

James Clemmons

List of Publications by Year in descending order

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100
papers

4,298
citations

147566

31
h-index

110170

64
g-index

103
all docs

103
docs citations

103
times ranked

2579
citing authors

#	ARTICLE	IF	CITATIONS
1	Electron-scale measurements of magnetic reconnection in space. <i>Science</i> , 2016, 352, aaf2939.	6.0	545
2	The Magnetic Electron Ion Spectrometer (MagEIS) Instruments Aboard the Radiation Belt Storm Probes (RBSP) Spacecraft. <i>Space Science Reviews</i> , 2013, 179, 383-421.	3.7	491
3	Science Goals and Overview of the Radiation Belt Storm Probes (RBSP) Energetic Particle, Composition, and Thermal Plasma (ECT) Suite on NASA's Van Allen Probes Mission. <i>Space Science Reviews</i> , 2013, 179, 311-336.	3.7	463
4	The Two Wide-angle Imaging Neutral-atom Spectrometers (TWINS) NASA Mission-of-Opportunity. <i>Space Science Reviews</i> , 2009, 142, 157-231.	3.7	170
5	High-resolution sounding rocket observations of large-amplitude Alfvén waves. <i>Journal of Geophysical Research</i> , 1990, 95, 12157-12171.	3.3	128
6	Van Allen Probes observation of localized drift resonance between poloidal mode ultra-low frequency waves and 60 keV electrons. <i>Geophysical Research Letters</i> , 2013, 40, 4491-4497.	1.5	127
7	On low-altitude particle acceleration and intense electric fields and their relationship to black aurora. <i>Journal of Geophysical Research</i> , 1997, 102, 17509-17522.	3.3	122
8	Broadband ELF plasma emission during auroral energization: 1. Slow ion acoustic waves. <i>Journal of Geophysical Research</i> , 1998, 103, 4343-4375.	3.3	119
9	The Energetic Particle Detector (EPD) Investigation and the Energetic Ion Spectrometer (EIS) for the Magnetospheric Multiscale (MMS) Mission. <i>Space Science Reviews</i> , 2016, 199, 471-514.	3.7	111
10	Van Allen Probes show that the inner radiation zone contains no MeV electrons: ECT/MagEIS data. <i>Geophysical Research Letters</i> , 2015, 42, 1283-1289.	1.5	109
11	Cavity resonators and Alfvén resonance cones observed on Freja. <i>Journal of Geophysical Research</i> , 1997, 102, 2565-2575.	3.3	94
12	Correlation between core ion energization, suprathermal electron bursts, and broadband ELF plasma waves. <i>Journal of Geophysical Research</i> , 1998, 103, 4171-4186.	3.3	94
13	The Fly's Eye Energetic Particle Spectrometer (FEEPS) Sensors for the Magnetospheric Multiscale (MMS) Mission. <i>Space Science Reviews</i> , 2016, 199, 309-329.	3.7	89
14	A background correction algorithm for Van Allen Probes MagEIS electron flux measurements. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 5703-5727.	0.8	78
15	Ion cyclotron heating in the dayside magnetosphere. <i>Journal of Geophysical Research</i> , 1996, 101, 13179-13193.	3.3	75
16	Langmuir wave growth and electron bunching: Results from a wave-particle correlator. <i>Journal of Geophysical Research</i> , 1991, 96, 225-238.	3.3	58
17	Energy limits of electron acceleration in the plasma sheet during substorms: A case study with the Magnetospheric Multiscale (MMS) mission. <i>Geophysical Research Letters</i> , 2016, 43, 7785-7794.	1.5	51
18	The TESP electron spectrometer and correlator (F7) on Freja. <i>Space Science Reviews</i> , 1994, 70, 509-540.	3.7	49

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19	Observations of an upward-directed electron beam with the perpendicular temperature of the cold ionosphere. <i>Geophysical Research Letters</i> , 1995, 22, 2103-2106.	1.5	47
20	Autogenous and efficient acceleration of energetic ions upstream of Earth's bow shock. <i>Nature</i> , 2018, 561, 206-210.	13.7	47
21	Multipoint Observations of Energetic Particle Injections and Substorm Activity During a Conjunction Between Magnetospheric Multiscale (MMS) and Van Allen Probes. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 11,481.	0.8	42
22	Electron signatures and Alfvén waves. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 15-1.	3.3	41
23	Thermospheric density in the Earth's magnetic cusp as observed by the Streak mission. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	41
24	Freja studies of the current-voltage relation in substorm-related events. <i>Journal of Geophysical Research</i> , 1998, 103, 4285-4301.	3.3	40
25	Ionospheric signature of the cusp as seen by incoherent scatter radar. <i>Journal of Geophysical Research</i> , 1996, 101, 10947-10963.	3.3	39
26	Evidence of a transverse Langmuir modulational instability in a space plasma. <i>Geophysical Research Letters</i> , 1991, 18, 1177-1180.	1.5	38
27	The hidden dynamics of relativistic electrons (0.7–1.5 MeV) in the inner zone and slot region. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 3127-3144.	0.8	38
28	Thermal ion upflow in the cusp ionosphere and its dependence on soft electron energy flux. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	35
29	Initial FAST observations of acceleration processes in the cusp. <i>Geophysical Research Letters</i> , 1998, 25, 2037-2040.	1.5	33
30	Van Allen Probes observations of direct wave-particle interactions. <i>Geophysical Research Letters</i> , 2014, 41, 1869-1875.	1.5	32
31	A Revised Look at Relativistic Electrons in the Earth's Inner Radiation Zone and Slot Region. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 934-951.	0.8	32
32	An overview of observations of unstable layers during the Turbulent Oxygen Mixing Experiment (TOMEX). <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	30
33	Possible precursors in HCN oligomerization. <i>Molecular Physics</i> , 1983, 48, 631-637.	0.8	29
34	Wave rectification in plasma sheaths surrounding electric field antennas. <i>Journal of Geophysical Research</i> , 1994, 99, 21361.	3.3	29
35	Dynamic response of the cusp morphology to the solar wind: A case study during passage of the solar wind plasma cloud on February 21, 1994. <i>Journal of Geophysical Research</i> , 1996, 101, 24675-24687.	3.3	26
36	Core ion interactions with BB ELF, lower hybrid, and Alfvén waves in the high-latitude topside ionosphere. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	26

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37	Freja observations of narrow inverted-V electron precipitation by the Two-Dimensional Electron Spectrometer. <i>Geophysical Research Letters</i> , 1994, 21, 1895-1898.	1.5	24
38	Inhomogeneous transverse electric fields and wave generation in the auroral region: A statistical study. <i>Journal of Geophysical Research</i> , 2001, 106, 10803-10816.	3.3	24
39	Inverted-V events simultaneously observed with the Freja satellite and from the ground. <i>Geophysical Research Letters</i> , 1994, 21, 1891-1894.	1.5	23
40	Observations of energetic particle escape at the magnetopause: Early results from the MMS Energetic Ion Spectrometer (EIS). <i>Geophysical Research Letters</i> , 2016, 43, 5960-5968.	1.5	23
41	The ionospheric signature of the cusp: A case study using Freja and the Sondrestrom radar. <i>Geophysical Research Letters</i> , 1994, 21, 1923-1926.	1.5	21
42	Observation of electron bunching during Landau growth and damping. <i>Journal of Geophysical Research</i> , 1991, 96, 11371-11378.	3.3	19
43	Wavelength measurement of auroral hiss. <i>Journal of Geophysical Research</i> , 1991, 96, 21299-21307.	3.3	19
44	Freja observations of a ten-meter boundary within monoenergetic auroral electron precipitation. <i>Geophysical Research Letters</i> , 1995, 22, 69-72.	1.5	19
45	Driving dayside convection with northward IMF: Observations by a sounding rocket launched from Svalbard. <i>Journal of Geophysical Research</i> , 2000, 105, 5245-5263.	3.3	19
46	Lower-hybrid cavity density depletions as a result of transverse ion acceleration localized on the gyroradius scale. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	19
47	Identification of auroral oval boundaries from in situ magnetic field measurements. <i>Journal of Geophysical Research</i> , 1998, 103, 4187-4197.	3.3	18
48	Observations of traveling Pc5 waves and their relation to the magnetic cloud event of January 1997. <i>Journal of Geophysical Research</i> , 2000, 105, 5441-5452.	3.3	18
49	The Magnetic Electron Ion Spectrometer: A Review of On-Orbit Sensor Performance, Data, Operations, and Science. <i>Space Science Reviews</i> , 2021, 217, 80.	3.7	18
50	Signatures of energy-time dispersed electron fluxes measured by Freja. <i>Geophysical Research Letters</i> , 1994, 21, 1899-1902.	1.5	17
51	Impulsive ion injections in the morning auroral region. <i>Journal of Geophysical Research</i> , 1995, 100, 12133.	3.3	17
52	Toward a consistent picture of the generation of electromagnetic ion cyclotron ELF waves on auroral field lines. <i>Journal of Geophysical Research</i> , 1997, 102, 24369-24386.	3.3	17
53	Freja and ground-based analysis of inverted-V events. <i>Journal of Geophysical Research</i> , 1998, 103, 4303-4314.	3.3	17
54	Mass spectroscopy using a rotating electric field. <i>Review of Scientific Instruments</i> , 1998, 69, 2285-2291.	0.6	17

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55	Studies of auroral arcs using Freja satellite and ground-based data. <i>Advances in Space Research</i> , 1996, 18, 107-110.	1.2	16
56	The outer radiation belt injection, transport, acceleration and loss satellite (ORBITALS): A canadian small satellite mission for ILWS. <i>Advances in Space Research</i> , 2006, 38, 1838-1860.	1.2	16
57	Inner zone and slot electron radial diffusion revisited. <i>Geophysical Research Letters</i> , 2016, 43, 7301-7310.	1.5	16
58	Relationship between Large-, Meso-, and Small-Scale Field-Aligned Currents and their Current Carriers. , 1998, , 173-188.		16
59	Airglow emissions and oxygen mixing ratios from the photometer experiment on the Turbulent Oxygen Mixing Experiment (TOMEX). <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	15
60	Sub-kilometer thermal plasma structure near 1750 km altitude in the polar cusp/cleft. <i>Geophysical Research Letters</i> , 1994, 21, 1907-1910.	1.5	14
61	Electromagnetic waves and bursty electron acceleration: implications from Freja. <i>Annales Geophysicae</i> , 2002, 20, 139-150.	0.6	14
62	LAICE CubeSat mission for gravity wave studies. <i>Advances in Space Research</i> , 2015, 56, 1413-1427.	1.2	14
63	Microinjections observed by MMS FEEPS in the dusk to midnight region. <i>Geophysical Research Letters</i> , 2016, 43, 6078-6086.	1.5	13
64	The TESP Electron Spectrometer and Correlator (F7) on Freja. , 1994, , 105-136.		13
65	Daytime Dynamo Electrodynamics With Spiral Currents Driven by Strong Winds Revealed by Vapor Trails and Sounding Rocket Probes. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088803.	1.5	12
66	Computational Analysis of High-Altitude Ionization Gauge Flight Measurements. <i>Journal of Spacecraft and Rockets</i> , 2006, 43, 186-193.	1.3	11
67	The Ionization Gauge Investigation for the Streak Mission. <i>Space Science Reviews</i> , 2009, 145, 263-283.	3.7	11
68	High-latitude region ionosphere-thermosphere coupling: A comparative study using in situ and incoherent scatter radar observations. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	11
69	High-resolution modeling of the cusp density anomaly: Response to particle and Joule heating under typical conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 2645-2661.	0.8	11
70	Field-line resonances triggered by a northward IMF turning. <i>Geophysical Research Letters</i> , 1998, 25, 2991-2994.	1.5	10
71	A multiyear (2002-2006) climatology of O/N ₂ in the lower thermosphere from TIMED GUVI and ground-based photometer observations. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	10
72	An empirically observed pitch-angle diffusion eigenmode in the Earth's electron belt near $L^* = 5.0$. <i>Geophysical Research Letters</i> , 2014, 41, 251-258.	1.5	10

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73	Simultaneous observations of solar wind plasma entry from FAST and POLAR. Geophysical Research Letters, 1998, 25, 2081-2084.	1.5	9
74	Current energetic particle sensors. Journal of Geophysical Research: Space Physics, 2016, 121, 8840-8858.	0.8	9
75	On the use of drift echoes to characterize on-orbit sensor discrepancies. Journal of Geophysical Research: Space Physics, 2015, 120, 2076-2087.	0.8	8
76	Science Goals and Overview of the Radiation Belt Storm Probes (RBSP) Energetic Particle, Composition, and Thermal Plasma (ECT) Suite on NASA's Van Allen Probes Mission. , 2013, , 311-336.		8
77	VISIONS remote observations of a spatially-structured filamentary source of energetic neutral atoms near the polar cap boundary during an auroral substorm. Advances in Space Research, 2015, 56, 2097-2105.	1.2	7
78	Scientific Objectives of Electron Losses and Fields Investigation Onboard Lomonosov Satellite. Space Science Reviews, 2018, 214, 1.	3.7	7
79	Overview of the Rocket Experiment for Neutral Upwelling Sounding Rocket 2 (RENU2). Geophysical Research Letters, 2020, 47, e2018GL081885.	1.5	7
80	Multi-Channel Charge Amplifier-Discriminator-Counter IC for the Space Sciences. , 2006, , .		6
81	Energy transport during O+energization by ELF waves observed by the Freja satellite. Journal of Geophysical Research, 1999, 104, 2563-2572.	3.3	5
82	Strong magnetic field fluctuations within filamentary auroral density cavities interpreted as VLF saucer sources. Journal of Geophysical Research, 2012, 117, .	3.3	4
83	Evolution of mesoscale auroral cavities before substorm onset. Journal of Geophysical Research, 1999, 104, 17201-17215.	3.3	3
84	Acceleration signatures in the dayside boundary layer and the cusp. Physics and Chemistry of the Earth, Part C: Solar, Terrestrial and Planetary Science, 2001, 26, 195-200.	0.2	3
85	Solar wind-magnetosphere-ionosphere coupling: an event study based on Freja data. Journal of Atmospheric and Solar-Terrestrial Physics, 2004, 66, 375-380.	0.6	3
86	High efficiency fourth-harmonic generation from nanosecond fiber master oscillator power amplifier. Proceedings of SPIE, 2016, , .	0.8	3
87	Resonant Alfvén Waves in the Lower Auroral Ionosphere: Evidence for the Nonlinear Evolution of the Ionospheric Feedback Instability. Journal of Geophysical Research: Space Physics, 2022, 127, .	0.8	3
88	Auroral measurements from space brought into the classroom. Physics Teacher, 1995, 33, 34-41.	0.2	2
89	Rapid, highly structured meridional winds and their modulation by non migrating tides: Measurements from the Streak mission. Journal of Geophysical Research: Space Physics, 2013, 118, 866-877.	0.8	2
90	RENU2 UV PMT Observations of the Cusp. Geophysical Research Letters, 2020, 47, e2019GL082314.	1.5	2

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91	A New Technique for Estimating the Lifetime of Bursts of Electron Precipitation From Sounding Rocket Measurements. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL082894.	1.5	2
92	Long-Term Galactic Cosmic Ray Environment Response of Plasma Analyzers on High-Altitude Spacecraft. <i>Journal of Spacecraft and Rockets</i> , 2015, 52, 1169-1180.	1.3	1
93	Imaging Low-Energy Ion Outflow in the Auroral Zone. <i>Frontiers in Astronomy and Space Sciences</i> , 2022, 9, .	1.1	1
94	The collision meter: An experimental technique to measure charged-neutral interactions and gas composition in the upper atmosphere. <i>Physics and Chemistry of the Earth, Part C: Solar, Terrestrial and Planetary Science</i> , 2001, 26, 247-252.	0.2	0
95	Lower hybrid ion heating cavities in the auroral ionosphere. , 0, , .		0
96	Analysis of High-Altitude Ionization Gauge Measurements Using the Direct Simulation Monte Carlo Method. , 2004, , .		0
97	Novel Measurement of the Pitch-Angle Structure of Auroral Electron Beams with a Top Hat Spectrometer. <i>Geophysical Monograph Series</i> , 0, , 169-174.	0.1	0
98	The Data System for the Freja F7 Electron Spectrometer. <i>Geophysical Monograph Series</i> , 2013, , 181-186.	0.1	0
99	Observations of Spatial Variations in O/N^{2+} During an Auroral Substorm Using the Multichannel Downlooking Camera on the VISIONS Rocket. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 7089-7105.	0.8	0
100	The Flyâ€™s Eye Energetic Particle Spectrometer (FEEPS) Sensors for the Magnetospheric Multiscale (MMS) Mission. , 2017, , 307-327.		0