

# Publication List from all Collaborations and Experiments

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- 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.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), doi:[10.1103/PhysRevD.104.032013](https://doi.org/10.1103/PhysRevD.104.032013), arXiv:[2105.03007](https://arxiv.org/abs/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](https://arxiv.org/abs/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](https://arxiv.org/abs/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](https://arxiv.org/abs/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](https://arxiv.org/abs/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](https://arxiv.org/abs/2104.13474) [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](https://arxiv.org/abs/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](https://arxiv.org/abs/2103.01290) [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](https://arxiv.org/abs/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](https://arxiv.org/abs/2103.04377) [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](https://arxiv.org/abs/2102.08816) [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](https://arxiv.org/abs/2102.13048) [hep-ex]
- A.M. Sirunyan et al., **Hard color-singlet exchange in dijet events in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, (2021). <http://arxiv.org/abs/2102.06945>, arXiv:[2102.06945](https://arxiv.org/abs/2102.06945) [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](https://doi.org/10.1103/PhysRevC.103.014902), arXiv:[1905.09935](https://arxiv.org/abs/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](https://doi.org/10.1016/j.physletb.2021.136253), arXiv:[2009.12628](https://arxiv.org/abs/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](https://doi.org/10.1007/JHEP04(2021)109), arXiv:[2012.04119](https://arxiv.org/abs/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](https://doi.org/10.1140/epjc/s10052-021-08949-5), arXiv:[2011.03422](https://arxiv.org/abs/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](https://doi.org/10.1007/JHEP03(2021)003), arXiv:[2007.01984](https://arxiv.org/abs/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](https://doi.org/10.1016/j.physletb.2021.136188), arXiv:[2007.02434](https://arxiv.org/abs/2007.02434) [hep-ex]
- A.M. Sirunyan et al., **Measurement of the azimuthal anisotropy of  $\Upsilon(1S)$  and  $\Upsilon(2S)$  mesons in PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**, *Phys. Lett. B.* 819 (2021) 136385, doi:[10.1016/j.physletb.2021.136385](https://doi.org/10.1016/j.physletb.2021.136385), arXiv:[2006.07707](https://arxiv.org/abs/2006.07707) [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  $\nu\bar{\nu}$ ) 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]
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