

# 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  | 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         |
| 2  | The ENUBET experiment. International Journal of Modern Physics A, 2022, 37, .  | 1.5  | 1         |
| 3  | Antiproton-nuclei cross sections with Woods-Saxon potential at low energies. EPJ Web of Conferences, 2022, 262, 01018.   | 0.3  | 0         |
| 4  | Upgrade of the scintillating bars detector for the ASACUSA experiment. EPJ Web of Conferences, 2022, 262, 01013.   | 0.3  | 0         |
| 5  | Minimizing plasma temperature for antimatter mixing experiments. EPJ Web of Conferences, 2022, 262, 01007.   | 0.3  | 0         |
| 6  | Exploiting the wide dynamic range of silicon photomultipliers for quantum optics applications. EPJ Quantum Technology, 2021, 8, .  | 6.3  | 6         |
| 7  | Differential cross sections for $\hat{b}(1520)$ using photoproduction at CLAS. Physical Review C, 2021, 103, .   | 2.9  | 4         |
| 8  | Beam Spin Asymmetry in Semi-Inclusive Electroproduction of Hadron Pairs. Physical Review Letters, 2021, 126, 062002.   | 7.8  | 9         |
| 9  | Photoproduction of the $f_2(1270)$ Meson Using the CLAS Detector. Physical Review Letters, 2021, 126, 082002.  | 7.8  | 3         |
| 10 | Investigation on steering of ultrarelativistic $e^+p$ beam through an axially oriented bent crystal. European Physical Journal C, 2021, 81, 1.   | 3.9  | 10        |
| 11 | Measurement of the principal quantum number distribution in a beam of antihydrogen atoms. European Physical Journal D, 2021, 75, 1.  | 1.3  | 10        |
| 12 | 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        |
| 13 | Observation of Beam Spin Asymmetries in the Process $e^+p \rightarrow e^+p\hat{b}(1520)\pi^0$ with CLAS12. Physical Review Letters, 2021, 126, 152501.   | 7.8  | 13        |
| 14 | Measurement of the proton spin structure at long distances. Nature Physics, 2021, 17, 736-741.   | 16.7 | 14        |
| 15 | Progress towards the first measurement of charm baryon dipole moments. Physical Review D, 2021, 103, .   | 4.7  | 16        |
| 16 | Limits on antiproton-nuclei annihilation cross sections at $\hat{b}(125)$ keV. Nuclear Physics A, 2021, 1009, 122170.  | 1.5  | 12        |
| 17 | A study of muon-electron elastic scattering in a test beam. Journal of Instrumentation, 2021, 16, P06005.  | 1.2  | 8         |
| 18 | Double polarisation observable $G_{\pi}^{\pi}$ for single pion photoproduction from the proton. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 817, 136304.                             | 4.1  | 7         |

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|----|--|-----|-----------|
| 19 | Beam charge asymmetries for deeply virtual Compton scattering off the proton. European Physical Journal A, 2021, 57, 1.  | 2.5 | 8         |
| 20 | Light dark matter searches with positrons. European Physical Journal A, 2021, 57, 1.   | 2.5 | 9         |
| 21 | Measurement of deeply virtual Compton scattering off $^4\text{He}$ with the CEBAF Large Acceptance Spectrometer at Jefferson Lab. Physical Review C, 2021, 104, .  | 2.9 | 2         |
| 22 | 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        |
| 23 | $12C(e,e'pN)$ 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        |
| 24 | First Measurement of Timelike Compton Scattering. Physical Review Letters, 2021, 127, 262501.  | 7.8 | 19        |
| 25 | ENUBET: a monitored neutrino beam for the precision era of neutrino physics. Journal of Physics: Conference Series, 2021, 2156, 012234.  | 0.4 | 0         |
| 26 | 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         |
| 27 | 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         |
| 28 | 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        |
| 29 | 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         |
| 30 | Beam target helicity asymmetry $E$ in $K^+\Lambda^0$ photoproduction on the neutron. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 808, 135662.  | 4.1 | 8         |
| 31 | Extraction of Beam-Spin Asymmetries from the Hard Exclusive $\gamma p \rightarrow \gamma p$ Channel off Protons in a Wide Range of Kinematics. Physical Review Letters, 2020, 125, 182001.   | 7.8 | 13        |
| 32 | The ENUBET positron tagger prototype: construction and testbeam performance. Journal of Instrumentation, 2020, 15, P08001-P08001.  | 1.2 | 10        |
| 33 | First measurement of direct photoproduction of the $\rho(770)$ meson on the proton. Physical Review C, 2020, 102, .  | 2.9 | 2         |
| 34 | Decay tunnel instrumentation for the ENUBET neutrino beam. Journal of Instrumentation, 2020, 15, C05059-C05059.  | 1.2 | 0         |
| 35 | 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         |
| 36 | Broad angular anisotropy of multiple scattering in a Si crystal. European Physical Journal C, 2020, 80, 1.   | 3.9 | 9         |

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|----|--|-----|-----------|
| 37 | 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        |
| 38 | 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         |
| 39 | Exclusive $\pi^0$ electroproduction off protons in the resonance region at photon virtualities $0.4\text{GeV}^2 \leq Q^2 \leq 1\text{GeV}^2$ . Physical Review C, 2020, 101, .   | 2.9 | 10        |
| 40 | Study of muon pair production from positron annihilation at threshold energy. Journal of Instrumentation, 2020, 15, P01036-P01036.   | 1.2 | 9         |
| 41 | Photoproduction of $\hat{1}$ -mesons off the proton for $1.2 < E_{\gamma} < 4.7\text{GeV}$ using CLAS at Jefferson Laboratory. Physical Review C, 2020, 102, .   | 2.9 | 2         |
| 42 | A high precision narrow-band neutrino beam: The ENUBET project. International Journal of Modern Physics A, 2020, 35, 2044017.  | 1.5 | 1         |
| 43 | Shashlik calorimeters for the ENUBET tagged neutrino beam. Journal of Physics: Conference Series, 2019, 1162, 012032.  | 0.4 | 0         |
| 44 | 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         |
| 45 | Irradiation and performance of RGB-HD Silicon Photomultipliers for calorimetric applications. Journal of Instrumentation, 2019, 14, P02029-P02029.   | 1.2 | 17        |
| 46 | 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         |
| 47 | 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         |
| 48 | Antiproton beams with low energy spread for antihydrogen production. Journal of Instrumentation, 2019, 14, P05009-P05009.  | 1.2 | 4         |
| 49 | Identification of particles with Lorentz factor up to $\gamma > 4$ with Transition Radiation Detectors based on micro-strip silicon detectors. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2019, 927, 1-13. | 1.6 | 7         |
| 50 | Hyperfine spectroscopy of hydrogen and antihydrogen in ASACUSA. Hyperfine Interactions, 2019, 240, 1.  | 0.5 | 18        |
| 51 | Development of Transition Radiation Detectors for hadron identification at TeV energy scale. Journal of Physics: Conference Series, 2019, 1390, 012126.  | 0.4 | 3         |
| 52 | 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         |
| 53 | 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         |
| 54 | Measurement of the antiproton-nucleus annihilation cross-section at low energy. Nuclear Physics A, 2018, 970, 366-378.   | 1.5 | 22        |

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|----|--|-----|-----------|
| 55 | Status of the ENUBET project. Journal of Physics: Conference Series, 2018, 1056, 012047.   | 0.4 | 0         |
| 56 | Recent Developments from <b>ASACUSA</b> on Antihydrogen Detection. EPJ Web of Conferences, 2018, 181, 01003.   | 0.3 | 10        |
| 57 | Experimental technique for antiproton-nucleus annihilation cross section measurements at low energy. EPJ Web of Conferences, 2018, 182, 03009.   | 0.3 | 0         |
| 58 | Antiproton-nucleus annihilation cross section at low energy. EPJ Web of Conferences, 2018, 182, 03013.   | 0.3 | 0         |
| 59 | The ASACUSA antihydrogen and hydrogen program: results and prospects. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2018, 376, 20170273.  | 3.4 | 33        |
| 60 | Testbeam performance of a shashlik calorimeter with fine-grained longitudinal segmentation. Journal of Instrumentation, 2018, 13, P01028-P01028.   | 1.2 | 15        |
| 61 | Strong Reduction of the Effective Radiation Length in an Axially Oriented Scintillator Crystal. Physical Review Letters, 2018, 121, 021603.  | 7.8 | 20        |
| 62 | Shashlik Calorimeters With Embedded SiPMs for Longitudinal Segmentation. IEEE Transactions on Nuclear Science, 2017, 64, 1056-1061.  | 2.0 | 24        |
| 63 | Antiparticle cloud temperatures for antihydrogen experiments. Physical Review A, 2017, 96, .   | 2.5 | 2         |
| 64 | Longitudinally segmented shashlik calorimeters with SiPM embedded readout. , 2017, , .   |     | 0         |
| 65 | Antihydrogen Synthesis in a Double-Cusp Trap. , 2017, , .  |     | 2         |
| 66 | Manipulation and Transport of Antiprotons for an Efficient Production of Antihydrogen Atoms. , 2017, , .   |     | 1         |
| 67 | New results of the antiproton-carbon annihilation cross section measurement at low energies. EPJ Web of Conferences, 2016, 130, 07014.   | 0.3 | 1         |
| 68 | Longitudinally segmented shashlik calorimeters with SiPM readout: The SCENTT experiment. , 2016, , .   |     | 0         |
| 69 | Antihydrogen synthesis in a double-CUSP trap towards test of the CPT-symmetry. Hyperfine Interactions, 2016, 237, 1.   | 0.5 | 0         |
| 70 | Towards measuring the ground state hyperfine splitting of antihydrogen â€“ a progress report. Hyperfine Interactions, 2016, 237, 1.  | 0.5 | 8         |
| 71 | 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        |
| 72 | 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        |

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|----|--|------|-----------|
| 73 | The development of the antihydrogen beam detector and the detection of the antihydrogen atoms for in-flight hyperfine spectroscopy. <i>Journal of Physics: Conference Series</i> , 2015, 635, 022061.  | 0.4  | 3         |
| 74 | Scintillating bar detector for antiproton annihilations measurements. <i>Hyperfine Interactions</i> , 2015, 233, 53-58.  | 0.5  | 16        |
| 75 | The ASACUSA CUSP: an antihydrogen experiment. <i>Hyperfine Interactions</i> , 2015, 235, 13-20.  | 0.5  | 5         |
| 76 | First measurement of the antiproton-nucleus annihilation cross section at 125 keV. <i>Hyperfine Interactions</i> , 2015, 234, 85-92.   | 0.5  | 8         |
| 77 | Beam Diagnostics for Measurements of Antiproton Annihilation Cross Sections at Ultra-low Energy. <i>EPJ Web of Conferences</i> , 2014, 66, 09020.  | 0.3  | 0         |
| 78 | A source of antihydrogen for in-flight hyperfine spectroscopy. <i>Nature Communications</i> , 2014, 5, 3089.   | 12.8 | 149       |
| 79 | Modelling the behavior of the positron plasma temperature in antihydrogen experimentation. <i>Hyperfine Interactions</i> , 2014, 228, 53-60.   | 0.5  | 2         |
| 80 | Enhancement of annihilation cross sections by electric interactions between the antineutron and the field of a large nucleus. <i>European Physical Journal A</i> , 2014, 50, 1.  | 2.5  | 7         |
| 81 | Towards a spin polarized antihydrogen beam. <i>Hyperfine Interactions</i> , 2014, 228, 67-76.  | 0.5  | 1         |
| 82 | Experimental investigation of $\sim 130$ keV kinetic energy antiprotons annihilation on nuclei. <i>Hyperfine Interactions</i> , 2014, 229, 31-36.  | 0.5  | 1         |
| 83 | Experimental results on antiproton-nuclei annihilation cross section at very low energies. <i>EPJ Web of Conferences</i> , 2014, 66, 09001.  | 0.3  | 1         |
| 84 | Experimental apparatus for annihilation cross-section measurements of low energy antiprotons. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2013, 711, 12-20. | 1.6  | 25        |
| 85 | Towards the production of anti-hydrogen beams. , 2013, , .   |      | 0         |
| 86 | Beam profile monitor for annihilation cross section measurements of antiprotons at 100 keV. <i>Hyperfine Interactions</i> , 2012, 213, 199-204.  | 0.5  | 0         |
| 87 | In-flight antiproton annihilation on nuclei at low energies. <i>Hyperfine Interactions</i> , 2012, 213, 31-39.   | 0.5  | 4         |
| 88 | First experimental detection of antiproton in-flight annihilation on nuclei at $\sim 130$ keV. <i>European Physical Journal Plus</i> , 2012, 127, 1.   | 2.6  | 26        |
| 89 | Synthesis of antihydrogen atoms in a CUSP trap. <i>Hyperfine Interactions</i> , 2012, 209, 35-41.  | 0.5  | 3         |
| 90 | Synthesis of antihydrogen atoms in a CUSP trap. , 2012, , 35-41.   |      | 0         |

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|-----|---|-----|-----------|
| 91  | Silicon Photomultipliers as a Readout System for a Scintillator-Lead Shashlik Calorimeter. IEEE Transactions on Nuclear Science, 2011, 58, 1297-1307.   | 2.0 | 10        |
| 92  | Measurement of the antiproton-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        |
| 93  | In-flight antiproton annihilation on nuclei at low energies. , 2011, , 251-259.   |     | 0         |
| 94  | 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       |
| 95  | Synthesis of Cold Antihydrogen in a Cusp Trap. Physical Review Letters, 2010, 105, 243401.  | 7.8 | 135       |
| 96  | A scintillating bar tracking detector for the ASACUSA - "trap group" experiment at the CERN AD. , 2010, , .   |     | 0         |
| 97  | Performance of the readout electronics chain of the MICE Electron Muon Ranger. , 2010, , .  |     | 1         |
| 98  | The prototype of the MICE Electron-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         |
| 99  | Measurement of the antiproton-nucleus annihilation cross-section at very low energies. Hyperfine Interactions, 2009, 194, 305-311.  | 0.5 | 10        |
| 100 | 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         |
| 101 | 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         |
| 102 | FAST: A COMPACT SCINTILLATING FIBER DETECTOR FOR ANTIPROTON CROSS SECTION MEASUREMENTS. , 2008, , .   |     | 0         |
| 103 | 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        |
| 104 | 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        |
| 105 | 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        |
| 106 | Operation and performance of the FAST detector at the AD machine. Nuclear Physics, Section B, Proceedings Supplements, 2007, 172, 299-302.  | 0.4 | 5         |
| 107 | Real time spectrometer for thermal neutrons from radiotherapeutic accelerators. Nuclear Physics, Section B, Proceedings Supplements, 2007, 172, 84-87.  | 0.4 | 2         |
| 108 | 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         |