

Steven Tomczyk

List of Publications by Year in descending order

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64
papers

6,410
citations

186265

28
h-index

128289

60
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65
all docs

65
docs citations

65
times ranked

2444
citing authors

#	ARTICLE	IF	CITATIONS
1	Electron Densities in the Solar Corona Measured Simultaneously in the Extreme Ultraviolet and Infrared. <i>Astrophysical Journal</i> , 2021, 906, 118.	4.5	7
2	Global maps of the magnetic field in the solar corona. <i>Science</i> , 2020, 369, 694-697.	12.6	92
3	Mapping the magnetic field in the solar corona through magnetoseismology. <i>Science China Technological Sciences</i> , 2020, 63, 2357-2368.	4.0	41
4	A New Facility for Airborne Solar Astronomy: NASA's WB-57 at the 2017 Total Solar Eclipse. <i>Astrophysical Journal</i> , 2020, 895, 131.	4.5	1
5	High-cadence Visible and Infrared Spectra of the Sun during Eclipse. <i>Astrophysical Journal</i> , 2019, 877, 10.	4.5	5
6	Solar Eclipse Observations from the Ground and Air from 0.31 to 5.5 Microns. <i>Solar Physics</i> , 2019, 294, 1.	2.5	10
7	Turbulence and Heating in the Flank and Wake Regions of a Coronal Mass Ejection. <i>Solar Physics</i> , 2018, 293, 1.	2.5	7
8	Experimental Testing of Scattering Polarization Models. <i>Astrophysical Journal Letters</i> , 2018, 867, L22.	8.3	1
9	The Eruption of a Prominence-carrying Coronal Flux Rope: Forward Synthesis of the Magnetic Field Strength Measurement by the COronal Solar Magnetism Observatory Large Coronagraph. <i>Astrophysical Journal</i> , 2018, 866, 57.	4.5	10
10	Magnetic Nulls and Super-radial Expansion in the Solar Corona. <i>Astrophysical Journal Letters</i> , 2017, 840, L13.	8.3	22
11	The Coronal Solar Magnetism Observatory. <i>Proceedings of the International Astronomical Union</i> , 2017, 13, 359-361.	0.0	1
12	A GLOBAL VIEW OF VELOCITY FLUCTUATIONS IN THE CORONA BELOW $1.3 R_{\odot}$ WITH CoMP. <i>Astrophysical Journal</i> , 2016, 828, 89.	4.5	64
13	Waves and Magnetism in the Solar Atmosphere (WAMIS). <i>Frontiers in Astronomy and Space Sciences</i> , 2016, 3, .	2.8	4
14	DIRECT OBSERVATION OF SOLAR CORONAL MAGNETIC FIELDS BY VECTOR TOMOGRAPHY OF THE CORONAL EMISSION LINE POLARIZATIONS. <i>Astrophysical Journal Letters</i> , 2016, 819, L36.	8.3	16
15	The COSMO coronagraph optical design and stray light analysis. <i>Proceedings of SPIE</i> , 2016, , .	0.8	4
16	Scientific objectives and capabilities of the Coronal Solar Magnetism Observatory. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 7470-7487.	2.4	40
17	Development of a tunable filter for coronal polarimetry. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 6184-6195.	2.4	5
18	Coronal plasma diagnostics from ground-based observations. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 8237-8249.	2.4	31

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19	Waves and Magnetism in the Solar Atmosphere (WAMIS). Proceedings of the International Astronomical Union, 2014, 10, 121-126.	0.0	0
20	Observations of Coronal Mass Ejections with the Coronal Multichannel Polarimeter. Solar Physics, 2013, 288, 637-650.	2.5	28
21	Coronal Multi-channel Polarimeter at the Lomnický Peak Observatory. Proceedings of the International Astronomical Union, 2013, 8, 521-522.	0.0	1
22	DESIGN AND MEASUREMENT OF THE STOKES POLARIMETER FOR THE COSMO K-CORONAGRAPH. Astrophysical Journal, 2013, 774, 85.	4.5	16
23	The chromosphere and prominence magnetometer. Proceedings of SPIE, 2012, , .	0.8	3
24	Stray light and polarimetry considerations for the COSMO K-Coronagraph. Proceedings of SPIE, 2012, , .	0.8	22
25	Optical design of the COSMO large coronagraph. Proceedings of SPIE, 2012, , .	0.8	5
26	Solar magnetism eXplorer (SolmeX). Experimental Astronomy, 2012, 33, 271-303.	3.7	34
27	The Helioseismic and Magnetic Imager (HMI) Investigation for the Solar Dynamics Observatory (SDO). Solar Physics, 2012, 275, 207-227.	2.5	1,677
28	Design and Ground Calibration of the Helioseismic and Magnetic Imager (HMI) Instrument on the Solar Dynamics Observatory (SDO). Solar Physics, 2012, 275, 229-259.	2.5	1,463
29	A RING OF POLARIZED LIGHT: EVIDENCE FOR TWISTED CORONAL MAGNETISM IN CAVITIES. Astrophysical Journal Letters, 2011, 731, L1.	8.3	57
30	VFISV: Very Fast Inversion of the Stokes Vector for the Helioseismic and Magnetic Imager. Solar Physics, 2011, 273, 267-293.	2.5	261
31	The polychromatic polarization modulator. , 2010, , .		8
32	Wavelength-diverse polarization modulators for Stokes polarimetry. Applied Optics, 2010, 49, 3580.	2.1	36
33	LARGE-SCALE FLOWS IN PROMINENCE CAVITIES. Astrophysical Journal, 2009, 700, L96-L98.	4.5	36
34	TIME-DISTANCE SEISMOLOGY OF THE SOLAR CORONA WITH CoMP. Astrophysical Journal, 2009, 697, 1384-1391.	4.5	242
35	An Instrument to Measure Coronal Emission Line Polarization. Solar Physics, 2008, 247, 411-428.	2.5	191
36	A Coherence-Based Approach for Tracking Waves in the Solar Corona. Solar Physics, 2008, 252, 321-348.	2.5	29

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37	A new spectro-polarimeter for solar prominence and filament magnetic field measurements. Proceedings of SPIE, 2008, , .	0.8	5
38	The feasibility of large refracting telescopes for solar coronal research. Proceedings of SPIE, 2008, , .	0.8	8
39	Alfvén Waves in the Solar Corona. Science, 2007, 317, 1192-1196.	12.6	673
40	Magnetic Field Vector Retrieval With the Helioseismic and Magnetic Imager. Solar Physics, 2007, 240, 177-196.	2.5	22
41	Spinor: Visible and Infrared Spectro-Polarimetry at the National Solar Observatory. Solar Physics, 2006, 235, 55-73.	2.5	73
42	Spectral Line Selection for HMI: A Comparison of Fe I 6173 Å... and Ni I 6768 Å... Solar Physics, 2006, 239, 69-91.	2.5	109
43	Full Stokes Spectropolarimetry of H \pm in Prominences. Astrophysical Journal, 2005, 621, L145-L148.	4.5	23
44	Background-Induced Measurement Errors of the Coronal Intensity, Density, Velocity, and Magnetic Field. Solar Physics, 2004, 222, 61-78.	2.5	13
45	Polarimeter for the study of magnetic fields in prominences. , 2003, 4853, 235.		0
46	Magnetic Maps of Prominences from Full Stokes Analysis of the He I D3 Line. Astrophysical Journal, 2003, 598, L67-L70.	4.5	146
47	Hyperfine Structure as a Diagnostic of Solar Magnetic Fields. Astrophysical Journal, 2002, 580, 519-527.	4.5	29
48	Inference of Solar Magnetic Field Parameters from Data with Limited Wavelength Sampling. Solar Physics, 2002, 208, 211-232.	2.5	15
49	Spectroscopic Detection of the 3.934 Micron Line of S[CLC]i[/CLC] [CSC]ix[/CSC] in the Solar Corona. Astrophysical Journal, 2002, 576, L157-L160.	4.5	19
50	<title>Calibration procedure for the polarimetric instrument for Solar Eclipse-98</title>. , 2000, , .		2
51	A New Precise Measurement of the Coronal Magnetic Field Strength. Astrophysical Journal, 2000, 541, L83-L86.	4.5	194
52	Rotation of the solar core from BiSON and LOWL frequency observations. Monthly Notices of the Royal Astronomical Society, 1999, 308, 405-414.	4.4	68
53	The Rotation of the Solar Core Inferred by Genetic Forward Modeling. Astrophysical Journal, 1998, 496, 1015-1030.	4.5	55
54	Solar internal sound speed as inferred from combined BiSON and LOWL oscillation frequencies. Monthly Notices of the Royal Astronomical Society, 1997, 292, 243-251.	4.4	101

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55	Stokes Profile Asymmetries in Solar Active Regions. <i>Astrophysical Journal</i> , 1997, 482, 1065-1075.	4.5	14
56	Magneto-optic Doppler analyzer: a new instrument to measure mesopause winds. <i>Applied Optics</i> , 1996, 35, 6494.	2.1	4
57	The Solar Acoustic Spectrum and Eigenmode Parameters. <i>Science</i> , 1996, 272, 1292-1295.	12.6	131
58	The Sun's Hydrostatic Structure from LOWL Data. <i>Astrophysical Journal</i> , 1996, 460, 1064.	4.5	39
59	An instrument to observe low-degree solar oscillations. <i>Solar Physics</i> , 1995, 159, 1-21.	2.5	116
60	Depth and latitude dependence of the solar internal angular velocity. <i>Astrophysical Journal</i> , 1990, 351, 687.	4.5	54
61	Full-Disk solar Dopplergrams observed with a 1024 Å— 1024-Pixel CCD Camera. <i>Symposium - International Astronomical Union</i> , 1988, 123, 471-474.	0.1	0
62	On the constancy of intermediate-degree p-mode frequencies during the declining phase of solar cycle 21. <i>Astrophysical Journal</i> , 1988, 326, 479.	4.5	18
63	A One-Megapixel Image Acquisition And Processing System For Solar Oscillation Studies. <i>Proceedings of SPIE</i> , 1986, , .	0.8	2
64	A compact dopplergraph/magnetograph suitable for space-based measurements of solar oscillations and magnetic fields. <i>Advances in Space Research</i> , 1984, 4, 103-112.	2.6	5