Krishan K Khurana

List of Publications by Year
in descending order

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161 papers	9,841 citations	31902 53 h-index	39575 94 g-index
168 all docs	168 docs citations	168 times ranked	3498 citing authors

#	Article	IF	Citations
1	Quasiperiodic 1â€Hour AlfvÃ©n Wave Resonances in Saturn's Magnetosphere: Theory for a Realistic Plasma/Field Model. Geophysical Research Letters, 2021, 48, e2020GL090967.	1.5	5
2	Embedded Regions 1 and 2 Fieldâ€Aligned Currents: Newly Recognized From Lowâ€Altitude Spacecraft Observations. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029207.	0.8	7
3	Magnetospheric Interactions of Saturn's Moon Dione (2005â€“2015). Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027688.	0.8	9
4	Joint Europa Mission (JEM): a multi-scale study of Europa to characterize its habitability and search for extant life. Planetary and Space Science, 2020, 193, 104960.	0.9	15
5	Local Time Asymmetries in Jupiter's Magnetodisc Currents. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027455.	0.8	16
6	Thermal and Energetic Ion Dynamics in Ganymede's Magnetosphere. Journal of Geophysical Research: Space Physics, 2018, 123, 4614-4637.	0.8	46
7	Saturnâ€™s Magnetic Field and Dynamo. , 2018, , 69-96.		1
8	Saturnâ€™s magnetic field revealed by the Cassini Grand Finale. Science, 2018, 362, .	6.0	108
9	Discovery of Atmosphericâ€Windâ€Driven Electric Currents in Saturn's Magnetosphere in the Gap Between Saturn and its Rings. Geophysical Research Letters, 2018, 45, 10,068.	1.5	18
10	Evidence of a plume on Europa from Galileo magnetic and plasma wave signatures. Nature Astronomy, 2018, 2, 459-464.	4.2	164
11	The role of plasma slowdown in the generation of Rhea's AlfvÃ©n wings. Journal of Geophysical Research: Space Physics, 2017, 122, 1778-1788.	0.8	8
12	Spinning, breathing, and flapping: Periodicities in Saturn's middle magnetosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 393-416.	0.8	18
13	Cassini observations of Saturn's southern polar cusp. Journal of Geophysical Research: Space Physics, 2016, 121, 3006-3030.	0.8	17
14	On the formation of Ganymede's surface brightness asymmetries: Kinetic simulations of Ganymede's magnetosphere. Geophysical Research Letters, 2016, 43, 4745-4754.	1.5	38
15	AlfvÃ©n wings in the lunar wake: The role of pressure gradients. Journal of Geophysical Research: Space Physics, 2016, 121, 10,698.	0.8	17
16	The 2013 Saturn auroral campaign. Icarus, 2016, 263, 1.	1.1	1
17	Effects of radial motion on interchange injections at Saturn. Icarus, 2016, 264, 342-351.	1.1	33
18	Sources of Local Time Asymmetries in Magnetodiscs. Space Sciences Series of ISSI, 2016, , 301-333.	0.0	2

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19	Selfâ€consistent multifluid MHD simulations of Europa's exospheric interaction with Jupiter's magnetosphere. Journal of Geophysical Research: Space Physics, 2015, 120, 3503-3524.	0.8	44
20	Callisto plasma interactions: Hybrid modeling including induction by a subsurface ocean. Journal of Geophysical Research: Space Physics, 2015, 120, 4877-4889.	0.8	23
21	Field dipolarization in Saturn's magnetotail with planetward ion flows and energetic particle flow bursts: Evidence of quasiâ€steady reconnection. Journal of Geophysical Research: Space Physics, 2015, 120, 3603-3617.	0.8	20
22	Ionospheric flow shear associated with the preexisting auroral arc: A statistical study from the FAST spacecraft data. Journal of Geophysical Research: Space Physics, 2015, 120, 5194-5213.	0.8	14
23	The far-ultraviolet main auroral emission at Jupiter â€“ Part 1: Dawnâ€“dusk brightness asymmetries. Annales Geophysicae, 2015, 33, 1203-1209.	0.6	22
24	The far-ultraviolet main auroral emission at Jupiter â€“ Part 2: Vertical emission profile. Annales Geophysicae, 2015, 33, 1211-1219.	0.6	12
25	Magnetosphereâ€ionosphere mapping at Jupiter: Quantifying the effects of using different internal field models. Journal of Geophysical Research: Space Physics, 2015, 120, 2584-2599.	0.8	35
26	Sources of Local Time Asymmetries in Magnetodiscs. Space Science Reviews, 2015, 187, 301-333.	3.7	13
27	The exploration of Titan with an orbiter and a lake probe. Planetary and Space Science, 2014, 104, 78-92.	0.9	26
28	Threeâ€dimensional lunar wake reconstructed from ARTEMIS data. Journal of Geophysical Research: Space Physics, 2014, 119, 5220-5243.	0.8	54
29	Development and validation of inversion technique for substorm current wedge using ground magnetic field data. Journal of Geophysical Research: Space Physics, 2014, 119, 1909-1924.	0.8	43
30	Structure and statistical properties of plasmoids in Jupiter's magnetotail. Journal of Geophysical Research: Space Physics, 2014, 119, 821-843.	0.8	54
31	Simulating the effect of centrifugal forces in Jupiter's magnetosphere. Journal of Geophysical Research: Space Physics, 2014, 119, 1925-1950.	0.8	17
32	Ion composition in interchange injection events in Saturn's magnetosphere. Journal of Geophysical Research: Space Physics, 2014, 119, 9761-9772.	0.8	23
33	Detection of a strongly negative surface potential at Saturn's moon Hyperion. Geophysical Research Letters, 2014, 41, 7011-7018.	1.5	12
34	Surface current balance and thermoelectric whistler wings at airless astrophysical bodies: Cassini at Rhea. Journal of Geophysical Research: Space Physics, 2014, 119, 8881-8901.	0.8	6
35	ULF waves in Ganymede's upstream magnetosphere. Annales Geophysicae, 2013, 31, 45-59.	0.6	6
36	Generation and properties of in vivo flux transfer events. Journal of Geophysical Research, 2012, 117, .	3.3	22

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37	Outward expansion of the lunar wake: ARTEMIS observations. Geophysical Research Letters, 2012, 39, .	1.5	18
38	In situ observations of the â€œpreexisting auroral arcâ€•by THEMIS all sky imagers and the FAST spacecraft. Journal of Geophysical Research, 2012, 117, .	3.3	24
39	Evidence of a Global Magma Ocean in Ioâ€™s Interior. Science, 2011, 332, 1186-1189.	6.0	115
40	Pitch angle distributions of energetic electrons at Saturn. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	25
41	Improved mapping of Jupiter's auroral features to magnetospheric sources. Journal of Geophysical Research, 2011, 116, .	3.3	98
42	Joule heating of the south polar terrain on Enceladus. Journal of Geophysical Research, 2011, 116, .	3.3	8
43	Cassini magnetometer observations over the Enceladus poles. Geophysical Research Letters, 2011, 38, n/a-n/a.	1.5	10
44	Flow vortices associated with flux transfer events moving along the magnetopause: Observations and an MHD simulation. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	11
45	Periodic motion of Saturn's nightside plasma sheet. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	84
46	A statistical study of the inner edge of the electron plasma sheet and the net convection potential as a function of geomagnetic activity. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	10
47	First Results from ARTEMIS, a New Two-Spacecraft Lunar Mission: Counter-Streaming Plasma Populations in the Lunar Wake. Space Science Reviews, 2011, 165, 93-107.	3.7	44
48	ARTEMIS Science Objectives. Space Science Reviews, 2011, 165, 59-91.	3.7	47
49	Mapping Magnetospheric Equatorial Regions at Saturn from Cassini Prime Mission Observations. Space Science Reviews, 2011, 164, 1-83.	3.7	40
50	ARTEMIS Science Objectives. , 2011, , 27-59.		4
51	First Results from ARTEMIS, a New Two-Spacecraft Lunar Mission: Counter-Streaming Plasma Populations in the Lunar Wake. , 2011, , 93-107.		4
52	Medicean Moons Sailing Through Plasma Seas: Challenges in Establishing Magnetic Properties. Proceedings of the International Astronomical Union, 2010, 6, 58-70.	0.0	0
53	Magnetic Fields of the Satellites of Jupiter and Saturn. Space Science Reviews, 2010, 152, 271-305.	3.7	41
54	Environments in the Outer Solar System. Space Science Reviews, 2010, 153, 11-59.	3.7	8

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55	Ion pick-up near the icy Galilean satellites. , 2010, , .		6
56	Interaction of Saturn's magnetosphere and its moons: 1. Interaction between corotating plasma and standard obstacles. Journal of Geophysical Research, 2010, 115, .	3.3	20
57	Interaction of Saturn's magnetosphere and its moons: 2. Shape of the Enceladus plume. Journal of Geophysical Research, 2010, 115, .	3.3	11
58	Asymmetries in Saturn's radiation belts. Journal of Geophysical Research, 2010, 115, .	3.3	28
59	Evidence that crater flux transfer events are initial stages of typical flux transfer events. Journal of Geophysical Research, 2010, 115, .	3.3	31
60	Reconnection and flows in the Jovian magnetotail as inferred from magnetometer observations. Journal of Geophysical Research, 2010, 115, .	3.3	93
61	Timeâ€varying magnetospheric environment near Enceladus as seen by the Cassini magnetometer. Geophysical Research Letters, 2010, 37, .	1.5	18
62	A plasmapauseâ€like density boundary at high latitudes in Saturn's magnetosphere. Geophysical Research Letters, 2010, 37, .	1.5	38
63	Global configuration of Saturn's magnetic field derived from observations. Geophysical Research Letters, 2010, 37, .	1.5	11
64	Saturn's periodic magnetic field perturbations caused by a rotating partial ring current. Geophysical Research Letters, 2010, 37, .	1.5	37
65	Interaction of Saturn's magnetosphere and its moons: 3. Time variation of the Enceladus plume. Journal of Geophysical Research, 2010, 115, .	3.3	11
66	Dynamics of Ganymede's magnetopause: Intermittent reconnection under steady external conditions. Journal of Geophysical Research, 2010, 115, .	3.3	44
67	Environments in the Outer Solar System. Space Sciences Series of ISSI, 2010, , 11-59.	0.0	0
68	The electron density of Saturn's magnetosphere. Annales Geophysicae, 2009, 27, 2971-2991.	0.6	73
69	LAPLACE: A mission to Europa and the Jupiter System for ESAâ€™s Cosmic Vision Programme. Experimental Astronomy, 2009, 23, 849-892.	1.6	38
70	Signatures of fieldâ€aligned currents in Saturn's nightside magnetosphere. Geophysical Research Letters, 2009, 36, .	1.5	37
71	Properties of Ganymede's magnetosphere inferred from improved threeâ€dimensional MHD simulations. Journal of Geophysical Research, 2009, 114, .	3.3	84
72	Sources of rotational signals in Saturn's magnetosphere. Journal of Geophysical Research, 2009, 114, .	3.3	74

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73	Saturn's Magnetospheric Configuration. , 2009, , 203-255.		44
74	Magnetic Fields of the Satellites of Jupiter and Saturn. Space Sciences Series of ISSI, 2009, , 271-305.	0.0	1
75	Energetic electron signatures of Saturn's smaller moons: Evidence of an arc of material at Methone. Icarus, 2008, 193, 455-464.	1.1	22
76	Magnetic portraits of Tethys and Rhea. Icarus, 2008, 193, 465-474.	1.1	56
77	Saturn's magnetodisc current sheet. Journal of Geophysical Research, 2008, 113, .	3.3	89
78	Threeâ€dimensional MHD simulations of Ganymedeâ€™s magnetosphere. Journal of Geophysical Research, 2008, 113, .	3.3	80
79	Warping of Saturn's magnetospheric and magnetotail current sheets. Journal of Geophysical Research, 2008, 113, .	3.3	148
80	Thermal electron periodicities at 20R_S in Saturn's magnetosphere. Geophysical Research Letters, 2008, 35, .	1.5	41
81	Largeâ€scale dynamics of Saturn's magnetopause: Observations by Cassini. Journal of Geophysical Research, 2008, 113, .	3.3	86
82	Modeling a forceâ€free flux transfer event probed by multiple Time History of Events and Macroscale Interactions during Substorms (THEMIS) spacecraft. Journal of Geophysical Research, 2008, 113, .	3.3	34
83	The Dust Halo of Saturn's Largest Icy Moon, Rhea. Science, 2008, 319, 1380-1384.	6.0	53
84	Plasma and fields in the wake of Rhea: 3-D hybrid simulation and comparison with Cassini data. Annales Geophysicae, 2008, 26, 619-637.	0.6	50
85	Mass of Saturn's magnetodisc: Cassini observations. Geophysical Research Letters, 2007, 34, .	1.5	57
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87	Measuring the stress state of the Saturnian magnetosphere. Geophysical Research Letters, 2007, 34, .	1.5	11
88	Europa's nearâ€surface radiation environment. Geophysical Research Letters, 2007, 34, .	1.5	44
89	Europa's AlfvÃ©n wing: shrinkage and displacement influenced by an induced magnetic field. Annales Geophysicae, 2007, 25, 905-914.	0.6	25
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91	Modeling the size and shape of Saturn's magnetopause with variable dynamic pressure. Journal of Geophysical Research, 2006, 111, .	3.3	133
92	Titan's near magnetotail from magnetic field and electron plasma observations and modeling: Cassini flybys TA, TB, and T3. Journal of Geophysical Research, 2006, 111, .	3.3	82
93	Non-self-similar scaling of plasma sheet and solar wind probability distribution functions of magnetic field fluctuations. Journal of Geophysical Research, 2006, 111, .	3.3	16
94	Mirror mode structures in the Jovian magnetosheath. Journal of Geophysical Research, 2006, 111, .	3.3	88
95	Identification of a Dynamic Atmosphere at Enceladus with the Cassini Magnetometer. Science, 2006, 311, 1406-1409.	6.0	338
96	Anti-planetward auroral electron beams at Saturn. Nature, 2006, 439, 699-702.	13.7	40
97	Jovian plasma sheet morphology: particle and field observations by the Galileo spacecraft. Planetary and Space Science, 2005, 53, 681-692.	0.9	19
98	Diffuse auroral precipitation in the jovian upper atmosphere and magnetospheric electron flux variability. Icarus, 2005, 178, 406-416.	1.1	15
99	Cassini Magnetometer Observations During Saturn Orbit Insertion. Science, 2005, 307, 1266-1270.	6.0	211
100	The Locations and Shapes of Jupiterâ€™s Bow Shock and Magnetopause. AIP Conference Proceedings, 2005, , .	0.3	6
101	Titan's Magnetic Field Signature During the First Cassini Encounter. Science, 2005, 308, 992-995.	6.0	133
102	Plasma sheet turbulence observed by Cluster II. Journal of Geophysical Research, 2005, 110, .	3.3	124
103	Dynamic Harris current sheet thickness from Cluster current density and plasma measurements. Journal of Geophysical Research, 2005, 110, .	3.3	36
104	Global structure of Jupiter's magnetospheric current sheet. Journal of Geophysical Research, 2005, 110, .	3.3	98
105	Mass release at Jupiter: Substorm-like processes in the Jovian magnetotail. Journal of Geophysical Research, 2005, 110, .	3.3	94
106	Dynamics of the Saturnian inner magnetosphere: First inferences from the Cassini magnetometers about small-scale plasma transport in the magnetosphere. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	44
107	Warm flux tubes in the E-ring plasma torus: Initial Cassini magnetometer observations. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	33
108	Ion cyclotron waves in the Saturnian magnetosphere associated with Cassini's engine exhaust. Geophysical Research Letters, 2005, 32, n/a-n/a.	1.5	4

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109	Cluster observations of quasi-periodic impulsive signatures in the dayside northern lobe: High-latitude flux transfer events?. Journal of Geophysical Research, 2004, 109, .	3.3	11
110	Limits on an intrinsic dipole moment in Europa. Journal of Geophysical Research, 2004, 109, .	3.3	47
111	Cluster electric current density measurements within a magnetic flux rope in the plasma sheet. Geophysical Research Letters, 2003, 30, .	1.5	77
112	Searching for Liquid Water in Europa by Using Surface Observatories. Astrobiology, 2002, 2, 93-103.	1.5	41
113	Probabilistic models of the Jovian magnetopause and bow shock locations. Journal of Geophysical Research, 2002, 107, SMP 17-1.	3.3	195
114	Observations of thermal plasmas in Jupiter's magnetotail. Journal of Geophysical Research, 2002, 107, SIA 1-1.	3.3	56
115	Properties of the magnetic field in the Jovian magnetotail. Journal of Geophysical Research, 2002, 107, SMP 23-1-SMP 23-9.	3.3	39
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117	Energetic ion dynamics in Jupiter's plasma sheet. Journal of Geophysical Research, 2001, 106, 18895-18905.	3.3	16
118	Wave activity in Europa's wake: Implications for ion pickup. Journal of Geophysical Research, 2001, 106, 26033-26048.	3.3	52
119	Influence of solar wind on Jupiter's magnetosphere deduced from currents in the equatorial plane. Journal of Geophysical Research, 2001, 106, 25999-26016.	3.3	120
120	Magnetized or unmagnetized: Ambiguity persists following Galileo's encounters with Io in 1999 and 2000. Journal of Geophysical Research, 2001, 106, 26121-26135.	3.3	31
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122	Europa and Callisto: Induced or intrinsic fields in a periodically varying plasma environment. Journal of Geophysical Research, 1999, 104, 4609-4625.	3.3	181
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125	Probing Ganymede's magnetosphere with field line resonances. Journal of Geophysical Research, 1999, 104, 14729-14738.	3.3	20
126	Mirror-mode structures at the Galileo-Io flyby: Instability criterion and dispersion analysis. Journal of Geophysical Research, 1999, 104, 17479-17489.	3.3	44

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128	Induced magnetic fields as evidence for subsurface oceans in Europa and Callisto. Nature, 1998, 395, 777-780.	13.7	539
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131	Ganymede's magnetosphere: Magnetometer overview. Journal of Geophysical Research, 1998, 103, 19963-19972.	3.3	114
132	Location and shape of the Jovian magnetopause and bow shock. Journal of Geophysical Research, 1998, 103, 20075-20082.	3.3	82
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135	Measuring magnetic field gradients from four point vector measurements in space. Geophysical Monograph Series, 1998, , 311-316.	0.1	4
136	A new functional form to study the solar wind control of the magnetopause size and shape. Journal of Geophysical Research, 1997, 102, 9497-9511.	3.3	652
137	Euler potential models of Jupiter's magnetospheric field. Journal of Geophysical Research, 1997, 102, 11295-11306.	3.3	179
138	Ion cyclotron waves observed at Galileo's Io encounter: Implications for neutral cloud distribution and plasma composition. Geophysical Research Letters, 1997, 24, 2139-2142.	1.5	49
139	The magnetic field and magnetosphere of Ganymede. Geophysical Research Letters, 1997, 24, 2155-2158.	1.5	127
140	Intermittent short-duration magnetic field anomalies in the Io torus: Evidence for plasma interchange?. Geophysical Research Letters, 1997, 24, 2127-2130.	1.5	107
141	Interaction of Io with its torus: Does Io have an internal magnetic field?. Geophysical Research Letters, 1997, 24, 2391-2394.	1.5	27
142	Europa's Magnetic Signature: Report from Galileo's Pass on 19December 1996. Science, 1997, 276, 1239-1241.	6.0	93
143	Absence of an internal magnetic field at Callisto. Nature, 1997, 387, 262-264.	13.7	51
144	Magnetospheric convection in the presence of interplanetary magnetic fieldBy: A conceptual model and simulations. Journal of Geophysical Research, 1996, 101, 4907-4916.	3.3	47

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146	A Magnetic Signature at Io: Initial Report from the Galileo Magnetometer. Science, 1996, 273, 337-340.	6.0	100
147	Io's Interaction with the Plasma Torus: Galileo Magnetometer Report. Science, 1996, 274, 396-398.	6.0	165
148	Constraints from Galileo observations on the origin of jovian dust streams. Nature, 1996, 381, 395-398.	13.7	62
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150	Observations of magnetic flux ropes and associated currents in Earth's magnetotail with the Galileo spacecraft. Geophysical Research Letters, 1995, 22, 2087-2090.	1.5	24
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154	Inference of the angular velocity of plasma in the Jovian magnetosphere from the sweepback of magnetic field. Journal of Geophysical Research, 1993, 98, 67-79.	3.3	57
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159	Magnetic Field Studies of the Solar Wind Interaction with Venus from the Galileo Flyby. Science, 1991, 253, 1518-1522.	6.0	20
160	Ultralow frequency MHD waves in Jupiter's middle magnetosphere. Journal of Geophysical Research, 1989, 94, 5241-5254.	3.3	66
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