

Jay Albert

List of Publications by Year in descending order

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92
papers

5,752
citations

87843

38
h-index

76872

74
g-index

93
all docs

93
docs citations

93
times ranked

1610
citing authors

#	ARTICLE	IF	CITATIONS
1	Timescale for radiation belt electron acceleration by whistler mode chorus waves. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	561
2	Radial diffusion analysis of outer radiation belt electrons during the October 9, 1990, magnetic storm. <i>Journal of Geophysical Research</i> , 2000, 105, 291-309.	3.3	428
3	The Electric Field and Waves Instruments on the Radiation Belt Storm Probes Mission. <i>Space Science Reviews</i> , 2013, 179, 183-220.	3.7	421
4	Precipitation of radiation belt electrons by EMIC waves, observed from ground and space. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	245
5	Evaluation of quasi-linear diffusion coefficients for EMIC waves in a multispecies plasma. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	233
6	Relativistic electron precipitation by EMIC waves from self-consistent global simulations. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	223
7	Energetic outer zone electron loss timescales during low geomagnetic activity. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	170
8	Evaluation of quasi-linear diffusion coefficients for whistler mode waves in a plasma with arbitrary density ratio. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	168
9	Three-dimensional diffusion simulation of outer radiation belt electrons during the 9 October 1990 magnetic storm. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	160
10	Nonlinear interaction of outer zone electrons with VLF waves. <i>Geophysical Research Letters</i> , 2002, 29, 116-1-116-3.	1.5	141
11	Relativistic electron loss timescales in the slot region. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	137
12	Nonlinear interaction of radiation belt electrons with electromagnetic ion cyclotron waves. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	135
13	Multidimensional quasi-linear diffusion of radiation belt electrons. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	1.5	121
14	Controlled precipitation of radiation belt electrons. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	102
15	Estimates of lifetimes against pitch angle diffusion. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2009, 71, 1647-1652.	0.6	90
16	Gyroresonant interactions of radiation belt particles with a monochromatic electromagnetic wave. <i>Journal of Geophysical Research</i> , 2000, 105, 21191-21209.	3.3	88
17	Analysis of quasi-linear diffusion coefficients. <i>Journal of Geophysical Research</i> , 1999, 104, 2429-2441.	3.3	86
18	Global MHD test particle simulations of >10 MeV radiation belt electrons during storm sudden commencement. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	84

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19	Simple approximations of quasi-linear diffusion coefficients. Journal of Geophysical Research, 2007, 112, .	3.3	84
20	Quasi-linear pitch angle diffusion coefficients: Retaining high harmonics. Journal of Geophysical Research, 1994, 99, 23741.	3.3	83
21	Comparison of bounce-averaged quasi-linear diffusion coefficients for parallel propagating whistler mode waves with test particle simulations. Journal of Geophysical Research, 2012, 117, .	3.3	83
22	CRRES electric field power spectra and radial diffusion coefficients. Journal of Geophysical Research, 2005, 110, .	3.3	80
23	Diffusion by one wave and by many waves. Journal of Geophysical Research, 2010, 115, .	3.3	80
24	Effects of amplitude modulation on nonlinear interactions between electrons and chorus waves. Geophysical Research Letters, 2012, 39, .	1.5	80
25	Cyclotron resonance in an inhomogeneous magnetic field. Physics of Fluids B, 1993, 5, 2744-2750.	1.7	79
26	Illumination of the plasmasphere by terrestrial very low frequency transmitters: Model validation. Journal of Geophysical Research, 2008, 113, .	3.3	79
27	Stochastic modeling of multidimensional diffusion in the radiation belts. Journal of Geophysical Research, 2008, 113, .	3.3	73
28	Aspects of Nonlinear Wave-Particle Interactions. Geophysical Monograph Series, 0, , 255-264.	0.1	72
29	Quasi-linear simulations of inner radiation belt electron pitch angle and energy distributions. Geophysical Research Letters, 2016, 43, 2381-2388.	1.5	70
30	The importance of amplitude modulation in nonlinear interactions between electrons and large amplitude whistler waves. Journal of Atmospheric and Solar-Terrestrial Physics, 2013, 99, 67-72.	0.6	68
31	Comparison of quasilinear diffusion coefficients for parallel propagating whistler mode waves with test particle simulations. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	63
32	Recent developments in the radiation belt environment model. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 1435-1443.	0.6	63
33	Evidence of stronger pitch angle scattering loss caused by oblique whistler-mode waves as compared with quasi-parallel waves. Geophysical Research Letters, 2014, 41, 6063-6070.	1.5	63
34	Numerical modeling of multidimensional diffusion in the radiation belts using layer methods. Journal of Geophysical Research, 2009, 114, .	3.3	61
35	Efficient approximations of quasi-linear diffusion coefficients in the radiation belts. Journal of Geophysical Research, 2008, 113, .	3.3	60
36	Using quasi-linear diffusion to model acceleration and loss from wave-particle interactions. Space Weather, 2004, 2, n/a-n/a.	1.3	57

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37	Comparison of pitch angle diffusion by turbulent and monochromatic whistler waves. <i>Journal of Geophysical Research</i> , 2001, 106, 8477-8482.	3.3	44
38	CRRES observations of radiation belt protons: 1. Data overview and steady state radial diffusion. <i>Journal of Geophysical Research</i> , 1998, 103, 9261-9273.	3.3	43
39	Nonlinear Interactions Between Radiation Belt Electrons and Chorus Waves: Dependence on Wave Amplitude Modulation. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL085987.	1.5	41
40	Influence of a ground-based VLF radio transmitter on the inner electron radiation belt. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 628-635.	0.8	40
41	A new ionospheric electron precipitation module coupled with RAM-SCB within the geospace general circulation model. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 8554-8575.	0.8	40
42	Contribution of convective transport to stormtime ring current electron injection. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	34
43	Specification of the near-Earth space environment with SHIELDS. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2018, 177, 148-159.	0.6	31
44	VLF Transmitters and Lightning-Generated Whistlers: 2. Diffusion of Radiation Belt Electrons. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027030.	0.8	29
45	Electron lifetimes from narrowband wave-particle interactions within the plasmasphere. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 8858-8880.	0.8	27
46	Calculation of Last Closed Drift Shells for the 2013 GEM Radiation Belt Challenge Events. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 9597-9611.	0.8	27
47	Quasi-linear diffusion coefficients for highly oblique whistler mode waves. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 5339-5354.	0.8	26
48	VLF Transmitters and Lightning-Generated Whistlers: 1. Modeling Waves From Source to Space. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027029.	0.8	24
49	Dependence of quasi-linear diffusion coefficients on wave parameters. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	23
50	Three-dimensional stochastic modeling of radiation belts in adiabatic invariant coordinates. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 7615-7635.	0.8	22
51	Models of Resonant Wave-Particle Interactions. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029216.	0.8	22
52	Theoretical model of the nonlinear resonant interaction of whistler-mode waves and field-aligned electrons. <i>Physics of Plasmas</i> , 2021, 28, .	0.7	21
53	Low-altitude distribution of radiation belt electrons. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	19
54	Effects of discreteness of chorus waves on quasilinear diffusion-based modeling of energetic electron dynamics. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 8848-8857.	0.8	19

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55	The coupling of quasi-linear pitch angle and energy diffusion. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2009, 71, 1664-1668.	0.6	18
56	Unraveling the Formation Mechanism for the Bursts of Electron Butterfly Distributions: Test Particle and Quasilinear Simulations. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL090749.	1.5	18
57	SAID/SAPS-related VLF waves and the outer radiation belt boundary. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	1.5	17
58	Amplitude Dependence of Nonlinear Precipitation Blocking of Relativistic Electrons by Large Amplitude EMIC Waves. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	17
59	Dependence of Nonlinear Effects on Whistlerâ€™Mode Wave Bandwidth and Amplitude: A Perspective From Diffusion Coefficients. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	0.8	16
60	Transport and loss of the inner plasma sheet electrons: THEMIS observations. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	15
61	Variability of the Proton Radiation Belt. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 5516-5527.	0.8	15
62	An efficient and positivityâ€™preserving layer method for modeling radiation belt diffusion processes. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 305-320.	0.8	13
63	Temporal and Spatial Correspondence of Pc1/EMIC Waves and Relativistic Electron Precipitations Observed With Groundâ€™Based Multiâ€™Instruments on 27 March 2017. <i>Geophysical Research Letters</i> , 2018, 45, 13,182.	1.5	13
64	Test particle motion in the cyclotron resonance regime. <i>Physics of Fluids B</i> , 1991, 3, 2994-3012.	1.7	12
65	CRRES observations of radiation belt protons: 2. Time-dependent radial diffusion. <i>Journal of Geophysical Research</i> , 1998, 103, 14865-14877.	3.3	12
66	Relativistic electron beam propagation in the Earth's magnetosphere. <i>Journal of Geophysical Research</i> , 1999, 104, 28587-28599.	3.3	12
67	Refractive index and wavenumber properties for cyclotron resonant quasilinear diffusion by cold plasma waves. <i>Physics of Plasmas</i> , 2007, 14, .	0.7	12
68	Modeling radiation belt dynamics using a 3â€™D layer method code. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 8642-8658.	0.8	12
69	Pitch angle diffusion as seen by CRRES. <i>Advances in Space Research</i> , 2000, 25, 2343-2346.	1.2	11
70	Comment on "On the numerical simulation of particle dynamics in the radiation belt. Part I: Implicit and semiâ€™implicit schemes" and "On the numerical simulation of particle dynamics in the radiation belt. Part II: Procedure based on the diagonalization of the diffusion tensor" by E. Camporeale et al.. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 7762-7764.	0.8	11
71	Quantitative Assessment of Radiation Belt Modeling. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 898-904.	0.8	11
72	Almost twoâ€™dimensional treatment of drift wave turbulence. <i>Physics of Fluids B</i> , 1990, 2, 3032-3039.	1.7	10

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73	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.	0.6	10
74	Radial diffusion simulations of the 20 September 2007 radiation belt dropout. <i>Annales Geophysicae</i> , 2014, 32, 925-934.	0.6	9
75	Equations of Motion Near Cyclotron Resonance. <i>Frontiers in Astronomy and Space Sciences</i> , 0, 9, .	1.1	9
76	On the influence of the initial pitch angle distribution on relativistic electron beam dynamics. <i>Journal of Geophysical Research</i> , 2000, 105, 16093-16094.	3.3	7
77	Effects of magnetic drift shell splitting on electron diffusion in the radiation belts. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 11,985.	0.8	7
78	Correction to "Nonlinear interaction of radiation belt electrons with electromagnetic ion cyclotron waves". <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	6
79	SCATHA measurements of electron decay times at 5 L \pm 8. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	6
80	Three-wave interactions and type II irregularities in the equatorial electrojet. <i>Physics of Fluids B</i> , 1991, 3, 495-497.	1.7	5
81	A bounce-averaged Monte Carlo collision operator and ripple transport in a tokamak. <i>Physics of Fluids</i> , 1988, 31, 1809.	1.4	4
82	Analytical bounds on the whistler mode refractive index. <i>Physics of Plasmas</i> , 2004, 11, 4875-4877.	0.7	4
83	Purple Auroral Rays and Global Pc1 Pulsations Observed at the CIR-Associated Solar Wind Density Enhancement on 21 March 2017. <i>Geophysical Research Letters</i> , 2018, 45, 10,819.	1.5	4
84	Dynamic Radiation Belt Modeling at the Air Force Research Laboratory. <i>Geophysical Monograph Series</i> , 0, , 281-287.	0.1	3
85	Discrete mappings and resonant ripple transport in a tokamak. <i>Physics of Fluids</i> , 1988, 31, 1811.	1.4	2
86	A generalized discrete mapping treatment of nonresonant ripple transport in a tokamak. <i>Physics of Fluids B</i> , 1989, 1, 1335-1336.	1.7	2
87	Diagonalization of diffusion equations in two and three dimensions. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2018, 177, 202-207.	0.6	2
88	Optimization of Radial Diffusion Coefficients for the Proton Radiation Belt During the CRRES Era. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028486.	0.8	2
89	An almost two-dimensional approach to type 2 irregularities in the equatorial electrojet. <i>Journal of Geophysical Research</i> , 1991, 96, 16015-16020.	3.3	1
90	The whistler mode refractive index as a function of gyrofrequency. <i>Physics of Plasmas</i> , 2011, 18, 084503.	0.7	1

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91	CRRES Observations and Radial Diffusion Theory of Radiation Belt Protons. Geophysical Monograph Series, 0, , 69-71.	0.1	0
92	Diffusion Modeling of Electrons in the Inner Zone and Slot Region. , 2018, , .		0