

Michael S Wheatland

List of Publications by Year in descending order

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114
papers

3,847
citations

126907

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114
all docs

114
docs citations

114
times ranked

1693
citing authors

#	ARTICLE	IF	CITATIONS
1	An Optimization Approach to Reconstructing Force-free Fields. <i>Astrophysical Journal</i> , 2000, 540, 1150-1155.	4.5	393
2	A CRITICAL ASSESSMENT OF NONLINEAR FORCE-FREE FIELD MODELING OF THE SOLAR CORONA FOR ACTIVE REGION 10953. <i>Astrophysical Journal</i> , 2009, 696, 1780-1791.	4.5	318
3	Nonlinear Force-Free Modeling of Coronal Magnetic Fields Part I: A Quantitative Comparison of Methods. <i>Solar Physics</i> , 2006, 235, 161-190.	2.5	286
4	Nonlinear Force-free Field Modeling of a Solar Active Region around the Time of a Major Flare and Coronal Mass Ejection. <i>Astrophysical Journal</i> , 2008, 675, 1637-1644.	4.5	254
5	Nonlinear Force-Free Modeling of Coronal Magnetic Fields. II. Modeling a Filament Arcade and Simulated Chromospheric and Photospheric Vector Fields. <i>Solar Physics</i> , 2008, 247, 269-299.	2.5	186
6	A COMPARISON OF FLARE FORECASTING METHODS. I. RESULTS FROM THE "ALL-CLEAR" WORKSHOP. <i>Astrophysical Journal</i> , 2016, 829, 89.	4.5	162
7	The Origin of the Solar Flare Waiting-Time Distribution. <i>Astrophysical Journal</i> , 2000, 536, L109-L112.	4.5	148
8	The Waiting-Time Distribution of Solar Flare Hard X-ray Bursts. <i>Astrophysical Journal</i> , 1998, 509, 448-455.	4.5	124
9	A Bayesian Approach to Solar Flare Prediction. <i>Astrophysical Journal</i> , 2004, 609, 1134-1139.	4.5	82
10	THE INFLUENCE OF SPATIAL RESOLUTION ON NONLINEAR FORCE-FREE MODELING. <i>Astrophysical Journal</i> , 2015, 811, 107.	4.5	78
11	Understanding Solar Flare Waiting-Time Distributions. <i>Solar Physics</i> , 2002, 211, 255-274.	2.5	71
12	A statistical solar flare forecast method. <i>Space Weather</i> , 2005, 3, n/a-n/a.	3.7	66
13	Metastable Magnetic Configurations and Their Significance for Solar Eruptive Events. <i>Astrophysical Journal</i> , 2001, 548, 492-496.	4.5	62
14	Rates of Flaring in Individual Active Regions. <i>Solar Physics</i> , 2001, 203, 87-106.	2.5	58
15	USING CORONAL LOOPS TO RECONSTRUCT THE MAGNETIC FIELD OF AN ACTIVE REGION BEFORE AND AFTER A MAJOR FLARE. <i>Astrophysical Journal</i> , 2014, 783, 102.	4.5	57
16	A SELF-CONSISTENT NONLINEAR FORCE-FREE SOLUTION FOR A SOLAR ACTIVE REGION MAGNETIC FIELD. <i>Astrophysical Journal</i> , 2009, 700, L88-L91.	4.5	55
17	GUIDING NONLINEAR FORCE-FREE MODELING USING CORONAL OBSERVATIONS: FIRST RESULTS USING A QUASI-GRAD-RUBIN SCHEME. <i>Astrophysical Journal</i> , 2012, 756, 153.	4.5	54
18	Alfvén solitons in a Fermionic quantum plasma. <i>Physical Review E</i> , 2011, 83, 066407.	2.1	48

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19	Are Electric Currents in Solar Active Regions Neutralized?. <i>Astrophysical Journal</i> , 2000, 532, 616-621.	4.5	47
20	Search for Periodicities in the Homestake Solar Neutrino Data. <i>Astrophysical Journal</i> , 1997, 491, 409-413.	4.5	45
21	Rotational Signature and Possible [CLC][ITAL]r[/ITAL][[/CLC]-Mode Signature in the GALLEX Solar Neutrino Data. <i>Astrophysical Journal</i> , 1999, 523, L177-L180.	4.5	45
22	The Coronal Mass Ejection Waiting-Time Distribution. <i>Solar Physics</i> , 2003, 214, 361-373.	2.5	44
23	Interpreting Yokkoh hard and soft X-ray flare observations. <i>Solar Physics</i> , 1995, 158, 283-299.	2.5	44
24	Calculating and Testing Nonlinear Force-Free Fields. <i>Solar Physics</i> , 2007, 245, 251-262.	2.5	43
25	A Fast Current-Field Iteration Method for Calculating Nonlinear Force-Free Fields. <i>Solar Physics</i> , 2006, 238, 29-39.	2.5	42
26	Dynamics of a double pendulum with distributed mass. <i>American Journal of Physics</i> , 2009, 77, 216-223.	0.7	39
27	[ITAL]Yokkoh[/ITAL] Soft X-Ray Telescope Images of the Diffuse Solar Corona. <i>Astrophysical Journal</i> , 1996, 461, .	4.5	38
28	PREDICTION OF SOLAR FLARES USING UNIQUE SIGNATURES OF MAGNETIC FIELD IMAGES. <i>Astrophysical Journal</i> , 2017, 834, 11.	4.5	37
29	Coronal Heating and the Vertical Temperature Structure of the Quiet Corona. <i>Astrophysical Journal</i> , 1997, 482, 510-518.	4.5	37
30	A Flare-type IV Burst Event from Proxima Centauri and Implications for Space Weather. <i>Astrophysical Journal</i> , 2020, 905, 23.	4.5	37
31	Parallel Construction of Nonlinear Force-Free Fields. <i>Solar Physics</i> , 2004, 222, 247-264.	2.5	36
32	Power-spectrum analyses of Super-Kamiokande solar neutrino data: Variability and its implications for solar physics and neutrino physics. <i>Physical Review D</i> , 2005, 72, .	4.7	36
33	Flare Frequencyâ€”Size Distributions for Individual Active Regions. <i>Astrophysical Journal</i> , 2000, 532, 1209-1214.	4.5	33
34	DO SOLAR FLARES EXHIBIT AN INTERVALâ€”SIZE RELATIONSHIP?. <i>Solar Physics</i> , 2000, 191, 381-389.	2.5	32
35	ACHIEVING SELF-CONSISTENT NONLINEAR FORCE-FREE MODELING OF SOLAR ACTIVE REGIONS. <i>Astrophysical Journal</i> , 2011, 728, 112.	4.5	30
36	Energy Balance in the Flaring Solar Corona. <i>Astrophysical Journal</i> , 2001, 557, 332-336.	4.5	30

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37	A Simple Dynamical Model for Filament Formation in the Solar Corona. <i>Astrophysical Journal</i> , 2005, 630, 587-595.	4.5	29
38	Including Flare Sympathy in a Model for Solar Flare Statistics. <i>Solar Physics</i> , 2006, 238, 73-86.	2.5	29
39	The Energetics of a Flaring Solar Active Region and Observed Flare Statistics. <i>Astrophysical Journal</i> , 2008, 679, 1621-1628.	4.5	27
40	The ASKAP Variables and Slow Transients (VAST) Pilot Survey. <i>Publications of the Astronomical Society of Australia</i> , 2021, 38, .	3.4	26
41	Combined and Comparative Analysis of Power Spectra. <i>Solar Physics</i> , 2005, 227, 137-153.	2.5	24
42	EVIDENCE FOR DEPARTURE FROM A POWER-LAW FLARE SIZE DISTRIBUTION FOR A SMALL SOLAR ACTIVE REGION. <i>Astrophysical Journal</i> , 2010, 710, 1324-1334.	4.5	24
43	Flare Frequency Distributions Based on a Master Equation. <i>Astrophysical Journal</i> , 1998, 494, 858-863.	4.5	23
44	A Magnetostatic Gradâ€“Rubin Code for Coronal Magnetic Field Extrapolations. <i>Solar Physics</i> , 2013, 282, 283-302.	2.5	20
45	ON THE BRIGHTNESS AND WAITING-TIME DISTRIBUTIONS OF A TYPE III RADIO STORM OBSERVED BY STEREO/WAVES. <i>Astrophysical Journal Letters</i> , 2010, 708, L95-L99.	8.3	19
46	Modeling a falling slinky. <i>American Journal of Physics</i> , 2012, 80, 1051-1060.	0.7	18
47	The Free Energy of NOAA Solar Active Region AR 11029. <i>Solar Physics</i> , 2012, 276, 133-160.	2.5	18
48	Flare Reconnection-driven Magnetic Field and Lorentz Force Variations at the Sunâ€™s Surface. <i>Astrophysical Journal</i> , 2019, 877, 67.	4.5	18
49	Avalanche Models of Solar Flares and the Distribution of Active Regions. <i>Astrophysical Journal</i> , 1996, 471, 1044-1048.	4.5	18
50	Apparent Latitudinal Modulation of the Solar Neutrino Flux. <i>Astrophysical Journal</i> , 1998, 507, 978-983.	4.5	18
51	A Better Linear Forceâ€“free Field. <i>Astrophysical Journal</i> , 1999, 518, 948-953.	4.5	17
52	Nonlinear Force-Free Modeling of the Corona in Spherical Coordinates. <i>Solar Physics</i> , 2014, 289, 1153-1171.	2.5	17
53	Principle of Minimum Energy in Magnetic Reconnection in a Self-organized Critical Model for Solar Flares. <i>Astrophysical Journal</i> , 2018, 859, 41.	4.5	16
54	An Improved Virial Estimate of Solar Active Region Energy. <i>Astrophysical Journal</i> , 2006, 636, 1151-1158.	4.5	15

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55	Is Cyclotron Maser Emission in Solar Flares Driven by a Horseshoe Distribution?. Solar Physics, 2016, 291, 3637-3658.	2.5	15
56	MODELING SUNSPOT AND STARSPOT DECAY BY TURBULENT EROSION. Astrophysical Journal, 2015, 800, 130.	4.5	13
57	Toward a Reconnection Model for Solar Flare Statistics. Astrophysical Journal, 2003, 595, 458-464.	4.5	12
58	Energy Balance in Avalanche Models for Solar Flares. Astrophysical Journal Letters, 2019, 883, L20.	8.3	11
59	Distribution of Flare Energies Based on Independent Reconnecting Structures. Solar Physics, 2002, 208, 33-42.	2.5	10
60	Initial Test of a Bayesian Approach to Solar Flare Prediction. Publications of the Astronomical Society of Australia, 2005, 22, 153-156.	3.4	10
61	Monte Carlo Simulation of Solar Active-Region Energy. Solar Physics, 2009, 255, 211-227.	2.5	10
62	MODELING THE SUNSPOT NUMBER DISTRIBUTION WITH A FOKKER-PLANCK EQUATION. Astrophysical Journal, 2011, 732, 5.	4.5	10
63	Bulk Energization of Electrons in Solar Flares by Alfvén Waves. Solar Physics, 2014, 289, 881-897.	2.5	10
64	A Study of External Magnetic Reconnection that Triggers a Solar Eruption. Astrophysical Journal Letters, 2017, 851, L1.	8.3	10
65	Modeling the Rate of Occurrence of Solar Flares. Astrophysical Journal, 2001, 550, L109-L112.	4.5	9
66	A Bayesian Approach to Forecasting Solar Cycles Using a Fokker-Planck Equation. Solar Physics, 2012, 276, 363-381.	2.5	9
67	A Generalized Equatorial Model for the Accelerating Solar Wind. Journal of Geophysical Research: Space Physics, 2018, 123, 1061-1085.	2.4	9
68	The mobile phone as a free-rotation laboratory. American Journal of Physics, 2021, 89, 342-348.	0.7	9
69	Quantifying the Performance of Force-free Extrapolation Methods Using Known Solutions. Astrophysical Journal, 2006, 641, 1188-1196.	4.5	8
70	YOHKOH/HXT EVIDENCE FOR A HYPERHOT LOOP-TOP SOURCE IN THE PRE-IMPULSIVE PHASE OF A LOOP FLARE. Solar Physics, 2001, 202, 117-130.	2.5	7
71	Interpretation of Statistical Flare Data using Magnetic Reconnection Models. Solar Physics, 2002, 211, 275-287.	2.5	7
72	A Rate-Independent Test for Solar Flare Sympathy. Solar Physics, 2006, 236, 313-324.	2.5	7

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73	Transfer of Energy, Potential, and Current by Alfvén Waves in Solar Flares. <i>Solar Physics</i> , 2013, 288, 223-240.	2.5	7
74	A current sheet traced from the Sun to interplanetary space. <i>Astronomy and Astrophysics</i> , 2011, 525, A156.	5.1	7
75	On Measuring Divergence for Magnetic Field Modeling. <i>Astrophysical Journal</i> , 2020, 900, 136.	4.5	7
76	Self-Stabilization of Light Sails by Damped Internal Degrees of Freedom. <i>Physical Review Applied</i> , 2022, 17, .	3.8	7
77	Energy release in a prominence-loaded flaring loop. <i>Solar Physics</i> , 1995, 159, 137-141.	2.5	6
78	Photospheric Response to a Flare. <i>Astrophysical Journal</i> , 2018, 864, 159.	4.5	6
79	Time-Dependent Stochastic Modeling of Solar Active Region Energy. <i>Solar Physics</i> , 2010, 266, 301-321.	2.5	5
80	Nonlinear Force-free Modeling of Flare-related Magnetic Field Changes at the Photosphere and Chromosphere. <i>Astrophysical Journal</i> , 2018, 865, 146.	4.5	5
81	The state of nonlinear force-free magnetic field extrapolation. <i>Journal of Physics: Conference Series</i> , 2013, 440, 012037.	0.4	4
82	Estimating Electric Current Densities in Solar Active Regions. <i>Solar Physics</i> , 2015, 290, 1147-1157.	2.5	4
83	Very narrow coronal mass ejections producing solar energetic particles. <i>Astronomy and Astrophysics</i> , 2018, 619, A34.	5.1	4
84	Alfvénic Fronts and the turning-off of the Energy Release in Solar Flares. <i>Publications of the Astronomical Society of Australia</i> , 1994, 11, 25-27.	3.4	3
85	A Test to Confirm the Source of Energy for Solar Flares. <i>Publications of the Astronomical Society of Australia</i> , 2001, 18, 351-354.	3.4	3
86	Testing Circuit Models for the Energies of Coronal Magnetic Field Configurations. <i>Solar Physics</i> , 2004, 219, 109-123.	2.5	3
87	Origin and Use of the Laplace Distribution in Daily Sunspot Numbers. <i>Solar Physics</i> , 2013, 282, 565-578.	2.5	3
88	A Check on the Validity of Magnetic Field Reconstructions. <i>Solar Physics</i> , 2018, 293, 1.	2.5	3
89	Mapping Magnetic Field Lines for an Accelerating Solar Wind. <i>Solar Physics</i> , 2019, 294, 1.	2.5	3
90	Self-consistent Nonlinear Force-Free Field Reconstruction from Weighted Boundary Conditions. <i>Solar Physics</i> , 2020, 295, 1.	2.5	3

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91	Relative Magnetic Helicity Based on a Periodic Potential Field. <i>Astrophysical Journal</i> , 2020, 894, 151.	4.5	3
92	Energy Balance in the Corona over the 22 Year Solar Cycle. <i>Solar Physics</i> , 2004, 219, 265-277.	2.5	2
93	Interpretation of SXT Data Concerning the Diffuse Corona. , 1996, , 417-418.		2
94	Cross-field Current Closure Below the Solar Photosphere. <i>Australian Journal of Physics</i> , 1994, 47, 361.	0.6	2
95	Analysis and Packaging of Radiochemical Solar Neutrino Data: A Bayesian Approach. <i>Solar Physics</i> , 2008, 247, 217-224.	2.5	1
96	SLINSPOT AND STARSPOT LIFETIMES IN A TURBULENT EROSION MODEL. <i>Astrophysical Journal</i> , 2017, 834, 108.	4.5	1
97	Reconstructing Highly-twisted Magnetic Fields. <i>Solar Physics</i> , 2020, 295, 1.	2.5	1
98	Advances in Geosciences. , 2007, , .		1
99	Bayesian Data Analysis. , 2010, , .		1
100	Rolling along a square path: The dynamics of biased balls. <i>American Journal of Physics</i> , 2020, 88, 465-474.	0.7	1
101	Nonlinear force-free modeling of magnetic fields in flare-productive active regions. <i>Proceedings of the International Astronomical Union</i> , 2015, 11, 167-174.	0.0	0
102	Editorial: 50 Years of Solar Physics. <i>Solar Physics</i> , 2016, 291, 3461-3465.	2.5	0
103	Editorial Appreciation. <i>Solar Physics</i> , 2017, 292, 1.	2.5	0
104	Editorial: Last Print Issue of Solar Physics. <i>Solar Physics</i> , 2017, 292, 1.	2.5	0
105	Editorial Appreciation. <i>Solar Physics</i> , 2018, 293, 1.	2.5	0
106	Editorial Appreciation. <i>Solar Physics</i> , 2019, 294, 1.	2.5	0
107	Comparisons Between the Field Lines Using an Accelerating and a Constant Solar Wind model. <i>Journal of Physics: Conference Series</i> , 2019, 1332, 012015.	0.4	0
108	Editorial Appreciation. <i>Solar Physics</i> , 2020, 295, 1.	2.5	0

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109	Editorial Appreciation. Solar Physics, 2021, 296, 1.	2.5	0
110	10.1119/10.0003380.1. , 2021, , .		0
111	RECONSTRUCTION OF NONLINEAR FORCE-FREE FIELDS AND SOLAR FLARE PREDICTION. , 2007, , 123-137.		0
112	10.1119/10.0000905.1. , 2020, , .		0
113	Editorial Appreciation. Solar Physics, 2022, 297, 1.	2.5	0
114	MODELLING THE CORONAL MAGNETIC FIELD USING HINODE (AND FUTURE) DATA. , 0, , 327-338.		0