

Charles W Smith

List of Publications by Year in descending order

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120
papers

6,756
citations

71102

41
h-index

62596

80
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124
all docs

124
docs citations

124
times ranked

2046
citing authors

#	ARTICLE	IF	CITATIONS
1	Three-dimensional Hybrid Simulation Results of a Variable Magnetic Helicity Signature at Proton Kinetic Scales. <i>Astrophysical Journal</i> , 2022, 924, 41.	4.5	0
2	High-latitude Observations of Inertial-range Turbulence by the Ulysses Spacecraft During the Solar Minimum of 1993â€“96. <i>Astrophysical Journal</i> , 2022, 927, 43.	4.5	4
3	Interstellar Neutrals, Pickup Ions, and Energetic Neutral Atoms Throughout the Heliosphere: Present Theory and Modeling Overview. <i>Space Science Reviews</i> , 2022, 218, 1.	8.1	13
4	Driving and Dissipation of Solar-Wind Turbulence: What is the Evidence?. <i>Frontiers in Astronomy and Space Sciences</i> , 2021, 7, .	2.8	14
5	Low-frequency Waves due to Newborn Interstellar Pickup He ⁺ Observed by the Ulysses Spacecraft. <i>Astrophysical Journal</i> , 2021, 923, 185.	4.5	4
6	Solar Wind Turbulence from 1 to 45 au. II. Analysis of Inertial-range Fluctuations Using Voyager and ACE Observations. <i>Astrophysical Journal</i> , 2020, 900, 92.	4.5	14
7	Solar Wind Turbulence from 1 to 45 au. I. Evidence for Dissipation of Magnetic Fluctuations Using Voyager and ACE Observations. <i>Astrophysical Journal</i> , 2020, 900, 91.	4.5	18
8	Solar Wind Turbulence from 1 to 45 au. III. Anisotropy of Magnetic Fluctuations in the Inertial Range Using Voyager and ACE Observations. <i>Astrophysical Journal</i> , 2020, 900, 93.	4.5	20
9	Solar Wind Turbulence from 1 to 45 au. IV. Turbulent Transport and Heating of the Solar Wind Using Voyager Observations. <i>Astrophysical Journal</i> , 2020, 900, 94.	4.5	22
10	Solar Wind Turbulence from 1 to 45 au. V. Data Intervals from the Voyager Observations. <i>Astrophysical Journal, Supplement Series</i> , 2020, 250, 14.	7.7	2
11	Advanced Composition Explorer Observations of Turbulence from 1998 through 2002: Data Intervals. <i>Astrophysical Journal, Supplement Series</i> , 2020, 250, 15.	7.7	4
12	Some Properties of the Solar Wind Turbulence at 1 AU Statistically Examined in the Different Types of Solar Wind Plasma. <i>Journal of Geophysical Research: Space Physics</i> , 2019, 124, 2406-2424.	2.4	27
13	Slowing of the Solar Wind in the Outer Heliosphere. <i>Astrophysical Journal</i> , 2019, 885, 156.	4.5	47
14	Correlation Scales of the Turbulent Cascade at 1 AU. <i>Journal of Physics: Conference Series</i> , 2018, 1100, 012023.	0.4	0
15	Roles of Flow Braking, Plasmaspheric Virtual Resonances, and Ionospheric Currents in Producing Ground Pi2 Pulsations. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 9187-9203.	2.4	12
16	Magnetic Waves Excited by Newborn Interstellar Pickup Ions Measured by the <i>Voyager</i> Spacecraft from 1 to 45 au. III. Observation Times. <i>Astrophysical Journal, Supplement Series</i> , 2018, 237, 34.	7.7	16
17	Van Allen Probes Observation of a Fundamental Poloidal Standing Alfvén Wave Event Related to Giant Pulsations. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 4574-4593.	2.4	24
18	Correlation Scales of the Turbulent Cascade at 1 au. <i>Astrophysical Journal</i> , 2018, 858, 21.	4.5	15

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19	Magnetic Waves Excited by Newborn Interstellar Pickup Ions Measured by the Voyager Spacecraft from 1 to 45 au. II. Instability and Turbulence Analyses. <i>Astrophysical Journal</i> , 2018, 863, 76.	4.5	22
20	Magnetic Waves Excited by Newborn Interstellar Pickup Ions Measured by the Voyager Spacecraft from 1 to 45 au. I. Wave Properties. <i>Astrophysical Journal</i> , 2018, 863, 75.	4.5	21
21	Observation and Numerical Simulation of Cavity Mode Oscillations Excited by an Interplanetary Shock. <i>Journal of Geophysical Research: Space Physics</i> , 2018, 123, 1969-1988.	2.4	21
22	The Turbulence Magnetic Helicity Signature in the Interplanetary Medium: A Blackman–Tukey and Morlet Wavelet Analysis. <i>Astrophysical Journal</i> , 2018, 855, 121.	4.5	9
23	Listing of 502 Times When the Ulysses Magnetic Fields Instrument Observed Waves Due to Newborn Interstellar Pickup Protons. <i>Astrophysical Journal</i> , 2017, 840, 13.	4.5	13
24	Inferring the Heliospheric Magnetic Field Back through Maunder Minimum. <i>Astrophysical Journal</i> , 2017, 837, 165.	4.5	14
25	Observation of Magnetic Waves Excited by Newborn Interstellar Pickup He ⁺ Observed by the Voyager 2 Spacecraft at 30 au. <i>Astrophysical Journal</i> , 2017, 849, 61.	4.5	15
26	Observations of Low-Frequency Magnetic Waves due to Newborn Interstellar Pickup Ions Using ACE, Ulysses, and Voyager Data. <i>Journal of Physics: Conference Series</i> , 2017, 900, 012018.	0.4	13
27	THE EFFECT OF ELECTRON THERMAL PRESSURE ON THE OBSERVED MAGNETIC HELICITY IN THE SOLAR WIND. <i>Astrophysical Journal</i> , 2016, 833, 212.	4.5	7
28	A SURVEY OF MAGNETIC WAVES EXCITED BY NEWBORN INTERSTELLAR He ⁺ OBSERVED BY THE ACE SPACECRAFT AT 1 au. <i>Astrophysical Journal</i> , 2016, 830, 47.	4.5	22
29	Propagation of ULF waves from the upstream region to the midnight sector of the inner magnetosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 8428-8447.	2.4	17
30	VOYAGER OBSERVATIONS OF MAGNETIC WAVES DUE TO NEWBORN INTERSTELLAR PICKUP IONS: 2–6 au. <i>Astrophysical Journal</i> , 2016, 822, 94.	4.5	29
31	Storm time occurrence and spatial distribution of Pc4 poloidal ULF waves in the inner magnetosphere: A Van Allen Probes statistical study. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 4748-4762.	2.4	66
32	ACE observations of magnetic waves arising from newborn interstellar pickup helium ions. <i>Geophysical Research Letters</i> , 2015, 42, 9617-9623.	4.0	16
33	Externally driven plasmaspheric ULF waves observed by the Van Allen Probes. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 526-552.	2.4	44
34	Multifrequency compressional magnetic field oscillations and their relation to multiharmonic toroidal mode standing Alfvén waves. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 10,384.	2.4	9
35	Interplanetary coronal mass ejections from MESSENGER orbital observations at Mercury. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 6101-6118.	2.4	88
36	STATISTICAL ANALYSIS OF THE MAGNETIC HELICITY SIGNATURE OF THE SOLAR WIND TURBULENCE AT 1 AU. <i>Astrophysical Journal</i> , 2015, 806, 78.	4.5	19

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37	Third-moment descriptions of the interplanetary turbulent cascade, intermittency and back transfer. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140150.	3.4	60
38	Proton temperature change with heliocentric distance from 0.3 to 1 AU according to relative temperatures. Journal of Geophysical Research: Space Physics, 2014, 119, 3267-3280.	2.4	14
39	VARIABLE CASCADE DYNAMICS AND INTERMITTENCY IN THE SOLAR WIND AT 1 AU. Astrophysical Journal, 2014, 786, 52.	4.5	29
40	<i>ULYSSES</i> OBSERVATIONS OF MAGNETIC WAVES DUE TO NEWBORN INTERSTELLAR PICKUP IONS. I. NEW OBSERVATIONS AND LINEAR ANALYSIS. Astrophysical Journal, 2014, 784, 150.	4.5	34
41	<i>ULYSSES</i> OBSERVATIONS OF MAGNETIC WAVES DUE TO NEWBORN INTERSTELLAR PICKUP IONS. II. APPLICATION OF TURBULENCE CONCEPTS TO LIMITING WAVE ENERGY AND OBSERVABILITY. Astrophysical Journal, 2014, 787, 133.	4.5	33
42	The heliospheric magnetic flux, solar wind proton flux, and cosmic ray intensity during the coming solar minimum. Space Weather, 2014, 12, 499-507.	3.7	14
43	An analysis of Alfvén radius based on sunspot number from 1749 to today. Journal of Geophysical Research: Space Physics, 2014, 119, 115-120.	2.4	29
44	Excitation of poloidal standing Alfvén waves through drift resonance wave-particle interaction. Geophysical Research Letters, 2013, 40, 4127-4132.	4.0	134
45	Solar wind magnetic field discontinuities and turbulence generated current layers. AIP Conference Proceedings, 2013, , .	0.4	5
46	Preliminary analysis of magnetic waves due to newborn interstellar pickup ions. AIP Conference Proceedings, 2013, , .	0.4	2
47	DECLINE AND RECOVERY OF THE INTERPLANETARY MAGNETIC FIELD DURING THE PROTRACTED SOLAR MINIMUM. Astrophysical Journal, 2013, 775, 59.	4.5	23
48	An analysis of heliospheric magnetic field flux based on sunspot number from 1749 to today and prediction for the coming solar minimum. Journal of Geophysical Research: Space Physics, 2013, 118, 7525-7531.	2.4	25
49	Solar-Cycle, Radial and Latitudinal Variations of Magnetic Helicity: IMF Observations. Geophysical Monograph Series, 2013, , 239-245.	0.1	3
50	Solar wind alpha particles and heavy ions in the inner heliosphere observed with MESSENGER. Journal of Geophysical Research, 2012, 117, .	3.3	54
51	OBSERVATION OF BERNSTEIN WAVES EXCITED BY NEWBORN INTERSTELLAR PICKUP IONS IN THE SOLAR WIND. Astrophysical Journal, 2012, 745, 112.	4.5	25
52	THE TURBULENT CASCADE AND PROTON HEATING IN THE SOLAR WIND DURING SOLAR MINIMUM. Astrophysical Journal, 2012, 754, 93.	4.5	45
53	OBSERVATIONAL CONSTRAINTS ON THE ROLE OF CYCLOTRON DAMPING AND KINETIC ALFVÉN WAVES IN THE SOLAR WIND. Astrophysical Journal, 2012, 745, 8.	4.5	73
54	Use of single-component wind speed in Rankine-Hugoniot analysis of interplanetary shocks. Space Weather, 2011, 9, .	3.7	9

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55	Turbulence associated with corotating interaction regions at 1AU: Inertial range cross-helicity spectra. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	11
56	Turbulence associated with corotating interaction regions at 1 AU: Inertial and dissipation range magnetic field spectra. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	15
57	INTERPLANETARY MAGNETIC FLUX DEPLETION DURING PROTRACTED SOLAR MINIMA. Astrophysical Journal, 2011, 727, 8.	4.5	27
58	THIRD MOMENTS AND THE ROLE OF ANISOTROPY FROM VELOCITY SHEAR IN THE SOLAR WIND. Astrophysical Journal, 2011, 736, 44.	4.5	31
59	THE TURBULENT CASCADE FOR HIGH CROSS-HELICITY STATES AT 1 AU. Astrophysical Journal, 2010, 713, 920-934.	4.5	46
60	TURBULENT HEATING OF THE DISTANT SOLAR WIND BY INTERSTELLAR PICKUP PROTONS IN A DECELERATING FLOW. Astrophysical Journal, 2010, 719, 716-721.	4.5	57
61	EXCITATION OF LOW-FREQUENCY WAVES IN THE SOLAR WIND BY NEWBORN INTERSTELLAR PICKUP IONS H^{+} AND He^{+} AS SEEN BY VOYAGER AT 4.5 AU. Astrophysical Journal, 2010, 724, 1256-1261.	4.5	33
62	Smith <i>et al.</i> Reply. Physical Review Letters, 2010, 104, .	7.8	6
63	A Two-component Transport Model for Solar Wind Fluctuations: Waves plus Quasi-2D Turbulence. , 2010, , .		1
64	Inertial range anisotropies in the solar wind from 0.3 to 1 AU: Helios 1 observations. Journal of Geophysical Research, 2010, 115, .	3.3	34
65	THE TURBULENT CASCADE AND PROTON HEATING IN THE SOLAR WIND AT 1 AU. Astrophysical Journal, 2009, 697, 1119-1127.	4.5	114
66	THE FLUX OF OPEN AND TOROIDAL INTERPLANETARY MAGNETIC FIELD AS A FUNCTION OF HELIOLATITUDE AND SOLAR CYCLE. Astrophysical Journal, 2009, 695, 357-362.	4.5	13
67	Turbulence in space plasmas. , 2009, , 163-194.		10
68	SPECTRAL INDICES FOR MULTI-DIMENSIONAL INTERPLANETARY TURBULENCE AT 1 AU. Astrophysical Journal, 2009, 692, 684-693.	4.5	89
69	Turbulent Cascade at 1 AU in High Cross-Helicity Flows. Physical Review Letters, 2009, 103, 201101.	7.8	62
70	Short wavelength turbulence in the solar wind: Linear theory of whistler and kinetic Alfvén fluctuations. Journal of Geophysical Research, 2009, 114, .	3.3	113
71	Anisotropies and helicities in the solar wind inertial and dissipation ranges at 1 AU. Journal of Geophysical Research, 2008, 113, .	3.3	97
72	Automated shock detection and analysis algorithm for space weather application. Space Weather, 2008, 6, .	3.7	21

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73	The Turbulent Cascade at 1 AU: Energy Transfer and the Third-Order Scaling for MHD. <i>Astrophysical Journal</i> , 2008, 679, 1644-1660.	4.5	180
74	Statistical Analysis of the High-Frequency Spectral Break of the Solar Wind Turbulence at 1 AU. <i>Astrophysical Journal</i> , 2008, 675, 1576-1583.	4.5	91
75	Turbulence spectrum of interplanetary magnetic fluctuations and the rate of energy cascade. <i>AIP Conference Proceedings</i> , 2007, , .	0.4	4
76	Evaluation of the turbulent energy cascade rates from the upper inertial range in the solar wind at 1 AU. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	149
77	Numerous small magnetic field discontinuities of Bartels rotation 2286 and the potential role of Alfvénic turbulence. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	111
78	Interplanetary magnetic fluctuation anisotropy in the inertial range. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	84
79	Turbulent Heating of the Solar Wind by Newborn Interstellar Pickup Protons. <i>Astrophysical Journal</i> , 2006, 638, 508-517.	4.5	144
80	Dissipation of the Perpendicular Turbulent Cascade in the Solar Wind. <i>Astrophysical Journal</i> , 2006, 639, 1177-1185.	4.5	73
81	Dependence of the Dissipation Range Spectrum of Interplanetary Magnetic Fluctuations on the Rate of Energy Cascade. <i>Astrophysical Journal</i> , 2006, 645, L85-L88.	4.5	289
82	Signatures of Alfvén-cyclotron wave-ion scattering: Advanced Composition Explorer (ACE) solar wind observations. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	24
83	Further evidence of wave refraction associated with extended rarefaction events in the solar wind. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	15
84	Magnetic helicity in the solar wind. <i>Advances in Space Research</i> , 2003, 32, 1971-1980.	2.6	11
85	The radial temperature profile of the solar wind. <i>Geophysical Research Letters</i> , 2003, 30, n/a-n/a.	4.0	71
86	Turbulent Heating of the Distant Solar Wind by Interstellar Pickup Protons. <i>Astrophysical Journal</i> , 2003, 592, 564-573.	4.5	104
87	Heating of the low-latitude solar wind by dissipation of turbulent magnetic fluctuations. <i>Journal of Geophysical Research</i> , 2001, 106, 8253-8272.	3.3	256
88	Proton temperature anisotropy constraint in the solar wind: ACE observations. <i>Geophysical Research Letters</i> , 2001, 28, 2759-2762.	4.0	113
89	Day the solar wind almost disappeared: Magnetic field fluctuations, wave refraction and dissipation. <i>Journal of Geophysical Research</i> , 2001, 106, 18625-18634.	3.3	77
90	Tokamaks' question: Surface tension vs buoyancy. <i>Physics Teacher</i> , 2001, 39, 69-70.	0.3	1

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91	Dissipation range dynamics: Kinetic Alfvén waves and the importance of \hat{v}_e . Journal of Geophysical Research, 1999, 104, 22331-22344.	3.3	308
92	Observational constraints on the dynamics of the interplanetary magnetic field dissipation range. Journal of Geophysical Research, 1998, 103, 4775-4787.	3.3	658
93	Dynamical age of solar wind turbulence in the outer heliosphere. Journal of Geophysical Research, 1998, 103, 6495-6502.	3.3	38
94	Characteristics of magnetic fluctuations within coronal mass ejections: The January 1997 event. Geophysical Research Letters, 1998, 25, 2505-2508.	4.0	46
95	Contribution of Cyclotron-resonant Damping to Kinetic Dissipation of Interplanetary Turbulence. Astrophysical Journal, 1998, 507, L181-L184.	4.5	144
96	The role of coronal mass ejections and interplanetary shocks in interplanetary magnetic field statistics and solar magnetic flux ejection. Journal of Geophysical Research, 1997, 102, 249-261.	3.3	32
97	Comment on "The underlying magnetic field direction in Ulysses observations of the southern polar heliosphere" by Forsyth et al.. Geophysical Research Letters, 1996, 23, 3279-3280.	4.0	4
98	Thermal anisotropies in the solar wind: Evidence of heating by interstellar pickup ions?. Geophysical Research Letters, 1996, 23, 3259-3262.	4.0	25
99	Inelastic scattering in normal metal/superconductor point contacts. European Physical Journal D, 1996, 46, 1327-1328.	0.4	0
100	Anomalous temperature dependence of the Andreev peak for Ag/Nd _{1.85} Ce _{0.15} CuO ₄ point contacts. Physica B: Condensed Matter, 1996, 218, 202-204.	2.7	0
101	Electron beam excitation of upstream waves in the whistler mode frequency range. Journal of Geophysical Research, 1994, 99, 13373.	3.3	17
102	Proton and electron mean free paths: The Palmer consensus revisited. Astrophysical Journal, 1994, 420, 294.	4.5	614
103	Long-term variations of interplanetary magnetic field spectra with implications for cosmic ray modulation. Journal of Geophysical Research, 1993, 98, 3585-3603.	3.3	76
104	Multiple spacecraft survey of the north-south asymmetry of the interplanetary magnetic field. Journal of Geophysical Research, 1993, 98, 9401-9415.	3.3	30
105	Data analysis strategies for the characterization of normal: superconductor point contacts by barrier strength parameter. Journal of Applied Physics, 1993, 73, 4439-4443.	2.5	4
106	Alfvén waves and associated energetic ions downstream from Uranus. Journal of Geophysical Research, 1991, 96, 1647-1660.	3.3	11
107	Whistler waves associated with the Uranian bow shock: Outbound observations. Journal of Geophysical Research, 1991, 96, 15841-15852.	3.3	20
108	Solar cycle variation of the interplanetary magnetic field spiral. Astrophysical Journal, 1991, 370, 435.	4.5	114

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109	Cosmic-ray pitch angle scattering in isotropic turbulence. II - Sensitive dependence on the dissipation range spectrum. <i>Astrophysical Journal</i> , 1990, 363, 283.	4.5	32
110	Anisotropy of shock-accelerated ion distributions in interplanetary space. <i>Journal of Geophysical Research</i> , 1989, 94, 5474-5478.	3.3	5
111	Whistler wave bursts upstream of the Uranian bow shock. <i>Journal of Geophysical Research</i> , 1989, 94, 17035-17048.	3.3	14
112	Cosmic-ray pitch-angle scattering in isotropic turbulence. <i>Astrophysical Journal</i> , 1988, 334, 470.	4.5	41
113	Measurement of the acoustic nonlinearity parameter in water, methanol, liquid nitrogen, and liquid helium by two different methods: A comparison. <i>Journal of the Acoustical Society of America</i> , 1987, 82, 2086-2089.	1.1	20
114	Electromagnetic ion beam instabilities: Growth at cyclotron harmonic wave numbers. <i>Journal of Geophysical Research</i> , 1987, 92, 117-125.	3.3	19
115	Coupled hydromagnetic wave excitation and ion acceleration upstream of the Jovian bow shock. <i>Journal of Geophysical Research</i> , 1986, 91, 81-90.	3.3	22
116	Large-amplitude MHD waves upstream of the Jovian bow shock: Reinterpretation. <i>Journal of Geophysical Research</i> , 1985, 90, 302-310.	3.3	68
117	Beam-driven ion cyclotron harmonic resonances in the terrestrial foreshock. <i>Journal of Geophysical Research</i> , 1985, 90, 1429-1434.	3.3	32
118	Electromagnetic ion beam instabilities. <i>Physics of Fluids</i> , 1984, 27, 1852.	1.4	231
119	Turbulence analysis of the Jovian upstream $\tilde{\omega}$ -wave phenomenon. <i>Journal of Geophysical Research</i> , 1983, 88, 5581-5593.	3.3	85
120	Large amplitude MHD waves upstream of the Jovian bow shock. <i>Journal of Geophysical Research</i> , 1983, 88, 9989-9999.	3.3	52