

Nigel Meredith

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

114
papers

9,799
citations

54
h-index

98
g-index

120
ext. papers

10,630
ext. citations

4.9
avg, IF

6.02
L-index

#	Paper	IF	Citations
114	Music of the spheres. <i>Astronomy and Geophysics</i> , 2022 , 63, 1.38-1.40	0.2	
113	On the Variability of EMIC Waves and the Consequences for the Relativistic Electron Radiation Belt Population. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2021JA029754	2.6	2
112	Multi-Parameter Chorus and Plasmaspheric Hiss Wave Models. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2020JA028403	2.6	2
111	Statistical Investigation of the Frequency Dependence of the Chorus Source Mechanism of Plasmaspheric Hiss. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL092725	4.9	9
110	Comparing Electron Precipitation Fluxes Calculated From Pitch Angle Diffusion Coefficients to LEO Satellite Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2020JA028410	2.6	4
109	Interplanetary Shock-Induced Magnetopause Motion: Comparison Between Theory and Global Magnetohydrodynamic Simulations. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL092554	4.9	2
108	Drift Orbit Bifurcations and Cross-Field Transport in the Outer Radiation Belt: Global MHD and Integrated Test-Particle Simulations. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2021JA029802 ⁰	2.6	2
107	Cross- Coherence of the Outer Radiation Belt During Storms and the Role of the Plasmopause. <i>Journal of Geophysical Research: Space Physics</i> , 2021 , 126, e2021JA029308	2.6	1
106	The Implications of Temporal Variability in Wave-Particle Interactions in Earth's Radiation Belts. <i>Geophysical Research Letters</i> , 2021 , 48, e2020GL089962	4.9	2
105	A New Approach to Constructing Models of Electron Diffusion by EMIC Waves in the Radiation Belts. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL088976	4.9	6
104	Global Model of Whistler Mode Chorus in the Near-Equatorial Region (\bar{h}). <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL087311	4.9	18
103	Particle-in-Cell Experiments Examine Electron Diffusion by Whistler-Mode Waves: 2. Quasi-Linear and Nonlinear Dynamics. <i>Journal of Geophysical Research: Space Physics</i> , 2020 , 125, e2020JA027949	2.6	10
102	Variability of Quasilinear Diffusion Coefficients for Plasmaspheric Hiss. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 8488-8506	2.6	14
101	Effects of VLF Transmitter Waves on the Inner Belt and Slot Region. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 5260-5277	2.6	21
100	An Investigation of VLF Transmitter Wave Power in the Inner Radiation Belt and Slot Region. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 5246-5259	2.6	19
99	Turning the sounds of space into art. <i>Astronomy and Geophysics</i> , 2019 , 60, 2.18-2.21	0.2	2
98	Particle-in-cell Experiments Examine Electron Diffusion by Whistler-mode Waves: 1. Benchmarking With a Cold Plasma. <i>Journal of Geophysical Research: Space Physics</i> , 2019 , 124, 8893-8912	2.6	5

97	Spacecraft surface charging induced by severe environments at geosynchronous orbit. <i>Space Weather</i> , 2018 , 16, 89-106	3.7	28
96	Spacecraft Charging Related Risk of Floating Connector Pins. <i>IEEE Transactions on Plasma Science</i> , 2018 , 46, 201-206	1.3	3
95	Realistic Worst Case for a Severe Space Weather Event Driven by a Fast Solar Wind Stream. <i>Space Weather</i> , 2018 , 16, 1202-1215	3.7	14
94	Radiation Effects on Satellites During Extreme Space Weather Events. <i>Space Weather</i> , 2018 , 16, 1216-1236	3.6	16
93	Global Model of Plasmaspheric Hiss From Multiple Satellite Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2018 , 123, 4526-4541	2.6	49
92	A 30-Year Simulation of the Outer Electron Radiation Belt. <i>Space Weather</i> , 2018 , 16, 1498-1522	3.7	32
91	The Contribution of Compressional Magnetic Pumping to the Energization of the Earth's Outer Electron Radiation Belt During High-Speed Stream-Driven Storms. <i>Journal of Geophysical Research: Space Physics</i> , 2017 , 122, 12,072	2.6	4
90	Extreme relativistic electron fluxes in the Earth's outer radiation belt: Analysis of INTEGRAL IREM data. <i>Space Weather</i> , 2017 , 15, 917-933	3.7	11
89	Extreme internal charging currents in medium Earth orbit: Analysis of SURF plate currents on Giove-A. <i>Space Weather</i> , 2016 , 14, 578-591	3.7	9
88	Wave-Driven Diffusion in Radiation Belt Dynamics 2016 , 217-243		5
87	Quasi-linear simulations of inner radiation belt electron pitch angle and energy distributions. <i>Geophysical Research Letters</i> , 2016 , 43, 2381-2388	4.9	57
86	Extreme energetic electron fluxes in low Earth orbit: Analysis of POES E ₁ -E ₃ , E ₄ -E ₆ , and E ₇ -E ₁₀ keV electrons. <i>Space Weather</i> , 2016 , 14, 136-150	3.7	15
85	Extreme relativistic electron fluxes at geosynchronous orbit: Analysis of GOES E > 2 MeV electrons. <i>Space Weather</i> , 2015 , 13, 170-184	3.7	34
84	Three-dimensional stochastic modeling of radiation belts in adiabatic invariant coordinates. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 7615-7635	2.6	18
83	Simulating the Earth's radiation belts: Internal acceleration and continuous losses to the magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 7444-7463	2.6	20
82	Electron losses from the radiation belts caused by EMIC waves. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 8820-8837	2.6	107
81	Three-dimensional electron radiation belt simulations using the BAS Radiation Belt Model with new diffusion models for chorus, plasmaspheric hiss, and lightning-generated whistlers. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 268-289	2.6	139
80	Effect of plasma density on diffusion rates due to wave particle interactions with chorus and plasmaspheric hiss: extreme event analysis. <i>Annales Geophysicae</i> , 2014 , 32, 1059-1071	2	10

79	Global model of low-frequency chorus (. <i>Geophysical Research Letters</i> , 2014 , 41, 280-286	4.9	30
78	Global morphology and spectral properties of EMIC waves derived from CRRES observations. <i>Journal of Geophysical Research: Space Physics</i> , 2014 , 119, 5328-5342	2.6	131
77	Space weather impacts on satellites and forecasting the Earth's electron radiation belts with SPACECAST. <i>Space Weather</i> , 2013 , 11, 169-186	3.7	116
76	Global statistical evidence for chorus as the embryonic source of plasmaspheric hiss. <i>Geophysical Research Letters</i> , 2013 , 40, 2891-2896	4.9	49
75	Forecasting the Earth's radiation belts and modelling solar energetic particle events: Recent results from SPACECAST. <i>Journal of Space Weather and Space Climate</i> , 2013 , 3, A20	2.5	20
74	A new diffusion matrix for whistler mode chorus waves. <i>Journal of Geophysical Research: Space Physics</i> , 2013 , 118, 6302-6318	2.6	54
73	Global model of lower band and upper band chorus from multiple satellite observations. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		188
72	Resonant scattering of plasma sheet electrons leading to diffuse auroral precipitation: 1. Evaluation for electrostatic electron cyclotron harmonic waves. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		61
71	Resonant scattering of plasma sheet electrons leading to diffuse auroral precipitation: 2. Evaluation for whistler mode chorus waves. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		101
70	Evolution of electron pitch angle distributions following injection from the plasma sheet. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		74
69	Energetic electron precipitation during high-speed solar wind stream driven storms. <i>Journal of Geophysical Research</i> , 2011 , 116,		93
68	Chorus-driven resonant scattering of diffuse auroral electrons in nondipolar magnetic fields. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		51
67	Diffuse auroral scattering by whistler mode chorus waves: Dependence on wave normal angle distribution. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		45
66	Modeling the wave power distribution and characteristics of plasmaspheric hiss. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		58
65	Effects of energy and pitch angle mixed diffusion on radiation belt electrons. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2011 , 73, 785-795	2	8
64	Scattering by chorus waves as the dominant cause of diffuse auroral precipitation. <i>Nature</i> , 2010 , 467, 943-6	50.4	347
63	Origin of energetic electron precipitation >30 keV into the atmosphere. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		141
62	Wave-particle interactions in the equatorial source region of whistler-mode emissions. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		44

61	Role of the plasmopause in dictating the ground accessibility of ELF/VLF chorus. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		19
60	Correction to Radiation belt electron precipitation into the atmosphere: Recovery from a geomagnetic storm. <i>Journal of Geophysical Research</i> , 2010 , 115, n/a-n/a		1
59	Plasmaspheric hiss overview and relation to chorus. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2009 , 71, 1636-1646	2	32
58	Survey of upper band chorus and ECH waves: Implications for the diffuse aurora. <i>Journal of Geophysical Research</i> , 2009 , 114, n/a-n/a		109
57	Three-dimensional diffusion simulation of outer radiation belt electrons during the 9 October 1990 magnetic storm. <i>Journal of Geophysical Research</i> , 2009 , 114, n/a-n/a		144
56	Relativistic electron loss timescales in the slot region. <i>Journal of Geophysical Research</i> , 2009 , 114, n/a-n/a		118
55	The unexpected origin of plasmaspheric hiss from discrete chorus emissions. <i>Nature</i> , 2008 , 452, 62-6	50.4	269
54	Radiation Belt Environment model: Application to space weather nowcasting. <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		127
53	Ground-based transmitter signals observed from space: Ducted or nonducted?. <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		45
52	Electron scattering by whistler-mode ELF hiss in plasmaspheric plumes. <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		154
51	Three-dimensional test simulations of the outer radiation belt electron dynamics including electron-chorus resonant interactions. <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		101
50	Survey of magnetosonic waves and proton ring distributions in the Earth's inner magnetosphere. <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		156
49	Evaluation of whistler mode chorus amplification during an injection event observed on CRRES. <i>Journal of Geophysical Research</i> , 2008 , 113, n/a-n/a		58
48	Review of modeling of losses and sources of relativistic electrons in the outer radiation belt II: Local acceleration and loss. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2008 , 70, 1694-1713	2	315
47	Review of modeling of losses and sources of relativistic electrons in the outer radiation belt I: Radial transport. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2008 , 70, 1679-1693	2	177
46	Parameterization of radiation belt electron loss timescales due to interactions with chorus waves. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	112
45	Timescales for radiation belt electron acceleration and loss due to resonant wave-particle interactions: 1. Theory. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		180
44	Timescales for radiation belt electron acceleration and loss due to resonant wave-particle interactions: 2. Evaluation for VLF chorus, ELF hiss, and electromagnetic ion cyclotron waves. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		322

43	Refilling of the slot region between the inner and outer electron radiation belts during geomagnetic storms. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		77
42	Modeling the propagation characteristics of chorus using CRRES suprathermal electron fluxes. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		96
41	Ray tracing of penetrating chorus and its implications for the radiation belts. <i>Geophysical Research Letters</i> , 2007 , 34,	4-9	47
40	Electron acceleration in the Van Allen radiation belts by fast magnetosonic waves. <i>Geophysical Research Letters</i> , 2007 , 34,	4-9	296
39	Modeling the effects of radial diffusion and plasmaspheric hiss on outer radiation belt electrons. <i>Geophysical Research Letters</i> , 2007 , 34,	4-9	37
38	Radiation belt electron precipitation into the atmosphere: Recovery from a geomagnetic storm. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		64
37	Slot region electron loss timescales due to plasmaspheric hiss and lightning-generated whistlers. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		203
36	Longitudinal and seasonal variations in plasmaspheric electron density: Implications for electron precipitation. <i>Journal of Geophysical Research</i> , 2007 , 112, n/a-n/a		22
35	Studies of the substorm on March 12, 1991: 1. Structure of substorm activity and auroral ions. <i>Cosmic Research</i> , 2007 , 45, 27-38	0.6	1
34	Studies of substorm on March 12, 1991: 2. Auroral electrons. Acceleration, injection, and dynamics. <i>Cosmic Research</i> , 2007 , 45, 89-96	0.6	4
33	Low-altitude measurements of 20 MeV electron trapping lifetimes at 1.5 L ± 0.5. <i>Geophysical Research Letters</i> , 2007 , 34,	4-9	59
32	Mechanisms for the Acceleration of Radiation Belt Electrons. <i>Geophysical Monograph Series</i> , 2006 , 151-173		33
31	Phase space density analysis of the outer radiation belt energetic electron dynamics. <i>Journal of Geophysical Research</i> , 2006 , 111,		83
30	Comment on "On the origin of whistler mode radiation in the plasmasphere" by Green et al.. <i>Journal of Geophysical Research</i> , 2006 , 111,		29
29	Energetic outer zone electron loss timescales during low geomagnetic activity. <i>Journal of Geophysical Research</i> , 2006 , 111,		152
28	Origins of plasmaspheric hiss. <i>Journal of Geophysical Research</i> , 2006 , 111,		102
27	Comparative study of outer-zone relativistic electrons observed by Akebono and CRRES. <i>Journal of Geophysical Research</i> , 2005 , 110,		13
26	Timescale for radiation belt electron acceleration by whistler mode chorus waves. <i>Journal of Geophysical Research</i> , 2005 , 110,		501

25	Simulation of the outer radiation belt electrons near geosynchronous orbit including both radial diffusion and resonant interaction with Whistler-mode chorus waves. <i>Geophysical Research Letters</i> , 2005 , 32, n/a-n/a	4.9	114
24	The Influence of Wave-Particle Interactions on Relativistic Electron Dynamics During Storms. <i>Geophysical Monograph Series</i> , 2005 , 101-112	1.1	48
23	Wave acceleration of electrons in the Van Allen radiation belts. <i>Nature</i> , 2005 , 437, 227-30	50.4	429
22	Ground observations of chorus following geomagnetic storms. <i>Journal of Geophysical Research</i> , 2004 , 109,		36
21	Substorm dependence of plasmaspheric hiss. <i>Journal of Geophysical Research</i> , 2004 , 109,		249
20	Temporal evolution of substorm-enhanced whistler-mode waves: Relationship between space-based observations, ground-based observations, and energetic electrons. <i>Journal of Geophysical Research</i> , 2004 , 109,		5
19	Differences in ground-observed chorus in geomagnetic storms with and without enhanced relativistic electron fluxes. <i>Journal of Geophysical Research</i> , 2004 , 109,		28
18	Evolution of energetic electron pitch angle distributions during storm time electron acceleration to megaelectronvolt energies. <i>Journal of Geophysical Research</i> , 2003 , 108, SMP 11-1		128
17	Statistical analysis of relativistic electron energies for cyclotron resonance with EMIC waves observed on CRRES. <i>Journal of Geophysical Research</i> , 2003 , 108,		342
16	Diffuse auroral electron scattering by electron cyclotron harmonic and whistler mode waves during an isolated substorm. <i>Journal of Geophysical Research</i> , 2003 , 108,		143
15	Evidence for chorus-driven electron acceleration to relativistic energies from a survey of geomagnetically disturbed periods. <i>Journal of Geophysical Research</i> , 2003 , 108,		205
14	Energization of relativistic electrons in the presence of ULF power and MeV microbursts: Evidence for dual ULF and VLF acceleration. <i>Journal of Geophysical Research</i> , 2003 , 108,		217
13	Favored regions for chorus-driven electron acceleration to relativistic energies in the Earth's outer radiation belt. <i>Geophysical Research Letters</i> , 2003 , 30,	4.9	231
12	Evidence for acceleration of outer zone electrons to relativistic energies by whistler mode chorus. <i>Annales Geophysicae</i> , 2002 , 20, 967-979	2	92
11	Outer zone relativistic electron acceleration associated with substorm-enhanced whistler mode chorus. <i>Journal of Geophysical Research</i> , 2002 , 107, SMP 29-1		180
10	Model of the energization of outer-zone electrons by whistler-mode chorus during the October 9, 1990 geomagnetic storm. <i>Geophysical Research Letters</i> , 2002 , 29, 27-1-27-4	4.9	157
9	The relativistic electron response in the outer radiation belt during magnetic storms. <i>Annales Geophysicae</i> , 2002 , 20, 957-965	2	58
8	Substorm dependence of chorus amplitudes: Implications for the acceleration of electrons to relativistic energies. <i>Journal of Geophysical Research</i> , 2001 , 106, 13165-13178		409

7	The temporal evolution of electron distributions and associated wave activity following substorm injections in the inner magnetosphere. <i>Journal of Geophysical Research</i> , 2000 , 105, 12907-12917		76
6	Beagle 2: a proposed exobiology lander for ESA's 2003 Mars Express mission. <i>Advances in Space Research</i> , 1999 , 23, 1925-8	2.4	23
5	pancake electron distributions in the outer radiation belts. <i>Journal of Geophysical Research</i> , 1999 , 104, 12431-12444		57
4	The anomalous behaviour of C2 in P/Borrelly 1987p. <i>Monthly Notices of the Royal Astronomical Society</i> , 1989 , 240, 647-655	4.3	5
3	Gas coma of comet Giacobini-Zinner: Emission from grains. <i>Advances in Space Research</i> , 1989 , 9, 213-216	2.4	
2	Comparison of ion structures in comets halley and giacobini-zinner. <i>Planetary and Space Science</i> , 1987 , 35, 299-311	2	2
1	Networking ground-based images of comet Halley during the Giotto encounter. <i>Eos</i> , 1986 , 67, 1385	1.5	1