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Full list of peer-reviewed or book publications, sorted by year

Five most relevant in bold font

M. Lisowska, ..., M. Lupberger, ... et al., *Photocathode characterisation for robust PICOSEC Micromegas precise-timing detectors*
Nucl.Instrum.Meth.A 1072 (2025) 170151.

A. Utrobicic, ..., M. Lupberger, ... et al., *Single channel PICOSEC Micromegas detector with improved time resolution*
Nucl.Instrum.Meth.A 1072 (2025) 170127.

Ben Bruers, ..., M. Lupberger, ... et al., *Resource-aware Research on Universe and Matter: Call-to-Action in Digital Transformation*
The European Physical Journal Special Topics (2024): 1-17.

A. Kallitsopoulou, ..., M. Lupberger, ... et al., *PICOSEC-Micromegas Detector, an innovative solution for Lepton Time Tagging*
Nucl.Instrum.Meth.A 1069 (2024) 1699208.

P. Bechtle, ..., M. Lupberger, ... et al., *A Proposal for the Lohengrin Experiment to Search for Dark Sector Particles at the ELSA Accelerator*
arXiv pre-print submitted to European Physical Journal C.

M. Lisowska, ..., M. Lupberger, ... et al., *Towards robust PICOSEC Micromegas precise timing detectors*
JINST 18 (2023) 07, C07018.

A. Utrobicic, ..., M. Lupberger, ... et al., *A large area 100 channel Picosec Micromegas detector with sub 20 ps time resolution*
JINST 18 (2023) 07, C07012.

J. Kaminski and M. Lupberger, *TPC Development by the LCTPC Collaboration for future Higgs factories*
Nucl.Instr.Meth.A 1047 (2023) 167819.

D. Pfeiffer, ..., M. Lupberger, ... et al., *Demonstration of Gd-GEM detector design for neutron macromolecular crystallography applications*
JINST 18 (2023) P04023.

M. Lisowska, ..., M. Lupberger, ... et al., *Sub-25 ps timing measurements with $10 \times 10 \, cm^2$ PICOSEC Micromegas detectors*
Nucl.Instrum.Meth.A 1046 (2023) 167687.

F. Jaekel, ..., M. Lupberger, ... et al., *An automated testing system for the RD51 VMM hybrid and yield measurement of the first production batches*
Nucl.Instr.Meth.A 1049 (2023) 168132.

T. Block, ..., M. Lupberger, ... et al., *Particle Physics Readout Electronics and Novel Detector Technologies for Neutron Science*
Nucl.Instr.Meth.A 1047 (2023) 167753.

I. Manthos, ..., M. Lupberger, ... et al., *Precise timing and recent advancements with segmented anode PICOSEC Micromegas prototypes*
JINST 17 (2022) 10, C10009.

L. Scharenberg, ..., M. Lupberger, ... et al., *Development of a high-rate scalable readout system for gaseous detectors*
JINST 17 (2022) 12, C12014

Yumi Aoki, ..., M. Lupberger, ... et al., (LCTPC Collaboration) Double-hit separation and dE/dx resolution of a time projection chamber with GEM readout
JINST 17 P11027.

K. Dehmelt, ..., M. Lupberger, ... et al., *Snowmass 2021 White Paper Instrumentation Frontier 05 – White Paper 1: MPGDs: Recent advances and current R&D*

arXiv e-Print:2203.06562

D. Pfeiffer, ..., M. Lupberger, ... et al., *Rate-capability of the VMM3a front-end in the RD51 Scalable Readout System*
Nucl.Instrum.Meth.A 1031 (2022) 165576.

L. Scharenberg, ..., M. Lupberger, ... et al., *X-ray imaging with gaseous detectors using the VMM3a and the SRS*
Nucl.Instrum.Meth.A 1011 (2021) 165576.

M. Lauß, ..., M. Lupberger, ... et al., *Electron beam studies of light collection in a scintillating counter with embedded wavelength-shifting fibers*
Nucl.Instrum.Meth.A 1012 (2021) 165617.

S. Aune, ..., M. Lupberger, ... et al. *Timing performance of a multi-pad PICOSEC-Micromegas detector prototype*
Nucl.Instrum.Meth.A 993 (2021) 165076.

J. Bortfeldt, ..., M. Lupberger, ... et al., *Modeling the Timing Characteristics of the PICOSEC Micromegas Detector*
Nucl.Instrum.Meth.A 993 (2021) 165049.

L. Scharenberg, ..., M. Lupberger, ... et al., *Gaseous detector studies with the VMM3a ASIC and the Scalable Readout System*
JINST 15 (2020) 08, C08026

L. Scharenberg, ..., M. Lupberger, ... et al., *Resolving soft X-ray absorption in energy, space and time in gaseous detectors using the VMM3a ASIC and the SRS*
Nucl.Instrum.Meth.A 977 (2020) 164310.

M. Lupberger et al., *SRS VMM readout for Gadolinium GEM-based detector prototypes for the NMX instrument at ESS*
J.Phys.Conf.Ser. 1498 (2020) 1, 012050.

I. Manthos, ..., M. Lupberger, ... et al., *Recent Developments on Precise Timing with the PICOSEC Micromegas Detector*
J.Phys.Conf.Ser. 1498 (2020) 1, 012014.

L. Sohl, ..., M. Lupberger, ... et al., *Single photoelectron time resolution studies of the PICOSEC-Micromegas detector*
JINST 15 (2020) 04, C04053

M. Christmann, ..., M. Lupberger, ... et al. (The MAGIX Collaboration), *Detector response of Cherenkov radiators for calorimetry in the energy range below 14 MeV*
Nucl.Instrum.Meth.A 960 (2020) 163665

K. Kordas, ..., M. Lupberger, ... et al., *Progress on the PICOSEC-Micromegas Detector Development: Towards a precise timing, radiation hard, large-scale particle detector with segmented readout*
Nucl.Instrum.Meth.A 958 (2020) 162877

J. Bortfeldt, ..., M. Lupberger, ... et al., *Timing Performance of a Micro-Channel-Plate Photomultiplier Tube*
Nucl.Instrum.Meth.A 960 (2020) 163592.

D. Sampsonidis, ..., M. Lupberger, ... et al., *Precise timing with the PICOSEC-Micromegas detector*
Nuovo Cim.C 43 (2020) 1, 13.

M. Lupberger et al., *The VMM front-end integration in the Scalable Readout System: On the way to a next generation readout system for generic detector R&D and experiment instrumentation*
PoS TWEPP2018 (2019) 136.

J. Bortfeldt, ..., M. Lupberger, ... et al., *Precise Charged Particle Timing with the PICOSEC Detector*
AIP Conf.Proc. 2075 (2019) no.1, 080009.

L. Sohl, ..., M. Lupberger, ... et al., *PICOSEC-Micromegas: Robustness measurements and study of different photocathode materials*
J.Phys.Conf.Ser. 1312 (2019) no.1, 012012.

F.J.Iguaz, ..., M. Lupberger, ... et al. *Charged particle timing at sub-25 picosecond precision: The PICOSEC detection concept*
Nucl.Instrum.Meth. A936 (2019) 515-518.

K. Kordas, ..., M. Lupberger, ... et al., *Progress on the PICOSEC-Micromegas Detector Development: Towards a precise timing, radiation hard, large-scale particle detector with segmented readout*
Nucl. Inst. Meth. A958 (2019) 162877.

F.M. Brunbauer, M. Lupberger, ... et al., *3D printing of gaseous radiation detectors*
JINST 14 (2019) no.12, P12005.

M. Lupberger et al. ***Implementation of the VMM ASIC in the Scalable Readout System***
Nucl. Inst. Meth. A903 (2018) 91-98.

J. Bortfeldt, ..., M. Lupberger, ... et al. ***PICOSEC: Charged particle timing at sub-25 picosecond precision with a Micromegas based detector***
Nucl. Instr. Meth. A903 (2018) 317-325.

M.J. Christensen, ..., M. Lupberger, ... et al. *Software-based data acquisition and processing for neutron detectors at European Spallation Source - early experience from four detector designs*
JINST 13 (2018) 11, T11002.

F.M. Brunbauer, ..., M. Lupberger, ... et al. *Combined optical and electronic readout for event reconstruction in a GEM-based TPC*
IEEE Trans. Nucl. Sci. 65 (2018) no.3, 913-918.

F.M. Brunbauer, ..., M. Lupberger, ... et al. *Radiation imaging with optically read out GEM-based detectors*
JINST 13 (2018) no.02, T02006.

C. Krieger, ..., M. Lupberger, ... et al. *Operation of an InGrid based X-ray detector at the CAST experiment*
EPJ Web Conf. 174 (2018) 02008.

M. Lupberger et al. ***Toward the Pixel-TPC: Construction and operation of a large area GridPix detector***
IEEE Trans. Nucl. Sci 64.5 (2017) 1159-1167.

C. Krieger, J. Kaminski, M. Lupberger and K. Desch *A GridPix-based X-ray detector for the CAST experiment*
Nucl. Inst. Meth. A867 (2017) 101-107.

David Attié, ..., M. Lupberger, ... et al. (LCTPC Collaboration) *A Time Projection Chamber with GEM-Based Readout*
Nucl. Instr. Meth. A856 (2017) 109-118.

J. Kaminski, ..., M. Lupberger, ... et al. *GridPix detectors – introduction and applications*
Nucl. Instr. Meth. A845 (2017) 233-235

M. Lupberger *The Pixel-TPC: A feasibility study*
University of Bonn Library, PhD thesis book publication (2016).

M. Lupberger, K. Desch and J. Kaminski *Implementation of the Timepix ASIC in the scalable readout system*
Nucl. Inst. Meth. A830 (2016) 75-81.

M. Lupberger *The Pixel-TPC: A feasibility study*
2015 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), San Diego, CA (2015) pp. 1-1.

K. Desch, ..., M. Lupberger, ... et al. *Using an InGrid Detector to Search for Solar Chameleons with CAST*
Proceedings of the 11th Patras Workshop on Axions, WIMPs and WISPs (AXION-WIMP 2015)

M. Lupberger et al. *InGrid: Pixelated Micromegas detectors for a pixel-TPC*
PoS TIPP2014 (2014) 225.

M. Lupberger for the LCTPC Collaboration, *The Pixel-TPC: first results from an 8-InGrid module*
JINST 9 (2014) 01, C01033.

C. Krieger, ..., M. Lupberger, ... et al. *An InGrid based Low Energy X-ray Detector for the CAST Experiment*
PoS TIPP2014 (2014) 060

C. Krieger, ..., M. Lupberger, ... et al. *An InGrid based Low Energy X-ray Detector*
Proceedings of the 10th Patras Workshop on Axions, WIMPs and WISPs (AXION-WIMP 2014)

T. Krautscheid, ..., M. Lupberger, ... et al. *Gridpix: Production and application of integrated pixel readouts*
Nucl. Instr. Meth. A718 (2013) 391-394

M. Lupberger *Avalanche statistics and single electron counting with a Timepix-InGrid detector*
Univeristy of Freiburg Library, Diploma thesis book publication (2010).

Reports and press articles, sorted by year

R. Hall-Wilton, M.Lupberger, D. Pfeiffer, P. Thuiner, Z.Kraujalyte, *D4.13 - Module for NMX Detector*
BrightnESS deliverable report (2018).

H. Muller ..., M. Lupberger, ... et al., *MS83*
AIDA-2020 Milestone report (2018).

M. Lupberger, *D4.9 - Detector electronics chain*
BrightnESS deliverable report (2017).

M. Lupberger, *MS22: Definition of detector electronics chain*
BrightnESS milestone report (2017).

B. Warmbein, *InGrids on the rise*
Article for the Linear Collider Newsline (2015)

P. Colas, ..., M. Lupberger, ... et al., *D9.6: Pixel read-out for gaseous detectors*
AIDA deliverable report (2014).

P. Colas, ..., M. Lupberger, ... et al., *MS41: Pixel gas read-out progress*
AIDA Milestone report (2013).

J. Aguilar, ..., M. Lupberger, ... et al., (EUDET Collaboration) *Infrastructure for Detector Research and Development towards the International Collider*
arXiv preprint (2012).