

William Lotko

List of Publications by Year in descending order

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107
papers

5,124
citations

94269

37
h-index

88477

70
g-index

110
all docs

110
docs citations

110
times ranked

1897
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermospheric Impact on the Magnetosphere Through Ionospheric Outflow. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028656.	0.8	4
2	Solar flare effects in the Earth's magnetosphere. Nature Physics, 2021, 17, 807-812.	6.5	27
3	How Jupiter's unusual magnetospheric topology structures its aurora. Science Advances, 2021, 7, .	4.7	31
4	Global Effects of a Polar Solar Eclipse on the Coupled Magnetosphere-Ionosphere System. Geophysical Research Letters, 2021, 48, .	1.5	10
5	Is Nightside Outflow Required to Induce Magnetospheric Sawtooth Oscillations. Geophysical Research Letters, 2020, 47, e2019GL086419.	1.5	5
6	Outstanding questions in magnetospheric plasma physics: The pollenzo view. Journal of Atmospheric and Solar-Terrestrial Physics, 2020, 208, 105377.	0.6	13
7	Alfvénic Thermospheric Upwelling in a Global Geospace Model. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028059.	0.8	7
8	Alfvénic Heating in the Cusp Ionosphere-Thermosphere. Journal of Geophysical Research: Space Physics, 2018, 123, 10,368.	0.8	16
9	Parametric study of density cavities caused by ion outflow in the topside ionosphere. Journal of Atmospheric and Solar-Terrestrial Physics, 2017, 156, 37-49.	0.6	3
10	The Unifying Principle of Coordinated Measurements in Geospace Science. Space Weather, 2017, 15, 553-557.	1.3	6
11	IMF Control of Alfvénic Energy Transport and Deposition at High Latitudes. Journal of Geophysical Research: Space Physics, 2017, 122, 12,189.	0.8	17
12	Transition from global to local control of dayside reconnection from ionospheric-sourced mass loading. Journal of Geophysical Research: Space Physics, 2017, 122, 9474-9488.	0.8	17
13	The effects of plasmaspheric plumes on dayside reconnection. Journal of Geophysical Research: Space Physics, 2016, 121, 4111-4118.	0.8	19
14	The role of ionospheric O ⁺ outflow in the generation of earthward propagating plasmoids. Journal of Geophysical Research: Space Physics, 2016, 121, 1425-1435.	0.8	9
15	Influence of ion outflow in coupled geospace simulations: 2. Sawtooth oscillations driven by physics-based ion outflow. Journal of Geophysical Research: Space Physics, 2016, 121, 9688-9700.	0.8	14
16	Effects of auroral potential drops on plasma sheet dynamics. Journal of Geophysical Research: Space Physics, 2016, 121, 11,129-11,144.	0.8	5
17	Influence of ion outflow in coupled geospace simulations: 1. Physics-based ion outflow model development and sensitivity study. Journal of Geophysical Research: Space Physics, 2016, 121, 9671-9687.	0.8	24
18	How does mass loading impact local versus global control on dayside reconnection?. Geophysical Research Letters, 2016, 43, 1837-1844.	1.5	23

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19	Pathways of F region thermospheric mass density enhancement via soft electron precipitation. Journal of Geophysical Research: Space Physics, 2015, 120, 5824-5831.	0.8	16
20	Poynting flux-conserving low-altitude boundary conditions for global magnetospheric models. Journal of Geophysical Research: Space Physics, 2015, 120, 384-400.	0.8	5
21	Now Is the Time to be Heard!. Space Weather, 2015, 13, 251-252.	1.3	0
22	Electron precipitation models in global magnetosphere simulations. Journal of Geophysical Research: Space Physics, 2015, 120, 1035-1056.	0.8	56
23	Modeling the interaction between convection and nonthermal ion outflows. Journal of Geophysical Research: Space Physics, 2015, 120, 2353-2362.	0.8	14
24	Ionospheric control of magnetotail reconnection. Science, 2014, 345, 184-187.	6.0	67
25	Solar wind control of auroral Alfvénic power generated in the magnetotail. Journal of Geophysical Research: Space Physics, 2014, 119, 1734-1748.	0.8	16
26	Properties of outflow-driven sawtooth substorms. Journal of Geophysical Research: Space Physics, 2013, 118, 3223-3232.	0.8	53
27	Predicting the location of polar cusp in the Lyon-Fedder-Mobarry global magnetosphere simulation. Journal of Geophysical Research: Space Physics, 2013, 118, 6327-6337.	0.8	25
28	The effects of ionospheric outflow on ICME and SIR driven sawtooth events. Journal of Geophysical Research: Space Physics, 2013, 118, 6026-6041.	0.8	38
29	Magnetotail origins of auroral Alfvénic power. Journal of Geophysical Research, 2012, 117, .	3.3	38
30	Enhancement of thermospheric mass density by soft electron precipitation. Geophysical Research Letters, 2012, 39, .	1.5	38
31	A statistical study of magnetosphere-ionosphere coupling in the Lyon-Fedder-Mobarry global MHD model. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 686-702.	0.6	28
32	Magnetosphere Sawtooth Oscillations Induced by Ionospheric Outflow. Science, 2011, 332, 1183-1186.	6.0	106
33	Correction to "Magnetospheric cavity modes driven by solar wind dynamic pressure fluctuations". Geophysical Research Letters, 2010, 37, .	1.5	0
34	Solar wind driving of magnetospheric ULF waves: Field line resonances driven by dynamic pressure fluctuations. Journal of Geophysical Research, 2010, 115, .	3.3	94
35	Effects of causally driven cusp O ⁺ outflow on the storm time magnetosphere-ionosphere system using a multifluid global simulation. Journal of Geophysical Research, 2010, 115, .	3.3	64
36	Influence of cusp O ⁺ outflow on magnetotail dynamics in a multifluid MHD model of the magnetosphere. Journal of Geophysical Research, 2010, 115, .	3.3	73

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37	Effects of solar wind dynamic pressure on the ionospheric O ⁺ fluence during the 31 August 2005 storm. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	17
38	Magnetospheric cavity modes driven by solar wind dynamic pressure fluctuations. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	63
39	Modeling seasonal variations of auroral particle precipitation in a global-scale magnetosphere-ionosphere simulation. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	85
40	Coupling between density structures, electromagnetic waves and ionospheric feedback in the auroral zone. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	62
41	A multidisciplinary approach to introductory engineering design. , 2008, , .		2
42	Effect of the radial boundary condition on Alfvén wave dynamics in reduced magnetohydrodynamics. <i>Physics of Plasmas</i> , 2008, 15, 032106.	0.7	2
43	Nonlinear finite-Larmor-radius effects in reduced fluid models. <i>Physics of Plasmas</i> , 2008, 15, 082302.	0.7	14
44	Reduced magnetohydrodynamic equations with coupled Alfvén and sound wave dynamics. <i>Physics of Plasmas</i> , 2007, 14, 102906.	0.7	4
45	The magnetosphere-ionosphere system from the perspective of plasma circulation: A tutorial. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2007, 69, 191-211.	0.6	58
46	Ground and satellite observations of the evolution of growth phase auroral arcs. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	28
47	Localized parallel electric fields associated with inertial Alfvén waves. <i>Physics of Plasmas</i> , 2005, 12, 072901.	0.7	29
48	Simulation of ULF field-aligned currents generated by HF heating of the ionosphere. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	16
49	Ultra-low-frequency electrodynamic of the magnetosphere-ionosphere interaction. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	23
50	Some properties of Alfvén waves: Observations in the tail lobes and the plasma sheet boundary layer. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	61
51	Inductive magnetosphere-ionosphere coupling. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2004, 66, 1443-1456.	0.6	29
52	Multiscale electrodynamic of the ionosphere-magnetosphere system. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	81
53	Simulations of resonant Alfvén waves generated by artificial HF heating of the auroral ionosphere. <i>Annales Geophysicae</i> , 2004, 22, 2943-2949.	0.6	9
54	Reflection and absorption of Alfvénic power in the low-altitude magnetosphere. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	31

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55	Small-scale electric fields in downward auroral current channels. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	50
56	Evidence for kinetic Alfvén waves and parallel electron energization at 4-6RE altitudes in the plasma sheet boundary layer. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 24-1-SMP 24-15.	3.3	271
57	Effects of the seasonal asymmetry in ionospheric Pedersen conductance on the appearance of discrete aurora. <i>Geophysical Research Letters</i> , 2002, 29, 79-1-79-4.	1.5	28
58	Harmonic structure of field line eigenmodes generated by ionospheric feedback instability. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 14-1.	3.3	29
59	Ultralow-frequency magnetohydrodynamics in boundary-constrained geomagnetic flux coordinates. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 1-1.	3.3	16
60	Numerical modeling of Alfvén waves observed by the Polar spacecraft in the nightside plasma sheet boundary layer. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 9-1-SMP 9-8.	3.3	21
61	Large Alfvén wave power in the plasma sheet boundary layer during the expansion phase of substorms. <i>Geophysical Research Letters</i> , 2000, 27, 3169-3172.	1.5	78
62	Numerical cavity mode simulation and polar data from the January 1997 magnetic cloud event. <i>Geophysical Monograph Series</i> , 1999, , 77-86.	0.1	1
63	Small-scale, electrostatic auroral structures and Alfvén waves. <i>Journal of Geophysical Research</i> , 1999, 104, 4411-4426.	3.3	55
64	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
65	Discrete auroral arc, electrostatic shock and suprathermal electrons powered by dispersive, anomalously resistive field line resonance. <i>Geophysical Research Letters</i> , 1998, 25, 4449-4452.	1.5	92
66	Small-scale, dispersive field line resonances in the hot magnetospheric plasma. <i>Journal of Geophysical Research</i> , 1998, 103, 26559-26572.	3.3	76
67	Dispersive, nonradiative field line resonances in a dipolar magnetic field geometry. <i>Journal of Geophysical Research</i> , 1997, 102, 27121-27135.	3.3	30
68	Influence of the finite ionospheric conductivity on dispersive, nonradiative field line resonances. <i>Annales Geophysicae</i> , 1997, 15, 625-633.	0.6	4
69	Magnetospheric resonance, auroral structure and multipoint measurements. <i>Advances in Space Research</i> , 1997, 20, 1067-1073.	1.2	6
70	On the kinetic dispersion relation for shear Alfvén waves. <i>Journal of Geophysical Research</i> , 1996, 101, 5085-5094.	3.3	375
71	The fine structure of dispersive, nonradiative field line resonance layers. <i>Journal of Geophysical Research</i> , 1996, 101, 5343-5358.	3.3	47
72	Model of the low-latitude boundary layer with finite field-aligned potential drops and nonconstant mapping factors. <i>Journal of Geophysical Research</i> , 1996, 101, 21463-21479.	3.3	6

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73	Modelling mesoscale processes in the global geospace system. <i>Space Science Reviews</i> , 1995, 71, 623-646.	3.7	1
74	Radial energy transport by magnetospheric ULF waves: Effects of magnetic curvature and plasma pressure. <i>Journal of Geophysical Research</i> , 1995, 100, 7599.	3.3	13
75	Dispersive field line resonances on auroral field lines. <i>Journal of Geophysical Research</i> , 1995, 100, 19457.	3.3	61
76	Self-consistent steady state model of the low-latitude boundary layer. <i>Journal of Geophysical Research</i> , 1994, 99, 2351.	3.3	22
77	Developing service promises accurate space weather forecasts in the future. <i>Eos</i> , 1994, 75, 353.	0.1	8
78	Milestones in Geospace Environment Modeling. <i>Eos</i> , 1993, 74, 618.	0.1	2
79	Acoustic double layers in multispecies plasma. <i>IEEE Transactions on Plasma Science</i> , 1992, 20, 745-755.	0.6	9
80	Decay of ion beam driven acoustic waves into ion holes. <i>Geophysical Research Letters</i> , 1991, 18, 1675-1678.	1.5	26
81	On large-scale rotational motions and energetics of auroral shear layers. <i>Journal of Geophysical Research</i> , 1991, 96, 9549-9565.	3.3	18
82	Magnetic field draping at the low-latitude magnetopause. <i>Journal of Geophysical Research</i> , 1991, 96, 15779-15787.	3.3	6
83	A high-latitude, low-latitude boundary layer model of the convection current system. <i>Journal of Geophysical Research</i> , 1991, 96, 3487-3495.	3.3	88
84	Self-consistent model of the low-latitude boundary layer. <i>Journal of Geophysical Research</i> , 1989, 94, 1281-1293.	3.3	31
85	Oxygen acoustic solitary waves in a magnetized plasma. <i>Journal of Geophysical Research</i> , 1989, 94, 1339-1346.	3.3	19
86	Dynamics of localized ion-acoustic waves in a magnetized plasma. <i>Physics of Fluids</i> , 1988, 31, 2190.	1.4	23
87	Internal shear layers in auroral dynamics. <i>Geophysical Monograph Series</i> , 1988, , 121-132.	0.1	9
88	Weak double layers in the auroral ionosphere. <i>Laser and Particle Beams</i> , 1987, 5, 295-313.	0.4	6
89	Nonsteady boundary layer flow including ionospheric drag and parallel electric fields. <i>Journal of Geophysical Research</i> , 1987, 92, 8635-8648.	3.3	90
90	Diffusive acceleration of auroral primaries. <i>Journal of Geophysical Research</i> , 1986, 91, 191-203.	3.3	78

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91	Production of flickering aurora and field-aligned electron flux by electromagnetic ion cyclotron waves. Journal of Geophysical Research, 1986, 91, 5769-5792.	3.3	131
92	Transition to unstable ion flow in parallel electric fields. Journal of Geophysical Research, 1986, 91, 7033-7045.	3.3	72
93	Evidence for nonlinear wave-wave interactions in solar type III radio bursts. Astrophysical Journal, 1986, 308, 954.	1.6	294
94	Particle Energization in Stochastic Double Layers. Symposium - International Astronomical Union, 1985, 107, 125-129.	0.1	0
95	Weak double layers in ion-acoustic turbulence. Physics of Fluids, 1985, 28, 1055.	1.4	83
96	Particle Energization in Stochastic Double Layers. , 1985, , 125-129.		2
97	Ion-acoustic solitary waves in a magnetized plasma with arbitrary electron equation of state. Physics of Fluids, 1983, 26, 2176.	1.4	114
98	Spiky ion acoustic waves in collisionless auroral plasma. Journal of Geophysical Research, 1983, 88, 381-394.	3.3	54
99	Solitary waves and double layers on auroral field lines. Journal of Geophysical Research, 1983, 88, 916-926.	3.3	116
100	Reflection dissipation of an ion-acoustic soliton. Physics of Fluids, 1983, 26, 1771.	1.4	37
101	Observations of Double Layers and Solitary Waves in the Auroral Plasma. Physical Review Letters, 1982, 48, 1175-1179.	2.9	751
102	Altitude dependent model of the auroral beam and beam-generated electrostatic noise. Journal of Geophysical Research, 1981, 86, 3439-3447.	3.3	81
103	Amplification of electrostatic noise in cyclotron resonance with an adiabatic auroral beam. Journal of Geophysical Research, 1981, 86, 3449-3458.	3.3	39
104	Damping of electrostatic noise by warm auroral electrons. Planetary and Space Science, 1979, 27, 1491-1506.	0.9	30
105	Theoretical calculation of electrical resistivity in liquid sodium and potassium. Fluid Phase Equilibria, 1977, 1, 277-281.	1.4	2
106	Interdisciplinary core curriculum based on engineering systems. , 0, , .		1
107	Stationary Electrostatic Solitary Waves in the Auroral Plasma. Geophysical Monograph Series, 0, , 437-443.	0.1	5