CMS Publications

November 23, 2019

• 958. Search for lepton flavour violating decays of a neutral heavy Higgs boson to $\mu\tau$ and $e\tau$ in proton-proton collisions at $\sqrt{s} = 13$ TeV, Submitted to JHEP.

• 957. Search for supersymmetry in pp collisions at $\sqrt{s} = 13$ TeV with 137 fb$^{-1}$ in final states with a single lepton using the sum of masses of large-radius jets, Submitted to PRD, arXiv:1911.07558.


• 952. Observation of the $\Lambda^0_b \to J/\psi \Lambda \phi$ decay in proton-proton collisions at $\sqrt{s} = 13$ TeV, Submitted to PLB, arXiv:1911.03789.

• 951. Search for new neutral Higgs bosons through the $H \to ZA \to \ell^+\ell^-b\bar{b}$ process in pp collisions at $\sqrt{s} = 13$ TeV, Submitted to JHEP, arXiv:1911.03781.


• 948. Measurement of properties of $B^0 \rightarrow \mu^+ \mu^-$ decays and search for $B^0 \rightarrow \mu^+ \mu^-$ with the CMS experiment, Submitted to JHEP, arXiv:1910.12127.

• 947. Search for a heavy pseudoscalar Higgs boson decaying into a 125 GeV Higgs boson and a Z boson in final states with two tau and two light leptons at $\sqrt{s} = 13$ TeV, Submitted to JHEP, arXiv:1910.11634.


• 945. Mixed higher-order anisotropic flow and nonlinear response coefficients of charged particles in PbPb collisions at $\sqrt{b|s_{NN}} = 2.76$ and 5.02 TeV, Submitted to EPJC, arXiv:1910.08789.

• 944. Strange hadron production in pp and pPb collisions at $\sqrt{b|s_{NN}} = 5.02$ TeV, Submitted to PRC, arXiv:1910.04812.


• 942. Search for supersymmetry with a compressed mass spectrum in events with a soft $\tau$ lepton, a highly energetic jet, and large missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV, Submitted to PRL, arXiv:1910.01185.


• 937. Measurement of the $t\bar{t}b\bar{b}$ production cross section in the all-jet final state in pp collisions at $\sqrt{s} = 13$ TeV, Submitted to PLB, arXiv:1909.05306.

• 935. Measurements of differential Z boson production cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV,
Accepted by JHEP, arXiv:1909.04133.

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

• 933. Searches for physics beyond the standard model with the $M_{T2}$ variable in hadronic final states with and without disappearing tracks in proton-proton collisions at $\sqrt{s} = 13$ TeV,
Accepted by EPJC, arXiv:1909.03460.

• 932. Search for a charged Higgs boson decaying into top and bottom quarks in proton-proton collisions at $\sqrt{s} = 13$ TeV in events with electrons or muons,

• 931. Search for supersymmetry using Higgs boson to diphoton decays at $\sqrt{s} = 13$ TeV,
Accepted by JHEP, arXiv:1908.08500.

• 930. Search for production of four top quarks in final states with same-sign or multiple leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 929. Search for supersymmetry in proton-proton collisions at 13 TeV in final states with jets and missing transverse momentum,

• 928. Search for dark photons in decays of Higgs bosons produced in association with Z bosons in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 927. Measurement of the average very forward energy as a function of the track multiplicity at central pseudorapidities in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 926. Search for dark matter particles produced in association with a Higgs boson in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 925. Search for heavy Higgs bosons decaying to a top quark pair in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 924. Search for direct pair production of supersymmetric partners to the $\tau$ lepton in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 923. Measurement of top quark pair production in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV,
• 922. Search for anomalous triple gauge couplings in WW and WZ production in lepton + jet events in proton-proton collisions at $\sqrt{s} = 13$ TeV, Accepted by JHEP, arXiv:1907.08354.


• 920. Measurements of triple-differential cross sections for inclusive isolated-photon+jet events in pp collisions at $\sqrt{s} = 8$ TeV, Accepted by EPJC, arXiv:1907.08155.

• 919. Search for light pseudoscalar boson pairs produced from decays of the 125 GeV Higgs boson in final states with two muons and two nearby tracks in pp collisions at $\sqrt{s} = 13$ TeV, Accepted by PLB, arXiv:1907.07235.

• 918. Search for physics beyond the standard model in events with overlapping photons and jets, Submitted to PRL, arXiv:1907.06275.

• 917. Study of the $B^+ \rightarrow J/\psi \Lambda p$ decay in proton-proton collisions at $\sqrt{s} = 8$ TeV, Accepted by JHEP, arXiv:1907.05461.

• 916. Measurement of the top quark polarization and $t\bar{t}$ spin correlations using dilepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV, PRD 100 (2019) 072002, arXiv:1907.03729.


• 914. Measurement of the top quark Yukawa coupling from $t\bar{t}$ kinematic distributions in the lepton+jets final state in proton-proton collisions at $\sqrt{s} = 13$ TeV, PRD 100 (2019) 072007, arXiv:1907.01590.


909. Production of $\Lambda_c^+$ baryons in proton-proton and lead-lead collisions at $\sqrt{b_{\text{NN}}} = 5.02$ TeV. Submitted to PLB, arXiv:1906.03322.


901. Search for a light charged Higgs boson decaying to a W boson and a CP-odd Higgs boson in final states with $e\mu\mu$ or $\mu\mu\mu$ in proton-proton collisions at $\sqrt{s} = 13$ TeV, PRL 123 (2019) 131802, arXiv:1905.07453.


899. Search for the production of $W^\pm W^\pm W^\mp$ events at $\sqrt{s} = 13$ TeV, PRD 100 (2019) 012004, arXiv:1905.04246.

898. Observation of nuclear modifications in $W^\pm$ boson production in pPb collisions at $\sqrt{b_{\text{NN}}} = 8.16$ TeV, Accepted by PLB, arXiv:1905.01486.

• 896. Measurement of \( \bar{t}t \) normalised multi-differential cross sections in pp collisions at \( \sqrt{s} = 13 \) TeV, and simultaneous determination of the strong coupling strength, top quark pole mass, and parton distribution functions, Submitted to EPJC, arXiv:1904.05237.

• 895. Search for resonances decaying to a pair of Higgs bosons in the b\( \bar{b}q^{\prime}\ell\nu \) final state in proton-proton collisions at \( \sqrt{s} = 13 \) TeV, JHEP 10 (2019) 125.

• 894. Extraction and validation of a new set of CMS PYTHIA-8 tunes from underlying-event measurements, Accepted by EPJC, arXiv:1903.12179.


• 892. Search for a low-mass \( \tau^-\tau^+ \) resonance in association with a bottom quark in proton-proton collisions at \( \sqrt{s} = 13 \) TeV, JHEP 05 (2019) 210, arXiv:1903.10228.


• 890. Constraints on anomalous HVV couplings from the production of Higgs bosons decaying to \( \tau \) lepton pairs, Accepted by PRD, arXiv:1903.06973.


• 888. Search for charged Higgs bosons in the \( H^\pm \to \tau^\pm\nu_\tau \) decay channel in proton-proton collisions at \( \sqrt{s} = 13 \) TeV, JHEP 07 (2019) 142, arXiv:1903.04560.


• 884. Combinations of single-top-quark production cross-section measurements and \( |f_LV_{tb}| \) determinations at \( \sqrt{s} = 7 \) and 8 TeV with the ATLAS and CMS experiments, Submitted to JHEP, arXiv:1902.07158.


• 881. Measurement of exclusive \( \rho (770)^0 \) photoproduction in ultraperipheral pPb collisions at \( \sqrt{b} s_{\text{NN}} = 5.02 \) TeV, EPJC 79 (2019) 702, arXiv:1902.01339.

• 880. Observation of two excited \( B_{c}^{+} \) states and measurement of the \( B_{c}^{+}(2S) \) mass in pp collisions at \( \sqrt{s} = 13 \) TeV, PRL 122 (2019) 132001, arXiv:1902.00571.


• 878. Charged-particle angular correlations in XeXe collisions at \( \sqrt{b} s_{\text{NN}} = 5.44 \) TeV, PRC 100 (2019) 044902, arXiv:1901.07997.


• 875. Measurements of the pp \( \rightarrow \) WZ inclusive and differential production cross section and constraints on charged anomalous triple gauge couplings at \( \sqrt{s} = 13 \) TeV, JHEP 04 (2019) 122, arXiv:1901.03428.

• 874. Search for dark matter produced in association with a single top quark or a top quark pair in proton-proton collisions at \( \sqrt{s} = 13 \) TeV, JHEP 03 (2019) 141, arXiv:1901.01553.

• 873. Search for the pair production of light top squarks in the \( e^\pm \mu^\mp \) final state in proton-proton collisions at \( \sqrt{s} = 13 \) TeV, JHEP 03 (2019) 101, arXiv:1901.01288.


870. Measurement of the $t\bar{t}$ production cross section, the top quark mass, and the strong coupling constant using dilepton events in pp collisions at $\sqrt{s} = 13$ TeV, EPJC 79 (2019) 368, arXiv:1812.10505.


• 858. Measurement of inclusive very forward jet cross sections in proton-lead collisions at $\sqrt{s_{\text{NN}}} = 5.02$ TeV, JHEP 05 (2019) 043, arXiv:1812.01691.


• 848. Search for a $W'$ boson decaying to a vector-like quark and a top or bottom quark in the all-jets final state, JHEP 03 (2019) 127, arXiv:1811.07010.


• 843. Search for heavy neutrinos and third-generation leptoquarks in hadronic states of two \( \tau \) leptons and two jets in proton-proton collisions at \( \sqrt{s} = 13 \text{ TeV} \), JHEP 03 (2019) 170, arXiv:1811.00806.

• 842. Search for nonresonant Higgs boson pair production in the \( b\bar{b}b\bar{b} \) final state at \( \sqrt{s} = 13 \text{ TeV} \), JHEP 04 (2019) 112, arXiv:1810.11854.


• 840. Studies of beauty suppression via nonprompt D\(^0\) mesons in PbPb collisions at \( \sqrt{\sqrt{s}_{NN}} = 5.02 \text{ TeV} \), PRL 123 (2019) 022001, arXiv:1810.11102.


• 838. Search for rare decays of Z and Higgs bosons to J/\( \psi \) and a photon in proton-proton collisions at \( \sqrt{s} = 13 \text{ TeV} \), EPJC 79 (2019)94, arXiv:1810.10056.


• 836. Search for resonant \( t\bar{t} \) production in proton-proton collisions at \( \sqrt{s} = 13 \text{ TeV} \), JHEP 04 (2019) 031, arXiv:1810.05905.

• 835. Centrality and pseudorapidity dependence of the transverse energy density in pPb collisions at \( \sqrt{\sqrt{s}_{NN}} = 5.02 \text{ TeV} \), PRC 100 (2019) 024902, arXiv:1810.05745.


• 833. Search for top quark partners with charge 5/3 in the same-sign dilepton and single-lepton final states in proton-proton collisions at \( \sqrt{s} = 13 \text{ TeV} \), JHEP 03 (2019) 082, arXiv:1810.03188.
832. Measurement of $B_s^0$ meson production in pp and PbPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV,

831. Observation of prompt $J/\psi$ meson elliptic flow in high-multiplicity pPb collisions at $\sqrt{s_{NN}} = 8.16$ TeV,

830. Search for new physics in final states with a single photon and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV,

829. Measurement of exclusive $\Upsilon$ photoproduction from protons in pPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV,

828. Combined measurements of Higgs boson couplings in proton-proton collisions at $\sqrt{s} = 13$ TeV,

827. Search for single production of vector-like quarks decaying to a top quark and a $W$ boson in proton-proton collisions at $\sqrt{s} = 13$ TeV,

826. Jet shapes of isolated photon-tagged jets in PbPb and pp collisions at $\sqrt{s_{NN}} = 5.02$ TeV,

825. Search for invisible decays of a Higgs boson produced through vector boson fusion in proton-proton collisions at $\sqrt{s} = 13$ TeV,

824. Search for leptoquarks coupled to third-generation quarks in proton-proton collisions at $\sqrt{s} = 13$ TeV,

823. Studies of $B^{0}_{s2}(5840)^0$ and $B_{s1}(5830)^0$ mesons including the observation of the $B^{0}_{s2}(5840)^0 \rightarrow B^{0}K_{S}^{0}$ decay in proton-proton collisions at $\sqrt{s} = 8$ TeV,

822. Search for the associated production of the Higgs boson and a vector boson in proton-proton collisions at $\sqrt{s} = 13$ TeV via Higgs boson decays to $\tau$ leptons,

821. Performance of reconstruction and identification of $\tau$ leptons decaying to hadrons and $\nu_\tau$ in pp collisions at $\sqrt{s} = 13$ TeV,

820. Charged-particle nuclear modification factors in XeXe collisions at $\sqrt{s_{NN}} = 5.44$ TeV,


• 814. Search for an \( L_\mu - L_\tau \) gauge boson using \( Z \to 4\mu \) events in proton-proton collisions at \( \sqrt{s} = 13 \) TeV, PLB 792 (2019) 345, arXiv:1808.03684.


• 808. Search for heavy resonances decaying into two Higgs bosons or into a Higgs boson and a W or Z boson in proton-proton collisions at 13 TeV, JHEP 01 (2019) 051, arXiv:1808.01365.


• 806. Search for a W' boson decaying to a \( \tau \) lepton and a neutrino in proton-proton collisions at \( \sqrt{s} = 13 \) TeV, PLB 792 (2019) 107, arXiv:1807.11421.
• 805. Searches for pair production of charginos and top squarks in final states with two oppositely charged leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 804. Search for dark matter particles produced in association with a top quark pair at $\sqrt{s} = 13$ TeV,

• 803. Search for the Higgs boson decaying to two muons in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 802. Measurements of the differential jet cross section as a function of the jet mass in dijet events from proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 801. Measurement of inclusive and differential Higgs boson production cross sections in the diphoton decay channel in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 800. Precision measurement of the structure of the CMS inner tracking system using nuclear interactions,

• 799. Search for heavy resonances decaying into a vector boson and a Higgs boson in final states with charged leptons, neutrinos and b quarks at $\sqrt{s} = 13$ TeV,

• 798. Study of the underlying event in top quark pair production in pp collisions at 13 TeV,

• 797. Search for supersymmetry in events with a $\tau$ lepton pair and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 796. Measurement of differential cross sections for inclusive isolated-photon and photon+jets production in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 795. Measurement of charged particle spectra in minimum-bias events from proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 794. Search for heavy Majorana neutrinos in same-sign dilepton channels in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 793. Measurement of differential cross sections for $Z$ boson pair production in association with jets at $\sqrt{s} = 8$ and 13 TeV,


• 779. Observation of the $\chi_{b1}(3P)$ and $\chi_{b2}(3P)$ and measurement of their masses,

• 778. Search for an exotic decay of the Higgs boson to a pair of light pseudoscalars in the final state with two $b$ quarks and two $\tau$ leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 777. Constraints on models of scalar and vector leptoquarks decaying to a quark and a neutrino at $\sqrt{s} = 13$ TeV,

• 776. Measurement of nuclear modification factors of $\Upsilon(1S)$, $\Upsilon(2S)$, and $\Upsilon(3S)$ mesons in PbPb collisions at $\sqrt{b_sNN} = 5.02$ TeV,

• 775. Measurement of the production cross section for single top quarks in association with W bosons in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 774. Search for top squarks decaying via four-body or chargino-mediated modes in single-lepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV,

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• 772. Measurement of the groomed jet mass in PbPb and pp collisions at $\sqrt{b_sNN} = 5.02$ TeV,

• 771. Search for an exotic decay of the Higgs boson to a pair of light pseudoscalars in the final state of two muons and two $\tau$ leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV,

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• 769. Constraining gluon distributions in nuclei using dijets in proton-proton and proton-lead collisions at $\sqrt{b_sNN} = 5.02$ TeV,

• 768. Measurement of prompt $\psi(2S)$ production cross sections in proton-lead and proton-proton collisions at $\sqrt{b_sNN} = 5.02$ TeV,

• 767. Measurement of the top quark mass with lepton+jets final states using pp collisions at $\sqrt{s} = 13$ TeV,


• 762. Search for $t\bar{t}H$ production in the $H \rightarrow b\bar{b}$ decay channel with leptonic $t\bar{t}$ decays in proton-proton collisions at $\sqrt{s} = 13$ TeV, JHEP 03 (2019) 026, arXiv:1804.03682.

• 761. Observation of $t\bar{t}H$ production, PRL 120 (2018) 231801, arXiv:1804.02610.


• 752. Search for additional neutral MSSM Higgs bosons in the \( \tau \tau \) final state in proton-proton collisions at \( \sqrt{s} = 13 \) TeV, JHEP 09 (2018) 007, arXiv:1803.06553.


• 750. Evidence for associated production of a Higgs boson with a top quark pair in final states with electrons, muons, and hadronically decaying \( \tau \) leptons at \( \sqrt{s} = 13 \) TeV, JHEP 08 (2018) 066, arXiv:1803.05485.


• 747. Search for a heavy resonance decaying into a Z boson and a vector boson in the \( \nu \bar{\nu} q\bar{q} \) final state, JHEP 07 (2018) 075, arXiv:1803.03838.

• 746. Search for third-generation scalar leptoquarks decaying to a top quark and a \( \tau \) lepton at \( \sqrt{s} = 13 \) TeV, EPJC 78 (2018) 707, arXiv:1803.02864.


• 744. Search for a heavy resonance decaying to a pair of vector bosons in the lepton plus merged jet final state at \( \sqrt{s} = 13 \) TeV, JHEP 05 (2018) 088, arXiv:1802.09407.


• 742. Measurement of the \( \Lambda_b \) polarization and angular parameters in \( \Lambda_b \rightarrow J/\psi \Lambda \) decays from pp collisions at \( \sqrt{s} = 7 \) and 8 TeV, PRD 97 (2018) 072010, arXiv:1802.04867.

• 740. Measurement of the inelastic proton-proton cross section at \( \sqrt{s} = 13 \) TeV,

• 739. Search for natural and split supersymmetry in proton-proton collisions at \( \sqrt{s} = 13 \) TeV in final states with jets and missing transverse momentum,

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• 737. Search for lepton-flavor violating decays of heavy resonances and quantum black holes to e\(\mu\) final states in proton-proton collisions at \( \sqrt{s} = 13 \) TeV,

• 736. Comparing transverse momentum balance of b jet pairs in pp and PbPb collisions at \( \sqrt{b_sNN} = 5.02 \) TeV,

• 735. Search for dark matter in events with energetic, hadronically decaying top quarks and missing transverse momentum at \( \sqrt{s} = 13 \) TeV,

• 734. Observation of medium induced modifications of jet fragmentation in PbPb collisions at \( \sqrt{b_sNN} = 5.02 \) TeV using isolated-photon-tagged jets,

• 733. Combined search for electroweak production of charginos and neutralinos in proton-proton collisions at \( \sqrt{s} = 13 \) TeV,

• 732. Measurement of the \( Z/\gamma^* \rightarrow \tau\tau \) cross section in pp collisions at \( \sqrt{s} = 13 \) TeV and validation of \( \tau \) lepton analysis techniques,

• 731. Search for new physics in events with two soft oppositely charged leptons and missing transverse momentum in proton-proton collisions at \( \sqrt{s} = 13 \) TeV,

• 730. Search for decays of stopped exotic long-lived particles produced in proton-proton collisions at \( \sqrt{s} = 13 \) TeV,

• 729. Electroweak production of two jets in association with a Z boson in proton-proton collisions at \( \sqrt{s} = 13 \) TeV,


• 722. Search for the $X(5568)$ state decaying into $B^0_s\pi^\pm$ in proton-proton collisions at $\sqrt{s} = 8$ TeV, PRL 120 (2018) 202005, arXiv:1712.06144.


• 717. Search for the flavor-changing neutral current interactions of the top quark and the Higgs boson which decays into a pair of $b$ quarks at $\sqrt{s} = 13$ TeV, JHEP 06 (2018) 102, arXiv:1712.02399.

715. Search for pair production of excited top quarks in the lepton+jets final state,

714. Study of jet quenching with isolated-photon+jet correlations in PbPb and pp collisions at $\sqrt{s_{NN}} = 5.02$ TeV,

713. Search for new long-lived particles at $\sqrt{s} = 13$ TeV,

712. Search for gauge-mediated supersymmetry in events with at least one photon and missing transverse momentum in pp collisions at $\sqrt{s} = 13$ TeV,

711. Non-Gaussian elliptic-flow fluctuations in PbPb collisions at $\sqrt{b|s_{NN}} = 5.02$ TeV,

710. Search for ZZ resonances in the $2\ell 2\nu$ final state in proton-proton collisions at 13 TeV,

709. Search for excited quarks of light and heavy flavor in $\gamma+$jet final states in proton-proton collisions at $\sqrt{s} = 13$ TeV,

708. Measurement of the underlying event activity in inclusive Z boson production in proton-proton collisions at $\sqrt{s} = 13$ TeV,

707. Measurement of the inclusive $t\bar{t}$ cross section in pp collisions at $\sqrt{s} = 5.02$ TeV using final states with at least one charged lepton,

706. Measurement of the cross section for top quark pair production in association with a W or Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV,

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• 699. Pseudorapidity distributions of charged hadrons in proton-lead collisions at \( \sqrt{b|s_{NN}} = 5.02 \) and 8.16 TeV, JHEP 01 (2018) 045, arXiv:1710.09355.


• 697. Search for supersymmetry in events with at least three electrons or muons, jets, and missing transverse momentum in proton-proton collisions at \( \sqrt{s} = 13 \) TeV, JHEP 02 (2018) 067, arXiv:1710.09154.


• 694. Search for a massive resonance decaying to a pair of Higgs bosons in the four b quark final state in proton-proton collisions at \( \sqrt{s} = 13 \) TeV, PLB 781 (2018) 244.

• 693. Measurement of angular parameters from the decay \( B^0 \rightarrow K^0 \mu^+ \mu^- \) in proton-proton collisions at \( \sqrt{s} = 8 \) TeV, PLB 781 (2018) 517, arXiv:1710.02846.


• 686. Measurements of the $pp \to ZZ$ production cross section and the $Z \to 4\ell$ branching fraction, and constraints on anomalous triple gauge couplings at $\sqrt{s} = 13$ TeV, EPJC 78 (2018) 165, arXiv:1709.08601.


• 681. Combination of inclusive and differential $t\bar{t}$ charge asymmetry measurements using ATLAS and CMS data at $\sqrt{s} = 7$ and 8 TeV, JHEP 04 (2018) 033, arXiv:1709.05327.


• 679. Search for higgsino pair production in pp collisions at $\sqrt{s} = 13$ TeV in final states with large missing transverse momentum and two Higgs bosons decaying via $H \to b\bar{b}$, PRD 97 (2018) 032007, arXiv:1709.04896.


• 676. Challenges to the chiral magnetic wave using charge-dependent azimuthal anisotropies in pPb and PbPb collisions at $\sqrt{\sqrt{s_{NN}}} = 5.02$ TeV, Accepted by PRL, arXiv:1708.08901.


• 669. Search for resonant and nonresonant Higgs boson pair production in the $b\bar{b}\ell\nu\ell\nu$ final state in proton-proton collisions at $\sqrt{s} = 13$ TeV, JHEP 01 (2018) 054, arXiv:1708.04188.


• 662. Search for the pair production of third-generation squarks with two-body decays to a bottom or charm quark and a neutralino in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 661. Search for a light pseudoscalar Higgs boson produced in association with bottom quarks in $pp$ collisions at $\sqrt{s} = 8$ TeV,

• 660. Measurement of the differential cross sections for the associated production of a $W$ boson and jets in proton-proton collisions at $\sqrt{s} = 13$ TeV,

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• 650. Search for electroweak production of charginos and neutralinos in $WH$ events in proton-proton collisions at $\sqrt{s} = 13$ TeV,

• 648. Exclusive and semi-exclusive $\pi^{+}\pi^{-}$ production in proton-proton collisions at $\sqrt{s} = 7$ TeV, Submitted to PRD, arXiv:1706.08310.

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

• 646. Suppression of excited $\Upsilon$ states relative to the ground state in PbPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV, PRL 120 (2018) 142301, arXiv:1706.05984.


636. Measurements of $t\bar{t}$ cross sections in association with b jets and inclusive jets and their ratio using dilepton final states in pp collisions at $\sqrt{s} = 13$ TeV,

635. Combination of searches for heavy resonances decaying to WW, WZ, ZZ, WH, and ZH boson pairs in proton-proton collisions at $\sqrt{s} = 8$ and 13 TeV,

634. Search for new phenomena with the $M_{T2}$ variable in the all-hadronic final state produced in proton-proton collisions at $\sqrt{s} = 13$ TeV,

633. Search for supersymmetry in pp collisions at $\sqrt{s} = 13$ TeV in the single-lepton final state using the sum of masses of large-radius jets,

632. Measurement of $B^{\pm}$ mesons differential production cross sections in pp and PbPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV,

631. Search for charged Higgs bosons produced via vector boson fusion and decaying into a pair of $W$ and $Z$ bosons using proton-proton collisions at $\sqrt{s} = 13$ TeV,

630. Measurement of the triple-differential dijet cross section in proton-proton collisions at $\sqrt{s} = 8$ TeV and constraints on parton distribution functions,

629. Search for black holes in high-multiplicity final states in proton-proton collisions at $\sqrt{s} = 13$ TeV,

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

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

626. Measurement of the top quark mass in the dileptonic $t\bar{t}$ decay channel using the mass observables $M_{bt}$, $M_{T2}$, and $M_{bt\nu}$ in pp collisions at $\sqrt{s} = 8$ TeV,

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


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