# Luca Pernié

### Selected Publication List

### Analysis note, physics notes and publications Phys. Rev. D Resonant Di-Higgs Production in the bbWW Channel: Probing the Electroweak 96 (2017) Phase Transition at the LHC, doi:10.1103/PhysRevD.96.035007 CMS PAS A Search for BSM Light Bosons Decaying into Muon Pairs HIG-16-035 CMS AN A Search for Beyond Standard Model Light Bosons Decaying into Muon Pairs 2016-044 CMS Performance of Track-based Muon Alignment DP-2016/053 Eur. Phys. J. Measurements of the ZZ production cross sections in the $2l2\nu$ channel in proton-C 75 (2015) proton collisions at $\sqrt{s} = 7$ and 8 TeV and combined constraints on triple gauge couplings CMS Simulation studies on precise timing information during High Luminosity LHC CR-2015/101 NIMA vol. Response of microchannel plates to single particles and to electromagnetic showers 797 (Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, doi:10.1016/j.nima.2015.06.057) CMS CR Measurement of the ZZ production cross section in the $2I2\nu$ decay channel and 2014/181 limits on anomalous triple gauge couplings (preliminary results) CMS AN Performance of jets and missing transverse energy with fast ECAL timing 2014/088 CMS DN Studies on a precision timing electromagnetic calorimeter for the CMS upgrade 2014/06 CMS CR ZZ cross section measurements and limits on anomalous coupling constants for 013/453 neutral triple gauge boson CMS AN Bounding the Higgs width using Z to II events with high missing transverse energy 2013/411 CMS AN CMS ECAL calibration with $\pi^0$ and $\eta$ in the LHC RUN1 2013/344 CMS AN Search for Z( $\rightarrow$ II) H( $\rightarrow$ invisible) at $\sqrt{s}=7$ and 8 TeV 2013/333 CMS CR Evolution of the response of the CMS ECAL, and upgrade design options for 2013/284 electromagnetic calorimetry at the HL-LHC, CMS Conference report

CMS PAS Measurements of the ZZ production cross sections in the 2l2nu channel in proton-SMP-12-016 proton collisions at sqrt(s) = 7 and 8 TeV and combined constraints on triple gauge couplings CMS AN Search for a high-mass Higgs boson in the  $H \to ZZ \to 2l2\nu$  decay channel in pp 2012/371 collisions with the CMS detector CMS AN Measurement of ZZ production cross section at 7 and 8 TeV and anomalous gauge 2012/148 couplings limits in 2l2v decay channel CMS AN Search for the Higgs boson in the  $H \to ZZ \to 2l2\nu$  decay channel in pp collisions 2012/138 with the CMS detector CMS AN Search for Invisible Higgs Decays in the  $ZH \rightarrow ll + \text{MET}$  channel 2012/123 CMS AN Search for a Standard Model Higgs boson in the decay channel  $H \to WW \to lvjj$ 2012/004 CMS AN Search for Higgs Boson Decays to two W Bosons in the Fully Leptonic Final State 2011/432 with Full 2011 pp Dataset at  $\sqrt{s} = 7$  TeV CMS AN Search for a Standard Model Higgs boson produced via vector boson fusion, in the 2011/110 decay channel  $H \to WW \to lvjj$ 

#### Publications in the CMS collaboration

1. "Search for pair production of vector-like quarks in the bW $\overline{\rm b}$ W channel from proton-proton collisions at  $\sqrt{s}=$  13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1710.01539 [hep-ex]

CMS-B2G-17-003, CERN-EP-2017-224

2. "Search for low mass vector resonances decaying into quark-antiquark pairs in proton-proton collisions at  $\sqrt{s}=$  13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1710.00159 [hep-ex]

CMS-EXO-17-001, CERN-EP-2017-235

3. "Search for supersymmetry in events with one lepton and multiple jets exploiting the angular correlation between the lepton and the missing transverse momentum in proton-proton collisions at  $\sqrt{s}=$  13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1709.09814 [hep-ex]

CMS-SUS-16-042, CERN-EP-2017-201

4. "Observation of correlated azimuthal anisotropy Fourier harmonics in pp and pPb collisions at the LHC"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1709.09189 [nucl-ex]

CMS-HIN-16-022, CERN-EP-2017-220

5. "Search for new phenomena in final states with two opposite-charge, same-flavor leptons, jets, and missing transverse momentum in pp collisions at  $\sqrt{s}=$  13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

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arXiv:1709.08908 [hep-ex] CMS-SUS-16-034, CERN-EP-2017-170
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6. "Measurements of the pp $\to$ ZZ production cross section and the Z $\to$   $4\ell$  branching fraction, and constraints on anomalous triple gauge couplings at  $\sqrt{s}=$  13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1709.08601 [hep-ex]

CMS-SMP-16-017, CERN-EP-2017-219

7. "Evidence for the Higgs boson decay to a bottom quark-antiquark pair"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1709.07497 [hep-ex]

CMS-HIG-16-044, CERN-EP-2017-233

8. "Observation of top quark production in proton-nucleus collisions"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1709.07411 [nucl-ex]

CMS-HIN-17-002, CERN-EP-2017-239

9. "Observation of electroweak production of same-sign W boson pairs in the two jet and two same-sign lepton final state in proton-proton collisions at  $\sqrt{s}=$  13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1709.05822 [hep-ex]

CMS-SMP-17-004, CERN-EP-2017-232

10. "Inclusive search for a highly boosted Higgs boson decaying to a bottom quark-antiquark pair"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1709.05543 [hep-ex]

CMS-HIG-17-010, CERN-EP-2017-207

11. "Search for electroweak production of charginos and neutralinos in multilepton final states in proton-proton collisions at  $\sqrt{s}=$  13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1709.05406 [hep-ex]

CMS-SUS-16-039, CERN-EP-2017-121

12. "Combination of inclusive and differential  $t\bar{t}$  charge asymmetry measurements using AT-LAS and CMS data at  $\sqrt{s}=$  7 and 8 TeV"

M. Aaboud et al. [ATLAS and CMS Collaborations].

arXiv:1709.05327 [hep-ex]

CMS-TOP-15-016, ATLAS-TOPQ-2016-16, CERN-EP-2017-236

13. "Search for higgsino pair production in pp collisions at  $\sqrt{s}=13$  TeV in final states with large missing transverse momentum and two Higgs bosons decaying via  $H\to b\overline{b}$ "

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1709.04896 [hep-ex]

CMS-SUS-16-044, CERN-EP-2017-127

14. "Search for supersymmetry with Higgs boson to diphoton decays using the razor variables at  $\sqrt{s}=$  13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1709.00384 [hep-ex]

CMS-SUS-16-045, CERN-EP-2017-158

15. "Measurement of the splitting function in pp and PbPb collisions at  $\sqrt{s_{
m NN}}=$  5.02 TeV"

A. M. Sirunyan et al. [CMS Collaboration]

arXiv:1708.09429 [nucl-ex]

CMS-HIN-16-006, CERN-EP-2017-205

16. "Challenges to the chiral magnetic wave using charge-dependent azimuthal anisotropies in pPb and PbPb collisions at  $\sqrt{[b]s_{_{
m NN}}}=$  5.02 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.08901 [nucl-ex]

CMS-HIN-16-0017, CERN-EP-2017-180

17. "Search for heavy resonances decaying to a top quark and a bottom quark in the lepton+jets final state in proton-proton collisions at 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.08539 [hep-ex]

CMS-B2G-17-010, CERN-EP-2017-196

18. "Search for evidence of the type-III seesaw mechanism in multilepton final states in proton-proton collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.07962 [hep-ex]

CMS-EXO-17-006, CERN-EP-2017-194

19. "Measurement of normalized differential t-tbar cross sections in the dilepton channel from pp collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.07638 [hep-ex]

CMS-TOP-16-007, CERN-EP-2017-120

20. "Principal-component analysis of two-particle azimuthal correlations in PbPb and pPb collisions at CMS"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.07113 [nucl-ex]

CMS-HIN-15-010, CERN-EP-2017-133

21. "Search for massive resonances decaying into WW, WZ, ZZ, qW, and qZ with dijet final states at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.05379 [hep-ex]

CMS-B2G-17-001, CERN-EP-2017-184

22. "Nuclear modification factor of D0 mesons in PbPb collisions at sqrt(s[NN]) = 5.02 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.04962 [nucl-ex]

CMS-HIN-16-001, CERN-EP-2017-186

23. "Search for resonant and nonresonant Higgs boson pair production in the bblnulnu final state in proton-proton collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.04188 [hep-ex]

CMS-HIG-17-006, CERN-EP-2017-168

24. "Measurement of prompt  $D^0$  meson azimuthal anisotropy in PbPb collisions at  $\sqrt{s_{NN}}$  = 5.02 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.03497 [nucl-ex]

CMS-HIN-16-007, CERN-EP-2017-174

25. "Measurement of vector boson scattering and constraints on anomalous quartic couplings from events with four leptons and two jets in proton-proton collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan *et al.* [CMS Collaboration].

arXiv:1708.02812 [hep-ex]

CMS-SMP-17-006. CERN-EP-2017-177

26. "Search for vector-like light-flavor quark partners in proton-proton collisions at sqrt(s)=8 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.02510 [hep-ex]

CMS-B2G-12-016, CERN-EP-2017-145

27. "Constraints on the chiral magnetic effect using charge-dependent azimuthal correlations in pPb and PbPb collisions at the LHC"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.01602 [nucl-ex]

CMS-HIN-17-001, CERN-EP-2017-193

28. "Search for single production of a vector-like T quark decaying to a Z boson and a top quark in proton-proton collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.01062 [hep-ex]

CMS-B2G-17-007, CERN-EP-2017-155

29. "Observation of the Higgs boson decay to a pair of tau leptons"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1708.00373 [hep-ex]

CMS-HIG-16-043, CERN-EP-2017-181

30. "Search for a light pseudoscalar Higgs boson produced in association with bottom quarks in pp collisions at sqrt(s)=8 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1707.07283 [hep-ex]

CMS-HIG-15-009, CERN-EP-2017-159

31. "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"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1707.07274 [hep-ex]

CMS-SUS-16-032, CERN-EP-2017-144

32. "Search for supersymmetry in events with at least one photon, missing transverse momentum, and large transverse event activity in proton-proton collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1707.06193 [hep-ex]

CMS-SUS-16-047, CERN-EP-2017-130

33. "Measurement of the differential cross sections for the associated production of a W boson and jets in proton-proton collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1707.05979 [hep-ex]

CMS-SMP-16-005, CERN-EP-2017-142

34. "Search for natural supersymmetry in events with top quark pairs and photons in pp collisions at sqrt(s) = 8 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1707.03325 [hep-ex]

CMS-SUS-15-009, CERN-EP-2017-124

35. "Search for direct production of supersymmetric partners of the top quark in the all-jets final state in proton-proton collisions at  $\sqrt{s}=13$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1707.03316 [hep-ex]

DOI:10.1007/JHEP10(2017)005 JHEP **1710**, 005 (2017)

CMS-SUS-16-049, CERN-EP-2017-129

36. "Search for Higgs boson pair production in events with two bottom quarks and two tau leptons in proton-proton collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1707.02909 [hep-ex]

CMS-HIG-17-002, CERN-EP-2017-126

37. "Search for heavy resonances that decay into a vector boson and a Higgs boson in hadronic final states at  $\sqrt{s}=13$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1707.01303 [hep-ex]

DOI:10.1140/epic/s10052-017-5192-z

Eur. Phys. J. C 77, no. 9, 636 (2017)

CMS-B2G-17-002, CERN-EP-2017-128

38. "Constraints on anomalous Higgs boson couplings using production and decay information in the four-lepton final state"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1707.00541 [hep-ex]

CMS-HIG-17-011, CERN-EP-2017-143

39. "A search for Higgs boson pair production in the bbtautau final state in proton-proton collisions at sqrt(s) = 8 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1707.00350 [hep-ex]

CMS-HIG-215-013, CERN-EP-2017-104

40. "Measurement of charged pion, kaon, and proton production in proton-proton collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.10194 [hep-ex]

CMS-FSQ-16-004, CERN-EP-2017-091

41. "Measurements of properties of the Higgs boson decaying into the four-lepton final state in pp collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.09936 [hep-ex]

CMS-HIG-16-041, CERN-EP-2017-123

42. "Search for electroweak production of charginos and neutralinos in WH events in protonproton collisions at sqrt(s) =13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.09933 [hep-ex]

CMS-SUS-16-043, CERN-EP-2017-113

43. "Search for a heavy composite Majorana neutrino in the final state with two leptons and two quarks at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.08578 [hep-ex]

CMS-EXO-16-026, CERN-EP-2017-125

44. "Exclusive and semi-exclusive pi+pi- production in proton-proton collisions at sqrt(s) = 7 TeV"

V. Khachatryan et al. [CMS Collaboration].

arXiv:1706.08310 [hep-ex]

CMS-FSQ-12-004, CERN-EP-2016-261

45. "Measurement of the semileptonic  $t\bar{t}+\hat{\bf l}$ ş production cross section in pp collisions at  $\sqrt{s}=8$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.08128 [hep-ex]

DOI:10.1007/JHEP10(2017)006

JHEP **1710**, 006 (2017)

CMS-TOP-14-008, CERN-EP-2017-112

46. "Suppression of excited Upsilon states relative to the ground state in PbPb collisions at sqrt(sNN) = 5.02 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.05984 [hep-ex]

CMS-HIN-16-008, CERN-EP-2017-080

47. "Measurements of jet charge with dijet events in pp collisions at  $\sqrt{s} = 8$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.05868 [hep-ex]

CMS-SMP-15-003, CERN-EP-2017-085

48. "Particle-flow reconstruction and global event description with the CMS detector"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.04965 [physics.ins-det]

CMS-PRF-14-001, CERN-EP-2017-110

49. "Search for top squark pair production in pp collisions at sqrt(s)=13 TeV using single lepton events"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.04402 [hep-ex]

CMS-SUS-16-051, CERN-EP-2017-109

50. "Searches for WâĂš bosons decaying to a top quark and a bottom quark in proton-proton collisions at 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.04260 [hep-ex]

DOI:10.1007/JHEP08(2017)029

JHEP 1708, 029 (2017)

CMS-B2G-16-016, CERN-EP-2017-090

51. "Search for new physics in the monophoton final state in proton-proton collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.03794 [hep-ex]

CMS-EXO-16-039, CERN-EP-2017-097

52. "Search for pair production of vector-like T and B quarks in single-lepton final states using boosted jet substructure techniques at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.03408 [hep-ex]

CMS-B2G-16-024, CERN-EP-2017-107

53. "Search for dark matter produced in association with heavy-flavor quarks in proton-proton collisions at sqrt(s)=13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1706.02581 [hep-ex]

CMS-EXO-16-005, CERN-EP-2017-087

54. "Search for top quark partners with charge 5/3 in proton-proton collisions at  $\sqrt{s}=13$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

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arXiv:1705.10967 [hep-ex] DOI:10.1007/JHEP08(2017)073
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JHEP **1708**, 073 (2017)

CMS-B2G-15-006, CERN-EP-2017-102

55. "Search for Low Mass Vector Resonances Decaying to Quark-Antiquark Pairs in Proton-Proton Collisions at  $\sqrt{s}=13~{
m TeV}$ "

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1705.10532 [hep-ex]

DOI:10.1103/PhysRevLett.119.111802

Phys. Rev. Lett. 119, no. 11, 111802 (2017)

CMS-EXO-16-030, CERN-EP-2017-098

56. "Measurements of ttbar cross sections in association with b jets and inclusive jets and their ratio using dilepton final states in pp collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1705.10141 [hep-ex]

CMS-TOP-16-010, CERN-EP-2017-069

57. "Combination of searches for heavy resonances decaying to WW, WZ, ZZ, WH, and ZH boson pairs in proton-proton collisions at sqrt(s) = 8 and 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1705.09171 [hep-ex]

CMS-B2G-16-007, CERN-EP-2017-077

58. "Measurement of B+/- meson differential production cross sections in pp and PbPb collisions at sqrt(s[NN]) = 5.02 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1705.04727 [hep-ex]

CMS-HIN-16-011, CERN-EP-2017-076

59. "Search for supersymmetry in pp collisions at sqrt(s) = 13 TeV in the single-lepton final state using the sum of masses of large-radius jets"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1705.04673 [hep-ex]

CMS-SUS-16-037, CERN-EP-2017-088

60. "Search for new phenomena with the MT2 variable in the all-hadronic final state produced in proton-proton collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1705.04650 [hep-ex]

CMS-SUS-16-036, CERN-EP-2017-084

61. "Search for Charged Higgs Bosons Produced via Vector Boson Fusion and Decaying into a Pair of W and Z Bosons Using pp Collisions at  $\sqrt{s} = 13$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1705.02942 [hep-ex]

DOI:10.1103/PhysRevLett.119.141802

Phys. Rev. Lett. 119, no. 14, 141802 (2017)

CMS-HIG-16-027, CERN-EP-2017-068

62. "Measurement of the triple-differential dijet cross section in proton-proton collisions at sqrt(s) = 8 TeV and constraints on parton distribution functions"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1705.02628 [hep-ex]

CMS-SMP-16-011, CERN-EP-2017-061

63. "Search for black holes in high-multiplicity final states in proton-proton collisions at sqrt(s) = 13 TeV"

A. M. Sirunyan *et al.* [CMS Collaboration]. arXiv:1705.01403 [hep-ex]

CMS-EXO-15-007, CERN-EP-2017-074

64. "Search for supersymmetry in multijet events with missing transverse momentum in proton-proton collisions at 13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1704.07781 [hep-ex]

DOI:10.1103/PhysRevD.96.032003

Phys. Rev. D 96, no. 3, 032003 (2017)

CMS-SUS-16-033, CERN-EP-2017-072

65. "Search for physics beyond the standard model in events with two leptons of same sign, missing transverse momentum, and jets in protonâĂŞproton collisions at  $\sqrt{s}=13\,\text{TeV}$ "

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1704.07323 [hep-ex]

DOI:10.1140/epic/s10052-017-5079-z

Eur. Phys. J. C 77, no. 9, 578 (2017)

CMS-SUS-16-035, CERN-EP-2017-071

66. "Measurement of the top quark mass in the dileptonic  $t\bar{t}$  decay channel using the mass observables  $M_{b\ell}$ ,  $M_{T2}$ , and  $M_{b\ell\nu}$  in pp collisions at  $\sqrt{s}=8$ âĂĽTeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1704.06142 [hep-ex]

DOI:10.1103/PhysRevD.96.032002

Phys. Rev. D 96, no. 3, 032002 (2017)

CMS-TOP-15-008, CERN-EP-2017-050

67. "Search for  $t\bar{t}$  resonances in highly boosted lepton+jets and fully hadronic final states in proton-proton collisions at  $\sqrt{s}=13$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1704.03366 [hep-ex]

DOI:10.1007/JHEP07(2017)001

JHEP 1707, 001 (2017)

CMS-B2G-16-015, CERN-EP-2017-049

68. "Measurements of the  $pp \to W\gamma\gamma$  and  $pp \to Z\gamma\gamma$  cross sections and limits on anomalous quartic gauge couplings at  $\sqrt{s}=$  8 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1704.00366 [hep-ex]

CMS-SMP-15-008, CERN-EP-2017-039

69. "Search for new physics with dijet angular distributions in proton-proton collisions at  $\sqrt{s}=13$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1703.09986 [hep-ex]

DOI:10.1007/JHEP07(2017)013

JHEP **1707**, 013 (2017)

CMS-EXO-15-009, CERN-EP-2017-047

70. "Search for a heavy resonance decaying to a top quark and a vector-like top quark at  $\sqrt{s}=13$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1703.06352 [hep-ex]

DOI:10.1007/JHEP09(2017)053

JHEP **1709**, 053 (2017)

CMS-B2G-16-013, CERN-EP-2017-035

71. "Measurement of the jet mass in highly boosted  $t\bar{t}$  events from pp collisions at  $\sqrt{s}=8$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1703.06330 [hep-ex]

DOI:10.1140/epjc/s10052-017-5030-3

Eur. Phys. J. C 77, no. 7, 467 (2017)

CMS-TOP-15-015, CERN-EP-2017-018

72. "Search for anomalous couplings in boosted  $WW/WZ \to \ell \nu q \bar{q}$  production in proton-proton collisions at  $\sqrt{s}=$  8 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1703.06095 [hep-ex]

DOI:10.1016/j.physletb.2017.06.009

Phys. Lett. B 772, 21 (2017)

CMS-SMP-13-008, CERN-EP-2017-029

73. "Search for associated production of dark matter with a Higgs boson decaying to  $b\bar{b}$  or  $\gamma\gamma$  at  $\sqrt{s}=$  13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1703.05236 [hep-ex]

CMS-EXO-16-012, CERN-EP-2017-027

74. "Search for third-generation scalar leptoquarks and heavy right-handed neutrinos in final states with two tau leptons and two jets in proton-proton collisions at  $\sqrt{s}=13$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1703.03995 [hep-ex]

DOI:10.1007/JHEP07(2017)121

JHEP **1707**, 121 (2017)

CMS-EXO-16-023, CERN-EP-2017-025

75. "Measurement of the top quark mass using single top quark events in proton-proton collisions at  $\sqrt{s}=8$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1703.02530 [hep-ex]

DOI:10.1140/epjc/s10052-017-4912-8

Eur. Phys. J. C 77, no. 5, 354 (2017)

CMS-TOP-15-001, CERN-EP-2017-012

76. "Search for dark matter produced with an energetic jet or a hadronically decaying W or Z boson at  $\sqrt{s}=13$  TeV"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1703.01651 [hep-ex]

DOI:10.1007/JHEP07(2017)014

JHEP **1707**, 014 (2017)

CMS-EXO-16-037, CERN-EP-2017-031

77. "Measurement of double-differential cross sections for top quark pair production in pp collisions at  $\sqrt{s}=8$  TeV and impact on parton distribution functions"

A. M. Sirunyan et al. [CMS Collaboration].

arXiv:1703.01630 [hep-ex]

DOI:10.1140/epjc/s10052-017-4984-5

Eur. Phys. J. C 77, no. 7, 459 (2017)

CMS-TOP-14-013, CERN-EP-2017-030

78. "Search for standard model production of four top quarks in proton-proton collisions at  $\sqrt{s}=$  13 TeV"

A. M. Sirunyan et al. [CMS Collaboration].

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m jet}$  Correlations in Pb-Pb and pp Collisions at  $\sqrt{s}_{NN}=5.02~{
m TeV}$ "

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JHEP 1705, 029 (2017)

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JHEP **1709**, 051 (2017)

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JHEP **1704**, 022 (2017)

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