Publication List from all Collaborations and Experiments

Oliver Gutsche

February 1, 2023

A. Tumasyan et al., **Observation of triple J/ ψ meson production in proton-proton collisions at $\sqrt{s}$ = 13 TeV**, (2021). http://arxiv.org/abs/2111.05370, arXiv:2111.05370 [hep-ex]

V. Khachatryan et al., **Exclusive and semi-exclusive pi+pi- production in proton-proton collisions at sqrt(s) = 7 TeV**, (2017). http://arxiv.org/abs/1706.08310, arXiv:1706.08310 [hep-ex]

G.L. Bayatian et al., **CMS expression of interest in the SLHC**, (2007)

A. Tumasyan et al., **Search for electroweak production of charginos and neutralinos in proton-proton collisions at $\sqrt{s}$ = 13 TeV**, *JHEP*. 04 (2022) 147, doi:10.1007/JHEP04(2022)147, arXiv:2106.14246 [hep-ex]

A. Tumasyan et al., **Measurement of W $^{\pm}\gamma$ differential cross sections in proton-proton collisions at $\sqrt{s}$ = 13 TeV and effective field theory constraints**, *Phys. Rev. D.* 105 (2022) 052003, doi:10.1103/PhysRevD.105.052003, arXiv:2111.13948 [hep-ex]

A. Tumasyan et al., **Search for a right-handed W boson and a heavy neutrino in proton-proton collisions at $\sqrt{s}$ = 13 TeV**, *JHEP*. 04 (2022) 047, doi:10.1007/JHEP04(2022)047, arXiv:2112.03949 [hep-ex]

A. Tumasyan et al., **Search for resonant production of strongly coupled dark matter in proton-proton collisions at 13 TeV**, *JHEP*. 06 (2022) 156, doi:10.1007/JHEP06(2022)156, arXiv:2112.11125 [hep-ex]

A. Tumasyan et al., **Search for supersymmetry in final states with two or three soft leptons and missing transverse momentum in proton-proton collisions at $\sqrt{s}$ = 13 TeV**, *JHEP*. 04 (2022) 091, doi:10.1007/JHEP04(2022)091, arXiv:2111.06296 [hep-ex]

A. Tumasyan et al., **Search for flavor-changing neutral current interactions of the top quark and the Higgs boson decaying to a bottom quark-antiquark pair at $\sqrt{s}$ = 13 TeV**, *JHEP*. 02 (2022) 169, doi:10.1007/JHEP02(2022)169, arXiv:2112.09734 [hep-ex]

A. Tumasyan et al., **Measurement of the inclusive $t\bar{t}$ production cross section in proton-proton collisions at $\sqrt{s}$ = 5.02 TeV**, *JHEP*. 04 (2022) 144, doi:10.1007/JHEP04(2022)144, arXiv:2112.09114 [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 τ leptons in pp collisions at $\sqrt{s}$ = 13 TeV**, *Phys. Rev. Lett.* 128 (2022) 081805, doi:10.1103/PhysRevLett.128.081805, arXiv:2107.11486 [hep-ex]

A. Tumasyan et al., **Search for Flavor-Changing Neutral Current Interactions of the Top Quark and Higgs Boson in Final States with Two Photons in Proton-Proton Collisions at $\sqrt{s} = 13TeV$**, *Phys. Rev. Lett.* 129 (2022) 032001, doi:10.1103/PhysRevLett.129.032001, arXiv:2111.02219 [hep-ex]

A. Tumasyan et al., **Measurement of the inclusive and differential WZ production cross sections, polarization angles, and triple gauge couplings in pp collisions at $\sqrt{s}$ = 13 TeV**, *JHEP*. 07 (2022) 032, doi:10.1007/JHEP07(2022)032, arXiv:2110.11231 [hep-ex]

A. Tumasyan et al., **Strategies and performance of the CMS silicon tracker alignment during LHC Run 2**, *Nucl. Instrum. Meth. A*. 1037 (2022) 166795, doi:10.1016/j.nima.2022.166795, arXiv:2111.08757 [physics.ins-det]

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**, *Phys. Rev. D.* 106 (2022) 012004, doi:10.1103/PhysRevD.106.012004, 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**, *JHEP*. 01 (2022) 188, doi:10.1007/JHEP01(2022)188, arXiv:2109.03340 [hep-ex]

A. Tumasyan et al., **Search for long-lived particles decaying to leptons with large impact parameter in proton-proton collisions at $\sqrt{s} = 13TeV$**, *Eur. Phys. J. C.* 82 (2022) 153, doi:10.1140/epjc/s10052-022-10027-3, arXiv:2110.04809 [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**, *Phys. Rev. D.* 105 (2022) 032008, doi:10.1103/PhysRevD.105.032008, 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**, *JHEP.* 01 (2022) 177, doi:10.1007/JHEP01(2022)177, arXiv:2109.13822 [hep-ex]

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A.M. Sirunyan et al., **Using Z Boson Events to Study Parton-Medium Interactions in Pb-Pb Collisions**, *Phys. Rev. Lett.* 128 (2022) 122301, doi:10.1103/PhysRevLett.128.122301, arXiv:2103.04377 [hep-ex]

A. Tumasyan et al., **Measurements of the associated production of a W boson and a charm quark in protonproton collisions at $\sqrt{s} = 8TeV$**, *Eur. Phys. J. C.* 82 (2022) 1094, doi:10.1140/epjc/s10052-022-10897-7, arXiv:2112.00895 [hep-ex]

A. Tumasyan et al., **Measurement of the production cross section for Z+b jets in proton-proton collisions at $\sqrt{s}$ = 13 TeV**, *Phys. Rev. D.* 105 (2022) 092014, doi:10.1103/PhysRevD.105.092014, arXiv:2112.09659 [hep-ex]

A. Tumasyan et al., **Search for low-mass dilepton resonances in Higgs boson decays to four-lepton final states in protonproton collisions at $\sqrt{s} = 13TeV$**, *Eur. Phys. J. C.* 82 (2022) 290, doi:10.1140/epjc/s10052-022-10127-0, arXiv:2111.01299 [hep-ex]

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A. Tumasyan et al., **Search for heavy resonances decaying to a pair of Lorentz-boosted Higgs bosons in final states with leptons and a bottom quark pair at $\sqrt{s}$= 13 TeV**, *JHEP.* 05 (2022) 005, doi:10.1007/JHEP05(2022)005, arXiv:2112.03161 [hep-ex]

A. Tumasyan et al., **Search for strongly interacting massive particles generating trackless jets in protonproton collisions at $\sqrt{s} = 13TeV$**, *Eur. Phys. J. C.* 82 (2022) 213, doi:10.1140/epjc/s10052-022-10095-5, arXiv:2105.09178 [hep-ex]

A. Tumasyan et al., **A new calibration method for charm jet identification validated with proton-proton collision events at $\sqrt{s}$ =13 TeV**, *JINST.* 17 (2022) P03014, doi:10.1088/1748-0221/17/03/P03014, arXiv:2111.03027 [hep-ex]

A. Tumasyan et al., **Search for long-lived particles decaying into muon pairs in proton-proton collisions at $\sqrt{s}$ = 13 TeV collected with a dedicated high-rate data stream**, *JHEP.* 04 (2022) 062, doi:10.1007/JHEP04(2022)062, arXiv:2112.13769 [hep-ex]

A. Tumasyan et al., **Analysis of the CP structure of the Yukawa coupling between the Higgs boson and τ leptons in proton-proton collisions at $\sqrt{s}$ = 13 TeV**, *JHEP.* 06 (2022) 012, doi:10.1007/JHEP06(2022)012, arXiv:2110.04836 [hep-ex]

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A. Tumasyan et al., **Search for heavy resonances decaying to ZZ or ZW and axion-like particles mediating nonresonant ZZ or ZH production at $\sqrt{s}$ = 13 TeV**, *JHEP.* 04 (2022) 087, doi:10.1007/JHEP04(2022)087, arXiv:2111.13669 [hep-ex]

A. Tumasyan et al., **Search for long-lived particles produced in association with a Z boson in proton-proton collisions at $\sqrt{s}$ = 13 TeV**, *JHEP.* 03 (2022) 160, doi:10.1007/JHEP03(2022)160, arXiv:2110.13218 [hep-ex]

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A.M. Sirunyan et al., **Evidence for X(3872) in Pb-Pb Collisions and Studies of its Prompt Production at $\sqrt{s_{NN}}$=5.02 TeV**, *Phys. Rev. Lett.* 128 (2022) 032001, doi:10.1103/PhysRevLett.128.032001, arXiv:2102.13048 [hep-ex]

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A. Tumasyan et al., **Search for long-lived heavy neutral leptons with displaced vertices in proton-proton collisions at $\sqrt{s}$ =13 TeV**, *JHEP.* 07 (2022) 081, doi:10.1007/JHEP07(2022)081, arXiv:2201.05578 [hep-ex]

A. Tumasyan et al., **Search for new physics in the lepton plus missing transverse momentum final state in proton-proton collisions at $\sqrt{s}$ = 13 TeV**, *JHEP.* 07 (2022) 067, doi:10.1007/JHEP07(2022)067, arXiv:2202.06075 [hep-ex]

A. Tumasyan et al., **Measurement of the Higgs boson width and evidence of its off-shell contributions to ZZ production**, *Nature Phys.* 18 (2022) 1329–1334, doi:10.1038/s41567-022-01682-0, arXiv:2202.06923 [hep-ex]

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A. Tumasyan et al., **Identification of hadronic tau lepton decays using a deep neural network**, *JINST.* 17 (2022) P07023, doi:10.1088/1748-0221/17/07/P07023, arXiv:2201.08458 [hep-ex]

A. Tumasyan et al., **Search for invisible decays of the Higgs boson produced via vector boson fusion in proton-proton collisions at s=13 TeV**, *Phys. Rev. D.* 105 (2022) 092007, doi:10.1103/PhysRevD.105.092007, arXiv:2201.11585 [hep-ex]

A. Tumasyan et al., **Search for new particles in an extended Higgs sector with four b quarks in the final state at s=13TeV**, *Phys. Lett. B.* 835 (2022) 137566, doi:10.1016/j.physletb.2022.137566, arXiv:2203.00480 [hep-ex]

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