

# Rebeca Gonzalez Suarez - Publication List

## Contents

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## Metrics

As of March 18, 2018:

	Citeable papers	Published only
Number of papers	762	691
Number of citations	72629	72254
Average citations per paper	95.3	104.6
h index	126	126

Breakdown of papers by citations:

	Citeable papers	Published only
Renowned papers (500+)	13	13
Famous papers (250-499)	29	29
Very well-known papers (100-249)	134	133
Well-known papers (50-99)	190	190
Known papers (10-49)	254	246
Less known papers (1-9)	116	73
Unknown papers (0)	26	7

The contributions listed here are labeled when it corresponds using the following convention:

[PA = Primary Author; ED = Editor; C = Contributor; R = Review]

Additionally to this, the ten most relevant peer-reviewed publications are highlighted.

In addition to what is presented in the following, I am an author of all the public results from the CMS collaboration since 2006. They full list can be consulted at

<https://cds.cern.ch/collection/CMS>

## Main publications in peer-reviewed journals

Publications in which I have had a personal contribution, in reverse chronological order. The ten most relevant publications are marked with a ★ sign.

**Recent CMS results in top and Higgs physics**, *Rebeca Gonzalez Suarez*, arXiv:1707.05054, Modern Physics Letters A, 2, Vol. 32, No. 29 (2017) 1730026 [PA, ED]

**Measurement of the transverse momentum spectrum of the Higgs boson produced in pp collisions at  $\sqrt{s} = 8$  TeV using H to WW decays**, *CMS Collaboration*, arXiv:1606.01522, JHEP 03 (2017) 032 [R - Higgs to WW]

**Measurement of the W boson helicity fractions in the decays of top quark pairs to lepton+jets final states produced in pp collisions at  $\sqrt{s} = 8$  TeV**, *CMS Collaboration*, arXiv:1605.09047, Phys. Lett. B 762 (2016) 512 [R - ARC]

**Measurements of the Higgs boson production and decay rates and constraints on its couplings from a combined ATLAS and CMS analysis of the LHC  $pp$  collision data at  $\sqrt{s} = 7$  and 8 TeV**, *ATLAS and CMS Collaborations*, arXiv:1606.02266, JHEP 1608 (2016) 045. [C]

**Search for Higgs boson off-shell production in proton-proton collisions at 7 and 8 TeV and derivation of constraints on its total decay width**, *CMS Collaboration*, arXiv:1605.02329, JHEP 09 (2016) 051 [R - Higgs to WW]  
**500<sup>th</sup> paper of CMS**

**Search for s channel single top quark production in pp collisions at  $\sqrt{s} = 7$  and 8 TeV**, *CMS Collaboration*, arXiv:1603.02555, JHEP 09 (2016) 027 [R - Single Top]

**Search for anomalous single top quark production in association with a photon in pp collisions at  $\sqrt{s} = 8$  TeV**, *CMS Collaboration*, arXiv:1511.03951, JHEP 04 (2016) 035 [R - Single Top]

**Measurement of top quark polarisation in t-channel single top quark production**, *CMS Collaboration*, arXiv:1511.02138, JHEP 04 (2016) 073 [R - Single Top]

★ **Search for the associated production of a Higgs boson with a single top quark in proton-proton collisions at  $\sqrt{s} = 8$  TeV**, *CMS Collaboration*, arXiv:1509.08159, JHEP06(2016)177 [C, R-ARC]  
Cited by 28.

**Measurement of the Charge Asymmetry in Top Quark Pair Production in pp Collisions at  $\sqrt{s} = 8$  TeV using a Template Method**, *CMS Collaboration*, arXiv:1508.03862, Phys. Rev. D 93, 034014 (2016) [R-ARC]

**Search for a standard model Higgs boson produced in association with a top-quark pair and decaying to bottom quarks using a matrix element method**, *CMS Collaboration*, arXiv:1502.02485, Eur. Phys. J. C 75 (2015) 251 [R-ARC]

**Precise determination of the mass of the Higgs boson and tests of compatibility of its couplings with the standard model predictions using proton collisions at 7 and 8 TeV**, *CMS Collaboration*, arXiv:1412.8662, Eur. Phys. J. C 75 (2015) 212 [C]

★ **Constraints on the spin-parity and anomalous HVV couplings of the Higgs boson in proton collisions at 7 and 8 TeV**, *CMS Collaboration*, arXiv:1411.3441, Phys. Rev. D 92, 012004 (2015) [PA, ED]  
Cited by [292](#) (100+).

**Measurement of the W boson helicity in events with a single reconstructed top quark in pp collisions at  $\sqrt{s} = 8$  TeV**, *CMS Collaboration*, arXiv:1410.1154, JHEP01(2015)053 [R - Single Top]

★ **Search for monotop signatures in proton-proton collisions at  $\sqrt{s} = 8$  TeV**, *CMS Collaboration*, arXiv:1410.1149, Phys. Rev. Lett. 114, 101801 (2015) [R - Chair of the Review]  
Cited by 56.

★ **Observation of the associated production of a single top quark and a W boson in pp collisions at  $\sqrt{s} = 8\text{TeV}$** , *CMS Collaboration*, arXiv:1401.2942, Phys. Rev. Lett. 112, 231802. [PA]

Cited by [158](#) (100+).

**Measurement of the t-channel single-top-quark production cross section and of the  $|V_{tb}|$  CKM matrix element in pp collisions at  $\sqrt{s} = 8\text{ TeV}$** , *CMS Collaboration*, arXiv:1403.7366, JHEP 06 (2014) 090 [R - Single top]

**Searches for electroweak production of charginos, neutralinos, and sleptons decaying to leptons and W, Z, and Higgs bosons in pp collisions at 8 TeV**, *CMS Collaboration*, arXiv:1405.7570, Eur. Phys. J. C 74 (2014) [R-ARC]

★ **Measurement of Higgs boson production and properties in the WW decay channel with leptonic final states**, *CMS Collaboration*, arXiv:1312.1129, JHEP 01(2014)096 [PA]

Cited by [353](#) (250+).

**Snowmass 2013 Top quark working group report**, (*Top Quark Working Group Collaboration*), arXiv:1311.2028 [C]

**Observation of a new boson with mass near 125 GeV in pp collisions at  $\sqrt{s} = 7$  and 8 TeV**, *CMS Collaboration*, arXiv:1303.4571, JHEP 1306 (2013) 081 [C]

★ **Evidence for associated production of a single top quark and W boson in pp collisions at 7 TeV**, *CMS Collaboration*, arXiv:1209.3489, Phys. Rev. Lett. 110, 022003 (2013) [PA, ED]

Cited by [140](#) (100+).

**Search for electroweak production of charginos and neutralinos using leptonic final states in pp collisions at  $\sqrt{s} = 7\text{ TeV}$** , *CMS Collaboration*, arXiv:1209.6620, JHEP 1211 (2012) 147 [R-ARC]

★ **Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC**, *CMS Collaboration*, arXiv:1207.7235, Phys.Lett. B 716 (2012) 30-61 [C]

Cited by [8111](#) (1000+).

**Search for physics beyond the standard model in events with a Z boson, jets, and missing transverse energy in pp collisions at  $\sqrt{s} = 7\text{ TeV}$** , *CMS Collaboration*, arXiv:1204.3774, Physics Letters B 716 (2012) 260-284 [R-ARC]

★ **Search for the standard model Higgs boson decaying to a W pair in the fully leptonic final state in pp collisions at  $\sqrt{s} = 7\text{ TeV}$** , *CMS Collaboration*, arXiv:1202.1489, Phys.Lett. B 710 (2012) 91-113 [C]

Cited by [171](#) (100+).

★ **Measurement of the  $t\bar{t}$  Production Cross Section in pp Collisions at 7 TeV in Lepton + Jets Events Using b-quark Jet Identification**, *CMS Collaboration*, arXiv:1108.3773, Phys.Rev. D84 (2011) 092004 [C]

Cited by [133](#) (100+).

★ **Measurement of  $W^+W^-$  Production and Search for the Higgs Boson in pp Collisions at  $\sqrt{s} = 7\text{ TeV}$** , *CMS Collaboration*, arXiv:1102.5429, Phys.Lett. B 699 (2011) 25-47 [C]

Cited by [172](#) (100+).

## Publications from top

Publications submitted to journals during my period as convener of the top quark physics analysis group in CMS, in reverse chronological order:

**Measurements of differential cross sections of top quark pair production as a function of kinematic event variables in proton-proton collisions at  $\sqrt{s} = 13$  TeV** *CMS Collaboration*, Submitted to JHEP, arXiv:1803.03991

**Measurement of the associated production of a single top quark and a Z boson in pp collisions at  $\sqrt{s} = 13$  TeV** *CMS Collaboration*, Phys.Lett. B779 (2018) 358-384, arXiv:1712.02825

**Search for the flavor-changing neutral current interactions of the top quark and the Higgs boson which decays into a pair of b quarks at  $\sqrt{s} = 13$  TeV** *CMS Collaboration*, Submitted to JHEP, arXiv:1712.02399

**Measurement of the inclusive  $t\bar{t}$  cross section in pp collisions at  $\sqrt{s} = 5.02$  TeV using final states with at least one charged lepton** *CMS Collaboration*, Submitted to JHEP, arXiv:1711.03143

**Measurement of the cross section for top quark pair production in association with a W or Z boson in proton-proton collisions at  $\sqrt{s} = 13$  TeV** *CMS Collaboration*, Submitted to JHEP, arXiv:1711.02547

**Search for standard model production of four top quarks with same-sign and multilepton final states in proton-proton collisions at  $\sqrt{s} = 13$  TeV** *CMS Collaboration*, Submitted to Eur. Phys. J. C, arXiv:1710.10614

**Combination of inclusive and differential  $t\bar{t}$  charge asymmetry measurements using ATLAS and CMS data at  $\sqrt{s} = 7$  and 8 TeV** *CMS and ATLAS Collaborations*, Submitted to JHEP, arXiv:1709.05327

**Measurement of normalized differential  $t\bar{t}$  cross sections in the dilepton channel from pp collisions at  $\sqrt{s} = 13$  TeV** *CMS Collaboration*, Submitted to JHEP, arXiv:1708.07638

**Measurement of the semileptonic  $t\bar{t} + \gamma$  production cross section in pp collisions at  $\sqrt{s} = 8$  TeV** *CMS Collaboration*, JHEP 10 (2017) 006, arXiv:1706.08128

**Measurements of  $t\bar{t}$  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** *CMS Collaboration*, Phys. Lett. B 776 (2017) 355, arXiv:1705.10141

**Measurement of the top quark mass in the dileptonic  $t\bar{t}$  decay channel using the mass observables  $M_{bl}$ ,  $M_{T2}$ , and  $M_{lb}$  in pp collisions at  $\sqrt{s} = 8$  TeV** *CMS Collaboration*, Phys. Rev. D 96 (2017) 032002, arXiv:1704.06142

**Measurement of the jet mass in highly boosted  $t\bar{t}$  events from pp collisions at  $\sqrt{s} = 8$  TeV** *CMS Collaboration*, Eur. Phys. J. C 77 (2017) 467, arXiv:1703.06330

**Measurement of the top quark mass using single top quark events in proton-proton collisions at  $\sqrt{s} = 8$  TeV** *CMS Collaboration*, EPJC 77 (2017) 354, arXiv:1703.02530

**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** *CMS Collaboration*, EPJC 77 (2017) 459, arXiv:1703.01630

**Search for standard model production of four top quarks in proton-proton collisions at  $\sqrt{s} = 13$  TeV**, *CMS Collaboration*, Phys. Lett. B 772 (2017) 336, arXiv:1702.06164

**Search for associated production of a Z boson with a single top quark and for tZ flavour-changing interactions in pp collisions at  $\sqrt{s} = 8$  TeV**, *CMS Collaboration*, JHEP 07 (2017) 003, arXiv:1702.01404

**Measurement of the  $t\bar{t}$  production cross section using events with one lepton and at least one jet in pp collisions at  $\sqrt{s} = 13$  TeV**, *CMS Collaboration*, JHEP 09 (2017) 051, arXiv:1701.06228

**Search for CP violation in  $t\bar{t}$  production and decay in proton-proton collisions at  $\sqrt{s} = 8$  TeV, CMS Collaboration, JHEP 03 (2017) 101, arXiv:1611.08931**

**Measurement of the  $t\bar{t}$  production cross section using events in the  $e\mu$  final state in pp collisions at  $\sqrt{s} = 13$  TeV, CMS Collaboration, EPJC 77 (2017) 172, arXiv:1611.04040**

**Measurement of the mass difference between top quark and antiquark in pp collisions at  $\sqrt{s} = 8$  TeV, CMS Collaboration, Phys. Lett. B 770 (2017) 50, arXiv:1610.09551**

**Search for top quark decays via Higgs-boson-mediated flavor-changing neutral currents in pp collisions at  $\sqrt{s} = 8$  TeV, CMS Collaboration, JHEP 02 (2017) 079, arXiv:1610.04857**

**Measurement of differential cross sections for top quark pair production using the lepton+jets final state in proton-proton collisions at 13 TeV, CMS Collaboration, Phys. Rev. D 95, 092001 (2017), arXiv:1610.04191**

**Cross section measurement of t-channel single top quark production in pp collisions at  $\sqrt{s} = 13$  TeV, CMS Collaboration, Phys. Lett. B 772 (2017) 752, arXiv:1610.00678**

Additional peer-reviewed publications of which I am also an author, in reverse chronological order:

**Evidence for associated production of a Higgs boson with a top quark pair in final states with electrons, muons, and hadronically decaying  $\tau$  leptons at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1803.05485 [hep-ex].

**Search for a heavy resonance decaying into a Z boson and a vector boson in the  $\nu\bar{\nu}q\bar{q}$  final state** CMS Collaboration  
arXiv:1803.03838 [hep-ex].

**Test beam demonstration of silicon microstrip modules with transverse momentum discrimination for the future CMS tracking detector** CMS Tracker Collaboration  
10.1088/1748-0221/13/03/P03003.  
JINST 13 (2018) no.03, P03003.

**Search for third-generation scalar leptoquarks decaying to a top quark and a  $\tau$  lepton at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1803.02864 [hep-ex].

**Jet properties in PbPb and pp collisions at  $\sqrt{s_{NN}} = 5.02$  TeV** CMS Collaboration  
arXiv:1803.00042 [nucl-ex].

**Search for a heavy resonance decaying to a pair of vector bosons in the lepton plus merged jet final state at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1802.09407 [hep-ex].

**Search for narrow resonances in the b-tagged dijet mass spectrum in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1802.06149 [hep-ex].

**Measurement of the  $\Lambda_b$  polarization and angular parameters in  $\Lambda_b \rightarrow J/\psi \Lambda$  decays from pp collisions at  $\sqrt{s} = 7$  and 8 TeV** CMS Collaboration  
arXiv:1802.04867 [hep-ex].

**Search for heavy neutral leptons in events with three charged leptons in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1802.02965 [hep-ex].

**Measurement of the inelastic proton-proton cross section at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1802.02613 [hep-ex].

**Search for natural and split supersymmetry in proton-proton collisions at  $\sqrt{s} = 13$  TeV in final states with jets and missing transverse momentum** CMS Collaboration  
arXiv:1802.02110 [hep-ex].

**Search for single production of vector-like quarks decaying to a b quark and a Higgs boson** CMS Collaboration  
arXiv:1802.01486 [hep-ex].

**Search for lepton-flavor violating decays of heavy resonances and quantum black holes to  $e\mu$  final states in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1802.01122 [hep-ex].

**Comparing transverse momentum balance of b jet pairs in pp and PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

CMS Collaboration  
arXiv:1802.00707 [hep-ex].

**Search for dark matter in events with energetic, hadronically decaying top quarks and missing transverse momentum at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1801.08427 [hep-ex].

**Observation of medium induced modifications of jet fragmentation in PbPb collisions using isolated-photon-tagged jets** CMS Collaboration  
arXiv:1801.04895 [hep-ex].

**Combined search for electroweak production of charginos and neutralinos in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1801.03957 [hep-ex].

**Measurement of the  $Z\gamma^* \rightarrow \tau\tau$  cross section in pp collisions at  $\sqrt{s} = 13$  TeV and validation of  $\tau$  lepton analysis techniques** CMS Collaboration  
arXiv:1801.03535 [hep-ex].

**Search for new physics in events with two soft oppositely charged leptons and missing transverse momentum in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1801.01846 [hep-ex].

**Search for decays of stopped exotic long-lived particles produced in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1801.00359 [hep-ex].

**Electroweak production of two jets in association with a Z boson in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1712.09814 [hep-ex].

**Measurement of prompt and nonprompt charmonium suppression in PbPb collisions at 5.02 TeV** CMS Collaboration  
arXiv:1712.08959 [nucl-ex].

**Search for  $R$ -parity violating supersymmetry in pp collisions at  $\sqrt{s} = 13$  TeV using b jets in a final state with a single lepton, many jets, and high sum of large-radius jet masses** CMS Collaboration  
arXiv:1712.08920 [hep-ex].

**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** CMS Collaboration  
arXiv:1712.08501 [hep-ex].

**Study of Bose-Einstein correlations in pp, pPb, and PbPb collisions at the LHC** CMS Collaboration  
arXiv:1712.07198 [hep-ex].

**Search for lepton flavour violating decays of the Higgs boson to  $\mu\tau$  and  $e\tau$  in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1712.07173 [hep-ex].

**Identification of heavy-flavour jets with the CMS detector in pp collisions at 13 TeV** CMS Collaboration  
arXiv:1712.07158 [physics.ins-det].

**Search for the  $X(5568)$  state decaying into  $B_s^0\pi^\pm$  in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1712.06144 [hep-ex].

**Azimuthal correlations for inclusive 2-jet, 3-jet, and 4-jet events in pp collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1712.05471 [hep-ex].

**Search for  $Z\gamma$  resonances using leptonic and hadronic final states in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1712.03143 [hep-ex].

**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** CMS Collaboration  
arXiv:1712.02345 [hep-ex].

**Constraints on the double-parton scattering cross section from same-sign W boson pair production in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1712.02280 [hep-ex].

**Search for pair production of excited top quarks in the lepton+jets final state** CMS Collaboration  
arXiv:1711.10949 [hep-ex].

**Study of jet quenching with isolated-photon+jet correlations in PbPb and pp collisions at  $\sqrt{s_{NN}} = 5.02$  TeV** CMS Collaboration  
arXiv:1711.09738 [nucl-ex].

**Search for new long-lived particles at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1711.09120 [hep-ex].

**Search for gauge-mediated supersymmetry in events with at least one photon and missing transverse momentum in pp collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1711.08008 [hep-ex].

**Non-Gaussian elliptic-flow fluctuations in PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV** CMS Collaboration  
arXiv:1711.05594 [nucl-ex].

**Search for excited states of light and heavy flavor quarks in the  $\gamma$ +jet final state in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1711.04652 [hep-ex].

**Search for diboson resonances in the  $2\ell 2\nu$  final state** CMS Collaboration  
arXiv:1711.04370 [hep-ex].

**Measurement of the underlying event activity in inclusive Z boson production in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1711.04299 [hep-ex].

**Measurement of associated Z + charm production in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1711.02143 [hep-ex].

**Search for top squarks and dark matter particles in opposite-charge dilepton final states at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1711.00752 [hep-ex].

**Search for new physics in events with a leptonically decaying Z boson and a large transverse momentum imbalance in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1711.00431 [hep-ex].



**Search for supersymmetry in proton-proton collisions at 13 TeV using identified top quarks** CMS Collaboration  
arXiv:1710.11188 [hep-ex].

**Measurement of quarkonium production cross sections in pp collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1710.11002 [hep-ex].

**Pseudorapidity distributions of charged hadrons in proton-lead collisions at  $\sqrt{s_{\text{NN}}} = 5.02$  and 8.16 TeV** CMS Collaboration  
arXiv:1710.09355 [hep-ex].

**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** CMS Collaboration  
arXiv:1710.09154 [hep-ex].

**Measurement of b hadron lifetimes in pp collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1710.08949 [hep-ex].

**Measurement of differential cross sections in the  $\phi^*$  variable for inclusive Z boson production in pp collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1710.07955 [hep-ex].

**Pseudorapidity and transverse momentum dependence of flow harmonics in pPb and PbPb collisions** CMS Collaboration  
arXiv:1710.07864 [nucl-ex].

**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** CMS Collaboration  
arXiv:1710.04960 [hep-ex].

**Measurement of angular parameters from the decay  $B^0 \rightarrow K^{*0} \mu^+ \mu^-$  in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1710.02846 [hep-ex].

**Study of dijet events with a large rapidity gap between the two leading jets in pp collisions at  $\sqrt{s} = 7$  TeV** CMS Collaboration  
arXiv:1710.02586 [hep-ex].

**Search for pair production of vector-like quarks in the  $bW\bar{b}W$  channel from proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1710.01539 [hep-ex].

**Search for low mass vector resonances decaying into quark-antiquark pairs in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1710.00159 [hep-ex].

**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** CMS Collaboration  
arXiv:1709.09814 [hep-ex].

**Observation of correlated azimuthal anisotropy Fourier harmonics in pp and pPb collisions at the LHC** CMS Collaboration  
arXiv:1709.09189 [nucl-ex].

**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** CMS Collaboration  
arXiv:1709.08908 [hep-ex].

**Measurements of the  $pp \rightarrow ZZ$  production cross section and the  $Z \rightarrow 4\ell$  branching fraction, and constraints on anomalous triple gauge couplings at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1709.08601 [hep-ex].

**Evidence for the Higgs boson decay to a bottom quark-antiquark pair** CMS Collaboration  
arXiv:1709.07497 [hep-ex].

**Observation of top quark production in proton-nucleus collisions** CMS Collaboration  
arXiv:1709.07411 [nucl-ex].

**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** CMS Collaboration  
arXiv:1709.05822 [hep-ex].

**Inclusive search for a highly boosted Higgs boson decaying to a bottom quark-antiquark pair** CMS Collaboration  
arXiv:1709.05543 [hep-ex].

**Search for electroweak production of charginos and neutralinos in multilepton final states in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1709.05406 [hep-ex].

**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  $H \rightarrow b\bar{b}$**  CMS Collaboration  
arXiv:1709.04896 [hep-ex].

**Search for supersymmetry with Higgs boson to diphoton decays using the razor variables at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1709.00384 [hep-ex].

**Measurement of the splitting function in pp and PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV** CMS Collaboration  
arXiv:1708.09429 [nucl-ex].

**Challenges to the chiral magnetic wave using charge-dependent azimuthal anisotropies in pPb and PbPb collisions at  $\sqrt{[b]s_{NN}} = 5.02$  TeV** CMS Collaboration  
arXiv:1708.08901 [nucl-ex].

**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** CMS Collaboration  
arXiv:1708.08539 [hep-ex].

**Search for evidence of the type-III seesaw mechanism in multilepton final states in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1708.07962 [hep-ex].

**Principal-component analysis of two-particle azimuthal correlations in PbPb and pPb collisions at CMS** CMS Collaboration  
arXiv:1708.07113 [nucl-ex].

**Search for massive resonances decaying into WW, WZ, ZZ, qW, and qZ with dijet final states at  $\sqrt{s} =$**

**13 TeV CMS Collaboration**  
arXiv:1708.05379 [hep-ex].

**Nuclear modification factor of D0 mesons in PbPb collisions at  $\sqrt{s[NN]} = 5.02$  TeV** CMS Collaboration  
arXiv:1708.04962 [nucl-ex].

**Search for resonant and nonresonant Higgs boson pair production in the  $b\bar{b}\ell\ell\nu\nu$  final state in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1708.04188 [hep-ex].

**Measurement of prompt  $D^0$  meson azimuthal anisotropy in PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV** CMS Collaboration  
arXiv:1708.03497 [nucl-ex].

**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** CMS Collaboration  
arXiv:1708.02812 [hep-ex].

**Search for vector-like light-flavor quark partners in proton-proton collisions at  $\sqrt{s}=8$  TeV** CMS Collaboration  
arXiv:1708.02510 [hep-ex].

**Constraints on the chiral magnetic effect using charge-dependent azimuthal correlations in pPb and PbPb collisions at the LHC** CMS Collaboration  
arXiv:1708.01602 [nucl-ex].

**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** CMS Collaboration  
arXiv:1708.01062 [hep-ex].

**Observation of the Higgs boson decay to a pair of tau leptons** CMS Collaboration  
arXiv:1708.00373 [hep-ex].

**Search for a light pseudoscalar Higgs boson produced in association with bottom quarks in pp collisions at  $\sqrt{s}=8$  TeV** CMS Collaboration  
arXiv:1707.07283 [hep-ex].

**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** CMS Collaboration  
arXiv:1707.07274 [hep-ex].

**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** CMS Collaboration  
arXiv:1707.06193 [hep-ex].

**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** CMS Collaboration  
arXiv:1707.05979 [hep-ex].

**Search for natural supersymmetry in events with top quark pairs and photons in pp collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1707.03325 [hep-ex].

**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** CMS Collaboration

arXiv:1707.03316 [hep-ex].

**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** CMS Collaboration

arXiv:1707.02909 [hep-ex].

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

arXiv:1707.01303 [hep-ex].

**Constraints on anomalous Higgs boson couplings using production and decay information in the four-lepton final state** CMS Collaboration

arXiv:1707.00541 [hep-ex].

**A search for Higgs boson pair production in the bbtatau final state in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration

arXiv:1707.00350 [hep-ex].

**Measurement of charged pion, kaon, and proton production in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration

arXiv:1706.10194 [hep-ex].

**Measurements of properties of the Higgs boson decaying into the four-lepton final state in pp collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration

arXiv:1706.09936 [hep-ex].

**Search for electroweak production of charginos and neutralinos in WH events in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration

arXiv:1706.09933 [hep-ex].

**Search for a heavy composite Majorana neutrino in the final state with two leptons and two quarks at  $\sqrt{s} = 13$  TeV** CMS Collaboration

arXiv:1706.08578 [hep-ex].

**Exclusive and semi-exclusive  $\pi^+\pi^-$  production in proton-proton collisions at  $\sqrt{s} = 7$  TeV** CMS Collaboration

arXiv:1706.08310 [hep-ex].

**Suppression of excited Upsilon states relative to the ground state in PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV** CMS Collaboration

arXiv:1706.05984 [hep-ex].

**Measurements of jet charge with dijet events in pp collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration

arXiv:1706.05868 [hep-ex].

**Particle-flow reconstruction and global event description with the CMS detector** CMS Collaboration

arXiv:1706.04965 [physics.ins-det].

**Search for top squark pair production in pp collisions at  $\sqrt{s}=13$  TeV using single lepton events** CMS Collaboration

arXiv:1706.04402 [hep-ex].

**Searches for  $W'$  bosons decaying to a top quark and a bottom quark in proton-proton collisions at 13 TeV** CMS Collaboration

arXiv:1706.04260 [hep-ex].

**Search for new physics in the monophoton final state in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1706.03794 [hep-ex].

**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** CMS Collaboration  
arXiv:1706.03408 [hep-ex].

**Search for dark matter produced in association with heavy-flavor quarks in proton-proton collisions at  $\sqrt{s}=13$  TeV** CMS Collaboration  
arXiv:1706.02581 [hep-ex].

**Search for top quark partners with charge 5/3 in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1705.10967 [hep-ex].

**Search for low mass vector resonances decaying to quark-antiquark pairs in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1705.10532 [hep-ex].

**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** CMS Collaboration  
arXiv:1705.09171 [hep-ex].

**Measurement of  $B^{+/-}$  meson differential production cross sections in pp and PbPb collisions at  $\sqrt{s[NN]} = 5.02$  TeV** CMS Collaboration  
arXiv:1705.04727 [hep-ex].

**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** CMS Collaboration  
arXiv:1705.04673 [hep-ex].

**Search for new phenomena with the  $MT_2$  variable in the all-hadronic final state produced in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1705.04650 [hep-ex].

**Search for charged Higgs bosons produced in vector boson fusion processes and decaying into a pair of W and Z bosons using proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1705.02942 [hep-ex].

**Measurement of the triple-differential dijet cross section in proton-proton collisions at  $\sqrt{s} = 8$  TeV and constraints on parton distribution functions** CMS Collaboration  
arXiv:1705.02628 [hep-ex].

**Search for black holes in high-multiplicity final states in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1705.01403 [hep-ex].

**Search for supersymmetry in multijet events with missing transverse momentum in proton-proton collisions at 13 TeV** CMS Collaboration  
arXiv:1704.07781 [hep-ex].

**Search for physics beyond the standard model in events with two leptons of same sign, missing transverse momentum, and jets in proton-proton collisions at  $\sqrt{s}=13$  TeV** CMS Collaboration  
arXiv:1704.07323 [hep-ex].

**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** CMS Collaboration  
arXiv:1704.03366 [hep-ex].

**Measurements of the  $pp \rightarrow W\gamma\gamma$  and  $pp \rightarrow Z\gamma\gamma$  cross sections and limits on anomalous quartic gauge couplings at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1704.00366 [hep-ex].

**Search for new physics with dijet angular distributions in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1703.09986 [hep-ex].

**Search for a heavy resonance decaying to a top quark and a vector-like top quark at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1703.06352 [hep-ex].

**Search for anomalous couplings in semileptonic  $WW/WZ$  to  $l \nu q\bar{q}$  production in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1703.06095 [hep-ex].

**Search for associated production of dark matter with a Higgs boson decaying to  $b\bar{b}$  or  $\gamma\gamma$  at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1703.05236 [hep-ex].

**Search for the 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** CMS Collaboration  
arXiv:1703.03995 [hep-ex].

**Search for dark matter produced with an energetic jet or a hadronically decaying  $W$  or  $Z$  boson at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1703.01651 [hep-ex].

**Measurement of the cross section for electroweak production of  $Z\gamma$  in association with two jets and constraints on anomalous quartic gauge couplings in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1702.03025 [hep-ex].

**Measurement of prompt and nonprompt  $J/\psi$  production in  $pp$  and  $pPb$  collisions at  $\sqrt{s[NN]} = 5.02$  TeV** CMS Collaboration  
arXiv:1702.01462 [nucl-ex].

**Study of jet quenching with  $Z$ +jet correlations in  $PbPb$  and  $pp$  collisions at  $\sqrt{s[NN]} = 5.02$  TeV** CMS Collaboration  
arXiv:1702.01060 [nucl-ex].

**Azimuthal anisotropy of charged particles with transverse momentum up to 100 GeV in  $PbPb$  collisions at  $\sqrt{s[NN]} = 5.02$  TeV** CMS Collaboration  
arXiv:1702.00630 [hep-ex].

**Measurement of the inclusive energy spectrum in the very forward direction in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1701.08695 [hep-ex].

**Search for single production of vector-like quarks decaying into a  $b$  quark and a  $W$  boson in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1701.08328 [hep-ex].

**Search for single production of vector-like quarks decaying to a Z boson and a top or a bottom quark in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1701.07409 [hep-ex].

**Search for supersymmetry with multiple charged leptons in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1701.06940 [hep-ex].

**Search for dark matter and unparticles in events with a Z boson and missing transverse momentum in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1701.02042 [hep-ex].

**Search for light bosons in decays of the 125 GeV Higgs boson in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1701.02032 [hep-ex].

**Mechanical stability of the CMS strip tracker measured with a laser alignment system** CMS Collaboration  
arXiv:1701.02022 [physics.ins-det].

**Search for supersymmetry in the all-hadronic final state using top quark tagging in pp collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1701.01954 [hep-ex].

**Search for leptophobic Z' bosons decaying into four-lepton final states in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1701.01345 [hep-ex].

**Search for high-mass Z gamma resonances at  $\sqrt{s} = 8$  and 13 TeV using jet substructure techniques** CMS Collaboration  
arXiv:1612.09516 [hep-ex].

**Search for heavy gauge W' boson in events with an energetic lepton and large missing transverse momentum at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1612.09274 [hep-ex].

**Measurement of electroweak-induced production of W gamma with two jets in pp collisions at  $\sqrt{s} = 8$  TeV and constraints on anomalous quartic gauge couplings** CMS Collaboration  
arXiv:1612.09256 [hep-ex].

**Search for massive resonances decaying into WW, WZ or ZZ bosons in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1612.09159 [hep-ex].

**Measurements of the charm jet cross section and nuclear modification factor in pPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV** CMS Collaboration  
arXiv:1612.08972 [nucl-ex].

**Search for electroweak production of a vector-like quark decaying to a top quark and a Higgs boson using boosted topologies in fully hadronic final states** CMS Collaboration  
arXiv:1612.05336 [hep-ex].

**Searches for pair production for third-generation squarks in  $\sqrt{s} = 13$  TeV pp collisions** CMS Collaboration  
arXiv:1612.03877 [hep-ex].

**Search for heavy neutrinos or third-generation leptoquarks in final states with two hadronically decaying tau leptons and two jets in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1612.01190 [hep-ex].

**Search for single production of a heavy vector-like T quark decaying to a Higgs boson and a top quark with a lepton and jets in the final state** CMS Collaboration  
arXiv:1612.00999 [hep-ex].

**Search for supersymmetry in events with photons and missing transverse energy in pp collisions at 13 TeV** CMS Collaboration  
arXiv:1611.06604 [hep-ex].

**Search for heavy resonances decaying to tau lepton pairs in proton-proton collisions at  $\sqrt{s} = 13$  TeV** CMS Collaboration  
arXiv:1611.06594 [hep-ex].

**Measurements of differential production cross sections for a Z boson in association with jets in pp collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1611.03844 [hep-ex].

**Search for dijet resonances in proton-proton collisions at  $\sqrt{s} = 13$  TeV and constraints on dark matter and other models** CMS Collaboration  
arXiv:1611.03568 [hep-ex].

**Charged-particle nuclear modification factors in PbPb and pPb collisions at  $\sqrt{s[NN]} = 5.02$  TeV** CMS Collaboration  
arXiv:1611.01664 [hep-ex].

**Suppression of Upsilon(1S), Upsilon(2S), and Upsilon(3S) quarkonium states in PbPb collisions at  $\sqrt{s[NN]} = 2.76$  TeV** CMS Collaboration  
arXiv:1611.01510 [hep-ex].

**Relative modification of prompt Psi(2S) and J/psi yields from pp to PbPb collisions at  $\sqrt{s[NN]} = 5.02$  TeV** CMS Collaboration  
arXiv:1611.01438 [hep-ex].

**A search for new phenomena in pp collisions at  $\sqrt{s} = 13$  TeV in final states with missing transverse momentum and at least one jet using the  $\alpha_T$  variable** CMS Collaboration  
arXiv:1611.00338 [hep-ex].

**Searches for invisible decays of the Higgs boson in pp collisions at  $\sqrt{s} = 7, 8,$  and 13 TeV** CMS Collaboration  
arXiv:1610.09218 [hep-ex].

**Search for heavy resonances decaying into a vector boson and a Higgs boson in final states with charged leptons, neutrinos, and b quarks** CMS Collaboration  
arXiv:1610.08066 [hep-ex].

**Observation of Upsilon(1S) pair production in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1610.07095 [hep-ex].

**Search for R-parity violating supersymmetry with displaced vertices in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1610.05133 [hep-ex].



**Search for electroweak production of charginos in final states with two tau leptons in pp collisions at  $\sqrt{s}$**

**= 8 TeV** CMS Collaboration

arXiv:1610.04870 [hep-ex].

**Measurements of differential cross sections for associated production of a W boson and jets in proton-proton collisions at  $\sqrt{s}$ =8 TeV** CMS Collaboration

arXiv:1610.04222 [hep-ex].

**Search for high-mass Z-gamma resonances in e+e-gamma and mu+mu-gamma final states in proton-proton collisions at  $\sqrt{s}$ =8 and 13 TeV** CMS Collaboration

arXiv:1610.02960 [hep-ex].

**Suppression and azimuthal anisotropy of prompt and nonprompt J/psi production in PbPb collisions at  $\sqrt{s_{NN}}$  = 2.76 TeV** CMS Collaboration

arXiv:1610.00613 [nucl-ex].

**Observation of charge-dependent azimuthal correlations in pPb collisions and its implication for the search for the chiral magnetic effect** CMS Collaboration

arXiv:1610.00263 [nucl-ex].

**Search for supersymmetry in events with one lepton and multiple jets in proton-proton collisions at  $\sqrt{s}$  = 13 TeV** CMS Collaboration

arXiv:1609.09386 [hep-ex].

**Search for long-lived charged particles in proton-proton collisions at  $\sqrt{s}$  = 13 TeV** CMS Collaboration

arXiv:1609.08382 [hep-ex].

Phys.Rev. D94 (2016) no.11, 112004.

**Inclusive search for supersymmetry using razor variables in pp collisions at  $\sqrt{s}$  = 13 TeV** CMS Collaboration

arXiv:1609.07658 [hep-ex].

**Measurement of the WZ production cross section in pp collisions at  $\sqrt{s}$  = 7 and 8 TeV and search for anomalous triple gauge couplings at  $\sqrt{s}$  = 8 TeV**

CMS Collaboration

arXiv:1609.05721 [hep-ex].

**Search for narrow resonances in dilepton mass spectra in proton-proton collisions at  $\sqrt{s}$  = 13 TeV and combination with 8 TeV data**

CMS Collaboration

arXiv:1609.05391 [hep-ex].

**Measurement of inclusive jet cross-sections in pp and PbPb collisions at  $\sqrt{s_{NN}}$ =2.76 TeV**

CMS Collaboration

arXiv:1609.05383 [nucl-ex].

**Measurement and QCD analysis of double-differential inclusive jet cross-sections in pp collisions at  $\sqrt{s}$  = 8 TeV and ratios to 2.76 and 7 TeV**

CMS Collaboration

arXiv:1609.05331 [hep-ex].

**Studies of inclusive four-jet production with two b-tagged jets in proton-proton collisions at 7 TeV**

CMS Collaboration

arXiv:1609.03489 [hep-ex].

**Search for high-mass diphoton resonances in proton-proton collisions at 13 TeV and combination with 8**

### TeV search

CMS Collaboration  
arXiv:1609.02507 [hep-ex].  
Phys.Rev. D94 (2016) no.11, 112005.

### Decomposing transverse momentum balance contributions for quenched jets in PbPb collisions at $\sqrt{s_{NN}} = 2.76$ TeV

CMS Collaboration  
arXiv:1609.02466 [nucl-ex].  
JHEP 1611 (2016) 055.

### The CMS trigger system

CMS Collaboration  
arXiv:1609.02366 [physics.ins-det].

### Measurement of the total and differential inclusive B(+) hadron cross sections in pp collisions at $\sqrt{s} = 13$ TeV

CMS Collaboration  
arXiv:1609.00873 [hep-ex].

### Measurement of the production cross section of the W boson in association with two b jets in pp collisions at $\sqrt{s} = 8$ TeV

CMS Collaboration  
arXiv:1608.07561 [hep-ex].

### Measurement of the mass of the top quark in decays with a $J/\psi$ meson in pp collisions at 8 TeV

CMS Collaboration  
arXiv:1608.03560 [hep-ex].  
JHEP 1612 (2016) 123.

### Search for new physics in events with high jet multiplicity and low missing transverse momentum in proton-proton collisions at $\sqrt{s} = 8$ TeV

CMS Collaboration  
arXiv:1608.01224 [hep-ex].

### Measurement of the $ZZ$ production cross section and $Z \rightarrow \ell^+ \ell^- \ell'^+ \ell'^-$ branching fraction in $pp$ collisions at $\sqrt{s} = 13$ TeV

CMS Collaboration  
arXiv:1607.08834 [hep-ex].  
Phys.Lett. B763 (2016) 280-303.

### Measurement of electroweak production of a W boson and two forward jets in proton-proton collisions at $\sqrt{s} = 8$ TeV

CMS Collaboration  
arXiv:1607.06975 [hep-ex].  
JHEP 1611 (2016) 147.

### Measurement of the $WZ$ production cross section in $pp$ collisions at $\sqrt{s} = 13$ TeV

CMS Collaboration  
arXiv:1607.06943 [hep-ex].

### Search for dark matter in proton-proton collisions at 8 TeV with missing transverse momentum and vector boson tagged jets

CMS Collaboration  
arXiv:1607.05764 [hep-ex].  
JHEP 1612 (2016) 083.

### **Jet energy scale and resolution in the CMS experiment in pp collisions at 8 TeV**

CMS Collaboration

arXiv:1607.03663 [hep-ex].

### **Search for lepton flavour violating decays of the Higgs boson to $e\tau$ and $e\mu$ in proton-proton collisions at $\sqrt{s} = 8$ TeV**

CMS Collaboration

arXiv:1607.03561 [hep-ex].

Phys.Lett. B763 (2016) 472-500.

### **Observation of the decay $B^+ \rightarrow \psi(2S)\phi(1020)K^+$ in pp collisions at $\sqrt{s} = 8$ TeV**

CMS Collaboration

arXiv:1607.02638 [hep-ex].

Phys.Lett. B764 (2017) 66-86.

### **Search for new physics in final states with two opposite-sign, same-flavor leptons, jets, and missing transverse momentum in pp collisions at $\sqrt{s} = 13$ TeV**

CMS Collaboration

arXiv:1607.00915 [hep-ex].

JHEP 1612 (2016) 013.

### **Measurement of the differential cross sections for top quark pair production as a function of kinematic event variables in pp collisions at $\sqrt{s} = 7$ and 8 TeV**

CMS Collaboration

arXiv:1607.00837 [hep-ex].

Phys.Rev. D94 (2016) no.5, 052006.

### **Searches for R-parity-violating supersymmetry in pp collisions at $\sqrt{s}=8$ TeV in final states with 0-4 leptons**

CMS Collaboration

arXiv:1606.08076 [hep-ex].

Phys.Rev.D, Phys.Rev. D94 (2016) 112009.

### **Evidence for collectivity in pp collisions at the LHC**

CMS Collaboration

arXiv:1606.06198 [nucl-ex].

### **Measurement of the transverse momentum spectra of weak vector bosons produced in proton-proton collisions at $\sqrt{s} = 8$ TeV**

CMS Collaboration

arXiv:1606.05864 [hep-ex].

### **Search for Resonant Production of High-Mass Photon Pairs in Proton-Proton Collisions at $\sqrt{s} = 8$ and 13 TeV**

CMS Collaboration

arXiv:1606.04093 [hep-ex].

Phys.Rev.Lett. 117 (2016) no.5, 051802.

### **Phenomenological MSSM interpretation of CMS searches in pp collisions at $\sqrt{s} = 7$ and 8 TeV**

CMS Collaboration

arXiv:1606.03577 [hep-ex].

JHEP 1610 (2016) 129.

### **Search for dark matter and supersymmetry with a compressed mass spectrum in the vector boson fusion topology in proton-proton collisions at $\sqrt{s} = 8$ TeV**

CMS Collaboration

arXiv:1605.09305 [hep-ex].

**Search for top squark pair production in compressed-mass-spectrum scenarios in proton-proton collisions at  $\sqrt{s} = 8$  TeV using the  $\alpha_T$  variable**

CMS Collaboration

arXiv:1605.08993 [hep-ex].

**Coherent J/Psi photoproduction in ultra-peripheral PbPb collisions at  $\sqrt{s[NN]} = 2.76$  TeV with the CMS experiment**

CMS Collaboration

arXiv:1605.06966 [nucl-ex].

**Multiplicity and rapidity dependence of strange hadron production in pp, pPb, and PbPb collisions at the LHC**

CMS Collaboration

arXiv:1605.06699 [nucl-ex].

**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**

CMS Collaboration

arXiv:1605.04608 [hep-ex].

JHEP 1608 (2016) 122.

**Measurement of the double-differential inclusive jet cross section in proton-proton collisions at  $\sqrt{s} = 13$  TeV**

CMS Collaboration

arXiv:1605.04436 [hep-ex].

Eur.Phys.J. C76 (2016) no.8, 451.

**Search for new physics in same-sign dilepton events in proton-proton collisions at  $\sqrt{s} = 13$  TeV**

CMS Collaboration

arXiv:1605.03171 [hep-ex]

Eur.Phys.J. C76 (2016) no.8, 439.

**Measurement of the integrated and differential  $t\bar{t}$  production cross sections for high- $p_t$  top quarks in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1605.00116 [hep-ex].

Phys.Rev. D94 (2016) no.7, 072002.

**Search for narrow resonances in dijet final states at  $\sqrt{s} = 8$  TeV with the novel CMS technique of data scouting**

CMS Collaboration

arXiv:1604.08907 [hep-ex].

Phys.Rev.Lett. 117 (2016) no.3, 031802.

**Pseudorapidity dependence of long-range two-particle correlations in pPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

CMS Collaboration

arXiv:1604.05347 [nucl-ex].

**Search for lepton flavour violating decays of heavy resonances and quantum black holes to an  $e\mu$  pair in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1604.05239 [hep-ex].

Eur.Phys.J. C76 (2016) no.6, 317.

**Evidence for exclusive  $\gamma\gamma \rightarrow W^+W^-$  production and constraints on anomalous quartic gauge couplings in  $pp$  collisions at  $\sqrt{s} = 7$  and 8 TeV**

CMS Collaboration

arXiv:1604.04464 [hep-ex].

JHEP 1608 (2016) 119.

**Search for dark matter particles in proton-proton collisions at  $\sqrt{s} = 8$  TeV using the razor variables**

CMS Collaboration

arXiv:1603.08914 [hep-ex].

JHEP 1612 (2016) 088.

**Search for two Higgs bosons in final states containing two photons and two bottom quarks in proton-proton collisions at 8 TeV**

CMS Collaboration

arXiv:1603.06896 [hep-ex].

Phys.Rev. D94 (2016) no.5, 052012.

**Measurement of the top quark mass using charged particles in  $pp$  collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1603.06536 [hep-ex].

Phys.Rev. D93 (2016) no.9, 092006.

**Measurements of  $t\bar{t}$  charge asymmetry using dilepton final states in  $pp$  collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1603.06221 [hep-ex].

Phys.Lett. B760 (2016) 365-386.

**Search for new physics with the  $M_{T2}$  variable in all-jets final states produced in  $pp$  collisions at  $\sqrt{s} = 13$  TeV**

CMS Collaboration

arXiv:1603.04053 [hep-ex].

JHEP 1610 (2016) 006.

**Search for neutral resonances decaying into a Z boson and a pair of b jets or tau leptons**

CMS Collaboration

arXiv:1603.02991 [hep-ex].

Phys.Lett. B759 (2016) 369-394.

**$\Upsilon(nS)$  polarizations versus particle multiplicity in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1603.02913 [hep-ex].

Phys.Lett. B761 (2016) 31-52.

**Measurement of the  $t\bar{t}$  production cross section in the  $e\mu$  channel in proton-proton collisions at  $\sqrt{s} = 7$  and 8 TeV**

CMS Collaboration

arXiv:1603.02303 [hep-ex].

JHEP 1608 (2016) 029.

**Search for heavy Majorana neutrinos in  $e^\pm e^\pm +$  jets and  $e^\pm \mu^\pm +$  jets events in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1603.02248 [hep-ex].

JHEP 1604 (2016) 169.

**Measurement of the differential cross section and charge asymmetry for inclusive  $pp \rightarrow W^\pm + X$  production at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1603.01803 [hep-ex].  
Eur.Phys.J. C76 (2016) no.8, 469.

**Search for direct pair production of supersymmetric top quarks decaying to all-hadronic final states in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1603.00765 [hep-ex].  
Eur.Phys.J. C76 (2016) no.8, 460.

**Measurements of the  $t\bar{t}$  production cross section in lepton+jets final states in pp collisions at 8 TeV and ratio of 8 to 7 TeV cross sections**

CMS Collaboration  
arXiv:1602.09024 [hep-ex].

**Search for supersymmetry in electroweak production with photons and large missing transverse energy in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1602.08772 [hep-ex].  
Phys.Lett. B759 (2016) 479-500.

**Search for heavy resonances decaying to two Higgs bosons in final states containing four b quarks**

CMS Collaboration  
arXiv:1602.08762 [hep-ex].  
Eur.Phys.J. C76 (2016) no.7, 371.

**Measurement of the  $Z\gamma \rightarrow \nu\bar{\nu}\gamma$  production cross section in pp collisions at  $\sqrt{s} = 8$  TeV and limits on anomalous  $ZZ\gamma$  and  $Z\gamma\gamma$  trilinear gauge boson couplings**

CMS Collaboration  
arXiv:1602.07152 [hep-ex].  
Phys.Lett. B760 (2016) 448-468.

**Search for supersymmetry in the multijet and missing transverse momentum final state in pp collisions at 13 TeV**

CMS Collaboration  
arXiv:1602.06581 [hep-ex].  
Phys.Lett. B758 (2016) 152-180.

**Measurement of dijet azimuthal decorrelation in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1602.04384 [hep-ex].  
Eur.Phys.J. C76 (2016) no.10, 536.

**Search for R-parity violating decays of a top squark in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1602.04334 [hep-ex].  
Phys.Lett. B760 (2016) 178-201.

**Combined search for anomalous pseudoscalar HVV couplings in  $VH(H \rightarrow b\bar{b})$  production and  $H \rightarrow VV$  decay**

CMS Collaboration  
arXiv:1602.04305 [hep-ex].  
Phys.Lett. B759 (2016) 672-696.

**Search for direct pair production of scalar top quarks in the single- and dilepton channels in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1602.03169 [hep-ex].  
JHEP 1607 (2016) 027, Erratum: JHEP 1609 (2016) 056.

**Search for supersymmetry in pp collisions at  $\sqrt{s} = 8$  TeV in final states with boosted W bosons and b jets using razor variables**

CMS Collaboration  
arXiv:1602.02917 [hep-ex].  
Phys.Rev. D93 (2016) no.9, 092009.

**Azimuthal decorrelation of jets widely separated in rapidity in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1601.06713 [hep-ex].  
JHEP 1608 (2016) 139.

**Search for massive WH resonances decaying into the  $\ell\nu b\bar{b}$  final state at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1601.06431 [hep-ex].  
Eur.Phys.J. C76 (2016) no.5, 237.

**Forward-backward asymmetry of Drell-Yan lepton pairs in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1601.04768 [hep-ex].  
Eur.Phys.J. C76 (2016) no.6, 325.

**Measurement of inclusive jet production and nuclear modifications in pPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

CMS Collaboration  
arXiv:1601.02001 [nucl-ex].  
Eur.Phys.J. C76 (2016) no.7, 372.

**Measurements of  $t\bar{t}$  spin correlations and top quark polarization using dilepton final states in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1601.01107 [hep-ex].  
Phys.Rev. D93 (2016) no.5, 052007.

**Correlations between jets and charged particles in PbPb and pp collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration  
arXiv:1601.00079 [nucl-ex].  
JHEP 1602 (2016) 156.

**Measurement of differential and integrated fiducial cross sections for Higgs boson production in the four-lepton decay channel in pp collisions at  $\sqrt{s} = 7$  and 8 TeV**

CMS Collaboration  
arXiv:1512.08377 [hep-ex].  
JHEP 1604 (2016) 005.

**Search for supersymmetry in events with soft leptons, low jet multiplicity, and missing transverse momentum in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1512.08002 [hep-ex].  
Phys.Lett. B759 (2016) 9-35.

**Study of Z boson production in pPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

CMS Collaboration  
arXiv:1512.06461 [hep-ex].

Phys.Lett. B759 (2016) 36-57.

**Measurement of the inclusive jet cross section in pp collisions at  $\sqrt{s}= 2.76$  TeV**

CMS Collaboration

arXiv:1512.06212 [hep-ex].

Eur.Phys.J. C76 (2016) no.5, 265.

**Search for narrow resonances decaying to dijets in proton-proton collisions at  $\sqrt{s} = 13$  TeV**

CMS Collaboration

arXiv:1512.01224 [hep-ex].

Phys.Rev.Lett. 116 (2016) no.7, 071801.

**Event generator tunes obtained from underlying event and multiparton scattering measurements**

CMS Collaboration

arXiv:1512.00815 [hep-ex].

Eur.Phys.J. C76 (2016) no.3, 155.

**Search for dark matter and unparticles produced in association with a Z boson in proton-proton collisions at  $\sqrt{s}= 8$  TeV**

CMS Collaboration

arXiv:1511.09375 [hep-ex].

Phys.Rev. D93 (2016) no.5, 052011.

**Measurement of spin correlations in  $t\bar{t}$  production using the matrix element method in the muon+jets final state in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1511.06170 [hep-ex].

Phys.Lett. B758 (2016) 321-346.

**Search for a low-mass pseudoscalar Higgs boson produced in association with a  $b\bar{b}$  pair in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1511.03610 [hep-ex].

Phys.Lett. B758 (2016) 296-320.

**Search for excited leptons in proton-proton collisions at  $\sqrt{s}= 8$  TeV**

CMS Collaboration

arXiv:1511.01407 [hep-ex].

JHEP 1603 (2016) 125.

**Reconstruction and identification of  $\tau$  lepton decays to hadrons and  $\nu_\tau$  at CMS**

CMS Collaboration

arXiv:1510.07488 [physics.ins-det].

JINST 11 (2016) no.01, P01019.

**Search for a very light NMSSM Higgs boson produced in decays of the 125 GeV scalar boson and decaying into  $\tau$  leptons in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1510.06534 [hep-ex].

JHEP 1601 (2016) 079.

**Measurement of the top quark pair production cross section in proton-proton collisions at  $\sqrt{s} = 13$  TeV**

CMS Collaboration

arXiv:1510.05302 [hep-ex].

Phys.Rev.Lett. 116 (2016) no.5, 052002.



**Search for a light charged Higgs boson decaying to  $c\bar{s}$  in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1510.04252 [hep-ex].  
JHEP 1512 (2015) 178.

**Transverse momentum spectra of b jets in pPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

CMS Collaboration  
arXiv:1510.03373 [nucl-ex].  
Phys.Lett. B754 (2016) 59.

**Measurement of  $t\bar{t}$  production with additional jet activity, including b quark jets, in the dilepton decay channel using pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1510.03072 [hep-ex].  
Eur.Phys.J. C76 (2016) no.7, 379.

**Measurement of long-range near-side two-particle angular correlations in pp collisions at  $\sqrt{s} = 13$  TeV**

CMS Collaboration  
arXiv:1510.03068 [nucl-ex].  
Phys.Rev.Lett. 116 (2016) no.17, 172302.

**Searches for a heavy scalar boson  $H$  decaying to a pair of 125 GeV Higgs bosons  $hh$  or for a heavy pseudoscalar boson  $A$  decaying to  $Zh$ , in the final states with  $h \rightarrow \tau\tau$**

CMS Collaboration  
arXiv:1510.01181 [hep-ex].  
Phys.Lett. B755 (2016) 217-244.

**Observation of top quark pairs produced in association with a vector boson in pp collisions at  $\sqrt{s}=8$  TeV**

CMS Collaboration  
arXiv:1510.01131 [hep-ex].  
JHEP 1601 (2016) 096.

**Measurement of transverse momentum relative to dijet systems in PbPb and  $pp$  collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration  
arXiv:1509.09029 [nucl-ex].  
JHEP 1606 (2016) 177.

**Search for the Production of an Excited Bottom Quark Decaying to  $tW$  in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1509.08141 [hep-ex].  
JHEP 1601 (2016) 166.

**Measurement of the  $t\bar{t}$  Production Cross Section in the All-Jets Final State in pp Collisions at  $\sqrt{s}=8$  TeV**

CMS Collaboration  
arXiv:1509.06076 [hep-ex].  
Eur.Phys.J. C76 (2016) no.3, 128.

**Search for  $W' \rightarrow t\bar{b}$  in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1509.06051 [hep-ex].  
JHEP 1602 (2016) 122.

**Search for Vector-Like Charge 2/3 T Quarks in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1509.04177 [hep-ex].  
Phys.Rev. D93 (2016) no.1, 012003.

**Measurement of the top quark mass using proton-proton data at  $\sqrt{s} = 7$  and 8 TeV**

CMS Collaboration  
arXiv:1509.04044 [hep-ex].  
Phys.Rev. D93 (2016) no.7, 072004.

**Measurement of the Inelastic Cross Section in Proton-Lead Collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

CMS Collaboration  
arXiv:1509.03893 [hep-ex].  
Phys.Lett. B759 (2016) 641-662.

**Search for Single Production of Scalar Leptoquarks in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1509.03750 [hep-ex].  
Phys.Rev. D93 (2016) no.3, 032005.

**Search for Pair Production of First and Second Generation Leptoquarks in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1509.03744 [hep-ex].  
Phys.Rev. D93 (2016) no.3, 032004.

**Measurement of Differential Cross Sections for Higgs Boson Production in the Diphoton Decay Channel in pp Collisions at  $\sqrt{s}=8$  TeV**

CMS Collaboration  
arXiv:1508.07819 [hep-ex].  
Eur.Phys.J. C76 (2016) no.1, 13.

**Search for a charged Higgs boson in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1508.07774 [hep-ex].  
JHEP 1511 (2015) 018.

**Search for supersymmetry in the vector-boson fusion topology in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1508.07628 [hep-ex].  
JHEP 1511 (2015) 189.

**Study of B Meson Production in pPb Collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

CMS Collaboration  
arXiv:1508.06678 [nucl-ex].  
Phys.Rev.Lett. 116 (2016) no.3, 032301.

**Search for  $W'$  decaying to tau lepton and neutrino in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1508.04308 [hep-ex].  
Phys.Lett. B755 (2016) 196-216.

**Search for neutral MSSM Higgs bosons decaying to  $\mu^+\mu^-$  in pp collisions at  $\sqrt{s} = 7$  and 8 TeV**

CMS Collaboration  
arXiv:1508.01437 [hep-ex].  
Phys.Lett. B752 (2016) 221-246.

**Search for Supersymmetry with a Photon, a Lepton, and Missing Transverse Momentum in pp Collisions at**

$\sqrt{s} = 8 \text{ TeV}$

CMS Collaboration

arXiv:1508.01218 [hep-ex].

Phys.Lett. B757 (2016) 6-31.

**Angular analysis of the decay  $B^0 \rightarrow K^{*0} \mu^+ \mu^-$  from pp collisions at  $\sqrt{s} = 8 \text{ TeV}$**

CMS Collaboration

arXiv:1507.08126 [hep-ex].

Phys.Lett. B753 (2016) 424-448.

**Measurement of the CP-violating weak phase  $\phi_s$  and the decay width difference  $\Delta\Gamma_s$  using the  $B_s^0 \rightarrow J/\psi \phi(1020)$  decay channel in pp collisions at  $\sqrt{s} = 8 \text{ TeV}$**

CMS Collaboration

arXiv:1507.07527 [hep-ex].

Phys.Lett. B757 (2016) 97-120.

**Measurement of the underlying event activity using charged-particle jets in proton-proton collisions at  $\sqrt{s} = 2.76 \text{ TeV}$**

CMS Collaboration

arXiv:1507.07229 [hep-ex].

JHEP 1509 (2015) 137.

**Search for pair-produced vector-like B quarks in proton-proton collisions at  $\sqrt{s} = 8 \text{ TeV}$**

CMS Collaboration

arXiv:1507.07129 [hep-ex].

Phys.Rev. D93 (2016) no.11, 112009.

**Limits on the Higgs boson lifetime and width from its decay to four charged leptons**

CMS Collaboration

arXiv:1507.06656 [hep-ex].

Phys.Rev. D92 (2015) 7, 072010.

**Pseudorapidity distribution of charged hadrons in proton-proton collisions at  $\sqrt{s} = 13 \text{ TeV}$**

CMS Collaboration

arXiv:1507.05915 [hep-ex].

Phys.Lett. B751 (2015) 143-163.

**Measurement of the  $W^+W^-$  cross section in pp collisions at  $\sqrt{s} = 8 \text{ TeV}$  and limits on anomalous gauge couplings**

CMS Collaboration

arXiv:1507.03268 [hep-ex].

Eur.Phys.J. C76 (2016) no.7, 401.

**Inclusive and differential measurements of the  $t\bar{t}$  charge asymmetry in pp collisions at  $\sqrt{s} = 8 \text{ TeV}$**

CMS Collaboration

arXiv:1507.03119 [hep-ex].

Phys.Lett. B757 (2016) 154-179.

**Search for a Higgs boson decaying into  $\gamma^* \gamma \rightarrow \ell\ell\gamma$  with low dilepton mass in pp collisions at  $\sqrt{s} = 8 \text{ TeV}$**

CMS Collaboration

arXiv:1507.03031 [hep-ex].

Phys.Lett. B753 (2016) 341-362.

**Search for supersymmetry with photons in pp collisions at  $\sqrt{s} = 8 \text{ TeV}$**  CMS Collaboration

arXiv:1507.02898 [hep-ex].

Phys.Rev. D92 (2015) 7, 072006.

**Search for exotic decays of a Higgs boson into undetectable particles and one or more photons**

CMS Collaboration

arXiv:1507.00359 [hep-ex].

Phys.Lett. B753 (2016) 363-388.

**Production of leading charged particles and leading charged-particle jets at small transverse momenta in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1507.00233 [hep-ex].

Phys.Rev. D92 (2015) 11, 112001.

**Search for Neutral MSSM Higgs Bosons Decaying into A Pair of Bottom Quarks**

CMS Collaboration

arXiv:1506.08329 [hep-ex].

JHEP 1511 (2015) 071.

**Search for Resonant  $t\bar{t}$  Production in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1506.03062 [hep-ex].

Phys.Rev. D93 (2016) no.1, 012001.

**Search for diphoton resonances in the mass range from 150 to 850 GeV in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1506.02301 [hep-ex].

Phys.Lett. B750 (2015) 494-519.

**Search for A Massive Resonance Decaying into a Higgs Boson and a W or Z Boson in Hadronic Final States in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1506.01443 [hep-ex].

JHEP 1602 (2016) 145.

**Search for the standard model Higgs boson produced through vector boson fusion and decaying to  $b\bar{b}$  CMS**

Collaboration

arXiv:1506.01010 [hep-ex].

Phys.Rev. D92 (2015) 3, 032008.

**A search for pair production of new light bosons decaying into muons CMS Collaboration**

arXiv:1506.00424 [hep-ex].

Phys.Lett. B752 (2016) 146-168.

**Search for neutral color-octet weak-triplet scalar particles in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1505.08118 [hep-ex].

JHEP 1509 (2015) 201.

**Comparison of the  $Z/\gamma^* + \text{jets}$  to  $\gamma + \text{jets}$  cross sections in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1505.06520 [hep-ex].

JHEP 1510 (2015) 128.

**Measurement of the differential cross section for top quark pair production in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1505.04480 [hep-ex].  
Eur.Phys.J. C75 (2015) 11, 542.

**Search for a pseudoscalar boson decaying into a Z boson and the 125 GeV Higgs boson in  $l^+l^-b\bar{b}$  final states** CMS Collaboration  
arXiv:1504.04710 [hep-ex].  
Phys.Lett. B748 (2015) 221-243.

**Angular coefficients of Z bosons produced in pp collisions at  $\sqrt{s} = 8$  TeV and decaying to  $\mu^+\mu^-$  as a function of transverse momentum and rapidity** CMS Collaboration  
arXiv:1504.03512 [hep-ex].  
Phys.Lett. B750 (2015) 154-175.

**Measurement of the Z boson differential cross section in transverse momentum and rapidity in proton proton collisions at 8 TeV** CMS Collaboration  
arXiv:1504.03511 [hep-ex].  
Phys.Lett. B749 (2015) 187-209.

**Search for the production of dark matter in association with top-quark pairs in the single-lepton final state in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1504.03198 [hep-ex].  
JHEP 1506 (2015) 121.

**Search for a Higgs Boson in the Mass Range from 145 to 1000 GeV Decaying to a Pair of W or Z Bosons** CMS Collaboration  
arXiv:1504.00936 [hep-ex].  
JHEP 1510 (2015) 144.

**Search for Third-Generation Scalar Leptoquarks in the  $t\tau$  Channel in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1503.09049 [hep-ex].  
JHEP 1507 (2015) 042.

**Measurement of diffraction dissociation cross sections in pp collisions at  $\sqrt{s} = 7$  TeV** CMS Collaboration  
arXiv:1503.08689 [hep-ex].  
Phys.Rev. D92 (2015) 1, 012003.

**Searches for third-generation squark production in fully hadronic final states in proton-proton collisions at  $\sqrt{s} = 8$  TeV** CMS Collaboration  
arXiv:1503.08037 [hep-ex].  
JHEP 1506 (2015) 116.

**Combined Measurement of the Higgs Boson Mass in  $pp$  Collisions at  $\sqrt{s} = 7$  and 8 TeV with the ATLAS and CMS Experiments** ATLAS and CMS Collaborations  
arXiv:1503.07589 [hep-ex].  
Phys.Rev.Lett. 114 (2015) 191803.

**Study of W boson production in pPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV** CMS Collaboration

arXiv:1503.05825 [nucl-ex].  
Phys.Lett. B750 (2015) 565-586.

**Measurements of the  $Z Z$  production cross sections in the  $2l2\nu$  channel in proton-proton collisions at  $\sqrt{s} = 7$  and 8 TeV and combined constraints on triple gauge couplings**

CMS Collaboration  
arXiv:1503.05467 [hep-ex].  
Eur.Phys.J. C75 (2015) 10, 511.

**Search for resonant pair production of Higgs bosons decaying to two bottom quark-antiquark pairs in proton-proton collisions at 8 TeV**

CMS Collaboration  
arXiv:1503.04114 [hep-ex].  
Phys.Lett. B749 (2015) 560-582.

**Search for vector-like  $T$  quarks decaying to top quarks and Higgs bosons in the all-hadronic channel using jet substructure**

CMS Collaboration  
arXiv:1503.01952 [hep-ex].  
JHEP 1506 (2015) 080.

**Evidence for transverse momentum and pseudorapidity dependent event plane fluctuations in PbPb and pPb collisions**

CMS Collaboration  
arXiv:1503.01692 [nucl-ex].  
Phys.Rev. C92 (2015) 3, 034911.124.

**Study of Final-State Radiation in Decays of  $Z$  Bosons Produced in  $pp$  Collisions at 7 TeV**

CMS Collaboration  
arXiv:1502.07940 [hep-ex].  
Phys.Rev. D91 (2015) 9, 092012.124.

**Search for Lepton-Flavour-Violating Decays of the Higgs Boson**

CMS Collaboration  
arXiv:1502.07400 [hep-ex].  
Phys.Lett. B749 (2015) 337-362.124.

**Search for Physics Beyond the Standard Model in Events with Two Leptons, Jets, and Missing Transverse Momentum in  $pp$  Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1502.06031 [hep-ex].  
JHEP 1504 (2015) 124.

**Measurement of the  $Z\gamma$  Production Cross Section in  $pp$  Collisions at 8 TeV and Search for Anomalous Triple Gauge Boson Couplings**

CMS Collaboration  
arXiv:1502.05664 [hep-ex].  
JHEP 1504 (2015) 164.

**Nuclear Effects on the Transverse Momentum Spectra of Charged Particles in pPb Collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

CMS Collaboration  
arXiv:1502.05387 [nucl-ex].  
Eur.Phys.J. C75 (2015) 5, 237.

**Evidence for Collective Multiparticle Correlations in p-Pb Collisions**

CMS Collaboration  
arXiv:1502.05382 [nucl-ex].  
Phys.Rev.Lett. 115 (2015) 1, 012301.

**Search for Narrow High-Mass Resonances in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV Decaying to a Z and a Higgs Boson**

CMS Collaboration  
arXiv:1502.04994 [hep-ex].  
Phys.Lett. B748 (2015) 255-277.

**Distributions of Topological Observables in Inclusive Three- and Four-Jet Events in pp Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1502.04785 [hep-ex].  
Eur.Phys.J. C75 (2015) 7, 302.

**Searches for Supersymmetry using the  $M_{T2}$  Variable in Hadronic Events Produced in pp Collisions at 8 TeV**

CMS Collaboration  
arXiv:1502.04358 [hep-ex].  
JHEP 1505 (2015) 078.

**Measurement of  $J/\psi$  and  $\psi(2S)$  Prompt Double-Differential Cross Sections in pp Collisions at  $\sqrt{s}=7$ TeV**

CMS Collaboration  
arXiv:1502.04155 [hep-ex]. Phys.Rev.Lett. 114 (2015) 19, 191802.

**Performance of Photon Reconstruction and Identification with the CMS Detector in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1502.02702 [physics.ins-det].  
JINST 10 (2015) 08, P08010.

**Performance of Electron Reconstruction and Selection with the CMS Detector in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1502.02701 [physics.ins-det].  
JINST 10 (2015) 06, P06005.

**Constraints on the pMSSM, AMSB Model and on Other Models from the Search for Long-Lived Charged Particles in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1502.02522 [hep-ex].  
Eur.Phys.J. C75 (2015) 7, 325.

**Search for Supersymmetry Using Razor Variables in Events with  $b$ -Tagged Jets in  $pp$  Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1502.00300 [hep-ex].  
Phys.Rev. D91 (2015) 052018.

**Measurements of the  $\Upsilon(1S)$ ,  $\Upsilon(2S)$ , and  $\Upsilon(3S)$  differential cross sections in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1501.07750 [hep-ex].  
Phys.Lett. B749 (2015) 14-34.

**Measurement of the ratio  $\mathcal{B}(B_s^0 \rightarrow J/\psi f_0(980))/\mathcal{B}(B_s^0 \rightarrow J/\psi \phi(1020))$  in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1501.06089 [hep-ex].

Phys.Lett. B756 (2016) 84-102.

**Search for Decays of Stopped Long-Lived Particles Produced in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1501.05603 [hep-ex].

Eur.Phys.J. C75 (2015) 4, 151.

**Search for heavy Majorana neutrinos in  $\mu^\pm \mu^\pm +$  jets events in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1501.05566 [hep-ex].

Phys.Lett. B748 (2015) 144-166.

**Search for resonances and quantum black holes using dijet mass spectra in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1501.04198 [hep-ex].

Phys.Rev. D91 (2015) 5, 052009.

**Search for pair-produced resonances decaying to jet pairs in proton-proton collisions at  $\sqrt{s}=8$  TeV**

CMS Collaboration

arXiv:1412.7706 [hep-ex].

Phys.Lett. B747 (2015) 98-119.

**Search for physics beyond the standard model in dilepton mass spectra in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1412.6302 [hep-ex].

JHEP 1504 (2015) 025.

**Searches for supersymmetry based on events with b jets and four W bosons in pp collisions at 8 TeV**

CMS Collaboration

arXiv:1412.4109 [hep-ex].

Phys.Lett. B745 (2015) 5-28.

**Measurement of the inclusive 3-jet production differential cross section in proton-proton collisions at 7 TeV and determination of the strong coupling constant in the TeV range**

CMS Collaboration

arXiv:1412.1633 [hep-ex].

Eur.Phys.J. C75 (2015) 5, 186.

**Measurements of differential and double-differential Drell-Yan cross sections in proton-proton collisions at 8 TeV**

CMS Collaboration

arXiv:1412.1115 [hep-ex].

Eur.Phys.J. C75 (2015) 4, 147.

**Search for stealth supersymmetry in events with jets, either photons or leptons, and low missing transverse momentum in pp collisions at 8 TeV**

CMS Collaboration

arXiv:1411.7255 [hep-ex].

Phys.Lett. B743 (2015) 503-525.

**Search for long-lived particles that decay into final states containing two electrons or two muons in proton-proton collisions at  $\sqrt{s} = 8$  TeV**



CMS Collaboration  
arXiv:1411.6977 [hep-ex].  
Phys.Rev. D91 (2015) 5, 052012.

**Search for Long-Lived Neutral Particles Decaying to Quark-Antiquark Pairs in Proton-Proton Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1411.6530 [hep-ex].  
Phys.Rev. D91 (2015) 1, 012007.

**Search for disappearing tracks in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1411.6006 [hep-ex].  
JHEP 1501 (2015) 096.

**Measurement of the cross section ratio  $\sigma_{t\bar{t}b\bar{b}}/\sigma_{t\bar{t}jj}$  in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1411.5621 [hep-ex].  
Phys.Lett. B746 (2015) 132-153.

**Observation of the rare  $B_s^0 \rightarrow \mu^+ \mu^-$  decay from the combined analysis of CMS and LHCb data**

CMS and LHCb Collaborations  
arXiv:1411.4413 [hep-ex].  
Nature 522 (2015) 68-72.

**Search for quark contact interactions and extra spatial dimensions using dijet angular distributions in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1411.2646 [hep-ex].  
Phys.Lett. B746 (2015) 79-99.

**Performance of the CMS missing transverse momentum reconstruction in pp data at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1411.0511 [physics.ins-det].  
JINST 10 (2015) 02, P02006.

**Search for new phenomena in monophoton final states in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1410.8812 [hep-ex].  
Phys.Lett. B755 (2016) 102-124.

**Constraints on parton distribution functions and extraction of the strong coupling constant from the inclusive jet cross section in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1410.6765 [hep-ex].  
Eur.Phys.J. C75 (2015) 6, 288.

**Search for a standard model-like Higgs boson in the  $\mu^+ \mu^-$  and  $e^+ e^-$  decay channels at the LHC**

CMS Collaboration  
arXiv:1410.6679 [hep-ex].  
Phys.Lett. B744 (2015) 184-207.

**Study of vector boson scattering and search for new physics in events with two same-sign leptons and two jets**

CMS Collaboration  
arXiv:1410.6315 [hep-ex].

Phys.Rev.Lett. 114 (2015) 5, 051801.

**Measurement of the ratio of the production cross sections times branching fractions of  $B_c^\pm \rightarrow J/\psi\pi^\pm$  and  $B^\pm \rightarrow J/\psi K^\pm$  and  $\mathcal{B}(B_c^\pm \rightarrow J/\psi\pi^\pm\pi^\pm\pi^\mp)/\mathcal{B}(B_c^\pm \rightarrow J/\psi\pi^\pm)$  in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1410.5729 [hep-ex].

JHEP 1501 (2015) 063.

**Study of Z production in PbPb and pp collisions at  $\sqrt{s_{NN}} = 2.76$  TeV in the dimuon and dielectron decay channels**

CMS Collaboration

arXiv:1410.4825 [nucl-ex].

JHEP 1503 (2015) 022..

**Identification techniques for highly boosted W bosons that decay into hadrons**

CMS Collaboration

arXiv:1410.4227 [hep-ex].

JHEP 1412 (2014) 017..

**Measurement of electroweak production of two jets in association with a Z boson in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1410.3153 [hep-ex].

Eur.Phys.J. C75 (2015) 2, 66..

**Searches for heavy Higgs bosons in two-Higgs-doublet models and for  $t - ch$  decay using multilepton and diphoton final states in pp collisions at 8 TeV**

CMS Collaboration

arXiv:1410.2751 [hep-ex].

Phys.Rev. D90 (2014) 112013..

**Measurement of Prompt  $\psi(2S) \rightarrow J/\psi$  Yield Ratios in Pb-Pb and  $p - p$  Collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration

arXiv:1410.1804 [nucl-ex].

Phys.Rev.Lett. 113 (2014) 26, 262301.

**Search for Standard Model Production of Four Top Quarks in the Lepton + Jets Channel in pp Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1409.7339 [hep-ex].

JHEP 1411 (2014) 154.

**Measurement of the production cross section ratio  $\sigma(\chi_{b2}(1P)) / \sigma(\chi_{b1}(1P))$  in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1409.5761 [hep-ex].

Phys.Lett. B743 (2015) 383-402.

**Search for Displaced Supersymmetry in events with an electron and a muon with large impact parameters**

CMS Collaboration

arXiv:1409.4789 [hep-ex].

Phys.Rev.Lett. 114 (2015) 6, 061801.

**Long-range two-particle correlations of strange hadrons with charged particles in pPb and PbPb collisions at LHC energies**

CMS Collaboration  
arXiv:1409.3392 [nucl-ex].  
Phys.Lett. B742 (2015) 200-224.

**Searches for electroweak neutralino and chargino production in channels with Higgs, Z, and W bosons in pp collisions at 8 TeV**

CMS Collaboration  
arXiv:1409.3168 [hep-ex].  
Phys.Rev. D90 (2014) 9, 092007.

**Search for dark matter, extra dimensions, and unparticles in monojet events in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1408.3583 [hep-ex].  
Eur.Phys.J. C75 (2015) 5, 235.

**Search for neutral MSSM Higgs bosons decaying to a pair of tau leptons in pp collisions**

CMS Collaboration  
arXiv:1408.3316 [hep-ex].  
JHEP 1410 (2014) 160.

**Measurements of jet multiplicity and differential production cross sections of  $Z +$  jets events in proton-proton collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1408.3104 [hep-ex].  
Phys.Rev. D91 (2015) 5, 052008.

**Search for physics beyond the standard model in final states with a lepton and missing transverse energy in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1408.2745 [hep-ex].  
Phys.Rev. D91 (2015) 9, 092005.

**Search for the associated production of the Higgs boson with a top-quark pair**

CMS Collaboration  
arXiv:1408.1682 [hep-ex].  
JHEP 1409 (2014) 087, Erratum-ibid. 1410 (2014) 106.

**Search for pair production of third-generation scalar leptoquarks and top squarks in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1408.0806 [hep-ex].  
Phys.Lett. B739 (2014) 229.

**Measurement of the  $t\bar{t}$  production cross section in  $pp$  collisions at  $\sqrt{s} = 8$  TeV in dilepton final states containing one  $\tau$  lepton**

CMS Collaboration  
arXiv:1407.6643 [hep-ex].  
Phys.Lett. B739 (2014) 23-43.

**Search for heavy neutrinos and W bosons with right-handed couplings in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1407.3683 [hep-ex].  
Eur.Phys.J. C74 (2014) 11, 3149.

**Search for new resonances decaying via WZ to leptons in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1407.3476 [hep-ex].  
Phys.Lett. B740 (2014) 83-104.

**Study of hadronic event-shape variables in multijet final states in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1407.2856 [hep-ex].  
JHEP 1410 (2014) 87.

**Observation of the diphoton decay of the Higgs boson and measurement of its properties**

CMS Collaboration  
arXiv:1407.0558 [hep-ex].  
Eur.Phys.J. C74 (2014) 10, 3076.

**Measurement of top quark-antiquark pair production in association with a W or Z boson in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1406.7830 [hep-ex].  
Eur.Phys.J. C74 (2014) 9, 3060.

**Differential cross section measurements for the production of a W boson in association with jets in proton-proton collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1406.7533 [hep-ex].  
Phys.Lett. B741 (2015) 12.

**Search for excited quarks in the  $\gamma$ +jet final state in proton proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1406.5171 [hep-ex].  
Phys.Lett. B738 (2014) 274-293.

**Measurement of jet fragmentation in PbPb and pp collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration  
arXiv:1406.0932 [nucl-ex].  
Phys.Rev. C90 (2014) 2, 024908.

**Measurement of prompt  $J/\psi$  pair production in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1406.0484 [hep-ex].  
JHEP 1409 (2014) 094.

**Measurement of the ratio of inclusive jet cross sections using the anti- $k_T$  algorithm with radius parameters  $R=0.5$  and  $0.7$  in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1406.0324 [hep-ex].  
Phys.Rev. D90 (2014) 7, 072006.

**Measurement of the pp to ZZ production cross section and constraints on anomalous triple gauge couplings in four-lepton final states at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1406.0113 [hep-ex].  
Phys.Lett. B740 (2015) 250.

**Search for jet extinction in the inclusive jet- $p_t$  spectrum from proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1405.7653 [hep-ex].  
Phys.Rev. D90 (2014) 3, 032005.

**Measurement of differential cross sections for the production of a pair of isolated photons in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1405.7225 [hep-ex].  
Eur.Phys.J. C74 (2014) 11, 3129.

**Description and performance of track and primary-vertex reconstruction with the CMS tracker**

CMS Collaboration  
arXiv:1405.6569 [physics.ins-det].  
JINST 9 (2014) 10, P10009.

**Search for supersymmetry with razor variables in pp collisions at  $\sqrt{s}=7$  TeV**

CMS Collaboration  
arXiv:1405.3961 [hep-ex].  
Phys.Rev. D90 (2014) 11, 112001.

**Search for top-squark pairs decaying into Higgs or Z bosons in pp collisions at  $\sqrt{s}=8$  TeV**

CMS Collaboration  
arXiv:1405.3886 [hep-ex].  
Phys.Lett. B736 (2014) 371-397.

**Constraints on the Higgs boson width from off-shell production and decay to Z-boson pairs**

CMS Collaboration  
arXiv:1405.3455 [hep-ex].  
Phys.Lett. B736 (2014) 64.

**Search for massive resonances decaying into pairs of boosted bosons in semi-leptonic final states at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1405.3447 [hep-ex].  
JHEP 1408 (2014) 174.

**Search for massive resonances in dijet systems containing jets tagged as W or Z boson decays in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1405.1994 [hep-ex].  
JHEP 1408 (2014) 173.

**Measurement of pseudorapidity distributions of charged particles in proton-proton collisions at  $\sqrt{s} = 8$  TeV by the CMS and TOTEM experiments**

CMS and TOTEM Collaborations  
arXiv:1405.0722 [hep-ex].  
Eur.Phys.J. C74 (2014) 10, 3053.

**Search for anomalous production of events with three or more leptons in  $pp$  collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1404.5801 [hep-ex].  
Phys.Rev. D90 (2014) 3, 032006.

**Search for  $WW\gamma$  and  $WZ\gamma$  production and constraints on anomalous quartic gauge couplings in  $pp$  collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1404.4619 [hep-ex].

Phys.Rev. D90 (2014) 3, 032008.

**Measurement of jet multiplicity distributions in  $t\bar{t}$  production in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1404.3171 [hep-ex].

Eur.Phys.J. C74 (2014) 8, 3014.

**Measurement of the ratio  $B(t \rightarrow Wb)/B(t \rightarrow Wq)$  in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1404.2292 [hep-ex].

Phys.Lett. B736 (2014) 33.

**Search for invisible decays of Higgs bosons in the vector boson fusion and associated ZH production modes**

CMS Collaboration

arXiv:1404.1344 [hep-ex].

Eur.Phys.J. C74 (2014) 8, 2980.

**Measurement of WZ and ZZ production in pp collisions at  $\sqrt{s} = 8$  TeV in final states with b-tagged jets**

CMS Collaboration

arXiv:1403.3047 [hep-ex].

Eur.Phys.J. C74 (2014) 8, 2973.

**Alignment of the CMS tracker with LHC and cosmic ray data**

CMS Collaboration

arXiv:1403.2286 [physics.ins-det].

JINST 9 (2014) P06009.

**Search for new physics in the multijet and missing transverse momentum final state in proton-proton collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1402.4770 [hep-ex].

JHEP 1406 (2014) 055.

**Measurements of the  $t\bar{t}$  charge asymmetry using the dilepton decay channel in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1402.3803 [hep-ex].

JHEP 1404 (2014) 191.

**Search for  $W' \rightarrow tb$  decays in the lepton + jets final state in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1402.2176 [hep-ex].

JHEP 1405 (2014) 108.

**Measurement of the production cross sections for a Z boson and one or more b jets in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1402.1521 [hep-ex].

JHEP 1406 (2014) 120.

**Measurement of inclusive W and Z boson production cross sections in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1402.0923 [hep-ex].

Phys.Rev.Lett. 112 (2014) 191802.

### **Evidence for the direct decay of the 125 GeV Higgs boson to fermions**

CMS Collaboration

arXiv:1401.6527 [hep-ex].

Nature Phys. 10 (2014) 557-560.

### **Evidence for the 125 GeV Higgs boson decaying to a pair of $\tau$ leptons**

CMS Collaboration

arXiv:1401.5041 [hep-ex].

JHEP 1405 (2014) 104.

### **Studies of dijet transverse momentum balance and pseudorapidity distributions in pPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV**

CMS Collaboration

arXiv:1401.4433 [nucl-ex].

Eur.Phys.J. C74 (2014) 7, 2951.

### **Measurement of the $t\bar{t}$ production cross section in the dilepton channel in pp collisions at $\sqrt{s} = 8$ TeV**

CMS Collaboration

arXiv:1312.7582 [hep-ex], arXiv:1312.7582.

JHEP 1402 (2014) 024, Erratum-ibid. 1402 (2014) 102.

### **Measurement of the production cross section for a W boson and two b jets in pp collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1312.6608 [hep-ex].

Phys.Lett. B735 (2014) 204.

### **Measurement of four-jet production in proton-proton collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1312.6440 [hep-ex].

Phys.Rev. D89 (2014) 9, 092010.

### **Event activity dependence of Y(nS) production in $\sqrt{s_{NN}}=5.02$ TeV pPb and $\sqrt{s}=2.76$ TeV pp collisions**

CMS Collaboration

arXiv:1312.6300 [nucl-ex].

JHEP 1404 (2014) 103.

### **Measurement of the muon charge asymmetry in inclusive $pp \rightarrow W + X$ production at $\sqrt{s} = 7$ TeV and an improved determination of light parton distribution functions**

CMS Collaboration

arXiv:1312.6283 [hep-ex].

Phys.Rev. D90 (2014) 3, 032004.

### **Study of double parton scattering using W + 2-jet events in proton-proton collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1312.5729 [hep-ex].

JHEP 1403 (2014) 032.

### **Measurement of the properties of a Higgs boson in the four-lepton final state**

CMS Collaboration

arXiv:1312.5353 [hep-ex].

Phys.Rev. D89 (2014) 092007.

### **Evidence of b-Jet Quenching in PbPb Collisions at $\sqrt{s_{NN}} = 2.76$ TeV**

CMS Collaboration

arXiv:1312.4198 [nucl-ex].

Phys.Rev.Lett. 113 (2014) 13, 132301.

**Search for Flavor-Changing Neutral Currents in Top-Quark Decays  $t \rightarrow Zq$  in  $pp$  Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1312.4194 [hep-ex].

Phys.Rev.Lett. 112 (2014) 17, 171802.

**Search for top squark and higgsino production using diphoton Higgs boson decays**

CMS Collaboration

arXiv:1312.3310 [hep-ex].

Phys.Rev.Lett. 112 (2014) 161802.

**Search for top-quark partners with charge 5/3 in the same-sign dilepton final state**

CMS Collaboration

arXiv:1312.2391 [hep-ex].

Phys.Rev.Lett. 112 (2014) 171801.

**Studies of azimuthal dihadron correlations in ultra-central PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration

arXiv:1312.1845 [nucl-ex].

JHEP 1402 (2014) 088.

**Inclusive search for a vector-like T quark with charge  $\frac{2}{3}$  in  $pp$  collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1311.7667 [hep-ex].

Phys.Lett. B729 (2014) 149-171.

**Search for new physics in events with same-sign dileptons and jets in  $pp$  collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1311.6736, arXiv:1311.6736 [hep-ex].

JHEP 1401 (2014) 163.

**Measurement of the triple-differential cross section for photon+jets production in proton-proton collisions at  $\sqrt{s}=7$  TeV**

CMS Collaboration

arXiv:1311.6141 [hep-ex].

JHEP 1406 (2014) 009.

**Probing color coherence effects in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1311.5815 [hep-ex].

Eur.Phys.J. C74 (2014) 6, 2901.

**Search for pair production of excited top quarks in the lepton + jets final state**

CMS Collaboration

arXiv:1311.5357 [hep-ex].

JHEP 1406 (2014) 125.

**Search for supersymmetry in  $pp$  collisions at  $\sqrt{s}=8$  TeV in events with a single lepton, large jet multiplicity, and multiple b jets**

CMS Collaboration

arXiv:1311.4937 [hep-ex].

Phys.Lett. B733 (2014) 328-353.

**Measurements of  $t\bar{t}$  spin correlations and top-quark polarization using dilepton final states in  $pp$  collisions at**



**$\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1311.3924 [hep-ex].

Phys.Rev.Lett. 112 (2014) 182001.

**Searches for light and heavy-flavour three-jet resonances in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1311.1799 [hep-ex].

Phys.Lett. B730 (2014) 193-214.

**Measurement of higher-order harmonic azimuthal anisotropy in PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration

arXiv:1310.8651 [nucl-ex].

Phys.Rev. C89 (2014) 044906.

**Measurement of the differential and double-differential Drell-Yan cross sections in proton-proton collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1310.7291 [hep-ex].

JHEP 1312 (2013) 030.

**Jet and underlying event properties as a function of charged-particle multiplicity in proton proton collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1310.4554 [hep-ex].

Eur.Phys.J. C73 (2013) 12, 2674.

**Search for the standard model Higgs boson produced in association with a W or a Z boson and decaying to bottom quarks**

CMS Collaboration

arXiv:1310.3687 [hep-ex].

Phys.Rev. D89 (2014) 1, 012003.

**Rapidity distributions in exclusive Z + jet and  $\gamma$  + jet events in pp collisions at  $\sqrt{s}=7$  TeV**

CMS Collaboration

arXiv:1310.3082 [hep-ex].

Phys.Rev. D88 (2013) 112009.

**Search for baryon number violation in top-quark decays**

CMS Collaboration

arXiv:1310.1618 [hep-ex].

Phys.Lett. B731 (2014) 173-196.

**Measurement of the cross section and angular correlations for associated production of a Z boson with b hadrons in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1310.1349 [hep-ex].

JHEP 1312 (2013) 039.

**Measurement of associated W + charm production in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1310.1138 [hep-ex].

JHEP 1402 (2014) 013.

**Modification of jet shapes in PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration

arXiv:1310.0878 [nucl-ex].  
Phys.Lett. B730 (2014) 243-263.

**Observation of a peaking structure in the  $J/\psi$   $\phi$  mass spectrum from  $B(+/-)$  to  $J/\psi$   $\phi$   $K(+/-)$  decays**  
CMS Collaboration  
arXiv:1309.6920 [hep-ex].  
Phys.Lett. B734 (2014) 261.

**Searches for new physics using the  $t\bar{t}$  invariant mass distribution in pp collisions at  $\sqrt{s}=8$  TeV**  
CMS Collaboration  
arXiv:1309.2030 [hep-ex].  
Phys.Rev.Lett. 111 (2013) 21, 211804, Erratum-ibid. 112 (2014) 11, 119903.

**Measurement of the production cross section for  $Z\gamma \rightarrow \nu\bar{\nu}\gamma$  in pp collisions at  $\sqrt{s} = 7$  TeV and limits on  $ZZ\gamma$  and  $Z\gamma\gamma$  triple gauge boson couplings**  
CMS Collaboration  
arXiv:1309.1117 [hep-ex].  
JHEP 1310 (2013) 164.

**Search for a new bottomonium state decaying to  $\Upsilon(1S)\pi^+\pi^-$  in pp collisions at  $\sqrt{s} = 8$  TeV**  
CMS Collaboration  
arXiv:1309.0250 [hep-ex].  
Phys.Lett. B727 (2013) 57-76.

**Measurement of the W gamma and Z gamma inclusive cross sections in pp collisions at  $\sqrt{s} = 7$  TeV and limits on anomalous triple gauge boson couplings**  
CMS Collaboration  
arXiv:1308.6832 [hep-ex].  
Phys.Rev. D89 (2014) 092005.

**Measurement of the W-boson helicity in top-quark decays from  $t\bar{t}$  production in lepton+jets events in pp collisions at  $\sqrt{s} = 7$  TeV**  
CMS Collaboration  
arXiv:1308.3879 [hep-ex].  
JHEP 1310 (2013) 167.

**Angular analysis and branching fraction measurement of the decay  $B^0 \rightarrow K^{*0}\mu^+\mu^-$**   
CMS Collaboration  
arXiv:1308.3409 [hep-ex].  
Phys.Lett. B727 (2013) 77-100.

**Search for top-squark pair production in the single-lepton final state in pp collisions at  $\sqrt{s} = 8$  TeV**  
CMS Collaboration  
arXiv:1308.1586 [hep-ex].  
Eur.Phys.J. C73 (2013) 12, 2677.

**Measurement of the prompt  $J/\psi$  and  $\psi(2S)$  polarizations in pp collisions at  $\sqrt{s} = 7$  TeV**  
CMS Collaboration  
arXiv:1307.6070 [hep-ex].  
Phys.Lett. B727 (2013) 381-402.

**Search for a Higgs boson decaying into a Z and a photon in pp collisions at  $\sqrt{s} = 7$  and 8 TeV**  
CMS Collaboration  
arXiv:1307.5515 [hep-ex].  
Phys.Lett. B726 (2013) 587-609.

**Measurement of the  $B(s)$  to  $\mu^+ \mu^-$  branching fraction and search for  $B^0$  to  $\mu^+ \mu^-$  with the CMS Experiment**

CMS Collaboration

arXiv:1307.5025 [hep-ex].

Phys.Rev.Lett. 111 (2013) 101804.

**Measurement of the top-quark mass in all-jets  $t\bar{t}$  events in pp collisions at  $\sqrt{s}=7$  TeV**

CMS Collaboration

arXiv:1307.4617 [hep-ex].

Eur.Phys.J. C74 (2014) 4, 2758.

**Study of the production of charged pions, kaons, and protons in pPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

CMS Collaboration

arXiv:1307.3442 [hep-ex].

Eur.Phys.J. C74 (2014) 6, 2847.

**Determination of the top-quark pole mass and strong coupling constant from the  $t\bar{t}$  production cross section in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1307.1907 [hep-ex].

Phys.Lett. B728 (2014) 496-517, Erratum-ibid. B728 (2014) 526-528.

**Search for top squarks in  $R$ -parity-violating supersymmetry using three or more leptons and b-tagged jets**

CMS Collaboration

arXiv:1306.6643 [hep-ex].

Phys.Rev.Lett. 111 (2013) 22, 221801.

**The performance of the CMS muon detector in proton-proton collisions at  $\sqrt{s} = 7$  TeV at the LHC**

CMS Collaboration

arXiv:1306.6905 [physics.ins-det].

JINST 8 (2013) P11002.

**Energy Calibration and Resolution of the CMS Electromagnetic Calorimeter in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1306.2016 [hep-ex].

JINST 8 (2013) P09009.

**Measurement of the  $W^+W^-$  Cross section in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV and Limits on Anomalous  $WW\gamma$  and  $WWZ$  couplings**

CMS Collaboration

arXiv:1306.1126 [hep-ex].

Eur.Phys.J. C73 (2013) 10, 2610.

**Measurement of the hadronic activity in events with a Z and two jets and extraction of the cross section for the electroweak production of a Z with two jets in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1305.7389 [hep-ex].

JHEP 1310 (2013) 062.

**Measurement of neutral strange particle production in the underlying event in proton-proton collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1305.6016 [hep-ex].

Phys.Rev. D88 (2013) 052001.

**Study of exclusive two-photon production of  $W^+W^-$  in  $pp$  collisions at  $\sqrt{s} = 7$  TeV and constraints on anomalous quartic gauge couplings**

CMS Collaboration

arXiv:1305.5596 [hep-ex].

JHEP 1307 (2013) 116.

**Search for gluino mediated bottom and top-squark production in multijet final states in  $pp$  collisions at 8 TeV**

CMS Collaboration

arXiv:1305.2390 [hep-ex].

Phys.Lett. B725 (2013) 243-270.

**Multiplicity and transverse momentum dependence of two and four-particle correlations in pPb and PbPb collisions**

CMS Collaboration

arXiv:1305.0609 [nucl-ex].

Phys.Lett. B724 (2013) 213-240.

**Searches for long-lived charged particles in  $pp$  collisions at  $\sqrt{s}=7$  and 8 TeV**

CMS Collaboration

arXiv:1305.0491 [hep-ex].

JHEP 1307 (2013) 122.

**Measurement of the ratio of the inclusive 3-jet cross section to the inclusive 2-jet cross section in  $pp$  collisions at  $\sqrt{s} = 7$  TeV and first determination of the strong coupling constant in the TeV range**

CMS Collaboration

arXiv:1304.7498 [hep-ex].

Eur.Phys.J. C73 (2013) 10, 2604.

**Measurement of the  $\Lambda_b^0$  lifetime in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1304.7495 [hep-ex].

JHEP 1307 (2013) 163.

**Measurement of masses in the  $t\bar{t}$  system by kinematic endpoints in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1304.5783 [hep-ex].

Eur.Phys.J. C73 (2013) 2494.

**Search for a standard-model-like Higgs boson with a mass in the range 145 to 1000 GeV at the LHC**

CMS Collaboration

arXiv:1304.0213 [hep-ex].

Eur.Phys.J. C73 (2013) 6, 2469.

**Measurement of the  $\Upsilon(1S)$ ,  $\Upsilon(2S)$ , and  $\Upsilon(3S)$  cross sections in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1303.5900 [hep-ex].

Phys.Lett. B727 (2013) 101-125.

**Search for microscopic black holes in  $pp$  collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1303.5338 [hep-ex].

JHEP 1307 (2013) 178.

**Studies of jet mass in dijet and  $W/Z + \text{jet}$  events**

CMS Collaboration

arXiv:1303.4811 [hep-ex].  
JHEP 1305 (2013) 090.

**A New Boson with a Mass of 125 GeV Observed with the CMS Experiment at the Large Hadron Collider**

CMS Collaboration  
Science 338 (2012) 1569-1575.

**Measurement of associated production of vector bosons and top quark-antiquark pairs at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1303.3239 [hep-ex].  
Phys.Rev.Lett. 110 (2013) 172002.

**Search for supersymmetry in hadronic final states with missing transverse energy using the variables  $\alpha_T$  and b-quark multiplicity in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
arXiv:1303.2985 [hep-ex].  
Eur.Phys.J. C73 (2013) 9, 2568.

**Search for the standard model Higgs boson produced in association with a top-quark pair in pp collisions at the LHC**

CMS Collaboration  
arXiv:1303.0763 [hep-ex].  
JHEP 1305 (2013) 145.

**Search for narrow resonances using the dijet mass spectrum in pp collisions at  $\sqrt{s}=8$  TeV**

CMS Collaboration  
arXiv:1302.4794 [hep-ex].  
Phys.Rev. D87 (2013) 11, 114015.

**Measurement of the X(3872) production cross section via decays to J/psi pi pi in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1302.3968 [hep-ex].  
JHEP 1304 (2013) 154.

**Search for a Higgs boson decaying into a b-quark pair and produced in association with b quarks in proton-proton collisions at 7 TeV**

CMS Collaboration  
arXiv:1302.2892 [hep-ex].  
Phys.Lett. B722 (2013) 207-232.

**Search for new physics in final states with a lepton and missing transverse energy in pp collisions at the LHC**

CMS Collaboration  
arXiv:1302.2812 [hep-ex].  
Phys.Rev. D87 (2013) 7, 072005.

**Study of the underlying event at forward rapidity in pp collisions at  $\sqrt{s} = 0.9, 2.76$ , and 7 TeV**

CMS Collaboration  
arXiv:1302.2394 [hep-ex].  
JHEP 1304 (2013) 072.

**Searches for Higgs bosons in pp collisions at  $\sqrt{s} = 7$  and 8 TeV in the context of four-generation and fermiophobic models**

CMS Collaboration  
arXiv:1302.1764 [hep-ex].

Phys.Lett. B725 (2013) 36-59.

**Search for pair-produced dijet resonances in four-jet final states in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1302.0531 [hep-ex].

Phys.Rev.Lett. 110 (2013) 141802.

**Measurement of the  $t\bar{t}$  production cross section in the all-jet final state in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1302.0508 [hep-ex].

JHEP 1305 (2013) 065.

**Measurement of the top-antitop production cross section in the tau+jets channel in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1301.5755 [hep-ex].

Eur.Phys.J. C73 (2013) 4, 2386.

**Search for contact interactions using the inclusive jet  $p_T$  spectrum in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1301.5023 [hep-ex].

Phys.Rev. D87 (2013) 5, 052017.

**Measurement of W+W and ZZ production cross sections in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1301.4698 [hep-ex].

Phys.Lett. B721 (2013) 190-211.

**Search for physics beyond the standard model in events with  $\tau$  leptons, jets, and large transverse momentum imbalance in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1301.3792 [hep-ex].

Eur.Phys.J. C73 (2013) 2493.

**Interpretation of Searches for Supersymmetry with simplified Models**

CMS Collaboration

arXiv:1301.2175 [hep-ex].

Phys.Rev. D88 (2013) 5, 052017.

**Event shapes and azimuthal correlations in  $Z +$  jets events in pp collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1301.1646 [hep-ex].

Phys.Lett. B722 (2013) 238-261.

**Search for supersymmetry in events with opposite-sign dileptons and missing transverse energy using an artificial neural network**

CMS Collaboration

arXiv:1301.0916 [hep-ex].

Phys.Rev. D87 (2013) 072001.

**Search for supersymmetry in pp collisions at  $\sqrt{s} = 7$  TeV in events with a single lepton, jets, and missing transverse momentum**

CMS Collaboration

arXiv:1212.6428 [hep-ex].

Eur.Phys.J. C73 (2013) 2404.

## **Study of the Mass and Spin-Parity of the Higgs Boson Candidate Via Its Decays to Z Boson Pairs**

CMS Collaboration

arXiv:1212.6639 [hep-ex].

Phys.Rev.Lett. 110 (2013) 081803.

## **Measurements of differential jet cross sections in proton-proton collisions at $\sqrt{s} = 7$ TeV with the CMS detector**

CMS Collaboration

arXiv:1212.6660 [hep-ex].

Phys.Rev. D87 (2013) 11, 112002.

## **Measurement of the $t\bar{t}$ production cross section in $pp$ collisions at $\sqrt{s} = 7$ TeV with lepton + jets final states**

CMS Collaboration

arXiv:1212.6682.

Phys.Lett. B720 (2013) 83-104.

## **Inclusive search for supersymmetry using the razor variables in $pp$ collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1212.6961 [hep-ex].

Phys.Rev.Lett. 111 (2013) 8, 081802.

## **Search for new physics in events with same-sign dileptons and $b$ jets in $pp$ collisions at $\sqrt{s} = 8$ TeV**

CMS Collaboration

arXiv:1212.6194 [hep-ex].

JHEP 1303 (2013) 037, Erratum-ibid. 1307 (2013) 041.

## **Search for heavy narrow dilepton resonances in $pp$ collisions at $\sqrt{s} = 7$ TeV and $\sqrt{s} = 8$ TeV**

CMS Collaboration

arXiv:1212.6175 [hep-ex].

Phys.Lett. B720 (2013) 63-82.

## **Search for contact interactions in $\mu^+\mu^-$ events in $pp$ collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1212.4563 [hep-ex].

Phys.Rev. D87 (2013) 3, 032001.

## **Search for heavy resonances in the W/Z-tagged dijet mass spectrum in $pp$ collisions at 7 TeV**

CMS Collaboration

arXiv:1212.1910 [hep-ex].

Phys.Lett. B723 (2013) 280-301.

## **Search for long-lived particles decaying to photons and missing energy in proton-proton collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1212.1838 [hep-ex].

Phys.Lett. B722 (2013) 273-294.

## **Search for exotic resonances decaying into $WZ/ZZ$ in $pp$ collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1211.5779 [hep-ex].

JHEP 1302 (2013) 036.

## **Measurement of the $ZZ$ production cross section and search for anomalous couplings in 2 l2l ' final states in $pp$ collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1211.4890 [hep-ex].  
JHEP 1301 (2013) 063.

**Search for new physics in events with photons, jets, and missing transverse energy in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1211.4784 [hep-ex].  
JHEP 1303 (2013) 111.

**Identification of b-quark jets with the CMS experiment**

CMS Collaboration  
arXiv:1211.4462 [hep-ex].  
JINST 8 (2013) P04013.

**Search for  $Z'$  resonances decaying to  $t\bar{t}$  in dilepton+jets final states in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1211.3338 [hep-ex].  
Phys.Rev. D87 (2013) 072002.

**Search for supersymmetry in final states with a single lepton, b-quark jets, and missing transverse energy in proton-proton collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1211.3143 [hep-ex].  
Phys.Rev. D87 (2013) 5, 052006.

**Search in leptonic channels for heavy resonances decaying to long-lived neutral particles**

CMS Collaboration  
arXiv:1211.2472 [hep-ex].  
JHEP 1302 (2013) 085.

**Measurement of differential top-quark pair production cross sections in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1211.2220 [hep-ex].  
Eur.Phys.J. C73 (2013) 3, 2339.

**Search for supersymmetry in final states with missing transverse energy and 0, 1, 2, or at least 3 b-quark jets in 7 TeV  $pp$  collisions using the variable  $\alpha_T$**

CMS Collaboration  
arXiv:1210.8115 [hep-ex].  
JHEP 1301 (2013) 077.

**Search for a non-standard-model Higgs boson decaying to a pair of new light bosons in four-muon final states**

CMS Collaboration  
arXiv:1210.7619 [hep-ex].  
Phys.Lett. B726 (2013) 564-586.

**Measurement of the sum of  $WW$  and  $WZ$  production with  $W$ +dijet events in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1210.7544 [hep-ex].  
Eur.Phys.J. C73 (2013) 2, 2283.

**Search for heavy quarks decaying into a top quark and a  $W$  or  $Z$  boson using lepton + jets events in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration



arXiv:1210.7471 [hep-ex].  
JHEP 1301 (2013) 154.

**Measurement of the inelastic proton-proton cross section at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1210.6718 [hep-ex].  
Phys.Lett. B722 (2013) 5-27.

**Search for pair production of third-generation leptoquarks and top squarks in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1210.5629 [hep-ex].  
Phys.Rev.Lett. 110 (2013) 081801.

**Search for third-generation leptoquarks and scalar bottom quarks in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1210.5627 [hep-ex].  
JHEP 1212 (2012) 055.

**Observation of long-range near-side angular correlations in proton-lead collisions at the LHC**

CMS Collaboration  
arXiv:1210.5482 [nucl-ex].  
Phys.Lett. B718 (2013) 795-814.

**Observation of  $Z$  decays to four leptons with the CMS detector at the LHC**

CMS Collaboration  
arXiv:1210.3844 [hep-ex].  
JHEP 1212 (2012) 034.

**Search for excited leptons in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1210.2422 [hep-ex].  
Phys.Lett. B720 (2013) 309-329.

**Search for heavy neutrinos and  $W[R]$  bosons with right-handed couplings in a left-right symmetric model in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1210.2402 [hep-ex].  
Phys.Rev.Lett. 109 (2012) 261802.

**Search for narrow resonances and quantum black holes in inclusive and  $b$ -tagged dijet mass spectra from  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1210.2387 [hep-ex].  
JHEP 1301 (2013) 013.

**Search for fractionally charged particles in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1210.2311 [hep-ex].  
Phys.Rev. D87 (2013) 9, 092008.

**Search for supersymmetry in events with photons and low missing transverse energy in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1210.2052 [hep-ex].  
Phys.Lett. B719 (2013) 42-61.

**Search for heavy lepton partners of neutrinos in proton-proton collisions in the context of the type III seesaw mechanism**

CMS Collaboration

arXiv:1210.1797 [hep-ex].

Phys.Lett. B718 (2012) 348-368.

**Measurement of the relative prompt production rate of  $\chi(c2)$  and  $\chi(c1)$  in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1210.0875 [hep-ex].

Eur.Phys.J. C72 (2012) 2251.

**Search for anomalous production of highly boosted  $Z$  bosons decaying to dimuons in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1210.0867 [hep-ex].

Phys.Lett. B722 (2013) 28-47.

**Measurement of the single-top-quark  $t$ -channel cross section in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1209.4533 [hep-ex].

JHEP 1212 (2012) 035.

**Search for resonant  $t\bar{t}$  production in lepton+jets events in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1209.4397 [hep-ex].

JHEP 1212 (2012) 015.

**Search for the standard model Higgs boson produced in association with  $W$  and  $Z$  bosons in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1209.3937 [hep-ex].

JHEP 1211 (2012) 088.

**Search for a narrow spin-2 resonance decaying to a pair of  $Z$  vector bosons in the semileptonic final state**

CMS Collaboration

arXiv:1209.3807 [hep-ex].

Phys.Lett. B718 (2013) 1208-1228.

**Measurement of the  $Y1S$ ,  $Y2S$  and  $Y3S$  polarizations in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1209.2922 [hep-ex].

Phys.Rev.Lett. 110 (2013) 081802.

**Measurement of the top-quark mass in  $t\bar{t}$  events with dilepton final states in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1209.2393 [hep-ex].

Eur.Phys.J. C72 (2012) 2202.

**Measurement of the top-quark mass in  $t\bar{t}$  events with lepton+jets final states in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1209.2319 [hep-ex].

JHEP 1212 (2012) 105.

**Observation of a diffractive contribution to dijet production in proton-proton collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1209.1805 [hep-ex].  
Phys.Rev. D87 (2013) 012006.

**Search for exclusive or semi-exclusive photon pair production and observation of exclusive and semi-exclusive electron pair production in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1209.1666 [hep-ex].  
JHEP 1211 (2012) 080.

**Combined search for the quarks of a sequential fourth generation**

CMS Collaboration  
arXiv:1209.1062 [hep-ex].  
Phys.Rev. D86 (2012) 112003.

**Search for pair produced fourth-generation up-type quarks in  $pp$  collisions at  $\sqrt{s} = 7$  TeV with a lepton in the final state**

CMS Collaboration  
arXiv:1209.0471 [hep-ex].  
Phys.Lett. B718 (2012) 307-328.

**Search for supersymmetry in events with b-quark jets and missing transverse energy in  $pp$  collisions at 7 TeV**

CMS Collaboration  
arXiv:1208.4859 [hep-ex].  
Phys.Rev. D86 (2012) 072010.

**Study of the dijet mass spectrum in  $pp \rightarrow W + \text{jets}$  events at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1208.3477 [hep-ex].  
Phys.Rev.Lett. 109 (2012) 251801.

**Search for three-jet resonances in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1208.2931 [hep-ex].  
Phys.Lett. B718 (2012) 329-347.

**Observation of sequential Upsilon suppression in PbPb collisions**

CMS Collaboration  
arXiv:1208.2826 [nucl-ex].  
Phys.Rev.Lett. 109 (2012) 222301.

**Measurement of the  $t\bar{t}$  production cross section in the dilepton channel in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1208.2671 [hep-ex].  
JHEP 1211 (2012) 067.

**Measurement of the azimuthal anisotropy of neutral pions in PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration  
arXiv:1208.2470 [nucl-ex].  
Phys.Rev.Lett. 110 (2013) 042301.

**Search for flavor changing neutral currents in top quark decays in  $pp$  collisions at 7 TeV**

CMS Collaboration  
arXiv:1208.0957 [hep-ex].  
Phys.Lett. B718 (2013) 1252-1272.

**Search for a  $W$  ' boson decaying to a bottom quark and a top quark in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1208.0956 [hep-ex].

Phys.Lett. B718 (2013) 1229-1251.

**Search for heavy Majorana neutrinos in  $\mu^+\mu^+[\mu^-\mu^-]$  and  $e^+e^+[e^-e^-]$  events in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1207.6079 [hep-ex].

Phys.Lett. B717 (2012) 109-128.

**Search for pair production of first and second-generation scalar leptoquarks in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1207.5406 [hep-ex].

Phys.Rev. D86 (2012) 052013.

**Study of the inclusive production of charged pions, kaons, and protons in  $pp$  collisions at  $\sqrt{s} = 0.9, 2.76$ , and 7 TeV**

CMS Collaboration

arXiv:1207.4724 [hep-ex].

Eur.Phys.J. C72 (2012) 2164.

**Forward-backward asymmetry of Drell-Yan lepton pairs in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1207.3973 [hep-ex].

Phys.Lett. B718 (2013) 752-772.

**A search for a doubly-charged Higgs boson in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1207.2666 [hep-ex].

Eur.Phys.J. C72 (2012) 2189.

**Measurement of the underlying event activity in  $pp$  collisions at  $\sqrt{s} = 0.9$  and 7 TeV with the novel jet-area/median approach**

CMS Collaboration

arXiv:1207.2392 [hep-ex].

JHEP 1208 (2012) 130.

**Search for new physics in the multijet and missing transverse momentum final state in proton-proton collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1207.1898 [hep-ex].

Phys.Rev.Lett. 109 (2012) 171803.

**Search for supersymmetry in hadronic final states using MT2 in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1207.1798 [hep-ex].

JHEP 1210 (2012) 018.

**Search for a fermiophobic Higgs boson in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1207.1130 [hep-ex].

JHEP 1209 (2012) 111.

**Search for new physics with long-lived particles decaying to photons and missing energy in  $pp$  collisions**

**at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1207.0627 [hep-ex].

JHEP 1211 (2012) 172.

**Search for stopped long-lived particles produced in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1207.0106 [hep-ex].

JHEP 1208 (2012) 026.

**Inclusive and differential measurements of the  $t\bar{t}$  charge asymmetry in proton-proton collisions at 7 TeV**

CMS Collaboration

arXiv:1207.0065 [hep-ex].

Phys.Lett. B717 (2012) 129-150.

**Search for a light pseudoscalar Higgs boson in the dimuon decay channel in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1206.6326 [hep-ex].

Phys.Rev.Lett. 109 (2012) 121801.

**Search for dark matter and large extra dimensions in monojet events in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1206.5663 [hep-ex].

JHEP 1209 (2012) 094.

**Search for new physics in events with opposite-sign leptons, jets, and missing transverse energy in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1206.3949 [hep-ex].

Phys.Lett. B718 (2013) 815-840.

**Search for charge-asymmetric production of  $W'$  bosons in top pair + jet events from  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1206.3921 [hep-ex].

Phys.Lett. B717 (2012) 351-370.

**Measurement of the electron charge asymmetry in inclusive  $W$  production in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1206.2598 [hep-ex].

Phys.Rev.Lett. 109 (2012) 111806.

**Search for narrow resonances in dilepton mass spectra in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1206.1849 [hep-ex].

Phys.Lett. B714 (2012) 158-179.

**Search for high mass resonances decaying into  $\tau^+$  lepton pairs in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1206.1725 [hep-ex].

Phys.Lett. B716 (2012) 82-102.

**Search for a  $W'$  or Techni- $\rho$  Decaying into  $WZ$  in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1206.0433 [hep-ex].

Phys.Rev.Lett. 109 (2012) 141801.

**Search for new physics with same-sign isolated dilepton events with jets and missing transverse energy**

CMS Collaboration

arXiv:1205.6615 [hep-ex].

Phys.Rev.Lett. 109 (2012) 071803.

**Study of  $W$  boson production in PbPb and  $pp$  collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration

arXiv:1205.6334 [nucl-ex].

Phys.Lett. B715 (2012) 66-87.

**Measurement of jet fragmentation into charged particles in  $pp$  and PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration

arXiv:1205.5872 [nucl-ex].

JHEP 1210 (2012) 087.

**Search for a light charged Higgs boson in top quark decays in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1205.5736 [hep-ex].

JHEP 1207 (2012) 143.

**Search for new physics in events with same-sign dileptons and  $b$ -tagged jets in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1205.3933 [hep-ex].

JHEP 1208 (2012) 110.

**Measurement of the pseudorapidity and centrality dependence of the transverse energy density in PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration

arXiv:1205.2488 [nucl-ex].

Phys.Rev.Lett. 109 (2012) 152303.

**Measurement of the  $\Lambda_{cb}$  cross section and the  $\bar{\Lambda}(b)$  to  $\Lambda_{cb}$  ratio with  $\Lambda_{cb}$  to J/Psi  $\Lambda$  decays in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1205.0594 [hep-ex].

Phys.Lett. B714 (2012) 136-157.

**Search for heavy long-lived charged particles in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1205.0272 [hep-ex].

Phys.Lett. B713 (2012) 408-433.

**Studies of jet quenching using isolated-photon+jet correlations in PbPb and  $pp$  collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration

arXiv:1205.0206 [nucl-ex].

Phys.Lett. B718 (2013) 773-794.

**Observation of a new  $\Xi(b)$  baryon**

CMS Collaboration

arXiv:1204.5955 [hep-ex].

Phys.Rev.Lett. 108 (2012) 252002.

**Search for anomalous production of multilepton events in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1204.5341 [hep-ex].  
JHEP 1206 (2012) 169.

**Search for leptonic decays of  $W^\pm$  bosons in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1204.4764 [hep-ex].  
JHEP 1208 (2012) 023.

**Shape, Transverse Size, and Charged Hadron Multiplicity of Jets in  $pp$  Collisions at 7 TeV**

CMS Collaboration  
arXiv:1204.3170 [hep-ex].  
JHEP 1206 (2012) 160.

**Measurement of the mass difference between top and antitop quarks**

CMS Collaboration  
arXiv:1204.2807 [hep-ex].  
JHEP 1206 (2012) 109.

**Search for Anomalous  $t\bar{t}$  Production in the Highly-Boosted All-Hadronic Final State**

CMS Collaboration  
arXiv:1204.2488 [hep-ex].  
JHEP 1209 (2012) 029, Erratum-ibid. 1403 (2014) 132.

**Azimuthal anisotropy of charged particles at high transverse momenta in PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration  
arXiv:1204.1850 [nucl-ex].  
Phys.Rev.Lett. 109 (2012) 022301.

**Measurement of the  $Z/\gamma^* + b$ -jet cross section in  $pp$  collisions at 7 TeV**

CMS Collaboration  
arXiv:1204.1643 [hep-ex].  
JHEP 1206 (2012) 126.

**Measurement of the elliptic anisotropy of charged particles produced in PbPb collisions at nucleon-nucleon center-of-mass energy = 2.76 TeV**

CMS Collaboration  
arXiv:1204.1409 [nucl-ex].  
Phys.Rev. C87 (2013) 014902.

**Measurement of the underlying event in the Drell-Yan process in proton-proton collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1204.1411 [hep-ex].  
Eur.Phys.J. C72 (2012) 2080.

**Search for heavy bottom-like quarks in 4.9 inverse femtobarns of  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1204.1088 [hep-ex].  
JHEP 1205 (2012) 123.

**Search for Dark Matter and Large Extra Dimensions in  $pp$  Collisions Yielding a Photon and Missing Transverse Energy**

CMS Collaboration

arXiv:1204.0821 [hep-ex].  
Phys.Rev.Lett. 108 (2012) 261803.

**Ratios of dijet production cross sections as a function of the absolute difference in rapidity between jets in proton-proton collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1204.0696 [hep-ex].  
Eur.Phys.J. C72 (2012) 2216.

**Measurement of the top quark pair production cross section in  $pp$  collisions at  $\sqrt{s} = 7$  TeV in dilepton final states containing a  $\tau$**

CMS Collaboration  
arXiv:1203.6810 [hep-ex].  
Phys.Rev. D85 (2012) 112007.

**Search for heavy, top-like quark pair production in the dilepton final state in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1203.5410 [hep-ex].  
Phys.Lett. B716 (2012) 103-121.

**Search for  $B_s^0 \rightarrow \mu^+ \mu^-$  and  $B^0 \rightarrow \mu^+ \mu^-$  decays**

CMS Collaboration  
arXiv:1203.3976 [hep-ex].  
JHEP 1204 (2012) 033.

**Measurement of the cross section for production of  $b\bar{b}$   $X$ , decaying to muons in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1203.3458 [hep-ex].  
JHEP 1206 (2012) 110.

**Search for microscopic black holes in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.6396 [hep-ex].  
JHEP 1204 (2012) 061.

**Search for quark compositeness in dijet angular distributions from  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.5535 [hep-ex].  
JHEP 1205 (2012) 055.

**Jet momentum dependence of jet quenching in PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration  
arXiv:1202.5022 [nucl-ex].  
Phys.Lett. B712 (2012) 176-197.

**Inclusive  $b$ -jet production in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.4617 [hep-ex].  
JHEP 1204 (2012) 084.

**Search for the standard model Higgs boson decaying to bottom quarks in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.4195 [hep-ex].  
Phys.Lett. B710 (2012) 284-306.



**Search for neutral Higgs bosons decaying to  $\tau$  pairs in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.4083 [hep-ex].  
Phys.Lett. B713 (2012) 68-90.

**Search for large extra dimensions in dimuon and dielectron events in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.3827 [hep-ex].  
Phys.Lett. B711 (2012) 15-34.

**Search for the standard model Higgs boson in the  $H$  to  $ZZ$  to  $2\ell 2\nu$  channel in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.3478 [hep-ex].  
JHEP 1203 (2012) 040.

**Search for the standard model Higgs boson in the  $H$  to  $ZZ$  to  $\ell\ell\tau\tau$  decay channel in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.3617 [hep-ex].  
JHEP 1203 (2012) 081.

**Study of high- $p_T$  charged particle suppression in PbPb compared to  $pp$  collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration  
arXiv:1202.2554 [nucl-ex].  
Eur.Phys.J. C72 (2012) 1945.

**Search for the standard model Higgs boson in the decay channel  $H$  to  $ZZ$  to 4 leptons in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.1997 [hep-ex].  
Phys.Rev.Lett. 108 (2012) 111804.

**Combined results of searches for the standard model Higgs boson in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.1488 [hep-ex].  
Phys.Lett. B710 (2012) 26-48.

**Search for the standard model Higgs boson decaying into two photons in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.1487 [hep-ex].  
Phys.Lett. B710 (2012) 403-425.

**Search for a Higgs boson in the decay channel  $H$  to  $ZZ(*)$  to  $q\bar{q}\ell^-\ell^+$  in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.1416 [hep-ex].  
JHEP 1204 (2012) 036.

**Measurement of the inclusive production cross sections for forward jets and for dijet events with one forward and one central jet in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1202.0704 [hep-ex].  
JHEP 1206 (2012) 036.

**Suppression of non-prompt  $J/\psi$ , prompt  $J/\psi$ , and  $\Upsilon(1S)$  in PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration

arXiv:1201.5069 [nucl-ex].  
JHEP 1205 (2012) 063.

**Centrality dependence of dihadron correlations and azimuthal anisotropy harmonics in PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**  
CMS Collaboration  
arXiv:1201.3158 [nucl-ex].  
Eur.Phys.J. C72 (2012) 2012.

**Measurement of isolated photon production in  $pp$  and PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**  
CMS Collaboration  
arXiv:1201.3093 [nucl-ex].  
Phys.Lett. B710 (2012) 256-277.

**Measurement of the charge asymmetry in top-quark pair production in proton-proton collisions at  $\sqrt{s} = 7$  TeV**  
CMS Collaboration  
arXiv:1112.5100 [hep-ex].  
Phys.Lett. B709 (2012) 28-49.

**Search for signatures of extra dimensions in the diphoton mass spectrum at the Large Hadron Collider**  
CMS Collaboration  
arXiv:1112.0688 [hep-ex].  
Phys.Rev.Lett. 108 (2012) 111801.

**Exclusive photon-photon production of muon pairs in proton-proton collisions at  $\sqrt{s} = 7$  TeV**  
CMS Collaboration  
arXiv:1111.5536 [hep-ex].  
JHEP 1201 (2012) 052.

**$J/\psi$  and  $\psi_{2S}$  production in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**  
CMS Collaboration  
arXiv:1111.1557 [hep-ex].  
JHEP 1202 (2012) 011.

**Measurement of the Production Cross Section for Pairs of Isolated Photons in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**  
CMS Collaboration  
arXiv:1110.6461 [hep-ex].  
JHEP 1201 (2012) 133.

**Measurement of the Rapidity and Transverse Momentum Distributions of  $Z$  Bosons in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**  
CMS Collaboration  
arXiv:1110.4973 [hep-ex].  
Phys.Rev. D85 (2012) 032002.

**Jet Production Rates in Association with  $W$  and  $Z$  Bosons in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**  
CMS Collaboration  
arXiv:1110.3226 [hep-ex].  
JHEP 1201 (2012) 010.

**Measurement of the weak mixing angle with the Drell-Yan process in proton-proton collisions at the LHC**  
CMS Collaboration  
arXiv:1110.2682 [hep-ex].  
Phys.Rev. D84 (2011) 112002.

**Measurement of energy flow at large pseudorapidities in  $pp$  collisions at  $\sqrt{s} = 0.9$  and 7 TeV**

CMS Collaboration

arXiv:1110.0211 [hep-ex].

JHEP 1111 (2011) 148, Erratum-ibid. 1202 (2012) 055.

**Forward Energy Flow, Central Charged-Particle Multiplicities, and Pseudorapidity Gaps in W and Z Boson Events from  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1110.0181 [hep-ex].

Eur.Phys.J. C72 (2012) 1839.

**Performance of tau-lepton reconstruction and identification in CMS**

CMS Collaboration

arXiv:1109.6034 [physics.ins-det].

JINST 7 (2012) P01001.

**Search for a Vector-like Quark with Charge 2/3 in  $t + Z$  Events from  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1109.4985 [hep-ex].

Phys.Rev.Lett. 107 (2011) 271802.

**Search for Supersymmetry at the LHC in Events with Jets and Missing Transverse Energy**

CMS Collaboration

arXiv:1109.2352 [hep-ex].

Phys.Rev.Lett. 107 (2011) 221804.

**Measurement of the Differential Cross Section for Isolated Prompt Photon Production in  $pp$  Collisions at 7 TeV**

CMS Collaboration

arXiv:1108.2044 [hep-ex].

Phys.Rev. D84 (2011) 052011.

**Measurement of the Drell-Yan Cross Section in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1108.0566 [hep-ex].

JHEP 1110 (2011) 007.

**Search for  $B(s)$  and B to dimuon decays in  $pp$  collisions at 7 TeV**

CMS Collaboration

arXiv:1107.5834 [hep-ex].

Phys.Rev.Lett. 107 (2011) 191802.

**Search for Resonances in the Dijet Mass Spectrum from 7 TeV  $pp$  Collisions at CMS**

CMS Collaboration

arXiv:1107.4771 [hep-ex].

Phys.Lett. B704 (2011) 123-142.

**Measurement of the Inclusive  $W$  and  $Z$  Production Cross Sections in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1107.4789 [hep-ex].

JHEP 1110 (2011) 132.

**Dependence on pseudorapidity and centrality of charged hadron production in PbPb collisions at a nucleon-nucleon centre-of-mass energy of 2.76 TeV**

CMS Collaboration

arXiv:1107.4800 [nucl-ex].  
JHEP 1108 (2011) 141.

### **Determination of Jet Energy Calibration and Transverse Momentum Resolution in CMS**

CMS Collaboration  
arXiv:1107.4277 [physics.ins-det].  
JINST 6 (2011) P11002.

### **Search for Three-Jet Resonances in $pp$ Collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration  
arXiv:1107.3084 [hep-ex].  
Phys.Rev.Lett. 107 (2011) 101801.

### **Search for supersymmetry in $pp$ collisions at $\sqrt{s} = 7$ TeV in events with a single lepton, jets, and missing transverse momentum**

CMS Collaboration  
arXiv:1107.1870 [hep-ex].  
JHEP 1108 (2011) 156.

### **A search for excited leptons in $pp$ Collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration  
arXiv:1107.1773 [hep-ex].  
Phys.Lett. B704 (2011) 143-162.

### **Inclusive search for squarks and gluinos in $pp$ collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration  
arXiv:1107.1279 [hep-ex].  
Phys.Rev. D85 (2012) 012004.

### **Measurement of the Underlying Event Activity at the LHC with $\sqrt{s} = 7$ TeV and Comparison with $\sqrt{s} = 0.9$ TeV**

CMS Collaboration  
arXiv:1107.0330 [hep-ex].  
JHEP 1109 (2011) 109.

### **Missing transverse energy performance of the CMS detector**

CMS Collaboration  
arXiv:1106.5048 [physics.ins-det].  
JINST 6 (2011) P09001.

### **Search for New Physics with a Mono-Jet and Missing Transverse Energy in $pp$ Collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration  
arXiv:1106.4775 [hep-ex].  
Phys.Rev.Lett. 107 (2011) 201804.

### **Search for New Physics with Jets and Missing Transverse Momentum in $pp$ collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration  
arXiv:1106.4503 [hep-ex].  
JHEP 1108 (2011) 155.

### **Measurement of the Strange $B$ Meson Production Cross Section with $J/\Psi \phi$ Decays in $pp$ Collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration  
arXiv:1106.4048 [hep-ex].  
Phys.Rev. D84 (2011) 052008.

**Search for Supersymmetry in Events with b Jets and Missing Transverse Momentum at the LHC**

CMS Collaboration

arXiv:1106.3272 [hep-ex].

JHEP 1107 (2011) 113.

**Measurement of the  $t$ -channel single top quark production cross section in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1106.3052 [hep-ex].

Phys.Rev.Lett. 107 (2011) 091802.

**Search for Light Resonances Decaying into Pairs of Muons as a Signal of New Physics**

CMS Collaboration

arXiv:1106.2375 [hep-ex].

JHEP 1107 (2011) 098.

**Search for Same-Sign Top-Quark Pair Production at  $\sqrt{s} = 7$  TeV and Limits on Flavour Changing Neutral Currents in the Top Sector**

CMS Collaboration

arXiv:1106.2142 [hep-ex].

JHEP 1108 (2011) 005.

**Measurement of the Top-antitop Production Cross Section in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV using the Kinematic Properties of Events with Leptons and Jets**

CMS Collaboration

arXiv:1106.0902 [hep-ex].

Eur.Phys.J. C71 (2011) 1721.

**Search for Physics Beyond the Standard Model Using Multilepton Signatures in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1106.0933 [hep-ex].

Phys.Lett. B704 (2011) 411-433.

**Measurement of the Ratio of the 3-jet to 2-jet Cross Sections in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1106.0647 [hep-ex].

Phys.Lett. B702 (2011) 336-354.

**Measurement of the Inclusive Jet Cross Section in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1106.0208 [hep-ex].

Phys.Rev.Lett. 107 (2011) 132001.

**Measurement of the  $t\bar{t}$  production cross section and the top quark mass in the dilepton channel in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1105.5661 [hep-ex].

JHEP 1107 (2011) 049.

**Search for First Generation Scalar Leptoquarks in the  $evjj$  channel in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1105.5237 [hep-ex].

Phys.Lett. B703 (2011) 246-266.

**Indications of suppression of excited  $\Upsilon$  states in PbPb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration

arXiv:1105.4894 [nucl-ex].  
Phys.Rev.Lett. 107 (2011) 052302.

**Search for supersymmetry in events with a lepton, a photon, and large missing transverse energy in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1105.3152 [hep-ex].  
JHEP 1106 (2011) 093.

**Measurement of  $W\gamma$  and  $Z\gamma$  production in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1105.2758 [hep-ex].  
Phys.Lett. B701 (2011) 535-555.

**Long-range and short-range dihadron angular correlations in central PbPb collisions at a nucleon-nucleon center of mass energy of 2.76 TeV**

CMS Collaboration  
arXiv:1105.2438 [nucl-ex].  
JHEP 1107 (2011) 076.

**Charged particle transverse momentum spectra in  $pp$  collisions at  $\sqrt{s} = 0.9$  and 7 TeV**

CMS Collaboration  
arXiv:1104.3547 [hep-ex].  
JHEP 1108 (2011) 086.

**Measurement of the Polarization of W Bosons with Large Transverse Momenta in W+Jets Events at the LHC**

CMS Collaboration  
arXiv:1104.3829 [hep-ex].  
Phys.Rev.Lett. 107 (2011) 021802.

**Search for new physics with same-sign isolated dilepton events with jets and missing transverse energy at the LHC**

CMS Collaboration  
arXiv:1104.3168 [hep-ex].  
JHEP 1106 (2011) 077.

**Measurement of the  $B^0$  production cross section in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1104.2892 [hep-ex].  
Phys.Rev.Lett. 106 (2011) 252001.

**Measurement of the differential dijet production cross section in proton-proton collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1104.1693 [hep-ex].  
Phys.Lett. B700 (2011) 187-206.

**Measurement of the Inclusive Z Cross Section via Decays to Tau Pairs in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1104.1617 [hep-ex].  
JHEP 1108 (2011) 117.

**Search for Neutral MSSM Higgs Bosons Decaying to Tau Pairs in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1104.1619 [hep-ex].  
Phys.Rev.Lett. 106 (2011) 231801.

### **Search for Large Extra Dimensions in the Diphoton Final State at the Large Hadron Collider**

CMS Collaboration

arXiv:1103.4279 [hep-ex].

JHEP 1105 (2011) 085.

### **Measurement of the lepton charge asymmetry in inclusive $W$ production in pp collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1103.3470 [hep-ex].

JHEP 1104 (2011) 050.

### **Search for Physics Beyond the Standard Model in Opposite-Sign Dilepton Events at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1103.1348 [hep-ex].

JHEP 1106 (2011) 026.

### **Search for Supersymmetry in $pp$ Collisions at $\sqrt{s} = 7$ TeV in Events with Two Photons and Missing Transverse Energy**

CMS Collaboration

arXiv:1103.0953 [hep-ex].

Phys.Rev.Lett. 106 (2011) 211802.

### **Search for Resonances in the Dilepton Mass Distribution in $pp$ Collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1103.0981 [hep-ex].

JHEP 1105 (2011) 093.

### **Search for a $W'$ boson decaying to a muon and a neutrino in $pp$ collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1103.0030 [hep-ex].

Phys.Lett. B701 (2011) 160-179.

### **Study of Z boson production in PbPb collisions at nucleon-nucleon centre of mass energy = 2.76 TeV**

CMS Collaboration

arXiv:1102.5435 [nucl-ex].

Phys.Rev.Lett. 106 (2011) 212301.

### **Search for a Heavy Bottom-like Quark in $pp$ Collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1102.4746 [hep-ex].

Phys.Lett. B701 (2011) 204-223.

### **Strange Particle Production in $pp$ Collisions at $\sqrt{s} = 0.9$ and 7 TeV**

CMS Collaboration

arXiv:1102.4282 [hep-ex].

JHEP 1105 (2011) 064.

### **Measurement of $B\bar{B}$ Angular Correlations based on Secondary Vertex Reconstruction at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1102.3194 [hep-ex].

JHEP 1103 (2011) 136.

### **Measurement of Dijet Angular Distributions and Search for Quark Compositeness in pp Collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration

arXiv:1102.2020 [hep-ex].

Phys.Rev.Lett. 106 (2011) 201804.

**Observation and studies of jet quenching in PbPb collisions at nucleon-nucleon center-of-mass energy = 2.76 TeV**

CMS Collaboration

arXiv:1102.1957 [nucl-ex].

Phys.Rev. C84 (2011) 024906.

**First Measurement of Hadronic Event Shapes in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1102.0068 [hep-ex].

Phys.Lett. B699 (2011) 48-67.

**Dijet Azimuthal Decorrelations in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1101.5029 [hep-ex].

Phys.Rev.Lett. 106 (2011) 122003.

**Inclusive b-hadron production cross section with muons in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1101.3512 [hep-ex].

JHEP 1103 (2011) 090.

**Measurement of Bose-Einstein Correlations in  $pp$  Collisions at  $\sqrt{s} = 0.9$  and 7 TeV**

CMS Collaboration

arXiv:1101.3518 [hep-ex].

JHEP 1105 (2011) 029.

**Search for Supersymmetry in  $pp$  Collisions at 7 TeV in Events with Jets and Missing Transverse Energy**

CMS Collaboration

arXiv:1101.1628 [hep-ex].

Phys.Lett. B698 (2011) 196-218.

**Search for Heavy Stable Charged Particles in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1101.1645 [hep-ex].

JHEP 1103 (2011) 024.

**Measurement of the  $B^+$  Production Cross Section in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1101.0131 [hep-ex].

Phys.Rev.Lett. 106 (2011) 112001.

**Search for a heavy gauge boson  $W'$  in the final state with an electron and large missing transverse energy in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1012.5945 [hep-ex].

Phys.Lett. B698 (2011) 21-39.

**Upsilon Production Cross-Section in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1012.5545 [hep-ex].

Phys.Rev. D83 (2011) 112004.

**Search for Pair Production of First-Generation Scalar Leptoquarks in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration



arXiv:1012.4031 [hep-ex].  
Phys.Rev.Lett. 106 (2011) 201802.

**Search for Pair Production of Second-Generation Scalar Leptoquarks in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1012.4033 [hep-ex].  
Phys.Rev.Lett. 106 (2011) 201803.

**Search for Microscopic Black Hole Signatures at the Large Hadron Collider**

CMS Collaboration  
arXiv:1012.3375 [hep-ex].  
Phys.Lett. B697 (2011) 434-453.

**Measurements of Inclusive  $W$  and  $Z$  Cross Sections in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1012.2466 [hep-ex].  
JHEP 1101 (2011) 080.

**Measurement of the Isolated Prompt Photon Production Cross Section in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1012.0799 [hep-ex].  
Phys.Rev.Lett. 106 (2011) 082001.

**Charged particle multiplicities in  $pp$  interactions at  $\sqrt{s} = 0.9, 2.36$ , and 7 TeV**

CMS Collaboration  
arXiv:1011.5531 [hep-ex].  
JHEP 1101 (2011) 079.

**Search for Stopped Gluinos in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1011.5861 [hep-ex].  
Phys.Rev.Lett. 106 (2011) 011801.

**Prompt and non-prompt  $J/\psi$  production in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1011.4193 [hep-ex].  
Eur.Phys.J. C71 (2011) 1575.

**First Measurement of the Cross Section for Top-Quark Pair Production in Proton-Proton Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1010.5994 [hep-ex].  
Phys.Lett. B695 (2011) 424-443.

**Search for Quark Compositeness with the Dijet Centrality Ratio in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1010.4439 [hep-ex].  
Phys.Rev.Lett. 105 (2010) 262001.

**Search for Dijet Resonances in 7 TeV  $pp$  Collisions at CMS**

CMS Collaboration  
arXiv:1010.0203 [hep-ex].  
Phys.Rev.Lett. 105 (2010) 211801.

**Observation of Long-Range Near-Side Angular Correlations in Proton-Proton Collisions at the LHC**

CMS Collaboration

arXiv:1009.4122 [hep-ex].  
JHEP 1009 (2010) 091.

### **CMS Tracking Performance Results from early LHC Operation**

CMS Collaboration  
arXiv:1007.1988 [physics.ins-det].  
Eur.Phys.J. C70 (2010) 1165-1192.

### **First Measurement of the Underlying Event Activity at the LHC with $\sqrt{s} = 0.9$ TeV**

CMS Collaboration  
arXiv:1006.2083 [hep-ex].  
Eur.Phys.J. C70 (2010) 555-572.

### **Measurement of the charge ratio of atmospheric muons with the CMS detector**

CMS Collaboration  
arXiv:1005.5332 [hep-ex].  
Phys.Lett. B692 (2010) 83-104.

### **Measurement of Bose-Einstein correlations with first CMS data**

CMS Collaboration  
arXiv:1005.3294 [hep-ex].  
Phys.Rev.Lett. 105 (2010) 032001.

### **Transverse-momentum and pseudorapidity distributions of charged hadrons in $pp$ collisions at $\sqrt{s} = 7$ TeV**

CMS Collaboration  
arXiv:1005.3299 [hep-ex].  
Phys.Rev.Lett. 105 (2010) 022002.

### **Transverse momentum and pseudorapidity distributions of charged hadrons in $pp$ collisions at $\sqrt{s} = 0.9$ and 2.36 TeV**

CMS Collaboration  
arXiv:1002.0621 [hep-ex].  
JHEP 1002 (2010) 041.

### **Commissioning and Performance of the CMS Pixel Tracker with Cosmic Ray Muons**

CMS Collaboration  
arXiv:0911.5434 [physics.ins-det].  
JINST 5 (2010) T03007.

### **Performance of the CMS Level-1 Trigger during Commissioning with Cosmic Ray Muons**

CMS Collaboration  
arXiv:0911.5422 [physics.ins-det].  
JINST 5 (2010) T03002.

### **Measurement of the Muon Stopping Power in Lead Tungstate**

CMS Collaboration  
arXiv:0911.5397 [physics.ins-det].  
JINST 5 (2010) P03007.

### **Commissioning and Performance of the CMS Silicon Strip Tracker with Cosmic Ray Muons**

CMS Collaboration  
arXiv:0911.4996 [physics.ins-det].  
JINST 5 (2010) T03008.

### **Performance of CMS Muon Reconstruction in Cosmic-Ray Events**

CMS Collaboration

arXiv:0911.4994 [physics.ins-det].  
JINST 5 (2010) T03022.

### **Performance of the CMS Cathode Strip Chambers with Cosmic Rays**

CMS Collaboration  
arXiv:0911.4992 [physics.ins-det].  
JINST 5 (2010) T03018.

### **Performance of the CMS Hadron Calorimeter with Cosmic Ray Muons and LHC Beam Data**

CMS Collaboration  
arXiv:0911.4991 [physics.ins-det].  
JINST 5 (2010) T03012.

### **Fine Synchronization of the CMS Muon Drift-Tube Local Trigger using Cosmic Rays**

CMS Collaboration  
arXiv:0911.4904 [physics.ins-det].  
JINST 5 (2010) T03004.

### **Calibration of the CMS Drift Tube Chambers and Measurement of the Drift Velocity with Cosmic Rays**

CMS Collaboration  
arXiv:0911.4895 [physics.ins-det].  
JINST 5 (2010) T03016.

### **Performance of the CMS Drift-Tube Local Trigger with Cosmic Rays**

CMS Collaboration  
arXiv:0911.4893 [physics.ins-det].  
JINST 5 (2010) T03003.

### **Commissioning of the CMS High-Level Trigger with Cosmic Rays**

CMS Collaboration  
arXiv:0911.4889 [physics.ins-det].  
JINST 5 (2010) T03005.

### **Identification and Filtering of Uncharacteristic Noise in the CMS Hadron Calorimeter**

CMS Collaboration  
arXiv:0911.4881 [physics.ins-det].  
JINST 5 (2010) T03014.

### **Performance of CMS Hadron Calorimeter Timing and Synchronization using Test Beam, Cosmic Ray, and LHC Beam Data**

CMS Collaboration  
arXiv:0911.4877 [physics.ins-det].  
JINST 5 (2010) T03013.

### **Performance of the CMS Drift Tube Chambers with Cosmic Rays**

CMS Collaboration  
arXiv:0911.4855 [physics.ins-det].  
JINST 5 (2010) T03015.

### **Commissioning of the CMS Experiment and the Cosmic Run at Four Tesla**

CMS Collaboration  
arXiv:0911.4845 [physics.ins-det].  
JINST 5 (2010) T03001.

### **CMS Data Processing Workflows during an Extended Cosmic Ray Run**

CMS Collaboration

arXiv:0911.4842 [physics.ins-det].  
JINST 5 (2010) T03006.

### **Aligning the CMS Muon Chambers with the Muon Alignment System during an Extended Cosmic Ray Run**

CMS Collaboration  
arXiv:0911.4770 [physics.ins-det].  
JINST 5 (2010) T03019.

### **Performance Study of the CMS Barrel Resistive Plate Chambers with Cosmic Rays**

CMS Collaboration  
arXiv:0911.4045 [physics.ins-det].  
JINST 5 (2010) T03017.

### **Time Reconstruction and Performance of the CMS Electromagnetic Calorimeter**

CMS Collaboration  
arXiv:0911.4044 [physics.ins-det].  
JINST 5 (2010) T03011.

### **Alignment of the CMS Muon System with Cosmic-Ray and Beam-Halo Muons**

CMS Collaboration  
arXiv:0911.4022 [physics.ins-det].  
JINST 5 (2010) T03020.

### **Precise Mapping of the Magnetic Field in the CMS Barrel Yoke using Cosmic Rays**

CMS Collaboration  
arXiv:0910.5530 [physics.ins-det].  
JINST 5 (2010) T03021.

### **Performance and Operation of the CMS Electromagnetic Calorimeter**

CMS Collaboration  
arXiv:0910.3423 [physics.ins-det].  
JINST 5 (2010) T03010.

### **Alignment of the CMS Silicon Tracker during Commissioning with Cosmic Rays**

CMS Collaboration  
arXiv:0910.2505 [physics.ins-det].  
JINST 5 (2010) T03009.

### **The CMS experiment at the CERN LHC**

CMS Collaboration  
10.1088/1748-0221/3/08/S08004.  
JINST 3 (2008) S08004.

**Run-1 Single-top measurements at CMS**, *Rebeca Gonzalez Suarez*, Proceedings DPF 2015, arXiv:1510.05235

**Inclusive single top cross section at the LHC**, *Rebeca Gonzalez Suarez on behalf of the CMS and ATLAS collaborations*, Proceedings TOP 2013, DOI:10.3204/DESY-PROC-2014-02/16

**Single top Production at  $\sqrt{s} = 7$  TeV**, *Rebeca Gonzalez Suarez on behalf of the CMS, ATLAS collaborations*, Proceedings Moriond 2012, arXiv:1205.2786

**Higgs search prospects at the LHC**, *Rebeca Gonzalez Suarez*, Proceedings BEACH 2010, Nucl.Phys.Proc.Suppl. 210-211 (2011) 283-288

**Discovery Potential for the SM Higgs Boson in the  $H \rightarrow WW^* \rightarrow 2l2\nu$  channel at LHC**, *Rebeca Gonzalez Suarez*, Proceedings ICHEP 2008, arXiv:0810.1468

**A Software and Computing prototype for CMS Muon System alignment**, (*Iban Cabrillo, Isidro Gonzalez Caballero, Rebeca Gonzalez Suarez...*), Proceedings CHEP 2007, Journal of Physics: Conference Series 119 (2008) 072008

## Public Analysis Summaries

CMS Public Analysis Summaries in which I had a relevant contribution in reverse chronological order. This kind of document is reviewed by a board of four referees and circulated to the Collaboration before being made public:

'Higgs to WW measurements with  $15.2 \text{ fb}^{-1}$  of 13 TeV proton-proton collisions' - HIG-16-021 - [C - Higgs to WW]

'Search for Higgs boson pair production in the  $b\bar{b}l\nu l\nu$  final state at  $\sqrt{s} = 13 \text{ TeV}$ ' - HIG-16-024 - [R - Higgs to WW]

'Search for high mass Higgs to WW with fully leptonic decays using 2015 data' - HIG-16-023 [R - Higgs to WW]

'Search for associated production of Higgs bosons and top quarks in multilepton final states at  $\sqrt{s} = 13 \text{ TeV}$ ' - HIG-16-022 [R - Higgs to WW]

'Search for associated production of a Z boson with a single top quark and for tZ flavour-changing interactions in pp collisions at  $\sqrt{s} = 8 \text{ TeV}$ ' - TOP-12-039 [R - Single top]

'Measurement of the top quark mass in the dileptonic ttbar decay channel using the Mbl, MT2, and MAOS Mblv observables'- TOP-15-008 [R-ARC] [Chair of the review]

'First results on Higgs to WW at  $\sqrt{s} = 13 \text{ TeV}$ ' - HIG-15-003 [ED- HWW]

'Combination of cross-section measurements of associated production of a single top quark and a W boson at  $\sqrt{s} = 8 \text{ TeV}$  with the ATLAS and CMS experiments' - TOP-15-019 [C]

'Search for resonant Higgs boson pair production in the  $b\bar{b}l\nu l\nu$  final state at  $\sqrt{s} = 13 \text{ TeV}$ ' - HIG-16-011 [R - Higgs to WW]

'Search for ttH production in multilepton final states at  $\sqrt{s} = 13 \text{ TeV}$ ' - HIG-15-008 [C, R - HWW]

'Measurement of the top quark mass from single-top production events' - TOP-15-001 [R-ARC] [Chair of the review]

'Measurement of the transverse momentum spectrum of the Higgs boson produced in pp collisions at  $\sqrt{s} = 8 \text{ TeV}$  using the  $H \rightarrow WW$  decays' (CMS-PAS-HIG-15-010) [R - Higgs to WW]

'Measurement of the top-quark mass from the b jet energy spectrum' (CMS-PAS-TOP-15-002) [R-ARC] [Chair of the review]

'Measurements of the Higgs boson production and decay rates and constraints on its couplings from a combined ATLAS and CMS analysis of the LHC pp collision data at  $\sqrt{s} = 7$  and  $8 \text{ TeV}$ ' (CMS-PAS-HIG-15-002) [C]

'Measurement of the W boson helicity using  $t\bar{t}$  events in the dilepton final state at  $\sqrt{s} = 8 \text{ TeV}$ ' CMS-PAS-TOP-14-017 [R-ARC] [Chair of the review]

'Measurements of the differential cross section of single top-quark production in the t channel in proton-proton collisions at  $\sqrt{s} = 8 \text{ TeV}$ ' (CMS-PAS-TOP-14-004) [R - Single top]

'Search for  $H \rightarrow b\bar{b}$  in association with single top quarks as a test of Higgs boson couplings' (CMS-PAS-HIG-14-015) [C]

'Combination of cross-section measurements of associated production of a single top-quark and a W boson at  $\sqrt{s} = 8 \text{ TeV}$  with the ATLAS and CMS experiments' (CMS-PAS-TOP-14-009) [C, R - Single top]

'Constraints on Anomalous HWW Interactions using Higgs boson decays to  $W+W^-$  in the fully leptonic final state' (CMS-PAS-HIG-14-012) [PA, ED]

- ‘Constraints on anomalous HVV interactions using  $H$  to  $4l$  decays’ (CMS-PAS-HIG-14-014) [C]
- ‘Search for  $t\bar{t}H$  events in the  $H \rightarrow b\bar{b}$  final state using the Matrix Element Method’ (CMS-PAS- HIG-14-010) [R-ARC]
- ‘Search for anomalous  $Wtb$  couplings and top FCNC in t-channel single-top-quark events’ (CMS-PAS-TOP-14-007) [R - Single top]
- ‘Search for anomalous single top quark production in association with a photon’ (CMS-PAS-TOP-14-003) [R - Single top]
- ‘Search for new physics with monotop final states in pp collisions at  $\sqrt{s} = 8$  TeV’ (CMS-PAS- B2G-12-022) [R-ARC] [Chair of the review]
- ‘Search for associated production of a single top quark and a Higgs boson in events where the Higgs boson decays to two photons at  $\sqrt{s} = 8$  TeV’ (CMS-PAS-HIG-14-001) [R-ARC]
- ‘Projections for Top FCNC Searches in  $3000fb^{-1}$  at the LHC’ (CMS-PAS-FTR-13-016) [R-ARC]
- ‘Sensitivity study of the prospects for searching for heavy vector-like charge  $2/3$  quarks at  $\sqrt{s} = 14$  TeV with the upgraded CMS detector’ (CMS-PAS-FTR-13-026) [R-ARC]
- ‘Projected improvement of the accuracy of top-quark mass measurements at the upgraded LHC’ (CMS-PAS-FTR-13-017) [R-ARC]
- ‘CMS reach in  $B_s^0 \rightarrow \mu^+\mu^-$  and  $B^0 \rightarrow \mu^+\mu^-$  branching fractions for the new LHC runs’ (CMS-PAS-FTR-13-022) [R-ARC]
- ‘Search for s-channel single top-quark production in pp collisions at  $\sqrt{s} = 8\text{TeV}$ ’ (CMS-PAS-TOP-13-009) [R - Single top]
- ‘Measurement of top quark polarization in t-channel single-top production’ (CMS-PAS-TOP-13-001) [R - Single top]
- ‘Combination of single top-quark cross-sections measurements in the t-channel at  $\sqrt{s} = 8\text{TeV}$  with the ATLAS and CMS experiments’ (CMS-PAS-TOP-12-002) [R - Single top]
- ‘Search for electroweak production of charginos and neutralinos using leptonic final states’ (CMS-PAS-SUS-13-006) [R-ARC]
- ‘Observation of Associated Production of a Single Top Quark and W Boson in pp Collisions at  $\sqrt{s} = 8\text{TeV}$ ’ (CMS-PAS-TOP-12-040) [PA]
- ‘Search for Flavor-Changing Neutral Currents in  $tZ$  events in proton-proton collisions at  $\sqrt{s} = 7\text{TeV}$ ’ (CMS-PAS-TOP-12-021) [R - Single top]
- ‘Search for electroweak production of charginos, neutralinos and sleptons using leptonic final states in pp collisions at  $\sqrt{s} = 8$  TeV’ (CMS-PAS-SUS-12-022) [R-ARC]
- ‘Measurement of the single-top t-channel charge ratio at 8 TeV’ (CMS-PAS-TOP-12-038) [R - Single top]
- ‘Measurement of W-helicity fractions in single top events topology’ (CMS-PAS-TOP-12-020) [R - Single top]
- ‘Search for single top  $tW$  associated production in the dilepton decay channel in pp collisions at  $\sqrt{s} = 7$  TeV’ (CMS-PAS-TOP-11-022) [PA, ED]
- ‘Search for Physics Beyond the Standard Model in  $Z+\text{MET}+\text{Jets}$  events at the LHC’ (CMS-PAS-SUS-11-019) [R-ARC]

'Measurement of the top-quark pair-production cross section in the lepton+jets channel with the use of b-tagging' (CMS-PAS-TOP-10-003) [C]

'Measurement of the top-quark pair-production cross section in the di-lepton channel at 7 TeV' (CMS-PAS-TOP-10-005) [C]

'Search for  $H \rightarrow WW \rightarrow 2l 2\nu$ ' (CMS-PAS-HIG-10-003) [C]

'Observation of WW final state' (CMS-PAS-EWK-009) [C]

'Performance of muon identification in pp collisions at  $\sqrt{s} = 7$  TeV' (CMS-PAS-MUO-10-002) [PA]

'Search Strategy for a Standard Model Higgs Boson Decaying to Two W Bosons in the Fully Leptonic Final State' (CMS-PAS-HIG-08-006) [PA]

'Search for the Higgs boson in the  $WW$  decay channel with the CMS experiment' (CMS-PAS-HIG-07-001) [PA]



## Public top results

Public analysis summaries made public during my convenership of the top quark physics analysis group in CMS, in reverse chronological order:

'Study of the underlying event in top quark pair production at  $\sqrt{s} = 13$  TeV' TOP-17-015

'Measurement of jet substructure observables in  $t\bar{t}$  events from pp collisions at  $\sqrt{s} = 13$  TeV' TOP-17-013

'Search for the flavor-changing interactions of the top quark with the Higgs boson in  $H \rightarrow b\bar{b}$  channel at  $\sqrt{s} = 13$  TeV' TOP-17-003

'Evidence for the standard model production of a Z boson with a single top quark in pp collisions at  $\sqrt{s} = 13$  TeV' TOP-16-020

'Measurement of the production cross section for single top quarks in association with W bosons in pp collisions at  $\sqrt{s} = 13$  TeV' TOP-17-018

'Measurement of the top quark mass with lepton+jets final states in pp collisions at  $\sqrt{s} = 13$  TeV' TOP-17-007

'Measurement of differential cross sections for top quark pair production and associated jets using the lepton+jets final state in proton-proton collisions at 13 TeV' TOP-17-002

'Search for the standard model production of four top quarks with same-sign and multilepton final states in proton-proton collisions at  $\sqrt{s} = 13$  TeV ' TOP-17-009

'Measurement of the differential  $t\bar{t}$  cross section with high- $p_T$  top-quark jets in the all-hadronic channel at  $\sqrt{s} = 8$  TeV ' TOP-16-018

'Measurement of the differential cross sections of top quark pair production as a function of kinematic event variables in pp collisions at  $\sqrt{s} = 13$  TeV' TOP-16-014

'Measurement of top quark pair-production in association with a W or Z boson in pp collisions at 13 TeV' TOP-17-005

'Measurement of the inclusive  $t\bar{t}$  cross section at  $\sqrt{s}= 5.02$  TeV' TOP-16-023

'Measurement of the top quark mass with muon+jets final states in pp collisions at  $\sqrt{s}= 13$  TeV' (TOP-16-022)

'Investigations of the impact of the parton shower tuning in Pythia 8 in the modelling of  $t\bar{t}$  at  $\sqrt{s} = 8$  and 13 TeV' (TOP-16-021)

'Combinations of the CMS alternative technique measurements of the top quark mass' (TOP-15-012)

'Bounding the top quark width using final states with two charged leptons and two jets at  $\sqrt{s} = 13$  TeV ' (TOP-16-019)

'Measurement of the  $t\bar{t} + \gamma$  production cross-section in pp collisions at  $\sqrt{s} = 8$  TeV' (TOP-14-008)

'Measurement of the jet mass distribution in boosted  $t\bar{t}$  production at  $\sqrt{s} = 8$  TeV' (TOP-15-015)

## Internal Analysis Notes

Internal notes that I am an author of in reverse chronological order:

- CMS AN-2015/300** - 'Higgs Boson decaying to WW in the leptonic final state at 13 TeV' (*HWW team*) [ED]
- CMS AN-2015/299** - 'Common analysis object definitions and triggers efficiencies for the  $H \rightarrow WW$  Run-2 analysis' (*HWW team*) [ED]
- CMS AN-2015/321** - 'Search for ttH in multilepton final states at 13 TeV' (*Anne-Catherine Le Bihan et al.*) [C]
- CMS AN-2013/113** - 'Search for  $H \rightarrow b\bar{b}$  in association with single top quarks as a test of Higgs boson couplings' (*A. Anuar, A. Bean et al.*) [C]
- CMS AN-2014/083** - 'Spin Parity of the Higgs Boson and Tensor Structure of the HWW interaction in the  $H \rightarrow WW$  dileptonic decay channel' (*Rebeca Gonzalez Suarez et al.*) [PA-ED]
- CMS AN-2013/096** - 'Study of associated Higgs boson (ZH) production in the three leptons, two jets final state at 7 and 8 TeV' (*Rebeca Gonzalez Suarez et al.*) [PA-ED]
- CMS AN-2012/458** - 'Single top associated tW production at 8 TeV' (*Rebeca Gonzalez Suarez et al.*) [PA-ED]
- CMS AN-2012/060** - 'Search for single top tW production using a boosted decision tree method in the dilepton channel' (*Rebeca Gonzalez Suarez et al.*) [C]
- CMS AN-2011/465** - 'Search for the Single top tW associated production in the dilepton decay channel with the full 2011 dataset' (*Rebeca Gonzalez Suarez et al.*) [PA-ED]
- CMS AN-2011/253** - 'Search for the Single top tW associated production in the dilepton decay channel' (*Rebeca Gonzalez Suarez et al.*) [PA-ED]
- CMS AN2010/281** - 'A measurement of  $t\bar{t}$  cross section in early 7 TeV data using the semileptonic topology: electron plus jets with one or more b-tags, using  $36 \text{ pb}^{-1}$  of CMS data.' (*M. Barrett, F. Blekman et al.*) [C-ED]
- CMS AN2010/411** - 'Search for Higgs Boson Decays to Two W Bosons in the Fully Leptonic Final State at  $\sqrt{s} = 7 \text{ TeV}$ ' (*G. Bauer, J. Bendavid et al.*) [C]
- CMS AN2010/344** - 'First Measurement of  $pp \rightarrow WW$  Production Cross-Section at  $\sqrt{s} = 7 \text{ TeV}$ ' (*W. Andrews, D. Barge et al.*) [C]
- CMS AN2010/406** - 'Measurement of the  $t\bar{t}$  cross section in the dilepton final state using b-tagging at  $\sqrt{s} = 7 \text{ TeV}$ ' (*J. Brochero, A. Calderón et al.*) [C-ED]
- CMS AN 2010/008** - 'The CMS physics reach for searches at 7 TeV' (*CMS Collaboration*) [PA]
- CMS AN 2009/139** - 'Search Strategy for a Standard Model Higgs Boson Decaying to Two W Bosons in the Fully Leptonic Final State at  $\sqrt{s} = 10 \text{ TeV}$ ' (*G. Bauer, J. Bendavid et al.*)
- CMS AN-2009/185** - 'Analysis strategy for the measurement of the  $WW \rightarrow \mu\nu\mu\nu$  cross-section with  $200 \text{ pb}^{-1}$  at center of mass energy of 10 TeV' (*C.Jorda, R. Villar et al.*) [C]
- CMS AN-2009/025** - 'Analysis strategy for the measurement of the  $WW \rightarrow \mu\nu\mu\nu$  cross-section' (*C.Jorda, R. Villar et al.*) [C]
- CMS AN-2009/020** - 'Projected exclusion limits on the SM Higgs boson cross sections obtained by combining

the  $H \rightarrow WW$  and  $ZZ$  decay channels' (*S. Baffioni, C. Botta et al.*) [PA]

**CMS AN-2008/074** - 'Measurement of muon charge asymmetry in the  $W \rightarrow \mu\nu$  channel' (*J. Alcaraz, M.I. Josa et al.*) [C]

**CMS AN-2008/039** - 'Search Strategy for a Standard Model Higgs Boson Decaying to Two W Bosons in the Fully Leptonic Final State' (*C. Charlot, J. Cuevas et al.*) [PA]

**CMS AN-2007/037** - 'Search for the Higgs boson in the  $WW$  decay channel with the CMS experiment' (*C. Charlot, J. Cuevas et al.*) [PA]

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