

Rapport d'activité LPNHE 2022–2023

Liste de publications du groupe H.E.S.S.

- [1] H. Abdalla, F. Aharonian, F. Ait Benkhali et al. « Search for Dark Matter Annihilation Signals in the H.E.S.S. Inner Galaxy Survey ». *Phys. Rev. Lett.* 129.11, 111101 (sept. 2022), p. 111101. DOI : [10.1103/PhysRevLett.129.111101](https://doi.org/10.1103/PhysRevLett.129.111101). arXiv : [2207.10471](https://arxiv.org/abs/2207.10471) [astro-ph.HE].
- [2] H. Abe, S. Abe, V. A. Acciari et al. « Gamma-ray observations of MAXI J1820+070 during the 2018 outburst ». *MNRAS* 517.4 (déc. 2022), p. 4736-4751. DOI : [10.1093/mnras/stac2686](https://doi.org/10.1093/mnras/stac2686). arXiv : [2209.09785](https://arxiv.org/abs/2209.09785) [astro-ph.HE].
- [3] A. Acharyya, C. B. Adams, A. Archer et al. « Multiwavelength Observations of the Blazar PKS 0735+178 in Spatial and Temporal Coincidence with an Astrophysical Neutrino Candidate IceCube-211208A ». *ApJ* 954.1, 70 (sept. 2023), p. 70. DOI : [10.3847/1538-4357/ace327](https://doi.org/10.3847/1538-4357/ace327). arXiv : [2306.17819](https://arxiv.org/abs/2306.17819) [astro-ph.HE].
- [4] A. Addazi, J. Alvarez-Muniz, R. Alves Batista et al. « Quantum gravity phenomenology at the dawn of the multi-messenger era-A review ». *Progress in Particle and Nuclear Physics* 125, 103948 (juill. 2022), p. 103948. DOI : [10.1016/j.pnpnp.2022.103948](https://doi.org/10.1016/j.pnpnp.2022.103948). arXiv : [2111.05659](https://arxiv.org/abs/2111.05659) [hep-ph].
- [5] F. Aharonian, F. Ait Benkhali, J. Aschersleben et al. « H.E.S.S. Follow-up Observations of GRB 221009A ». *ApJ* 946.1, L27 (mars 2023), p. L27. DOI : [10.3847/2041-8213/acc405](https://doi.org/10.3847/2041-8213/acc405). arXiv : [2303.10558](https://arxiv.org/abs/2303.10558) [astro-ph.HE].
- [6] F. Aharonian, F. Ait Benkhali, J. Aschersleben et al. « Search for the evaporation of primordial black holes with H.E.S.S. ». *J. Cosmology Astropart. Phys.* 2023.4, 040 (avr. 2023), p. 040. DOI : [10.1088/1475-7516/2023/04/040](https://doi.org/10.1088/1475-7516/2023/04/040). arXiv : [2303.12855](https://arxiv.org/abs/2303.12855) [astro-ph.HE].
- [7] F. Aharonian, J. Aschersleben, M. Backes et al. « Constraints on the Intergalactic Magnetic Field Using Fermi-LAT and H.E.S.S. Blazar Observations ». *ApJ* 950.2, L16 (juin 2023), p. L16. DOI : [10.3847/2041-8213/acd777](https://doi.org/10.3847/2041-8213/acd777). arXiv : [2306.05132](https://arxiv.org/abs/2306.05132) [astro-ph.HE].
- [8] F. Aharonian, H. Ashkar, M. Backes et al. « A deep spectromorphological study of the γ -ray emission surrounding the young massive stellar cluster Westerlund 1 ». *A&A* 666, A124 (oct. 2022), A124. DOI : [10.1051/0004-6361/202244323](https://doi.org/10.1051/0004-6361/202244323). arXiv : [2207.10921](https://arxiv.org/abs/2207.10921) [astro-ph.HE].
- [9] F. Aharonian, F. Ait Benkhali, J. Aschersleben et al. « The Vanishing of the Primary Emission Region in PKS 1510-089 ». *ApJ* 952.2, L38 (août 2023), p. L38. DOI : [10.3847/2041-8213/ace3c0](https://doi.org/10.3847/2041-8213/ace3c0). arXiv : [2307.01692](https://arxiv.org/abs/2307.01692) [astro-ph.HE].

- [10] Julien Bolmont, Anna Campoy-Ordaz et Jelena Strišković. « Gamma-ray data collection, calibration and analysis for Lorentz invariance violation studies ». *PoS QG-MMSchools* (2023), p. 003. DOI : [10.22323/1.440.0003](https://doi.org/10.22323/1.440.0003).
- [11] Julien Bolmont, Sami Caroff, Markus Gaug et al. « First Combined Study on Lorentz Invariance Violation from Observations of Energy-dependent Time Delays from Multiple-type Gamma-Ray Sources. I. Motivation, Method Description, and Validation through Simulations of H.E.S.S., MAGIC, and VERITAS Data Sets ». *ApJ* 930.1, 75 (mai 2022), p. 75. DOI : [10.3847/1538-4357/ac5048](https://doi.org/10.3847/1538-4357/ac5048). arXiv : [2201.02087](https://arxiv.org/abs/2201.02087) [[astro-ph.HE](#)].
- [12] F. Cangemi, J. Rodriguez, T. Belloni et al. « INTEGRAL study of MAXI J1535–571, MAXI J1820+070, and MAXI J1348 – 630 outbursts. I. Detection and polarization properties of the high-energy emission ». *A&A* 669, A65 (jan. 2023), A65. DOI : [10.1051/0004-6361/202243564](https://doi.org/10.1051/0004-6361/202243564). arXiv : [2210.08561](https://arxiv.org/abs/2210.08561) [[astro-ph.HE](#)].
- [13] M. Cerruti, C. Boisson, M. Böttcher et al. « Target of Opportunity observations of flaring blazars with H.E.S.S. ». *arXiv e-prints* (août 2023). arXiv : [2308.07872](https://arxiv.org/abs/2308.07872) [[astro-ph.HE](#)].
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- [15] Axel Donath, Régis Terrier, Quentin Remy et al. « Gammapy : A Python package for gamma-ray astronomy ». *A&A* 678, A157 (oct. 2023), A157. DOI : [10.1051/0004-6361/202346488](https://doi.org/10.1051/0004-6361/202346488). arXiv : [2308.13584](https://arxiv.org/abs/2308.13584) [[astro-ph.IM](#)].
- [16] H.E.S.S. Collaboration, F. Aharonian, F. Ait Benkhali et al. « Constraining the cosmic-ray pressure in the inner Virgo Cluster using H.E.S.S. observations of M 87 ». *A&A* 675, A138 (juill. 2023), A138. DOI : [10.1051/0004-6361/202346056](https://doi.org/10.1051/0004-6361/202346056). arXiv : [2305.09607](https://arxiv.org/abs/2305.09607) [[astro-ph.HE](#)].
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- [19] H.E.S.S. Collaboration, F. Aharonian, F. Ait Benkhali et al. « Evidence for γ -ray emission from the remnant of Kepler’s supernova based on deep H.E.S.S. observations ». *A&A* 662, A65 (juin 2022), A65. DOI : [10.1051/0004-6361/202243096](https://doi.org/10.1051/0004-6361/202243096). arXiv : [2201.05839](https://arxiv.org/abs/2201.05839) [[astro-ph.HE](#)].
- [20] H.E.S.S. Collaboration, F. Aharonian, F. Ait Benkhali et al. « HESS J1809–193 : A halo of escaped electrons around a pulsar wind nebula ? » *A&A* 672, A103 (avr. 2023), A103. DOI : [10.1051/0004-6361/202245459](https://doi.org/10.1051/0004-6361/202245459). arXiv : [2302.13663](https://arxiv.org/abs/2302.13663) [[astro-ph.HE](#)].
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- [22] C. Levy, J. Bolmont, S. Caroff et al. « Robust constraints on Lorentz Invariance Violation from H.E.S.S., MAGIC and VERITAS data combination ». *37th International Cosmic Ray Conference*. Mars 2022, 695, p. 695. DOI : [10.22323/1.395.0695](https://doi.org/10.22323/1.395.0695). arXiv : [2108.03992](https://arxiv.org/abs/2108.03992) [astro-ph.HE].
- [23] C. Levy, H. Sol et J. Bolmont. « Modeling intrinsic time-lags in flaring blazars in the context of Lorentz Invariance Violation searches ». *37th International Cosmic Ray Conference*. Mars 2022, 907, p. 907. DOI : [10.22323/1.395.0907](https://doi.org/10.22323/1.395.0907). arXiv : [2110.06734](https://arxiv.org/abs/2110.06734) [astro-ph.HE].
- [24] M. Zacharias, J. Heil, M. Böttcher et al. « The ablation of gas clouds by blazar jets and the long-lasting flare in CTA 102 ». *37th International Cosmic Ray Conference*. Mars 2022, 676, p. 676. DOI : [10.22323/1.395.0676](https://doi.org/10.22323/1.395.0676). arXiv : [2107.11108](https://arxiv.org/abs/2107.11108) [astro-ph.HE].