Krishan K Khurana

List of Publications by Citations

162	8,324	50	86
papers	citations	h-index	g-index
168	8,930	9.9	5.56
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
162	A new functional form to study the solar wind control of the magnetopause size and shape. *Journal of Geophysical Research*, **1997**, 102, 9497-9511		506
161	Induced magnetic fields as evidence for subsurface oceans in Europa and Callisto. *Nature*, **1998**, 395, 777-80	47.5	444
160	Galileo magnetometer measurements: a stronger case for a subsurface ocean at Europa. *Science*, **2000**, 289, 1340-3	32.2	444
159	Discovery of Ganymede's magnetic field by the Galileo spacecraft. *Nature*, **1996**, 384, 537-541	47.5	300
158	Identification of a dynamic atmosphere at Enceladus with the Cassini magnetometer. *Science*, **2006**, 311, 1406-9	32.2	294
157	Cassini magnetometer observations during Saturn orbit insertion. *Science*, **2005**, 307, 1266-70	32.2	195
156	Probabilistic models of the Jovian magnetopause and bow shock locations. *Journal of Geophysical Research*, **2002**, 107, SMP 17-1		163
155	Io's Interaction with the Plasma Torus: Galileo Magnetometer Report. *Science*, **1996**, 274, 396-398	32.2	151
154	Euler potential models of Jupiter's magnetospheric field. *Journal of Geophysical Research*, **1997**, 102, 11295-11306		148
153	Europa and Callisto: Induced or intrinsic fields in a periodically varying plasma environment. *Journal of Geophysical Research*, **1999**, 104, 4609-4625		146
152	Warping of Saturn's magnetospheric and magnetotail current sheets. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		129
151	Titan's magnetic field signature during the first Cassini encounter. *Science*, **2005**, 308, 992-5	32.2	127
150	Modeling the size and shape of Saturn's magnetopause with variable dynamic pressure. *Journal of Geophysical Research*, **2006**, 111,		125
149	Magnetic Field Signatures Near Galileo's Closest Approach to Gaspra. *Science*, **1993**, 261, 331-4	32.2	101
148	Ganymede's magnetosphere: Magnetometer overview. *Journal of Geophysical Research*, **1998**, 103, 19963-19972		98
147	The magnetic field and magnetosphere of Ganymede. *Geophysical Research Letters*, **1997**, 24, 2155-2158	4.8	99
146	Evidence of a plume on Europa from Galileo magnetic and plasma wave signatures. *Nature Astronomy*, **2018**, 2, 459-464	12	101

145	Intermittent short-duration magnetic field anomalies in the Io torus: Evidence for plasma interchange?. *Geophysical Research Letters*, **1997**, 24, 2127-2130	4.8	97
144	Plasma sheet turbulence observed by Cluster II. *Journal of Geophysical Research*, **2005**, 110,		96
143	Influence of solar wind on Jupiter's magnetosphere deduced from currents in the equatorial plane. *Journal of Geophysical Research*, **2001**, 106, 25999-26016		96
142	Localized reconnection in the near jovian magnetotail. *Science*, **1998**, 280, 1061-4	32.2	94
141	Evidence of a global magma ocean in Io's interior. *Science*, **2011**, 332, 1186-9	32.2	90
140	A Magnetic Signature at Io: Initial Report from the Galileo Magnetometer. *Science*, **1996**, 273, 337-40	32.2	92
139	Mass release at Jupiter: Substorm-like processes in the Jovian magnetotail. *Journal of Geophysical Research*, **2005**, 110,		87
138	Storm-like dynamics of Jupiter's inner and middle magnetosphere. *Journal of Geophysical Research*, **1999**, 104, 22759-22778		87
137	Improved mapping of Jupiter's auroral features to magnetospheric sources. *Journal of Geophysical Research*, **2011**, 116,		85
136	Reconnection and flows in the Jovian magnetotail as inferred from magnetometer observations. *Journal of Geophysical Research*, **2010**, 115, n/a-n/a		84
135	Saturn's magnetodisc current sheet. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		85
134	Periodic motion of Saturn's nightside plasma sheet. *Journal of Geophysical Research*, **2011**, 116, n/a-n/a		82
133	Large-scale dynamics of Saturn's magnetopause: Observations by Cassini. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		81
132	Saturn's magnetic field revealed by the Cassini Grand Finale. *Science*, **2018**, 362,	32.2	61
131	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,		77
130	Global structure of Jupiter's magnetospheric current sheet. *Journal of Geophysical Research*, **2005**, 110,		73
129	Europa's magnetic signature: report from Galileo's pass on 19 December 1996. *Science*, **1997**, 276, 1239-41	31.2	77
128	Location and shape of the Jovian magnetopause and bow shock. *Journal of Geophysical Research*, **1998**, 103, 20075-20082		73

127	Mirror mode structures in the Jovian magnetosheath. *Journal of Geophysical Research*, **2006**, 111,		71
126	The electron density of Saturn's magnetosphere. *Annales Geophysicae*, **2009**, 27, 2971-2991	1.9	70
125	Sources of rotational signals in Saturn's magnetosphere. *Journal of Geophysical Research*, **2009**, 114, n/a-n/a		69
124	Properties of Ganymede's magnetosphere inferred from improved three-dimensional MHD simulations. *Journal of Geophysical Research*, **2009**, 114, n/a-n/a		67
123	Cluster electric current density measurements within a magnetic flux rope in the plasma sheet. *Geophysical Research Letters*, **2003**, 30,	4.8	66
122	MHD simulations of Io's interaction with the plasma torus. *Journal of Geophysical Research*, **1998**, 103, 19867-19877		63
121	Three-dimensional MHD simulations of Ganymede magnetosphere. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		62
120	Mass loading of Saturn's magnetosphere near Enceladus. *Journal of Geophysical Research*, **2007**, 112, n/a-n/a		63
119	Constraints from Galileo observations on the origin of jovian dust streams. *Nature*, **1996**, 381, 395-398	47.5	61
118	The origin of Ganymede's polar caps. *Icarus*, **2007**, 191, 193-202	3.7	56
117	Ultralow frequency MHD waves in Jupiter's middle magnetosphere. *Journal of Geophysical Research* , **1989**, 94, 5241		55
116	Mass of Saturn's magnetodisc: Cassini observations. *Geophysical Research Letters*, **2007**, 34,	4.8	54
115	Magnetic portraits of Tethys and Rhea. *Icarus*, **2008**, 193, 465-474	3.7	50
114	The dust halo of Saturn's largest icy moon, Rhea. *Science*, **2008**, 319, 1380-4	32.2	49
113	A generalized hinged-magnetodisc model of Jupiter's nightside current sheet. *Journal of Geophysical Research*, **1992**, 97, 6269		48
112	Structure and statistical properties of plasmoids in Jupiter's magnetotail. *Journal of Geophysical Research: Space Physics*, **2014**, 119, 821-843	2.5	49
111	Observations of thermal plasmas in Jupiter's magnetotail. *Journal of Geophysical Research*, **2002**, 107, SIA 1-1		48
110	Plasma and fields in the wake of Rhea: 3-D hybrid simulation and comparison with Cassini data. *Annales Geophysicae*, **2008**, 26, 619-637	1.9	46

109	Ion cyclotron waves observed at Galileo's Io encounter: Implications for neutral cloud distribution and plasma composition. *Geophysical Research Letters*, **1997**, 24, 2139-2142	4.8	45
108	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		45
107	Three-dimensional lunar wake reconstructed from ARTEMIS data. *Journal of Geophysical Research: Space Physics*, **2014**, 119, 5220-5243	2.5	44
106	Absence of an internal magnetic field at Callisto. *Nature*, **1997**, 387, 262-264	47.5	45
105	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	7.4	41
104	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	4.8	41
103	Mirror-mode structures at the Galileo-Io flyby: Instability criterion and dispersion analysis. *Journal of Geophysical Research*, **1999**, 104, 17479-17489		41
102	Wave activity in Europa's wake: Implications for ion pickup. *Journal of Geophysical Research*, **2001**, 106, 26033-26048		41
101	ARTEMIS Science Objectives. *Space Science Reviews*, **2011**, 165, 59-91	7.4	40
100	Thermal electron periodicities at 20RS in Saturn's magnetosphere. *Geophysical Research Letters*, **2008**, 35,	4.8	40
99	Magnetospheric convection in the presence of interplanetary magnetic field By : A conceptual model and simulations. *Journal of Geophysical Research*, **1996**, 101, 4907-4916		39
98	Mapping Magnetospheric Equatorial Regions at Saturn from Cassini Prime Mission Observations. *Space Science Reviews*, **2011**, 164, 1-83	7.4	39
97	Saturn's Magnetospheric Configuration **2009**, 203-255		38
96	Plasma sheet dynamics in the Jovian magnetotail: Signatures For substorm-like processes ?. *Geophysical Research Letters*, **1999**, 26, 2137-2140	4.8	37
95	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	2.5	37
94	Anti-planetward auroral electron beams at Saturn. *Nature*, **2006**, 439, 699-702	47.5	37
93	A plasmapause-like density boundary at high latitudes in Saturn's magnetosphere. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.8	36
92	Signatures of field-aligned currents in Saturn's nightside magnetosphere. *Geophysical Research Letters*, **2009**, 36,	4.8	36

91	Limits on an intrinsic dipole moment in Europa. *Journal of Geophysical Research*, **2004**, 109,		36
90	Saturn's periodic magnetic field perturbations caused by a rotating partial ring current. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.8	35
89	Europa's near-surface radiation environment. *Geophysical Research Letters*, **2007**, 34,	4.8	33
88	Properties of the magnetic field in the Jovian magnetotail. *Journal of Geophysical Research*, **2002**, 107, SMP 23-1-SMP 23-9		33
87	Dynamics of Ganymede's magnetopause: Intermittent reconnection under steady external conditions. *Journal of Geophysical Research*, **2010**, 115, n/a-n/a		33
86	LAPLACE: A mission to Europa and the Jupiter System for ESA Cosmic Vision Programme. *Experimental Astronomy*, **2009**, 23, 849-892	1.3	31
85	Mirror-mode structures at the Galileo-Io flyby: Observations. *Journal of Geophysical Research*, **1999**, 104, 17471-17477		33
84	On Jovian plasma sheet structure. *Journal of Geophysical Research*, **1989**, 94, 11791		33
83	Magnetic Fields of the Satellites of Jupiter and Saturn. *Space Science Reviews*, **2010**, 152, 271-305	7.4	32
82	Modeling a force-free flux transfer event probed by multiple Time History of Events and Macroscale Interactions during Substorms (THEMIS) spacecraft. *Journal of Geophysical Research*, **2008**, 113, n/a-n/a		32
81	Magnetosphere-ionosphere mapping at Jupiter: Quantifying the effects of using different internal field models. *Journal of Geophysical Research: Space Physics*, **2015**, 120, 2584-2599	2.5	30
80	Self-consistent multifluid MHD simulations of Europa's exospheric interaction with Jupiter's magnetosphere. *Journal of Geophysical Research: Space Physics*, **2015**, 120, 3503-3524	2.5	29
79	Searching for liquid water in Europa by using surface observatories. *Astrobiology*, **2002**, 2, 93-103	3.6	30
78	Models of flux ropes embedded in a harris neutral sheet: Force-free solutions in low and high beta plasmas. *Journal of Geophysical Research*, **1995**, 100, 23637		29
77	The Galileo Earth encounter: Magnetometer and allied measurements. *Journal of Geophysical Research*, **1993**, 98, 11299		30
76	Warm flux tubes in the E-ring plasma torus: Initial Cassini magnetometer observations. *Geophysical Research Letters*, **2005**, 32, n/a-n/a	4.8	29
75	Effects of radial motion on interchange injections at Saturn. *Icarus*, **2016**, 264, 342-351	3.7	28
74	Dynamic Harris current sheet thickness from Cluster current density and plasma measurements. *Journal of Geophysical Research*, **2005**, 110,		28

73	Magnetized or unmagnetized: Ambiguity persists following Galileo's encounters with Io in 1999 and 2000. *Journal of Geophysical Research*, **2001**, 106, 26121-26135		27
72	Interaction of Io with its torus: Does Io have an internal magnetic field?. *Geophysical Research Letters*, **1997**, 24, 2391-2394	4.8	27
71	Thermal and Energetic Ion Dynamics in Ganymede's Magnetosphere. *Journal of Geophysical Research: Space Physics*, **2018**, 123, 4614-4637	2.5	26
70	Asymmetries in Saturn's radiation belts. *Journal of Geophysical Research*, **2010**, 115,		25
69	Evidence that crater flux transfer events are initial stages of typical flux transfer events. *Journal of Geophysical Research*, **2010**, 115, n/a-n/a		23
68	On the formation of Ganymede's surface brightness asymmetries: Kinetic simulations of Ganymede's magnetosphere. *Geophysical Research Letters*, **2016**, 43, 4745-4754	4.8	24
67	The exploration of Titan with an orbiter and a lake probe. *Planetary and Space Science*, **2014**, 104, 78-92	2	21
66	Ion composition in interchange injection events in Saturn's magnetosphere. *Journal of Geophysical Research: Space Physics*, **2014**, 119, 9761-9772	2.5	22
65	Energetic electron signatures of Saturn's smaller moons: Evidence of an arc of material at Methone. *Icarus*, **2008**, 193, 455-464	3.7	22
64	In situ observations of the □reexisting auroral arc□by THEMIS all sky imagers and the FAST spacecraft. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		21
63	Sheared magnetic field structure in Jupiter's dusk magnetosphere: Implications for return currents. *Journal of Geophysical Research*, **2002**, 107, SMP 17-1		21
62	Observations of magnetic flux ropes and associated currents in Earth's magnetotail with the Galileo spacecraft. *Geophysical Research Letters*, **1995**, 22, 2087-2090	4.8	21
61	Generation and properties of in vivo flux transfer events. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		20
60	Pitch angle distributions of energetic electrons at Saturn. *Journal of Geophysical Research*, **2011**, 116, n/a-n/a		19
59	Magnetic field studies of the solar wind interaction with venus from the galileo flyby. *Science*, **1991**, 253, 1518-22	32.2	19
58	Field dipolarization in Saturn's magnetotail with planetward ion flows and energetic particle flow bursts: Evidence of quasi-steady reconnection. *Journal of Geophysical Research: Space Physics*, **2015**, 120, 3603-3617	2.5	17
57	Time-varying magnetospheric environment near Enceladus as seen by the Cassini magnetometer. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.8	18
56	Europa's Alfv□ wing: shrinkage and displacement influenced by an induced magnetic field. *Annales Geophysicae*, **2007**, 25, 905-914	1.9	18

55	Callisto plasma interactions: Hybrid modeling including induction by a subsurface ocean. *Journal of Geophysical Research: Space Physics*, **2015**, 120, 4877-4889	2.5	17
54	Spinning, breathing, and flapping: Periodicities in Saturn's middle magnetosphere. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 393-416	2.5	17
53	Interaction of Saturn's magnetosphere and its moons: 1. Interaction between corotating plasma and standard obstacles. *Journal of Geophysical Research*, **2010**, 115, n/a-n/a		17
52	Jovian plasma sheet morphology: particle and field observations by the Galileo spacecraft. *Planetary and Space Science*, **2005**, 53, 681-692	2	17
51	Probing Ganymede's magnetosphere with field line resonances. *Journal of Geophysical Research*, **1999**, 104, 14729-14738		17
50	Discovery of Atmospheric-Wind-Driven Electric Currents in Saturn's Magnetosphere in the Gap Between Saturn and its Rings. *Geophysical Research Letters*, **2018**, 45, 10,068-10,074	4.8	16
49	Simulating the effect of centrifugal forces in Jupiter's magnetosphere. *Journal of Geophysical Research: Space Physics*, **2014**, 119, 1925-1950	2.5	16
48	Flux ropes, interhemispheric conjugacy, and magnetospheric current closure. *Journal of Geophysical Research*, **1996**, 101, 27341-27350		15
47	Alfvén wings in the lunar wake: The role of pressure gradients. *Journal of Geophysical Research: Space Physics*, **2016**, 121, 10,698-10,711	2.5	14
46	Diffuse auroral precipitation in the jovian upper atmosphere and magnetospheric electron flux variability. *Icarus*, **2005**, 178, 406-416	3.7	14
45	Sources of Local Time Asymmetries in Magnetodiscs. *Space Science Reviews*, **2015**, 187, 301-333	7.4	13
44	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	2.5	13
43	A variable cross-section model of the bow shock of Venus. *Journal of Geophysical Research*, **1994**, 99, 8505		12
42	The far-ultraviolet main auroral emission at Jupiter Part 1: Dawn–dusk brightness asymmetries. *Annales Geophysicae*, **2015**, 33, 1203-1209	1.9	12
41	Cassini observations of Saturn's southern polar cusp. *Journal of Geophysical Research: Space Physics*, **2016**, 121, 3006-3030	2.5	12
40	Outward expansion of the lunar wake: ARTEMIS observations. *Geophysical Research Letters*, **2012**, 39,	4.8	12
39	Non-self-similar scaling of plasma sheet and solar wind probability distribution functions of magnetic field fluctuations. *Journal of Geophysical Research*, **2006**, 111,		12
38	Energetic ion dynamics in Jupiter's plasma sheet. *Journal of Geophysical Research*, **2001**, 106, 18895-18905		12

37	Measuring the stress state of the Saturnian magnetosphere. *Geophysical Research Letters*, **2007**, 34,	4.8	11
36	The far-ultraviolet main auroral emission at Jupiter Part 2: Vertical emission profile. *Annales Geophysicae*, **2015**, 33, 1211-1219	1.9	10
35	Global configuration of Saturn's magnetic field derived from observations. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.8	10
34	Interaction of Saturn's magnetosphere and its moons: 3. Time variation of the Enceladus plume. *Journal of Geophysical Research*, **2010**, 115, n/a-n/a		10
33	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		10
32	Detection of a strongly negative surface potential at Saturn's moon Hyperion. *Geophysical Research Letters*, **2014**, 41, 7011-7018	4.8	9
31	Interaction of Saturn's magnetosphere and its moons: 2. Shape of the Enceladus plume. *Journal of Geophysical Research*, **2010**, 115, n/a-n/a		9
30	Cassini magnetometer observations over the Enceladus poles. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.8	9
29	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		8
28	Environments in the Outer Solar System. *Space Science Reviews*, **2010**, 153, 11-59	7.4	8
27	The role of plasma slowdown in the generation of Rhea's Alfvn wings. *Journal of Geophysical Research: Space Physics*, **2017**, 122, 1778-1788	2.5	7
26	Cluster observations of quasi-periodic impulsive signatures in the dayside northern lobe: High-latitude flux transfer events?. *Journal of Geophysical Research*, **2004**, 109,		7
25	Surface current balance and thermoelectric whistler wings at airless astrophysical bodies: Cassini at Rhea. *Journal of Geophysical Research: Space Physics*, **2014**, 119, 8881-8901	2.5	6
24	Joule heating of the south polar terrain on Enceladus. *Journal of Geophysical Research*, **2011**, 116,		5
23	Ion pick-up near the icy Galilean satellites **2010**,		6
22	The Locations and Shapes of Jupiter Bow Shock and Magnetopause. *AIP Conference Proceedings*, **2005**,	0	6
21	ULF waves in Ganymede's upstream magnetosphere. *Annales Geophysicae*, **2013**, 31, 45-59	1.9	5
20	Magnetospheric Interactions of Saturn's Moon Dione (2005 2015). *Journal of Geophysical Research: Space Physics*, **2020**, 125, e2019JA027688	2.5	5

19	Local Time Asymmetries in Jupiter's Magnetodisc Currents. *Journal of Geophysical Research: Space Physics*, **2020**, 125, e2019JA027455	2.5	5
18	Ultralow frequency waves in the magnetotails of the Earth and the outer planets. *Advances in Space Research*, **1992**, 12, 57-63	2.3	5
17	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	2	3
16	Measuring magnetic field gradients from four point vector measurements in space. *Geophysical Monograph Series*, **1998**, 311-316	1.1	4
15	Ion cyclotron waves in the Saturnian magnetosphere associated with Cassini's engine exhaust. *Geophysical Research Letters*, **2005**, 32, n/a-n/a	4.8	4
14	Mode conversion at the Jovian plasma sheet boundary. *Journal of Geophysical Research*, **1998**, 103, 14995-15000		4
13	ARTEMIS Science Objectives **2011**, 27-59		4
12	Reply [to "Comment on "Interaction of Io with its torus: Does Io have an internal magnetic field?" by Krishan K. Khurana, Margaret G. Kivelson and Christopher T. Russell"] *Geophysical Research Letters*, **1998**, 25, 2351-2352	4.8	3
11	First Results from ARTEMIS, a New Two-Spacecraft Lunar Mission: Counter-Streaming Plasma Populations in the Lunar Wake **2011**, 93-107		1
10	The Galileo Magnetic Field Investigation **1992**, 357-383		2
9	Quasiperiodic 1-Hour Alfvén Wave Resonances in Saturn's Magnetosphere: Theory for a Realistic Plasma/Field Model. *Geophysical Research Letters*, **2021**, 48, e2020GL090967	4.8	2
8	Current Systems in Planetary Magnetospheres. *Geophysical Monograph Series*, **2018**, 17-41	1.1	1
7	The 2013 Saturn auroral campaign. *Icarus*, **2016**, 263, 1	3.7	1
6	Saturn's Magnetic Field and Dynamo **2018**, 69-96		1
5	Embedded Regions 1 and 2 Field-Aligned Currents: Newly Recognized From Low-Altitude Spacecraft Observations. *Journal of Geophysical Research: Space Physics*, **2021**, 126, e2021JA029207	2.5	1
4	Sources of Local Time Asymmetries in Magnetodiscs. *Space Sciences Series of ISSI*, **2016**, 301-333	0.1	0
3	Magnetic Fields of the Satellites of Jupiter and Saturn. *Space Sciences Series of ISSI*, **2009**, 271-305	0.1	0
2	Medicean Moons Sailing Through Plasma Seas: Challenges in Establishing Magnetic Properties. *Proceedings of the International Astronomical Union*, **2010**, 6, 58-70	0.1	

1 Environments in the Outer Solar System. *Space Sciences Series of ISSI*, **2010**, 11-59 0.1