Rapport d'activité LPNHE 2020–2021
Liste de publications du groupe H.E.S.S.

15 novembre 2021

Articles

1. A. Addazi, J. Alvarez-Muniz, R. Alves Batista et al. « Quantum gravity phenomenology at the dawn of the multi-messenger era – A review ». *arXiv e-prints*, arXiv :2111.05659 (nov. 2021), arXiv :2111.05659. arXiv : 2111.05659 [hep-ph]
2. H. Abdalla, F. Aharonian, F. Ait Benkhali et al. « Searching for TeV Gamma-Ray Emission from SGR 1935+2154 during Its 2020 X-Ray and Radio Bursting Phase ». *ApJ* 919.2, 106 (oct. 2021), p. 106. DOI : 10.3847/1538-4357/ac0fe1. arXiv : 2110.00636 [astro-ph.HE]
3. C. B. Adams, W. Benbow, A. Brill et al. « Observation of the gamma-ray binary HESS J0632+057 with the H.E.S.S., MAGIC, and VERITAS telescopes ». *arXiv e-prints*, arXiv :2109.11894 (sept. 2021), arXiv :2109.11894. arXiv : 2109.11894 [astro-ph.HE] (accepté pour publication dans ApJ)
4. H. Abdalla, F. Aharonian, F. Ait Benkhali et al. « Search for Dark Matter Annihilation Signals from Unidentified Fermi-LAT Objects with H.E.S.S. » *ApJ* 918.1, 17 (sept. 2021), p. 17. DOI : 10.3847/1538-4357/abff59. arXiv : 2106.00551 [astro-ph.HE]
5. H. Abdalla, F. Aharonian, F. Ait Benkhali et al. « Evidence of 100 TeV γ-ray emission from HESS J1702-420 : A new PeVatron candidate ». *A&A* 653, A152 (sept. 2021), A152. DOI : 10.1051/0004-6361/202140962. arXiv : 2106.06405 [astro-ph.HE]
6. H. E. S. S. Collaboration, H. Abdalla, F. Aharonian et al. « LMC N132D : A mature supernova remnant with a power-law gamma-ray spectrum extending beyond 8 TeV ». *A&A* 655, A7 (nov. 2021), A7. DOI : 10.1051/0004-6361/202141486. arXiv : 2108.02015 [astro-ph.HE] (accepté pour publication dans A&A)
7. H. Abdalla, F. Aharonian, F. Ait Benkhali et al. « TeV Emission of Galactic Plane Sources with HAWC and H.E.S.S. » *ApJ* 917.1, 6 (août 2021), p. 6. DOI : 10.3847/1538-4357/abf64b. arXiv : 2107.01425 [astro-ph.IM]
8. H. E. S. S. Collaboration, H. Abdalla, F. Aharonian et al. « Revealing x-ray and gamma ray temporal and spectral similarities in the GRB 190829A afterglow ». *Science* 372.6546 (juin 2021), p. 1081-1085. DOI : 10.1126/science.abe8560. arXiv : 2106.02510 [astro-ph.HE]

9. H. Abdallah, R. Adam, F. Aharonian et al. « Search for dark matter annihilation in the Wolf-Lundmark-Melotte dwarf irregular galaxy with H.E.S.S. » *Phys. Rev. D* 103.10, 102002 (mai 2021), p. 102002. DOI : 10.1103/PhysRevD.103.102002. arXiv : 2105.04325 [astro-ph.HE]

10. EHT MWL Science Working Group, J. C. Algaba, J. Anczarski et al. « Broadband Multi-wavelength Properties of M87 during the 2017 Event Horizon Telescope Campaign ». *ApJ* 911.1, L11 (avr. 2021), p. L11. DOI : 10.3847/2041-8213/abef71. arXiv : 2104.06855 [astro-ph.HE]

11. H. E. S. S. Collaboration, H. Abdalla, R. Adam et al. « H.E.S.S. and MAGIC observations of a sudden cessation of a very-high-energy γ-ray flare in PKS 1510−089 in May 2016 ». *A&A* 648, A23 (avr. 2021), A23. DOI : 10.1051/0004-6361/202038949. arXiv : 2012.10254 [astro-ph.HE]

12. M. Holler, J. -P. Lenain, M. de Naurois et al. « A run-wise simulation and analysis framework for Imaging Atmospheric Cherenkov Telescope arrays ». *Astroparticle Physics* 123, 102491 (déc. 2020), p. 102491. DOI : 10.1016/j.astropartphys.2020.102491. arXiv : 2007.01697 [astro-ph.HE]

13. H. E. S. S. Collaboration, H. Abdalla, R. Adam et al. « An extreme particle accelerator in the Galactic plane : HESS J1826-130 ». *A&A* 644, A112 (déc. 2020), A112. DOI : 10.1051/0004-6361/202038851. arXiv : 2010.13101 [astro-ph.HE]

14. H. Abdallah, R. Adam, F. Aharonian et al. « Search for dark matter signals towards a selection of recently detected DES dwarf galaxy satellites of the Milky Way with H.E.S.S. » *Phys. Rev. D* 102.6, 062001 (sept. 2020), p. 062001. DOI : 10.1103/PhysRevD.102.062001. arXiv : 2008.00688 [astro-ph.HE]

15. G. Principe, A. M. W. Mitchell, S. Caroff et al. « Energy dependent morphology of the pulsar wind nebula HESS J1825-137 with Fermi-LAT ». *A&A* 640, A76 (août 2020), A76. DOI : 10.1051/0004-6361/202038375. arXiv : 2006.11177 [astro-ph.HE]

16. H. Abdalla, R. Adam, F. Aharonian et al. « Simultaneous observations of the blazar PKS 2155-304 from ultra-violet to TeV energies ». *A&A* 639, A42 (juil. 2020), A42. DOI : 10.1051/0004-6361/201936900. arXiv : 1912.07273 [astro-ph.HE]

17. H. E. S. S. Collaboration, H. Abdalla, R. Adam et al. « Resolving acceleration to very high energies along the jet of Centaurus A ». *Nature* 582.7812 (juin 2020), p. 356-359. DOI : 10.1038/s41586-020-2354-1. arXiv : 2007.04823 [astro-ph.HE]

18. H. Abdalla, R. Adam, F. Aharonian et al. « Very high energy γ-ray emission from two blazars of unknown redshift and upper limits on their distance ». *MNRAS* 494.4 (juin 2020), p. 5590-5602. DOI : 10.1093/mnras/staa999. arXiv : 2004.03306 [astro-ph.HE]

19. H. Abdalla, R. Adam, F. Aharonian et al. « Probing the Magnetic Field in the GW170817 Outflow Using H.E.S.S. Observations ». *ApJ* 894.2, L16 (mai 2020), p. L16. DOI : 10.3847/2041-8213/ab8b59. arXiv : 2004.10105 [astro-ph.HE]

20. T. Ashton, M. Backes, A. Balzer et al. « A NECTAr-based upgrade for the Cherenkov cameras of the H.E.S.S. 12-meter telescopes ». *Astroparticle Physics* 118, 102425 (mar. 2020), p. 102425. DOI : 10.1016/j.astropartphys.2019.102425. arXiv : 2001.04510 [astro-ph.IM]

21. H. E. S. S. Collaboration, H. Abdalla, R. Adam et al. « Detection of very-high-energy γ-ray emission from the colliding wind binary η Car with H.E.S.S. » *A&A* 635, A167 (mar. 2020), A167. DOI : 10.1051/0004-6361/201936761. arXiv : 2002.02336 [astro-ph.HE]
22. H. E. S. S. Collaboration, H. Abdalla, R. Adam et al. « H.E.S.S. detection of very high-energy γ-ray emission from the quasar PKS 0736+017 ». *A&A* 633, A162 (jan. 2020), A162. DOI : 10.1051/0004-6361/201935906. arXiv : 1911.04761 [astro-ph.HE]
23. C. Perennes, H. Sol et J. Bolmont. « Modeling spectral lags in active galactic nucleus flares in the context of Lorentz invariance violation searches ». *A&A* 633, A143 (jan. 2020), A143. DOI : 10.1051/0004-6361/201936430. arXiv : 1911.10377 [astro-ph.HE]
24. H. E. S. S. Collaboration, H. Abdalla, R. Adam et al. « H.E.S.S. and Fermi-LAT observations of PSR B1259-63/LS 2883 during its 2014 and 2017 periastron passages ». *A&A* 633, A102 (jan. 2020), A102. DOI : 10.1051/0004-6361/201936621. arXiv : 1912.05868 [astro-ph.HE]

Actes de conférences

1. Chistelle Levy, Julien Bolmont, Sami Caroff et al. « Robust constraints on Lorentz Invariance Violation from H.E.S.S., MAGIC and VERITAS data combination ». *arXiv e-prints*, arXiv :2108.03992 (août 2021), arXiv :2108.03992. arXiv : 2108.03992 [astro-ph.HE]
2. Christelle Levy, Hélène Sol et Julien Bolmont. « Modeling intrinsic time-lags in flaring blazars in the context of Lorentz Invariance Violation searches ». *arXiv e-prints*, arXiv :2110.06734 (oct. 2021), arXiv :2110.06734. arXiv : 2110.06734 [astro-ph.HE]
3. J. Bolmont et C. Perennes. « Probing modified dispersion relations in vacuum with high-energy γ-ray sources : review and prospects ». *Journal of Physics Conference Series*. T. 1586. Journal of Physics Conference Series. Août 2020, p. 012033. DOI : 10.1088/1742-6596/1586/1/012033

Alertes à la communauté

1. S. Wagner, B. Rani et H. E. S. S. Collaboration. « Enhanced HE and VHE gamma-ray activity from the FSRQ PKS 0346-27 ». *The Astronomer's Telegram* 15020 (nov. 2021), p. 1
2. F. Jankowsky, S. J. Wagner et J. -P. Lenain. « Detection of a bright optical/X-ray flare in FSRQ PKS 0514-459 ». *The Astronomer's Telegram* 14245 (déc. 2020), p. 1
3. S. J. Wagner. « Detection of Very-High-Energy Gamma-rays from PKS 0903-57 by H.E.S.S. » *The Astronomer's Telegram* 13632 (avr. 2020), p. 1