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International Researcher IDs

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Education Information

Doctorate, Rheinisch-Westfaelische Technische Hochschule Aachen, III. Physikalisches Institut B, Physics / High Energy Physics, Germany 2008 - 2013

Postgraduate, Halep Üniversitesi, Faculty Of Sciences/ Department Of Physics, Physics / Radiation Physics, Syria 2003 - 2004

Undergraduate, Halep Üniversitesi, Faculty Of Sciences/ Department Of Mathematics & Physics, Mathematics & Physics, Syria 1999 - 2003

Foreign Languages

German, C1 Advanced

Turkish, B2 Upper Intermediate

English, C1 Advanced

Arabic, C1 Advanced

Dissertations

Doctorate, Search for Top Quark Pair Resonances with the CMS Detector at the LHC, Rheinisch-Westfaelische Technische Hochschule Aachen, Faculty Of Mathematics, Informatics And Natural Sciences, Physics / High Energy & Particle Physics, 2013

Postgraduate, Thickness Measurements of Thin Foils using Alpha Particles, Halep Üniversitesi, Faculty Of Sciences, Physics / Nuclear Physics, 2004

Research Areas

Physics, Nuclear physics, Experimental Methods of Particle and Nuclear Physics, Basic Particles and Areas, General Theory of Particles and Fields, Properties of special particles, Special reactions and phenomenology, Special theories and interaction models, particle systematics, Natural Sciences

Academic Titles / Tasks

Assistant Professor, Erzincan Binali Yildirim University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2014 - Continues
Assistant Professor, Erzincan Binali Yildirim University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2014 - 2018

Courses

Thermodynamic and Statistic Physics, Undergraduate, 2019 - 2020
Quantum Physics II, Undergraduate, 2019 - 2020
Elementary Particle Physics, Undergraduate, 2019 - 2020
COMPUTER APPLICATIONS, Undergraduate, 2017 - 2018
Advanced Academic English, Postgraduate, 2017 - 2018
USE OF BASIC INFORMATION TECHNOLOGIES, Undergraduate, 2017 - 2018
Data Analysis and Programming (C++, Matlab, Mathematica), Postgraduate, 2017 - 2018
Basics of Computer II, Undergraduate, 2017 - 2018

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Observation of the $\Lambda b^0 \rightarrow J/\psi \Xi^- K^+$ decay**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Valle A. E. D., Hussain P., et al.
European Physical Journal C, vol.84, no.10, 2024 (SCI-Expanded)
- II. **Search for Higgs boson pair production with one associated vector boson in proton-proton collisions at $s = 13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Journal of High Energy Physics, vol.2024, no.10, 2024 (SCI-Expanded)
- III. **Measurement of differential ZZ + jets production cross sections in pp collisions at $s = 13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Journal of High Energy Physics, vol.2024, no.10, 2024 (SCI-Expanded)
- IV. **Searches for violation of Lorentz invariance in top quark pair production using dilepton events in 13 TeV proton-proton collisions**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.857, 2024 (SCI-Expanded)
- V. **Search for a resonance decaying to a W boson and a photon in proton-proton collisions at $s = 13$ TeV using leptonic W boson decays**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.9, 2024 (SCI-Expanded)
- VI. **Performance of the CMS electromagnetic calorimeter in pp collisions at $\sqrt{s} = 13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Journal of Instrumentation, vol.19, no.9, 2024 (SCI-Expanded)
- VII. **Performance of CMS muon reconstruction from proton-proton to heavy ion collisions**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of Instrumentation, vol.19, no.9, 2024 (SCI-Expanded)

- VIII. **Measurement of Energy Correlators inside Jets and Determination of the Strong Coupling Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review Letters, vol.133, no.7, 2024 (SCI-Expanded)
- IX. **Search for long-lived particles decaying in the CMS muon detectors in proton-proton collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.110, no.3, 2024 (SCI-Expanded)
- X. **Measurement of multijet azimuthal correlations and determination of the strong coupling in proton-proton collisions at $s=13\text{TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
European Physical Journal C, vol.84, no.8, 2024 (SCI-Expanded)
- XI. **Constraints on anomalous Higgs boson couplings from its production and decay using the WW channel in proton-proton collisions at $s=13\text{TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
European Physical Journal C, vol.84, no.8, 2024 (SCI-Expanded)
- XII. **Search for new physics in high-mass diphoton events from proton-proton collisions at $s = 13\text{TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.8, 2024 (SCI-Expanded)
- XIII. **Observation of the Formula Presented Meson and Suppression of Formula Presented States in Pb-Pb Collisions at Formula Presented**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Physical Review Letters, vol.133, no.2, 2024 (SCI-Expanded)
- XIV. **Search for Narrow Trijet Resonances in Proton-Proton Collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Physical Review Letters, vol.133, no.1, 2024 (SCI-Expanded)
- XV. **Search for long-lived heavy neutral leptons decaying in the CMS muon detectors in proton-proton collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.110, no.1, 2024 (SCI-Expanded)
- XVI. **Search for dark QCD with emerging jets in proton-proton collisions at $s = 13\text{TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.7, 2024 (SCI-Expanded)
- XVII. **Search for a scalar or pseudoscalar dilepton resonance produced in association with a massive vector boson or top quark-antiquark ff pair in multilepton events at $\sqrt{s}=13\text{TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Physical Review D, vol.110, no.1, 2024 (SCI-Expanded)
- XVIII. **Search for high-mass exclusive diphoton production with tagged protons in proton-proton collisions at Formula Presented**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.

Physical Review D, vol.110, no.1, 2024 (SCI-Expanded)

- XIX. Extracting the speed of sound in quark-gluon plasma with ultrarelativistic lead-lead collisions at the LHC**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Reports on Progress in Physics, vol.87, no.7, 2024 (SCI-Expanded)
- XX. Observation of the Λ_c^+ decay and studies of the Λ_c^+ baryon in proton-proton collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.110, no.1, 2024 (SCI-Expanded)
- XXI. Search for ZZ and ZH production in the $b\bar{b}b\bar{b}$ final state using proton-proton collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
European Physical Journal C, vol.84, no.7, 2024 (SCI-Expanded)
- XXII. Combination of Measurements of the Top Quark Mass from Data Collected by the ATLAS and CMS Experiments at $\sqrt{s}=13$ TeV and 8 TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review Letters, vol.132, no.26, 2024 (SCI-Expanded)
- XXIII. Search for Baryon Number Violation in Top Quark Production and Decay Using Proton-Proton Collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review Letters, vol.132, no.24, 2024 (SCI-Expanded)
- XXIV. Search for pair production of scalar and vector leptoquarks decaying to muons and bottom quarks in proton-proton collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.109, no.11, 2024 (SCI-Expanded)
- XXV. Combined search for electroweak production of winos, binos, higgsinos, and sleptons in proton-proton collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Physical Review D, vol.109, no.11, 2024 (SCI-Expanded)
- XXVI. Search for long-lived particles using displaced vertices and missing transverse momentum in proton-proton collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.109, no.11, 2024 (SCI-Expanded)
- XXVII. Search for stealth supersymmetry in final states with two photons, jets, and low missing transverse momentum in proton-proton collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Hussain P., et al.
Physical Review D, vol.109, no.11, 2024 (SCI-Expanded)
- XXVIII. Observation of the Λ_c^+ decay in proton-proton collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.109, no.11, 2024 (SCI-Expanded)
- XXIX. Nonresonant central exclusive production of charged-hadron pairs in proton-proton collisions at $\sqrt{s}=13$ TeV**

Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.109, no.11, 2024 (SCI-Expanded)

- XXX. **Search for the lepton flavor violating $\tau \rightarrow 3\mu$ decay in proton-proton collisions at $s=13\text{TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.853, 2024 (SCI-Expanded)
- XXXI. **Search for exotic decays of the Higgs boson to a pair of pseudoscalars in the $\mu\mu b\bar{b}$ and $\tau\tau b\bar{b}$ final states**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Hussain P., et al.
European Physical Journal C, vol.84, no.5, 2024 (SCI-Expanded)
- XXXII. **Measurement of the primary Lund jet plane density in proton-proton collisions at $s = 13 \text{ TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Journal of High Energy Physics, vol.2024, no.5, 2024 (SCI-Expanded)
- XXXIII. **Search for a new resonance decaying into two spin-0 bosons in a final state with two photons and two bottom quarks in proton-proton collisions at (Formula presented.)**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.5, 2024 (SCI-Expanded)
- XXXIV. **Inclusive and differential cross section measurements of $t\bar{t}b\bar{b}$ production in the lepton+jets channel at $s = 13 \text{ TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Journal of High Energy Physics, vol.2024, no.5, 2024 (SCI-Expanded)
- XXXV. **Development of the CMS detector for the CERN LHC Run 3**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Hussain P., Jeitler M., et al.
Journal of Instrumentation, vol.19, no.5, 2024 (SCI-Expanded)
- XXXVI. **Measurement of simplified template cross sections of the Higgs boson produced in association with w or z bosons in the Formula Presented decay channel in proton-proton collisions at Formula Presented**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Physical Review D, vol.109, no.9, 2024 (SCI-Expanded)
- XXXVII. **Search for W' bosons decaying to a top and a bottom quark in leptonic final states in proton-proton collisions at $s = 13 \text{ TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Journal of High Energy Physics, vol.2024, no.5, 2024 (SCI-Expanded)
- XXXVIII. **Search for long-lived particles decaying to final states with a pair of muons in proton-proton collisions at $s = 13.6 \text{ TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.5, 2024 (SCI-Expanded)
- XXXIX. **Search for flavor changing neutral current interactions of the top quark in final states with a photon and additional jets in proton-proton collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Physical Review D, vol.109, no.7, 2024 (SCI-Expanded)

- XL. Search for supersymmetry in final states with disappearing tracks in proton-proton collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Physical Review D, vol.109, no.7, 2024 (SCI-Expanded)
- XLII. New Structures in the Formula Presented Mass Spectrum in Proton-Proton Collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Physical Review Letters, vol.132, no.11, 2024 (SCI-Expanded)
- XLIII. Search for dark matter particles in $W+W-$ events with transverse momentum imbalance in proton-proton collisions at $s = 13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Journal of High Energy Physics, vol.2024, no.3, 2024 (SCI-Expanded)
- XLIII. Search for long-lived heavy neutral leptons with lepton flavour conserving or violating decays to a jet and a charged lepton**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.3, 2024 (SCI-Expanded)
- XLIV. Higher-order moments of the elliptic flow distribution in PbPb collisions at $s_{NN} = 5.02$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.2, 2024 (SCI-Expanded)
- XLV. Two-particle Bose-Einstein correlations and their Lévy parameters in PbPb collisions at Formula Presented TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Physical Review C, vol.109, no.2, 2024 (SCI-Expanded)
- XLVI. Muon identification using multivariate techniques in the CMS experiment in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Journal of Instrumentation, vol.19, no.2, 2024 (SCI-Expanded)
- XLVII. Search for Inelastic Dark Matter in Events with Two Displaced Muons and Missing Transverse Momentum in Proton-Proton Collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Frühwirth R., et al.
Physical Review Letters, vol.132, no.4, 2024 (SCI-Expanded)
- XLVIII. Evidence for the Higgs boson decay to a Z boson and a photon at the LHC**
Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Acharya B., et al.
Physical Review Letters, vol.132, no.2, 2024 (SCI-Expanded)
- XLIX. Luminosity determination using Z boson production at the CMS experiment**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Valle A. E. D., Hussain P., et al.
European Physical Journal C, vol.84, no.1, 2024 (SCI-Expanded)
- L. Measurement of the Higgs boson production via vector boson fusion and its decay into bottom quarks in proton-proton collisions at $s = 13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.

Journal of High Energy Physics, vol.2024, no.1, 2024 (SCI-Expanded)

- LI. **Measurement of the production cross section for a W boson in association with a charm quark in proton–proton collisions at $\sqrt{s}=13\text{TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Valle A. E. D., Hussain P., Jeitler M., et al.
European Physical Journal C, vol.84, no.1, 2024 (SCI-Expanded)
- LII. **Study of charm hadronization with prompt Λ_c^+ baryons in proton-proton and lead-lead collisions at $\sqrt{s_{NN}} = 5.02 \text{ TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.1, 2024 (SCI-Expanded)
- LIII. **Measurement of the τ lepton polarization in Z boson decays in proton-proton collisions at (Formula presented.)**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Journal of High Energy Physics, vol.2024, no.1, 2024 (SCI-Expanded)
- LIV. **Measurement of the top quark mass using a profile likelihood approach with the lepton + jets final states in proton–proton collisions at $\sqrt{s}=13\text{TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Hussain P., Jeitler M., et al.
European Physical Journal C, vol.83, no.10, 2023 (SCI-Expanded)
- LV. **Search for the lepton-flavor violating decay of the Higgs boson and additional Higgs bosons in the Formula Presented final state in proton-proton collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Physical Review D, vol.108, no.7, 2023 (SCI-Expanded)
- LVI. **A search for decays of the Higgs boson to invisible particles in events with a top-antitop quark pair or a vector boson in proton-proton collisions at $\sqrt{s}=13\text{TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
European Physical Journal C, vol.83, no.10, 2023 (SCI-Expanded)
- LVII. **Measurement of the Dependence of the Hadron Production Fraction Ratios f_s/f_u and f_d/f_u on B Meson Kinematic Variables in Proton-Proton Collisions at Formula Presented**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Physical Review Letters, vol.131, no.12, 2023 (SCI-Expanded)
- LVIII. **Search for Exotic Higgs Boson Decays Formula Presented with Events Containing Two Merged Diphotons in Proton-Proton Collisions at Formula Presented**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Physical Review Letters, vol.131, no.10, 2023 (SCI-Expanded)
- LIX. **Observation of the Rare Decay of the η Meson to Four Muons**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Physical Review Letters, vol.131, no.9, 2023 (SCI-Expanded)
- LX. **Search for a vector-like quark $T' \rightarrow tH$ via the diphoton decay mode of the Higgs boson in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2023, no.9, 2023 (SCI-Expanded)
- LXI. **Reconstruction of decays to merged photons using end-to-end deep learning with domain**

continuation in the CMS detector

Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Frühwirth R., Jeitler M., et al.

Physical Review D, vol.108, no.5, 2023 (SCI-Expanded)

LXII. Observation of Same-Sign WW Production from Double Parton Scattering in Proton-Proton Collisions at Formula Presented

Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.

Physical Review Letters, vol.131, no.9, 2023 (SCI-Expanded)

LXIII. A search for new physics in central exclusive production using the missing mass technique with the CMS detector and the CMS-TOTEM precision proton spectrometer

Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Valle A. E. D., Hussain P., Jeitler M., et al.

European Physical Journal C, vol.83, no.9, 2023 (SCI-Expanded)

LXIV. Measurement of differential cross sections for the production of a Z boson in association with jets in proton-proton collisions at Formula Presented

Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.

Physical Review D, vol.108, no.5, 2023 (SCI-Expanded)

LXV. Search for Higgs Boson Decay to a Charm Quark-Antiquark Pair in Proton-Proton Collisions at Formula Presented

Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.

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LXVI. Azimuthal Correlations within Exclusive Dijets with Large Momentum Transfer in Photon-Lead Collisions

Tumasyan A., Adam W., Bergauer T., Dragicevic M., Del Valle A. E., Frühwirth R., Jeitler M., Krammer N., Lechner L., Liko D., et al.

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LXVII. Measurement of the electroweak production of Formula Presented in association with two jets in proton-proton collisions at Formula Presented

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LXVIII. Azimuthal correlations in Z +jets events in proton-proton collisions at $\sqrt{s}=13\text{TeV}$

Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Valle A. E. D., Frühwirth R., Jeitler M., et al.

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LXIX. Constraints on anomalous Higgs boson couplings to vector bosons and fermions from the production of Higgs bosons using the $\tau\tau$ final state

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LXX. Search for new physics using effective field theory in 13 TeV pp collision events that contain a top quark pair and a boosted Z or Higgs boson

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LXXI. Measurements of jet multiplicity and jet transverse momentum in multijet events in proton-proton collisions at $\sqrt{s}=13\text{TeV}$

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- LXXII. **Search for Nonresonant Pair Production of Highly Energetic Higgs Bosons Decaying to Bottom Quarks**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
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- LXXIII. **Search for Higgs Boson and Observation of Z Boson through Their Decay into a Charm Quark-Antiquark Pair in Boosted Topologies in Proton-Proton Collisions at Formula Presented**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Hussain P., Jeitler M., et al.
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- LXXIV. **Measurement of the $B_s^0 \rightarrow \mu^+ \mu^-$ decay properties and search for the $B^0 \rightarrow \mu^+ \mu^-$ decay in proton-proton collisions at $s=13\text{TeV}$**
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- LXXV. **Precision measurement of the Z boson invisible width in pp collisions at $s=13\text{TeV}$**
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- LXXVI. **Search for electroweak production of charginos and neutralinos at $s=13\text{TeV}$ in final states containing hadronic decays of WW, WZ, or WH and missing transverse momentum**
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- LXXVII. **Search for nonresonant Higgs boson pair production in final state with two bottom quarks and two tau leptons in proton-proton collisions at $s=13\text{TeV}$**
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- LXXVIII. **Probing Heavy Majorana Neutrinos and the Weinberg Operator through Vector Boson Fusion Processes in Proton-Proton Collisions at Formula Presented**
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- LXXIX. **Search for narrow resonances in the Formula Presented-tagged dijet mass spectrum in proton-proton collisions at Formula Presented**
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- LXXX. **Search for direct pair production of supersymmetric partners of τ leptons in the final state with two hadronically decaying τ leptons and missing transverse momentum in proton-proton collisions at Formula Presented**
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- LXXXI. **CMS pythia 8 colour reconnection tunes based on underlying-event data**
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- LXXXII. **Search for CP violating top quark couplings in pp collisions at $\sqrt{s} = 13$ TeV**
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- LXXXIV. **Measurement of the mass dependence of the transverse momentum of lepton pairs in Drell-Yan production in proton-proton collisions at $\sqrt{s}=13$ TeV**
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- LXXXV. **Observation of electroweak $W+W-$ pair production in association with two jets in proton-proton collisions at $s=13$ TeV**
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- LXXXVI. **Search for CP violation using (Formula presented.) events in the lepton+jets channel in pp collisions at $\sqrt{s} = 13$ TeV**
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- LXXXVII. **Search for long-lived particles decaying to a pair of muons in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- LXXXVIII. **Search for heavy resonances and quantum black holes in $e\mu$, $e\tau$, and $\mu\tau$ final states in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- XC. **Search for nonresonant Higgs boson pair production in the four leptons plus twob jets final state in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- XCII. **Measurement of the Higgs boson width and evidence of its off-shell contributions to ZZ production**
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- XCIII. Search for a W' boson decaying to a vector-like quark and a top or bottom quark in the all-jets final state at $\sqrt{s} = 13$ TeV**
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- XCv. Measurement of the Drell-Yan forward-backward asymmetry at high dilepton masses in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- XCvI. Probing Charm Quark Dynamics via Multiparticle Correlations in Pb-Pb Collisions at $s_{NN} = 5.02$ TeV**
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- XCvII. Search for Resonances Decaying to Three W Bosons in Proton-Proton Collisions at $s = 13$ TeV**
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- XCvIII. Search for heavy resonances decaying to $Z(\nu\nu^*)V(qq^*)$ in proton-proton collisions at $s = 13$ TeV**
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- XCIX. Search for resonances decaying to three W bosons in the hadronic final state in proton-proton collisions at $s = 13$ TeV**
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- C. Identification of hadronic tau lepton decays using a deep neural network**
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- CI. Search for long-lived heavy neutral leptons with displaced vertices in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CII. Search for new physics in the lepton plus missing transverse momentum final state in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CIII. Measurement of the inclusive and differential WZ production cross sections, polarization angles, and triple gauge couplings in pp collisions at $\sqrt{s} = 13$ TeV**
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- CIV. **Search for charged-lepton flavor violation in top quark production and decay in pp collisions at $\sqrt{s} = 13$ TeV**
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- CV. **Search for resonant production of strongly coupled dark matter in proton-proton collisions at 13 TeV**
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- CVI. **Analysis of the CP structure of the Yukawa coupling between the Higgs boson and τ leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CVII. **Search for invisible decays of the Higgs boson produced via vector boson fusion in proton-proton collisions at $s = 13$ TeV**
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- CVIII. **Search for higgsinos decaying to two Higgs bosons and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CX. **Measurement of the inclusive and differential $t \bar{t} \gamma$ cross sections in the dilepton channel and effective field theory interpretation in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CXXII. **Using Z Boson Events to Study Parton-Medium Interactions in Pb-Pb Collisions**
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- CXXV. **Search for long-lived particles produced in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CXXVIII. **Measurement of $W \pm \gamma$ differential cross sections in proton-proton collisions at $s = 13$ TeV and effective field theory constraints**
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- CXXX. **Fragmentation of jets containing a prompt J/ψ meson in PbPb and pp collisions at $s_{NN} = 5.02$ TeV**
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- CXXXII. **Measurement and QCD analysis of double-differential inclusive jet cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CXXXIII. **Inclusive and differential cross section measurements of single top quark production in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CXXXIV. **Search for heavy resonances decaying to WW, WZ, or WH boson pairs in a final state consisting of a lepton and a large-radius jet in proton-proton collisions at $s = 13$ TeV**
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- CXXXV. **Evidence for X(3872) in Pb-Pb Collisions and Studies of its Prompt Production at $s_{NN} = 5.02$ TeV**
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- CXXXVI. **Measurement of double-parton scattering in inclusive production of four jets with low transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CXXXVII. **Study of quark and gluon jet substructure in Z+jet and dijet events from pp collisions**
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- CXXXVIII. **Search for Long-Lived Particles Decaying in the CMS End Cap Muon Detectors in Proton-Proton Collisions at $s = 13$ TeV**
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- CXXXIX. **Measurement of the top quark mass using events with a single reconstructed top quark in pp collisions at $\sqrt{s} = 13$ TeV**
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- CXLI. **Measurement of the inclusive and differential $t \bar{t} \gamma$ cross sections in the single-lepton channel and EFT interpretation at $\sqrt{s} = 13$ TeV**
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- CXLII. **Search for a heavy resonance decaying to a top quark and a W boson at $\sqrt{s} = 13$ TeV in the fully hadronic final state**
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- CXLIII. **Measurements of the Electroweak Diboson Production Cross Sections in Proton-Proton Collisions at $s = 5.02$ TeV Using Leptonic Decays**
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- CXLIV. **Measurement of prompt open-charm production cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CXLV. **Search for a heavy Higgs boson decaying into two lighter Higgs bosons in the $\tau\tau b\bar{b}$ final state at 13 TeV**
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- CXLVI. **Observation of $t\bar{W}$ production in the single-lepton channel in pp collisions at $\sqrt{s} = 13$ TeV**
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- CXLVII. **Measurement of differential $t\bar{t}$ production cross sections in the full kinematic range using lepton+jets events from proton-proton collisions at $s = 13$ TeV MEASUREMENT of DIFFERENTIAL ...**
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- CXLVIII. **Search for new particles in events with energetic jets and large missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CXLIX. **Measurement of the electroweak production of $Z\gamma$ and two jets in proton-proton collisions at $s = 13$ TeV and constraints on anomalous quartic gauge couplings**
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- CL. **Measurements of the $pp \rightarrow W\pm \gamma\gamma$ and $pp \rightarrow Z\gamma\gamma$ cross sections at $\sqrt{s} = 13$ TeV and limits on anomalous quartic gauge couplings**
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- CLI. **Search for chargino-neutralino production in events with Higgs and W bosons using 137 fb⁻¹ of proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CLII. **Study of Z boson plus jets events using variables sensitive to double-parton scattering in pp collisions at 13 TeV**
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- CLIII. **Observation of Forward Neutron Multiplicity Dependence of Dimuon Acoplanarity in Ultraperipheral Pb-Pb Collisions at $s_{NN} = 5.02$ TeV**
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- CLIV. **First measurement of the cross section for top quark pair production with additional charm jets using dileptonic final states in pp collisions at $s = 13$ TeV**
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- CLV. **Search for W' bosons decaying to a top and a bottom quark at $s = 13$ TeV in the hadronic final state**
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- CLVI. **Constraints on the Initial State of Pb-Pb Collisions via Measurements of Z -Boson Yields and Azimuthal Anisotropy at $s_{NN} = 5.02$ TeV**

Sirunyan A., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.

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CLVII. Constraints on anomalous Higgs boson couplings to vector bosons and fermions in its production and decay using the four-lepton final state

Sirunyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.

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CLVIII. Search for top squark production in fully hadronic final states in proton-proton collisions at $s = 13$ TeV

Sirunyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.

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CLIX. Search for long-lived particles decaying to jets with displaced vertices in proton-proton collisions at $s = 13$ TeV

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CLX. Search for the rare decay of the W boson into a pion and a photon in proton-proton collisions at $s = 13$ TeV

Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.

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CLXI. Search for singly and pair-produced leptoquarks coupling to third-generation fermions in proton-proton collisions at $s = 13$ TeV

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CLXII. Measurement of the azimuthal anisotropy of [Formula presented] and [Formula presented] mesons in PbPb collisions at $s_{NN} = 5.02$ TeV

Sirunyan A., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., Frühwirth R., et al.

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CLXIII. Hard color-singlet exchange in dijet events in proton-proton collisions at $s = 13$ TeV

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CLXIV. Search for top squarks in final states with two top quarks and several light-flavor jets in proton-proton collisions at $s = 13$ TeV

Sirunyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.

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CLXV. Search for lepton-flavor violating decays of the Higgs boson in the $\mu\tau$ and $e\tau$ final states in proton-proton collisions at $s = 13$ TeV

Sirunyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.

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CLXVI. Performance of the CMS muon trigger system in proton-proton collisions at $\sqrt{s} = 13$ TeV

Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., Lechner L., et al.

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- CLXVIII. **Search for long-lived particles using displaced jets in proton-proton collisions at $s = 13$ TeV**
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- CLXIX. **Measurements of Higgs boson production cross sections and couplings in the diphoton decay channel at $\sqrt{s} = 13$ TeV**
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- CLXX. **Observation of a New Excited Beauty Strange Baryon Decaying to $\Xi_b^- \pi^+ \pi^-$**
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- CLXXII. **Measurement of prompt D^0 and $D^{\bar{0}}$ meson azimuthal anisotropy and search for strong electric fields in PbPb collisions at $s_{NN} = 5.02$ TeV**
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- CLXXV. **Electron and photon reconstruction and identification with the CMS experiment at the CERN LHC**
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- CLXXVI. **First measurement of large area jet transverse momentum spectra in heavy-ion collisions**
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- CLXXVII. **Measurements of the differential cross sections of the production of Z + jets and γ + jets and of Z boson emission collinear with a jet in pp collisions at $\sqrt{s} = 13$ TeV**
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- CLXXIX. **Measurement of b jet shapes in proton-proton collisions at $\sqrt{s} = 5.02$ TeV**
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- CLXXX. **Measurement of differential cross sections for Z bosons produced in association with charm jets in pp collisions at $\sqrt{s} = 13$ TeV**
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- CLXXXIII. **Search for supersymmetry in final states with two oppositely charged same-flavor leptons and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CLXXXIV. **Measurement of differential $t \bar{t}$ production cross sections using top quarks at large transverse momenta in pp collisions at $s = 13$ TeV MEASUREMENT of DIFFERENTIAL $t \bar{t}$... SIRUNYAN A. M. et al.**
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Physical Review D, vol.103, no.5, 2021 (SCI-Expanded)
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- CLXXXVI. **Search for nonresonant Higgs boson pair production in final states with two bottom quarks and two photons in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CLXXXVII. **Measurement of the inclusive and differential Higgs boson production cross sections in the leptonic WW decay mode at $\sqrt{s} = 13$ TeV**
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- CLXXXIX. **Measurements of production cross sections of polarized same-sign W boson pairs in association with two jets in proton-proton collisions at $s=13$ TeV**
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- CXCII. **Search for the lepton flavor violating decay $\tau \rightarrow 3\mu$ in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambroggi F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
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- CXCIII. **Observation of electroweak production of $W\gamma$ with two jets in proton-proton collisions at $s=13$ TeV**
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- CXCIV. **Search for bottom-type, vectorlike quark pair production in a fully hadronic final state in proton-proton collisions at $s = 13$ TeV**
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- CXCV. **Dependence of inclusive jet production on the anti-kT distance parameter in pp collisions at $\sqrt{s} = 13$ TeV**
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- CXCVI. **Inclusive search for highly boosted Higgs bosons decaying to bottom quark-antiquark pairs in proton-proton collisions at $\sqrt{s} = 13$ TeV**
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- CXCIX. **Measurement of $B_c(2S)^+$ and $B_c^*(2S)^+$ cross section ratios in proton-proton collisions at $s = 13$ TeV**
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- CC. **Search for decays of the 125 GeV Higgs boson into a Z boson and a ρ or ϕ meson**
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- CCI. **Investigation into the event-activity dependence of $Y(nS)$ relative production in proton-proton collisions at $\sqrt{s} = 7$ TeV**
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- CCII. **Measurements of production cross sections of WZ and same-sign WW boson pairs in association with two jets in proton-proton collisions at $s=13$ TeV**
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- CCIV. **Observation of the Production of Three Massive Gauge Bosons at $s = 13$ TeV**
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- CCV. **Search for supersymmetry in proton-proton collisions at $\sqrt{s} = 13$ TeV in events with high-momentum Z bosons and missing transverse momentum**
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- CCVI. **Measurement of CKM matrix elements in single top quark t-channel production in proton-proton collisions at root $s=13$ TeV**
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- CCVII. **Measurement of the $Y(1S)$ pair production cross section and search for resonances decaying to $Y(1S)\mu^{+}\mu^{-}$ in proton-proton collisions at root $s=13$ TeV**
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- CCXI. **Combination of the W boson polarization measurements in top quark decays using ATLAS and CMS data at root s=8 TeV**
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- CCXIII. **Search for physics beyond the standard model in events with jets and two same-sign or at least three charged leptons in proton-proton collisions at $\sqrt{s}=13\text{TeV}$**
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- CCXIV. **Measurement of quark- and gluon-like jet fractions using jet charge in PbPb and pp collisions at 5.02 TeV**
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- CCXV. **Search for disappearing tracks in proton-proton collisions at root s=13 TeV**
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- CCXVI. **Search for charged Higgs bosons decaying into a top and a bottom quark in the all-jet final state of pp collisions at root s=13 TeV**
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- CCXVII. **Measurement of the cross section for $t(\bar{t})$ production with additional jets and b jets in pp collisions at root s=13TeV**
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- CCXVIII. **The production of isolated photons in PbPb and pp collisions at root s(NN)=5.02 TeV**
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- CCXIX. **Measurement of the top quark forward-backward production asymmetry and the anomalous chromoelectric and chromomagnetic moments in in pp collisions at root s=13 TeV**
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- CCXX. **Determination of the strong coupling constant $\alpha(S)(m(Z))$ from measurements of inclusive W-
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CCXXII. **Mixed higher-order anisotropic flow and nonlinear response coefficients of charged particles in PbPb collisions at $\sqrt{s_{NN}}=2.76$ and 5.02 TeV**

Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.

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CCXXIII. **Identification of heavy, energetic, hadronically decaying particles using machine-learning techniques**

Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Eroe J., Del Valle A. E., Flechl M., et al.

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CCXXIV. **A measurement of the Higgs boson mass in the diphoton decay channel**

Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Eroe J., Del Valle A. E., Flechl M., et al.

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CCXXV. **Measurement of the cross section for electroweak production of a Z boson, a photon and two jets in proton-proton collisions at root s=13TeV and constraints on anomalous quartic couplings**

Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Eroe J., Del Valle A. E., Flechl M., et al.

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CCXXVI. **Study of J/ ψ meson production inside jets in pp collisions at s=8TeV**

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Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.804, 2020 (SCI-Expanded)

CCXXVII. **Search for direct top squark pair production in events with one lepton, jets, and missing transverse momentum at 13 TeV with the CMS experiment**

Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Eroe J., Del Valle A. E., Flechl M., et al.

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CCXXVIII. **Calibration of the CMS hadron calorimeters using proton-proton collision data at root s=13 TeV**

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CCXXIX. **Search for an excited lepton that decays via a contact interaction to a lepton and two jets in proton-proton collisions at root s=13 TeV**

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CCXXX. **Search for high mass dijet resonances with a new background prediction method in proton-proton collisions at $\sqrt{s} = 13$ TeV**

Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., Fruehwirth R., et al.

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CCXXXI. **Measurement of the Jet Mass Distribution and Top Quark Mass in Hadronic Decays of Boosted Top Quarks in pp Collisions at root s=13 TeV**

Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Eroe J., Del Valle A. E., Flechl M., et al.

PHYSICAL REVIEW LETTERS, vol.124, no.20, 2020 (SCI-Expanded)

CCXXXII. **Study of excited Λ_b 0 states decaying to Λ_b 0 π + π^- in proton-proton collisions at s=13TeV**

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- CCXXXIII. **Running of the top quark mass from proton-proton collisions at $s=13\text{TeV}$**
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- CCXXXIV. **Measurement of the $t\bar{t}b\bar{b}$ production cross section in the all-jet final state in pp collisions at $s=13\text{TeV}$**
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- CCXXXV. **Production of Λc + baryons in proton-proton and lead-lead collisions at $s_{NN}=5.02\text{TeV}$**
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Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.803, 2020 (SCI-Expanded)
- CCXXXVI. **Measurement of properties of $B(s)(0)s \rightarrow \mu(+)\mu(-)$ decays and search for $B-0 \rightarrow \mu(+)\mu(-)$ with the CMS experiment**
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- CCXXXVII. **Search for a Narrow Resonance Lighter than 200 GeV Decaying to a Pair of Muons in Proton-Proton Collisions at $\sqrt{s}=13\text{TeV}$**
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- CCXXXVIII. **Search for heavy Higgs bosons decaying to a top quark pair in proton-proton collisions at $\sqrt{s}=13\text{TeV}$**
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- CCXXXIX. **Constraints on the $\chi(c1)$ versus $\chi(c2)$ Polarizations in Proton-Proton Collisions at $\sqrt{s}=8\text{TeV}$**
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- CCXL. **Observation of the $\Lambda b \rightarrow J/\psi \Lambda \phi$ decay in proton-proton collisions at $s=13\text{TeV}$**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., Frühwirth R., et al.
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- CCXLI. **A search for the standard model Higgs boson decaying to charm quarks**
Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Dragicevic M., Erö J., Del Valle A. E., Flechl M., Frühwirth R., et al.
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- CCXLII. **Search for a heavy Higgs boson decaying to a pair of W bosons in proton-proton collisions at $\sqrt{s}=13\text{TeV}$**
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- CCXLIII. **Measurement of top quark pair production in association with a Z boson in proton-proton collisions at $\sqrt{s}=13\text{TeV}$**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del

Valle A., Flechl M., et al.

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CCXLIV. **Search for new neutral Higgs bosons through the $H \rightarrow ZA \rightarrow \ell + \ell - b \bar{b}$ process in pp collisions at $\sqrt{s} = 13$ TeV**

Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.

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CCXLV. **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**

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Journal of High Energy Physics, vol.2020, no.3, 2020 (SCI-Expanded)

CCXLVI. **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**

Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., Frühwirth R., et al.

Physical Review D, vol.101, no.5, 2020 (SCI-Expanded)

CCXLVII. **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**

Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.

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CCXLVIII. **Search for physics beyond the standard model in multilepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV**

Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., Frühwirth R., et al.

Journal of High Energy Physics, vol.2020, no.3, 2020 (SCI-Expanded)

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

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CCL. **Combined search for supersymmetry with photons in proton-proton collisions at $\sqrt{s} = 13$ TeV**

Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.801, 2020 (SCI-Expanded)

CCLI. **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**

Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Del Valle A. E., Flechl M., et al.

European Physical Journal C, vol.80, no.2, 2020 (SCI-Expanded)

CCLII. **Measurement of the top quark pair production cross section in dilepton final states containing one τ lepton in pp collisions at $\sqrt{s} = 13$ TeV**

Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.

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CCLIII. **Performance of the reconstruction and identification of high-momentum muons in proton-proton collisions at $\sqrt{s} = 13$ TeV**

Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Dragicevic M., Erö J., Del Valle A. E., Flechl M., Frühwirth R., et al.

JOURNAL OF INSTRUMENTATION, vol.15, no.2, 2020 (SCI-Expanded)

- CCLIV. **Search for top squark pair production in a final state with two tau leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.
Journal of High Energy Physics, vol.2020, no.2, 2020 (SCI-Expanded)
- CCLV. **Search for Supersymmetry with a Compressed Mass Spectrum in Events with a Soft τ Lepton, a Highly Energetic Jet, and Large Missing Transverse Momentum in Proton-Proton Collisions at $\sqrt{s}=13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.
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- CCLVI. **Search for electroweak production of a vector-like T quark using fully hadronic final states**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.
Journal of High Energy Physics, vol.2020, no.1, 2020 (SCI-Expanded)
- CCLVII. **W+W- boson pair production in proton-proton collisions at $s = 13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Physical Review D, vol.102, no.9, 2020 (SCI-Expanded)
- CCLVIII. **Search for a charged Higgs boson decaying into top and bottom quarks in events with electrons or muons in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.
Journal of High Energy Physics, vol.2020, no.1, 2020 (SCI-Expanded)
- CCLIX. **Evidence for WW production from double-parton interactions in proton-proton collisions at $\sqrt{s}=13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.
European Physical Journal C, vol.80, no.1, 2020 (SCI-Expanded)
- CCLX. **Search for low mass vector resonances decaying into quark-antiquark pairs in proton-proton collisions at $s = 13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.
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- CCLXI. **Search for Physics beyond the Standard Model in Events with Overlapping Photons and Jets**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.
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- CCLXII. **Search for long-lived particles using delayed photons in proton-proton collisions at root $s=13$ TeV**
Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Ero J., Del Valle A. E., Flechl M., et al.
PHYSICAL REVIEW D, vol.100, no.11, 2019 (SCI-Expanded)
- CCLXIII. **Measurements of differential Z boson production cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.
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- CCLXIV. **Study of the $B \rightarrow J / \psi \Lambda^- p$ decay in proton-proton collisions at $\sqrt{s} = 8$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.
Journal of High Energy Physics, vol.2019, no.12, 2019 (SCI-Expanded)

- CCLXV. **Combination of CMS searches for heavy resonances decaying to pairs of bosons or leptons**
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- CCCXCIV. **Constraints on the Higgs boson width from off-shell production and decay to Z-boson pairs**
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- CCCXCIX. **Measurement of jet fragmentation in PbPb and pp collisions at $\sqrt{s_{NN}}=2.76\text{TeV}$**
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- I. **Search for supersymmetry with a compressed mass spectrum in events involving soft leptons, jets**

and missing transverse momentum with an integrated luminosity of 20.1 pb⁻¹ of $\sqrt{s} = 8$ TeV ATLAS data

Morvaj L.

2013 European Physical Society Conference on High Energy Physics, EPS-HEP 2013, Stockholm, Sweden, 18 - 24 July 2013

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