

# Rebeca Gonzalez Suarez - Publication List

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## 1 Metrics

As of March 9, 2016:

	Citeable papers	Published only
Number of papers	518	469
Number of citations	42729	42551
Average citations per paper	82.5	90.7
h index	99	99

Breakdown of papers by citations:

	Citeable papers	Published only
Renowned papers (500+)	4	4
Famous papers (250-499)	19	19
Very well-known papers (100-249)	76	76
Well-known papers (50-99)	134	133
Known papers (10-49)	192	190
Less known papers (1-9)	73	44
Unknown papers (0)	20	3

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 have a longer explanation of why they are chosen as such.

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>

## 2 Publications in peer-reviewed journals

First, publications in which I have had a direct personal contribution, chronologically ordered. The ten most relevant publications are marked with a ★ sign.

**Search for s channel single top quark production in pp collisions at  $\sqrt{s} = 7$  and 8 TeV, CMS Collaboration (Serguei Chatrchyan et al.),** arXiv:1603.02555, Submitted to J. High Energy Phys [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 (Serguei Chatrchyan et al.),** arXiv:1511.03951, Submitted to J. High Energy Phys [R - Single Top]

**Measurement of top quark polarisation in t-channel single top quark production, CMS Collaboration (Serguei Chatrchyan et al.),** arXiv:1511.02138, Submitted to J. High Energy Phys [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 (Serguei Chatrchyan et al.),** arXiv:1509.08159, Submitted to JHEP [C, R-ARC]

**Measurement of the Charge Asymmetry in Top Quark Pair Production in pp Collisions at  $\sqrt{s} = 8$  TeV using a Template Method, CMS Collaboration (Serguei Chatrchyan et al.),** arXiv:1508.03862, Accepted Phys. Rev. D [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 (Serguei Chatrchyan et al.),** 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 (Serguei Chatrchyan et al.),** 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 (Serguei Chatrchyan et al.),** arXiv:1411.3441, Phys. Rev. D 92, 012004 (2015) [PA, ED]

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

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

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

**Measurement of the t-channel single-top-quark production cross section and of the  $|V_{tb}|$  CKM matrix element in pp collisions at  $\sqrt{s} = 8$  TeV, CMS Collaboration (Serguei Chatrchyan et al.),** 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 (Serguei Chatrchyan et al.), 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 (Serguei Chatrchyan et al.), arXiv:1312.1129, JHEP 01(2014)096 [PA]**

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

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

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

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

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

**★ 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 (Serguei Chatrchyan et al.), Phys. Rev. D 84 (2011) 092004, arXiv:1108.3773 [C]**

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

Additional peer-reviewed publications from which I am also an author, chronologically ordered:

**Measurement of the t-tbar 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].

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

CMS Collaboration

arXiv:1603.02248 [hep-ex].

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

CMS Collaboration

arXiv:1603.01803 [hep-ex].

**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].

**Measurements of the t-tbar 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].

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

CMS Collaboration

arXiv:1602.08762 [hep-ex].

**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].

**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].

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

CMS Collaboration

arXiv:1602.04384 [hep-ex].

**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].

**Combined search for anomalous pseudoscalar HVV couplings in VH production and H to VV decay**

CMS Collaboration

arXiv:1602.04305 [hep-ex].

**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].

**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].

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

CMS Collaboration

arXiv:1601.06713 [hep-ex].

**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].

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

CMS Collaboration

arXiv:1601.04768 [hep-ex].

**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].

**Measurements of t-tbar 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].

**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].

**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].

**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].

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

CMS Collaboration

arXiv:1512.06461 [hep-ex].

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

CMS Collaboration

arXiv:1512.06212 [hep-ex].

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

CMS Collaboration

arXiv:1512.01224 [hep-ex].

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

CMS Collaboration

arXiv:1512.00815 [hep-ex].

**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].

**Measurement of spin correlations in t-tbar 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].

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

CMS Collaboration

arXiv:1511.03610 [hep-ex].

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

CMS Collaboration

arXiv:1511.01407 [hep-ex].

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

CMS Collaboration

arXiv:1510.07488 [physics.ins-det].

**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].

**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].

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

CMS Collaboration

arXiv:1510.04252 [hep-ex].  
10.1007/JHEP12(2015)178.  
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].

**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].

**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].

**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].

**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].

**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].

**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].

**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].

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

CMS Collaboration  
arXiv:1509.06051 [hep-ex].

**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].

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

CMS Collaboration

arXiv:1509.04044 [hep-ex].

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

CMS Collaboration

arXiv:1509.03893 [hep-ex].

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

CMS Collaboration

arXiv:1509.03750 [hep-ex].

**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].

**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].

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

CMS Collaboration

arXiv:1508.07774 [hep-ex].

10.1007/JHEP11(2015)018.

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].

10.1007/JHEP11(2015)189.

JHEP 1511 (2015) 189.

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

CMS Collaboration

arXiv:1508.06678 [nucl-ex].

**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].

**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].

10.1016/j.physletb.2015.11.042.

Phys.Lett. B752 (2016) 221-246.

**Search for Supersymmetry with a Photon, a Lepton, and Missing Transverse Momentum in pp Collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1508.01218 [hep-ex].



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

CMS Collaboration

arXiv:1507.08126 [hep-ex].

10.1016/j.physletb.2015.12.020.

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

CMS Collaboration

arXiv:1507.07527 [hep-ex].

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

CMS Collaboration

arXiv:1507.07229 [hep-ex].

10.1007/JHEP09(2015)137.

JHEP 1509 (2015) 137.

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

CMS Collaboration

arXiv:1507.07129 [hep-ex].

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

CMS Collaboration

arXiv:1507.06656 [hep-ex].

10.1103/PhysRevD.92.072010.

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

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

CMS Collaboration

arXiv:1507.05915 [hep-ex].

10.1016/j.physletb.2015.10.004.

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

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

CMS Collaboration

arXiv:1507.03268 [hep-ex].

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

CMS Collaboration

arXiv:1507.03119 [hep-ex].

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

CMS Collaboration

arXiv:1507.03031 [hep-ex].

10.1016/j.physletb.2015.12.039.

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

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

CMS Collaboration

arXiv:1507.02898 [hep-ex].

10.1103/PhysRevD.92.072006.  
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].  
10.1016/j.physletb.2015.12.017.  
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].  
10.1103/PhysRevD.92.112001.  
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].  
10.1007/JHEP11(2015)071.  
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].

**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].  
10.1016/j.physletb.2015.09.062.  
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].

**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].  
10.1103/PhysRevD.92.032008.  
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].  
10.1016/j.physletb.2015.10.067.  
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].  
10.1007/JHEP09(2015)201.  
JHEP 1509 (2015) 201.

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

CMS Collaboration  
arXiv:1505.06520 [hep-ex].  
10.1007/JHEP10(2015)128.  
JHEP 1510 (2015) 128.

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

CMS Collaboration  
arXiv:1505.04480 [hep-ex].  
10.1140/epjc/s10052-015-3709-x.  
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].  
10.1016/j.physletb.2015.07.010.  
Phys.Lett. B748 (2015) 221-243.

**Angular coefficients of Z bosons produced in pp collisions at  $\sqrt{s} = 8 \text{ TeV}$  and decaying to  $\mu^+\mu^-$  as a function of transverse momentum and rapidity**

CMS Collaboration  
arXiv:1504.03512 [hep-ex].  
10.1016/j.physletb.2015.08.061.  
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].  
10.1016/j.physletb.2015.07.065.  
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  $\sqrt{s} = 8 \text{ TeV}$**

CMS Collaboration  
arXiv:1504.03198 [hep-ex].  
10.1007/JHEP06(2015)121.  
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].  
10.1007/JHEP10(2015)144.  
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].

10.1007/JHEP07(2015)042.

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].

10.1103/PhysRevD.92.012003.

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].

10.1007/JHEP06(2015)116.

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].

10.1103/PhysRevLett.114.191803.

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].

10.1016/j.physletb.2015.09.057.

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].

10.1140/epjc/s10052-015-3706-0.

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].

10.1016/j.physletb.2015.08.047.

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].

10.1007/JHEP06(2015)080.

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].

10.1103/PhysRevC.92.034911.

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].

10.1103/PhysRevD.91.092012.

Phys.Rev. D91 (2015) 9, 092012.124.

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

CMS Collaboration

arXiv:1502.07400 [hep-ex].

10.1016/j.physletb.2015.07.053.

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].

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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

CMS Collaboration

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

CMS Collaboration

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

CMS Collaboration

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

CMS Collaboration

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**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

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CMS Collaboration

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CMS Collaboration

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**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].

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CMS Collaboration

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

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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

CMS Collaboration

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**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

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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JHEP 1501 (2015) 096.

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CMS Collaboration

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CMS and LHCb Collaborations

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CMS Collaboration

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CMS Collaboration  
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JINST 10 (2015) 02, P02006.

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

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

CMS Collaboration  
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CMS Collaboration  
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Phys.Rev. D90 (2014) 112013..

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CMS Collaboration  
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CMS Collaboration  
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**Measurement of the production cross section ratio  $\sigma(\text{chi}[b_2](1P)) / \sigma(\text{chi}[b_1](1P))$  in  $pp$  collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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**W bosons in pp collisions at 8 TeV**

CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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**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

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Phys.Rev. D91 (2015) 9, 092005.

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CMS Collaboration

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JHEP 1409 (2014) 087, Erratum-ibid. 1410 (2014) 106.

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CMS Collaboration

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**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

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CMS Collaboration

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Eur.Phys.J. C74 (2014) 11, 3149.

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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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

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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

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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

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Phys.Rev. D90 (2014) 3, 032005.

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CMS Collaboration

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Eur.Phys.J. C74 (2014) 11, 3129.

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CMS Collaboration

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JINST 9 (2014) 10, P10009.

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

CMS Collaboration

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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

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

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

CMS Collaboration  
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10.1103/PhysRevD.90.032006.  
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].  
10.1103/PhysRevD.90.032008.  
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  
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CMS Collaboration  
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Phys.Lett. B736 (2014) 33.

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

**duction modes**

CMS Collaboration

arXiv:1404.1344 [hep-ex].

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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].

10.1140/epjc/s10052-014-2973-5.

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

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

CMS Collaboration

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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

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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

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10.1007/JHEP04(2014)191.

JHEP 1404 (2014) 191.

**Search for  $W' \rightarrow t\bar{b}$  decays in the lepton + jets final state in pp collisions at  $\sqrt{s} = 8$  TeV**

CMS Collaboration

arXiv:1402.2176 [hep-ex].

10.1007/JHEP05(2014)108.

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].

10.1007/JHEP06(2014)120.

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].

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

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CMS Collaboration

arXiv:1401.6527 [hep-ex].

10.1038/nphys3005.

Nature Phys. 10 (2014) 557-560.

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

CMS Collaboration

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10.1007/JHEP05(2014)104.

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**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].

10.1140/epjc/s10052-014-2951-y.

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.

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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].

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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].

10.1103/PhysRevD.89.092010.

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].

10.1007/JHEP04(2014)103.

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].

10.1103/PhysRevD.90.032004.

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

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration

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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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

## **Collider**

CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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

CMS Collaboration

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

CMS Collaboration

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## **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

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## **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

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

CMS Collaboration

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CMS Collaboration

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JHEP 1304 (2013) 072.

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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JHEP 1305 (2013) 065.

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CMS Collaboration

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CMS Collaboration

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

CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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

CMS Collaboration

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CMS Collaboration

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### **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].

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### **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].

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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

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

CMS Collaboration

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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].

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

CMS Collaboration

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

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CMS Collaboration

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

CMS Collaboration

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CMS Collaboration

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CMS Collaboration

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JHEP 1302 (2013) 036.

**Measurement of the  $ZZ$  production cross section and search for anomalous couplings in 2  $l_1 l_2$  final states in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1211.4890 [hep-ex].

10.1007/JHEP01(2013)063.

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].

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

CMS Collaboration  
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**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].  
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**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  
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**Search in leptonic channels for heavy resonances decaying to long-lived neutral particles**

CMS Collaboration  
arXiv:1211.2472 [hep-ex].  
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**Measurement of differential top-quark pair production cross sections in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1211.2220 [hep-ex].  
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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].  
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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].  
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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].  
10.1140/epjc/s10052-013-2283-3.  
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].

10.1007/JHEP01(2013)154.

JHEP 1301 (2013) 154.

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

CMS Collaboration

arXiv:1210.6718 [hep-ex].

10.1016/j.physletb.2013.03.024.

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].

10.1103/PhysRevLett.110.081801.

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].

10.1007/JHEP12(2012)055.

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].

10.1016/j.physletb.2012.11.025.

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].

10.1007/JHEP12(2012)034.

JHEP 1212 (2012) 034.

**Search for excited leptons in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1210.2422 [hep-ex].

10.1016/j.physletb.2013.02.031.

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].

10.1103/PhysRevLett.109.261802.

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].

10.1007/JHEP01(2013)013.

JHEP 1301 (2013) 013.

**Search for fractionally charged particles in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1210.2311 [hep-ex].

10.1103/PhysRevD.87.092008.

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].

10.1016/j.physletb.2012.12.055.

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].

10.1016/j.physletb.2012.10.070.

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].

10.1140/epjc/s10052-012-2251-3.

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].

10.1016/j.physletb.2013.03.037.

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].

10.1007/JHEP12(2012)035.

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].

10.1007/JHEP12(2012)015.

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].

10.1007/JHEP11(2012)088.

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].

10.1016/j.physletb.2012.11.063.

Phys.Lett. B718 (2013) 1208-1228.

**Measurement of the  $Y_1S$ ,  $Y_2S$  and  $Y_3S$  polarizations in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1209.2922 [hep-ex].

10.1103/PhysRevLett.110.081802.

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].

10.1140/epjc/s10052-012-2202-z.

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].

10.1007/JHEP12(2012)105.

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].

10.1103/PhysRevD.87.012006.

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].

10.1007/JHEP11(2012)080.

JHEP 1211 (2012) 080.

**Combined search for the quarks of a sequential fourth generation**

CMS Collaboration

arXiv:1209.1062 [hep-ex].

10.1103/PhysRevD.86.112003.

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].

10.1016/j.physletb.2012.10.038.

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].

10.1103/PhysRevD.86.072010.

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].

10.1103/PhysRevLett.109.251801.

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].

10.1016/j.physletb.2012.10.048.

Phys.Lett. B718 (2012) 329-347.

**Observation of sequential Upsilon suppression in PbPb collisions**

CMS Collaboration

arXiv:1208.2826 [nucl-ex].

10.1103/PhysRevLett.109.222301.

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].

10.1007/JHEP11(2012)067.

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].

10.1103/PhysRevLett.110.042301.

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].

10.1016/j.physletb.2012.12.045.

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**



## TeV

CMS Collaboration

arXiv:1208.0956 [hep-ex].

10.1016/j.physletb.2012.12.008.

Phys.Lett. B718 (2013) 1229-1251.

## Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC

CMS Collaboration

arXiv:1207.7235 [hep-ex].

10.1016/j.physletb.2012.08.021.

Phys.Lett. B716 (2012) 30-61.

## 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].

10.1016/j.physletb.2012.09.012.

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].

10.1103/PhysRevD.86.052013.

Phys.Rev. D86 (2012) 052013.

## Study of the inclusive production of charged pions, kaons, and protons in $pp$ collisions at $\sqrt{s} = 0.9, 2.76, \text{ and } 7$ TeV

CMS Collaboration

arXiv:1207.4724 [hep-ex].

10.1140/epjc/s10052-012-2164-1.

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].

10.1016/j.physletb.2012.10.082.

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].

10.1140/epjc/s10052-012-2189-5.

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].

10.1007/JHEP08(2012)130.

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].

10.1103/PhysRevLett.109.171803.

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].

10.1007/JHEP10(2012)018.

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].

10.1007/JHEP09(2012)111.

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].

10.1007/JHEP11(2012)172.

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].

10.1007/JHEP08(2012)026.

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].

10.1016/j.physletb.2012.09.028.

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].

10.1103/PhysRevLett.109.121801.

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].

10.1007/JHEP09(2012)094.

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].

10.1016/j.physletb.2012.11.036.

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].

10.1016/j.physletb.2012.09.048.

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].

10.1103/PhysRevLett.109.111806.

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].

10.1016/j.physletb.2012.06.051.

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].

10.1016/j.physletb.2012.07.062.

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].

10.1103/PhysRevLett.109.141801.

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].

10.1103/PhysRevLett.109.071803.

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].

10.1016/j.physletb.2012.07.025.

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].

10.1007/JHEP10(2012)087.

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].

10.1007/JHEP07(2012)143.

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].

10.1007/JHEP08(2012)110.

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].

10.1103/PhysRevLett.109.152303.

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].

10.1016/j.physletb.2012.05.063.

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].

10.1016/j.physletb.2012.06.023.

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].

10.1016/j.physletb.2012.11.003.

Phys.Lett. B718 (2013) 773-794.

## Observation of a new $\Xi(b)$ baryon

CMS Collaboration

arXiv:1204.5955 [hep-ex].

10.1103/PhysRevLett.108.252002.

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].  
10.1007/JHEP06(2012)169.  
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].  
10.1007/JHEP08(2012)023.  
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].  
10.1007/JHEP06(2012)160.  
JHEP 1206 (2012) 160.

**Measurement of the mass difference between top and antitop quarks**

CMS Collaboration  
arXiv:1204.2807 [hep-ex].  
10.1007/JHEP06(2012)109.  
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].  
10.1007/JHEP03(2014)132, 10.1007/JHEP09(2012)029.  
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].  
10.1103/PhysRevLett.109.022301.  
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].  
10.1007/JHEP06(2012)126.  
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].  
10.1103/PhysRevC.87.014902.  
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].  
10.1140/epjc/s10052-012-2080-4.  
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].  
10.1007/JHEP05(2012)123.  
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].  
10.1103/PhysRevLett.108.261803.  
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].  
10.1140/epjc/s10052-012-2216-6.  
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].  
10.1103/PhysRevD.85.112007.  
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].  
10.1016/j.physletb.2012.07.059.  
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].  
10.1007/JHEP04(2012)033.  
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].  
10.1007/JHEP06(2012)110.  
JHEP 1206 (2012) 110.

**Search for microscopic black holes in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1202.6396 [hep-ex].  
10.1007/JHEP04(2012)061.  
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].  
10.1007/JHEP05(2012)055.  
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].  
10.1016/j.physletb.2012.04.058.  
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].  
10.1007/JHEP04(2012)084.  
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].  
10.1016/j.physletb.2012.02.085.  
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].  
10.1016/j.physletb.2012.05.028.  
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].  
10.1016/j.physletb.2012.03.029.  
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].  
10.1007/JHEP03(2012)040.  
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].  
10.1007/JHEP03(2012)081.  
JHEP 1203 (2012) 081.

**Study of high-pT charged particle suppression in PbPb compared to  $pp$  collisions at  $\sqrt{s_{NN}} = 2.76$  TeV**

CMS Collaboration  
arXiv:1202.2554 [nucl-ex].  
10.1140/epjc/s10052-012-1945-x.  
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].  
10.1103/PhysRevLett.108.111804.  
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].  
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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  
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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].  
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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].  
10.1007/JHEP06(2012)036.  
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].  
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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].

10.1140/epjc/s10052-012-2012-3.

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].

10.1016/j.physletb.2012.02.077.

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].

10.1016/j.physletb.2012.01.078.

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].

10.1103/PhysRevLett.108.111801.

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].

10.1007/JHEP01(2012)052.

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].

10.1007/JHEP02(2012)011.

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].

10.1007/JHEP01(2012)133.

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].

10.1103/PhysRevD.85.032002.

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].

10.1007/JHEP01(2012)010.

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].

10.1103/PhysRevD.84.112002.

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

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10.1007/JHEP11(2011)148, 10.1007/JHEP02(2012)055.

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].

10.1140/epjc/s10052-011-1839-3.

Eur.Phys.J. C72 (2012) 1839.

**Performance of tau-lepton reconstruction and identification in CMS**

CMS Collaboration

arXiv:1109.6034 [physics.ins-det].

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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].

10.1103/PhysRevLett.107.271802.

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].

10.1103/PhysRevLett.107.221804.

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].

10.1103/PhysRevD.84.052011.

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].  
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JHEP 1110 (2011) 007.

**Search for B(s) and B to dimuon decays in pp collisions at 7 TeV**

CMS Collaboration  
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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].  
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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].  
10.1007/JHEP10(2011)132.  
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  
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10.1007/JHEP08(2011)141.  
JHEP 1108 (2011) 141.

**Determination of Jet Energy Calibration and Transverse Momentum Resolution in CMS**

CMS Collaboration  
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JINST 6 (2011) P11002.

**Search for Three-Jet Resonances in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1107.3084 [hep-ex].  
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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].  
10.1007/JHEP08(2011)156.  
JHEP 1108 (2011) 156.

**A search for excited leptons in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
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Phys.Lett. B704 (2011) 143-162.

**Inclusive search for squarks and gluinos in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
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10.1103/PhysRevD.85.012004.  
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].  
10.1007/JHEP09(2011)109.  
JHEP 1109 (2011) 109.

**Missing transverse energy performance of the CMS detector**

CMS Collaboration  
arXiv:1106.5048 [physics.ins-det].  
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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].  
10.1103/PhysRevLett.107.201804.  
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].  
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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].  
10.1103/PhysRevD.84.052008.  
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].  
10.1007/JHEP07(2011)113.  
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].  
10.1103/PhysRevLett.107.091802.  
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].  
10.1007/JHEP07(2011)098.  
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].  
10.1007/JHEP08(2011)005.  
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].  
10.1140/epjc/s10052-011-1721-3.  
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].  
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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].  
10.1016/j.physletb.2011.07.067.  
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].  
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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].  
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JHEP 1107 (2011) 049.

**Search for First Generation Scalar Leptoquarks in the  $e\nu jj$  channel in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

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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].  
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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].  
10.1007/JHEP06(2011)093.  
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].  
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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].  
10.1007/JHEP07(2011)076.  
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].  
10.1007/JHEP08(2011)086.  
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].  
10.1103/PhysRevLett.107.021802.  
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].  
10.1007/JHEP06(2011)077.  
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].  
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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].  
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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].  
10.1007/JHEP08(2011)117.  
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].  
10.1103/PhysRevLett.106.231801.  
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].  
10.1007/JHEP05(2011)085.  
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].  
10.1007/JHEP04(2011)050.  
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].  
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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].  
10.1103/PhysRevLett.106.211802.  
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].  
10.1007/JHEP05(2011)093.  
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].  
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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  
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Phys.Rev.Lett. 106 (2011) 212301.

**Search for a Heavy Bottom-like Quark in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
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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].  
10.1007/JHEP05(2011)064.  
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].  
10.1007/JHEP03(2011)136.  
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].  
10.1103/PhysRevLett.106.201804.  
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].  
10.1103/PhysRevC.84.024906.  
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].



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Phys.Lett. B699 (2011) 48-67.

**Dijet Azimuthal Decorrelations in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration  
arXiv:1101.5029 [hep-ex].  
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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].  
10.1007/JHEP03(2011)090.  
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].  
10.1007/JHEP05(2011)029.  
JHEP 1105 (2011) 029.

**Search for Supersymmetry in  $pp$  Collisions at 7 TeV in Events with Jets and Missing Transverse Energy**

CMS Collaboration  
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10.1016/j.physletb.2011.03.021.  
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].  
10.1007/JHEP03(2011)024.  
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].  
10.1103/PhysRevLett.106.112001.  
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].  
10.1016/j.physletb.2011.02.048.  
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].  
10.1103/PhysRevD.83.112004.  
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].

10.1103/PhysRevLett.106.201802.

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].

10.1103/PhysRevLett.106.201803.

Phys.Rev.Lett. 106 (2011) 201803.

**Search for Microscopic Black Hole Signatures at the Large Hadron Collider**

CMS Collaboration

arXiv:1012.3375 [hep-ex].

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**Measurements of Inclusive  $W$  and  $Z$  Cross Sections in  $pp$  Collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1012.2466 [hep-ex].

10.1007/JHEP01(2011)080.

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].

10.1103/PhysRevLett.106.082001.

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].

10.1007/JHEP01(2011)079.

JHEP 1101 (2011) 079.

**Search for Stopped Gluinos in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

arXiv:1011.5861 [hep-ex].

10.1103/PhysRevLett.106.011801.

Phys.Rev.Lett. 106 (2011) 011801.

**Prompt and non-prompt  $J/\psi$  production in  $pp$  collisions at  $\sqrt{s} = 7$  TeV**

CMS Collaboration

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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].  
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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].  
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Phys.Rev.Lett. 105 (2010) 262001.

**Search for Dijet Resonances in 7 TeV  $pp$  Collisions at CMS**

CMS Collaboration  
arXiv:1010.0203 [hep-ex].  
10.1103/PhysRevLett.105.211801, 10.1103/PhysRevLett.106.029902.  
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].  
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JHEP 1009 (2010) 091.

**CMS Tracking Performance Results from early LHC Operation**

CMS Collaboration  
arXiv:1007.1988 [physics.ins-det].  
10.1140/epjc/s10052-010-1491-3.  
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].  
10.1140/epjc/s10052-010-1453-9.  
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**Measurement of the charge ratio of atmospheric muons with the CMS detector**

CMS Collaboration  
arXiv:1005.5332 [hep-ex].  
10.1016/j.physletb.2010.07.033.  
Phys.Lett. B692 (2010) 83-104.

**Measurement of Bose-Einstein correlations with first CMS data**

CMS Collaboration  
arXiv:1005.3294 [hep-ex].  
10.1103/PhysRevLett.105.032001.  
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].

10.1103/PhysRevLett.105.022002.  
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  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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CMS Collaboration  
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### **Performance of the CMS Drift-Tube Local Trigger with Cosmic Rays**

CMS Collaboration  
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### **Commissioning of the CMS High-Level Trigger with Cosmic Rays**

CMS Collaboration  
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CMS Collaboration  
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10.1088/1748-0221/5/03/T03014.  
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].  
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JINST 5 (2010) T03013.

### **Performance of the CMS Drift Tube Chambers with Cosmic Rays**

CMS Collaboration  
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CMS Collaboration  
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10.1088/1748-0221/5/03/T03001.  
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### **CMS Data Processing Workflows during an Extended Cosmic Ray Run**

CMS Collaboration  
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JINST 5 (2010) T03006.

### **Aligning the CMS Muon Chambers with the Muon Alignment System during an Extended Cosmic Ray Run**

CMS Collaboration

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JINST 5 (2010) T03019.

### **Performance Study of the CMS Barrel Resistive Plate Chambers with Cosmic Rays**

CMS Collaboration

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JINST 5 (2010) T03017.

### **Time Reconstruction and Performance of the CMS Electromagnetic Calorimeter**

CMS Collaboration

arXiv:0911.4044 [physics.ins-det].

10.1088/1748-0221/5/03/T03011.

JINST 5 (2010) T03011.

### **Alignment of the CMS Muon System with Cosmic-Ray and Beam-Halo Muons**

CMS Collaboration

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10.1088/1748-0221/5/03/T03020.

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].

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JINST 5 (2010) T03021.

### **Performance and Operation of the CMS Electromagnetic Calorimeter**

CMS Collaboration

arXiv:0910.3423 [physics.ins-det].

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JINST 5 (2010) T03010.

### **Alignment of the CMS Silicon Tracker during Commissioning with Cosmic Rays**

CMS Collaboration

arXiv:0910.2505 [physics.ins-det].

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JINST 5 (2010) T03009.

### **The CMS experiment at the CERN LHC**

CMS Collaboration

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JINST 3 (2008) S08004.

### 3 Conference proceedings

**Run-1 Single-top measurements at CMS**, *Rebeca Gonzalez Suarez*, Proceedings DPF 2015, arXiv:1510.05235 [P]

**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 [P]

**Single top Production at  $\sqrt{s} = 7$  TeV**, *Rebeca Gonzalez Suarez on behalf of the CMS, ATLAS collaborations*, Proceedings Moriond 2012, arXiv:1205.2786 [P]

**Higgs search prospects at the LHC**, *Rebeca Gonzalez Suarez*, Proceedings BEACH 2010, Nucl.Phys.Proc.Suppl. 210-211 (2011) 283-288 [P]

**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 [P]

**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 [P]

## 4 Public Analysis Summaries

CMS Public Analysis Summaries in which I had a relevant contribution. This kind of document is reviewed by a board of four referees and circulated to the Collaboration before being made public:

'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  $\sqrt{s} = 8\text{ TeV}$ ' (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  $\sqrt{s} = 8\text{ TeV}$ ' (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  $\sqrt{s} = 14\text{ TeV}$  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  $\sqrt{s} = 8\text{TeV}$ ' (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  $\sqrt{s} = 7\text{TeV}$ ' (CMS-PAS-TOP-11-022) [PA, ED]

`Search for Physics Beyond the Standard Model in Z+MET+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  $\sqrt{s} = 7\text{TeV}$ ' (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]

## 5 Internal Analysis Notes

Internal notes that I am an author of:

**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. Al-

*caraz, 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]