Clare E J Watt

List of Publications by Year
in descending order

91 papers	2,242 citations	230014 27 h-index	312153 41 g-index
101 all docs	101 docs citations	101 times ranked	1525 citing authors

#	Article	IF	Citations
1	Weak Turbulence and Quasilinear Diffusion for Relativistic Wave-Particle Interactions Via a Markov Approach. Frontiers in Astronomy and Space Sciences, 2022, 8, .	1.1	16
2	Evidence of AlfvÃ©nic Activity in Jupiter's Midâ€Toâ€High Latitude Magnetosphere. Journal of Geophysical Research: Space Physics, 2022, 127, .	0.8	3
3	Proâ€•L * â€•A Probabilistic L * Mapping Tool for Ground Observations. Space Weather, 2021, 19, e2020SW002602.	1.3	3
4	Determining the Temporal and Spatial Coherence of Plasmaspheric Hiss Waves in the Magnetosphere. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028635.	0.8	7
5	ULF Wave Driven Radial Diffusion During Geomagnetic Storms: A Statistical Analysis of Van Allen Probes Observations. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA029024.	0.8	30
6	Electron Diffusion and Advection During Nonlinear Interactions With Whistlerâ€Mode Waves. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028793.	0.8	27
7	Constraining the Location of the Outer Boundary of Earth's Outer Radiation Belt. Earth and Space Science, 2021, 8, e2020EA001610.	1.1	2
8	Drift Orbit Bifurcations and Crossâ€Field Transport in the Outer Radiation Belt: Global MHD and Integrated Testâ€Particle Simulations. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029802.	0.8	9
9	Crossâ€•Coherence of the Outer Radiation Belt During Storms and the Role of the Plasmapause. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029308.	0.8	5
10	The Implications of Temporal Variability in Waveâ€Particle Interactions in Earth's Radiation Belts. Geophysical Research Letters, 2021, 48, e2020GL089962.	1.5	9
11	Determining the Global Scale Size of Chorus Waves in the Magnetosphere. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029569.	0.8	6
12	On the Variability of EMIC Waves and the Consequences for the Relativistic Electron Radiation Belt Population. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029754.	0.8	19
13	Forecasting GOES 15 >2â€‰MeV Electron Fluxes From Solar Wind Data and Geomagnetic Indices. Space Weather, 2020, 18, e2019SW002416.	1.3	12
14	Particleâ€inâ€Cell Experiments Examine Electron Diffusion by Whistlerâ€Mode Waves: 2. Quasiâ€Linear and Nonlinear Dynamics. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA027949.	0.8	25
15	Inner Magnetospheric ULF Waves: The Occurrence and Distribution of Broadband and Discrete Wave Activity. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA027887.	0.8	10
16	Accounting for Variability in ULF Wave Radial Diffusion Models. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027254.	0.8	10
17	Random Forest Model of Ultralowâ€Frequency Magnetospheric Wave Power. Earth and Space Science, 2020, 7, e2020EA001274.	1.1	5
18	Diagnosing the Timeâ€Dependent Nature of Magnetosphereâ€Ionosphere Coupling via ULF Waves at Substorm Onset. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028573.	0.8	4

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19	A New Approach to Constructing Models of Electron Diffusion by EMIC Waves in the Radiation Belts. Geophysical Research Letters, 2020, 47, e2020GL088976.	1.5	22
20	A Framework for Understanding and Quantifying the Loss and Acceleration of Relativistic Electrons in the Outer Radiation Belt During Geomagnetic Storms. Space Weather, 2020, 18, e2020SW002477.	1.3	11
21	Data-Driven Classification of Coronal Hole and Streamer Belt Solar Wind. Solar Physics, 2020, 295, 1.	1.0	10
22	On the Magnetospheric ULF Wave Counterpart of Substorm Onset. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027573.	0.8	8
23	Semi-annual, annual and Universal Time variations in the magnetosphere and in geomagnetic activity: 2. Response to solar wind power input and relationships with solar wind dynamic pressure and magnetospheric flux transport. Journal of Space Weather and Space Climate, 2020, 10, 30.	1.1	24
24	Semi-annual, annual and Universal Time variations in the magnetosphere and in geomagnetic activity: 3. Modelling. Journal of Space Weather and Space Climate, 2020, 10, 61.	1.1	16
25	The Development of a Space Climatology: 1. Solar Wind Magnetosphere Coupling as a Function of Timescale and the Effect of Data Gaps. Space Weather, 2019, 17, 133-156.	1.3	35
26	How Do Ultraâ€Low Frequency Waves Access the Inner Magnetosphere During Geomagnetic Storms?. Geophysical Research Letters, 2019, 46, 10699-10709.	1.5	20
27	Particleâ€inâ€cell Experiments Examine Electron Diffusion by Whistlerâ€mode Waves: 1. Benchmarking With a Cold Plasma. Journal of Geophysical Research: Space Physics, 2019, 124, 8893-8912.	0.8	12
28	Variability of Quasilinear Diffusion Coefficients for Plasmaspheric Hiss. Journal of Geophysical Research: Space Physics, 2019, 124, 8488-8506.	0.8	27
29	The Development of a Space Climatology: 2. The Distribution of Power Input Into the Magnetosphere on a 3â€Hourly Timescale. Space Weather, 2019, 17, 157-179.	1.3	12
30	A global view of storms and substorms. Astronomy and Geophysics, 2019, 60, 3.13-3.19.	0.1	1
31	Capturing Uncertainty in Magnetospheric Ultralow Frequency Wave Models. Space Weather, 2019, 17, 599-618.	1.3	9
32	The Development of a Space Climatology: 3. Models of the Evolution of Distributions of Space Weather Variables With Timescale. Space Weather, 2019, 17, 180-209.	1.3	17
33	ULF Wave Activity in the Magnetosphere: Resolving Solar Wind Interdependencies to Identify Driving Mechanisms. Journal of Geophysical Research: Space Physics, 2018, 123, 2745-2771.	0.8	34
34	The Global Statistical Response of the Outer Radiation Belt During Geomagnetic Storms. Geophysical Research Letters, 2018, 45, 3783-3792.	1.5	66
35	Control of ULF Wave Accessibility to the Inner Magnetosphere by the Convection of Plasma Density. Journal of Geophysical Research: Space Physics, 2018, 123, 1086-1099.	0.8	47
36	The Role of Localized Compressional Ultraâ€low Frequency Waves in Energetic Electron Precipitation. Journal of Geophysical Research: Space Physics, 2018, 123, 1900-1914.	0.8	36

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37	A diagnosis of the plasma waves responsible for the explosive energy release of substorm onset. Nature Communications, 2018, 9, 4806.	5.8	25
38	Space climate and space weather over the past 400â€‰years: 2. Proxy indicators of geomagnetic storm and substorm occurrence. Journal of Space Weather and Space Climate, 2018, 8, A12.	1.1	27
39	Determining the Mode, Frequency, and Azimuthal Wave Number of ULF Waves During a HSS and Moderate Geomagnetic Storm. Journal of Geophysical Research: Space Physics, 2018, 123, 6457-6477.	0.8	23
40	A direct examination of the dynamics of dipolarization fronts using MMS. Journal of Geophysical Research: Space Physics, 2017, 122, 4335-4347.	0.8	44
41	Selfâ€consistent formation of a 0.5 cyclotron frequency gap in magnetospheric whistler mode waves. Journal of Geophysical Research: Space Physics, 2017, 122, 8166-8180.	0.8	29
42	Statistical azimuthal structuring of the substorm onset arc: Implications for the onset mechanism. Geophysical Research Letters, 2017, 44, 2078-2087.	1.5	35
43	The parameterization of waveâ€particle interactions in the Outer Radiation Belt. Journal of Geophysical Research: Space Physics, 2017, 122, 9545-9551.	0.8	17
44	Using ultra-low frequency waves and their characteristics to diagnose key physics of substorm onset. Geoscience Letters, 2017, 4, 23.	1.3	8
45	Space climate and space weather over the past 400 years: 1. The power input to the magnetosphere. Journal of Space Weather and Space Climate, 2017, 7, A25.	1.1	29
46	Using the cold plasma dispersion relation and whistler mode waves to quantify the antenna sheath impedance of the Van Allen Probes EFW instrument. Journal of Geophysical Research: Space Physics, 2016, 121, 4590-4606.	0.8	33
47	Accurately characterizing the importance of waveâ€particle interactions in radiation belt dynamics: The pitfalls of statistical wave representations. Journal of Geophysical Research: Space Physics, 2016, 121, 7895-7899.	0.8	21
48	What effect do substorms have on the content of the radiation belts?. Journal of Geophysical Research: Space Physics, 2016, 121, 6292-6306.	0.8	40
49	On the origins and timescales of geoeffective IMF. Space Weather, 2016, 14, 406-432.	1.3	65
50	Statistical characterization of the growth and spatial scales of the substorm onset arc. Journal of Geophysical Research: Space Physics, 2015, 120, 8503-8516.	0.8	52
51	Increases in plasma sheet temperature with solar wind driving during substorm growth phases. Geophysical Research Letters, 2014, 41, 8713-8721.	1.5	22
52	Automated determination of auroral breakup during the substorm expansion phase using all-sky imager data. Journal of Geophysical Research: Space Physics, 2014, 119, 1414-1427.	0.8	5
53	Field line resonances as a trigger and a tracer for substorm onset. Journal of Geophysical Research: Space Physics, 2014, 119, 5343-5363.	0.8	23
54	In situ spatiotemporal measurements of the detailed azimuthal substructure of the substorm current wedge. Journal of Geophysical Research: Space Physics, 2014, 119, 927-946.	0.8	49

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55	Comment on â€œFormation of substorm Pi2: A coherent response to auroral streamers and currentsâ€•by Y. Nishimura et al.. Journal of Geophysical Research: Space Physics, 2013, 118, 3488-3496.	0.8	5
56	Constructing the frequency and wave normal distribution of whistlerâ€mode wave power. Journal of Geophysical Research: Space Physics, 2013, 118, 1984-1991.	0.8	16
57	Reply to comment by F. Mottez on â€œDo magnetospheric shear AlfvÃ©n waves generate sufficient electron energy flux to power the aurora?â€• Journal of Geophysical Research: Space Physics, 2013, 118, 5800-5802.	0.8	0
58	AlfvÃ©n Wave Acceleration of Auroral Electrons in Warm Magnetospheric Plasma. Geophysical Monograph Series, 2013, , 251-260.	0.1	18
59	Temporal evolution and electric potential structure of the auroral acceleration region from multispacecraft measurements. Journal of Geophysical Research, 2012, 117, .	3.3	11
60	Whistler mode wave growth and propagation in the prenoon magnetosphere. Journal of Geophysical Research, 2012, 117, .	3.3	7
61	The correlation of ULF waves and auroral intensity before, during and after substorm expansion phase onset. Journal of Geophysical Research, 2012, 117, .	3.3	22
62	Contrasting the responses of three different groundâ€based instruments to energetic electron precipitation. Radio Science, 2012, 47, .	0.8	53
63	AlfvÃ©n: magnetosphereâ€”ionosphere connection explorers. Experimental Astronomy, 2012, 33, 445-489.	1.6	9
64	On the nature of ULF wave power during nightside auroral activations and substorms: 2. Temporal evolution. Journal of Geophysical Research, 2011, 116, .	3.3	21
65	Ultralow-frequency modulation of whistler-mode wave growth. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	23
66	Comparison of the openâ€closed separatrix in a global magnetospheric simulation with observations: The role of the ring current. Journal of Geophysical Research, 2010, 115, .	3.3	19
67	Do magnetospheric shear AlfvÃ©n waves generate sufficient electron energy flux to power the aurora?. Journal of Geophysical Research, 2010, 115, .	3.3	33
68	Optical characterization of the growth and spatial structure of a substorm onset arc. Journal of Geophysical Research, 2010, 115, .	3.3	53
69	Comprehensive groundâ€based and in situ observations of substorm expansion phase onset. Journal of Geophysical Research, 2010, 115, .	3.3	15
70	Electron Trapping in Shear AlfvÃ©n Waves that Power the Aurora. Physical Review Letters, 2009, 102, 045002.	2.9	63
71	Comment on â€œRole of dispersive AlfvÃ©n waves in generating parallel electric fields along the Ioâ€Jupiter fluxtubeâ€•by S. T. Jones and Y.â€J. Su. Journal of Geophysical Research, 2009, 114, .	3.3	2
72	Reply to comment by K. Liou and Y.â€L. Zhang on â€œWaveletâ€based ULF wave diagnosis of substorm expansion phase onsetâ€• Journal of Geophysical Research, 2009, 114, .	3.3	9

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73	Waveletâ€based ULF wave diagnosis of substorm expansion phase onset. Journal of Geophysical Research, 2009, 114, .	3.3	40
74	Timing and localization of ionospheric signatures associated with substorm expansion phase onset. Journal of Geophysical Research, 2009, 114, .	3.3	58
75	Nearâ€Earth initiation of a terrestrial substorm. Journal of Geophysical Research, 2009, 114, .	3.3	60
76	Electron acceleration and parallel electric fields due to kinetic AlfvÃ©n waves in plasma with similar thermal and AlfvÃ©n speeds. Advances in Space Research, 2008, 42, 964-969.	1.2	14
77	DK-1D: a drift-kinetic simulation tool for modelling the shear AlfvÃ©n wave and its interaction with collisionless plasma. Plasma Physics and Controlled Fusion, 2008, 50, 074008.	0.9	4
78	Electron acceleration due to inertial AlfvÃ©n waves in a non-Maxwellian plasma. Journal of Geophysical Research, 2007, 112, n/a-n/a.	3.3	22
79	Equatorâ€S observations of drift mirror mode waves in the dawnside magnetosphere. Journal of Geophysical Research, 2007, 112, .	3.3	50
80	Selfâ€consistent waveâ€particle interactions in dispersive scale longâ€period fieldâ€lineâ€resonances. Geophysical Research Letters, 2007, 34, .	1.5	17
81	Energy deposition in the ionosphere through a global field line resonance. Annales Geophysicae, 2007, 25, 2529-2539.	0.6	42
82	Parallel electric fields associated with inertial AlfvÃ©n waves. Planetary and Space Science, 2007, 55, 714-721.	0.9	7
83	Theoretical aspects of kinetic and inertial scale dispersive AlfvÃ©n waves in Earth's magnetosphere. Geophysical Monograph Series, 2006, , 91-108.	0.1	5
84	Anomalous resistivity and the nonlinear evolution of the ion-acoustic instability. Journal of Geophysical Research, 2006, 111, .	3.3	33
85	Inertial AlfvÃ©n waves and acceleration of electrons in nonuniform magnetic fields. Geophysical Research Letters, 2006, 33, .	1.5	37
86	Self-consistent electron acceleration due to inertial AlfvÃ©n wave pulses. Journal of Geophysical Research, 2005, 110, .	3.3	53
87	Evolution and characteristics of global Pc5 ULF waves during a high solar wind speed interval. Journal of Geophysical Research, 2005, 110, .	3.3	131
88	Kinetic simulations of electron response to shear AlfvÃ©n waves in magnetospheric plasmas. Physics of Plasmas, 2004, 11, 1277-1284.	0.7	41
89	Anomalous resistivity in non-Maxwellian plasmas. Journal of Geophysical Research, 2003, 108, .	3.3	37
90	Ion-acoustic resistivity in plasmas with similar ion and electron temperatures. Geophysical Research Letters, 2002, 29, 4-1.	1.5	46

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91	Vlasov simulations of ion-acoustic waves. , 0, , .		0