M L Stevens

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/6093813/publications.pdf

Version: 2024-02-01

130 papers	6,035 citations	66234 42 h-index	85405 71 g-index
132 all docs	132 docs citations	132 times ranked	1975 citing authors

#	Article	IF	Citations
1	Solar Wind Electrons Alphas and Protons (SWEAP) Investigation: Design of the Solar Wind and Coronal Plasma Instrument Suite for Solar Probe Plus. Space Science Reviews, 2016, 204, 131-186.	3.7	439
2	Highly structured slow solar wind emerging from an equatorial coronal hole. Nature, 2019, 576, 237-242.	13.7	401
3	AlfvÃ©nic velocity spikes and rotational flows in the near-Sun solar wind. Nature, 2019, 576, 228-231.	13.7	311
4	The Evolution and Role of Solar Wind Turbulence in the Inner Heliosphere. Astrophysical Journal, Supplement Series, 2020, 246, 53.	3.0	166
5	The Solar Probe Cup on the Parker Solar Probe. Astrophysical Journal, Supplement Series, 2020, 246, 43.	3.0	154
6	Solar Wind Helium Abundance as a Function of Speed and Heliographic Latitude: Variation through a Solar Cycle. Astrophysical Journal, 2007, 660, 901-910.	1.6	141
7	Sharp AlfvÃ©nic Impulses in the Near-Sun Solar Wind. Astrophysical Journal, Supplement Series, 2020, 246, 45.	3.0	115
8	The Solar Probe ANalyzersâ€"Electrons on the Parker Solar Probe. Astrophysical Journal, Supplement Series, 2020, 246, 74.	3.0	114
9	Parker Solar Probe Enters the Magnetically Dominated Solar Corona. Physical Review Letters, 2021, 127, 255101.	2.9	104
10	Probing the energetic particle environment near the Sun. Nature, 2019, 576, 223-227.	13.7	103
11	Magnetic Connectivity of the Ecliptic Plane within 0.5 au: Potential Field Source Surface Modeling of the First Parker Solar Probe Encounter. Astrophysical Journal, Supplement Series, 2020, 246, 23.	3.0	100
12	Electrons in the Young Solar Wind: First Results from the Parker Solar Probe. Astrophysical Journal, Supplement Series, 2020, 246, 22.	3.0	99
13	The solar magnetic activity band interaction and instabilities that shape quasi-periodic variability. Nature Communications, 2015, 6, 6491.	5.8	97
14	EVOLUTION OF THE RELATIONSHIPS BETWEEN HELIUM ABUNDANCE, MINOR ION CHARGE STATE, AND SOLAR WIND SPEED OVER THE SOLAR CYCLE. Astrophysical Journal, 2012, 745, 162.	1.6	96
15	Sensitive Test for Ion-Cyclotron Resonant Heating in the Solar Wind. Physical Review Letters, 2013, 110, 091102.	2.9	95
16	The Statistical Properties of Solar Wind Temperature Parameters Near 1 au. Astrophysical Journal, Supplement Series, 2018, 236, 41.	3.0	94
17	MULTI-SPECIES MEASUREMENTS OF THE FIREHOSE AND MIRROR INSTABILITY THRESHOLDS IN THE SOLAR WIND. Astrophysical Journal Letters, 2016, 825, L26.	3.0	86
18	Magnetic Field Kinks and Folds in the Solar Wind. Astrophysical Journal, Supplement Series, 2020, 246, 32.	3.0	86

#	Article	IF	Citations
19	Switchbacks in the Solar Magnetic Field: Their Evolution, Their Content, and Their Effects on the Plasma. Astrophysical Journal, Supplement Series, 2020, 246, 68.	3.0	83
20	Ion-scale Electromagnetic Waves in the Inner Heliosphere. Astrophysical Journal, Supplement Series, 2020, 246, 66.	3.0	67
21	Ionâ€driven instabilities in the solar wind: Wind observations of 19 March 2005. Journal of Geophysical Research: Space Physics, 2016, 121, 30-41.	0.8	66
22	The Role of AlfvÃ©n Wave Dynamics on the Large-scale Properties of the Solar Wind: Comparing an MHD Simulation with Parker Solar Probe E1 Data. Astrophysical Journal, Supplement Series, 2020, 246, 24.	3.0	66
23	Parker Solar Probe In Situ Observations of Magnetic Reconnection Exhausts during Encounter 1. Astrophysical Journal, Supplement Series, 2020, 246, 34.	3.0	65
24	Parker Solar Probe Observations of Proton Beams Simultaneous with Ion-scale Waves. Astrophysical Journal, Supplement Series, 2020, 248, 5.	3.0	62
25	Cross Helicity Reversals in Magnetic Switchbacks. Astrophysical Journal, Supplement Series, 2020, 246, 67.	3.0	61
26	A PROTON-CYCLOTRON WAVE STORM GENERATED BY UNSTABLE PROTON DISTRIBUTION FUNCTIONS IN THE SOLAR WIND. Astrophysical Journal, 2016, 819, 6.	1.6	57
27	Electron Energy Partition across Interplanetary Shocks. I. Methodology and Data Product. Astrophysical Journal, Supplement Series, 2019, 243, 8.	3.0	57
28	Identification of Magnetic Flux Ropes from Parker Solar Probe Observations during the First Encounter. Astrophysical Journal, Supplement Series, 2020, 246, 26.	3.0	57
29	Proton Temperature Anisotropy Variations in Inner Heliosphere Estimated with the First Parker Solar Probe Observations. Astrophysical Journal, Supplement Series, 2020, 246, 70.	3.0	56
30	Enhanced Energy Transfer Rate in Solar Wind Turbulence Observed near the Sun from Parker Solar Probe. Astrophysical Journal, Supplement Series, 2020, 246, 48.	3.0	56
31	A Comparison of Alpha Particle and Proton Beam Differential Flows in Collisionally Young Solar Wind. Astrophysical Journal, 2018, 864, 112.	1.6	55
32	Anticorrelation between the Bulk Speed and the Electron Temperature in the Pristine Solar Wind: First Results from the Parker Solar Probe and Comparison with Helios. Astrophysical Journal, Supplement Series, 2020, 246, 62.	3.0	55
33	Turbulence Transport Modeling and First Orbit Parker Solar Probe (PSP) Observations. Astrophysical Journal, Supplement Series, 2020, 246, 38.	3.0	53
34	Revisiting the structure of lowâ€Mach number, lowâ€beta, quasiâ€perpendicular shocks. Journal of Geophysical Research: Space Physics, 2017, 122, 9115-9133.	0.8	52
35	Relating Streamer Flows to Density and Magnetic Structures at the Parker Solar Probe. Astrophysical Journal, Supplement Series, 2020, 246, 37.	3.0	52
36	Majority of Solar Wind Intervals Support Ion-Driven Instabilities. Physical Review Letters, 2018, 120, 205102.	2.9	51

#	Article	IF	Citations
37	Measures of Scale-dependent AlfvÃ©nicity in the First PSP Solar Encounter. Astrophysical Journal, Supplement Series, 2020, 246, 58.	3.0	51
38	The Heliospheric Current Sheet in the Inner Heliosphere Observed by the Parker Solar Probe. Astrophysical Journal, Supplement Series, 2020, 246, 47.	3.0	50
39	Characteristic Scales of Magnetic Switchback Patches Near the Sun and Their Possible Association With Solar Supergranulation and Granulation. Astrophysical Journal, 2021, 919, 96.	1.6	50
40	Evolution of Solar Wind Turbulence from 0.1 to 1 au during the First Parker Solar Probeâ€“Solar Orbiter Radial Alignment. Astrophysical Journal Letters, 2021, 912, L21.	3.0	49
41	A Zone of Preferential Ion Heating Extends Tens of Solar Radii from the Sun. Astrophysical Journal, 2017, 849, 126.	1.6	47
42	Sunward-propagating Whistler Waves Collocated with Localized Magnetic Field Holes in the Solar Wind: Parker Solar Probe Observations at 35.7 R_{âŠ™} Radii. Astrophysical Journal Letters, 2020, 891, L20.	3.0	46
43	Exploring Solar Wind Origins and Connecting Plasma Flows from the Parker Solar Probe to 1 au: Nonspherical Source Surface and AlfvÃ©nic Fluctuations. Astrophysical Journal, Supplement Series, 2020, 246, 54.	3.0	46
44	Density Fluctuations in the Solar Wind Based on Type III Radio Bursts Observed by Parker Solar Probe. Astrophysical Journal, Supplement Series, 2020, 246, 57.	3.0	45
45	Localized Magnetic-field Structures and Their Boundaries in the Near-Sun Solar Wind from Parker Solar Probe Measurements. Astrophysical Journal, 2020, 893, 93.	1.6	44
46	Solar Wind Streams and Stream Interaction Regions Observed by the Parker Solar Probe with Corresponding Observations at 1 au. Astrophysical Journal, Supplement Series, 2020, 246, 36.	3.0	43
47	Collisional Thermalization of Hydrogen and Helium in Solar-Wind Plasma. Physical Review Letters, 2013, 111, 241101.	2.9	40
48	Electron Energy Partition across Interplanetary Shocks. II. Statistics. Astrophysical Journal, Supplement Series, 2019, 245, 24.	3.0	40
49	The Heliospheric Current Sheet and Plasma Sheet during Parker Solar Probeâ€™s First Orbit. Astrophysical Journal Letters, 2020, 894, L19.	3.0	39
50	Clustering of Intermittent Magnetic and Flow Structures near Parker Solar Probeâ€™s First Perihelionâ€”A Partial-variance-of-increments Analysis. Astrophysical Journal, Supplement Series, 2020, 246, 31.	3.0	37
51	Switchbacks: statistical properties and deviations from AlfvÃ©nicity. Astronomy and Astrophysics, 2021, 650, A3.	2.1	37
52	The Radial Dependence of Proton-scale Magnetic Spectral Break in Slow Solar Wind during PSP Encounter 2. Astrophysical Journal, Supplement Series, 2020, 246, 55.	3.0	36
53	Turbulence in the Sub-AlfvÃ©nic Solar Wind. Astrophysical Journal Letters, 2022, 926, L16.	3.0	36
54	Solar Energetic Particles Produced by a Slow Coronal Mass Ejection at â¼0.25 au. Astrophysical Journal, Supplement Series, 2020, 246, 29.	3.0	35

#	Article	IF	Citations
55	Statistics and Polarization of Type III Radio Bursts Observed in the Inner Heliosphere. Astrophysical Journal, Supplement Series, 2020, 246, 49.	3.0	35
56	Detection of small magnetic flux ropes from the third and fourth Parker Solar Probe encounters. Astronomy and Astrophysics, 2021, 650, A12.	2.1	35
57	Analysis of the Internal Structure of the Streamer Blowout Observed by the Parker Solar Probe During the First Solar Encounter. Astrophysical Journal, Supplement Series, 2020, 246, 63.	3.0	34
58	Coronal Electron Temperature Inferred from the Strahl Electrons in the Inner Heliosphere: Parker Solar Probe and Helios Observations. Astrophysical Journal, 2020, 892, 88.	1.6	34
59	Statistical analysis of orientation, shape, and size of solar wind switchbacks. Astronomy and Astrophysics, 2021, 650, A1.	2.1	34
60	Electron heat flux in the near-Sun environment. Astronomy and Astrophysics, 2021, 650, A15.	2.1	32
61	Energetic Particle Increases Associated with Stream Interaction Regions. Astrophysical Journal, Supplement Series, 2020, 246, 20.	3.0	31
62	Plasma Waves near the Electron Cyclotron Frequency in the Near-Sun Solar Wind. Astrophysical Journal, Supplement Series, 2020, 246, 21.	3.0	30
63	CORONAL ELECTRON TEMPERATURE FROM THE SOLAR WIND SCALING LAW THROUGHOUT THE SPACE AGE. Astrophysical Journal, 2011, 739, 9.	1.6	29
64	Proton core behaviour inside magnetic field switchbacks. Monthly Notices of the Royal Astronomical Society, 2020, 498, 5524-5531.	1.6	29
65	Constraining Ion-Scale Heating and Spectral Energy Transfer in Observations of Plasma Turbulence. Physical Review Letters, 2020, 125, 025102.	2.9	29
66	Source and Propagation of a Streamer Blowout Coronal Mass Ejection Observed by the Parker Solar Probe. Astrophysical Journal, Supplement Series, 2020, 246, 69.	3.0	29
67	AlfvÃ©nic versus non-AlfvÃ©nic turbulence in the inner heliosphere as observed by Parker Solar Probe. Astronomy and Astrophysics, 2021, 650, A21.	2.1	29
68	Plasma Heating and AlfvÃ©nic Turbulence Enhancement During Two Steps of Energy Conversion in Magnetic Reconnection Exhaust Region of Solar Wind. Astrophysical Journal, 2018, 856, 148.	1.6	28
69	Sub-AlfvÃ©nic Solar Wind Observed by the Parker Solar Probe: Characterization of Turbulence, Anisotropy, Intermittency, and Switchback. Astrophysical Journal Letters, 2022, 926, L1.	3.0	28
70	³He-rich Solar Energetic Particle Observations at the Parker Solar Probe and near Earth. Astrophysical Journal, Supplement Series, 2020, 246, 42.	3.0	27
71	Observations of the 2019 April 4 Solar Energetic Particle Event at the Parker Solar Probe. Astrophysical Journal, Supplement Series, 2020, 246, 35.	3.0	27
72	Direct evidence for magnetic reconnection at the boundaries of magnetic switchbacks with Parker Solar Probe. Astronomy and Astrophysics, 2021, 650, A5.	2.1	27

#	Article	IF	Citations
73	Observations of Heating along Intermittent Structures in the Inner Heliosphere from PSP Data. Astrophysical Journal, Supplement Series, 2020, 246, 46.	3.0	26
74	Observations of Energetic-particle Population Enhancements along Intermittent Structures near the Sun from the Parker Solar Probe. Astrophysical Journal, Supplement Series, 2020, 246, 61.	3.0	25
75	Exploring the Solar Wind from Its Source on the Corona into the Inner Heliosphere during the First Solar Orbiterâ€“Parker Solar Probe Quadrature. Astrophysical Journal Letters, 2021, 920, L14.	3.0	25
76	Parker Solar Probe Evidence for Scattering of Electrons in the Young Solar Wind by Narrowband Whistler-mode Waves. Astrophysical Journal Letters, 2021, 911, L29.	3.0	24
77	The Enhancement of Proton Stochastic Heating in the Near-Sun Solar Wind. Astrophysical Journal, Supplement Series, 2020, 246, 30.	3.0	23
78	Multiscale Solar Wind Turbulence Properties inside and near Switchbacks Measured by the Parker Solar Probe. Astrophysical Journal, 2021, 912, 28.	1.6	23
79	Prevalence of magnetic reconnection in the near-Sun heliospheric current sheet. Astronomy and Astrophysics, 2021, 650, A13.	2.1	23
80	Inferred Linear Stability of Parker Solar Probe Observations Using One- and Two-component Proton Distributions. Astrophysical Journal, 2021, 909, 7.	1.6	22
81	Whistler wave occurrence and the interaction with strahl electrons during the first encounter of Parker Solar Probe. Astronomy and Astrophysics, 2021, 650, A9.	2.1	22
82	Small-scale Magnetic Flux Ropes in the First Two Parker Solar Probe Encounters. Astrophysical Journal, 2020, 903, 76.	1.6	22
83	SOLAR CYCLE VARIATIONS IN THE ELEMENTAL ABUNDANCE OF HELIUM AND FRACTIONATION OF IRON IN THE FAST SOLAR WIND: INDICATORS OF AN EVOLVING ENERGETIC RELEASE OF MASS FROM THE LOWER SOLAR ATMOSPHERE. Astrophysical Journal Letters, 2011, 740, L23.	3.0	21
84	Seed Population Preconditioning and Acceleration Observed by the Parker Solar Probe. Astrophysical Journal, Supplement Series, 2020, 246, 33.	3.0	21
85	Using Parker Solar Probe observations during the first four perihelia to constrain global magnetohydrodynamic models. Astronomy and Astrophysics, 2021, 650, A19.	2.1	21
86	Electron Energy Partition across Interplanetary Shocks. III. Analysis. Astrophysical Journal, 2020, 893, 22.	1.6	21
87	Narrowband oblique whistler-mode waves: comparing properties observed by Parker Solar Probe at <0.3 AU and STEREO at 1 AU. Astronomy and Astrophysics, 2021, 650, A8.	2.1	20
88	Coronal electron temperature in the protracted solar minimum, the cycle 24 mini maximum, and over centuries. Journal of Geophysical Research: Space Physics, 2014, 119, 1486-1492.	0.8	19
89	ALPS: the Arbitrary Linear Plasma Solver. Journal of Plasma Physics, 2018, 84, .	0.7	19
90	Parker Solar Probe Evidence for the Absence of Whistlers Close to the Sun to Scatter Strahl and to Regulate Heat Flux. Astrophysical Journal Letters, 2022, 924, L33.	3.0	19

#	Article	IF	Citations
91	The Turbulent Properties of the Sub-AlfvÃ©nic Solar Wind Measured by the Parker Solar Probe. Astrophysical Journal Letters, 2022, 928, L15.	3.0	19
92	Evidence of Subprotonâ€Scale Magnetic Holes in the Venusian Magnetosheath. Geophysical Research Letters, 2021, 48, e2020GL090329.	1.5	18
93	Applying Nyquist's method for stability determination to solar wind observations. Journal of Geophysical Research: Space Physics, 2017, 122, 9815-9823.	0.8	17
94	MHD Mode Composition in the Inner Heliosphere from the Parker Solar Probeâ€™s First Perihelion. Astrophysical Journal, Supplement Series, 2020, 246, 71.	3.0	17
95	A living catalog of stream interaction regions in the Parker Solar Probe era. Astronomy and Astrophysics, 2021, 650, A25.	2.1	17
96	Predicting the Magnetic Fields of a Stealth CME Detected by Parker Solar Probe at 0.5 au. Astrophysical Journal, 2021, 920, 65.	1.6	17
97	Plasma Double Layers at the Boundary Between Venus and the Solar Wind. Geophysical Research Letters, 2020, 47, e2020GL090115.	1.5	16
98	Radial Evolution of a CIR: Observations From a Nearly Radially Aligned Event Between Parker Solar Probe and STEREOâ€A. Geophysical Research Letters, 2021, 48, e2020GL091376.	1.5	16
99	Improving the AlfvÃ©n Wave Solar Atmosphere Model Based on Parker Solar Probe Data. Astrophysical Journal, 2022, 925, 146.	1.6	16
100	CMEs and SEPs During Novemberâ€“December 2020: A Challenge for Realâ€Time Space Weather Forecasting. Space Weather, 2022, 20, .	1.3	16
101	Parker Solar Probe Observations of Solar Wind Energetic Proton Beams Produced by Magnetic Reconnection in the Nearâ€Sun Heliospheric Current Sheet. Geophysical Research Letters, 2022, 49, .	1.5	15
102	The Streamer Blowout Origin of a Flux Rope and Energetic Particle Event Observed by Parker Solar Probe at 0.5 au. Astrophysical Journal, 2020, 897, 134.	1.6	14
103	Predicting the Solar Wind at the Parker Solar Probe Using an Empirically Driven MHD Model. Astrophysical Journal, Supplement Series, 2020, 246, 40.	3.0	14
104	Determination of Solar Wind Angular Momentum and AlfvÃ©n Radius from Parker Solar Probe Observations. Astrophysical Journal Letters, 2021, 908, L41.	3.0	14
105	The Sunward Electron Deficit: A Telltale Sign of the Sunâ€™s Electric Potential. Astrophysical Journal, 2021, 916, 16.	1.6	14
106	Ambipolar Electric Field and Potential in the Solar Wind Estimated from Electron Velocity Distribution Functions. Astrophysical Journal, 2021, 921, 83.	1.6	14
107	Direct First Parker Solar Probe Observation of the Interaction of Two Successive Interplanetary Coronal Mass Ejections in 2020 November. Astrophysical Journal, 2022, 930, 88.	1.6	14
108	Wave-particle energy transfer directly observed in an ion cyclotron wave. Astronomy and Astrophysics, 2021, 650, A10.	2.1	12

#	Article	IF	Citations
109	Electron Bernstein waves and narrowband plasma waves near the electron cyclotron frequency in the near-Sun solar wind. Astronomy and Astrophysics, 2021, 650, A97.	2.1	12
110	Energetic particle behavior in near-Sun magnetic field switchbacks from PSP. Astronomy and Astrophysics, 2021, 650, L4.	2.1	12
111	Solar wind energy flux observations in the inner heliosphere: first results from Parker Solar Probe. Astronomy and Astrophysics, 2021, 650, A14.	2.1	12
112	Comparative Analysis of the 2020 November 29 Solar Energetic Particle Event Observed by Parker Solar Probe. Astrophysical Journal, 2021, 920, 123.	1.6	12
113	Statistical Analysis of Intermittency and its Association with Proton Heating in the Near-Sun Environment. Astrophysical Journal, 2022, 927, 140.	1.6	12
114	The contribution of alpha particles to the solar wind angular momentum flux in the inner heliosphere. Astronomy and Astrophysics, 2021, 650, A17.	2.1	11
115	Kineticâ€scale Turbulence in the Venusian Magnetosheath. Geophysical Research Letters, 2021, 48, e2020GL090783.	1.5	11
116	The Solar Wind Angular Momentum Flux as Observed by Parker Solar Probe. Astrophysical Journal Letters, 2020, 902, L4.	3.0	11
117	Electromagnetic cyclotron waves in the solar wind: Wind observation and wave dispersion analysis. AIP Conference Proceedings, 2016, , .	0.3	10
118	Kinetic-scale Spectral Features of Cross Helicity and Residual Energy in the Inner Heliosphere. Astrophysical Journal, Supplement Series, 2020, 246, 52.	3.0	10
119	Solar Origin of Bare Ion Anomalies in the Solar Wind and Interplanetary Coronal Mass Ejections. Astrophysical Journal, 2021, 921, 93.	1.6	10
120	(Non)radial Solar Wind Propagation through the Heliosphere. Astrophysical Journal Letters, 2020, 897, L39.	3.0	9
121	Small Electron Events Observed by Parker Solar Probe/ISâŠ™IS during Encounter 2. Astrophysical Journal, 2020, 902, 20.	1.6	9
122	Magnetic increases with central current sheets: observations with Parker Solar Probe. Astronomy and Astrophysics, 2021, 650, A11.	2.1	8
123	AlfvÃ©n Speed Transition Zone in the Solar Corona. Astrophysical Journal Letters, 2021, 919, L33.	3.0	7
124	Eruption and Interplanetary Evolution of a Stealthy Streamer-Blowout CME Observed by PSP at â^¼0.5ÂAU. Frontiers in Astronomy and Space Sciences, 2022, 9, .	1.1	7
125	Spectra of Temperature Fluctuations in the Solar Wind. Atmosphere, 2021, 12, 1277.	1.0	3
126	Solar Wind Electrons Alphas and Protons (SWEAP) Science Operations Center initial design and implementation. Proceedings of SPIE, 2014, , .	0.8	1

#	Article	IF	Citations
127	Science Enhancements by the MAVEN Participating Scientists. Space Science Reviews, 2015, 195, 319-355.	3.7	1
128	Interaction of the Interplanetary Shock and IMF Directional Discontinuity in the Solar Wind. Journal of Geophysical Research: Space Physics, 2018, 123, 3822-3835.	0.8	1
129	MarsCAT: Mars Array of ionospheric Research Satellites using the CubeSat Ambipolar Thruster. , 2016, , .		0
130	Electrostatic Waves with Rapid Frequency Shifts in the Solar Wind from PSP observations. , 2021, , .		0