John F Beacom

List of Publications by Year
in descending order

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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	On the Normalization of the Cosmic Star Formation History. Astrophysical Journal, 2006, 651, 142-154.	4.5	1,413
2	Neutrino physics with JUNO. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 030401.	3.6	750
3	Precise relic WIMP abundance and its impact on searches for dark matter annihilation. Physical Review D, 2012, 86, .	4.7	471
4	Antineutrino Spectroscopy with Large Water ÄŒerenkov Detectors. Physical Review Letters, 2004, 93, 171101.	7.8	345
5	Revealing the High-Redshift Star Formation Rate with Gamma-Ray Bursts. Astrophysical Journal, 2008, 683, L5-L8.	4.5	280
6	A Survey About Nothing: Monitoring a Million Supergiants for Failed Supernovae. Astrophysical Journal, 2008, 684, 1336-1342.	4.5	226
7	THE COSMIC CORE-COLLAPSE SUPERNOVA RATE DOES NOT MATCH THE MASSIVE-STAR FORMATION RATE. Astrophysical Journal, 2011, 738, 154.	4.5	198
8	Measuring flavor ratios of high-energy astrophysical neutrinos. Physical Review D, 2003, 68, .	4.7	186
9	The Diffuse Supernova Neutrino Background. Annual Review of Nuclear and Particle Science, 2010, 60, 439-462.	10.2	184
10	The next-generation liquid-scintillator neutrino observatory LENA. Astroparticle Physics, 2012, 35, 685-732.	4.3	181
11	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
12	OBSERVING THE NEXT GALACTIC SUPERNOVA. Astrophysical Journal, 2013, 778, 164.	4.5	178
13	Stringent constraints on cosmological neutrino-antineutrino asymmetries from synchronized flavor transformation. Physical Review D, 2002, 66, .	4.7	177
14	Decay of High-Energy Astrophysical Neutrinos. Physical Review Letters, 2003, 90, 181301.	7.8	177
15	Gamma-Ray Constraint on Galactic Positron Production by MeV Dark Matter. Physical Review Letters, 2005, 94, 171301.	7.8	170
16	Stringent Constraint on Galactic Positron Production. Physical Review Letters, 2006, 97, 071102.	7.8	160
17	Diffuse supernova neutrino background is detectable in Super-Kamiokande. Physical Review D, 2009, 79, .	4.7	151
18	Do solar neutrinos decay?. Physical Review D, 2002, 65, .	4.7	149

#	ARTICLE	IF	CITATIONS
19	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
20	Neutrino constraints on the dark matter total annihilation cross section. Physical Review D, 2007, 76, .	4.7	130
21	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
22	Neutrino Magnetic Moments, Flavor Mixing, and the Super-Kamiokande Solar Data. Physical Review Letters, 1999, 83, 5222-5225.	7.8	126
23	Secondary Photons and Neutrinos from Cosmic Rays Produced by Distant Blazars. Physical Review Letters, 2010, 104, 141102.	7.8	124
24	GeV-scale thermal WIMPs: Not even slightly ruled out. Physical Review D, 2018, 98, .	4.7	121
25	Upper Bound on the Dark Matter Total Annihilation Cross Section. Physical Review Letters, 2007, 99, 231301.	7.8	120
26	Detection of supernova neutrinos by neutrino-proton elastic scattering. Physical Review D, 2002, 66, .	4.7	118
27	Neutrinoless Universe. Physical Review Letters, 2004, 93, 121302.	7.8	117
28	Direct x-ray constraints on sterile neutrino warm dark matter. Physical Review D, 2006, 74, .	4.7	116
29	Theoretically Palatable Flavor Combinations of Astrophysical Neutrinos. Physical Review Letters, 2015, 115, 161302.	7.8	116
30	Pseudo-Dirac Neutrinos: A Challenge for Neutrino Telescopes. Physical Review Letters, 2004, 92, 011101.	7.8	113
31	Cosmic neutrino cascades from secret neutrino interactions. Physical Review D, 2014, 90, .	4.7	110
32	New class of high-energy transients from crashes of supernova ejecta with massive circumstellar material shells. Physical Review D, 2011, 84, .	4.7	107
33	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
34	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
35	New constraints on sterile neutrino dark matter from NuSTAR M31 observations. Physical Review D, 2019, 99, .	4.7	87
36	Strong new limits on light dark matter from neutrino experiments. Physical Review D, 2019, 100, .	4.7	84

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37	Guaranteed and prospective Galactic TeV neutrino sources. Physical Review D, 2006, 74, .	4.7	82
38	Reverse direct detection: Cosmic ray scattering with light dark matter. Physical Review D, 2019, 99, .	4.7	81
39	Demystifying the PeV cascades in IceCube: Less (energy) is more (events). Physical Review D, 2013, 88, .	4.7	80
40	ASASSN-18ey: The Rise of a New Black Hole X-Ray Binary. Astrophysical Journal Letters, 2018, 867, L9.	8.3	80
41	Sensitivity toÎ¸13andÎ´in the decaying astrophysical neutrino scenario. Physical Review D, 2004, 69, .	4.7	79
42	Physics prospects of the Jinping neutrino experiment. Chinese Physics C, 2017, 41, 023002.	3.7	74
43	Conservative constraints on dark matter annihilation into gamma rays. Physical Review D, 2008, 78, .	4.7	72
44	Strong Upper Limits on Sterile Neutrino Warm Dark Matter. Physical Review Letters, 2008, 101, 121301.	7.8	72
45	DUNE as the Next-Generation Solar Neutrino Experiment. Physical Review Letters, 2019, 123, 131803.	7.8	71
46	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
47	Constraints on new neutrino interactions via light Abelian vector bosons. Physical Review D, 2014, 89, .	4.7	68
48	Testing decay of astrophysical neutrinos with incomplete information. Physical Review D, 2017, 95, .	4.7	68
49	Enhanced signal of astrophysical tau neutrinos propagating through Earth. Physical Review D, 2002, 66, .	4.7	65
50	Powerful solar signatures of long-lived dark mediators. Physical Review D, 2017, 95, .	4.7	65
51	TeV halos are everywhere: Prospects for new discoveries. Physical Review D, 2019, 100, .	4.7	63
52	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
53	Tev-scale thermal WIMPs: Unitarity and its consequences. Physical Review D, 2019, 100, .	4.7	61
54	New Freezeout Mechanism for Strongly Interacting Dark Matter. Physical Review Letters, 2020, 125, 131301.	7.8	56

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55	New sensitivity to solar WIMP annihilation using low-energy neutrinos. Physical Review D, 2013, 88, .	4.7	55
56	Publisherâ€™s Note: Cosmic neutrino cascades from secret neutrino interactions [Phys. Rev. D90, 065035 (2014)]. Physical Review D, 2014, 90, .	4.7	54
57	Shower power: isolating the prompt atmospheric neutrino flux using electron neutrinos. Journal of Cosmology and Astroparticle Physics, 2004, 2004, 009-009.	5.4	51
58	THE UNUSUAL TEMPORAL AND SPECTRAL EVOLUTION OF THE TYPE IIn SUPERNOVA 2011ht. Astrophysical Journal, 2012, 751, 92.	4.5	51
59	Core-collapse astrophysics with a five-megaton neutrino detector. Physical Review D, 2011, 83, .	4.7	50
60	Neutrino background flux from sources of ultrahigh-energy cosmic-ray nuclei. Physical Review D, 2010, 81, .	4.7	48
61	Resolving small-scale dark matter structures using multisource indirect detection. Physical Review D, 2014, 89, .	4.7	47
62	Solar atmospheric neutrinos: A new neutrino floor for dark matter searches. Physical Review D, 2017, 96, .	4.7	46
63	NuSTAR tests of sterile-neutrino dark matter: New Galactic bulge observations and combined impact. Physical Review D, 2020, 101, .	4.7	46
64	First calculation of cosmic-ray muon spallation backgrounds forÂMeV astrophysical neutrino signals in Super-Kamiokande. Physical Review C, 2014, 89, .	2.9	42
65	Not as big as a barn: Upper bounds on dark matter-nucleus cross sections. Physical Review D, 2019, 100, .	4.7	41
66	Exciting prospects for detecting late-time neutrinos from core-collapse supernovae. Physical Review D, 2021, 103, .	4.7	40
67	High-energy Emission from Interacting Supernovae: New Constraints on Cosmic-Ray Acceleration in Dense Circumstellar Environments. Astrophysical Journal, 2019, 874, 80.	4.5	38
68	Dissecting the Cygnus region with TeV gamma rays and neutrinos. Physical Review D, 2007, 75, .	4.7	37
69	Synoptic sky surveys and the diffuse supernova neutrino background: Removing astrophysical uncertainties and revealing invisible supernovae. Physical Review D, 2010, 81, .	4.7	37
70	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
71	First observation of time variation in the solar-disk gamma-ray flux with Fermi. Physical Review D, 2016, 94, .	4.7	36
72	Neutrino spectrum from SN 1987A and from cosmic supernovae. Physical Review D, 2007, 76, .	4.7	33

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73	Spallation backgrounds in Super-Kamiokande are made in muon-induced showers. Physical Review D, 2015, 91, .	4.7	33
74	Normalization of the neutrino-deuteron cross section. Physical Review D, 2001, 64, .	4.7	32
75	Developing the MeV potential of DUNE: Detailed considerations of muon-induced spallation and other backgrounds. Physical Review C, 2019, 99, .	2.9	30
76	Evidence for a New Component of High-Energy Solar Gamma-Ray Production. Physical Review Letters, 2018, 121, 131103.	7.8	28
77	TeV solar gamma rays from cosmic-ray interactions. Physical Review D, 2017, 96, .	4.7	27
78	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
79	Tagging spallation backgrounds with showers in water Cherenkov detectors. Physical Review D, 2015, 92, .	4.7	26
80	Unexpected dip in the solar gamma-ray spectrum. Physical Review D, 2018, 98, .	4.7	26
81	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
82	Dark Matter Velocity Spectroscopy. Physical Review Letters, 2016, 116, 031301.	7.8	25
83	Probing secret interactions of astrophysical neutrinos in the high-statistics era. Physical Review D, 2021, 104, .	4.7	24
84	<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
85	Measurement of the Core-collapse Progenitor Mass Distribution of the Small Magellanic Cloud. Astrophysical Journal, 2019, 871, 64.	4.5	22
86	Echo Technique to Distinguish Flavors of Astrophysical Neutrinos. Physical Review Letters, 2019, 122, 151101.	7.8	22
87	Semiclassical treatment of matter-enhanced neutrino oscillations for an arbitrary density profile. Physical Review D, 1996, 54, 6323-6337.	4.7	21
88	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
89	Towards probing the diffuse supernova neutrino background in all flavors. Physical Review D, 2022, 105, .	4.7	18
90	New experimental constraints in a new landscape for composite dark matter. Physical Review D, 2021, 103, .	4.7	17

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91	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
92	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
93	Millisecond pulsars modify the radio-star-formation-rate correlation in quiescent galaxies. Physical Review D, 2021, 103, .	4.7	10
94	First observations of solar disk gamma rays over a full solar cycle. Physical Review D, 2022, 105, .	4.7	10
95	Dimuons in neutrino telescopes: New predictions and first search in IceCube. Physical Review D, 2022, 105, .	4.7	6