

Steven Petrinec

List of Publications by Year in descending order

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82
papers

3,486
citations

186265

28
h-index

138484

58
g-index

87
all docs

87
docs citations

87
times ranked

1833
citing authors

#	ARTICLE	IF	CITATIONS
1	Electron-scale measurements of magnetic reconnection in space. <i>Science</i> , 2016, 352, aaf2939.	12.6	545
2	Near-Earth magnetotail shape and size as determined from the magnetopause flaring angle. <i>Journal of Geophysical Research</i> , 1996, 101, 137-152.	3.3	231
3	Electron-scale dynamics of the diffusion region during symmetric magnetic reconnection in space. <i>Science</i> , 2018, 362, 1391-1395.	12.6	221
4	The thickness of the magnetosheath: Constraints on the polytropic index. <i>Geophysical Research Letters</i> , 1991, 18, 1821-1824.	4.0	154
5	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
6	Magnetospheric Multiscale Science Mission Profile and Operations. <i>Space Science Reviews</i> , 2016, 199, 77-103.	8.1	138
7	Simultaneous Cluster and IMAGE observations of cusp reconnection and auroral proton spot for northward IMF. <i>Geophysical Research Letters</i> , 2003, 30, n/a-n/a.	4.0	130
8	HYDRODYNAMIC AND MHD EQUATIONS ACROSS THE BOW SHOCK AND ALONG THE SURFACES OF PLANETARY OBSTACLES. <i>Space Science Reviews</i> , 1997, 79, 757-791.	8.1	103
9	Stability of the high-latitude reconnection site for steady northward IMF. <i>Geophysical Research Letters</i> , 2000, 27, 473-476.	4.0	97
10	The effect of solar wind dynamic pressure changes on low and mid-latitude magnetic records. <i>Geophysical Research Letters</i> , 1992, 19, 1227-1230.	4.0	95
11	Location of the reconnection line at the magnetopause during southward IMF conditions. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	78
12	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
13	Antiparallel and component reconnection at the dayside magnetopause. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	71
14	An empirical model of the size and shape of the near-Earth magnetotail. <i>Geophysical Research Letters</i> , 1993, 20, 2695-2698.	4.0	70
15	External and internal influences on the size of the dayside terrestrial magnetosphere. <i>Geophysical Research Letters</i> , 1993, 20, 339-342.	4.0	69
16	Energetic neutral atoms from the Earth's subsolar magnetopause. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	66
17	Location of the reconnection line for northward interplanetary magnetic field. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	56
18	Neutral atom imaging of the magnetospheric cusps. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	53

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19	LOW ENERGY NEUTRAL ATOMS FROM THE HELIOSHEATH. <i>Astrophysical Journal</i> , 2014, 784, 89.	4.5	53
20	The location of magnetic reconnection at Saturn's magnetopause: A comparison with Earth. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 2563-2578.	2.4	53
21	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
22	Reconnection sites of spatial cusp structures. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	46
23	Magnetospheric ion influence on magnetic reconnection at the duskside magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 1435-1442.	4.0	42
24	First IBEX observations of the terrestrial plasma sheet and a possible disconnection event. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	38
25	Dayside magnetic topology at the Earth's magnetopause for northward IMF. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	36
26	Computing the reconnection rate at the Earth's magnetopause using two spacecraft observations. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	35
27	Magnetic field topology for northward IMF reconnection: Ion observations. <i>Journal of Geophysical Research: Space Physics</i> , 2014, 119, 9051-9071.	2.4	32
28	Magnetospheric ion influence at the dayside magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 8617-8631.	2.4	32
29	The effect of foreshock on the motion of the dayside magnetopause. <i>Geophysical Research Letters</i> , 1997, 24, 1439-1441.	4.0	28
30	Force balance at the magnetopause determined with MMS: Application to flux transfer events. <i>Geophysical Research Letters</i> , 2016, 43, 11,941.	4.0	27
31	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
32	Steady reconnection during intervals of northward IMF: Implications for magnetosheath properties. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	25
33	Evidence of multiple reconnection lines at the magnetopause from cusp observations. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	25
34	The Location of Magnetic Reconnection at Earth's Magnetopause. <i>Space Science Reviews</i> , 2021, 217, 41.	8.1	24
35	On the solar wind control of cusp aurora during northward IMF. <i>Geophysical Research Letters</i> , 2004, 31, .	4.0	23
36	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

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37	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
38	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
39	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
40	On continuous versus discontinuous neutral lines at the dayside magnetopause for southward interplanetary magnetic field. <i>Geophysical Research Letters</i> , 2003, 30, n/a-n/a.	4.0	20
41	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
42	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
43	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
44	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
45	The reconnection site of temporal cusp structures. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	16
46	Imaging the development of the cold dense plasma sheet. <i>Geophysical Research Letters</i> , 2015, 42, 7867-7873.	4.0	15
47	Field-aligned Currents in Auroral Vortices. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028583.	2.4	15
48	Shape of the terrestrial plasma sheet in the near-Earth magnetospheric tail as imaged by the Interstellar Boundary Explorer. <i>Geophysical Research Letters</i> , 2015, 42, 2115-2122.	4.0	14
49	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
50	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
51	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
52	The steepness of the magnetic shear angle θ_{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
53	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
54	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

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55	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
56	Sequential Observations of Flux Transfer Events, Poleward-Moving Auroral Forms, and Polar Cap Patches. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2019JA027674.	2.4	12
57	An Investigation of Flow Shear and Diamagnetic Drift Effects on Magnetic Reconnection at Saturn's Dawnside Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 8457-8473.	2.4	11
58	Suppression of Magnetic Reconnection at Saturn's Low-Latitude Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2020, 125, e2020JA027895.	2.4	11
59	On the relative intercalibration of solar wind instruments on IMP-8 and ISEE-3. <i>Geophysical Research Letters</i> , 1992, 19, 961-963.	4.0	10
60	Cusp and Nightside Auroral Sources of O^{+} in the Plasma Sheet. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 10036-10047.	2.4	10
61	A probability assessment of encountering dayside magnetopause diffusion regions. <i>Journal of Geophysical Research</i> , 2011, 116, n/a-n/a.	3.3	9
62	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
63	Magnetospheric Multiscale Observation of an Electron Diffusion Region at High Latitudes. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087268.	4.0	8
64	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
65	Long and Active Magnetopause Reconnection X-lines During Changing IMF Conditions. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2020JA028926.	2.4	8
66	Simultaneous observations of fluctuating cusp aurora and low-latitude magnetopause reconnection. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	7
67	Stable reconnection at the dusk flank magnetopause. <i>Geophysical Research Letters</i> , 2016, 43, 9374-9382.	4.0	7
68	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
69	Microscale Processes Determining Macroscale Evolution of Magnetic Flux Tubes along Earth's Magnetopause. <i>Astrophysical Journal</i> , 2021, 914, 26.	4.5	6
70	Reconnection X-line Orientations at the Earth's Magnetopause. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029789.	2.4	6
71	Nowcasting and forecasting of the magnetopause and bow shock: A status update. <i>Space Weather</i> , 2017, 15, 36-43.	3.7	5
72	First Global Images of Ion Energization in the Terrestrial Foreshock by the Interstellar Boundary Explorer. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088188.	4.0	4

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73	Probing the Magnetosheath Boundaries Using Interstellar Boundary Explorer (IBEX) Orbital Encounters. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, e2021JA029278.	2.4	4
74	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
75	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
76	Long Term Variations in the Solar Wind of Importance to ULF Phenomena. <i>Geophysical Monograph Series</i> , 2013, , 67-74.	0.1	3
77	MMS Observations of Reconnection at Dayside Magnetopause Crossings During Transitions of the Solar Wind to Sub-Alfvénic Flow. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 9934-9951.	2.4	3
78	Effects in the Near-Magnetopause Magnetosheath Elicited by Large-Amplitude Alfvénic Fluctuations Terminating in a Field and Flow Discontinuity. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 8983-9004.	2.4	3
79	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
80	High-Density Magnetospheric He ⁺⁺ at the Dayside Magnetopause and Its Effect on Magnetic Reconnection. <i>Journal of Geophysical Research: Space Physics</i> , 2021, 126, .	2.4	3
81	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
82	Determining the Near-Instantaneous Curvature of Earth's Bow Shock Using Simultaneous IBEX and MMS Observations. <i>Journal of Geophysical Research: Space Physics</i> , 2022, 127, .	2.4	2