

David Tarasick

List of Publications by Year in descending order

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69
papers

5,170
citations

109264

35
h-index

95218

68
g-index

79
all docs

79
docs citations

79
times ranked

4575
citing authors

#	ARTICLE	IF	CITATIONS
1	Unprecedented Arctic ozone loss in 2011. <i>Nature</i> , 2011, 478, 469-475.	13.7	572
2	Increasing springtime ozone mixing ratios in the free troposphere over western North America. <i>Nature</i> , 2010, 463, 344-348.	13.7	397
3	Long-term changes in tropospheric ozone. <i>Atmospheric Environment</i> , 2006, 40, 3156-3173.	1.9	345
4	Assessment of the performance of ECCâ€œozonesondes under quasiâ€œflight 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
5	Tropospheric ozone assessment report: Global ozone metrics for climate change, human health, and crop/ecosystem research. <i>Elementa</i> , 2018, 6, 1.	1.1	196
6	Recent tropospheric ozone changes â€œ A pattern dominated by slow or no growth. <i>Atmospheric Environment</i> , 2013, 67, 331-351.	1.9	195
7	Climate variability modulates western US ozone air quality in spring via deep stratospheric intrusions. <i>Nature Communications</i> , 2015, 6, 7105.	5.8	186
8	Validation of Tropospheric Emission Spectrometer (TES) nadir ozone profiles using ozonesonde measurements. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	181
9	Longâ€œterm ozone trends at rural ozone monitoring sites across the United States, 1990â€œ2010. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	180
10	Tropospheric Ozone Assessment Report: Database and metrics data of global surface ozone observations. <i>Elementa</i> , 2017, 5, .	1.1	172
11	Validation of Aura Microwave Limb Sounder Ozone by ozonesonde and lidar measurements. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	133
12	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
13	Tropospheric intrusions associated with the secondary tropopause. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	110
14	Ozone in the Arctic lower troposphere during winter and spring 2000 (ALERT2000). <i>Atmospheric Environment</i> , 2002, 36, 2535-2544.	1.9	106
15	On the detection and utilization of gravity waves in airglow studies. <i>Planetary and Space Science</i> , 1987, 35, 851-866.	0.9	104
16	Tropospheric Ozone Assessment Report: Tropospheric ozone from 1877 to 2016, observed levels, trends and uncertainties. <i>Elementa</i> , 2019, 7, .	1.1	103
17	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
18	Ground-based assessment of the bias and long-term stability of 14 limb and occultation ozone profile data records. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 2497-2534.	1.2	92

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19	Tropospheric ozone in CMIP6 simulations. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 4187-4218.	1.9	89
20	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
21	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
22	Assimilated ozone from EOSâ€œAura: Evaluation of the tropopause region and tropospheric columns. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	75
23	Nearâ€œComplete Local Reduction of Arctic Stratospheric Ozone by Severe Chemical Loss in Spring 2020. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089547.	1.5	75
24	The Canadian operational procedure for forecasting total ozone and UV radiation. <i>Meteorological Applications</i> , 1994, 1, 247-265.	0.9	74
25	Revisiting the evidence of increasing springtime ozone mixing ratios in the free troposphere over western North America. <i>Geophysical Research Letters</i> , 2015, 42, 8719-8728.	1.5	69
26	Strategic ozone sounding networks: Review of design and accomplishments. <i>Atmospheric Environment</i> , 2011, 45, 2145-2163.	1.9	63
27	The POLARCAT Model Intercomparison Project (POLMIP): overview and evaluation with observations. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 6721-6744.	1.9	62
28	The observable effects of gravity waves on airglow emissions. <i>Planetary and Space Science</i> , 1990, 38, 1105-1119.	0.9	58
29	Long-term trends of surface ozone and its influencing factors at the Mt Waliguan GAW station, China â€œ Part 2: The roles of anthropogenic emissions and climate variability. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 773-798.	1.9	56
30	Enhanced ozone over western North America from biomass burning in Eurasia during April 2008 as seen in surface and profile observations. <i>Atmospheric Environment</i> , 2010, 44, 4497-4509.	1.9	55
31	Multi-decadal surface ozone trends at globally distributed remote locations. <i>Elementa</i> , 2020, 8, .	1.1	54
32	Validation of 10-year SAO OMI Ozone Profile (PROFOZ) product using ozonesonde observations. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 2455-2475.	1.2	53
33	COVIDâ€œ19 Crisis Reduces Free Tropospheric Ozone Across the Northern Hemisphere. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL091987.	1.5	51
34	Effects of gravity waves on complex airglow chemistries: 2. OH emission. <i>Journal of Geophysical Research</i> , 1992, 97, 3195-3208.	3.3	48
35	Ozone correlation lengths and measurement uncertainties from analysis of historical ozonesonde data in North America and Europe. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	42
36	Effects of gravity waves on complex airglow chemistries: 1. O ₂ (¹ Δ _g) emission. <i>Journal of Geophysical Research</i> , 1992, 97, 3185-3193.	3.3	35

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37	Climatology and trends of surface UV radiation: Survey article. <i>Atmosphere - Ocean</i> , 2003, 41, 121-138.	0.6	35
38	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
39	Global-scale distribution of ozone in the remote troposphere from the ATom and HIPPO airborne field missions. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 10611-10635.	1.9	31
40	Improving ECC Ozonesonde Data Quality: Assessment of Current Methods and Outstanding Issues. <i>Earth and Space Science</i> , 2021, 8, e2019EA000914.	1.1	30
41	Continuous rise of the tropopause in the Northern Hemisphere over 1980–2020. <i>Science Advances</i> , 2021, 7, eabi8065.	4.7	26
42	Airglow response to vertically standing gravity waves. <i>Geophysical Research Letters</i> , 1994, 21, 2729-2732.	1.5	24
43	Ozone in the troposphere: Measurements, climatology, budget, and trends. <i>Atmosphere - Ocean</i> , 2008, 46, 93-115.	0.6	23
44	Laboratory investigations of the response of Brewer-Mast ozonesondes to tropospheric ozone. <i>Journal of Geophysical Research</i> , 2002, 107, ACH 14-1.	3.3	21
45	A Post-2013 Dropoff in Total Ozone at a Third of Global Ozonesonde Stations: Electrochemical Concentration Cell Instrument Artifacts?. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL086791.	1.5	19
46	A new global real-time Lagrangian diagnostic system for stratosphere-troposphere exchange: evaluation during a balloon sonde campaign in eastern Canada. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 2661-2679.	1.9	16
47	Carbon monoxide climatology derived from the trajectory mapping of global MOZAIC-IGOS data. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 10263-10282.	1.9	16
48	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
49	Pan-Arctic surface ozone: modelling vs. measurements. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 15937-15967.	1.9	14
50	A review of the O ₂ (a ¹ g) and O ₂ (b ¹ g+) airglow emissions. <i>Advances in Space Research</i> , 1993, 13, 145-148.	1.2	13
51	Validation of Environment Canada and NOAA UV Index Forecasts with Brewer Measurements from Canada. <i>Journal of Applied Meteorology and Climatology</i> , 2013, 52, 1477-1489.	0.6	13
52	An Arctic ozone hole in 2020 if not for the Montreal Protocol. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 15771-15781.	1.9	13
53	Summertime stratospheric processes at northern mid-latitudes: comparisons between MANTRA balloon measurements and the Canadian Middle Atmosphere Model. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 2057-2071.	1.9	11
54	Analysis of the latitudinal variability of tropospheric ozone in the Arctic using the large number of aircraft and ozonesonde observations in early summer 2008. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 13341-13358.	1.9	10

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55	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
56	Stratospheric ozone loss in the Arctic winters between 2005 and 2013 derived with ACE-FTS measurements. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 577-601.	1.9	10
57	The Role of Natural Halogens in Global Tropospheric Ozone Chemistry and Budget Under Different 21st Century Climate Scenarios. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD034859.	1.2	10
58	Layer truncation and the Eulerian/Lagrangian duality in the theory of airglow fluctuations induced by gravity waves. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 1997, 59, 327-334.	0.6	9
59	Impact of the COVID-19 Economic Downturn on Tropospheric Ozone Trends: An Uncertainty Weighted Data Synthesis for Quantifying Regional Anomalies Above Western North America and Europe. <i>AGU Advances</i> , 2022, 3, .	2.3	9
60	Title is missing!. <i>Hydrobiologia</i> , 2001, 462, 75-89.	1.0	8
61	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
62	Chemical Evolution of the Exceptional Arctic Stratospheric Winter 2019/2020 Compared to Previous Arctic and Antarctic Winters. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD034356.	1.2	8
63	Parameterization of large-scale turbulent diffusion in the presence of both well-mixed and weakly mixed patchy layers. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2016, 143-144, 14-36.	0.6	7
64	Brewer, SAOZ and Ozonesonde Observations in Siberia. <i>Atmosphere - Ocean</i> , 2015, 53, 14-18.	0.6	6
65	An assessment of 10-year NOAA aircraft-based tropospheric ozone profiling in Colorado. <i>Atmospheric Environment</i> , 2017, 158, 116-127.	1.9	6
66	On the nonlinear response of airglow to atmospheric gravity waves. <i>Journal of Geophysical Research</i> , 1993, 98, 19127-19131.	3.3	5
67	Seasonal ozone vertical profiles over North America using the AQMEII3 group of air quality models: model inter-comparison and stratospheric intrusions. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 13925-13945.	1.9	2
68	Biases of Global Tropopause Altitude Products in Reanalyses and Implications for Estimates of Tropospheric Column Ozone. <i>Atmosphere</i> , 2021, 12, 417.	1.0	2
69	UV spectral measurements at moderately high resolution and of OH resonance scattering resolved by polarization during the MANTRA 2002-2004 stratospheric balloon flights. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2009, 110, 205-222.	1.1	0