

# M R Hairston

## List of Publications by Citations

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110  
papers

3,176  
citations

32  
h-index

51  
g-index

121  
ext. papers

3,476  
ext. citations

3.2  
avg, IF

4.88  
L-index

#	Paper	IF	Citations
110	Large-scale convection patterns observed by DMSP. <i>Journal of Geophysical Research</i> , <b>1994</b> , 99, 3827		303
109	Empirical polar cap potentials. <i>Journal of Geophysical Research</i> , <b>1997</b> , 102, 111-125		235
108	Behavior of the O <sup>+</sup> /H <sup>+</sup> transition height during the extreme solar minimum of 2008. <i>Geophysical Research Letters</i> , <b>2009</b> , 36,	4.9	105
107	Control of plasmaspheric dynamics by both convection and sub-auroral polarization stream. <i>Geophysical Research Letters</i> , <b>2003</b> , 30,	4.9	100
106	Global plasmasphere evolution 22–3 April 2001. <i>Journal of Geophysical Research</i> , <b>2005</b> , 110,		85
105	Extreme Poynting flux in the dayside thermosphere: Examples and statistics. <i>Geophysical Research Letters</i> , <b>2011</b> , 38, n/a-n/a	4.9	78
104	Coupled response of the inner magnetosphere and ionosphere on 17 April 2002. <i>Journal of Geophysical Research</i> , <b>2005</b> , 110,		76
103	Observed saturation of the ionospheric polar cap potential during the 31 March 2001 storm. <i>Geophysical Research Letters</i> , <b>2003</b> , 30,	4.9	72
102	The postsunset vertical plasma drift and its effects on the generation of equatorial plasma bubbles observed by the C/NOFS satellite. <i>Journal of Geophysical Research: Space Physics</i> , <b>2015</b> , 120, 2263-2275	2.6	68
101	Ring current and the magnetosphere-ionosphere coupling during the superstorm of 20 November 2003. <i>Journal of Geophysical Research</i> , <b>2005</b> , 110,		67
100	Ionospheric convection response to slow, strong variations in a northward interplanetary magnetic field: A case study for January 14, 1988. <i>Journal of Geophysical Research</i> , <b>1993</b> , 98, 19273-19292		67
99	Response time of the polar ionospheric convection pattern to changes in the north-south direction of the IMF. <i>Geophysical Research Letters</i> , <b>1995</b> , 22, 631-634	4.9	63
98	The interaction of a magnetic cloud with the Earth: Ionospheric convection in the northern and southern hemispheres for a wide range of quasi-steady interplanetary magnetic field conditions. <i>Journal of Geophysical Research</i> , <b>1993</b> , 98, 7633-7655		63
97	First observations of the temporal/spatial variation of the sub-auroral polarization stream from the SuperDARN Wallops HF radar. <i>Geophysical Research Letters</i> , <b>2006</b> , 33,	4.9	60
96	Plasma density enhancements associated with equatorial spread F: ROCSAT-1 and DMSP observations. <i>Journal of Geophysical Research</i> , <b>2003</b> , 108,		59
95	Magnetospheric electric fields and plasma sheet injection to low L-shells during the 4B June 1991 magnetic storm: Comparison between the Rice Convection Model and observations. <i>Journal of Geophysical Research</i> , <b>2004</b> , 109,		58
94	Observations of ionospheric convection from the Wallops SuperDARN radar at middle latitudes. <i>Journal of Geophysical Research</i> , <b>2007</b> , 112, n/a-n/a		51

93	Saturation of the ionospheric polar cap potential during the October/November 2003 superstorms. <i>Journal of Geophysical Research</i> , <b>2005</b> , 110,		47
92	Generation and characteristics of equatorial plasma bubbles detected by the C/NOFS satellite near the sunset terminator. <i>Journal of Geophysical Research</i> , <b>2012</b> , 117, n/a-n/a		43
91	Comparison of DMSP cross-track ion drifts and SuperDARN line-of-sight velocities. <i>Annales Geophysicae</i> , <b>2005</b> , 23, 2479-2486	2	43
90	Parameterization of the Defense Meteorological Satellite Program ionospheric electrostatic potentials by the interplanetary magnetic field strength and direction. <i>Journal of Geophysical Research</i> , <b>1999</b> , 104, 177-184		43
89	Study of the Equatorial and Low-Latitude Electrodynamic and Ionospheric Disturbances During the 22-23 June 2015 Geomagnetic Storm Using Ground-Based and Spaceborne Techniques. <i>Journal of Geophysical Research: Space Physics</i> , <b>2018</b> , 123, 2424-2440	2.6	41
88	Distribution of convection potential around the polar cap boundary as a function of the interplanetary magnetic field. <i>Journal of Geophysical Research</i> , <b>1989</b> , 94, 13447		39
87	Case study of the 15 July 2000 magnetic storm effects on the ionosphere-driver of the positive ionospheric storm in the winter hemisphere. <i>Journal of Geophysical Research</i> , <b>2003</b> , 108,		38
86	Large-scale quasiperiodic plasma bubbles: C/NOFS observations and causal mechanism. <i>Journal of Geophysical Research: Space Physics</i> , <b>2013</b> , 118, 3602-3612	2.6	36
85	Sounding of the plasmasphere by Mid-continent MAgnetoseismic Chain (McMAC) magnetometers. <i>Journal of Geophysical Research: Space Physics</i> , <b>2013</b> , 118, 3077-3086	2.6	35
84	Measuring the dayside reconnection rate during an interval of due northward interplanetary magnetic field. <i>Annales Geophysicae</i> , <b>2004</b> , 22, 4243-4258	2	35
83	Dynamic temporal evolution of polar cap tongue of ionization during magnetic storm. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		34
82	Evolution of ionospheric multicell convection during northward interplanetary magnetic field with $ B_z / B_y  > 1$ . <i>Journal of Geophysical Research</i> , <b>2000</b> , 105, 27095-27107		34
81	Analysis of the ionospheric cross polar cap potential drop using DMSP data during the National Space Weather Program study period. <i>Journal of Geophysical Research</i> , <b>1998</b> , 103, 26337-26347		34
80	An investigation of the influence of data and model inputs on assimilative mapping of ionospheric electrodynamics. <i>Journal of Geophysical Research</i> , <b>2001</b> , 106, 417-433		33
79	Long-lasting daytime equatorial plasma bubbles observed by the C/NOFS satellite. <i>Journal of Geophysical Research: Space Physics</i> , <b>2013</b> , 118, 2398-2408	2.6	32
78	Plasmapause undulation of 17 April 2002. <i>Geophysical Research Letters</i> , <b>2004</b> , 31,	4.9	32
77	Vertical thermal O <sup>+</sup> flows at 850 km in dynamic auroral boundary coordinates. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		30
76	Equatorial ionospheric plasma drifts and O <sup>+</sup> concentration enhancements associated with disturbance dynamo during the 2015 St. Patrick's Day magnetic storm. <i>Journal of Geophysical Research: Space Physics</i> , <b>2016</b> , 121, 7961-7973	2.6	29

75	Earth's ion upflow associated with polar cap patches: Global and in situ observations. <i>Geophysical Research Letters</i> , <b>2016</b> , 43, 1845-1853	4.9	28
74	Ion temperature and density relationships measured by CINDI from the C/NOFS spacecraft during solar minimum. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		28
73	High-latitude ionospheric convection pattern during steady northward interplanetary magnetic field. <i>Journal of Geophysical Research</i> , <b>1995</b> , 100, 14537		28
72	Relationship between plasma bubbles and density enhancements: Observations and interpretation. <i>Journal of Geophysical Research: Space Physics</i> , <b>2014</b> , 119, 1325-1336	2.6	27
71	Transpolar voltage and polar cap flux during the substorm cycle and steady convection events. <i>Journal of Geophysical Research</i> , <b>2009</b> , 114, n/a-n/a		27
70	Consequences of a saturated convection electric field on the ring current. <i>Geophysical Research Letters</i> , <b>2002</b> , 29, 62-1-62-4	4.9	26
69	High-latitude plasma outflow as measured by the DMSP spacecraft. <i>Journal of Geophysical Research</i> , <b>2003</b> , 108,		25
68	Broad plasma decreases in the equatorial ionosphere. <i>Geophysical Research Letters</i> , <b>2009</b> , 36,	4.9	24
67	Responses in the polar and equatorial ionosphere to the March 2015 St. Patrick Day storm. <i>Journal of Geophysical Research: Space Physics</i> , <b>2016</b> , 121, 11,213-11,234	2.6	24
66	A statistical comparison of the AMIE derived and DMSP-SSIES observed high-latitude ionospheric electric field. <i>Journal of Geophysical Research</i> , <b>2006</b> , 111,		23
65	Ionospheric storm time dynamics as seen by GPS tomography and in situ spacecraft observations. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		21
64	Polar cap bifurcation during steady-state northward interplanetary magnetic field with $ BY  \sim BZ$ . <i>Journal of Geophysical Research</i> , <b>2004</b> , 109,		21
63	Equatorial broad plasma depletions associated with the evening prereversal enhancement and plasma bubbles during the 17 March 2015 storm. <i>Journal of Geophysical Research: Space Physics</i> , <b>2016</b> , 121, 10,209	2.6	20
62	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. <i>Journal of Geophysical Research</i> , <b>2002</b> , 107, SMP 36-1-SMP 36-23		20
61	Global storm time auroral X-ray morphology and timing and comparison with UV measurements. <i>Journal of Geophysical Research</i> , <b>2000</b> , 105, 15757-15777		19
60	Solar filament impact on 21 January 2005: Geospace consequences. <i>Journal of Geophysical Research: Space Physics</i> , <b>2014</b> , 119, 5401-5448	2.6	18
59	The nonlinear response of the polar cap potential under southward IMF: A statistical view. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116, n/a-n/a		18
58	Three-dimensional ionospheric plasma circulation. <i>Journal of Geophysical Research</i> , <b>1992</b> , 97, 13903		18

57	Dayside reconnection under interplanetary magnetic field By-dominated conditions: The formation and movement of bending arcs. <i>Journal of Geophysical Research: Space Physics</i> , <b>2015</b> , 120, 2967-2978	2.6	17
56	Testing global storm-time electric field models using particle spectra on multiple spacecraft. <i>Journal of Geophysical Research</i> , <b>2002</b> , 107, SMP 21-1-SMP 21-11		17
55	Response of the ionospheric convection pattern to a rotation of the interplanetary magnetic field on January 14, 1988. <i>Journal of Geophysical Research</i> , <b>1992</b> , 97, 19449		17
54	Topside equatorial zonal ion velocities measured by C/NOFS during rising solar activity. <i>Annales Geophysicae</i> , <b>2014</b> , 32, 69-75	2	16
53	High-latitude ionosphere convection and Birkeland current response for the 15 May 2005 magnetic storm recovery phase. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113, n/a-n/a		16
52	Statistical description of low-latitude plasma blobs as observed by DMSP F15 and KOMPSAT-1. <i>Advances in Space Research</i> , <b>2008</b> , 41, 650-654	2.4	16
51	Ionospheric Joule heating, fast flow channels, and magnetic field line topology for IMF By-dominant conditions: Observations and comparisons with predicted reconnection jet speeds. <i>Journal of Geophysical Research</i> , <b>2012</b> , 117, n/a-n/a		15
50	Unusually elongated, bright airglow plume in the polar cap F region: Is it a tongue of ionization?. <i>Geophysical Research Letters</i> , <b>2009</b> , 36, n/a-n/a	4.9	15
49	Characteristics of high-latitude vertical plasma flow from the Defense Meteorological Satellite Program. <i>Journal of Geophysical Research</i> , <b>2006</b> , 111,		15
48	Three-way validation of the Rankin Inlet PolarDARN radar velocity measurements. <i>Radio Science</i> , <b>2009</b> , 44, n/a-n/a	1.4	14
47	Ionospheric signatures of internal reconnection for northward interplanetary magnetic field: Observation of reciprocal cells and magnetosheath ion precipitation. <i>Journal of Geophysical Research</i> , <b>2006</b> , 111,		14
46	The ionospheric response to interplanetary magnetic field variations: Evidence for rapid global change and the role of preconditioning in the magnetosphere. <i>Journal of Geophysical Research</i> , <b>2000</b> , 105, 22955-22977		14
45	Formation of polar ionospheric tongue of ionization during minor geomagnetic disturbed conditions. <i>Journal of Geophysical Research: Space Physics</i> , <b>2015</b> , 120, 6860-6873	2.6	13
44	Imaging magnetospheric boundaries at ionospheric heights. <i>Journal of Geophysical Research: Space Physics</i> , <b>2013</b> , 118, 7294-7305	2.6	13
43	Reversed two-cell convection in the Northern and Southern hemispheres during northward interplanetary magnetic field. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116, n/a-n/a		13
42	Electrostatic potential drop across the ionospheric signature of the low-latitude boundary layer. <i>Journal of Geophysical Research</i> , <b>2009</b> , 114, n/a-n/a		13
41	Modeling Inner Magnetospheric Electric Fields: Latest Self-Consistent Results. <i>Geophysical Monograph Series</i> , <b>2005</b> , 263-269	1.1	13
40	Analysis of the ionospheric cross polar cap potential drop and electrostatic potential distribution patterns during the January 1997 cme event using DMSP data. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>1999</b> , 61, 195-206	2	13

39	The auroral ionosphere TEC response to an interplanetary shock. <i>Geophysical Research Letters</i> , <b>2016</b> , 43, 1810-1818	4.9	12
38	Stratification of east-west plasma flow channels observed in the ionospheric cusp in response to IMF BY polarity changes. <i>Geophysical Research Letters</i> , <b>2010</b> , 37, n/a-n/a	4.9	12
37	Testing nowcasts of the ionospheric convection from the expanding and contracting polar cap model. <i>Space Weather</i> , <b>2017</b> , 15, 623-636	3.7	11
36	Correlation between Poynting flux and soft electron precipitation in the dayside polar cap boundary regions. <i>Journal of Geophysical Research: Space Physics</i> , <b>2015</b> , 120, 9102-9109	2.6	11
35	Imaging space weather over Europe. <i>Space Weather</i> , <b>2013</b> , 11, 69-78	3.7	11
34	Observations of ionospheric plasma flows within theta auroras. <i>Journal of Geophysical Research</i> , <b>2005</b> , 110,		11
33	Vertical and meridional equatorial ion flows observed by CINDI during the 26 September 2011 storm. <i>Journal of Geophysical Research: Space Physics</i> , <b>2013</b> , 118, 5230-5243	2.6	10
32	Temporal variations and spatial extent of the electron density enhancements in the polar magnetosphere during geomagnetic storms. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115,		10
31	Statistical behavior of the topside electron density as determined from DMSP observations: A probabilistic climatology. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115,		10
30	Field-aligned current reconfiguration and magnetospheric response to an impulse in the interplanetary magnetic field BY component. <i>Geophysical Research Letters</i> , <b>2013</b> , 40, 2489-2494	4.9	9
29	Dawnside Auroral Polarization Streams. <i>Journal of Geophysical Research: Space Physics</i> , <b>2020</b> , 125, e2019JA027842	2.6	7
28	DMSP observations of high latitude Poynting flux during magnetic storms. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , <b>2017</b> , 164, 294-307	2	7
27	On the Production of Ionospheric Irregularities Via Kelvin-Helmholtz Instability Associated with Cusp Flow Channels. <i>Journal of Geophysical Research: Space Physics</i> , <b>2020</b> , 125, e2019JA027734	2.6	7
26	Topside Ionospheric Electron Temperature Observations of the 21 August 2017 Eclipse by DMSP Spacecraft. <i>Geophysical Research Letters</i> , <b>2018</b> , 45, 7242-7247	4.9	7
25	Coincident Observations by the Kharkiv IS Radar and Ionosonde, DMSP and Arase (ERG) Satellites, and FLIP Model Simulations: Implications for the NRLMSISE-00 Hydrogen Density, Plasmasphere, and Ionosphere. <i>Geophysical Research Letters</i> , <b>2018</b> , 45, 8062-8071	4.9	7
24	F region dusk ion temperature spikes at the equatorward edge of the high-latitude convection pattern. <i>Geophysical Research Letters</i> , <b>2014</b> , 41, 300-307	4.9	7
23	Radio-tomographic images of postmidnight equatorial plasma depletions. <i>Geophysical Research Letters</i> , <b>2014</b> , 41, 13-19	4.9	7
22	Global X-ray observations of magnetospheric convection-driven auroral disturbances. <i>Geophysical Research Letters</i> , <b>2000</b> , 27, 3233-3236	4.9	7

21	Features of morning-time auroras during SC. <i>Geomagnetism and Aeronomy</i> , <b>2008</b> , 48, 154-164	0.9	6
20	Impacts of Binning Methods on High-Latitude Electrodynamic Forcing: Static Versus Boundary-Oriented Binning Methods. <i>Journal of Geophysical Research: Space Physics</i> , <b>2020</b> , 125, e2019JA027275	2.6	5
19	Storm time coupling between the magnetosheath and the polar ionosphere. <i>Journal of Geophysical Research: Space Physics</i> , <b>2017</b> , 122, 7541-7554	2.6	5
18	ASHLEY: A New Empirical Model for the High-Latitude Electron Precipitation and Electric Field. <i>Space Weather</i> , <b>2021</b> , 19, e2020SW002671	3.7	5
17	Hemispheric Asymmetries in Poynting Flux Derived From DMSP Spacecraft. <i>Geophysical Research Letters</i> , <b>2021</b> , 48, e2021GL094781	4.9	5
16	RISR-N observations of the IMF By influence on reverse convection during extreme northward IMF. <i>Journal of Geophysical Research: Space Physics</i> , <b>2017</b> , 122, 3707-3720	2.6	4
15	Response of reverse convection to fast IMF transitions. <i>Journal of Geophysical Research: Space Physics</i> , <b>2015</b> , 120, 4020-4037	2.6	4
14	Storm-time meridional flows: a comparison of CINDI observations and model results. <i>Annales Geophysicae</i> , <b>2014</b> , 32, 659-668	2	4
13	Multisatellite low-altitude observations of a magnetopause merging burst. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		4
12	Ionospheric convection signatures of the interchange cycle at small interplanetary magnetic field clock angles. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		4
11	Dual-Lobe Reconnection and Horse-Collar Auroras. <i>Journal of Geophysical Research: Space Physics</i> , <b>2020</b> , 125, e2020JA028567	2.6	4
10	Conjugate Aurora Location During a Strong IMF By Storm. <i>Geophysical Monograph Series</i> , <b>2017</b> , 285-294	1.1	3
9	On the distribution of ionospheric electron density observations. <i>Space Weather</i> , <b>2005</b> , 3, n/a-n/a	3.7	3
8	Event Studies of O+ Density Variability Within Quiet-Time Plasma Sheet. <i>Journal of Geophysical Research: Space Physics</i> , <b>2019</b> , 124, 4168-4187	2.6	1
7	Mapping the duskside topside ionosphere with CINDI and DMSP. <i>Journal of Geophysical Research</i> , <b>2010</b> , 115, n/a-n/a		1
6	Statistical Study of the Relationship Between Ion Upflow and Field-Aligned Current in the Topside Ionosphere for Both Hemispheres During Geomagnetic Disturbed and Quiet Time. <i>Journal of Geophysical Research: Space Physics</i> , <b>2020</b> , 125, e2019JA027538	2.6	1
5	Transpolar Arcs During a Prolonged Radial Interplanetary Magnetic Field Interval. <i>Journal of Geophysical Research: Space Physics</i> , <b>2021</b> , 126, e2021JA029197	2.6	1
4	ASHLEY: A new empirical model for the high-latitude electron precipitation and electric field		1

- 3 Solar and Geomagnetic Activity Impact on Occurrence and Spatial Size of Cold and Hot Polar Cap Patches. *Geophysical Research Letters*, **2021**, 48, e2021GL094526 4.9 1
- 2 Auroral Heating of Plasma Patches Due to High-Latitude Reconnection. *Journal of Geophysical Research: Space Physics*, **2021**, 126, e2021JA029657 2.6
- 1 Features of morning-time auroras during SC **2010**, 48, 154