James W. Rohlf

Feb. 2017

Contact
Boston University Physics Dept., 590 Commonwealth Ave., Boston, MA 02215,
phone 617-353-2600, mobile 617-543-7455, Skype 617-275-3636, CERN +41754112573
email rohlf@bu.edu

Education
Ph.D. in Physics 1980 Caltech, "Investigations of Hadron Jets," published in Nucl. Phys. B171 (1980) p. 1-37, Committee: G. C. Fox (advisor), C. Barnes, R. P. Feynman, R. Gomez
M.S. in Physics 1975 University California, Los Angeles
B.A. Physics and B.S. Mathematics 1973 University of Minnesota

Employment
Professor of Physics, Boston University, 1988 - present
Associate Professor of Physics, Harvard University, 1985-8
Assistant Professor of Physics, Harvard University, 1981-5 (concurrent with Cornell and CERN)
Scientific Associate (paid), European Center for Nuclear Research (CERN), 1982-4
Visiting Fellow, Laboratory of Nuclear Studies, Cornell University, 1980-2
Research Associate, Harvard University, 1980-1
Research Associate, California Institute of Technology, 1979-80

Current research
Physics with the Compact Muon Solenoid (CMS) detector at the CERN LHC. First data collected in Dec. 2009. First physics paper published in Feb. 2010. Design and construction of the data concentrator (DCC and DCC2) to read out the CMS hadron calorimeter (HCAL) and other associated electronics ($5 M equipment money). Development of silicon photomultipliers (SiPM) and micro-CTA electronics (AMC13) for trigger, clock, and data acquisition in CMS. Led effort to establish source calibration procedure for calorimeter. Supervision of postdocs and and graduate students. Work closely with the senior engineers at the Boston University Electronics Design Facility. Operations and detctor upgrades funded by US Department of Energy.

Research highlights

Discovery of the higgs boson.

CMS detector design, construction, and commissioning. Work done at Boston University and CERN. 451 published papers.

Discovery of the intermediate vector bosons, W and Z^0.

UA1 detector commissioning, shift coordination, and leading role in event selection and data analysis to identify events in both the electron and muon decay channels. Led the analysis to measure the spin, cross sections, and branching ratios. Work done at CERN. 66 papers published.

Discovery of the B-factory resonance Υ(4s) and first study of the b quark.

Led analysis of the discovery of the Υ(4s) using novel event shape variables developed by my thesis advisor, Geoffrey Fox and Steven Wolfram. Performed particle identification of kaons and charmed mesons to establish the quark transition b$\rightarrow$ c. Work done at Cornell. Followed up with work at CERN with the discovery of B mixing and the first baryon containing the b quark. 30 papers published.

First observation of jets in hadron collisions.

Construction and operation of the first experiment to trigger on jet energy with a calorimeter. First definition of hadron jets and use of model of Feynman and Field to compare to e^+e- collisions and make detailed acceptance corrections to arrive at first measurement of quark-quark scattering cross sections. Work done at Fermilab and Caltech. Followed up with work at CERN on angular distribution of jets to search for substructure of quarks. 9 published papers

Textbook

"Modern Physics from Alpha to Z^0," Wiley (1994) 646 pages.

Courses taught

Harvard U, Advanced electricity and magnetism
Harvard U, High energy physics
Harvard U, Advanced lab for graduate students
Boston U, Mechanics (non-calculus)
Boston U, Mechanics for engineers and scientists
Boston U, Mechanics for physics majors
Boston U, Electricity and magnetism (non-calculus)
Boston U, Electricity and magnetism for engineers and scientists
Boston U, Electricity and magnetism for graduate students
Boston U, Modern physics for engineers and scientists
Boston U, Quantum physics for physics majors
Boston U, Particle physics
Boston U, Physics of the Large Hadron Collider

Publications (59,264 citations)

[1] S. Erhan, W. Lockman, T. Meyer, M. Medinnis, J. Rohlf, P. Schlein, (UCLA) , R. Heisterberg, L. Mo, (Virginia Tech.), "Proposal to Study High Momentum Transfer Phenomena and Search for New States," FERMILAB-PROPOSAL-0519, Oct 1976. 26pp.

[2] C. Bromberg *et al.*, "Observation of Jets of Particles at High Transverse Momentum and Comparison With Inclusive Single Particle Reactions," Phys. Rev. Lett. 38, 1447 (1977).

[3] C. Bromberg *et al.*, "Comparison of Hadron Jets Produced by π^- and p Beams on Hydrogen and Aluminum Targets," FERMILAB-CONF-77-062-EXP, Aug 1977. 47pp. Presented at 8th International Symposium on Multiparticle Dynamics, Kaysersberg, France, Jun 12-17, 1977. Published in Kayserberg Conf.1977:B-89 (QCD161:C49:1977)

[4] C. Bromberg *et al.*, "Production of Jets and Single Particles at High p_T in 200-GeV Hadron Beryllium Collisions," Nucl. Phys. B134, 189 (1978).

[5] C. Bromberg *et al.*, "Jets Produced in π^-, π^+ and Proton Interactions at 200-GeV on Hydrogen and Aluminum Targets," Phys. Rev. Lett. 42, 1202 (1979).

[6] C. Bromberg *et al.*, "Production and Correlations of Charged Particles with High $p_{\rm T}$ in 200-GeV π p, Kp and pp Collisions," Phys. Rev. Lett. 43, 561 (1979).

[7] C. Bromberg *et al.*, "Experimental Tests of Quantum Chromodynamics in High p_T Jet Production in 200- GeV Hadron-Proton Collisions," Phys. Rev. Lett. 43, 565 (1979).

[8] J. Rohlf, "Jet Production in High-Energy Hadron - Proton Collisions, " Ph. D. thesis, James W. Rohlf, (Caltech), FERMILAB-THESIS-1979-20, UMI-80-12212, Dec 1979. 91pp. Ph.D. Thesis (Advisor: Geoffrey C. Fox).

[9] C. Bromberg *et al.*, "Jet Production in High-Energy Hadron-Proton Colllisions," Nucl. Phys. B171, 1 (1980).

[10] C. Bromberg *et al.*, "Measurement of Forward Jets Produced In High Transverse Momentum Hadron - Proton Collisions," Phys. Rev. Lett. 45, 769,1980.

[11] C. Bromberg *et al.*, "Structure of Events in 200-GeV Interactions on Hydrogen and Aluminum Targets in Both Soft and Hard Collisions," Nucl. Phys. B171, 38 (1980).

[12] G. Moneti *et al.*"Results From Cesr," HEPSY-MEMO-15-80, Aug 1980. 39pp. Presented at SLAC Summer Inst., Stanford, Calif., Jul 28 - Aug 8, 1980. Published in SLAC Summer Inst.1980:361 (QCD161:S76:1980).

[13] D. Andrews *et al.*, "Observation of a Fourth Upsilon State in Electron-Positron Annihilations," Phys. Rev. Lett. 45, 218 (1980).

[14] C. Bebek *et al.*, "Evidence for New Flavor Production at the Upslion(4S)," Phys. Rev. Lett. 46, 84 (1981).

[15] A. Brody *et al*, "Charged And Neutral Kaon Production At The Upsilon (4s)," By CLEO Collaboration CLEO/81-03, CLNS 81/483, Mar 1981. 14pp.

[16] K. Chadwick *et al*, "Evidence Against Exotic Decays Of B Mesons," CLEO 81/06, 1981, Rochester Univ. - CLEO 81-06A (81,REC.NOV.) 3-13.

[17] M.S. Alam *et al.*, "Inclusive Properties Of B Meson Decay," CLEO 81/06, 1981. Rochester Univ. - CLEO 81-06B (81,REC.NOV.) 14-34.

[18] J. Green *et al.*, "Leptons From B Decay," CLEO-81-06, 1981. Rochester Univ. - CLEO 81-06C (81,REC.NOV.) 35-55.

[19] C. Bebek *et al.*, "Kaon Production From The Upsilon Resonances," CLEO 81/06, 1981. Rochester Univ. - CLEO 81-06D (81,REC.NOV.) 56-71.

[20] C. Bebek *et al.*, "Kaon Lepton Events In B Meson Decay," CLEO 81/06, 1981. Rochester Univ. - CLEO 81-06E (81,REC.NOV.) 72-79.

[21] A. Brody *et al*, "Baryon Production In The Upsilon Region," CLEO 81/06, 1981. Rochester Univ. - CLEO 81-06F (81,REC.NOV.) 80-94.

[22] A. Brody *et al*, "A Determination Of Alpha-S From The Leptonic Decay Of The Upsilon (1s)," CLEO 81/06, 1981. Rochester Univ. - CLEO 81-06G (81,REC.NOV.) 95-104.

[23] D. Andrews *et al.*, "Angular Distribution In The Three Gluon Decay Of The Upsilon (1s)," CLEO 81/06, 1981. Rochester Univ. - CLEO 81-06H (81,REC.NOV.) 105-117.

[24] K. Chadwick *et al*, "A Measurement Of The Leptonic Branching Ratio Of The Upsilon (2s)," CLEO 81/06, 1981. Rochester Univ. - CLEO 81-06I (81,REC.NOV.) 118-125.

[25] M.S. Alam *et al.*, "Observation Of Upsilon (3s) $\rightarrow \pi^+\pi^-$ Upsilon (1s)," CLEO 81/06, 1981. Rochester Univ. - CLEO 81-06J (81,REC.NOV.) 126-133.

[26] D. Andrews *et al.*, "Cross-Sections For e^+e^- Annihilation Into Hadrons In The Upsilon Region," CLEO 81/06, 1981. Rochester Univ. - CLEO 81-06K (81,REC.NOV.) 134-159.

[27] K. Chadwick *et al*, "Decay of b-flavored Hadrons into Single Muon and Dimuon Final States," Phys. Rev. Lett. 46, 88 (1981).

[28] J. J. Mueller *et al.*, "A Measurement of the Branching Ratio of $\Upsilon(2S) \to \pi^+\pi^-\Upsilon(1S)$," Phys. Rev. Lett. 46, 1181 (1981).

[29] Y. Cho *et al.*, "Electron Proton Interaction Experiment," In Brookhaven 1981, Proceedings, Isabelle, Vol. 2, 659-721.

[30] A. Brody *et al*, "Decay of B Mesons Into Charged And Neutral Kaons," Phys. Rev. Lett. 48, 1070 (1982).

[31] Daniel Reich, James Rohlf, Robert Weisskoff, "A Search For Kaon Decays In The Solenoid," Cornell U., LNS. CBX-82-3, Jan 1982. 9pp.

[32] J. Green *et al.*, "A Measurement of the Branching Ratio of $\Upsilon(3S) \to \pi^+\pi^-\Upsilon(1S)$," Phys. Rev. Lett. 49, 617 (1982).

[33] C. Bebek *et al.*, "Inclusive Charged D* Production in e^+e^- Annihilations at W = 10.4 GeV," Phys. Rev. Lett. 49, 610 (1982).

[34] M. S. Alam *et al.*, "Charged Particle Multiplicities in B Meson Decay," Phys. Rev. Lett. 49, 357 (1982).

[35] Y. Cho *et al.* , "Electron - Proton Interaction Experiment," FERMILAB-PROPOSAL-0719, May 1982. 35pp.

[36] J. W. Rohlf, (Harvard U.), "Measurement Of The Charm Quark Fragmentation Function," In Volendam 1982, Proceedings, Multiparticle Dynamics 1982, 589-596.

[37] D. Andrews *et al*, "The CLEO Detector," Nucl. Instr. Meth. 211, 47 (1983).

[38] K. Chadwick *et al*, "Semileptonic Decays of B Mesons," Phys. Rev. D27, 475 (1983).

[39] G. Arnison *et al.*, "Experimental Observation of Isolated Large Transverse Energy Electrons With Associated Missing Energy at $\sqrt{s}$ = 540 GeV," Phys. Lett. B122, 103 (1983).

[40] R. Giles *et al.*, "A Measurement of the Branching Fraction of the Decay $\Upsilon(1S) \to \tau^+\tau^-$," Phys. Rev. Lett. 50, 877 (1983).

[41] S. Behrends *et al.*, "Observation of Exclusive Decay Modes of B Flavored Mesons," Phys. Rev. Lett. 50, 881 (1983).

[42] D. Andrews *et al.*, "A Measurement of The Leptonic Branching Ratios of the Upsilon (1s), Upsilon (2s), And Upsilon (3s)," Phys. Rev. Lett. 50, 807 (1983).

[43] M. S. Alam *et al;*, "A Search For Axion Production in Upsilon Decay," Phys. Rev. D37, 1665 (1983).

[44] A. Chen *et al*, "Ruling Out Exotic Models of b-quark Decay," Phys. Lett. B122, 317 (1983).

[45] D. Cline, J. Rohlf, (CERN), SU(2) x U(1) Parameters, Z^0 Width and Upper Limit on Number of Neutrinos From W, Z Events," CERN-UA1/TN83-40, Jun 1983. 4pp.

[46] G. Arnison *et al.*, "Experimental Observation of Lepton Pairs of Invariant Mass Around 95-GeV/c^2 at the CERN SPS Collider," Phys. Lett. B126, 398 (1983).

[47] J. Rohlf, "Physics at the Proton-Antiproton Collider," Proceedings of the 12th International Conference on High Energy Accelerators, Fermilab, 619 (1983).

[48] G. Arnison *et al.*, "Elastic and Total Cross-Section Measurement at the Cern Proton-Antiproton Collider," Phys. Lett. B128, 336 (1983).

[49] G. Arnison *et al.*, "Further Evidence for Charged Intermediate Vector Bosons at the SPS Collider," Phys. Lett. B129, 273 (1983).

[50] G. Arnison *et al.*, "Jet Production at the CERN Proton Antiproton Collider," Phys. Lett. B132, 214 (1983).

[51] G. Arnison *et al.*, "Jet Fragmentation Into Charged Particles at the Cern Proton-Antiproton Collider," Phys. Lett. B132, 223 (1983).

[52] G. Arnison *et al.*, "Search for Massive $e\nu\gamma$ and $\mu\nu\gamma$ Final States at the CERN Super Proton Synchrotron Collider," Phys. Lett. B135, 250 (1984).

[53] G. Arnison *et al.*, "Observation of the Muonic Decay of the Charged Intermediate Vector Boson," Phys. Lett. B134, 469 (1984).

[54] G. Arnison *et al.*, "Angular Distributions and Structure Functions from Two Jet Events at the CERN SPS Proton-Antiproton Collider," Phys. Lett .B136, 294 (1984).

[55] G. Arnison *et al.*, "Experimental Observation of Events with Large Missing Transverse Energy Accompanied by a Jet or a Photon(s) in $\mathrm{p\bar{p}}$ Collisions at $\sqrt{s}$ = 540 GeV," Phys. Lett. B139, 115 (1984).

[56] M. Calvetti *et al.*, "Physics at the CERN Collider Using a 'Minimum Bias' Trigger, In Rome 1983, Proceedings, Proton Antiproton Collider Physics, 10-49.

[57] G. Arnison *et al.*, "D^{*+-} Production In Jets at the Cern SPS Collider," Phys. Lett B147, 222 (1984).

[58] G. Arnison *et al.*, "Observation of Muonic Z^0 Decay at the Proton-Antiproton Collider," Phys. Lett. B147, 241 (1984).

[59] Kenneth D. Lane, (Ohio State U.) , James Rohlf, (Harvard U.), "Top Quark Identification Through Isolated Energetic Leptons," DOE-ER-01545-354, Jun 1984. 6pp. Contribution to Proc. of 1984 DPF Workshop on Design and Utilization of Superconducting Super Colider, Snowmass, CO, Jun 23 - Jul 13, 1984. Published in Snowmass Summer Study 1984:0737 (QCD184:S7:1984).

[60] J. Rohlf, "New Physics from UA1," CERN-EP/84-126, Sep 1984. 9pp. Presented at 22nd Int. Conf. on High Energy Physics, Leipzig, East Germany, Jul 19-25, 1984. Published in Leipzig High Energy 1984 v.2:12 (QCD161:H51:1984) Also in Providence Grand Unif.1984:151 (QCD161:W74:1984).

[61] R.Keith Ellis, (Fermilab) , James Rohlf, (Harvard U.), "Summary Report of the Jet Study Group," FERMILAB-CONF-84-106-T, Oct 1984. 4pp. DPF Summer Study on Design and Utilization of the SSC, Snowmass, Colo., Jun 23-Jul 13, 1984. Published in Snowmass Summer Study 1984:203 (QCD184:S7:1984).

[62] G. Arnison *et al.*, "Associated Production of an Isolated Large Transverse Momentum Lepton (Electron or Muon), and Two Jets at the CERN $\mathrm{p\bar{p}}$ Collider," Phys. Lett. B147, 493 (1984).

[63] James Rohlf (Harvard U.), "Anomolous Events from High-Energy Proton-Antiproton Collisions," Jan 1985. 1pp. Published in Phys. Today 38N1, S34 (1985).

[64] G. Arnison *et al.*, "Intemediate Mass Dimuon Events at the CERN $\mathrm{p\bar{p}}$ Collider at $\sqrt{s}$ = 540 GeV," Phys. Lett. B155 442 (1985).

[65] G. Arnison *et al.*, "Comparison of Three Jet and Two Jet Cross-Sections in Proton-Antiproton Collisions at the CERN SPS Collider," Phys. Lett B158, 494 (1985).

[66] G. Arnison *et al.*, "W Production Properties at the CERN SPS Collider," Lett. Nuovo Cim. 44, 1 (1985).

[67] G. Arnison *et al.*, "Inclusive Jet Production at $\sqrt{s}$ = 540 GeV," CERN-EP-85-116, Jul 1985. 12pp.

[68] J. Rohlf, "Results From UA1," CERN-EP-85-160, Oct 1985. 30pp. Invited talk given at Annual Mtg. of Div. of Particles and Fields of the APS, Eugene, OR, Aug 12-15, 1985. Published in DPF Conf.1985:66 (QCD161:A6:1985)

[69] J. Oliver, J. Rohlf, A. Schwartz, (Harvard U.), "A Fastbus To VME / VMX Interface," In Geneva 1985, Proceedings, Fastbus Software, 87-91 (1986).

[70] G. Arnison *et al.*, "Recent Results on Intermediate Vector Boson Properties at the CERN Super Proton Synchrotron Collider," Phys. Lett. B166, 484 (1986).

[71] G. Arnison *et al.*, "Intermediate Vector Boson Properties at the CERN Super Proton Synchrotron Collider," Europhys. Lett. 1, 327 (1986).

[72] G. Arnison *et al.*, "Measurement of the Inclusive Jet Cross-Section at the CERN Proton-Antiproton Collider," Phys. Lett. B172, 461 (1986).

[73] G. Arnison *et al.*, "Results on W^{+-} and Z^0 Physics from the UA1 Collaboration," CERN-EP-86-60, May 1986. 17pp. Invited talk given at 21st Rencontre de Moriond: Perspectives in Electroweak Interactions and Unified Theories, Les Arcs, France, Mar 9-16, 1986. Published in Moriond 1986: Leptonic v.1:63 (QCD161:R34:1986:V.1).

[74] G. Arnison *et al.*, "Analysis of the Fragmentation Properties of Quark and Gluon Jets at the CERN $S\bar{p}pS$ Collider," Nucl. Phys. B276, 253 (1986).

[75] G. Arnison *et al.*, "Angular distributions for High Mass Jet Pairs and a Limit on the Energy scale for Compositeness for Quarks from the CERN Proton-Antiproton Collider," Phys. Lett. B177, 244 (1986).

[76] C. Albajar *et al*, "Events with Large Missing Transverse Energy at the CERN Collider: I. W $\rightarrow \tau\nu$ Decay and Test of $\tau - \mu -$e Universality at $Q^2 = m_{W^2}$," Phys. Lett. B185, 233 (1987).

[77] C. Albajar *et al*, "Events with Large Missing Transverse Energy at the CERN Collider: II. Search for Decays of W^{+-} Into Heavy Leptons and of Z^0 Into Noninteracting Particles," Phys. Lett. B185, 233 (1987).

[78] C. Albajar *et al*, "Beauty Production at the CERN Proton-Antiproton Collider," Phys. Lett. B186, 237 (1987).

[79] C. Albajar *et al*, "Search for B^0 anti-B^0 Oscillations at the CERN Proton-Antiproton Collider," Phys. Lett. B186, 247 (1987).

[80] C. Albajar *et al*, "Production of Ws with Large Transverse Momentum at the CERN Proton-Antiproton Collider," Phys. Lett. B193, 389 (1987).

[81] C. Albajar *et al*, "Analysis of the Highest Transverse Energy Events Seen in the UA1 Detector at the S$\mathrm{p\bar{p}}$S Collider," Z. Phys. C36, 33 (1987).

[82] C. Albajar *et al*, "Events with Large Missing Transverse Energy at the CERN Collider: III. Mass Limits on Supersymmetric Particles," Phys. Lett. B198, 261 (1987).

[83] C. Albajar *et al*, "Intermediate Vector Boson Cross Sections at the CERN Super Proton Synchrotron Collider and the Number of Neutrino Types," Phys. Lett. B198, 271 (1987).

[84] C. Albajar *et al*, "Study of Heavy Flavor Production In Events with a Muon Accompanied by Jet(s) at the Cern Proton - Anti-Proton Collider," Z. Phys. C37 489 (1988).

[85] C. Albajar *et al*, "Search for New Heavy Quarks at the CERN Proton - Antiproton Collider," Z. Phys. C37, 505 (1988).

[86] C. Albajar *et al*, "High Transverse Momentum J / psi Production at the CERN Proton - Antiproton Collider," Phys. Lett. B200, 380 (1988).

[87] C. Albajar *et al*, "Production of Low Transverse Energy Clusters in $\mathrm{\bar{p}p}$ Collisions at $\sqrt{s}$ = 0.2-TeV to 0.9-TeV and their Interpretation in Terms of QCD Jets," Nucl. Phys. B309, 405 (1988).

[88] C. Albajar *et al*, "Direct Photon Production at the CERN Proton - Antiproton Collider," Phys. Lett. B209, 385 (1988).

[89] C. Albajar *et al*, , "Two-Jet Mass Distributions at the Cern Proton-Antiproton Collider," Phys. Lett. B209, 127 (1988).

[90] C. Albajar *et al*, "Low Mass Dimuon Production at the CERN Proton - Antiproton Collider.," Phys. Lett. B209, 397 (1988).

[91] J. Rohlf, (CERN & Harvard U.), "Recent Physics Results from the Cern $\mathrm{\bar{p}p}$ Collider," Published in Proc. 12th Int. Conf. on High Energy Accelerators, pp. 619-625 (1988).

[92] J. W. Rohlf (Harvard U. & Boston U.), "Present Status of Warm Liquid Calorimetry," Prepared for 1988 DPF Summer Study on High-energy Physics in the 1990s (Snowmass 88), Snowmass, CO, 27 Jun - 15 Jul 1988. In Snowmass 1988, Proceedings, High energy physics in the 1990s, 816-823.

[93] C. Albajar *et al*, "Measurement of the Bottom Quark Production Cross Section in Proton-Antiproton Collisions at $\sqrt{s}$ = 0.63-TeV," Phys. Lett. B213, 405 (1988).

[94] J. Rohlf, (Harvard U.), "Experimental Limits on the Number of Neutrino Generations," In Boston 1988, Proceedings, Neutrino physics and astrophysics, 434-442.

[95] K. Ankoviak *et al*, "Construction and Performance of a Position Detector for the UA1 Uranium-TMP Calorimeter," Nucl. Instr. Meth. A279, 83 (1989).

[96] C. Albajar *et al.*, "Studies of Intermediate Vector Boson Production and Decay in UA1 at the CERN Proton-Antiproton Collider," Z. Phys C44, 15 (1989).

[97] C. Albajar *et al.*, "Bose-Einstein Correlations in $\bar{\mathrm{p}}\mathrm{p}$ Iinteractions at $\sqrt{s}$ = 0.2-TeV to 0.9-TeV," Phys. Lett. B226, 410 (1989).

[98] C. Albajar *et al.*, "A Study of the General Characteristics of Proton - Antiproton Collisions at $\sqrt{s}$ = 0.2-TeV to 0.9-TeV," Nucl. Phys. B335, 261 (1990).

[99] C. Albajar *et al.*, "Comparison of W and Direct Photon Cross Sections at Large Transverse Momenta," CERN-EP-89-138, Oct 1989. 19pp. In Castiglione della Pescaia 1989, Proceedings, Proton-Antiproton Collider Physics 254-267. (see HIGH ENERGY PHSICS INDEX 29 (1991) No. 9440).

[100] B. Zhou *et al.*, "Performance of Small Radius Thin Wall Drift Tubes In an SSC Radiation Environment at the Mit Research Reactor," IEEE Trans. Nucl. Sci. 37, 1564 (1990).

[101] C. Albajar *et al.*, "Experimental Limit of the Decay $\mathrm{W}^{+-} \to \pi^{+-}\gamma$ at the CERN Proton-Antiproton Collider," Phys. Lett. B241, 283 (1990).

[102] C. Albajar *et al.*, "Search for New Heavy Quarks in Proton - Antiproton Collisions at $\sqrt{s}$ = 0.63-TeV," Z. Phys. C48, 1 (1990).

[103] C. Albajar *et al.*, "A Study of the D* Content of Jets at the CERN Proton-Antiproton Collider," Phys. Lett. B244, 566 (1990).

[104] C. Albajar *et al.*, "Intermittency Studies in $\bar{\mathrm{p}}\mathrm{p}$ Collisions at $\sqrt{s}$ = 630-GeV," Nucl. Phys. B345, 1 (1990).

[105] Samuel C. C. Ting *et al.*, "Expression of interest to the Superconducting Super Collider Laboratory by the L* Collaboration," SSCL-SR-1165, SSC-EOI0010, May 1990. 89pp. See the books collection under the call number: QCD197:S8.

[106] S. Ahlen *et al*, "Design and Performance of Drift Tubes for Tracking at High Luminosity Hadron Colliders," Part. World 1, 168 (1990).

[107] Samuel C. C. Ting *et al.*, "Letter of Intent to the Superconducting Super Collider Laboratory by the L* Collaboration," SSCL-SR-1154, SSC-LOI0002, Nov 1990. 89pp. See the books collection.

[108] C. Albajar *et al.*, "J / ψ and ψ' Production at the CERN $\bar{\mathrm{p}}\mathrm{p}$ Collider," Phys. Lett. B256, 112 (1991).

[109] C. Albajar *et al.*, "Measurement of the Ratio $R = \sigma(\mathrm{W})\mathrm{Br}(\mathrm{W}) \to \mu\nu)/\sigma(\mathrm{Z})\mathrm{Br}(\mathrm{Z}) \to \mu\mu$ and Γ(W) Total at the CERN Proton-Antiproton Collider," Phys. Lett. B253, 503 (1991).

[110] C. Albajar *et al.*, "Limits on t Quark Decay into Charged Higgs from a Direct Search at the CERN $\bar{\mathrm{p}}\mathrm{p}$ Collider," Phys. Lett. B257, 459 (1991).

[111] C. Albajar *et al.*, "Beauty Production at the CERN Proton-Antiproton Collider," Phys. Lett. B256, 121 (1991).

[112] C. Albajar *et al.*, "Measurement of B^0 - anti-B^0 Mixing at the CERN SPS Collider," Phys. Lett. B262, 171 (1991).

[113] C. Albajar *et al.*, "A Search for Rare B Meson Decays at the CERN SPS Collider," Phys. Lett. B262, 163 (1991).

[114] C. Albajar *et al.*, "First Observation of the Beauty Baryon Λ_b in the decay channel $\Lambda_\mathrm{b} \to$ J/ψ Λ at the CERN Proton-Antiproton Collider," Phys. Lett. B273, 540 (1991).

[115] J. Rohlf, "Intermediate Vector Bosons," Encylopedia of Science and Technology, McGraw-Hill, Vol. 9, 317 (1992).

[116] "The Compact Muon Solenoid," Letter of Intent, CERN/LHCC 92-3, LHCC/I 1, 254 pages, 1 October 1992.

[117] James William Rohlf, "Modern Physics from Alpha to Z^0," Wiley (1994) 646 pages.

[118] "CMS Technical Proposal," CERN/LHCC 94-38, LHCC/P1 (December 1994).

[119] W. W. Armstrong *et al.*, "ATLAS: Technical Proposal for a General-Purpose pp Experiment at the Large Hadron Collider at CERN," CERN-LHCC-94-43, Dec 1994. 289pp.

[120] V. Gavrilov *et al.*, "CMS Quartz Fiber Calorimetry," Prepared for 6th International Conference on Calorimetry in High-energy Physics (ICCHEP 96), Rome, Italy, 8-14 Jun 1996. Published in Frascati 1996, Calorimetry in High Energy Physics, 269-280.

[121] G. L. Bayatian,"CMS Hadron Calorimeter Technical Design Report," CERN/LHCC 97-31, CMS TDR 2 (1997).

[122] G. L. Bayatian,"The CMS Muon project: Technical Design Report," CERN-LHCC-97-032 ; CMS-TDR-3, 441 p (1998).

[123] G. L. Bayatian,"CMS, The Electromagnetic Calorimeter Technical Design Report," CERN/LHCC 97-33, CMS TDR 4, 364 p (1997).

[124] G. L. Bayatian,"The CMS Tracker System Project: Technical Design Report," CERN/LHCC 98-6, CMS TDR 5 (1998).

[125] G. L. Bayatian,"CMS, The TriDAS Project, Technical Design Report, Volume 1: The Trigger Systems," CERN/LHCC 2000-38, CMD TDR 6.1, 599 p (2000).

[126] G. L. Bayatian,"The CMS tracker : addendum to the Technical Design Report," CERN/LHCC 2000-016, CMS TDR 5 Addendum, 82 p (2000).

[127] James Rohlf, 'Saving the Bay," Cape Cod Life, July 2001.

[128] E. Hazen, J. Rohlf, S. Wu, (Boston U.) , A. Baden, T. Grassi, (Maryland U.), "The CMS HCAL Data Concentrator: A modular, Standards-Based Implementation," Prepared for 7th Workshop on Electronics for LHC Experiments, Stockholm, Sweden, 10-14 Sep 2001. Published in Stockholm 2001, Electronics for LHC experiments, 347-350.

[129] James Rohlf, "Shellfish Under Attack," Cape Cod Life, July 2002.

[130] G. L. Bayatian,"CMS, The TriDAS Project, Technical Design Report, Volume 2: Data Acquisition and High-Level Trigger," CERN/LHCC 2002-26, CMS TDR 6.2, 530 p (2002).

[131] James W. Rohlf, "Pave Paws Is Less Dangerous Than Your Fridge," Centerpiece Editorial, Cape Cod Times, Sunday, Jan. 26, 2003.

[132] E. Hazen *et al.*, "Radioactive Source Calibration Technique for the CMS Hadron Calorimeter," Nucl. Instr. Meth. A511, 311 (2003).

[133] James Rohlf, "The Wind Farm Question: Cost and Benefits for the Cape and Islands," Cape Cod Life, Jan. 2004.

[134] J. W. Rohlf, (Boston U.), "Physics Reach with CMS at High and Super-High Luminosities," Prepared for 4th International Symposium on LHC Physics and Detectors (LHC 2003), Batavia, Illinois, 1-3 May 2003. Published in Eur. Phys. J. C 34, S221 (2004).

[135] J. W. Rohlf, (Boston U.), "Physics with Jets at the LHC," Prepared for 34th International Symposium on Multiparticle Dynamics (ISMD 2004), Rohnert Park, California, 26 Jul - 1 Aug 2004. Published in Acta Phys. Polon. B36:469-479 (2005).

[136] M.G. Albrow *et al.*, "FP420: An R&D Proposal to Investigate the Feasibility of Installing Proton Tagging Detectors in the 420-m Region at LHC," CERN-LHCC-2005-025, Jun 2005. 17pp.

[137] G. L. Bayatian"CMS: The Computing Project," CERN-LHCC-2005-023, CMS TDR 7, 137 p (2005).

[138] C. Albajar *et al.*, "Conceptual Design of an Improved CMS RPC Muon Trigger Using the Hadron Outer Scintillators," Nucl. Instr. Meth. A545, 97 (2005).

[139] W. Adam *et al.*, "The CMS High Level Trigger," Eur. Phys. J. C46, 605 (2006).

[140] H. Pi *et al.*, "Measurement of Missing Transverse Energy with the CMS Detector at the LHC," Eur. Phys. J. C46S1, 45 (2006).

[141] A. Heister *et al.*, "Measurement of Jets with the CMS Detector at the LHC," (Aachen, Tech. Hochsch., Moscow State U., Dubna, JINR, Boston U., Princeton U., Moscow, ITEP) . CERN-CMS-NOTE-2006-036, Feb 2006. 13pp.

[142] H. Pi *et al.*, "Searching for SM Higgs Produced via Vector Boson Fusion," CMS Note 2006/092 (2006).

[143] G. L. Bayatian *et al.*, "CMS Physics Technical Design Report Vol. 1, Detector Performance and Software" CERN-LHCC-2006-001, CMS-TDR-008-1, 521p (2006).

[144] G. Baiatian *et al.*, "Energy Response and Longitudinal Shower Profiles Measured in CMS HCAL and Comparison With Geant4," CMS NOTE 2006/139 (2006).

[145] D. G. d'Enterria *et al.*, "CMS Physics Technical Design Report: Addendum on High Density QCD with Heavy Ions," J. Phys. G34, 2307-2455 (2007).

[146] A. Heering *et al.*, "Performance of Silicon Photomultiplers with the CMS HCAL Front-end Electronics," Nucl. Instr. Meth. A576, 341 (2007).

[147] A. Heering *et al.*, "Large-area SiPMs for the CMS Hadron-Outer Calorimeter," 2007 IEEE Nuclear Science Symposium Conference Record, vol. 2, p. 1545 (2007).

[148] G.L. Bayatian *et al.*, "Synchronization and timing in CMS HCAL," CERN-CMS-NOTE-2006-139, May 2007. 9pp.

[149] J. Nash *et al.*, "CMS expression of interest in the SLHC," CERN-LHCC-2007-014, CERN-LHCC-G-131, Mar 2007. 56pp.

[150] G. L. Bayatian *et al.*, "CMS Physics Technical Design Report Vol. 2," J. Phys. G34, 995-1579 (2007).

[151] S. Abdullin *et al.*, "Design, Performance and Calibration of the CMS Forward Calorimeter Wedges," Eur. Phys. J. C53, 139-166, (2008).

[152] S. Abdullin *et al.*, 'Design, Performance and Calibration of CMS Hadron-Barrel Calorimeter Wedges," Eur. Phys. J. C55, 159-171 (2008).

[153] R. Adolphi *et al.*, "The CMS Experiment at the CERN LHC," JINST 3, S08004 (2008).

[154] G. Baiatian *et al.*, "Design, Performance, and Calibration of CMS Hadron Endcap Calorimeters," CERN-CMS-NOTE-2008-010, 36 p (2008).

[155] S. Abdullin *et al.*, "Design, Performance, and Calibration of the CMS Hadron-Outer Calorimeter," Eur. Phys. J. C57, 653-663 (2008).

[156] A. Heering *et al.*, "Radiation Damage Studies on SiPMs for Calorimetry at the Super LHC, IEEE Nuclar Science Symposium Conference Record N12-6 (2008) 1523.

[157] P. Bohn *et al.*, "Radiation Damage Studies of Silicon Photomultipliers," Nucl. Instrum. Meth. A598, 722-736 (2009).

[158] S. Abdullin *et al.*, "The CMS Barrel Calorimeter Response to Particle Beams from 2 to 350 GeV/c," Eur. Phys. J. C60, 359-373 (2009).

[159] A. Heering *et al.*, "An 18 Element Strip of 1 mm^2 G-APDs for CMS HCAL Upgrade: Results of CERN Test Beam 2009," IEEE prceedings (2009).

[160] James W. Rohlf, (Boston U.), "Particle Colliders," Oct 2009. 34pp. Published in Encyclopedia of Applied High Energy and Particle Physics, R. Stock, Ed. Wiley, 2009, p.585-618.

[161] V. Khachatryan *et al.*, "Transverse-Momentum and Pseudorapidity Distributions of Charged Hadrons in pp Collisions at $\sqrt{s}$ = 0.9 and 2.36 TeV," e-Print: arXiv:1002.0621, J. High Energy Phys. 02 (2010) 041.

[162] S. Chatrchyan *et al.*, "Commissioning and Performance of the CMS Pixel Tracker with Cosmic Ray Muons," CMS-CFT-09-001, Nov 2009, e-Print: arXiv:0911.5434, JINST 5, T03007 (2010).

[163] S. Chatrchyan *et al.*, "Commissioning and Performance of the CMS Silicon Strip Tracker with Cosmic Ray Muons," CMS-CFT-09-002, Nov 2009, e-Print: arXiv:0911.4996, JINST 5, T03008 (2010).

[164] S. Chatrchyan *et al.*, "Alignment of the CMS Silicon Tracker During Commissioning with Cosmic Rays," CMS-CFT-09-003, e-Print: arXiv:0910.2505, JINST 5, T03009 (2010).

[165] S. Chatrchyan *et al.*, 'Performance and Operation of the CMS Electromagnetic Calorimeter, " CMS-CFT-09-004, arXiv:0910.3423, JINST 5, T03010 (2010).

[166] S. Chatrchyan *et al.*, "Measurement of the Muon Stopping Power in Lead Tungstate," CMS-CFT-09-005, Nov 2009, e-Print: arXiv:0911.5397, JINST 5, P03007 (2010).

[167] S. Chatrchyan *et al.*, "Time Reconstruction and Performance of the CMS Electromagnetic Calorimeter," CMS-CFT-09-006, Nov 2009. e-Print: arXiv:0911.4044, JINST 5, T03011 (2010).

[168] S. Chatrchyan *et al.*, "CMS Data Processing Workflows during an Extended Cosmic Ray Run," CMS-CFT-09-007, arXiv:0911.4842, JINST 5, T03006 (2010).

[169] S. Chatrchyan *et al.*, "Commissioning of the CMS Experiment and the Cosmic Run at Four Tesla," CMS-CFT-09-008, Nov 2009, e-Print: arXiv:0911.4845, JINST 5, T03001 (2010).

[170] S. Chatrchyan *et al.*, "Performance of the CMS Hadron Calorimeter with Cosmic Ray Muons and LHC Beam Data," CMS-CFT-09-009, Nov 2009, e-Print: arXiv:0911.4991, JINST 5, T03012 (2010).

[171] S. Chatrchyan *et al.*, "Performance Study of the CMS Barrel Resistive Plate Chambers with Cosmic Rays," CMS-CFT-09-010, Nov 2009, e-Print: arXiv:0911.4045, JINST 5, T03017 (2010).

[172] S. Chatrchyan *et al.*, "Performance of the CMS Cathode Strip Chambers with Cosmic Rays," CMS-CFT-09-011, Nov 2009, e-Print: arXiv:0911.4992, JINST 5, T03018 (2010).

[173] S. Chatrchyan *et al.*, 'Performance of the CMS Drift Tube Chambers with Cosmic Rays," The CMS Collaboration, . CMS-CFT-09-012, Nov 2009, e-Print: arXiv:0911.4855, JINST 5, T03015 (2010).

[174] S. Chatrchyan *et al.*, "Performance of the CMS Level-1 Trigger during Commissioning with Cosmic Ray Muons," CMS-CFT-09-013, Nov 2009, e-Print: arXiv:0911.5422, JINST 5, T03002 (2010).

[175] S. Chatrchyan *et al.*, "Performance of CMS Muon Reconstruction in Cosmic-Ray Events," CMS-CFT-09-014, Nov 2009, e-Print: arXiv:0911.4994, JINST 5, T03022 (2010).

[176] S. Chatrchyan *et al.*, "Precise Mapping of the Magnetic Field in the CMS Barrel Yoke Using Cosmic Rays," CMS-CFT-09-015, Oct 2009. e-Print: arXiv:0910.5530, JINST 5, T03021 (2010).

[177] S. Chatrchyan *et al.*, "Alignment of the CMS Muon System with Cosmic-Ray and Beam-Halo Muons," CMS-CFT-09-016, Nov 2009, e-Print: arXiv:0911.4022, JINST 5, T03020 (2010).

[178] S. Chatrchyan *et al.*, "Aligning the CMS Muon Chambers with the Muon Alignment System during an Extended Cosmic Ray Run," CMS-CFT-09-017, Nov 2009, e-Print: arXiv:0911.4770, JINST 5, T03019 (2010).

[179] S. Chatrchyan *et al.*, "Performance of CMS Hadron Calorimeter Timing and Synchronization using Cosmic Ray and LHC Beam Data," CMS-CFT-09-018, Nov 2009, e-Print: arXiv:0911.4877, JINST 5, T03013 (2010).

[180] S. Chatrchyan *et al.*, "Identification and Filtering of Uncharacteristic Noise in the CMS Hadron Calorimeter," CMS-CFT-09-019, Nov 2009, e-Print: arXiv:0911.4881, JINST 5, T03014 (2010).

[181] S. Chatrchyan *et al.*, "Commissioning of the CMS High-Level Trigger with Cosmic Rays," CMS-CFT-09-020, Nov 2009, e-Print: arXiv:0911.4889, JINST 5, T03005 (2010).

[182] S. Chatrchyan *et al.*, 'Performance of the CMS Drift-Tube Local Trigger with Cosmic Rays," CMS-CFT-09-022, Nov 2009, e-Print: arXiv:0911.4893, JINST 5, T03003 (2010).

[183] S. Chatrchyan *et al.*, "Calibration of the CMS Drift Tube Chambers and Measurement of the Drift Velocity with Cosmic Rays," CMS-CFT-09-023, Nov 2009, e-Print: arXiv:0911.4895, JINST 5, T03016 (2010).

[184] S. Chatrchyan *et al.*, "Fine Synchronization of the CMS Muon Drift-Tube Local Trigger using Cosmic Rays," CMS-CFT-09-025, Nov 2009, e-Print: arXiv:0911.4904, JINST 5, T03004 (2010).

[185] V. Khachatryan *et al.*, "Transverse-Momentum and Pseudorapidity Distributions of Charged Hadrons in pp Collisions at $\sqrt{s}$ = 7 TeV," e-Print: arXiv:1005.3299, Phys. Rev. Lett. 105, 022002 (2010).

[186] V. Khachatryan *et al.*, "First Measurement of Bose-Einstein Correlations in Proton-Proton Collisions at s = 0.9 and 2.36 TeV at the LHC," e-Print: arXiv:1005.3294, Phys. Rev. Lett. 105, 032001 (2010).

[187] S. Chatrchyan *et al.*, "Study of various photomultiplier tubes with muon beams and Cherenkov light produced in electron showers," JINST 5, P06002 (2010).

[188] V. Khachatryan *et al.*, "Measurement of the charge ratio of atmospheric muons with the CMS detector," e-Print: arXiv:1005.5332, CMS-MUO-10-001, CERN-PH-EP-2010-011, Phys. Lett. B692, 83 (2010).

[189] V. Khachatryan *et al.*, "Observation of long-range, near-side angular correlations in proton-proton collisions at the LHC," J. High Energy Phys. 09, 091 (2010).

[190] V. Khachatryan *et al.*, "First Measurement of the Underlying Event Activity at the LHC with $\sqrt{s}$ = 0.9 TeV" e-Print: arXiv:1006.2083, CMS-QCD-10-001, CERN-PH-EP-2010-014, Eur. Phys. J. C70, 555 (2010).

[191] V. Khachatryan *et al.*, "CMS Tracking Performance Results from Early LHC Operation," arXiv:1007.1988, CERN-PH-EP-2010-019, CMS-TRK-10-001, Eur. Phys. J. C70, 1165 (2010)

[192] V. Khachatryan *et al.*, "Search for Dijet Resonances in 7 TeV pp Collisions at CMS," arXiv:1010.0203, CERN-PH-EP-2010-035, Phys. Rev. Lett. 105, 211801 (2010).

[193] V. Khachatryan *et al.*, "Search for Quark Compositeness with the Dijet Centrality Ratio in 7 TeV pp Collisions at CMS," CMS-EXO-10-002-004, CERN-PH-EP-2010-038, Phys. Rev. Lett 105, 262001 (2010).

[194] M. Dimitriyev, E. Hazen, S. X. Wu, J. Rohlf, "Development of a MicroTCA carrier Hub for CMS at HL-LHC," JINST 5, C12042 (2010).

[195] V. Khachatryan *et al.*, "Publisher's Note: Search for Dijet Resonances in 7 TeV pp Collisions at CMS," Phys. Rev. Lett. 106, 029902 (2011).

[196] V. Khachatryan *et al.*, "Search for Stopped Gluinos in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1011.5861 ; CERN-PH-EP-2010-049 ; CMS-EXO-10-003, Phys. Rev. Lett. 106, 011801 (2011).

[197] V. Khachatryan *et al.*, "First Measurement of the Cross Section for Top-Quark Pair Production in Proton-Proton Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1010.5994; CERN-PH-EP-2010-039; CMS-TOP-10-001, Phys. Lett. B695, 424 (2011).

[198] V. Khachatryan *et al.*, "Charged particle multiplicities in pp interactions at $\sqrt{s}$ = 0.9, 2.36, and 7 TeV," arXiv:1011.5531 ; CERN-PH-EP-2010-048 ; CMS-QCD-10-004, J. High Energy Phys. 1101, 079 (2011).

[199] V. Khachatryan *et al.*, "Measurements of Inclusive W and Z Cross Sections in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1012.2466 ; CERN-PH-EP-2010-050 ; CMS-EWK-10-002, J. High Energy Phys. 1101, 080 (2011).

[200] V. Khachatryan *et al.*, "Search for Microscopic Black Hole Signatures at the LHC," arXiv:1012.3375 ; CMS-EXO-10-017 ; CERN-PH-EP-2010-073, Phys. Lett. B 697, 434 (2011).

[201] V. Khachatryan *et al.*, "Measurement of the Isolated Prompt Photon Production Cross Section in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1012.0799 ; CERN-PH-EP-2010-053 ; CMS-QCD-10-019, Phys. Rev. Lett. 106, 082001 (2011).

[202] V. Khachatryan *et al.*, "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," arXiv:1012.5945 ; CMS-EXO-10-014 ; CERN-PH-EP-2010-074, Phys. Lett. B 698, 21 (2011).

[203] V. Khachatryan *et al.*, "Search for Supersymmetry in pp Collisions at 7 TeV in Events with Jets and Missing Transverse Energy," arXiv:1101.1628 ; CMS-SUS-10-003 ; CERN-PH-EP-2010-084, Phys. Lett. B 698, 196 (2011).

[204] V. Khachatryan *et al.*, "Search for Heavy Stable Charged Particles in pp collisions at $\sqrt{s}$ = 7 TeV," CMS-EXO-10-011-001; CERN-PH-EP-2010-067, J. High Energy Phys. 03, 024 (2011).

[205] V. Khachatryan *et al.*, "Inclusive b-hadron production cross section with muons in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1101.3512 ; CMS-BPH-10-007 ; CERN-PH-EP-2010-088, J. High Energy Phys. 03, 090 (2011).

[206] V. Khachatryan *et al.*, "Dijet Azimuthal Decorrelations in pp Collisions at $\sqrt{s}$ = 7 TeV ," arXiv:1101.5029 ; CMS-QCD-10-026 ; CERN-PH-EP-2010-086, Phys. Rev. Lett. 106, 122003 (2011).

[207] V. Khachatryan *et al.*, "Measurement of the B^+ Production Cross Section in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1101.0131 ; CERN-PH-EP-2010-087 ; CMS-BPH-10-004, Phys. Rev. Lett. 106, 112001 (2011).

[208] V. Khachatryan *et al.*, "Measurement of $\mathrm{B\bar{B}}$ Angular Correlations based on Secondary Vertex Reconstruction at $\sqrt{s}$ = 7 TeV in CMS," arXiv:1102.3194 ; CMS-BPH-10-010 ; CERN-PH-EP-2010-093, J. High Energy Phys. 1103, 136 (2011).

[209] S. Chatrchyan *et al.*, "Measurement of the lepton charge asymmetry in inclusive W production in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1103.3470 ; CMS-EWK-10-006 ; CERN-PH-EP-2011-024, J. High Energy Phys. 1104, 050 (2011).

[210] S. Chatrchyan *et al.*, "Measurement of $\mathrm{W^+W^-}$ Production and Search for the Higgs Boson in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1102.5429 ; CMS-EWK-10-009 ; CERN-PH-EP-2011-015, Phys. Lett. B 699, 25 (2011).

[211] V. Khachatryan *et al.*, "Prompt and non-prompt J/ψ production in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1011.4193 ; CERN-PH-EP-2010-046 ; CMS-BPH-10-002, Eur. Phys. J. C 71, 1575 (2011).

[212] V. Khachatryan *et al.*, "First Measurement of Hadronic Event Shapes in pp Collisions at 7 TeV at the LHC," CMS-QCD-10-013-001; CERN-PH-EP-2010-072, Phys. Lett. B 699, 48 (2011).

[213] V. Khachatryan *et al.*, "Search for Heavy Stable Charged Particles in pp collisions at $\sqrt{s}$ = 7 TeV ," arXiv:1101.1645 ; CMS-EXO-10-011 ; CERN-PH-EP-2010-067, J. High Energy Phys. 1103, 024 (2011).

[214] V. Khachatryan *et al.*, "Measurement of Bose-Einstein Correlations in proton-proton Collisions at $\sqrt{s}$ = 0.9 and 7 TeV at the LHC," arXiv:1101.3518; CMS-QCD-10-023; CERN-PH-EP-2010-091, J. High Energy Phys. 1105, 029 (2011).

[215] V. Khachatryan *et al.*, "Strange Particle Production in pp collisions at $\sqrt{s}$ = 0.9 and 7 TeV," arXiv:1102.4282 ; CMS-QCD-10-007 ; CERN-PH-EP-2010-094, J. High Energy Phys. 1105, 064 (2011).

[216] S. Chatrchyan *et al.*, "Search for Large Extra Dimensions in the Diphoton Final State at the Large Hadron Collider," arXiv:1103.4279 ; CMS-EXO-10-026 ; CERN-PH-EP-2011-020, J. High Energy Phys. 1105, 085 (2011).

[217] S. Chatrchyan *et al.*, "Search for Resonances in the Dilepton Mass Distribution in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1103.0981 ; CMS-EXO-10-013 ; CERN-PH-EP-2011-002, J. High Energy Phys. 1105, 093 (2011).

[218] V. Khachatryan *et al.*, "Search for Pair Production of First-Generation Scalar Leptoquarks in pp Collisions at $\sqrt{s}$= 7 TeV," arXiv:1012.4031 ; CERN-PH-EP-2010-052 ; CMS-EXO-10-005, Phys. Rev. Lett. 106, 201802 (2011).

[219] V. Khachatryan *et al.*, "Search for Pair Production of Second Generation Scalar Leptoquarks in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1012.4033 ; CMS-EXO-10-007 ; CERN-PH-EP-2010-054, Phys. Rev. Lett. 106, 201803 (2011).

[220] V. Khachatryan *et al.*, "Measurement of Dijet Angular Distributions and Search for Quark Compositeness in pp Collisions at $\sqrt{s}$ = 7 TeV," CERN-PH-EP-2010-092; CMS-QCD-10-016-003 (2011), Phys. Rev. Lett. 106, 201804 (2011).

[221] S. Chatrchyan *et al.*, "Measurement of the differential dijet production cross section in proton-proton collisions at$\sqrt{s}$ = 7 TeV," arXiv:1104.1693 ; CMS-QCD-10-025 ; CERN-PH-EP-2011-042, Phys. Lett. B 700, 187 (2011).

[222] V. Khachatryan *et al.*, "Upsilon production cross section in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1012.5545 ; CERN-PH-EP-2010-055 ; CMS-BPH-10-003, Phys. Rev. D 83, 112004 (2011).

[223] S. Chatrchyan *et al.*, "Observation and studies of jet quenching in PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1102.1957 ; CMS-HIN-10-004 ; CERN-PH-EP-2011-001, Phys. Rev. C 84, 024906 (2011).

[224] S. Chatrchyan *et al.*, "Search for a Heavy Bottom-like Quark in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1102.4746 ; CMS-EXO-10-018 ; CERN-PH-EP-2011-009, Phys. Lett. B 701, 204 (2011).

[225] S. Chatrchyan *et al.*, "Study of Z boson production in PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1102.5435 ; CMS-HIN-10-003 ; CERN-PH-EP-2011-003, Phys. Rev. Lett. 106, 212301 (2011).

[226] S. Chatrchyan *et al.*, "Search for a W$'$ boson decaying to a muon and a neutrino in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1103.0030 ; CMS-EXO-10-015 ; CERN-PH-EP-2011-012, Phys. Lett. B 701, 160 (2011).

[227] S. Chatrchyan *et al.*, "Search for Supersymmetry in pp Collisions at $\sqrt{s}$ = 7 TeV in Events with Two Photons and Missing Transverse Energy," arXiv:1103.0953 ; CMS-SUS-10-002 ; CERN-PH-EP-2011-007, Phys. Rev. Lett. 106, 211802 (2011).

[228] S. Chatrchyan *et al.*, "Search for Physics Beyond the Standard Model in Opposite-sign Dilepton Events in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1103.1348 ; CMS-SUS-10-007 ; CERN-PH-EP-2011-016, J. High Energy Phys. 06, 026 (2011).

[229] S. Chatrchyan *et al.*, "Search for Neutral MSSM Higgs Bosons Decaying to Tau Pairs in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1104.1619 ; CMS-HIG-10-002 ; CERN-PH-EP-2011-027, Phys. Rev. Lett. 106, 231801 (2011).

[230] S. Chatrchyan *et al.*, " Measurement of the Inclusive Z Cross Section via Decays to Tau Pairs in pp Collisions at $\sqrt{s}$ = 7 TeV.," arXiv:1104.1617 ; CMS-EWK-10-013 ; CERN-PH-EP-2011-035, J. High Energy Phys. 08, 117 (2011).

[231] S. Chatrchyan *et al.*, " Measurement of the Polarization of W Bosons with Large Transverse Momenta in W+Jets Events at the LHC," arXiv:1104.3829 ; CMS-EWK-10-014 ; CERN-PH-EP-2011-043, Phys. Rev. Lett. 107, 021802 (2011).

[232] S. Chatrchyan *et al.*, " Charged particle transverse momentum spectra in pp collisions at $\sqrt{s}$ = 0.9 and 7 TeV ," arXiv:1104.3547 ; CMS-QCD-10-008 ; CERN-PH-EP-2011-049, J. High Energy Phys. 08, 086 (2011).

[233] S. Chatrchyan *et al.*, "Search for new physics with same-sign isolated dilepton events with jets and missing transverse energy at the LHC ," arXiv:1104.3168 ; CMS-SUS-10-004 ; CERN-PH-EP-2011-033, J. High Energy Phys. 06, 077 (2011).

[234] S. Chatrchyan *et al.*, "Measurement of the B^0 Production Cross Section in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1104.2892 ; CMS-BPH-10-005 ; CERN-PH-EP-2011-034, Phys. Rev. Lett. 106, 252001 (2011).

[235] S. Chatrchyan *et al.*, "Search for supersymmetry in events with a lepton, a photon, and large missing transverse energy in pp collisions at sqrt(s) = 7 TeV," arXiv:1105.3152 ; CMS-SUS-11-002 ; CERN-PH-EP-2011-058, J. High Energy Phys. 06, 093 (2011).

[236] S. Chatrchyan *et al.*, "Measurement of Wγ and Zγ production in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1105.2758 ; CMS-EWK-10-008 ; CERN-PH-EP-2011-045, Phys. Lett. B 701, 535 (2011).

[237] S. Chatrchyan *et al.*, "Long-range and short-range dihadron angular correlations in central PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1105.2438 ; CMS-HIN-11-001 ; CERN-PH-EP-2011-056, J. High Energy Phys. 07, 76, (2011).

[238] S. Chatrchyan *et al.*, "Suppression of excited Υ states in PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1105.4894 ; CMS-HIN-11-007 ; CERN-PH-EP-2011-074, Phys. Rev. Lett. 107, 052302 (2011).

[239] S. Chatrchyan *et al.*, "Search for First Generation Scalar Leptoquarks in the eνjj Channel in pp Collisions at $\sqrt{s}$= 7 TeV," arXiv:1105.5237 ; CMS-EXO-10-006 ; CERN-PH-EP-2011-062, Phys. Lett B 703, 246 (2011).

[240] S. Chatrchyan *et al.*, "Measurement of the $\mathrm{t\bar{t}}$ production cross section and the top quark mass in the dilepton channel in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1105.5661, CERN-PH-EP-2011-055 ; CMS-TOP-11-002-004, J. High Energy Phys. 07, 049 (2011).

[241] S. Chatrchyan *et al.*, "Measurement of the Inclusive Jet Cross Section in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1106.0208 ; CMS-QCD-10-011 ; CERN-PH-EP-2011-053, Phys. Rev. Lett. 107, 132001 (2011).

[242] S. Chatrchyan *et al.*, "Measurement of the Ratio of the 3-jet to 2-jet Cross Sections in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1106.0647 ; CMS-QCD-10-012 ; CERN-PH-EP-2011-044, Phys. Lett. B 702, 336 (2011).

[243] S. Chatrchyan *et al.*, "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," arXiv:1106.0902 ; CMS-TOP-10-002 ; CERN-PH-EP-2011-060, Eur. Phys. J. C 71, 1721 (2011).

[244] S. Chatrchyan *et al.*, "Search for Physics Beyond the Standard Model Using Multilepton Signatures in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1106.0933 ; CMS-SUS-10-008 ; CERN-PH-EP-2011-046, Phys. Lett. B 704 (2011) 411.

[245] S. Chatrchyan *et al.*, "Search for Same-Sign Top-Quark Pair Production at $\sqrt{s}$ = 7 TeV and Limits on Flavour Changing Neutral Currents in the Top Sector," arXiv:1106.2142 ; CMS-EXO-11-065 ; CERN-PH-EP-2011-087, J. High Energy Phys. 08, 005 (2011).

[246] S. Chatrchyan *et al.*, "Search for Light Resonances Decaying into Pairs of Muons as a Signal of New Physics," arXiv:1106.2375 ; CMS-EXO-11-013 ; CERN-PH-EP-2011-064, J. High Energy Phys. 07, 098 (2011).

[247] S. Chatrchyan *et al.*, "Measurement of the t-channel single top quark production cross section in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1106.3052 ; CMS-TOP-10-008 ; CERN-PH-EP-2011-066, Phys. Rev. Lett. 107, 091802 (2011).

[248] S. Chatrchyan *et al.*, "Search for Supersymmetry in Events with b Jets and Missing Transverse Momentum at the LHC," arXiv:1106.3272 ; CMS-SUS-10-011 ; CERN-PH-EP-2011-067, J. High Energy Phys. 07, 113 (2011).

[249] S. Chatrchyan *et al.*, "Search for New Physics with Jets and Missing Transverse Momentum in pp collisions at $\sqrt{s}$ = 7 TeV," CERN-PH-EP-2011-065 ; CMS-SUS-10-005-003, J. High Energy Phys. 08, 155 (2011).

[250] S. Chatrchyan *et al.*, "Search for New Physics with a Mono-Jet and Missing Transverse Energy in pp Collisions at $\sqrt{s}$ = 7 TeV," CERN-PH-EP-2011-070 ; CMS-EXO-11-003-003, Phys. Rev. Lett. 107 (2011) 201804

[251] S. Chatrchyan *et al.*, "Missing transverse energy performance of the CMS detector," CERN-PH-EP-2011-051 ; CMS-JME-10-009-003, JINST 6, 09001 (2011).

[252] S. Chatrchyan *et al.*, "Search for Three-Jet Resonances in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1107.3084; CMS-EXO-11-001; CERN-PH-EP-2011-089, Phys. Rev. Lett. 107, 101801 (2011).

[253] S. Chatrchyan *et al.*, "Search for supersymmetry in pp collisions at $\sqrt{s}$ =7 TeV in events with a single lepton, jets, and missing transverse momentum," arXiv:1107.1870 ; CMS-SUS-10-006 ; CERN-PH-EP-2011-084, J. High Energy Phys. 08, 156 (2011).

[254] S. Chatrchyan *et al.*, "A search for excited leptons in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1107.1773 ; CMS-EXO-10-016 ; CERN-PH-EP-2011-081, Phys. Lett. B 704, 143 (2011).

[255] S. Chatrchyan *et al.*, "Inclusive search for squarks and gluinos in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1107.1279 ; CMS-SUS-10-009 ; CERN-PH-EP-2011-099, Phys. Rev. D 85 (2012) 012004.

[256] S. Chatrchyan *et al.*, "Measurement of the Underlying Event Activity at the LHC with s = 7 TeV and Comparison with $\sqrt{s}$ = 0.9 TeV," arXiv:1107.0330 ; CMS-QCD-10-010 ; CERN-PH-EP-2011-059, J. High Energy Phys. 09, 109 (2011).

[257] S. Chatrchyan *et al.*, "Determination of Jet Energy Calibration and Transverse Momentum Resolution in CMS," arXiv:1107.4277; CMS-JME-10-011; CERN-PH-EP-2011-102, JINST 6 (2011) P11002.

[258] S. Chatrchyan *et al.*, "Measurement of the Inclusive W and Z Production Cross Sections in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1107.4789 ; CMS-EWK-10-005 ; CERN-PH-EP-2011-107, J. High Energy Phys. 10 (2011) 132.

[259] S. Chatrchyan *et al.*, "Search for Resonances in the Dijet Mass Spectrum from 7 TeV pp Collisions at CMS ," arXiv:1107.4771 ; CMS-EXO-11-015 ; CERN-PH-EP-2011-119, Phys. Lett. B 704, 123 (2011).

[260] S. Chatrchyan *et al.*, "Dependence on pseudorapidity and on centrality of charged hadron production in PbPb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 2.76 TeV," arXiv:1107.4800 ; CMS-HIN-10-001 ; CERN-PH-EP-2011-092, J. High Energy Phys. 02, 141 (2011).

[261] S. Chatrchyan *et al.*, "Search for $\mathrm{B_s^0} \to \mu^+\mu^-$ and $\mathrm{B^0} \to \mu^+\mu^-$ decays in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1107.5834 ; CMS-BPH-11-002 ; CERN-PH-EP-2011-120, Phys. Rev. Lett. 107 (2011) 191802.

[262] S. Chatrchyan *et al.*, "Measurement of the Drell-Yan Cross Section in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1108.0566 ; CMS-EWK-10-007 ; CERN-PH-EP-2011-093, J. High Energy Phys. 10 (2011) 007.

[263] S. Chatrchyan *et al.*, "Measurement of the $\mathrm{B_s^0}$ Production Cross Section with $\mathrm{B_s^0} \to \mathrm{J}/\psi\phi$ Decays in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1106.4048 ; CMS-BPH-10-013 ; CERN-PH-EP-2011-063, Phys. Rev. D 84, 052008 (2011).

[264] S. Chatrchyan *et al.*, "Measurement of the Differential Cross Section for Isolated Prompt Photon Production in pp Collisions at 7 TeV," arXiv:1108.2044 ; CMS-QCD-10-037 ; CERN-PH-EP-2011-128, Phys. Rev. D 84, 052011 (2011).

[265] S. Chatrchyan *et al.*, "Measurement of the $\mathrm{t\bar{t}}$ Production Cross Section in pp Collisions at 7 TeV in Lepton + Jets Events Using b-quark Jet Identification," arXiv:1108.3773 ; CMS-TOP-10-003 ; CERN-PH-EP-2011-085, Phys. Rev. D 84 (2011) 092004

[266] S. Chatrchyan *et al.*, "Search for Supersymmetry at the LHC in Events with Jets and Missing Transverse Energy," arXiv:1109.2352 ; CMS-SUS-11-003 ; CERN-PH-EP-2011-138, Phys. Rev. Lett. 107 (2011) 221804.

[267] S. Chatrchyan *et al.*, "Technical Proposal for the Upgrade of the CMS Detector Through 2020," CERN-LHCC-2011-006 ; CMS-UG-TP-1 ; LHCC-P-004, 321 p (2011). .

[268] S. Chatrchyan *et al.*, "Performance of τ-lepton reconstruction and identification in CMS," arXiv:1109.6034 ; CMS-TAU-11-001 ; CERN-PH-EP-2011-137, JINST 7 (2012) P01001.

[269] S. Chatrchyan *et al.*, "Search for a Vector-like Quark with Charge 2/3 in t + Z Events from pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1109.4985 ; CMS-EXO-11-005 ; CERN-PH-EP-2011-139, Phys. Rev. Lett. 107 (2011) 271802.

[270] S. Chatrchyan *et al.*, "Measurement of energy flow at large pseudorapidities in pp collisions at $\sqrt{s}$ = 0.9 and 7 TeV," CERN-PH-EP-2011-086 ; CMS-FWD-10-011-004 J. High Energy Phys. 11 (2011) 148.

[271] S. Chatrchyan *et al.*, "Forward Energy Flow, Central Charged-Particle Multiplicities, and Pseudorapidity Gaps in W and Z Boson Events from pp Collisions at 7 TeV ," CERN-PH-EP-2011-141 ; CMS-FWD-10-008-003, Eur. Phys. J. C 72 (2012) 1839.

[272] S. Chatrchyan *et al.*, "Measurement of the weak mixing angle with the Drell-Yan process in proton-proton collisions at the LHC," CERN-PH-EP-2011-159 ; CMS-EWK-11-003-004, Phys. Rev. D 84 (2011) 112002.

[273] S. Chatrchyan *et al.*, "Jet Production Rates in Association with W and Z Bosons in pp Collisions at $\sqrt{s}$ = 7 TeV ," CERN-PH-EP-2011-125 ; CMS-EWK-10-012-003, J. High Energy Phys. 01 (2012) 010.

[274] S. Chatrchyan *et al.*, "Measurement of the Rapidity and Transverse Momentum Distributions of Z Bosons in pp Collisions at $\sqrt{s}$ = 7 TeV," arXiv:1110.4973 ; CMS-EWK-10-010 ; CERN-PH-EP-2011-169, Phys. Rev. D 85 (2012) 032002.

[275] S. Chatrchyan *et al.*, "Measurement of the Production Cross Section for Pairs of Isolated Photons in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1110.6461 ; CMS-QCD-10-035 ; CERN-PH-EP-2011-171, J. High Energy Phys. 01 (2012) 133.

[276] S. Chatrchyan *et al.*, "J/ψ and ψ(2S) production in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1111.1557 ; CMS-BPH-10-014 ; CERN-PH-EP-2011-177, J. High Energy Phys. 02 (2012) 011.

[277] S. Chatrchyan *et al.*, "Exclusive $\gamma\gamma \to \mu^+\mu^-$ production in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1111.5536 ; CMS-FWD-10-005 ; CERN-PH-EP-2011-187, J. High Energy Phys. 01 (2012) 052.

[278] S. Chatrchyan *et al.*, "Search for signatures of extra dimensions in the diphoton mass spectrum at the Large Hadron Collider," arXiv:1112.0688 ; CMS-EXO-11-038 ; CERN-PH-EP-2011-173, Phys. Rev. Lett. 108, 111801 (2012).

[279] S. Chatrchyan *et al.*, "Measurement of the charge asymmetry in top-quark pair production in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1112.5100 ; CMS-TOP-11-014 ; CERN-PH-EP-2011-217, Phys. Lett. B 709 (2012) 28.

[280] S. Chatrchyan *et al.*, "Measurement of isolated photon production in pp and PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1201.3093 ; CMS-HIN-11-002 ; CERN-PH-EP-2011-221, Phys. Lett. B 710 (2012) 256-277.

[281] S. Chatrchyan *et al.*, "Centrality dependence of dihadron correlations and azimuthal anisotropy harmonics in PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1201.3158 ; CMS-HIN-11-006 ; CERN-PH-EP-2011-222, Eur. Phys. J. C 72 (2012) 2012.

[282] S. Chatrchyan *et al.*, "Suppression of non-prompt J/ψ, prompt J/ψ, and Υ(1S) in PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1201.5069 ; CMS-HIN-10-006 ; CERN-PH-EP-2011-170, J. High Energy Phys. 05 (2012) 063.

[283] S. Chatrchyan *et al.*, "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," arXiv:1202.0704 ; CMS-FWD-11-002 ; CERN-PH-EP-2011-179, J. High Energy Phys. 06 (2012) 036.

[284] S. Chatrchyan *et al.*, "Combined results of searches for the standard model Higgs boson in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1202.1488 ; CMS-HIG-11-032 ; CERN-PH-EP-2012-023, Phys. Lett. B 710 (2012) 26-48.

[285] S. Chatrchyan *et al.*, "Search for a Higgs boson in the decay channel $\mathrm{H} \to \mathrm{ZZ}^* \to \mathrm{q\bar{q}l^+l^-}$ in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1202.1416 ; CMS-HIG-11-027 ; CERN-PH-EP-2012-028, J. High Energy Phys. 04 (2012) 036.

[286] S. Chatrchyan *et al.*, "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," arXiv:1202.1489 ; CMS-HIG-11-024 ; CERN-PH-EP-2012-018, Phys. Lett. B 710 (2012) 91-113.

[287] S. Chatrchyan *et al.*, "Search for the standard model Higgs boson decaying into two photons in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1202.1487 ; CMS-HIG-11-033 ; CERN-PH-EP-2012-024, Phys. Lett. B 710 (2012) 403-425.

[288] S. Chatrchyan *et al.*, "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," CERN-PH-EP-2012-025 ; CMS-HIG-11-025-004, Phys. Rev. Lett. 108 (2012) 111804.

[289] S. Chatrchyan *et al.*, "Study of high-p_T charged particle suppression in PbPb compared to pp collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1202.2554 ; CMS-HIN-10-005 ; CERN-PH-EP-2012-043, Eur. Phys. J. C 72 (2012) 1945.

[290] S. Chatrchyan *et al.*, "Search for the standard model Higgs boson in the $H \to ZZ \to 2l2\nu$ channel in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1202.3478 ; CMS-HIG-11-026 ; CERN-PH-EP-2012-033, J. High Energy Phys. 03 (2012) 040.

[291] S. Chatrchyan *et al.*, "Search for the standard model Higgs boson in the $H \to ZZ \to l^+l^-\tau^+\tau^-$ decay channel in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1202.3617 ; CMS-HIG-11-028 ; CERN-PH-EP-2012-038, J. High Energy Phys. 03 (2012) 081.

[292] S. Chatrchyan *et al.*, "Search for large extra dimensions in dimuon and dielectron events in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1202.3827 ; CMS-EXO-11-087 ; CERN-PH-EP-2012-037, Phys. Lett. B 711 (2012) 15-34.

[293] S. Chatrchyan *et al.*, "Search for neutral Higgs bosons decaying to tau pairs in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1202.4083 ; CMS-HIG-11-029 ; CERN-PH-EP-2012-034, Phys. Lett. B 713 (2012) 68-90.

[294] S. Chatrchyan *et al.*, "Search for the standard model Higgs boson decaying to bottom quarks in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1202.4195 ; CMS-HIG-11-031 ; CERN-PH-EP-2012-040, Phys. Lett. B 710 (2012) 284-306.

[295] S. Chatrchyan *et al.*, "Inclusive b-jet production in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1202.4617 ; CMS-BPH-11-022 ; CERN-PH-EP-2012-036, J. High Energy Phys. 04 (2012) 084.

[296] S. Chatrchyan *et al.*, "Jet momentum dependence of jet quenching in PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1202.5022 ; CMS-HIN-11-013 ; CERN-PH-EP-2012-042, Phys. Lett. B 712 (2012) 176-197.

[297] S. Chatrchyan *et al.*, "Search for quark compositeness in dijet angular distributions from pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1202.5535 ; CMS-EXO-11-017 ; CERN-PH-EP-2012-044, J. High Energy Phys. 05 (2012) 055.

[298] S. Chatrchyan *et al.*, "Search for microscopic black holes in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1202.6396 ; CMS-EXO-11-071 ; CERN-PH-EP-2012-045, J. High Energy Phys. 04 (2012) 061.

[299] S. Chatrchyan *et al.*, "Measurement of the cross section for production of $\mathrm{b\bar{b}}$ X, decaying to muons in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1203.3458 ; CMS-BPH-10-015 ; CERN-PH-EP-2012-057, J. High Energy Phys. 06 (2012) 110.

[300] S. Chatrchyan *et al.*, "Search for $\mathrm{B_s^0} \to \mu^+\mu$ and $\mathrm{B^0} \to \mu^+\mu$ decays". arXiv:1203.3976 ; CMS-BPH-11-020 ; CERN-PH-EP-2012-086, J. High Energy Phys. 04 (2012) 033.

[301] S. Chatrchyan *et al.*, "Search for heavy, top-like quark pair production in the dilepton final state in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1203.5410 ; CMS-EXO-11-050 ; CERN-PH-EP-2012-081, Phys. Lett. B 716 (2012) 103-121.

[302] S. Chatrchyan *et al.*, "Measurement of the top quark pair production cross section in pp collisions at $\sqrt{s}$ = 7 TeV in dilepton final states containing a τ," arXiv:1203.6810 ; CMS-TOP-11-006 ; CERN-PH-EP-2012-078, Phys. Rev. D 85 (2012) 112007.

[303] S. Chatrchyan *et al.*, "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," arXiv:1204.0696 ; CMS-FWD-10-014 ; CERN-PH-EP-2012-088, Eur. Phys. J. C 72 (2012) 2216.

[304] S. Chatrchyan *et al.*, "Search for Dark Matter and Large Extra Dimensions in pp Collisions Yielding a Photon and Missing Transverse Energy," arXiv:1204.0821 ; CMS-EXO-11-096 ; CERN-PH-EP-2012-084, Phys. Rev. Lett. 108 (2012) 261803.

[305] S. Chatrchyan *et al.*, "Search for heavy bottom-like quarks in 4.9 inverse femtobarns of pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1204.1088 ; CMS-EXO-11-036 ; CERN-PH-EP-2012-100, J. High Energy Phys. 05 (2012) 123.

[306] S. Chatrchyan *et al.*, "Measurement of the elliptic anisotropy of charged particles produced in PbPb collisions at nucleon-nucleon center-of-mass energy = 2.76 TeV," arXiv:1204.1409 ; CMS-HIN-10-002 ; CERN-PH-EP-2012-095, Phys. Rev. C 87 (2013) 014902.

[307] S. Chatrchyan *et al.*, "Measurement of the underlying event in the Drell-Yan process in proton-proton collisions at $\sqrt{s}$ = 7 TeV ," arXiv:1204.1411 ; CMS-QCD-11-012 ; CERN-PH-EP-2012-085, Eur. Phys. J. C 72 (2012) 2080 .

[308] S. Chatrchyan *et al.*, "Measurement of the Z/γ+b-jet cross section in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1204.1643 ; CMS-EWK-11-012 ; CERN-PH-EP-2012-049, J. High Energy Phys. 06 (2012) 126.

[309] S. Chatrchyan *et al.*, "Azimuthal anisotropy of charged particles at high transverse momenta in PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1204.1850 ; CMS-HIN-11-012 ; CERN-PH-EP-2012-096, Phys. Rev. Lett. 109 (2012) 022301.

[310] S. Chatrchyan *et al.*, "Search for anomalous $\mathrm{t\bar{t}}$ production in the highly-boosted all-hadronic final state," arXiv:1204.2488 ; CMS-EXO-11-006 ; CERN-PH-EP-2012-077, J. High Energy Phys. 1209 (2012) 029.

[311] S. Chatrchyan *et al.*, "Measurement of the mass difference between top and antitop quarks," arXiv:1204.2807 ; CMS-TOP-11-019 ; CERN-PH-EP-2012-104, J. High Energy Phys. 06 (2012) 109.

[312] S. Chatrchyan *et al.*, "Shape, transverse size, and charged hadron multiplicity of jets in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1204.3170 ; CMS-QCD-10-029 ; CERN-PH-EP-2012-079, J. High Energy Phys. 06 (2012) 160.

[313] S. Chatrchyan *et al.*, "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," arXiv:1204.3774 ; CMS-SUS-11-021 ; CERN-PH-EP-2012-029, Phys. Lett. B 716 (2012) 260-284.

[314] S. Chatrchyan *et al.*, "Search for leptonic decays of W′ bosons in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1204.4764 ; CERN-PH-EP-2012-103 ; CMS-EXO-11-024-003, J. High Energy Phys. 08 (2012) 023.

[315] S. Chatrchyan *et al.*, "Search for anomalous production of multilepton events in pp collisions at $\sqrt{s}$ = 7 TeV ," arXiv:1204.5341 ; CERN-PH-EP-2012-110 ; CMS-SUS-11-013-003, J. High Energy Phys. 06 (2012) 169.

[316] S. Chatrchyan *et al.*, "Observation of a new Ξ_{b} baryon," arXiv:1204.5955 ; CMS-BPH-12-001 ; CERN-PH-EP-2012-118, Phys. Rev. Lett. 108 (2012) 252002.

[317] S. Chatrchyan *et al.*, "Search for heavy long-lived charged particles in pp collisions at $\sqrt{s}$ =7 TeV," arXiv:1205.0272; CMS-EXO-11-022; CERN-PH-EP-2012-093, Phys. Lett. B 713 (2012) 408-433.

[318] S. Chatrchyan *et al.*, "Measurement of the Λ_{b} cross section and the $\bar{\Lambda}_{\mathrm{b}}$ to Λ_{b} ratio with $\mathrm{J/psi/Lambda}$ decays in pp collisions at $\sqrt{s}$ = 7 TeV ," arXiv:1205.0594 ; CMS-BPH-11-007 ; CERN-PH-EP-2012-124, Phys. Lett. B 714 (2012) 136-157.

[319] S. Chatrchyan *et al.*, "Measurement of the pseudorapidity and centrality dependence of the transverse energy density in PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1205.2488 ; CMS-HIN-11-003 ; CERN-PH-EP-2012-116, Phys. Rev. Lett. 109 (2012) 152303.

[320] S. Chatrchyan *et al.*, "Search for a light charged Higgs boson in top quark decays in pp collisions at $\sqrt{s}$ = 7 TeV," CERN-PH-EP-2012-123 ; CMS-HIG-11-019-003, J. High Energy Phys. 07 (2012) 143.

[321] S. Chatrchyan *et al.*, "Measurement of jet fragmentation into charged particles in pp and PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1205.5872 ; CMS-HIN-11-004 ; CERN-PH-EP-2012-143, J. High Energy Phys. 10 (2012) 087.

[322] S. Chatrchyan *et al.*, "Search for new physics with same-sign isolated dilepton events with jets and missing transverse energy," arXiv:1205.6615 ; CMS-SUS-11-010 ; CERN-PH-EP-2012-159, Phys. Rev. Lett. 109 (2012) 071803.

[323] S. Chatrchyan *et al.*, "Study of W boson production in PbPb and pp collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1205.6334 ; CMS-HIN-11-008 ; CERN-PH-EP-2012-144, Phys. Lett. B 715 (2012) 66-87.

[324] S. Chatrchyan *et al.*, "Search for a W$'$ or Techni-ρ Decaying into WZ in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1206.0433 ; CMS-EXO-11-041 ; CERN-PH-EP-2012-150, Phys. Rev. Lett. 109 (2012) 141801.

[325] S. Chatrchyan *et al.*, "Search for narrow resonances in dilepton mass spectra in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1206.1849 ; CMS-EXO-11-019 ; CERN-PH-EP-2012-157, Phys. Lett. B 714 (2012) 158-179.

[326] S. Chatrchyan *et al.*, "Search for high mass resonances decaying into -lepton pairs in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1206.1725 ; CMS-EXO-11-031 ; CERN-PH-EP-2012-137, Phys. Lett. B 716 (2012) 82-102.

[327] S. Chatrchyan *et al.*, "Measurement of the electron charge asymmetry in inclusive W production in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1206.2598 ; CMS-SMP-12-001 ; CERN-PH-EP-2012-151, Phys. Rev. Lett. 109 (2012) 111806.

[328] S. Chatrchyan *et al.*, "Search for charge-asymmetric production of W' bosons in top pair + Jet events from pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1206.3921 ; CERN-PH-EP-2012-166 ; CMS-EXO-11-056-003, Phys. Lett. B 717 (2012) 351370.

[329] S. Chatrchyan *et al.*, "Search for new physics in events with opposite-sign leptons, jets and missing transverse energy in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1206.3949 ; CERN-PH-EP-2012-156 ; CMS-SUS-11-011-003, Phys. Lett. B 718 (2013) 815-840.

[330] S. Chatrchyan *et al.*, "Performance of CMS muon reconstruction in pp collision events at $\sqrt{s}$ = 7 TeV," arXiv:1206.4071 ; CERN-PH-EP-2012-173 ; CMS-MUO-10-004-003, J. Instrum. 7 (2012) P10002.

[331] S. Chatrchyan *et al.*, "Search for dark matter and large extra dimensions in monojet events in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1206.5663 ; CMS-EXO-11-059 ; CERN-PH-EP-2012-168, J. High Energy Phys. 1209 (2012) 094.

[332] S. Chatrchyan *et al.*, "Search for a light pseudoscalar Higgs boson in the dimuon decay channel in pp collisions at at $\sqrt{s}$ = 7 TeV," arXiv:1206.6326 ; CMS-HIG-12-004 ; CERN-PH-EP-2012-176, Phys. Rev. Lett. 109 (2012) 121801.

[333] S. Chatrchyan *et al.*, "Search for stopped long-lived particles produced in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1207.0106 ; CMS-EXO-11-020 ; CERN-PH-EP-2012-170, J. High Energy Phys. 08 (2012) 026.

[334] S. Chatrchyan *et al.*, "Inclusive and differential measurements of the $\mathrm{t\bar{t}}$ charge asymmetry in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1207.0065 ; CMS-TOP-11-030 ; CERN-PH-EP-2012-175, Phys. Lett. B 717 (2012) 129-150.

[335] S. Chatrchyan *et al.*, "Search for new physics with long-lived particles decaying to photons and missing energy in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1207.0627 ; CMS-EXO-11-067 ; CERN-PH-EP-2012-164, J. High Energy Phys. 11 (2012) 172.

[336] S. Chatrchyan *et al.*, "Search for a fermiophobic Higgs boson in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1207.1130 ; CMS-HIG-12-009 ; CERN-PH-EP-2012-174, J. High Energy Phys. 09 (2012) 111.

[337] S. Chatrchyan *et al.*, "Search for new physics in the multijet and missing transverse momentum final state in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1207.1898 ; CMS-SUS-12-011 ; CERN-PH-EP-2012-184, Phys. Rev. Lett. 109 (2012) 171803.

[338] S. Chatrchyan *et al.*, "Search for supersymmetry in hadronic final states using MT2 in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1207.1798 ; CMS-SUS-12-002 ; CERN-PH-EP-2012-186, J. High Energy Phys. 10 (2012) 018.

[339] S. Chatrchyan *et al.*, "Measurement of the underlying event activity in pp collisions at $\sqrt{s}$ = 0.9 and 7 TeV with the novel jet-area/median approach," arXiv:1207.2392 ; CMS-QCD-10-021 ; CERN-PH-EP-2012-152, J. High Energy Phys. 08 (2012) 130.

[340] S. Chatrchyan *et al.*, "A search for a doubly-charged Higgs boson in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1207.2666 ; CMS-HIG-12-005 ; CERN-PH-EP-2012-169, Eur. Phys. J. C 72 (2012) 2189.

[341] S. Chatrchyan *et al.*, "Forward-backward asymmetry of Drell-Yan lepton pairs in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1207.3973 ; CMS-EWK-11-004 ; CERN-PH-EP-2012-187 Phys. Lett. B 718 (2013) 752.

[342] S. Chatrchyan *et al.*, "Study of the inclusive production of charged pions, kaons, and protons in pp collisions at $\sqrt{s}$ = 0.9, 2.76, and 7 TeV ," arXiv:1207.4724 ; CMS-FSQ-12-014 ; CERN-PH-EP-2012-202, Eur. Phys. J. C 72 (2012) 2164.

[343] S. Chatrchyan *et al.*, "Search for heavy Majorana neutrinos in $\mu^+\mu^+$ [$\mu^-\mu^-$] and e^+e^+ [e^-e^-] events in pp collisions at $\sqrt{s}$ = 7 TeV ," arXiv:1207.6079 ; CMS-EXO-11-076 ; CERN-PH-EP-2012-203, Phys. Lett. B 717 (2012) 109-128.

[344] S. Chatrchyan *et al.*, "Search for pair production of first- and second-generation scalar leptoquarks in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1207.5406 ; CMS-EXO-11-028 ; CERN-PH-EP-2012-193, Phys. Rev. D 86 (2012) 052013.

[345] S. Chatrchyan *et al.*, "Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC," arXiv:1207.7235 ; CMS-HIG-12-028 ; CERN-PH-EP-2012-220, Phys. Lett. B 716 (2012) 3061.

[346] S. Chatrchyan *et al.*, "CMS Technical Design Report for the Level-1 Trigger Upgrade," CERN-LHCC-2013-011; CMS-TDR-12, 195 p (2013).

[347] S. Chatrchyan *et al.*, "Search for a W' boson decaying to a bottom quark and a top quark in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1208.0956 ; CMS-EXO-12-001 ; CERN-PH-EP-2012-192, Phys. Lett. B 718 (2013) 1229.

[348] S. Chatrchyan *et al.*, "Search for flavor changing neutral currents in top quark decays in pp collisions at 7 TeV," arXiv:1208.0957 ; CMS-TOP-11-028 ; CERN-PH-EP-2012-206, Phys. Lett. B 718 (2013) 1252-1272.

[349] S. Chatrchyan *et al.*, "Measurement of the azimuthal anisotropy of neutral pions in PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1208.2470 ; CMS-HIN-11-009 ; CERN-PH-EP-2012-231, Phys. Rev. Lett. 110 (2013) 042301.

[350] S. Chatrchyan *et al.*, "Measurement of the $\mathrm{t\bar{t}}$ production cross section in the dilepton channel in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1208.2671 ; CMS-TOP-11-005 ; CERN-PH-EP-2012-224, J. High Energy Phys. 1211 (2012) 067.

[351] S. Chatrchyan *et al.*, "Observation of sequential Upsilon suppression in PbPb collisions," arXiv:1208.2826 ; CMS-HIN-11-011 ; CERN-PH-EP-2012-228, Phys. Lett. B 718 (2013) 773-794.

[352] S. Chatrchyan *et al.*, "Search for three-jet resonances in pp collisions at $\sqrt{s}$ = 7 TeV ," arXiv:1208.2931 ; CMS-EXO-11-060 ; CERN-PH-EP-2012-225, Phys. Lett. B 718 (2012) 329-347.

[353] S. Chatrchyan *et al.*, "Study of the dijet mass spectrum in pp $\rightarrow$ W + jets events at $\sqrt{s}$ = 7 TeV," arXiv:1208.3477 ; CMS-EWK-11-017 ; CERN-PH-EP-2012-226, Phys. Rev. Lett. 109 (2012) 251801.

[354] S. Chatrchyan *et al.*, "Search for supersymmetry in events with b-quark jets and missing transverse energy in pp collisions at 7 TeV," arXiv:1208.4859 ; CMS-SUS-12-003 ; CERN-PH-EP-2012-240, Phys. Rev. D 86 (2012) 072010.

[355] S. Chatrchyan *et al.*, "Search for pair produced fourth-generation up-type quarks in pp collisions at s=7 TeV with a lepton in the final state," arXiv:1209.0471; CMS-EXO-11-099; CERN-PH-EP-2012-244, Phys. Lett. B 718 (2012) 307-328.

[356] S. Chatrchyan *et al.*, "Combined search for the quarks of a sequential fourth generation," arXiv:1209.1062 ; CMS-EXO-11-098 ; CERN-PH-EP-2012-251, Phys. Rev. D 86 (2012) 112003.

[357] S. Chatrchyan *et al.*, "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," arXiv:1209.1666 ; CMS-FWD-11-004 ; CERN-PH-EP-2012-246, J. High Energy Phys. 11 (2012) 080.

[358] S. Chatrchyan *et al.*, "Observation of a diffractive contribution to dijet production in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1209.1805 ; CMS-FWD-10-004 ; CERN-PH-EP-2012-248, Phys. Rev. D 87 (2013) 012006.

[359] S. Chatrchyan *et al.*, "Measurement of the top-quark mass in $\mathrm{t\bar{t}}$ events with lepton+jets final states in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1209.2319 ; CMS-TOP-11-015 ; CERN-PH-EP-2012-250, J. High Energy Phys. 12 (2012) 105.

[360] S. Chatrchyan *et al.*, "Measurement of the top-quark mass in $\mathrm{t\bar{t}}$ events with dilepton final states in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1209.2393; CMS-TOP-11-016; CERN-PH-EP-2012-222, Eur. Phys. J. C 72 (2012) 2202.

[361] S. Chatrchyan *et al.*, "Measurement of the Υ(1S), Υ(2S) and Υ(3S) polarizations in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1209.2922 ; CMS-BPH-11-023 ; CERN-PH-EP-2012-205, Phys. Rev. Lett. 110 (2013) 081802.

[362] S. Chatrchyan *et al.*, "Evidence for associated production of a single top quark and W boson in pp collisions at 7 TeV," arXiv:1209.3489 ; CMS-TOP-11-022 ; CERN-PH-EP-2012-266, Phys. Rev. Lett. 110 (2013) 022003.

[363] S. Chatrchyan *et al.*, "Search for a narrow spin-2 resonance decaying to a pair of Z vector bosons in the semileptonic final state," arXiv:1209.3807 ; CMS-EXO-11-102 ; CERN-PH-EP-2012-232, Phys. Lett. B 718 (2013) 1208.

[364] S. Chatrchyan *et al.*, "Search for the standard model Higgs boson produced in association with W and Z bosons in pp collisions at $\sqrt{s}$ = TeV," arXiv:1209.3937 ; CMS-HIG-12-010 ; CERN-PH-EP-2012-253, J. High Energy Phys. 11 (2012) 088.

[365] S. Chatrchyan *et al.*, "Search for resonant $\mathrm{t\bar{t}}$ production in lepton+jets events in pp collisions at $\sqrt{s}$ = TeV," arXiv:1209.4397 ; CMS-TOP-12-017 ; CERN-PH-EP-2012-264, J. High Energy Phys. 12 (2012) 015.

[366] S. Chatrchyan *et al.*, "Measurement of the single-top-quark t-channel cross section in pp collisions at $\sqrt{s}$ = TeV," arXiv:1209.4533 ; CMS-TOP-11-021 ; CERN-PH-EP-2012-274, J. High Energy Phys. 12 (2012) 035.

[367] S. Chatrchyan *et al.*, "Search for electroweak production of charginos and neutralinos using leptonic final states in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1209.6620 ; CMS-SUS-12-006 ; CERN-PH-EP-2012-273, J. High Energy Phys. 12 (2012) 015.

[368] S. Chatrchyan *et al.*, "Search for anomalous production of highly boosted Z bosons decaying to dimuons in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1210.0867 ; CMS-EXO-11-025 ; CERN-PH-EP-2012-294, Phys. Lett. B 722 (2013) 28-47.

[369] S. Chatrchyan *et al.*, "Measurement of the relative prompt production rate of χ_{c2} and χ_{c1} in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1210.0875 ; CMS-BPH-11-010 ; CERN-PH-EP-2012-271, Eur. Phys. J. C 72 (2012) 2251.

[370] S. Chatrchyan *et al.*, "Search for heavy lepton partners of neutrinos in proton-proton collisions in the context of the type III seesaw mechanism," arXiv:1210.1797 ; CMS-EXO-11-073 ; CERN-PH-EP-2012-278, Phys. Lett. B 718 (2012) 348-368.

[371] S. Chatrchyan *et al.*, "Search for supersymmetry in events with photons and low missing transverse energy in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1210.2052 ; CMS-SUS-12-014 ; CERN-PH-EP-2012-272, Phys. Lett. B 719 (2013) 42.

[372] S. Chatrchyan *et al.*, "Search for excited leptons in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1210.2422 ; CMS-EXO-11-034 ; CERN-PH-EP-2012-261, Phys. Lett. B 720 (2013) 309-329.

[373] S. Chatrchyan *et al.*, "Search for narrow resonances and quantum black holes in inclusive and b-tagged dijet mass spectra from pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1210.2387 ; CMS-EXO-11-094 ; CERN-PH-EP-2012-277, J. High Energy Phys. 01 (2013) 013.

[374] S. Chatrchyan *et al.*, "Search for heavy neutrinos and WR bosons with right-handed couplings in a left-right symmetric model in pp collisions at 7 TeV," arXiv:1210.2402 ; CMS-EXO-11-091 ; CERN-PH-EP-2012-235, Phys. Rev. Lett. 109 (2012) 261802.

[375] S. Chatrchyan *et al.*, "Search for fractionally charged particles in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1210.2311 ; CMS-EXO-11-074 ; CERN-PH-EP-2012-282, Phys. Rev. D 87 (2013) 092008.

[376] S. Chatrchyan *et al.*, "Observation of Z decays to four leptons with the CMS detector at the LHC," arXiv:1210.3844 ; CMS-SMP-12-009 ; CERN-PH-EP-2012-283, J. High Energy Phys. 12 (2012) 034.

[377] S. Chatrchyan *et al.*, "Observation of long-range near-side angular correlations in proton-lead collisions at the LHC ," arXiv:1210.5482 ; CMS-HIN-12-015 ; CERN-PH-EP-2012-320, Phys. Lett. B 718 (2013) 795-814.

[378] S. Chatrchyan *et al.*, "Search for third-generation leptoquarks and scalar bottom quarks in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1210.5627 ; CMS-EXO-11-030 ; CERN-PH-EP-2012-297, J. High Energy Phys. 12 (2012) 055.

[379] S. Chatrchyan *et al.*, "Search for pair production of third-generation leptoquarks and top squarks in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1210.5629 ; CMS-EXO-12-002 ; CERN-PH-EP-2012-299, Phys. Rev. Lett. 110 (2013) 081801.

[380] S. Chatrchyan *et al.*, "CMS Technical Design Report for the Phase 1 Upgrade of the Hadron Calorimeter," CERN-LHCC-2012-015; CMS-TDR-010 (2012).

[381] S. Chatrchyan *et al.*, "CMS Technical Design Report for the Pixel Detector Upgrade," CERN-LHCC-2012-016 ; CMS-TDR-01, 239 p (2012).

[382] S. Chatrchyan *et al.*, "Studies of jet quenching using isolated-photon+jet correlations in PbPb and pp collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1205.0206 ; CMS-HIN-11-010 ; CERN-PH-EP-2012-089, Phys. Lett. B 718 (2013) 773-794.

[383] S. Chatrchyan *et al.*, "Measurement of the inelastic proton-proton cross section at $\sqrt{s}$ = 7 TeV," arXiv:1210.6718 ; CMS-FWD-11-001 ; CERN-PH-EP-2012-293, Phys. Lett. B 722 (2013) 5-27.

[384] S. Chatrchyan *et al.*, "Search for a non-standard-model Higgs boson decaying to a pair of new light bosons in four-muon final states," CERN-PH-EP-2012-292 ; CMS-EXO-12-012-003, Phys. Lett. B 726 (2013) 564-586.

[385] S. Chatrchyan *et al.*, "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," CERN-PH-EP-2012-309 ; CMS-B2G-12-004-003, J. High Energy Phys. 01 (2013) 154.

[386] S. Chatrchyan *et al.*, "Measurement of the sum of WW and WZ production with W+dijet events in pp collisions at $\sqrt{s}$ = 7 TeV," CERN-PH-EP-2012-311 ; CMS-SMP-12-015-003, Eur. Phys. J. C 73 (2013) 2283.

[387] S. Chatrchyan *et al.*, "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 α_{T}," CERN-PH-EP-2012-290 ; CMS-SUS-11-022-003, J. High Energy Phys. 01 (2013) 077.

[388] S. Chatrchyan *et al.*, "Measurement of differential top-quark pair production cross sections in pp colisions at Measurement of differential top-quark pair production cross sections in pp colisions at $\sqrt{s}$ = 7 TeV," arXiv:1211.2220 ; CMS-TOP-11-013 ; CERN-PH-EP-2012-322, Eur. Phys. J. C 73 (2013) 2339.

[389] S. Chatrchyan *et al.*, " Search in leptonic channels for heavy resonances decaying to long-lived neutral particles," arXiv:1211.2472 ; CMS-EXO-11-101 ; CERN-PH-EP-2012-304, J. High Energy Phys. 02 (2013) 085.

[390] S. Chatrchyan *et al.*, "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, arXiv:1211.3143 ; CMS-SUS-11-028 ; CERN-PH-EP-2012-316, Phys. Rev. D 87 (2013) 052006.

[391] S. Chatrchyan *et al.*, "Search for Z′ resonances decaying to $t\bar{t}$ in dilepton+jets final states in pp collisions at $\sqrt{s}$ = 7 TeV, arXiv:1211.3338 ; CMS-TOP-11-010 ; CERN-PH-EP-2012-324, Phys. Rev. D 87 (2013) 072002.

[392] S. Chatrchyan *et al.*, " Identification of b-quark jets with the CMS experiment," arXiv:1211.4462 ; CMS-BTV-12-001 ; CERN-PH-EP-2012-262, J. Instrum. 8 P04013 (2013) P04013.

[393] S. Chatrchyan *et al.*, "Search for new physics in events with photons, jets, and missing transverse energy in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1211.4784 ; CMS-SUS-12-001 ; CERN-PH-EP-2012-321, J. High Energy Phys. 03 (2013) 111.

[394] S. Chatrchyan *et al.*, "Measurement of the ZZ production cross section and search for anomalous couplings in 2l2l′ final states in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1211.4890 ; CMS-SMP-12-007 ; CERN-PH-EP-2012-336, J. High Energy Phys. 01 (2013) 063.

[395] S. Chatrchyan *et al.*, " Search for exotic resonances decaying into WZ/ZZ in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1211.5779 ; CMS-EXO-12-014 ; CERN-PH-EP-2012-312, J. High Energy Phys. 02 (2013) 036.

[396] S. Chatrchyan *et al.*, "Search for long-lived particles decaying to photons and missing energy in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1212.1838 ; CMS-EXO-11-035 ; CERN-PH-EP-2012-342, Phys. Lett. B 722 (2013) 273-294.

[397] S. Chatrchyan *et al.*, "Search for heavy resonances in the W/Z-tagged dijet mass spectrum in pp collisions at 7 TeV," arXiv:1212.1910 ; CMS-EXO-11-095 ; CERN-PH-EP-2012-356, Phys. Lett. B 723 (2013) 280-301.

[398] S. Chatrchyan *et al.*, "Search for contact interactions in opposite-sign dimuon events in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1212.4563 ; CMS-EXO-11-009 ; CERN-PH-EP-2012-329, Phys. Rev. D 87 (2013) 032001.

[399] S. Chatrchyan *et al.*, " Search for heavy narrow dilepton resonances in pp collisions at $\sqrt{s}$ = 7 TeV and $\sqrt{s}$ = 8 TeV," arXiv:1212.6175 ; CMS-EXO-12-015 ; CERN-PH-EP-2012-364, Phys. Lett. B 720 (2013) 63-82.

[400] S. Chatrchyan *et al.*, " Search for new physics in events with same-sign dileptons and b jets in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1212.6194 ; CMS-SUS-12-017 ; CERN-PH-EP-2012-361, J. High Energy Phys. 03 (2013) 037.

[401] S. Chatrchyan *et al.*, "Search for supersymmetry in pp collisions at $\sqrt{s}$ = 7 TeV in events with a single lepton, jets, and missing transverse momentum," arXiv:1212.6428 ; CMS-SUS-12-010 ; CERN-PH-EP-2012-348, Eur. Phys. J. C 73 (2013) 2404.

[402] S. Chatrchyan *et al.*, "Study of the Mass and Spin-Parity of the Higgs Boson Candidate via Its Decays to Z Boson Pairs," arXiv:1212.6639 ; CMS-HIG-12-041 ; CERN-PH-EP-2012-372, Phys. Rev. Lett. 110 (2013) 081803 .

[403] S. Chatrchyan *et al.*, "Measurements of differential jet cross sections in proton-proton collisions at $\sqrt{s}$ = 7 TeV with the CMS detector," arXiv:1212.6660 ; CMS-QCD-11-004 ; CERN-PH-EP-2012-343, Phys. Rev. D 87 (2013) 112002 .

[404] S. Chatrchyan *et al.*, "Measurement of the $\mathrm{t\bar{t}}$ production cross section in pp collisions at $\sqrt{s}$ = 7 TeV with lepton + jets final states," arXiv:1212.6682 ; CMS-TOP-11-003 ; CERN-PH-EP-2012-285, Phys. Lett. B 720 (2013) 83-104.

[405] S. Chatrchyan *et al.*, "Search for supersymmetry in events with opposite-sign dileptons and missing transverse energy using an artificial neural network," arXiv:1301.0916 ; CMS-SUS-11-018 ; CERN-PH-EP-2012-341, Phys. Rev. D 87 (2013) 072001.

[406] S. Chatrchyan *et al.*, "Event shapes and azimuthal correlations in Z + jets events in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1301.1646 ; CMS-EWK-11-021 ; CERN-PH-EP-2013-001, Phys. Lett. B 722 (2013) 238-261.

[407] S. Chatrchyan *et al.*, "Inclusive search for supersymmetry using the razor variables in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1212.6961 ; CMS-SUS-11-024 ; CERN-PH-EP-2012-332, Phys. Rev. Lett. 111 (2013) 081802 .

[408] S. Chatrchyan *et al.*, "Interpretation of searches for supersymmetry with simplified models," arXiv:1301.2175 ; CMS-SUS-11-016 ; CERN-PH-EP-2012-351., Phys. Rev. D 88 (2013) 052017.

[409] S. Chatrchyan *et al.*, "Search for physics beyond the standard model in events with τ leptons, jets, and large transverse momentum imbalance in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1301.3792 ; CMS-SUS-12-004 ; CERN-PH-EP-2012-252, Eur. Phys. J. C 73 (2013) 2493.

[410] S. Chatrchyan *et al.*, "Measurement of $\mathrm{W^{+}W}$ and ZZ production cross sections in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1301.4698 ; CMS-SMP-12-024 ; CERN-PH-EP-2012-376, Phys. Lett. B 721 (2013) 190-211.

[411] S. Chatrchyan *et al.*, " Search for contact interactions using the inclusive jet $\mathrm{p_T}$ spectrum in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1301.5023 ; CMS-EXO-11-010 ; CERN-PH-EP-2013-002, Phys. Rev. D 87 (2013) 052017.

[412] S. Chatrchyan *et al.*, "Measurement of the top-antitop production cross section in the tau+jets channel in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1301.5755 ; CMS-TOP-11-004 ; CERN-PH-EP-2012-374, Eur. Phys. J. C 73 (2013) 2386.

[413] S. Chatrchyan *et al.*, "Search for pair-produced dijet resonances in four-jet final states in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1302.0531 ; CMS-EXO-11-016 ; CERN-PH-EP-2013-007, Phys. Rev. Lett. 110 (2013) 141802.

[414] S. Chatrchyan *et al.*, "Measurement of the $\mathrm{t\bar{t}}$ production cross section in the all-jet final state in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1302.0508 ; CMS-TOP-11-007 ; CERN-PH-EP-2012-358, : J. High Energy Phys. 05 (2013) 065.

[415] S. Chatrchyan *et al.*, " Searches for Higgs bosons in pp collisions at $\sqrt{s}$ = 7 and 8 TeV in the context of four-generation and fermiophobic models," arXiv:1302.1764 ; CMS-HIG-12-013 ; CERN-PH-EP-2013-011, Phys. Lett. B 725 (2013) 36-59.

[416] S. Chatrchyan *et al.*, "Study of the underlying event at forward rapidity in pp collisions at $\sqrt{s}$ = 0.9, 2.76, and 7 TeV," arXiv:1302.2394 ; CMS-FWD-11-003 ; CERN-PH-EP-2013-012, J. High Energy Phys. 04 (2013) 072.

[417] S. Chatrchyan *et al.*, "Search for new physics in final states with a lepton and missing transverse energy in pp collisions at the LHC," arXiv:1302.2812 ; CMS-EXO-12-010 ; CERN-PH-EP-2013-010, Phys. Rev. D 87 (2013) 072005.

[418] S. Chatrchyan *et al.*, "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," arXiv:1302.2892 ; CMS-HIG-12-033 ; CERN-PH-EP-2012-375, Phys. Lett. B 722 (2013) 207-232.

[419] S. Chatrchyan *et al.*, "Measurement of the X(3872) production cross section via decays to J/$\psi\pi^+\pi^-$ in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1302.3968 ; CMS-BPH-11-011 ; CERN-PH-EP-2013-014, J. High Energy Phys. 04 (2013) 154.

[420] S. Chatrchyan *et al.*, "Search for narrow resonances using the dijet mass spectrum in pp collisions at $\sqrt{s}$ = 8 TeV ," arXiv:1302.4794 ; CMS-EXO-12-016 ; CERN-PH-EP-2013-015, Phys. Rev. D 87 (2013) 114015.

[421] S. Chatrchyan *et al.*, "Search for the standard model Higgs boson produced in association with a top-quark pair in pp collisions at the LHC," arXiv:1303.0763 ; CMS-HIG-12-035 ; CERN-PH-EP-2013-027, J. High Energy Phys. 05 (2013) 145.

[422] S. Chatrchyan *et al.*, "Search for supersymmetry in hadronic final states with missing transverse energy using the variables T and b-quark multiplicity in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1303.2985 ; CMS-SUS-12-028 ; CERN-PH-EP-2013-037, Eur. Phys. J. C 73 (2013) 2568.

[423] S. Chatrchyan *et al.*, "Measurement of associated production of vector bosons and $t\bar{t}$ at $\sqrt{s}$ = 7 TeV," arXiv:1303.3239 ; CMS-TOP-12-014 ; CERN-PH-EP-2013-033, Phys. Rev. Lett. 110 (2013) 172002.

[424] S. Chatrchyan *et al.*, "Observation of a new boson with mass near 125 GeV in pp collisions at $\sqrt{s}$ 7 and 8 TeV," arXiv:1303.4571 ; CMS-HIG-12-036 ; CERN-PH-EP-2013-035, J. High Energy Phys. 06 (2013) 081.

[425] S. Chatrchyan *et al.*, "Studies of jet mass in dijet and W/Z+jet events," arXiv:1303.4811 ; CMS-SMP-12-019 ; CERN-PH-EP-2013-016, J. High Energy Phys. 05 (2013) 090.

[426] S. Chatrchyan *et al.*, "A New Boson with a Mass of 125 GeV Observed with the CMS Experiment at the Large Hadron Collider," Science 338 (2012) 1569-1575.

[427] S. Chatrchyan *et al.*, "Search for microscopic black holes in pp collisions at $\sqrt{s}$ 8 TeV," arXiv:1303.5338 ; CMS-EXO-12-009 ; CERN-PH-EP-2013-043, J. High Energy Phys. 07 (2013) 178.

[428] S. Chatrchyan *et al.*, "Measurement of the Υ(1S), Υ(2S), and Υ(3S) cross sections in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1303.5900 ; CMS-BPH-11-001 ; CERN-PH-EP-2012-373, Phys. Lett. B 727 (2013) 101-125.

[429] S. Chatrchyan *et al.*, "Search for a standard-model-like Higgs boson with a mass of up to 1 TeV at the LHC," arXiv:1304.0213 ; CMS-HIG-12-034 ; CERN-PH-EP-2013-050, Eur. Phys. J. C 73 (2013) 2469.

[430] S. Chatrchyan *et al.*, "Measurement of masses in the $t\bar{t}$ system by kinematic endpoints in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1304.5783 ; CMS-TOP-11-027 ; CERN-PH-EP-2013-059, Eur. Phys. J. C 73 (2013) 2494.

[431] S. Chatrchyan *et al.*, "Measurement of the Λ_b^0 lifetime in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1304.7495 ; CMS-BPH-11-013 ; CERN-PH-EP-2013-065, J. High Energy Phys. 07 (2013) 163.

[432] S. Chatrchyan *et al.*, "Measurement of the ratio of the inclusive 3-jet cross section to the inclusive 2-jet cross section in pp collisions at $\sqrt{s}$ = 7 TeV and first determination of the strong coupling constant in the TeV range," arXiv:1304.7498 ; CMS-QCD-11-003 ; CERN-PH-EP-2013-057. - 2013, Eur. Phys. J. C 73 (2013) 2604.

[433] S. Chatrchyan *et al.*, "Searches for long-lived charged particles in pp collisions at $\sqrt{s}$ = 7 and 8 TeV," arXiv:1305.0491 ; CMS-EXO-12-026 ; CERN-PH-EP-2013-073, J. High Energy Phys. 07 (2013) 122.

[434] S. Chatrchyan *et al.*, "Multiplicity and transverse-momentum dependence of two- and four-particle correlations in pPb and PbPb collisions," arXiv:1305.0609 ; CMS-HIN-13-002 ; CERN-PH-EP-2013-077, Phys. Lett. B 724 (2013) 213-240.

[435] S. Chatrchyan *et al.*, "Search for gluino mediated bottom- and top-squark production in multijet final states in pp collisions at 8 TeV," arXiv:1305.2390 ; CMS-SUS-12-024 ; CERN-PH-EP-2013-076, Phys. Lett. B 725 (2013) 243-270.

[436] S. Chatrchyan *et al.*, "Study of exclusive two-photon production of W^+W^- in pp collisions at$\sqrt{s}$ = 7 TeV and constraints on anomalous quartic gauge couplings," CERN-PH-EP-2013-084 ; CMS-FSQ-12-010 ; arXiv:1305.5596, J. High Energy Phys. 07 (2013) 116.

[437] S. Chatrchyan *et al.*, "Measurement of neutral strange particle production in the underlying event in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1305.6016 ; CMS-QCD-11-010 ; CERN-PH-EP-2013-086, Phys. Rev. D 88 (2013) 052001.

[438] S. Chatrchyan *et al.*, "Measurement of the hadronic activity in events with a Z and two jets and extraction of the cross section for the electroweak production of a Z with two jets in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1305.7389 ; CMS-FSQ-12-019 ; CERN-PH-EP-2013-060, J. High Energy Phys. 10 (2013) 062.

[439] S. Chatrchyan *et al.*, " Measurement of the W^+W^- cross section in pp collisions at $\sqrt{s}$ = 7 TeV and limits on anomalous WWγ and WWZ couplings," arXiv:1306.1126 ; CMS-SMP-12-005 ; CERN-PH-EP-2013-075, Eur. Phys. J. C 73 (2013) 2610.

[440] S. Chatrchyan *et al.*, "Energy calibration and resolution of the CMS electromagnetic calorimeter in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1306.2016 ; CMS-EGM-11-001 ; CERN-PH-EP-2013-097, J. Instrum. 8 (2013) P09009.

[441] S. Chatrchyan *et al.*, "Search for top squarks in R-parity-violating supersymmetry using three or more leptons and b-tagged jets," arXiv:1306.6643 ; CMS-SUS-13-003 ; CERN-PH-EP-2013-093, Phys. Rev. Lett. 111 (2013) 221801.

[442] S. Chatrchyan *et al.*, "The performance of the CMS muon detector in proton-proton collisions at $\sqrt{s}$ = 7 TeV at the LHC," arXiv:1306.6905 ; CMS-MUO-11-001 ; CERN-PH-EP-2013-072, J. Instrum. 8 (2013) P11002.

[443] S. Chatrchyan *et al.*, "Determination of the top-quark pole mass and strong coupling constant from the $t\bar{t}$ production cross section in pp collisions at $\sqrt{s}$ = 7 TeV," CERN-PH-EP-2013-121 ; CMS-TOP-12-022-003 ; arXiv:1307.1907, Phys. Lett. B 728 (2013) 496-517.

[444] S. Chatrchyan *et al.*, "Study of the production of charged pions, kaons, and protons in pPb collisions at $\sqrt{s_{NN}}$ = 5.02 TeV," CERN-PH-EP-2013-096 ; CMS-HIN-12-016-003, Eur. Phys. J. C 74 (2014) 2847.

[445] S. Chatrchyan *et al.*, "Measurement of the top-quark mass in all-jets $\mathrm{t\bar{t}}$ events in pp collisions at $\sqrt{s}$ = 7 TeV, arXiv:1307.4617 ; CMS-TOP-11-017 ; CERN-PH-EP-2013-124, Eur. Phys. J. C 74 (2014) 2758.

[446] S. Chatrchyan *et al.*, "Measurement of the $\mathrm{B_s^0} \to \mu^+\mu^-$ branching fraction and search for $\mathrm{B^0} \to \mu^+\mu^-$ with the CMS Experiment," arXiv:1307.5025; CMS-BPH-13-004-003; CERN-PH-EP-2013-129, Phys. Rev. Lett. 111 (2013) 101804.

[447] S. Chatrchyan *et al.*, "Search for a Higgs boson decaying into a Z and a photon in pp collisions at $\sqrt{s}$ = 7 and 8 TeV," arXiv:1307.5515; CMS-HIG-13-006; CERN-PH-EP-2013-113, Phys. Lett. B 726 (2013) 587-609.

[448] S. Chatrchyan *et al.*, " Measurement of the prompt J/ψ and ψ(2S) polarizations in pp collisions at $\sqrt{s}$ = 7 TeV, arXiv:1307.6070; CMS-BPH-13-003-003; CERN-PH-EP-2013-140, Phys. Lett. B 727 (2013) 381-402.

[449] S. Chatrchyan *et al.*, "Search for top-squark pair production in the single-lepton final state in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1308.1586; CMS-SUS-13-011; CERN-PH-EP-2013-148, Eur. Phys. J. C 73 (2013) 2677.

[450] S. Chatrchyan *et al.*, "Angular analysis and branching fraction measurement of the decay $\mathrm{B^0} \to \mathrm{K^{*0}}\mu^+\mu^-$," arXiv:1308.3409; CMS-BPH-11-009; CERN-PH-EP-2013-152, Phys. Lett. B 727 (2013) 77-100.

[451] S. Chatrchyan *et al.*, "Measurement of the W-boson helicity in top-quark decays from $\mathrm{t\bar{t}}$ production in lepton+jets events in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1308.3879; CMS-TOP-11-020; CERN-PH-EP-2013-133, J. High Energy Phys. 10 (2013) 167.

[452] E. Hazen *et al.*, "The AMC13XG: a new generation clock/timing/DAQ module for CMS MicroTCA," JINST 8 (2013) C12036.

[453] S. Chatrchyan *et al.*, "Measurement of the Wγ and Zγ inclusive cross sections in pp collisions at $\sqrt{s}$ = 7 TeV and limits on anomalous triple gauge boson couplings," arXiv:1308.6832; CMS-EWK-11-009 ; CERN-PH-EP-2013-108, Phys. Rev. D 89 (2014) 092005.

[454] S. Chatrchyan *et al.*, " Search for a new bottomonium state decaying to Υ (1S) $\pi^+\pi^-$ in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1309.0250; CMS-BPH-11-016; CERN-PH-EP-2013-157, Phys. Lett. B 727 (2013) 57-76.

[455] S. Chatrchyan *et al.*, "Measurement of the production cross section for $Z\gamma \to \nu\bar{\nu}\gamma$ in pp collisions at $\sqrt{s}$ = 7 TeV and limits on $ZZ\gamma$ and $Z\gamma\gamma$ triple gauge boson couplings," arXiv:1309.1117; CMS-SMP-12-020; CERN-PH-EP-2013-098 J. High Energy Phys. 10 (2013) 164.

[456] S. Chatrchyan *et al.*, " Searches for new physics using the $t\bar{t}$ invariant mass distribution in pp collisions at $\sqrt{s}$ = 8TeV," arXiv:1309.2030; CMS-B2G-13-001-003; CERN-PH-EP-2013-162, Phys. Rev. Lett. 111 (2013) 211804.

[457] S. Chatrchyan *et al.*, "Observation of a peaking structure in the J/$\psi\phi$ mass spectrum from $B^{\pm} \to J\psi\phi K^{\pm}$ decays, arXiv:1309.6920 ; CMS-BPH-11-026 ; CERN-PH-EP-2013-167, Phys. Lett. B 734 (2014) 261-281.

[458] S. Chatrchyan *et al.*, "Modification of jet shapes in PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1310.0878; CMS-HIN-12-002; CERN-PH-EP-2013-189. Phys. Lett. B 730 (2014) 243.

[459] S. Chatrchyan *et al.*, "Measurement of the cross section and angular correlations for associated production of a Z boson with b hadrons in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1310.1349; CMS-EWK-11-015; CERN-PH-EP-2013-153, J. High Energy Phys. 12 (2013) 039.

[460] S. Chatrchyan *et al.*, "Measurement of associated W + charm production in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1310.1138 ; CMS-SMP-12-002 ; CERN-PH-EP-2013-149, J. High Energy Phys. 02 (2014) 013.

[461] S. Chatrchyan *et al.*, "Search for baryon number violation in top quark decays," arXiv:1310.1618 ; CMS-B2G-12-023 ; CERN-PH-EP-2013-179, Phys. Lett. B 731 (2014) 173.

[462] S. Chatrchyan *et al.*, "Rapidity distributions in exclusive Z + jet and photon + jet events in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1310.3082; CMS-SMP-12-004; CERN-PH-EP-2013-169, Phys. Rev. D 88 (2013) 112009.

[463] S. Chatrchyan *et al.*, "Search for the standard model Higgs boson produced in association with a W or a Z boson and decaying to bottom quarks," arXiv:1310.3687; CMS-HIG-13-012; CERN-PH-EP-2013-188, Phys. Rev. D 89 (2014) 012003.

[464] S. Chatrchyan *et al.*, "Jet and underlying event properties as a function of charged-particle multiplicity in protonproton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1310.4554; CMS-FSQ-12-022; CERN-PH-EP-2013-195, Eur. Phys. J. C 73 (2013) 2674.

[465] S. Chatrchyan *et al.*, "Measurement of the differential and double-differential Drell-Yan cross sections in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1310.7291; CMS-SMP-13-003; CERN-PH-EP-2013-168, J. High Energy Phys. 12 (2013) 030.

[466] S. Chatrchyan *et al.*, "Measurement of higher-order harmonic azimuthal anisotropy in PbPb collisions at a nucleon-nucleon center-of-mass energy of 2.76 TeV," arXiv:1310.8651 ; CMS-HIN-11-005 ; CERN-PH-EP-2013-196, Phys. Rev. C 89 (2014) 044906.

[467] S. Chatrchyan *et al.*, "Searches for light- and heavy-flavour three-jet resonances in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1311.1799; CMS-EXO-12-049; CERN-PH-EP-2013-204, Phys. Lett. B 730 (2014) 193.

[468] S. Chatrchyan *et al.*, "Measurements of tt spin correlations and top-quark polarization using dilepton final states in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1311.3924 ; CMS-TOP-13-003 ; CERN-PH-EP-2013-211, Phys. Rev. Lett. 112 (2014) 182001.

[469] S. Chatrchyan *et al.*, "Search for supersymmetry in pp collisions at $\sqrt{s}$ = 8 TeV in events with a single lepton, large jet multiplicity, and multiple b jets," arXiv:1311.4937 ; CMS-SUS-13-007 ; CERN-PH-EP-2013-209, Phys. Lett. B733 (2014) 328-353.

[470] S. Chatrchyan *et al.*, "Search for pair production of excited top quarks in the lepton+jets final state," arXiv:1311.5357 ; CMS-B2G-12-014 ; CERN-PH-EP-2013-206, J. High Energy Phys. 1406 (2014) 125.

[471] S. Chatrchyan *et al.*, " Probing color coherence effects in pp collisions at $\sqrt{s}$ = 7 TeV ," arXiv:1311.5815 ; CERN-PH-EP-2013-200, Eur. Phys. J. C 74 (2014) 2901.

[472] S. Chatrchyan *et al.*, "Measurement of the triple-differential cross section for photon+jets production in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1311.6141 ; CMS-QCD-11-005-003 ; CERN-PH-EP-2013-194, J. High Energy Phys. 1406 (2014) 009.

[473] S. Chatrchyan *et al.*, "Search for new physics in events with same-sign dileptons and jets in pp collisions at $\sqrt{s}$ = 8 TeV, arXiv:1311.6736; CMS-SUS-13-013; CERN-PH-EP-2013-213, J. High Energy Phys. 01 (2014) 163.

[474] S. Chatrchyan *et al.*, "Inclusive search for a vector-like T quark with charge 2/3 in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1311.7667; CMS-B2G-12-015; CERN-PH-EP-2013-215, Phys. Lett. B 729 (2014) 149-171.

[475] S. Chatrchyan *et al.*, "Measurement of Higgs boson production and properties in the WW decay channel with leptonic final states," arXiv:1312.1129; CMS-HIG-13-023; CERN-PH-EP-2013-221, J. High Energy Phys. 01 (2014) 096.

[476] S. Chatrchyan *et al.*, "Studies of azimuthal dihadron correlations in ultra-central PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1312.1845 ; CERN-PH-EP-2013-214, J. High Energy Phys. 02 (2014) 088.

[477] S. Chatrchyan *et al.*, "Search for top-quark partners with charge 5/3 in the same-sign dilepton final state," arXiv:1312.2391 ; CMS-B2G-12-012 ; CERN-PH-EP-2013-216, Phys. Rev. Lett. 112 (2014) 171801.

[478] S. Chatrchyan *et al.*, "Search for stop and higgsino production using diphoton Higgs boson decays," arXiv:1312.3310 ; CMS-SUS-13-014 ; CERN-PH-EP-2013-226, Phys. Rev. Lett. 112 (2014) 161802.

[479] S. Chatrchyan *et al.*, "Search for flavor-changing neutral currents in top-quark decays t $\rightarrow$ Zq in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1312.4194 ; CMS-TOP-12-037 ; CERN-PH-EP-2013-208, Phys. Rev. Lett. 112 (2014) 171802.

[480] S. Chatrchyan *et al.*, "Evidence of b-jet quenching in PbPb collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1312.4198 ; CMS-HIN-12-003 ; CERN-PH-EP-2013-228, Phys. Rev. Lett. 113 (2014) 132301.

[481] S. Chatrchyan *et al.*, "Measurement of the properties of a Higgs boson in the four-lepton final state," arXiv:1312.5353 ; CMS-HIG-13-002 ; CERN-PH-EP-2013-220, Phys. Rev. D 89 (2014) 092007.

[482] S. Chatrchyan *et al.*, "Study of double parton scattering using W + 2-jet events in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1312.5729 ; CMS-FSQ-12-028 ; CERN-PH-EP-2013-224, J. High Energy Phys. 03 (2014) 032.

[483] S. Chatrchyan *et al.*, "Event activity dependence of Y(nS) production in $\sqrt{s_{NN}}$ = 5.02 TeV pPb and $\sqrt{s}$ = 2.76 TeV pp collisions," arXiv:1312.6300 ; CMS-HIN-13-003 ; CERN-PH-EP-2013-219, J. High Energy Phys. 04 (2014) 103.

[484] S. Chatrchyan *et al.*, "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," arXiv:1312.6283 ; CMS-SMP-12-021 ; CERN-PH-EP-2013-232, Phys. Rev. D 90 (2014) 032004.

[485] S. Chatrchyan *et al.*, "Measurement of four-jet production in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1312.6440 ; CERN-PH-EP-2013-229, Phys. Rev. D 89 (2014) 092010.

[486] S. Chatrchyan *et al.*, "Measurement of the production cross section for a W boson and two b jets in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1312.6608 ; CMS-SMP-12-026 ; CERN-PH-EP-2013-223, Phys. Lett. B 735 (2014) 204.

[487] S. Chatrchyan *et al.*, "Measurement of the $\mathrm{t\bar{t}}$ production cross section in the dilepton channel in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1312.7582; CMS-TOP-12-007; CERN-PH-EP-2013-234, J. High Energy Phys. 02 (2014) 024.

[488] S. Chatrchyan *et al.*, "Observation of the associated production of a single top quark and a W boson in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1401.2942 ; CMS-TOP-12-040 ; CERN-PH-EP-2013-237, Phys. Rev. Lett. 112 (2014) 231802.

[489] S. Chatrchyan *et al.*, "Studies of dijet pseudorapidity distributions and transverse momentum balance in pPb collisions at $\sqrt{s_{NN}}$ = 5.02 TeV," arXiv:1401.4433 ; CMS-HIN-13-001 ; CERN-PH-EP-2013-236, Eur. Phys. J. C 74 (2014) 2951.

[490] S. Chatrchyan *et al.*, "Evidence for the 125 GeV Higgs boson decaying to a pair of leptons," arXiv:1401.5041 ; CMS-HIG-13-004 ; CERN-PH-EP-2014-001, J. High Energy Phys. 05 (2014) 104.

[491] S. Chatrchyan *et al.*, "Evidence for the direct decay of the 125 GeV Higgs boson to fermions," rXiv:1401.6527 ; CMS-HIG-13-033 ; CERN-PH-EP-2014-004, Nature Phys. 10 (2014) 1.

[492] S. Chatrchyan *et al.*, " Measurement of inclusive W and Z boson production cross sections in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1402.0923 ; CMS-SMP-12-011 ; CERN-PH-EP-2013-217, Phys. Rev. Lett. 112 (2014) 191802.

[493] S. Chatrchyan *et al.*, "Measurement of the production cross sections for a Z boson and one or more b jets in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1402.1521 ; CMS-SMP-13-004 ; CERN-PH-EP-2014-005, J. High Energy Phys. 1406 (2014) 120

[494] S. Chatrchyan *et al.*, "Search for W′ to tb decays in the lepton + jets final state in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1402.2176 ; CMS-B2G-12-010 ; CERN-PH-EP-2014-011, J. High Energy Phys. 1405 (2014) 108.

[495] S. Chatrchyan *et al.*, "Measurements of the $\mathrm{t\bar{t}}$ charge asymmetry using the dilepton decay channel in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1402.3803 ; CMS-TOP-12-010 ; CERN-PH-EP-2014-010, J. High Energy Phys. 04 (2014) 191.

[496] S. Chatrchyan *et al.*, "Search for new physics in the multijet and missing transverse momentum final state in proton-proton collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2014-015 ; CMS-SUS-13-012-004, J. High Energy Phys. 1406 (2014) 055.

[497] S. Chatrchyan *et al.*, "Alignment of the CMS tracker with LHC and cosmic ray data," CERN-PH-EP-2014-028 ; CMS-TRK-11-002-003 ; arXiv:1403.2286, J. Instrum. 9 (2014) P06009.

[498] S. Chatrchyan *et al.*, "Measurement of WZ and ZZ production in pp collisions at $\sqrt{s}$ = 8 TeV in final states with b-tagged jets," CERN-PH-EP-2014-022 ; CMS-SMP-13-011-003 ; arXiv:1403.3047, Eur. Phys. J. C 74 (2014) 2973.

[499] V. Khachatryan *et al.*, " 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," arXiv:1403.7366 ; CMS-TOP-12-038-003 ; CERN-PH-EP-2014-032, J. High Energy Phys. 1406 (2014) 090.

[500] S. Chatrchyan *et al.*, "Search for invisible decays of Higgs bosons in the vector boson fusion and associated ZH production mode," arXiv:1404.1344 ; CMS-HIG-13-030 ; CERN-PH-EP-2014-051, Eur. Phys. J. C 74 (2014) 2980.

[501] V. Khachatryan *et al.*, "Measurement of the ratio $B(t \to Wb)/B(t \to Wq)$ in pp collisions at s = 8 TeV," arXiv:1404.2292 ; CMS-TOP-12-035 ; CERN-PH-EP-2014-052, Phys. Lett. B 736 (2014) 33.

[502] S. Chatrchyan *et al.*, "Measurement of jet multiplicity distributions in $\mathrm{t\bar{t}}$ production in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1404.3171 ; CMS-TOP-12-018 ; CERN-PH-EP-2014-048, Eur. Phys. J. C 74 (2014) 3014.

[503] S. Chatrchyan *et al.*, "A search for WWγ and WZγ production and constraints on anomalous quartic gauge couplings in pp collisions at s = 8 TeV," arXiv:1404.4619 ; CMS-SMP-13-009 ; CERN-PH-EP-2014-046, Phys. Rev. D 90 (2014) 032008.

[504] S. Chatrchyan *et al.*, "Search for anomalous production of events with three or more leptons in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1404.5801 ; CMS-SUS-13-002-003 ; CERN-PH-EP-2014-039, Phys. Rev. D 90 (2014) 032006.

[505] S. Chatrchyan *et al.*, "Measurement of pseudorapidity distributions of charged particles in proton-proton collisions at $\sqrt{s}$ = 8 TeV by the CMS and TOTEM experiments," arXiv:1405.0722 ; CMS-FSQ-12-026 ; CERN-PH-EP-TOTEM-2014-002 ; CERN-PH-EP-2014-063, Eur. Phys. J. C 74 (2014) 3053.

[506] V. Khachatryan *et al.*, "Search for massive resonances in dijet systems containing jets tagged as W or Z boson decays in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1405.1994 ; CMS-EXO-12-024 ; CERN-PH-EP-2014-071, J. High Energy Phys. 08 (2014) 173.

[507] V. Khachatryan *et al.*, "Constraints on the Higgs boson width from off-shell production and decay to Z-boson pairs," arXiv:1405.3455 ; CMS-HIG-14-002 ; CERN-PH-EP-2014-078, Phys. Lett. B 736 (2014) 64.

[508] V. Khachatryan *et al.*, "Search for massive resonances decaying into pairs of boosted bosons in semi-leptonic final states at $\sqrt{s}$ = 8 TeV," arXiv:1405.3447 ; CMS-EXO-13-009 ; CERN-PH-EP-2014-076, J. High Energy Phys. 08 (2014) 174.

[509] V. Khachatryan *et al.*, "Search for top-squark pairs decaying into Higgs or Z bosons in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1405.3886 ; CMS-SUS-13-024 ; CERN-PH-EP-2014-073, Phys. Lett. B 736 (2014) 371.

[510] S. Chatrchyan *et al.*, "Search for supersymmetry with razor variables in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1405.3961 ; CMS-SUS-12-005 ; CERN-PH-EP-2014-057, Phys. Rev. D 90 (2014) 112001.

[511] S. Chatrchyan *et al.*, "Description and performance of track and primary-vertex reconstruction with the CMS tracker," arXiv:1405.6569 ; CERN-PH-EP-2014-070 ; CMS-TRK-11-001, J. Instrum. 9 (2014) P10009.

[512] S. Chatrchyan *et al.*, "Measurement of differential cross sections for the production of a pair of isolated photons in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1405.7225 ; CMS-SMP-13-001 ; CERN-PH-EP-2014-067, Eur. Phys. J. C 74 (2014) 3129.

[513] V. Khachatryan *et al.*, "Searches for electroweak production of charginos, neutralinos, and sleptons decaying to leptons and W, Z, and Higgs bosons in pp collisions at 8 TeV," arXiv:1405.7570 ; CMS-SUS-13-006 ; CERN-PH-EP-2014-098, Eur. Phys. J. C 74 (2014) 3036.

[514] V. Khachatryan *et al.*, "Search for jet extinction in the inclusive jet-pT spectrum from proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1405.7653 ; CMS-EXO-12-051 ; CERN-PH-EP-2014-108, Phys. Rev. D 90 (2014) 032005.

[515] V. Khachatryan *et al.*, "Measurement of the pp ZZ production cross section and constraints on anomalous triple gauge couplings in four-lepton final states at $\sqrt{s}$ = 8 TeV," arXiv:1406.0113 ; CMS-SMP-13-005 ; CERN-PH-EP-2014-080, Phys. Lett. B 740 (2015) 250.

[516] S. Chatrchyan *et al.*, "Measurement of the ratio of inclusive jet cross sections using the anti-kT algorithm with radius parameters R=0.5 and 0.7 in pp collisions at $\sqrt{s}$ = 7 TeV," CMS-SMP-13-002-003 ; CMS-SMP-13-002 ; CERN-PH-EP-2014-068, Phys. Rev. D 90 (2014) 072006.

[517] V. Khachatryan *et al.*, "Measurement of prompt J/ pair production in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1406.0484 ; CERN-PH-EP-2014-111 ; CMS-BPH-11-021, J. High Energy Phys. 09 (2014) 094.

[518] S. Chatrchyan *et al.*, "Measurement of jet fragmentation in PbPb and pp collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," arXiv:1406.0932 ; CMS-HIN-12-013 ; CERN-PH-EP-2014-100, Phys. Rev. C 90 (2014) 024908.

[519] V. Khachatryan *et al.*, "Search for excited quarks in the γ+jet final state in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1406.5171 ; CMS-EXO-13-003 ; CERN-PH-EP-2014-129, Phys. Lett. B 738 (2014) 274.

[520] V. Khachatryan *et al.*, "Measurement of top quark-antiquark pair production in association with a W or Z boson in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1406.7830; CERN-PH-EP-2014-136; CMS-TOP-12-036, Eur. Phys. J. C 74 (2014) 3060.

[521] V. Khachatryan *et al.*, "Observation of the diphoton decay of the Higgs boson and measurement of its properties," arXiv:1407.0558 ; CMS-HIG-13-001 ; CERN-PH-EP-2014-117, Eur. Phys. J. C 74 (2014) 3076.

[522] V. Khachatryan *et al.*, "Study of hadronic event-shape variables in multijet final states in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1407.2856 ; CERN-PH-EP-2014-146 ; CMS-SMP-12-022, J. High Energy Phys. 10 (2014) 087.

[523] V. Khachatryan *et al.*, "Search for new resonances decaying via WZ to leptons in proton-proton collisions at $\sqrt{s}$ = TeV," arXiv:1407.3476 ; CMS-EXO-12-025 ; CERN-PH-EP-2014-160, Phys. Lett. B 740 (2015) 83.

[524] V. Khachatryan *et al.*, "Search for heavy neutrinos and W bosons with right-handed couplings in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1407.3683 ; CERN-PH-EP-2014-161 ; CMS-EXO-13-008, Eur. Phys. J. C 74 (2014) 3149.

[525] V. Khachatryan *et al.*, "Measurement of the $\mathrm{t\bar{t}}$ production cross section in pp collisions at $\sqrt{s}$ = 8 TeV in dilepton final states containing one τ lepton," arXiv:1407.6643 ; CMS-TOP-12-026 ; CERN-PH-EP-2014-167, Phys. Lett. B 739 (2014) 23.

[526] V. Khachatryan *et al.*, "Search for pair production of third-generation scalar leptoquarks and top squarks in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1408.0806 ; CMS-EXO-12-032 ; CERN-PH-EP-2014-190, Phys. Lett. B 739 (2014) 229.

[527] V. Khachatryan *et al.*, "Search for the associated production of the Higgs boson with a top-quark pair," arXiv:1408.1682; CMS-HIG-13-029; CERN-PH-EP-2014-189, J. High Energy Phys. 09 (2014) 087.

[528] V. Khachatryan *et al.*, "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," arXiv:1408.2745 ; CMS-EXO-12-060 ; CERN-PH-EP-2014-176, Phys. Rev. D 91 (2015) 092005.

[529] V. Khachatryan *et al.*, "Measurements of jet multiplicity and differential production cross sections of Z+jets events in proton-proton collisions at $\sqrt{s}$ = 7 TeV," arXiv:1408.3104 ; CMS-SMP-12-017 ; CERN-PH-EP-2014-205, Phys. Rev. D 91 (2015) 052008.

[530] V. Khachatryan *et al.*, "Search for neutral MSSM Higgs bosons decaying to a pair of tau leptons in pp collisions," arXiv:1408.3316 ; CMS-HIG-13-021 ; CERN-PH-EP-2014-192, J. High Energy Phys. 10 (2014) 160.

[531] V. Khachatryan *et al.*, "Search for dark matter, extra dimensions, and unparticles in monojet events in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1408.3583 ; CMS-EXO-12-048 ; CERN-PH-EP-2014-164, Eur. Phys. J. C 75 (2015) 235.

[532] V. Khachatryan *et al.*, "Searches for electroweak neutralino and chargino production in channels with Higgs, Z, and W bosons in pp collisions at 8 TeV," arXiv:1409.3168 ; CMS-SUS-14-002 ; CERN-PH-EP-2014-216, Phys. Rev. D 90 (2014) 092007.

[533] V. Khachatryan *et al.*, "Long-range two-particle correlations of strange hadrons with charged particles in pPb and PbPb collisions at LHC energies," arXiv:1409.3392 ; CMS-HIN-14-002 ; CERN-PH-EP-2014-212, Phys. Lett. B 742 (2015) 200.

[534] V. Khachatryan *et al.*, "Search for Displaced Supersymmetry in events with an electron and a muon with large impact parameters," CERN-PH-EP-2014-219 ; CMS-B2G-12-024-003 ; arXiv:1409.4789, Phys. Rev. Lett. 114 (2015) 061801.

[535] V. Khachatryan *et al.*, "Measurement of the production cross section ratio $\sigma(\chi_{b2}(1\mathrm{P}))/\sigma(\chi_{b1}(1\mathrm{P}))$ in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1409.5761 , CERN-PH-EP-2014-217, Phys. Lett. B 743 (2015) 383.

[536] V. Khachatryan *et al.*, "Search for standard model production of four top quarks in the lepton + jets channel in pp collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2014-222 ; CMS-TOP-13-012-003 ; arXiv:1409.7339, J. High Energy Phys. 11 (2014) 154.

[537] V. Khachatryan *et al.*, "Search for monotop signatures in proton-proton collisions at $\sqrt{s}$ = 8 TeV, CERN-PH-EP-2014-225 ; CMS-B2G-12-022-003 ; arXiv:1410.1149 Phys. Rev. Lett. 114 (2015) 101801.

[538] V. Khachatryan *et al.*, "Measurement of the W boson helicity in events with a single reconstructed top quark in pp collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2014-242 ; CMS-TOP-12-020-005 ; arXiv:1410.1154, J. High Energy Phys. 01 (2015) 053.

[539] V. Khachatryan *et al.*, "Measurement of prompt ψ(2S) to J/ψ yield ratios in PbPb and pp collisions at $\sqrt{s_{NN}}$ = 2.76 TeV," CERN-PH-EP-2014-240 ; CMS-HIN-12-007-003 ; arXiv:1410.1804, Phys. Rev. Lett. 113 (2014) 262301.

[540] V. Khachatryan *et al.*, "Searches for heavy scalar and pseudoscalar Higgs bosons and for flavor-violating decays of the top quark into a Higgs boson in pp collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2014-239 ; CMS-HIG-13-025-003 ; arXiv:1410.2751, Phys. Rev. D 90 (2014) 112013.

[541] V. Khachatryan *et al.*, "CMS-TOTEM Precision Proton Spectrometer Technical Design Report," CERN-LHCC-2014-021, TOTEM-TDR-003, CMS-TDR-13, 8 September 2014.

[542] V. Khachatryan *et al.*, "Measurement of electroweak production of two jets in association with a Z boson in proton-proton collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2014-234 ; CMS-FSQ-12-035-003 ; arXiv:1410.3153, Eur. Phys. J. C 75 (2015) 66.

[543] V. Khachatryan *et al.*, "Identification techniques for highly boosted W bosons that decay into hadrons," CERN-PH-EP-2014-241 ; CMS-JME-13-006-003 ; arXiv:1410.4227, J. High Energy Phys. 12 (2014) 017.

[544] V. Khachatryan *et al.*, "Study of Z production in PbPb and pp collisions at $\sqrt{s_{NN}}$ = 2.76 TeV in the dimuon and dielectron decay channels," arXiv:1410.4825 ; CMS-HIN-13-004 ; CERN-PH-EP-2014-235, J. High Energy Phys. 03 (2015) 022.

[545] V. Khachatryan *et al.*, "Measurement of the ratio $(\mathrm{B_c^+} \to \mathrm{J}/\psi\pi^+\pi^+\pi^-)/(\mathrm{B_c^+} \to \mathrm{J}/\psi\pi^+)$ and the production cross sections times branching fractions of $\mathrm{B_c^+} \to \mathrm{J}/\psi\pi^+$ and $\mathrm{B_c^+} \to \mathrm{J}/\psi\mathrm{K}^+$ in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1410.5729; CMS-BPH-12-011; CERN-PH-EP-2014-248, J. High Energy Phys. 01 (2015) 063.

[546] V. Khachatryan *et al.*, "Study of vector boson scattering and search for new physics in events with two same-sign leptons and two jets," arXiv:1410.6315 ; CMS-SMP-13-015 ; CERN-PH-EP-2014-250, Phys. Rev. Lett. 114 (2015) 051801.

[547] V. Khachatryan *et al.*, "Search for a standard model-like Higgs boson in the $\mu^+\mu^-$ and e^+e^- decay channels at the LHC," arXiv:1410.6679 ; CMS-HIG-13-007 ; CERN-PH-EP-2014-243, Phys. Lett. B 744 (2015) 184.

[548] V. Khachatryan *et al.*, " Constraints on parton distribution functions and extraction of the strong coupling constant from the inclusive jet cross section in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1410.6765 ; CMS-SMP-12-028 ; CERN-PH-EP-2014-238, Eur. Phys. J. C 75 (2015) 288.

[549] V. Khachatryan *et al.*, " Search for new phenomena in monophoton final states in proton-proton collisions at $\sqrt{s}$ =8 TeV," arXiv:1410.8812 ; CMS-EXO-12-047 ; CERN-PH-EP-2014-253.

[550] V. Khachatryan *et al.*, " Performance of the missing transverse energy reconstruction by the CMS experiment in $\sqrt{s}$ = 8 TeV pp data." arXiv:1411.0511 ; CMS-JME-13-003 ; CERN-PH-EP-2014-246, J. Instrum. 10 (2015) P02006.

[551] V. Khachatryan *et al.*, " Search for quark contact interactions and extra spatial dimensions using dijet angular distributions in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1411.2646 ; CERN-PH-EP-2014-261, Phys. Lett. B 746 (2015) 79.

[552] V. Khachatryan *et al.*, "Constraints on the spin-parity and anomalous HVV couplings of the Higgs boson in proton collisions at 7 and 8 TeV," arXiv:1411.3441 ; CMS-HIG-14-018 ; CERN-PH-EP-2014-265, Phys. Rev. D 92 (2015) 012004.

[553] V. Khachatryan *et al.*, "Observation of the rare $\mathrm{B}^{\mathrm{s}}_{0} \to \mu^+\mu^-$ decay from the combined analysis of CMS and LHCb data," arXiv:1411.4413 ; CERN-PH-EP-2014-220, Nature 522 (2015) 68.

[554] V. Khachatryan *et al.*, "Measurement of the cross section ratio $\sigma_{\mathrm{t\bar{t}b\bar{b}}}/\sigma_{\mathrm{t\bar{t}jj}}$ in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1411.5621 ; CMS-TOP-13-010 ; CERN-PH-EP-2014-249, Phys. Lett. B 746 (2015) 132.

[555] V. Khachatryan *et al.*, " Search for disappearing tracks in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1411.6006 ; CMS-EXO-12-034 ; CERN-PH-EP-2014-273, J. High Energy Phys. 01 (2015) 096.

[556] V. Khachatryan *et al.*, "Search for long-lived neutral particles decaying to quark-antiquark pairs in proton-proton collisions at $\sqrt{s}$ = 8 TeV ," arXiv:1411.6530 ; CMS-EXO-12-038, CERN-PH-EP-2014-256, Phys. Rev. D 91 (2015) 012007.

[557] V. Khachatryan *et al.*, "Search for long-lived particles that decay into final states containing two electrons or two muons in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1411.6977 ; CMS-EXO-12-037 ; CERN-PH-EP-2014-263, Phys. Rev. D 91 (2015) 052012.

[558] V. Khachatryan *et al.*, "Search for stealth supersymmetry in events with jets, either photons or leptons, and low missing transverse momentum in pp collisions at 8 TeV," arXiv:1411.7255 ; CMS-SUS-14-009 ; CERN-PH-EP-2014-277, Phys. Lett. B 743 (2015) 503.

[559] V. Khachatryan *et al.*, " Measurements of differential and double-differential Drell-Yan cross sections in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1412.1115 ; CMS-SMP-14-003 ; CERN-PH-EP-2014-289, Eur. Phys. J. C 75 (2015) 147.

[560] V. Khachatryan *et al.*, "Measurement of the inclusive 3-jet production differential cross section in proton-proton collisions at 7 TeV and determination of the strong coupling constant in the TeV range," arXiv:1412.1633 ; CMS-SMP-12-027 ; CERN-PH-EP-2014-287, Eur. Phys. J. C 75 (2015) 186.

[561] V. Khachatryan *et al.*, "Searches for supersymmetry based on events with b jets and four W bosons in pp collisions at 8 TeV," arXiv:1412.4109 ; CERN-PH-EP-2014-286, Phys. Lett. B 745 (2015) 5.

[562] V. Khachatryan *et al.*, "Search for physics beyond the standard model in dilepton mass spectra in proton-proton collisions at $\sqrt{s}$= 8 TeV," arXiv:1412.6302 ; CERN-PH-EP-2014-272, J. High Energy Phys. 04 (2015) 025.

[563] V. Khachatryan *et al.*, "Search for pair-produced resonances decaying to jet pairs in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1412.7706 ; CMS-EXO-12-052 ; CERN-PH-EP-2014-293, Phys. Lett. B 747 (2015) 98.

[564] V. Khachatryan *et al.*, "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," arXiv:1412.8662 ; CERN-PH-EP-2014-288, Eur. Phys. J. C 75 (2015) 212.

[565] V. Khachatryan *et al.*, "Search for resonances and quantum black holes using dijet mass spectra in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1501.04198 ; CERN-PH-EP-2014-300, Phys. Rev. D 91 (2015) 052009.

[566] V. Khachatryan *et al.*, "Search for decays of stopped long-lived particles produced in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1501.05603 ; CERN-PH-EP-2015-002, Eur. Phys. J. C 75 (2015) 151.

[567] V. Khachatryan *et al.*, "Measurement of the ratio $B(\mathrm{B}_\mathrm{s}^0 \to \mathrm{J}/\psi \mathrm{f}_0(980))/B(\mathrm{B}_\mathrm{s}^0 \to \mathrm{J}/\psi\phi(1020))$ in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1501.06089 ; CMS-BPH-14-002 ; CERN-PH-EP-2015-003.

[568] V. Khachatryan *et al.*, "Measurements of the $\Upsilon(1\mathrm{S})$, $\Upsilon(2\mathrm{S})$, and $\Upsilon(3\mathrm{S})$ differential cross sections in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1501.07750 ; CMS-BPH-12-006 ; CERN-PH-EP-2015-007, Phys. Lett. B 749 (2015) 14 .

[569] V. Khachatryan *et al.*, " Search for supersymmetry using razor variables in events with b-tagged jets in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1502.00300 ; CERN-PH-EP-2015-005, Phys. Rev. D 91 (2015) 052018.

[570] V. Khachatryan *et al.*, "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," arXiv:1502.02485 ; CERN-PH-EP-2015-016, Eur. Phys. J. C 75 (2015) 251.

[571] V. Khachatryan *et al.*, "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," CERN-PH-EP-2015-014 ; CMS-EXO-13-006-003 ; arXiv:1502.02522, Eur. Phys. J. C 73 (2015) 325.

[572] V. Khachatryan *et al.*, "Performance of electron reconstruction and selection with the CMS detector in proton-proton collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-004 ; CMS-EGM-13-001-003 ; arXiv:1502.02701, J. Instrum. 10 (2015) P06005.

[573] V. Khachatryan *et al.*, "Performance of photon reconstruction and identification with the CMS detector in proton-proton collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-006 ; CMS-EGM-14-001-003 ; arXiv:1502.02702, J. Instrum. 10 (2015) P08010.

[574] V. Khachatryan *et al.*, "Measurement of J/ψ and ψ(2S) prompt double-differential cross sections in pp collisions at $\sqrt{s}$ = 7 TeV," arXiv:1502.04155; CMS-BPH-14-001; CERN-PH-EP-2015-022, Phys. Rev. Lett. 114 (2015) 191802.

[575] V. Khachatryan *et al.*, "Searches for supersymmetry using the M_{T2} variable in hadronic events produced in pp collisions at 8 TeV, arXiv:1502.04358; CMS-SUS-13-019; CERN-PH-EP-2015-017, J. High Energy Phys. 05 (2015) 078.

[576] V. Khachatryan *et al.*, "Distributions of topological observables in inclusive three- and four-jet events in pp collisions at $\sqrt{s}$ = 7 TeV ," arXiv:1502.04785 ; CMS-QCD-11-006 ; CERN-PH-EP-2014-302, Eur. Phys. J. C 75 (2015) 302.

[577] V. Khachatryan *et al.*, "Search for narrow high-mass resonances in proton-proton collisions at $\sqrt{s}$ = 8 TeV decaying to Z and Higgs bosons," arXiv:1502.04994 ; CMS-EXO-13-007 ; CERN-PH-EP-2015-010, Phys. Lett. B 748 (2015) 255.

[578] V. Khachatryan *et al.*, "Evidence for collective multi-particle correlations in pPb collisions," arXiv:1502.05382 ; CMS-HIN-14-006 ; CERN-PH-EP-2015-011, Phys. Rev. Lett. 115 (2015) 012301.

[579] V. Khachatryan *et al.*, "Nuclear effects on the transverse momentum spectra of charged particles in pPb collisions at $\sqrt{s_{NN}}$ = 5.02 TeV," arXiv:1502.05387; CMS-HIN-12-017; CERN-PH-EP-2014-282, Eur. Phys. J. C 75 (2015) 237.

[580] V. Khachatryan *et al.*, "Measurement of the Zγ production cross section in pp collisions at 8 TeV and search for anomalous triple gauge boson couplings ," arXiv:1502.05664; CMS-SMP-13-014; CERN-PH-EP-2014-303, J. High Energy Phys. 04 (2015) 164.

[581] V. Khachatryan *et al.*, "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," arXiv:1502.06031; CMS-SUS-14-014; CERN-PH-EP-2015-033, J. High Energy Phys. 04 (2015) 124.

[582] V. Khachatryan *et al.*, "Search for lepton-flavour-violating decays of the Higgs boson," arXiv:1502.07400 ; CMS-HIG-14-005 ; CERN-PH-EP-2015-027, Phys. Lett. B 749 (2015) 337.

[583] V. Khachatryan *et al.*, "Study of final-state radiation in decays of Z bosons produced in pp collisions at 7 TeV," arXiv:1502.07940; CMS-EWK-11-016; CERN-PH-EP-2015-031, Phys. Rev. D 91 (2015) 092012.

[584] V. Khachatryan *et al.*, "Evidence for transverse momentum and pseudorapidity dependent event plane fluctuations in PbPb and pPb collisions," arXiv:1503.01692 ; CMS-HIN-14-012 ; CERN-PH-EP-2015-039, Phys. Rev. C 92 (2015) 034911.

[585] V. Khachatryan *et al.*, "Search for vector-like T quarks decaying to top quarks and Higgs bosons in the all-hadronic channel using jet substructure," arXiv:1503.01952 ; CMS-B2G-14-002 ; CERN-PH-EP-2015-034, J. High Energy Phys. 06 (2015) 080.

[586] V. Khachatryan *et al.*, "Search for resonant pair production of Higgs bosons decaying to two bottom quark-antiquark pairs in proton-proton collisions at 8 TeV," arXiv:1503.04114 ; CMS-HIG-14-013 ; CERN-PH-EP-2015-042, Phys. Lett. B 749 (2015) 560.

[587] V. Khachatryan *et al.*, "Measurements of the ZZ production cross sections in the $2\ell 2\nu$ channel in proton-proton collisions at $\sqrt{s}$ = 7 and 8 TeV and combined constraints on triple gauge couplings," arXiv:1503.05467 ; CMS-SMP-12-016 ; CERN-PH-EP-2015-029, Eur. Phys. J. C 75 (2015) 511.

[588] V. Khachatryan *et al.*, "Study of W boson production in pPb collisions at $\sqrt{s_{NN}}$ =5.02 TeV," arXiv:1503.05825 ; CMS-HIN-13-007 ; CERN-PH-EP-2015-054, Phys. Lett. B 750 (2015) 565-586.

[589] V. Khachatryan *et al.*, "Combined Measurement of the Higgs Boson Mass in pp Collisions at $\sqrt{s}$ = 7 and 8 TeV with the ATLAS and CMS Experiments," arXiv:1503.07589; ATLAS-HIGG-2014-14; CMS-HIG-14-042; CERN-PH-EP-2015-075, Phys. Rev. Lett. 114 (2015) 191803.

[590] V. Khachatryan *et al.*, "Searches for third-generation squark production in fully hadronic final states in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1503.08037 ; CMS-SUS-14-001 ; CERN-PH-EP-2015-055, J. High Energy Phys. 06 (2015) 116.

[591] V. Khachatryan *et al.*, " Measurement of diffractive dissociation cross sections in pp collisions at $\sqrt{s}$ =7 TeV," arXiv:1503.08689 ; CERN-PH-EP-2015-062 ; CMS-FSQ-12-005, Phys. Rev. D 92 (2015) 012003.

[592] V. Khachatryan *et al.*, "Search for third-generation scalar leptoquarks in the tτ channel in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1503.09049 ; CERN-PH-EP-2015-063 ; CMS-EXO-14-008, J. High Energy Phys. 07 (2015) 042.

[593] V. Khachatryan *et al.*, "Search for a Higgs boson in the mass range from 145 to 1000 GeV decaying to a pair of W or Z bosons," arXiv:1504.00936 ; CERN-PH-EP-2015-074 ; CMS-HIG-13-031.

[594] V. Khachatryan *et al.*, "Search for the production of dark matter in association with top-quark pairs in the single-lepton final state in proton-proton collisions at s = 8 TeV," CERN-PH-EP-2015-087 ; CMS-B2G-14-004-003 ; arXiv:1504.03198, J. High Energy Phys. 06 (2015) 121.

[595] V. Khachatryan *et al.*, "Measurement of the Z boson differential cross section in transverse momentum and rapidity in proton-proton collisions at 8 TeV," CERN-PH-EP-2015-059 ; CMS-SMP-13-013-003 ; arXiv:1504.03511, Phys. Lett. B 749 (2015) 187.

[596] V. Khachatryan *et al.*, "Angular coefficients of Z bosons produced in pp collisions at $\sqrt{s}$ = 8 TeV and decaying to $\mu^+\mu^-$ as a function of transverse momentum and rapidity," CERN-PH-EP-2015-046 ; CMS-SMP-13-010-003 ; arXiv:1504.03512, Phys. Lett. B 750 (2015) 154-175.

[597] V. Khachatryan *et al.*, "Search for a pseudoscalar boson decaying into a Z boson and the 125 GeV Higgs boson in $\ell^+\ell^-\mathrm{b\bar{b}}$ final states," CERN-PH-EP-2015-088 ; CMS-HIG-14-011-003 ; arXiv:1504.04710, Phys. Lett. B 748 (2015) 221.

[598] V. Khachatryan *et al.*, "Measurement of the differential cross section for top quark pair production in pp collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-117 ; CMS-TOP-12-028-003 ; arXiv:1505.04480, Eur. Phys. J. C 75 (2015) 542.

[599] V. Khachatryan *et al.*, "Comparison of the Z/γ^*+jets to γ+jets cross sections in pp collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-089 ; CMS-SMP-14-005-003 ; arXiv:1505.06520, J. High Energy Phys. 10 (2015) 128.

[600] V. Khachatryan *et al.*, "Search for neutral color-octet weak-triplet scalar particles in proton-proton collisions at s= 8 TeV," CERN-PH-EP-2015-119 ; CMS-EXO-12-007-003 ; arXiv:1505.08118, J. High Energy Phys. 09 (2015) 201.

[601] V. Khachatryan *et al.*, "A search for pair production of new light bosons decaying into muons," CERN-PH-EP-2015-116 ; CMS-HIG-13-010-003 ; arXiv:1506.00424, Phys. Lett. B 752 (2016) 146-168.

[602] V. Khachatryan *et al.*, "Search for the standard model Higgs boson produced through vector boson fusion and decaying to $\mathrm{b\bar{b}}$," CERN-PH-EP-2015-121 ; CMS-HIG-14-004-003 ; arXiv:1506.01010, Phys. Rev. D 92 (2015) 032008.

[603] V. Khachatryan *et al.*, "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," CERN-PH-EP-2015-096 ; CMS-EXO-14-009-003 ; arXiv:1506.01443, J. High Energy Phys. 02 (2016) 145.

[604] V. Khachatryan *et al.*, "Search for diphoton resonances in the mass range from 150 to 850 GeV in pp collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-113 ; CMS-HIG-14-006-003 ; arXiv:1506.02301, Phys. Lett. B 750 (2015) 494-519.

[605] V. Khachatryan *et al.*, "Search for resonant $\mathrm{t\bar{t}}$ production in proton-proton collisions at s= 8 TeV," CERN-PH-EP-2015-126 ; CMS-B2G-13-008-003 ; arXiv:1506.03062, Phys. Rev. D 93 (2016) 012001.

[606] V. Khachatryan *et al.*, "Search for neutral MSSM Higgs bosons decaying into a pair of bottom quarks," arXiv:1506.08329 ; CMS-HIG-14-017 ; CERN-PH-EP-2015-133, J. High Energy Phys. 11 (2015) 071.

[607] V. Khachatryan *et al.*, "Production of leading charged particles and leading charged-particle jets at small transverse momenta in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1507.00233 ; CERN-PH-EP-2015-135 ; CMS-FSQ-12-032, Phys. Rev. D 92 (2015) 112001.

[608] V. Khachatryan *et al.*, "Search for exotic decays of a Higgs boson into undetectable particles and photons," arXiv:1507.00359 ; CMS-HIG-14-025 ; CERN-PH-EP-2015-131, Phys. Lett. B 753 (2016) 363.

[609] V. Khachatryan *et al.*, "Search for supersymmetry with photons in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1507.02898; CMS-SUS-14-004; CERN-PH-EP-2015-129, Phys. Rev. D 92 (2015) 072006.

[610] V. Khachatryan *et al.*, "Search for a Higgs boson decaying into $\gamma^*\gamma \to \ell\ell\gamma$ with low dilepton mass in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1507.03031 ; CMS-HIG-14-003 ; CERN-PH-EP-2015-137, Phys. Lett. B 753 (2016) 341.

[611] V. Khachatryan *et al.*, "Inclusive and differential measurements of the $\mathrm{t\bar{t}}$ charge asymmetry in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1507.03119 ; CMS-TOP-12-033 ; CERN-PH-EP-2015-141, Phys. Lett. B 757 (2016) 154.

[612] V. Khachatryan *et al.*, "Measurement of the $\mathrm{W^+W^?}$ cross section in pp collisions at $\sqrt{s}$= 8 TeV and limits on anomalous gauge couplings," arXiv:1507.03268 ; CERN-PH-EP-2015-122 ; CMS-SMP-14-016, Eur. Phys. J. C 76 (2016) 401.

[613] V. Khachatryan *et al.*, "Pseudorapidity distribution of charged hadrons in proton-proton collisions at $\sqrt{s}$ = 13 TeV," arXiv:1507.05915; CMS-FSQ-15-001; CERN-PH-EP-2015-180, Phys. Lett. B 751 (2015) 143-163.

[614] V. Khachatryan *et al.*, "Limits on the Higgs boson lifetime and width from its decay to four charged leptons," arXiv:1507.06656; CMS-HIG-14-036; CERN-PH-EP-2015-159, Phys. Rev. D 92 (2015) 072010.

[615] V. Khachatryan *et al.*, "Search for pair-produced vector-like B quarks in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1507.07129 ; CMS-B2G-13-006 ; CERN-PH-EP-2015-170, Phys. Rev. D 93 (2016) 112009.

[616] V. Khachatryan *et al.*, "Measurement of the underlying event activity using charged-particle jets in proton-proton collisions at $\sqrt{s}$ = 2.76 TeV," arXiv:1507.07229; CMS-FSQ-12-025; CERN-PH-EP-2015-176, J. High Energy Phys. 09 (2015) 137.

[617] V. Khachatryan *et al.*, "Measurement of the CP-violating weak phase ϕ_{s} and the decay width difference $\Delta\Gamma_{\mathrm{s}}$ using the $\mathrm{B}_0^{\mathrm{s}} \to \mathrm{J}/\psi\phi(1020)$ decay channel in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1507.07527 ; CMS-BPH-13-012 ; CERN-PH-EP-2015-192, Phys. Lett. B 757 (2016) 97-120.

[618] V. Khachatryan *et al.*, "Angular analysis of the deca$\mathrm{B}_0 \to \mathrm{K}^{*0}\mu^+\mu^-$ from pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1507.08126 ; CMS-BPH-13-010 ; CERN-PH-EP-2015-178, Phys. Lett. B 753 (2016) 424.

[619] V. Khachatryan *et al.*, "Search for supersymmetry in events with a photon, a lepton, and missing transverse momentum in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1508.01218 ; CMS-SUS-14-013 ; CERN-PH-EP-2015-169, Phys. Lett. B 757 (2016) 6.

[620] V. Khachatryan *et al.*, "Search for neutral MSSM Higgs bosons decaying to $\mu^+\mu^-$ in pp collisions at $\sqrt{s}$ = 7 and 8 TeV," arXiv:1508.01437 ; CMS-HIG-13-024 ; CERN-PH-EP-2015-148, Phys. Lett. B 752 (2016) 221.

[621] V. Khachatryan *et al.*, "Measurement of the charge asymmetry in top quark pair production in pp collisions at $\sqrt{s}$ = 8 TeV using a template method," arXiv:1508.03862 ; CMS-TOP-13-013 ; CERN-PH-EP-2015-189, Phys. Rev. D 93 (2016) 034014.

[622] V. Khachatryan *et al.*, "Search for W' decaying to tau lepton and neutrino in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1508.04308 ; CMS-EXO-12-011 ; CERN-PH-EP-2015-190.

[623] V. Khachatryan *et al.*, "Study of B meson production in pPb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV using exclusive hadronic decays ," arXiv:1508.06678 ; CMS-HIN-14-004-003 ; CMS-HIN-14-004 ; CERN-PH-EP-2015-209.

[624] V. Khachatryan *et al.*, "Measurement of differential cross sections for Higgs boson production in the diphoton decay channel in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1508.07819 ; CMS-HIG-14-016 ; CERN-PH-EP-2015-195, Eur. Phys. J. C 76 (2016) 13.

[625] V. Khachatryan *et al.*, "Search for supersymmetry in the vector-boson fusion topology in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1508.07628 ; CERN-PH-EP-2015-213 ; CMS-SUS-14-005, J. High Energy Phys. 11 (2015) 189.

[626] V. Khachatryan *et al.*, "Search for a charged Higgs boson in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1508.07774 ; CERN-PH-EP-2015-221 ; CMS-HIG-14-023, J. High Energy Phys. 11 (2015) 018.

[627] V. Khachatryan *et al.*, "Search for pair production of first and second generation leptoquarks in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1509.03744 ; CERN-PH-EP-2015-197 ; CMS-EXO-12-041, Phys. Rev. D 93 (2016) 032004.

[628] V. Khachatryan *et al.*, "Search for single production of scalar leptoquarks in proton-proton collisions at $\sqrt{s}$ = 8 TeV, arXiv:1509.03750 ; CERN-PH-EP-2015-149 ; CMS-EXO-12-043-003, Phys. Rev. D 93 (2016) 032005.

[629] V. Khachatryan *et al.*, "Measurement of the inelastic cross section in proton-lead collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV," rXiv:1509.03893 ; CERN-PH-EP-2015-210 ; CMS-FSQ-13-006-003, Phys. Lett. B 759 (2016) 641.

[630] V. Khachatryan *et al.*, "Measurement of the top quark mass using proton-proton data at $\sqrt{s}$ = 7 and 8 TeV," arXiv:1509.04044 ; CMS-TOP-14-022 ; CERN-PH-EP-2015-234, Phys. Rev. D 93 (2016) 072004.

[631] V. Khachatryan *et al.*, "Search for vector-like charge 2/3 T quarks in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1509.04177 ; CMS-B2G-13-005 ; CERN-PH-EP-2015-228, Phys. Rev. D 93 (2016) 012003.

[632] V. Khachatryan *et al.*, "Search for $\mathrm{W}' \to \mathrm{tb}$ in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1509.06051 ; CMS-B2G-12-009 ; CERN-PH-EP-2015-231, J. High Energy Phys. 02 (2016) 122.

[633] V. Khachatryan *et al.*, "Measurement of the $\mathrm{t\bar{t}}$ production cross section in the all-jets final state in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1509.06076 ; CMS-TOP-14-018 ; CERN-PH-EP-2015-243, Eur. Phys. J. C 76 (2016) 128.

[634] V. Khachatryan *et al.*, "Search for the production of an excited bottom quark decaying to tW in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1509.08141 ; CMS-B2G-14-005 ; CERN-PH-EP-2015-246, J. High Energy Phys. 01 (2016) 166.

[635] V. Khachatryan *et al.*, "Search for the associated production of a Higgs boson with a single top quark in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1509.08159 ; CERN-PH-EP-2015-255 ; CMS-HIG-14-027, J. High Energy Phys. 06 (2016) 177.

[636] V. Khachatryan *et al.*, "Measurement of transverse momentum relative to dijet systems in PbPb and pp collisions at $\sqrt{s_{\mathrm{NN}}}$ = 2.76 TeV," arXiv:1509.09029 ; CMS-HIN-14-010 ; CERN-PH-EP-2015-260, J. High Energy Phys. 01 (2016) 006.

[637] V. Khachatryan *et al.*, "Observation of top quark pairs produced in association with a vector boson in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1510.01131 ; CMS-TOP-14-021 ; CERN-PH-EP-2015-248, J. High Energy Phys. 01 (2016) 096.

[638] V. Khachatryan *et al.*, "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 $\mathrm{h} \to \tau\tau$," arXiv:1510.01181 ; CMS-HIG-14-034 ; CERN-PH-EP-2015-211, Phys. Lett. B 755 (2016) 217-244.

[639] V. Khachatryan *et al.*, "Measurement of long-range near-side two-particle angular correlations in pp collisions at $\sqrt{s}$ = 13 TeV," arXiv:1510.03068 ; CMS-FSQ-15-002 ; CERN-PH-EP-2015-271, Phys. Rev. Lett. 116 (2016) 172302.

[640] V. Khachatryan *et al.*, "Measurement of $\mathrm{t\bar{t}}$ production with additional jet activity, including b quark jets, in the dilepton decay channel using pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1510.03072 ; CMS-TOP-12-041 ; CERN-PH-EP-2015-240, Eur. Phys. J. C 76 (2016) 379.

[641] V. Khachatryan *et al.*, "Transverse momentum spectra of b jets in pPb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV," arXiv:1510.03373 ; CMS-HIN-14-007 ; CERN-PH-EP-2015-205, Phys. Lett. B 754 (2016) 59.

[642] V. Khachatryan *et al.*, "Search for a light charged Higgs boson decaying to $\mathrm{c\bar{s}}$ in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1510.04252 ; CMS-HIG-13-035 ; CERN-PH-EP-2015-266, J. High Energy Phys. 12 (2015) 178.

[643] V. Khachatryan *et al.*, "Measurement of the top quark pair production cross section in proton-proton collisions at $\sqrt{s}$ = 13 TeV," arXiv:1510.05302 ; CMS-TOP-15-003 ; CERN-PH-EP-2015-280, Phys. Rev. Lett. 116 (2016) 052002.

[644] V. Khachatryan *et al.*, "Search for a very light NMSSM Higgs boson produced in decays of the 125 GeV scalar boson and decaying into τ leptons in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1510.06534 ; CMS-HIG-14-019 ; CERN-PH-EP-2015-264, J. High Energy Phys. 01 (2016) 07.

[645] V. Khachatryan *et al.*, "Reconstruction and identification of τ lepton decays to hadrons and ν_τ at CMS," arXiv:1510.07488 ; CMS-TAU-14-001 ; CERN-PH-EP-2015-261, J. Instrum. 11 (2016) P01019.

[646] V. Khachatryan *et al.*, "Search for excited leptons in proton-proton collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-281 ; CMS-EXO-14-015-003 ; arXiv:1511.01407, J. High Energy Phys. 03 (2016) 125.

[647] V. Khachatryan *et al.*, "Measurement of top quark polarization in t-channel single top quark production," CERN-PH-EP-2015-282 ; CMS-TOP-13-001-003 ; arXiv:1511.02138, J. High Energy Phys. 04 (2016) 073.

[648] V. Khachatryan *et al.*, "Search for a low-mass pseudoscalar Higgs boson produced in association with a $\mathrm{b\bar{b}}$ pair in pp collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-284 ; CMS-HIG-14-033-003 ; arXiv:1511.03610, Phys. Lett. B 758 (2016) 296.

[649] V. Khachatryan *et al.*, "Search for anomalous single top quark production in association with a photon in pp collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-287 ; CMS-TOP-14-003-003 ; arXiv:1511.03951, J. High Energy Phys. 04 (2016) 035.

[650] V. Khachatryan *et al.*, "Measurement of spin correlations in $\mathrm{t\bar{t}}$ production using the matrix element method in the muon+jets final state in pp collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-289 ; CMS-TOP-13-015-003 ; arXiv:1511.06170, Phys. Lett. B 758 (2016) 321-346.

[651] V. Khachatryan *et al.*, "search for dark matter and unparticles produced in association with a Z boson in proton-proton collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-297 ; CMS-EXO-12-054-003 ; arXiv:1511.09375, Phys. Rev. D 93 (2016) 052011.

[652] V. Khachatryan *et al.*, "Event generator tunes obtained from underlying event and multiparton scattering measurements ." CERN-PH-EP-2015-291 ; CMS-GEN-14-001-003 ; arXiv:1512.00815, Eur. Phys. J. C 76 (2016) 155.

[653] V. Khachatryan *et al.*, "Search for narrow resonances decaying to dijets in proton-proton collisions at $\sqrt{s}$ = 13 TeV," CERN-PH-EP-2015-317 ; CMS-EXO-15-001-004 ; arXiv:1512.01224, Phys. Rev. Lett. 116 (2016) 071801.

[654] V. Khachatryan *et al.*, "Measurement of the inclusive jet cross section in pp collisions at $\sqrt{s}$ = 2.76 TeV," CERN-PH-EP-2015-299 ; CMS-SMP-14-017-003 ; arXiv:1512.06212, Eur. Phys. J. C 76 (2016) 265.

[655] V. Khachatryan *et al.*, "Study of Z boson production in pPb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV," CERN-PH-EP-2015-302 ; CMS-HIN-15-002-003 ; arXiv:1512.06461, Phys. Lett. B 759 (2016) 36.

[656] V. Khachatryan *et al.*, "Search for supersymmetry in events with soft leptons, low jet multiplicity, and missing transverse energy in proton-proton collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-307 ; CMS-SUS-14-021-003 ; arXiv:1512.08002, Phys. Lett. B 759 (2016) 9-35.

[657] V. Khachatryan *et al.*, "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," CERN-PH-EP-2015-285 ; CMS-HIG-14-028-003 ; arXiv:1512.08377, : J. High Energy Phys. 04 (2016) 005.

[658] V. Khachatryan *et al.*, "Correlations between jets and charged particles in PbPb and pp collisions at $\sqrt{s_{\mathrm{NN}}}$ = 2.76 TeV," CERN-PH-EP-2015-329 ; CMS-HIN-14-016-003 ; arXiv:1601.00079, J. High Energy Phys. 02 (2016) 156.

[659] V. Khachatryan *et al.*, "Measurements of $\mathrm{t\bar{t}}$ spin correlations and top quark polarization using dilepton final states in pp collisions at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-333 ; CMS-TOP-14-023-003 ; arXiv:1601.01107, Phys. Rev. D 93 (2016) 052007.

[660] V. Khachatryan *et al.*, "Measurement of inclusive jet production and nuclear modifications in pPb collisions at $\sqrt{s_{\mathrm{NN}}}$ = 5.02 TeV," CERN-PH-EP-2015-334 ; CMS-HIN-14-001-003 ; arXiv:1601.02001,Eur. Phys. J. C 76 (2016) 372

[661] V. Khachatryan *et al.*, "Forward-backward asymmetry of Drell-Yan lepton pairs in pp collisions at $\sqrt{s}$ = 8 TeV," arXiv:1601.04768 ; CMS-SMP-14-004 ; CERN-PH-EP-2015-295, Eur. Phys. J. C 76 (2016) 325.

[662] V. Khachatryan *et al.*, "Search for massive WH resonances decaying into the $\ell\nu\mathrm{b\bar{b}}$ final state at $\sqrt{s}$ = 8 TeV," CERN-PH-EP-2015-332 ; CMS-EXO-14-010-003, Eur. Phys. J. C 76 (2016) 237.

[663] V. Khachatryan *et al.*, "Azimuthal decorrelation of jets widely separated in rapidity in pp collisions at $\sqrt{s}$ = 7 TeV," CERN-PH-EP-2015-309 ; CMS-FSQ-12-002-003 ; arXiv:1601.06713, J. High Energy Phys. 08 (2016) 139.

[664] V. Khachatryan *et al.*, "Search for supersymmetry in pp collisions at $\sqrt{s}$ = 8 TeV in final states with boosted W bosons and b jets using razor variables," CERN-EP-2016-008 ; CMS-SUS-14-007-003, Phys. Rev. D 93 (2016) 092009.

[665] V. Khachatryan *et al.*, "Search for direct pair production of scalar top quarks in the single- and dilepton channels in proton-proton collisions at $\sqrt{s}$ = 8 TeV," arXiv:1602.03169 ; CERN-EP-2016-004 ; CMS-SUS-14-015-003 ; CMS-SUS-14-015 ; CERN-PH-EP-2016-004, J. High Energy Phys. 07 (2016) 027.

[666] V. Khachatryan *et al.*, "Combined search for anomalous pseudoscalar HVV couplings in VH production and H $\rightarrow$ VV decay," CERN-PH-EP-2015-331 ; CMS-HIG-14-035-003 ; arXiv:1602.04305, Phys. Lett. B 759 (2016) 672.

[667] V. Khachatryan *et al.*, "Search for R-parity violating decays of a top squark in proton-proton collisions at $\sqrt{s}$ = 8 TeV," CERN-EP-2016-005 ; CMS-EXO-14-013-004, Phys. Lett. B 760 (2016) 178.

[668] V. Khachatryan *et al.*, "Measurement of dijet azimuthal decorrelation in pp collisions at $\sqrt{s}$ = 8 TeV," CERN-EP-2016-013 ; CMS-SMP-14-015-003, Eur. Phys. J. C 76 (2016) 536.

[669] V. Khachatryan *et al.*, "Technical Proposal for the Phase-II Upgrade of the Compact Muon Solenoid," CERN-LHCC-2015-10, LHCC-P-008, CMS-TDR-15-02, ISBN 978-92-9083-417-5, 1 June 2015.

[670] V. Khachatryan *et al.*, "CMS Technical Design Report for the Muon Endcap GEM Upgrade," CERN-LHCC-2015-12, CMS-TDR013, 30 September 2015.

[671] V. Khachatryan *et al.*, "CMS Phase II Upgrade Scope Document," CERN-LHCC-2015-019, LHCC-G-165, 25 September 2015.

[672] V. Khachatryan *et al.*, "Search for supersymmetry in the multijet and missing transverse momentum final state in pp collisions at 13 TeV / CMS Collaboration," arXiv:1602.06581; CMS-SUS-15-002; CERN-EP-2016-036.- Geneva : CERN, 2016 - 44 p. - Published in : Phys. Lett. B 758 (2016) 152.

[673] V. Khachatryan *et al.*, "Measurement of the Z production cross section in pp collisions at s= 8 TeV and limits on anomalous ZZ and Z trilinear gauge boson couplings," arXiv:1602.07152; CERN-EP-2016-007; CMS-SMP-14-019.- Geneva : CERN, 2016 - 30 p. - Published in : Phys. Lett. B 760 (2016) 448.

[674] V. Khachatryan *et al.*, "Search for supersymmetry in electroweak production with photons and large missing transverse energy in pp collisions at s= 8 TeV" arXiv:1602.08772; CERN-EP-2016-012; CMS-SUS-14-016.- Geneva : CERN, 2016 - 30 p. - Published in : Phys. Lett. B 759 (2016) 479.

[675] V. Khachatryan *et al.*, "Search for heavy resonances decaying to two Higgs bosons in final states containing four b quarks," arXiv:1602.08762; CERN-EP-2016-041; CMS-EXO-12-053.- Geneva : CERN, 2016 - 38 p. - Published in : Eur. Phys. J. C 76 (2016) 371.

[676] V. Khachatryan *et al.*, "Measurements of the tt production cross section in lepton+jets final states in pp collisions at 8 TeV and ratio of 8 to 7 TeV cross sections," CMS-TOP-12-006; CERN-EP-2016-016; arXiv:1602.09024; CERN-EP-2016-016; CMS-TOP-12-006.- Geneva : CERN, 2017 - 42 p. - Published in : Eur. Phys. J. C 77 (2017) 15.

[677] V. Khachatryan *et al.*, "Search for direct pair production of supersymmetric top quarks decaying to all-hadronic final states in pp collisions at s= 8 TeV," arXiv:1603.00765; CERN-EP-2016-040; CMS-SUS-13-023.- Geneva : CERN, 2016 - 62 p. - Published in : Eur. Phys. J. C 76 (2016) 460

[678] V. Khachatryan *et al.*, " Measurement of the differential cross section and charge asymmetry for inclusive ppW+X production at s= 8 TeV," arXiv:1603.01803; CERN-EP-2016-043; CMS-SMP-14-022.- Geneva : CERN, 2016 - 38 p. - Published in : Eur. Phys. J. C 76 (2016) 469.

[679] V. Khachatryan *et al.*, " Search for direct pair production of supersymmetric top quarks decaying to all-hadronic final states in pp collisions at s= 8 TeV," arXiv:1603.00765; CERN-EP-2016-040; CMS-SUS-13-023.- Geneva : CERN, 2016 - 62 p. - Published in : Eur. Phys. J. C 76 (2016) 460.

[680] V. Khachatryan *et al.*, " Measurement of the differential cross section and charge asymmetry for inclusive ppW+X production at s= 8 TeV," arXiv:1603.01803; CERN-EP-2016-043; CMS-SMP-14-022.- Geneva : CERN, 2016 - 38 p. - Published in : Eur. Phys. J. C 76 (2016) 469.

[681] V. Khachatryan *et al.*, " Search for heavy Majorana neutrinos in ee+ jets and e+ jets events in proton-proton collisions at s= 8 TeV," arXiv:1603.02248; CMS-EXO-14-014; CERN-EP-2016-032.- Geneva : CERN, 2016 - 43 p. - Published in : J. High Energy Phys. 04 (2016) 169.

[682] V. Khachatryan *et al.*, " Measurement of the tt production cross section in the e channel in proton-proton collisions at s= 7 and 8 TeV," arXiv:1603.02303; CERN-EP-2016-044; CMS-TOP-13-004.- Geneva : CERN, 2016 - 52 p. - Published in : J. High Energy Phys. 08 (2016) 029.

[683] V. Khachatryan *et al.*, "Search for s channel single top quark production in pp collisions at s= 7 and 8 TeV," arXiv:1603.02555; CERN-EP-2016-045; CMS-TOP-13-009.- Geneva : CERN, 2016 - 36 p. - Published in : J. High Energy Phys. 09 (2016) 027.

[684] V. Khachatryan *et al.*, "(nS) polarizations versus particle multiplicity in pp collisions at s," arXiv:1603.02913; CERN-PH-EP-2015-310; CMS-HIN-15-003.- Geneva : CERN, 2016 - 32 p. - Published in : Phys. Lett. B 761 (2016) 31.

[685] V. Khachatryan *et al.*, "Search for neutral resonances decaying into a Z boson and a pair of b jets or leptons," arXiv:1603.02991; CMS-HIG-15-001; CERN-EP-2016-039.- Geneva : CERN, 2016 - Published in : Phys. Lett. B 759 (2016) 369.

[686] V. Khachatryan *et al.*, "Search for new physics with the MT2 variable in all-jets final states produced in pp collisions at s= 13 TeV," arXiv:1603.04053; CERN-EP-2016-067; CMS-SUS-15-003.- Geneva : CERN, 2016 - 56 p. - Published in : J. High Energy Phys. 10 (2016) 006,

[687] V. Khachatryan *et al.*, " Measurements of tt charge asymmetry using dilepton final states in pp collisions at s= 8 TeV," arXiv:1603.06221; CMS-TOP-15-009; CERN-EP-2016-059.- Geneva : CERN, 2016 - Published in : Phys. Lett. B 760 (2016) 365.

[688] V. Khachatryan *et al.*, " Measurement of the top quark mass using charged particles in pp in collisions at s= 8 TeV," arXiv:1603.06536; CMS-TOP-12-030-003; CERN-EP-2016-062.- Geneva : CERN, 2016 - 46 p. - Published in : Phys. Rev. D 93 (2016) 092006.

[689] V. Khachatryan *et al.*, " Search for two Higgs bosons in final states containing two photons and two bottom quarks in proton-proton collisions at 8 TeV ," arXiv:1603.06896; CMS-HIG-13-032; CERN-EP-2016-050.- Geneva : CERN, 2016 - 46 p. - Published in : Phys. Rev. D 94 (2016) 052012.

[690] V. Khachatryan *et al.*, "Search for dark matter particles in proton-proton collisions at s= 8 TeV using the razor variables," arXiv:1603.08914; CMS-EXO-14-004; CERN-EP-2016-025.- Geneva : CERN, 2016 - 46 p. - Published in : J. High Energy Phys. 12 (2016) 088.

[691] V. Khachatryan *et al.*, " Evidence for exclusive W+W production and constraints on anomalous quartic gauge couplings in pp collisions at s= 7 and 8 TeV," arXiv:1604.04464; CMS-FSQ-13-008; CERN-EP-2016-073.- Geneva : CERN, 2016 - Published in : J. High Energy Phys. 08 (2016) 119.

[692] V. Khachatryan *et al.*, " Search for lepton flavour violating decays of heavy resonances and quantum black holes to an e pair in proton-proton collisions at s= 8 TeV,"

[693] V. Khachatryan *et al.*, "arXiv:1604.05239; CERN-EP-2016-068; CMS-EXO-13-002.- Geneva : CERN, 2016 - 38 p. - Published in : Eur. Phys. J. C 76 (2016) 317.

[694] V. Khachatryan *et al.*, "Pseudorapidity dependence of long-range two-particle correlations in pPb collisions at sNN= 5.02 TeV," arXiv:1604.05347 ; CMS-HIN-14-008 ; CERN-EP-2016-042.

[695] V. Khachatryan *et al.*, "Measurement of the integrated and differential tt production cross sections for high-pT top quarks in pp collisions at s= 8 TeV," arXiv:1605.00116; CMS-TOP-14-012; CERN-EP-2016-078.- Geneva : CERN, 2016 - 40 p. - Published in : Phys. Rev. D 94 (2016) 072002 .

[696] V. Khachatryan *et al.*, "

Search for narrow resonances in dijet final states at s= 8 TeV with the novel CMS technique of data scouting ," arXiv:1604.08907; CMS-EXO-14-005; CERN-EP-2016-090.- Geneva : CERN, 2016 - Published in : Phys. Rev. Lett. 117 (2016) 031802.

[697] V. Khachatryan *et al.*, " Search for Higgs boson off-shell production in proton-proton collisions at 7 and 8 TeV and derivation of constraints on its total decay width," arXiv:1605.02329; CMS-HIG-14-032; CERN-EP-2016-054.- Geneva : CERN, 2016 - Published in : J. High Energy Phys. 09 (2016) 051.

[698] V. Khachatryan *et al.*, " Search for new physics in same-sign dilepton events in proton-proton collisions at s= 13 TeV," arXiv:1605.03171; CMS-SUS-15-008; CERN-EP-2016-119.- Geneva : CERN, 2016 - Published in : Eur. Phys. J. C 76 (2016) 439.

[699] V. Khachatryan *et al.*, "Measurement of the double-differential inclusive jet cross section in proton-proton collisions at s= 13 TeV," arXiv:1605.04436; CMS-SMP-15-007; CERN-EP-2016-104.- Geneva : CERN, 2016 - Published in : Eur. Phys. J. C 76 (2016) 451.

[700] V. Khachatryan *et al.*, " Search for supersymmetry in pp collisions at s= 13 TeV in the single-lepton final state using the sum of masses of large-radius jets," arXiv:1605.04608; CMS-SUS-15-007; CERN-EP-2016-111.- Geneva : CERN, 2016 - Published in : J. High Energy Phys. 08 (2016) 122.

[701] V. Khachatryan *et al.*, "Multiplicity and rapidity dependence of strange hadron production in pp, pPb, and PbPb collisions at the LHC," CMS-HIN-15-006 ; CERN-EP-2016-105 ; arXiv:1605.06699 ; CMS-HIN-15-006 ; CERN-EP-2016-105.

[702] V. Khachatryan *et al.*, " Coherent J/ photoproduction in ultra-peripheral PbPb collisions at sNN= 2.76 TeV with the CMS experiment," arXiv:1605.06966 ; CMS-HIN-12-009 ; CERN-EP-2016-098.

[703] V. Khachatryan *et al.*, " Measurement of the W boson helicity fractions in the decays of top quark pairs to lepton+jets final states produced in pp collisions at s= 8 TeV," arXiv:1605.09047; CMS-TOP-13-008; CERN-EP-2016-118.- Geneva : CERN, 2016 - Published in : Phys. Lett. B 762 (2016) 512-534.

[704] V. Khachatryan *et al.*, "Search for top squark pair production in compressed-mass-spectrum scenarios in proton-proton collisions at s= 8 TeV using the T variable," CMS-SUS-14-006 ; CERN-EP-2016-103 ; arXiv:1605.08993 ; CMS-SUS-14-006 ; CERN-EP-2016-103.

[705] V. Khachatryan *et al.*, "Search for dark matter and supersymmetry with a compressed mass spectrum in the vector boson fusion topology in proton-proton collisions at s= 8 TeV," arXiv:1605.09305; CMS-SUS-14-019; CERN-EP-2016-096.- Geneva : CERN, 2017 - 18 p. - Published in : Phys. Rev. Lett. : 118 (2017) , pp. 021802.

[706] V. Khachatryan *et al.*, "Measurement of the transverse momentum spectrum of the Higgs boson produced in pp collisions at s= 8 TeV using HWW decay," arXiv:1606.01522 ; CMS-HIG-15-010 ; CERN-EP-2016-125.

[707] V. Khachatryan *et al.*, "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 s= 7 and 8 TeV," arXiv:1606.02266; CERN-EP-2016-100; ATLAS-HIGG-2015-07; CMS-HIG-15-002.- Geneva : CERN, 2016 - 70 p. - Published in : J. High Energy Phys. 08 (2016) 045.

[708] V. Khachatryan *et al.*, "Phenomenological MSSM interpretation of CMS searches in pp collisions at s= 7 and 8 TeV," arXiv:1606.03577; CMS-SUS-15-010; CERN-EP-2016-094.- Geneva : CERN, 2016 - Published in : J. High Energy Phys. 10 (2016) 129.

[709] V. Khachatryan *et al.*, " Search for resonant production of high-mass photon pairs in proton-proton collisions at s= 8 and 13 TeV," arXiv:1606.04093; CMS-EXO-16-018; CERN-EP-2016-154.- Geneva : CERN, 2016 - 36 p. - Published in : Phys. Rev. Lett. 117 (2016) 051802.

[710] V. Khachatryan *et al.*, " Measurement of the transverse momentum spectra of weak vector bosons produced in proton-proton collisions at s= 8 TeV," CMS-SMP-14-012 ; CERN-EP-2016-152 ; arXiv:1606.05864 ; CMS-SMP-14-012 ; CERN-EP-2016-152.

[711] V. Khachatryan *et al.*, "Evidence for collectivity in pp collisions at the LHC," arXiv:1606.06198; CMS-HIN-16-010; CERN-EP-2016-147.- Geneva : CERN, 2017 - 42. - Published in : Phys. Lett. B 765 (2017) 193-220.

[712] V. Khachatryan *et al.*, " Searches for R-parity-violating supersymmetry in pp collisions at s= 8 TeV in final states with 0-4 leptons," arXiv:1606.08076; CMS-SUS-14-003; CERN-EP-2016-097.

[713] V. Khachatryan *et al.*, " Search for new physics in final states with two opposite-sign, same-flavor leptons, jets, and missing transverse momentum in pp collisions at s= 13 TeV,"

arXiv:1607.00915; CERN-EP-2016-132; CMS-SUS-15-011.- Geneva : CERN, 2016 - 36 p. - Published in : J. High Energy Phys. 12 (2016) 013.

[714] V. Khachatryan *et al.*, " Measurement of the differential cross sections for top quark pair production as a function of kinematic event variables in pp collisions at s = 7 and 8 TeV," arXiv:1607.00837; CMS-TOP-12-042; CERN-EP-2016-139.- Geneva : CERN, 2016 - 40 p. - Published in : Phys. Rev. D 94 (2016) 052006.

[715] V. Khachatryan *et al.*, " Observation of the decay B+(2S)(1020)K+ in pp collisions at s= 8 TeV," arXiv:1607.02638; CERN-EP-2016-161; CMS-BPH-13-009.- Geneva : CERN, 2017 - 28 p. - Published in : Phys. Lett. B 764 (2017) 66.

[716] V. Khachatryan *et al.*, " Jet energy scale and resolution in the CMS experiment in pp collisions at 8 TeV," arXiv:1607.03663 ; CERN-PH-EP-2015-305 ; CMS-JME-13-004.

[717] V. Khachatryan *et al.*, "Search for lepton flavour violating decays of the Higgs boson to e and e in proton-proton collisions at s= 8 TeV," arXiv:1607.03561; CMS-HIG-14-040; CERN-EP-2016-112.- Geneva : CERN, 2016 - 29. - Published in : Phys. Lett. B 763 (2016) 472-500.

[718] V. Khachatryan *et al.*, " Search for dark matter in proton-proton collisions at 8 TeV with missing transverse momentum and vector boson tagged jet," arXiv:1607.05764; CMS-EXO-12-055; CERN-EP-2016-178.- Geneva : CERN, 2016 - 46 p. - Published in : J. High Energy Phys. 12 (2016) 083.

[719] V. Khachatryan *et al.*, "Measurement of the WZ production cross section in pp collisions at s= 13 TeV," arXiv:1607.06943 ; CMS-SMP-16-002 ; CERN-EP-2016-169.

[720] V. Khachatryan *et al.*, "Measurement of electroweak production of a W boson and two forward jets in proton-proton collisions at s= 8 TeV," arXiv:1607.06975; CMS-SMP-13-012; CERN-EP-2016-093.- Geneva : CERN, 2016 - 36. - Published in : J. High Energy Phys. 11 (2016) 147.

[721] V. Khachatryan *et al.*, " Measurement of the ZZ production cross section and Z++ branching fraction in pp collisions at s= 13 TeV," arXiv:1607.08834; CMS-SMP-16-001; CERN-EP-2016-174.- Geneva : CERN, 2016 - 24. - Published in : Phys. Lett. B 763 (2016) 280.

[722] V. Khachatryan *et al.*, "Search for new phenomena in events with high jet multiplicity and low missing transverse momentum in proton-proton collisions at s= 8 TeV," arXiv:1608.01224 ; CMS-EXO-13-001 ; CERN-EP-2016-187.

[723] V. Khachatryan *et al.*, " Measurement of the mass of the top quark in decays with a J/ meson in pp collisions at 8 TeV," arXiv:1608.03560; CMS-TOP-15-014; CERN-EP-2016-202.- Geneva : CERN, 2016 - Published in : J. High Energy Phys. 12 (2016) 123.

[724] V. Khachatryan *et al.*, "Measurement of the production cross section of a W boson in association with two b jets in pp collisions at s= 8 TeV," CMS-SMP-14-020 ; CERN-EP-2016-190 ; arXiv:1608.07561 ; CMS-SMP-14-020 ; CERN-EP-2016-190.

[725] V. Khachatryan *et al.*, "Measurement of the total and differential inclusive B+ hadron cross sections in pp collisions at s= 13 TeV," arXiv:1609.00873 ; CMS-BPH-15-004 ; CERN-EP-2016-198.

[726] V. Khachatryan *et al.*, "The CMS trigger system," CERN-EP-2016-160; arXiv:1609.02366; CMS-TRG-12-001.- Geneva : CERN, 2017 - 122 p. - Published in : J. Instrum. 12 (2017) P01020.

[727] V. Khachatryan *et al.*, "Search for high-mass diphoton resonances in proton-proton collisions at 13 TeV and combination with 8 TeV search," arXiv:1609.02507 ; CERN-EP-2016-216 ; CMS-EXO-16-027.

[728] V. Khachatryan *et al.*, "

Decomposing transverse momentum balance contributions for quenched jets in PbPb collisions at sNN= 2.76 TeV," arXiv:1609.02466; CERN-EP-2016-199; CMS-HIN-15-011.- Geneva : CERN, 2016 - 43 p. - Published in : J. High Energy Phys. 11 (2016) 055.

[729] V. Khachatryan *et al.*, ". Studies of inclusive four-jet production with two b-tagged jets in proton-proton collisions at 7 TeV," arXiv:1609.03489; CMS-FSQ-13-010; CERN-EP-2016-191.- Geneva : CERN, 2016 - 40 p. - Published in : Phys. Rev. D 94 (2016) 112005.

[730] V. Khachatryan *et al.*, "Measurement and QCD analysis of double-differential inclusive jet cross-sections in pp collisions at s= 8 TeV and ratios to 2.76 and 7 TeV," arXiv:1609.05331 ; CERN-EP-2016-196 ; CMS-SMP-14-001.

[731] V. Khachatryan *et al.*, " Measurement of inclusive jet cross sections in pp and PbPb collisions at sNN= 2.76 TeV," arXiv:1609.05383 ; CERN-EP-2016-217 ; CMS-HIN-13-005.

[732] V. Khachatryan *et al.*, "Search for narrow resonances in dilepton mass spectra in proton-proton collisions at s= 13 TeV and combination with 8 TeV data," arXiv:1609.05391 ; CERN-EP-2016-209 ; CMS-EXO-15-005.

[733] V. Khachatryan *et al.*, " Inclusive search for supersymmetry using razor variables in pp collisions at s= 13 TeV," CERN-EP-2016-214; arXiv:1609.07658; CMS-SUS-15-004.- Geneva : CERN, 2017 - 56 p. - Published in : Phys. Rev. D 95 (2017) 012003.

[734] V. Khachatryan *et al.*, " Search for long-lived charged particles in proton-proton collisions at s= 13 TeV," arXiv:1609.08382; CMS-EXO-15-010; CERN-EP-2016-204.- Geneva : CERN, 2016 - 38 p. - Published in : Phys. Rev. D 94 (2016) 112004.

[735] V. Khachatryan *et al.*, " Search for supersymmetry in events with one lepton and multiple jets in proton-proton collisions at s= 13 TeV," CERN-EP-2016-239; arXiv:1609.09386; CMS-SUS-15-006.- Geneva : CERN, 2017 - 42 p. - Published in : Phys. Rev. D 95 (2017) 012011.

[736] V. Khachatryan *et al.*, "Observation of charge-dependent azimuthal correlations in pPb collisions and its implication for the search for the chiral magnetic effect," CERN-EP-2016-236 ; arXiv:1610.00263 ; CMS-HIN-16-009.

[737] V. Khachatryan *et al.*, " Cross section measurement of t-channel single top quark production in pp collisions at s= 13 TeV," arXiv:1610.00678 ; CERN-EP-2016-233 ; CMS-TOP-16-003.

[738] V. Khachatryan *et al.*, " Suppression and azimuthal anisotropy of prompt and nonprompt J/ production in PbPb collisions at sNN= 2.76 TeV," arXiv:1610.00613 ; CMS-HIN-14-005 ; CERN-EP-2016-243.

[739] V. Khachatryan *et al.*, " Search for high-mass Z resonances in e+e and + final states in proton-proton collisions at s= 8 and 13 TeV," arXiv:1610.02960; CMS-EXO-16-021; CERN-EP-2016-230.

[740] V. Khachatryan *et al.*, " Search for anomalous Wtb couplings and flavour-changing neutral currents in t-channel single top quark production in pp collisions at s= 7 and 8 TeV," CERN-EP-2016-207 ; arXiv:1610.03545 ; CMS-TOP-14-007.

[741] V. Khachatryan *et al.*, "Measurement of differential cross sections for top quark pair production using the lepton+jets final state in proton-proton collisions at 13 TeV," CERN-EP-2016-227 ; arXiv:1610.04191 ; CMS-TOP-16-008.

[742] V. Khachatryan *et al.*, "Measurements of differential cross sections for associated production of a W boson and jets in proton-proton collisions at s= 8 TeV," arXiv:1610.04222 ; CMS-SMP-14-023 ; CERN-EP-2016-231.

[743] V. Khachatryan *et al.*, "Search for top quark decays via Higgs-boson-mediated flavor-changing neutral currents in pp collisions at s= 8 TeV," CERN-EP-2016-208 ; arXiv:1610.04857 ; CMS-TOP-13-017.

[744] V. Khachatryan *et al.*, " Search for electroweak production of charginos in final states with two leptons in pp collisions at s= 8 TeV," CERN-EP-2016-225 ; arXiv:1610.04870 ; CMS-SUS-14-022.

[745] V. Khachatryan *et al.*, " Search for R-parity violating supersymmetry with displaced vertices in proton-proton collisions at s= 8 TeV," CERN-EP-2016-224; arXiv:1610.05133; CMS-SUS-14-020.- Geneva : CERN, 2017 - 38 p. - Published in : Phys. Rev. D 95 (2017) 012009.

[746] V. Khachatryan *et al.*, " Observation of (1S) pair production in proton-proton collisions at s= 8 TeV," arXiv:1610.07095 ; CMS-BPH-14-008 ; CERN-EP-2016-237.

[747] V. Khachatryan *et al.*, "Search for heavy resonances decaying into a vector boson and a Higgs boson in final states with charged leptons, neutrinos, and b quarks," arXiv:1610.08066 ; CMS-B2G-16-003 ; CERN-EP-2016-226.

[748] V. Khachatryan *et al.*, "Searches for invisible decays of the Higgs boson in pp collisions at s= 7, 8, and 13 TeV," arXiv:1610.09218 ; CMS-HIG-16-016 ; CERN-EP-2016-240.

[749] V. Khachatryan *et al.*, "Measurement of the mass difference between top quark and anti-quark in pp collisions at s= 8 TeV," arXiv:1610.09551 ; CMS-TOP-12-031 ; CERN-EP-2016-249.

[750] V. Khachatryan *et al.*, "A search for new phenomena in pp collisions at s= 13 TeV in final states with missing transverse momentum and at least one jet using the T variable," arXiv:1611.00338 ; CMS-SUS-15-005 ; CERN-EP-2016-246.

[751] V. Khachatryan *et al.*, "Charged-particle nuclear modification factors in PbPb and pPb collisions at sNN= 5.02 TeV," arXiv:1611.01664 ; CERN-EP-2016-242 ; CMS-HIN-15-015.

[752] V. Khachatryan *et al.*, "Relative modification of prompt (2S) and J/ yields from pp to PbPb collisions at sNN= 5.02 TeV," arXiv:1611.01438 ; CMS-HIN-16-004 ; CERN-EP-2016-258.

[753] V. Khachatryan *et al.*, " Suppression of (1S), (2S) and (3S) production in PbPb collisions at sNN = 2.76 TeV," arXiv:1611.01510 ; CMS-HIN-15-001 ; CERN-EP-2016-248.

[754] V. Khachatryan *et al.*, " Search for dijet resonances in proton-proton collisions at s= 13 TeV and constraints on dark matter and other models," arXiv:1611.03568; CERN-EP-2016-277; CMS-EXO-16-032.

[755] V. Khachatryan *et al.*, " Measurements of differential production cross sections for a Z boson in association with jets in pp collisions at s= 8 TeV," arXiv:1611.03844 ; CERN-EP-2016-256 ; CMS-SMP-14-013.

[756] V. Khachatryan *et al.*, " Measurement of the tt production cross section using events in the e final state in pp collisions at s= 13 TeV," arXiv:1611.04040 ; CERN-EP-2016-265 ; CMS-TOP-16-005.

[757] V. Khachatryan *et al.*, "Measurements of the associated production of a Z boson and b jets in pp collisions at s= 8 TeV," arXiv:1611.06507 ; CMS-SMP-14-010 ; CERN-EP-2016-254.

[758] V. Khachatryan *et al.*, " Search for heavy resonances decaying to tau lepton pairs in proton-proton collisions at s= 13 TeV," CMS-EXO-16-008 ; CERN-EP-2016-273 ; arXiv:1611.06594 ; CERN-EP-2016-273 ; CMS-EXO-16-008.

[759] V. Khachatryan *et al.*, "Search for supersymmetry in events with photons and missing transverse energy in pp collisions at 13 TeV," arXiv:1611.06604 ; CMS-SUS-15-012 ; CERN-EP-2016-269.

[760] V. Khachatryan *et al.*, "Search for CP violation in tt production and decay in proton-proton collisions at s= 8 TeV," arXiv:1611.08931 ; CMS-TOP-16-001 ; CERN-EP-2016-266.

[761] V. Khachatryan *et al.*, "Search for single production of a heavy vector-like T quark decaying to a Higgs boson and a top quark with a lepton and jets in the final state," CERN-EP-2016-279 ; arXiv:1612.00999 ; CMS-B2G-15-008.

[762] V. Khachatryan *et al.*, "Search for heavy neutrinos or third-generation leptoquarks in final states with two hadronically decaying leptons and two jets in proton-proton collisions at s= 13 TeV," CERN-EP-2016-286 ; 1612.01190 ; CMS-EXO-16-016.

[763] V. Khachatryan *et al.*, "Searches for pair production of third-generation squarks in s=13 TeV pp collisions," CERN-EP-2016-284 ; 1612.03877 ; CMS-SUS-16-008.

[764] V. Khachatryan *et al.*, " Search for electroweak production of a vector-like quark decaying to a top quark and a Higgs boson using boosted topologies in fully hadronic final states," CERN-EP-2016-290 ; arXiv:1612.05336 ; CMS-B2G-16-005.

[765] V. Khachatryan *et al.*, "Measurements of the charm jet cross section and nuclear modification factor in pPb collisions at sNN= 5.02 TeV," CERN-EP-2016-274 ; arXiv:1612.08972 ; CMS-HIN-15-012.

[766] V. Khachatryan *et al.*, " Search for massive resonances decaying into WW, WZ or ZZ bosons in proton-proton collisions at s= 13 TeV," CERN-EP-2016-296 ; arXiv:1612.09159 ; CMS-B2G-16-004.

[767] V. Khachatryan *et al.*, "Search for heavy gauge W' bosons in events with an energetic lepton and large missing transverse momentum at s= 13 TeV," CERN-EP-2016-281 ; arXiv:1612.09274 ; CMS-EXO-15-006.

[768] V. Khachatryan *et al.*, "Measurement of electroweak-induced production of W with two jets in pp collisions at s= 8 TeV and constraints on anomalous quartic gauge couplings," CERN-EP-2016-289 ; arXiv:1612.09256 ; CMS-SMP-14-011.

[769] V. Khachatryan *et al.*, "Search for high-mass Z resonances in proton-proton collisions at s= 8 and 13 TeV using jet substructure techniques," CERN-EP-2016-300 ; arXiv:1612.09516 ; CMS-EXO-16-025.

[770] V. Khachatryan *et al.*, "Search for leptophobic Z' bosons decaying into four-lepton final states in proton-proton collisions at s= 8 TeV," CERN-EP-2016-295 ; arXiv:1701.01345 ; CMS-EXO-14-006.

[771] V. Khachatryan *et al.*, "Search for supersymmetry in the all-hadronic final state using top quark tagging in pp collisions at s= 13 TeV," CERN-EP-2016-293 ; arXiv:1701.01954 ; CMS-SUS-16-009.

[772] V. Khachatryan *et al.*, "Search for light bosons in decays of the 125 GeV Higgs boson in proton-proton collisions at s= 8 TeV," CERN-EP-2016-292 ; arXiv:1701.02032 ; CMS-HIG-16-015.

[773] V. Khachatryan *et al.*, "Mechanical stability of the CMS strip tracker measured with a laser alignment system," CERN-EP-2016-320 ; arXiv:1701.02022 ; CMS-TRK-15-002.

[774] V. Khachatryan *et al.*, " Search for dark matter and unparticles in events with a Z boson and missing transverse momentum in proton-proton collisions at s= 13 TeV," CERN-EP-2016-309 ; arXiv:1701.02042 ; CMS-EXO-16-010.

[775] V. Khachatryan *et al.*, "Measurement of the tt production cross section using events with one lepton and at least one jet in pp collisions at s= 13 TeV," CERN-EP-2016-321 ; arXiv:1701.06228 ; CMS-TOP-16-006.

[776] V. Khachatryan *et al.*, " Search for supersymmetry with multiple charged leptons in proton-proton collisions at s= 13 TeV," CERN-EP-2016-306 ; CMS-SUS-16-003.

[777] V. Khachatryan *et al.*, "Search for single production of vector-like quarks decaying to a Z boson and a top or a bottom quark in proton-proton collisions at s= 13 TeV," CERN-EP-2016-326 ; arXiv:1701.07409 ; CMS-B2G-16-001.

[778] V. Khachatryan *et al.*, "Search for single production of vector-like quarks decaying into a b quark and a W boson in proton-proton collisions at s= 13 TeV," CERN-EP-2016-319 ; CMS-B2G-16-006.

[779] V. Khachatryan *et al.*, "Measurement of the inclusive energy spectrum in the very forward direction in proton-proton collisions at s= 13 TeV," CERN-EP-2016-313 ; arXiv:1701.08695 ; CMS-FSQ-16-002.

[780] V. Khachatryan *et al.*, "Azimuthal anisotropy of charged particles with transverse momentum up to 100 GeV/c in PbPb collisions at sNN= 5.02 TeV," CERN-EP-2017-001 ; arXiv:1702.00630 ; CMS-HIN-15-014.

[781] V. Khachatryan *et al.*, "Study of jet quenching with Z+jet correlations in PbPb and pp collisions at sNN= 5.02 TeV," CERN-EP-2017-002 ; arXiv:1702.01060 ; CMS-HIN-15-013.

[782] V. Khachatryan *et al.*, "Search for associated production of a Z boson with a single top quark and for tZ flavour-changing interactions in pp collisions at s= 8 TeV," CERN-EP-2016-324 ; arXiv:1702.01404 ; CMS-TOP-12-039.

[783] V. Khachatryan *et al.*, " Measurement of prompt and nonprompt J/ production in pp and pPb collisions at sNN= 5.02 TeV," CERN-EP-2017-009 ; CMS-HIN-14-009-003.

[784] V. Khachatryan *et al.*, "Measurement of the cross section for electroweak production of Z in association with two jets and constraints on anomalous quartic gauge couplings in proton-proton collisions at s= 8 TeV," CERN-EP-2016-308 ; CMS-SMP-14-018-003.

[785] V. Khachatryan *et al.*, "Search for standard model production of four top quarks in proton-proton collisions at s= 13 TeV," CMS-TOP-16-016 ; CERN-EP-2017-023 ; arXiv:1702.06164 ; CMS-TOP-16-016-003.