Chuntao Liu

List of Publications by Year
in descending order

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	Using TRMM Latent Heat as a Source to Estimate Convection Induced Gravity Wave Momentum Flux in the Lower Stratosphere. Journal of Geophysical Research D: Atmospheres, 2022, 127, e2021JD035785.	3.3	3
2	Relationships between Extratropical Precipitation Systems and UTLS Temperatures and Tropopause Height from GPM and GPS-RO. Atmosphere, 2022, 13, 196.	2.3	0
3	Validity of Global Fogâ€Đay Trends Indicated by the Global Surface Summary of the Day (GSOD) Data Set. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	5
4	Relationship Between Lightning, Precipitation, and Environmental Characteristics at Midâ€ŀHigh Latitudes From a GLM and GPM Perspective. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	5
5	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. Journal of Atmospheric and Solar-Terrestrial Physics, 2021, 214, 105528.	1.6	3
6	A 4-Year Climatological Analysis Based on GPM Observations of Deep Convective Events in the Mediterranean Region. Remote Sensing, 2021, 13, 1685.	4.0	7
7	Observational Validation of Parameterized Gravity Waves From Tropical Convection in the Whole Atmosphere Community Climate Model. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033954.	3.3	7
8	Differences in the Diurnal Variation of Precipitation Estimated by Spaceborne Radar, Passive Microwave Radiometer, and IMERG. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033020.	3.3	9
9	Comparison of Lightning Detection Between the FYâ€4A Lightning Mapping Imager and the ISS Lightning Imaging Sensor. Earth and Space Science, 2021, 8, e2020EA001099.	2.6	5
10	Properties of Mesoscale Convective Systems Throughout Their Lifetimes Using IMERG, GPM, WWLLN, and a Simplified Tracking Algorithm. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035264.	3.3	7
11	Extreme Convection vs. Extreme Rainfall: a Global View. Current Climate Change Reports, 2021, 7, 121-130.	8.6	9
12	Using Deep Learning and Machine Learning Methods to Diagnose Hailstorms in Large-Scale Thermodynamic Environments. Sustainability, 2020, 12, 10499.	3.2	4
13	What Are the Favorable Large-Scale Environments for the Highest-Flash-Rate Thunderstorms on Earth?. Journals of the Atmospheric Sciences, 2020, 77, 1583-1612.	1.7	20
14	Climatology and Detection of Overshooting Convection From 4ÂYears of GPM Precipitation Radar and Passive Microwave Observations. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032003.	3.3	17
15	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
16	Ice Microphysical Properties near the Tops of Deep Convective Cores Implied by the GPM Dual-Frequency Radar Observations. Journals of the Atmospheric Sciences, 2019, 76, 2899-2917.	1.7	15
17	Uncertainties of GPM Microwave Imager Precipitation Estimates Related to Precipitation System Size and Intensity. Journal of Hydrometeorology, 2019, 20, 1907-1923.	1.9	13
18	Remote Sensing Properties of Freezing Rain Events From Space. Journal of Geophysical Research D: Atmospheres, 2019, 124, 10385-10400.	3.3	9

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19	The Relationship between the ITCZ and MJO Initiation over the Indian Ocean. Journals of the Atmospheric Sciences, 2019, 76, 2275-2294.	1.7	10
20	The Variation of the Intensity, Height, and Size of Precipitation Systems with El NiÃ±oâ€“Southern Oscillation in the Tropics and Subtropics. Journal of Climate, 2019, 32, 4281-4297.	3.2	6
21	How Does the Trend in Thunder Days Relate to the Variation of Lightning Flash Density?. Journal of Geophysical Research D: Atmospheres, 2019, 124, 4955-4974.	3.3	19
22	Geographical Distribution of Thundersnow Events and Their Properties From GPM Kuâ€Band Radar. Journal of Geophysical Research D: Atmospheres, 2019, 124, 2031-2048.	3.3	15
23	A Bayesianâ€Like Approach to Describe the Regional Variation of Highâ€Flash Rate Thunderstorms From Thermodynamic and Kinematic Environment Variables. Journal of Geophysical Research D: Atmospheres, 2019, 124, 12507-12522.	3.3	4
24	Intra-seasonal and seasonal variability of convective properties of monsoon precipitation systems over West and Central Africa. Theoretical and Applied Climatology, 2019, 137, 1715-1728.	2.8	7
25	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
26	The Effects of Deep Convection on Regional Temperature Structure in the Tropical Upper Troposphere and Lower Stratosphere. Journal of Geophysical Research D: Atmospheres, 2018, 123, 1585-1603.	3.3	22
27	Evolution of Precipitation Structure During the November DYNAMO MJO Event: Cloudâ€Resolving Model Intercomparison and Cross Validation Using Radar Observations. Journal of Geophysical Research D: Atmospheres, 2018, 123, 3530-3555.	3.3	9
28	A Multiyear Analysis of Global Precipitation Combining CloudSat and GPM Precipitation Retrievals. Journal of Hydrometeorology, 2018, 19, 1935-1952.	1.9	14
29	Retrieving Global Wilson Currents from Electrified Clouds Using Satellite Passive Microwave Observations. Journal of Atmospheric and Oceanic Technology, 2018, 35, 1487-1503.	1.3	4
30	A TRMM Assessment of the Composition of the Generator Current That Supplies the Global Electric Circuit. Journal of Geophysical Research D: Atmospheres, 2018, 123, 8208-8220.	3.3	7
31	Synoptic Environments and Characteristics of Convection Reaching the Tropopause over Northeast China. Monthly Weather Review, 2018, 146, 745-759.	1.4	16
32	The properties of optical lightning flashes and the clouds they illuminate. Journal of Geophysical Research D: Atmospheres, 2017, 122, 423-442.	3.3	50
33	Severe weather in a warming climate. Nature, 2017, 544, 422-423.	27.8	4
34	Relationship between the global electric circuit and electrified cloud parameters at diurnal, seasonal, and interannual timescales. Journal of Geophysical Research D: Atmospheres, 2017, 122, 8525-8542.	3.3	9
35	Decreased hail size in China since 1980. Scientific Reports, 2017, 7, 10913.	3.3	17
36	A TRMM/GPM retrieval of the total mean generator current for the global electric circuit. Journal of Geophysical Research D: Atmospheres, 2017, 122, 10,025.	3.3	15

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37	The El NiÃ±oâ€“Southern Oscillation effect on tropical outgoing longwave radiation: A daytime versus nighttime perspective. Journal of Geophysical Research D: Atmospheres, 2017, 122, 7820-7833.	3.3	6
38	Relationships between Large Precipitating Systems and Atmospheric Factors at a Grid Scale. Journals of the Atmospheric Sciences, 2017, 74, 531-552.	1.7	14
39	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
40	Warm Organized Rain Systems over the Tropical Eastern Pacific. Journal of Climate, 2016, 29, 3403-3422.	3.2	12
41	Global distribution of deep convection reaching tropopause in 1â€‰year GPM observations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 3824-3842.	3.3	75
42	Properties of hail storms over China and the United States from the Tropical Rainfall Measuring Mission. Journal of Geophysical Research D: Atmospheres, 2016, 121, 12031-12044.	3.3	9
43	Parameterizing total storm conduction currents in the Community Earth System Model. Journal of Geophysical Research D: Atmospheres, 2016, 121, 13,715.	3.3	9
44	Weak linkage between the heaviest rainfall and tallest storms. Nature Communications, 2015, 6, 6213.	12.8	143
45	The global distribution of largest, deepest, and most intense precipitation systems. Geophysical Research Letters, 2015, 42, 3591-3595.	4.0	136
46	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
47	A Method of Estimating Electric Fields above Electrified Clouds from Passive Microwave Observations. Journal of Atmospheric and Oceanic Technology, 2015, 32, 1429-1446.	1.3	11
48	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
49	TRMM-Observed Shallow versus Deep Convection in the Eastern Pacific Related to Large-Scale Circulations in Reanalysis Datasets. Journal of Climate, 2014, 27, 5575-5592.	3.2	15
50	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
51	Rain characteristics and largeâ€scale environments of precipitation objects with extreme rain volumes from TRMM observations. Journal of Geophysical Research D: Atmospheres, 2013, 118, 9673-9689.	3.3	14
52	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
53	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
54	A climatology of tropical congestus using CloudSat. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6478-6492.	3.3	24

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55	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
56	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
57	A Regional Climatology of Monsoonal Precipitation in the Southwestern United States Using TRMM. Journal of Hydrometeorology, 2012, 13, 310-323.	1.9	11
58	An Orography-Associated Extreme Rainfall Event during TiMREX: Initiation, Storm Evolution, and Maintenance. Monthly Weather Review, 2012, 140, 2555-2574.	1.4	100
59	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
60	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
61	A TRMM-Based Tropical Cyclone Cloud and Precipitation Feature Database. Journal of Applied Meteorology and Climatology, 2011, 50, 1255-1274.	1.5	98
62	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
63	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
64	Improving a spectral bin microphysical scheme using TRMM satellite observations. Quarterly Journal of the Royal Meteorological Society, 2010, 136, 382-399.	2.7	40
65	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
66	Status of the TRMM 2A12 Land Precipitation Algorithm. Journal of Atmospheric and Oceanic Technology, 2010, 27, 1343-1354.	1.3	98
67	On the relationships between lightning frequency and thundercloud parameters of regional precipitation systems. Journal of Geophysical Research, 2010, 115, .	3.3	34
68	â€œWarm Rainâ€•in the Tropics: Seasonal and Regional Distributions Based on 9 yr of TRMM Data. Journal of Climate, 2009, 22, 767-779.	3.2	122
69	TRMM 2A12 Land Precipitation Product - Status and Future Plans. Journal of the Meteorological Society of Japan, 2009, 87A, 237-253.	1.8	79
70	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
71	Implications of the day versus night differences of water vapor, carbon monoxide, and thin cloud observations near the tropical tropopause. Journal of Geophysical Research, 2009, 114, .	3.3	20
72	Diurnal cycles of precipitation, clouds, and lightning in the tropics from 9 years of TRMM observations. Geophysical Research Letters, 2008, 35, .	4.0	129

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73	Implications of the differences between daytime and nighttime CloudSat observations over the tropics. Journal of Geophysical Research, 2008, 113, .	3.3	31
74	On the diurnal cycle of deep convection, highâ€level cloud, and upper troposphere water vapor in the Multiscale Modeling Framework. Journal of Geophysical Research, 2008, 113, .	3.3	50
75	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
76	Global Distribution of Tropical Deep Convection: Different Perspectives from TRMM Infrared and Radar Data. Journal of Climate, 2007, 20, 489-503.	3.2	206
77	How do the water vapor and carbon monoxide â€œtape recordersâ€•start near the tropical tropopause?. Geophysical Research Letters, 2007, 34, .	4.0	40
78	Geographical and seasonal distribution of tropical tropopause thin clouds and their relation to deep convection and water vapor viewed from satellite measurements. Journal of Geophysical Research, 2007, 112, .	3.3	22
79	WHERE ARE THE MOST INTENSE THUNDERSTORMS ON EARTH?. Bulletin of the American Meteorological Society, 2006, 87, 1057-1072.	3.3	764
80	Global distribution of convection penetrating the tropical tropopause. Journal of Geophysical Research, 2005, 110, .	3.3	305