

# Publication List from all Collaborations and Experiments

Oliver Gutsche

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- A.M. Sirunyan et al., **Observation of proton-tagged, central (semi)exclusive production of high-mass lepton pairs in pp collisions at 13 TeV with the CMS-TOTEM precision proton spectrometer**, *JHEP.* 07 (2018) 153, doi:[10.1007/JHEP07\(2018\)153](https://doi.org/10.1007/JHEP07(2018)153), arXiv:[1803.04496](https://arxiv.org/abs/1803.04496) [hep-ex]
- A.M. Sirunyan et al., **Search for massive resonances decaying into  $WW$ ,  $WZ$ ,  $ZZ$ ,  $qW$ , and  $qZ$  with dijet final states at  $\sqrt{s} = 13\text{TeV}$** , *Phys. Rev. D* 97 (2018) 072006, doi:[10.1103/PhysRevD.97.072006](https://doi.org/10.1103/PhysRevD.97.072006), arXiv:[1708.05379](https://arxiv.org/abs/1708.05379) [hep-ex]
- A.M. Sirunyan et al., **Measurement of the Splitting Function in  $pp$  and Pb-Pb Collisions at  $\sqrt{s_{NN}} = 5.02\text{ TeV}$** , *Phys. Rev. Lett.* 120 (2018) 142302, doi:[10.1103/PhysRevLett.120.142302](https://doi.org/10.1103/PhysRevLett.120.142302), arXiv:[1708.09429](https://arxiv.org/abs/1708.09429) [nucl-ex]
- A.M. Sirunyan et al., **Search for Physics Beyond the Standard Model in Events with High-Momentum Higgs Bosons and Missing Transverse Momentum in Proton-Proton Collisions at 13 TeV**, *Phys. Rev. Lett.* 120 (2018) 241801, doi:[10.1103/PhysRevLett.120.241801](https://doi.org/10.1103/PhysRevLett.120.241801), arXiv:[1712.08501](https://arxiv.org/abs/1712.08501) [hep-ex]
- A.M. Sirunyan et al., **Inclusive search for a highly boosted Higgs boson decaying to a bottom quark-antiquark pair**, *Phys. Rev. Lett.* 120 (2018) 071802, doi:[10.1103/PhysRevLett.120.071802](https://doi.org/10.1103/PhysRevLett.120.071802), arXiv:[1709.05543](https://arxiv.org/abs/1709.05543) [hep-ex]
- A.M. Sirunyan et al., **Search for natural supersymmetry in events with top quark pairs and photons in pp collisions at  $\sqrt{s} = 8\text{ TeV}$** , *JHEP.* 03 (2018) 167, doi:[10.1007/JHEP03\(2018\)167](https://doi.org/10.1007/JHEP03(2018)167), arXiv:[1707.03325](https://arxiv.org/abs/1707.03325) [hep-ex]
- A.M. Sirunyan et al., **Search for  $R$ -parity violating supersymmetry in pp collisions at  $\sqrt{s} = 13\text{ TeV}$  using b jets in a final state with a single lepton, many jets, and high sum of large-radius jet masses**, *Phys. Lett. B* 783 (2018) 114–139, doi:[10.1016/j.physletb.2018.06.028](https://doi.org/10.1016/j.physletb.2018.06.028), arXiv:[1712.08920](https://arxiv.org/abs/1712.08920) [hep-ex]
- A.M. Sirunyan et al., **Measurement of angular parameters from the decay  $B^0 \rightarrow K^{*0} \mu^+ \mu^-$  in proton-proton collisions at  $\sqrt{s} = 8\text{ TeV}$** , *Phys. Lett. B* 781 (2018) 517–541, doi:[10.1016/j.physletb.2018.04.030](https://doi.org/10.1016/j.physletb.2018.04.030), arXiv:[1710.02846](https://arxiv.org/abs/1710.02846) [hep-ex]
- A.M. Sirunyan et al., **Search for Higgs boson pair production in events with two bottom quarks and two tau leptons in proton–proton collisions at  $\sqrt{s} = 13\text{TeV}$** , *Phys. Lett. B* 778 (2018) 101–127, doi:[10.1016/j.physletb.2018.01.001](https://doi.org/10.1016/j.physletb.2018.01.001), arXiv:[1707.02909](https://arxiv.org/abs/1707.02909) [hep-ex]
- A.M. Sirunyan et al., **Search for supersymmetry with Higgs boson to diphoton decays using the razor variables at  $\sqrt{s} = 13\text{ TeV}$** , *Phys. Lett. B* 779 (2018) 166–190, doi:[10.1016/j.physletb.2017.12.069](https://doi.org/10.1016/j.physletb.2017.12.069), arXiv:[1709.00384](https://arxiv.org/abs/1709.00384) [hep-ex]
- A.M. Sirunyan et al., **Evidence for the Higgs boson decay to a bottom quark–antiquark pair**, *Phys. Lett. B* 780 (2018) 501–532, doi:[10.1016/j.physletb.2018.02.050](https://doi.org/10.1016/j.physletb.2018.02.050), arXiv:[1709.07497](https://arxiv.org/abs/1709.07497) [hep-ex]
- A.M. Sirunyan et al., **Identification of heavy-flavour jets with the CMS detector in pp collisions at 13 TeV**, *JINST.* 13 (2018) P05011, doi:[10.1088/1748-0221/13/05/P05011](https://doi.org/10.1088/1748-0221/13/05/P05011), arXiv:[1712.07158](https://arxiv.org/abs/1712.07158) [physics.ins-det]
- A.M. Sirunyan et al., **Search for excited quarks of light and heavy flavor in  $\gamma$ +jet final states in proton–proton collisions at  $\sqrt{s} = 13\text{TeV}$** , *Phys. Lett. B* 781 (2018) 390–411, doi:[10.1016/j.physletb.2018.04.007](https://doi.org/10.1016/j.physletb.2018.04.007), arXiv:[1711.04652](https://arxiv.org/abs/1711.04652) [hep-ex]
- A.M. Sirunyan et al., **Search for resonant and nonresonant Higgs boson pair production in the  $b\bar{b}l\nu l\nu$  final state in proton-proton collisions at  $\sqrt{s} = 13\text{ TeV}$** , *JHEP.* 01 (2018) 054, doi:[10.1007/JHEP01\(2018\)054](https://doi.org/10.1007/JHEP01(2018)054), arXiv:[1708.04188](https://arxiv.org/abs/1708.04188) [hep-ex]
- A.M. Sirunyan et al., **Constraints on the double-parton scattering cross section from same-sign W boson pair production in proton-proton collisions at  $\sqrt{s} = 8\text{ TeV}$** , *JHEP.* 02 (2018) 032, doi:[10.1007/JHEP02\(2018\)032](https://doi.org/10.1007/JHEP02(2018)032), arXiv:[1712.02280](https://arxiv.org/abs/1712.02280) [hep-ex]
- A.M. Sirunyan et al., **Search for Z  $\gamma$  resonances using leptonic and hadronic final states in proton-proton collisions at  $\sqrt{s} = 13\text{ TeV}$** , *JHEP.* 09 (2018) 148, doi:[10.1007/JHEP09\(2018\)148](https://doi.org/10.1007/JHEP09(2018)148), arXiv:[1712.03143](https://arxiv.org/abs/1712.03143) [hep-ex]

- A.M. Sirunyan et al., **Search for supersymmetry in events with at least three electrons or muons, jets, and missing transverse momentum in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *JHEP.* 02 (2018) 067, doi:[10.1007/JHEP02\(2018\)067](https://doi.org/10.1007/JHEP02(2018)067), arXiv:[1710.09154](https://arxiv.org/abs/1710.09154) [hep-ex]
- A.M. Sirunyan et al., **Bose-Einstein correlations in  $pp$ ,  $pPb$ , and  $PbPb$  collisions at  $\sqrt{s_{NN}} = 0.9 - 7$  TeV**, *Phys. Rev. C* 97 (2018) 064912, doi:[10.1103/PhysRevC.97.064912](https://doi.org/10.1103/PhysRevC.97.064912), arXiv:[1712.07198](https://arxiv.org/abs/1712.07198) [hep-ex]
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- A.M. Sirunyan et al., **Measurement of differential cross sections in the kinematic angular variable  $\phi^*$  for inclusive  $Z$  boson production in  $pp$  collisions at  $\sqrt{s} = 8$  TeV**, *JHEP.* 03 (2018) 172, doi:[10.1007/JHEP03\(2018\)172](https://doi.org/10.1007/JHEP03(2018)172), arXiv:[1710.07955](https://arxiv.org/abs/1710.07955) [hep-ex]
- A.M. Sirunyan et al., **Search for a massive resonance decaying to a pair of Higgs bosons in the four  $b$  quark final state in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *Phys. Lett. B* 781 (2018) 244–269, doi:[10.1016/j.physletb.2018.03.084](https://doi.org/10.1016/j.physletb.2018.03.084), arXiv:[1710.04960](https://arxiv.org/abs/1710.04960) [hep-ex]
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- A.M. Sirunyan et al., **Search for new long-lived particles at  $\sqrt{s} = 13$  TeV**, *Phys. Lett. B* 780 (2018) 432–454, doi:[10.1016/j.physletb.2018.03.019](https://doi.org/10.1016/j.physletb.2018.03.019), arXiv:[1711.09120](https://arxiv.org/abs/1711.09120) [hep-ex]
- A.M. Sirunyan et al., **Electroweak production of two jets in association with a  $Z$  boson in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *Eur. Phys. J. C* 78 (2018) 589, doi:[10.1140/epjc/s10052-018-6049-9](https://doi.org/10.1140/epjc/s10052-018-6049-9), arXiv:[1712.09814](https://arxiv.org/abs/1712.09814) [hep-ex]
- A.M. Sirunyan et al., **Search for new physics in final states with an energetic jet or a hadronically decaying  $W$  or  $Z$  boson and transverse momentum imbalance at  $\sqrt{s} = 13$  TeV**, *Phys. Rev. D* 97 (2018) 092005, doi:[10.1103/PhysRevD.97.092005](https://doi.org/10.1103/PhysRevD.97.092005), arXiv:[1712.02345](https://arxiv.org/abs/1712.02345) [hep-ex]
- A.M. Sirunyan et al., **Azimuthal correlations for inclusive 2-jet, 3-jet, and 4-jet events in  $pp$  collisions at  $\sqrt{s} = 13$  TeV**, *Eur. Phys. J. C* 78 (2018) 566, doi:[10.1140/epjc/s10052-018-6033-4](https://doi.org/10.1140/epjc/s10052-018-6033-4), arXiv:[1712.05471](https://arxiv.org/abs/1712.05471) [hep-ex]
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- A.M. Sirunyan et al., **Search for the pair production of third-generation squarks with two-body decays to a bottom or charm quark and a neutralino in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *Phys. Lett. B* 778 (2018) 263–291, doi:[10.1016/j.physletb.2018.01.012](https://doi.org/10.1016/j.physletb.2018.01.012), arXiv:[1707.07274](https://arxiv.org/abs/1707.07274) [hep-ex]
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- A.M. Sirunyan et al., **Suppression of Excited  $\Upsilon$  States Relative to the Ground State in  $Pb$ - $Pb$  Collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**, *Phys. Rev. Lett.* 120 (2018) 142301, doi:[10.1103/PhysRevLett.120.142301](https://doi.org/10.1103/PhysRevLett.120.142301), arXiv:[1706.05984](https://arxiv.org/abs/1706.05984) [hep-ex]
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- A.M. Sirunyan et al., **Measurement of normalized differential  $t\bar{t}$  cross sections in the dilepton channel from  $pp$  collisions at  $\sqrt{s} = 13$  TeV**, *JHEP.* 04 (2018) 060, doi:[10.1007/JHEP04\(2018\)060](https://doi.org/10.1007/JHEP04(2018)060), arXiv:[1708.07638](https://arxiv.org/abs/1708.07638) [hep-ex]
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