

M K Hudson

List of Publications by Year in descending order

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74
papers

4,986
citations

117571

34
h-index

123376

61
g-index

74
all docs

74
docs citations

74
times ranked

1960
citing authors

#	ARTICLE	IF	CITATIONS
1	Observations of Paired Electrostatic Shocks in the Polar Magnetosphere. <i>Physical Review Letters</i> , 1977, 38, 292-295.	2.9	672
2	Science Goals and Overview of the Radiation Belt Storm Probes (RBSP) Energetic Particle, Composition, and Thermal Plasma (ECT) Suite on NASA's Van Allen Probes Mission. <i>Space Science Reviews</i> , 2013, 179, 311-336.	3.7	463
3	Simulation of the prompt energization and transport of radiation belt particles during the March 24, 1991 SSC. <i>Geophysical Research Letters</i> , 1993, 20, 2423-2426.	1.5	393
4	Discovery of very large amplitude whistler-mode waves in Earth's radiation belts. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	249
5	A Long-Lived Relativistic Electron Storage Ring Embedded in Earth's Outer Van Allen Belt. <i>Science</i> , 2013, 340, 186-190.	6.0	216
6	Comparisons of Polar satellite observations of solitary wave velocities in the plasma sheet boundary and the high altitude cusp to those in the auroral zone. <i>Geophysical Research Letters</i> , 1999, 26, 425-428.	1.5	183
7	Experimental evidence on the role of the large spatial scale electric field in creating the ring current. <i>Journal of Geophysical Research</i> , 1998, 103, 29527-29544.	3.3	161
8	Simulations of radiation belt formation during storm sudden commencements. <i>Journal of Geophysical Research</i> , 1997, 102, 14087-14102.	3.3	139
9	Van Allen Probes observation of localized drift resonance between poloidal mode ultra-low frequency waves and 60 keV electrons. <i>Geophysical Research Letters</i> , 2013, 40, 4491-4497.	1.5	127
10	Gradual diffusion and punctuated phase space density enhancements of highly relativistic electrons: Van Allen Probes observations. <i>Geophysical Research Letters</i> , 2014, 41, 1351-1358.	1.5	127
11	Resonant enhancement of relativistic electron fluxes during geomagnetically active periods. <i>Annales Geophysicae</i> , 1999, 17, 631-638.	0.6	120
12	Solitary waves and double layers on auroral field lines. <i>Journal of Geophysical Research</i> , 1983, 88, 916-926.	3.3	116
13	Simulated magnetopause losses and Van Allen Probe flux dropouts. <i>Geophysical Research Letters</i> , 2014, 41, 1113-1118.	1.5	105
14	Shock-induced prompt relativistic electron acceleration in the inner magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 1661-1674.	0.8	104
15	Simulation of proton radiation belt formation during the March 24, 1991 SSC. <i>Geophysical Research Letters</i> , 1995, 22, 291-294.	1.5	98
16	Solar wind driving of magnetospheric ULF waves: Field line resonances driven by dynamic pressure fluctuations. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	94
17	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
18	Weak double layers in ion-acoustic turbulence. <i>Physics of Fluids</i> , 1985, 28, 1055.	1.4	83

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19	Incorporating spectral characteristics of Pc5 waves into three-dimensional radiation belt modeling and the diffusion of relativistic electrons. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	80
20	Extreme lunar surface charging during solar energetic particle events. <i>Geophysical Research Letters</i> , 2007, 34, .	1.5	80
21	The Balloon Array for RBSP Relativistic Electron Losses (BARREL). <i>Space Science Reviews</i> , 2013, 179, 503-530.	3.7	76
22	Coherent anomalous resistivity in the region of electrostatic shocks. <i>Geophysical Research Letters</i> , 1979, 6, 661-663.	1.5	75
23	Simulation of radiation belt dynamics driven by solar wind variations. <i>Geophysical Monograph Series</i> , 1999, , 171-182.	0.1	72
24	Magnetic field-aligned potential drops due to electrostatic ion cyclotron turbulence. <i>Geophysical Research Letters</i> , 1978, 5, 143-146.	1.5	70
25	Electrostatic shocks, double layers, and anomalous resistivity in the magnetosphere. <i>Geophysical Research Letters</i> , 1978, 5, 131-134.	1.5	64
26	Magnetospheric cavity modes driven by solar wind dynamic pressure fluctuations. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	63
27	Dynamic modeling of geomagnetic cutoff for the 23â€“24 November 2001 solar energetic particle event. <i>Geophysical Research Letters</i> , 2004, 31, .	1.5	50
28	Observations of the inner radiation belt: CRAND and trapped solar protons. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 6541-6552.	0.8	50
29	Modeling CMEâ€™s shockâ€™driven storms in 2012â€“2013: MHD test particle simulations. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 1168-1181.	0.8	50
30	Magnetic field line curvature induced pitch angle diffusion in the inner magnetosphere. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	45
31	Injection and loss of inner radiation belt protons during solar proton events and magnetic storms. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	44
32	Empirical model for $\hat{\nu}^{1/4}$ scattering caused by field line curvature in a realistic magnetosphere. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 3-1.	3.3	43
33	Pitch Angle Scattering of Sub-MeV Relativistic Electrons by Electromagnetic Ion Cyclotron Waves. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 5610-5626.	0.8	41
34	Impulsive solar energetic ion trapping in the magnetosphere during geomagnetic storms. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	37
35	BARREL observations of an ICMEâ€™s shock impact with the magnetosphere and the resultant radiation belt electron loss. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 2557-2570.	0.8	35
36	Direct observation of the CRAND proton radiation belt source. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 7532-7537.	0.8	29

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37	The Role of Hiss, Chorus, and EMIC Waves in the Modeling of the Dynamics of the Multi-MeV Radiation Belt Electrons. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028282.	0.8	28
38	Inward diffusion and loss of radiation belt protons. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 1969-1978.	0.8	26
39	Dynamics of localized ion-acoustic waves in a magnetized plasma. <i>Physics of Fluids</i> , 1988, 31, 2190.	1.4	23
40	Simulation of ULF wave-modulated radiation belt electron precipitation during the 17 March 2013 storm. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 3444-3461.	0.8	23
41	Simulation of the acceleration of relativistic electrons in the inner magnetosphere using RCM-VERB coupled codes. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	22
42	Ion Acceleration by Wave-Particle Interaction. <i>Geophysical Monograph Series</i> , 0, , 261-270.	0.1	22
43	Possible evidence of damped cavity mode oscillations stimulated by the January, 1997 magnetic cloud event. <i>Geophysical Research Letters</i> , 1999, 26, 3589-3592.	1.5	21
44	Rebuilding of the Earth's outer electron belt during 8-10 October 2012. <i>Geophysical Research Letters</i> , 2014, 41, 749-754.	1.5	20
45	Simulations of Electron Energization and Injection by BBFs Using High-Resolution LFM MHD Fields. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 1222-1238.	0.8	20
46	MHD/Particle Simulations of Radiation Belt Formation During a Storm Sudden Commencement. <i>Geophysical Monograph Series</i> , 0, , 57-62.	0.1	18
47	Modeling geomagnetic cutoffs for space weather applications. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 5694-5702.	0.8	18
48	Magnetohydrodynamic modeling of three Van Allen Probes storms in 2012 and 2013. <i>Annales Geophysicae</i> , 2015, 33, 1037-1050.	0.6	15
49	Comparison of Van Allen Probes radiation belt proton data with test particle simulation for the 17 March 2015 storm. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 11,035.	0.8	15
50	Dayside magnetospheric ULF wave frequency modulated by a solar wind dynamic pressure negative impulse. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 1658-1669.	0.8	15
51	Dayside response of the magnetosphere to a small shock compression: Van Allen Probes, Magnetospheric MultiScale, and GOES-13. <i>Geophysical Research Letters</i> , 2017, 44, 8712-8720.	1.5	15
52	Pitch Angle Scattering of Energetic Electrons by BBFs. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 9265-9274.	0.8	14
53	Simulations of inner radiation belt proton loss during geomagnetic storms. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 9323-9333.	0.8	13
54	Dependence of Relativistic Electron Precipitation in the Ionosphere on EMIC Wave Minimum Resonant Energy at the Conjugate Equator. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029193.	0.8	12

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55	Modeling magnetospheric response to synthetic Alfvénic fluctuations in the solar wind: ULF wave fields in the magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 8801-8812.	0.8	11
56	Experimental Aspects of Ion Acceleration in the Earth's Magnetosphere. <i>Geophysical Monograph Series</i> , 0, , 17-35.	0.1	9
57	A Statistical Study of Spatial Variation of Relativistic Electron Precipitation Energy Spectra With Polar Operational Environmental Satellites. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 3349-3359.	0.8	9
58	Ion Heating in the Cusp. <i>Geophysical Monograph Series</i> , 0, , 271-281.	0.1	8
59	BARREL observations of a solar energetic electron and solar energetic proton event. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 4205-4216.	0.8	8
60	Science Goals and Overview of the Radiation Belt Storm Probes (RBSP) Energetic Particle, Composition, and Thermal Plasma (ECT) Suite on NASA's Van Allen Probes Mission. , 2013, , 311-336.		8
61	Test-Particle Simulations of Linear and Nonlinear Interactions Between a Whistler-Mode Wave Packet and Radiation Belt Electrons. <i>Geophysical Research Letters</i> , 2018, 45, 5234-5245.	1.5	7
62	Weak double layers in the auroral ionosphere. <i>Laser and Particle Beams</i> , 1987, 5, 295-313.	0.4	6
63	The Creation of New Ion Radiation Belts Associated with Solar Energetic Particle Events and Interplanetary Shocks. , 2006, , 345.		6
64	Nonlinear Radial Transport in the Earth's Radiation Belts. <i>Geophysical Monograph Series</i> , 0, , 151-160.	0.1	6
65	The Direct Production of Ion Conics by Plasma Double Layers. <i>Geophysical Monograph Series</i> , 0, , 317-322.	0.1	6
66	Observations of Electrostatic Shocks and Associated Plasma Instabilities by the S3-3 Satellite. <i>Astrophysics and Space Science Library</i> , 1981, , 115-126.	1.0	6
67	One- and two-dimensional hybrid simulations of whistler mode waves in a dipole field. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 1908-1923.	0.8	5
68	A New Mechanism for Excitation of Waves in a Magnetoplasma: I. Linear Theory. <i>Geophysical Monograph Series</i> , 0, , 297-300.	0.1	4
69	Hybrid fluid-particle simulation of whistler-mode waves in a compressed dipole magnetic field: Implications for dayside high-latitude chorus. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 432-448.	0.8	4
70	Energetic Particles in the Magnetosphere and their Relationship to Solar Wind Drivers. , 2006, , 353.		2
71	Modelling mesoscale processes in the global geospace system. <i>Space Science Reviews</i> , 1995, 71, 623-646.	3.7	1
72	Effects of Warm Streaming Electrons on Electrostatic Shock Solutions. <i>Geophysical Monograph Series</i> , 0, , 334-339.	0.1	1

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73	Double Layers in Linearly Stable Plasma. Geophysical Monograph Series, 0, , 328-333.	0.1	1
74	Ring current O+Interaction with PC 5 Micropulsations. Geophysical Monograph Series, 2013, , 143-150.	0.1	0