Sean Davis

List of Publications by Citations

92 papers	4,136 citations	32 h-index	63 g-index
129 ext. papers	4,844 ext. citations	7.3 avg, IF	5.53 L-index

#	Paper	IF	Citations
92	Contributions of stratospheric water vapor to decadal changes in the rate of global warming. *Science*, **2010**, 327, 1219-23	33.3	810
91	Introduction to the SPARC Reanalysis Intercomparison Project (S-RIP) and overview of the reanalysis systems. *Atmospheric Chemistry and Physics*, **2017**, 17, 1417-1452	6.8	201
90	Stratospheric water vapor feedback. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 18087-91	11.5	167
89	Global-scale black carbon profiles observed in the remote atmosphere and compared to models. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	159
88	A missing source of aerosols in Antarctica beyond long-range transport, phytoplankton, and photochemistry. *Atmospheric Chemistry and Physics*, **2017**, 17, 1-20	6.8	156
87	Evidence for a continuous decline in lower stratospheric ozone offsetting ozone layer recovery. *Atmospheric Chemistry and Physics*, **2018**, 18, 1379-1394	6.8	143
86	A Multidiagnostic Intercomparison of Tropical-Width Time Series Using Reanalyses and Satellite Observations. *Journal of Climate*, **2012**, 25, 1061-1078	4.4	139
85	Stratospheric water vapor trends over Boulder, Colorado: Analysis of the 30 year Boulder record. *Journal of Geophysical Research*, **2011**, 116,		128
84	Influence of Tropical Tropopause Layer Cooling on Atlantic Hurricane Activity. *Journal of Climate*, **2013**, 26, 2288-2301	4.4	111
83	Re-examining tropical expansion. *Nature Climate Change*, **2018**, 8, 768-775	21.4	103
82	Past changes in the vertical distribution of ozone Part 3: Analysis and interpretation of trends. *Atmospheric Chemistry and Physics*, **2015**, 15, 9965-9982	6.8	95
81	The Stratospheric Water and Ozone Satellite Homogenized (SWOOSH) database: a long-term database for climate studies. *Earth System Science Data*, **2016**, 8, 461-490	10.5	90
80	Black carbon lofts wildfire smoke high into the stratosphere to form a persistent plume. *Science*, **2019**, 365, 587-590	33.3	87
79	Trends in tropospheric humidity from reanalysis systems. *Journal of Geophysical Research*, **2010**, 115,		75
78	An update on ozone profile trends for the period 2000 to 2016. *Atmospheric Chemistry and Physics*, **2017**, 17, 10675-10690	6.8	71
77	The AquaVIT-1 intercomparison of atmospheric water vapor measurement techniques. *Atmospheric Measurement Techniques*, **2014**, 7, 3177-3213	4	68
76	Climatology and interannual variability of dynamic variables in multiple reanalyses evaluated by the SPARC Reanalysis Intercomparison Project (S-RIP). *Atmospheric Chemistry and Physics*, **2017**, 17, 14593-14629	6.8	62

75	Variations of stratospheric water vapor over the past three decades. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 12,588-12,598	4.4	61
74	In situ and lidar observations of tropopause subvisible cirrus clouds during TC4. *Journal of Geophysical Research*, **2010**, 115,		61
73	Evidence for changes in stratospheric transport and mixing over the past three decades based on multiple data sets and tropical leaky pipe analysis. *Journal of Geophysical Research*, **2010**, 115,		59
72	Recent Tropical Expansion: Natural Variability or Forced Response?. *Journal of Climate*, **2019**, 32, 1551-1571	4.4	56
71	Improving stratospheric transport trend analysis based on SF6 and CO2 measurements. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 14,110-14,128	4.4	52
70	Intercomparison of vertically resolved merged satellite ozone data sets: interannual variability and long-term trends. *Atmospheric Chemistry and Physics*, **2015**, 15, 3021-3043	6.8	51
69	Large anomalies in lower stratospheric water vapour and ice during the 2015–2016 El Niño. *Nature Geoscience*, **2017**, 10, 405-409	18.3	50
68	Genetic Algorithms and Support Vector Machines for Time Series Classification **2002**,		49
67	Assessment of upper tropospheric and stratospheric water vapor and ozone in reanalyses as part of S-RIP. *Atmospheric Chemistry and Physics*, **2017**, 17, 12743-12778	6.8	47
66	Revisiting the Relationship among Metrics of Tropical Expansion. *Journal of Climate*, **2018**, 31, 7565-7581	4.4	44
65	Regional and Seasonal Characteristics of the Recent Expansion of the Tropics. *Journal of Climate*, **2018**, 31, 6839-6856	4.4	40
64	Transport of ice into the stratosphere and the humidification of the stratosphere over the 21 century. *Geophysical Research Letters*, **2016**, 43, 2323-2329	4.9	37
63	Contrasting upper and lower atmospheric metrics of tropical expansion in the Southern Hemisphere. *Geophysical Research Letters*, **2016**, 43, 10,496	4.9	36
62	Measurement of Total Water with a Tunable Diode Laser Hygrometer: Inlet Analysis, Calibration Procedure, and Ice Water Content Determination. *Journal of Atmospheric and Oceanic Technology*, **2007**, 24, 463-475	2	35
61	Climatology of long-range transported Asian dust along the West Coast of the United States. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 12,171-12,185	4.4	32
60	Validation of Aura Microwave Limb Sounder stratospheric water vapor measurements by the NOAA frost point hygrometer. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 1612-1625	4.4	32
59	Comparisons of in situ measurements of cirrus cloud ice water content. *Journal of Geophysical Research*, **2007**, 112,		32
58	Temperature and tropopause characteristics from reanalyses data in the tropical tropopause layer. *Atmospheric Chemistry and Physics*, **2020**, 20, 753-770	6.8	31

57	Stratospheric ozone trends for 1985–2018: sensitivity to recent large variability. *Atmospheric Chemistry and Physics*, **2019**, 19, 12731-12748	6.8	30
56	The changing width of Earth's tropical belt. *Physics Today*, **2014**, 67, 38-44	0.9	30
55	Biases in southern hemisphere climate trends induced by coarsely specifying the temporal resolution of stratospheric ozone. *Geophysical Research Letters*, **2014**, 41, 8602-8610	4.9	28
54	Hadley cell expansion in CMIP6 models. *Atmospheric Chemistry and Physics*, **2020**, 20, 5249-5268	6.8	27
53	Changes in the width of the tropical belt due to simple radiative forcing changes in the GeoMIP simulations. *Atmospheric Chemistry and Physics*, **2016**, 16, 10083-10095	6.8	27
52	Regional Widening of Tropical Overturning: Forced Change, Natural Variability, and Recent Trends. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 6104-6119	4.4	26
51	Nonlinear response of tropical lower stratospheric temperature and water vapor to ENSO. *Atmospheric Chemistry and Physics*, **2018**, 18, 4597-4615	6.8	26
50	Interannual variability of tropical tropopause layer clouds. *Geophysical Research Letters*, **2013**, 40, 2862-2866	4.6	26
49	The TropD software package (v1): standardized methods for calculating tropical-width diagnostics. *Geoscientific Model Development*, **2018**, 11, 4339-4357	6.3	26
48	Recent divergences in stratospheric water vapor measurements by frost point hygrometers and the Aura Microwave Limb Sounder. *Atmospheric Measurement Techniques*, **2016**, 9, 4447-4457	4	25
47	A decline in global CFC-11 emissions during 2018-2019. *Nature*, **2021**, 590, 428-432	50.4	24
46	The potential impact of changes in lower stratospheric water vapour on stratospheric temperatures over the past 30 years. *Quarterly Journal of the Royal Meteorological Society*, **2014**, 140, 2176-2185	6.4	21
45	Comparison of airborne in situ measurements and Moderate Resolution Imaging Spectroradiometer (MODIS) retrievals of cirrus cloud optical and microphysical properties during the Midlatitude Cirrus Experiment (MidCiX). *Journal of Geophysical Research*, **2009**, 114,		21
44	Estimating Source Region Influences on Black Carbon Abundance, Microphysics, and Radiative Effect Observed Over South Korea. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 13,527	4.4	20
43	Directly measured heating rates of a tropical subvisible cirrus cloud. *Journal of Geophysical Research* , **2010**, 115,		19
42	Reconciling Hadley Cell Expansion Trend Estimates in Reanalyses. *Geophysical Research Letters*, **2018**, 45, 11,439	4.9	17
41	Evaluating stratospheric ozone and water vapour changes in CMIP6 models from 1850 to 2100. *Atmospheric Chemistry and Physics*, **2021**, 21, 5015-5061	6.8	16
40	Persistent Stratospheric Warming Due to 2019–2020 Australian Wildfire Smoke. *Geophysical Research Letters*, **2021**, 48, e2021GL092609	4.9	16

39	The Response of the Tropospheric Circulation to Water Vapor□like Forcings in the Stratosphere. *Journal of Climate*, **2011**, 24, 5713-5720	4.4	13
38	FORTE observations of optical emissions from lightning: Optical properties and discrimination capability. *Journal of Geophysical Research*, **2002**, 107, ACL 9-1-ACL 9-5		13
37	The AquaVIT-1 intercomparison of atmospheric water vapor measurement techniques		13
36	Designing the Climate Observing System of the Future. *Earth's Future*, **2018**, 6, 80-102	7.9	13
35	Around the World in 84 Days. *Eos*, **2018**, 99,	1.5	12
34	Tropical Widening: From Global Variations to Regional Impacts. *Bulletin of the American Meteorological Society*, **2020**, 101, E897-E904	6.1	11
33	Seasonal stratospheric ozone trends over 2000□2018 derived from several merged data sets. *Atmospheric Chemistry and Physics*, **2020**, 20, 7035-7047	6.8	10
32	CO signatures in subtropical convective clouds and anvils during CRYSTAL-FACE: An analysis of convective transport and entrainment using observations and a cloud-resolving model. *Journal of Geophysical Research*, **2006**, 111,		10
31	Validation of SAGE III/ISS Solar Occultation Ozone Products With Correlative Satellite and Ground-Based Measurements. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2020JD032430	4.4	9
30	Influence of Arctic stratospheric ozone on surface climate in CCMI models. *Atmospheric Chemistry and Physics*, **2019**, 19, 9253-9268	6.8	9
29	Evaluating stratospheric ozone and water vapor changes in CMIP6 models from 1850□2100 **2020**,		8
28	A comprehensive assessment of tropical stratospheric upwelling in the specified dynamics Community Earth System Model 1.2.2 □Whole Atmosphere Community Climate Model (CESM (WACCM)). *Geoscientific Model Development*, **2020**, 13, 717-734	6.3	8
27	Large Uncertainty in the Relative Rates of Dynamical and Hydrological Tropical Expansion. *Geophysical Research Letters*, **2018**, 45, 1106-1113	4.9	8
26	The representation of the TTL in a tropical channel version of the WRF model. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 2835-2848	4.4	8
25	Low-ozone bubbles observed in the tropical tropopause layer during the TC4 campaign in 2007. *Journal of Geophysical Research*, **2010**, 115,		8
24	Modeling the climate impact of Southern Hemisphere ozone depletion: The importance of the ozone data set. *Geophysical Research Letters*, **2014**, 41, 9033-9039	4.9	7
23	An updated version of a gap-free monthly mean zonal mean ozone database. *Earth System Science Data*, **2018**, 10, 1473-1490	10.5	7
22	The Stratospheric Water and Ozone Satellite Homogenized (SWOOSH) database: A long-term database for climate studies		7

21	Revisiting ozone measurements as an indicator of tropical width. *Progress in Earth and Planetary Science*, **2018**, 5,	3.9	7
20	On the stratospheric chemistry of midlatitude wildfire smoke.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2117325119	11.5	7
19	Zonal Asymmetry of the QBO Temperature Signal in the Tropical Tropopause Region. *Geophysical Research Letters*, **2020**, 47, e2020GL089533	4.9	6
18	Validation of SAGE III/ISS Solar Water Vapor Data With Correlative Satellite and Balloon-Borne Measurements. *Journal of Geophysical Research D: Atmospheres*, **2021**, 126, e2020JD033803	4.4	5
17	Assessment of upper tropospheric and stratospheric water vapour and ozone in reanalyses as part of S-RIP **2017**,		4
16	Near-Global Variability of Stratospheric Water Vapor Observed by SAGE III/ISS. *Journal of Geophysical Research D: Atmospheres*, **2021**, 126, e2020JD034274	4.4	4
15	Toward a Reanalysis of Stratospheric Ozone for Trend Studies: Assimilation of the Aura Microwave Limb Sounder and Ozone Mapping and Profiler Suite Limb Profiler Data. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2019JD031892	4.4	4
14	Climatology and Interannual Variability of Dynamic Variables in Multiple Reanalyses Evaluated by the SPARC Reanalysis Intercomparison Project (S-RIP) **2017**,		3
13	Nonlinear response of tropical lower stratospheric temperature and water vapor to ENSO		3
12	Intercomparison of vertically resolved merged satellite ozone data sets: interannual variability and long-term trends		3
11	The TropD software package: Standardized methods for calculating Tropical Width Diagnostics		3
10	Tropical Stratospheric Circulation and Ozone Coupled to Pacific Multi-Decadal Variability. *Geophysical Research Letters*, **2021**, 48, e2020GL092162	4.9	3
9	Effect of deep convection on the tropical tropopause layer composition over the southwest Indian Ocean during austral summer. *Atmospheric Chemistry and Physics*, **2020**, 20, 10565-10586	6.8	2
8	Past changes in the vertical distribution of ozone Part 3: Analysis and interpretation of trends		2
7	Changes in Variability Associated with Climate Change **2013**, 249-271		2
6	Introduction to the SPARC Reanalysis Intercomparison Project (S-RIP) and overview of the reanalysis systems **2016**,		2
5	Continuous decline in lower stratospheric ozone offsets ozone layer recovery **2017**,		1
4	An update on ozone profile trends for the period 2000 to 2016 **2017**,		1

3	Influence of the El Niño Southern Oscillation on entry stratospheric water vapor in coupled chemistry–ocean CCMI and CMIP6 models. *Atmospheric Chemistry and Physics*, **2021**, 21, 3725-3740	6.8	1
2	A reel-down instrument system for profile measurements of water vapor, temperature, clouds, and aerosol beneath constant-altitude scientific balloons. *Atmospheric Measurement Techniques*, **2021**, 14, 2635-2648	4	1
1	First Super-Pressure Balloon-Borne Fine-Vertical-Scale Profiles in the Upper TTL: Impacts of Atmospheric Waves on Cirrus Clouds and the QBO. *Geophysical Research Letters*, **2022**, 49,	4.9	0