M K Hudson

List of Publications by Year
in descending order

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	Dependence of Relativistic Electron Precipitation in the Ionosphere on EMIC Wave Minimum Resonant Energy at the Conjugate Equator. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029193.	0.8	12
2	The Role of Hiss, Chorus, and EMIC Waves in the Modeling of the Dynamics of the Multiâ€MeV Radiation Belt Electrons. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028282.	0.8	28
3	Pitch Angle Scattering of Subâ€MeV Relativistic Electrons by Electromagnetic Ion Cyclotron Waves. Journal of Geophysical Research: Space Physics, 2019, 124, 5610-5626.	0.8	41
4	Simulations of Electron Energization and Injection by BBFs Using Highâ€Resolution LFM MHD Fields. Journal of Geophysical Research: Space Physics, 2019, 124, 1222-1238.	0.8	20
5	A Statistical Study of Spatial Variation of Relativistic Electron Precipitation Energy Spectra With Polar Operational Environmental Satellites. Journal of Geophysical Research: Space Physics, 2018, 123, 3349-3359.	0.8	9
6	Pitch Angle Scattering of Energetic Electrons by BBFs. Journal of Geophysical Research: Space Physics, 2018, 123, 9265-9274.	0.8	14
7	Testâ€Particle Simulations of Linear and Nonlinear Interactions Between a 2â€D Whistlerâ€Mode Wave Packet and Radiation Belt Electrons. Geophysical Research Letters, 2018, 45, 5234-5245.	1.5	7
8	Dayside magnetospheric ULF wave frequency modulated by a solar wind dynamic pressure negative impulse. Journal of Geophysical Research: Space Physics, 2017, 122, 1658-1669.	0.8	15
9	Hybrid fluidâ€particle simulation of whistlerâ€mode waves in a compressed dipole magnetic field: Implications for dayside highâ€latitude chorus. Journal of Geophysical Research: Space Physics, 2017, 122, 432-448.	0.8	4
10	Dayside response of the magnetosphere to a small shock compression: Van Allen Probes, Magnetospheric MultiScale, and GOESâ€13. Geophysical Research Letters, 2017, 44, 8712-8720.	1.5	15
11	Comparison of Van Allen Probes radiation belt proton data with test particle simulation for the 17 March 2015 storm. Journal of Geophysical Research: Space Physics, 2016, 121, 11,035.	0.8	15
12	Inward diffusion and loss of radiation belt protons. Journal of Geophysical Research: Space Physics, 2016, 121, 1969-1978.	0.8	26
13	BARREL observations of a solar energetic electron and solar energetic proton event. Journal of Geophysical Research: Space Physics, 2016, 121, 4205-4216.	0.8	8
14	Modeling geomagnetic cutoffs for space weather applications. Journal of Geophysical Research: Space Physics, 2015, 120, 5694-5702.	0.8	18
15	Simulations of inner radiation belt proton loss during geomagnetic storms. Journal of Geophysical Research: Space Physics, 2015, 120, 9323-9333.	0.8	13
16	Simulation of ULF waveâ€modulated radiation belt electron precipitation during the 17 March 2013 storm. Journal of Geophysical Research: Space Physics, 2015, 120, 3444-3461.	0.8	23
17	Magnetohydrodynamic modeling of three Van Allen Probes storms in 2012 and 2013. Annales Geophysicae, 2015, 33, 1037-1050.	0.6	15
18	Oneâ€and twoâ€dimensional hybrid simulations of whistler mode waves in a dipole field. Journal of Geophysical Research: Space Physics, 2015, 120, 1908-1923.	0.8	5

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19	Modeling CMEâ€shockâ€driven storms in 2012â€“2013: MHD test particle simulations. Journal of Geophysical Research: Space Physics, 2015, 120, 1168-1181.	0.8	50
20	Shockâ€induced prompt relativistic electron acceleration in the inner magnetosphere. Journal of Geophysical Research: Space Physics, 2015, 120, 1661-1674.	0.8	104
21	BARREL observations of an ICMEâ€shock impact with the magnetosphere and the resultant radiation belt electron loss. Journal of Geophysical Research: Space Physics, 2015, 120, 2557-2570.	0.8	35
22	Observations of the inner radiation belt: CRAND and trapped solar protons. Journal of Geophysical Research: Space Physics, 2014, 119, 6541-6552.	0.8	50
23	Rebuilding of the Earth's outer electron belt during 8â€“10 October 2012. Geophysical Research Letters, 2014, 41, 749-754.	1.5	20
24	Simulated magnetopause losses and Van Allen Probe flux dropouts. Geophysical Research Letters, 2014, 41, 1113-1118.	1.5	105
25	Modeling magnetospheric response to synthetic AlfvÃ©nic fluctuations in the solar wind: ULF wave fields in the magnetosphere. Journal of Geophysical Research: Space Physics, 2014, 119, 8801-8812.	0.8	11
26	Gradual diffusion and punctuated phase space density enhancements of highly relativistic electrons: Van Allen Probes observations. Geophysical Research Letters, 2014, 41, 1351-1358.	1.5	127
27	Ring current 0+Interaction with PC 5 Micropulsations. Geophysical Monograph Series, 2013, , 143-150.	0.1	0
28	Van Allen Probes observation of localized drift resonance between poloidal mode ultraâ€low frequency waves and 60 keV electrons. Geophysical Research Letters, 2013, 40, 4491-4497.	1.5	127
29	Science Goals and Overview of the Radiation Belt Storm Probes (RBSP) Energetic Particle, Composition, and Thermal Plasma (ECT) Suite on NASAâ€™s Van Allen Probes Mission. Space Science Reviews, 2013, 179, 311-336.	3.7	463
30	A Long-Lived Relativistic Electron Storage Ring Embedded in Earthâ€™s Outer Van Allen Belt. Science, 2013, 340, 186-190.	6.0	216
31	The Balloon Array for RBSP Relativistic Electron Losses (BARREL). Space Science Reviews, 2013, 179, 503-530.	3.7	76
32	Direct observation of the CRAND proton radiation belt source. Journal of Geophysical Research: Space Physics, 2013, 118, 7532-7537.	0.8	29
33	Science Goals and Overview of the Radiation Belt Storm Probes (RBSP) Energetic Particle, Composition, and Thermal Plasma (ECT) Suite on NASAâ€™s Van Allen Probes Mission. , 2013, , 311-336.		8
34	Simulation of the acceleration of relativistic electrons in the inner magnetosphere using RCM-VERB coupled codes. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	22
35	Injection and loss of inner radiation belt protons during solar proton events and magnetic storms. Journal of Geophysical Research, 2010, 115, .	3.3	44
36	Solar wind driving of magnetospheric ULF waves: Field line resonances driven by dynamic pressure fluctuations. Journal of Geophysical Research, 2010, 115, .	3.3	94

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37	Magnetospheric cavity modes driven by solar wind dynamic pressure fluctuations. Geophysical Research Letters, 2009, 36, .	1.5	63
38	Magnetic field line curvature induced pitch angle diffusion in the inner magnetosphere. Journal of Geophysical Research, 2008, 113, .	3.3	45
39	Discovery of very large amplitude whistlerâ€mode waves in Earth's radiation belts. Geophysical Research Letters, 2008, 35, .	1.5	249
40	Global MHD test particle simulations of >10 MeV radiation belt electrons during storm sudden commencement. Journal of Geophysical Research, 2007, 112, .	3.3	84
41	Extreme lunar surface charging during solar energetic particle events. Geophysical Research Letters, 2007, 34, .	1.5	80
42	Energetic Particles in the Magnetosphere and their Relationship to Solar Wind Drivers. , 2006, , 353.		2
43	The Creation of New Ion Radiation Belts Associated with Solar Energetic Particle Events and Interplanetary Shocks. , 2006, , 345.		6
44	Incorporating spectral characteristics of Pc5 waves into three-dimensional radiation belt modeling and the diffusion of relativistic electrons. Journal of Geophysical Research, 2005, 110, .	3.3	80
45	Impulsive solar energetic ion trapping in the magnetosphere during geomagnetic storms. Geophysical Research Letters, 2005, 32, .	1.5	37
46	Dynamic modeling of geomagnetic cutoff for the 23â€“24 November 2001 solar energetic particle event. Geophysical Research Letters, 2004, 31, .	1.5	50
47	Empirical model for Î¼ scattering caused by field line curvature in a realistic magnetosphere. Journal of Geophysical Research, 2002, 107, SMP 3-1.	3.3	43
48	Resonant enhancement of relativistic electron fluxes during geomagnetically active periods. Annales Geophysicae, 1999, 17, 631-638.	0.6	120
49	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. Geophysical Research Letters, 1999, 26, 425-428.	1.5	183
50	Possible evidence of damped cavity mode oscillations stimulated by the January, 1997 magnetic cloud event. Geophysical Research Letters, 1999, 26, 3589-3592.	1.5	21
51	Simulation of radiation belt dynamics driven by solar wind variations. Geophysical Monograph Series, 1999, , 171-182.	0.1	72
52	Experimental evidence on the role of the large spatial scale electric field in creating the ring current. Journal of Geophysical Research, 1998, 103, 29527-29544.	3.3	161
53	Simulations of radiation belt formation during storm sudden commencements. Journal of Geophysical Research, 1997, 102, 14087-14102.	3.3	139
54	Modelling mesoscale processes in the global geospace system. Space Science Reviews, 1995, 71, 623-646.	3.7	1

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55	Simulation of proton radiation belt formation during the March 24, 1991 SSC. Geophysical Research Letters, 1995, 22, 291-294.	1.5	98
56	Simulation of the prompt energization and transport of radiation belt particles during the March 24, 1991 SSC. Geophysical Research Letters, 1993, 20, 2423-2426.	1.5	393
57	Dynamics of localized ion-acoustic waves in a magnetized plasma. Physics of Fluids, 1988, 31, 2190.	1.4	23
58	Weak double layers in the auroral ionosphere. Laser and Particle Beams, 1987, 5, 295-313.	0.4	6
59	Weak double layers in ion-acoustic turbulence. Physics of Fluids, 1985, 28, 1055.	1.4	83
60	Solitary waves and double layers on auroral field lines. Journal of Geophysical Research, 1983, 88, 916-926.	3.3	116
61	Observations of Electrostatic Shocks and Associated Plasma Instabilities by the S3-3 Satellite. Astrophysics and Space Science Library, 1981, , 115-126.	1.0	6
62	Coherent anomalous resistivity in the region of electrostatic shocks. Geophysical Research Letters, 1979, 6, 661-663.	1.5	75
63	Electrostatic shocks, double layers, and anomalous resistivity in the magnetosphere. Geophysical Research Letters, 1978, 5, 131-134.	1.5	64
64	Magnetic fieldâ€aligned potential drops due to electrostatic ion cyclotron turbulence. Geophysical Research Letters, 1978, 5, 143-146.	1.5	70
65	Observations of Paired Electrostatic Shocks in the Polar Magnetosphere. Physical Review Letters, 1977, 38, 292-295.	2.9	672
66	Nonlinear Radial Transport in the Earth's Radiation Belts. Geophysical Monograph Series, 0, , 151-160.	0.1	6
67	Ion Heating in the Cusp. Geophysical Monograph Series, 0, , 271-281.	0.1	8
68	MHD/Particle Simulations of Radiation Belt Formation During a Storm Sudden Commencement. Geophysical Monograph Series, 0, , 57-62.	0.1	18
69	Ion Acceleration by Wave-Particle Interaction. Geophysical Monograph Series, 0, , 261-270.	0.1	22
70	Effects of Warm Streaming Electrons on Electrostatic Shock Solutions. Geophysical Monograph Series, 0, , 334-339.	0.1	1
71	Experimental Aspects of Ion Acceleration in the Earth's Magnetosphere. Geophysical Monograph Series, 0, , 17-35.	0.1	9
72	Double Layers in Linearly Stable Plasma. Geophysical Monograph Series, 0, , 328-333.	0.1	1

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73	A New Mechanism for Excitation of Waves in a Magnetoplasma: I. Linear Theory. Geophysical Monograph Series, 0, , 297-300.	0.1	4
74	The Direct Production of Ion Conics by Plasma Double Layers. Geophysical Monograph Series, 0, , 317-322.	0.1	6