George M Fuller

List of Publications by Year
in descending order

114 papers	7,618 citations	44069 48 h-index	51608 86 g-index
114 all docs	114 docs citations	114 times ranked	2577 citing authors

#	Article	IF	Citations
1	New Dark Matter Candidate: Nonthermal Sterile Neutrinos. Physical Review Letters, 1999, 82, 2832-2835.	7.8	582
2	Collective Neutrino Oscillations. Annual Review of Nuclear and Particle Science, 2010, 60, 569-594.	10.2	440
3	The Extremely Metalâ€poor, Neutron Captureâ€“rich Star CS 22892â€052: A Comprehensive Abundance Analysis. Astrophysical Journal, 2003, 591, 936-953.	4.5	430
4	Sterile neutrino hot, warm, and cold dark matter. Physical Review D, 2001, 64, .	4.7	406
5	Simulation of coherent nonlinear neutrino flavor transformation in the supernova environment: Correlated neutrino trajectories. Physical Review D, 2006, 74, .	4.7	351
6	The Chemical Composition and Age of the Metalâ€poor Halo Star BD +17o3248. Astrophysical Journal, 2002, 572, 861-879.	4.5	267
7	Direct Detection of Warm Dark Matter in the Xâ€Ray. Astrophysical Journal, 2001, 562, 593-604.	4.5	261
8	Collective neutrino flavor transformation in supernovae. Physical Review D, 2006, 74, .	4.7	226
9	Evidence of Multiple [CLC][ITAL]r[/ITAL][/CLC]-Process Sites in the Early Galaxy: New Observations of CS 22892â˜052. Astrophysical Journal, 2000, 533, L139-L142.	4.5	209
10	Connection between flavor-mixing of cosmologically significant neutrinos and heavy element nucleosynthesis in supernovae. Physical Review Letters, 1993, 71, 1965-1968.	7.8	195
11	Coherent Development of Neutrino Flavor in the Supernova Environment. Physical Review Letters, 2006, 97, 241101.	7.8	154
12	Neutrino-neutrino scattering and matter-enhanced neutrino flavor transformation in supernovae. Physical Review D, 1995, 51, 1479-1494.	4.7	152
13	Pulsar kicks from a dark-matter sterile neutrino. Physical Review D, 2003, 68, .	4.7	150
14	Neutrino oscillations in curved spacetime: A heuristic treatment. Physical Review D, 1997, 55, 7960-7966.	4.7	137
15	Analysis of collective neutrino flavor transformation in supernovae. Physical Review D, 2007, 75, .	4.7	134
16	Neutrino Capture and Supernova Nucleosynthesis. Astrophysical Journal, 1995, 453, 792.	4.5	130
17	Neutrino quantum kinetics. Physical Review D, 2014, 89, .	4.7	128
18	Neutrino Mass Hierarchy and Stepwise Spectral Swapping of Supernova Neutrino Flavors. Physical Review Letters, 2007, 99, 241802.	7.8	109

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19	Neutrino capture andr-process nucleosynthesis. Physical Review C, 1998, 58, 3696-3710.	2.9	102
20	Prospects for detecting supernova neutrino flavor oscillations. Physical Review D, 1999, 59, .	4.7	97
21	Neutrino Scattering and Flavor Transformation in Supernovae. Physical Review Letters, 2012, 108, 261104.	7.8	97
22	Can a closure mass neutrino help solve the supernova shock reheating problem?. Astrophysical Journal, 1992, 389, 517.	4.5	94
23	Flavor Evolution of the Neutronization Neutrino Burst From an O-Ne-Mg Core-Collapse Supernova. Physical Review Letters, 2008, 100, 021101.	7.8	84
24	General Relativistic Effects in the Neutrino-driven Wind and [CLC] [ITAL]r[/ITAL] [/CLC]-Process Nucleosynthesis. Astrophysical Journal, 1997, 486, L111-L114.	4.5	83
25	Simple picture for neutrino flavor transformation in supernovae. Physical Review D, 2007, 76, .	4.7	79
26	Neutrino oscillations in supernovae: Angular moments and fast instabilities. Physical Review D, 2020, 101, .	4.7	79
27	Estimates of Stellar Weak Interaction Rates for Nuclei in the Mass Range A â€‰=â€‰65â€“80. Astrophysical Journal, Supplement Series, 2003, 149, 189-203.	7.7	73
28	Stepwise spectral swapping with three neutrino flavors. Physical Review D, 2008, 77, .	4.7	73
29	Sterile neutrinos and supernova nucleosynthesis. Physical Review D, 2000, 61, .	4.7	72
30	Simultaneous flavor transformation of neutrinos and antineutrinos with dominant potentials from neutrino-neutrino forward scattering. Physical Review D, 2006, 73, .	4.7	71
31	Primordial Black Holes and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>r</mml:mi></mml:math> -Process Nucleosynthesis. Physical Review Letters, 2017, 119, 061101.	7.8	68
32	Matter-enhanced antineutrino flavor transformation and supernova nucleosynthesis. Physical Review D, 1995, 52, 656-660.	4.7	67
33	Europium Isotopic Abundances in Very Metal Poor Stars. Astrophysical Journal, 2002, 566, L25-L28.	4.5	66
34	Bulk QCD thermodynamics and sterile neutrino dark matter. Physical Review D, 2002, 66, .	4.7	65
35	Bulk viscosity, decaying dark matter, and the cosmic acceleration. Physical Review D, 2007, 75, .	4.7	62
36	The Influence of Nuclear Composition on the Electron Fraction in the Postâ€“Core Bounce Supernova Environment. Astrophysical Journal, 1996, 472, 440-451.	4.5	61

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37	Cosmological lepton asymmetry, primordial nucleosynthesis and sterile neutrinos. Physical Review D, 2005, 72, .	4.7	60
38	Can a â€˜â€˜naturalâ€™â€™ three-generation neutrino mixing scheme satisfy everything?. Physical Review D, 1996, 53, 4421-4429.	4.7	59
39	Dark matter sterile neutrinos in stellar collapse: Alteration of energy/lepton number transport, and a mechanism for supernova explosion enhancement. Physical Review D, 2006, 74, .	4.7	59
40	High-temperature neutrino-nucleus processes in stellar collapse. Astrophysical Journal, 1991, 376, 701.	4.5	57
41	Halo modification of a supernova neutronization neutrino burst. Physical Review D, 2013, 87, .	4.7	56
42	Sterile neutrino-enhanced supernova explosions. Physical Review D, 2007, 76, .	4.7	55
43	Heavy sterile neutrinos and supernova explosions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 670, 281-284.	4.1	53
44	Fast oscillations, collisionless relaxation, and spurious evolution of supernova neutrino flavor. Physical Review D, 2020, 102, .	4.7	53
45	Diluted equilibrium sterile neutrino dark matter. Physical Review D, 2015, 92, .	4.7	52
46	New nuclear physics for big bang nucleosynthesis. Physical Review D, 2010, 82, .	4.7	50
47	A new spin on neutrino quantum kinetics. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 747, 27-35.	4.1	50
48	Neutrino oscillations and the leptonic charge of the universe. Astrophysical Journal, 1991, 368, 1.	4.5	48
49	Gamow-Teller electron capture strength distributions in stars: Unblocked iron and nickel isotopes. Nuclear Physics A, 1985, 440, 511-530.	1.5	43
50	Do experiments and astrophysical considerations suggest an inverted neutrino mass hierarchy?. Physical Review D, 1995, 52, 1288-1291.	4.7	43
51	Test for the Origin of Solar Mass Black Holes. Physical Review Letters, 2021, 126, 071101.	7.8	35
52	Lepton-number-driven sterile neutrino production in the early universe. Physical Review D, 2008, 78, .	4.7	34
53	Modification of the Brink-Axel hypothesis for high-temperature nuclear weak interactions. Physical Review C, 2014, 90, .	2.9	34
54	Can a Large Neutron Excess Help Solve the Baryon Loading Problem in Gamma-Ray Burst Fireballs?. Physical Review Letters, 2000, 85, 2673-2676.	7.8	33

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55	Leptonic Domains in the Early Universe and Their Implications. Physical Review Letters, 1999, 83, 3120-3123.	7.8	32
56	Light element signatures of sterile neutrinos and cosmological lepton numbers. Physical Review D, 2006, 74, .	4.7	32
57	Coherent Active-Sterile Neutrino Flavor Transformation in the Early Universe. Physical Review Letters, 2006, 97, 141301.	7.8	31
58	Neutrino flavor transformation in the lepton-asymmetric universe. Physical Review D, 2016, 94, .	4.7	31
59	Flavor changing supersymmetry interactions in a supernova. Astroparticle Physics, 2005, 24, 160-182.	4.3	30
60	Neutrino Capture on Heavy Nuclei. Astrophysical Journal, 1995, 455, 202.	4.5	29
61	Multiangle simulation of flavor evolution in the neutronization neutrino burst from an O-Ne-Mg core-collapse supernova. Physical Review D, 2010, 82, .	4.7	27
62	Neutrino flavor evolution in neutron star mergers. Physical Review D, 2017, 96, .	4.7	27
63	Lightâ€Element Synthesis in Highâ€Entropy Relativistic Flows Associated with Gammaâ€Ray Bursts. Astrophysical Journal, 2002, 580, 368-373.	4.5	27
64	Time of flight and supernova progenitor effects on the neutrino halo. Physical Review D, 2020, 102, .	4.7	24
65	Evidence for an Intense Neutrino Flux during [ITAL]r[/ITAL]-Process Nucleosynthesis?. Astrophysical Journal, 1996, 464, L143-L146.	4.5	22
66	Probing neutrino physics with a self-consistent treatment of the weak decoupling, nucleosynthesis, and photon decoupling epochs. Journal of Cosmology and Astroparticle Physics, 2015, 2015, 017-017.	5.4	22
67	Neutrino-mixing-generated lepton asymmetry and the primordial4Heabundance. Physical Review D, 1999, 60, .	4.7	21
68	Big Bang Nucleosynthesis in Light of Discordant Deuterium Measurements. Astrophysical Journal, 1996, 472, 435-439.	4.5	21
69	Is Deuterium in Highâ€Redshift Lyman Limit Systems Primordial?. Astrophysical Journal, 1997, 483, 560-564.	4.5	21
70	New cosmological limit on neutrino mass. Physical Review D, 1991, 43, 3136-3139.	4.7	20
71	Self-interacting sterile neutrino dark matter: The heavy-mediator case. Physical Review D, 2019, 100, .	4.7	20
72	Signature of supernova neutrino flavor mixing in water ÄŒerenkov detectors. Physical Review D, 1994, 49, 1762-1770.	4.7	19

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73	Density fluctuation effects on collective neutrino oscillations in O-Ne-Mg core-collapse supernovae. Physical Review D, 2011, 84, .	4.7	19
74	Limits on active-sterile neutrino mixing and the primordial deuterium abundance. Physical Review D, 1996, 54, R1260-R1263.	4.7	18
75	Neutrino luminosity and matter-induced modification of collective neutrino flavor oscillations in supernovae. Physical Review D, 2012, 85, .	4.7	18
76	Neutrino gravitational redshift and the electron fraction above nascent neutron stars. Nuclear Physics A, 1996, 606, 167-172.	1.5	17
77	Quantum Coherence of Relic Neutrinos. Physical Review Letters, 2009, 102, 201303.	7.8	17
78	Lepton asymmetry, neutrino spectral distortions, and big bang nucleosynthesis. Physical Review D, 2017, 95, .	4.7	17
79	Consequences of neutrino self-interactions for weak decoupling and big bang nucleosynthesis. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 001-001.	5.4	17
80	Big bang nucleosynthesis with independent neutrino distribution functions. Physical Review D, 2009, 79, .	4.7	16
81	The surprising influence of late charged current weak interactions on Big Bang Nucleosynthesis. Nuclear Physics B, 2016, 911, 955-973.	2.5	16
82	Part IV. Neutrino astrophysics. Physics Reports, 1993, 227, 149-155.	25.6	15
83	New connection between central engine weak physics and the dynamics of gamma-ray burst fireballs. Physical Review D, 2001, 64, .	4.7	15
84	Weak Chargeâ€¢changing Flow in Expandingrâ€Process Environments. Astrophysical Journal, 1997, 489, 766-771.	4.5	15
85	Supermassive Objects as Gamma-Ray Bursters. Astrophysical Journal, 1998, 502, L5-L8.	4.5	15
86	Big bang nucleosynthesis and active-sterile neutrino mixing: Evidence for maximalÎ½Î¼â†”Î½Ï„mixing in Super Kamiokande?. Physical Review D, 1999, 59, .	4.7	14
87	Stellar collapse dynamics with neutrino flavor changing neutral currents. Physical Review D, 2007, 75, .	4.7	14
88	Dark matter studies entrain nuclear physics. Progress in Particle and Nuclear Physics, 2013, 71, 167-184.	14.4	14
89	Geometric phases in neutrino oscillations with nonlinear refraction. Physical Review D, 2017, 95, .	4.7	14
90	Strange mechanics of the neutrino flavor pendulum. Physical Review D, 2018, 97, .	4.7	14

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91	Prospects for neutrino spin coherence in supernovae. Physical Review D, 2017, 95, .	4.7	13
92	Positrons and 511ÂkeV Radiation as Tracers of Recent Binary Neutron Star Mergers. Physical Review Letters, 2019, 122, 121101.	7.8	13
93	Nuclear neutrino energy spectra in high temperature astrophysical environments. Physical Review C, 2016, 94, .	2.9	12
94	An optimization-based approach to calculating neutrino flavor evolution. Physical Review D, 2017, 96, .	4.7	12
95	Neutrino-pair emission from hot nuclei during stellar collapse. Physical Review C, 2013, 88, .	2.9	10
96	Neutrino burst-generated gravitational radiation from collapsing supermassive stars. Physical Review D, 2018, 98, .	4.7	10
97	On Steady State Neutrinoâ€heated Ultrarelativistic Winds from Compact Objects. Astrophysical Journal, 2001, 561, 957-963.	4.5	10
98	Neutrino Production of Deuterium in Supermassive Stars and Possible Implications for Deuterium Detections in Lyman-Limit Systems. Astrophysical Journal, 1997, 487, L25-L28.	4.5	9
99	Intermediate baseline appearance experiments and three-neutrino mixing schemes. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 413, 246-252.	4.1	8
100	Increase in the primordial4Heyield in the two-doublet four-neutrino mixing scheme. Physical Review D, 2000, 62, .	4.7	8
101	Weak interaction rate Coulomb corrections in big bang nucleosynthesis. Physical Review D, 2010, 81, .	4.7	8
102	Nuclear weak interaction rates in primordial nucleosynthesis. Physical Review D, 2010, 82, .	4.7	8
103	Neutrino Spectra from Nuclear Weak Interactions in sd-Shell Nuclei under Astrophysical Conditions. Astrophysical Journal, 2018, 852, 43.	4.5	7
104	Modified Brink-Axel hypothesis for astrophysical Gamow-Teller transitions. Physical Review C, 2022, 105, .	2.9	6
105	Inference offers a metric to constrain dynamical models of neutrino flavor transformation. Physical Review D, 2020, 102, .	4.7	5
106	Inference of neutrino flavor evolution through data assimilation and neural differential equations. Physical Review D, 2021, 103, .	4.7	5
107	Three-generation neutrino mixing and lsnd dark matter neutrinos. Nuclear Physics, Section B, Proceedings Supplements, 1996, 51, 259-263.	0.4	3
108	Effects of an intermediate mass sterile neutrino population on the early Universe. Physical Review D, 2022, 105, .	4.7	2

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109	Astrophysical constraints on Dirac neutrino masses. AIP Conference Proceedings, 1991, , .	0.4	0
110	Neutrino masses and mixings: Big Bang and Supernova nucleosynthesis and neutrino dark matter. , 1999, , .		0
111	Neutrino Flavor Changing Neutral Currents and Stellar Collapse. AIP Conference Proceedings, 2006, , .	0.4	0
112	Neutrinoâ€Accelerated Hot Hydrogen Burning. Astrophysical Journal, 2007, 656, 1104-1108.	4.5	0
113	Neutrinos from Pre-Collapse Stars. , 2017, , .		0
114	Neutrino Flavor Transformation in Supernovae and the Early Universe. , 2001, , 255-285.		0