

Tomas Karlsson

List of Publications by Year in descending order

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83
papers

1,981
citations

304602

22
h-index

302012

39
g-index

98
all docs

98
docs citations

98
times ranked

1448
citing authors

#	ARTICLE	IF	CITATIONS
1	Cometary plasma science. <i>Experimental Astronomy</i> , 2022, 54, 1129-1167.	1.6	3
2	Downstream high-speed plasma jet generation as a direct consequence of shock reformation. <i>Nature Communications</i> , 2022, 13, 598.	5.8	15
3	Editorial: Topical Collection on Auroral Physics. <i>Space Science Reviews</i> , 2021, 217, 1.	3.7	4
4	Statistical study of linear magnetic hole structures near Earth. <i>Annales Geophysicae</i> , 2021, 39, 239-253.	0.6	16
5	Magnetosheath jet evolution as a function of lifetime: global hybrid-Vlasov simulations compared to MMS observations. <i>Annales Geophysicae</i> , 2021, 39, 289-308.	0.6	15
6	DMSP Observations of High-Latitude Dayside Aurora (HiLDA). <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028808.	0.8	6
7	Magnetic Holes in the Solar Wind and Magnetosheath Near Mercury. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028961.	0.8	18
8	Causes of Jets in the Quasi-Perpendicular Magnetosheath. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093173.	1.5	10
9	On the Generation of Pi2 Pulsations due to Plasma Flow Patterns Around Magnetosheath Jets. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093611.	1.5	9
10	Classifying the Magnetosheath Behind the Quasi-Parallel and Quasi-Perpendicular Bow Shock by Local Measurements. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029269.	0.8	6
11	Quiet, Discrete Auroral Arcs: Acceleration Mechanisms. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	9
12	The MEFISTO and WPT Electric Field Sensors of the Plasma Wave Investigation on the BepiColombo Mio Spacecraft. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	7
13	Classifying Magnetosheath Jets Using MMS: Statistical Properties. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027754.	0.8	27
14	Investigating Mercury's Environment with the Two-Spacecraft BepiColombo Mission. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	71
15	Plasma Wave Investigation (PWI) Aboard BepiColombo Mio on the Trip to the First Measurement of Electric Fields, Electromagnetic Waves, and Radio Waves Around Mercury. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	20
16	Classification of Magnetosheath Jets Using Neural Networks and High Resolution OMNI (HRO) Data. <i>Frontiers in Astronomy and Space Sciences</i> , 2020, 7, .	1.1	14
17	Quiet, Discrete Auroral Arcs' Observations. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	31
18	On the magnetic characteristics of magnetic holes in the solar wind between Mercury and Venus. <i>Annales Geophysicae</i> , 2020, 38, 51-60.	0.6	26

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19	Helium in the Earth's foreshock: a global Vlasov survey. <i>Annales Geophysicae</i> , 2020, 38, 1081-1099.	0.6	6
20	Plasma Density and Magnetic Field Fluctuations in the Ion Gyro-Frequency Range Near the Diamagnetic Cavity of Comet 67P. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028592.	0.8	4
21	The Difference Between Isolated Flux Transfer Events and Flux Transfer Event Cascades. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 7850-7871.	0.8	2
22	Oscillatory Flows in the Magnetotail Plasma Sheet: Cluster Observations of the Distribution Function. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 2736-2754.	0.8	1
23	Properties of the singing comet waves in the 67P/Churyumov-Gerasimenko plasma environment as observed by the Rosetta mission. <i>Astronomy and Astrophysics</i> , 2019, 630, A39.	2.1	14
24	Oxygen Ion Flow Reversals in Earth's Magnetotail: A Cluster Statistical Study. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 8928-8942.	0.8	0
25	In Situ Observations of a Magnetosheath High-Speed Jet Triggering Magnetopause Reconnection. <i>Geophysical Research Letters</i> , 2018, 45, 1732-1740.	1.5	66
26	Investigating the anatomy of magnetosheath jets – MMS observations. <i>Annales Geophysicae</i> , 2018, 36, 655-677.	0.6	15
27	First observations of magnetic holes deep within the coma of a comet. <i>Astronomy and Astrophysics</i> , 2018, 618, A114.	2.1	24
28	Magnetosheath jet properties and evolution as determined by a global hybrid-Vlasov simulation. <i>Annales Geophysicae</i> , 2018, 36, 1171-1182.	0.6	26
29	Extremely Low-Frequency Waves Inside the Diamagnetic Cavity of Comet 67P/Churyumov-Gerasimenko. <i>Geophysical Research Letters</i> , 2018, 45, 3854-3864.	1.5	14
30	Jets Downstream of Collisionless Shocks. <i>Space Science Reviews</i> , 2018, 214, 1.	3.7	101
31	A Comparative Study of the Proton Properties of Magnetospheric Substorms at Earth and Mercury in the Near Magnetotail. <i>Geophysical Research Letters</i> , 2018, 45, 7933-7941.	1.5	14
32	Rosetta measurements of lower hybrid frequency range electric field oscillations in the plasma environment of comet 67P. <i>Geophysical Research Letters</i> , 2017, 44, 1641-1651.	1.5	26
33	Lower hybrid waves at comet 67P/Churyumov-Gerasimenko. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S29-S38.	1.6	26
34	Emergence of MHD structures in a collisionless PIC simulation plasma. <i>Physics of Plasmas</i> , 2017, 24, .	0.7	8
35	Magnetosheath High-Speed Jets: Internal Structure and Interaction With Ambient Plasma. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 10,157.	0.8	23
36	Investigating short-time-scale variations in cometary ions around comet 67P. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S522-S534.	1.6	24

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37	Investigation of $\sim 1/4$ ~ 40 mHz ULF waves and their driving mechanisms in Mercury's dayside magnetosphere. <i>Annales Geophysicae</i> , 2017, 35, 879-884.	0.6	6
38	Observations of magnetospheric ULF waves in connection with the Kelvin-Helmholtz instability at Mercury. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 8576-8588.	0.8	12
39	Isolated magnetic field structures in Mercury's magnetosheath as possible analogues for terrestrial magnetosheath plasmoids and jets. <i>Planetary and Space Science</i> , 2016, 129, 61-73.	0.9	25
40	Oxygen ion response to proton bursty bulk flows. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 7535-7546.	0.8	11
41	Response of magnetotail twisting to variations in IMF B_y : A THEMIS case study 1–2 January 2009. <i>Geophysical Research Letters</i> , 2016, 43, 7822-7830.	1.5	18
42	Magnetic forces associated with bursty bulk flows in Earth's magnetotail. <i>Geophysical Research Letters</i> , 2015, 42, 3122-3128.	1.5	18
43	The statistical difference between bending arcs and regular polar arcs. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 10,443.	0.8	28
44	MESSENGER observations of the dayside low-latitude boundary layer in Mercury's magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 8387-8400.	0.8	13
45	Magnetospheric signatures of ionospheric density cavities observed by Cluster. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 1876-1887.	0.8	5
46	On the origin of magnetosheath plasmoids and their relation to magnetosheath jets. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 7390-7403.	0.8	56
47	Electron density and parallel electric field distribution of the auroral density cavity. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 9428-9441.	0.8	4
48	Statistical altitude distribution of the auroral density cavity. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 996-1006.	0.8	14
49	Waves in high-speed plasmoids in the magnetosheath and at the magnetopause. <i>Annales Geophysicae</i> , 2014, 32, 991-1009.	0.6	37
50	Evidence for the braking of flow bursts as they propagate toward the Earth. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 9004-9018.	0.8	22
51	In situ observations of density cavities extending above the auroral acceleration region. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 5286-5294.	0.8	7
52	Low-latitude electron acceleration due to multiple flow bursts in the magnetotail. <i>Geophysical Research Letters</i> , 2014, 41, 777-784.	1.5	7
53	Statistical altitude distribution of Cluster auroral electric fields, indicating mainly quasi-static acceleration below $2.8 R_E$ and Alfvénic above. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 8984-8991.	0.8	5
54	Statistical investigation of Kelvin-Helmholtz waves at the magnetopause of Mercury. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 9670-9683.	0.8	37

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55	Pseudo altitude: A new perspective on the auroral density cavity. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 4341-4351.	0.8	8
56	The evolution of flux pileup regions in the plasma sheet: Cluster observations. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 6279-6290.	0.8	24
57	Inverted- ∇ and low-energy broadband electron acceleration features of multiple auroras within a large-scale surge. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 5543-5552.	0.8	17
58	IMF dependence of the azimuthal direction of earthward magnetotail fast flows. <i>Geophysical Research Letters</i> , 2013, 40, 5598-5604.	1.5	20
59	Plasma penetration of the dayside magnetopause. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	33
60	Cluster multipoint study of the acceleration potential pattern and electrodynamic of an auroral surge and its associated horn arc. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	11
61	Localized density enhancements in the magnetosheath: Three-dimensional morphology and possible importance for impulsive penetration. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	52
62	Spatiotemporal features of the auroral acceleration region as observed by Cluster. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	17
63	Evolution in space and time of the quasi-static acceleration potential of inverted-V aurora and its interaction with Alfvénic boundary processes. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	22
64	On the divergence of the auroral electrojets. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	10
65	Altitude Distribution of the Auroral Acceleration Potential Determined from Cluster Satellite Data at Different Heights. <i>Physical Review Letters</i> , 2011, 106, 055002.	2.9	40
66	Occurrence and properties of substorms associated with pseudobreakups. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	17
67	Small and meso-scale properties of a substorm onset auroral arc. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	29
68	Auroral arc and oval electrodynamic in the Harang region. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	19
69	Geomagnetic signatures of auroral substorms preceded by pseudobreakups. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	9
70	Small-scale, localized electromagnetic waves observed by Cluster: Result of magnetosphere-ionosphere interactions. <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	17
71	Seasonal dependence and solar wind control of transpolar arc luminosity. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	12
72	Cluster observations of an auroral potential and associated field-aligned current reconfiguration during thinning of the plasma sheet boundary layer. <i>Journal of Geophysical Research</i> , 2007, 112, n/a-n/a.	3.3	24

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73	Temporal and spatial evolution of discrete auroral arcs as seen by Cluster. <i>Annales Geophysicae</i> , 2005, 23, 2531-2557.	0.6	25
74	On Enhanced Aurora and Low-Altitude Parallel Electric Fields. <i>Physica Scripta</i> , 2005, 72, 419-422.	1.2	16
75	First results of electric field and density observations by Cluster EFW based on initial months of operation. <i>Annales Geophysicae</i> , 2001, 19, 1219-1240.	0.6	273
76	Temporal evolution of the electric field accelerating electrons away from the auroral ionosphere. <i>Nature</i> , 2001, 414, 724-727.	13.7	132
77	A statistical study of intense low-altitude electric fields observed by Freja. <i>Geophysical Research Letters</i> , 1996, 23, 1005-1008.	1.5	53
78	Auroral Arc Electrodynamics: Review and Outlook. <i>Geophysical Monograph Series</i> , 0, , 143-158.	0.1	8
79	Mutual Evolution of Aurora and Ionospheric Electrodynamical Features Near the Harang Reversal During Substorms. <i>Geophysical Monograph Series</i> , 0, , 159-170.	0.1	14
80	Imaging of Aurora to Estimate the Energy and Flux of Electron Precipitation. <i>Geophysical Monograph Series</i> , 0, , 171-182.	0.1	17
81	Cold and warm electrons at comet 67P/Churyumov-Gerasimenko. <i>Astronomy and Astrophysics</i> , 0, , .	2.1	15
82	Upstream solar wind speed at comet 67P. Reconstruction method, model comparison, and results. <i>Astronomy and Astrophysics</i> , 0, , .	2.1	3
83	Asymmetric interaction of a solar wind reconnecting current sheet and its magnetic hole with Earth's bow shock and magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 0, , .	0.8	1