

# Publication List from all Collaborations and Experiments

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- A. Tumasyan et al., **Probing effective field theory operators in the associated production of top quarks with a Z boson in multilepton final states at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2107.13896>, arXiv:2107.13896 [hep-ex]
- A. Tumasyan et al., **Combined searches for the production of supersymmetric top quark partners in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2107.10892>, arXiv:2107.10892 [hep-ex]
- A. Tumasyan et al., **Search for new particles in events with energetic jets and large missing transverse momentum in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2107.13021>, arXiv:2107.13021 [hep-ex]
- A. Tumasyan et al., **Search for chargino-neutralino production in events with Higgs and W bosons using 137 fb<sup>-1</sup> of proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2107.12553>, arXiv:2107.12553 [hep-ex]
- A. Tumasyan et al., **Measurement of the inclusive and differential Higgs boson production cross sections in the decay mode to a pair of  $\tau$  leptons in pp collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2107.11486>, arXiv:2107.11486 [hep-ex]
- A. Tumasyan et al., **Measurement of the inclusive and differential  $t\bar{t}\gamma$  cross sections in the single-lepton channel and EFT interpretation at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2107.01508>, arXiv:2107.01508 [hep-ex]
- A. Tumasyan et al., **Measurement of prompt open-charm production cross sections in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2107.01476>, arXiv:2107.01476 [hep-ex]
- A. Tumasyan et al., **Measurements of the electroweak diboson production cross sections in proton-proton collisions at  $\sqrt{s} = 5.02$  TeV using leptonic decays**, (2021). <http://arxiv.org/abs/2107.01137>, arXiv:2107.01137 [hep-ex]
- A. Tumasyan et al., **Measurement of the electroweak production of Z  $\gamma$  and two jets in proton-proton collisions at  $\sqrt{s} = 13$  TeV and constraints on anomalous quartic gauge couplings**, (2021). <http://arxiv.org/abs/2106.11082>, arXiv:2106.11082 [hep-ex]
- A. Tumasyan et al., **Fragmentation of jets containing a prompt J/ $\psi$  meson in PbPb and pp collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**, (2021). <http://arxiv.org/abs/2106.13235>, arXiv:2106.13235 [hep-ex]
- A. Tumasyan et al., **Search for a heavy Higgs boson decaying into two lighter Higgs bosons in the  $\tau\tau b\bar{b}$  final state at 13 TeV**, (2021). <http://arxiv.org/abs/2106.10361>, arXiv:2106.10361 [hep-ex]
- A. Tumasyan et al., **Search for W  $\gamma$  resonances in proton-proton collisions at  $\sqrt{s} = 13$  TeV using hadronic decays of Lorentz-boosted W bosons**, (2021). <http://arxiv.org/abs/2106.10509>, arXiv:2106.10509 [hep-ex]
- A. Tumasyan et al., **Measurements of the  $pp \rightarrow W^\pm \gamma \gamma$  and  $pp \rightarrow Z \gamma \gamma$  cross sections at  $\sqrt{s} = 13$  TeV and limits on anomalous quartic gauge couplings**, (2021). <http://arxiv.org/abs/2105.12780>, arXiv:2105.12780 [hep-ex]
- A.M. Sirunyan et al., **Search for lepton-flavor violating decays of the Higgs boson in the  $\mu\tau$  and  $e\tau$  final states in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2105.03007>, arXiv:2105.03007 [hep-ex]
- A. Tumasyan et al., **Search for strongly interacting massive particles generating trackless jets in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2105.09178>, arXiv:2105.09178 [hep-ex]
- A. Tumasyan et al., **Measurements of Z bosons plus jets using variables sensitive to double parton scattering in pp collisions at 13 TeV**, (2021). <http://arxiv.org/abs/2105.14511>, arXiv:2105.14511 [hep-ex]
- A.M. Sirunyan et al., **Search for a heavy resonance decaying to a top quark and a W boson at  $\sqrt{s} = 13$  TeV in the fully hadronic final state**, (2021). <http://arxiv.org/abs/2104.12853>, arXiv:2104.12853 [hep-ex]

- A.M. Sirunyan et al., **Constraints on anomalous Higgs boson couplings to vector bosons and fermions in its production and decay using the four-lepton final state**, (2021). <http://arxiv.org/abs/2104.12152>, arXiv:2104.12152 [hep-ex]
- A.M. Sirunyan et al., **Search for long-lived particles decaying to jets with displaced vertices in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2104.13474>, arXiv:2104.13474 [hep-ex]
- A.M. Sirunyan et al., **Search for charged Higgs bosons produced in vector boson fusion processes and decaying into vector boson pairs in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2104.04762>, arXiv:2104.04762 [hep-ex]
- A.M. Sirunyan et al., **Precision luminosity measurement in proton-proton collisions at  $\sqrt{s} = 13$  TeV in 2015 and 2016 at CMS**, (2021). <http://arxiv.org/abs/2104.01927>, arXiv:2104.01927 [hep-ex]
- A.M. Sirunyan et al., **Search for top squark production in fully-hadronic final states in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2103.01290>, arXiv:2103.01290 [hep-ex]
- A.M. Sirunyan et al., **Search for resonant and nonresonant new phenomena in high-mass dilepton final states at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2103.02708>, arXiv:2103.02708 [hep-ex]
- A.M. Sirunyan et al., **High precision measurements of Z boson production in PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**, (2021). <http://arxiv.org/abs/2103.14089>, arXiv:2103.14089 [hep-ex]
- A.M. Sirunyan et al., **Using Z boson events to study parton-medium interactions in PbPb collisions**, (2021). <http://arxiv.org/abs/2103.04377>, arXiv:2103.04377 [hep-ex]
- A.M. Sirunyan et al., **Search for a heavy vector resonance decaying to a Z boson and a Higgs boson in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2102.08198>, arXiv:2102.08198 [hep-ex]
- A.M. Sirunyan et al., **Measurements of angular distance and momentum ratio distributions in three-jet and Z + two-jet final states in pp collisions**, (2021). <http://arxiv.org/abs/2102.08816>, arXiv:2102.08816 [hep-ex]
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- A.M. Sirunyan et al., **Evidence for X(3872) in PbPb collisions and studies of its prompt production at  $\sqrt{s_{NN}} = 5.02$  TeV**, (2021). <http://arxiv.org/abs/2102.13048>, arXiv:2102.13048 [hep-ex]
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- A.M. Sirunyan et al., **Correlations of azimuthal anisotropy Fourier harmonics with subevent cumulants in  $pPb$  collisions at  $\sqrt{s_{NN}} = 8.16$  TeV**, *Phys. Rev. C* 103 (2021) 014902, doi:10.1103/PhysRevC.103.014902, arXiv:1905.09935 [hep-ex]
- A.M. Sirunyan et al., **Search for supersymmetry in final states with two oppositely charged same-flavor leptons and missing transverse momentum in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *JHEP* 04 (2021) 123, doi:10.1007/JHEP04(2021)123, arXiv:2012.08600 [hep-ex]
- A.M. Sirunyan et al., **Measurement of prompt  $D^0$  and  $\bar{D}^0$  meson azimuthal anisotropy and search for strong electric fields in PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**, *Phys. Lett. B* 816 (2021) 136253, doi:10.1016/j.physletb.2021.136253, arXiv:2009.12628 [hep-ex]
- A.M. Sirunyan et al., **Measurement of differential cross sections for Z bosons produced in association with charm jets in pp collisions at  $\sqrt{s} = 13$  TeV**, *JHEP* 04 (2021) 109, doi:10.1007/JHEP04(2021)109, arXiv:2012.04119 [hep-ex]
- A.M. Sirunyan et al., **Development and validation of HERWIG 7 tunes from CMS underlying-event measurements**, *Eur. Phys. J. C* 81 (2021) 312, doi:10.1140/epjc/s10052-021-08949-5, arXiv:2011.03422 [hep-ex]
- A.M. Sirunyan et al., **Measurement of the inclusive and differential Higgs boson production cross sections in the leptonic WW decay mode at  $\sqrt{s} = 13$  TeV**, *JHEP* 03 (2021) 003, doi:10.1007/JHEP03(2021)003, arXiv:2007.01984 [hep-ex]
- A.M. Sirunyan et al., **Measurement of the CP-violating phase  $\phi_s$  in the  $B_s^0 \rightarrow J/\psi \phi(1020) \rightarrow \mu^+ \mu^- K^+ K^-$  channel in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *Phys. Lett. B* 816 (2021) 136188, doi:10.1016/j.physletb.2021.136188, arXiv:2007.02434 [hep-ex]

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- A.M. Sirunyan et al., **Measurements of production cross sections of polarized same-sign W boson pairs in association with two jets in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *Phys. Lett. B.* 812 (2021) 136018, doi:[10.1016/j.physletb.2020.136018](https://doi.org/10.1016/j.physletb.2020.136018), arXiv:[2009.09429](https://arxiv.org/abs/2009.09429) [hep-ex]
- A.M. Sirunyan et al., **Evidence for electroweak production of four charged leptons and two jets in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *Phys. Lett. B.* 812 (2021) 135992, doi:[10.1016/j.physletb.2020.135992](https://doi.org/10.1016/j.physletb.2020.135992), arXiv:[2008.07013](https://arxiv.org/abs/2008.07013) [hep-ex]
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- A.M. Sirunyan et al., **Measurements of  $pp \rightarrow ZZ$  production cross sections and constraints on anomalous triple gauge couplings at  $\sqrt{s} = 13$  TeV**, *Eur. Phys. J. C.* 81 (2021) 200, doi:[10.1140/epjc/s10052-020-08817-8](https://doi.org/10.1140/epjc/s10052-020-08817-8), arXiv:[2009.01186](https://arxiv.org/abs/2009.01186) [hep-ex]
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