M R Hairston

List of Publications by Year
in descending order

113 papers	3,863 citations	109321 35 h-index	144013 57 g-index
121 all docs	121 docs citations	121 times ranked	2018 citing authors

#	Article	IF	Citations
1	Large-scale convection patterns observed by DMSP. Journal of Geophysical Research, 1994, 99, 3827.	3.3	361
2	Empirical polar cap potentials. Journal of Geophysical Research, 1997, 102, 111-125.	3.3	286
3	Behavior of the O+/H+ transition height during the extreme solar minimum of 2008. Geophysical Research Letters, 2009, 36, .	4.0	121
4	Control of plasmaspheric dynamics by both convection and sub-auroral polarization stream. Geophysical Research Letters, 2003, 30, .	4.0	117
5	The postsunset vertical plasma drift and its effects on the generation of equatorial plasma bubbles observed by the C/NOFS satellite. Journal of Geophysical Research: Space Physics, 2015, 120, 2263-2275.	2.4	92
6	Global plasmasphere evolution 22â€“23 April 2001. Journal of Geophysical Research, 2005, 110, .	3.3	91
7	Coupled response of the inner magnetosphere and ionosphere on 17 April 2002. Journal of Geophysical Research, 2005, 110, .	3.3	85
8	Extreme Poynting flux in the dayside thermosphere: Examples and statistics. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	85
9	The interaction of a magnetic cloud with the Earth: Ionospheric convection in the northern and southern hemispheres for a wide range of quasiâ€steady interplanetary magnetic field conditions. Journal of Geophysical Research, 1993, 98, 7633-7655.	3.3	82
10	Observed saturation of the ionospheric polar cap potential during the 31 March 2001 storm. Geophysical Research Letters, 2003, 30, .	4.0	82
11	Plasma density enhancements associated with equatorial spreadF: ROCSAT-1 and DMSP observations. Journal of Geophysical Research, 2003, 108, .	3.3	80
12	Ring current and the magnetosphere-ionosphere coupling during the superstorm of 20 November 2003. Journal of Geophysical Research, 2005, 110, .	3.3	78
13	Ionospheric convection response to slow, strong variations in a northward interplanetary magnetic field: A case study for January 14, 1988. Journal of Geophysical Research, 1993, 98, 19273-19292.	3.3	75
14	Response time of the polar ionospheric convection pattern to changes in the north-south direction of the IMF. Geophysical Research Letters, 1995, 22, 631-634.	4.0	70
15	First observations of the temporal/spatial variation of the sub-auroral polarization stream from the SuperDARN Wallops HF radar. Geophysical Research Letters, 2006, 33, .	4.0	70
16	Magnetospheric electric fields and plasma sheet injection to low L-shells during the 4-5 June 1991 magnetic storm: Comparison between the Rice Convection Model and observations. Journal of Geophysical Research, 2004, 109, .	3.3	64
17	Saturation of the ionospheric polar cap potential during the October-November 2003 superstorms. Journal of Geophysical Research, 2005, 110, .	3.3	60
18	Study of the Equatorial and Lowâ€Latitude Electrodynamic and Ionospheric Disturbances During the 22â€“23 June 2015 Geomagnetic Storm Using Groundâ€Based and Spaceborne Techniques. Journal of Geophysical Research: Space Physics, 2018, 123, 2424-2440.	2.4	57

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19	Observations of ionospheric convection from the Wallops SuperDARN radar at middle latitudes. Journal of Geophysical Research, 2007, 112, n/a-n/a.	3.3	55
20	Generation and characteristics of equatorial plasma bubbles detected by the C/NOFS satellite near the sunset terminator. Journal of Geophysical Research, 2012, 117, .	3.3	53
21	Measuring the dayside reconnection rate during an interval of due northward interplanetary magnetic field. Annales Geophysicae, 2004, 22, 4243-4258.	1.6	49
22	Comparison of DMSP cross-track ion drifts and SuperDARN line-of-sight velocities. Annales Geophysicae, 2005, 23, 2479-2486.	1.6	48
23	Case study of the 15 July 2000 magnetic storm effects on the ionosphere-driver of the positive ionospheric storm in the winter hemisphere. Journal of Geophysical Research, 2003, 108, .	3.3	46
24	Largeâ€scale quasiperiodic plasma bubbles: C/NOFS observations and causal mechanism. Journal of Geophysical Research: Space Physics, 2013, 118, 3602-3612.	2.4	46
25	Longâ€lasting daytime equatorial plasma bubbles observed by the C/NOFS satellite. Journal of Geophysical Research: Space Physics, 2013, 118, 2398-2408.	2.4	46
26	Parameterization of the Defense Meteorological Satellite Program ionospheric electrostatic potentials by the interplanetary magnetic field strength and direction. Journal of Geophysical Research, 1999, 104, 177-184.	3.3	45
27	Distribution of convection potential around the polar cap boundary as a function of the interplanetary magnetic field. Journal of Geophysical Research, 1989, 94, 13447-13461.	3.3	44
28	Sounding of the plasmasphere by Midâ€continent MAgnetoseismic Chain (McMAC) magnetometers. Journal of Geophysical Research: Space Physics, 2013, 118, 3077-3086.	2.4	44
29	Evolution of ionospheric multicell convection during northward interplanetary magnetic field with |Bz/By| > 1. Journal of Geophysical Research, 2000, 105, 27095-27107.	3.3	40
30	Analysis of the ionospheric cross polar cap potential drop using DMSP data during the National Space Weather Program study period. Journal of Geophysical Research, 1998, 103, 26337-26347.	3.3	39
31	Dynamic temporal evolution of polar cap tongue of ionization during magnetic storm. Journal of Geophysical Research, 2010, 115, .	3.3	39
32	Transpolar voltage and polar cap flux during the substorm cycle and steady convection events. Journal of Geophysical Research, 2009, 114, .	3.3	38
33	Equatorial ionospheric plasma drifts and O⁺ concentration enhancements associated with disturbance dynamo during the 2015 St. Patrick's Day magnetic storm. Journal of Geophysical Research: Space Physics, 2016, 121, 7961-7973.	2.4	37
34	An investigation of the influence of data and model inputs on assimilative mapping of ionospheric electrodynamics. Journal of Geophysical Research, 2001, 106, 417-433.	3.3	35
35	Relationship between plasma bubbles and density enhancements: Observations and interpretation. Journal of Geophysical Research: Space Physics, 2014, 119, 1325-1336.	2.4	35
36	Ion temperature and density relationships measured by CINDI from the C/NOFS spacecraft during solar minimum. Journal of Geophysical Research, 2010, 115, .	3.3	34

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37	Earth's ion upflow associated with polar cap patches: Global and in situ observations. Geophysical Research Letters, 2016, 43, 1845-1853.	4.0	34
38	Consequences of a saturated convection electric field on the ring current. Geophysical Research Letters, 2002, 29, 62-1-62-4.	4.0	33
39	Plasmapause undulation of 17 April 2002. Geophysical Research Letters, 2004, 31, .	4.0	33
40	Vertical thermal O⁺ flows at 850 km in dynamic auroral boundary coordinates. Journal of Geophysical Research, 2010, 115, .	3.3	33
41	Responses in the polar and equatorial ionosphere to the March 2015 St. Patrick Day storm. Journal of Geophysical Research: Space Physics, 2016, 121, 11,213.	2.4	33
42	High-latitude ionospheric convection pattern during steady northward interplanetary magnetic field. Journal of Geophysical Research, 1995, 100, 14537.	3.3	31
43	High-latitude plasma outflow as measured by the DMSP spacecraft. Journal of Geophysical Research, 2003, 108, .	3.3	27
44	A statistical comparison of the AMIE derived and DMSP-SSIES observed high-latitude ionospheric electric field. Journal of Geophysical Research, 2006, 111, .	3.3	26
45	Broad plasma decreases in the equatorial ionosphere. Geophysical Research Letters, 2009, 36, .	4.0	26
46	Ionospheric storm time dynamics as seen by GPS tomography and in situ spacecraft observations. Journal of Geophysical Research, 2008, 113, .	3.3	25
47	Polar cap bifurcation during steady-state northward interplanetary magnetic field with âˆ£BYâˆ£ âˆ¼BZ. Journal of Geophysical Research, 2004, 109, .	3.3	24
48	Hemispheric Asymmetries in Poynting Flux Derived From DMSP Spacecraft. Geophysical Research Letters, 2021, 48, e2021GL094781.	4.0	24
49	Dayside reconnection under interplanetary magnetic field B_yâ€dominated conditions: The formation and movement of bending arcs. Journal of Geophysical Research: Space Physics, 2015, 120, 2967-2978.	2.4	22
50	Equatorial broad plasma depletions associated with the evening prereversal enhancement and plasma bubbles during the 17 March 2015 storm. Journal of Geophysical Research: Space Physics, 2016, 121, 10,209.	2.4	22
51	Global storm time auroral X-ray morphology and timing and comparison with UV measurements. Journal of Geophysical Research, 2000, 105, 15757-15777.	3.3	21
52	Detailed analysis of a substorm event on 6 and 7 June 1989 1. Growth phase evolution of nightside auroral activities and ionospheric convection toward expansion phase onset. Journal of Geophysical Research, 2002, 107, SMP 36-1-SMP 36-23.	3.3	21
53	Statistical description of low-latitude plasma blobs as observed by DMSP F15 and KOMPSAT-1. Advances in Space Research, 2008, 41, 650-654.	2.6	21
54	Dualâ€Lobe Reconnection and Horseâ€Collar Auroras. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028567.	2.4	21

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55	Solar filament impact on 21 January 2005: Geospace consequences. Journal of Geophysical Research: Space Physics, 2014, 119, 5401-5448.	2.4	20
56	Response of the ionospheric convection pattern to a rotation of the interplanetary magnetic field on January 14, 1988. Journal of Geophysical Research, 1992, 97, 19449-19460.	3.3	19
57	Testing global storm-time electric field models using particle spectra on multiple spacecraft. Journal of Geophysical Research, 2002, 107, SMP 21-1-SMP 21-11.	3.3	19
58	The nonlinear response of the polar cap potential under southward IMF: A statistical view. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	19
59	Formation of polar ionospheric tongue of ionization during minor geomagnetic disturbed conditions. Journal of Geophysical Research: Space Physics, 2015, 120, 6860-6873.	2.4	19
60	Threeâ€dimensional ionospheric plasma circulation. Journal of Geophysical Research, 1992, 97, 13903-13910.	3.3	18
61	Highâ€latitude ionosphere convection and Birkeland current response for the 15 May 2005 magnetic storm recovery phase. Journal of Geophysical Research, 2008, 113, .	3.3	18
62	Reversed two-cell convection in the Northern and Southern hemispheres during northward interplanetary magnetic field. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	18
63	Topside equatorial zonal ion velocities measured by C/NOFS during rising solar activity. Annales Geophysicae, 2014, 32, 69-75.	1.6	18
64	Dawnside Auroral Polarization Streams. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027742.	2.4	18
65	Analysis of the ionospheric cross polar cap potentialdrop and electrostatic potential distribution patternsduring the January 1997 cme event using DMSP data. Journal of Atmospheric and Solar-Terrestrial Physics, 1999, 61, 195-206.	1.6	17
66	Ionospheric signatures of internal reconnection for northward interplanetary magnetic field: Observation of â€œreciprocal cellsâ€•and magnetosheath ion precipitation. Journal of Geophysical Research, 2006, 111, .	3.3	17
67	Characteristics of high-latitude vertical plasma flow from the Defense Meteorological Satellite Program. Journal of Geophysical Research, 2006, 111, .	3.3	17
68	Coincident Observations by the Kharkiv IS Radar and Ionosonde, DMSP and Arase (ERG) Satellites, and FLIP Model Simulations: Implications for the NRLMSISEâ€00 Hydrogen Density, Plasmasphere, and Ionosphere. Geophysical Research Letters, 2018, 45, 8062-8071.	4.0	17
69	ASHLEY: A New Empirical Model for the Highâ€latitude Electron Precipitation and Electric Field. Space Weather, 2021, 19, e2020SW002671.	3.7	17
70	Observations of ionospheric plasma flows within theta auroras. Journal of Geophysical Research, 2005, 110, .	3.3	16
71	Threeâ€way validation of the Rankin Inlet PolarDARN radar velocity measurements. Radio Science, 2009, 44, .	1.6	16
72	Ionospheric Joule heating, fast flow channels, and magnetic field line topology for IMF B_yâ€dominant conditions: Observations and comparisons with predicted reconnection jet speeds. Journal of Geophysical Research, 2012, 117, .	3.3	16

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73	Topside Ionospheric Electron Temperature Observations of the 21 August 2017 Eclipse by DMSP Spacecraft. Geophysical Research Letters, 2018, 45, 7242-7247.	4.0	16
74	On the Production of Ionospheric Irregularities Via Kelvinâ€Helmholtz Instability Associated with Cusp FlowÂChannels. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027734.	2.4	16
75	Unusually elongated, bright airglow plume in the polar cap F region: Is it a tongue of ionization?. Geophysical Research Letters, 2009, 36, .	4.0	15
76	The ionospheric response to interplanetary magnetic field variations: Evidence for rapid global change and the role of preconditioning in the magnetosphere. Journal of Geophysical Research, 2000, 105, 22955-22977.	3.3	14
77	Modeling Inner Magnetospheric Electric Fields: Latest Self-Consistent Results. Geophysical Monograph Series, 0, , 263-269.	0.1	14
78	Electrostatic potential drop across the ionospheric signature of the lowâ€latitude boundary layer. Journal of Geophysical Research, 2009, 114, .	3.3	14
79	Statistical behavior of the topside electron density as determined from DMSP observations: A probabilistic climatology. Journal of Geophysical Research, 2010, 115, .	3.3	14
80	Imaging magnetospheric boundaries at ionospheric heights. Journal of Geophysical Research: Space Physics, 2013, 118, 7294-7305.	2.4	14
81	The auroral ionosphere TEC response to an interplanetary shock. Geophysical Research Letters, 2016, 43, 1810-1818.	4.0	14
82	Stratification of eastâ€west plasma flow channels observed in the ionospheric cusp in response to IMF B_Y polarity changes. Geophysical Research Letters, 2010, 37, .	4.0	13
83	Imaging space weather over Europe. Space Weather, 2013, 11, 69-78.	3.7	13
84	Radioâ€tomographic images of postmidnight equatorial plasma depletions. Geophysical Research Letters, 2014, 41, 13-19.	4.0	12
85	Correlation between Poynting flux and soft electron precipitation in the dayside polar cap boundary regions. Journal of Geophysical Research: Space Physics, 2015, 120, 9102-9109.	2.4	12
86	Testing nowcasts of the ionospheric convection from the expanding and contracting polar cap model. Space Weather, 2017, 15, 623-636.	3.7	12
87	Vertical and meridional equatorial ion flows observed by CINDI during the 26 September 2011 storm. Journal of Geophysical Research: Space Physics, 2013, 118, 5230-5243.	2.4	11
88	DMSP observations of high latitude Poynting flux during magnetic storms. Journal of Atmospheric and Solar-Terrestrial Physics, 2017, 164, 294-307.	1.6	11
89	Lobe Reconnection and Cuspâ€Aligned Auroral Arcs. Journal of Geophysical Research: Space Physics, 2022, 127, .	2.4	11
90	Temporal variations and spatial extent of the electron density enhancements in the polar magnetosphere during geomagnetic storms. Journal of Geophysical Research, 2010, 115, .	3.3	10

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91	Fieldâ€aligned current reconfiguration and magnetospheric response to an impulse in the interplanetary magnetic field B_Y component. Geophysical Research Letters, 2013, 40, 2489-2494.	4.0	10
92	F region dusk ion temperature spikes at the equatorward edge of the highâ€latitude convection pattern. Geophysical Research Letters, 2014, 41, 300-307.	4.0	9
93	Global X-ray observations of magnetospheric convection-driven auroral disturbances. Geophysical Research Letters, 2000, 27, 3233-3236.	4.0	8
94	Solar and Geomagnetic Activity Impact on Occurrence and Spatial Size of Cold and Hot Polar Cap Patches. Geophysical Research Letters, 2021, 48, e2021GL094526.	4.0	8
95	On the distribution of ionospheric electron density observations. Space Weather, 2005, 3, n/a-n/a.	3.7	7
96	Impacts of Binning Methods on Highâ€Latitude Electrodynamic Forcing: Static Versus Boundaryâ€Oriented Binning Methods. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027270.	2.4	7
97	Features of morning-time auroras during SC. Geomagnetism and Aeronomy, 2008, 48, 154-164.	0.8	6
98	Statistical Study of the Relationship Between Ion Upflow and Fieldâ€Aligned Current in the Topside Ionosphere for Both Hemispheres During Geomagnetic Disturbed and Quiet Time. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027538.	2.4	6
99	Storm time coupling between the magnetosheath and the polar ionosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 7541-7554.	2.4	5
100	Multisatellite lowâ€altitude observations of a magnetopause merging burst. Journal of Geophysical Research, 2010, 115, .	3.3	4
101	Ionospheric convection signatures of the interchange cycle at small interplanetary magnetic field clock angles. Journal of Geophysical Research, 2010, 115, .	3.3	4
102	Storm-time meridional flows: a comparison of CINDI observations and model results. Annales Geophysicae, 2014, 32, 659-668.	1.6	4
103	Response of reverse convection to fast IMF transitions. Journal of Geophysical Research: Space Physics, 2015, 120, 4020-4037.	2.4	4
104	RISRâ€N observations of the IMF B y influence on reverse convection during extreme northward IMF. Journal of Geophysical Research: Space Physics, 2017, 122, 3707-3720.	2.4	4
105	Transpolar Arcs During a Prolonged Radial Interplanetary Magnetic Field Interval. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029197.	2.4	4
106	The Dependence of Cold and Hot Patches on Local Plasma Transport and Particle Precipitation in Northern Hemisphere Winter. Geophysical Research Letters, 2022, 49, .	4.0	3
107	Event Studies of O + Density Variability Within Quietâ€Time Plasma Sheet. Journal of Geophysical Research: Space Physics, 2019, 124, 4168-4187.	2.4	2
108	Correction to â€œRing current and the magnetosphere-ionosphere coupling during the superstorm of 20 November 2003â€• Journal of Geophysical Research, 2005, 110, .	3.3	1

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109	Correction to â€œPolar cap bifurcation during steadyâ€state northward interplanetary magnetic field with âˆ£B_Yâˆ£ âˆ¼ B_Zâ€. Journal of Geophysical Research, 2007, 112, .	3.3	1
110	Mapping the duskside topside ionosphere with CINDI and DMSP. Journal of Geophysical Research, 2010, 115, n/a-n/a.	3.3	1
111	Using insitu satellite data to describe global scale variations in space weather. , 2004, , .		0
112	10.1007/s11478-008-2004-5. , 2010, 48, 154.		0
113	Auroral heating of plasma patches due to highâ€latitude reconnection. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029657.	2.4	0