

# Zhaoyan Liu

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9573259/publications.pdf>

Version: 2024-02-01

104  
papers

11,174  
citations

53660

45  
h-index

38300

95  
g-index

128  
all docs

128  
docs citations

128  
times ranked

5800  
citing authors

#	ARTICLE	IF	CITATIONS
1	Overview of the CALIPSO Mission and CALIOP Data Processing Algorithms. Journal of Atmospheric and Oceanic Technology, 2009, 26, 2310-2323.	0.5	1,820
2	The CALIPSO Automated Aerosol Classification and Lidar Ratio Selection Algorithm. Journal of Atmospheric and Oceanic Technology, 2009, 26, 1994-2014.	0.5	820
3	Asian dust transported one full circuit around the globe. Nature Geoscience, 2009, 2, 557-560.	5.4	689
4	Fully Automated Detection of Cloud and Aerosol Layers in the CALIPSO Lidar Measurements. Journal of Atmospheric and Oceanic Technology, 2009, 26, 2034-2050.	0.5	484
5	The CALIPSO Lidar Cloud and Aerosol Discrimination: Version 2 Algorithm and Initial Assessment of Performance. Journal of Atmospheric and Oceanic Technology, 2009, 26, 1198-1213.	0.5	430
6	The global 3-D distribution of tropospheric aerosols as characterized by CALIOP. Atmospheric Chemistry and Physics, 2013, 13, 3345-3361.	1.9	406
7	The CALIPSO version 4 automated aerosol classification and lidar ratio selection algorithm. Atmospheric Measurement Techniques, 2018, 11, 6107-6135.	1.2	334
8	Long-range transport and vertical structure of Asian dust from CALIPSO and surface measurements during PACDEX. Journal of Geophysical Research, 2008, 113, .	3.3	324
9	Summer dust aerosols detected from CALIPSO over the Tibetan Plateau. Geophysical Research Letters, 2007, 34, .	1.5	302
10	Ground-based network observation of Asian dust events of April 1998 in east Asia. Journal of Geophysical Research, 2001, 106, 18345-18359.	3.3	278
11	Fully automated analysis of space-based lidar data: an overview of the CALIPSO retrieval algorithms and data products. , 2004, 5575, 16.		267
12	CALIPSO/CALIOP Cloud Phase Discrimination Algorithm. Journal of Atmospheric and Oceanic Technology, 2009, 26, 2293-2309.	0.5	261
13	Airborne dust distributions over the Tibetan Plateau and surrounding areas derived from the first year of CALIPSO lidar observations. Atmospheric Chemistry and Physics, 2008, 8, 5045-5060.	1.9	256
14	A height resolved global view of dust aerosols from the first year CALIPSO lidar measurements. Journal of Geophysical Research, 2008, 113, .	3.3	225
15	Global view of aerosol vertical distributions from CALIPSO lidar measurements and GOCART simulations: Regional and seasonal variations. Journal of Geophysical Research, 2010, 115, .	3.3	218
16	CALIPSO lidar observations of the optical properties of Saharan dust: A case study of long-range transport. Journal of Geophysical Research, 2008, 113, .	3.3	189
17	Two contrasting dust-dominant periods over India observed from MODIS and CALIPSO data. Geophysical Research Letters, 2009, 36, .	1.5	171
18	The depolarization - attenuated backscatter relation: CALIPSO lidar measurements vs. theory. Optics Express, 2007, 15, 5327.	1.7	167

#	ARTICLE	IF	CITATIONS
19	Extinction-to-backscatter ratio of Asian dust observed with high-spectral-resolution lidar and Raman lidar. <i>Applied Optics</i> , 2002, 41, 2760.	2.1	159
20	Adjoint inversion modeling of Asian dust emission using lidar observations. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 2869-2884.	1.9	157
21	Use of probability distribution functions for discriminating between cloud and aerosol in lidar backscatter data. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	142
22	CALIOP and AERONET aerosol optical depth comparisons: One size fits none. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 4748-4766.	1.2	130
23	On the climate forcing consequences of the albedo continuum between cloudy and clear air. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 59, 715.	0.8	116
24	CALIPSO Lidar Calibration Algorithms. Part I: Nighttime 532-nm Parallel Channel and 532-nm Perpendicular Channel. <i>Journal of Atmospheric and Oceanic Technology</i> , 2009, 26, 2015-2033.	0.5	115
25	Trans-pacific dust transport: integrated analysis of NASA/CALIPSO and a global aerosol transport model. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 3137-3145.	1.9	112
26	Assessment of the CALIPSO Lidar 532 nm attenuated backscatter calibration using the NASA LaRC airborne High Spectral Resolution Lidar. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 1295-1311.	1.9	111
27	Estimating random errors due to shot noise in backscatter lidar observations. <i>Applied Optics</i> , 2006, 45, 4437.	2.1	110
28	3D structure of Asian dust transport revealed by CALIPSO lidar and a 4DVAR dust model. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	104
29	An elevated large-scale dust veil from the Taklimakan Desert: Intercontinental transport and three-dimensional structure as captured by CALIPSO and regional and global models. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 8545-8558.	1.9	95
30	Lidar Measurements for Desert Dust Characterization: An Overview. <i>Advances in Meteorology</i> , 2012, 2012, 1-36.	0.6	88
31	Quantifying above-cloud aerosol using spaceborne lidar for improved understanding of cloudy sky direct climate forcing. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	86
32	Simple relation between lidar multiple scattering and depolarization for water clouds. <i>Optics Letters</i> , 2006, 31, 1809.	1.7	84
33	Discriminating between clouds and aerosols in the CALIOP version 4.1 data products. <i>Atmospheric Measurement Techniques</i> , 2019, 12, 703-734.	1.2	80
34	High-spectral-resolution lidar using an iodine absorption filter for atmospheric measurements. <i>Optical Engineering</i> , 1999, 38, 1661.	0.5	76
35	Detection of dust aerosol by combining CALIPSO active lidar and passive IIR measurements. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 4241-4251.	1.9	73
36	CALIOP observations of the transport of ash from the Eyjafjallajökull volcano in April 2010. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	72

#	ARTICLE	IF	CITATIONS
37	CALIPSO lidar calibration at 532nm: version 4 nighttime algorithm. Atmospheric Measurement Techniques, 2018, 11, 1459-1479.	1.2	70
38	CALIPSO inferred most probable heights of global dust and smoke layers. Journal of Geophysical Research D: Atmospheres, 2015, 120, 5085-5100.	1.2	68
39	Large Asian dust layers continuously reached North America in April 2010. Atmospheric Chemistry and Physics, 2011, 11, 7333-7341.	1.9	65
40	Retrieving Optical Depths and Lidar Ratios for Transparent Layers Above Opaque Water Clouds From CALIPSO Lidar Measurements. IEEE Geoscience and Remote Sensing Letters, 2007, 4, 523-526.	1.4	62
41	Shortwave direct radiative effects of above-cloud aerosols over global oceans derived from 8 years of CALIOP and MODIS observations. Atmospheric Chemistry and Physics, 2016, 16, 2877-2900.	1.9	59
42	On the spectral dependence of backscatter from cirrus clouds: Assessing CALIOP's 1064 nm calibration assumptions using cloud physics lidar measurements. Journal of Geophysical Research, 2010, 115, .	3.3	57
43	Asian dust outflow in the PBL and free atmosphere retrieved by NASA CALIPSO and an assimilated dust transport model. Atmospheric Chemistry and Physics, 2009, 9, 1227-1239.	1.9	56
44	Wintertime pollution over the Eastern Indo-Gangetic Plains as observed from MOPITT, CALIPSO and tropospheric ozone residual data. Atmospheric Chemistry and Physics, 2010, 10, 12273-12283.	1.9	56
45	Comparison of Two Different Cloud Climatologies Derived from CALIOP-Attenuated Backscattered Measurements (Level 1): The CALIPSO-ST and the CALIPSO-GOCCP. Journal of Atmospheric and Oceanic Technology, 2013, 30, 725-744.	0.5	53
46	Evaluation of CALIOP 532 nm aerosol optical depth over opaque water clouds. Atmospheric Chemistry and Physics, 2015, 15, 1265-1288.	1.9	52
47	Simulations of the observation of clouds and aerosols with the Experimental Lidar in Space Equipment system. Applied Optics, 2000, 39, 3120.	2.1	50
48	Effective lidar ratios of dense dust layers over North Africa derived from the CALIOP measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 204-213.	1.1	44
49	Measurements of cirrus cloud backscatter color ratio with a two-wavelength lidar. Applied Optics, 2008, 47, 1478.	2.1	43
50	CALIPSO lidar calibration at 1064nm: version 4 algorithm. Atmospheric Measurement Techniques, 2019, 12, 51-82.	1.2	42
51	Quantifying the low bias of CALIPSO's column aerosol optical depth due to undetected aerosol layers. Journal of Geophysical Research D: Atmospheres, 2017, 122, 1098-1113.	1.2	41
52	Extinction to backscatter ratios of Saharan dust layers derived from in situ measurements and CALIPSO overflights during NAMMA. Journal of Geophysical Research, 2010, 115, .	3.3	40
53	An integrated analysis of aerosol above clouds from A-Train multi-sensor measurements. Remote Sensing of Environment, 2012, 121, 125-131.	4.6	40
54	Summertime trans-Pacific transport of Asian dust. Geophysical Research Letters, 2010, 37, .	1.5	39

#	ARTICLE	IF	CITATIONS
55	Structure of dust and air pollutant outflow over East Asia in the spring. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	37
56	Differential Discrimination Technique for Incoherent Doppler Lidar to Measure Atmospheric Wind and Backscatter Ratio. <i>Optical Review</i> , 1996, 3, 47-52.	1.2	34
57	Transpacific transport and evolution of the optical properties of Asian dust. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013, 116, 24-33.	1.1	34
58	Estimations of global shortwave direct aerosol radiative effects above opaque water clouds using a combination of A-Train satellite sensors. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 4933-4962.	1.9	34
59	For the depolarization of linearly polarized light by smoke particles. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013, 122, 233-237.	1.1	31
60	Cloud temperature measurement using rotational Raman lidar. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2013, 125, 45-50.	1.1	28
61	Seasonal Characteristics of Spherical Aerosol Distribution in Eastern Asia: Integrated Analysis Using Ground/Space-Based Lidars and a Chemical Transport Model. <i>Scientific Online Letters on the Atmosphere</i> , 2011, 7, 121-124.	0.6	27
62	Effect of CALIPSO cloudâ€‘aerosol discrimination (CAD) confidence levels on observations of aerosol properties near clouds. <i>Atmospheric Research</i> , 2012, 116, 134-141.	1.8	25
63	Latitudinal distribution of aerosols and clouds in the western Pacific observed with a lidar on board the Research Vessel Mirai. <i>Geophysical Research Letters</i> , 2001, 28, 4187-4190.	1.5	22
64	Simulation study for cloud detection with space lidars by use of analog detection photomultiplier tubes. <i>Applied Optics</i> , 2002, 41, 1750.	2.1	22
65	Deriving Marine-Boundary-Layer Lapse Rate from Collocated CALIPSO, MODIS, and AMSR-E Data to Study Global Low-Cloud Height Statistics. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2008, 5, 649-652.	1.4	22
66	CALIPSO lidar ratio retrieval over the ocean. <i>Optics Express</i> , 2011, 19, 18696.	1.7	22
67	Determination of aerosol extinction-to-backscatter ratios from simultaneous ground-based and spaceborne lidar measurements. <i>Optics Letters</i> , 2008, 33, 2986.	1.7	20
68	Modulation of Cloud Droplets and Radiation over the North Pacific by Sulfate Aerosol Erupted from Mount Kilauea. <i>Scientific Online Letters on the Atmosphere</i> , 2011, 7, 77-80.	0.6	20
69	Evaluations of cirrus contamination and screening in ground aerosol observations using collocated lidar systems. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	18
70	Retrieval of multi-wavelength aerosol lidar ratio profiles using Raman scattering and Mie backscattering signals. <i>Atmospheric Environment</i> , 2013, 79, 36-40.	1.9	17
71	Detection of pollution outflow from Mexico City using CALIPSO lidar measurements. <i>Remote Sensing of Environment</i> , 2015, 169, 205-211.	4.6	17
72	The impact of ice cloud particle microphysics on the uncertainty of ice water content retrievals. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2011, 112, 189-196.	1.1	16

#	ARTICLE	IF	CITATIONS
73	On the consistency of CERES longwave flux and AIRS temperature and humidity profiles. Journal of Geophysical Research, 2011, 116, .	3.3	15
74	A New Technique Using Infrared Satellite Measurements to Improve the Accuracy of the CALIPSO Cloud-Aerosol Discrimination Method. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 642-653.	2.7	15
75	Airborne lidar observations of wind, water vapor, and aerosol profiles during the NASA Aeolus calibration and validation (Cal/Val) test flight campaign. Atmospheric Measurement Techniques, 2021, 14, 4305-4334.	1.2	15
76	Observations of Arctic snow and sea ice cover from CALIOP lidar measurements. Remote Sensing of Environment, 2017, 194, 248-263.	4.6	13
77	Laser pulse bidirectional reflectance from CALIPSO mission. Atmospheric Measurement Techniques, 2018, 11, 3281-3296.	1.2	13
78	Swelling of transported smoke from savanna fires over the Southeast Atlantic Ocean. Remote Sensing of Environment, 2018, 211, 105-111.	4.6	12
79	Application of high-dimensional fuzzy &lt;i>k&lt;/i>-means cluster analysis to CALIOP/CALIPSO version 4.1 cloud&lt;i>â&lt;/i> aerosol discrimination. Atmospheric Measurement Techniques, 2019, 12, 2261-2285.	1.2	12
80	Validating Lidar Depolarization Calibration Using Solar Radiation Scattered by Ice Clouds. IEEE Geoscience and Remote Sensing Letters, 2004, 1, 157-161.	1.4	10
81	Summertime Taklimakan dust structure. Geophysical Research Letters, 2008, 35, .	1.5	9
82	Obtaining a ground-based lidar geometric form factor using coincident spaceborne lidar measurements. Applied Optics, 2010, 49, 108.	2.1	9
83	A Super-Resolution Laser Altimetry Concept. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 298-302.	1.4	8
84	Ocean Lidar Measurements of Beam Attenuation and a Roadmap to Accurate Phytoplankton Biomass Estimates. EPJ Web of Conferences, 2016, 119, 22003.	0.1	8
85	Use of spaceborne lidar for the evaluation of thin cirrus contamination and screening in the Aqua MODIS Collection 5 aerosol products. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6444-6453.	1.2	7
86	CALIOP receiver transient response study. , 2013, , .		6
87	Multiple scattering simulations for the Japanese space lidar project ELISE. IEEE Transactions on Geoscience and Remote Sensing, 2002, 40, 550-559.	2.7	5
88	Transmittance ratio constrained retrieval technique for lidar cirrus measurements. Optics Letters, 2012, 37, 1595.	1.7	5
89	Two-dimensional and multi-channel feature detection algorithm for the CALIPSO lidar measurements. Atmospheric Measurement Techniques, 2021, 14, 1593-1613.	1.2	5
90	High-spectral-resolution lidar measurements of aerosols, clouds, and temperature at NIES. , 1998, 3504, 558.		3

#	ARTICLE	IF	CITATIONS
91	Is Oklahoma getting drier?. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 122, 208-213.	1.1	3
92	Wave-front matching measurement in coherent CO <sub>2</sub> laser-radar. Applied Optics, 1992, 31, 7647.	2.1	2
93	<title>Inversion algorithms for space lidar observation of clouds and aerosols</title>. , 1998, 3494, 296.		2
94	The CALIPSO Mission: results and progress. Proceedings of SPIE, 2010, , .	0.8	2
95	Simulation of coherent Doppler wind lidar measurement from space based on CALIPSO lidar global aerosol observations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 122, 79-86.	1.1	2
96	Cloud-Aerosol Interactions: Retrieving Aerosol Å...ngstrÅ¶m Exponents from Calipso Measurements of Opaque Water Clouds. EPJ Web of Conferences, 2016, 119, 11001.	0.1	2
97	Martian Atmospheric CO <sub>2</sub> and Pressure Profiling With Differential Absorption Lidar: System Consideration and Simulation Results. Earth and Space Science, 2021, 8, e2020EA001600.	1.1	2
98	Assessing the benefits of Imaging Infrared Radiometer observations for the CALIOP version 4 cloud and aerosol discrimination algorithm. Atmospheric Measurement Techniques, 2022, 15, 1931-1956.	1.2	2
99	Cloud and aerosol observation planned with the space-borne lidar "ELISE" and the ATMOS-B1/ERM lidar. , 0, , .		1
100	Aerosol Optical Properties Above Opaque Water Clouds Derived From The Caliop Version 4 Level 1 Data. EPJ Web of Conferences, 2016, 119, 04010.	0.1	1
101	Influence of system parameters on multiple scattering in spaceborne lidar measurements. , 2001, 4153, 631.		0
102	Science applications of the multi-FOV lidar for ATMOS-B1/ERM. , 2001, 4153, 399.		0
103	Observation of aerosols and clouds in the western tropical Pacific using a two-wavelength polarization lidar on the research vessel Mirai. , 2001, 4153, 234.		0
104	Data reduction methods for space lidar observation of clouds and aerosols. , 2001, 4153, 647.		0