

Samuel R Hall

List of Publications by Year in descending order

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105
papers

5,972
citations

74677

40
h-index

92649

69
g-index

133
all docs

133
docs citations

133
times ranked

6470
citing authors

#	ARTICLE	IF	CITATIONS
1	Emissions from biomass burning in the Yucatan. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 5785-5812.	5.0	443
2	Why do models overestimate surface ozone in the Southeast United States?. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 13561-13577.	5.0	334
3	Airborne measurement of OH reactivity during INTEX-B. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 163-173.	5.0	301
4	Chemistry of hydrogen oxide radicals (HO _x) in the Arctic troposphere in spring. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 5823-5838.	5.0	228
5	Ozone production rates as a function of NO _x abundances and HO _x production rates in the Nashville urban plume. <i>Journal of Geophysical Research</i> , 2002, 107, ACH 7-1.	3.3	214
6	OH and HO ₂ concentrations, sources, and loss rates during the Southern Oxidants Study in Nashville, Tennessee, summer 1999. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	178
7	Rapid cycling of reactive nitrogen in the marine boundary layer. <i>Nature</i> , 2016, 532, 489-491.	36.2	177
8	Quantification of organic aerosol and brown carbon evolution in fresh wildfire plumes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 29469-29477.	7.6	114
9	Heterogeneous N ₂ O ₅ Uptake During Winter: Aircraft Measurements During the 2015 WINTER Campaign and Critical Evaluation of Current Parameterizations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 4345-4372.	3.3	111
10	High levels of molecular chlorine in the Arctic atmosphere. <i>Nature Geoscience</i> , 2014, 7, 91-94.	11.9	107
11	A comparison of Arctic BrO measurements by chemical ionization mass spectrometry and long path-differential optical absorption spectroscopy. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	106
12	Measurements of OH, H ₂ SO ₄ , and MSA at the South Pole during ISCAT. <i>Geophysical Research Letters</i> , 2001, 28, 3629-3632.	4.0	101
13	First direct measurements of formaldehyde flux via eddy covariance: implications for missing in-canopy formaldehyde sources. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 10565-10578.	5.0	101
14	Agricultural fires in the southeastern U.S. during SEAC ⁴ RS: Emissions of trace gases and particles and evolution of ozone, reactive nitrogen, and organic aerosol. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 7383-7414.	3.3	98
15	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. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	92
16	Active and widespread halogen chemistry in the tropical and subtropical free troposphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 9281-9286.	7.6	92
17	Influence of oil and gas emissions on summertime ozone in the Colorado Northern Front Range. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 8712-8729.	3.3	91
18	Detection of iodine monoxide in the tropical free troposphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 2035-2040.	7.6	89

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19	Constraints on Aerosol Nitrate Photolysis as a Potential Source of HONO and NO _x . Environmental Science & Technology, 2018, 52, 13738-13746.	10.5	87
20	Nitrous acid (HONO) during polar spring in Barrow, Alaska: A net source of OH radicals?. Journal of Geophysical Research, 2011, 116, .	3.3	71
21	Observations of inorganic bromine (HOBr, BrO, and Br ₂) speciation at Barrow, Alaska, in spring 2009. Journal of Geophysical Research, 2012, 117, .	3.3	71
22	Quantitative detection of iodine in the stratosphere. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 1860-1866.	7.6	67
23	The POLARCAT Model Intercomparison Project (POLMIP): overview and evaluation with observations. Atmospheric Chemistry and Physics, 2015, 15, 6721-6744.	5.0	64
24	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.	7.6	64
25	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.	5.0	63
26	HONO Emissions from Western U.S. Wildfires Provide Dominant Radical Source in Fresh Wildfire Smoke. Environmental Science & Technology, 2020, 54, 5954-5963.	10.5	62
27	The relative importance of chlorine and bromine radicals in the oxidation of atmospheric mercury at Barrow, Alaska. Journal of Geophysical Research, 2012, 117, .	3.3	61
28	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, .	3.3	59
29	Missing peroxy radical sources within a summertime ponderosa pine forest. Atmospheric Chemistry and Physics, 2014, 14, 4715-4732.	5.0	58
30	Ozone chemistry in western U.S. wildfire plumes. Science Advances, 2021, 7, eabl3648.	10.9	57
31	Quantifying sources and sinks of reactive gases in the lower atmosphere using airborne flux observations. Geophysical Research Letters, 2015, 42, 8231-8240.	4.0	54
32	Photolysis frequency of NO ₂ : Measurement and modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI). Journal of Geophysical Research, 2003, 108, .	3.3	53
33	Global and regional effects of the photochemistry of CH ₃ O ₂ /NO ₂ evidence from ARCTAS. Atmospheric Chemistry and Physics, 2011, 11, 4209-4219.		
34	The Convective Transport of Active Species in the Tropics (CONTRAST) Experiment. Bulletin of the American Meteorological Society, 2017, 98, 106-128.	5.5	52
35	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.	3.3	51
36	Comprehensive isoprene and terpene gas-phase chemistry improves simulated surface ozone in the southeastern US. Atmospheric Chemistry and Physics, 2020, 20, 3739-3776.	5.0	49

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37	International Photolysis Frequency Measurement and Model Intercomparison (IPMMI): Spectral actinic solar flux measurements and modeling. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	47
38	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. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 11867-11894.	5.0	46
39	Comparison of airborne measured and calculated spectral actinic flux and derived photolysis frequencies during the PEM Tropics B mission. <i>Journal of Geophysical Research</i> , 2003, 108, PEM 6-1.	3.3	45
40	Light penetration in the snowpack at Summit, Greenland: Part 2 Nitrate photolysis. <i>Atmospheric Environment</i> , 2007, 41, 5091-5100.	4.2	44
41	Daytime Oxidized Reactive Nitrogen Partitioning in Western U.S. Wildfire Smoke Plumes. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033484.	3.3	44
42	Atmospheric Acetaldehyde: Importance of Air-Sea Exchange and a Missing Source in the Remote Troposphere. <i>Geophysical Research Letters</i> , 2019, 46, 5601-5613.	4.0	42
43	Spectral absorption of biomass burning aerosol determined from retrieved single scattering albedo during ARCTAS. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 10505-10518.	5.0	41
44	An analysis of fast photochemistry over high northern latitudes during spring and summer using in-situ observations from ARCTAS and TOPSE. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 6799-6825.	5.0	40
45	Nighttime and daytime dark oxidation chemistry in wildfire plumes: an observation and model analysis of FIREX-AQ aircraft data. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 16293-16317.	5.0	40
46	Light penetration in the snowpack at Summit, Greenland: Part 1. <i>Atmospheric Environment</i> , 2007, 41, 5077-5090.	4.2	39
47	Stratospheric Injection of Brominated Very Short-Lived Substances: Aircraft Observations in the Western Pacific and Representation in Global Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 5690-5719.	3.3	39
48	Constraining remote oxidation capacity with ATom observations. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 7753-7781.	5.0	39
49	Cloud impacts on photochemistry: building a climatology of photolysis rates from the Atmospheric Tomography mission. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 16809-16828.	5.0	38
50	Observed NO ₂ /NO ₂ Ratios in the Upper Troposphere Imply Errors in NO ₂ ↔O ₃ Cycling Kinetics or an Unaccounted NO _x Reservoir. <i>Geophysical Research Letters</i> , 2018, 45, 4466-4474.	4.0	38
51	A pervasive role for biomass burning in tropical high ozone/low water structures. <i>Nature Communications</i> , 2016, 7, 10267.	13.2	37
52	Impact of Biomass Burning Plumes on Photolysis Rates and Ozone Formation at the Mount Bachelor Observatory. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 2272-2284.	3.3	37
53	Measurements of CH ₃ O, O ₂ , and NO ₂ in the upper troposphere. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 987-997.		
54	Formaldehyde in the Tropical Western Pacific: Chemical Sources and Sinks, Convective Transport, and Representation in CAM-Chem and the CCM1 Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 11201-11226.	3.3	36

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55	BrO and inferred Br and profiles over the western Pacific: relevance of inorganic bromine sources and a minimum in the aged tropical tropopause layer. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 15245-15270.	5.0	36
56	Photolysis frequency of O ₃ to O(1D): Measurements and modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI). <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	35
57	Role of convection in redistributing formaldehyde to the upper troposphere over North America and the North Atlantic during the summer 2004 INTEX campaign. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	35
58	Rapid cloud removal of dimethyl sulfide oxidation products limits SO ₂ and cloud condensation nuclei production in the marine atmosphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.6	34
59	Observation-based modeling of ozone chemistry in the Seoul metropolitan area during the Korea-United States Air Quality Study (KORUS-AQ). <i>Elementa</i> , 2020, 8, .	3.3	33
60	Characteristics of the NO-NO ₂ -O ₃ system in different chemical regimes during the MIRAGE-Mex field campaign. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 7153-7164.	5.0	32
61	Interactions of bromine, chlorine, and iodine photochemistry during ozone depletions in Barrow, Alaska. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 9651-9679.	5.0	32
62	ClNO ₂ Yields From Aircraft Measurements During the 2015 WINTER Campaign and Critical Evaluation of the Current Parameterization. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 12,994.	3.3	32
63	Patterns and Levels of Sedentary Behavior and Physical Activity in a General Japanese Population: The Hisayama Study. <i>Journal of Epidemiology</i> , 2018, 28, 260-265.	2.8	30
64	Calculations of solar shortwave heating rates due to black carbon and ozone absorption using in situ measurements. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	29
65	Formaldehyde evolution in US wildfire plumes during the Fire Influence on Regional to Global Environments and Air Quality experiment (FIREX-AQ). <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 18319-18331.	5.0	29
66	Evaluating the Impact of Chemical Complexity and Horizontal Resolution on Tropospheric Ozone Over the Conterminous US With a Global Variable Resolution Chemistry Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	3.7	29
67	Missing OH reactivity in the global marine boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 4013-4029.	5.0	28
68	Ultraviolet actinic flux in clear and cloudy atmospheres: model calculations and aircraft-based measurements. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 5457-5469.	5.0	26
69	Tropospheric sources and sinks of gas-phase acids in the Colorado Front Range. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 12315-12327.	5.0	26
70	Integration of airborne and ground observations of nitril chloride in the Seoul metropolitan area and the implications on regional oxidation capacity during KORUS-AQ 2016. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 12779-12795.	5.0	25
71	Exploring Oxidation in the Remote Free Troposphere: Insights From Atmospheric Tomography (ATom). <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031685.	3.3	25
72	Observational Constraints on the Oxidation of NO _x in the Upper Troposphere. <i>Journal of Physical Chemistry A</i> , 2016, 120, 1468-1478.	2.6	24

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73	Tropospheric HONO distribution and chemistry in the southeastern US. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 9107-9120.	5.0	24
74	An overview of air-snow exchange at Summit, Greenland: Recent experiments and findings. <i>Atmospheric Environment</i> , 2007, 41, 4995-5006.	4.2	23
75	The dependence of bromine chemistry in the Arctic atmospheric boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 10799-10809.	5.0	23
76	Effect of aerosols and NO ₂ concentration on ultraviolet actinic flux near Mexico City during MILAGRO: measurements and model calculations. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 1011-1022.	5.0	20
77	An observationally constrained evaluation of the oxidative capacity in the tropical western Pacific troposphere. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 7461-7488.	3.3	20
78	Arctic springtime observations of volatile organic compounds during the OASIS-2009 campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 9789-9813.	3.3	20
79	Global Atmospheric Budget of Acetone: Air-Sea Exchange and the Contribution to Hydroxyl Radicals. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD032553.	3.3	20
80	Atmospheric oxidation in the presence of clouds during the Deep Convective Clouds and Chemistry (DC3) study. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 14493-14510.	5.0	19
81	Observations and Modeling of NO _x Photochemistry and Fate in Fresh Wildfire Plumes. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 2652-2667.	2.8	19
82	Photolysis frequency measurements at the South Pole during ISCAT-98. <i>Geophysical Research Letters</i> , 2001, 28, 3637-3640.	4.0	17
83	Chemical Tomography in a Fresh Wildland Fire Plume: A Large Eddy Simulation (LES) Study. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD035203.	3.3	17
84	Airborne measurements of BrO and the sum of HOBr and Br ₂ over the Tropical West Pacific from 1 to 15%km during the CONvective TRansport of Active Species in the Tropics (CONTRAST) experiment. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 12,560.	3.3	16
85	Novel Analysis to Quantify Plume Crosswind Heterogeneity Applied to Biomass Burning Smoke. <i>Environmental Science & Technology</i> , 2021, 55, 15646-15657.	10.5	16
86	Comparison of airborne NO ₂ photolysis frequency measurements during PEM-Tropics B. <i>Journal of Geophysical Research</i> , 2001, 106, 32645-32656.	3.3	15
87	PTR-MS observations of photo-enhanced VOC release from Arctic and midlatitude snow. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	15
88	Rates of Wintertime Atmospheric SO ₂ Oxidation based on Aircraft Observations during Clear-Sky Conditions over the Eastern United States. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 6630-6649.	3.3	14
89	Direct Constraints on Secondary HONO Production in Aged Wildfire Smoke From Airborne Measurements Over the Western US. <i>Geophysical Research Letters</i> , 2022, 49, .	4.0	13
90	Improved modeling of cloudy-sky actinic flux using satellite cloud retrievals. <i>Geophysical Research Letters</i> , 2017, 44, 1592-1600.	4.0	12

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91	Photochemical evolution of the 2013 California Rim Fire: synergistic impacts of reactive hydrocarbons and enhanced oxidants. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 4253-4275.	5.0	11
92	Ozone depletion due to dust release of iodine in the free troposphere. <i>Science Advances</i> , 2021, 7, eabj6544.	10.9	11
93	Low-ozone bubbles observed in the tropical tropopause layer during the TC4 campaign in 2007. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	9
94	Spatially Resolved Photochemistry Impacts Emissions Estimates in Fresh Wildfire Plumes. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL095443.	4.0	9
95	Use of Airborne In Situ VOC Measurements to Estimate Transit Time Spectrum: An Observation-Based Diagnostic of Convective Transport. <i>Geophysical Research Letters</i> , 2018, 45, 13,150.	4.0	8
96	Observations of atmospheric oxidation and ozone production in South Korea. <i>Atmospheric Environment</i> , 2022, 269, 118854.	4.2	7
97	Column ozone and aerosol optical properties retrieved from direct solar irradiance measurements during SOLVE II. <i>Atmospheric Chemistry and Physics</i> , 2005, 5, 611-622.	5.0	6
98	Wintertime Transport of Reactive Trace Gases From East Asia Into the Deep Tropics. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 12,877.	3.3	6
99	Evolution of formaldehyde (HCHO) in a plume originating from a petrochemical industry and its volatile organic compounds (VOCs) emission rate estimation. <i>Elementa</i> , 2021, 9, .	3.3	6
100	The Role of Snow in Controlling Halogen Chemistry and Boundary Layer Oxidation During Arctic Spring: A 1D Modeling Case Study. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	3.3	6
101	The Impact of Smoke on the Ultraviolet and Visible Radiative Forcing Under Different Fire Regimes. <i>Air, Soil and Water Research</i> , 2018, 11, 117862211877480.	2.7	5
102	Wildfire-driven changes in the abundance of gas-phase pollutants in the city of Boise, ID during summer 2018. <i>Atmospheric Pollution Research</i> , 2022, 13, 101269.	3.9	5
103	An observation-based, reduced-form model for oxidation in the remote marine troposphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2023, 120, .	7.6	5
104	Deriving Tropospheric Transit Time Distributions Using Airborne Trace Gas Measurements: Uncertainty and Information Content. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD034358.	3.3	3
105	Airborne Observations Constrain Heterogeneous Nitrogen and Halogen Chemistry on Tropospheric and Stratospheric Biomass Burning Aerosol. <i>Geophysical Research Letters</i> , 2024, 51, .	4.0	1