Jonathan Krall

List of Publications by Year
in descending order

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111 papers	6,698 citations	66234 42 h-index	62479 80 g-index
119 all docs	119 docs citations	119 times ranked	3808 citing authors

#	Article	IF	Citations
1	Overview of plasma-based accelerator concepts. IEEE Transactions on Plasma Science, 1996, 24, 252-288.	0.6	1,105
2	Self-focusing and guiding of short laser pulses in ionizing gases and plasmas. IEEE Journal of Quantum Electronics, 1997, 33, 1879-1914.	1.0	419
3	Propagation and guiding of intense laser pulses in plasmas. Physical Review Letters, 1992, 69, 2200-2203.	2.9	406
4	Simulation of the seeding of equatorial spread F by circular gravity waves. Geophysical Research Letters, 2013, 40, 1-5.	1.5	324
5	Guiding of High Intensity Laser Pulses in Straight and Curved Plasma Channel Experiments. Physical Review Letters, 1996, 77, 4186-4189.	2.9	295
6	Laser acceleration of electrons in vacuum. Physical Review E, 1995, 52, 5443-5453.	0.8	278
7	Evidence of an Erupting Magnetic Flux Rope: LASCO Coronal Mass Ejection of 1997 April 13. Astrophysical Journal, 1997, 490, L191-L194.	1.6	221
8	Threeâ€dimensional equatorial spread F modeling. Geophysical Research Letters, 2008, 35, .	1.5	196
9	Envelope analysis of intense laser pulse self-modulation in plasmas. Physical Review Letters, 1994, 72, 2887-2890.	2.9	186
10	Laser driven electron acceleration in vacuum, gases, and plasmas. Physics of Plasmas, 1996, 3, 2183-2190.	0.7	173
11	Enhanced acceleration in a self-modulated-laser wake-field accelerator. Physical Review E, 1993, 48, 2157-2161.	0.8	150
12	Acceleration of coronal mass ejections. Journal of Geophysical Research, 2003, 108, .	3.3	130
13	Externally modulated intense relativistic electron beams. Journal of Applied Physics, 1988, 64, 3353-3379.	1.1	123
14	Optically guided laser wakeâ€field acceleration*. Physics of Fluids B, 1993, 5, 2690-2697.	1.7	118
15	Hose-Modulation Instability of Laser Pulses in Plasmas. Physical Review Letters, 1994, 73, 3544-3547.	2.9	107
16	Self-guiding and stability of intense optical beams in gases undergoing ionization. Physical Review E, 1996, 54, 4211-4232.	0.8	95
17	Magnetic Geometry and Dynamics of the Fast Coronal Mass Ejection of 1997 September 9. Astrophysical Journal, 2000, 533, 481-500.	1.6	94
18	Erupting Solar Magnetic Flux Ropes: Theory and Observation. Astrophysical Journal, 2001, 562, 1045-1057.	1.6	79

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19	Temporal Evolution of Self-Modulated Laser Wakefields Measured by Coherent Thomson Scattering. Physical Review Letters, 1996, 77, 5377-5380.	2.9	77
20	Theory and group velocity of ultrashort, tightly focused laser pulses. Journal of the Optical Society of America B: Optical Physics, 1995, 12, 1695.	0.9	76
21	Optical guiding of high-intensity laser pulses in a long plasma channel formed by a slow capillary discharge. Journal of the Optical Society of America B: Optical Physics, 1996, 13, 68.	0.9	74
22	Efficient generation of multigigawatt rf power by a klystronlike amplifier. Review of Scientific Instruments, 1990, 61, 171-181.	0.6	72
23	Drive Mechanisms of Erupting Solar Magnetic Flux Ropes. Astrophysical Journal, 2000, 539, 964-982.	1.6	72
24	Modeling the plasmasphere with SAMI3. Geophysical Research Letters, 2013, 40, 6-10.	1.5	67
25	Impact of meridional winds on equatorial spread F: Revisited. Geophysical Research Letters, 2013, 40, 1268-1272.	1.5	63
26	Estimating the effects of ionospheric plasma on solar wind/magnetosphere coupling via mass loading of dayside reconnection: Ionâ€plasmaâ€sheet oxygen, plasmaspheric drainage plumes, and the plasma cloak. Journal of Geophysical Research: Space Physics, 2013, 118, 5695-5719.	0.8	63
27	Relativistic Klystron amplifiers driven by modulated intense relativistic electron beams. IEEE Transactions on Plasma Science, 1990, 18, 553-569.	0.6	62
28	Threeâ€dimensional equatorial spread F modeling: Zonal neutral wind effects. Geophysical Research Letters, 2009, 36, .	1.5	62
29	Vacuum beat wave acceleration. Physical Review E, 1997, 55, 5924-5933.	0.8	61
30	Vacuum laser acceleration. Optics Communications, 1996, 124, 69-73.	1.0	59
31	Three-dimensional simulation of equatorial spread-F with meridional wind effects. Annales Geophysicae, 2009, 27, 1821-1830.	0.6	58
32	Ionized Plasma and Neutral Gas Coupling in the Sunâ€™s Chromosphere and Earthâ€™s Ionosphere/Thermosphere. Space Science Reviews, 2014, 184, 107-172.	3.7	58
33	Why do equatorial ionospheric bubbles stop rising?. Geophysical Research Letters, 2010, 37, .	1.5	55
34	Dayâ€toâ€day variability of the equatorial ionization anomaly and scintillations at dusk observed by GUVI and modeling by SAMI3. Journal of Geophysical Research, 2009, 114, .	3.3	54
35	Equinoctial asymmetry of a low-latitude ionosphere-thermosphere system and equatorial irregularities: evidence for meridional wind control. Annales Geophysicae, 2009, 27, 2027-2034.	0.6	52
36	On the seeding of equatorial spread F by gravity waves. Geophysical Research Letters, 2013, 40, 661-664.	1.5	52

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37	Fluxâ€Rope Coronal Mass Ejection Geometry and Its Relation to Observed Morphology. Astrophysical Journal, 2006, 652, 1740-1746.	1.6	48
38	Transverse equilibrium and stability of the primary beam in the plasma wakeâ€field accelerator. Physics of Plasmas, 1995, 2, 1326-1331.	0.7	47
39	Density enhancements associated with equatorial spread <I>F</I>. Annales Geophysicae, 2010, 28, 327-337.	0.6	46
40	Modeling of equatorial plasma bubbles triggered by non-equatorial traveling ionospheric disturbances. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	45
41	The Fluxâ€Rope Scaling of the Acceleration of Coronal Mass Ejections and Eruptive Prominences. Astrophysical Journal, 2006, 649, 452-463.	1.6	43
42	The May 13, 2005 Eruption: Observations, Data Analysis and Interpretation. Solar Physics, 2006, 239, 317-335.	1.0	43
43	Orientations of LASCO Halo CMEs and their connection to the flux rope structure of interplanetary CMEs. Advances in Space Research, 2007, 40, 1821-1826.	1.2	39
44	Propagation of radiusâ€tailored laser pulses over extended distances in a uniform plasma*. Physics of Plasmas, 1994, 1, 1738-1743.	0.7	38
45	Flux Rope Model of the 2003 October 28â€“30 Coronal Mass Ejection and Interplanetary Coronal Mass Ejection. Astrophysical Journal, 2006, 642, 541-553.	1.6	37
46	Threeâ€dimensional modeling of equatorial spread F airglow enhancements. Geophysical Research Letters, 2009, 36, .	1.5	36
47	Ion and electron temperature evolution during equatorial spread F. Geophysical Research Letters, 2009, 36, .	1.5	35
48	Observation of 20 eV xâ€ray generation in a proofâ€ofâ€principle laser synchrotron source experiment. Journal of Applied Physics, 1995, 78, 575-577.	1.1	34
49	Are All Coronal Mass Ejections Hollow Flux Ropes?. Astrophysical Journal, 2007, 657, 559-566.	1.6	34
50	Atomic and molecular ion dynamics during equatorial spread F. Geophysical Research Letters, 2009, 36, .	1.5	29
51	Selfâ€consistent modeling of equatorial dawn density depletions with SAMI3. Geophysical Research Letters, 2010, 37, .	1.5	29
52	On the Origin, 3D Structure and Dynamic Evolution ofÂCMEs Near Solar Minimum. Solar Physics, 2009, 259, 143-161.	1.0	28
53	Numerical simulations of axisymmetric erosion processes in ionâ€focused regimeâ€transported beams. Physics of Fluids B, 1989, 1, 2099-2105.	1.7	27
54	Global Ionospheric Metal Ion Transport With SAMI3. Geophysical Research Letters, 2019, 46, 7937-7944.	1.5	27

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55	Simulation of field-aligned H⁺ and He⁺ dynamics during late-stage plasmasphere refilling. Annales Geophysicae, 2008, 26, 1507-1516.	0.6	23
56	SAMI3 simulation of plasmasphere refilling. Geophysical Research Letters, 2013, 40, 2484-2488.	1.5	22
57	Electron accelerators driven by modulated intense relativistic electron beams. Physical Review Letters, 1989, 63, 2468-2471.	2.9	20
58	Vlasov simulations of very-large-amplitude-wave generation in the plasma wake-field accelerator. Physical Review A, 1991, 44, 6854-6861.	1.0	20
59	The Unknown Hydrogen Exosphere: Space Weather Implications. Space Weather, 2018, 16, 205-215.	1.3	20
60	Simulation of Buoyant Flux Ropes in a Magnetized Solar Atmosphere. Astrophysical Journal, 1998, 500, 992-1002.	1.6	19
61	Density Structure of a Preeruption Coronal Flux Rope. Astrophysical Journal, 2005, 628, 1046-1055.	1.6	18
62	The effect of the thermosphere on quiet time plasmasphere morphology. Journal of Geophysical Research: Space Physics, 2014, 119, 5032-5048.	0.8	17
63	Modulation of an intense beam by an external microwave source: Theory and simulation. Applied Physics Letters, 1988, 52, 431-433.	1.5	16
64	Equatorial spread <I>F</I> fossil plumes. Annales Geophysicae, 2010, 28, 2059-2069.	0.6	14
65	Nonlinear space-charge waves on an intense relativistic electron beam. IEEE Transactions on Plasma Science, 1988, 16, 249-257.	0.6	13
66	Seeding equatorial spreadFwith turbulent gravity waves: Phasing effects. Geophysical Research Letters, 2015, 42, 15-21.	1.5	13
67	Measurement and modeling of the refilling plasmasphere during 2001. Journal of Geophysical Research: Space Physics, 2016, 121, 2226-2248.	0.8	13
68	Radioâ€tomographic images of postmidnight equatorial plasma depletions. Geophysical Research Letters, 2014, 41, 13-19.	1.5	12
69	Simulation studies of a klystronlike amplifier operating in the 10-100 GW regime. IEEE Transactions on Electromagnetic Compatibility, 1992, 34, 222-228.	1.4	11
70	SAMI3 Simulations of Ionospheric Metallic Layers at Arecibo. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027297.	0.8	11
71	Nonmigrating tidal signature in the distributions of equatorial plasma bubbles and prereversal enhancement. Journal of Geophysical Research: Space Physics, 2015, 120, 3254-3262.	0.8	10
72	Dayâ€toâ€day variability in the thermosphere and its impact on plasmasphere refilling. Journal of Geophysical Research: Space Physics, 2016, 121, 6889-6900.	0.8	9

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73	The plasmasphere electron content paradox. Journal of Geophysical Research: Space Physics, 2016, 121, 8924-8935.	0.8	9
74	Erosion of the plasmasphere during a storm. Journal of Geophysical Research: Space Physics, 2017, 122, 9320-9328.	0.8	9
75	SAMI3 Simulations of a Persistent Plasmasphere Plume. Geophysical Research Letters, 2018, 45, 3374-3381.	1.5	9
76	Analysis of Erupting Solar Prominences in Terms of an Underlying Fluxâ€Rope Configuration. Astrophysical Journal, 2007, 663, 1354-1362.	1.6	8
77	Modeling the Impact of Metallic Ion Layers on Equatorial Spread With SAMI3/ESF. Geophysical Research Letters, 2020, 47, no.	1.5	8
78	<title>Relativistic klystron amplifier IV: simulation studies of a coaxial-geometry RKA</title>. , 1991, 1407, 23.		7
79	ELBA (electron beams in accelerators) particle simulation code. Laser and Particle Beams, 1994, 12, 273-282.	0.4	7
80	Simulation of Counterstreaming H + Outflows During Plasmasphere Refilling. Geophysical Research Letters, 2019, 46, 3052-3060.	1.5	6
81	Stability regimes in a helical quadrupole focusing acceleratorâ"theory and simulation. Physics of Fluids B, 1991, 3, 204-211.	1.7	5
82	Control of emittance growth due to mismatches in accelerators that use stellarator transport. Journal of Applied Physics, 1995, 77, 463-473.	1.1	5
83	The Effect of Oxygen on the Limiting H + Flux in the Topside Ionosphere. Journal of Geophysical Research: Space Physics, 2019, 124, 4509-4517.	0.8	5
84	Relativistic Klystron Amplifier. Proceedings of SPIE, 1988, , .	0.8	4
85	Correction to â€œSelfâ€consistent modeling of equatorial dawn density depletions with SAMI3â€• Geophysical Research Letters, 2010, 37, .	1.5	4
86	Three-Dimensional Modeling of Equatorial Spread F. , 2011, , 211-218.		4
87	The Effect of Midnight Temperature Maximum Winds on Postâ€Midnight Equatorial Spread F. Space Weather, 2021, 19, e2021SW002728.	1.3	4
88	Kinetic stabilization of interchange modes in an axisymmetric mirror by large orbit radius thermal ions. Physics of Fluids B, 1991, 3, 1015-1025.	1.7	3
89	Does Ring Current Heating Generate the Observed O⁺ Shell?. Geophysical Research Letters, 2020, 47, e2020GL088419.	1.5	3
90	Counterstreaming Cold H+, He+, O+, and N+ Outflows in the Plasmasphere. Frontiers in Astronomy and Space Sciences, 2021, 8, .	1.1	3

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91	Stability of an elongated axisymmetric mirror with an energetic axis-encircling ion component. Nuclear Fusion, 1984, 24, 1013-1021.	1.6	2
92	On Certain Theoretical Aspects Of Relativistic Klystron Amplifiers. Proceedings of SPIE, 1989, 1061, 48.	0.8	2
93	Operation Of A Multigigawatt Relativistic Klystron Amplifier. , 1989, 1061, 34.		2
94	Geospace imaging using Thomson scattering. Journal of Atmospheric and Solar-Terrestrial Physics, 2009, 71, 132-142.	0.6	2
95	Exploiting Laboratory and Heliophysics Plasma Synergies. Energies, 2010, 3, 1014-1048.	1.6	2
96	Relativistic klystron amplifier and its applications. , 1990, , .		1
97	Theory of electromagnetic instability of an intense beam in a quadrupole focusing system. Physical Review A, 1992, 45, 7492-7499.	1.0	1
98	Numerical simulation of a 450 MeV single-stage laser wakefield accelerator. AIP Conference Proceedings, 1992, , .	0.3	1
99	A Compact Accelerator Powered By The Relativistic Klystron Amplifier. Proceedings of SPIE, 1989, , .	0.8	0
100	ELBA-a laser-plasma simulation code. , 1990, , .		0
101	Nonlinear beam loading and dynamical limiting currents in a high power microwave gap. , 1990, , .		0
102	Relativistic Klystron Amplifiers: Simulation Studies Of A Coaxial-geometry RKA. , 0, , .		0
103	Beam dynamics in the spiral line induction accelerator. , 1991, , .		0
104	<title>Intense laser pulse propagation, optical guiding, and wakefield generation in plasma</title>. , 1992, , .		0
105	Numerical simulation of the electromagnetic instability of an intense beam in a quadrupole focusing system. Physical Review A, 1992, 46, 6750-6753.	1.0	0
106	Electron acceleration and optical guiding in the laser wakefield accelerator. AIP Conference Proceedings, 1992, , .	0.3	0
107	<title>rf converter simulation: imposition of the radiation condition</title>. , 1992, , .		0
108	RF convertor simulation-imposition of the radiation condition. Journal of Infrared, Millimeter and Terahertz Waves, 1993, 14, 335-346.	0.6	0

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109	Pulse propagation in the laser wakefield accelerator. AIP Conference Proceedings, 1996, , .	0.3	0
110	Laser driven acceleration in vacuum and gases. , 1997, , .		0
111	The Effect of the Thermosphere on Ionosphere Outflows. Frontiers in Astronomy and Space Sciences, 2021, 8, .	1.1	0