Steven Ackerman

List of Publications by Year
in descending order

133 papers	11,994 citations	44069 48 h-index	27406 106 g-index
134 all docs	134 docs citations	134 times ranked	7842 citing authors

#	Article	IF	Citations
1	The MODIS cloud products: algorithms and examples from terra. IEEE Transactions on Geoscience and Remote Sensing, 2003, 41, 459-473.	6.3	1,497
2	Discriminating clear sky from clouds with MODIS. Journal of Geophysical Research, 1998, 103, 32141-32157.	3.3	1,002
3	The CALIPSO Mission. Bulletin of the American Meteorological Society, 2010, 91, 1211-1230.	3.3	847
4	Cloud and aerosol properties, precipitable water, and profiles of temperature and water vapor from MODIS. IEEE Transactions on Geoscience and Remote Sensing, 2003, 41, 442-458.	6.3	838
5	The MODIS Cloud Optical and Microphysical Products: Collection 6 Updates and Examples From Terra and Aqua. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 502-525.	6.3	489
6	Spatial and Temporal Distribution of Clouds Observed by MODIS Onboard the Terra and Aqua Satellites. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 3826-3852.	6.3	441
7	Assessment of Global Cloud Datasets from Satellites: Project and Database Initiated by the GEWEX Radiation Panel. Bulletin of the American Meteorological Society, 2013, 94, 1031-1049.	3.3	437
8	Cloud Detection with MODIS. Part I: Improvements in the MODIS Cloud Mask for Collection 5. Journal of Atmospheric and Oceanic Technology, 2008, 25, 1057-1072.	1.3	346
9	Cloud Detection with MODIS. Part II: Validation. Journal of Atmospheric and Oceanic Technology, 2008, 25, 1073-1086.	1.3	344
10	Remote sensing aerosols using satellite infrared observations. Journal of Geophysical Research, 1997, 102, 17069-17079.	3.3	341
11	MODIS Global Cloud-Top Pressure and Amount Estimation: Algorithm Description and Results. Journal of Applied Meteorology and Climatology, 2008, 47, 1175-1198.	1.5	256
12	Reconciling Simulated and Observed Views of Clouds: MODIS, ISCCP, and the Limits of Instrument Simulators. Journal of Climate, 2012, 25, 4699-4720.	3.2	256
13	Cloud Properties inferred from 8Â–12-Âµm Data. Journal of Applied Meteorology and Climatology, 1994, 33, 212-229.	1.7	244
14	Global Moderate Resolution Imaging Spectroradiometer (MODIS) cloud detection and height evaluation using CALIOP. Journal of Geophysical Research, 2008, 113, .	3.3	227
15	MODIS Cloud-Top Property Refinements for Collection 6. Journal of Applied Meteorology and Climatology, 2012, 51, 1145-1163.	1.5	192
16	Remote sensing of cloud properties using MODIS airborne simulator imagery during SUCCESS: 2. Cloud thermodynamic phase. Journal of Geophysical Research, 2000, 105, 11781-11792.	3.3	157
17	Remote Sensing of Liquid Water and Ice Cloud Optical Thickness and Effective Radius in the Arctic: Application of Airborne Multispectral MAS Data. Journal of Atmospheric and Oceanic Technology, 2004, 21, 857-875.	1.3	157
18	The 27â€“28 October 1986 FIRE IFO Cirrus Case Study: Spectral Properties of Cirrus Clouds in the 8â€“12 Î¼m Window. Monthly Weather Review, 1990, 118, 2377-2388.	1.4	143

#	Article	IF	Citations
19	State of the Climate in 2016. Bulletin of the American Meteorological Society, 2017, 98, Si-S280.	3.3	132
20	State of the Climate in 2012. Bulletin of the American Meteorological Society, 2013, 94, S1-S258.	3.3	129
21	State of the Climate in 2011. Bulletin of the American Meteorological Society, 2012, 93, S1-S282.	3.3	121
22	A Shortwave Parameterization Revised to Improve Cloud Absorption. Journals of the Atmospheric Sciences, 1984, 41, 687-690.	1.7	120
23	Single-scattering properties of droxtals. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 79-80, 1159-1169.	2.3	115
24	Radiative Effects of Airborne Dust on Regional Energy Budgets at the Top of the Atmosphere. Journal of Applied Meteorology and Climatology, 1992, 31, 223-233.	1.7	112
25	Global Satellite Observations of Negative Brightness Temperature Differences between 11 and 6.7 Âµm. Journals of the Atmospheric Sciences, 1996, 53, 2803-2812.	1.7	111
26	Using the radiative temperature difference at 3.7 and 11 Î¼m to tract dust outbreaks. Remote Sensing of Environment, 1989, 27, 129-133.	11.0	102
27	Nighttime polar cloud detection with MODIS. Remote Sensing of Environment, 2004, 92, 181-194.	11.0	99
28	Viewing Geometry Dependencies in MODIS Cloud Products. Journal of Atmospheric and Oceanic Technology, 2010, 27, 1519-1528.	1.3	93
29	Errors in Cloud Detection over the Arctic Using a Satellite Imager and Implications for Observing Feedback Mechanisms. Journal of Climate, 2010, 23, 1894-1907.	3.2	91
30	The Absorption of Solar Radiation by Cloud Droplets: An Application of Anomalous Diffraction Theory. Journals of the Atmospheric Sciences, 1987, 44, 1574-1588.	1.7	90
31	The Saudi Arabian heat low: Aerosol distributions and thermodynamic structure. Journal of Geophysical Research, 1982, 87, 8991-9002.	3.3	83
32	Arctic cloud macrophysical characteristics from CloudSat and CALIPSO. Remote Sensing of Environment, 2012, 124, 159-173.	11.0	83
33	High-Spectral- and High-Temporal-Resolution Infrared Measurements from Geostationary Orbit. Journal of Atmospheric and Oceanic Technology, 2009, 26, 2273-2292.	1.3	78
34	Frequency and causes of failed MODIS cloud property retrievals for liquid phase clouds over global oceans. Journal of Geophysical Research D: Atmospheres, 2015, 120, 4132-4154.	3.3	78
35	Surface weather observations of atmospheric dust over the southwest summer monsoon region. Meteorology and Atmospheric Physics, 1989, 41, 19-34.	2.0	77
36	Inference of ice cloud properties from high spectral resolution infrared observations. IEEE Transactions on Geoscience and Remote Sensing, 2004, 42, 842-853.	6.3	75

#	Article	IF	Citations
37	State of the Climate in 2008. Bulletin of the American Meteorological Society, 2009, 90, S1-S196.	3.3	74
38	Resolving ice cloud optical thickness biases between CALIOP and MODIS using infrared retrievals. Atmospheric Chemistry and Physics, 2016, 16, 5075-5090.	4.9	73
39	Remote Sensing Cloud Properties from High Spectral Resolution Infrared Observations. Journals of the Atmospheric Sciences, 1993, 50, 1708-1720.	1.7	70
40	Sea Ice Extent and Classification Mapping with the Moderate Resolution Imaging Spectroradiometer Airborne Simulator. Remote Sensing of Environment, 1999, 68, 152-163.	11.0	62
41	Infrared spectral absorption of nearly invisible cirrus clouds. Geophysical Research Letters, 1998, 25, 1137-1140.	4.0	61
42	A comparison of cloud top heights computed from airborne lidar and MAS radiance data using CO2slicing. Journal of Geophysical Research, 1999, 104, 24547-24555.	3.3	61
43	High-Spatial-Resolution Surface and Cloud-Type Classification from MODIS Multispectral Band Measurements. Journal of Applied Meteorology and Climatology, 2003, 42, 204-226.	1.7	61
44	Cloud Classification of Satellite Radiance Data by Multicategory Support Vector Machines. Journal of Atmospheric and Oceanic Technology, 2004, 21, 159-169.	1.3	61
45	Dust and Smoke Detection for Multi-Channel Imagers. Remote Sensing, 2010, 2, 2347-2368.	4.0	61
46	An Improvement to the High-Spectral-Resolution CO2-Slicing Cloud-Top Altitude Retrieval. Journal of Atmospheric and Oceanic Technology, 2006, 23, 653-670.	1.3	60
47	A Quantitative Analysis of the Enhanced-V Feature in Relation to Severe Weather. Weather and Forecasting, 2007, 22, 853-872.	1.4	57
48	Aircraft Observations of the Shortwave Fractional Absorptance of Non-Homogeneous Clouds. Journal of Applied Meteorology, 1981, 20, 1510-1515.	1.1	52
49	Vertical distributions and relationships of cloud occurrence frequency as observed by MISR, AIRS, MODIS, OMI, CALIPSO, and CloudSat. Geophysical Research Letters, 2009, 36, .	4.0	50
50	Computationally Efficient Methods of Collocating Satellite, Aircraft, and Ground Observations. Journal of Atmospheric and Oceanic Technology, 2009, 26, 1585-1595.	1.3	44
51	Assimilation of thermodynamic information from advanced infrared sounders under partially cloudy skies for regional NWP. Journal of Geophysical Research D: Atmospheres, 2015, 120, 5469-5484.	3.3	41
52	Radiation Energy Budget Studies Using Collocated AVHRR and ERBE Observations. Journal of Applied Meteorology and Climatology, 1994, 33, 370-378.	1.7	38
53	The Temporal Evolution of Convective Indices in Storm-Producing Environments. Weather and Forecasting, 2008, 23, 786-794.	1.4	38
54	Radiative Effects of Various Cloud Types as Classified by the Split Window Technique over the Eastern Sub-tropical Pacific Derived from Collocated ERBE and AVHRR Data.. Journal of the Meteorological Society of Japan, 2002, 80, 1383-1394.	1.8	37

#	Article	IF	Citations
55	Cirrus Cloud Properties Derived from High Spectral Resolution Infrared Spectrometry during FIRE II. Part II: Aircraft HIS Results. Journals of the Atmospheric Sciences, 1995, 52, 4246-4263.	1.7	33
56	GOES sounding improvement and applications to severe storm nowcasting. Geophysical Research Letters, 2008, 35, .	4.0	31
57	Retrieval of Cirrus Cloud Optical Depth under Day and Night Conditions from MODIS Collection 6 Cloud Property Data. Remote Sensing, 2015, 7, 7257-7271.	4.0	31
58	Model Calculations and Interferometer Measurements of Ice-Cloud Characteristics. Journal of Applied Meteorology and Climatology, 2000, 39, 634-644.	1.7	30
59	The Continuity MODIS-VIIRS Cloud Mask. Remote Sensing, 2020, 12, 3334.	4.0	30
60	Comparison between current and future environmental satellite imagers on cloud classification using MODIS. Remote Sensing of Environment, 2007, 108, 311-326.	11.0	29
61	Satellite Regional Cloud Climatology over the Great Lakes. Remote Sensing, 2013, 5, 6223-6240.	4.0	29
62	Cross-calibration of S-NPP VIIRS moderate-resolution reflective solar bands against MODIS Aqua over dark water scenes. Atmospheric Measurement Techniques, 2017, 10, 1425-1444.	3.1	29
63	The NASA MODIS-VIIRS Continuity Cloud Optical Properties Products. Remote Sensing, 2021, 13, 2.	4.0	29
64	Satellite remote sensing of H2SO4aerosol using the 8- to 12-Î¼m window region: Application to Mount Pinatubo. Journal of Geophysical Research, 1994, 99, 18639.	3.3	28
65	Understanding Satellite-Observed Mountain-Wave Signatures Using High-Resolution Numerical Model Data. Weather and Forecasting, 2009, 24, 76-86.	1.4	27
66	A Comparison of GOES Sounderâ€“ and Cloud Lidar- and Radar-Retrieved Cloud-Top Heights. Journal of Applied Meteorology and Climatology, 2005, 44, 1234-1242.	1.7	25
67	Convectively Induced Transverse Band Signatures in Satellite Imagery. Weather and Forecasting, 2009, 24, 1362-1373.	1.4	25
68	Evaluation of MODIS thermal IR band L1B radiances during SAFARI 2000. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	24
69	Mountain Wave Signatures in MODIS 6.7-Î¼m Imagery and Their Relation to Pilot Reports of Turbulence. Weather and Forecasting, 2007, 22, 662-670.	1.4	23
70	Trade-off studies of a hyperspectral infrared sounder on a geostationary satellite. Applied Optics, 2007, 46, 200.	2.1	23
71	A Composite Perspective on Bore Passages during the PECAN Campaign. Monthly Weather Review, 2019, 147, 1395-1413.	1.4	22
72	The Detection and Characterization of Arctic Sea Ice Leads with Satellite Imagers. Remote Sensing, 2019, 11, 521.	4.0	22

#	Article	IF	Citations
73	Comparison of Satellite and All-Sky Camera Estimates of Cloud Cover during GATE. Journal of Applied Meteorology, 1981, 20, 581-587.	1.1	21
74	Comparison of Satellite-, Model-, and Radiosonde-Derived Convective Available Potential Energy in the Southern Great Plains Region. Journal of Applied Meteorology and Climatology, 2017, 56, 1499-1513.	1.5	21
75	Synergistic use of AIRS and MODIS radiance measurements for atmospheric profiling. Geophysical Research Letters, 2008, 35, .	4.0	20
76	Forecasting and nowcasting improvement in cloudy regions with high temporal GOES sounder infrared radiance measurements. Journal of Geophysical Research, 2009, 114, .	3.3	20
77	Exploring the first aerosol indirect effect over Southeast Asia using a 10-year collocated MODIS, CALIOP, and model dataset. Atmospheric Chemistry and Physics, 2018, 18, 12747-12764.	4.9	20
78	Climate Parameters from Satellite Spectral Measurements. Part 1: Collocated AVHRR and HIRS/2 Observations of Spectral Greenhouse Parameter. Journal of Climate, 1996, 9, 327-344.	3.2	19
79	Retrieval of effective microphysical properties of clouds: A wave cloud case study. Geophysical Research Letters, 1998, 25, 1121-1124.	4.0	19
80	Simulation of high-spectral-resolution infrared signature of overlapping cirrus clouds and mineral dust. Geophysical Research Letters, 2006, 33, .	4.0	19
81	Comparison of upper tropospheric water vapor from GOES, Raman lidar, and cross-chain loran atmospheric sounding system measurements. Journal of Geophysical Research, 1994, 99, 21005.	3.3	18
82	Informal Science Education: A Practicum for Graduate Students. Innovative Higher Education, 2011, 36, 291-304.	2.5	18
83	Intercomparison of scanner and nonscanner measurements for the Earth Radiation Budget Experiment. Journal of Geophysical Research, 1990, 95, 11785-11798.	3.3	17
84	Assessment of Regional Global Climate Model Water Vapor Bias and Trends Using Precipitable Water Vapor (PWV) Observations from a Network of Global Positioning Satellite (GPS) Receivers in the U.S. Great Plains and Midwest. Journal of Climate, 2012, 25, 5471-5493.	3.2	17
85	Discriminating heavy aerosol, clouds, and fires during SCAR-B: Application of airborne multispectral MAS data. Journal of Geophysical Research, 1998, 103, 31989-31999.	3.3	16
86	Radiative Energy Budget Estimates for the 1979 Southwest Summer Monsoon. Journals of the Atmospheric Sciences, 1987, 44, 3052-3078.	1.7	15
87	Using the GOES Sounder to monitor upper level SO₂ from volcanic eruptions. Journal of Geophysical Research, 2008, 113, .	3.3	15
88	Inferring Convective Weather Characteristics with Geostationary High Spectral Resolution IR Window Measurements: A Look into the Future. Journal of Atmospheric and Oceanic Technology, 2009, 26, 1527-1541.	1.3	15
89	Enhancement and identification of dust events in the south-west region of Iran using satellite observations. Journal of Earth System Science, 2017, 126, 1.	1.3	15
90	Radiation budget studies using collocated observations from advanced very high resolution radiometer, highâ€resolution infrared sounder/2, and Earth Radiation Budget Experiment instruments. Journal of Geophysical Research, 1992, 97, 11513-11525.	3.3	14

#	Article	IF	Citations
91	A Multispectral Technique for Detecting Low-Level Cloudiness near Sunrise. Journal of Atmospheric and Oceanic Technology, 2007, 24, 1800-1810.	1.3	14
92	Assimilation of clear sky Atmospheric Infrared Sounder radiances in short-term regional forecasts using community models. Journal of Applied Remote Sensing, 2014, 8, 083655.	1.3	14
93	Examining the Relationship between Cloud and Radiation Quantities Derived from Satellite Observations and Model Calculations. Journal of Climate, 2000, 13, 3842-3859.	3.2	12
94	Satellite monitoring of smoke from the Kuwait oil fires. Journal of Geophysical Research, 1992, 97, 14551-14563.	3.3	11
95	Application of GPS radio occultation to the assessment of temperature profile retrievals from microwave and infrared sounders. Atmospheric Measurement Techniques, 2014, 7, 3751-3762.	3.1	11
96	GATE phase III Mean Synoptic-Scale Radiative Convergence Profiles. Monthly Weather Review, 1981, 109, 371-383.	1.4	8
97	Shortwave radiative parameterization of large atmospheric aerosols: Dust and water clouds. Journal of Geophysical Research, 1988, 93, 11063-11073.	3.3	8
98	Time-to-Detect Trends in Precipitable Water Vapor with Varying Measurement Error. Journal of Climate, 2014, 27, 8259-8275.	3.2	8
99	Cirrus cloud optical and microphysical property retrievals from eMAS during SEAC⁴RS using bi-spectral reflectance measurements within the 1.88â€¯Âµm water vapor absorption band. Atmospheric Measurement Techniques, 2016, 9, 1743-1753.	3.1	8
100	Application of a Convolutional Neural Network for the Detection of Sea Ice Leads. Remote Sensing, 2021, 13, 4571.	4.0	8
101	Comparison of Organ Weights of Wild and Laboratory Microtus montanus infected with Trypanosoma brucei gambiense. American Midland Naturalist, 1978, 100, 126.	0.4	7
102	What Do Introductory Meteorology Students Want to Learn?. Bulletin of the American Meteorological Society, 2005, 86, 1431-1436.	3.3	7
103	GEWEX cloud assessment: A review. AIP Conference Proceedings, 2013, , .	0.4	7
104	Predicted Changes in the Frequency of Extreme Precipitable Water Vapor Events. Journal of Climate, 2015, 28, 7057-7070.	3.2	7
105	Libraries, massive open online courses and the importance of place. New Library World, 2016, 117, 688-701.	1.1	7
106	Interactive Web-Based Learning with JAVA. Bulletin of the American Meteorological Society, 2002, 83, 970-975.	3.3	7
107	Applications of high spectral resolution FTIR observations demonstrated by the radiometrically accurate ground-based AERI and the scanning HIS aircraft instruments. , 2003, , .		6
108	Evaluation of Visible Infrared Imaging Radiometer Suite (VIIRS) neural network cloud detection against current operational cloud masks. Atmospheric Measurement Techniques, 2021, 14, 3371-3394.	3.1	6

#	Article	IF	Citations
109	A Long-Term Fine-Resolution Record of AVHRR Surface Temperatures for the Laurentian Great Lakes. Remote Sensing, 2018, 10, 1210.	4.0	5
110	Using the â€œblue spikeâ€•to characterize biomass-burning sites during Southern African Regional Science Initiative (SAFARI) 2000. Journal of Geophysical Research, 2004, 109, .	3.3	3
111	Global distribution of instantaneous daytime radiative effects of high thin clouds observed by the cloud profiling radar. Journal of Applied Remote Sensing, 2010, 4, 043543.	1.3	3
112	A Summary of the 18th AMS Symposium on Education. Bulletin of the American Meteorological Society, 2011, 92, 61-64.	3.3	3
113	Information Content of a Synergy of Ground-Based and Space-Based Infrared Sounders. Part I: Clear-Sky Environments. Journal of Atmospheric and Oceanic Technology, 2022, 39, 771-787.	1.3	3
114	Weight of the Spleen, Adrenals and Gonads during a Chronic Trypanosoma brucei gambiense Infection of Laboratory-reared Microtus montanus. American Midland Naturalist, 1976, 96, 379.	0.4	2
115	Correlations of oriented ice and precipitation in marine midlatitude low clouds using collocated CloudSat, CALIOP, and MODIS observations. Journal of Geophysical Research D: Atmospheres, 2017, 122, 8056-8070.	3.3	2
116	University of Wisconsin Cirrus Remote Sensing Pilot Experiment. Bulletin of the American Meteorological Society, 1993, 74, 1041-1049.	3.3	1
117	GLI/MODIS cloud mask results, comparisons, and validation. , 2004, , .		1
118	A Unique Satellite Perspective of the 13â€“14 January 2004 Record Cold Outbreak in the Northeast. Weather and Forecasting, 2005, 20, 222-225.	1.4	1
119	Improvements in the data quality of the Interferometric Monitor for Greenhouse Gases. Applied Optics, 2010, 49, 520.	2.1	1
120	Multiple-scattering algorithm for use with line-by-line RTE models. , 1993, 1934, 373.		0
121	Detection of aerosols from satellite observations in the infrared window region. , 1993, , .		0
122	Meeting Summary of the Eighth Conference on Atmospheric Radiation. Bulletin of the American Meteorological Society, 1994, 75, 1837-1838.	3.3	0
123	Comparison of cloud amounts derived from two satellite retrieval techniques. , 1995, 2578, 18.		0
124	<title>Comparison of improved cloud amounts over land derived from two satellite retrieval techniques</title>. , 1996, , .		0
125	Retrieval of cloud top height, effective emissivity, and particle size, from aircraft high-spectral-resolution infrared measurements. , 2002, 4539, 50.		0
126	MODIS cloud mask: current situation and its improvements. , 2003, , .		0

#	Article	IF	Citations
127	Recent improvements in the MODIS cloud mask. , 2004, , .		0
128	IN BOX. Bulletin of the American Meteorological Society, 2007, 88, 627-638.	3.3	0
129	The infrared cloud ice radiometer (IRCIR). , 2007, , .		0
130	Using a Publication Analysis to Explore Mission Success. Bulletin of the American Meteorological Society, 2009, 90, 1313-1320.	3.3	0
131	Comparison of the MODIS Collection 5 Multilayer Cloud Detection Product with CALIPSO. , 2009, , .		0
132	Contemplating synergistic algorithms for the NASA ACE Mission. Proceedings of SPIE, 2013, , .	0.8	0
133	Inference and Validation of Cloud Phase from MODIS, AIRS and CALIPSO Data. , 2007, , .		0