

# 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	Electron-scale measurements of magnetic reconnection in space. <i>Science</i> , 2016, 352, aaf2939.	12.6	545
2	Hot Plasma Composition Analyzer for the Magnetospheric Multiscale Mission. <i>Space Science Reviews</i> , 2016, 199, 407-470.	8.1	147
3	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
4	Magnetospheric Multiscale Science Mission Profile and Operations. <i>Space Science Reviews</i> , 2016, 199, 77-103.	8.1	138
5	Cusp aurora dependence on interplanetary magnetic field $B_z$ . <i>Journal of Geophysical Research</i> , 2002, 107, SIA 6-1.	3.3	105
6	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
7	Stability of the high-latitude reconnection site for steady northward IMF. <i>Geophysical Research Letters</i> , 2000, 27, 473-476.	4.0	97
8	Location of the reconnection line at the magnetopause during southward IMF conditions. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	78
9	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
10	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
11	Antiparallel and component reconnection at the dayside magnetopause. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	71
12	Energetic neutral atoms from the Earth's subsolar magnetopause. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	66
13	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
14	Magnetopause reconnection across wide local time. <i>Annales Geophysicae</i> , 2011, 29, 1683-1697.	1.6	57
15	Location of the reconnection line for northward interplanetary magnetic field. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	56
16	Neutral atom imaging of the magnetospheric cusps. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	53
17	LOW ENERGY NEUTRAL ATOMS FROM THE HELIOSHEATH. <i>Astrophysical Journal</i> , 2014, 784, 89.	4.5	53
18	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

#	ARTICLE	IF	CITATIONS
19	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
20	Origins of energetic ions in the cusp. <i>Journal of Geophysical Research</i> , 2001, 106, 5967-5976.	3.3	47
21	Reconnection sites of spatial cusp structures. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	46
22	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
23	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
24	Magnetospheric ion influence on magnetic reconnection at the duskside magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 1435-1442.	4.0	42
25	Dayside magnetic topology at the Earth's magnetopause for northward IMF. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	36
26	Diffuse alpha particles upstream of simulated quasi-parallel supercritical collisionless shocks. <i>Geophysical Research Letters</i> , 1991, 18, 1817-1820.	4.0	35
27	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
28	Computing the reconnection rate at the Earth's magnetopause using two spacecraft observations. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	35
29	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
30	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
31	On spatial and temporal structures in the cusp. <i>Journal of Geophysical Research</i> , 1999, 104, 28411-28421.	3.3	33
32	Magnetic field topology for northward IMF reconnection: Ion observations. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 9051-9071.	2.4	32
33	Magnetospheric ion influence at the dayside magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 8617-8631.	2.4	32
34	Charge state of $\sim 41$ to 50 keV ions after passing through graphene and ultrathin carbon foils. <i>Optical Engineering</i> , 2014, 53, 024101.	1.0	30
35	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
36	Ion Kinetics in a Hot Flow Anomaly: MMS Observations. <i>Geophysical Research Letters</i> , 2018, 45, 11,520.	4.0	28

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37	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
38	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
39	Steady reconnection during intervals of northward IMF: Implications for magnetosheath properties. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	25
40	Evidence of multiple reconnection lines at the magnetopause from cusp observations. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	25
41	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
42	Characteristics of the Flank Magnetopause: MMS Results. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027623.	2.4	24
43	The Location of Magnetic Reconnection at Earth's Magnetopause. <i>Space Science Reviews</i> , 2021, 217, 41.	8.1	24
44	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
45	Electron Inflow Velocities and Reconnection Rates at Earth's Magnetopause and Magnetosheath. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089082.	4.0	23
46	Diffuse minor ions upstream of simulated quasi-parallel shocks. <i>Journal of Geophysical Research</i> , 1994, 99, 6637.	3.3	22
47	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
48	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
49	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
50	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
51	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
52	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
53	Cusp structures: combining multi-spacecraft observations with ground-based observations. <i>Annales Geophysicae</i> , 2003, 21, 2031-2041.	1.6	20
54	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

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55	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
56	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
57	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
58	MMS Observations of Harmonic Electromagnetic Ion Cyclotron Waves. <i>Geophysical Research Letters</i> , 2018, 45, 8764-8772.	4.0	18
59	Observation of a retreating $x$ 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
60	Relation between cusp ion structures and dayside reconnection for four IMF clock angles: OpenGGCM-TPT results. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 4890-4906.	2.4	17
61	The reconnection site of temporal cusp structures. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	16
62	Overlapping ion populations in the cusp: polar/TIMAS results. <i>Geophysical Research Letters</i> , 1998, 25, 1621-1624.	4.0	14
63	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
64	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
65	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
66	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
67	Double cusp encounter by Cluster: double cusp or motion of the cusp?. <i>Annales Geophysicae</i> , 2013, 31, 713-723.	1.6	13
68	The steepness of the magnetic shear angle $\theta_{\text{saddle}}$ : 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
69	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
70	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
71	Cusp energetic ions as tracers for particle transport into the magnetosphere. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	12
72	Locating dayside magnetopause reconnection with exhaust ion distributions. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 5105-5113.	2.4	12

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73	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
74	Carriers and Sources of Magnetopause Current: MMS Case Study. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 5464-5475.	2.4	12
75	MMS Observation of Shock-Reflected He <sup>++</sup> at Earth's Quasi-Perpendicular Bow Shock. <i>Geophysical Research Letters</i> , 2018, 45, 49-55.	4.0	11
76	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
77	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
78	Energy Conversion Within Current Sheets in the Earth's Quasi-Parallel Magnetosheath. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL091859.	4.0	10
79	A probability assessment of encountering dayside magnetopause diffusion regions. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	9
80	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
81	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
82	Observing the prevalence of thin current sheets downstream of Earth's bow shock. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	9
83	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
84	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
85	Magnetospheric Multiscale Observation of an Electron Diffusion Region at High Latitudes. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087268.	4.0	8
86	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
87	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
88	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
89	Dual storage and release of molecular oxygen in comet 67P/Churyumov-Gerasimenko. <i>Nature Astronomy</i> , 2022, 6, 724-730.	10.1	8
90	Stable reconnection at the dusk flank magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 9374-9382.	4.0	7

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91	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
92	Helium in the Earth's foreshock: a global Vlasior survey. <i>Annales Geophysicae</i> , 2020, 38, 1081-1099.	1.6	6
93	Reconnection X-Line Orientations at the Earth's Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029789.	2.4	6
94	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
95	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
96	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
97	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
98	Multiple Reconnection X-Lines at the Magnetopause and Overlapping Cusp Ion Injections. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	2.4	4
99	Dual E <sup>+</sup> -B flow responses in the dayside ionosphere—a sudden IMF By rotation. <i>Geophysical Research Letters</i> , 2017, 44, 6525-6533.	4.0	3
100	The He <sup>+</sup> /H <sup>+</sup> 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
101	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
102	Secondary Magnetic Reconnection at Earth's Flank Magnetopause. <i>Frontiers in Astronomy and Space Sciences</i> , 2021, 8, .	2.8	3
103	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
104	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
105	Multipoint Density Measurements of Geocoronal Pickup Ions. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093695.	4.0	2
106	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
107	Simultaneous Polar and Cluster Observations in the Northern and Southern Middle-Latitude Polar Cusps Around Equinox. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA028346.	2.4	1
108	Anomalous Reconnection Layer at Earth's Dayside Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029678.	2.4	1

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109	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, , .	2.4	1
110	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