

# Samuel J Oltmans

## List of Publications by Year in descending order

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69  
papers

6,866  
citations

57681

46  
h-index

104191

69  
g-index

78  
all docs

78  
docs citations

78  
times ranked

4533  
citing authors

#	ARTICLE	IF	CITATIONS
1	Improving ECC Ozonesonde Data Quality: Assessment of Current Methods and Outstanding Issues. <i>Earth and Space Science</i> , 2021, 8, e2019EA000914.	1.1	30
2	Estimating wildfire-generated ozone over North America using ozonesonde profiles and a differential back trajectory technique. <i>Atmospheric Environment: X</i> , 2020, 7, 100078.	0.8	8
3	Multi-decadal surface ozone trends at globally distributed remote locations. <i>Elementa</i> , 2020, 8, .	1.1	54
4	A new method to correct the electrochemical concentration cell (ECC) ozonesonde time response and its implications for "background current" and pump efficiency. <i>Atmospheric Measurement Techniques</i> , 2020, 13, 5667-5680.	1.2	15
5	Variations in the vertical profile of ozone at four high-latitude Arctic sites from 2005 to 2017. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 9733-9751.	1.9	10
6	Boundary layer ozone in the Northern Colorado Front Range in July–August 2014 during FRAPPE and DISCOVER-AQ from vertical profile measurements. <i>Elementa</i> , 2019, 7, .	1.1	9
7	Quantifying stratosphere-troposphere transport of ozone using balloon-borne ozonesondes, radar windprofilers and trajectory models. <i>Atmospheric Environment</i> , 2019, 198, 496-509.	1.9	34
8	Tropospheric Ozone Assessment Report: Tropospheric ozone from 1877 to 2016, observed levels, trends and uncertainties. <i>Elementa</i> , 2019, 7, .	1.1	103
9	Homogenizing and estimating the uncertainty in NOAA's long-term vertical ozone profile records measured with the electrochemical concentration cell ozonesonde. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 3661-3687.	1.2	56
10	Tropospheric ozonesonde profiles at long-term U.S. monitoring sites: 2. Links between Trinidad Head, CA, profile clusters and inland surface ozone measurements. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 1261-1280.	1.2	17
11	Reversal of Long-Term Trend in Baseline Ozone Concentrations at the North American West Coast. <i>Geophysical Research Letters</i> , 2017, 44, 10,675.	1.5	24
12	First Reprocessing of Southern Hemisphere Additional Ozonesondes (SHADOZ) Ozone Profiles (1998–2016): 2. Comparisons With Satellites and Ground-Based Instruments. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 13,000.	1.2	61
13	Advancements, measurement uncertainties, and recent comparisons of the NOAA frost-point hygrometer. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 4295-4310.	1.2	31
14	Recent divergences in stratospheric water vapor measurements by frost point hygrometers and the Aura Microwave Limb Sounder. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 4447-4457.	1.2	33
15	A re-evaluated Canadian ozonesonde record: measurements of the vertical distribution of ozone over Canada from 1966 to 2013. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 195-214.	1.2	51
16	Origin of springtime ozone enhancements in the lower troposphere over Beijing: in situ measurements and model analysis. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 5161-5179.	1.9	25
17	Climate variability modulates western US ozone air quality in spring via deep stratospheric intrusions. <i>Nature Communications</i> , 2015, 6, 7105.	5.8	186
18	Validation of Aura Microwave Limb Sounder stratospheric water vapor measurements by the NOAA frost point hygrometer. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 1612-1625.	1.2	38

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19	Tropospheric ozone trends at Mauna Loa Observatory tied to decadal climate variability. <i>Nature Geoscience</i> , 2014, 7, 136-143.	5.4	151
20	Anatomy of wintertime ozone associated with oil and natural gas extraction activity in Wyoming and Utah. <i>Elementa</i> , 2014, 2, .	1.1	45
21	Impacts of transported background pollutants on summertime western US air quality: model evaluation, sensitivity analysis and data assimilation. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 359-391.	1.9	28
22	Cold trap dehydration in the Tropical Tropopause Layer characterised by SOWER chilled-mirror hygrometer network data in the Tropical Pacific. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 4393-4411.	1.9	17
23	Technical Note: Ozonesonde climatology between 1995 and 2011: description, evaluation and applications. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 7475-7497.	1.9	101
24	Stratospheric influence on surface ozone in the Los Angeles area during late spring and early summer of 2010. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	103
25	Springtime boundary layer ozone depletion at Barrow, Alaska: Meteorological influence, year-to-year variation, and long-term change. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	52
26	Southern Hemisphere Additional Ozonesondes (SHADOZ) ozone climatology (2005-2009): Tropospheric and tropical tropopause layer (TTL) profiles with comparisons to OMI-based ozone products. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	58
27	Transport of Asian ozone pollution into surface air over the western United States in spring. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	218
28	Springtime high surface ozone events over the western United States: Quantifying the role of stratospheric intrusions. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	219
29	Stratospheric water vapor trends over Boulder, Colorado: Analysis of the 30 year Boulder record. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	162
30	Measurement of western U.S. baseline ozone from the surface to the tropopause and assessment of downwind impact regions. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	71
31	Characterizing summertime chemical boundary conditions for airmasses entering the US West Coast. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 1769-1790.	1.9	90
32	Strategic ozone sounding networks: Review of design and accomplishments. <i>Atmospheric Environment</i> , 2011, 45, 2145-2163.	1.9	63
33	Comparison of ozone concentrations on a surface elevation gradient with balloon-borne ozonesonde measurements. <i>Atmospheric Environment</i> , 2011, 45, 5431-5439.	1.9	10
34	Comparisons of temperature, pressure and humidity measurements by balloon-borne radiosondes and frost point hygrometers during MOHAVE-2009. <i>Atmospheric Measurement Techniques</i> , 2011, 4, 2777-2793.	1.2	37
35	Impacts of transported background ozone on California air quality during the ARCTAS-CARB period - a multi-scale modeling study. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 6947-6968.	1.9	63
36	Validation of northern latitude Tropospheric Emission Spectrometer stare ozone profiles with ARC-IONS sondes during ARCTAS: sensitivity, bias and error analysis. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 9901-9914.	1.9	58

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37	Impact of transported background ozone inflow on summertime air quality in a California ozone exceedance area. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 10093-10109.	1.9	73
38	Increasing springtime ozone mixing ratios in the free troposphere over western North America. <i>Nature</i> , 2010, 463, 344-348.	13.7	397
39	High-resolution tropospheric ozone fields for INTEX and ARCTAS from IONS ozonesondes. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	35
40	Seasonal to decadal variations of water vapor in the tropical lower stratosphere observed with balloon-borne cryogenic frost point hygrometers. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	61
41	Rapid photochemical production of ozone at high concentrations in a rural site during winter. <i>Nature Geoscience</i> , 2009, 2, 120-122.	5.4	175
42	Background ozone levels of air entering the west coast of the US and assessment of longer-term changes. <i>Atmospheric Environment</i> , 2008, 42, 6020-6038.	1.9	100
43	Validation of Tropospheric Emission Spectrometer (TES) nadir ozone profiles using ozonesonde measurements. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	181
44	Atmospheric comparison of electrochemical cell ozonesondes from different manufacturers, and with different cathode solution strengths: The Balloon Experiment on Standards for Ozonesondes. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	119
45	Trends and variability of midlatitude stratospheric water vapour deduced from the re-evaluated Boulder balloon series and HALOE. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 1391-1402.	1.9	107
46	Assessment of the performance of ECC ozonesondes under quasi-flight conditions in the environmental simulation chamber: Insights from the Juelich Ozone Sonde Intercomparison Experiment (JOSIE). <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	282
47	Intercontinental Chemical Transport Experiment Ozonesonde Network Study (IONS) 2004: 1. Summertime upper troposphere/lower stratosphere ozone over northeastern North America. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	82
48	Intercontinental Chemical Transport Experiment Ozonesonde Network Study (IONS) 2004: 2. Tropospheric ozone budgets and variability over northeastern North America. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	77
49	Comparison of Canadian air quality forecast models with tropospheric ozone profile measurements above midlatitude North America during the IONS/ICARTT campaign: Evidence for stratospheric input. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	40
50	Evidence for a recurring eastern North America upper tropospheric ozone maximum during summer. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	81
51	Attribution of recovery in lower-stratospheric ozone. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	70
52	Large upper tropospheric ozone enhancements above midlatitude North America during summer: In situ evidence from the IONS and MOZAIC ozone measurement network. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	113
53	Development and Validation of a Time-Lag Correction for Vaisala Radiosonde Humidity Measurements. <i>Journal of Atmospheric and Oceanic Technology</i> , 2004, 21, 1305-1327.	0.5	193
54	Southern Hemisphere Additional Ozonesondes (SHADOZ) 1998-2000 tropical ozone climatology 1. Comparison with Total Ozone Mapping Spectrometer (TOMS) and ground-based measurements. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	329

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55	The Behavior of the Snow White Chilled-Mirror Hygrometer in Extremely Dry Conditions. <i>Journal of Atmospheric and Oceanic Technology</i> , 2003, 20, 1560-1567.	0.5	51
56	Performance of the Meteolabor "Snow White" Chilled-Mirror Hygrometer in the Tropical Troposphere: Comparisons with the Vaisala RS80 A/H-Humicap Sensors. <i>Journal of Atmospheric and Oceanic Technology</i> , 2003, 20, 1534-1542.	0.5	57
57	Electrochemical concentration cell (ECC) ozonesonde pump efficiency measurements and tests on the sensitivity to ozone of buffered and unbuffered ECC sensor cathode solutions. <i>Journal of Geophysical Research</i> , 2002, 107, ACH 8-1.	3.3	137
58	Balloon-borne observations of water vapor and ozone in the tropical upper troposphere and lower stratosphere. <i>Journal of Geophysical Research</i> , 2002, 107, ACL 8-1.	3.3	69
59	Stratospheric water vapor increases over the past half-century. <i>Geophysical Research Letters</i> , 2001, 28, 1195-1198.	1.5	246
60	Water vapor control at the tropopause by equatorial Kelvin waves observed over the Galápagos. <i>Geophysical Research Letters</i> , 2001, 28, 3143-3146.	1.5	69
61	The increase in stratospheric water vapor from balloonborne, frostpoint hygrometer measurements at Washington, D.C., and Boulder, Colorado. <i>Geophysical Research Letters</i> , 2000, 27, 3453-3456.	1.5	201
62	Trends in the vertical distribution of ozone: A comparison of two analyses of ozonesonde data. <i>Journal of Geophysical Research</i> , 1999, 104, 26373-26399.	3.3	179
63	Trends of ozone in the troposphere. <i>Geophysical Research Letters</i> , 1998, 25, 139-142.	1.5	156
64	Tropospheric ozone during Mauna Loa Observatory Photochemistry Experiment 2 compared to long-term measurements from surface and ozonesonde observations. <i>Journal of Geophysical Research</i> , 1996, 101, 14569-14580.	3.3	36
65	Observations of Near-Zero Ozone Concentrations Over the Convective Pacific: Effects on Air Chemistry. <i>Science</i> , 1996, 274, 230-233.	6.0	212
66	Increase in lower-stratospheric water vapour at a mid-latitude Northern Hemisphere site from 1981 to 1994. <i>Nature</i> , 1995, 374, 146-149.	13.7	220
67	The evolution of the dehydration in the Antarctic stratospheric vortex. <i>Journal of Geophysical Research</i> , 1995, 100, 13919.	3.3	104
68	Stratospheric Water Vapor Variability for Washington, DC/Boulder, CO: 1964-82. <i>Journals of the Atmospheric Sciences</i> , 1983, 40, 2157-2165.	0.6	48
69	Surface ozone measurements in clean air. <i>Journal of Geophysical Research</i> , 1981, 86, 1174-1180.	3.3	222