

Susan E Strahan

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

117
papers

6,072
citations

41
h-index

76
g-index

138
ext. papers

6,704
ext. citations

6.8
avg, IF

5.02
L-index

#	Paper	IF	Citations
117	Optimized Umkehr profile algorithm for ozone trend analyses. <i>Atmospheric Measurement Techniques</i> , 2022 , 15, 1849-1870	4	1
116	On the stratospheric chemistry of midlatitude wildfire smoke.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022 , 119, e2117325119	11.5	7
115	How Atmospheric Chemistry and Transport Drive Surface Variability of N2O and CFC-11. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126, e2020JD033979	4.4	5
114	Evolution of observed ozone, trace gases, and meteorological variables over Arrival Heights, Antarctica (77.8°S, 166.7°E) during the 2019 Antarctic stratospheric sudden warming. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2021 , 73, 1-18	3.3	0
113	COVID-19 Crisis Reduces Free Tropospheric Ozone Across the Northern Hemisphere. <i>Geophysical Research Letters</i> , 2021 , 48, e2020GL091987	4.9	19
112	Stratospheric Fluorine as a Tracer of Circulation Changes: Comparison Between Infrared Remote-Sensing Observations and Simulations With Five Modern Reanalyses. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126, e2021JD034995	4.4	3
111	Tropospheric Age-of-Air: Influence of SF6 Emissions on Recent Surface Trends and Model Biases. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126, e2021JD035451	4.4	0
110	Surface Ozone-Meteorology Relationships: Spatial Variations and the Role of the Jet Stream. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020 , 125, e2020JD032735	4.4	3
109	Validation of SAGE III/ISS Solar Occultation Ozone Products With Correlative Satellite and Ground-Based Measurements. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020 , 125, e2020JD032430	4.4	9
108	A machine learning examination of hydroxyl radical differences among model simulations for CCM1-1. <i>Atmospheric Chemistry and Physics</i> , 2020 , 20, 1341-1361	6.8	11
107	Seasonal Variation of the Quasi-Biennial Oscillation Descent. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020 , 125, e2020JD033077	4.4	2
106	Observed Hemispheric Asymmetry in Stratospheric Transport Trends From 1994 to 2018. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL088567	4.9	9
105	The Effects of a 1998 Observing System Change on MERRA-2-Based Ozone Profile Simulations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019 , 124, 7429	4.4	8
104	Large-scale transport into the Arctic: the roles of the midlatitude jet and the Hadley Cell. <i>Atmospheric Chemistry and Physics</i> , 2019 , 19, 5511-5528	6.8	7
103	Disentangling the Drivers of the Summertime Ozone-Temperature Relationship Over the United States. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019 , 124, 10503-10524	4.4	13
102	Why Do Antarctic Ozone Recovery Trends Vary?. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019 , 124, 8837-8850	4.4	7
101	Decline in Antarctic Ozone Depletion and Lower Stratospheric Chlorine Determined From Aura Microwave Limb Sounder Observations. <i>Geophysical Research Letters</i> , 2018 , 45, 382-390	4.9	59

100	The Network for the Detection of Atmospheric Composition Change (NDACC): history, status and perspectives. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 4935-4964	6.8	98
99	Using satellite measurements of N ₂ O to remove dynamical variability from HCl measurements. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 5691-5697	6.8	7
98	Large-scale tropospheric transport in the Chemistry Climate Model Initiative (CCMI) simulations. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 7217-7235	6.8	25
97	Changes in Global Tropospheric OH Expected as a Result of Climate Change Over the Last Several Decades. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 10,774	4.4	17
96	Large-scale transport into the Arctic: the roles of the midlatitude jet and the Hadley Cell 2018 ,		1
95	A 4 U laser heterodyne radiometer for methane (CH ₄) and carbon dioxide (CO ₂) measurements from an occultation-viewing CubeSat. <i>Measurement Science and Technology</i> , 2017 , 28, 035902	2	12
94	Large-Scale Tropospheric Transport in the Chemistry Climate Model Initiative (CCMI) Simulations 2017 ,		2
93	A Cloud-Ozone Data Product from Aura OMI and MLS Satellite Measurements. <i>Atmospheric Measurement Techniques</i> , 2017 , 10, 4067-4078	4	5
92	The Network for the Detection of Atmospheric Composition Change (NDACC): History, status and perspectives 2017 ,		3
91	Concerns for ozone recovery. <i>Science</i> , 2017 , 358, 1257-1258	33.3	12
90	Multi-decadal records of stratospheric composition and their relationship to stratospheric circulation change. <i>Atmospheric Chemistry and Physics</i> , 2017 , 17, 12081-12096	6.8	8
89	Response of trace gases to the disrupted 2015-2016 quasi-biennial oscillation. <i>Atmospheric Chemistry and Physics</i> , 2017 , 17, 6813-6823	6.8	29
88	Global O-CO Correlations in a Chemistry and Transport Model During July-August: Evaluation with TES Satellite Observations and Sensitivity to Input Meteorological Data and Emissions. <i>Atmospheric Chemistry and Physics</i> , 2017 , 17, 8429-8452	6.8	9
87	Large-Scale Atmospheric Transport in GEOS Replay Simulations. <i>Journal of Advances in Modeling Earth Systems</i> , 2017 , 9, 2545-2560	7.1	39
86	Chemical Mechanisms and Their Applications in the Goddard Earth Observing System (GEOS) Earth System Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2017 , 9, 3019-3044	7.1	32
85	Using beryllium-7 to assess cross-tropopause transport in global models. <i>Atmospheric Chemistry and Physics</i> , 2016 , 16, 4641-4659	6.8	24
84	Interpreting space-based trends in carbon monoxide with multiple models. <i>Atmospheric Chemistry and Physics</i> , 2016 , 16, 7285-7294	6.8	24
83	Chemical and Dynamical Impacts of Stratospheric Sudden Warmings on Arctic Ozone Variability. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 11836-11851	4.4	24

82	Trends and variability in surface ozone over the United States. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015 , 120, 9020-9042	4.4	74
81	Modulation of Antarctic vortex composition by the quasi-biennial oscillation. <i>Geophysical Research Letters</i> , 2015 , 42, 4216-4223	4.9	27
80	Measuring and modeling the lifetime of nitrous oxide including its variability. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015 , 120, 5693-5705	4.4	90
79	Tropospheric ozone variability in the tropics from ENSO to MJO and shorter timescales. <i>Atmospheric Chemistry and Physics</i> , 2015 , 15, 8037-8049	6.8	33
78	The global structure of upper troposphere-lower stratosphere ozone in GEOS-5: A multiyear assimilation of EOS Aura data. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015 , 120, 2013-2036	4.4	39
77	Multimodel estimates of atmospheric lifetimes of long-lived ozone-depleting substances: Present and future. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 2555-2573	4.4	40
76	Understanding differences in chemistry climate model projections of stratospheric ozone. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 4922-4939	4.4	18
75	Inorganic chlorine variability in the Antarctic vortex and implications for ozone recovery. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 14,098-14,109	4.4	18
74	Assessment and applications of NASA ozone data products derived from Aura OMI/MLS satellite measurements in context of the GMI chemical transport model. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 5671-5699	4.4	34
73	The spring 2011 final stratospheric warming above Eureka: anomalous dynamics and chemistry. <i>Atmospheric Chemistry and Physics</i> , 2013 , 13, 611-624	6.8	12
72	The large-scale frozen-in anticyclone in the 2011 Arctic summer stratosphere. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 2656-2672	4.4	4
71	Tropospheric SF6: Age of air from the Northern Hemisphere midlatitude surface. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 11,429-11,441	4.4	30
70	The contributions of chemistry and transport to low arctic ozone in March 2011 derived from Aura MLS observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013 , 118, 1563-1576	4.4	55
69	Understanding differences in upper stratospheric ozone response to changes in chlorine and temperature as computed using CCMVal-2 models. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		15
68	Seasonal variations of stratospheric age spectra in the Goddard Earth Observing System Chemistry Climate Model (GEOSCCM). <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		26
67	Long-term changes in stratospheric age spectra in the 21st century in the Goddard Earth Observing System Chemistry-Climate Model (GEOSCCM). <i>Journal of Geophysical Research</i> , 2012 , 117,		20
66	Using transport diagnostics to understand chemistry climate model ozone simulations. <i>Journal of Geophysical Research</i> , 2011 , 116,		64
65	Modeling the Frozen-In Anticyclone in the 2005 Arctic Summer Stratosphere. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 4557-4576	6.8	16

64	Sensitivity of aerosol optical thickness and aerosol direct radiative effect to relative humidity. <i>Atmospheric Chemistry and Physics</i> , 2009 , 9, 2375-2386	6.8	74
63	The impact of tropical recirculation on polar composition. <i>Atmospheric Chemistry and Physics</i> , 2009 , 9, 2471-2480	6.8	14
62	Comparison of lower stratospheric tropical mean vertical velocities. <i>Journal of Geophysical Research</i> , 2008 , 113,		71
61	Quantifying errors in trace species transport modeling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 19617-21	11.5	52
60	Uncertainties in global aerosol simulations: Assessment using three meteorological data sets. <i>Journal of Geophysical Research</i> , 2007 , 112,		70
59	A trajectory-based estimate of the tropospheric ozone column using the residual method. <i>Journal of Geophysical Research</i> , 2007 , 112,		83
58	Sensitivity of stratospheric inorganic chlorine to differences in transport. <i>Atmospheric Chemistry and Physics</i> , 2007 , 7, 4935-4941	6.8	20
57	Observationally derived transport diagnostics for the lowermost stratosphere and their application to the GMI chemistry and transport model. <i>Atmospheric Chemistry and Physics</i> , 2007 , 7, 2435-2445	6.8	139
56	Multi-model simulations of the impact of international shipping on Atmospheric Chemistry and Climate in 2000 and 2030. <i>Atmospheric Chemistry and Physics</i> , 2007 , 7, 757-780	6.8	104
55	Model study of the cross-tropopause transport of biomass burning pollution. <i>Atmospheric Chemistry and Physics</i> , 2007 , 7, 3713-3736	6.8	145
54	Nitrogen and sulfur deposition on regional and global scales: A multimodel evaluation. <i>Global Biogeochemical Cycles</i> , 2006 , 20, n/a-n/a	5.9	73 ¹
53	Multimodel ensemble simulations of present-day and near-future tropospheric ozone. <i>Journal of Geophysical Research</i> , 2006 , 111,		625
52	Sensitivity of Arctic ozone loss to polar stratospheric cloud volume and chlorine and bromine loading in a chemistry and transport model. <i>Geophysical Research Letters</i> , 2006 , 33,	4.9	11
51	Multimodel simulations of carbon monoxide: Comparison with observations and projected near-future changes. <i>Journal of Geophysical Research</i> , 2006 , 111,		220
50	The global atmospheric environment for the next generation. <i>Environmental Science & Technology</i> , 2006 , 40, 3586-94	10.3	298
49	Meteorological implementation issues in chemistry and transport models. <i>Atmospheric Chemistry and Physics</i> , 2006 , 6, 2895-2910	6.8	31
48	Multi-model ensemble simulations of tropospheric NO ₂ compared with GOME retrievals for the year 2000. <i>Atmospheric Chemistry and Physics</i> , 2006 , 6, 2943-2979	6.8	118
47	Evaluating the credibility of transport processes in simulations of ozone recovery using the Global Modeling Initiative three-dimensional model. <i>Journal of Geophysical Research</i> , 2004 , 109,		25

46	Sensitivity of Global Modeling Initiative model predictions of Antarctic ozone recovery to input meteorological fields. <i>Journal of Geophysical Research</i> , 2004 , 109,	8
45	Radicals and reservoirs in the GMI chemistry and transport model: Comparison to measurements. <i>Journal of Geophysical Research</i> , 2004 , 109,	50
44	Influence of planetary wave transport on Arctic ozone as observed by Polar Ozone and Aerosol Measurement (POAM) III. <i>Journal of Geophysical Research</i> , 2002 , 107, ACL 2-1	7
43	Mean ages of stratospheric air derived from in situ observations of CO ₂ , CH ₄ , and N ₂ O. <i>Journal of Geophysical Research</i> , 2001 , 106, 32295-32314	158
42	Empirical age spectra for the midlatitude lower stratosphere from in situ observations of CO ₂ : Quantitative evidence for a subtropical barrier to horizontal transport. <i>Journal of Geophysical Research</i> , 2001 , 106, 10257-10274	54
41	Climatologies of lower stratospheric NO _y and O ₃ and correlations with N ₂ O based on in situ observations. <i>Journal of Geophysical Research</i> , 1999 , 104, 30463-30480	20
40	Climatology and small-scale structure of lower stratospheric N ₂ O based on in situ observations. <i>Journal of Geophysical Research</i> , 1999 , 104, 2195-2208	25
39	Choosing meteorological input for the global modeling initiative assessment of high-speed aircraft. <i>Journal of Geophysical Research</i> , 1999 , 104, 27545-27564	63
38	The CO ₂ seasonal cycle as a tracer of transport. <i>Journal of Geophysical Research</i> , 1998 , 103, 13729-13741	39
37	Long-lived tracer transport in the Antarctic stratosphere. <i>Journal of Geophysical Research</i> , 1996 , 101, 26615-26629	19
36	Evaluation of the SKYHI general circulation model using aircraft N ₂ O measurements: 1. Polar winter stratospheric meteorology and tracer morphology. <i>Journal of Geophysical Research</i> , 1994 , 99, 10305	29
35	Evaluation of the SKYHI general circulation model using aircraft N ₂ O measurements: 2. Tracer variability and diabatic meridional circulation. <i>Journal of Geophysical Research</i> , 1994 , 99, 10319	22
34	Evolution of the 1991-1992 Arctic vortex and comparison with the Geophysical Fluid Dynamics Laboratory SKYHI general circulation model. <i>Journal of Geophysical Research</i> , 1994 , 99, 20713	14
33	Chemical loss of ozone in the arctic polar vortex in the winter of 1991-1992. <i>Science</i> , 1993 , 261, 1146-9	33.3 114
32	Water vapor and cloud water measurements over Darwin during the STEP 1987 tropical mission. <i>Journal of Geophysical Research</i> , 1993 , 98, 8713-8723	85
31	Effects of Pinatubo aerosol on stratospheric ozone at mid-latitudes. <i>Geophysical Research Letters</i> , 1993 , 20, 2515-2518	4.9 9
30	NEw observations of the NO _y /N ₂ O correlation in the lower stratosphere. <i>Geophysical Research Letters</i> , 1993 , 20, 2531-2534	4.9 43
29	Northern hemisphere nitrous oxide morphology during the 1989 AASE and the 1991-1992 AASE II campaigns. <i>Geophysical Research Letters</i> , 1993 , 20, 2535-2538	4.9 9

28	Polar stratospheric cloud processed air and potential vorticity in the northern hemisphere lower stratosphere at mid-latitudes during winter. <i>Journal of Geophysical Research</i> , 1992 , 97, 7883		91
27	An estimate of the relative magnitude of small-scale tracer fluxes. <i>Geophysical Research Letters</i> , 1992 , 19, 1101-1104	4.9	1
26	A diagnostic for denitrification in the winter polar stratospheres. <i>Nature</i> , 1990 , 345, 698-702	50.4	113
25	A comparison of ER-2 measurements of stratospheric water vapor between the 1987 Antarctic and 1989 Arctic airborne missions. <i>Geophysical Research Letters</i> , 1990 , 17, 465-468	4.9	80
24	Stratospheric constituent trends from ER-2 profile data. <i>Geophysical Research Letters</i> , 1990 , 17, 469-472	4.9	55
23	N ₂ O as a dynamical tracer in the Arctic vortex. <i>Geophysical Research Letters</i> , 1990 , 17, 477-480	4.9	54
22	ATLAS instrument characterization: Accuracy of the AASE and AAOE nitrous oxide data sets. <i>Geophysical Research Letters</i> , 1990 , 17, 481-484	4.9	15
21	Reconstruction of O ₃ and N ₂ O fields from ER-2, DC-8, and balloon observations. <i>Geophysical Research Letters</i> , 1990 , 17, 521-524	4.9	41
20	Global three-dimensional constituent fields derived from profile data. <i>Geophysical Research Letters</i> , 1990 , 17, 525-528	4.9	25
19	Effects of atmospheric transport on column abundances of nitrogen and chlorine compounds in the Arctic stratosphere. <i>Geophysical Research Letters</i> , 1990 , 17, 533-536	4.9	9
18	Loss of ozone in the Arctic vortex for the winter of 1989. <i>Geophysical Research Letters</i> , 1990 , 17, 561-564	4.9	60
17	Dehydration in the lower Antarctic stratosphere during late winter and early spring, 1987. <i>Journal of Geophysical Research</i> , 1989 , 94, 11317		179
16	Nitrous oxide as a dynamical tracer in the 1987 Airborne Antarctic Ozone Experiment. <i>Journal of Geophysical Research</i> , 1989 , 94, 11589		106
15	Potential vorticity and mixing in the south polar vortex during spring. <i>Journal of Geophysical Research</i> , 1989 , 94, 11625		45
14	Indicators of transport and vertical motion from correlations between in situ measurements in the Airborne Antarctic Ozone Experiment. <i>Journal of Geophysical Research</i> , 1989 , 94, 11669		42
13	Correlation of N ₂ O and ozone in the southern polar vortex during the Airborne Antarctic Ozone Experiment. <i>Journal of Geophysical Research</i> , 1989 , 94, 16749		21
12	Stratospheric nitrous oxide distribution in the southern hemisphere. <i>Journal of Geophysical Research</i> , 1989 , 94, 16767		47
11	Transport into the south polar vortex in early spring. <i>Journal of Geophysical Research</i> , 1989 , 94, 16779		77

10	Evidence for diabatic cooling and poleward transport within and around the 1987 Antarctic ozone hole. <i>Journal of Geophysical Research</i> , 1989 , 94, 16797	60
9	Reconstruction of the constituent distribution and trends in the Antarctic polar vortex from ER-2 flight observations. <i>Journal of Geophysical Research</i> , 1989 , 94, 16815	98
8	Measurement of the rotational spectrum of the water cation (H ₂ O ⁺) by laser magnetic resonance. <i>Journal of Chemical Physics</i> , 1986 , 85, 1252-1260	3.9 53
7	Using beryllium-7 to assess cross-tropopause transport in global models	2
6	Observationally derived transport diagnostics for the lowermost stratosphere and their application to the GMI chemistry and transport model	4
5	Model study of the cross-tropopause transport of biomass burning pollution	2
4	Global ozone and air quality: a multi-model assessment of risks to human health and crops	40
3	Transport and modeling of stratospheric inorganic chlorine	1
2	Sensitivity of aerosol optical thickness and aerosol direct radiative effect to relative humidity	1
1	Surface ozone-meteorology relationships: Spatial variations and the role of the jet stream	1