

# Publication List from all Collaborations and Experiments

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- A. Hayrapetyan et al., **Search for bottom quark associated production of the standard model Higgs boson in final states with leptons in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2408.01344>, arXiv:2408.01344 [hep-ex]
- A. Hayrapetyan et al., **Measurement of the inclusive cross sections for W and Z boson production in proton-proton collisions at  $\sqrt{s} = 5.02$  and 13 TeV**, (2024). <http://arxiv.org/abs/2408.03744>, arXiv:2408.03744 [hep-ex]
- A. Hayrapetyan et al., **Measurement of the Drell–Yan forward-backward asymmetry and of the effective leptonic weak mixing angle in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2408.07622>, arXiv:2408.07622 [hep-ex]
- A. Hayrapetyan et al., **Test of lepton flavor universality in semileptonic  $B_c^+$  meson decays in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2408.00678>, arXiv:2408.00678 [hep-ex]
- A. Hayrapetyan et al., **Constraints on the Higgs boson self-coupling from the combination of single and double Higgs boson production in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2407.13554>, arXiv:2407.13554 [hep-ex]
- A. Hayrapetyan et al., **Measurement of the  $B_s^0 \rightarrow J/\psi K_S^0$  effective lifetime from proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2407.13441>, arXiv:2407.13441 [hep-ex]
- A. Hayrapetyan et al., **Measurement of boosted Higgs bosons produced via vector boson fusion or gluon fusion in the  $H \rightarrow b\bar{b}$  decay mode using LHC proton-proton collision data at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2407.08012>, arXiv:2407.08012 [hep-ex]
- A. Hayrapetyan et al., **Measurement of the  $t\bar{t}H$  and  $tH$  production rates in the  $H \rightarrow b\bar{b}$  decay channel using proton-proton collision data at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2407.10896>, arXiv:2407.10896 [hep-ex]
- A. Hayrapetyan et al., **Search for long-lived heavy neutral leptons in proton-proton collision events with a lepton-jet pair associated with a secondary vertex at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2407.10717>, arXiv:2407.10717 [hep-ex]
- A. Hayrapetyan et al., **Model-independent search for pair production of new bosons decaying into muons in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2407.20425>, arXiv:2407.20425 [hep-ex]
- A. Hayrapetyan et al., **Search for nuclear modifications of  $B^+$  meson production in pPb collisions at  $\sqrt{s_{NN}} = 8.16$  TeV**, (2024). <http://arxiv.org/abs/2407.05402>, arXiv:2407.05402 [nucl-ex]
- A. Tumasyan et al., **Search for resonant pair production of Higgs bosons in the  $b\bar{b}b\bar{b}$  final state using large-area jets in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2407.13872>, arXiv:2407.13872 [hep-ex]
- A. Hayrapetyan et al., **Multiplicity dependence of charm baryon and baryon meson production in pPb collisions at  $\sqrt{s_{NN}} = 8.16$  TeV**, (2024). <http://arxiv.org/abs/2407.13615>, arXiv:2407.13615 [nucl-ex]
- A. Hayrapetyan et al., **Search for flavor-changing neutral current interactions of the top quark mediated by a Higgs boson in proton-proton collisions at 13 TeV**, (2024). <http://arxiv.org/abs/2407.15172>, arXiv:2407.15172 [hep-ex]
- A. Hayrapetyan et al., **Observation of double  $J/\psi$  meson production in pPb collisions at  $\sqrt{s_{NN}} = 8.16$  TeV**, (2024). <http://arxiv.org/abs/2407.03223>, arXiv:2407.03223 [nucl-ex]
- A. Hayrapetyan et al., **Measurement of inclusive and differential cross sections for  $W^+W^-$  production in proton-proton collisions at  $\sqrt{s} = 13.6$  TeV**, (2024). <http://arxiv.org/abs/2406.05101>, arXiv:2406.05101 [hep-ex]

- A. Hayrapetyan et al., **Measurement of the polarizations of prompt and non-prompt  $J/\psi$  and  $\psi(2S)$  mesons produced in pp collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2406.14409>, arXiv:2406.14409 [hep-ex]
- A. Hayrapetyan et al., **Search for a resonance decaying to a W boson and a photon in proton-proton collisions at  $\sqrt{s} = 13$  TeV using leptonic W boson decays**, (2024). <http://arxiv.org/abs/2406.05737>, arXiv:2406.05737 [hep-ex]
- A. Hayrapetyan et al., **Review of searches for vector-like quarks, vector-like leptons, and heavy neutral leptons in proton-proton collisions at  $\sqrt{s} = 13$  TeV at the CMS experiment**, (2024). <http://arxiv.org/abs/2405.17605>, arXiv:2405.17605 [hep-ex]
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- A. Hayrapetyan et al., **Search for  $CP$  violation in  $D^0 \rightarrow K_S^0 K_S^0$  decays in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2405.11606>, arXiv:2405.11606 [hep-ex]
- A. Hayrapetyan et al., **Overview of high-density QCD studies with the CMS experiment at the LHC**, (2024). <http://arxiv.org/abs/2405.10785>, arXiv:2405.10785 [nucl-ex]
- A. Hayrapetyan et al., **Search for new physics in high-mass diphoton events from proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2405.09320>, arXiv:2405.09320 [hep-ex]
- A. Hayrapetyan et al., **Search for production of a single vector-like quark decaying to tH or tZ in the all-hadronic final state in pp collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2405.05071>, arXiv:2405.05071 [hep-ex]
- A. Hayrapetyan et al., **Searches for violation of Lorentz invariance in  $t\bar{t}$  production using dilepton events in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2405.14757>, arXiv:2405.14757 [hep-ex]
- A. Hayrapetyan et al., **Study of WH production through vector boson scattering and extraction of the relative sign of the W and Z couplings to the Higgs boson in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2405.16566>, arXiv:2405.16566 [hep-ex]
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- A. Hayrapetyan et al., **Search for a standard model-like Higgs boson in the mass range between 70 and 110 GeV in the diphoton final state in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2405.18149>, arXiv:2405.18149 [hep-ex]
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- A. Hayrapetyan et al., **Dark sector searches with the CMS experiment**, (2024). <http://arxiv.org/abs/2405.13778>, arXiv:2405.13778 [hep-ex]
- A. Hayrapetyan et al., **Search for Higgs Boson Pair Production with One Associated Vector Boson in Proton-Proton Collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2404.08462>, arXiv:2404.08462 [hep-ex]
- A. Hayrapetyan et al., **Measurement of Differential ZZ+Jets Production Cross Sections in pp Collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2404.02711>, arXiv:2404.02711 [hep-ex]
- A. Hayrapetyan et al., **Searches for Pair-Produced Multijet Resonances using Data Scouting in Proton-Proton Collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2404.02992>, arXiv:2404.02992 [hep-ex]
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- A. Hayrapetyan et al., **Performance of CMS muon reconstruction from proton-proton to heavy ion collisions**, (2024). <http://arxiv.org/abs/2404.17377>, arXiv:2404.17377 [hep-ex]
- A. Hayrapetyan et al., **Search for the Z boson decay to  $\tau\tau\mu\mu$  in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2024). <http://arxiv.org/abs/2404.18298>, arXiv:2404.18298 [hep-ex]
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- A. Hayrapetyan et al., **Enriching the Physics Program of the CMS Experiment via Data Scouting and Data Parking**, (2024). <http://arxiv.org/abs/2403.16134>, arXiv:2403.16134 [hep-ex]
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- A. Hayrapetyan et al., **Observation of the  $\Lambda_b^0 \rightarrow J/\psi \Xi^- K^+$  decay**, (2024). <http://arxiv.org/abs/2401.16303>, arXiv:2401.16303 [hep-ex]
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