

# Karlheinz J Trattner

## List of Publications by Year in descending order

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110  
papers

3,544  
citations

136950

32  
h-index

155660

55  
g-index

131  
all docs

131  
docs citations

131  
times ranked

1978  
citing authors

#	ARTICLE	IF	CITATIONS
1	Dual storage and release of molecular oxygen in comet 67P/Churyumov-Gerasimenko. <i>Nature Astronomy</i> , 2022, 6, 724-730.	10.1	8
2	Dayside magnetopause reconnection and flux transfer events under radial interplanetary magnetic field (IMF): BepiColombo Earth-flyby observations. <i>Annales Geophysicae</i> , 2022, 40, 217-229.	1.6	2
3	Multiple Reconnection X <sub>lines</sub> at the Magnetopause and Overlapping Cusp Ion Injections. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	2.4	4
4	On the Occurrence of Magnetic Reconnection Along the Terrestrial Magnetopause, Using Magnetospheric Multiscale (MMS) Observations in Proximity to the Reconnection Site. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	2.4	3
5	High-Density Magnetospheric He <sup>+</sup> at the Dayside Magnetopause and Its Effect on Magnetic Reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, .	2.4	3
6	Energy Conversion Within Current Sheets in the Earth's Quasi-Parallel Magnetosheath. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL091859.	4.0	10
7	The Location of Magnetic Reconnection at Earth's Magnetopause. <i>Space Science Reviews</i> , 2021, 217, 41.	8.1	24
8	Long and Active Magnetopause Reconnection X <sub>lines</sub> During Changing IMF Conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028926.	2.4	8
9	Multipoint Density Measurements of Geocoronal Pickup Ions. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093695.	4.0	2
10	TRICE 2 Observations of Low-Energy Magnetospheric Ions Within the Cusp. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029382.	2.4	4
11	Anomalous Reconnection Layer at Earth's Dayside Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029678.	2.4	1
12	Observing the prevalence of thin current sheets downstream of Earth's bow shock. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	9
13	Reconnection X <sub>line</sub> Orientations at the Earth's Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029789.	2.4	6
14	Kelvin-Helmholtz Instability Associated With Reconnection and Ultra Low Frequency Waves at the Ground: A Case Study. <i>Frontiers in Physics</i> , 2021, 9, .	2.1	5
15	Secondary Magnetic Reconnection at Earth's Flank Magnetopause. <i>Frontiers in Astronomy and Space Sciences</i> , 2021, 8, .	2.8	3
16	Multiscale Coupling During Magnetopause Reconnection: Interface Between the Electron and Ion Diffusion Regions. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA027985.	2.4	10
17	Simultaneous Polar and Cluster Observations in the Northern and Southern Middle-Altitude Polar Cusps Around Equinox. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028346.	2.4	1
18	Magnetospheric Multiscale Observation of an Electron Diffusion Region at High Latitudes. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087268.	4.0	8

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19	Energetics and Alfvénic Coupling of a Poleward Boundary Intensification: A Polar Case Study. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028041.	2.4	0
20	The 18 November 2015 Magnetopause Crossing: The GEM Dayside Kinetic Challenge Event Observed by MMS/HPCA. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027617.	2.4	7
21	Neutral Atom Imaging of the Solar Wind–Magnetosphere–Exosphere Interaction Near the Subsolar Magnetopause. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089362.	4.0	14
22	MMS Observation of Secondary Magnetic Reconnection Beside Ion-Scale Flux Rope at the Magnetopause. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089075.	4.0	8
23	Electron Inflow Velocities and Reconnection Rates at Earth's Magnetopause and Magnetosheath. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089082.	4.0	23
24	Characteristics of Minor Ions and Electrons in Flux Transfer Events Observed by the Magnetospheric Multiscale Mission. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA027778.	2.4	8
25	On the Ubiquity of Magnetic Reconnection Inside Flux Transfer Event-Like Structures at the Earth's Magnetopause. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL086726.	4.0	20
26	Characteristics of the Flank Magnetopause: MMS Results. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027623.	2.4	24
27	Helium in the Earth's foreshock: a global Vlasov survey. <i>Annales Geophysicae</i> , 2020, 38, 1081-1099.	1.6	6
28	Mass Loading the Earth's Dayside Magnetopause Boundary Layer and Its Effect on Magnetic Reconnection. <i>Geophysical Research Letters</i> , 2019, 46, 6204-6213.	4.0	21
29	Electron Sublayers and the Associated Magnetic Topologies in the Inner Low-Latitude Boundary Layer. <i>Geophysical Research Letters</i> , 2019, 46, 5746-5753.	4.0	2
30	Comparison of neutral outgassing of comet 67P/Churyumov-Gerasimenko inbound and outbound beyond 3 AU from ROSINA/DFMS. <i>Astronomy and Astrophysics</i> , 2019, 630, A30.	5.1	8
31	Stationarity of the Reconnection X-Line at Earth's Magnetopause for Southward IMF. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 8524-8534.	2.4	14
32	Signatures of Magnetic Separatrices at the Borders of a Crater Flux Transfer Event Connected to an Active X-Line. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 8600-8616.	2.4	5
33	High-density $O^{++}$ in Earth's outer magnetosphere and its effect on dayside magnetopause magnetic reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 10257-10269.	2.4	14
34	The $He^{++}/H^{++}$ Density Ratio Across Earth's Subsolar Magnetopause and Its Implications for the Presence of a Mass-Dependent Reflection Coefficient. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 9893-9903.	2.4	3
35	MMS Observation of Shock-Reflected $He^{++}$ at Earth's Quasi-Perpendicular Bow Shock. <i>Geophysical Research Letters</i> , 2018, 45, 49-55.	4.0	11
36	Magnetic Reconnection at a Thin Current Sheet Separating Two Interlaced Flux Tubes at the Earth's Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1779-1793.	2.4	35

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37	The Transition Between Antiparallel and Component Magnetic Reconnection at Earth's Dayside Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 10,177.	2.4	12
38	Nonlobe Reconnection at the Earth's Magnetopause for Northward IMF. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 8275-8291.	2.4	8
39	Observational Evidence of Large-scale Multiple Reconnection at the Earth's Dayside Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 8407-8421.	2.4	21
40	Ion Kinetics in a Hot Flow Anomaly: MMS Observations. <i>Geophysical Research Letters</i> , 2018, 45, 11,520.	4.0	28
41	Carriers and Sources of Magnetopause Current: MMS Case Study. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 5464-5475.	2.4	12
42	MMS Observations of Harmonic Electromagnetic Ion Cyclotron Waves. <i>Geophysical Research Letters</i> , 2018, 45, 8764-8772.	4.0	18
43	On the occurrence of magnetic reconnection equatorward of the cusps at the Earth's magnetopause during northward IMF conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 605-617.	2.4	13
44	Large-scale characteristics of reconnection diffusion regions and associated magnetopause crossings observed by MMS. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 5466-5486.	2.4	48
45	The nonlinear behavior of whistler waves at the reconnecting dayside magnetopause as observed by the Magnetospheric Multiscale mission: A case study. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 5487-5501.	2.4	22
46	IMF dependence of energetic oxygen and hydrogen ion distributions in the near-Earth magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 5168-5180.	2.4	14
47	Locating dayside magnetopause reconnection with exhaust ion distributions. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 5105-5113.	2.4	12
48	Structure and evolution of flux transfer events near dayside magnetic reconnection dissipation region: MMS observations. <i>Geophysical Research Letters</i> , 2017, 44, 5951-5959.	4.0	26
49	Occurrence frequency and location of magnetic islands at the dayside magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 4138-4155.	2.4	19
50	Magnetospheric Ion Evolution Across the Low-Latitude Boundary Layer Separatrix. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 10,247.	2.4	18
51	MMS Observations and Hybrid Simulations of Surface Ripples at a Marginally Quasi-Parallel Shock. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 11,003.	2.4	53
52	The MMS Dayside Magnetic Reconnection Locations During Phase 1 and Their Relation to the Predictions of the Maximum Magnetic Shear Model. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 11,991.	2.4	26
53	Magnetospheric ion influence at the dayside magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 8617-8631.	2.4	32
54	Dual $E \times B$ flow responses in the dayside ionosphere to a sudden IMF By rotation. <i>Geophysical Research Letters</i> , 2017, 44, 6525-6533.	4.0	3

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55	Multipoint Measurements of the Electron Jet of Symmetric Magnetic Reconnection with a Moderate Guide Field. <i>Physical Review Letters</i> , 2017, 118, 265101.	7.8	44
56	Electron-scale measurements of magnetic reconnection in space. <i>Science</i> , 2016, 352, aaf2939.	12.6	545
57	Magnetospheric ion influence on magnetic reconnection at the duskside magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 1435-1442.	4.0	42
58	The response time of the magnetopause reconnection location to changes in the solar wind: MMS case study. <i>Geophysical Research Letters</i> , 2016, 43, 4673-4682.	4.0	21
59	Observations of energetic particle escape at the magnetopause: Early results from the MMS Energetic Ion Spectrometer (EIS). <i>Geophysical Research Letters</i> , 2016, 43, 5960-5968.	4.0	23
60	Ion chemistry in the coma of comet 67P near perihelion. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S67-S77.	4.4	28
61	Stable reconnection at the dusk flank magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 9374-9382.	4.0	7
62	Magnetospheric Multiscale Observations of the Electron Diffusion Region of Large Guide Field Magnetic Reconnection. <i>Physical Review Letters</i> , 2016, 117, 015001.	7.8	74
63	Observations of whistler mode waves with nonlinear parallel electric fields near the dayside magnetic reconnection separatrix by the Magnetospheric Multiscale mission. <i>Geophysical Research Letters</i> , 2016, 43, 5909-5917.	4.0	61
64	A sequence of flux transfer events potentially generated by different generation mechanisms. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 8624-8639.	2.4	9
65	Comparison of Magnetospheric Multiscale ion jet signatures with predicted reconnection site locations at the magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 5997-6004.	4.0	19
66	Magnetospheric Multiscale Science Mission Profile and Operations. <i>Space Science Reviews</i> , 2016, 199, 77-103.	8.1	138
67	Hot Plasma Composition Analyzer for the Magnetospheric Multiscale Mission. <i>Space Science Reviews</i> , 2016, 199, 407-470.	8.1	147
68	Distinguishing between pulsed and continuous reconnection at the dayside magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 1684-1696.	2.4	13
69	Ion acceleration dependence on magnetic shear angle in dayside magnetopause reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 7255-7269.	2.4	21
70	Relation between cusp ion structures and dayside reconnection for four IMF clock angles: OpenGGCM results. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 4890-4906.	2.4	17
71	ROSINA/DFMS and IES observations of 67P: Ion-neutral chemistry in the coma of a weakly outgassing comet. <i>Astronomy and Astrophysics</i> , 2015, 583, A2.	5.1	43
72	Magnetic field topology for northward IMF reconnection: Ion observations. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 9051-9071.	2.4	32

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73	Charge state of $^{14}\text{N}$ to 50 keV ions after passing through graphene and ultrathin carbon foils. <i>Optical Engineering</i> , 2014, 53, 024101.	1.0	30
74	LOW ENERGY NEUTRAL ATOMS FROM THE HELIOSHEATH. <i>Astrophysical Journal</i> , 2014, 784, 89.	4.5	53
75	The steepness of the magnetic shear angle "saddle": A parameter for constraining the location of dayside magnetic reconnection?. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 8404-8414.	2.4	13
76	Observation of a retreating $\text{X}$ line and magnetic islands poleward of the cusp during northward interplanetary magnetic field conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 9643-9657.	2.4	17
77	Double cusp encounter by Cluster: double cusp or motion of the cusp?. <i>Annales Geophysicae</i> , 2013, 31, 713-723.	1.6	13
78	Dayside magnetic topology at the Earth's magnetopause for northward IMF. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	36
79	The location of reconnection at the magnetopause: Testing the maximum magnetic shear model with THEMIS observations. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	75
80	Evidence of multiple reconnection lines at the magnetopause from cusp observations. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	25
81	Energetic ions near the dayside magnetopause reconnection site: Implications for energization sources. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2012, 87-88, 65-69.	1.6	4
82	A probability assessment of encountering dayside magnetopause diffusion regions. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	9
83	Neutral atom imaging of the magnetospheric cusps. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	53
84	Cluster observations of bow shock energetic ion transport through the magnetosheath into the cusp. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	9
85	Antiparallel and component reconnection at the dayside magnetopause. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	71
86	Magnetopause reconnection across wide local time. <i>Annales Geophysicae</i> , 2011, 29, 1683-1697.	1.6	57
87	Cusp energetic ions as tracers for particle transport into the magnetosphere. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	12
88	Energetic neutral atoms from the Earth's subsolar magnetopause. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	66
89	Two sources of magnetosheath ions observed by Cluster in the mid-altitude polar cusp. <i>Advances in Space Research</i> , 2008, 41, 1528-1536.	2.6	10
90	Effect of a northward turning of the interplanetary magnetic field on cusp precipitation as observed by Cluster. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	24

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91	The reconnection site of temporal cusp structures. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	16
92	Location of the reconnection line at the magnetopause during southward IMF conditions. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	78
93	Probing the boundary between antiparallel and component reconnection during southward interplanetary magnetic field conditions. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	139
94	Temporal evolution of a staircase ion signature observed by Cluster in the mid-altitude polar cusp. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	19
95	Reconnection sites of spatial cusp structures. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	46
96	Computing the reconnection rate at the Earth's magnetopause using two spacecraft observations. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	35
97	Location of the reconnection line for northward interplanetary magnetic field. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	56
98	Steady reconnection during intervals of northward IMF: Implications for magnetosheath properties. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	25
99	Cusp structures: combining multi-spacecraft observations with ground-based observations. <i>Annales Geophysicae</i> , 2003, 21, 2031-2041.	1.6	20
100	Cusp aurora dependence on interplanetary magnetic field $B_z$ . <i>Journal of Geophysical Research</i> , 2002, 107, SIA 6-1.	3.3	105
101	Temporal versus spatial interpretation of cusp ion structures observed by two spacecraft. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 9-1.	3.3	35
102	Spatial features observed in the cusp under steady solar wind conditions. <i>Journal of Geophysical Research</i> , 2002, 107, SMP 10-1.	3.3	34
103	Origins of energetic ions in the cusp. <i>Journal of Geophysical Research</i> , 2001, 106, 5967-5976.	3.3	47
104	Stability of the high-latitude reconnection site for steady northward IMF. <i>Geophysical Research Letters</i> , 2000, 27, 473-476.	4.0	97
105	Cusp observations of high- and low-latitude reconnection for northward interplanetary magnetic field. <i>Journal of Geophysical Research</i> , 2000, 105, 253-266.	3.3	104
106	On spatial and temporal structures in the cusp. <i>Journal of Geophysical Research</i> , 1999, 104, 28411-28421.	3.3	33
107	Overlapping ion populations in the cusp: polar/TIMAS results. <i>Geophysical Research Letters</i> , 1998, 25, 1621-1624.	4.0	14
108	Diffuse minor ions upstream of simulated quasi-parallel shocks. <i>Journal of Geophysical Research</i> , 1994, 99, 6637.	3.3	22

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109	Diffuse alpha particles upstream of simulated quasi-parallel supercritical collisionless shocks. Geophysical Research Letters, 1991, 18, 1817-1820.	4.0	35
110	Asymmetric interaction of a solar wind reconnecting current sheet and its magnetic hole with Earth's bow shock and magnetopause. Journal of Geophysical Research: Space Physics, 0, , .	2.4	1