Stefan Ulmer

List of Publications by Year
in descending order

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75 papers	1,761 citations	236612 25 h-index	288905 40 g-index
85 all docs	85 docs citations	85 times ranked	986 citing authors

#	ARTICLE	IF	CITATIONS
1	A source of antihydrogen for in-flight hyperfine spectroscopy. Nature Communications, 2014, 5, 3089.	5.8	149
2	High-precision comparison of the antiproton-to-proton charge-to-mass ratio. Nature, 2015, 524, 196-199.	13.7	114
3	A parts-per-billion measurement of the antiproton magnetic moment. Nature, 2017, 550, 371-374.	13.7	96
4	High-Precision Measurement of the Protonâ€™s Atomic Mass. Physical Review Letters, 2017, 119, 033001.	2.9	85
5	Double-trap measurement of the proton magnetic moment at 0.3 parts per billion precision. Science, 2017, 358, 1081-1084.	6.0	81
6	Direct high-precision measurement of the magnetic moment of the proton. Nature, 2014, 509, 596-599.	13.7	79
7	PENTATRAP: a novel cryogenic multi-Penning-trap experiment for high-precision mass measurements on highly charged ions. Applied Physics B: Lasers and Optics, 2012, 107, 983-996.	1.1	72
8	Observation of Spin Flips with a Single Trapped Proton. Physical Review Letters, 2011, 106, 253001.	2.9	70
9	BASE â€“ The Baryon Antibaryon Symmetry Experiment. European Physical Journal: Special Topics, 2015, 224, 3055-3108.	1.2	53
10	Direct limits on the interaction of antiprotons with axion-like dark matter. Nature, 2019, 575, 310-314.	13.7	47
11	The quality factor of a superconducting rf resonator in a magnetic field. Review of Scientific Instruments, 2009, 80, 123302.	0.6	46
12	Resolution of Single Spin Flips of a Single Proton. Physical Review Letters, 2013, 110, 140405.	2.9	44
13	Sixfold improved single particle measurement of the magnetic moment of the antiproton. Nature Communications, 2017, 8, 14084.	5.8	40
14	The trap design of PENTATRAP. Applied Physics B: Lasers and Optics, 2012, 107, 997-1005.	1.1	37
15	The ASACUSA antihydrogen and hydrogen program: results and prospects. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170273.	1.6	33
16	An experiment for the direct determination of the<i>g</i>-factor of a single proton in a Penning trap. New Journal of Physics, 2012, 14, 063011.	1.2	32
17	A cryogenic detection system at 28.9MHZ for the non-destructive observation of a single proton at low particle energy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 705, 55-60.	0.7	32
18	Highly sensitive superconducting circuits at âˆ¼700 kHz with tunable quality factors for image-current detection of single trapped antiprotons. Review of Scientific Instruments, 2016, 87, 113305.	0.6	32

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19	Constraints on the Coupling between Axionlike Dark Matter and Photons Using an Antiproton Superconducting Tuned Detection Circuit in a Cryogenic Penning Trap. Physical Review Letters, 2021, 126, 041301.	2.9	32
20	Detection of metastable electronic states by Penning trap mass spectrometry. Nature, 2020, 581, 42-46.	13.7	31
21	Recent developments in ion detection techniques for Penning trap mass spectrometry at TRIGA-TRAP. European Physical Journal A, 2009, 42, 311-317.	1.0	30
22	Improved limit on the directly measured antiproton lifetime. New Journal of Physics, 2017, 19, 083023.	1.2	30
23	Measurement of the hyperfine structure of antihydrogen in a beam. Hyperfine Interactions, 2013, 215, 1-8.	0.2	27
24	Sympathetic cooling of protons and antiprotons with a common endcap Penning trap. Journal of Modern Optics, 2018, 65, 568-576.	0.6	27
25	Demonstration of the double Penning Trap technique with a single proton. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 723, 78-81.	1.5	26
26	A 16-parts-per-trillion measurement of the antiproton-to-proton chargeâ€“mass ratio. Nature, 2022, 601, 53-57.	13.7	25
27	A reservoir trap for antiprotons. International Journal of Mass Spectrometry, 2015, 389, 10-13.	0.7	23
28	<i>g</i>-factor experiments on simple systems in Penning traps. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 154021.	0.6	20
29	Direct Measurement of the Free Cyclotron Frequency of a Single Particle in a Penning Trap. Physical Review Letters, 2011, 107, 103002.	2.9	20
30	Millicharged Dark Matter Detection with Ion Traps. PRX Quantum, 2022, 3, .	3.5	20
31	Calculation of electrostatic fields using quasi-Green's functions: application to the hybrid Penning trap. New Journal of Physics, 2008, 10, 103009.	1.2	19
32	Hyperfine spectroscopy of hydrogen and antihydrogen in ASACUSA. Hyperfine Interactions, 2019, 240, 1.	0.2	18
33	Observation of individual spin quantum transitions of a single antiproton. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 769, 1-6.	1.5	17
34	Cryogenic ⁹Be⁺ Penning trap for precision measurements with (anti-)protons. Measurement Science and Technology, 2020, 31, 035003.	1.4	17
35	Sympathetic cooling of a trapped proton mediated by an LC circuit. Nature, 2021, 596, 514-518.	13.7	17
36	CPT symmetry tests with cold and antihydrogen. Annalen Der Physik, 2013, 525, 493-504.	0.9	16

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37	Direct <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Q</mml:mi></mml:mrow></mml:math> -Value Determination of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Î²</mml:mi><mml:mo>âˆ'</mml:mo></mml:msup></mml:math> Decay of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>Re</mml:mi></mml:mrow><mml:mprescripts	2.9	16
38	Direct measurement of the 3He+ magnetic moments. Nature, 2022, 606, 878-883.	13.7	15
39	Penning Trap Measurement of the Magnetic Moment of the Antiproton. AIP Conference Proceedings, 2005, , .	0.3	10
40	Recent Developments from ASACUSA on Antihydrogen Detection. EPJ Web of Conferences, 2018, 181, 01003.	0.1	10
41	Measurement of Ultralow Heating Rates of a Single Antiproton in a Cryogenic Penning Trap. Physical Review Letters, 2019, 122, 043201.	2.9	10
42	Measurement of the principal quantum number distribution in a beam of antihydrogen atoms. European Physical Journal D, 2021, 75, 1.	0.6	10
43	A New Experiment for the Measurement of the <i>g</i>-Factors of ³He⁺ and ³He²⁺. Journal of Physics: Conference Series, 2018, 1138, 012004.	0.3	9
44	CPT TEST WITH (ANTI)PROTON MAGNETIC MOMENTS BASED ON QUANTUM LOGIC COOLING AND READOUT. , 2014, , 41-44.		9
45	Towards measuring the ground state hyperfine splitting of antihydrogen â€" a progress report. Hyperfine Interactions, 2016, 237, 1.	0.2	8
46	Towards a high-precision measurement of the antiproton magnetic moment. Hyperfine Interactions, 2014, 228, 31-36.	0.2	7
47	Quantum logic inspired techniques for spacetime-symmetry tests with (anti-)protons. New Journal of Physics, 2021, 23, 073045.	1.2	7
48	139ÂGHz UV phase-locked Raman laser system for thermometry and sideband cooling of ⁹Be⁺ ions in a Penning trap. Journal of Physics B: Atomic, Molecular and Optical Physics, 2021, 54, 195402.	0.6	7
49	Superconducting Solenoid System with Adjustable Shielding Factor for Precision Measurements of the Properties of the Antiproton. Physical Review Applied, 2019, 12, .	1.5	6
50	Sympathetic cooling schemes for separately trapped ions coupled via image currents. New Journal of Physics, 2022, 24, 033021.	1.2	6
51	Developments for the direct determination of the g-factor of a single proton in a Penning trap. Hyperfine Interactions, 2009, 194, 93-98.	0.2	5
52	The magnetic moments of the proton and the antiproton. Journal of Physics: Conference Series, 2014, 488, 012033.	0.3	5
53	The ASACUSA CUSP: an antihydrogen experiment. Hyperfine Interactions, 2015, 235, 13-20.	0.2	5
54	A Novel Penningâ€Trap Design for the Highâ€Precision Measurement of the 3 He 2 + Nuclear Magnetic Moment. Annalen Der Physik, 2019, 531, 1800485.	0.9	5

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55	350-fold improved measurement of the antiproton magnetic moment using a multi-trap method. Hyperfine Interactions, 2018, 239, 1.	0.2	4
56	Towards sympathetic cooling of single (anti-)protons. Hyperfine Interactions, 2018, 239, 1.	0.2	4
57	Antiproton beams with low energy spread for antihydrogen production. Journal of Instrumentation, 2019, 14, P05009-P05009.	0.5	4
58	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.	0.3	3
59	Challenging the standard model by high-precision comparisons of the fundamental properties of protons and antiprotons. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170275.	1.6	3
60	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.	0.7	3
61	Elementary Laserâ€Less Quantum Logic Operations with (Antiâ€)Protons in Penning Traps. Advanced Quantum Technologies, 2020, 3, 1900133.	1.8	3
62	Towards a direct measurement of the g-factor of a single isolated protonThis paper was presented at the International Conference on Precision Physics of Simple Atomic Systems, held at Ã‰cole de Physique, les Houches, France, 30 Mayâ€“4 June, 2010.. Canadian Journal of Physics, 2011, 89, 165-168.	0.4	2
63	Antihydrogen Synthesis in a Double-Cusp Trap. , 2017, , .		2
64	Progress towards an improved comparison of the proton-to-antiproton charge-to-mass ratios. Hyperfine Interactions, 2018, 239, 1.	0.2	2
65	The Magnetic Moments of the Proton and the Antiproton. Springer Tracts in Modern Physics, 2014, , 165-201.	0.1	2
66	Towards a spin polarized antihydrogen beam. Hyperfine Interactions, 2014, 228, 67-76.	0.2	1
67	Towards Sympathetic Laser Cooling and Detection of Single (Anti-)Protons. , 2017, , .		1
68	Manipulation and Transport of Antiprotons for an Efficient Production of Antihydrogen Atoms. , 2017, , .		1
69	QuantensprÃ¼nge des Proton-Spins. Physik in Unserer Zeit, 2011, 42, 216-217.	0.0	0
70	Towards the production of anti-hydrogen beams. , 2013, , .		0
71	Das magnetische Moment des Protons. Physik in Unserer Zeit, 2015, 46, 92-97.	0.0	0
72	Antihydrogen synthesis in a double-CUSP trap towards test of the CPT-symmetry. Hyperfine Interactions, 2016, 237, 1.	0.2	0

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73	PRECISE TESTS OF FUNDAMENTAL SYMMETRIES WITH TRAPPED IONS. Advanced Textbooks in Physics, 2016, , 335-376.	0.1	0
74	Optical transition seen in antihydrogen. Nature, 2017, 541, 467-468.	13.7	0
75	Developments for the direct determination of the g-factor of a single proton in a Penning trap. , 2009, , 441-446.		0