Krishan K Khurana

List of Publications by Year in descending order

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161 papers 9,841 citations

53 h-index 94 g-index

168 all docs

168 docs citations

168 times ranked 3498 citing authors

#	Article	IF	CITATIONS
1	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
2	Galileo Magnetometer Measurements: A Stronger Case for a Subsurface Ocean at Europa. Science, 2000, 289, 1340-1343.	6.0	576
3	Induced magnetic fields as evidence for subsurface oceans in Europa and Callisto. Nature, 1998, 395, 777-780.	13.7	539
4	Discovery of Ganymede's magnetic field by the Galileo spacecraft. Nature, 1996, 384, 537-541.	13.7	348
5	Identification of a Dynamic Atmosphere at Enceladus with the Cassini Magnetometer. Science, 2006, 311, 1406-1409.	6.0	338
6	Cassini Magnetometer Observations During Saturn Orbit Insertion. Science, 2005, 307, 1266-1270.	6.0	211
7	Probabilistic models of the Jovian magnetopause and bow shock locations. Journal of Geophysical Research, 2002, 107, SMP 17-1.	3.3	195
8	Europa and Callisto: Induced or intrinsic fields in a periodically varying plasma environment. Journal of Geophysical Research, 1999, 104, 4609-4625.	3.3	181
9	Euler potential models of Jupiter's magnetospheric field. Journal of Geophysical Research, 1997, 102, 11295-11306.	3.3	179
10	lo's Interaction with the Plasma Torus: Galileo Magnetometer Report. Science, 1996, 274, 396-398.	6.0	165
11	Evidence of a plume on Europa from Galileo magnetic and plasma wave signatures. Nature Astronomy, 2018, 2, 459-464.	4.2	164
12	Warping of Saturn's magnetospheric and magnetotail current sheets. Journal of Geophysical Research, 2008, 113, .	3.3	148
13	Titan's Magnetic Field Signature During the First Cassini Encounter. Science, 2005, 308, 992-995.	6.0	133
14	Modeling the size and shape of Saturn's magnetopause with variable dynamic pressure. Journal of Geophysical Research, 2006, 111 , .	3.3	133
15	The magnetic field and magnetosphere of Ganymede. Geophysical Research Letters, 1997, 24, 2155-2158.	1.5	127
16	Plasma sheet turbulence observed by Cluster II. Journal of Geophysical Research, 2005, 110, .	3.3	124
17	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
18	Magnetic Field Signatures Near Galileo's Closest Approach to Gaspra. Science, 1993, 261, 331-334.	6.0	116

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19	Evidence of a Global Magma Ocean in Io's Interior. Science, 2011, 332, 1186-1189.	6.0	115
20	Ganymede's magnetosphere: Magnetometer overview. Journal of Geophysical Research, 1998, 103, 19963-19972.	3.3	114
21	Saturn's magnetic field revealed by the Cassini Grand Finale. Science, 2018, 362, .	6.0	108
22	Intermittent short-duration magnetic field anomalies in the Io torus: Evidence for plasma interchange?. Geophysical Research Letters, 1997, 24, 2127-2130.	1.5	107
23	Localized Reconnection in the Near Jovian Magnetotail. Science, 1998, 280, 1061-1064.	6.0	101
24	Storm-like dynamics of Jupiter's inner and middle magnetosphere. Journal of Geophysical Research, 1999, 104, 22759-22778.	3.3	101
25	A Magnetic Signature at Io: Initial Report from the Galileo Magnetometer. Science, 1996, 273, 337-340.	6.0	100
26	Global structure of Jupiter's magnetospheric current sheet. Journal of Geophysical Research, 2005, 110, .	3.3	98
27	Improved mapping of Jupiter's auroral features to magnetospheric sources. Journal of Geophysical Research, 2011, 116, .	3.3	98
28	Mass release at Jupiter: Substorm-like processes in the Jovian magnetotail. Journal of Geophysical Research, 2005, 110 , .	3.3	94
29	Europa's Magnetic Signature: Report from Galileo's Pass on 19December 1996. Science, 1997, 276, 1239-1241.	6.0	93
30	Reconnection and flows in the Jovian magnetotail as inferred from magnetometer observations. Journal of Geophysical Research, 2010, $115, \ldots$	3.3	93
31	Saturn's magnetodisc current sheet. Journal of Geophysical Research, 2008, 113, .	3.3	89
32	Mirror mode structures in the Jovian magnetosheath. Journal of Geophysical Research, 2006, 111, .	3.3	88
33	Largeâ€scale dynamics of Saturn's magnetopause: Observations by Cassini. Journal of Geophysical Research, 2008, 113, .	3.3	86
34	Properties of Ganymede's magnetosphere inferred from improved threeâ€dimensional MHD simulations. Journal of Geophysical Research, 2009, 114, .	3.3	84
35	Periodic motion of Saturn's nightside plasma sheet. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	84
36	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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37	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
38	Threeâ€dimensional MHD simulations of Ganymede's magnetosphere. Journal of Geophysical Research, 2008, 113, .	3.3	80
39	The origin of Ganymede's polar caps. Icarus, 2007, 191, 193-202.	1.1	78
40	Cluster electric current density measurements within a magnetic flux rope in the plasma sheet. Geophysical Research Letters, 2003, 30, .	1.5	77
41	Sources of rotational signals in Saturn's magnetosphere. Journal of Geophysical Research, 2009, 114, .	3.3	74
42	The electron density of Saturn's magnetosphere. Annales Geophysicae, 2009, 27, 2971-2991.	0.6	73
43	MHD simulations of Io's interaction with the plasma torus. Journal of Geophysical Research, 1998, 103, 19867-19877.	3.3	68
44	Ultralow frequency MHD waves in Jupiter's middle magnetosphere. Journal of Geophysical Research, 1989, 94, 5241-5254.	3.3	66
45	Mass loading of Saturn's magnetosphere near Enceladus. Journal of Geophysical Research, 2007, 112, .	3.3	64
46	A generalized hingedâ€magnetodisc model of Jupiter's nightside current sheet. Journal of Geophysical Research, 1992, 97, 6269-6276.	3.3	62
47	Constraints from Galileo observations on the origin of jovian dust streams. Nature, 1996, 381, 395-398.	13.7	62
48	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
49	Mass of Saturn's magnetodisc: Cassini observations. Geophysical Research Letters, 2007, 34, .	1.5	57
50	Observations of thermal plasmas in Jupiter's magnetotail. Journal of Geophysical Research, 2002, 107, SIA 1-1.	3.3	56
51	Magnetic portraits of Tethys and Rhea. Icarus, 2008, 193, 465-474.	1.1	56
52	Threeâ€dimensional lunar wake reconstructed from ARTEMIS data. Journal of Geophysical Research: Space Physics, 2014, 119, 5220-5243.	0.8	54
53	Structure and statistical properties of plasmoids in Jupiter's magnetotail. Journal of Geophysical Research: Space Physics, 2014, 119, 821-843.	0.8	54
54	The Dust Halo of Saturn's Largest Icy Moon, Rhea. Science, 2008, 319, 1380-1384.	6.0	53

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55	Wave activity in Europa's wake: Implications for ion pickup. Journal of Geophysical Research, 2001, 106, 26033-26048.	3.3	52
56	Absence of an internal magnetic field at Callisto. Nature, 1997, 387, 262-264.	13.7	51
57	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
58	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
59	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
60	Limits on an intrinsic dipole moment in Europa. Journal of Geophysical Research, 2004, 109, .	3.3	47
61	ARTEMIS Science Objectives. Space Science Reviews, 2011, 165, 59-91.	3.7	47
62	Thermal and Energetic Ion Dynamics in Ganymede's Magnetosphere. Journal of Geophysical Research: Space Physics, 2018, 123, 4614-4637.	0.8	46
63	Mirror-mode structures at the Galileo-lo flyby: Instability criterion and dispersion analysis. Journal of Geophysical Research, 1999, 104, 17479-17489.	3.3	44
64	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
65	Europa's nearâ€surface radiation environment. Geophysical Research Letters, 2007, 34, .	1.5	44
66	Dynamics of Ganymede's magnetopause: Intermittent reconnection under steady external conditions. Journal of Geophysical Research, 2010, 115, .	3.3	44
67	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
68	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
69	Saturn's Magnetospheric Configuration. , 2009, , 203-255.		44
70	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
71	Plasma sheet dynamics in the Jovian magnetotail: Signatures For substorm-like processes?. Geophysical Research Letters, 1999, 26, 2137-2140.	1.5	42
72	Searching for Liquid Water in Europa by Using Surface Observatories. Astrobiology, 2002, 2, 93-103.	1.5	41

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73	Thermal electron periodicities at $20 < i > R < /i > < sub > < i > S < /i > < /sub > in Saturn's magnetosphere. Geophysical Research Letters, 2008, 35, .$	1.5	41
74	Magnetic Fields of the Satellites of Jupiter and Saturn. Space Science Reviews, 2010, 152, 271-305.	3.7	41
75	On Jovian plasma sheet structure. Journal of Geophysical Research, 1989, 94, 11791-11803.	3.3	40
76	Anti-planetward auroral electron beams at Saturn. Nature, 2006, 439, 699-702.	13.7	40
77	Mapping Magnetospheric Equatorial Regions at Saturn from Cassini Prime Mission Observations. Space Science Reviews, 2011, 164, 1-83.	3.7	40
78	Properties of the magnetic field in the Jovian magnetotail. Journal of Geophysical Research, 2002, 107, SMP 23-1-SMP 23-9.	3.3	39
79	LAPLACE: A mission to Europa and the Jupiter System for ESA's Cosmic Vision Programme. Experimental Astronomy, 2009, 23, 849-892.	1.6	38
80	A plasmapauseâ€like density boundary at high latitudes in Saturn's magnetosphere. Geophysical Research Letters, 2010, 37, .	1.5	38
81	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
82	Signatures of fieldâ€aligned currents in Saturn's nightside magnetosphere. Geophysical Research Letters, 2009, 36, .	1.5	37
83	Saturn's periodic magnetic field perturbations caused by a rotating partial ring current. Geophysical Research Letters, 2010, 37, .	1.5	37
84	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.	3.3	36
85	Mirror-mode structures at the Galileo-Io flyby: Observations. Journal of Geophysical Research, 1999, 104, 17471-17477.	3.3	36
86	Dynamic Harris current sheet thickness from Cluster current density and plasma measurements. Journal of Geophysical Research, 2005, 110 , .	3.3	36
87	The Galileo Earth encounter: Magnetometer and allied measurements. Journal of Geophysical Research, 1993, 98, 11299-11318.	3.3	35
88	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
89	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
90	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

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91	Effects of radial motion on interchange injections at Saturn. Icarus, 2016, 264, 342-351.	1.1	33
92	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
93	Evidence that crater flux transfer events are initial stages of typical flux transfer events. Journal of Geophysical Research, 2010, 115, .	3.3	31
94	Asymmetries in Saturn's radiation belts. Journal of Geophysical Research, 2010, 115, .	3.3	28
95	Interaction of Io with its torus: Does Io have an internal magnetic field?. Geophysical Research Letters, 1997, 24, 2391-2394.	1.5	27
96	The exploration of Titan with an orbiter and a lake probe. Planetary and Space Science, 2014, 104, 78-92.	0.9	26
97	Europa's Alfv $ ilde{A}$ ©n wing: shrinkage and displacement influenced by an induced magnetic field. Annales Geophysicae, 2007, 25, 905-914.	0.6	25
98	Pitch angle distributions of energetic electrons at Saturn. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	25
99	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
100	In situ observations of the "preexisting auroral arc―by THEMIS all sky imagers and the FAST spacecraft. Journal of Geophysical Research, 2012, 117, .	3.3	24
101	Ion composition in interchange injection events in Saturn's magnetosphere. Journal of Geophysical Research: Space Physics, 2014, 119, 9761-9772.	0.8	23
102	Callisto plasma interactions: Hybrid modeling including induction by a subsurface ocean. Journal of Geophysical Research: Space Physics, 2015, 120, 4877-4889.	0.8	23
103	Energetic electron signatures of Saturn's smaller moons: Evidence of an arc of material at Methone. Icarus, 2008, 193, 455-464.	1.1	22
104	Generation and properties of in vivo flux transfer events. Journal of Geophysical Research, 2012, 117, .	3.3	22
105	The far-ultraviolet main auroral emission at Jupiter – Part 1: Dawn–dusk brightness asymmetries. Annales Geophysicae, 2015, 33, 1203-1209.	0.6	22
106	Sheared magnetic field structure in Jupiter's dusk magnetosphere: Implications for return currents. Journal of Geophysical Research, 2002, 107, SMP 17-1.	3.3	21
107	Magnetic Field Studies of the Solar Wind Interaction with Venus from the Galileo Flyby. Science, 1991, 253, 1518-1522.	6.0	20
108	Probing Ganymede's magnetosphere with field line resonances. Journal of Geophysical Research, 1999, 104, 14729-14738.	3.3	20

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109	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
110	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
111	Jovian plasma sheet morphology: particle and field observations by the Galileo spacecraft. Planetary and Space Science, 2005, 53, 681-692.	0.9	19
112	Flux ropes, interhemispheric conjugacy, and magnetospheric current closure. Journal of Geophysical Research, 1996, 101, 27341-27350.	3.3	18
113	Timeâ€varying magnetospheric environment near Enceladus as seen by the Cassini magnetometer. Geophysical Research Letters, 2010, 37, .	1.5	18
114	Outward expansion of the lunar wake: ARTEMIS observations. Geophysical Research Letters, 2012, 39, .	1.5	18
115	Spinning, breathing, and flapping: Periodicities in Saturn's middle magnetosphere. Journal of Geophysical Research: Space Physics, 2017, 122, 393-416.	0.8	18
116	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
117	Simulating the effect of centrifugal forces in Jupiter's magnetosphere. Journal of Geophysical Research: Space Physics, 2014, 119, 1925-1950.	0.8	17
118	Cassini observations of Saturn's southern polar cusp. Journal of Geophysical Research: Space Physics, 2016, 121, 3006-3030.	0.8	17
119	Alfvén wings in the lunar wake: The role of pressure gradients. Journal of Geophysical Research: Space Physics, 2016, 121, 10,698.	0.8	17
120	A variable cross-section model of the bow shock of Venus. Journal of Geophysical Research, 1994, 99, 8505.	3.3	16
121	Energetic ion dynamics in Jupiter's plasma sheet. Journal of Geophysical Research, 2001, 106, 18895-18905.	3.3	16
122	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
123	Local Time Asymmetries in Jupiter's Magnetodisc Currents. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027455.	0.8	16
124	Diffuse auroral precipitation in the jovian upper atmosphere and magnetospheric electron flux variability. Icarus, 2005, 178, 406-416.	1.1	15
125	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
126	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

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127	Sources of Local Time Asymmetries in Magnetodiscs. Space Science Reviews, 2015, 187, 301-333.	3.7	13
128	Detection of a strongly negative surface potential at Saturn's moon Hyperion. Geophysical Research Letters, 2014, 41, 7011-7018.	1.5	12
129	The far-ultraviolet main auroral emission at Jupiter – Part 2: Vertical emission profile. Annales Geophysicae, 2015, 33, 1211-1219.	0.6	12
130	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
131	Measuring the stress state of the Saturnian magnetosphere. Geophysical Research Letters, 2007, 34, .	1.5	11
132	Interaction of Saturn's magnetosphere and its moons: 2. Shape of the Enceladus plume. Journal of Geophysical Research, $2010,115,115$	3.3	11
133	Global configuration of Saturn's magnetic field derived from observations. Geophysical Research Letters, 2010, 37, .	1.5	11
134	Interaction of Saturn's magnetosphere and its moons: 3. Time variation of the Enceladus plume. Journal of Geophysical Research, 2010, 115, .	3.3	11
135	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
136	Cassini magnetometer observations over the Enceladus poles. Geophysical Research Letters, 2011, 38, $n/a-n/a$.	1.5	10
137	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
138	Magnetospheric Interactions of Saturn's Moon Dione (2005–2015). Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027688.	0.8	9
139	Environments in the Outer Solar System. Space Science Reviews, 2010, 153, 11-59.	3.7	8
140	Joule heating of the south polar terrain on Enceladus. Journal of Geophysical Research, 2011, 116, .	3.3	8
141	The role of plasma slowdown in the generation of Rhea's Alfvén wings. Journal of Geophysical Research: Space Physics, 2017, 122, 1778-1788.	0.8	8
142	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
143	Ultralow frequency waves in the magnetotails of the Earth and the outer planets. Advances in Space Research, 1992, 12, 57-63.	1.2	6
144	The Locations and Shapes of Jupiter's Bow Shock and Magnetopause. AIP Conference Proceedings, 2005, , .	0.3	6

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145	lon pick-up near the icy Galilean satellites. , 2010, , .		6
146	ULF waves in Ganymede's upstream magnetosphere. Annales Geophysicae, 2013, 31, 45-59.	0.6	6
147	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
148	Quasiperiodic 1â€Hour Alfvén Wave Resonances in Saturn's Magnetosphere: Theory for a Realistic Plasma/Field Model. Geophysical Research Letters, 2021, 48, e2020GL090967.	1.5	5
149	Mode conversion at the Jovian plasma sheet boundary. Journal of Geophysical Research, 1998, 103, 14995-15000.	3.3	4
150	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
151	ARTEMIS Science Objectives. , 2011, , 27-59.		4
152	First Results from ARTEMIS, a New Two-Spacecraft Lunar Mission: Counter-Streaming Plasma Populations in the Lunar Wake., 2011, , 93-107.		4
153	Measuring magnetic field gradients from four point vector measurements in space. Geophysical Monograph Series, 1998, , 311-316.	0.1	4
154	Reply [to "Comment on â€Interaction of Io with its torus: Does Io have an internal magnetic field?―by Krishan K. Khurana, Margaret G. Kivelson and Christopher T. Russellâ€]. Geophysical Research Letters, 1998, 25, 2351-2352.	1.5	3
155	The Galileo Magnetic Field Investigation. , 1992, , 357-383.		3
156	Sources of Local Time Asymmetries in Magnetodiscs. Space Sciences Series of ISSI, 2016, , 301-333.	0.0	2
157	The 2013 Saturn auroral campaign. Icarus, 2016, 263, 1.	1.1	1
158	Saturn's Magnetic Field and Dynamo. , 2018, , 69-96.		1
159	Magnetic Fields of the Satellites of Jupiter and Saturn. Space Sciences Series of ISSI, 2009, , 271-305.	0.0	1
160	Medicean Moons Sailing Through Plasma Seas: Challenges in Establishing Magnetic Properties. Proceedings of the International Astronomical Union, 2010, 6, 58-70.	0.0	0
161	Environments in the Outer Solar System. Space Sciences Series of ISSI, 2010, , 11-59.	0.0	0