






# DR. MANUEL MEYER | PUBLICATION LIST

43 publications in peer-reviewed journals with major contribution (18 as corresponding author). Additionally, co-author of more than 65 publications of the H.E.S.S. collaboration, 25 publications of the *Fermi*-LAT collaboration, 30 conference proceedings, and 5 white papers (in total 168 publications). According to [NASA ADS](#), the publications have in total more than 12,000 citations with an h index of 52 ([selected publications](#) below have an h index of 26 with more than 3,100 citations). A publication list including all collaboration papers can be found on [orcid.org/0000-0002-0738-7581](https://orcid.org/0000-0002-0738-7581). Please note that, according to the policies of the scientific Collaborations of which I am a member, author lists of collaboration papers are in alphabetical order. Corresponding author publications are marked with ★. Publications led by students I have supervised are marked with . Papers with  $\geq 100$  (50) citations are marked with  ().

## Peer Reviewed Publications





- [43]  S. Porras-Bedmar, M. **Meyer**, and D. Horns, *Novel bounds on decaying axionlike particle dark matter from the cosmic background*, *Phys. Rev. D*, Vol. 110, No. 10, 103501, p. 103501, 2024, arXiv: [2407.10618](#) [[astro-ph.CO](#)] 
- [42] S. Abe et al. (CTAO Consortium including M. **Meyer**), *Dark matter line searches with the Cherenkov Telescope Array*, *JCAP*, Vol. 2024, No. 7, 047, p. 047, 2024, arXiv: [2403.04857](#) [[hep-ph](#)] 
- [41] ★ F. Aharonian et al. (H.E.S.S. Collaboration, including M. **Meyer**), *Spectrum and extension of the inverse-Compton emission of the Crab Nebula from a combined Fermi-LAT and H.E.S.S. analysis*, *A&A*, Vol. 686, A308 2024, arXiv: [2403.12608](#) [[astro-ph.HE](#)] 
- [40]  F. Aharonian et al. (H.E.S.S. Collaboration, including M. **Meyer**), *Curvature in the very-high energy gamma-ray spectrum of M 87*, *A&A*, Vol. 685, A96 2024, arXiv: [2402.13330](#) [[astro-ph.HE](#)] 
- [39] J. Tjemsland, M. **Meyer**, and F. Vazza, *Constraining the Astrophysical Origin of Intergalactic Magnetic Fields*, *ApJ*, Vol. 963, No. 2, 135, p. 135, 2024, arXiv: [2311.04273](#) [[astro-ph.HE](#)] 
- [38] ★ M. **Meyer** et al., *A First Application of Machine and Deep Learning for Background Rejection in the ALPS II TES Detector*, *Annalen der Physik*, Vol. 536, No. 1, 2200545 2024, arXiv: [2304.08406](#) [[hep-ex](#)] 
- [37] ★ F. Aharonian et al. (H.E.S.S. Collaboration, including M. **Meyer**), *Constraints on the Intergalactic Magnetic Field Using Fermi-LAT and H.E.S.S. Blazar Observations*, *ApJL*, Vol. 950, No. 2, L16, p. L16, 2023, arXiv: [2306.05132](#) [[astro-ph.HE](#)] 
- [36]  J. Davies, M. **Meyer**, and G. Cotter, *Constraints on axionlike particles from a combined analysis of three flaring Fermi flat-spectrum radio quasars*, *Phys. Rev. D*, Vol. 107, No. 8, 083027, p. 083027, 2023, arXiv: [2211.03414](#) [[astro-ph.HE](#)] 
- [35] J. Rubiera Gimeno et al. (including M. **Meyer**), *The TES detector of the ALPS II experiment*, *Nuclear Instruments and Methods in Physics Research A*, Vol. 1046, 167588, p. 167588, 2023
- [34] ★ J. Biteau and M. **Meyer**, *Gamma-Ray Cosmology and Tests of Fundamental Physics*, *Galaxies*, Vol. 10, No. 2, p. 39, 2022, arXiv: [2202.00523](#) [[astro-ph.CO](#)] 
- [33]  J. Davies, M. **Meyer**, and G. Cotter, *Relevance of photon-photon dispersion within the jet for blazar axionlike particle searches*, *Phys. Rev. D*, Vol. 105, No. 2, 023017, p. 023017, 2022, arXiv: [2112.08194](#) [[astro-ph.HE](#)] 
- [32]  M. Crnogorčević, R. Caputo, M. **Meyer**, N. Omodei, and M. Gustafsson, *Searching for Axion-Like Particles from Core-Collapse Supernovae with Fermi LAT's Low Energy Technique*, *Phys. Rev. D*, Vol. 104, No. 10, 103001, p. 103001, 2021, arXiv: [2109.05790](#) [[astro-ph.HE](#)] 

- [31] ★ M. **Meyer**, M. Petropoulou, and I. Christie, *The Observability of Plasmoid-powered  $\gamma$ -Ray Flares with the Fermi Large Area Telescope*, *ApJ*, Vol. 912, No. 1, 40, p. 40, 2021, arXiv: [2012.09944 \[astro-ph.HE\]](#). 
- [30] 🏆 ★ H. Abdalla et al. (CTAO Consortium including M. **Meyer**), *Sensitivity of the Cherenkov Telescope Array for probing cosmology and fundamental physics with gamma-ray propagation*, *JCAP*, Vol. 2021, No. 2, 048, p. 048, 2021, arXiv: [2010.01349 \[astro-ph.HE\]](#). 
- [29] 🎓 J. Davies, M. **Meyer**, and G. Cotter, *Relevance of jet magnetic field structure for blazar axionlike particle searches*, *Phys. Rev. D*, Vol. 103, No. 2, 023008, p. 023008, 2021, arXiv: [2011.08123 \[astro-ph.HE\]](#). 
- [28] 🏆 H. Abdalla et al. (CTAO Consortium including M. **Meyer**), *Sensitivity of the Cherenkov Telescope Array to a dark matter signal from the Galactic centre*, *JCAP*, Vol. 2021, No. 1, 057, p. 057, 2021, arXiv: [2007.16129 \[astro-ph.HE\]](#). 
- [27] H. Abdalla et al. (H.E.S.S. & MAGIC Collaborations including M. **Meyer**), *Observation of a sudden cessation of a very-high-energy  $\gamma$ -ray flare in PKS 1510–089 with H.E.S.S. and MAGIC in May 2016*, *A&A*, Vol. 648, A23, A23, 2021, arXiv: [2012.10254 \[astro-ph.HE\]](#). 
- [26] R. Buehler, G. Gallardo, G. Maier, A. Dominguez, M. López, and M. **Meyer**, *Search for the imprint of axion-like particles in the highest-energy photons of hard  $\gamma$ -ray blazars*, *JCAP*, Vol. 2020, No. 9, 027, p. 027, 2020, arXiv: [2004.09396 \[astro-ph.HE\]](#) 
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- [24] H. Chiaro et al. (including M. **Meyer**), *Identifying TeV Source Candidates among Fermi-LAT Unclassified Blazars*, *ApJ*, Vol. 887, No. 1, 104, p. 104, 2019, arXiv: [1909.10834 \[astro-ph.HE\]](#) 
- [23] H. Abdalla et al. (H.E.S.S. Collaboration including M. **Meyer**), *Constraints on the emission region of 3C 279 during strong flares in 2014 and 2015 through VHE  $\gamma$ -ray observations with H.E.S.S.*, *A&A*, Vol. 627, A159, A159, 2019, arXiv: [1906.04996 \[astro-ph.HE\]](#) 
- [22] 🏆 ★ M. **Meyer**, J. D. Scargle, and R. D. Blandford, *Characterizing the gamma-ray variability of the brightest flat spectrum radio quasars observed with the Fermi LAT*, *ApJ*, Vol. 877, No. 1, 39, p. 39, 2019, arXiv: [1902.02291 \[astro-ph.HE\]](#) 
- [21] 🏆 ★ M. Ackermann et al. (Fermi-LAT Collaboration, including M. **Meyer**), *The Search for Spatial Extension in High-latitude Sources Detected by the Fermi Large Area Telescope*, *ApJS*, Vol. 237, 32, p. 32, 2018, arXiv: [1804.08035 \[astro-ph.HE\]](#) 
- [20] M. Ackermann et al. (Fermi-LAT Collaboration, including M. **Meyer**), *Search for Gamma-Ray Emission from Local Primordial Black Holes with the Fermi Large Area Telescope*, *ApJ*, Vol. 857, 49, p. 49, 2018 
- [19] A. Desai et al. (including M. **Meyer**), *Probing the EBL evolution at high redshift using GRBs detected with the Fermi-LAT*, *ApJ*, Vol. 850, No. 1, p. 73, 2017, arXiv: [1710.02535 \[astro-ph.HE\]](#) 
- [18] H. Abdalla et al. (H.E.S.S. Collaboration, including M. **Meyer**), *Measurement of the EBL spectral energy distribution using the VHE gamma-ray spectra of H.E.S.S. blazars*, *A&A*, Vol. 606, A59, 2017, arXiv: [1707.06090 \[astro-ph.HE\]](#) 
- [17] ★ C. Balázs, J. Conrad, B. Farmer, T. Jacques, T. Li, M. **Meyer**, F. S. Queiroz, and M. A. Sánchez-Conde, *Sensitivity of the Cherenkov Telescope Array to the detection of a dark matter signal in comparison to direct detection and collider experiments*, *Phys. Rev. D*, Vol. 96, p. 083002, 2017, arXiv: [1706.01505 \[astro-ph.HE\]](#). 
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- [15] 🏆 A. Albert et al. (Fermi-LAT and DES Collaborations, including M. **Meyer**), *Searching for Dark Matter Annihilation in Recently Discovered Milky Way Satellites with Fermi-LAT*, *ApJ*, Vol. 834, No. 2, p. 110, 2017, arXiv: [1611.03184](#) [[astro-ph.HE](#)].
- [14] ★ M. **Meyer**, J. Conrad, and H. Dickinson, *Sensitivity of the Cherenkov Telescope Array to the Detection of Intergalactic Magnetic Fields*, *ApJ*, Vol. 827, No. 2, p. 147, 2016, arXiv: [1603.03431](#) [[astro-ph.HE](#)].
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- [10] 🏆 Aleksić et al. (MAGIC Collaboration, with M. **Meyer**), *Measurement of the Crab Nebula spectrum over three decades in energy with the MAGIC telescopes*, *Journal of High Energy Astrophysics*, Vol. 5, pp. 30–38, 2015, arXiv: [1406.6892](#) [[astro-ph.HE](#)].
- [9] ★ M. **Meyer** and J. Conrad, *Sensitivity of the Cherenkov Telescope Array to the detection of axion-like particles at high gamma-ray opacities*, *JCAP*, Vol. 12, 016, p. 016, 2014, arXiv: [1410.1556](#) [[astro-ph.HE](#)].
- [8] ★ 🏆 M. **Meyer**, D. Montanino, and J. Conrad, *On detecting oscillations of gamma rays into axion-like particles in turbulent and coherent magnetic fields*, *JCAP*, Vol. 9, 003, p. 003, 2014, arXiv: [1406.5972](#) [[astro-ph.HE](#)].
- [7] 🏆 A. Abramowski et al. (H.E.S.S. Collaboration including M. **Meyer**), *Constraints on axionlike particles with H.E.S.S. from the irregularity of the PKS 2155-304 energy spectrum*, *Phys. Rev. D*, Vol. 88, No. 10, 102003, p. 102003, 2013, arXiv: [1311.3148](#) [[astro-ph.HE](#)].
- [6] 🏆 ★ M. **Meyer**, D. Horns, and M. Raue, *First lower limits on the photon-axion-like particle coupling from very high energy gamma-ray observations*, *Phys. Rev. D*, Vol. 87, No. 3, 035027 2013, arXiv: [1302.1208](#) [[astro-ph.HE](#)].
- [5] 🏆 D. Horns et al. (including M. **Meyer**), *Hardening of TeV gamma spectrum of active galactic nuclei in galaxy clusters by conversions of photons into axionlike particles*, *Phys. Rev. D*, Vol. 86, No. 7, 075024 2012, arXiv: [1207.0776](#) [[astro-ph.HE](#)].
- [4] M. Raue and M. **Meyer**, *Probing the peak of the star formation rate density with the extragalactic background light*, *MNRAS*, Vol. 426, pp. 1097–1106, 2012, arXiv: [1203.0310](#) [[astro-ph.CO](#)].
- [3] 🏆 ★ M. **Meyer**, M. Raue, D. Mazin, and D. Horns, *Limits on the extragalactic background light in the Fermi era*, *A&A*, Vol. 542, A59 2012, arXiv: [1202.2867](#) [[astro-ph.CO](#)].
- [2] 🏆 D. Horns and M. **Meyer**, *Indications for a pair-production anomaly from the propagation of VHE gamma-rays*, *JCAP*, Vol. 2, 033, p. 033, 2012, arXiv: [1201.4711](#) [[astro-ph.CO](#)].
- [1] 🏆 ★ M. **Meyer**, D. Horns, and H.-S. Zechlin, *The Crab Nebula as a standard candle in very high-energy astrophysics*, *A&A*, Vol. 523, A2 2010, arXiv: [1008.4524](#) [[astro-ph.HE](#)].

## White Papers

- [5] ★ F. Iocco et al. (CTAO Consortium, including M. **Meyer**), *Probing Dark Matter and Fundamental Physics with the Cherenkov Telescope Array*, *ArXiv e-prints* 2021, arXiv: [2106.03582](#) [[astro-ph.HE](#)]

- [4] 🏆 E. Armengaud et al. (including M. **Meyer**), *Physics potential of the International Axion Observatory (IAXO)*, *JCAP*, Vol. 2019, No. 6, 047, p. 047, 2019, arXiv: [1904.09155](#) [[hep-ph](#)] 
- [3] 🏆 P. S. Ray et al. (including M. **Meyer**), *STROBE-X: X-ray Timing and Spectroscopy on Dynamical Timescales from Microseconds to Years*, *ArXiv e-prints* 2019, arXiv: [1903.03035](#) [[astro-ph.IM](#)] 
- [2] 🏆 A. Drlica-Wagner et al. (including M. **Meyer**), *Probing the Fundamental Nature of Dark Matter with the Large Synoptic Survey Telescope*, *ArXiv e-prints* 2019, arXiv: [1902.01055](#) [[astro-ph.CO](#)] 
- [1] 🏆 The CTAO consortium, (including M. **Meyer**), *Science with the Cherenkov Telescope Array*, *World Scientific* 2018, arXiv: [1709.07997](#) [[astro-ph.HE](#)] 

## »»» Conference Proceedings

- [30] C. Schwemmbauer et al. (including M. **Meyer**), *Direct dark matter searches using ALPS II's TES detection system*, *PoS*, Vol. EPS-HEP2023, p. 120, 2024 
- [29] J. Rubiera Gimeno et al. (including M. **Meyer**), *A TES system for ALPS II - Status and Prospects*, *PoS*, Vol. EPS-HEP2023, p. 567, 2024 
- [28] 🎓 R. Cecil, V. M. Barbosa, I. Lypova, M. **Meyer**, and S. Wagner, *Probing Gamma-Ray Propagation at Very-High Energies with H.E.S.S. Observations of M87*, *PoS*, Vol. ICRC2023, p. 908, 2024 
- [27] 🎓 R. Cecil and M. **Meyer**, *Modeling the Magnetic Field of the Virgo Cluster For Axion Like Particle Search in Gamma Ray Energies*, *PoS*, Vol. Gamma2022, p. 182, 2023 
- [26] ★ M. **Meyer**, J. Davies, and J. Kuhlmann, *gammaALPs: An open-source python package for computing photon-axion-like-particle oscillations in astrophysical environments*, *PoS*, Vol. ICRC2021, p. 557, 2021, arXiv: [2108.02061](#) [[astro-ph.HE](#)] 
- [25] ★ M. de Bony de Lavergne et al. (H.E.S.S. Collaboration, including M. **Meyer**), *Detection of new Extreme BL Lac objects with H.E.S.S. and Swift XRT*, *PoS*, Vol. ICRC2021, p. 823, 2021, arXiv: [2108.02232](#) [[astro-ph.HE](#)] 
- [24] ★ M. **Meyer** and T. Petrushevska, *Extending the sample of core-collapse supernovae for searches of axion-like-particle induced gamma-ray bursts with the Fermi LAT*, *PoS*, Vol. ICRC2021, p. 510, 2021, arXiv: [2108.02069](#) [[astro-ph.HE](#)] 
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- [22] M. Zacharias et al. (including M. **Meyer**), *The VHE Gamma-Ray View of the FSRQ PKS 1510-089*, *ArXiv e-prints* 2019, arXiv: [1903.08535](#) [[astro-ph.HE](#)]. 
- [21] ★ F. Gaté et al. (CTAO Consortium, including M. **Meyer**), *Studying cosmological  $\gamma$ -ray propagation with the Cherenkov Telescope Array*, *PoS*, Vol. ICRC2017 2017, arXiv: [1709.04185](#) [[astro-ph.HE](#)]. 
- [20] M. Wood, J. Biteau, R. Caputo, M. Di Mauro, and M. **Meyer** (Fermi-LAT Collaboration), *Preliminary Results of the Fermi High-Latitude Extended Source Catalog*, *PoS* 2017, arXiv: [1709.06213](#) [[astro-ph.HE](#)]. 
- [19] ★ R. Caputo, M. **Meyer**, and M. Sánchez-Conde (AMEGO Team), *AMEGO: Dark Matter Prospects*, *PoS*, Vol. ICRC2017, p. 910, 2017. 
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- [16] J. Conrad, M. Meyer, and D. Montanino, *Axion-Like particles from extragalactic High Energy sources*, *Journal of Physics Conference Series*, Vol. 718, No. 5, 052026, p. 052026, 2016.
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- [14] ★ M. Meyer, *Modelling gamma-ray-axion-like particle oscillations in turbulent magnetic fields: relevance for observations with Cherenkov telescopes*, *Proceedings of 10th Patras Workshop on Axions, WIMPs, and WISPs* 2014, arXiv: [1412.2492](#) [astro-ph.HE]. 
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- [11] O. Abril et al. (CTAO Consortium, including M. Meyer), *CTA contributions to the 33rd International Cosmic Ray Conference (ICRC2013)*, *ArXiv e-prints* 2013, arXiv: [1307.2232](#) [astro-ph.HE]. 
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- [6] ★ M. Meyer, D. Horns, L. Maccione, A. Mirizzi, D. Montanino, and M. Roncadelli, *The effect of photon-axion-like particle conversions in galaxy clusters on very high energy  $\gamma$ -ray spectra*, *Proceedings of the 8th Patras Workshop on Axions, WIMPs and WISPs* 2012, arXiv: [1211.6408](#) [astro-ph.HE]. 
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- [2] ★ M. Meyer and D. Horns, *On the transparency of the universe*, ed. by M. Raue, T. Kneiske, D. Horns, D. Elsaesser, and P. Hauschildt, p. 11, 2010.
- [1] ★ M. Meyer, D. Horns, and H. S. Zechlin, *Cross Calibration of Imaging Air Cherenkov Telescopes with Fermi*, *The 2009 Fermi Symposium, eConf Proceedings C091122* 2009, arXiv: [0912.3754](#) [astro-ph.IM]. 

