

# Charles S Zender

## List of Publications by Year in descending order

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95  
papers

16,737  
citations

43973

48  
h-index

40881

93  
g-index

128  
all docs

128  
docs citations

128  
times ranked

14742  
citing authors

#	ARTICLE	IF	CITATIONS
1	Data-Driven Artificial Intelligence for Calibration of Hyperspectral Big Data. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-20.	2.7	16
2	More Realistic Intermediate Depth Dry Firn Densification in the Energy Exascale Earth System Model (E3SM). Journal of Advances in Modeling Earth Systems, 2022, 14, .	1.3	3
3	SNICAR-ADv4: a physically based radiative transfer model to represent the spectral albedo of glacier ice. Cryosphere, 2022, 16, 1197-1220.	1.5	7
4	The role of förtfn winds in eastern Antarctic Peninsula rapid ice shelf collapse. Cryosphere, 2022, 16, 1369-1381.	1.5	10
5	Climatology and Evolution of the Antarctic Peninsula Förtfn Windâ€Induced Melt Regime From 1979â€2018. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033682.	1.2	16
6	Greenland Surface Melt Dominated by Solar and Sensible Heating. Geophysical Research Letters, 2021, 48, e2020GL090653.	1.5	10
7	Convectionâ€Permitting Simulations With the E3SM Global Atmosphere Model. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002544.	1.3	23
8	SNICAR-ADv3: a community tool for modeling spectral snow albedo. Geoscientific Model Development, 2021, 14, 7673-7704.	1.3	36
9	Coccidioidomycosis (Valley Fever) Case Data for the Southwestern United States. Open Health Data, 2020, 7, 1.	3.7	5
10	Regionally refined test bed in E3SM atmosphere model version 1 (EAMv1) and applications for high-resolution modeling. Geoscientific Model Development, 2019, 12, 2679-2706.	1.3	49
11	An Overview of the Atmospheric Component of the Energy Exascale Earth System Model. Journal of Advances in Modeling Earth Systems, 2019, 11, 2377-2411.	1.3	168
12	Intercomparison and improvement of two-stream shortwave radiative transfer schemes in Earth system models for a unified treatment of cryospheric surfaces. Cryosphere, 2019, 13, 2325-2343.	1.5	25
13	Expansion of Coccidioidomycosis Endemic Regions in the United States in Response to Climate Change. GeoHealth, 2019, 3, 308-327.	1.9	86
14	LIVkit 2.1: automated and extensible ice sheet model validation. Geoscientific Model Development, 2019, 12, 1067-1086.	1.3	4
15	Spatial Distribution of Melt Season Cloud Radiative Effects Over Greenland: Evaluating Satellite Observations, Reanalyses, and Model Simulations Against In Situ Measurements. Journal of Geophysical Research D: Atmospheres, 2019, 124, 57-71.	1.2	29
16	The DOE E3SM Coupled Model Version 1: Overview and Evaluation at Standard Resolution. Journal of Advances in Modeling Earth Systems, 2019, 11, 2089-2129.	1.3	404
17	Coccidioidomycosis Dynamics in Relation to Climate in the Southwestern United States. GeoHealth, 2018, 2, 6-24.	1.9	69
18	Temporal Characteristics of Cloud Radiative Effects on the Greenland Ice Sheet: Discoveries From Multiyear Automatic Weather Station Measurements. Journal of Geophysical Research D: Atmospheres, 2018, 123, 11,348.	1.2	20

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19	Climatic Responses to Future Trans-Arctic Shipping. <i>Geophysical Research Letters</i> , 2018, 45, 9898-9908.	1.5	34
20	Intense Winter Surface Melt on an Antarctic Ice Shelf. <i>Geophysical Research Letters</i> , 2018, 45, 7615-7623.	1.5	65
21	Projected changes in dust emissions and regional air quality due to the shrinking Salton Sea. <i>Aeolian Research</i> , 2018, 33, 82-92.	1.1	28
22	Connecting geomorphology to dust emission through high-resolution mapping of global land cover and sediment supply. <i>Aeolian Research</i> , 2017, 27, 47-65.	1.1	42
23	The compression-error trade-off for large gridded data sets. <i>Geoscientific Model Development</i> , 2017, 10, 413-423.	1.3	9
24	Bit Grooming: statistically accurate precision-preserving quantization with compression, evaluated in the netCDF Operators (NCO, v4.4.8+). <i>Geoscientific Model Development</i> , 2016, 9, 3199-3211.	1.3	31
25	A Retrospective, Iterative, Geometry-Based (RIGB) tilt-correction method for radiation observed by automatic weather stations on snow-covered surfaces: application to Greenland. <i>Cryosphere</i> , 2016, 10, 727-741.	1.5	17
26	Modeling dust as component minerals in the Community Atmosphere Model: development of framework and impact on radiative forcing. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 537-561.	1.9	130
27	Climate effect of black carbon aerosol in a Tibetan Plateau glacier. <i>Atmospheric Environment</i> , 2015, 111, 71-78.	1.9	77
28	Improved dust representation in the Community Atmosphere Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2014, 6, 541-570.	1.3	253
29	Bounding the role of black carbon in the climate system: A scientific assessment. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 5380-5552.	1.2	4,319
30	Global impact of smoke aerosols from landscape fires on climate and the Hadley circulation. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 5227-5241.	1.9	137
31	Recent Northern Hemisphere tropical expansion primarily driven by black carbon and tropospheric ozone. <i>Nature</i> , 2012, 485, 350-354.	13.7	216
32	Snowfall brightens Antarctic future. <i>Nature Climate Change</i> , 2012, 2, 770-771.	8.1	6
33	Tropical biomass burning smoke plume size, shape, reflectance, and age based on 2001-2009 MISR imagery of Borneo. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 3437-3454.	1.9	12
34	The equilibrium response to idealized thermal forcings in a comprehensive GCM: implications for recent tropical expansion. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 4795-4816.	1.9	32
35	Global estimates of mineral dust aerosol iron and aluminum solubility that account for particle size using diffusion-controlled and surface-area-controlled approximations. <i>Global Biogeochemical Cycles</i> , 2012, 26, .	1.9	12
36	Dynamics of fire plumes and smoke clouds associated with peat and deforestation fires in Indonesia. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	100

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37	The role of eastern Siberian snow and soil moisture anomalies in quasi-biennial persistence of the Arctic and North Atlantic Oscillations. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	15
38	Arctic and Antarctic diurnal and seasonal variations of snow albedo from multiyear Baseline Surface Radiation Network measurements. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	36
39	Gravity Recovery and Climate Experiment (GRACE) detection of water storage changes in the Three Gorges Reservoir of China and comparison with in situ measurements. <i>Water Resources Research</i> , 2011, 47, .	1.7	114
40	Global dust model intercomparison in AeroCom phase I. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 7781-7816.	1.9	839
41	Forcing of the Arctic Oscillation by Eurasian Snow Cover. <i>Journal of Climate</i> , 2011, 24, 6528-6539.	1.2	68
42	Observed 20th century desert dust variability: impact on climate and biogeochemistry. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 10875-10893.	1.9	355
43	Do biomass burning aerosols intensify drought in equatorial Asia during El Niño? <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 3515-3528.	1.9	87
44	MODIS snow albedo bias at high solar zenith angles relative to theory and to in situ observations in Greenland. <i>Remote Sensing of Environment</i> , 2010, 114, 563-575.	4.6	53
45	Estimated global ocean wind power potential from QuikSCAT observations, accounting for turbine characteristics and siting. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	59
46	Constraining MODIS snow albedo at large solar zenith angles: Implications for the surface energy budget in Greenland. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	10
47	Impacts of atmospheric nutrient inputs on marine biogeochemistry. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	138
48	Desert dust aerosol age characterized by mass- $\delta^{13}C$ age tracking of tracers. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	14
49	Effects of continental-scale snow albedo anomalies on the wintertime Arctic oscillation. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	41
50	Measurement of the specific surface area of snow using infrared reflectance in an integrating sphere at 1310 and 1550 nm. <i>Cryosphere</i> , 2009, 3, 167-182.	1.5	191
51	Efficient clustered server-side data analysis workflows using SWAMP. <i>Earth Science Informatics</i> , 2009, 2, 141-155.	1.6	9
52	Impacts of increasing anthropogenic soluble iron and nitrogen deposition on ocean biogeochemistry. <i>Global Biogeochemical Cycles</i> , 2009, 23, .	1.9	123
53	Global ocean wind power sensitivity to surface layer stability. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	26
54	Springtime warming and reduced snow cover from carbonaceous particles. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 2481-2497.	1.9	492

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55	Analysis of self-describing gridded geoscience data with netCDF Operators (NCO). <i>Environmental Modelling and Software</i> , 2008, 23, 1338-1342.	1.9	121
56	Constraining oceanic dust deposition using surface ocean dissolved Al. <i>Global Biogeochemical Cycles</i> , 2008, 22, .	1.9	83
57	Clustered Workflow Execution of Retargeted Data Analysis Scripts. , 2008, , .		14
58	MEETING SUMMARIES. <i>Bulletin of the American Meteorological Society</i> , 2008, 89, 1905-1920.	1.7	1
59	Observed and CAM3 GCM Sea Surface Wind Speed Distributions: Characterization, Comparison, and Bias Reduction. <i>Journal of Climate</i> , 2008, 21, 6569-6585.	1.2	28
60	Impact of Desert Dust Radiative Forcing on Sahel Precipitation: Relative Importance of Dust Compared to Sea Surface Temperature Variations, Vegetation Changes, and Greenhouse Gas Warming. <i>Journal of Climate</i> , 2007, 20, 1445-1467.	1.2	290
61	Scaling Properties of Common Statistical Operators for Gridded Datasets. <i>International Journal of High Performance Computing Applications</i> , 2007, 21, 485-498.	2.4	7
62	20th-Century Industrial Black Carbon Emissions Altered Arctic Climate Forcing. <i>Science</i> , 2007, 317, 1381-1384.	6.0	562
63	Present-day climate forcing and response from black carbon in snow. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	1,059
64	Effects of atmospheric inorganic nitrogen deposition on ocean biogeochemistry. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	100
65	Role of ammonia chemistry and coarse mode aerosols in global climatological inorganic aerosol distributions. <i>Atmospheric Environment</i> , 2007, 41, 2510-2533.	1.9	31
66	Fluctuations in Climate and Incidence of Coccidioidomycosis in Kern County, California. <i>Annals of the New York Academy of Sciences</i> , 2007, 1111, 73-82.	1.8	35
67	Statistical modeling of valley fever data in Kern County, California. <i>International Journal of Biometeorology</i> , 2007, 51, 307-313.	1.3	21
68	Server-Side Parallel Data Reduction and Analysis. , 2007, , 744-750.		4
69	The Impact of Boreal Forest Fire on Climate Warming. <i>Science</i> , 2006, 314, 1130-1132.	6.0	765
70	Constraining the magnitude of the global dust cycle by minimizing the difference between a model and observations. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	171
71	Change in atmospheric mineral aerosols in response to climate: Last glacial period, preindustrial, modern, and doubled carbon dioxide climates. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	427
72	Linking snowpack microphysics and albedo evolution. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	331

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73	Solar absorption by Mie resonances in cloud droplets. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2006, 98, 122-129.	1.1	17
74	Links between topography, wind, deflation, lakes and dust: The case of the Bodē Depression, Chad. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	176
75	Climate controls on valley fever incidence in Kern County, California. <i>International Journal of Biometeorology</i> , 2006, 50, 174-182.	1.3	54
76	Snowpack radiative heating: Influence on Tibetan Plateau climate. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	128
77	Model simulations of dust sources and transport in the global atmosphere: Effects of soil erodibility and wind speed variability. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	126
78	Regional contrasts in dust emission responses to climate. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	80
79	Roles of saltation, sandblasting, and wind speed variability on mineral dust aerosol size distribution during the Puerto Rican Dust Experiment (PRIDE). <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	78
80	Quantifying mineral dust mass budgets: Terminology, constraints, and current estimates. <i>Eos</i> , 2004, 85, 509-512.	0.1	293
81	Mineral Dust Entrainment and Deposition (DEAD) model: Description and 1990s dust climatology. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	963
82	Interannual variability in atmospheric mineral aerosols from a 22-year model simulation and observational data. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	171
83	Spatial heterogeneity in aeolian erodibility: Uniform, topographic, geomorphic, and hydrologic hypotheses. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	196
84	Mineral dust and global tropospheric chemistry: Relative roles of photolysis and heterogeneous uptake. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	123
85	A monthly and latitudinally varying volcanic forcing dataset in simulations of 20th century climate. <i>Geophysical Research Letters</i> , 2003, 30, .	1.5	296
86	Saltation Sandblasting behavior during mineral dust aerosol production. <i>Geophysical Research Letters</i> , 2002, 29, 15-1-15-4.	1.5	47
87	Understanding the 30-year Barbados desert dust record. <i>Journal of Geophysical Research</i> , 2002, 107, AAC 7-1-AAC 7-16.	3.3	97
88	Simulation of aerosol distributions and radiative forcing for INDOEX: Regional climate impacts. <i>Journal of Geophysical Research</i> , 2002, 107, INX2 27-1.	3.3	88
89	Simulating aerosols using a chemical transport model with assimilation of satellite aerosol retrievals: Methodology for INDOEX. <i>Journal of Geophysical Research</i> , 2001, 106, 7313-7336.	3.3	298
90	Direct radiative forcing and atmospheric absorption by boundary layer aerosols in the southeastern US: model estimates on the basis of new observations. <i>Atmospheric Environment</i> , 2001, 35, 3967-3977.	1.9	32

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91	Absorption of solar radiation by the cloudy atmosphere: Further interpretations of collocated aircraft measurements. <i>Journal of Geophysical Research</i> , 1999, 104, 2059-2066.	3.3	32
92	Global climatology of abundance and solar absorption of oxygen collision complexes. <i>Journal of Geophysical Research</i> , 1999, 104, 24471-24484.	3.3	26
93	Atmospheric absorption during the Atmospheric Radiation Measurement (ARM) Enhanced Shortwave Experiment (ARESE). <i>Journal of Geophysical Research</i> , 1997, 102, 29901-29915.	3.3	77
94	Sensitivity of climate simulations to radiative effects of tropical anvil structure. <i>Journal of Geophysical Research</i> , 1997, 102, 23793-23803.	3.3	17
95	Radiative sensitivities of tropical anvils to small ice crystals. <i>Journal of Geophysical Research</i> , 1994, 99, 25869.	3.3	25