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	Observations of Double Layers and Solitary Waves in the Auroral Plasma. Physical Review Letters, 1982, 48, 1175-1179.	2.9	751
2	On the kinetic dispersion relation for shear AlfvÃ©n waves. Journal of Geophysical Research, 1996, 101, 5085-5094.	3.3	375
3	Evidence for nonlinear wave-wave interactions in solar type III radio bursts. Astrophysical Journal, 1986, 308, 954.	1.6	294
4	Evidence for kinetic AlfvÃ©n waves and parallel electron energization at 4-6REaltitudes in the plasma sheet boundary layer. Journal of Geophysical Research, 2002, 107, SMP 24-1-SMP 24-15.	3.3	271
5	Production of flickering aurora and fieldâ€aligned electron flux by electromagnetic ion cyclotron waves. Journal of Geophysical Research, 1986, 91, 5769-5792.	3.3	131
6	Solitary waves and double layers on auroral field lines. Journal of Geophysical Research, 1983, 88, 916-926.	3.3	116
7	Ion-acoustic solitary waves in a magnetized plasma with arbitrary electron equation of state. Physics of Fluids, 1983, 26, 2176.	1.4	114
8	Magnetosphere Sawtooth Oscillations Induced by Ionospheric Outflow. Science, 2011, 332, 1183-1186.	6.0	106
9	Solar wind driving of magnetospheric ULF waves: Field line resonances driven by dynamic pressure fluctuations. Journal of Geophysical Research, 2010, 115, .	3.3	94
10	Discrete auroral arc, electrostatic shock and suprathermal electrons powered by dispersive, anomalously resistive field line resonance. Geophysical Research Letters, 1998, 25, 4449-4452.	1.5	92
11	Nonsteady boundary layer flow including ionospheric drag and parallel electric fields. Journal of Geophysical Research, 1987, 92, 8635-8648.	3.3	90
12	A highâ€latitude, lowâ€latitude boundary layer model of the convection current system. Journal of Geophysical Research, 1991, 96, 3487-3495.	3.3	88
13	Modeling seasonal variations of auroral particle precipitation in a globalâ€scale magnetosphereâ€ionosphere simulation. Journal of Geophysical Research, 2009, 114, .	3.3	85
14	Weak double layers in ion-acoustic turbulence. Physics of Fluids, 1985, 28, 1055.	1.4	83
15	Altitude dependent model of the auroral beam and beamâ€generated electrostatic noise. Journal of Geophysical Research, 1981, 86, 3439-3447.	3.3	81
16	Multiscale electrodynamics of the ionosphere-magnetosphere system. Journal of Geophysical Research, 2004, 109, .	3.3	81
17	Diffusive acceleration of auroral primaries. Journal of Geophysical Research, 1986, 91, 191-203.	3.3	78
18	Large AlfvÃ©n wave power in the plasma sheet boundary layer during the expansion phase of substorms. Geophysical Research Letters, 2000, 27, 3169-3172.	1.5	78

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19	Small-scale, dispersive field line resonances in the hot magnetospheric plasma. Journal of Geophysical Research, 1998, 103, 26559-26572.	3.3	76
20	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
21	Transition to unstable ion flow in parallel electric fields. Journal of Geophysical Research, 1986, 91, 7033-7045.	3.3	72
22	Ionospheric control of magnetotail reconnection. Science, 2014, 345, 184-187.	6.0	67
23	Effects of causally driven cusp O⁺ outflow on the storm time magnetosphereâ€ionosphere system using a multifluid global simulation. Journal of Geophysical Research, 2010, 115, .	3.3	64
24	Magnetospheric cavity modes driven by solar wind dynamic pressure fluctuations. Geophysical Research Letters, 2009, 36, .	1.5	63
25	Coupling between density structures, electromagnetic waves and ionospheric feedback in the auroral zone. Journal of Geophysical Research, 2008, 113, .	3.3	62
26	Dispersive field line resonances on auroral field lines. Journal of Geophysical Research, 1995, 100, 19457.	3.3	61
27	Some properties of AlfvÃ©n waves: Observations in the tail lobes and the plasma sheet boundary layer. Journal of Geophysical Research, 2005, 110, .	3.3	61
28	The magnetosphereâ€“ionosphere system from the perspective of plasma circulation: A tutorial. Journal of Atmospheric and Solar-Terrestrial Physics, 2007, 69, 191-211.	0.6	58
29	Electron precipitation models in global magnetosphere simulations. Journal of Geophysical Research: Space Physics, 2015, 120, 1035-1056.	0.8	56
30	Small-scale, â€œelectrostaticâ€•auroral structures and AlfvÃ©n waves. Journal of Geophysical Research, 1999, 104, 4411-4426.	3.3	55
31	Spiky ion acoustic waves in collisionless auroral plasma. Journal of Geophysical Research, 1983, 88, 381-394.	3.3	54
32	Properties of outflowâ€driven sawtooth substorms. Journal of Geophysical Research: Space Physics, 2013, 118, 3223-3232.	0.8	53
33	Small-scale electric fields in downward auroral current channels. Journal of Geophysical Research, 2003, 108, .	3.3	50
34	The fine structure of dispersive, nonradiative field line resonance layers. Journal of Geophysical Research, 1996, 101, 5343-5358.	3.3	47
35	Amplification of electrostatic noise in cyclotron resonance with an adiabatic auroral beam. Journal of Geophysical Research, 1981, 86, 3449-3458.	3.3	39
36	Magnetotail origins of auroral AlfvÃ©nic power. Journal of Geophysical Research, 2012, 117, .	3.3	38

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37	Enhancement of thermospheric mass density by soft electron precipitation. Geophysical Research Letters, 2012, 39, .	1.5	38
38	The effects of ionospheric outflow on ICME and SIR driven sawtoothâ€‰events. Journal of Geophysical Research: Space Physics, 2013, 118, 6026-6041.	0.8	38
39	Reflection dissipation of an ion-acoustic soliton. Physics of Fluids, 1983, 26, 1771.	1.4	37
40	Selfâ€consistent model of the lowâ€latitude boundary layer. Journal of Geophysical Research, 1989, 94, 1281-1293.	3.3	31
41	Reflection and absorption of AlfvÃ©nic power in the low-altitude magnetosphere. Journal of Geophysical Research, 2003, 108, .	3.3	31
42	How Jupiterâ€™s unusual magnetospheric topology structures its aurora. Science Advances, 2021, 7, .	4.7	31
43	Damping of electrostatic noise by warm auroral electrons. Planetary and Space Science, 1979, 27, 1491-1506.	0.9	30
44	Dispersive, nonradiative field line resonances in a dipolar magnetic field geometry. Journal of Geophysical Research, 1997, 102, 27121-27135.	3.3	30
45	Harmonic structure of field line eigenmodes generated by ionospheric feedback instability. Journal of Geophysical Research, 2002, 107, SMP 14-1.	3.3	29
46	Inductive magnetosphereâ€“ionosphere coupling. Journal of Atmospheric and Solar-Terrestrial Physics, 2004, 66, 1443-1456.	0.6	29
47	Localized parallel electric fields associated with inertial AlfvÃ©n waves. Physics of Plasmas, 2005, 12, 072901.	0.7	29
48	Effects of the seasonal asymmetry in ionospheric Pedersen conductance on the appearance of discrete aurora. Geophysical Research Letters, 2002, 29, 79-1-79-4.	1.5	28
49	Ground and satellite observations of the evolution of growth phase auroral arcs. Journal of Geophysical Research, 2007, 112, .	3.3	28
50	A statistical study of magnetosphereâ€“ionosphere coupling in the Lyonâ€“Fedderâ€“Mobarry global MHD model. Journal of Atmospheric and Solar-Terrestrial Physics, 2011, 73, 686-702.	0.6	28
51	Solar flare effects in the Earthâ€™s magnetosphere. Nature Physics, 2021, 17, 807-812.	6.5	27
52	Decay of ion beam driven acoustic waves into ion holes. Geophysical Research Letters, 1991, 18, 1675-1678.	1.5	26
53	Predicting the location of polar cusp in the Lyonâ€Fedderâ€Mobarry global magnetosphere simulation. Journal of Geophysical Research: Space Physics, 2013, 118, 6327-6337.	0.8	25
54	Influence of ion outflow in coupled geospace simulations: 1. Physicsâ€based ion outflow model development and sensitivity study. Journal of Geophysical Research: Space Physics, 2016, 121, 9671-9687.	0.8	24

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55	Dynamics of localized ion-acoustic waves in a magnetized plasma. Physics of Fluids, 1988, 31, 2190.	1.4	23
56	Ultra-low-frequency electrodynamics of the magnetosphere-ionosphere interaction. Journal of Geophysical Research, 2005, 110, .	3.3	23
57	How does mass loading impact local versus global control on dayside reconnection?. Geophysical Research Letters, 2016, 43, 1837-1844.	1.5	23
58	Self-consistent steady state model of the low-latitude boundary layer. Journal of Geophysical Research, 1994, 99, 2351.	3.3	22
59	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
60	Numerical modeling of AlfvÃ©n waves observed by the Polar spacecraft in the nightside plasma sheet boundary layer. Journal of Geophysical Research, 2002, 107, SMP 9-1-SMP 9-8.	3.3	21
61	Oxygen acoustic solitary waves in a magnetized plasma. Journal of Geophysical Research, 1989, 94, 1339-1346.	3.3	19
62	The effects of plasmaspheric plumes on dayside reconnection. Journal of Geophysical Research: Space Physics, 2016, 121, 4111-4118.	0.8	19
63	On largeâ€scale rotational motions and energetics of auroral shear layers. Journal of Geophysical Research, 1991, 96, 9549-9565.	3.3	18
64	Effects of solar wind dynamic pressure on the ionospheric O⁺ fluence during the 31 August 2005 storm. Journal of Geophysical Research, 2010, 115, .	3.3	17
65	IMF Control of AlfvÃ©nic Energy Transport and Deposition at High Latitudes. Journal of Geophysical Research: Space Physics, 2017, 122, 12,189.	0.8	17
66	Transition from global to local control of dayside reconnection from ionosphericâ€sourced mass loading. Journal of Geophysical Research: Space Physics, 2017, 122, 9474-9488.	0.8	17
67	Ultralow-frequency magnetohydrodynamics in boundary-constrained geomagnetic flux coordinates. Journal of Geophysical Research, 2002, 107, SMP 1-1.	3.3	16
68	Simulation of ULF field-aligned currents generated by HF heating of the ionosphere. Journal of Geophysical Research, 2005, 110, .	3.3	16
69	Solar wind control of auroral AlfvÃ©nic power generated in the magnetotail. Journal of Geophysical Research: Space Physics, 2014, 119, 1734-1748.	0.8	16
70	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
71	AlfvÃ©nic Heating in the Cusp Ionosphereâ€Thermosphere. Journal of Geophysical Research: Space Physics, 2018, 123, 10,368.	0.8	16
72	Nonlinear finite-Larmor-radius effects in reduced fluid models. Physics of Plasmas, 2008, 15, 082302.	0.7	14

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73	Modeling the interaction between convection and nonthermal ion outflows. Journal of Geophysical Research: Space Physics, 2015, 120, 2353-2362.	0.8	14
74	Influence of ion outflow in coupled geospace simulations: 2. Sawtooth oscillations driven by physicsâ€based ion outflow. Journal of Geophysical Research: Space Physics, 2016, 121, 9688-9700.	0.8	14
75	Radial energy transport by magnetospheric ULF waves: Effects of magnetic curvature and plasma pressure. Journal of Geophysical Research, 1995, 100, 7599.	3.3	13
76	Outstanding questions in magnetospheric plasma physics: The pollenzo view. Journal of Atmospheric and Solar-Terrestrial Physics, 2020, 208, 105377.	0.6	13
77	Global Effects of a Polar Solar Eclipse on the Coupled Magnetosphereâ€Ionosphere System. Geophysical Research Letters, 2021, 48, .	1.5	10
78	Internal shear layers in auroral dynamics. Geophysical Monograph Series, 1988, , 121-132.	0.1	9
79	Acoustic double layers in multispecies plasma. IEEE Transactions on Plasma Science, 1992, 20, 745-755.	0.6	9
80	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
81	Simulations of resonant AlfvÃ©n waves generated by artificial HF heating of the auroral ionosphere. Annales Geophysicae, 2004, 22, 2943-2949.	0.6	9
82	Developing service promises accurate space weather forecasts in the future. Eos, 1994, 75, 353.	0.1	8
83	AlfvÃ©nic Thermospheric Upwelling in a Global Geospace Model. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028059.	0.8	7
84	Weak double layers in the auroral ionosphere. Laser and Particle Beams, 1987, 5, 295-313.	0.4	6
85	Magnetic field draping at the lowâ€latitude magnetopause. Journal of Geophysical Research, 1991, 96, 15779-15787.	3.3	6
86	Model of the low-latitude boundary layer with finite field-aligned potential drops and nonconstant mapping factors. Journal of Geophysical Research, 1996, 101, 21463-21479.	3.3	6
87	Magnetospheric resonance, auroral structure and multipoint measurements. Advances in Space Research, 1997, 20, 1067-1073.	1.2	6
88	The Unifying Principle of Coordinated Measurements in Geospace Science. Space Weather, 2017, 15, 553-557.	1.3	6
89	Stationary Electrostatic Solitary Waves in the Auroral Plasma. Geophysical Monograph Series, 0, , 437-443.	0.1	5
90	Poynting flux-conserving low-altitude boundary conditions for global magnetospheric models. Journal of Geophysical Research: Space Physics, 2015, 120, 384-400.	0.8	5

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91	Effects of auroral potential drops on plasma sheet dynamics. Journal of Geophysical Research: Space Physics, 2016, 121, 11,129-11,144.	0.8	5
92	Is Nightside Outflow Required to Induce Magnetospheric Sawtooth Oscillations. Geophysical Research Letters, 2020, 47, e2019GL086419.	1.5	5
93	Influence of the finite ionospheric conductivity on dispersive, nonradiative field line resonances. Annales Geophysicae, 1997, 15, 625-633.	0.6	4
94	Reduced magnetohydrodynamic equations with coupled AlfvÃ©n and sound wave dynamics. Physics of Plasmas, 2007, 14, 102906.	0.7	4
95	Thermospheric Impact on the Magnetosphere Through Ionospheric Outflow. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028656.	0.8	4
96	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
97	Theoretical calculation of electrical resistivity in liquid sodium and potassium. Fluid Phase Equilibria, 1977, 1, 277-281.	1.4	2
98	Milestones in Geospace Environment Modeling. Eos, 1993, 74, 618.	0.1	2
99	A multidisciplinary approach to introductory engineering design. , 2008, , .		2
100	Effect of the radial boundary condition on AlfvÃ©n wave dynamics in reduced magnetohydrodynamics. Physics of Plasmas, 2008, 15, 032106.	0.7	2
101	Particle Energization in Stochastic Double Layers. , 1985, , 125-129.		2
102	Modelling mesoscale processes in the global geospace system. Space Science Reviews, 1995, 71, 623-646.	3.7	1
103	Numerical cavity mode simulation and polar data from the January 1997 magnetic cloud event. Geophysical Monograph Series, 1999, , 77-86.	0.1	1
104	Interdisciplinary core curriculum based on engineering systems. , 0, , .		1
105	Particle Energization in Stochastic Double Layers. Symposium - International Astronomical Union, 1985, 107, 125-129.	0.1	0
106	Correction to â€œMagnetospheric cavity modes driven by solar wind dynamic pressure fluctuationsâ€• Geophysical Research Letters, 2010, 37, .	1.5	0
107	Now Is the Time to be Heard!. Space Weather, 2015, 13, 251-252.	1.3	0