

James M Weygand

List of Publications by Citations

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99
papers

2,487
citations

29
h-index

45
g-index

112
ext. papers

2,908
ext. citations

3.4
avg, IF

4.59
L-index

#	Paper	IF	Citations
99	The Space Physics Environment Data Analysis System (SPEDAS). <i>Space Science Reviews</i> , 2019 , 215, 9	7.5	205
98	Spatial correlation of solar-wind turbulence from two-point measurements. <i>Physical Review Letters</i> , 2005 , 95, 231101	7.4	155
97	Substorm current wedge driven by plasma flow vortices: THEMIS observations. <i>Journal of Geophysical Research</i> , 2009 , 114, n/a-n/a		134
96	Plasma sheet turbulence observed by Cluster II. <i>Journal of Geophysical Research</i> , 2005 , 110,		96
95	Application and validation of the spherical elementary currents systems technique for deriving ionospheric equivalent currents with the North American and Greenland ground magnetometer arrays. <i>Journal of Geophysical Research</i> , 2011 , 116,		76
94	Anisotropy of the Taylor scale and the correlation scale in plasma sheet and solar wind magnetic field fluctuations. <i>Journal of Geophysical Research</i> , 2009 , 114, n/a-n/a		68
93	Equatorial distributions of the plasma sheet ions, their electric and magnetic drifts, and magnetic fields under different interplanetary magnetic field Bz conditions. <i>Journal of Geophysical Research</i> , 2006 , 111,		63
92	On the loss of relativistic electrons at geosynchronous altitude: Its dependence on magnetic configurations and external conditions. <i>Journal of Geophysical Research</i> , 2009 , 114, n/a-n/a		61
91	Sources, transport, and distributions of plasma sheet ions and electrons and dependences on interplanetary parameters under northward interplanetary magnetic field. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		59
90	Large-scale current systems and ground magnetic disturbance during deep substorm injections. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		53
89	THEMIS observations of ULF wave excitation in the nightside plasma sheet during sudden impulse events. <i>Journal of Geophysical Research: Space Physics</i> , 2013 , 118, 284-298	2.6	49
88	Magnetospheric response to magnetosheath pressure pulses: A low-pass filter effect. <i>Journal of Geophysical Research: Space Physics</i> , 2013 , 118, 5454-5466	2.6	47
87	Spatial distributions of ions and electrons from the plasma sheet to the inner magnetosphere: Comparisons between THEMIS-Geotail statistical results and the Rice convection model. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		47
86	Plasma sheet P5/3 and n and associated plasma and energy transport for different convection strengths and AE levels. <i>Journal of Geophysical Research</i> , 2009 , 114, n/a-n/a		46
85	Solar wind pressure pulse-driven magnetospheric vortices and their global consequences. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 4274-4280	2.6	41
84	ARTEMIS Science Objectives. <i>Space Science Reviews</i> , 2011 , 165, 59-91	7.5	40
83	An automated method for the detection of field line resonance frequencies using ground magnetometer techniques. <i>Journal of Geophysical Research</i> , 2003 , 108,		40

82	Correlation and Taylor scale variability in the interplanetary magnetic field fluctuations as a function of solar wind speed. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		39
81	Auroral conjugacy studies based on global imaging. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2007 , 69, 249-255	2	39
80	GPS phase scintillation at high latitudes during the geomagnetic storm of 17-18 March 2015. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 10,448	2.6	37
79	Cluster observations in the inner magnetosphere during the 18 April 2002 sawtooth event: Dipolarization and injection at $r = 4.6$ RE. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		37
78	A statistical comparison of solar wind sources of moderate and intense geomagnetic storms at solar minimum and maximum. <i>Journal of Geophysical Research</i> , 2006 , 111,		37
77	Flow bouncing and electron injection observed by Cluster. <i>Journal of Geophysical Research: Space Physics</i> , 2013 , 118, 2055-2072	2.6	36
76	Taylor scale and effective magnetic Reynolds number determination from plasma sheet and solar wind magnetic field fluctuations. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		35
75	Flux transport, dipolarization, and current sheet evolution during a double-onset substorm. <i>Journal of Geophysical Research</i> , 2011 , 116,		31
74	Dependence of ring current asymmetry on storm phase. <i>Journal of Geophysical Research</i> , 2006 , 111,		30
73	Interhemispherical asymmetry of substorm onset locations and the interplanetary magnetic field. <i>Geophysical Research Letters</i> , 2011 , 38, n/a-n/a	4.9	29
72	Evolution of plasma sheet particle content under different interplanetary magnetic field conditions. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		29
71	Dynamic Harris current sheet thickness from Cluster current density and plasma measurements. <i>Journal of Geophysical Research</i> , 2005 , 110,		29
70	A Study of Intense Local dB/dt Variations During Two Geomagnetic Storms. <i>Space Weather</i> , 2018 , 16, 676-693	3.7	29
69	Geomagnetically induced currents around the world during the 17 March 2015 storm. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 10,496	2.6	27
68	Aging of anisotropy of solar wind magnetic fluctuations in the inner heliosphere. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		27
67	Evidence that crater flux transfer events are initial stages of typical flux transfer events. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		25
66	Interplanetary Magnetic Taylor Microscale and Implications for Plasma Dissipation. <i>Astrophysical Journal</i> , 2008 , 678, L141-L144	4.7	25
65	Ionospheric response to oscillatory flow braking in the magnetotail. <i>Journal of Geophysical Research: Space Physics</i> , 2013 , 118, 1529-1544	2.6	24

64	Relation of substorm onset to Harang discontinuity. <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		24
63	Characterization of the Turbulent Magnetic Integral Length in the Solar Wind: From 0.3 to 5 Astronomical Units. <i>Solar Physics</i> , 2014 , 289, 3917-3933	2.6	23
62	Repetitive substorms caused by Alfvénic waves of the interplanetary magnetic field during high-speed solar wind streams. <i>Journal of Geophysical Research</i> , 2006 , 111,		23
61	Power law burst lifetime distribution of the SYM-H index. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	22
60	Nighttime Magnetic Perturbation Events Observed in Arctic Canada: 2. Multiple-Instrument Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 7459-7476	2.6	21
59	In situ observations of the preexisting auroral arc by THEMIS all sky imagers and the FAST spacecraft. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		21
58	Global magnetohydrodynamic simulation of reconnection and turbulence in the plasma sheet. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		21
57	EULERIAN DECORRELATION OF FLUCTUATIONS IN THE INTERPLANETARY MAGNETIC FIELD. <i>Astrophysical Journal Letters</i> , 2010 , 721, L10-L13	7.9	21
56	Comparison between SuperDARN flow vectors and equivalent ionospheric currents from ground magnetometer arrays. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		20
55	Ensemble Space-Time Correlation of Plasma Turbulence in the Solar Wind. <i>Physical Review Letters</i> , 2016 , 116, 245101	7.4	19
54	Determination of the $^{36}\text{Ar}/^{38}\text{Ar}$ isotopic abundance ratio of the solar wind using SOHO/CELIAS/MTOF. <i>Geochimica Et Cosmochimica Acta</i> , 2001 , 65, 4589-4596	5.5	18
53	The 17 March 2013 storm: Synergy of observations related to electric field modes and their ionospheric and magnetospheric Effects. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 10,880 ²⁶		17
52	Nighttime Magnetic Perturbation Events Observed in Arctic Canada: 1. Survey and Statistical Analysis. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 7442-7458	2.6	16
51	Birth and life of auroral arcs embedded in the evening auroral oval convection: A critical comparison of observations with theory. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		16
50	Magnetic correlation functions in the slow and fast solar wind in the Eulerian reference frame. <i>Journal of Geophysical Research: Space Physics</i> , 2013 , 118, 3995-4004	2.6	15
49	THEMIS ground-space observations during the development of auroral spirals. <i>Annales Geophysicae</i> , 2009 , 27, 4317-4332	2	14
48	Transport of plasma sheet material to the inner magnetosphere. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	14
47	Recommendations for Next-Generation Ground Magnetic Perturbation Validation. <i>Space Weather</i> , 2018 , 16, 1912-1920	3.7	14

46	Comparison of DMSP and SECS region-1 and region-2 ionospheric current boundary. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2016 , 143-144, 8-13	2	13
45	An interpretation of spacecraft and ground based observations of multiple omega band events. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2015 , 133, 185-204	2	13
44	Substorms during different storm phases. <i>Annales Geophysicae</i> , 2011 , 29, 2031-2043	2	13
43	Reasons why some solar wind changes do not trigger substorms. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		13
42	Determination of the abundance of aluminum in the solar wind with SOHO/CELIAS/MTOF. <i>Journal of Geophysical Research</i> , 2000 , 105, 12659-12666		13
41	Magnetospheric vortices and their global effect after a solar wind dynamic pressure decrease. <i>Journal of Geophysical Research: Space Physics</i> , 2016 , 121, 1071-1077	2.6	13
40	Flow Shears at the Poleward Boundary of Omega Bands Observed During Conjunctions of Swarm and THEMIS ASI. <i>Geophysical Research Letters</i> , 2018 , 45, 1218-1227	4.9	13
39	Statistical study of auroral omega bands. <i>Annales Geophysicae</i> , 2017 , 35, 1069-1083	2	12
38	Magnetotail energy dissipation during an auroral substorm. <i>Nature Physics</i> , 2016 , 12, 1158-1163	16.2	12
37	Statistical study of the effect of solar wind dynamic pressure fronts on the dayside and nightside ionospheric convection. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		12
36	Non-self-similar scaling of plasma sheet and solar wind probability distribution functions of magnetic field fluctuations. <i>Journal of Geophysical Research</i> , 2006 , 111,		12
35	Multipoint observations of plasma phenomena made in space by Cluster. <i>Journal of Plasma Physics</i> , 2015 , 81,	2.7	11
34	Ionospheric Footprints of Detached Magnetotail Interchange Heads. <i>Geophysical Research Letters</i> , 2019 , 46, 7237-7247	4.9	11
33	Auroral electrojet indices in the Northern and Southern Hemispheres: A statistical comparison. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 4819-4840	2.6	11
32	Anisotropy of the Taylor scale and the correlation scale in plasma sheet magnetic field fluctuations as a function of auroral electrojet activity. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		11
31	Relation of auroral substorm onset to local AL index and dispersionless particle injections. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2008 , 70, 2336-2345	2	10
30	Seasonal and interplanetary magnetic field-dependent polar cap contraction during substorm expansion phase. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		9
29	Long-term variation of driven and unloading effects on polar cap dynamics. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		8

28	Comparison of auroral electrojet indices in the Northern and Southern Hemispheres. <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		8
27	Magnetospheric Conditions for STEVE and SAID: Particle Injection, Substorm Surge, and Field-Aligned Currents. <i>Journal of Geophysical Research: Space Physics</i> , 2020 , 125, e2020JA027782	2.6	8
26	Extreme Magnetosphere-Ionosphere-Thermosphere Responses to the 5 April 2010 Supersubstorm. <i>Journal of Geophysical Research: Space Physics</i> , 2020 , 125, e2019JA027654	2.6	7
25	Effects of solar wind ultralow-frequency fluctuations on plasma sheet electron temperature: Regression analysis with support vector machine. <i>Journal of Geophysical Research: Space Physics</i> , 2017 , 122, 4210-4227	2.6	7
24	Utilizing the polar cap index to explore strong driving of polar cap dynamics. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		6
23	Jensen-Shannon Complexity Measurements in Solar Wind Magnetic Field Fluctuations. <i>Astrophysical Journal</i> , 2019 , 872, 59	4.7	5
22	Continent-Wide R1/R2 Current System and Ohmic Losses by Broad Dipolarization-Injection Fronts. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 4064-4082	2.6	5
21	Global and local processes of thin current sheet formation during substorm growth phase. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2021 , 220, 105671	2	5
20	Interhemispheric Asymmetries in Magnetospheric Energy Input. <i>Geophysical Monograph Series</i> , 2016 , 1-20	1.1	4
19	Statistical study of the effect of ULF fluctuations in the IMF on the cross polar cap potential drop for northward IMF. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		4
18	Relative contributions of large-scale and wedgelet currents in the substorm current wedge. <i>Earth, Planets and Space</i> , 2020 , 72, 106	2.9	4
17	ARTEMIS Science Objectives 2011 , 27-59		4
16	The Relation of N-S Auroral Streamers to Auroral Expansion. <i>Journal of Geophysical Research: Space Physics</i> , 2020 , 125, e2019JA027063	2.6	3
15	Technique for measuring and correcting the Taylor microscale. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 4256-4265	2.6	3
14	Magnetotail Flux Accumulation Leads to Substorm Current Wedge Formation: A Case Study. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126,	2.6	3
13	Small-Scale Aurora Associated With Magnetospheric Flow Vortices After a Solar Wind Dynamic Pressure Decrease. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 3303-3311	2.6	2
12	Anisotropy of the magnetic correlation function in the inner heliosphere 2010 ,		2
11	Temporal and Spatial Development of TEC Enhancements during Substorms. <i>Journal of Geophysical Research: Space Physics</i> , 2020 , 125, e2019JA026985	2.6	1

10	GPS phase scintillation and auroral electrojet currents during geomagnetic storms of March 17, 2013 and 2015 2017 ,		1
9	SECS Analysis of Nighttime Magnetic Perturbation Events Observed in Arctic Canada. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2021JA029839	2.6	1
8	Temporal and spatial variations of GPS TEC and phase during auroral substorms and breakups. <i>Polar Science</i> , 2021 , 28, 100602	2.3	1
7	Characteristics of Substorm-Onset-Related and Nonsubstorm Earthward Fast Flows and Associated Magnetic Flux Transport: THEMIS Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2020JA028313	2.6	0
6	Vortex Generation and Auroral Response to a Solar Wind Dynamic Pressure Increase: Event Analyses. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2020JA028753	2.6	0
5	A Comparison of the Location of the Mid-Latitude Trough and Plasmapause Boundary. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2020JA028213	2.6	0
4	Superposed Epoch Analysis of Nighttime Magnetic Perturbation Events Observed in Arctic Canada. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2021JA029465	2.6	0
3	The temporal and spatial development of dB/dt for substorms. <i>AIMS Geosciences</i> , 2021 , 7, 74-94	1.6	0
2	Comparative Study of Electric Currents and Energetic Particle Fluxes in a Solar Flare and Earth Magnetospheric Substorm. <i>Astrophysical Journal</i> , 2021 , 923, 151	4.7	0
1	Dynamical evolution of anisotropies of the solar wind magnetic turbulent outer scale. <i>Proceedings of the International Astronomical Union</i> , 2011 , 7, 164-167	0.1	