ChloÃ© Malbrunot

List of Publications by Year
in descending order

98 papers	1,277 citations	394421 19 h-index	395702 33 g-index
100 all docs	100 docs citations	100 times ranked	2804 citing authors

#	Article	IF	Citations
1	A source of antihydrogen for in-flight hyperfine spectroscopy. Nature Communications, 2014, 5, 3089.	12.8	149
2	A moirÃ© deflectometer for antimatter. Nature Communications, 2014, 5, 4538.	12.8	71
3	Axion searches with microwave filters: the RADES project. Journal of Cosmology and Astroparticle Physics, 2018, 2018, 040-040.	5.4	71
4	Laser excitation of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>n</mml:mi><mml:mo>=</mml:mo><mml:mn>3</mml:mn of positronium for antihydrogen production. Physical Review A, 2016, 94, .	2.5	39
5	Improved search for heavy neutrinos in the decay <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Ï€</mml:mi><mml:mo stretchy="false">â†’</mml:mo><mml:mi>e</mml:mi><mml:mi>Î½</mml:mi></mml:mrow></mml:math>. Physical Review D, 2018, 97, .	4.7	59
6	Improved Measurement of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Ï€</mml:mi><mml:mo stretchy="false">â†’</mml:mo><mml:mi mathvariant="normal">e</mml:mi><mml:mi>Î½</mml:mi></mml:mrow></mml:math>Branching Ratio. Physical Review Letters, 2015, 115, 071801.	7.8	56
7	Search for massive neutrinos in the decay<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Ï€</mml:mi><mml:mo>â†’</mml:mo><mml:mi>e</mml:mi><mml:mi>Î½</mml:mi></mml:math>. Physical Review D, 2011, 84, .	4.7	46
8	First results of the CAST-RADES haloscope search for axions at 34.67 Î¼eV. Journal of High Energy Physics, 2021, 2021, 1.	4.7	43
9	Search for heavy neutrinos in Ï€â€"â†'â€Î¼Î½ decay. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 798, 134980.	4.1	40
10	Pulsed production of antihydrogen. Communications Physics, 2021, 4, .	5.3	37
11	Positron bunching and electrostatic transport system for the production and emission of dense positronium clouds into vacuum. Nuclear Instruments & Methods in Physics Research B, 2015, 362, 86-92.	1.4	34
12	The ASACUSA antihydrogen and hydrogen program: results and prospects. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170273.	3.4	33
13	Conceptual design of BabyIAXO, the intermediate stage towards the International Axion Observatory. Journal of High Energy Physics, 2021, 2021, 1.	4.7	28
14	Improved study of the antiprotonic helium hyperfine structure. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 081008.	1.5	27
15	Measurement of the hyperfine structure of antihydrogen in a beam. Hyperfine Interactions, 2013, 215, 1-8.	0.5	27
16	Scalable haloscopes for axion dark matter detection in the 30 Î¼eV range with RADES. Journal of High Energy Physics, 2020, 2020, 1.	4.7	27
17	In-beam measurement of the hydrogen hyperfine splitting and prospects for antihydrogen spectroscopy. Nature Communications, 2017, 8, 15749.	12.8	26
18	High purity pion beam at TRIUMF. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 609, 102-105.	1.6	24

#	Article	IF	Citations
19	Producing long-lived <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>2</mml:mn><mml:msup><mml:mrow><mml:mspace width="0.16em" /></mml:mrow><mml:mn>3</mml:mn></mml:msup><mml:mi>S</mml:mi></mml:mrow></mml:math> positronium via <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>3</mml:mn><mml:msup><mml:mrow><mml:mspace	2.5	21
20	The AEgIS experiment. Hyperfine Interactions, 2015, 233, 13-20.	0.5	18
21	Hyperfine spectroscopy of hydrogen and antihydrogen in ASACUSA. Hyperfine Interactions, 2019, 240, 1.	0.5	18
22	Compression of a mixed antiproton and electron non-neutral plasma to high densities. European Physical Journal D, 2018, 72, 1.	1.3	17
23	Velocity-selected production of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>2</mml:mn><mml:mmultiscripts><mml:mi mathvariant="normal">S</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mspace width="0.16em" /><mml:mn>3</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> metastable positronium. Physical Review A, 2019, 99, .	2.5	17
24	Study of a large NaI(Tl) crystal. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 621, 188-191.	1.6	15
25	Rydberg-positronium velocity and self-ionization studies in a 1T magnetic field and cryogenic environment. Physical Review A, 2020, 102, .	2.5	14
26	Detector for measuring the Ï€+â†’e+Î½e branching fraction. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 791, 38-46.	1.6	12
27	Towards a precise measurement of the antihydrogen ground state hyperfine splitting in a beam: the case of in-flight radiative decays. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 184001.	1.5	11
28	Recent Developments from ASACUSA on Antihydrogen Detection. EPJ Web of Conferences, 2018, 181, 01003.	0.3	10
29	Measurement of the principal quantum number distribution in a beam of antihydrogen atoms. European Physical Journal D, 2021, 75, 1.	1.3	10
30	Search for three body pion decays Ï€+â†’l+Î½X. Physical Review D, 2021, 103, .	4.7	10
31	Annihilation detector for an in-beam spectroscopy apparatus to measure the ground state hyperfine splitting of antihydrogen. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2017, 845, 579-582.	1.6	9
32	Improved search for two body muon decay Î¼+â†’e+XH. Physical Review D, 2020, 101, .	4.7	9
33	Stimulated decay and formation of antihydrogen atoms. Physical Review A, 2020, 101, .	2.5	9
34	Design of New Resonant Haloscopes in the Search for the Dark Matter Axion: A Review of the First Steps in the RADES Collaboration. Universe, 2022, 8, 5.	2.5	9
35	Towards measuring the ground state hyperfine splitting of antihydrogen â€“ a progress report. Hyperfine Interactions, 2016, 237, 1.	0.5	8
36	AEgIS at ELENA: outlook for physics with a pulsed cold antihydrogen beam. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170274.	3.4	8

#	Article	IF	Citations
37	A â^¼100â€Î¼m-resolution position-sensitive detector for slow positronium. Nuclear Instruments & Methods in Physics Research B, 2019, 457, 44-48.	1.4	8
38	Efficient <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>2</mml:mn><mml:mspace width="0.16em" /><mml:mmultiscripts><mml:mi>S</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:math> positronium production by stimulated decay from the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>3</mml:mn><mml:mspace	2.5	8
39	The 3 Cavity Prototypes of RADES: An Axion Detector Using Microwave Filters at CAST. Springer Proceedings in Physics, 2020, , 45-51.	0.2	8
40	Thin Film (High Temperature) Superconducting Radiofrequency Cavities for the Search of Axion Dark Matter. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.7	8
41	Testing the Weak Equivalence Principle with an antimatter beam at CERN. Journal of Physics: Conference Series, 2015, 631, 012047.	0.4	7
42	Characterization of a transmission positron/positronium converter for antihydrogen production. Nuclear Instruments & Methods in Physics Research B, 2017, 407, 55-66.	1.4	7
43	The AEgIS experiment at CERN: measuring antihydrogen free-fall in earthâ€™s gravitational field to test WEP with antimatter. Journal of Physics: Conference Series, 2017, 791, 012014.	0.4	7
44	The AEgIS Experiment. Hyperfine Interactions, 2014, 228, 121-131.	0.5	6
45	Spectroscopy apparatus for the measurement of the hyperfine structure of antihydrogen. Hyperfine Interactions, 2014, 228, 61-66.	0.5	6
46	Investigation of silicon sensors for their use as antiproton annihilation detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 765, 161-166.	1.6	6
47	Direct detection of antiprotons with the Timepix3 in a new electrostatic selection beamline. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 831, 12-17.	1.6	6
48	A hydrogen beam to characterize the ASACUSA antihydrogen hyperfine spectrometer. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 935, 110-120.	1.6	6
49	Calibration and Equalisation of Plastic Scintillator Detectors for Antiproton Annihilation Identification Over Positron/Positronium Background. Acta Physica Polonica B, 2020, 51, 213.	0.8	6
50	The PIENU experiment at TRIUMF : a sensitive probe for new physics. Journal of Physics: Conference Series, 2011, 312, 102010.	0.4	5
51	Particle tracking at cryogenic temperatures: the Fast Annihilation Cryogenic Tracking (FACT) detector for the AEgIS antimatter gravity experiment. Journal of Instrumentation, 2015, 10, C02023-C02023.	1.2	5
52	The ASACUSA CUSP: an antihydrogen experiment. Hyperfine Interactions, 2015, 235, 13-20.	0.5	5
53	Positronium Rydberg excitation diagnostic in a 1T cryogenic environment. AIP Conference Proceedings, 2019, , .	0.4	5
54	Laser-stimulated deexcitation of Rydberg antihydrogen atoms. Physical Review A, 2019, 99, .	2.5	5

#	Article	IF	Citations
55	A cryogenic tracking detector for antihydrogen detection in the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e454" altimg="si123.svg"><mml:mtext>AEgIS</mml:mtext></mml:math> experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 960, 163637.	1.6	5
56	AEgIS experiment: Towards antihydrogen beam production for antimatter gravity measurements. European Physical Journal D, 2014, 68, 1.	1.3	4
57	Measuring the gravitational free-fall of antihydrogen. Hyperfine Interactions, 2014, 228, 151-157.	0.5	4
58	Measurement of antiproton annihilation on Cu, Ag and Au with emulsion films. Journal of Instrumentation, 2017, 12, P04021-P04021.	1.2	4
59	Antiproton beams with low energy spread for antihydrogen production. Journal of Instrumentation, 2019, 14, P05009-P05009.	1.2	4
60	Imaging a positronium cloud in a 1 Tesla. EPJ Web of Conferences, 2019, 198, 00004.	0.3	4
61	Hybrid Imaging and Timing Ps Laser Excitation Diagnostics for Pulsed Antihydrogen Production. Acta Physica Polonica A, 2020, 137, 96-100.	0.5	4
62	Comparison of Planar and 3D Silicon Pixel Sensors Used for Detection of Low Energy Antiprotons. IEEE Transactions on Nuclear Science, 2014, 61, 3747-3753.	2.0	3
63	The development of the antihydrogen beam detector and the detection of the antihydrogen atoms for in-flight hyperfine spectroscopy. Journal of Physics: Conference Series, 2015, 635, 022061.	0.4	3
64	Numerical simulations of hyperfine transitions of antihydrogen. Hyperfine Interactions, 2015, 233, 47-51.	0.5	3
65	An atomic hydrogen beam to test ASACUSAâ€™s apparatus for antihydrogen spectroscopy. Hyperfine Interactions, 2015, 233, 35-40.	0.5	3
66	Search for massive neutrinos in Ï€ + â†’ e + Î½ e ${pi }^{+}{ightarrow }e^{+}{u }_{e}$ decay. Hyperfine Interactions, 2017, 238, 1.	0.5	3
67	Monte-Carlo based performance assessment of ASACUSAâ€™s antihydrogen detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2018, 910, 90-95.	1.6	3
68	Towards the first measurement of matter-antimatter gravitational interaction. EPJ Web of Conferences, 2018, 182, 02040.	0.3	3
69	Search for the rare decays <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Ï€</mml:mi><mml:mo>+</mml:mo></mml:msup><mml:mo stretchy="false">â†’</mml:mo><mml:msup><mml:mi>Î¼</mml:mi><mml:mo>+</mml:mo></mml:msup><mml:msub><mml:mi>Î½</m accent="true"><mml:mi>Î½</mml:mi><mml:mo stretchy="false">Â¯</mml:mo></mml:mover></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml. Physical Review D, 2020, 102, .	4.7	3
70	Induced THz transitions in Rydberg caesium atoms for application in antihydrogen experiments. European Physical Journal D, 2021, 75, 1.	1.3	3
71	Advances in Ps Manipulations and Laser Studies in the AEgIS Experiment. Acta Physica Polonica B, 2017, 48, 1583.	0.8	3
72	Measurement of the pion branching ratio at TRIUMF. , 2012, , .		2

#	Article	IF	Citations
73	PIENU experiment at TRIUMF: A sensitive probe of new physics. AIP Conference Proceedings, 2013, , .	0.4	2
74	Development of nuclear emulsions operating in vacuum for the AEgIS experiment. Journal of Instrumentation, 2014, 9, C01061-C01061.	1.2	2
75	Probing antimatter gravity â€“ The AEGIS experiment at CERN. EPJ Web of Conferences, 2016, 126, 02016.	0.3	2
76	Collisional Effects on the Antiprotonic Helium Hyperfine Structure Measurement. AIP Conference Proceedings, 2008, , .	0.4	1
77	PIENU experiment at TRIUMF: Measurement of Ï€â†’eÎ½â^•Ï€â†’Î¼Î½ branching ratio. , 2009, , .		1
78	Towards a spin polarized antihydrogen beam. Hyperfine Interactions, 2014, 228, 67-76.	0.5	1
79	Status of the PIENU experiment at TRIUMF. Journal of Physics: Conference Series, 2015, 631, 012044.	0.4	1
80	Experiments with low-energy antimatter. EPJ Web of Conferences, 2015, 96, 01007.	0.3	1
81	Emulsion detectors for the antihydrogen detection in AEgIS. Hyperfine Interactions, 2015, 233, 29-34.	0.5	1
82	The DAQ system for the AEá¸¡IS experiment. Journal of Physics: Conference Series, 2017, 898, 032014.	0.4	1
83	AEgÌ…IS latest results. EPJ Web of Conferences, 2018, 181, 01037.	0.3	1
84	Monte-Carlo simulation of positronium laser excitation and anti-hydrogen formation via charge exchange. Hyperfine Interactions, 2019, 240, 1.	0.5	1
85	The AEgIS experiment: towards antimatter gravity measurements. Journal of Physics: Conference Series, 2019, 1390, 012104.	0.4	1
86	Techniques for Production and Detection of 23S Positronium. Acta Physica Polonica A, 2020, 137, 91-95.	0.5	1
87	Developments for pulsed antihydrogen production towards direct gravitational measurement on antimatter. Physica Scripta, 2020, 95, 114001.	2.5	1
88	Massive neutrino search in the decay Ï€[sup +]â†’e[sup +]Î½. , 2012, , .		0
89	Annihilation of low energy antiprotons in silicon sensors. , 2013, , .		0
90	Status of the PIENU experiment. Journal of Physics: Conference Series, 2014, 556, 012002.	0.4	0

#	Article	IF	Citations
91	Initial results from the PIENU experiment. Hyperfine Interactions, 2017, 238, 1.	0.5	0
92	The Development of the Antihydrogen Beam Detector: Toward the Three Dimensional Tracking with a BGO Crystal and a Hodoscope. , 2017, , .		0
93	Antiproton tagging and vertex fitting in a Timepix3 detector. Journal of Instrumentation, 2018, 13, P06004-P06004.	1.2	0
94	Production of long-lived positronium states via laser excitation to 33P level. AIP Conference Proceedings, 2019, , .	0.4	0
95	Positronium for Antihydrogen Production in the AEGIS Experiment. Acta Physica Polonica A, 2017, 132, 1443-1449.	0.5	0
96	Protocol for pulsed antihydrogen production in the AEá¸¡IS apparatus. Journal of Physics: Conference Series, 2020, 1612, 012025.	0.4	0
97	Simulation of antihydrogen deexcitation in neutral atom traps for improved trapping and cooling. Journal of Physics B: Atomic, Molecular and Optical Physics, 0, , .	1.5	0
98	A Rydberg hydrogen beam for studies of stimulated deexcitation. EPJ Web of Conferences, 2022, 262, 01002.	0.3	0