## Joo F C A Veloso

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| #   | Paper   | IF              | Citations        |
|-----|---|-----------------|------------------|
| 123 | The size of the proton. <i>Nature</i> , <b>2010</b> , 466, 213-6  | 50.4            | 885              |
| 122 | Proton structure from the measurement of 2S-2P transition frequencies of muonic hydrogen. <i>Science</i> , <b>2013</b> , 339, 417-20  | 33.3            | 548              |
| 121 | Laser spectroscopy of muonic deuterium. <i>Science</i> , <b>2016</b> , 353, 669-73  | 33.3            | 171              |
| 120 | Illuminating the proton radius conundrum: the He+ Lamb shiftThis paper was presented at the International Conference on Precision Physics of Simple Atomic Systems, held at Hole de Physique, les Houches, France, 30 May A June, 2010 <i>Canadian Journal of Physics</i> , <b>2011</b> , 89, 47-57 | 1.1             | 66               |
| 119 | NEXT-100 Technical Design Report (TDR). Executive summary. <i>Journal of Instrumentation</i> , <b>2012</b> , 7, T060  | 00 <u>1</u> -T0 | 60901            |
| 118 | First Measurement of Transverse-Spin-Dependent Azimuthal Asymmetries in the Drell-Yan Process. <i>Physical Review Letters</i> , <b>2017</b> , 119, 112002   | 7.4             | 42               |
| 117 | Towards THGEM UV-photon detectors for RICH: on single-photon detection efficiency in Ne/CH4and Ne/CF4. <i>Journal of Instrumentation</i> , <b>2010</b> , 5, P01002-P01002   | 1               | 38               |
| 116 | The Muonic Hydrogen Lamb Shift Experiment at PSI. Hyperfine Interactions, 2001, 138, 55-60  | 0.8             | 36               |
| 115 | Background rejection in NEXT using deep neural networks. <i>Journal of Instrumentation</i> , <b>2017</b> , 12, T0100  | 4-∏010          | 0 <del>4</del> 3 |
| 114 | Initial results of NEXT-DEMO, a large-scale prototype of the NEXT-100 experiment. <i>Journal of Instrumentation</i> , <b>2013</b> , 8, P04002-P04002  | 1               | 33               |
| 113 | The muonic hydrogen Lamb-shift experiment. <i>Canadian Journal of Physics</i> , <b>2005</b> , 83, 339-349   | 1.1             | 30               |
| 112 | Powerful fast triggerable 6 th laser for the muonic hydrogen 2S-Lamb shift experiment. <i>Optics Communications</i> , <b>2005</b> , 253, 362-374  | 2               | 30               |
| 111 | Operation and first results of the NEXT-DEMO prototype using a silicon photomultiplier tracking array. <i>Journal of Instrumentation</i> , <b>2013</b> , 8, P09011-P09011   | 1               | 28               |
| 110 | Development of high-gain gaseous photomultipliers for the visible spectral range. <i>Journal of Instrumentation</i> , <b>2009</b> , 4, P07005-P07005  | 1               | 28               |
| 109 | THGEM-based detectors for sampling elements in DHCAL: laboratory and beam evaluation. <i>Journal of Instrumentation</i> , <b>2012</b> , 7, C05011-C05011  | 1               | 27               |
| 108 | Demonstration of Single-Barium-Ion Sensitivity for Neutrinoless Double-Beta Decay Using Single-Molecule Fluorescence Imaging. <i>Physical Review Letters</i> , <b>2018</b> , 120, 132504  | 7.4             | 26               |
| 107 | Status of the muonic hydrogen Lamb-shift experiment. <i>Canadian Journal of Physics</i> , <b>2007</b> , 85, 469-478   | 1.1             | 25               |

The gain in Thick GEM multipliers and its time-evolution. Journal of Instrumentation, 2015, 10, P03026-P03026 23 106 Detection of single photons with ThickGEM-based counters. Journal of Instrumentation, 2012, 7, C02014-C020143 105 Characterisation of NEXT-DEMO using xenon K\(\mathbb{R}\)-rays. Journal of Instrumentation, 2014, 9, P10007-P1000\(\overline{I}\) 104 2.2 A microstrip gas chamber as a VUV photosensor for a xenon gas proportional scintillation counter. 103 1.7 IEEE Transactions on Nuclear Science, 1996, 43, 1232-1236 The Lamb-shift experiment in Muonic helium. Hyperfine Interactions, 2012, 212, 195-201 0.8 102 21 Application of the microhole and strip plate detector for neutron detection. IEEE Transactions on 101 1.7 21 Nuclear Science, 2004, 51, 2104-2109 Ion backflow in thick GEM-based detectors of single photons. Journal of Instrumentation, 2013, 8, P01021-P01020 100 Minimization of parallax error in positron emission tomography using depth of interaction capable 99 1.5 19 detectors: methods and apparatus. Biomedical Physics and Engineering Express, 2019, 5, 062001 Precision determination of the dpiNN transition strength at threshold. Physical Review Letters, 98 7.4 19 2010, 104, 142503 The Thick-COBRA: a new gaseous electron multiplier for radiation detectors. Journal of 97 19 Instrumentation, 2010, 5, P10002-P10002 Single Photon Counting X-Ray Imaging System Using a Micro Hole and Strip Plate. IEEE Transactions 96 1.7 19 on Nuclear Science, 2008, 55, 2341-2345 Ionization and scintillation response of high-pressure xenon gas to alpha particles. Journal of 18 95 *Instrumentation*, **2013**, 8, P05025-P05025 The NEXT White (NEW) detector. Journal of Instrumentation, 2018, 13, P12010-P12010 18 1 94 Radiopurity assessment of the tracking readout for the NEXT double beta decay experiment. 93 17 Journal of Instrumentation, 2015, 10, P05006-P05006 Radiopurity control in the NEXT-100 double beta decay experiment: procedures and initial 1 92 17 measurements. Journal of Instrumentation, 2013, 8, T01002-T01002 Characterization of a medium size Xe/TMA TPC instrumented with microbulk Micromegas, using 16 91 low-energy Frays. Journal of Instrumentation, 2014, 9, C04015-C04015 Energy resolved X-ray fluorescence imaging based on a micropattern gas detector. Spectrochimica 90 3.1 16 Acta, Part B: Atomic Spectroscopy, 2010, 65, 241-247 Measuring the ⊕article charge radius with muonic helium-4 ions. Nature, 2021, 589, 527-531 89 50.4 16

Progresses in the production of large-size THGEM boards. *Journal of Instrumentation*, **2014**, 9, C03046-C03046 15

| 87            | A dynamic method for charging-up calculations: the case of GEM. <i>Journal of Instrumentation</i> , <b>2014</b> , 9, P07025-P07025  | 1               | 14     |
|---------------|---|-----------------|--------|
| 86            | Beam studies of novel THGEM-based potential sampling elements for Digital Hadron Calorimetry.<br>Journal of Instrumentation, <b>2013</b> , 8, P07017-P07017   | 1               | 14     |
| 85            | Description and commissioning of NEXT-MM prototype: first results from operation in a Xenon-Trimethylamine gas mixture. <i>Journal of Instrumentation</i> , <b>2014</b> , 9, P03010-P03010  | 1               | 13     |
| 84            | X-ray imaging detector based on a position sensitive THCOBRA with resistive line. <i>Journal of Instrumentation</i> , <b>2013</b> , 8, P05016-P05016  | 1               | 13     |
| 83            | The size of the proton and the deuteron. <i>Journal of Physics: Conference Series</i> , <b>2011</b> , 264, 012008   | 0.3             | 13     |
| 82            | EDXRF imaging of Pb in glazed ceramics using a micropattern gas detector. <i>Analytical and Bioanalytical Chemistry</i> , <b>2009</b> , 395, 2073-80  | 4.4             | 13     |
| 81            | Characterization of an energy dispersive X-ray fluorescence imaging system based on a Micropattern Gaseous Detector. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy,</i> <b>2011</b> , 66, 308-313   | 3.1             | 13     |
| 8o            | A large area full-field EDXRF imaging system based on a THCOBRA gaseous detector. <i>Journal of Analytical Atomic Spectrometry</i> , <b>2015</b> , 30, 343-352  | 3.7             | 12     |
| 79            | Radiopurity assessment of the energy readout for the NEXT double beta decay experiment. <i>Journal of Instrumentation</i> , <b>2017</b> , 12, T08003-T08003   | 1               | 12     |
| 78            | Performance of a gaseous detector based energy dispersive X-ray fluorescence imaging system: Analysis of human teeth treated with dental amalgam. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , <b>2013</b> , 86, 115-122                           | 3.1             | 12     |
| 77            | Calibration of the NEXT-White detector using 83mKr decays. <i>Journal of Instrumentation</i> , <b>2018</b> , 13, P10  | 01 <u>4</u> -P1 | 00:124 |
| 76            | Elemental mapping in a contemporary miniature by full-field X-ray fluorescence imaging with gaseous detector vs. scanning X-ray fluorescence imaging with polycapillary optics. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy,</i> <b>2017</b> , 129, 1-7 | 3.1             | 11     |
| 75            | First in-beam studies of a Resistive-Plate WELL gaseous multiplier. <i>Journal of Instrumentation</i> , <b>2016</b> , 11, P01005-P01005   | 1               | 11     |
| 74            | Simulation of gain stability of THGEM gas-avalanche particle detectors. <i>Journal of Instrumentation</i> , <b>2018</b> , 13, P01015-P01015   | 1               | 11     |
| 73            | Single-Electron Response Using a GEM-MIGAS Electron Multiplier. <i>IEEE Transactions on Nuclear Science</i> , <b>2008</b> , 55, 2334-2340   | 1.7             | 11     |
| <del>72</del> | . IEEE Transactions on Nuclear Science, <b>2004</b> , 51, 1503-1508   | 1.7             | 11     |
| 71            | Electron drift and longitudinal diffusion in high pressure xenon-helium gas mixtures. <i>Journal of Instrumentation</i> , <b>2019</b> , 14, P08009-P08009   | 1               | 10     |

## (2002-2013)

| 70 | Status and progress of novel photon detectors based on THGEM and hybrid MPGD architectures.<br>Journal of Instrumentation, <b>2013</b> , 8, C12005-C12005                     | 1               | 10     |
|----|---|-----------------|--------|
| 69 | . IEEE Transactions on Nuclear Science, <b>2010</b> , 57, 938-943   | 1.7             | 10     |
| 68 | SiPMs coated with TPB: coating protocol and characterization for NEXT. <i>Journal of Instrumentation</i> , <b>2012</b> , 7, P02010-P02010                                     | 1               | 10     |
| 67 | Recent investigations of cascaded GEM and MHSP detectors. <i>IEEE Transactions on Nuclear Science</i> , <b>2004</b> , 51, 2097-2103   | 1.7             | 10     |
| 66 | Initial results on energy resolution of the NEXT-White detector. <i>Journal of Instrumentation</i> , <b>2018</b> , 13, P10020-P10020  | 1               | 10     |
| 65 | An homeopathic cure to pure Xenon large diffusion. <i>Journal of Instrumentation</i> , <b>2016</b> , 11, C02007-C020  | 007             | 9      |
| 64 | MPGD-based counters of single photons developed for COMPASS RICH-1. <i>Journal of Instrumentation</i> , <b>2014</b> , 9, C09017-C09017  | 1               | 9      |
| 63 | Measurements of charging-up processes in THGEM-based particle detectors. <i>Journal of Instrumentation</i> , <b>2018</b> , 13, P03009-P03009                                  | 1               | 9      |
| 62 | Improved x-ray detection and particle identification with avalanche photodiodes. <i>Review of Scientific Instruments</i> , <b>2015</b> , 86, 053102                           | 1.7             | 8      |
| 61 | Lifetime and population of the 2S state in muonic hydrogen and deuterium. <i>Physical Review A</i> , <b>2013</b> , 88,  | 2.6             | 8      |
| 60 | Energy resolution studies for NEXT. Journal of Instrumentation, 2011, 6, P05007-P05007  | 1               | 8      |
| 59 | Application of the digital pulse processing technique to gas proportional scintillation counters. <i>IEEE Transactions on Nuclear Science</i> , <b>1997</b> , 44, 521-526     | 1.7             | 8      |
| 58 | THGEM gain calculations using Garfield++: solving discrepancies between simulation and experimental data. <i>Journal of Instrumentation</i> , <b>2016</b> , 11, P08018-P08018 | 1               | 8      |
| 57 | Electron drift properties in high pressure gaseous xenon. <i>Journal of Instrumentation</i> , <b>2018</b> , 13, P07013  | -P <b></b> 0701 | 38     |
| 56 | An improved measurement of electron-ion recombination in high-pressure xenon gas. <i>Journal of Instrumentation</i> , <b>2015</b> , 10, P03025-P03025                         | 1               | 7      |
| 55 | Application and performance of an ML-EM algorithm in NEXT. <i>Journal of Instrumentation</i> , <b>2017</b> , 12, P08  | 30 <b>0</b> 9-P | 08;009 |
| 54 | Energy weighting technique in Quantum Computed Tomography using a MPGD. <i>Journal of Instrumentation</i> , <b>2011</b> , 6, C02002-C02002                                    | 1               | 7      |
| 53 | The performance of the GPSC/MSGC hybrid detector with argon-xenon gas mixtures. <i>IEEE Transactions on Nuclear Science</i> , <b>2002</b> , 49, 907-911                       | 1.7             | 7      |

| 52 | The micro-hole-and-strip plate gas detector: experimental results. <i>IEEE Transactions on Nuclear Science</i> , <b>2002</b> , 49, 875-880   | 1.7                | 7 |
|----|--|--------------------|---|
| 51 | Spectroscopic analysis of LYSO:Ce crystals. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , <b>2017</b> , 172, 163-167  | 4.4                | 6 |
| 50 | A comparative study of microstrip plate geometries as UV photosensors with reflective photocathodes: simulation. <i>IEEE Transactions on Nuclear Science</i> , <b>2001</b> , 48, 411-416   | 1.7                | 6 |
| 49 | . IEEE Transactions on Nuclear Science, <b>1993</b> , 40, 434-437  | 1.7                | 6 |
| 48 | In-beam evaluation of a medium-size Resistive-Plate WELL gaseous particle detector. <i>Journal of Instrumentation</i> , <b>2016</b> , 11, P09013-P09013  | 1                  | 6 |
| 47 | Pionic hydrogen and friends. <i>Hyperfine Interactions</i> , <b>2015</b> , 234, 105-111  | 0.8                | 5 |
| 46 | THCOBRA X-ray imaging detector operating in Ne/CH4. <i>Journal of Instrumentation</i> , <b>2015</b> , 10, P01003-P0  | ) <del>1</del> 003 | 5 |
| 45 | Line shape analysis of the Kitransition in muonic hydrogen. European Physical Journal D, 2018, 72, 1   | 1.3                | 5 |
| 44 | Energy resolving CT systems using Medipix2 and MHSP detectors. <i>Journal of Instrumentation</i> , <b>2013</b> , 8, C03022-C03022  | 1                  | 5 |
| 43 | Position sensitive VUV gaseous photomultiplier based on Thick-multipliers with resistive line readout. <i>Journal of Instrumentation</i> , <b>2013</b> , 8, P09002-P09002  | 1                  | 5 |
| 42 | The Lamb shift in muonic hydrogenThis paper was presented at the International Conference on Precision Physics of Simple Atomic Systems, held at Bole de Physique, les Houches, France, 30 May A June, 2010 <i>Canadian Journal of Physics</i> , <b>2011</b> , 89, 37-45 | 1.1                | 5 |
| 41 | Residual gas analysers in an undergraduate vacuum laboratory: a simple experiment involving direct quantitative measurements. <i>European Journal of Physics</i> , <b>2004</b> , 25, 469-473   | 0.8                | 5 |
| 40 | Application of large-area avalanche photodiodes to X-ray spectrometry of muonic atoms. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , <b>2003</b> , 58, 2255-2260   | 3.1                | 5 |
| 39 | Detection of VUV photons with large-area avalanche photodiodes. <i>Applied Physics B: Lasers and Optics</i> , <b>2005</b> , 81, 531-535  | 1.9                | 5 |
| 38 | Gas proportional scintillation counters for the /spl mu/p-Lamb shift experiment. <i>IEEE Transactions on Nuclear Science</i> , <b>2002</b> , 49, 899-906   | 1.7                | 5 |
| 37 | The response of xenon X-ray detectors to full-energy absorption and fluorescence-escape events: measurement and modelling. <i>IEEE Transactions on Nuclear Science</i> , <b>1996</b> , 43, 1432-1441   | 1.7                | 5 |
| 36 | High voltage insulation and gas absorption of polymers in high pressure argon and xenon gases.<br>Journal of Instrumentation, <b>2018</b> , 13, P10002-P10002  | 1                  | 5 |
| 35 | Laser spectroscopy of muonic hydrogen. <i>Annalen Der Physik</i> , <b>2013</b> , 525, 647-651  | 2.6                | 4 |

## (2013-2013)

| 34 | Design and characterization of the SiPM tracking system of NEXT-DEMO, a demonstrator prototype of the NEXT-100 experiment. <i>Journal of Instrumentation</i> , <b>2013</b> , 8, T05002-T05002           | 1     | 4     |
|----|---|-------|-------|
| 33 | A large area gas proportional scintillation counter for balloon borne solar X-ray spectrometry. <i>IEEE Transactions on Nuclear Science</i> , <b>2002</b> , 49, 2488-2491                               | 1.7   | 4     |
| 32 | The microhole and strip plate gas detector: Initial results. Review of Scientific Instruments, 2002, 73, 488  | -490  | 4     |
| 31 | THCOBRA X-ray imaging detector operating in pure Kr. <i>Journal of Instrumentation</i> , <b>2017</b> , 12, T05003-T0  | 5⊉03  | 3     |
| 30 | Pressure effects on the X-ray intrinsic position resolution in noble gases and mixtures. <i>Journal of Instrumentation</i> , <b>2016</b> , 11, P12008-P12008  | 1     | 3     |
| 29 | Radio frequency and DC high voltage breakdown of high pressure helium, argon, and xenon. <i>Journal of Instrumentation</i> , <b>2020</b> , 15, P04022-P04022  | 1     | 3     |
| 28 | Dependence of the performance of CsI-covered microstrip plate VUV photosensors on geometry: experimental results. <i>IEEE Transactions on Nuclear Science</i> , <b>2002</b> , 49, 1629-1633             | 1.7   | 3     |
| 27 | A simple method to improve the spatial uniformity of venetian-blind photomultiplier tubes. <i>IEEE Transactions on Nuclear Science</i> , <b>1996</b> , 43, 1335-1340                                    | 1.7   | 3     |
| 26 | Energy dispersive X-ray fluorescence quantitative analysis of biological samples with the external standard method. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , <b>2020</b> , 174, 105991 | 3.1   | 3     |
| 25 | Multi-slice quantum Computed Tomography system using a MHSP. <i>Journal of Instrumentation</i> , <b>2012</b> , 7, C01106-C01106   | 1     | 2     |
| 24 | GEM Operation in High-Pressure \${rm CF}_{4}\$: Studies of Charge and Scintillation Properties. <i>IEEE Transactions on Nuclear Science</i> , <b>2009</b> , 56, 1564-1567                               | 1.7   | 2     |
| 23 | Pionic deuterium. <i>Hyperfine Interactions</i> , <b>2009</b> , 193, 47-52  | 0.8   | 2     |
| 22 | Secondary scintillation readout from GEM and THGEM with a large area avalanche photodiode. <i>Journal of Instrumentation</i> , <b>2012</b> , 7, P06012-P06012   | 1     | 2     |
| 21 | The Photon-Assisted Cascaded Electron Multiplier Operation in CF\$_{4}\$ for Ion Backflow Suppression. <i>IEEE Transactions on Nuclear Science</i> , <b>2008</b> , 55, 1652-1656                        | 1.7   | 2     |
| 20 | Chapter 11 Experiments on Highly Charged Heavy Ions in Conjunction with Exotic Atoms. <i>Advances in Quantum Chemistry</i> , <b>2008</b> , 53, 217-235  | 1.4   | 2     |
| 19 | On the double peak structure of avalanche photodiode response to monoenergetic x-rays at various temperatures and bias voltages. <i>Journal of Instrumentation</i> , <b>2018</b> , 13, C01033-C01033    | 1     | 1     |
| 18 | Zero Ion Backflow electron multiplier operating in noble gases. <i>Journal of Instrumentation</i> , <b>2014</b> , 9, P02  | 004-P | 02004 |
| 17 | Characterization of a small CsI(Na)-WSF-SiPM gamma camera prototype using99mTc. <i>Journal of Instrumentation</i> , <b>2013</b> , 8, C03008-C03008  | 1     | 1     |

| 16 | Cryogenic Gaseous Photomultiplier for position reconstruction of liquid argon scintillation light. <i>Journal of Instrumentation</i> , <b>2015</b> , 10, P07017-P07017  | 1   | 1 |
|----|---|-----|---|
| 15 | Simultaneous readout of charge and scintillation pulses from electron avalanches for improving the response of micropattern gaseous detectors. <i>Journal of Instrumentation</i> , <b>2014</b> , 9, C08005-C08005 | 1   | 1 |
| 14 | Precision measurement of the (3plls) X-ray transition in muonic hydrogen. <i>Physics of Particles and Nuclei</i> , <b>2014</b> , 45, 181-183  | 0.7 | 1 |
| 13 | The size of the proton. <i>Hyperfine Interactions</i> , <b>2012</b> , 212, 185-194  | 0.8 | 1 |
| 12 | The 2D-Micro Hole & Strip Plate in CF4atmosphere aiming neutron imaging. <i>Journal of Instrumentation</i> , <b>2009</b> , 4, P12010-P12010   | 1   | 1 |
| 11 | Line shape of the $\mathbb{H}(3p-1s)$ transition. <i>Hyperfine Interactions</i> , <b>2009</b> , 193, 61-67  | 0.8 | 1 |
| 10 | 2D-sensitive hpxe gas proportional scintillation counter concept for nuclear medical imaging purposes. <i>Journal of Instrumentation</i> , <b>2011</b> , 6, C01067-C01067   | 1   | 1 |
| 9  | Small prototype gamma camera based on wavelength-shifting fibres. <i>Journal of Instrumentation</i> , <b>2012</b> , 7, C01043-C01043  | 1   | 1 |
| 8  | Simulation of VUV electroluminescence in micropattern gaseous detectors: the case of GEM and MHSP. <i>Journal of Instrumentation</i> , <b>2012</b> , 7, P09006-P09006   | 1   | 1 |
| 7  | High Pressure Operation of the Photon-Assisted Cascaded Electron Multiplier. <i>IEEE Transactions on Nuclear Science</i> , <b>2009</b> , 56, 1097-1101  | 1.7 | 1 |
| 6  | Single photon counting x-ray imaging system using a micro hole and strip plate <b>2007</b> ,  |     | 1 |
| 5  | MPGD-based photon detectors for the upgrade of COMPASS RICH-1 and beyond. <i>Journal of Instrumentation</i> , <b>2020</b> , 15, C09063-C09063   | 1   | 1 |
| 4  | Dependence of polytetrafluoroethylene reflectance on thickness at visible and ultraviolet wavelengths in air. <i>Journal of Instrumentation</i> , <b>2020</b> , 15, P11031-P11031                                 | 1   | 1 |
| 3  | Monitoring the effect of gas purification of sealed MPGDs for X-ray imaging. <i>Journal of Instrumentation</i> , <b>2019</b> , 14, T11010-T11010  | 1   | 1 |
| 2  | Single Low Dose of Cocaine-Structural Brain Injury Without Metabolic and Behavioral Changes. <i>Frontiers in Neuroscience</i> , <b>2020</b> , 14, 589897  | 5.1 | О |
| 1  | Development of a New Integrated System for Vital Sign Monitoring in Small Animals. <i>Sensors</i> , <b>2022</b> , 22, 4264  | 3.8 |   |