

# Nigel Meredith

## List of Publications by Citations

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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	Timescale for radiation belt electron acceleration by whistler mode chorus waves. <i>Journal of Geophysical Research</i> , <b>2005</b> , 110,		501
113	Wave acceleration of electrons in the Van Allen radiation belts. <i>Nature</i> , <b>2005</b> , 437, 227-30	50.4	429
112	Substorm dependence of chorus amplitudes: Implications for the acceleration of electrons to relativistic energies. <i>Journal of Geophysical Research</i> , <b>2001</b> , 106, 13165-13178		409
111	Scattering by chorus waves as the dominant cause of diffuse auroral precipitation. <i>Nature</i> , <b>2010</b> , 467, 943-6	50.4	347
110	Statistical analysis of relativistic electron energies for cyclotron resonance with EMIC waves observed on CRRES. <i>Journal of Geophysical Research</i> , <b>2003</b> , 108,		342
109	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> , <b>2007</b> , 112, n/a-n/a		322
108	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> , <b>2008</b> , 70, 1694-1713	2	315
107	Electron acceleration in the Van Allen radiation belts by fast magnetosonic waves. <i>Geophysical Research Letters</i> , <b>2007</b> , 34,	4.9	296
106	The unexpected origin of plasmaspheric hiss from discrete chorus emissions. <i>Nature</i> , <b>2008</b> , 452, 62-6	50.4	269
105	Substorm dependence of plasmaspheric hiss. <i>Journal of Geophysical Research</i> , <b>2004</b> , 109,		249
104	Favored regions for chorus-driven electron acceleration to relativistic energies in the Earth's outer radiation belt. <i>Geophysical Research Letters</i> , <b>2003</b> , 30,	4.9	231
103	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> , <b>2003</b> , 108,		217
102	Evidence for chorus-driven electron acceleration to relativistic energies from a survey of geomagnetically disturbed periods. <i>Journal of Geophysical Research</i> , <b>2003</b> , 108,		205
101	Slot region electron loss timescales due to plasmaspheric hiss and lightning-generated whistlers. <i>Journal of Geophysical Research</i> , <b>2007</b> , 112, n/a-n/a		203
100	Global model of lower band and upper band chorus from multiple satellite observations. <i>Journal of Geophysical Research</i> , <b>2012</b> , 117, n/a-n/a		188
99	Timescales for radiation belt electron acceleration and loss due to resonant wave-particle interactions: 1. Theory. <i>Journal of Geophysical Research</i> , <b>2007</b> , 112, n/a-n/a		180
98	Outer zone relativistic electron acceleration associated with substorm-enhanced whistler mode chorus. <i>Journal of Geophysical Research</i> , <b>2002</b> , 107, SMP 29-1		180

97	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> , <b>2008</b> , 70, 1679-1693	2	177
96	Model of the energization of outer-zone electrons by whistler-mode chorus during the October 9, 1990 geomagnetic storm. <i>Geophysical Research Letters</i> , <b>2002</b> , 29, 27-1-27-4	4.9	157
95	Survey of magnetosonic waves and proton ring distributions in the Earth's inner magnetosphere. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		156
94	Electron scattering by whistler-mode ELF hiss in plasmaspheric plumes. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		154
93	Energetic outer zone electron loss timescales during low geomagnetic activity. <i>Journal of Geophysical Research</i> , <b>2006</b> , 111,		152
92	Three-dimensional diffusion simulation of outer radiation belt electrons during the 9 October 1990 magnetic storm. <i>Journal of Geophysical Research</i> , <b>2009</b> , 114, n/a-n/a		144
91	Diffuse auroral electron scattering by electron cyclotron harmonic and whistler mode waves during an isolated substorm. <i>Journal of Geophysical Research</i> , <b>2003</b> , 108,		143
90	Origin of energetic electron precipitation >30 keV into the atmosphere. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		141
89	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> , <b>2014</b> , 119, 268-289	2.6	139
88	Global morphology and spectral properties of EMIC waves derived from CRRES observations. <i>Journal of Geophysical Research: Space Physics</i> , <b>2014</b> , 119, 5328-5342	2.6	131
87	Evolution of energetic electron pitch angle distributions during storm time electron acceleration to megaelectronvolt energies. <i>Journal of Geophysical Research</i> , <b>2003</b> , 108, SMP 11-1		128
86	Radiation Belt Environment model: Application to space weather nowcasting. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		127
85	Relativistic electron loss timescales in the slot region. <i>Journal of Geophysical Research</i> , <b>2009</b> , 114, n/a-n/a		118
84	Space weather impacts on satellites and forecasting the Earth's electron radiation belts with SPACECAST. <i>Space Weather</i> , <b>2013</b> , 11, 169-186	3.7	116
83	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> , <b>2005</b> , 32, n/a-n/a	4.9	114
82	Parameterization of radiation belt electron loss timescales due to interactions with chorus waves. <i>Geophysical Research Letters</i> , <b>2007</b> , 34,	4.9	112
81	Survey of upper band chorus and ECH waves: Implications for the diffuse aurora. <i>Journal of Geophysical Research</i> , <b>2009</b> , 114, n/a-n/a		109
80	Electron losses from the radiation belts caused by EMIC waves. <i>Journal of Geophysical Research: Space Physics</i> , <b>2014</b> , 119, 8820-8837	2.6	107

79	Origins of plasmaspheric hiss. <i>Journal of Geophysical Research</i> , <b>2006</b> , 111,		102
78	Resonant scattering of plasma sheet electrons leading to diffuse auroral precipitation: 2. Evaluation for whistler mode chorus waves. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116, n/a-n/a		101
77	Three-dimensional test simulations of the outer radiation belt electron dynamics including electron-chorus resonant interactions. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		101
76	Modeling the propagation characteristics of chorus using CRRES suprathermal electron fluxes. <i>Journal of Geophysical Research</i> , <b>2007</b> , 112, n/a-n/a		96
75	Energetic electron precipitation during high-speed solar wind stream driven storms. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116,		93
74	Evidence for acceleration of outer zone electrons to relativistic energies by whistler mode chorus. <i>Annales Geophysicae</i> , <b>2002</b> , 20, 967-979	2	92
73	Phase space density analysis of the outer radiation belt energetic electron dynamics. <i>Journal of Geophysical Research</i> , <b>2006</b> , 111,		83
72	Refilling of the slot region between the inner and outer electron radiation belts during geomagnetic storms. <i>Journal of Geophysical Research</i> , <b>2007</b> , 112, n/a-n/a		77
71	The temporal evolution of electron distributions and associated wave activity following substorm injections in the inner magnetosphere. <i>Journal of Geophysical Research</i> , <b>2000</b> , 105, 12907-12917		76
70	Evolution of electron pitch angle distributions following injection from the plasma sheet. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116, n/a-n/a		74
69	Radiation belt electron precipitation into the atmosphere: Recovery from a geomagnetic storm. <i>Journal of Geophysical Research</i> , <b>2007</b> , 112, n/a-n/a		64
68	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> , <b>2011</b> , 116, n/a-n/a		61
67	Low-altitude measurements of 28 MeV electron trapping lifetimes at 1.5 L $\pm$ 0.5. <i>Geophysical Research Letters</i> , <b>2007</b> , 34,	4-9	59
66	Modeling the wave power distribution and characteristics of plasmaspheric hiss. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116, n/a-n/a		58
65	Evaluation of whistler mode chorus amplification during an injection event observed on CRRES. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		58
64	The relativistic electron response in the outer radiation belt during magnetic storms. <i>Annales Geophysicae</i> , <b>2002</b> , 20, 957-965	2	58
63	Plasmaspheric electron distributions in the outer radiation belts. <i>Journal of Geophysical Research</i> , <b>1999</b> , 104, 12431-12444		57
62	Quasi-linear simulations of inner radiation belt electron pitch angle and energy distributions. <i>Geophysical Research Letters</i> , <b>2016</b> , 43, 2381-2388	4-9	57

61	A new diffusion matrix for whistler mode chorus waves. <i>Journal of Geophysical Research: Space Physics</i> , <b>2013</b> , 118, 6302-6318	2.6	54
60	Chorus-driven resonant scattering of diffuse auroral electrons in nondipolar magnetic fields. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116, n/a-n/a		51
59	Global statistical evidence for chorus as the embryonic source of plasmaspheric hiss. <i>Geophysical Research Letters</i> , <b>2013</b> , 40, 2891-2896	4.9	49
58	Global Model of Plasmaspheric Hiss From Multiple Satellite Observations. <i>Journal of Geophysical Research: Space Physics</i> , <b>2018</b> , 123, 4526-4541	2.6	49
57	The Influence of Wave-Particle Interactions on Relativistic Electron Dynamics During Storms. <i>Geophysical Monograph Series</i> , <b>2005</b> , 101-112	1.1	48
56	Ray tracing of penetrating chorus and its implications for the radiation belts. <i>Geophysical Research Letters</i> , <b>2007</b> , 34,	4.9	47
55	Diffuse auroral scattering by whistler mode chorus waves: Dependence on wave normal angle distribution. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116, n/a-n/a		45
54	Ground-based transmitter signals observed from space: Ducted or nonducted?. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		45
53	Wave-particle interactions in the equatorial source region of whistler-mode emissions. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		44
52	Modeling the effects of radial diffusion and plasmaspheric hiss on outer radiation belt electrons. <i>Geophysical Research Letters</i> , <b>2007</b> , 34,	4.9	37
51	Ground observations of chorus following geomagnetic storms. <i>Journal of Geophysical Research</i> , <b>2004</b> , 109,		36
50	Extreme relativistic electron fluxes at geosynchronous orbit: Analysis of GOES E > 2 MeV electrons. <i>Space Weather</i> , <b>2015</b> , 13, 170-184	3.7	34
49	Mechanisms for the Acceleration of Radiation Belt Electrons. <i>Geophysical Monograph Series</i> , <b>2006</b> , 151-173		33
48	Plasmaspheric hiss overview and relation to chorus. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>2009</b> , 71, 1636-1646	2	32
47	A 30-Year Simulation of the Outer Electron Radiation Belt. <i>Space Weather</i> , <b>2018</b> , 16, 1498-1522	3.7	32
46	Global model of low-frequency chorus (. <i>Geophysical Research Letters</i> , <b>2014</b> , 41, 280-286	4.9	30
45	Comment on On the origin of whistler mode radiation in the plasmasphere by Green et al.. <i>Journal of Geophysical Research</i> , <b>2006</b> , 111,		29
44	Spacecraft surface charging induced by severe environments at geosynchronous orbit. <i>Space Weather</i> , <b>2018</b> , 16, 89-106	3.7	28

43	Differences in ground-observed chorus in geomagnetic storms with and without enhanced relativistic electron fluxes. <i>Journal of Geophysical Research</i> , <b>2004</b> , 109,		28
42	Beagle 2: a proposed exobiology lander for ESA's 2003 Mars Express mission. <i>Advances in Space Research</i> , <b>1999</b> , 23, 1925-8	2.4	23
41	Longitudinal and seasonal variations in plasmaspheric electron density: Implications for electron precipitation. <i>Journal of Geophysical Research</i> , <b>2007</b> , 112, n/a-n/a		22
40	Effects of VLF Transmitter Waves on the Inner Belt and Slot Region. <i>Journal of Geophysical Research: Space Physics</i> , <b>2019</b> , 124, 5260-5277	2.6	21
39	Simulating the Earth's radiation belts: Internal acceleration and continuous losses to the magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , <b>2014</b> , 119, 7444-7463	2.6	20
38	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> , <b>2013</b> , 3, A20	2.5	20
37	An Investigation of VLF Transmitter Wave Power in the Inner Radiation Belt and Slot Region. <i>Journal of Geophysical Research: Space Physics</i> , <b>2019</b> , 124, 5246-5259	2.6	19
36	Role of the plasmopause in dictating the ground accessibility of ELF/VLF chorus. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		19
35	Three-dimensional stochastic modeling of radiation belts in adiabatic invariant coordinates. <i>Journal of Geophysical Research: Space Physics</i> , <b>2014</b> , 119, 7615-7635	2.6	18
34	Global Model of Whistler Mode Chorus in the Near-Equatorial Region (  $\theta$  ). <i>Geophysical Research Letters</i> , <b>2020</b> , 47, e2020GL087311	4.9	18
33	Radiation Effects on Satellites During Extreme Space Weather Events. <i>Space Weather</i> , <b>2018</b> , 16, 1216-1236	3.6	16
32	Extreme energetic electron fluxes in low Earth orbit: Analysis of POES E $\geq$ 100, E $\geq$ 1000, and E $\geq$ 3000keV electrons. <i>Space Weather</i> , <b>2016</b> , 14, 136-150	3.7	15
31	Variability of Quasilinear Diffusion Coefficients for Plasmaspheric Hiss. <i>Journal of Geophysical Research: Space Physics</i> , <b>2019</b> , 124, 8488-8506	2.6	14
30	Realistic Worst Case for a Severe Space Weather Event Driven by a Fast Solar Wind Stream. <i>Space Weather</i> , <b>2018</b> , 16, 1202-1215	3.7	14
29	Comparative study of outer-zone relativistic electrons observed by Akebono and CRRES. <i>Journal of Geophysical Research</i> , <b>2005</b> , 110,		13
28	Extreme relativistic electron fluxes in the Earth's outer radiation belt: Analysis of INTEGRAL IREM data. <i>Space Weather</i> , <b>2017</b> , 15, 917-933	3.7	11
27	Effect of plasma density on diffusion rates due to wave particle interactions with chorus and plasmaspheric hiss: extreme event analysis. <i>Annales Geophysicae</i> , <b>2014</b> , 32, 1059-1071	2	10
26	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> , <b>2020</b> , 125, e2020JA027949	2.6	10

25	Extreme internal charging currents in medium Earth orbit: Analysis of SURF plate currents on Giove-A. <i>Space Weather</i> , <b>2016</b> , 14, 578-591	3.7	9
24	Statistical Investigation of the Frequency Dependence of the Chorus Source Mechanism of Plasmaspheric Hiss. <i>Geophysical Research Letters</i> , <b>2021</b> , 48, e2021GL092725	4.9	9
23	Effects of energy and pitch angle mixed diffusion on radiation belt electrons. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>2011</b> , 73, 785-795	2	8
22	A New Approach to Constructing Models of Electron Diffusion by EMIC Waves in the Radiation Belts. <i>Geophysical Research Letters</i> , <b>2020</b> , 47, e2020GL088976	4.9	6
21	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> , <b>2019</b> , 124, 8893-8912	2.6	5
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> , <b>2004</b> , 109,		5
19	The anomalous behaviour of C2 in P/Borrelly 1987p. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>1989</b> , 240, 647-655	4.3	5
18	Wave-Driven Diffusion in Radiation Belt Dynamics <b>2016</b> , 217-243		5
17	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> , <b>2017</b> , 122, 12,072	2.6	4
16	Studies of substorm on March 12, 1991: 2. Auroral electrons. Acceleration, injection, and dynamics. <i>Cosmic Research</i> , <b>2007</b> , 45, 89-96	0.6	4
15	Comparing Electron Precipitation Fluxes Calculated From Pitch Angle Diffusion Coefficients to LEO Satellite Observations. <i>Journal of Geophysical Research: Space Physics</i> , <b>2021</b> , 126, e2020JA028410	2.6	4
14	Spacecraft Charging Related Risk of Floating Connector Pins. <i>IEEE Transactions on Plasma Science</i> , <b>2018</b> , 46, 201-206	1.3	3
13	Turning the sounds of space into art. <i>Astronomy and Geophysics</i> , <b>2019</b> , 60, 2.18-2.21	0.2	2
12	Comparison of ion structures in comets halley and giacobini-zinner. <i>Planetary and Space Science</i> , <b>1987</b> , 35, 299-311	2	2
11	On the Variability of EMIC Waves and the Consequences for the Relativistic Electron Radiation Belt Population. <i>Journal of Geophysical Research: Space Physics</i> , <b>2021</b> , 126, e2021JA029754	2.6	2
10	Multi-Parameter Chorus and Plasmaspheric Hiss Wave Models. <i>Journal of Geophysical Research: Space Physics</i> , <b>2021</b> , 126, e2020JA028403	2.6	2
9	Interplanetary Shock-Induced Magnetopause Motion: Comparison Between Theory and Global Magnetohydrodynamic Simulations. <i>Geophysical Research Letters</i> , <b>2021</b> , 48, e2021GL092554	4.9	2
8	The Implications of Temporal Variability in Wave-Particle Interactions in Earth's Radiation Belts. <i>Geophysical Research Letters</i> , <b>2021</b> , 48, e2020GL089962	4.9	2

7	Correction to Radiation belt electron precipitation into the atmosphere: Recovery from a geomagnetic storm <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		1
6	Studies of the substorm on March 12, 1991: 1. Structure of substorm activity and auroral ions. <i>Cosmic Research</i> , <b>2007</b> , 45, 27-38	0.6	1
5	Networking ground-based images of comet Halley during the Giotto encounter. <i>Eos</i> , <b>1986</b> , 67, 1385	1.5	1
4	Cross- Coherence of the Outer Radiation Belt During Storms and the Role of the Plasmopause. <i>Journal of Geophysical Research: Space Physics</i> , <b>2021</b> , 126, e2021JA029308	2.6	1
3	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> , <b>2021</b> , 126, e2021JA029802	2.6	0
2	Gas coma of comet Giacobini-Zinner: Emission from grains. <i>Advances in Space Research</i> , <b>1989</b> , 9, 213-216	2.4	
1	Music of the spheres. <i>Astronomy and Geophysics</i> , <b>2022</b> , 63, 1.38-1.40		0.2