Robert T Wicks

List of Publications by Year
in descending order

60 papers	2,123 citations	201658 27 h-index	233409 45 g-index
64 all docs	64 docs citations	64 times ranked	1528 citing authors

#	Article	IF	Citations
1	The Economic Impact of Space Weather: Where Do We Stand?. Risk Analysis, 2017, 37, 206-218.	2.7	187
2	Anisotropy of Solar Wind Turbulence between Ion and Electron Scales. Physical Review Letters, 2010, 104, 255002.	7.8	159
3	Power and spectral index anisotropy of the entire inertial range of turbulence in the fast solar wind. Monthly Notices of the Royal Astronomical Society: Letters, 2010, 407, L31-L35.	3.3	151
4	THREE-DIMENSIONAL STRUCTURE OF SOLAR WIND TURBULENCE. Astrophysical Journal, 2012, 758, 120.	4.5	105
5	Anisotropy in Space Plasma Turbulence: Solar Wind Observations. Space Science Reviews, 2012, 172, 325-342.	8.1	97
6	Anisotropy of Imbalanced AlfvÃ©nic Turbulence in Fast Solar Wind. Physical Review Letters, 2011, 106, 045001.	7.8	82
7	DETAILED FIT OF â€œCRITICAL BALANCEâ€•THEORY TO SOLAR WIND TURBULENCE MEASUREMENTS. Astrophysical Journal, 2011, 733, 76.	4.5	76
8	The Role of Proton Cyclotron Resonance as a Dissipation Mechanism in Solar Wind Turbulence: A Statistical Study at Ion-kinetic Scales. Astrophysical Journal, 2018, 856, 49.	4.5	68
9	The Solar Orbiter Science Activity Plan. Astronomy and Astrophysics, 2020, 642, A3.	5.1	67
10	Kinetic scale turbulence and dissipation in the solar wind: key observational results and future outlook. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140147.	3.4	62
11	A PROTON-CYCLOTRON WAVE STORM GENERATED BY UNSTABLE PROTON DISTRIBUTION FUNCTIONS IN THE SOLAR WIND. Astrophysical Journal, 2016, 819, 6.	4.5	57
12	INTERPRETING POWER ANISOTROPY MEASUREMENTS IN PLASMA TURBULENCE. Astrophysical Journal Letters, 2010, 711, L79-L83.	8.3	55
13	Permutation entropy and statistical complexity analysis of turbulence in laboratory plasmas and the solar wind. Physical Review E, 2015, 91, 023101.	2.1	55
14	On Kinetic Slow Modes, Fluid Slow Modes, and Pressure-balanced Structures in the Solar Wind. Astrophysical Journal, 2017, 840, 106.	4.5	53
15	A Quarter Century of<i>Wind</i>Spacecraft Discoveries. Reviews of Geophysics, 2021, 59, e2020RG000714.	23.0	52
16	Magnetic Discontinuities in the Near-Earth Solar Wind: Evidence of In-Transit Turbulence or Remnants ofÂCoronal Structure?. Solar Physics, 2011, 269, 411-420.	2.5	44
17	Turbulent dissipation challenge: a community-driven effort. Journal of Plasma Physics, 2015, 81, .	2.1	42
18	Alignment and Scaling of Large-Scale Fluctuations in the Solar Wind. Physical Review Letters, 2013, 110, 025003.	7.8	41

#	Article	IF	Citations
19	CORRELATIONS AT LARGE SCALES AND THE ONSET OF TURBULENCE IN THE FAST SOLAR WIND. Astrophysical Journal, 2013, 778, 177.	4.5	38
20	Parallel-propagating Fluctuations at Proton-kinetic Scales in the Solar Wind Are Dominated By Kinetic Instabilities. Astrophysical Journal Letters, 2019, 884, L53.	8.3	38
21	Mutual information as a tool for identifying phase transitions in dynamical complex systems with limited data. Physical Review E, 2007, 75, 051125.	2.1	36
22	Measures of three-dimensional anisotropy and intermittency in strong AlfvÃ©nic turbulence. Monthly Notices of the Royal Astronomical Society, 2016, 459, 2130-2139.	4.4	35
23	Increasing resilience to cascading events: The M.OR.D.OR. scenario. Safety Science, 2018, 110, 131-140.	4.9	35
24	The Variation of Solar Wind Correlation Lengths Over Three Solar Cycles. Solar Physics, 2010, 262, 191-198.	2.5	34
25	Determining the Kappa Distributions of Space Plasmas from Observations in a Limited Energy Range. Astrophysical Journal, 2018, 864, 3.	4.5	32
26	POWER ANISOTROPY IN THE MAGNETIC FIELD POWER SPECTRAL TENSOR OF SOLAR WIND TURBULENCE. Astrophysical Journal, 2012, 746, 103.	4.5	29
27	The evolution of inverted magnetic fields through the inner heliosphere. Monthly Notices of the Royal Astronomical Society, 2020, 494, 3642-3655.	4.4	29
28	SPATIAL CORRELATION OF SOLAR WIND FLUCTUATIONS AND THEIR SOLAR CYCLE DEPENDENCE. Astrophysical Journal, 2009, 690, 734-742.	4.5	27
29	Ensemble downscaling in coupled solar windâ€magnetosphere modeling for space weather forecasting. Space Weather, 2014, 12, 395-405.	3.7	27
30	Evaluating the Skill of Forecasts of the Nearâ€Earth Solar Wind Using a Space Weather Monitor at L5. Space Weather, 2018, 16, 814-828.	3.7	22
31	Polytropic Behavior of Solar Wind Protons Observed by Parker Solar Probe. Astrophysical Journal, 2020, 901, 26.	4.5	21
32	A Quasi-linear Diffusion Model for Resonant Waveâ€"Particle Instability in Homogeneous Plasma. Astrophysical Journal, 2020, 902, 128.	4.5	20
33	Three-dimensional magnetic reconnection in particle-in-cell simulations of anisotropic plasma turbulence. Journal of Plasma Physics, 2021, 87, .	2.1	19
34	The Fluid-like and Kinetic Behavior of Kinetic AlfvÃ©n Turbulence in Space Plasma. Astrophysical Journal, 2019, 870, 106.	4.5	18
35	The Impact of Turbulent Solar Wind Fluctuations on Solar Orbiter Plasma Proton Measurements. Astrophysical Journal, 2019, 886, 101.	4.5	18
36	DISSIPATION OF PARALLEL AND OBLIQUE ALFVÃ‰N-CYCLOTRON WAVESâ€"IMPLICATIONS FOR HEATING OF ALPHA PARTICLES IN THE SOLAR WIND. Astrophysical Journal, 2015, 814, 33.	4.5	15

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37	SPECTRAL ANISOTROPY OF ELSÃ„SSER VARIABLES IN TWO-DIMENSIONAL WAVE-VECTOR SPACE AS OBSERVED IN THE FAST SOLAR WIND TURBULENCE. Astrophysical Journal Letters, 2016, 816, L24.	8.3	15
38	Radial Evolution of Thermal and Suprathermal Electron Populations in the Slow Solar Wind from 0.13 to 0.5 au: Parker Solar Probe Observations. Astrophysical Journal, 2022, 931, 118.	4.5	15
39	Scale-free texture of the fast solar wind. Physical Review E, 2011, 84, 065401.	2.1	13
40	Active Region Modulation of Coronal Hole Solar Wind. Astrophysical Journal, 2019, 887, 146.	4.5	13
41	MagneToRE: Mapping the 3-D Magnetic Structure of the Solar Wind Using a Large Constellation of Nanosatellites. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	13
42	Determining the Bulk Parameters of Plasma Electrons from Pitch-Angle Distribution Measurements. Entropy, 2020, 22, 103.	2.2	12
43	On the Calculation of the Effective Polytropic Index in Space Plasmas. Entropy, 2019, 21, 997.	2.2	11
44	A Case for Electron-Astrophysics. Experimental Astronomy, 0, , 1.	3.7	11
45	On the Determination of Kappa Distribution Functions from Space Plasma Observations. Entropy, 2020, 22, 212.	2.2	9
46	Dependence of Solar Wind Proton Temperature on the Polarization Properties of AlfvÃ©nic Fluctuations at Ion-kinetic Scales. Astrophysical Journal, 2021, 912, 101.	4.5	9
47	Evaluating the Performance of a Plasma Analyzer for a Space Weather Monitor Mission Concept. Space Weather, 2020, 18, e2020SW002559.	3.7	9
48	Tests for coronal electron temperature signatures in suprathermal electron populations at 1â€¯AU. Annales Geophysicae, 2017, 35, 1275-1291.	1.6	8
49	The Stability of the Electron Strahl against the Oblique Fast-magnetosonic/Whistler Instability in the Inner Heliosphere. Astrophysical Journal Letters, 2022, 926, L26.	8.3	8
50	Deriving the bulk properties of solar wind electrons observed by Solar Orbiter. Astronomy and Astrophysics, 2021, 656, A10.	5.1	6
51	High-cadence measurements of electron pitch-angle distributions from Solar Orbiter SWA-EAS burst mode operations. Astronomy and Astrophysics, 0, , .	5.1	5
52	The Kinetic Expansion of Solar-wind Electrons: Transport Theory and Predictions for the Very Inner Heliosphere. Astrophysical Journal, 2022, 927, 162.	4.5	5
53	The Plasma Universe: A Coherent Science Theme for Voyage 2050. Frontiers in Astronomy and Space Sciences, 2021, 8, .	2.8	4
54	Evolving solar wind flow properties of magnetic inversions observed by <i>Helios</i>. Monthly Notices of the Royal Astronomical Society, 2021, 501, 5379-5392.	4.4	3

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55	Use of multi-point analysis and modelling to address cross-scale coupling in space plasmas: Lessons from Cluster. Planetary and Space Science, 2011, 59, 630-638.	1.7	2
56	Editorial: Topical Collection on Multi-Point Measurements of the Thermosphere with the QB50 Mission. Space Science Reviews, 2019, 215, 1.	8.1	2
57	Temperature anisotropy instabilities; combining plasma and magnetic field data at different distances from the Sun. , 2013, , .		1
58	Scaling anisotropy of the power in parallel and perpendicular components of the solar wind magnetic field. AIP Conference Proceedings, 2013, , .	0.4	1
59	Revolutionizing Our Understanding of Particle Energization in Space Plasmas Using On-Board Wave-Particle Correlator Instrumentation. Frontiers in Astronomy and Space Sciences, 0, 9, .	2.8	1
60	Anisotropy in Space Plasma Turbulence: Solar Wind Observations. Space Sciences Series of ISSI, 2011, , 325-342.	0.0	0