Pieter Mumm

List of Publications by Year
in descending order

51 papers	1,019 citations	394421 19 h-index	434195 31 g-index
52 all docs	52 docs citations	52 times ranked	961 citing authors

#	Article	IF	Citations
1	Determination of Reactor Antineutrino Spectra from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi mathvariant="normal">U</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>235</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math>	7.8	12
2	Joint Measurement of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi mathvariant="normal">U</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>235</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> Antineutrino Spectrum by PROSPECT and STEREO. Physical Review Letters, 2022, 128, 081802.	7.8	11
3	Improved short-baseline neutrino oscillation search and energy spectrum measurement with the PROSPECT experiment at HFIR. Physical Review D, 2021, 103, .	4.7	60
4	New high-sensitivity searches for neutrons converting into antineutrons and/or sterile neutrons at the HIBEAM/NNBAR experiment at the European Spallation Source. Journal of Physics G: Nuclear and Particle Physics, 2021, 48, 070501.	3.6	33
5	Limits on sub-GeV dark matter from the PROSPECT reactor antineutrino experiment. Physical Review D, 2021, 104, .	4.7	29
6	Optimum lithium loading of a liquid scintillator for neutron and neutrino detection. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 953, 163126.	1.6	5
7	Nonfuel antineutrino contributions in the ORNL High Flux Isotope Reactor (HFIR). Physical Review C, 2020, 101, .	2.9	4
8	Experimental upper bound and theoretical expectations for parity-violating neutron spin rotation in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>He</mml:mi><mml:mprescripts /><mml:none /><mml:mn>4</mml:mn></mml:mmultiscripts></mml:math>. Physical Review C, 2019, 100, .	2.9	6
9	Reactor HFIR with PROSPECT. Physical Review Letters, 2019, 122, 251801. <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi mathvariant="normal">U</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>235</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math>	7.8	39
10	The radioactive source calibration system of the PROSPECT reactor antineutrino detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 944, 162465.	1.6	3
11	The PROSPECT reactor antineutrino experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 922, 287-309.	1.6	40
12	A low mass optical grid for the PROSPECT reactor antineutrino detector. Journal of Instrumentation, 2019, 14, P04014-P04014.	1.2	10
13	Lithium-loaded liquid scintillator production for the PROSPECT experiment. Journal of Instrumentation, 2019, 14, P03026-P03026.	1.2	16
14	X-ray tomography of internal components of the NBS-1 photo-neutron source (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 222 Td 0		
15	Studies of MCP-PMTs in the miniTimeCube neutrino detector. AIP Advances, 2018, 8, 095003.	1.3	2
16	First Search for Short-Baseline Neutrino Oscillations at HFIR with PROSPECT. Physical Review Letters, 2018, 121, 251802.	7.8	99
17	Performance of a segmented ⁶Li-loaded liquid scintillator detector for the PROSPECT experiment. Journal of Instrumentation, 2018, 13, P06023-P06023.	1.2	23
18	Resolving the neutron lifetime puzzle. Science, 2018, 360, 605-606.	12.6	3

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19	Phase stability and lithium loading capacity in a liquid scintillation cocktail. Journal of Radioanalytical and Nuclear Chemistry, 2017, 314, 767-771.	1.5	5
20	Invited Article: miniTimeCube. Review of Scientific Instruments, 2016, 87, 021301.	1.3	8
21	Precision Measurement of the Radiative<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>Decay of the Free Neutron. Physical Review Letters, 2016, 116, 242501.	7.8	23
22	High-sensitivity measurement of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mmultiscripts><mml:mi>He</mml:mi><mml:mprescripts /><mml:none /><mml:mn>3</mml:mn></mml:mmultiscripts><mml:mo>â^'</mml:mo><mml:mmultiscripts><mml:mi>He</mml:mi><mml:mprescripts /><mml:none /><mml:mn>4</mml:mn></mml:mmultiscripts></mml:mrow></mml:math>isotopic ratios for ultracold neutron experiments. Physical Review C, 2016, 93, .	2.9	4
23	The PROSPECT physics program. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 113001.	3.6	53
24	Background radiation measurements at high power research reactors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 806, 401-419.	1.6	22
25	Survival analysis approach to account for non-exponential decay rate effects in lifetime experiments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 813, 84-95.	1.6	1
26	Neutron-antineutron oscillations: Theoretical status and experimental prospects. Physics Reports, 2016, 612, 1-45.	25.6	138
27	Light collection and pulse-shape discrimination in elongated scintillator cells for the PROSPECT reactor antineutrino experiment. Journal of Instrumentation, 2015, 10, P11004-P11004.	1.2	19
28	A slow neutron polarimeter for the measurement of parity-odd neutron rotary power. Review of Scientific Instruments, 2015, 86, 055101.	1.3	14
29	Design and performance of a cryogenic apparatus for magnetically trapping ultracold neutrons. Cryogenics, 2014, 64, 40-50.	1.7	3
30	Time reversal and the neutron. Hyperfine Interactions, 2013, 214, 97-104.	0.5	1
31	Experimental parameters for a reactor antineutrino experiment at very short baselines. Physical Review D, 2013, 87, .	4.7	16
32	A new limit on time-reversal violation in beta decay: Results of the emiTII experiment. , 2012, , .		0
33	A gamma- and X-ray detector for cryogenic, high magnetic field applications. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 691, 64-71.	1.6	6
34	Search for a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>T</mml:mi></mml:math>-odd,<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>P</mml:mi></mml:math>-even triple correlation in neutron decay. Physical Review C, 2012, 86, .	2.9	34
35	Polarized neutron beam properties for measuring parity-violating spin rotation in liquid 4He. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 631, 80-89.	1.6	10
36	Upper bound on parity-violating neutron spin rotation inHe4. Physical Review C, 2011, 83, .	2.9	36

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37	New Limit on Time-Reversal Violation in Beta Decay. Physical Review Letters, 2011, 107, 102301.	7.8	43
38	Radiative<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Î²</mml:mi></mml:mrow></mml:math>decay of the free neutron. Physical Review C, 2010, 81, .	2.9	26
39	Measuring the neutron lifetime using magnetically trapped neutrons. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 611, 171-175.	1.6	18
40	An experiment for the precision measurement of the radiative decay mode of the neutron. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 611, 219-223.	1.6	6
41	Invited Article: Development of high-field superconducting Ioffe magnetic traps. Review of Scientific Instruments, 2008, 79, 031301.	1.3	12
42	Radiative decay of the free neutron. AIP Conference Proceedings, 2007, , .	0.4	2
43	Particle and photon detection for a neutron radiative decay experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 579, 447-450.	1.6	7
44	Observation of the radiative decay mode of the free neutron. Nature, 2006, 444, 1059-1062.	27.8	36
45	Proposed Measurement of the Parity-Violating Neutron Spin Rotation in 4He. AIP Conference Proceedings, 2006, , .	0.4	1
46	Progress Towards a Precision Measurement of the Neutron Lifetime Using Magnetically Trapped Ultracold Neutrons. AIP Conference Proceedings, 2006, , .	0.4	0
47	Measurement of the parity-violating neutron spin rotation in He-4. Journal of Research of the National Institute of Standards and Technology, 2005, 110, 205.	1.2	7
48	emiT: An apparatus to test time reversal invariance in polarized neutron decay. Review of Scientific Instruments, 2004, 75, 5343-5355.	1.3	20
49	A zero-to-few-hundred eV proton beam for calibrations of neutron Î² decay experiments. Nuclear Instruments & Methods in Physics Research B, 2002, 197, 278-281.	1.4	2
50	Time reversal in polarized neutron decay: the emiT experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2000, 440, 648-652.	1.6	4
51	New limit on theDcoefficient in polarized neutron decay. Physical Review C, 2000, 62, .	2.9	45