Susan Solomon

List of Publications by Citations

103	14,044	47	108
papers	citations	h-index	g-index
108	15,769	8.9	6.64
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
103	Irreversible climate change due to carbon dioxide emissions. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 1704-9	11.5	1701
102	Interpretation of recent Southern Hemisphere climate change. *Science*, **2002**, 296, 895-9	33.3	1405
101	Stratospheric ozone depletion: A review of concepts and history. *Reviews of Geophysics*, **1999**, 37, 275-316	23.1	1259
100	On the depletion of Antarctic ozone. *Nature*, **1986**, 321, 755-758	50.4	1161
99	Contributions of stratospheric water vapor to decadal changes in the rate of global warming. *Science*, **2010**, 327, 1219-23	33.3	810
98	Signatures of the Antarctic ozone hole in Southern Hemisphere surface climate change. *Nature Geoscience*, **2011**, 4, 741-749	18.3	619
97	Aeronomy of the Middle Atmosphere. *Atmospheric and Oceanographic Sciences Library*, **2005**,		499
96	Ozone destruction through heterogeneous chemistry following the eruption of El Chichón. *Journal of Geophysical Research*, **1989**, 94, 5029		424
95	The persistently variable "background" stratospheric aerosol layer and global climate change. *Science*, **2011**, 333, 866-70	33.3	406
94	Heterogeneous reactions in sulfuric acid aerosols: A framework for model calculations. *Journal of Geophysical Research*, **1994**, 99, 3615		349
93	On the role of iodine in ozone depletion. *Journal of Geophysical Research*, **1994**, 99, 20491		338
92	Emergence of healing in the Antarctic ozone layer. *Science*, **2016**, 353, 269-74	33.3	337
91	Volcanic contribution to decadal changes in tropospheric temperature. *Nature Geoscience*, **2014**, 7, 185-189	13.3	304
90	The role of aerosol variations in anthropogenic ozone depletion at northern midlatitudes. *Journal of Geophysical Research*, **1996**, 101, 6713-6727		277
89	The role of molecular hydrogen and methane oxidation in the water vapour budget of the stratosphere. *Quarterly Journal of the Royal Meteorological Society*, **1988**, 114, 281-295	6.4	205
88	Early onset of significant local warming in low latitude countries. *Environmental Research Letters*, **2011**, 6, 034009	6.2	171
87	A comparison of model-simulated trends in stratospheric temperatures. *Quarterly Journal of the Royal Meteorological Society*, **2003**, 129, 1565-1588	6.4	162

86	Visible spectroscopy at McMurdo Station, Antarctica: 2. Observations of OClO. *Journal of Geophysical Research*, **1987**, 92, 8329		159
85	Stratosphere‐Troposphere Coupling in the Southern Hemisphere. *Journals of the Atmospheric Sciences*, **2005**, 62, 708-715	2.1	150
84	Heterogeneous chlorine chemistry in the tropopause region. *Journal of Geophysical Research*, **1997**, 102, 21411-21429		141
83	Antarctic Ocean and Sea Ice Response to Ozone Depletion: A Two-Time-Scale Problem. *Journal of Climate*, **2015**, 28, 1206-1226	4.4	139
82	Incorporating model quality information in climate change detection and attribution studies. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 14778-83	11.5	137
81	Global volcanic aerosol properties derived from emissions, 1990–2014, using CESM1(WACCM). *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 2332-2348	4.4	135
80	Total volcanic stratospheric aerosol optical depths and implications for global climate change. *Geophysical Research Letters*, **2014**, 41, 7763-7769	4.9	131
79	Separating signal and noise in atmospheric temperature changes: The importance of timescale. *Journal of Geophysical Research*, **2011**, 116, n/a-n/a		125
78	The potential of cirrus clouds for heterogeneous chlorine activation. *Geophysical Research Letters*, **1996**, 23, 2133-2136	4.9	114
77	Persistence of climate changes due to a range of greenhouse gases. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 18354-9	11.5	112
76	Role of aerosol variations in anthropogenic ozone depletion in the polar regions. *Journal of Geophysical Research*, **1996**, 101, 22991-23006		111
75	Simulation of polar ozone depletion: An update. *Journal of Geophysical Research D: Atmospheres*, **2015**, 120, 7958-7974	4.4	110
74	Identifying human influences on atmospheric temperature. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 26-33	11.5	102
73	Ozone depletion at mid-latitudes: Coupling of volcanic aerosols and temperature variability to anthropogenic chlorine. *Geophysical Research Letters*, **1998**, 25, 1871-1874	4.9	94
72	On the distributions of long-lived tracers and chlorine species in the middle atmosphere. *Journal of Geophysical Research*, **1984**, 89, 11633		92
71	Four decades of ozonesonde measurements over Antarctica. *Journal of Geophysical Research*, **2005**, 110,		86
70	Recent anthropogenic increases in SO2 from Asia have minimal impact on stratospheric aerosol. *Geophysical Research Letters*, **2013**, 40, 999-1004	4.9	82
69	Analysis of the August 1972 Solar Proton Event including chlorine chemistry. *Journal of Geophysical Research*, **1981**, 86, 1140		75

68	Historical Antarctic mean sea ice area, sea ice trends, and winds in CMIP5 simulations. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 5105-5110	4.4	72
67	Transport processes and ozone perturbations. *Journal of Geophysical Research*, **1985**, 90, 12981		72
66	Human influence on the seasonal cycle of tropospheric temperature. *Science*, **2018**, 361,	33.3	66
65	Understanding Recent Stratospheric Climate Change. *Journal of Climate*, **2009**, 22, 1934-1943	4.4	63
64	Effects of ozone cooling in the tropical lower stratosphere and upper troposphere. *Geophysical Research Letters*, **2007**, 34, n/a-n/a	4.9	63
63	Human and natural influences on the changing thermal structure of the atmosphere. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 17235-40	11.5	61
62	On the surface impact of Arctic stratospheric ozone extremes. *Environmental Research Letters*, **2015**, 10, 094003	6.2	59
61	Centuries of thermal sea-level rise due to anthropogenic emissions of short-lived greenhouse gases. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 657-662	11.5	54
60	Temperature Trend Patterns in Southern Hemisphere High Latitudes: Novel Indicators of Stratospheric Change. *Journal of Climate*, **2009**, 22, 6325-6341	4.4	54
59	Comparing Tropospheric Warming in Climate Models and Satellite Data. *Journal of Climate*, **2017**, 30, 373-392	4.4	51
58	Volcanic Radiative Forcing From 1979 to 2015. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 12491-12508	4.4	50
57	On the relationship between stratospheric aerosols and nitrogen dioxide. *Geophysical Research Letters*, **1993**, 20, 1187-1190	4.9	48
56	Changes in inorganic fine particulate matter sensitivities to precursors due to large-scale US emissions reductions. *Environmental Science & Technology*, **2015**, 49, 4834-41	10.3	41
55	Simulation of polar stratospheric clouds in the specified dynamics version of the whole atmosphere community climate model. *Journal of Geophysical Research D: Atmospheres*, **2013**, 118, 4991-5002	4.4	41
54	Observational evidence of strengthening of the Brewer-Dobson circulation since 1980. *Journal of Geophysical Research D: Atmospheres*, **2015**, 120, 10,214	4.4	40
53	Changes in Stratospheric Temperatures and Their Implications for Changes in the Brewer–Dobson Circulation, 1979–2005. *Journal of Climate*, **2012**, 25, 1759-1772	4.4	40
52	The influence of the Calbuco eruption on the 2015 Antarctic ozone hole in a fully coupled chemistry-climate model. *Geophysical Research Letters*, **2017**, 44, 2556-2561	4.9	39
51	Observed connections of Arctic stratospheric ozone extremes to Northern Hemisphere surface climate. *Environmental Research Letters*, **2017**, 12, 024004	6.2	39

50	Influences of the Antarctic Ozone Hole on Southern Hemispheric Summer Climate Change. *Journal of Climate*, **2014**, 27, 6245-6264	4.4	37
49	Impact of Changes in Climate and Halocarbons on Recent Lower Stratosphere Ozone and Temperature Trends. *Journal of Climate*, **2010**, 23, 2599-2611	4.4	37
48	Quantifying contributions of chlorofluorocarbon banks to emissions and impacts on the ozone layer and climate. *Nature Communications*, **2020**, 11, 1380	17.4	35
47	Climate model uncertainty in impact assessments for agriculture: A multi-ensemble case study on maize in sub-Saharan Africa. *Earth's Future*, **2017**, 5, 337-353	7.9	31
46	Comparison of three vertically resolved ozone data sets: climatology, trends and radiative forcings. *Atmospheric Chemistry and Physics*, **2013**, 13, 5533-5550	6.8	29
45	Uncertainties in the evolution of stratospheric ozone and implications for recent temperature changes in the tropical lower stratosphere. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	27
44	On the Identification of Ozone Recovery. *Geophysical Research Letters*, **2018**, 45, 5158-5165	4.9	27
43	Mirrored changes in Antarctic ozone and stratospheric temperature in the late 20th versus early 21st centuries. *Journal of Geophysical Research D: Atmospheres*, **2017**, 122, 8940-8950	4.4	26
42	Present and future sources and emissions of halocarbons: Toward new constraints. *Journal of Geophysical Research*, **2007**, 112,		25
41	The signature of ozone depletion on tropical temperature trends, as revealed by their seasonal cycle in model integrations with single forcings. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		24
40	Radiative and Dynamical Influences on Polar Stratospheric Temperature Trends. *Journal of Climate*, **2016**, 29, 4927-4938	4.4	22
39	Observing the Impact of Calbuco Volcanic Aerosols on South Polar Ozone Depletion in 2015. *Journal of Geophysical Research D: Atmospheres*, **2017**, 122, 11,862	4.4	22
38	An assessment of changing ozone loss rates at South Pole: Twenty-five years of ozonesonde measurements. *Journal of Geophysical Research*, **2011**, 116, n/a-n/a		21
37	Quantifying stochastic uncertainty in detection time of human-caused climate signals. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 19821-19827	11.5	20
36	New Insights on the Impact of Ozone-Depleting Substances on the Brewer-Dobson Circulation. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 2435-2451	4.4	18
35	Monsoon circulations and tropical heterogeneous chlorine chemistry in the stratosphere. *Geophysical Research Letters*, **2016**, 43, 12,624	4.9	17
34	Observed changes in Brewer–Dobson circulation for 1980–2018. *Environmental Research Letters*, **2019**, 14, 114026	6.2	12
33	Unfinished business after five decades of ozone-layer science and policy. *Nature Communications*, **2020**, 11, 4272	17.4	12

32	Prediction of Northern Hemisphere Regional Surface Temperatures Using Stratospheric Ozone Information. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 5922-5933	4.4	11
31	Water under a Changing and Uncertain Climate: Lessons from Climate Model Ensembles*. *Journal of Climate*, **2015**, 28, 9561-9582	4.4	10
30	An Exceptional Summer during the South Pole Race of 1911/12. *Bulletin of the American Meteorological Society*, **2017**, 98, 2189-2200	6.1	8
29	Detectability of the impacts of ozone-depleting substances and greenhouse gases upon stratospheric ozone accounting for nonlinearities in historical forcings. *Atmospheric Chemistry and Physics*, **2018**, 18, 143-166	6.8	8
28	Emergence of Southern Hemisphere stratospheric circulation changes in response to ozone recovery. *Nature Geoscience*, **2021**, 14, 638-644	18.3	8
27	On the Role of Heterogeneous Chemistry in Ozone Depletion and Recovery. *Geophysical Research Letters*, **2018**, 45, 7835-7842	4.9	7
26	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
25	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
24	Stratospheric Ozone in the Last Glacial Maximum. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2020JD032929	4.4	6
23	The Brewer-Dobson Circulation During the Last Glacial Maximum. *Geophysical Research Letters*, **2020**, 47, e2019GL086271	4.9	6
22	Comparison of three vertically resolved ozone data bases: climatology, trends and radiative forcings		6
21	An Arctic ozone hole in 2020 if not for the Montreal Protocol. *Atmospheric Chemistry and Physics*, **2021**, 21, 15771-15781	6.8	5
20	Stratospheric Temperature and Ozone Anomalies Associated With the 2020 Australian New Year Fires. *Geophysical Research Letters*, **2021**, 48, e2021GL095898	4.9	5
19	Quantifying the Lead Time Required for a Linear Trend to Emerge from Natural Climate Variability. *Journal of Climate*, **2017**, 30, 10179-10191	4.4	4
18	Modeled and Observed Volcanic Aerosol Control on Stratospheric NOy and Cly. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 10283-10303	4.4	4
17	On Recent Large Antarctic Ozone Holes and Ozone Recovery Metrics. *Geophysical Research Letters*, **2021**, 48, e2021GL095232	4.9	3
16	Decadal Attribution of Historic Temperature and Ocean Heat Content Change to Anthropogenic Emissions. *Geophysical Research Letters*, **2020**, 47, e2019GL085905	4.9	3
15	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,	11.5	3

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14	Joint inference of CFC lifetimes and banks suggests previously unidentified emissions. *Nature Communications*, **2021**, 12, 2920	17.4	3
13	The Key Role of Coupled Chemistry–Climate Interactions in Tropical Stratospheric Temperature Variability. *Journal of Climate*, **2020**, 33, 7619-7629	4.4	2
12	Evaluating Stratospheric Tropical Width Using Tracer Concentrations. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2020JD033081	4.4	2
11	Prediction of Northern Hemisphere Regional Sea Ice Extent and Snow Depth Using Stratospheric Ozone Information. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2019JD031770	4.4	2
10	Time of Steady Climate Change. *Geophysical Research Letters*, **2019**, 46, 5445-5451	4.9	1
9	Sensitivity of inorganic aerosol radiative effects to U.S. emissions. *Journal of Geophysical Research D: Atmospheres*, **2017**, 122, 6379-6390	4.4	1
8	Interannual SAM Modulation of Antarctic Sea Ice Extent Does Not Account for Its Long-Term Trends, Pointing to a Limited Role for Ozone Depletion. *Geophysical Research Letters*, **2021**, 48, e2021GL094871	4.9	1
7	Risks to the stratospheric ozone shield in the Anthropocene : This article belongs to Ambio's 50th Anniversary Collection. Theme: Ozone Layer. *Ambio*, **2021**, 50, 44-48	6.5	1
6	Climate Impacts and Potential Drivers of the Unprecedented Antarctic Ozone Holes of 2020 and 2021. *Geophysical Research Letters*, **2022**, 49,	4.9	1
5	Paul J. Crutzen (1933-2021). *Science*, **2021**, 371, 892	33.3	0
4	Quantifying the Imprints of Stratospheric Contributions to Interhemispheric Differences in Tropospheric CFC-11, CFC-12, and N2O Abundances. *Geophysical Research Letters*, **2021**, 48, e2021GL093700	4.9	
3	Atmospheric Chemistry Signatures of an Equatorially Symmetric Matsuno–Gill Circulation Pattern. *Journals of the Atmospheric Sciences*, **2021**, 78, 107-116	2.1	
2	Subpolar Activation of Halogen Heterogeneous Chemistry in Austral Spring. *Geophysical Research Letters*, **2021**, 48, e2020GL090036	4.9	
1	On the Southern Hemisphere Stratospheric Response to ENSO and Its Impacts on Tropospheric Circulation. *Journal of Climate*, **2022**, 35, 1963-1981	4.4	