Tomas Karlsson

List of Publications by Year
in descending order

83	1,981	304743 22	302126 39
papers	citations	h-index	g-index

98	98	98	1448
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Cometary plasma science. Experimental Astronomy, 2022, 54, 1129-1167.	3.7	3
2	Downstream high-speed plasma jet generation as a direct consequence of shock reformation. Nature Communications, 2022, 13, 598.	12.8	15
3	Editorial: Topical Collection on Auroral Physics. Space Science Reviews, 2021, 217, 1.	8.1	4
4	Statistical study of linear magnetic hole structures near Earth. Annales Geophysicae, 2021, 39, 239-253.	1.6	16
5	Magnetosheath jet evolution as a function of lifetime: global hybrid-Vlasov simulations compared to MMS observations. Annales Geophysicae, 2021, 39, 289-308.	1.6	15
6	DMSP Observations of Highâ€Łatitude Dayside Aurora (HiLDA). Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028808.	2.4	6
7	Magnetic Holes in the Solar Wind and Magnetosheath Near Mercury. Journal of Geophysical Research: Space Physics, 2021, 126, e2020JA028961.	2.4	18
8	Causes of Jets in the Quasiâ€Perpendicular Magnetosheath. Geophysical Research Letters, 2021, 48, e2021GL093173.	4.0	10
9	On the Generation of Pi2 Pulsations due to Plasma Flow Patterns Around Magnetosheath Jets. Geophysical Research Letters, 2021, 48, e2021GL093611.	4.0	9
10	Classifying the Magnetosheath Behind the Quasiâ€Parallel and Quasiâ€Perpendicular Bow Shock by Local Measurements. Journal of Geophysical Research: Space Physics, 2021, 126, e2021JA029269.	2.4	6
11	Quiet, Discrete Auroral Arcs: Acceleration Mechanisms. Space Science Reviews, 2020, 216, 1.	8.1	9
12	The MEFISTO and WPT Electric Field Sensors of the Plasma Wave Investigation on the BepiColombo Mio Spacecraft. Space Science Reviews, 2020, 216, 1.	8.1	7
13	Classifying Magnetosheath Jets Using MMS: Statistical Properties. Journal of Geophysical Research: Space Physics, 2020, 125, e2019JA027754.	2.4	27
14	Investigating Mercuryâ€™s Environment with the Two-Spacecraft BepiColombo Mission. Space Science Reviews, 2020, 216, 1.	8.1	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. Space Science Reviews, 2020, 216, 1.	8.1	20
16	Classification of Magnetosheath Jets Using Neural Networks and High Resolution OMNI (HRO) Data. Frontiers in Astronomy and Space Sciences, 2020, 7, .	2.8	14
17	Quiet, Discrete Auroral Arcsâ€”Observations. Space Science Reviews, 2020, 216, 1.	8.1	31
18	On the magnetic characteristics of magnetic holes in the solar wind between Mercury and Venus. Annales Geophysicae, 2020, 38, 51-60.	1.6	26

#	Article	IF	Citations
19	Helium in the Earth's foreshock: a global Vlasiator survey. Annales Geophysicae, 2020, 38, 1081-1099.	1.6	6
20	Plasma Density and Magnetic Field Fluctuations in the Ion Gyroâ€Frequency Range Near the Diamagnetic Cavity of Comet 67P. Journal of Geophysical Research: Space Physics, 2020, 125, e2020JA028592.	2.4	4
21	The Difference Between Isolated Flux Transfer Events and Flux Transfer Event Cascades. Journal of Geophysical Research: Space Physics, 2019, 124, 7850-7871.	2.4	2
22	Oscillatory Flows in the Magnetotail Plasma Sheet: Cluster Observations of the Distribution Function. Journal of Geophysical Research: Space Physics, 2019, 124, 2736-2754.	2.4	1
23	Properties of the singing comet waves in the 67P/Churyumov-Gerasimenko plasma environment as observed by the Rosetta mission. Astronomy and Astrophysics, 2019, 630, A39.	5.1	14
24	Oxygen Ion Flow Reversals in Earth's Magnetotail: A Cluster Statistical Study. Journal of Geophysical Research: Space Physics, 2019, 124, 8928-8942.	2.4	0
25	In Situ Observations of a Magnetosheath Highâ€Speed Jet Triggering Magnetopause Reconnection. Geophysical Research Letters, 2018, 45, 1732-1740.	4.0	66
26	Investigating the anatomy of magnetosheath jets â€“ MMS observations. Annales Geophysicae, 2018, 36, 655-677.	1.6	15
27	First observations of magnetic holes deep within the coma of a comet. Astronomy and Astrophysics, 2018, 618, A114.	5.1	24
28	Magnetosheath jet properties and evolution as determined by a global hybrid-Vlasov simulation. Annales Geophysicae, 2018, 36, 1171-1182.	1.6	26
29	Extremely Lowâ€Frequency Waves Inside the Diamagnetic Cavity of Comet 67P/Churyumovâ€Gerasimenko. Geophysical Research Letters, 2018, 45, 3854-3864.	4.0	14
30	Jets Downstream of Collisionless Shocks. Space Science Reviews, 2018, 214, 1.	8.1	101
31	A Comparative Study of the Proton Properties of Magnetospheric Substorms at Earth and Mercury in the Near Magnetotail. Geophysical Research Letters, 2018, 45, 7933-7941.	4.0	14
32	Rosetta measurements of lower hybrid frequency range electric field oscillations in the plasma environment of comet 67P. Geophysical Research Letters, 2017, 44, 1641-1651.	4.0	26
33	Lower hybrid waves at comet 67P/Churyumovâ€“Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2017, 469, S29-S38.	4.4	26
34	Emergence of MHD structures in a collisionless PIC simulation plasma. Physics of Plasmas, 2017, 24, .	1.9	8
35	Magnetosheath Highâ€Speed Jets: Internal Structure and Interaction With Ambient Plasma. Journal of Geophysical Research: Space Physics, 2017, 122, 10,157.	2.4	23
36	Investigating short-time-scale variations in cometary ions around comet 67P. Monthly Notices of the Royal Astronomical Society, 2017, 469, S522-S534.	4.4	24

#	Article	IF	Citations
37	Investigation of â€‰â¼â€‰20â€“40â€¯mHz ULF waves and their driving mechanisms in Mercury's dayside magnetosphere. Annales Geophysicae, 2017, 35, 879-884.	1.6	6
38	Observations of magnetospheric ULF waves in connection with the Kelvinâ€Helmholtz instability at Mercury. Journal of Geophysical Research: Space Physics, 2016, 121, 8576-8588.	2.4	12
39	Isolated magnetic field structures in Mercury's magnetosheath as possible analogues for terrestrial magnetosheath plasmoids and jets. Planetary and Space Science, 2016, 129, 61-73.	1.7	25
40	Oxygen ion response to proton bursty bulk flows. Journal of Geophysical Research: Space Physics, 2016, 121, 7535-7546.	2.4	11
41	Response of magnetotail twisting to variations in IMF B_y: A THEMIS case study 1â€“2 January 2009. Geophysical Research Letters, 2016, 43, 7822-7830.	4.0	18
42	Magnetic forces associated with bursty bulk flows in Earth's magnetotail. Geophysical Research Letters, 2015, 42, 3122-3128.	4.0	18
43	The statistical difference between bending arcs and regular polar arcs. Journal of Geophysical Research: Space Physics, 2015, 120, 10,443.	2.4	28
44	MESSENGER observations of the dayside lowâ€latitude boundary layer in Mercury's magnetosphere. Journal of Geophysical Research: Space Physics, 2015, 120, 8387-8400.	2.4	13
45	Magnetospheric signatures of ionospheric density cavities observed by Cluster. Journal of Geophysical Research: Space Physics, 2015, 120, 1876-1887.	2.4	5
46	On the origin of magnetosheath plasmoids and their relation to magnetosheath jets. Journal of Geophysical Research: Space Physics, 2015, 120, 7390-7403.	2.4	56
47	Electron density and parallel electric field distribution of the auroral density cavity. Journal of Geophysical Research: Space Physics, 2015, 120, 9428-9441.	2.4	4
48	Statistical altitude distribution of the auroral density cavity. Journal of Geophysical Research: Space Physics, 2015, 120, 996-1006.	2.4	14
49	Waves in high-speed plasmoids in the magnetosheath and at the magnetopause. Annales Geophysicae, 2014, 32, 991-1009.	1.6	37
50	Evidence for the braking of flow bursts as they propagate toward the Earth. Journal of Geophysical Research: Space Physics, 2014, 119, 9004-9018.	2.4	22
51	In situ observations of density cavities extending above the auroral acceleration region. Journal of Geophysical Research: Space Physics, 2014, 119, 5286-5294.	2.4	7
52	Lowâ€altitude electron acceleration due to multiple flow bursts in the magnetotail. Geophysical Research Letters, 2014, 41, 777-784.	4.0	7
53	Statistical altitude distribution of Cluster auroral electric fields, indicating mainly quasiâ€static acceleration below 2.8 R_E and AlfvÃ©nic above. Journal of Geophysical Research: Space Physics, 2014, 119, 8984-8991.	2.4	5
54	Statistical investigation of Kelvinâ€Helmholtz waves at the magnetopause of Mercury. Journal of Geophysical Research: Space Physics, 2014, 119, 9670-9683.	2.4	37

#	Article	IF	Citations
55	Pseudo altitude: A new perspective on the auroral density cavity. Journal of Geophysical Research: Space Physics, 2013, 118, 4341-4351.	2.4	8
56	The evolution of flux pileup regions in the plasma sheet: Cluster observations. Journal of Geophysical Research: Space Physics, 2013, 118, 6279-6290.	2.4	24
57	Invertedâ€V and lowâ€energy broadband electron acceleration features of multiple auroras within a largeâ€scale surge. Journal of Geophysical Research: Space Physics, 2013, 118, 5543-5552.	2.4	17
58	IMF dependence of the azimuthal direction of earthward magnetotail fast flows. Geophysical Research Letters, 2013, 40, 5598-5604.	4.0	20
59	Plasma penetration of the dayside magnetopause. Physics of Plasmas, 2012, 19, .	1.9	33
60	Cluster multipoint study of the acceleration potential pattern and electrodynamics of an auroral surge and its associated horn arc. Journal of Geophysical Research, 2012, 117, .	3.3	11
61	Localized density enhancements in the magnetosheath: Threeâ€dimensional morphology and possible importance for impulsive penetration. Journal of Geophysical Research, 2012, 117, .	3.3	52
62	Spatiotemporal features of the auroral acceleration region as observed by Cluster. Journal of Geophysical Research, 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 AlfvÃ©nic boundary processes. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	22
64	On the divergence of the auroral electrojets. Journal of Geophysical Research, 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. Physical Review Letters, 2011, 106, 055002.	7.8	40
66	Occurrence and properties of substorms associated with pseudobreakups. Journal of Geophysical Research, 2010, 115, .	3.3	17
67	Small and mesoâ€scale properties of a substorm onset auroral arc. Journal of Geophysical Research, 2010, 115, .	3.3	29
68	Auroral arc and oval electrodynamics in the Harang region. Journal of Geophysical Research, 2009, 114, .	3.3	19
69	Geomagnetic signatures of auroral substorms preceded by pseudobreakups. Journal of Geophysical Research, 2009, 114, .	3.3	9
70	Smallâ€scale, localized electromagnetic waves observed by Cluster: Result of magnetosphereâ€ionosphere interactions. Geophysical Research Letters, 2008, 35, .	4.0	17
71	Seasonal dependence and solar wind control of transpolar arc luminosity. Journal of Geophysical Research, 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. Journal of Geophysical Research, 2007, 112, n/a-n/a.	3.3	24

#	Article	IF	Citations
73	Temporal and spatial evolution of discrete auroral arcs as seen by Cluster. Annales Geophysicae, 2005, 23, 2531-2557.	1.6	25
74	On Enhanced Aurora and Low-Altitude Parallel Electric Fields. Physica Scripta, 2005, 72, 419-422.	2.5	16
75	First results of electric field and density observations by Cluster EFW based on initial months of operation. Annales Geophysicae, 2001, 19, 1219-1240.	1.6	273
76	Temporal evolution of the electric field accelerating electrons away from the auroral ionosphere. Nature, 2001, 414, 724-727.	27.8	132
77	A statistical study of intense low-altitude electric fields observed by Freja. Geophysical Research Letters, 1996, 23, 1005-1008.	4.0	53
78	Auroral Arc Electrodynamics: Review and Outlook. Geophysical Monograph Series, 0, , 143-158.	0.1	8
79	Mutual Evolution of Aurora and Ionospheric Electrodynamic Features Near the Harang Reversal During Substorms. Geophysical Monograph Series, 0, , 159-170.	0.1	14
80	Imaging of Aurora to Estimate the Energy and Flux of Electron Precipitation. Geophysical Monograph Series, 0, , 171-182.	0.1	17
81	Cold and warm electrons at comet 67P/Churyumov-Gerasimenko. Astronomy and Astrophysics, 0, , .	5.1	15
82	Upstream solar wind speed at comet 67P. Reconstruction method, model comparison, and results. Astronomy and Astrophysics, 0, , .	5.1	3
83	Asymmetric interaction of a solar wind reconnecting current sheet and its magnetic hole with Earthâ€™s bow shock and magnetopause. Journal of Geophysical Research: Space Physics, 0, , .	2.4	1