

## Publications

- Abdalla, H, H Abe, S Abe, A Abusleme u. a. (2022a). “Active Galactic Nuclei population studies with the Cherenkov Telescope Array”. In: *Proceedings of Science* 395.
- Abdalla, H, F Aharonian, F Ait-Benkhalil, O Anguener u. a. (2021a). “Search for dark matter annihilation towards the inner Milky Way halo with the HESS Inner Galaxy Survey”. In: *POS Proceedings of Science ICRC2021*, S. 511. DOI: 10.22323/1.395.0511.
- (2022b). “Limits on primordial black hole evaporation from HESS observations”. In: *37th International Cosmic Ray Conference (ICRC2021)-DM-Dark Matter*.
- Abdalla, H, F Aharonian, F Ait Benkhali, EO Angüner u. a. (2021b). “Searching for TeV gamma-ray emission from SGR 1935+ 2154 during its 2020 X-ray and radio bursting phase”. In: *The Astrophysical Journal* 919.2, S. 106.
- Abdalla, H., F. Aharonian, F. Ait Benkhali, E. O. Angüner u. a. (2021c). “Search for Dark Matter Annihilation Signals from Unidentified Fermi-LAT Objects with H.E.S.S.” In: *The Astrophysical Journal* 918.1, S. 17. DOI: 10.3847/1538-4357/abff59. URL: <https://dx.doi.org/10.3847/1538-4357/abff59>.
- Abdalla, H., F. Aharonian, F. Ait Benkhali, E. O. Angüner u. a. (2021d). “TeV Emission of Galactic Plane Sources with HAWC and H.E.S.S.” In: *The Astrophysical Journal* 917.1, S. 6. DOI: 10.3847/1538-4357/abf64b. URL: <https://dx.doi.org/10.3847/1538-4357/abf64b>.
- Abdalla, H. u. a. (2021e). “Evidence of 100 TeV  $\gamma$ -ray emission from HESS J1702-420: A new PeVatron candidate”. In: *Astron. Astrophys.* 653, A152. DOI: 10.1051/0004-6361/202140962. arXiv: 2106.06405 [astro-ph.HE].
- Abdalla, Hassan u. a. (2021f). “Detection of new Extreme BL Lac objects with H.E.S.S. and Swift XRT”. In: *PoS ICRC2021*, S. 823. DOI: 10.22323/1.395.0823. arXiv: 2108.02232 [astro-ph.HE].
- (2021g). “Is PKS 0625-354 another variable TeV active galactic nucleus?” In: *PoS ICRC2021*, S. 814. DOI: 10.22323/1.395.0814. arXiv: 2108.01331 [astro-ph.HE].
- (2021h). “Observation of burst activity from SGR1935+2154 associated to first galactic FRB with H.E.S.S.” In: *PoS ICRC2021*, S. 777. DOI: 10.22323/1.395.0777. arXiv: 2108.03404 [astro-ph.HE].
- (2021i). “Revisiting the PeVatron candidate MGRO J1908+06 with an updated H.E.S.S. analysis”. In: *PoS ICRC2021*, S. 779. DOI: 10.22323/1.395.0779. arXiv: 2108.03401 [astro-ph.HE].
- (2021j). “The young massive stellar cluster Westerlund 1 in gamma rays as seen with H.E.S.S.” In: *PoS ICRC2021*, S. 789. DOI: 10.22323/1.395.0789. arXiv: 2108.03003 [astro-ph.HE].

- Abe, H, S Abe, VA Acciari, T Aniello u. a. (2022). “Gamma-ray observations of MAXI J1820+ 070 during the 2018 outburst”. In: *Monthly Notices of the Royal Astronomical Society* 517.4, S. 4736–4751.
- Aharonian, F., F. Ait Benkhali, J. Aschersleben, H. Ashkar u. a. (2023). “H.E.S.S. Follow-up Observations of GRB 221009A”. In: *The Astrophysical Journal Letters* 946.1, S. L27. DOI: 10.3847/2041-8213/acc405. URL: <https://dx.doi.org/10.3847/2041-8213/acc405>.
- Aharonian, F. u. a. (2022). “Evidence for  $\gamma$ -ray emission from the remnant of Kepler’s supernova based on deep H.E.S.S. observations”. In: *Astron. Astrophys.* 662, A65. DOI: 10.1051/0004-6361/202243096. arXiv: 2201.05839 [astro-ph.HE].
- Armstrong, Thomas P., Heide Costantini, Jean-François Glicenstein, Jean-Philippe Lenain u. a. (2021). “Monte Carlo Simulations and Validation of NectarCAM, a Medium Sized Telescope Camera for CTA”. In: *PoS ICRC2021*, S. 747. DOI: 10.22323/1.395.0747. arXiv: 2108.00426 [astro-ph.IM].
- Aschersleben, J., R. Peletier, M. Vecchi, M. Wilkinson und CTA Consortium (März 2022). “Application of Pattern Spectra and Convolutional Neural Networks to the Analysis of Simulated Cherenkov Telescope Array Data”. In: *37th International Cosmic Ray Conference*, 697, S. 697. DOI: 10.22323/1.395.0697. arXiv: 2108.00834 [astro-ph.IM].
- Aschersleben, J., M. Vecchi, M. H. F. Wilkinson und R. F. Peletier (Feb. 2023). “Event reconstruction using pattern spectra and convolutional neural networks for the Cherenkov Telescope Array”. In: *arXiv e-prints*, arXiv:2302.11876, arXiv:2302.11876. DOI: 10.48550/arXiv.2302.11876. arXiv: 2302.11876 [astro-ph.IM].
- Ashkar, Halim u. a. (2021). “H.E.S.S. follow-up of BBH merger events”. In: *PoS ICRC2021*, S. 943. DOI: 10.22323/1.395.0943. arXiv: 2108.02282 [astro-ph.HE].
- Carosi, Alessandro, Alicia López-Oramas und Francesco Longo (2021). “The Cherenkov Telescope Array transient and multi-messenger program”. In: *PoS ICRC2021*, S. 736. DOI: 10.22323/1.395.0736. arXiv: 2108.04317 [astro-ph.HE].
- collaboration, HESS, H Abdalla, F Aharonian, F Ait Benkhali u. a. (2021). “Revealing x-ray and gamma ray temporal and spectral similarities in the GRB 190829A afterglow”. In: *Science* 372.6546, S. 1081–1085.
- Dalgleish, H., H. Prokoph, S. Zhu, M. Backes u. a. (März 2022). “Astronomy outreach in Namibia: H.E.S.S. and beyond”. In: *37th International Cosmic Ray Conference*, 1397, S. 1397. DOI: 10.22323/1.395.1397. arXiv: 2108.01379 [astro-ph.IM].
- Di Piano, A., A. Bulgarelli, V. Fioretti, L. Baroncelli u. a. (2021). “Detection methods for the Cherenkov Telescope Array at very-short exposure times”. In: *PoS ICRC2021*, S. 694. DOI: 10.22323/1.395.0694. arXiv: 2108.04504 [astro-ph.IM].
- Funk, S. u. a. (2017). “TARGET: A digitizing and trigger ASIC for the Cherenkov telescope array”. In: *AIP Conf. Proc.* 1792.1. Hrsg. von Felix A. Aharonian, Werner Hofmann und Frank M. Rieger, S. 080012. DOI: 10.1063/1.4969033. arXiv: 1610.01536 [astro-ph.IM].

- Gueta, O. and Abdalla, H. and Carlile, C. and Dravins, D. and Zmija, A. (2022). “The Cherenkov Telescope Array: layout, design and performance”. eng. In: *37th International Cosmic Ray Conference (ICRC2021) - GAI - Gamma Ray Indirect*. Bd. 395. Proceedings of Science. DOI: {10 . 22323 / 1 . 395 . 0885}. URL: {http : //dx.doi.org/10.22323/1.395.0885}.
- H. E. S. S. Collaboration, F. Aharonian, F. Ait Benkhali, E. O. Anguener u. a. (Apr. 2022a). “VizieR Online Data Catalog: Kepler’s supernova gamma-ray emissions (HESS Coll.+ , 2022)”. In: *VizieR Online Data Catalog*, J/A+A/662/A65, J/A+A/662/A65.
- H. E. S. S. Collaboration, F. Aharonian, F. Ait Benkhali, E. O. Angüner u. a. (Apr. 2022b). “Time-resolved hadronic particle acceleration in the recurrent nova RS Ophiuchi”. In: *Science* 376.6588, S. 77–80. DOI: 10.1126/science.abn0567. arXiv: 2202.08201 [astro-ph.HE].
- Hassan, Tarek, Orel Gueta, Gernot Maier, Maximilian Nöthe u. a. (2021). “Performance of a proposed event-type based analysis for CTA”. In: *PoS ICRC2021*, S. 752. DOI: 10.22323/1.395.0752. arXiv: 2108.10135 [astro-ph.IM].
- H.E.S.S. Collaboration, Abdalla, H., Aharonian, F., Ait Benkhali, F. u. a. (2021). “LMC N132D: A mature supernova remnant with a power-law gamma-ray spectrum extending beyond 8 TeV”. In: *A&A* 655, A7. DOI: 10.1051/0004-6361/202141486. URL: <https://doi.org/10.1051/0004-6361/202141486>.
- Holch, TL, F Leuschner, J Schäfer und S Steinmassl (2022). “Assessing aerosol induced errors in Monte Carlo based air-shower reconstruction for atmospheric Cherenkov detectors”. In: *Journal of Physics: Conference Series*. Bd. 2398. 1. IOP Publishing, S. 012017.
- IceCube Collaboration, Merlin Schaufel, Rasha Abbasi, Markus Ackermann u. a. (2021). “Hybrid cosmic ray measurements using the IceAct telescopes in coincidence with the IceCube and IceTop detectors”. Englisch. In: *37th International Cosmic Ray Conference (ICRC 2021): July 12th - 23rd, 2021, Online - Berlin, Germany*. 37th International Cosmic Ray Conference. ICRC 2021 (Online, 12.–23. Juli 2021). Bd. 395. Proceedings of Science. 51.13.04; LK 01. Scuola Internazionale Superiore di Studi Avanzati (SISSA), Art.–Nr.: 276. DOI: 10.22323/1.395.0276.
- Jankowsky, David, Adrian Zink, Manuel Kraus, Jacky Catalano u. a. (2018). “TARGET, An Integrated Readout Electronics for Cherenkov Telescopes”. In: *Verhandlungen der Deutschen Physikalischen Gesellschaft*.
- Kasai, Eli Kunwiji u. a. (2021). “Southern African Large Telescope Spectroscopy of BL Lacs for the CTA project”. In: *PoS ICRC2021*, S. 881. DOI: 10.22323/1.395.0881. arXiv: 2108.04917 [astro-ph.HE].
- Komin, Nukri, Matthieu Renaud, Rachel Simoni und Stuart Ryder (Aug. 2021). “H.E.S.S. ToO program on nearby core-collapse Supernovae: search for very-high energy  $\gamma$ -ray emission towards the SN candidate AT2019krl in M74”. In: *37th International Cosmic Ray Conference*. arXiv: 2108.03839 [astro-ph.HE].
- Leuschner, Fabian, Johannes Schäfer, Simon Steinmassl, Tim Lukas Holch u. a. (März 2023). “Validating Monte Carlo simulations for an analysis chain in H.E.S.S”. In:

*7th Heidelberg International Symposium on High-Energy Gamma-Ray Astronomy.*  
arXiv: 2303.00412 [astro-ph.IM].

- López-Oramas, Alicia u. a. (2021). “Prospects for Galactic transient sources detection with the Cherenkov Telescope Array”. In: *PoS ICRC2021*, S. 784. DOI: 10.22323/1.395.0784. arXiv: 2108.03911 [astro-ph.HE].
- Miener, Tjark, Daniel Nieto, Aryeh Brill, Samuel Timothy Spencer und Jose Luis Contreras (2021). “Reconstruction of stereoscopic CTA events using deep learning with CTLearn”. In: *PoS ICRC2021*, S. 730. DOI: 10.22323/1.395.0730. arXiv: 2109.05809 [astro-ph.IM].
- Mitchell, A. M. W., S. Caroff, J. Hinton und L. Mohrmann (2021). “Detection of extended TeV emission around the Geminga pulsar with H.E.S.S.”. In: *PoS ICRC2021*, S. 780. arXiv: 2108.02556 [astro-ph.HE].
- Moulin, Emmanuel, Alessandro Montanari, Denys Malyshev und Dmitry Malyshev (2021). “Search for TeV emission from the Fermi Bubbles at low Galactic latitudes with H.E.S.S. inner Galaxy survey observations”. In: *PoS ICRC2021*, S. 791. arXiv: 2108.10028 [astro-ph.HE].
- Noethe, Maximilian, Karl Kosack, Lukas Nickel und Michele Peresano and (2021). “Prototype Open Event Reconstruction Pipeline for the Cherenkov Telescope Array”. In: *Proceedings of 37th International Cosmic Ray Conference — PoS(ICRC2021)*. Sissa Medialab. DOI: 10.22323/1.395.0744. URL: <https://doi.org/10.22323/2F1.395.0744>.
- Patricelli, Barbara u. a. (2021). “Searching for very-high-energy electromagnetic counterparts to gravitational-wave events with the Cherenkov Telescope Array”. In: *PoS ICRC2021*, S. 998. DOI: 10.22323/1.395.0998. arXiv: 2108.00691 [astro-ph.HE].
- Pecimotika, Mario u. a. (2021). “Performance of the Cherenkov Telescope Array in the presence of clouds”. In: *PoS ICRC2021*, S. 773. DOI: 10.22323/1.395.0773. arXiv: 2107.14544 [astro-ph.IM].
- Prokhorov, Dmitry, Jacco Vink, Rachel Simoni, Nukri Komin u. a. (2021). “Deep observations of Kepler’s SNR with H.E.S.S.”. In: *PoS ICRC2021*, S. 805. arXiv: 2107.11582 [astro-ph.HE].
- Pühlhofer, Gerd u. a. (2021). “Science verification of the new FlashCam-based camera in the 28m telescope of H.E.S.S.”. In: *PoS ICRC2021*, S. 764. arXiv: 2108.02596 [astro-ph.IM].
- Seglar Arroyo, M, H Abdalla, F Aharonian, F Ait-Benkhali u. a. (2022). “HESS follow-up of BBH merger events”. In: *POS Proceedings of Science 395*, S. 943. DOI: 10.22323/1.395.0943.
- Sergijenko, Olga, Anthony M. Brown, Damiano Fiorillo, Alberto Rosales de Leon u. a. (2021). “Sensitivity of the Cherenkov Telescope Array to emission from the gamma-ray counterparts of neutrino events”. In: *PoS ICRC2021*, S. 975. DOI: 10.22323/1.395.0975. arXiv: 2108.05217 [astro-ph.HE].

- Sinha, A., V. Baghmanyany, G. Peron, Y. Gallant u. a. (Aug. 2021). “Search for enhanced TeV gamma-ray emission from Giant Molecular Clouds using H.E.S.S”. In: *37th International Cosmic Ray Conference*. arXiv: 2108.01738 [astro-ph.HE].
- Steppa, Constantin und Kathrin Egberts (2021). “Exploring the population of Galactic very-high-energy  $\gamma$ -ray sources”. In: *PoS ICRC2021*, S. 798. DOI: 10.22323/1.395.0798. arXiv: 2110.09100 [astro-ph.HE].
- Tagliaferri, G., A. Antonelli, T. Arnesen, J. Aschersleben u. a. (2022). “The small-sized telescope of CTAO”. In: *Ground-based and Airborne Telescopes IX*. Hrsg. von Heather K. Marshall, Jason Spyromilio und Tomonori Usuda. Bd. 12182. International Society for Optics und Photonics. SPIE, 121820K. DOI: 10.1117/12.2627956. URL: <https://doi.org/10.1117/12.2627956>.
- Verna, Gaia, Franca Cassol und Heide Costantini (2021). “HAWC J2227+610: a potential PeVatron candidate for the CTA in the northern hemisphere”. In: *PoS ICRC2021*, S. 904. DOI: 10.22323/1.395.0904. arXiv: 2110.07939 [astro-ph.HE].
- Zanin, Roberta u. a. (2022). “CTA – the World’s largest ground-based gamma-ray observatory”. In: *PoS ICRC2021*, S. 005. DOI: 10.22323/1.395.0005.