Matthew Baring

List of Publications by Year
in descending order

113 papers	6,638 citations	71102 41 h-index	60623 81 g-index
116 all docs	116 docs citations	116 times ranked	4654 citing authors

#	Article	IF	Citations
1	THE SECOND FERMI LARGE AREA TELESCOPE CATALOG OF GAMMA-RAY PULSARS. Astrophysical Journal, Supplement Series, 2013, 208, 17.	7.7	693
2	Fermi Observations of High-Energy Gamma-Ray Emission from GRB 080916C. Science, 2009, 323, 1688-1693.	12.6	523
3	A limit on the variation of the speed of light arising from quantum gravity effects. Nature, 2009, 462, 331-334.	27.8	454
4	THE FIRST FERMI LARGE AREA TELESCOPE CATALOG OF GAMMA-RAY PULSARS. Astrophysical Journal, Supplement Series, 2010, 187, 460-494.	7.7	396
5	FERMI OBSERVATIONS OF GRB 090902B: A DISTINCT SPECTRAL COMPONENT IN THE PROMPT AND DELAYED EMISSION. Astrophysical Journal, 2009, 706, L138-L144.	4.5	364
6	FERMILARGE AREA TELESCOPE OBSERVATIONS OF THE CRAB PULSAR AND NEBULA. Astrophysical Journal, 2010, 708, 1254-1267.	4.5	237
7	INSIGHTS INTO THE HIGH-ENERGY Î³-RAY EMISSION OF MARKARIAN 501 FROM EXTENSIVE MULTIFREQUENCY OBSERVATIONS IN THEFERMIERA. Astrophysical Journal, 2011, 727, 129.	4.5	185
8	Radio to Gammaâ€Ray Emission from Shellâ€Type Supernova Remnants: Predictions from Nonlinear Shock Acceleration Models. Astrophysical Journal, 1999, 513, 311-338.	4.5	178
9	SIMULTANEOUS OBSERVATIONS OF PKS 2155â€“304 WITH HESS, FERMI , RXTE , AND ATOM: SPECTRAL ENERGY DISTRIBUTIONS AND VARIABILITY IN A LOW STATE. Astrophysical Journal, 2009, 696, L150-L155.	4.5	144
10	Acceleration Rates and Injection Efficiencies in Oblique Shocks. Astrophysical Journal, 1995, 453, 873.	4.5	142
11	Nonlinear Shock Acceleration and Photon Emission in Supernova Remnants. Astrophysical Journal, 2000, 540, 292-307.	4.5	136
12	Photon Splitting and Pair Creation in Highly Magnetized Pulsars. Astrophysical Journal, 2001, 547, 929-948.	4.5	129
13	FERMILARGE AREA TELESCOPE OBSERVATIONS OF THE VELA PULSAR. Astrophysical Journal, 2009, 696, 1084-1093.	4.5	120
14	DIFFUSIVE ACCELERATION OF PARTICLES AT OBLIQUE, RELATIVISTIC, MAGNETOHYDRODYNAMIC SHOCKS. Astrophysical Journal, 2012, 745, 63.	4.5	119
15	Nonlinear Particle Acceleration in Oblique Shocks. Astrophysical Journal, 1996, 473, 1029-1050.	4.5	114
16	FERMIOBSERVATIONS OF TeV-SELECTED ACTIVE GALACTIC NUCLEI. Astrophysical Journal, 2009, 707, 1310-1333.	4.5	114
17	Blazar Î³-Rays, Shock Acceleration, and the Extragalactic Background Light. Astrophysical Journal, 2007, 667, L29-L32.	4.5	111
18	The Escape of Highâ€Energy Photons from Gammaâ€Ray Bursts. Astrophysical Journal, 1997, 491, 663-686.	4.5	110

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19	THE VELA PULSAR: RESULTS FROM THE FIRST YEAR OFFERMILAT OBSERVATIONS. Astrophysical Journal, 2010, 713, 154-165.	4.5	96
20	Photonâ€splitting Cascades in Gammaâ€Ray Pulsars and the Spectrum of PSR 1509â^'58. Astrophysical Journal, 1997, 476, 246-260.	4.5	95
21	Resonant Compton upscattering in anomalous X-ray pulsars. Astrophysics and Space Science, 2007, 308, 109-118.	1.4	94
22	The Fermi Gamma-Ray Space Telescope Discovers the Pulsar in the Young Galactic Supernova Remnant CTA 1. Science, 2008, 322, 1218-1221.	12.6	87
23	DETECTION OF THE ENERGETIC PULSAR PSR B1509â€"58 AND ITS PULSAR WIND NEBULA IN MSH 15â€"52 USING THEFERMI-LARGE AREA TELESCOPE. Astrophysical Journal, 2010, 714, 927-936.	4.5	72
24	SGR J1550â€"5418 BURSTS DETECTED WITH THEFERMIGAMMA-RAY BURST MONITOR DURING ITS MOST PROLIFIC ACTIVITY. Astrophysical Journal, 2012, 749, 122.	4.5	66
25	Acceleration of Solar Wind Ions by Nearby Interplanetary Shocks: Comparison of Monte Carlo Simulations withUlyssesObservations. Astrophysical Journal, 1997, 476, 889-902.	4.5	63
26	A Study of Prompt Emission Mechanisms in Gammaâ€Ray Bursts. Astrophysical Journal, 2004, 613, 460-476.	4.5	60
27	X-Ray and Radio Observations of the Magnetar SGR J1935+2154 during Its 2014, 2015, and 2016 Outbursts. Astrophysical Journal, 2017, 847, 85.	4.5	56
28	Probing acceleration and turbulence at relativistic shocks in blazar jets. Monthly Notices of the Royal Astronomical Society, 2017, 464, 4875-4894.	4.4	53
29	NICER View of the 2020 Burst Storm and Persistent Emission of SGR 1935+2154. Astrophysical Journal Letters, 2020, 904, L21.	8.3	53
30	Compton Scattering in Ultrastrong Magnetic Fields: Numerical and Analytical Behavior in the Relativistic Regime. Astrophysical Journal, 2000, 540, 907-922.	4.5	52
31	THE WIND NEBULA AROUND MAGNETAR SWIFT J1834.9â€"0846. Astrophysical Journal, 2016, 824, 138.	4.5	50
32	QUASI-PERIODIC OSCILLATIONS IN SHORT RECURRING BURSTS OF THE SOFT GAMMA REPEATER J1550â€"5418. Astrophysical Journal, 2014, 787, 128.	4.5	48
33	New limits on the dark matter lifetime from dwarf spheroidal galaxies using Fermi-LAT. Physical Review D, 2016, 93, .	4.7	48
34	Constraining Relativistic Bow Shock Properties in Rotation-powered Millisecond Pulsar Binaries. Astrophysical Journal, 2017, 839, 80.	4.5	47
35	THE FIVE YEAR FERMI /GBM MAGNETAR BURST CATALOG. Astrophysical Journal, Supplement Series, 2015, 218, 11.	7.7	45
36	Temporal Evolution of Pair Attenuation Signatures in Gammaâ€Ray Burst Spectra. Astrophysical Journal, 2006, 650, 1004-1019.	4.5	44

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37	CONSTRAINTS ON THE SYNCHROTRON SHOCK MODEL FOR THEFERMIGRB 090820A OBSERVED BY GAMMA-RAY BURST MONITOR. Astrophysical Journal, 2011, 741, 24.	4.5	43
38	The Fast Radio Burst Luminosity Function and Death Line in the Low-twist Magnetar Model. Astrophysical Journal, 2020, 891, 82.	4.5	43
39	Spinâ€dependent Cyclotron Decay Rates in Strong Magnetic Fields. Astrophysical Journal, 2005, 630, 430-440.	4.5	42
40	SEARCH FOR GAMMA-RAY EMISSION FROM MAGNETARS WITH THE FERMI LARGE AREA TELESCOPE. Astrophysical Journal Letters, 2010, 725, L73-L78.	8.3	42
41	X-ray polarimetry with the Polarization Spectroscopic Telescope Array (PolSTAR). Astroparticle Physics, 2016, 75, 8-28.	4.3	42
42	FERMILARGE AREA TELESCOPE DETECTION OF PULSED Î³-RAYS FROM THE VELA-LIKE PULSARS PSR J1048â€“5832 AND PSR J2229+6114. Astrophysical Journal, 2009, 706, 1331-1340.	4.5	41
43	High-energy emission from pulsars: the polar cap scenario. Advances in Space Research, 2004, 33, 552-560.	2.6	40
44	BROADBAND SPECTRAL INVESTIGATIONS OF SGR J1550â€“5418 BURSTS. Astrophysical Journal, 2012, 756, 54.	4.5	40
45	Petawatt laser absorption bounded. Nature Communications, 2014, 5, 4149.	12.8	39
46	Fermi/GAMMA-RAY BURST MONITOR OBSERVATIONS OF SGR J0501+4516 BURSTS. Astrophysical Journal, 2011, 739, 87.	4.5	37
47	Resonant Inverse Compton Scattering Spectra from Highly Magnetized Neutron Stars. Astrophysical Journal, 2018, 854, 98.	4.5	37
48	Fermi/GBM View of the 2019 and 2020 Burst Active Episodes of SGR J1935+2154. Astrophysical Journal Letters, 2020, 902, L43.	8.3	37
49	Rapid spectral variability of a giant flare from a magnetar in NGCÂ253. Nature, 2021, 589, 207-210.	27.8	36
50	Diffusive Shock Acceleration of High Energy Cosmic Rays. Nuclear Physics, Section B, Proceedings Supplements, 2004, 136, 198-207.	0.4	33
51	FERMILARGE AREA TELESCOPE OBSERVATIONS OF PSR J1836+5925. Astrophysical Journal, 2010, 712, 1209-1218.	4.5	33
52	Design and Performance of the X-ray Polarimeter X-Calibur. Journal of Astronomical Instrumentation, 2014, 03, .	1.5	32
53	DISCOVERY OF PULSED Î³-RAYS FROM THE YOUNG RADIO PULSAR PSR J1028â€“5819 WITH THE FERMI LARGE AREA TELESCOPE. Astrophysical Journal, 2009, 695, L72-L77.	4.5	31
54	Broadband X-ray burst spectroscopy of the fast-radio-burst-emitting Galactic magnetar. Nature Astronomy, 2021, 5, 408-413.	10.1	31

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55	Magnetohydrodynamic Jump Conditions for Oblique Relativistic Shocks with Gyrotropic Pressure. Astrophysical Journal, 2004, 600, 485-500.	4.5	30
56	The Sleeping Monster: NuSTAR Observations of SGR 1806â€“20, 11 Years After the Giant Flare. Astrophysical Journal, 2017, 851, 17.	4.5	28
57	Magnetic Photon Splitting: Computations of Properâ€Time Rates and Spectra. Astrophysical Journal, 1997, 482, 372-376.	4.5	27
58	OBSERVATIONS OF ENERGETIC HIGH MAGNETIC FIELD PULSARS WITH THEFERMILARGE AREA TELESCOPE. Astrophysical Journal, 2011, 743, 170.	4.5	26
59	FERMILARGE AREA TELESCOPE OBSERVATIONS OF GAMMA-RAY PULSARS PSR J1057â€“5226, J1709â€“4429, AND J1952+3252. Astrophysical Journal, 2010, 720, 26-40.	4.5	24
60	BURST AND PERSISTENT EMISSION PROPERTIES DURING THE RECENT ACTIVE EPISODE OF THE ANOMALOUS X-RAY PULSAR 1E 1841â€“045. Astrophysical Journal Letters, 2011, 740, L16.	8.3	24
61	COOLING RATES FOR RELATIVISTIC ELECTRONS UNDERGOING COMPTON SCATTERING IN STRONG MAGNETIC FIELDS. Astrophysical Journal, 2011, 733, 61.	4.5	24
62	SUZAKUOBSERVATIONS OF LUMINOUS QUASARS: REVEALING THE NATURE OF HIGH-ENERGY BLAZAR EMISSION IN LOW-LEVEL ACTIVITY STATES. Astrophysical Journal, 2010, 716, 835-849.	4.5	23
63	DETECTION OF SPECTRAL EVOLUTION IN THE BURSTS EMITTED DURING THE 2008-2009 ACTIVE EPISODE OF SGR J1550â€“5418. Astrophysical Journal, 2012, 755, 150.	4.5	23
64	TIME RESOLVED SPECTROSCOPY OF SGR J1550â€“5418 BURSTS DETECTED WITHFERMI/GAMMA-RAY BURST MONITOR. Astrophysical Journal, 2014, 785, 52.	4.5	23
65	Compton scattering in strong magnetic fields: Spin-dependent influences at the cyclotron resonance. Physical Review D, 2014, 90, .	4.7	18
66	X-Ray through Very High Energy Intrabinary Shock Emission from Black Widows and Redbacks. Astrophysical Journal, 2020, 904, 91.	4.5	18
67	Radiative transfer simulations of magnetar flare beaming. Monthly Notices of the Royal Astronomical Society, 2016, 461, 877-891.	4.4	17
68	ASUZAKUX-RAY STUDY OF THE PARTICLE ACCELERATION PROCESSES IN THE RELATIVISTIC JET OF BLAZAR Mrk 421. Astrophysical Journal, 2010, 722, 358-366.	4.5	16
69	Models of hydrostatic magnetar atmospheres at high luminosities. Monthly Notices of the Royal Astronomical Society, 2013, 434, 1398-1410.	4.4	15
70	Development of an interpretive simulation tool for the proton radiography technique. Review of Scientific Instruments, 2015, 86, 033302.	1.3	15
71	Photon Splitting and Pair Conversion in Strong Magnetic Fields. , 2008, , .		14
72	Opacities for photon splitting and pair creation in neutron star magnetospheres. Monthly Notices of the Royal Astronomical Society, 2019, 486, 3327-3349.	4.4	14

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73	Electrostatic Potentials in Supernova Remnant Shocks. Astrophysics and Space Science, 2007, 307, 165-168.	1.4	13
74	Conservation laws and conversion efficiency in ultraintense laser-overdense plasma interactions. Physics of Plasmas, 2013, 20, 103101.	1.9	13
75	A Radiatively Quiet Glitch and Anti-glitch in the Magnetar 1EÂ2259+586. Astrophysical Journal Letters, 2020, 896, L42.	8.3	13
76	MAGNETIC PAIR CREATION TRANSPARENCY IN GAMMA-RAY PULSARS. Astrophysical Journal, 2014, 790, 61.	4.5	12
77	Pulse Peak Migration during the Outburst Decay of the Magnetar SGR 1830-0645: Crustal Motion and Magnetospheric Untwisting. Astrophysical Journal Letters, 2022, 924, L27.	8.3	12
78	RADIO AND Î³-RAY CONSTRAINTS ON THE EMISSION GEOMETRY AND BIRTHPLACE OF PSR J2043+2740. Astrophysical Journal, 2011, 728, 77.	4.5	9
79	GRB Polarimetry with POET. , 2009, , .		8
80	Polarized radiation transfer in neutron star surface layers. Monthly Notices of the Royal Astronomical Society, 2020, 500, 5369-5392.	4.4	8
81	HX-POLâ€"A Balloon-Borne Hard X-Ray Polarimeter. IEEE Transactions on Nuclear Science, 2009, 56, 3607-3613.	2.0	7
82	Fermi/GBM Observations of the SGRJ1935+2154 Burst Forest. Astrophysical Journal Letters, 2021, 916, L7.	8.3	7
83	Simultaneous Magnetic Polar Cap Heating during a Flaring Episode from the Magnetar 1RXS J170849.0â€"400910. Astrophysical Journal Letters, 2020, 889, L27.	8.3	7
84	Using gamma-ray burst prompt emission to probe relativistic shock acceleration. Advances in Space Research, 2011, 47, 1427-1433.	2.6	6
85	Variability Constraints on Blazar Magnetic Fields. Publications of the Astronomical Society of Australia, 2002, 19, 60-63.	3.4	5
86	Multiwavelength spectral models for SNR G347.3-0.5 from non-linear shock acceleration. Advances in Space Research, 2005, 35, 1041-1046.	2.6	5
87	Probes of Diffusive Shock Acceleration using Gamma-Ray Burst Prompt Emission. , 2009, , .		5
88	Persistent Emission Properties of SGR J1935+2154 during Its 2020 Active Episode. Astrophysical Journal Letters, 2020, 905, L31.	8.3	5
89	X-Ray Burst and Persistent Emission Properties of the Magnetar SGR 1830-0645 in Outburst. Astrophysical Journal, 2022, 924, 136.	4.5	5
90	Identification of an X-Ray Pulsar in the BeXRB System IGR J18219â˜'1347. Astrophysical Journal, 2022, 927, 139.	4.5	5

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91	Modeling accelerated pick-up ion distributions at an interplanetary shock. Advances in Space Research, 2006, 37, 1426-1432.	2.6	4
92	Topical Issues for Particle Acceleration Mechanisms in Astrophysical Shocks. Astrophysics and Space Science, 2007, 307, 297-303.	1.4	4
93	Modeling the Non-Thermal X-ray Tail Emission of Anomalous X-ray Pulsars. AIP Conference Proceedings, 2008, , .	0.4	4
94	Particle Acceleration at Relativistic Shocks in Extragalactic Systems. , 2009, , .		3
95	Design and tests of the hard x-ray polarimeter X-Calibur. , 2011, , .		3
96	Focusing of intense subpicosecond laser pulses in wedge targets. Physics of Plasmas, 2011, 18, 103110.	1.9	3
97	Perspectives on Gamma-Ray Pulsar Emission. , 2011, , .		3
98	Swift/XRT Deep Galactic Plane Survey Discovery of a New Intermediate Polar Cataclysmic Variable, Swift J183920.1-045350. Astrophysical Journal, 2021, 923, 243.	4.5	3
99	Particle Acceleration at Interplanetary Shocks. AIP Conference Proceedings, 2008, , .	0.4	2
100	Hard X-ray quiescent emission in magnetars via resonant Compton upscattering. Journal of Physics: Conference Series, 2017, 932, 012021.	0.4	2
101	Intensity and Polarization Characteristics of Extended Neutron Star Surface Regions. Astrophysical Journal, 2022, 928, 82.	4.5	2
102	SEARCH FOR A REDSHIFTED 2.2 MeV NEUTRON CAPTURE LINE FROM A0535+262 IN OUTBURST. Astrophysical Journal, 2009, 694, 593-598.	4.5	1
103	Diagnosing particle acceleration in relativistic jets. Proceedings of the International Astronomical Union, 2014, 10, 153-158.	0.0	1
104	Ultra-bright and maybe ludicrously magnetic. Nature Astronomy, 2018, 2, 282-283.	10.1	1
105	Lepton Acceleration in Pulsar Wind Nebulae. Thirty Years of Astronomical Discovery With UKIRT, 2011, , 453-472.	0.3	1
106	Quiescent Magnetar Emission: Resonant Compton Upscattering. Symposium - International Astronomical Union, 2004, 218, 267-270.	0.1	0
107	Diffusive Acceleration of Ions at Interplanetary Shocks. AIP Conference Proceedings, 2005, , .	0.4	0
108	The Gamma Ray Burst section of the White Paper on the Status and Future of Very High Energy Gamma Ray Astronomy: A Brief Preliminary Report. AIP Conference Proceedings, 2008, , .	0.4	0

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109	The hard x-ray polarimeter X-Calibur. , 2013, , .		0
110	Hard Spectral Tails in Magnetars. Proceedings of the International Astronomical Union, 2017, 13, 108-111.	0.0	0
111	X-ray Synchrotron Polarization from Turbulent Plasmas in Supernova Remnants. Proceedings of the International Astronomical Union, 2017, 12, 242-247.	0.0	0
112	Electrostatic Potentials in Supernova Remnant Shocks. , 2006, , 165-168.		0
113	Topical Issues for Particle Acceleration Mechanisms in Astrophysical Shocks. , 2006, , 297-303.		0