

Publication List from all Collaborations and Experiments

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- V. Chekhovsky et al., **Search for dark matter produced in association with one or two top quarks in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2025). <http://arxiv.org/abs/2505.05300>, arXiv:2505.05300 [hep-ex]
- V. Chekhovsky et al., **Measurement of event shapes in minimum-bias events from proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2025). <http://arxiv.org/abs/2505.17850>, arXiv:2505.17850 [hep-ex]
- A. Hayrapetyan et al., **Measurements of inclusive and differential Higgs boson production cross sections at $\sqrt{s} = 13.6$ TeV in the $H \rightarrow \gamma\gamma$ decay channel**, (2025). <http://arxiv.org/abs/2504.17755>, arXiv:2504.17755 [hep-ex]
- V. Chekhovsky et al., **Combination and interpretation of differential Higgs boson production cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2025). <http://arxiv.org/abs/2504.13081>, arXiv:2504.13081 [hep-ex]
- V. Chekhovsky et al., **Search for jet quenching with dijets from high-multiplicity pPb collisions at $\sqrt{s_{NN}} = 8.16$ TeV**, (2025). <http://arxiv.org/abs/2504.08507>, arXiv:2504.08507 [nucl-ex]
- V. Chekhovsky et al., **Observation of coherent $\phi(1020)$ meson photoproduction in ultraperipheral PbPb collisions at $\sqrt{s_{NN}} = 5.36$ TeV**, (2025). <http://arxiv.org/abs/2504.05193>, arXiv:2504.05193 [nucl-ex]
- V. Chekhovsky et al., **Combined effective field theory interpretation of Higgs boson, electroweak vector boson, top quark, and multi-jet measurements**, (2025). <http://arxiv.org/abs/2504.02958>, arXiv:2504.02958 [hep-ex]
- A. Hayrapetyan et al., **Search for charged-lepton flavour violation in top quark interactions with an up-type quark, a muon, and a τ lepton in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2025). <http://arxiv.org/abs/2504.08532>, arXiv:2504.08532 [hep-ex]
- A. Hayrapetyan et al., **Search for t -channel scalar and vector leptoquark exchange in the high-mass dimuon and dielectron spectra in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2025). <http://arxiv.org/abs/2503.20023>, arXiv:2503.20023 [hep-ex]
- V. Chekhovsky et al., **Search for dark matter production in association with a single top quark in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2025). <http://arxiv.org/abs/2503.20033>, arXiv:2503.20033 [hep-ex]
- A. Hayrapetyan et al., **Observation of a pseudoscalar excess at the top quark pair production threshold**, (2025). <http://arxiv.org/abs/2503.22382>, arXiv:2503.22382 [hep-ex]
- V. Chekhovsky et al., **Observation of $WZ\gamma$ production and constraints on new physics scenarios in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2025). <http://arxiv.org/abs/2503.21977>, arXiv:2503.21977 [hep-ex]
- V. Chekhovsky et al., **Observation of the charged-particle multiplicity dependence of $\sigma_{\psi(2S)}/\sigma_{J/\psi}$ in pPb collisions at 8.16 TeV**, (2025). <http://arxiv.org/abs/2503.02139>, arXiv:2503.02139 [nucl-ex]
- V. Chekhovsky et al., **Small- x evolution of gluon fields from incoherent J/ψ photoproduction in ultraperipheral PbPb collisions**, (2025). <http://arxiv.org/abs/2503.08903>, arXiv:2503.08903 [nucl-ex]
- V. Chekhovsky et al., **Search for the associated production of a Higgs boson with a charm quark in the diphoton decay channel in pp collisions at $\sqrt{s} = 13$ TeV**, (2025). <http://arxiv.org/abs/2503.08797>, arXiv:2503.08797 [hep-ex]
- V. Chekhovsky et al., **Luminosity measurement for lead-lead collisions at $\sqrt{s_{NN}} = 5.02$ TeV in 2015 and 2018 at CMS**, (2025). <http://arxiv.org/abs/2503.03946>, arXiv:2503.03946 [hep-ex]
- V. Chekhovsky et al., **Measurements of the inclusive W and Z boson production cross sections and their ratios in proton-proton collisions at $\sqrt{s} = 13.6$ TeV**, (2025). <http://arxiv.org/abs/2503.09742>, arXiv:2503.09742 [hep-ex]
- V. Chekhovsky et al., **Search for vector-like leptons with long-lived particle decays in the CMS muon system in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2025). <http://arxiv.org/abs/2503.16699>, arXiv:2503.16699 [hep-ex]

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- V. Chekhovsky et al., **Development of systematic uncertainty-aware neural network trainings for binned-likelihood analyses at the LHC**, (2025). <http://arxiv.org/abs/2502.13047>, arXiv:2502.13047 [hep-ex]
- V. Chekhovsky et al., **Search for medium effects using jet axis decorrelation in inclusive jets from PbPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV**, (2025). <http://arxiv.org/abs/2502.13020>, arXiv:2502.13020 [nucl-ex]
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- A. Hayrapetyan et al., **Measurement of light-by-light scattering and the Breit-Wheeler process, and search for axion-like particles in ultraperipheral PbPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV**, (2024). <http://arxiv.org/abs/2412.15413>, arXiv:2412.15413 [nucl-ex]
- V. Chekhovsky et al., **High-precision measurement of the W boson mass with the CMS experiment at the LHC**, (2024). <http://arxiv.org/abs/2412.13872>, arXiv:2412.13872 [hep-ex]
- A. Hayrapetyan et al., **Search for heavy neutral resonances decaying to tau lepton pairs in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2024). <http://arxiv.org/abs/2412.04357>, arXiv:2412.04357 [hep-ex]
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- A. Hayrapetyan et al., **Reweighting simulated events using machine-learning techniques in the CMS experiment**, (2024). <http://arxiv.org/abs/2411.03023>, arXiv:2411.03023 [hep-ex]
- A. Hayrapetyan et al., **Study of same-sign W boson scattering and anomalous couplings in events with one tau lepton from pp collisions at $\sqrt{s} = 13$ TeV**, (2024). <http://arxiv.org/abs/2410.04210>, arXiv:2410.04210 [hep-ex]
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