Samuel Hall

List of Publications by Year in Descending Order

116 papers	4,245 citations	35 h-index	62 g-index
132 ext. papers	5,015 ext. citations	7.2 avg, IF	4.44 L-index

#	Paper	IF	Citations
116	Field observational constraints on the controllers in glyoxal (CHOCHO) reactive uptake to aerosol. *Atmospheric Chemistry and Physics*, **2022**, 22, 805-821	6.8	2
115	Wildfire-driven changes in the abundance of gas-phase pollutants in the city of Boise, ID during summer 2018. *Atmospheric Pollution Research*, **2022**, 13, 101269	4.5	0
114	Observations of atmospheric oxidation and ozone production in South Korea. *Atmospheric Environment*, **2022**, 269, 118854	5.3	1
113	Photochemical evolution of the 2013 California Rim Fire: synergistic impacts of reactive hydrocarbons and enhanced oxidants. *Atmospheric Chemistry and Physics*, **2022**, 22, 4253-4275	6.8	2
112	Ozone chemistry in western U.S. wildfire plumes. *Science Advances*, **2021**, 7, eabl3648	14.3	6
111	THE NASA ATMOSPHERIC TOMOGRAPHY (ATom) MISSION: Imaging the Chemistry of the Global Atmosphere. *Bulletin of the American Meteorological Society*, **2021**, 1-53	6.1	6
110	Nighttime and daytime dark oxidation chemistry in wildfire plumes: an observation and model analysis of FIREX-AQ aircraft data. *Atmospheric Chemistry and Physics*, **2021**, 21, 16293-16317	6.8	8
109	Novel Analysis to Quantify Plume Crosswind Heterogeneity Applied to Biomass Burning Smoke. *Environmental Science & Technology*, **2021**, 55, 15646-15657	10.3	2
108	Spatially Resolved Photochemistry Impacts Emissions Estimates in Fresh Wildfire Plumes. *Geophysical Research Letters*, **2021**, 48, e2021GL095443	4.9	1
107	Rapid cloud removal of dimethyl sulfide oxidation products limits SO and cloud condensation nuclei production in the marine atmosphere. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	7
106	Daytime Oxidized Reactive Nitrogen Partitioning in Western U.S. Wildfire Smoke Plumes. *Journal of Geophysical Research D: Atmospheres*, **2021**, 126, e2020JD033484	4.4	18
105	Chemical Tomography in a Fresh Wildland Fire Plume: A Large Eddy Simulation (LES) Study. *Journal of Geophysical Research D: Atmospheres*, **2021**, 126, e2021JD035203	4.4	5
104	Deriving Tropospheric Transit Time Distributions Using Airborne Trace Gas Measurements: Uncertainty and Information Content. *Journal of Geophysical Research D: Atmospheres*, **2021**, 126, e2020JD034358	4.4	3
103	Formaldehyde evolution in US wildfire plumes during the Fire Influence on Regional to Global Environments and Air Quality experiment (FIREX-AQ). *Atmospheric Chemistry and Physics*, **2021**, 21, 18319-18331	6.8	3
102	Ozone depletion due to dust release of iodine in the free troposphere.. *Science Advances*, **2021**, 7, eabj6544	14.3	0
101	Quantification of organic aerosol and brown carbon evolution in fresh wildfire plumes. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 29469-29477	11.5	31
100	Missing OH reactivity in the global marine boundary layer. *Atmospheric Chemistry and Physics*, **2020**, 20, 4013-4029	6.8	13

99	Quantitative detection of iodine in the stratosphere. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 1860-1866	11.5	35
98	HONO Emissions from Western U.S. Wildfires Provide Dominant Radical Source in Fresh Wildfire Smoke. *Environmental Science & Technology*, **2020**, 54, 5954-5963	10.3	26
97	Observation-based modeling of ozone chemistry in the Seoul metropolitan area during the Korea-United States Air Quality Study (KORUS-AQ). *Elementa*, **2020**, 8,	3.6	19
96	Constraining remote oxidation capacity with ATom observations. *Atmospheric Chemistry and Physics* , **2020**, 20, 7753-7781	6.8	18
95	Exploring Oxidation in the Remote Free Troposphere: Insights From Atmospheric Tomography (ATom). *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2019JD031685	4.4	11
94	Global Atmospheric Budget of Acetone: Air-Sea Exchange and the Contribution to Hydroxyl Radicals. *Journal of Geophysical Research D: Atmospheres*, **2020**, 125, e2020JD032553	4.4	8
93	Comprehensive isoprene and terpene gas-phase chemistry improves simulated surface ozone in the southeastern US. *Atmospheric Chemistry and Physics*, **2020**, 20, 3739-3776	6.8	20
92	Rates of Wintertime Atmospheric SO2 Oxidation based on Aircraft Observations during Clear-Sky Conditions over the Eastern United States. *Journal of Geophysical Research D: Atmospheres*, **2019**, 124, 6630-6649	4.4	8
91	Cloud System Evolution in the Trades-CSET: Following the Evolution of Boundary Layer Cloud Systems with the NSF/NCAR GV. *Bulletin of the American Meteorological Society*, **2019**, 100, 93-121	6.1	28
90	Mapping hydroxyl variability throughout the global remote troposphere via synthesis of airborne and satellite formaldehyde observations. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 11171-11180	11.5	38
89	Atmospheric Acetaldehyde: Importance of Air-Sea Exchange and a Missing Source in the Remote Troposphere. *Geophysical Research Letters*, **2019**, 46, 5601-5613	4.9	28
88	Integration of airborne and ground observations of nitryl chloride in the Seoul metropolitan area and the implications on regional oxidation capacity during KORUS-AQ 2016. *Atmospheric Chemistry and Physics*, **2019**, 19, 12779-12795	6.8	11
87	Heterogeneous N2O5 Uptake During Winter: Aircraft Measurements During the 2015 WINTER Campaign and Critical Evaluation of Current Parameterizations. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 4345-4372	4.4	69
86	Impact of Biomass Burning Plumes on Photolysis Rates and Ozone Formation at the Mount Bachelor Observatory. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 2272-2284	4.4	19
85	Tropospheric HONO distribution and chemistry in the southeastern US. *Atmospheric Chemistry and Physics*, **2018**, 18, 9107-9120	6.8	13
84	Observed NO/NO2 Ratios in the Upper Troposphere Imply Errors in NO-NO2-O3 Cycling Kinetics or an Unaccounted NOx Reservoir. *Geophysical Research Letters*, **2018**, 45, 4466-4474	4.9	24
83	Cloud impacts on photochemistry: building a climatology of photolysis rates from the Atmospheric Tomography mission. *Atmospheric Chemistry and Physics*, **2018**, 18, 16809-16828	6.8	18
82	The Impact of Smoke on the Ultraviolet and Visible Radiative Forcing Under Different Fire Regimes. *Air, Soil and Water Research*, **2018**, 11, 117862211877480	3.3	3

81	Wintertime Transport of Reactive Trace Gases From East Asia Into the Deep Tropics. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 12,877	4.4	4
80	Atmospheric oxidation in the presence of clouds during the Deep Convective Clouds and Chemistry (DC3) study. *Atmospheric Chemistry and Physics*, **2018**, 18, 14493-14510	6.8	8
79	Integration of Airborne and Ground Observations of Nitryl Chloride in the Seoul Metropolitan Area and the Implications on Regional Oxidation Capacity During KORUS-AQ 2016 **2018**,		2
78	Constraints on Aerosol Nitrate Photolysis as a Potential Source of HONO and NO. *Environmental Science & Technology*, **2018**, 52, 13738-13746	10.3	43
77	Use of Airborne In Situ VOC Measurements to Estimate Transit Time Spectrum: An Observation-Based Diagnostic of Convective Transport. *Geophysical Research Letters*, **2018**, 45, 13,150	4.9	6
76	ClNO2 Yields From Aircraft Measurements During the 2015 WINTER Campaign and Critical Evaluation of the Current Parameterization. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 12,994	4.4	24
75	Tropospheric sources and sinks of gas-phase acids in the Colorado Front Range. *Atmospheric Chemistry and Physics*, **2018**, 18, 12315-12327	6.8	18
74	Stratospheric Injection of Brominated Very Short-Lived Substances: Aircraft Observations in the Western Pacific and Representation in Global Models. *Journal of Geophysical Research D: Atmospheres*, **2018**, 123, 5690-5719	4.4	30
73	The Convective Transport of Active Species in the Tropics (CONTRAST) Experiment. *Bulletin of the American Meteorological Society*, **2017**, 98, 106-128	6.1	40
72	Improved modeling of cloudy-sky actinic flux using satellite cloud retrievals. *Geophysical Research Letters*, **2017**, 44, 1592-1600	4.9	8
71	Formaldehyde in the Tropical Western Pacific: Chemical sources and sinks, convective transport, and representation in CAM-Chem and the CCMI models. *Journal of Geophysical Research D: Atmospheres*, **2017**, 122, 11201-11226	4.4	21
70	BrO and inferred Br_{<i>y</i>} profiles over the western Pacific: relevance of inorganic bromine sources and a Br_{<i>y</i>} minimum in the aged tropical tropopause layer. *Atmospheric Chemistry and Physics*, **2017**, 17, 15245-15270	6.8	22
69	NO_x emissions, isoprene oxidation pathways, vertical mixing, and implications for surface ozone in the Southeast United States **2016**,		8
68	Airborne measurements of BrO and the sum of HOBr and Br2 over the Tropical West Pacific from 1 to 15 km during the CONvective TRansport of Active Species in the Tropics (CONTRAST) experiment. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 12,560-12,578	4.4	15
67	Why do Models Overestimate Surface Ozone in the Southeastern United States?. *Atmospheric Chemistry and Physics*, **2016**, 16, 13561-13577	6.8	239
66	Agricultural fires in the southeastern U.S. during SEAC4RS: Emissions of trace gases and particles and evolution of ozone, reactive nitrogen, and organic aerosol. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 7383-7414	4.4	71
65	A pervasive role for biomass burning in tropical high ozone/low water structures. *Nature Communications*, **2016**, 7, 10267	17.4	27
64	Observational Constraints on the Oxidation of NOx in the Upper Troposphere. *Journal of Physical Chemistry A*, **2016**, 120, 1468-78	2.8	20

63	Observational constraints on glyoxal production from isoprene oxidation and its contribution to organic aerosol over the Southeast United States. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 9849-9861	4.4	38
62	An observationally constrained evaluation of the oxidative capacity in the tropical western Pacific troposphere. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 7461-7488	4.4	17
61	Rapid cycling of reactive nitrogen in the marine boundary layer. *Nature*, **2016**, 532, 489-91	50.4	98
60	Influence of oil and gas emissions on summertime ozone in the Colorado Northern Front Range. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 8712-8729	4.4	62
59	Arctic springtime observations of volatile organic compounds during the OASIS-2009 campaign. *Journal of Geophysical Research D: Atmospheres*, **2016**, 121, 9789-9813	4.4	10
58	Active and widespread halogen chemistry in the tropical and subtropical free troposphere. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 9281-6	11.5	78
57	Measurements of CH₃O₂NO₂ in the upper troposphere. *Atmospheric Measurement Techniques*, **2015**, 8, 987-997	4	28
56	The POLARCAT Model Intercomparison Project (POLMIP): overview and evaluation with observations. *Atmospheric Chemistry and Physics*, **2015**, 15, 6721-6744	6.8	52
55	Interactions of bromine, chlorine, and iodine photochemistry during ozone depletions in Barrow, Alaska. *Atmospheric Chemistry and Physics*, **2015**, 15, 9651-9679	6.8	22
54	The NO_{<i>x</i>} dependence of bromine chemistry in the Arctic atmospheric boundary layer. *Atmospheric Chemistry and Physics*, **2015**, 15, 10799-10809	6.8	18
53	Quantifying sources and sinks of reactive gases in the lower atmosphere using airborne flux observations. *Geophysical Research Letters*, **2015**, 42, 8231-8240	4.9	38
52	Missing peroxy radical sources within a summertime ponderosa pine forest. *Atmospheric Chemistry and Physics*, **2014**, 14, 4715-4732	6.8	44
51	High levels of molecular chlorine in the Arctic atmosphere. *Nature Geoscience*, **2014**, 7, 91-94	18.3	79
50	Detection of iodine monoxide in the tropical free troposphere. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 2035-40	11.5	79
49	Effect of aerosols and NO₂ concentration on ultraviolet actinic flux near Mexico City during MILAGRO: measurements and model calculations. *Atmospheric Chemistry and Physics*, **2013**, 13, 1011-1022	6.8	18
48	Evaluation of HO_x sources and cycling using measurement-constrained model calculations in a 2-methyl-3-butene-2-ol (MBO) and monoterpene (MT) dominated ecosystem. *Atmospheric Chemistry and Physics*, **2013**, 13, 2031-2044	6.8	49
47	Observations of inorganic bromine (HOBr, BrO, and Br2) speciation at Barrow, Alaska, in spring 2009. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		58
46	The relative importance of chlorine and bromine radicals in the oxidation of atmospheric mercury at Barrow, Alaska. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		47

45	PTR-MS observations of photo-enhanced VOC release from Arctic and midlatitude snow. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		11
44	Spectral absorption of biomass burning aerosol determined from retrieved single scattering albedo during ARCTAS. *Atmospheric Chemistry and Physics*, **2012**, 12, 10505-10518	6.8	33
43	Impact of the deep convection of isoprene and other reactive trace species on radicals and ozone in the upper troposphere. *Atmospheric Chemistry and Physics*, **2012**, 12, 1135-1150	6.8	30
42	An analysis of fast photochemistry over high northern latitudes during spring and summer using in-situ observations from ARCTAS and TOPSE. *Atmospheric Chemistry and Physics*, **2012**, 12, 6799-6825	6.8	29
41	Nitrous acid (HONO) during polar spring in Barrow, Alaska: A net source of OH radicals?. *Journal of Geophysical Research*, **2011**, 116,		58
40	A comparison of Arctic BrO measurements by chemical ionization mass spectrometry and long path-differential optical absorption spectroscopy. *Journal of Geophysical Research*, **2011**, 116,		93
39	Global and regional effects of the photochemistry of CH₃O₂NO₂: evidence from ARCTAS. *Atmospheric Chemistry and Physics*, **2011**, 11, 4209-4219	6.8	41
38	Ultraviolet actinic flux in clear and cloudy atmospheres: model calculations and aircraft-based measurements. *Atmospheric Chemistry and Physics*, **2011**, 11, 5457-5469	6.8	22
37	First direct measurements of formaldehyde flux via eddy covariance: implications for missing in-canopy formaldehyde sources. *Atmospheric Chemistry and Physics*, **2011**, 11, 10565-10578	6.8	85
36	Detailed comparisons of airborne formaldehyde measurements with box models during the 2006 INTEX-B and MILAGRO campaigns: potential evidence for significant impacts of unmeasured and multi-generation volatile organic carbon compounds. *Atmospheric Chemistry and Physics*, **2011**, 11, 11867-11894	6.8	32
35	Low-ozone bubbles observed in the tropical tropopause layer during the TC4 campaign in 2007. *Journal of Geophysical Research*, **2010**, 115,		8
34	Chemistry of hydrogen oxide radicals (HO_x) in the Arctic troposphere in spring. *Atmospheric Chemistry and Physics*, **2010**, 10, 5823-5838	6.8	184
33	Impact of Mexico City emissions on regional air quality from MOZART-4 simulations. *Atmospheric Chemistry and Physics*, **2010**, 10, 6195-6212	6.8	70
32	Airborne measurement of OH reactivity during INTEX-B. *Atmospheric Chemistry and Physics*, **2009**, 9, 163-173	6.8	225
31	Emissions from biomass burning in the Yucatan. *Atmospheric Chemistry and Physics*, **2009**, 9, 5785-5812	6.8	358
30	Calculations of solar shortwave heating rates due to black carbon and ozone absorption using in situ measurements. *Journal of Geophysical Research*, **2008**, 113,		24
29	Role of convection in redistributing formaldehyde to the upper troposphere over North America and the North Atlantic during the summer 2004 INTEX campaign. *Journal of Geophysical Research*, **2008**, 113,		31
28	Characteristics of the NO-NO₂-O₃ system in different chemical regimes during the MIRAGE-Mex field campaign. *Atmospheric Chemistry and Physics*, **2008**, 8, 7153-7164	6.8	28

27	Light penetration in the snowpack at Summit, Greenland: Part 2 Nitrate photolysis. *Atmospheric Environment*, **2007**, 41, 5091-5100	5.3	42
26	Light penetration in the snowpack at Summit, Greenland: Part 1. *Atmospheric Environment*, **2007**, 41, 5077-5090	5.3	32
25	An overview of air-snow exchange at Summit, Greenland: Recent experiments and findings. *Atmospheric Environment*, **2007**, 41, 4995-5006	5.3	18
24	Direct measurements of the convective recycling of the upper troposphere. *Science*, **2007**, 315, 816-20	33.3	101
23	Column ozone and aerosol optical properties retrieved from direct solar irradiance measurements during SOLVE II. *Atmospheric Chemistry and Physics*, **2005**, 5, 611-622	6.8	5
22	Photolysis frequency of O3 to O(1D): Measurements and modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI). *Journal of Geophysical Research*, **2004**, 109,		25
21	Comparison of airborne measured and calculated spectral actinic flux and derived photolysis frequencies during the PEM Tropics B mission. *Journal of Geophysical Research*, **2003**, 108, PEM 6-1		35
20	International Photolysis Frequency Measurement and Model Intercomparison (IPMMI): Spectral actinic solar flux measurements and modeling. *Journal of Geophysical Research*, **2003**, 108,		36
19	Photolysis frequency of NO2: Measurement and modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI). *Journal of Geophysical Research*, **2003**, 108,		40
18	Impact of clouds and aerosols on photolysis frequencies and photochemistry during TRACE-P: 1. Analysis using radiative transfer and photochemical box models. *Journal of Geophysical Research*, **2003**, 108,		48
17	Use of proton-transfer-reaction mass spectrometry to characterize volatile organic compound sources at the La Porte super site during the Texas Air Quality Study 2000. *Journal of Geophysical Research*, **2003**, 108,		82
16	OH and HO2 concentrations, sources, and loss rates during the Southern Oxidants Study in Nashville, Tennessee, summer 1999. *Journal of Geophysical Research*, **2003**, 108,		152
15	Ozone production rates as a function of NOx abundances and HOx production rates in the Nashville urban plume. *Journal of Geophysical Research*, **2002**, 107, ACH 7-1		178
14	Comparison of airborne NO2 photolysis frequency measurements during PEM-Tropics B. *Journal of Geophysical Research*, **2001**, 106, 32645-32656		13
13	Photolysis frequency measurements at the South Pole during ISCAT-98. *Geophysical Research Letters*, **2001**, 28, 3637-3640	4.9	16
12	Measurements of OH, H2SO4, and MSA at the South Pole during ISCAT. *Geophysical Research Letters*, **2001**, 28, 3629-3632	4.9	88
11	Constraining remote oxidation capacity with ATom observations		2
10	Ultraviolet actinic flux in clear and cloudy atmospheres: model calculations and aircraft-based measurements		1

9	Detailed comparisons of airborne formaldehyde measurements with box models during the 2006 INTEX-B campaign: potential evidence for unmeasured and multi-generation volatile organic carbon oxidation processing		1
8	Spectral absorption of biomass burning aerosol determined from retrieved single scattering albedo during ARCTAS		1
7	An analysis of fast photochemistry over high northern latitudes during spring and summer using in-situ observations from ARCTAS and TOPSE		1
6	The POLARCAT Model Intercomparison Project (POLMIP): overview and evaluation with observations		10
5	The NO_x dependence of bromine chemistry in the Arctic atmospheric boundary layer		2
4	Interactions of bromine, chlorine, and iodine photochemistry during ozone depletions in Barrow, Alaska		1
3	Evaluation of HO_x sources and cycling using measurement-constrained model calculations in a 2-methyl-3-butene-2-ol (MBO) and monoterpene (MT) dominated ecosystem		2
2	Missing peroxy radical sources within a rural forest canopy		1
1	Observations and Modeling of NOx Photochemistry and Fate in Fresh Wildfire Plumes. *ACS Earth and Space Chemistry*,	3.2	1