Geoffrey Dutton

List of Publications by Year
in descending order

68	4,550	94269 37	110170 64
papers	citations	h-index	g-index

78	78	78	4839
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An unexpected and persistent increase in global emissions of ozone-depleting CFC-11. Nature, 2018, 557, 413-417.	13.7	269
2	Evaluation of source gas lifetimes from stratospheric observations. Journal of Geophysical Research, 1997, 102, 25543-25564.	3.3	214
3	Mean ages of stratospheric air derived from in situ observations of CO2, CH4, and N2O. Journal of Geophysical Research, 2001, 106, 32295-32314.	3.3	181
4	Airborne gas chromatograph for in situ measurements of long-lived species in the upper troposphere and lower stratosphere. Geophysical Research Letters, 1996, 23, 347-350.	1.5	158
5	Quantifying Transport Between the Tropical and Mid-Latitude Lower Stratosphere. Science, 1996, 272, 1763-1768.	6.0	157
6	Increase in CFC-11 emissions from eastern China based on atmospheric observations. Nature, 2019, 569, 546-550.	13.7	148
7	Mixing of polar vortex air into middle latitudes as revealed by tracer-tracer scatterplots. Journal of Geophysical Research, 1997, 102, 13119-13134.	3.3	144
8	State of the Climate in 2015. Bulletin of the American Meteorological Society, 2016, 97, Si-S275.	1.7	142
9	State of the Climate in 2013. Bulletin of the American Meteorological Society, 2014, 95, S1-S279.	1.7	138
10	History of atmospheric SF₆ from 1973 to 2008. Atmospheric Chemistry and Physics, 2010, 10, 10305-10320.	1.9	136
11	State of the Climate in 2016. Bulletin of the American Meteorological Society, 2017, 98, Si-S280.	1.7	132
12	Distribution of halon-1211 in the upper troposphere and lower stratosphere and the 1994 total bromine budget. Journal of Geophysical Research, 1998, 103, 1513-1526.	3.3	131
13	The NOAA nitrous oxide standard scale for atmospheric observations. Journal of Geophysical Research, 2007, 112, .	3.3	129
14	State of the Climate in 2012. Bulletin of the American Meteorological Society, 2013, 94, S1-S258.	1.7	129
15	State of the Climate in 2011. Bulletin of the American Meteorological Society, 2012, 93, S1-S282.	1.7	121
16	Transport into the northern hemisphere lowermost stratosphere revealed by in situ tracer measurements. Journal of Geophysical Research, 1999, 104, 26565-26580.	3.3	117
17	Re-evaluation of the lifetimes of the major CFCs and CH₃CCl₃ using atmospheric trends. Atmospheric Chemistry and Physics, 2013, 13, 2691-2702.	1.9	105
18	Estimation of regional emissions of nitrous oxide from 1997 to 2005 using multinetwork measurements, a chemical transport model, and an inverse method. Journal of Geophysical Research, 2008, 113, .	3.3	92

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19	Global and regional emissions estimates for N₂O. Atmospheric Chemistry and Physics, 2014, 14, 4617-4641.	1.9	91
20	An examination of the total hydrogen budget of the lower stratosphere. Geophysical Research Letters, 1994, 21, 2563-2566.	1.5	78
21	State of the Climate in 2014. Bulletin of the American Meteorological Society, 2015, 96, ES1-ES32.	1.7	78
22	The diurnal variation of hydrogen, nitrogen, and chlorine radicals: Implications for the heterogeneous production of HNO2. Geophysical Research Letters, 1994, 21, 2551-2554.	1.5	76
23	State of the Climate in 2008. Bulletin of the American Meteorological Society, 2009, 90, S1-S196.	1.7	74
24	Toward regional-scale modeling using the two-way nested global model TM5: Characterization of transport using SF6. Journal of Geophysical Research, 2004, 109, .	3.3	73
25	Transport mechanisms for synoptic, seasonal and interannual SF₆ variations and "age" of air in troposphere. Atmospheric Chemistry and Physics, 2009, 9, 1209-1225.	1.9	71
26	Chlorine budget and partitioning during the Stratospheric Aerosol and Gas Experiment (SAGE) III Ozone Loss and Validation Experiment (SOLVE). Journal of Geophysical Research, 2003, 108, .	3.3	69
27	The distribution of hydrogen, nitrogen, and chlorine radicals in the lower stratosphere: Implications for changes in O3due to emission of NOyfrom supersonic aircraft. Geophysical Research Letters, 1994, 21, 2547-2550.	1.5	67
28	Three-dimensional simulations of long-lived tracers using winds from MACCM2. Journal of Geophysical Research, 1997, 102, 21493-21513.	3.3	64
29	Descent and mixing in the 1999â€“2000 northern polar vortex inferred from in situ tracer measurements. Journal of Geophysical Research, 2002, 107, SOL 28-1.	3.3	64
30	Exploring causes of interannual variability in the seasonal cycles of tropospheric nitrous oxide. Atmospheric Chemistry and Physics, 2011, 11, 3713-3730.	1.9	60
31	Improving measurements of SF₆ for the study of atmospheric transport and emissions. Atmospheric Measurement Techniques, 2011, 4, 2441-2451.	1.2	59
32	Nitrous oxide emissions 1999 to 2009 from a global atmospheric inversion. Atmospheric Chemistry and Physics, 2014, 14, 1801-1817.	1.9	59
33	Optimal estimation of the surface fluxes of methyl chloride using a 3-D global chemical transport model. Atmospheric Chemistry and Physics, 2010, 10, 5515-5533.	1.9	51
34	Global CFC-11 (CCl₃F) and CFC-12 (CCl₂F₂) measurements with the Michelson Interferometer for Passive Atmospheric Sounding (MIPAS): retrieval, climatologies and trends. Atmospheric Chemistry and Physics, 2012, 12, 11857-11875.	1.9	49
35	Measurements of polar vortex air in the midlatitudes. Journal of Geophysical Research, 1996, 101, 12879-12891.	3.3	44
36	Closure of the total hydrogen budget of the northern extratropical lower stratosphere. Journal of Geophysical Research, 1999, 104, 8191-8200.	3.3	39

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37	Hydrogen in the atmosphere: Observations above a forest canopy in a polluted environment. Journal of Geophysical Research, 2003, 108, .	3.3	39
38	State of the Climate in 2005. Bulletin of the American Meteorological Society, 2006, 87, s1-s102.	1.7	39
39	Constraining the carbon tetrachloride (CCl₄) budget using its global trend and interâ€hemispheric gradient. Geophysical Research Letters, 2014, 41, 5307-5315.	1.5	38
40	In Situ Measurements of Long-Lived Trace Gases in the Lower Stratosphere by Gas Chromatography. Journal of Atmospheric and Oceanic Technology, 2001, 18, 1195-1204.	0.5	37
41	Tropospheric SF₆: Age of air from the Northern Hemisphere midlatitude surface. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,429.	1.2	37
42	Threeâ€dimensional SF₆ data and tropospheric transport simulations: Signals, modeling accuracy, and implications for inverse modeling. Journal of Geophysical Research, 2007, 112, .	3.3	35
43	Drivers and Environmental Responses to the Changing Annual Snow Cycle of Northern Alaska. Bulletin of the American Meteorological Society, 2017, 98, 2559-2577.	1.7	35
44	Dehydration and denitrification in the Arctic Polar Vortex during the 1995-1996 winter. Geophysical Research Letters, 1998, 25, 501-504.	1.5	33
45	An examination of the inorganic chlorine budget in the lower stratosphere. Journal of Geophysical Research, 2000, 105, 1957-1971.	3.3	33
46	Balloonborne in situ gas chromatograph for measurements in the troposphere and stratosphere. Journal of Geophysical Research, 2003, 108, .	3.3	32
47	Atmospheric three-dimensional inverse modeling of regional industrial emissions and global oceanic uptake of carbon tetrachloride. Atmospheric Chemistry and Physics, 2010, 10, 10421-10434.	1.9	32
48	Continued emissions of carbon tetrachloride from the United States nearly two decades after its phaseout for dispersive uses. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2880-2885.	3.3	32
49	The budget and partitioning of stratospheric chlorine during the 1997 Arctic summer. Journal of Geophysical Research, 1999, 104, 26653-26665.	3.3	31
50	A comparison of measurements from ATMOS and instruments aboard the ER-2 aircraft: Halogenated gases. Geophysical Research Letters, 1996, 23, 2393-2396.	1.5	29
51	CFC-11, CFC-12 and HCFC-22 ground-based remote sensing FTIR measurements at RÃ©union Island and comparisons with MIPAS/ENVISAT data. Atmospheric Measurement Techniques, 2016, 9, 5621-5636.	1.2	29
52	Atmospheric histories and global emissions of halons Hâ€1211 (CBrClF₂), Hâ€1301 (CBrF₃), and Hâ€2402 (CBrF₂CBrF₂). Journal of Geophysical Research D: Atmospheres, 2016, 121, 3663-3686.	1.2	24
53	Top-down constraints on global N₂O emissions at optimal resolution: application of aÂnew dimension reduction technique. Atmospheric Chemistry and Physics, 2018, 18, 735-756.	1.9	22
54	Stratospheric lifetime ratio of CFC-11 and CFC-12 from satellite and model climatologies. Atmospheric Chemistry and Physics, 2014, 14, 12479-12497.	1.9	20

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55	Spring measurements of tropospheric bromine at Barrow, Alaska. Geophysical Research Letters, 1993, 20, 201-204.	1.5	19
56	Urban/industrial pollution for the New York Cityâ€“Washington, D. C., corridor, 1996â€“1998: 2. A study of the efficacy of the Montreal Protocol and other regulatory measures. Journal of Geophysical Research, 2003, 108, .	3.3	17
57	Interannual variability in tropospheric nitrous oxide. Geophysical Research Letters, 2013, 40, 4426-4431.	1.5	15
58	Simulation of atmospheric N₂O with GEOS-Chem and its adjoint: evaluation of observational constraints. Geoscientific Model Development, 2015, 8, 3179-3198.	1.3	15
59	MIPAS IMK/IAA CFC-11 (CCl₃F) and CFC-12 (CCl₂F₂) measurements: accuracy, precision and long-term stability. Atmospheric Measurement Techniques, 2016, 9, 3355-3389.	1.2	15
60	Vertical transport rates in the stratosphere in 1993 from observations or CO2, N2O and CH4. Geophysical Research Letters, 1994, 21, 2571-2574.	1.5	14
61	Urban/industrial pollution for the New York Cityâ€“Washington, D. C., corridor, 1996â€“1998: 1. Providing independent verification of CO and PCE emissions inventories. Journal of Geophysical Research, 2003, 108, .	3.3	12
62	Ground-based FTIR retrievals of SF₆ on Reunion Island. Atmospheric Measurement Techniques, 2018, 11, 651-662.	1.2	11
63	UAS Chromatograph for Atmospheric Trace Species (UCATS) â€“ a versatile instrument for trace gas measurements on airborne platforms. Atmospheric Measurement Techniques, 2021, 14, 6795-6819.	1.2	9
64	Effect of the tropospheric trend on the stratospheric tracer-tracer correlations: Methyl chloroform. Journal of Geophysical Research, 1999, 104, 26643-26652.	3.3	7
65	Comparison of in situ N2O and CH4measurements in the upper troposphere and lower stratosphere during STRAT and POLARIS. Journal of Geophysical Research, 2000, 105, 19811-19822.	3.3	5
66	Interannual fluctuations in the seasonal cycle of nitrous oxide and chlorofluorocarbons due to the Brewerâ€Dobson circulation. Journal of Geophysical Research D: Atmospheres, 2013, 118, 10,694.	1.2	5
67	Continental-scale contributions to the global CFC-11 emission increase between 2012 and 2017. Atmospheric Chemistry and Physics, 2022, 22, 2891-2907.	1.9	2
68	3â€Ð Atmospheric Modeling of the Global Budget of N ₂ O and Its Isotopologues for 1980â€“2019: The Impact of Anthropogenic Emissions. Global Biogeochemical Cycles, 2022, 36, .	1.9	1