

Publication List

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- [1] V. Chekhovsky et al., *Search for dark matter production in association with bottom quarks and a lepton pair in proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [2] A. Hayrapetyan et al., *Discovery of suppressed charged-particle production in ultrarelativistic oxygen-oxygen collisions*, (2025).
- [3] A. Hayrapetyan et al., *Observation of long-range collective flow in OO and NeNe collisions and implications for nuclear structure studies*, (2025).
- [4] A. Hayrapetyan et al., *Vector boson scattering and anomalous quartic couplings in final states with $lvqq$ or ℓlqq plus jets using proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [5] A. Hayrapetyan et al., *Search for resonances decaying to an anomalous jet and a Higgs boson in proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [6] A. Hayrapetyan et al., *Measurements of ttW differential cross sections and the leptonic charge asymmetry at $\sqrt{s} = 13$ TeV*, (2025).
- [7] V. Chekhovsky et al., *Measurement of D^0 meson photoproduction in ultraperipheral heavy ion collisions*, (2025).
- [8] A. Hayrapetyan et al., *Model-independent measurement of the Higgs boson associated production with two jets and decaying to a pair of W bosons in proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [9] A. Hayrapetyan et al., *Search for a Higgs boson produced in association with a charm quark and decaying to a W boson pair in proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [10] V. Chekhovsky et al., *A general search for supersymmetric particles in scenarios with compressed mass spectra using proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [11] A. Hayrapetyan et al., *Search for a new scalar resonance decaying to a Higgs boson and another new scalar particle in the final state with two bottom quarks and two photons in proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [12] A. Hayrapetyan et al., *Search for charged lepton flavor violating Z and Z' boson decays in proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [13] A. Hayrapetyan et al., *Search for b hadron decays to long-lived particles in the CMS endcap muon detectors*, (2025).

- [14] A. Hayrapetyan et al., *First exclusive reconstruction of the B^{*+} , B^{*0} , and B_s^{*0} mesons and precise measurement of their masses*, (2025).
- [15] A. Hayrapetyan et al., *Probing the flavour structure of dimension-6 EFT operators in multilepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [16] A. Hayrapetyan et al., *Search for resonant production of pairs of dijet resonances through broad mediators in proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [17] V. Chekhovsky et al., *Exploring small-angle emissions in charm quark jets in proton-proton collisions at $\sqrt{s} = 5.02$ TeV*, (2025).
- [18] A. Hayrapetyan et al., *A method for correcting the substructure of multi-prong jets using the Lund jet plane*, (2025).
- [19] A. Hayrapetyan et al., *Search for heavy pseudoscalar and scalar bosons decaying to a top quark pair in proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [20] V. Chekhovsky et al., *Search for nonresonant new physics signals in high-mass dilepton events produced in association with b-tagged jets in proton-proton collisions at $\sqrt{s} = 13$ TeV*, (2025).
- [21] A. Hayrapetyan et al., *Machine learning method for enforcing variable independence in background estimation with LHC data: ABCDisCoTEC*, (2025).
- [22] A. Hayrapetyan et al., *Determination of the spin and parity of all-charm tetraquarks*, (2025).
- [23] A. Hayrapetyan et al., *Search for CP violation in events with top quarks and Z bosons at $\sqrt{s} = 13$ and 13.6 TeV*, (2025).
- [24] A. Hayrapetyan et al., *Measurement of WWZ and ZH Production Cross Sections at $\sqrt{s}=13$ and 13.6 TeV*, Phys. Rev. Lett. **135**, 091802 (2025).
- [25] 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*, JHEP **09**, 070 (2025).
- [26] V. Chekhovsky et al., *Search for jet quenching with dijets from high-multiplicity pPb collisions at $\sqrt{s_{NN}} = 8.16$ TeV*, JHEP **07**, 118 (2025).
- [27] V. Chekhovsky et al., *Observation of coherent $\phi(1020)$ meson photoproduction in ultraperipheral PbPb collisions at $\sqrt{s_{NN}} = 5.36$ TeV*, (2025).
- [28] V. Chekhovsky et al., *Combined effective field theory interpretation of Higgs boson, electroweak vector boson, top quark, and multi-jet measurements*, (2025).
- [29] A. Hayrapetyan et al., *Observation of a pseudoscalar excess at the top quark pair production threshold*, Rept. Prog. Phys. **88**, 087801 (2025).
- [30] A. Hayrapetyan et al., *Search for dark QCD with emerging jets in proton-proton collisions at $\sqrt{s} = 13$ TeV*, JHEP **07**, 142 (2024).
- [31] S. Malik, A. Karadzhinova-Ferrer, J. Hogan, R. Bray, R. Kamalieddin, K. Flood, A. El-Zant, G. Fidalgo, D. Bruhwiler, and M. Bellis, *Facilitating Non-HEP Career Transition*, in *Snowmass 2021* (2022).

- [32] M. G. Bardeen et al., *Particle Physics Outreach to K-12 Schools and Opportunities in Undergraduate Education*, (2022).
- [33] S. Malik et al., *Broadening the scope of Education, Career and Open Science in HEP*, in *Snowmass 2021* (2022).
- [34] A. M. Briceño, A. Goel, and G. A. F. Rodriguez, *Teaching Python the Sustainable Way: Lessons Learned at HSF Training*, (2022).