

Publication List from all Collaborations and Experiments

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- A. Tumasyan et al., **Search for new particles in an extended Higgs sector with four b quarks in the final state at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2203.00480>, arXiv:2203.00480 [hep-ex]
- A. Tumasyan et al., **Search for Higgs boson pair production in the four b quark final state in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2202.09617>, arXiv:2202.09617 [hep-ex]
- A. Tumasyan et al., **First evidence for off-shell production of the Higgs boson and measurement of its width**, (2022). <http://arxiv.org/abs/2202.06923>, arXiv:2202.06923 [hep-ex]
- A. Tumasyan et al., **Inclusive nonresonant multilepton probes of new phenomena at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2202.08676>, arXiv:2202.08676 [hep-ex]
- A. Tumasyan et al., **Search for a W' boson decaying to a vector-like quark and a top or bottom quark in the all-jets final state at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2202.12988>, arXiv:2202.12988 [hep-ex]
- A. Tumasyan et al., **Measurement of the Drell-Yan forward-backward asymmetry at high dilepton masses in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2202.12327>, arXiv:2202.12327 [hep-ex]
- A. Tumasyan et al., **Nuclear modification of Υ states in pPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV**, (2022). <http://arxiv.org/abs/2202.11807>, arXiv:2202.11807 [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**, (2022). <http://arxiv.org/abs/2202.06075>, arXiv:2202.06075 [hep-ex]
- A. Tumasyan et al., **Observation of $B^0 \rightarrow \psi(2S) K_S^0 \pi^+ \pi^-$ and $B_S^0 \rightarrow \psi(2S) K_S^0$ decays**, (2022). <http://arxiv.org/abs/2201.09131>, arXiv:2201.09131 [hep-ex]
- A. Tumasyan et al., **Search for long-lived heavy neutral leptons with displaced vertices in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2201.05578>, arXiv:2201.05578 [hep-ex]
- A. Tumasyan et al., **Measurement of the inclusive and differential $t\bar{t}\gamma$ cross sections in the dilepton channel and effective field theory interpretation in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2201.07301>, arXiv:2201.07301 [hep-ex]
- A. Tumasyan et al., **Search for resonances decaying to three W bosons in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2201.08476>, arXiv:2201.08476 [hep-ex]
- A. Tumasyan et al., **Precision measurement of the W boson decay branching fractions in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2201.07861>, arXiv:2201.07861 [hep-ex]
- A. Tumasyan et al., **Identification of hadronic tau lepton decays using a deep neural network**, (2022). <http://arxiv.org/abs/2201.08458>, 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 $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2201.11585>, arXiv:2201.11585 [hep-ex]
- A. Tumasyan et al., **Observation of the B_c^+ meson in PbPb and pp collisions at $\sqrt{s_{NN}} = 5.02$ TeV**, (2022). <http://arxiv.org/abs/2201.02659>, arXiv:2201.02659 [hep-ex]
- A. Tumasyan et al., **Search for high-mass resonances decaying to a jet and a Lorentz-boosted resonance in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2201.02140>, arXiv:2201.02140 [hep-ex]
- A. Tumasyan et al., **Search for higgsinos decaying to two Higgs bosons and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2201.04206>, arXiv:2201.04206 [hep-ex]

- A. Tumasyan et al., **Search for single production of a vector-like T quark decaying to a top quark and a Z boson in the final state with jets and missing transverse momentum at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2201.02227>, arXiv:2201.02227 [hep-ex]
- A. Tumasyan et al., **Search for charged-lepton flavor violation in top quark production and decay in pp collisions at $\sqrt{s} = 13$ TeV**, (2022). <http://arxiv.org/abs/2201.07859>, arXiv:2201.07859 [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 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]
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- 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 $\sqrt{s} = 13$ TeV**, *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]
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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]
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- 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]
- A. Tumasyan et al., **Measurement and QCD analysis of double-differential inclusive jet cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV**, *JHEP.* 02 (2022) 142, doi:10.1007/JHEP02(2022)142, arXiv:2111.10431 [hep-ex]
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- A. Tumasyan et al., **Search for resonances decaying to three W bosons in the hadronic final state in proton-proton collisions at $\sqrt{s} = 13$ TeV**, (2021). <http://arxiv.org/abs/2112.13090>, arXiv:2112.13090 [hep-ex]
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- A. Tumasyan et al., **Strategies and performance of the CMS silicon tracker alignment during LHC Run 2**, (2021). <http://arxiv.org/abs/2111.08757>, arXiv:2111.08757 [physics.ins-det]
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