

PUBLICATIONS MATIÈRE NOIRE – 05 MAR 2026

article

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1. First Search for Dark Photon Dark Matter with a MADMAX Prototype, J. Egge *et al.*, MADMAX Collaboration, Phys. Rev. Lett 134 (2025) 151004
2. Benchmarking the design of the cryogenics system for the underground argon in DarkSide-20k, F. Acerbi *et al.*, DarkSide Collaboration, J. Instrum 20 (2025) P02016
3. First search for axion dark matter with a Madmax prototype, B. A. d. S. Garcia *et al.*, MADMAX Collaboration, Phys. Rev. Lett 135 (2025) 4
4. Non-magnetic glass-fiber cryostat for MADMAX prototype tests, D. Kreikemeyer-Lorenzo *et al.*, J. Instrum 20 (2025) T02005
5. Quality Assurance and Quality Control of the 26 m^2 SiPM production for the DarkSide-20k dark matter experiment, F. Acerbi *et al.*, DarkSide Collaboration, Eur. Phys. J. C 85 (2025) 534
6. Flow and thermal modelling of the argon volume in the DarkSide-20k TPC, F. Acerbi *et al.*, DarkSide Collaboration, J. Instrum 20 (2025) P06046
7. Enhancing European Cooperation in the Search for Dark Matter, B. Andrieu *et al.*, indéfini (2025)
8. Fermionic sub-GeV Dark Matter from evaporating Primordial Black Holes at DarkSide-50, P. Agnes *et al.*, DarkSide Collaboration, Phys. Rev. D 112 (2025) 123058
9. Production, Quality Assurance and Quality Control of the SiPM Tiles for the DarkSide-20k Time Projection Chamber, F. Acerbi *et al.*, DarkSide Collaboration, Eur. Phys. J. C 85 (2025) 1334

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2. Constraints on directionality effect of nuclear recoils in a liquid argon time projection chamber, P. Agnes *et al.*, DarkSide Collaboration, Eur. Phys. J. C 84 (2024) 24
3. Long-term temporal stability of the DarkSide-50 dark matter detector, P. Agnes *et al.*, DarkSide Collaboration, J. Instrum 19 (2024) P05057
4. A new hybrid gadolinium nanoparticles-loaded polymeric material for neutron detection in rare event searches, F. Acerbi *et al.*, DarkSide Collaboration, J. Instrum 19 (2024)

5. DarkSide-20k sensitivity to light dark matter particles, F. Acerbi *et al.*, DarkSide Collaboration, *Commun. Phys.* 7 (2024) 422
6. First mechanical realization of a tunable dielectric haloscope for the MADMAX axion search experiment, B. A. D. S. Garcia *et al.*, MADMAX Collaboration, *J. Instrum* 19 (2024) T11002

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1. Search for Dark-Matter–Nucleon Interactions via Migdal Effect with DarkSide-50, P. Agnes *et al.*, DarkSide Collaboration, *Phys. Rev. Lett* 130 (2023) 101001
2. Search for Dark Matter Particle Interactions with Electron Final States with DarkSide-50, P. Agnes *et al.*, DarkSide Collaboration, *Phys. Rev. Lett* 130 (2023) 101002
3. Search for low-mass dark matter WIMPs with 12 ton-day exposure of DarkSide-50, P. Agnes *et al.*, DarkSide Collaboration, *Phys. Rev. D* 107 (2023) 063001
4. Sensitivity projections for a dual-phase argon TPC optimized for light dark matter searches through the ionization channel, P. Agnes *et al.*, *Phys. Rev. D* 107 (2023) 112006
5. Measurement of isotopic separation of argon with the prototype of the cryogenic distillation plant Aria for dark matter searches, E. Aaron *et al.*, DarkSide Collaboration, *Eur. Phys. J. C* 83 (2023) 453
6. Study of cosmogenic activation above ground for the DarkSide-20k experiment, A. Elersich *et al.*, DarkSide Collaboration, *Astropart. Phys.* 152 (2023) 102878
7. Search for low mass dark matter in DarkSide-50: the bayesian network approach, P. Agnes *et al.*, DarkSide Collaboration, *Eur. Phys. J. C* 83 (2023) 322

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1. A study of events with photoelectric emission in the DarkSide-50 liquid argon Time Projection Chamber, P. Agnes *et al.*, DarkSide Collaboration, *Astropart. Phys.* 140 (2022) 102704

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1. SiPM-matrix readout of two-phase argon detectors using electroluminescence in the visible and near infrared range, C. E. Aalseth *et al.*, DarkSide Collaboration, *Eur. Phys. J. C* 81 (2021) 153
2. Sensitivity of future liquid argon dark matter search experiments to core-collapse supernova neutrinos, Agnes, P. *et al.*, DarkSide Collaboration, *J. Cosmol. Astropart. P* 03 (2021) 043

3. Separating ^{39}Ar from ^{40}Ar by cryogenic distillation with Aria for dark-matter searches, P. Agnes *et al.*, DarkSide Collaboration, Eur. Phys. J. C 81 (2021) 359
4. Simulating MADMAX in 3D: Requirements for Dielectric Axion Haloscopes, S. Knirck *et al.*, MADMAX Collaboration, J. Cosmol. Astropart. P 10 (2021) 034
5. Calibration of the liquid argon ionization response to low energy electronic and nuclear recoils with DarkSide-50, P. Agnes *et al.*, DarkSide Collaboration, Phys. Rev. D 104 (2021) 082005

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1. Design and Construction of a New Detector to Measure Ultra- Low Radioactive-Isotope Contamination of Argon, C. E. Aalseth *et al.*, DarkSide Collaboration, J. Instrum 15 (2020) P02024

acte de conférence

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1. First searches for axion and dark photon dark matter with MADMAX, F. Hubaut, indéfini, 2025 European Physical Society Conference on High Energy Physics (2025), Marseille, France, 7-11 Jul 2025

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1. Direct detection of Axion dark matter with MADMAX, V. Dabhi, indéfini, Journées de Rencontres Jeunes Chercheurs (2024), Saint-Jean-de-Monts, France, 22-28 Oct 2023
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1. MADMAX Status Report, S. Beurthey, N. Böhmer, P. Brun, A. Caldwell, L. Chevalier, C. Diaconu, G. Dvali, P. Freire, E. Garutti, C. Gooch, A. Hambarzumjan, S. Heyminck, F. Hubaut, J. Jochum, P. Karst, S. Khan, D. Kittlinger, S. Knirck, M. Kramer, C. Krieger, T. Lasserre, C. Lee, X. Li, A. Lindner, B. Majorovits, M. Matysek, S. Martens, E. Öz, P. Pataguppi, P. Pralavorio, G. Raffelt, J. Redondo, O. Reimann, A. Ringwald, N. Roch, K. Saikawa, J. Schaffran, A. Schmidt, J. Schütte-Engel, A. Sedlak, F. Steffen, L. Shtembari, C. Strandhagen, D. Strom, G. Wieching, arXiv:2003.10894 [physics.ins-det]
2. Usage of the CERN MORPURGO magnet for the MADMAX prototype, S. Beurthey, N. Böhmer, P. Brun, A. Caldwell, L. Chevalier, C. Diaconu, G. Dvali, P. Freire, A. Gardikiotis, E. Garutti, C. Gooch, A. Hambarzumjan, S. Heyminck, F. Hubaut, J. Jochum, P. Karst, S. Khan, D. Kittlinger, S. Knirck, M. Kramer, C. Krieger, T. Lasserre, C. Lee, X. Li, A. Lindner, B. Majorovits, M. Matysek, S. Martens, E. Öz, P. Pataguppi, P. Pralavorio, G. Raffelt, J. Redondo, O. Reimann, A. Ringwald, K. Saikawa, A. Sedlak, L. Shtembari, F. Steffen, C. Strandhagen, D. Strom, A. Schmidt, J. Schütte-Engel, J. Schaffran, G. Wieching, CERN-SPSC-2020-012, SPSC-P-366

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1. Addendum to Madmax Proposal: potential tests at CERN during LS3 (2026-28), P. Pralavorio *et al.*, MADMAX Collaboration, CERN-SPSC-2024-013, SPSC-P-366-ADD-2

mémoire

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1. Searching for axion and dark photon dark matter with MADMAX, V. Dabhi, Aix-Marseille Université, 23 Sep 2025

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1. Direct search for dark matter with the DarkSide-20k experiment, M. van Uffelen, Aix-Marseille Université, 26 Sep 2024