Valerio Mascagna

List of Publications by Year
in descending order

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108 papers	1,251 citations	471509 17 h-index	434195 31 g-index
110 all docs	110 docs citations	110 times ranked	894 citing authors

#	Article	IF	Citations
1	A source of antihydrogen for in-flight hyperfine spectroscopy. Nature Communications, 2014, 5, 3089.	12.8	149
2	Synthesis of Cold Antihydrogen in a Cusp Trap. Physical Review Letters, 2010, 105, 243401.	7.8	135
3	First results on the SPS beam collimation with bent crystals. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 692, 78-82.	4.1	101
4	The CLAS12 Spectrometer at Jefferson Laboratory. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 959, 163419.	1.6	75
5	Measurement of the antiprotonâ€“nucleus annihilation cross section at 5.3 MeV. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2011, 704, 461-466.	4.1	43
6	The ASACUSA antihydrogen and hydrogen program: results and prospects. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170273.	3.4	33
7	First experimental detection of antiproton in-flight annihilation on nuclei at âˆ¼ 130 keV. European Physical Journal Plus, 2012, 127, 1.	2.6	26
8	A real time scintillating fiber dosimeter for gamma and neutron monitoring on radiotherapy accelerators. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 572, 228-230.	1.6	25
9	Experimental apparatus for annihilation cross-section measurements of low energy antiprotons. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 711, 12-20.	1.6	25
10	Shashlik Calorimeters With Embedded SiPMs for Longitudinal Segmentation. IEEE Transactions on Nuclear Science, 2017, 64, 1056-1061.	2.0	24
11	Measurement of the antiprotonâ€“nucleus annihilation cross-section at low energy. Nuclear Physics A, 2018, 970, 366-378.	1.5	22
12	Instrumentation for measurement of in-flight annihilations of 130 keV antiprotons on thin target foils. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 835, 110-118.	1.6	20
13	Strong Reduction of the Effective Radiation Length in an Axially Oriented Scintillator Crystal. Physical Review Letters, 2018, 121, 021603.	7.8	20
14	PhoNeS: A novel approach to BNCT with conventional radiotherapy accelerators. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 572, 231-232.	1.6	19
15	First Measurement of Timelike Compton Scattering. Physical Review Letters, 2021, 127, 262501.	7.8	19
16	Hyperfine spectroscopy of hydrogen and antihydrogen in ASACUSA. Hyperfine Interactions, 2019, 240, 1.	0.5	18
17	12C(e,e'pN) measurements of short range correlations in the tensor-to-scalar interaction transition region. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 820, 136523.	4.1	18
18	A scintillating fiber dosimeter for radiotherapy. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 581, 80-83.	1.6	17

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19	Irradiation and performance of RGB-HD Silicon Photomultipliers for calorimetric applications. Journal of Instrumentation, 2019, 14, P02029-P02029.	1.2	17
20	An experimental program with high duty-cycle polarized and unpolarized positron beams at Jefferson Lab. European Physical Journal A, 2021, 57, 1.	2.5	17
21	Scintillating bar detector for antiproton annihilations measurements. Hyperfine Interactions, 2015, 233, 53-58.	0.5	16
22	Progress towards the first measurement of charm baryon dipole moments. Physical Review D, 2021, 103, .	4.7	16
23	Testbeam performance of a shashlik calorimeter with fine-grained longitudinal segmentation. Journal of Instrumentation, 2018, 13, P01028-P01028.	1.2	15
24	Direct detection of antihydrogen atoms using a BGO crystal. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 840, 153-159.	1.6	14
25	Measurement of the proton spin structure at long distances. Nature Physics, 2021, 17, 736-741.	16.7	14
26	Extraction of Beam-Spin Asymmetries from the Hard Exclusive <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:math> Channel off Protons in a Wide Range of Kinematics. Physical Review Letters, 2020, 125, 182001.	7.8	13
27	Observation of Beam Spin Asymmetries in the Process <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>e</mml:mi><mml:mi>p</mml:mi><mml:mo stretchy="false">â†’</mml:mo><mml:msup><mml:mi>e</mml:mi><mml:mo>â€²</mml:mo></mml:msup><mml:msup><mml:mi>Ï€</mml:mi> with CLAS12. Physical Review Letters, 2021, 126, 152501.	7.8	13
28	Investigation on radiation generated by sub-GeV electrons in ultrashort silicon and germanium bent crystals. European Physical Journal C, 2021, 81, 1.	3.9	12
29	Limits on antiproton-nuclei annihilation cross sections at âˆ¼125 keV. Nuclear Physics A, 2021, 1009, 122170.	1.5	12
30	Polysiloxane-based scintillators for shashlik calorimeters. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 956, 163379.	1.6	11
31	Measurement of the antiproton-nucleus annihilation cross-section at very low energies. Hyperfine Interactions, 2009, 194, 305-311.	0.5	10
32	Silicon Photomultipliers as a Readout System for a Scintillator-Lead Shashlik Calorimeter. IEEE Transactions on Nuclear Science, 2011, 58, 1297-1307.	2.0	10
33	Recent Developments from ASACUSA on Antihydrogen Detection. EPJ Web of Conferences, 2018, 181, 01003.	0.3	10
34	The ENUBET positron tagger prototype: construction and testbeam performance. Journal of Instrumentation, 2020, 15, P08001-P08001.	1.2	10
35	Exclusive Ï€0p electroproduction off protons in the resonance region at photon virtualities 0.4GeV2â‰¤Q2â‰¤1GeV2. Physical Review C, 2020, 101, .	2.9	10
36	Investigation on steering of ultrarelativistic $$e^{pm }$$ beam through an axially oriented bent crystal. European Physical Journal C, 2021, 81, 1.	3.9	10

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37	Measurement of the principal quantum number distribution in a beam of antihydrogen atoms. European Physical Journal D, 2021, 75, 1.	1.3	10
38	Transition radiation measurements with a Si and a GaAs pixel sensor on a Timepix3 chip. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 958, 162037.	1.6	9
39	Broad angular anisotropy of multiple scattering in a Si crystal. European Physical Journal C, 2020, 80, 1.	3.9	9
40	Beam Spin Asymmetry in Semi-Inclusive Electroproduction of Hadron Pairs. Physical Review Letters, 2021, 126, 062002.	7.8	9
41	Light dark matter searches with positrons. European Physical Journal A, 2021, 57, 1.	2.5	9
42	Study of muon pair production from positron annihilation at threshold energy. Journal of Instrumentation, 2020, 15, P01036-P01036.	1.2	9
43	The prototype of the MICE Electronâ€“Muon Ranger: Design, construction and test. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 604, 314-318.	1.6	8
44	First measurement of the antiproton-nucleus annihilation cross section at 125 keV. Hyperfine Interactions, 2015, 234, 85-92.	0.5	8
45	Towards measuring the ground state hyperfine splitting of antihydrogen â€“ a progress report. Hyperfine Interactions, 2016, 237, 1.	0.5	8
46	A feasibility test run for the MUonE project. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, 636-637.	1.6	8
47	Beamâ€“target helicity asymmetry E in K+Î£â^' photoproduction on the neutron. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 808, 135662.	4.1	8
48	A study of muon-electron elastic scattering in a test beam. Journal of Instrumentation, 2021, 16, P06005.	1.2	8
49	Beam charge asymmetries for deeply virtual Compton scattering off the proton. European Physical Journal A, 2021, 57, 1.	2.5	8
50	Enhancement of annihilation cross sections by electric interactions between the antineutron and the field of a large nucleus. European Physical Journal A, 2014, 50, 1.	2.5	7
51	Identification of particles with Lorentz factor up to <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll" id="d1e856" altimg="si4.gif"><mml:mn>1</mml:mn><mml:msup><mml:mrow><mml:mn>0</mml:mn></mml:mrow><mml:mrow><mml:mn>4</mml:mn> with Transition Radiation Detectors based on micro-strip silicon detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated	1.6	7
52	Double polarisation observable <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"><mml:mi mathvariant="double-struck">G</mml:mi></mml:math> for single pion photoproduction from the proton. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 817, 136304.	4.1	7
53	First measurements of the spectral and angular distribution of transition radiation using a silicon pixel sensor on a Timepix3 chip. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, 523-526.	1.6	6
54	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

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55	Studies of the spectral and angular distributions of transition radiation using a silicon pixel sensor on a Timepix3 chip. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 961, 163681.	1.6	6
56	Exploiting the wide dynamic range of silicon photomultipliers for quantum optics applications. EPJ Quantum Technology, 2021, 8, .	6.3	6
57	Operation and performance of the FAST detector at the AD machine. Nuclear Physics, Section B, Proceedings Supplements, 2007, 172, 299-302.	0.4	5
58	The ASACUSA CUSP: an antihydrogen experiment. Hyperfine Interactions, 2015, 235, 13-20.	0.5	5
59	First measurement of direct photoproduction of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>a</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> meson on the proton. Physical Review C, 2020, 102, .	2.9	5
60	Silicon photomultipliers characterization for the EMR prototype of the MICE experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 609, 129-135.	1.6	4
61	In-flight antiproton annihilation on nuclei at low energies. Hyperfine Interactions, 2012, 213, 31-39.	0.5	4
62	Antiproton beams with low energy spread for antihydrogen production. Journal of Instrumentation, 2019, 14, P05009-P05009.	1.2	4
63	Fine structure of angular distribution of x-ray transition radiation from multilayered radiator in Geant4. Journal of Instrumentation, 2020, 15, C06024-C06024.	1.2	4
64	Differential cross sections for Î›(1520) using photoproduction at CLAS. Physical Review C, 2021, 103, .	2.9	4
65	A time-of-flight detector for thermal neutrons from radiotherapy Linacs. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 581, 88-90.	1.6	3
66	Synthesis of antihydrogen atoms in a CUSP trap. Hyperfine Interactions, 2012, 209, 35-41.	0.5	3
67	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
68	Development of Transition Radiation Detectors for hadron identification at TeV energy scale. Journal of Physics: Conference Series, 2019, 1390, 012126.	0.4	3
69	Photoproduction of the f2(1270) Meson Using the CLAS Detector. Physical Review Letters, 2021, 126, 082002.	7.8	3
70	Real time spectrometer for thermal neutrons from radiotherapic accelerators. Nuclear Physics, Section B, Proceedings Supplements, 2007, 172, 84-87.	0.4	2
71	Boron imaging with a microstrip silicon detector for applications in BNCT. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2009, 604, 82-85.	1.6	2
72	Modelling the behavior of the positron plasma temperature in antihydrogen experimentation. Hyperfine Interactions, 2014, 228, 53-60.	0.5	2

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73	Antiparticle cloud temperatures for antihydrogen experiments. Physical Review A, 2017, 96, .	2.5	2
74	Antihydrogen Synthesis in a Double-Cusp Trap. , 2017, , .		2
75	Shashlik calorimeters: Novel compact prototypes for the ENUBET experiment. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 936, 148-149.	1.6	2
76	Measurement of deeply virtual Compton scattering off <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> with the CEBAF Large Acceptance Spectrometer at Jefferson Lab. Physical Review C, 2021, 104, .	2.9	2
77	Photoproduction of Î· mesons off the proton for 1.2<EÎ³<4.7GeV using CLAS at Jefferson Laboratory. Physical Review C, 2020, 102, .	2.9	2
78	Towards a spin polarized antihydrogen beam. Hyperfine Interactions, 2014, 228, 67-76.	0.5	1
79	Experimental investigation of â‰ˆ130 keV kinetic energy antiprotons annihilation on nuclei. Hyperfine Interactions, 2014, 229, 31-36.	0.5	1
80	Experimental results on antiprotonâ€“nuclei annihilation cross section at very low energies. EPJ Web of Conferences, 2014, 66, 09001.	0.3	1
81	New results of the antiproton-carbon annihilation cross section measurement at low energies. EPJ Web of Conferences, 2016, 130, 07014.	0.3	1
82	Silicon Photomultipliers for the decay tunnel instrumentation of the ENUBET neutrino beam. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 983, 164482.	1.6	1
83	Manipulation and Transport of Antiprotons for an Efficient Production of Antihydrogen Atoms. , 2017, , .		1
84	Performance of the readout electronics chain of the MICE Electron Muon Ranger. , 2010, , .		1
85	A high precision narrow-band neutrino beam: The ENUBET project. International Journal of Modern Physics A, 2020, 35, 2044017.	1.5	1
86	Muon detection in electron-positron annihilation for muon collider studies. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2022, 1024, 166129.	1.6	1
87	The ENUBET experiment. International Journal of Modern Physics A, 2022, 37, .	1.5	1
88	Beam profile monitor for annihilation cross section measurements of antiprotons at 100 keV. Hyperfine Interactions, 2012, 213, 199-204.	0.5	0
89	Towards the production of anti-hydrogen beams. , 2013, , .		0
90	Beam Diagnostics for Measurements of Antiproton Annihilation Cross Sections at Ultra-low Energy. EPJ Web of Conferences, 2014, 66, 09020.	0.3	0

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91	Longitudinally segmented shashlik calorimeters with SiPM readout: The SCENTT experiment. , 2016, , .		0
92	Antihydrogen synthesis in a double-CUSP trap towards test of the CPT-symmetry. Hyperfine Interactions, 2016, 237, 1.	0.5	0
93	Longitudinally segmented shashlik calorimeters with SiPM embedded readout. , 2017, , .		0
94	Status of the ENUBET project. Journal of Physics: Conference Series, 2018, 1056, 012047.	0.4	0
95	Experimental technique for antiproton-nucleus annihilation cross section measurements at low energy. EPJ Web of Conferences, 2018, 182, 03009.	0.3	0
96	Antiproton-nucleus annihilation cross section at low energy. EPJ Web of Conferences, 2018, 182, 03013.	0.3	0
97	Shashlik calorimeters for the ENUBET tagged neutrino beam. Journal of Physics: Conference Series, 2019, 1162, 012032.	0.4	0
98	Measurement of the energy spectra and of the angular distribution of the Transition Radiation with a silicon strip detector. Journal of Physics: Conference Series, 2019, 1390, 012115.	0.4	0
99	The ENUBET ERC project for an instrumented decay tunnel for future neutrino beams. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2020, 958, 162162.	1.6	0
100	Decay tunnel instrumentation for the ENUBET neutrino beam. Journal of Instrumentation, 2020, 15, C05059-C05059.	1.2	0
101	FAST: A COMPACT SCINTILLATING FIBER DETECTOR FOR ANTIPROTON CROSS SECTION MEASUREMENTS. , 2008, , .		0
102	A scintillating bar tracking detector for the ASACUSA - "trap group" experiment at the CERN AD. , 2010, , .		0
103	In-flight antiproton annihilation on nuclei at low energies. , 2011, , 251-259.		0
104	Synthesis of antihydrogen atoms in a CUSP trap. , 2012, , 35-41.		0
105	ENUBET: a monitored neutrino beam for the precision era of neutrino physics. Journal of Physics: Conference Series, 2021, 2156, 012234.	0.4	0
106	Antiproton-nuclei cross sections with Woods-Saxon potential at low energies. EPJ Web of Conferences, 2022, 262, 01018.	0.3	0
107	Upgrade of the scintillating bars detector for the ASACUSA experiment. EPJ Web of Conferences, 2022, 262, 01013.	0.3	0
108	Minimizing plasma temperature for antimatter mixing experiments. EPJ Web of Conferences, 2022, 262, 01007.	0.3	0