008, 47, 2712-2728.	0.6	317
100	Erroneous Relationships among Humidity and Cloud Forcing Variables in Three Global Climate Models. Journal of Climate, 2008, 21, 4190-4206.	1.2	8
101	Robust Tropospheric Warming Revealed by Iteratively Homogenized Radiosonde Data. Journal of Climate, 2008, 21, 5336-5352.	1.2	108
102	Simultaneous Detection of Climate Change and Observing Biases in a Network with Incomplete Sampling. Journal of Climate, 2007, 20, 4047-4062.	1.2	34
103	Utility of Radiosonde Wind Data in Representing Climatological Variations of Tropospheric Temperature and Baroclinicity in the Western Tropical Pacific. Journal of Climate, 2007, 20, 5229-5243.	1.2	17
104	Annual temperature cycle of the tropical tropopause: A simple model study. Journal of Geophysical Research, 2007, 112, .	3.3	29
105	Discounting and uncertainty: a non-economistâ€™s view. Climatic Change, 2007, 80, 205-212.	1.7	9
106	Small ice crystals and the climatology of lightning. Geophysical Research Letters, 2006, 33, .	1.5	87
107	Modeling the Impact of Convective Entrainment on the Tropical Tropopause. Journals of the Atmospheric Sciences, 2006, 63, 1013-1027.	0.6	28
108	The General Circulation and Robust Relative Humidity. Journal of Climate, 2006, 19, 6278-6290.	1.2	40

#	Article	IF	Citations
109	A Distribution Law for Free-Tropospheric Relative Humidity. Journal of Climate, 2006, 19, 6267-6277.	1.2	33
110	UARS/MLS Cloud Ice Measurements: Implications for H2O Transport near the Tropopause. Journals of the Atmospheric Sciences, 2005, 62, 518-530.	0.6	46
111	Anvil glaciation in a deep cumulus updraught over Florida simulated with the Explicit Microphysics Model. I: Impact of various nucleation processes. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 2019-2046.	1.0	51
112	The Water Cycle across Scales. Bulletin of the American Meteorological Society, 2005, 86, 1743-1746.	1.7	1
113	Radiosonde Daytime Biases and Late-20th Century Warming. Science, 2005, 309, 1556-1559.	6.0	128
114	Detection of faceted crystals in deep convective clouds via the antisolar peak. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	5
115	Underestimation of deep convective cloud tops by thermal imagery. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	119
116	Deep convective cloud-top heights and their thermodynamic control during CRYSTAL-FACE. Journal of Geophysical Research, 2004, 109, .	3.3	58
117	Effect of convection on the summertime extratropical lower stratosphere. Journal of Geophysical Research, 2004, 109, .	3.3	106
118	Convective Impact on Temperatures Observed near the Tropical Tropopause. Journals of the Atmospheric Sciences, 2003, 60, 1847-1856.	0.6	94
119	Convective Mixing near the Tropical Tropopause: Insights from Seasonal Variations. Journals of the Atmospheric Sciences, 2003, 60, 2674-2685.	0.6	60
120	A model of HDO in the tropical tropopause layer. Atmospheric Chemistry and Physics, 2003, 3, 2173-2181.	1.9	51
121	Aerosols and Ice Particle Size in Tropical Cumulonimbus. Journal of Climate, 2002, 15, 1051-1063.	1.2	57
122	A Microphysical Connection Among Biomass Burning, Cumulus Clouds, and Stratospheric Moisture. Science, 2002, 295, 1272-1275.	6.0	97
123	A Model for Transport across the Tropical Tropopause. Journals of the Atmospheric Sciences, 2001, 58, 765-779.	0.6	183
124	On Moist Instability*. Monthly Weather Review, 2000, 128, 4139-4142.	0.5	23
125	Simulations of tropical upper tropospheric humidity. Journal of Geophysical Research, 2000, 105, 20155-20163.	3.3	63
126	Climate signals from station arrays with missing data, and an application to winds. Journal of Geophysical Research, 2000, 105, 29489-29500.	3.3	10

#	Article	IF	Citations
127	A stratospheric â€œdrainâ€•over the maritime continent. Geophysical Research Letters, 2000, 27, 677-680.	1.5	106
128	Climate signal mapping and an application to atmospheric tides. Geophysical Research Letters, 2000, 27, 3525-3528.	1.5	10
129	On the control of stratospheric humidity. Geophysical Research Letters, 2000, 27, 2513-2516.	1.5	205
130	On moistening of the tropical troposphere by cirrus clouds. Journal of Geophysical Research, 1999, 104, 11949-11960.	3.3	43
131	Feedbacks in a Simple Prognostic Tropical Climate Model. Journals of the Atmospheric Sciences, 1999, 56, 2178-2200.	0.6	6
132	Observed Evolution of Tropical Deep Convective Events and Their Environment. Monthly Weather Review, 1999, 127, 1777-1795.	0.5	94
133	Convective Precursors and Predictability in the Tropical Western Pacific. Monthly Weather Review, 1999, 127, 2977-2991.	0.5	150
134	Maintenance of the Free-Tropospheric Tropical Water Vapor Distribution. Part II: Simulation by Large-Scale Advection. Journal of Climate, 1996, 9, 2919-2934.	1.2	72
135	Maintenance of the Free-Tropospheric Tropical Water Vapor Distribution. Part I: Clear Regime Budget. Journal of Climate, 1996, 9, 2903-2918.	1.2	34
136	Response of an atmospheric general circulation model to radiative forcing of tropical clouds. Journal of Geophysical Research, 1994, 99, 20829.	3.3	62