

# Publication List from all Collaborations and Experiments

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- A. Tumasyan et al., **Search for heavy resonances decaying to  $Z(\nu\bar{\nu})V(q\bar{q}')$  in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2109.08268>, arXiv:2109.08268 [hep-ex]
- A. Tumasyan et al., **Study of quark and gluon jet substructure in Z+jet and dijet events from pp collisions**, (2021). <http://arxiv.org/abs/2109.03340>, arXiv:2109.03340 [hep-ex]
- A. Tumasyan et al., **Search for heavy resonances decaying to WW, WZ, or WH boson pairs in the lepton plus merged jet final state in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2109.06055>, arXiv:2109.06055 [hep-ex]
- A. Tumasyan et al., **Measurement of double-parton scattering in inclusive production of four jets with low transverse momentum in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2109.13822>, arXiv:2109.13822 [hep-ex]
- A. Tumasyan et al., **Observation of  $B_s^0$  mesons and measurement of the  $B_s^0/B^+$  yield ratio in PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**, (2021). <http://arxiv.org/abs/2109.01908>, arXiv:2109.01908 [hep-ex]
- A. Tumasyan et al., **Observation of tW production in the single-lepton channel in pp collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2109.01706>, arXiv:2109.01706 [hep-ex]
- A. Tumasyan et al., **Measurement of the top quark mass using events with a single reconstructed top quark in pp collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2108.10407>, arXiv:2108.10407 [hep-ex]
- A. Tumasyan et al., **Measurement of differential  $t\bar{t}$  production cross sections in the full kinematic range using lepton+jets events from proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2108.02803>, arXiv:2108.02803 [hep-ex]
- 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., **Search for long-lived particles decaying in the CMS endcap muon detectors in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2107.04838>, arXiv:2107.04838 [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., **Search for electroweak production of charginos and neutralinos in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2106.14246>, arXiv:2106.14246 [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. 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., **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., **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]
- 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]
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- 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]
- A.M. Sirunyan et al., **Measurement of the azimuthal anisotropy of Image 1 and Image 2 mesons in PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**, *Phys. Lett. B.* 819 (2021) 136385, doi:10.1016/j.physletb.2021.136385, arXiv:2006.07707 [hep-ex]

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- 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., **Measurement of the Z boson differential production cross section using its invisible decay mode ( $Z \rightarrow \nu\bar{\nu}$ ) in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *JHEP.* 05 (2021) 205, doi:[10.1007/JHEP05\(2021\)205](https://doi.org/10.1007/JHEP05(2021)205), arXiv:[2012.09254](https://arxiv.org/abs/2012.09254) [hep-ex]
- A.M. Sirunyan et al., **Search for long-lived particles using displaced jets in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *Phys. Rev. D.* 104 (2021) 012015, doi:[10.1103/PhysRevD.104.012015](https://doi.org/10.1103/PhysRevD.104.012015), arXiv:[2012.01581](https://arxiv.org/abs/2012.01581) [hep-ex]
- A.M. Sirunyan et al., **Search for dark photons in Higgs boson production via vector boson fusion in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *JHEP.* 03 (2021) 011, doi:[10.1007/JHEP03\(2021\)011](https://doi.org/10.1007/JHEP03(2021)011), arXiv:[2009.14009](https://arxiv.org/abs/2009.14009) [hep-ex]
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- A.M. Sirunyan et al., **Search for new physics in top quark production with additional leptons in proton-proton collisions at  $\sqrt{s} = 13$  TeV using effective field theory**, *JHEP.* 03 (2021) 095, doi:[10.1007/JHEP03\(2021\)095](https://doi.org/10.1007/JHEP03(2021)095), arXiv:[2012.04120](https://arxiv.org/abs/2012.04120) [hep-ex]
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