

Chuntao Liu

List of Publications by Year in descending order

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80
papers

4,154
citations

159585

30
h-index

118850

62
g-index

82
all docs

82
docs citations

82
times ranked

3115
citing authors

#	ARTICLE	IF	CITATIONS
1	WHERE ARE THE MOST INTENSE THUNDERSTORMS ON EARTH?. Bulletin of the American Meteorological Society, 2006, 87, 1057-1072.	3.3	764
2	A Cloud and Precipitation Feature Database from Nine Years of TRMM Observations. Journal of Applied Meteorology and Climatology, 2008, 47, 2712-2728.	1.5	317
3	Global distribution of convection penetrating the tropical tropopause. Journal of Geophysical Research, 2005, 110, .	3.3	305
4	Global Distribution of Tropical Deep Convection: Different Perspectives from TRMM Infrared and Radar Data. Journal of Climate, 2007, 20, 489-503.	3.2	206
5	Weak linkage between the heaviest rainfall and tallest storms. Nature Communications, 2015, 6, 6213.	12.8	143
6	The global distribution of largest, deepest, and most intense precipitation systems. Geophysical Research Letters, 2015, 42, 3591-3595.	4.0	136
7	Diurnal cycles of precipitation, clouds, and lightning in the tropics from 9 years of TRMM observations. Geophysical Research Letters, 2008, 35, .	4.0	129
8	“Warm Rain” in the Tropics: Seasonal and Regional Distributions Based on 9 yr of TRMM Data. Journal of Climate, 2009, 22, 767-779.	3.2	122
9	Rainfall Characteristics and Convective Properties of Mei-Yu Precipitation Systems over South China, Taiwan, and the South China Sea. Part I: TRMM Observations. Monthly Weather Review, 2009, 137, 4261-4275.	1.4	105
10	An Orography-Associated Extreme Rainfall Event during TIMREX: Initiation, Storm Evolution, and Maintenance. Monthly Weather Review, 2012, 140, 2555-2574.	1.4	100
11	Status of the TRMM 2A12 Land Precipitation Algorithm. Journal of Atmospheric and Oceanic Technology, 2010, 27, 1343-1354.	1.3	98
12	A TRMM-Based Tropical Cyclone Cloud and Precipitation Feature Database. Journal of Applied Meteorology and Climatology, 2011, 50, 1255-1274.	1.5	98
13	An Evaluation of Microwave Land Surface Emissivities Over the Continental United States to Benefit GPM-Era Precipitation Algorithms. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 378-398.	6.3	95
14	Diurnal Variations of Global Thunderstorms and Electrified Shower Clouds and Their Contribution to the Global Electrical Circuit. Journals of the Atmospheric Sciences, 2010, 67, 309-323.	1.7	92
15	Relationships between lightning flash rates and radar reflectivity vertical structures in thunderstorms over the tropics and subtropics. Journal of Geophysical Research, 2012, 117, .	3.3	83
16	TRMM 2A12 Land Precipitation Product - Status and Future Plans. Journal of the Meteorological Society of Japan, 2009, 87A, 237-253.	1.8	79
17	Global distribution of deep convection reaching tropopause in 1‰year GPM observations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 3824-3842.	3.3	75
18	Rainfall Contributions from Precipitation Systems with Different Sizes, Convective Intensities, and Durations over the Tropics and Subtropics. Journal of Hydrometeorology, 2011, 12, 394-412.	1.9	65

#	ARTICLE	IF	CITATIONS
19	Regional variation of morphology of organized convection in the tropics and subtropics. Journal of Geophysical Research D: Atmospheres, 2013, 118, 453-466.	3.3	53
20	Why does radar reflectivity tend to increase downward toward the ocean surface, but decrease downward toward the land surface?. Journal of Geophysical Research D: Atmospheres, 2013, 118, 135-148.	3.3	52
21	On the diurnal cycle of deep convection, high-level cloud, and upper troposphere water vapor in the Multiscale Modeling Framework. Journal of Geophysical Research, 2008, 113, .	3.3	50
22	The properties of optical lightning flashes and the clouds they illuminate. Journal of Geophysical Research D: Atmospheres, 2017, 122, 423-442.	3.3	50
23	An Investigation of the Aerosol Indirect Effect on Convective Intensity Using Satellite Observations. Journals of the Atmospheric Sciences, 2014, 71, 430-447.	1.7	44
24	How do the water vapor and carbon monoxide "tape recorders" start near the tropical tropopause?. Geophysical Research Letters, 2007, 34, .	4.0	40
25	Improving a spectral bin microphysical scheme using TRMM satellite observations. Quarterly Journal of the Royal Meteorological Society, 2010, 136, 382-399.	2.7	40
26	On the Detection of Hail Using Satellite Passive Microwave Radiometers and Precipitation Radar. Journal of Applied Meteorology and Climatology, 2017, 56, 2693-2709.	1.5	40
27	Latent Heating Contribution from Precipitation Systems with Different Sizes, Depths, and Intensities in the Tropics. Journal of Climate, 2015, 28, 186-203.	3.2	39
28	Global Distribution of Snow Precipitation Features and Their Properties from 3 Years of GPM Observations. Journal of Climate, 2018, 31, 3731-3754.	3.2	39
29	On the relationships between lightning frequency and thundercloud parameters of regional precipitation systems. Journal of Geophysical Research, 2010, 115, .	3.3	34
30	Contributions of the Liquid and Ice Phases to Global Surface Precipitation: Observations and Global Climate Modeling. Journals of the Atmospheric Sciences, 2020, 77, 2629-2648.	1.7	34
31	Characteristics of lightning flashes with exceptional illuminated areas, durations, and optical powers and surrounding storm properties in the tropics and inner subtropics. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,727.	3.3	33
32	Implications of the differences between daytime and nighttime CloudSat observations over the tropics. Journal of Geophysical Research, 2008, 113, .	3.3	31
33	Relationships between lightning flash rates and passive microwave brightness temperatures at 85 and 37 GHz over the tropics and subtropics. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	27
34	Differences between the Surface Precipitation Estimates from the TRMM Precipitation Radar and Passive Microwave Radiometer Version 7 Products. Journal of Hydrometeorology, 2014, 15, 2157-2175.	1.9	27
35	Global statistics of lightning in anvil and stratiform regions over the tropics and subtropics observed by the Tropical Rainfall Measuring Mission. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	26
36	A climatology of tropical congestus using CloudSat. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6478-6492.	3.3	24

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37	Geographical and seasonal distribution of tropical tropopause thin clouds and their relation to deep convection and water vapor viewed from satellite measurements. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	22
38	The Effects of Deep Convection on Regional Temperature Structure in the Tropical Upper Troposphere and Lower Stratosphere. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 1585-1603.	3.3	22
39	Implications of the day versus night differences of water vapor, carbon monoxide, and thin cloud observations near the tropical tropopause. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	20
40	What Are the Favorable Large-Scale Environments for the Highest-Flash-Rate Thunderstorms on Earth?. <i>Journals of the Atmospheric Sciences</i> , 2020, 77, 1583-1612.	1.7	20
41	How Does the Trend in Thunder Days Relate to the Variation of Lightning Flash Density?. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 4955-4974.	3.3	19
42	Decreased hail size in China since 1980. <i>Scientific Reports</i> , 2017, 7, 10913.	3.3	17
43	Climatology and Detection of Overshooting Convection From 4 Years of GPM Precipitation Radar and Passive Microwave Observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD032003.	3.3	17
44	Synoptic Environments and Characteristics of Convection Reaching the Tropopause over Northeast China. <i>Monthly Weather Review</i> , 2018, 146, 745-759.	1.4	16
45	TRMM-Observed Shallow versus Deep Convection in the Eastern Pacific Related to Large-Scale Circulations in Reanalysis Datasets. <i>Journal of Climate</i> , 2014, 27, 5575-5592.	3.2	15
46	A TRMM/GPM retrieval of the total mean generator current for the global electric circuit. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 10,025.	3.3	15
47	Ice Microphysical Properties near the Tops of Deep Convective Cores Implied by the GPM Dual-Frequency Radar Observations. <i>Journals of the Atmospheric Sciences</i> , 2019, 76, 2899-2917.	1.7	15
48	Geographical Distribution of Thundersnow Events and Their Properties From GPM Ku-Band Radar. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 2031-2048.	3.3	15
49	Rain characteristics and large-scale environments of precipitation objects with extreme rain volumes from TRMM observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 9673-9689.	3.3	14
50	Relationships between Large Precipitating Systems and Atmospheric Factors at a Grid Scale. <i>Journals of the Atmospheric Sciences</i> , 2017, 74, 531-552.	1.7	14
51	A Multiyear Analysis of Global Precipitation Combining CloudSat and GPM Precipitation Retrievals. <i>Journal of Hydrometeorology</i> , 2018, 19, 1935-1952.	1.9	14
52	Uncertainties of GPM Microwave Imager Precipitation Estimates Related to Precipitation System Size and Intensity. <i>Journal of Hydrometeorology</i> , 2019, 20, 1907-1923.	1.9	13
53	Warm Organized Rain Systems over the Tropical Eastern Pacific. <i>Journal of Climate</i> , 2016, 29, 3403-3422.	3.2	12
54	A Regional Climatology of Monsoonal Precipitation in the Southwestern United States Using TRMM. <i>Journal of Hydrometeorology</i> , 2012, 13, 310-323.	1.9	11

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55	A Method of Estimating Electric Fields above Electrified Clouds from Passive Microwave Observations. <i>Journal of Atmospheric and Oceanic Technology</i> , 2015, 32, 1429-1446.	1.3	11
56	The Relationship between the ITCZ and MJO Initiation over the Indian Ocean. <i>Journals of the Atmospheric Sciences</i> , 2019, 76, 2275-2294.	1.7	10
57	Properties of hail storms over China and the United States from the Tropical Rainfall Measuring Mission. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 12031-12044.	3.3	9
58	Parameterizing total storm conduction currents in the Community Earth System Model. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 13,715.	3.3	9
59	Relationship between the global electric circuit and electrified cloud parameters at diurnal, seasonal, and interannual timescales. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 8525-8542.	3.3	9
60	Evolution of Precipitation Structure During the November DYNAMO MJO Event: Cloud-Resolving Model Intercomparison and Cross Validation Using Radar Observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 3530-3555.	3.3	9
61	Remote Sensing Properties of Freezing Rain Events From Space. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 10385-10400.	3.3	9
62	Differences in the Diurnal Variation of Precipitation Estimated by Spaceborne Radar, Passive Microwave Radiometer, and IMERG. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033020.	3.3	9
63	Extreme Convection vs. Extreme Rainfall: a Global View. <i>Current Climate Change Reports</i> , 2021, 7, 121-130.	8.6	9
64	A TRMM Assessment of the Composition of the Generator Current That Supplies the Global Electric Circuit. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 8208-8220.	3.3	7
65	Intra-seasonal and seasonal variability of convective properties of monsoon precipitation systems over West and Central Africa. <i>Theoretical and Applied Climatology</i> , 2019, 137, 1715-1728.	2.8	7
66	A 4-Year Climatological Analysis Based on GPM Observations of Deep Convective Events in the Mediterranean Region. <i>Remote Sensing</i> , 2021, 13, 1685.	4.0	7
67	Observational Validation of Parameterized Gravity Waves From Tropical Convection in the Whole Atmosphere Community Climate Model. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033954.	3.3	7
68	Properties of Mesoscale Convective Systems Throughout Their Lifetimes Using IMERG, GPM, WWLLN, and a Simplified Tracking Algorithm. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD035264.	3.3	7
69	The El Niño Southern Oscillation effect on tropical outgoing longwave radiation: A daytime versus nighttime perspective. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 7820-7833.	3.3	6
70	The Variation of the Intensity, Height, and Size of Precipitation Systems with El Niño Southern Oscillation in the Tropics and Subtropics. <i>Journal of Climate</i> , 2019, 32, 4281-4297.	3.2	6
71	Comparison of Lightning Detection Between the FY-4A Lightning Mapping Imager and the ISS Lightning Imaging Sensor. <i>Earth and Space Science</i> , 2021, 8, e2020EA001099.	2.6	5
72	Validity of Global Fog Day Trends Indicated by the Global Surface Summary of the Day (GSOD) Data Set. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	3.3	5

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73	Relationship Between Lightning, Precipitation, and Environmental Characteristics at Mid-High Latitudes From a GLM and GPM Perspective. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	3.3	5
74	Severe weather in a warming climate. <i>Nature</i> , 2017, 544, 422-423.	27.8	4
75	Retrieving Global Wilson Currents from Electrified Clouds Using Satellite Passive Microwave Observations. <i>Journal of Atmospheric and Oceanic Technology</i> , 2018, 35, 1487-1503.	1.3	4
76	A Bayesian-Like Approach to Describe the Regional Variation of High-Frequency Flash Rate Thunderstorms From Thermodynamic and Kinematic Environment Variables. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 12507-12522.	3.3	4
77	Using Deep Learning and Machine Learning Methods to Diagnose Hailstorms in Large-Scale Thermodynamic Environments. <i>Sustainability</i> , 2020, 12, 10499.	3.2	4
78	Observations from the one year electric field Study-North Slope of Alaska (OYES-NSA) field campaign, and their implications for observing the distribution of global electrified cloud activity. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2021, 214, 105528.	1.6	3
79	Using TRMM Latent Heat as a Source to Estimate Convection Induced Gravity Wave Momentum Flux in the Lower Stratosphere. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, e2021JD035785.	3.3	3
80	Relationships between Extratropical Precipitation Systems and UTLS Temperatures and Tropopause Height from GPM and GPS-RO. <i>Atmosphere</i> , 2022, 13, 196.	2.3	0