Steven Pawson

List of Publications by Citations

182 papers	16,082 citations	53 h-index	125 g-index
201 ext. papers	18,346 ext. citations	4.8 avg, IF	5.86 L-index

#	Paper	IF	Citations
182	MERRA: NASA's Modern-Era Retrospective Analysis for Research and Applications. *Journal of Climate*, **2011**, 24, 3624-3648	4.4	3548
181	The Modern-Era Retrospective Analysis for Research and Applications, Version 2 (MERRA-2). *Journal of Climate*, **2017**, Volume 30, 5419-5454	4.4	2815
180	The Orbiting Carbon Observatory (OCO) mission. *Advances in Space Research*, **2004**, 34, 700-709	2.4	480
179	Assessment of temperature, trace species, and ozone in chemistry-climate model simulations of the recent past. *Journal of Geophysical Research*, **2006**, 111,		374
178	Validation of the Aura Microwave Limb Sounder temperature and geopotential height measurements. *Journal of Geophysical Research*, **2008**, 113,		312
177	Aura Microwave Limb Sounder observations of dynamics and transport during the record-breaking 2009 Arctic stratospheric major warming. *Geophysical Research Letters*, **2009**, 36,	4.9	310
176	Precision requirements for space-based data. *Journal of Geophysical Research*, **2007**, 112,		269
175	Multimodel projections of stratospheric ozone in the 21st century. *Journal of Geophysical Research*, **2007**, 112,		266
174	The impact of stratospheric ozone recovery on the Southern Hemisphere westerly jet. *Science*, **2008**, 320, 1486-9	33.3	260
173	Chemistry–climate Model Simulations of Twenty-First Century Stratospheric Climate and Circulation Changes. *Journal of Climate*, **2010**, 23, 5349-5374	4.4	242
172	Uncertainties and assessments of chemistry-climate models of the stratosphere. *Atmospheric Chemistry and Physics*, **2003**, 3, 1-27	6.8	239
171	The remarkable 2003–2004 winter and other recent warm winters in the Arctic stratosphere since the late 1990s. *Journal of Geophysical Research*, **2005**, 110,		206
170	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
169	The evolution of the stratopause during the 2006 major warming: Satellite data and assimilated meteorological analyses. *Journal of Geophysical Research*, **2008**, 113,		185
168	Multi-model assessment of stratospheric ozone return dates and ozone recovery in CCMVal-2 models. *Atmospheric Chemistry and Physics*, **2010**, 10, 9451-9472	6.8	179
167	Persistence of the lower stratospheric polar vortices. *Journal of Geophysical Research*, **1999**, 104, 27191-27201		169
166	Impact of stratospheric ozone hole recovery on Antarctic climate. *Geophysical Research Letters*, **2008**, 35,	4.9	165

165	Multimodel assessment of the upper troposphere and lower stratosphere: Tropics and global trends. *Journal of Geophysical Research*, **2010**, 115,		150
164	Satellite data of atmospheric pollution for U.S. air quality applications: Examples of applications, summary of data end-user resources, answers to FAQs, and common mistakes to avoid. *Atmospheric Environment*, **2014**, 94, 647-662	5.3	148
163	Solar occultation satellite data and derived meteorological products: Sampling issues and comparisons with Aura Microwave Limb Sounder. *Journal of Geophysical Research*, **2007**, 112,		132
162	A comparison of the lower stratospheric age spectra derived from a general circulation model and two data assimilation systems. *Journal of Geophysical Research*, **2003**, 108, n/a-n/a		132
161	Goddard Earth Observing System chemistry-climate model simulations of stratospheric ozone-temperature coupling between 1950 and 2005. *Journal of Geophysical Research*, **2008**, 113,		129
160	The GCM Reality Intercomparison Project for SPARC (GRIPS): Scientific Issues and Initial Results. *Bulletin of the American Meteorological Society*, **2000**, 81, 781-796	6.1	129
159	What would have happened to the ozone layer if chlorofluorocarbons (CFCs) had not been regulated?. *Atmospheric Chemistry and Physics*, **2009**, 9, 2113-2128	6.8	128
158	Alaskan and Canadian forest fires exacerbate ozone pollution over Houston, Texas, on 19 and 20 July 2004. *Journal of Geophysical Research*, **2006**, 111,		125
157	Multimodel climate and variability of the stratosphere. *Journal of Geophysical Research*, **2011**, 116,		122
156	A Strategy for Process-Oriented Validation of Coupled Chemistry–Climate Models. *Bulletin of the American Meteorological Society*, **2005**, 86, 1117-1134	6.1	118
155	A New Look at Stratospheric Sudden Warmings. Part II: Evaluation of Numerical Model Simulations. *Journal of Climate*, **2007**, 20, 470-488	4.4	115
154	The cold winters of the middle 1990s in the northern lower stratosphere. *Journal of Geophysical Research*, **1999**, 104, 14209-14222		113
153	HEMCO v1.0: a versatile, ESMF-compliant component for calculating emissions in atmospheric models. *Geoscientific Model Development*, **2014**, 7, 1409-1417	6.3	108
152	The anomalous change in the QBO in 2015–2016. *Geophysical Research Letters*, **2016**, 43, 8791-8797	4.9	104
151	A new interpretation of total column BrO during Arctic spring. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	102
150	Stratosphere-troposphere coupling and annular mode variability in chemistry-climate models. *Journal of Geophysical Research*, **2010**, 115,		96
149	Tropical Cumulus Convection and Upward-Propagating Waves in Middle-Atmospheric GCMs. *Journals of the Atmospheric Sciences*, **2003**, 60, 2765-2782	2.1	89
148	Trends in Stratospheric Ozone: Lessons Learned from a 3D Chemical Transport Model. *Journals of the Atmospheric Sciences*, **2006**, 63, 1028-1041	2.1	87

147	Global CO2 transport simulations using meteorological data from the NASA data assimilation system. *Journal of Geophysical Research*, **2004**, 109,		86
146	Impacts of climate change on stratospheric ozone recovery. *Geophysical Research Letters*, **2009**, 36, n/a-n/a	4.9	84
145	Evaluation of the Ozone Fields in NASA's MERRA-2 Reanalysis. *Journal of Climate*, **2017**, 30, 2961-2988	4.4	79
144	Carbon monitoring system flux estimation and attribution: impact of ACOS-GOSAT XCO2 sampling on the inference of terrestrial biospheric sources and sinks. *Tellus, Series B: Chemical and Physical Meteorology*, **2014**, 66, 22486	3.3	76
143	Comparison of lower stratospheric tropical mean vertical velocities. *Journal of Geophysical Research* , **2008**, 113,		71
142	Jet characterization in the upper troposphere/lower stratosphere (UTLS): applications to climatology and transport studies. *Atmospheric Chemistry and Physics*, **2011**, 11, 6115-6137	6.8	70
141	On the influence of anthropogenic forcings on changes in the stratospheric mean age. *Journal of Geophysical Research*, **2009**, 114,		69
140	Simulations of Dynamics and Transport during the September 2002 Antarctic Major Warming. *Journals of the Atmospheric Sciences*, **2005**, 62, 690-707	2.1	69
139	Assimilated ozone from EOS-Aura: Evaluation of the tropopause region and tropospheric columns. *Journal of Geophysical Research*, **2008**, 113,		65
138	Using transport diagnostics to understand chemistry climate model ozone simulations. *Journal of Geophysical Research*, **2011**, 116,		64
137	Decline and recovery of total column ozone using a multimodel time series analysis. *Journal of Geophysical Research*, **2010**, 115,		64
136	Effect of zonal asymmetries in stratospheric ozone on simulated Southern Hemisphere climate trends. *Geophysical Research Letters*, **2009**, 36,	4.9	64
135	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		63
134	Structure and Dynamics of the Quasi-Biennial Oscillation in MERRA-2. *Journal of Climate*, **2016**, 29, 5339-5354	4.4	60
133	Seasonal and interannual variability of the stratosphere diagnosed from UKMO TOVS analyses. *Quarterly Journal of the Royal Meteorological Society*, **2000**, 126, 2585-2604	6.4	60
132	Stratospheric sudden warmings and slowly propagating zonal-mean zonal wind anomalies. *Journal of Geophysical Research*, **2000**, 105, 12351-12359		60
131	Multimodel assessment of the upper troposphere and lower stratosphere: Extratropics. *Journal of Geophysical Research*, **2010**, 115,		56
130	Improved predictability of the troposphere using stratospheric final warmings. *Journal of Geophysical Research*, **2011**, 116,		54

129	A comparison of reanalyses in the tropical stratosphere. Part 3: inclusion of the pre-satellite data era. *Climate Dynamics*, **1999**, 15, 241-250	4.2	52
128	A comparison of reanalyses in the tropical stratosphere. Part 1: thermal structure and the annual cycle. *Climate Dynamics*, **1998**, 14, 631-644	4.2	50
127	Sensitivity of 21st century stratospheric ozone to greenhouse gas scenarios. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	48
126	Climatology of Upper Tropospheric□lower Stratospheric (UTLS) Jets and Tropopauses in MERRA. *Journal of Climate*, **2014**, 27, 3248-3271	4.4	47
125	Quantifying the impact of BOReal forest fires on Tropospheric oxidants over the Atlantic using Aircraft and Satellites (BORTAS) experiment: design, execution and science overview. *Atmospheric Chemistry and Physics*, **2013**, 13, 6239-6261	6.8	45
124	Recent decline in extratropical lower stratospheric ozone attributed to circulation changes. *Geophysical Research Letters*, **2018**, 45, 5166-5176	4.9	45
123	A comparison of reanalyses in the tropical stratosphere. Part 2: the quasi-biennial oscillation. *Climate Dynamics*, **1998**, 14, 645-658	4.2	44
122	Dynamics of the Disrupted 2015-16 Quasi-Biennial Oscillation. *Journal of Climate*, **2017**, 30, 5661-5674	4.4	43
121	Relative Contribution of Greenhouse Gases and Ozone-Depleting Substances to Temperature Trends in the Stratosphere: A Chemistry□Climate Model Study. *Journal of Climate*, **2010**, 23, 28-42	4.4	43
120	Diagnostic Comparison of Meteorological Analyses during the 2002 Antarctic Winter. *Monthly Weather Review*, **2005**, 133, 1261-1278	2.4	43
119	On the polar stratospheric cloud formation potential of the northern stratosphere. *Journal of Geophysical Research*, **1995**, 100, 23215		43
118	The Descent Rates of the Shear Zones of the Equatorial QBO. *Journals of the Atmospheric Sciences*, **1996**, 53, 1937-1949	2.1	43
117	A Composite Analysis of the Stratospheric Sudden Warmings Simulated in a Perpetual January Integration of the Berlin TSM GCM. *Journal of the Meteorological Society of Japan*, **1999**, 77, 431-445	2.8	42
116	Development of a grid-independent GEOS-Chem chemical transport model (v9-02) as an atmospheric chemistry module for Earth system models. *Geoscientific Model Development*, **2015**, 8, 595-602	6.3	41
115	Lower stratospheric temperature differences between meteorological analyses in two cold Arctic winters and their impact on polar processing studies. *Journal of Geophysical Research*, **2003**, 108,		41
114	The cold stratospheric winters 1994/1995 and 1995/1996. *Geophysical Research Letters*, **1996**, 23, 3703-3706	4.9	41
113	Global impact of COVID-19 restrictions on the surface concentrations of nitrogen dioxide and ozone. *Atmospheric Chemistry and Physics*, **2021**, 21, 3555-3592	6.8	41
112	Understanding the Changes of Stratospheric Water Vapor in Coupled Chemistry□Climate Model Simulations. *Journals of the Atmospheric Sciences*, **2008**, 65, 3278-3291	2.1	40

111	Large-Scale Atmospheric Transport in GEOS Replay Simulations. *Journal of Advances in Modeling Earth Systems*, **2017**, 9, 2545-2560	7.1	39
110	The global structure of upper troposphere-lower stratosphere ozone in GEOS-5: A multiyear assimilation of EOS Aura data. *Journal of Geophysical Research D: Atmospheres*, **2015**, 120, 2013-2036	4.4	39
109	An ozone increase in the Antarctic summer stratosphere: A dynamical response to the ozone hole. *Geophysical Research Letters*, **2006**, 33,	4.9	39
108	Construction and application of covariance functions with variable length-fields. *Quarterly Journal of the Royal Meteorological Society*, **2006**, 132, 1815-1838	6.4	39
107	Stepwise changes in stratospheric temperature. *Geophysical Research Letters*, **1998**, 25, 2157-2160	4.9	38
106	The 2015/2016 El Niño Event in Context of the MERRA-2 Reanalysis: A Comparison of the Tropical Pacific with 1982/1983 and 1997/1998. *Journal of Climate*, **2017**, 30, 4819-4842	4.4	37
105	A case study of excessive subtropical transport in the stratosphere of a data assimilation system. *Journal of Geophysical Research*, **2004**, 109,		37
104	Influence of the 2006 Indonesian biomass burning aerosols on tropical dynamics studied with the GEOS-5 AGCM. *Journal of Geophysical Research*, **2010**, 115,		36
103	Five year (2004–2009) observations of upper tropospheric water vapor and cloud ice from MLS and comparisons with GEOS-5 analyses. *Journal of Geophysical Research*, **2010**, 115,		36
102	Global simulation of tropospheric chemistry at 12.5 km resolution: performance and evaluation of the GEOS-Chem chemical module (v10-1) within the NASA GEOS Earth system model (GEOS-5 ESM). *Geoscientific Model Development*, **2018**, 11, 4603-4620	6.3	36
101	Climatology of planetary waves in the northern stratosphere. *Journal of Geophysical Research*, **1996**, 101, 16987-16996		35
100	GEOS-S2S Version 2: The GMAO High Resolution Coupled Model and Assimilation System for Seasonal Prediction. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2019JD031767	4.4	34
99	Tropical Waves and the Quasi-Biennial Oscillation in a 7-km Global Climate Simulation. *Journals of the Atmospheric Sciences*, **2016**, 73, 3771-3783	2.1	34
98	Assessment and applications of NASA ozone data products derived from Aura OMI/MLS satellite measurements in context of the GMI chemical transport model. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 5671-5699	4.4	34
97	Stratospheric transport using 6-h-averaged winds from a data assimilation system. *Journal of Geophysical Research*, **2007**, 112,		33
96	The Major Stratospheric Sudden Warming of January 2013: Analyses and Forecasts in the GEOS-5 Data Assimilation System. *Monthly Weather Review*, **2015**, 143, 491-510	2.4	32
95	Chemical Mechanisms and Their Applications in the Goddard Earth Observing System (GEOS) Earth System Model. *Journal of Advances in Modeling Earth Systems*, **2017**, 9, 3019-3044	7.1	32
94	Assessing the magnitude of CO2 flux uncertainty in atmospheric CO2 records using products from NASA's Carbon Monitoring Flux Pilot Project. *Journal of Geophysical Research D: Atmospheres*, **2015**, 120, 734-765	4.4	30

93	Impacts of Interactive Stratospheric Chemistry on Antarctic and Southern Ocean Climate Change in the Goddard Earth Observing System - Version 5 (GEOS-5). *Journal of Climate*, **2016**, 29, 3199-3218	4.4	30
92	Isolating the roles of different forcing agents in global stratospheric temperature changes using model integrations with incrementally added single forcings. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 8067-8082	4.4	30
91	Error correlation between CO₂ and CO as constraint for CO₂ flux inversions using satellite data. *Atmospheric Chemistry and Physics*, **2009**, 9, 7313-7323	6.8	29
90	EOS Microwave Limb Sounder observations of the Antarctic polar vortex breakup in 2004. *Geophysical Research Letters*, **2005**, 32, n/a-n/a	4.9	29
89	Reactive nitrogen, ozone and ozone production in the Arctic troposphere and the impact of stratosphere-troposphere exchange. *Atmospheric Chemistry and Physics*, **2011**, 11, 13181-13199	6.8	28
88	Assimilation of ozone data from the Michelson Interferometer for Passive Atmospheric Sounding. *Quarterly Journal of the Royal Meteorological Society*, **2005**, 131, 2713-2734	6.4	28
87	An evaluation of gravity waves and gravity wave sources in the Southern Hemisphere in a 7 km global climate simulation. *Quarterly Journal of the Royal Meteorological Society*, **2017**, 143, 2481-2495	6.4	27
86	Trends in daily wintertime temperatures in the northern stratosphere. *Geophysical Research Letters*, **1997**, 24, 575-578	4.9	27
85	Nonlinear response of tropical lower stratospheric temperature and water vapor to ENSO. *Atmospheric Chemistry and Physics*, **2018**, 18, 4597-4615	6.8	26
84	Seasonal variations of stratospheric age spectra in the Goddard Earth Observing System Chemistry Climate Model (GEOSCCM). *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		26
83	An EOF Analysis of the Vertical-Time Delay Structure of the Quasi-Biennial Oscillation. *Journals of the Atmospheric Sciences*, **1993**, 50, 3357-3365	2.1	26
82	Analysis of Convective Transport and Parameter Sensitivity in a Single Column Version of the Goddard Earth Observation System, Version 5, General Circulation Model. *Journals of the Atmospheric Sciences*, **2009**, 66, 627-646	2.1	25
81	Monitoring of observation errors in the assimilation of satellite ozone data. *Journal of Geophysical Research*, **2004**, 109, n/a-n/a		25
80	Internal variability in a perpetual January integration of a troposphere-stratosphere-mesosphere GCM. *Quarterly Journal of the Royal Meteorological Society*, **1995**, 121, 369-397	6.4	22
79	The Roles of Climate Change and Climate Variability in the 2017 Atlantic Hurricane Season. *Scientific Reports*, **2018**, 8, 16172	4.9	22
78	The Impact of Stratospheric Ozone Changes on Downward Wave Coupling in the Southern Hemisphere*. *Journal of Climate*, **2011**, 24, 4210-4229	4.4	21
77	CO₂ flux estimation errors associated with moist atmospheric processes. *Atmospheric Chemistry and Physics*, **2012**, 12, 6405-6416	6.8	21
76	Assimilation of SCIAMACHY total column CO observations: Global and regional analysis of data impact. *Journal of Geophysical Research*, **2009**, 114,		21

75	The potential to narrow uncertainty in projections of stratospheric ozone over the 21st century. *Atmospheric Chemistry and Physics*, **2010**, 10, 9473-9486	6.8	20
74	The Berlin troposphere-stratosphere-mesosphere GCM: Climatology and forcing mechanisms. *Quarterly Journal of the Royal Meteorological Society*, **1997**, 123, 1075-1096	6.4	20
73	Stratospheric gravity wave simulation over Greenland during 24 January 2005. *Journal of Geophysical Research*, **2007**, 112,		20
72	PhaseSpace Characteristics of the Tropical Stratospheric Quasi-Biennial Oscillation. *Journals of the Atmospheric Sciences*, **1995**, 52, 4482-4500	2.1	20
71	Tropospheric column ozone response to ENSO in GEOS-5 assimilation of OMI and MLS ozone data. *Atmospheric Chemistry and Physics*, **2016**, 16, 7091-7103	6.8	19
70	Reanalysis comparisons of upper tropospheric/lower stratospheric jets and multiple tropopauses. *Atmospheric Chemistry and Physics*, **2017**, 17, 11541-11566	6.8	18
69	Simulations of stratospheric sudden warmings in the Berlin troposphere-stratosphere-mesosphere GCM. *Annales Geophysicae*, **1996**, 14, 443-463	2	18
68	Detection of carbon monoxide trends in the presence of interannual variability. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 12,257-12,273	4.4	17
67	Intra-annual relationships between polar ozone and the SAM. *Geophysical Research Letters*, **2009**, 36,	4.9	17
66	Interannual Variability and Trends of Extratropical Ozone. Part II: Southern Hemisphere. *Journals of the Atmospheric Sciences*, **2008**, 65, 3030-3041	2.1	17
65	Use of radon for evaluation of atmospheric transport models: sensitivity to emissions. *Tellus, Series B: Chemical and Physical Meteorology*, **2004**, 56, 404-412	3.3	17
64	Air Pollution Monitoring for Health Research and Patient Care. An Official American Thoracic Society Workshop Report. *Annals of the American Thoracic Society*, **2019**, 16, 1207-1214	4.7	16
63	Modeling the Frozen-In Anticyclone in the 2005 Arctic Summer Stratosphere. *Atmospheric Chemistry and Physics*, **2011**, 11, 4557-4576	6.8	16
62	Interannual Variability and Trends of Extratropical Ozone. Part I: Northern Hemisphere. *Journals of the Atmospheric Sciences*, **2008**, 65, 3013-3029	2.1	16
61	Intercomparison of two stratospheric analyses: Temperatures relevant to polar stratospheric cloud formation. *Journal of Geophysical Research*, **1999**, 104, 2041-2050		16
60	Emission and transport of cesium-137 from boreal biomass burning in the summer of 2010. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		15
59	An analysis of the impact of convective parameter sensitivity on simulated global atmospheric CO distributions. *Journal of Geophysical Research*, **2011**, 116,		15
58	Monthly-mean diabatic circulations in the stratosphere. *Quarterly Journal of the Royal Meteorological Society*, **1989**, 115, 807-840	6.4	15

57	Narrowing of the upwelling branch of the Brewer-Dobson circulation and Hadley cell in chemistry-climate model simulations of the 21st century. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	14
56	Use of radon for evaluation of atmospheric transport models: sensitivity to emissions. *Tellus, Series B: Chemical and Physical Meteorology*, **2004**, 56, 404-412	3.3	13
55	Spatial structure of assimilated ozone in the upper troposphere and lower stratosphere. *Journal of Geophysical Research*, **2010**, 115,		12
54	The Berlin troposphere-stratosphere-mesosphere GCM: Sensitivity to physical parametrizations. *Quarterly Journal of the Royal Meteorological Society*, **1998**, 124, 1343-1371	6.4	12
53	Effects of Greenhouse Gas Increase and Stratospheric Ozone Depletion on Stratospheric Mean Age of Air in 1960–2010. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 2098-2110	4.4	11
52	El Niño–Southern Oscillation in Tropical and Midlatitude Column Ozone. *Journals of the Atmospheric Sciences*, **2011**, 68, 1911-1921	2.1	11
51	Description of the NASA GEOS Composition Forecast Modeling System GEOS-CF v1.0. *Journal of Advances in Modeling Earth Systems*, **2021**, 13, e2020MS002413	7.1	11
50	Mechanisms Linked to Recent Ozone Decreases in the Northern Hemisphere Lower Stratosphere. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2019JD031631	4.4	10
49	Impact of planetary boundary layer turbulence on model climate and tracer transport. *Atmospheric Chemistry and Physics*, **2015**, 15, 7269-7286	6.8	10
48	Assimilation of ozone profiles from the Improved Limb Atmospheric Spectrometer-II: Study of Antarctic ozone. *Journal of Geophysical Research*, **2006**, 111,		10
47	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	2.1	10
46	A comparison of the climatology of a tropospherestratosphere-mesosphere model with observations. *Climate Dynamics*, **1991**, 5, 161-174	4.2	10
45	Regional impacts of COVID-19 on carbon dioxide detected worldwide from space. *Science Advances*, **2021**, 7, eabf9415	14.3	10
44	The SAO and Kelvin waves in the EuroGRIPS GCMS and the UK Met. Office analyses. *Annales Geophysicae*, **2001**, 19, 99-114	2	10
43	Evaluation of a new middle-lower tropospheric CO₂ product using data assimilation. *Atmospheric Chemistry and Physics*, **2013**, 13, 4487-4500	6.8	9
42	The Stratopause Semiannual Oscillation in the Berlin Troposphere–Stratosphere–Mesosphere GCM. *Journals of the Atmospheric Sciences*, **1997**, 54, 2749-2759	2.1	9
41	The Berlin troposphere–stratosphere–mesosphere GCM: Sensitivity to physical parametrizations. *Quarterly Journal of the Royal Meteorological Society*, **1998**, 124, 1343-1371	6.4	8
40	A Study of the Radiative Dissipation of Planetary Waves Using Satellite Data. *Journals of the Atmospheric Sciences*, **1992**, 49, 1304-1317	2.1	8

39	Quantifying the impact of BOReal forest fires on Tropospheric oxidants over the Atlantic using Aircraft and Satellites (BORTAS) experiment: design, execution and science overview		8
38	The impact of greenhouse gases on past changes in tropospheric ozone. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		7
37	A test of sensitivity to convective transport in a global atmospheric CO2 simulation. *Tellus, Series B: Chemical and Physical Meteorology*, **2006**, 58, 463-475	3.3	7
36	Interannual variability of stratospheric trace gases: The role of extratropical wave driving. *Quarterly Journal of the Royal Meteorological Society*, **2004**, 130, 2459-2474	6.4	7
35	A New Parameterization of Scale-Dependent Radiative Rates in the Stratosphere. *Journals of the Atmospheric Sciences*, **1995**, 52, 4429-4447	2.1	7
34	The impact of SST-forced and unforced teleconnections on 2015/16 El Niño winter precipitation over the western United States. *Journal of Climate*, **2018**, 31, 5825-5844	4.4	6
33	On the inclusion of Limb Infrared Monitor of the Stratosphere version 6 ozone in a data assimilation system. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 7982-8000	4.4	6
32	Ice polar stratospheric clouds detected from assimilation of Atmospheric Infrared Sounder data. *Geophysical Research Letters*, **2007**, 34,	4.9	6
31	A Further Analysis of Internal Variability in a Perpetual January Integration of a Troposphere-Stratosphere-Mesosphere GCM. *Journal of the Meteorological Society of Japan*, **1996**, 74, 175-188	2.8	6
30	Effects of Gravity Wave Drag in the Berlin Troposphere-Stratosphere-Mesosphere GCM **1997**, 327-336		6
29	Bias-correcting carbon fluxes derived from land-surface satellite data for retrospective and near-real-time assimilation systems. *Atmospheric Chemistry and Physics*, **2021**, 21, 9609-9628	6.8	6
28	Multi-model assessment of stratospheric ozone return dates and ozone recovery in CCMVal-2 models		5
27	Challenges and Opportunities in NASA Weather Research. *Bulletin of the American Meteorological Society*, **2016**, 97, ES137-ES140	6.1	5
26	Global Assimilation of Loon Stratospheric Balloon Observations. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 3005-3019	4.4	4
25	Machine learning and air quality modeling **2017**,		4
24	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
23	Description of the NASA GEOS Composition Forecast Modeling System GEOS-CF v1.0		4
22	The influence of internal model variability in GEOS-5 on interhemispheric CO2 exchange. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		3

21	Investigation of source attributions of pollution to the Western Arctic during the NASA ARCTAS field campaign		3
20	What would have happened to the ozone layer if chlorofluorocarbons (CFCs) had not been regulated?		2
19	HEMCO v1.0: A versatile, ESMF-compliant component for calculating emissions in atmospheric models		2
18	Seasonal Variation of the Quasi-Biennial Oscillation Descent. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2020JD033077	4.4	2
17	Introduction to the SPARC Reanalysis Intercomparison Project (S-RIP) and overview of the reanalysis systems **2016**,		2
16	The impacts of fossil fuel emission uncertainties and accounting for 3-D chemical CO2 production on inverse natural carbon flux estimates from satellite and in situ data. *Environmental Research Letters*, **2020**, 15, 085002	6.2	1
15	Data Mining Geophysical Content from Satellites and Global Climate Models **2009**,		1
14	Uses of satellite observations to validate climate/middle atmosphere models. *Advances in Space Research*, **1998**, 22, 1483-1492	2.4	1
13	The tropical upper troposphere and lower stratosphere in the GEOS-2 GCM. *Advances in Space Research*, **2001**, 27, 1457-1465	2.4	1
12	POLECAT: Preparatory and modelling studies. *Physics and Chemistry of the Earth*, **1995**, 20, 109-121		1
11	Modelling the effects of solar variability on the middle atmosphere: A review. *Advances in Space Research*, **1994**, 14, 211-220	2.4	1
10	Jet characterization in the upper troposphere/lower stratosphere (UTLS): applications to climatology and transport studies		1
9	Development of a grid-independent GEOS-chem chemical transport model as an atmospheric chemistry module for Earth System Models		1
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7	Impacts of the Eruption of Mount Pinatubo on Surface Temperatures and Precipitation Forecasts With the NASA GEOS Subseasonal-to-Seasonal System. *Journal of Geophysical Research D: Atmospheres*, **2021**, 126, e2021JD034830	4.4	1
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