John F Beacom

List of Publications by Year
in descending order

95 papers	10,243 citations	28274 55 h-index	36028 97 g-index
97 all docs	97 docs citations	97 times ranked	6909 citing authors

#	Article	IF	Citations
1	Towards probing the diffuse supernova neutrino background in all flavors. Physical Review D, 2022, 105, .	4.7	18
2	First observations of solar disk gamma rays over a full solar cycle. Physical Review D, 2022, 105, .	4.7	10
3	Dimuons in neutrino telescopes: New predictions and first search in IceCube. Physical Review D, 2022, 105, .	4.7	6
4	New experimental constraints in a new landscape for composite dark matter. Physical Review D, 2021, 103, .	4.7	17
5	Exciting prospects for detecting late-time neutrinos from core-collapse supernovae. Physical Review D, 2021, 103, .	4.7	40
6	Millisecond pulsars modify the radio-star-formation-rate correlation in quiescent galaxies. Physical Review D, 2021, 103, .	4.7	10
7	Probing secret interactions of astrophysical neutrinos in the high-statistics era. Physical Review D, 2021, 104, .	4.7	24
8	Neutrino-nucleus cross sections for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>W</mml:mi></mml:math> -boson and trident production. Physical Review D, 2020, 101, .	4.7	26
9	NuSTAR tests of sterile-neutrino dark matter: New Galactic bulge observations and combined impact. Physical Review D, 2020, 101, .	4.7	46
10	New Freezeout Mechanism for Strongly Interacting Dark Matter. Physical Review Letters, 2020, 125, 131301.	7.8	56
11	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>W</mml:mi></mml:mrow></mml:math> -boson and trident production in TeVâ€"PeV neutrino observatories. Physical Review D, 2020, 101, .	4.7	23
12	Developing the MeV potential of DUNE: Detailed considerations of muon-induced spallation and other backgrounds. Physical Review C, 2019, 99, .	2.9	30
13	Not as big as a barn: Upper bounds on dark matter-nucleus cross sections. Physical Review D, 2019, 100, .	4.7	41
14	TeV halos are everywhere: Prospects for new discoveries. Physical Review D, 2019, 100, .	4.7	63
15	Tev-scale thermal WIMPs: Unitarity and its consequences. Physical Review D, 2019, 100, .	4.7	61
16	DUNE as the Next-Generation Solar Neutrino Experiment. Physical Review Letters, 2019, 123, 131803.	7.8	71
17	Measurement of the Core-collapse Progenitor Mass Distribution of the Small Magellanic Cloud. Astrophysical Journal, 2019, 871, 64.	4.5	22
18	New constraints on sterile neutrino dark matter from NuSTAR M31 observations. Physical Review D, 2019, 99, .	4.7	87

#	ARTICLE	IF	CITATIONS
19	Echo Technique to Distinguish Flavors of Astrophysical Neutrinos. Physical Review Letters, 2019, 122, 151101.	7.8	22
20	Reverse direct detection: Cosmic ray scattering with light dark matter. Physical Review D, 2019, 99, .	4.7	81
21	High-energy Emission from Interacting Supernovae: New Constraints on Cosmic-Ray Acceleration in Dense Circumstellar Environments. Astrophysical Journal, 2019, 874, 80.	4.5	38
22	Strong new limits on light dark matter from neutrino experiments. Physical Review D, 2019, 100, .	4.7	84
23	Unexpected dip in the solar gamma-ray spectrum. Physical Review D, 2018, 98, .	4.7	26
24	Evidence for a New Component of High-Energy Solar Gamma-Ray Production. Physical Review Letters, 2018, 121, 131103.	7.8	28
25	ASASSN-18ey: The Rise of a New Black Hole X-Ray Binary. Astrophysical Journal Letters, 2018, 867, L9.	8.3	80
26	GeV-scale thermal WIMPs: Not even slightly ruled out. Physical Review D, 2018, 98, .	4.7	121
27	Physics prospects of the Jinping neutrino experiment. Chinese Physics C, 2017, 41, 023002.	3.7	74
28	TeV solar gamma rays from cosmic-ray interactions. Physical Review D, 2017, 96, .	4.7	27
29	Almost closing the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î½</mml:mi><mml:mi>MSM</mml:mi></mml:mrow></mml:math> sterile neutrino dark matter window with NuSTAR. Physical Review D, 2017, 95, .	4.7	87
30	Solar atmospheric neutrinos: A new neutrino floor for dark matter searches. Physical Review D, 2017, 96, .	4.7	46
31	Testing decay of astrophysical neutrinos with incomplete information. Physical Review D, 2017, 95, .	4.7	68
32	Powerful solar signatures of long-lived dark mediators. Physical Review D, 2017, 95, .	4.7	65
33	Neutrino physics with JUNO. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 030401.	3.6	750
34	Dark Matter Velocity Spectroscopy. Physical Review Letters, 2016, 116, 031301.	7.8	25
35	First observation of time variation in the solar-disk gamma-ray flux with Fermi. Physical Review D, 2016, 94, .	4.7	36
36	Theoretically Palatable Flavor Combinations of Astrophysical Neutrinos. Physical Review Letters, 2015, 115, 161302.	7.8	116

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37	Spallation backgrounds in Super-Kamiokande are made in muon-induced showers. Physical Review D, 2015, 91, .	4.7	33
38	Tagging spallation backgrounds with showers in water Cherenkov detectors. Physical Review D, 2015, 92, .	4.7	26
39	Resolving small-scale dark matter structures using multisource indirect detection. Physical Review D, 2014, 89, .	4.7	47
40	Cosmic neutrino cascades from secret neutrino interactions. Physical Review D, 2014, 90, .	4.7	110
41	Publisherâ€™s Note: Cosmic neutrino cascades from secret neutrino interactions [Phys. Rev. D90, 065035 (2014)]. Physical Review D, 2014, 90, .	4.7	54
42	First calculation of cosmic-ray muon spallation backgrounds forÂMeV astrophysical neutrino signals in Super-Kamiokande. Physical Review C, 2014, 89, .	2.9	42
43	Gadolinium in water Cherenkov detectors improves detection of supernova<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Î½</mml:mi><mml:mi>e</mml:mi></mml:msub></mml:math>. Physical Review D, 2014, 89, .	4.7	36
44	Constraints on new neutrino interactions via light Abelian vector bosons. Physical Review D, 2014, 89, .	4.7	68
45	Demystifying the PeV cascades in IceCube: Less (energy) is more (events). Physical Review D, 2013, 88, .	4.7	80
46	Galaxy clusters as reservoirs of heavy dark matter and high-energy cosmic rays: constraints from neutrino observations. Journal of Cosmology and Astroparticle Physics, 2013, 2013, 028-028.	5.4	26
47	OBSERVING THE NEXT GALACTIC SUPERNOVA. Astrophysical Journal, 2013, 778, 164.	4.5	178
48	New sensitivity to solar WIMP annihilation using low-energy neutrinos. Physical Review D, 2013, 88, .	4.7	55
49	Gamma-ray and neutrino backgrounds as probes of the high-energy universe: hints of cascades, general constraints, and implications for TeV searches. Journal of Cosmology and Astroparticle Physics, 2012, 2012, 030-030.	5.4	68
50	Precise relic WIMP abundance and its impact on searches for dark matter annihilation. Physical Review D, 2012, 86, .	4.7	471
51	Constraining very heavy dark matter using diffuse backgrounds of neutrinos and cascaded gamma rays. Journal of Cosmology and Astroparticle Physics, 2012, 2012, 043-043.	5.4	106
52	THE UNUSUAL TEMPORAL AND SPECTRAL EVOLUTION OF THE TYPE IIn SUPERNOVA 2011ht. Astrophysical Journal, 2012, 751, 92.	4.5	51
53	The next-generation liquid-scintillator neutrino observatory LENA. Astroparticle Physics, 2012, 35, 685-732.	4.3	181
54	Reconstruction of supernova<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Î½</mml:mi><mml:mi>Î¼</mml:mi></mml:msub></mml:math>,<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Î½</mml:mi><mml:mi>Ï„</mml:mi></mml:msub></mml:math>,<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mover accent="true"><mml:mi>Î½</mml:mi><mml:mo>Â¯</mml:mo></mml:mover><mml:mi>Î¼</mml:mi></mml:msub></mml:math>,.	4.7	61

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55	New class of high-energy transients from crashes of supernova ejecta with massive circumstellar material shells. Physical Review D, 2011, 84, .	4.7	107
56	ROLE OF LINE-OF-SIGHT COSMIC-RAY INTERACTIONS IN FORMING THE SPECTRA OF DISTANT BLAZARS IN TeV GAMMA RAYS AND HIGH-ENERGY NEUTRINOS. Astrophysical Journal, 2011, 731, 51.	4.5	129
57	Core-collapse astrophysics with a five-megaton neutrino detector. Physical Review D, 2011, 83, .	4.7	50
58	THE COSMIC CORE-COLLAPSE SUPERNOVA RATE DOES NOT MATCH THE MASSIVE-STAR FORMATION RATE. Astrophysical Journal, 2011, 738, 154.	4.5	198
59	Secondary Photons and Neutrinos from Cosmic Rays Produced by Distant Blazars. Physical Review Letters, 2010, 104, 141102.	7.8	124
60	Synoptic sky surveys and the diffuse supernova neutrino background: Removing astrophysical uncertainties and revealing invisible supernovae. Physical Review D, 2010, 81, .	4.7	37
61	The Diffuse Supernova Neutrino Background. Annual Review of Nuclear and Particle Science, 2010, 60, 439-462.	10.2	184
62	Neutrino background flux from sources of ultrahigh-energy cosmic-ray nuclei. Physical Review D, 2010, 81, .	4.7	48
63	Diffuse supernova neutrino background is detectable in Super-Kamiokande. Physical Review D, 2009, 79, .	4.7	151
64	Conservative constraints on dark matter annihilation into gamma rays. Physical Review D, 2008, 78, .	4.7	72
65	Probing new physics with long-lived charged particles produced by atmospheric and astrophysical neutrinos. Journal of Cosmology and Astroparticle Physics, 2008, 2008, 029.	5.4	13
66	Strong Upper Limits on Sterile Neutrino Warm Dark Matter. Physical Review Letters, 2008, 101, 121301.	7.8	72
67	Characterizing Supernova Progenitors via the Metallicities of their Host Galaxies, from Poor Dwarfs to Rich Spirals. Astrophysical Journal, 2008, 673, 999-1008.	4.5	179
68	A Survey About Nothing: Monitoring a Million Supergiants for Failed Supernovae. Astrophysical Journal, 2008, 684, 1336-1342.	4.5	226
69	Revealing the High-Redshift Star Formation Rate with Gamma-Ray Bursts. Astrophysical Journal, 2008, 683, L5-L8.	4.5	280
70	Dissecting the Cygnus region with TeV gamma rays and neutrinos. Physical Review D, 2007, 75, .	4.7	37
71	Upper Bound on the Dark Matter Total Annihilation Cross Section. Physical Review Letters, 2007, 99, 231301.	7.8	120
72	Neutrino spectrum from SN 1987A and from cosmic supernovae. Physical Review D, 2007, 76, .	4.7	33

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73	Towards closing the window on strongly interacting dark matter: Far-reaching constraints from Earthâ€™s heat flow. Physical Review D, 2007, 76, .	4.7	139
74	Neutrino constraints on the dark matter total annihilation cross section. Physical Review D, 2007, 76, .	4.7	130
75	On the Normalization of the Cosmic Star Formation History. Astrophysical Journal, 2006, 651, 142-154.	4.5	1,413
76	Direct x-ray constraints on sterile neutrino warm dark matter. Physical Review D, 2006, 74, .	4.7	116
77	Guaranteed and prospective Galactic TeV neutrino sources. Physical Review D, 2006, 74, .	4.7	82
78	New test of supernova electron neutrino emission using Sudbury Neutrino Observatory sensitivity to the diffuse supernova neutrino background. Physical Review C, 2006, 73, .	2.9	20
79	Stringent Constraint on Galactic Positron Production. Physical Review Letters, 2006, 97, 071102.	7.8	160
80	Measuring the cosmic ray muon-induced fast neutron spectrum by (n,p) isotope production reactions in underground detectors. Physical Review C, 2005, 72, .	2.9	14
81	Gamma-Ray Constraint on Galactic Positron Production by MeV Dark Matter. Physical Review Letters, 2005, 94, 171301.	7.8	170
82	Shower power: isolating the prompt atmospheric neutrino flux using electron neutrinos. Journal of Cosmology and Astroparticle Physics, 2004, 2004, 009-009.	5.4	51
83	Pseudo-Dirac Neutrinos: A Challenge for Neutrino Telescopes. Physical Review Letters, 2004, 92, 011101.	7.8	113
84	Neutrinoless Universe. Physical Review Letters, 2004, 93, 121302.	7.8	117
85	Antineutrino Spectroscopy with Large Water ÄŒerenkov Detectors. Physical Review Letters, 2004, 93, 171101.	7.8	345
86	Sensitivity toÎ¸13andÎ´in the decaying astrophysical neutrino scenario. Physical Review D, 2004, 69, .	4.7	79
87	Decay of High-Energy Astrophysical Neutrinos. Physical Review Letters, 2003, 90, 181301.	7.8	177
88	Measuring flavor ratios of high-energy astrophysical neutrinos. Physical Review D, 2003, 68, .	4.7	186
89	Do solar neutrinos decay?. Physical Review D, 2002, 65, .	4.7	149
90	Enhanced signal of astrophysical tau neutrinos propagating through Earth. Physical Review D, 2002, 66, .	4.7	65

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91	Stringent constraints on cosmological neutrino-antineutrino asymmetries from synchronized flavor transformation. Physical Review D, 2002, 66, .	4.7	177
92	Detection of supernova neutrinos by neutrino-proton elastic scattering. Physical Review D, 2002, 66, .	4.7	118
93	Normalization of the neutrino-deuteron cross section. Physical Review D, 2001, 64, .	4.7	32
94	Neutrino Magnetic Moments, Flavor Mixing, and the Super-Kamiokande Solar Data. Physical Review Letters, 1999, 83, 5222-5225.	7.8	126
95	Semiclassical treatment of matter-enhanced neutrino oscillations for an arbitrary density profile. Physical Review D, 1996, 54, 6323-6337.	4.7	21