

Asst. Prof. VAEL HAJAHMAD

Personal Information

Mobile Phone: [+90 534 835 0816](tel:+905348350816)

Email: whahmad@erzincan.edu.tr

Web: <https://www.scopus.com/authid/detail.uri?authorId=35221758100>

Address: Erzincan Üniversitesi, Fen-Edebiyat Fakültesi, Fizik Bölümü, Yalnızbağ Kampüsü Erzincan/Türkiye.

International Researcher IDs

ScholarID: SO4cQIwAAAAJ

ORCID: 0000-0003-1491-0446

Publons / Web Of Science ResearcherID: E-6738-2016

ScopusID: 35221758100

Yoksis Researcher ID: 229544

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. **Combination of Measurements of the Top Quark Mass from Data Collected by the ATLAS and CMS Experiments at Formula Presented 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)
- II. **Search for Baryon Number Violation in Top Quark Production and Decay Using 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 Letters, vol.132, no.24, 2024 (SCI-Expanded)
- III. **Combined search for electroweak production of winos, binos, higgsinos, and sleptons 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.11, 2024 (SCI-Expanded)
- IV. **Nonresonant central exclusive production of charged-hadron pairs 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.109, no.11, 2024 (SCI-Expanded)
- V. **Search for stealth supersymmetry in final states with two photons, jets, and low missing transverse momentum in proton-proton collisions at Formula Presented**
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)
- VI. **Search for long-lived particles using displaced vertices and missing transverse momentum 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.109, no.11, 2024 (SCI-Expanded)
- VII. **Observation of the Formula Presented decay 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.109, no.11, 2024 (SCI-Expanded)

- VIII. **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)
- IX. **Search for pair production of scalar and vector leptoquarks decaying to muons and bottom quarks 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.109, no.11, 2024 (SCI-Expanded)
- X. **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)
- XI. **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)
- XII. **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)
- XIII. **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)
- XIV. **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)
- XV. **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)
- XVI. **Search for dark matter particles in $W+W^-$ events with transverse momentum imbalance 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.3, 2024 (SCI-Expanded)
- XVII. **Higher-order moments of the elliptic flow distribution in PbPb collisions at $s_{NN} = 5.02 \text{ TeV}$**
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.2, 2024 (SCI-Expanded)

- XVIII. **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)
- XIX. **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)
- XX. **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)
- XXI. **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)
- XXII. **Study of charm hadronization with prompt Λ_c^+ baryons in proton-proton and lead-lead 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.1, 2024 (SCI-Expanded)
- XXIII. **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)
- XXIV. **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)
- XXV. **Measurement of the production cross section for a W boson in association with a charm quark in proton-proton collisions at $\sqrt{s}=13$ 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)
- XXVI. **Measurement of the top quark mass using a profile likelihood approach with the lepton + jets final states in proton-proton collisions at $\sqrt{s}=13$ 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)
- XXVII. **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 $\sqrt{s}=13$ 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)
- XXVIII. **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)
- XXIX. **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)
- XXX. **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)
- XXXI. **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)
- XXXII. **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)
- XXXIII. **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)
- XXXIV. **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)
- XXXV. **Search for a vector-like quark $T' \rightarrow tH$ via the diphoton decay mode of the Higgs boson in proton-proton collisions at $\sqrt{s} = 13$ 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)
- XXXVI. **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)
- XXXVII. **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.
Physical Review Letters, vol.131, no.6, 2023 (SCI-Expanded)
- XXXVIII. **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.
Physical Review Letters, vol.131, no.5, 2023 (SCI-Expanded)

- XXXIX. **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.
European Physical Journal C, vol.83, no.8, 2023 (SCI-Expanded)
- XL. **Measurement of the electroweak production of Formula Presented in association with two jets 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.108, no.3, 2023 (SCI-Expanded)
- XLI. **Measurements of jet multiplicity and jet transverse momentum in multijet 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.
European Physical Journal C, vol.83, no.8, 2023 (SCI-Expanded)
- XLII. **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**
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.108, no.3, 2023 (SCI-Expanded)
- XLIII. **Constraints on anomalous Higgs boson couplings to vector bosons and fermions from the production of Higgs bosons using the $\tau\tau$ final state**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Physical Review D, vol.108, no.3, 2023 (SCI-Expanded)
- XLIV. **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.
Physical Review Letters, vol.131, no.4, 2023 (SCI-Expanded)
- XLV. **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.
Physical Review Letters, vol.131, no.4, 2023 (SCI-Expanded)
- XLVI. **Precision measurement of the Z boson invisible width in pp collisions at $s=13\text{TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Frühwirth R., Jeitler M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.842, 2023 (SCI-Expanded)
- XLVII. **Measurement of the $B_s \rightarrow \mu^+\mu^-$ decay properties and search for the $B^0 \rightarrow \mu^+\mu^-$ decay in proton-proton collisions at $s=13\text{TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Hussain P., Jeitler M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.842, 2023 (SCI-Expanded)
- XLVIII. **Search for nonresonant Higgs boson pair production in final state with two bottom quarks and two tau leptons in proton-proton collisions at $s=13\text{TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Hussain P., Jeitler M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.842, 2023 (SCI-Expanded)
- XLIX. **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**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle

- A., Frühwirth R., Jeitler M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.842, 2023 (SCI-Expanded)
- L. **Probing Heavy Majorana Neutrinos and the Weinberg Operator through Vector Boson Fusion Processes 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.1, 2023 (SCI-Expanded)
- LI. **CMS pythia 8 colour reconnection tunes based on underlying-event data**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Valle A. E. D., Frühwirth R., Jeitler M., et al.
European Physical Journal C, vol.83, no.7, 2023 (SCI-Expanded)
- LII. **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**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Physical Review D, vol.108, no.1, 2023 (SCI-Expanded)
- LIII. **Search for CP violating top quark couplings in pp collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Bergauer T., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., Lechner L., Liko D., et al.
Journal of High Energy Physics, vol.2023, no.7, 2023 (SCI-Expanded)
- LIV. **Search for CP violation in $t\bar{t}H$ and tH production in multilepton channels in proton-proton collisions at $\sqrt{s} = 13$ 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.7, 2023 (SCI-Expanded)
- LV. **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**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Valle A. E. D., Frühwirth R., Jeitler M., Krammer N., et al.
European Physical Journal C, vol.83, no.7, 2023 (SCI-Expanded)
- LVI. **Search for narrow resonances in the Formula Presented-tagged dijet mass spectrum 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., Frühwirth R., Jeitler M., et al.
Physical Review D, vol.108, no.1, 2023 (SCI-Expanded)
- LVII. **Observation of electroweak $W+W-$ pair production in association with two jets in proton-proton collisions at $s=13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Frühwirth R., Jeitler M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.841, 2023 (SCI-Expanded)
- LVIII. **Search for long-lived particles decaying to a pair of muons in proton-proton collisions at $\sqrt{s} = 13$ 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.5, 2023 (SCI-Expanded)
- LIX. **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**
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.6, 2023 (SCI-Expanded)

- LX. **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**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2023, no.5, 2023 (SCI-Expanded)
- LXI. **Search for CP violation using (Formula presented.) events in the lepton+jets channel in pp collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2023, no.6, 2023 (SCI-Expanded)
- LXII. **Search for top squarks in the four-body decay mode with single lepton final states in proton-proton collisions at $\sqrt{s} = 13$ 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.6, 2023 (SCI-Expanded)
- LXIII. **Observation of triple J/ψ meson production in proton-proton collisions**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Frühwirth R., Jeitler M., et al.
Nature Physics, vol.19, no.3, pp.338-350, 2023 (SCI-Expanded)
- LXIV. **Measurement of the Higgs boson width and evidence of its off-shell contributions to ZZ production**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Del Valle A. E., Frühwirth R., Jeitler M., et al.
Nature Physics, vol.18, no.11, pp.1329-1334, 2022 (SCI-Expanded)
- LXV. **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**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2022, no.9, 2022 (SCI-Expanded)
- LXVI. **Search for Higgs Boson Pair Production in the Four b Quark Final State in Proton-Proton Collisions at $s = 13$ TeV**
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 Letters, vol.129, no.8, 2022 (SCI-Expanded)
- LXVII. **Measurement of the Drell-Yan forward-backward asymmetry at high dilepton masses in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2022, no.8, 2022 (SCI-Expanded)
- LXVIII. **Search for Resonances Decaying to Three W Bosons in Proton-Proton Collisions at $s = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Del Valle A. E., Frühwirth R., Jeitler M., Krammer N., et al.
Physical Review Letters, vol.129, no.2, 2022 (SCI-Expanded)
- LXIX. **Probing Charm Quark Dynamics via Multiparticle Correlations in Pb-Pb Collisions at $s_{NN} = 5.02$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Del Valle A. E., Frühwirth R., Jeitler M., Krammer N., et al.
Physical Review Letters, vol.129, no.2, 2022 (SCI-Expanded)
- LXX. **Search for new physics in the lepton plus missing transverse momentum final state in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2022, no.7, 2022 (SCI-Expanded)

- LXXI. **Search for long-lived heavy neutral leptons with displaced vertices in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2022, no.7, 2022 (SCI-Expanded)
- LXXII. **Search for heavy resonances decaying to $Z(\nu\nu^*)V(q\bar{q}')$ in proton-proton collisions at $s = 13$ TeV**
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.106, no.1, 2022 (SCI-Expanded)
- LXXIII. **Measurement of the inclusive and differential WZ production cross sections, polarization angles, and triple gauge couplings in pp collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2022, no.7, 2022 (SCI-Expanded)
- LXXIV. **Identification of hadronic tau lepton decays using a deep neural network**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of Instrumentation, vol.17, no.7, 2022 (SCI-Expanded)
- LXXV. **Search for resonances decaying to three W bosons in the hadronic final state in proton-proton collisions at $s = 13$ TeV**
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.106, no.1, 2022 (SCI-Expanded)
- LXXVI. **Search for resonant production of strongly coupled dark matter in proton-proton collisions at 13 TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2022, no.6, 2022 (SCI-Expanded)
- LXXVII. **Search for charged-lepton flavor violation in top quark production and decay in pp collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2022, no.6, 2022 (SCI-Expanded)
- LXXVIII. **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**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2022, no.6, 2022 (SCI-Expanded)
- LXXIX. **Search for invisible decays of the Higgs boson produced via vector boson fusion in proton-proton collisions at $s = 13$ TeV**
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.105, no.9, 2022 (SCI-Expanded)
- LXXX. **Search for single production of a vector-like T quark decaying to a top quark and a Z boson in the final state with jets and missing transverse momentum at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2022, no.5, 2022 (SCI-Expanded)
- LXXXI. **Observation of $B^0 \rightarrow \psi(2S)K^0_S\pi^+\pi^-$ and $B^0_S \rightarrow \psi(2S)K^0_S$ decays**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Valle A. E. D., Frühwirth R., Jeitler M., et al.

European Physical Journal C, vol.82, no.5, 2022 (SCI-Expanded)

- LXXXII. **Search for heavy resonances decaying to a pair of Lorentz-boosted Higgs bosons in final states with leptons and a bottom quark pair at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2022, no.5, 2022 (SCI-Expanded)
- LXXXIII. **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**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2022, no.5, 2022 (SCI-Expanded)
- LXXXIV. **Search for higgsinos decaying to two Higgs bosons and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2022, no.5, 2022 (SCI-Expanded)
- LXXXV. **Search for a right-handed W boson and a heavy neutrino in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2022, no.4, 2022 (SCI-Expanded)
- LXXXVI. **Measurement of the inclusive $t\bar{t}$ production cross section in proton-proton collisions at $\sqrt{s} = 5.02$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2022, no.4, 2022 (SCI-Expanded)
- LXXXVII. **Search for a heavy resonance decaying into a top quark and a W boson in the lepton+jets final state at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2022, no.4, 2022 (SCI-Expanded)
- LXXXVIII. **Search for supersymmetry in final states with two or three soft leptons and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2022, no.4, 2022 (SCI-Expanded)
- LXXXIX. **Search for long-lived particles decaying into muon pairs in proton-proton collisions at $\sqrt{s} = 13$ TeV collected with a dedicated high-rate data stream**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2022, no.4, 2022 (SCI-Expanded)
- XC. **Precision measurement of the W boson decay branching fractions in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Del Valle A. E., Frühwirth R., Jeitler M., Krammer N., et al.
Physical Review D, vol.105, no.7, 2022 (SCI-Expanded)
- XCI. **Search for low-mass dilepton resonances in Higgs boson decays to four-lepton final states in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Valle A. E. D., Frühwirth R., Jeitler M., Krammer N., Lechner L., et al.
European Physical Journal C, vol.82, no.4, 2022 (SCI-Expanded)
- XCII. **Search for heavy resonances decaying to ZZ or ZW and axion-like particles mediating nonresonant**

ZZ or ZH production at $\sqrt{s} = 13$ TeV

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

Journal of High Energy Physics, vol.2022, no.4, 2022 (SCI-Expanded)

XCIII. Search for electroweak production of charginos and neutralinos in proton-proton collisions at $\sqrt{s} = 13$ TeV

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

Journal of High Energy Physics, vol.2022, no.4, 2022 (SCI-Expanded)

XCIV. Using Z Boson Events to Study Parton-Medium Interactions in Pb-Pb Collisions

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

Physical Review Letters, vol.128, no.12, 2022 (SCI-Expanded)

XCIV. Search for $W\gamma$ resonances in proton-proton collisions at $s=13$ TeV using hadronic decays of Lorentz-boosted W bosons

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

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.826, 2022 (SCI-Expanded)

XCVI. Measurement of $W\pm\gamma$ differential cross sections in proton-proton collisions at $s = 13$ TeV and effective field theory constraints

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

Physical Review D, vol.105, no.5, 2022 (SCI-Expanded)

XCVII. Search for long-lived particles produced in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV

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

Journal of High Energy Physics, vol.2022, no.3, 2022 (SCI-Expanded)

XCVIII. Study of dijet events with large rapidity separation in proton-proton collisions at $\sqrt{s} = 2.76$ TeV

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

Journal of High Energy Physics, vol.2022, no.3, 2022 (SCI-Expanded)

XCIX. A new calibration method for charm jet identification validated with proton-proton collision events at $\sqrt{s} = 13$ 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.

Journal of Instrumentation, vol.17, no.3, 2022 (SCI-Expanded)

C. Search for strongly interacting massive particles generating trackless jets in proton-proton collisions at $\sqrt{s}=13$ TeV

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

European Physical Journal C, vol.82, no.3, 2022 (SCI-Expanded)

CI. Measurement of the Inclusive and Differential Higgs Boson Production Cross Sections in the Decay Mode to a Pair of τ Leptons in pp Collisions at $s = 13$ TeV

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 Letters, vol.128, no.8, 2022 (SCI-Expanded)

CII. Fragmentation of jets containing a prompt J/ψ meson in PbPb and pp collisions at $s_{NN}=5.02$ TeV

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

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.825, 2022 (SCI-Expanded)

- CIII. **Search for long-lived particles decaying to leptons with large impact parameter 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.
European Physical Journal C, vol.82, no.2, 2022 (SCI-Expanded)
- CIV. **Measurement and QCD analysis of double-differential inclusive jet cross sections 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., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2022, no.2, 2022 (SCI-Expanded)
- CV. **Inclusive and differential cross section measurements of single top quark production in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13\text{TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.
Journal of High Energy Physics, vol.2022, no.2, 2022 (SCI-Expanded)
- CVI. **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 $s = 13\text{TeV}$**
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.105, no.3, 2022 (SCI-Expanded)
- CVII. **Evidence for X(3872) in Pb-Pb Collisions and Studies of its Prompt Production at $s_{NN} = 5.02\text{TeV}$**
Sirunyan A., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., Frühwirth R., et al.
Physical Review Letters, vol.128, no.3, 2022 (SCI-Expanded)
- CVIII. **Measurement of double-parton scattering in inclusive production of four jets with low transverse momentum in proton-proton collisions at $\sqrt{s} = 13\text{TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2022, no.1, 2022 (SCI-Expanded)
- CIX. **Study of quark and gluon jet substructure in Z+jet and dijet events from pp collisions**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2022, no.1, 2022 (SCI-Expanded)
- CX. **Search for Long-Lived Particles Decaying in the CMS End Cap Muon Detectors in Proton-Proton Collisions at $s = 13\text{TeV}$**
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 Letters, vol.127, no.26, 2021 (SCI-Expanded)
- CXI. **Measurement of the inclusive and differential $t\bar{t}\gamma$ cross sections in the single-lepton channel and EFT interpretation at $\sqrt{s} = 13\text{TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2021, no.12, 2021 (SCI-Expanded)
- CXII. **Search for a heavy resonance decaying to a top quark and a W boson at $\sqrt{s} = 13\text{TeV}$ in the fully hadronic final state**
Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., Lechner L., et al.
Journal of High Energy Physics, vol.2021, no.12, 2021 (SCI-Expanded)
- CXIII. **Probing effective field theory operators in the associated production of top quarks with a Z boson in multilepton final states at $\sqrt{s} = 13\text{TeV}$**
Tonon N., Aarup Petersen H., Aldaya Martin M., Asmuss P., Baxter S., Bayatmakou M., Behnke O., Bermúdez

Martínez A., Bhattacharya S., Bin Anuar A., et al.

Journal of High Energy Physics, vol.2021, no.12, 2021 (SCI-Expanded)

CXIV. Measurement of the top quark mass using events with a single reconstructed top quark in pp collisions at $\sqrt{s} = 13$ TeV

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

Journal of High Energy Physics, vol.2021, no.12, 2021 (SCI-Expanded)

CXV. Measurements of the Electroweak Diboson Production Cross Sections in Proton-Proton Collisions at $s = 5.02$ TeV Using Leptonic Decays

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 Letters, vol.127, no.19, 2021 (SCI-Expanded)

CXVI. 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 ... A. TUMASYAN et al.

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.104, no.9, 2021 (SCI-Expanded)

CXVII. Observation of tW production in the single-lepton channel in pp collisions at $\sqrt{s} = 13$ TeV

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

Journal of High Energy Physics, vol.2021, no.11, 2021 (SCI-Expanded)

CXVIII. Search for new particles in events with energetic jets and large missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13$ TeV

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

Journal of High Energy Physics, vol.2021, no.11, 2021 (SCI-Expanded)

CXIX. Search for a heavy Higgs boson decaying into two lighter Higgs bosons in the $\tau\tau b\bar{b}$ final state at 13 TeV

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

Journal of High Energy Physics, vol.2021, no.11, 2021 (SCI-Expanded)

CXX. Measurement of prompt open-charm production cross sections in proton-proton collisions at $\sqrt{s} = 13$ TeV

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

Journal of High Energy Physics, vol.2021, no.11, 2021 (SCI-Expanded)

CXXI. 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

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

Journal of High Energy Physics, vol.2021, no.10, 2021 (SCI-Expanded)

CXXII. Study of Z boson plus jets events using variables sensitive to double-parton scattering in pp collisions at 13 TeV

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

Journal of High Energy Physics, vol.2021, no.10, 2021 (SCI-Expanded)

CXXIII. 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

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.104, no.7, 2021 (SCI-Expanded)
- CXXIV. **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**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., et al.
Journal of High Energy Physics, vol.2021, no.10, 2021 (SCI-Expanded)
- CXXV. **Observation of Forward Neutron Multiplicity Dependence of Dimuon Acoplanarity in Ultraperipheral Pb-Pb Collisions at $s_{NN} = 5.02$ 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.
Physical Review Letters, vol.127, no.12, 2021 (SCI-Expanded)
- CXXVI. **Search for W' bosons decaying to a top and a bottom quark at $s=13$ TeV in the hadronic 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.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.820, 2021 (SCI-Expanded)
- CXXVII. **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**
Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Escalante Del Valle A., Frühwirth R., Jeitler M., Krammer N., Lechner L., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.820, 2021 (SCI-Expanded)
- CXXVIII. **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.
Physical Review Letters, vol.127, no.10, 2021 (SCI-Expanded)
- CXXIX. **Search for long-lived particles decaying to jets with displaced vertices in proton-proton collisions at $s = 13$ 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.
Physical Review D, vol.104, no.5, 2021 (SCI-Expanded)
- CXXX. **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.
Physical Review D, vol.104, no.5, 2021 (SCI-Expanded)
- CXXXI. **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.
Physical Review D, vol.104, no.5, 2021 (SCI-Expanded)
- CXXXII. **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.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.819, 2021 (SCI-Expanded)
- CXXXIII. **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.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.819, 2021 (SCI-Expanded)
- CXXXIV. **Search for singly and pair-produced leptoquarks coupling to third-generation fermions 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.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.819, 2021 (SCI-Expanded)

CXXXV. 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.

Physical Review D, vol.104, no.3, 2021 (SCI-Expanded)

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

Physical Review D, vol.104, no.3, 2021 (SCI-Expanded)

CXXXVII. 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.

Physical Review D, vol.104, no.3, 2021 (SCI-Expanded)

CXXXVIII. 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.

Journal of Instrumentation, vol.16, no.7, 2021 (SCI-Expanded)

CXXXIX. Measurements of Higgs boson production cross sections and couplings in the diphoton decay channel at $\sqrt{s} = 13$ 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.

Journal of High Energy Physics, vol.2021, no.7, 2021 (SCI-Expanded)

CXL. Search for long-lived particles using displaced jets in proton-proton collisions at $s = 13$ 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.

Physical Review D, vol.104, no.1, 2021 (SCI-Expanded)

CXLI. Search for resonant and nonresonant new phenomena in high-mass dilepton final states at $\sqrt{s} = 13$ 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.

Journal of High Energy Physics, vol.2021, no.7, 2021 (SCI-Expanded)

CXLII. Measurement of the $W\gamma$ Production Cross Section in Proton-Proton Collisions at $s = 13$ TeV and Constraints on Effective Field Theory Coefficients

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

Physical Review Letters, vol.126, no.25, 2021 (SCI-Expanded)

CXLIII. Observation of a New Excited Beauty Strange Baryon Decaying to $\Xi_b^- \pi^+ \pi^-$

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

Physical Review Letters, vol.126, no.25, 2021 (SCI-Expanded)

CXLIV. 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

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

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.816, 2021 (SCI-Expanded)

CXLV. Measurement of the CP-violating phase ϕ_s in the $B_s^0 \rightarrow J/\psi\phi(1020) \rightarrow \mu^+ \mu^- K^+ K^-$ channel 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., Frühwirth R., Jeitler M., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.816, 2021 (SCI-Expanded)

- CXLVI. **Measurements of the differential cross sections of the production of $Z + \text{jets}$ and $\gamma + \text{jets}$ and of Z boson emission collinear with a jet in pp collisions at $\sqrt{s} = 13 \text{ TeV}$**

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

Journal of High Energy Physics, vol.2021, no.5, 2021 (SCI-Expanded)

- CXLVII. **Electron and photon reconstruction and identification with the CMS experiment at the CERN LHC**

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

Journal of Instrumentation, vol.16, no.5, 2021 (SCI-Expanded)

- CXLVIII. **First measurement of large area jet transverse momentum spectra in heavy-ion collisions**

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.2021, no.5, 2021 (SCI-Expanded)

- CXLIX. **Measurement of the Z boson differential production cross section using its invisible decay mode ($Z \rightarrow \nu\bar{\nu}$) in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$**

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

Journal of High Energy Physics, vol.2021, no.5, 2021 (SCI-Expanded)

- CL. **Study of Drell-Yan dimuon production in proton-lead collisions at $\sqrt{s_{NN}} = 8.16 \text{ TeV}$**

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

Journal of High Energy Physics, vol.2021, no.5, 2021 (SCI-Expanded)

- CLI. **Measurement of b jet shapes in proton-proton collisions at $\sqrt{s} = 5.02 \text{ TeV}$**

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

Journal of High Energy Physics, vol.2021, no.5, 2021 (SCI-Expanded)

- CLII. **Angular analysis of the decay $B^+ \rightarrow K^*(892)^+ \mu^+ \mu^-$ in proton-proton collisions at $\sqrt{s} = 8 \text{ TeV}$**

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

Journal of High Energy Physics, vol.2021, no.4, 2021 (SCI-Expanded)

- CLIII. **Measurement of differential cross sections for Z bosons produced in association with charm jets in pp collisions at $\sqrt{s} = 13 \text{ TeV}$**

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

Journal of High Energy Physics, vol.2021, no.4, 2021 (SCI-Expanded)

- CLIV. **Development and validation of HERWIG 7 tunes from CMS underlying-event measurements**

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

European Physical Journal C, vol.81, no.4, 2021 (SCI-Expanded)

- CLV. **Search for supersymmetry in final states with two oppositely charged same-flavor leptons and missing transverse momentum in proton-proton collisions at $\sqrt{s} = 13 \text{ TeV}$**

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

Journal of High Energy Physics, vol.2021, no.4, 2021 (SCI-Expanded)

- CLVI. **Measurement of differential $t\bar{t}$ production cross sections using top quarks at large transverse momenta in pp collisions at $s = 13 \text{ TeV}$ MEASUREMENT OF DIFFERENTIAL $t\bar{t}$... SIRUNYAN A. M. et al.**

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.103, no.5, 2021 (SCI-Expanded)

CLVII. **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**

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

Journal of High Energy Physics, vol.2021, no.3, 2021 (SCI-Expanded)

CLVIII. **Measurement of the inclusive and differential Higgs boson production cross sections in the leptonic WW decay mode 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.2021, no.3, 2021 (SCI-Expanded)

CLIX. **Search for dark photons in Higgs boson production via vector boson fusion in proton-proton collisions at $\sqrt{s} = 13$ 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.

Journal of High Energy Physics, vol.2021, no.3, 2021 (SCI-Expanded)

CLX. **Search for new physics in top quark production with additional leptons in proton-proton collisions at $\sqrt{s} = 13$ TeV using effective field theory**

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

Journal of High Energy Physics, vol.2021, no.3, 2021 (SCI-Expanded)

CLXI. **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**

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

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.812, 2021 (SCI-Expanded)

CLXII. **Evidence for electroweak production of four charged leptons and two jets 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.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.812, 2021 (SCI-Expanded)

CLXIII. **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., Ambrogi F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Frühwirth R., Jeitler M., et al.

Journal of High Energy Physics, vol.2021, no.1, 2021 (SCI-Expanded)

CLXIV. **Evidence for Higgs boson decay to a pair of muons**

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

Journal of High Energy Physics, vol.2021, no.1, 2021 (SCI-Expanded)

CLXV. **Observation of electroweak production of $W\gamma$ with two jets 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.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.811, 2020 (SCI-Expanded)

CLXVI. **Search for bottom-type, vectorlike quark pair production in a fully hadronic final state 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.

Physical Review D, vol.102, no.11, 2020 (SCI-Expanded)

CLXVII. **Inclusive search for highly boosted Higgs bosons decaying to bottom quark-antiquark pairs 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., Frühwirth R., Jeitler M., et al.

Journal of High Energy Physics, vol.2020, no.12, 2020 (SCI-Expanded)

CLXVIII. Dependence of inclusive jet production on the anti-kT distance parameter 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.

Journal of High Energy Physics, vol.2020, no.12, 2020 (SCI-Expanded)

CLXIX. Measurements of the W boson rapidity, helicity, double-differential cross sections, and charge asymmetry in pp 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)

CLXX. Evidence for Top Quark Production in Nucleus-Nucleus Collisions

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 Letters, vol.125, no.22, 2020 (SCI-Expanded)

CLXXI. Measurement of $B_c(2S)^+$ and $B_c^*(2S)^+$ cross section ratios 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)

CLXXII. Investigation into the event-activity dependence of $\Upsilon(nS)$ relative production in proton-proton collisions at $\sqrt{s} = 7$ 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.11, 2020 (SCI-Expanded)

CLXXIII. Search for decays of the 125 GeV Higgs boson into a Z boson and a ρ or ϕ meson

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

Journal of High Energy Physics, vol.2020, no.11, 2020 (SCI-Expanded)

CLXXIV. 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

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

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.809, 2020 (SCI-Expanded)

CLXXV. Observation of the $B_s^0 \rightarrow X(3872)\phi$ Decay

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 Letters, vol.125, no.15, 2020 (SCI-Expanded)

CLXXVI. Observation of the Production of Three Massive Gauge Bosons 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 Letters, vol.125, no.15, 2020 (SCI-Expanded)

CLXXVII. Measurement of CKM matrix elements in single top quark t-channel production in proton-proton collisions at $\sqrt{s} = 13$ TeV

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

PHYSICS LETTERS B, vol.808, 2020 (SCI-Expanded)

CLXXVIII. 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

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.

PHYSICS LETTERS B, vol.808, 2020 (SCI-Expanded)

CLXXIX. Search for supersymmetry in proton-proton collisions at $\sqrt{s} = 13$ TeV in events with high-momentum Z bosons and missing transverse momentum

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

Journal of High Energy Physics, vol.2020, no.9, 2020 (SCI-Expanded)

CLXXX. Search for resonant pair production of Higgs bosons in the bbZZ channel in proton-proton collisions at root s=13 TeV

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

PHYSICAL REVIEW D, vol.102, no.3, 2020 (SCI-Expanded)

CLXXXI. Combination of the W boson polarization measurements in top quark decays using ATLAS and CMS data at root s=8 TeV

Aad G., Abbott B., Abbott D. C., Abud A. A., Abeling K., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.8, 2020 (SCI-Expanded)

CLXXXII. 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 $\sqrt{s}=13$ 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.

European Physical Journal C, vol.80, no.8, 2020 (SCI-Expanded)

CLXXXIII. Search for a light pseudoscalar Higgs boson in the boosted mu mu tau tau final state in proton-proton collisions at root s=13 TeV

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

JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.8, 2020 (SCI-Expanded)

CLXXXIV. Measurement of the associated production of a Z boson with charm or bottom quark jets 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.102, no.3, 2020 (SCI-Expanded)

CLXXXV. Measurements of $(t\bar{t})$ Production and the CP Structure of the Yukawa Interaction between the Higgs Boson and Top Quark in the Diphoton Decay Channel

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

PHYSICAL REVIEW LETTERS, vol.125, no.6, 2020 (SCI-Expanded)

CLXXXVI. 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

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.

JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.7, 2020 (SCI-Expanded)

CLXXXVII. Measurement of quark- and gluon-like jet fractions using jet charge in PbPb and pp collisions at 5.02 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.7, 2020 (SCI-Expanded)

:LXXXVIII. Measurement of the cross section for $t(\bar{t})$ production with additional jets and b jets in pp collisions at root s=13TeV

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

JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.7, 2020 (SCI-Expanded)

CLXXXIX. **Search for disappearing tracks in proton-proton collisions at root s=13 TeV**

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

PHYSICS LETTERS B, vol.806, 2020 (SCI-Expanded)

CXC. **The production of isolated photons in PbPb and pp collisions at root s(NN)=5.02 TeV**

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

JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.7, 2020 (SCI-Expanded)

CXCI. **Search for dijet resonances using events with three jets in proton-proton collisions at root s=13 TeV**

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

PHYSICS LETTERS B, vol.805, 2020 (SCI-Expanded)

CXCII. **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., Ero J., Del Valle A. E., Flechl M., et al.

JOURNAL OF INSTRUMENTATION, vol.15, no.6, 2020 (SCI-Expanded)

CXCIII. **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**

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.

JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.6, 2020 (SCI-Expanded)

CXCIV. **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., Ero J., Del Valle A. E., Flechl M., et al.

JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.6, 2020 (SCI-Expanded)

CXCV. **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., Ero J., Del Valle A. E., Flechl M., et al.

PHYSICS LETTERS B, vol.805, 2020 (SCI-Expanded)

CXCVI. **Determination of the strong coupling constant alpha(S)(m(Z)) from measurements of inclusive W- +/- and Z boson production cross sections in proton-proton collisions at root s=7 and 8 TeV**

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

JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.6, 2020 (SCI-Expanded)

CXCVII. **Mixed higher-order anisotropic flow and nonlinear response coefficients of charged particles in PbPb collisions at sqrt(sNN)=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.

European Physical Journal C, vol.80, no.6, 2020 (SCI-Expanded)

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

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.804, 2020 (SCI-Expanded)

CXCIX. **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., Ero J., Del Valle A.

- E., Flechl M., et al.
 PHYSICAL REVIEW LETTERS, vol.124, no.20, 2020 (SCI-Expanded)
- CC. **Calibration of the CMS hadron calorimeters using proton-proton collision data at root s=13 TeV**
 Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Brandstetter J., Dragicevic M., Eroë J., Del Valle A. E., Flechl M., et al.
 JOURNAL OF INSTRUMENTATION, vol.15, no.5, 2020 (SCI-Expanded)
- CCI. **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**
 Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Brandstetter J., Dragicevic M., Eroë J., Del Valle A. E., Flechl M., et al.
 JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.5, 2020 (SCI-Expanded)
- CCII. **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., Ambrogio F., Bergauer T., Brandstetter J., Dragicevic M., Eroë J., Del Valle A. E., Flechl M., et al.
 JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.5, 2020 (SCI-Expanded)
- CCIII. **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., Ambrogio 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.5, 2020 (SCI-Expanded)
- CCIV. **Study of excited Λ_b^0 states decaying to $\Lambda_b^0 \pi^+ \pi^-$ in proton-proton collisions at s=13TeV**
 Sirunyan A., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., Frühwirth R., et al.
 Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.803, 2020 (SCI-Expanded)
- CCV. **Measurement of the $t\bar{t}b\bar{b}$ production cross section in the all-jet final state in pp collisions at s=13 TeV**
 Sirunyan A., Tumasyan A., Adam W., Ambrogio 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.803, 2020 (SCI-Expanded)
- CCVI. **Production of Λ_c + baryons in proton-proton and lead-lead collisions at s NN =5.02TeV**
 Sirunyan A., Tumasyan A., Adam W., Ambrogio 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.803, 2020 (SCI-Expanded)
- CCVII. **Running of the top quark mass from proton-proton collisions at s=13TeV**
 Sirunyan A., Tumasyan A., Adam W., Ambrogio 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.803, 2020 (SCI-Expanded)
- CCVIII. **Search for a Narrow Resonance Lighter than 200 GeV Decaying to a Pair of Muons in Proton-Proton Collisions at root s=13 TeV**
 Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Dragicevic M., Eroë J., Del Valle A. E., Flechl M., Frühwirth R., et al.
 PHYSICAL REVIEW LETTERS, vol.124, no.13, 2020 (SCI-Expanded)
- CCIX. **Measurement of properties of $B(s)(0)s \rightarrow \mu^+ \mu^-$ decays and search for $B^0 \rightarrow \mu^+ \mu^-$ with the CMS experiment**
 Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Brandstetter J., Dragicevic M., Eroë J., Del Valle A. E., Flechl M., et al.
 JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.4, 2020 (SCI-Expanded)
- CCX. **Search for heavy Higgs bosons decaying to a top quark pair in proton-proton collisions at root s=13 TeV**
 Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Brandstetter J., Dragicevic M., Eroë J., Del Valle A.

E., Flechl M., et al.

JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.4, 2020 (SCI-Expanded)

- CCXI. **Constraints on the $\chi(c1)$ versus $\chi(c2)$ Polarizations in Proton-Proton Collisions at $\sqrt{s}=8$ TeV**
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Dragicevic M., Ero J., Del Valle A. E., Flechl M., Fruehwirth R., et al.
PHYSICAL REVIEW LETTERS, vol.124, no.16, 2020 (SCI-Expanded)
- CCXII. **Observation of the $\Lambda b \rightarrow J/\psi \Lambda \phi$ decay in proton-proton collisions at $\sqrt{s}=13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., Fruehwirth R., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.802, 2020 (SCI-Expanded)
- CCXIII. **Search for dark matter particles produced in association with a Higgs boson in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogio 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.3, 2020 (SCI-Expanded)
- CCXIV. **Measurement of top quark pair production in association with a Z boson in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogio 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.3, 2020 (SCI-Expanded)
- CCXV. **Search for a heavy Higgs boson decaying to a pair of W bosons in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Sirunyan A., Tumasyan A., Adam W., Ambrogio 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.3, 2020 (SCI-Expanded)
- CCXVI. **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., Ambrogio 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.3, 2020 (SCI-Expanded)
- CCXVII. **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., Ambrogio F., Bergauer T., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., Fruehwirth R., et al.
Journal of High Energy Physics, vol.2020, no.3, 2020 (SCI-Expanded)
- CCXVIII. **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**
Sirunyan A., Tumasyan A., Adam W., Ambrogio 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.3, 2020 (SCI-Expanded)
- CCXIX. **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., Ambrogio 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.3, 2020 (SCI-Expanded)
- CCXX. **A search for the standard model Higgs boson decaying to charm quarks**
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Bergauer T., Dragicevic M., Ero J., Del Valle A. E., Flechl M., Fruehwirth R., et al.
JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.3, 2020 (SCI-Expanded)
- CCXXI. **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)
- CCXXII. **Combined search for supersymmetry with photons 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.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.801, 2020 (SCI-Expanded)
- CCXXIII. **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)
- CCXXIV. **Performance of the reconstruction and identification of high-momentum muons in proton-proton collisions at root $s=13$ TeV**
Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Dragicevic M., Eroe J., Del Valle A. E., Flechl M., Fruehwirth R., et al.
JOURNAL OF INSTRUMENTATION, vol.15, no.2, 2020 (SCI-Expanded)
- CCXXV. **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.
Journal of High Energy Physics, vol.2020, no.2, 2020 (SCI-Expanded)
- CCXXVI. **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)
- CCXXVII. **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.
Physical review letters, vol.124, no.4, pp.41803, 2020 (SCI-Expanded)
- CCXXVIII. **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)
- CCXXIX. **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)
- CCXXX. **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)
- CCXXXI. **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)

- CCXXXII. **Search for low mass vector resonances decaying into quark-antiquark pairs 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.
 Physical Review D, vol.100, no.11, 2019 (SCI-Expanded)
- CCXXXIII. **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.
 Physical Review Letters, vol.123, no.24, 2019 (SCI-Expanded)
- CCXXXIV. **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.
 Journal of High Energy Physics, vol.2019, no.12, 2019 (SCI-Expanded)
- CCXXXV. **Study of the $B \rightarrow J/\psi \Lambda^0 p$ 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)
- CCXXXVI. **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., Erö J., Escalante Del Valle A., Flechl M., et al.
 PHYSICAL REVIEW D, vol.100, no.11, 2019 (SCI-Expanded)
- CCXXXVII. **Combination of CMS searches for heavy resonances decaying to pairs of bosons or leptons**
 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.798, 2019 (SCI-Expanded)
- CCXXXVIII. **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 MEASUREMENT of the TOP QUARK YUKAWA COUPLING from ... SIRUNYAN et al.**
 Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.
 Physical Review D, vol.100, no.7, 2019 (SCI-Expanded)
- CCXXXIX. **Search for Higgs and Z boson decays to J/ψ or Y pairs in the four-muon final state 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.797, 2019 (SCI-Expanded)
- CCXL. **Search for long-lived particles using nonprompt jets and missing transverse momentum with 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.797, 2019 (SCI-Expanded)
- CCXLI. **Search for pair production of vectorlike quarks in the fully hadronic final state**
 Sirunyan A., Tumasyan A., Adam W., Ambrogi F., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Escalante Del Valle A., Flechl M., et al.
 Physical Review D, vol.100, no.7, 2019 (SCI-Expanded)
- CCXLII. **Search for resonances decaying to a pair of Higgs bosons in the $b\bar{b}q\bar{q}'\ell\nu$ final state 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.2019, no.10, 2019 (SCI-Expanded)

- CCXLIII. **Search for supersymmetry in proton-proton collisions at 13 TeV in final states with jets and missing transverse momentum**
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.10, 2019 (SCI-Expanded)
- CCXLIV. **Search for dark photons in decays of Higgs bosons produced in association with Z bosons 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.2019, no.10, 2019 (SCI-Expanded)
- CCXLV. **Search for vectorlike leptons in multilepton final states 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.
Physical Review D, vol.100, no.5, 2019 (SCI-Expanded)
- CCXLVI. **Search for the production of $W^\pm W^\pm W$ events 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.
Physical Review D, vol.100, no.1, 2019 (SCI-Expanded)
- CCXLVII. **Search for leptophobic Z' bosons decaying into four-lepton final states in proton-proton collisions at $s = 8$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.773, pp.563-584, 2017 (SCI-Expanded)
- CCXLVIII. **Measurement of the differential inclusive B^+ hadron cross sections in pp collisions at $s = 13$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.771, pp.435-456, 2017 (SCI-Expanded)
- CCXLIX. **Measurement of the mass difference between top quark and antiquark in pp collisions at $s = 8$ TeV**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.770, pp.50-71, 2017 (SCI-Expanded)
- CCL. **Measurement of electroweak-induced production of $W\gamma$ with two jets in pp collisions at $\sqrt{s} = 8$ TeV and constraints on anomalous quartic gauge couplings**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Journal of High Energy Physics, vol.2017, no.6, 2017 (SCI-Expanded)
- CCLI. **Search for narrow resonances in dilepton mass spectra in proton-proton collisions at $s = 13$ TeV and combination with 8 TeV data**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.768, pp.57-80, 2017 (SCI-Expanded)
- CCLII. **Search for electroweak production of charginos in final states with two τ leptons in pp collisions at $\sqrt{s} = 8$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Journal of High Energy Physics, vol.2017, no.4, 2017 (SCI-Expanded)
- CCLIII. **Measurement of the WZ production cross section in pp collisions at $s = 13$ TeV**

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.766, pp.268-290, 2017 (SCI-Expanded)

CCLIV. Measurements of differential cross sections for associated production of a W boson and jets in proton-proton collisions at $s = 8$ TeV

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.

Physical Review D, vol.95, no.5, 2017 (SCI-Expanded)

CCLV. Evidence for collectivity in pp collisions at the LHC

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.765, pp.193-220, 2017 (SCI-Expanded)

CCLVI. Search for anomalous Wtb couplings and flavour-changing neutral currents in t-channel single top quark production in pp collisions at $\sqrt{s}=7$ and 8 TeV

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.

Journal of High Energy Physics, vol.2017, no.2, 2017 (SCI-Expanded)

CCLVII. Search for supersymmetry in events with one lepton and multiple jets in proton-proton collisions at $s = 13$ TeV

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.

Physical Review D, vol.95, no.1, 2017 (SCI-Expanded)

CCLVIII. Search for R -parity violating supersymmetry with displaced vertices in proton-proton collisions at $s = 8$ TeV

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.

Physical Review D, vol.95, no.1, 2017 (SCI-Expanded)

CCLIX. Observation of the decay $B^+ \rightarrow \psi(2S)\phi(1020)K^+$ in pp collisions at $s=8$ TeV

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.764, pp.66-86, 2017 (SCI-Expanded)

CCLX. Inclusive search for supersymmetry using razor variables in pp collisions at $s = 13$ TeV

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.

Physical Review D, vol.95, no.1, 2017 (SCI-Expanded)

CCLXI. Measurement of the ZZ production cross section and $Z \rightarrow \ell + \ell - \ell' + \ell' -$ branching fraction in pp collisions at $s=13$ TeV

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.763, pp.280-303, 2016 (SCI-Expanded)

**CCLXII. Studies of inclusive four-jet production with two b -tagged jets in proton-proton collisions at 7 TeV
STUDIES of INCLUSIVE FOUR-JET PRODUCTION with ... V. KHACHATRYAN et al.**

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.

Physical Review D, vol.94, no.11, 2016 (SCI-Expanded)

CCLXIII. Measurement of the mass of the top quark in decays with a J/ψ meson in pp collisions at 8 TeV

The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter

- J., Brondolin E., Dragicevic M., et al.
Journal of High Energy Physics, vol.2016, no.12, 2016 (SCI-Expanded)
- CCLXIV. **Search for new physics in final states with two opposite-sign, same-flavor leptons, jets, and missing transverse momentum in pp collisions at $\sqrt{s} = 13$ TeV**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., et al.
Journal of High Energy Physics, vol.2016, no.12, 2016 (SCI-Expanded)
- CCLXV. **Search for dark matter in proton-proton collisions at 8 TeV with missing transverse momentum and vector boson tagged jets**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., et al.
Journal of High Energy Physics, vol.2016, no.12, 2016 (SCI-Expanded)
- CCLXVI. **Decomposing transverse momentum balance contributions for quenched jets in PbPb collisions at $\sqrt{s_{NN}}=2.76$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Journal of High Energy Physics, vol.2016, no.11, 2016 (SCI-Expanded)
- CCLXVII. **Search for new physics in same-sign dilepton events in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
European Physical Journal C, vol.76, no.8, 2016 (SCI-Expanded)
- CCLXVIII. **Search for Resonant Production of High-Mass Photon Pairs in Proton-Proton Collisions at $s = 8$ and 13 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physical Review Letters, vol.117, no.5, 2016 (SCI-Expanded)
- CCLXIX. **Search for pair-produced vectorlike B quarks in proton-proton collisions at $s = 8$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physical Review D, vol.93, no.11, 2016 (SCI-Expanded)
- CCLXX. **Measurement of the ratio $B(Bs_0 \rightarrow J/\psi f_0(980))/B(Bs_0 \rightarrow J/\psi \phi(1020))$ in pp collisions at $\sqrt{s}=7$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.756, pp.84-102, 2016 (SCI-Expanded)
- CCLXXI. **Search for new phenomena in monophoton final states in proton-proton collisions at $s=8$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.755, pp.102-124, 2016 (SCI-Expanded)
- CCLXXII. **Search for single production of scalar leptoquarks in proton-proton collisions at $s = 8$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physical Review D, vol.93, no.3, 2016 (SCI-Expanded)
- CCLXXIII. **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 (Formula presented) = 8 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Flechl M., et al.
Journal of High Energy Physics, vol.2016, no.2, pp.1-41, 2016 (SCI-Expanded)
- CCLXXIV. **Search for $W' \rightarrow tb$ in proton-proton collisions at $\sqrt{s} = 8$ TeV**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter

J., Brondolin E., Dragicevic M., et al.

Journal of High Energy Physics, vol.2016, no.2, pp.1-42, 2016 (SCI-Expanded)

- CCLXXV. **A search for pair production of new light bosons decaying into muons**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.752, pp.146-168, 2016 (SCI-Expanded)
- CCLXXVI. **Search for neutral MSSM Higgs bosons decaying to $\mu+\mu$ - in pp collisions at $\sqrt{s}=7$ and 8 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.752, pp.221-246, 2016 (SCI-Expanded)
- CCLXXVII. **Search for resonant $t t^-$ production in proton-proton collisions at $s = 8$ TeV SEARCH for RESONANT $t t^-$ PRODUCTION in ... V. KHACHATRYAN et al.**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physical Review D, vol.93, no.1, 2016 (SCI-Expanded)
- :CLXXVIII. **Search for long-lived charged particles in proton-proton collisions at $\sqrt{s} = 13$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physical Review D, vol.94, no.11, 2016 (SCI-Expanded)
- CCLXXIX. **Production of leading charged particles and leading charged-particle jets at small transverse momenta in pp collisions at $s = 8$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.92, no.11, 2015 (SCI-Expanded)
- CCLXXX. **Search for diphoton resonances in the mass range from 150 to 850 GeV in pp collisions at $s=8$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.750, pp.494-519, 2015 (SCI-Expanded)
- CCLXXXI. **Study of W boson production in pPb collisions at $s_{NN}=5.02$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.750, pp.565-586, 2015 (SCI-Expanded)
- CCLXXXII. **Angular coefficients of Z bosons produced in pp collisions at $s=8$ TeV and decaying to $\mu+\mu^-$ as a function of transverse momentum and rapidity**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.750, pp.154-175, 2015 (SCI-Expanded)
- :CLXXXIII. **Measurement of the differential cross section for top quark pair production in pp collisions at $\sqrt{s}=8$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
European Physical Journal C, vol.75, no.11, pp.1-39, 2015 (SCI-Expanded)
- :CLXXXIV. **Search for supersymmetry with photons in pp collisions at $s = 8$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.92, no.7, 2015 (SCI-Expanded)

- CCLXXXV. **Measurements of the $\Upsilon(1S)$, $\Upsilon(2S)$, and $\Upsilon(3S)$ differential cross sections in pp collisions at $\sqrt{s}=7\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.749, pp.14-34, 2015 (SCI-Expanded)
- :CLXXXVI. **Measurement of the Z boson differential cross section in transverse momentum and rapidity in proton–proton collisions at 8 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.749, pp.187-209, 2015 (SCI-Expanded)
- CLXXXVII. **Search for lepton-flavour-violating decays of the Higgs boson**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.749, pp.337-362, 2015 (SCI-Expanded)
- :LXXXVIII. **Search for resonant pair production of Higgs bosons decaying to two bottom quark-antiquark pairs in proton-proton collisions at 8 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.749, pp.560-582, 2015 (SCI-Expanded)
- :CLXXXIX. **Comparison of the $Z/\gamma^* + \text{jets}$ to $\gamma + \text{jets}$ cross sections in pp collisions at (Formula presented.) TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Journal of High Energy Physics, vol.2015, no.10, pp.1-46, 2015 (SCI-Expanded)
- CCXC. **Search for a Higgs boson in the mass range from 145 to 1000 GeV decaying to a pair of W or Z bosons**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., et al.
Journal of High Energy Physics, vol.2015, no.10, pp.1-52, 2015 (SCI-Expanded)
- CCXCI. **Measurements of the ZZ production cross sections in the $2l2\nu$ channel in proton–proton collisions at $\sqrt{s} = 7$ and 8 TeV and combined constraints on triple gauge couplings**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
European Physical Journal C, vol.75, no.10, pp.1-26, 2015 (SCI-Expanded)
- CCXCII. **Evidence for transverse-momentum- and pseudorapidity-dependent event-plane fluctuations in PbPb and p Pb collisions**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Dragicevic M., Erö J., Flechl M., et al.
Physical Review C - Nuclear Physics, vol.92, no.3, 2015 (SCI-Expanded)
- CCXCIII. **Search for a pseudoscalar boson decaying into a Z boson and the 125 GeV Higgs boson in $l+l-bb^-$ final states**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erö J., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.748, pp.221-243, 2015 (SCI-Expanded)
- CCXCIV. **Search for narrow high-mass resonances in proton–proton collisions at $\sqrt{s}=8$ TeV decaying to a Z and a Higgs boson**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R.,

- Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.748, pp.255-277, 2015 (SCI-Expanded)
- CCXCV. **Search for neutral color-octet weak-triplet scalar particles in proton-proton collisions at $\sqrt{s}=8\text{TeV}$**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., et al.
Journal of High Energy Physics, vol.2015, no.9, 2015 (SCI-Expanded)
- CCXCVI. **Performance of photon reconstruction and identification with the CMS detector in proton-proton collisions at $s = 8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Journal of Instrumentation, vol.10, no.8, 2015 (SCI-Expanded)
- CCXCVII. **Search for pair-produced resonances decaying to jet pairs in proton-proton collisions at $s=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.747, pp.98-119, 2015 (SCI-Expanded)
- CCXCVIII. **Constraints on the pMSSM, AMSB model and on other models from the search for long-lived charged particles in proton-proton collisions at $\sqrt{s} = 8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
European Physical Journal C, vol.75, no.7, 2015 (SCI-Expanded)
- CCXCIX. **Search for third-generation scalar leptoquarks in the $t\bar{t}$ channel in proton-proton collisions at $\sqrt{s}=8\text{TeV}$**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., et al.
Journal of High Energy Physics, vol.2015, no.7, 2015 (SCI-Expanded)
- CCC. **Constraints on the spin-parity and anomalous HVV couplings of the Higgs boson in proton collisions at 7 and 8 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.92, no.1, 2015 (SCI-Expanded)
- CCCI. **Measurement of diffractive dissociation cross sections in pp collisions at $s = 7\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.92, no.1, 2015 (SCI-Expanded)
- CCCII. **Distributions of topological observables in inclusive three- and four-jet events in pp collisions at $\sqrt{S}=7\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
European Physical Journal C, vol.75, no.7, 2015 (SCI-Expanded)
- CCCI. **Search for heavy Majorana neutrinos in $\mu\pm\mu\pm + \text{jets}$ events in proton-proton collisions at $s=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.748, pp.144-166, 2015 (SCI-Expanded)
- CCCIV. **Measurement of the cross section ratio $\sigma(t\bar{t}b\bar{b}^-)/\sigma(t\bar{t}jj)$ in pp collisions at $s=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.746, pp.132-153, 2015 (SCI-Expanded)

- CCCV. **Search for quark contact interactions and extra spatial dimensions using dijet angular distributions in proton-proton collisions at $s=8$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.746, pp.79-99, 2015 (SCI-Expanded)
- CCCVI. **Search for vector-like T quarks decaying to top quarks and Higgs bosons in the all-hadronic channel using jet substructure**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., et al.
Journal of High Energy Physics, vol.2015, no.6, 2015 (SCI-Expanded)
- CCCVII. **Evidence for Collective Multiparticle Correlations in p-Pb Collisions**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physical Review Letters, vol.115, no.1, 2015 (SCI-Expanded)
- CCCVIII. **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**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
European Physical Journal C, vol.75, no.6, 2015 (SCI-Expanded)
- CCCIX. **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**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
European Physical Journal C, vol.75, no.6, 2015 (SCI-Expanded)
- CCCX. **Observation of the rare $B^0 \rightarrow \mu^+ \mu^-$ decay from the combined analysis of CMS and LHCb data**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Nature, vol.522, no.7554, pp.68-72, 2015 (SCI-Expanded)
- CCCXI. **Searches for third-generation squark production in fully hadronic final states in proton-proton collisions at (Formula Presented.) TeV**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., et al.
Journal of High Energy Physics, vol.2015, no.6, 2015 (SCI-Expanded)
- CCCXII. **Search for the production of dark matter in association with top-quark pairs in the single-lepton final state in proton-proton collisions at $\sqrt{s}= 8$ TeV**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., et al.
Journal of High Energy Physics, vol.2015, no.6, 2015 (SCI-Expanded)
- CCCXIII. **Performance of electron reconstruction and selection with the CMS detector in proton-proton collisions at $\sqrt{s} = 8$ TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Journal of Instrumentation, vol.10, no.6, 2015 (SCI-Expanded)
- CCCXIV. **Study of final-state radiation in decays of Z bosons produced in pp collisions at 7 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.91, no.9, 2015 (SCI-Expanded)
- CCCXV. **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**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R.,

- Ghete V., et al.
European Physical Journal C, vol.75, no.5, 2015 (SCI-Expanded)
- CCCXVI. **Searches for supersymmetry using the MT2 variable in hadronic events produced in pp collisions at 8 TeV**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., et al.
Journal of High Energy Physics, vol.2015, no.5, 2015 (SCI-Expanded)
- CCCXVII. **Search for physics beyond the standard model in final states with a lepton and missing transverse energy in proton-proton collisions at s=8 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.91, no.9, 2015 (SCI-Expanded)
- CCCXVIII. **Searches for supersymmetry based on events with b jets and four W bosons in pp collisions at 8 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.745, pp.5-28, 2015 (SCI-Expanded)
- CCCXIX. **Measurement of J /ψ and ψ (2S) prompt double-differential cross sections in pp collisions at s =7TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physical Review Letters, vol.114, no.19, 2015 (SCI-Expanded)
- CCCXX. **Combined Measurement of the Higgs Boson Mass in pp Collisions at s =7 and 8 TeV with the ATLAS and CMS Experiments**
Aad G., Abbott B., Abdallah J., Abdinov O., Aben R., Abolins M., Abouzeid O., Abramowicz H., Abreu H., Abreu R., et al.
Physical Review Letters, vol.114, no.19, 2015 (SCI-Expanded)
- CCCXXI. **Search for a standard model-like Higgs boson in the μ+μ− and e+e− decay channels at the LHC**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.744, pp.184-207, 2015 (SCI-Expanded)
- CCCXXII. **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**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
European Physical Journal C, vol.75, no.5, pp.1-24, 2015 (SCI-Expanded)
- CCCXXIII. **Nuclear effects on the transverse momentum spectra of charged particles in pPb collisions at √sNN = 5.02 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
European Physical Journal C, vol.75, no.5, 2015 (SCI-Expanded)
- CCCXXIV. **Search for dark matter, extra dimensions, and unparticles in monojet events in proton-proton collisions at √s = 8 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
European Physical Journal C, vol.75, no.5, 2015 (SCI-Expanded)
- CCCXXV. **Search for stealth supersymmetry in events with jets, either photons or leptons, and low missing transverse momentum in pp collisions at 8 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.743, pp.503-525, 2015 (SCI-

Expanded)

- CCCXXVI. **Measurement of the $Z\gamma$ production cross section in pp collisions at 8 TeV and search for anomalous triple gauge boson couplings**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., et al.
Journal of High Energy Physics, vol.2015, no.4, 2015 (SCI-Expanded)
- CCCXXVII. **Search for physics beyond the standard model in dilepton mass spectra in proton-proton collisions at $\sqrt{s}=8\text{TeV}$**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Journal of High Energy Physics, vol.2015, no.4, pp.1-49, 2015 (SCI-Expanded)
- CCCXXVIII. **Search for decays of stopped long-lived particles produced in proton-proton collisions at $\sqrt{s}=8, \text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
European Physical Journal C, vol.75, no.4, pp.1-22, 2015 (SCI-Expanded)
- CCCXXIX. **Measurements of differential and double-differential Drell-Yan cross sections in proton-proton collisions at $\sqrt{s}=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
European Physical Journal C, vol.75, no.4, pp.1-27, 2015 (SCI-Expanded)
- CCCXXX. **Search for physics beyond the standard model in events with two leptons, jets, and missing transverse momentum in pp collisions at $\sqrt{s}=8\text{TeV}$**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., et al.
Journal of High Energy Physics, vol.2015, no.4, 2015 (SCI-Expanded)
- CCCXXXI. **Search for supersymmetry using razor variables in events with b -tagged jets in pp collisions at $s=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.91, no.5, 2015 (SCI-Expanded)
- CCCXXXII. **Search for long-lived particles that decay into final states containing two electrons or two muons in proton-proton collisions at $s=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.91, no.5, 2015 (SCI-Expanded)
- CCCXXXIII. **Search for resonances and quantum black holes using dijet mass spectra in proton-proton collisions at $s=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.91, no.5, 2015 (SCI-Expanded)
- CCCXXXIV. **Measurements of jet multiplicity and differential production cross sections of Z+jets events in proton-proton collisions at $s=7\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.91, no.5, 2015 (SCI-Expanded)
- CCCXXXV. **Search for monotop signatures in proton-proton collisions at $s=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physical Review Letters, vol.114, no.10, 2015 (SCI-Expanded)
- CCCXXXVI. **Long-range two-particle correlations of strange hadrons with charged particles in pPb and PbPb**

collisions at LHC energies

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.742, pp.200-224, 2015 (SCI-Expanded)

CCXXXVII. **Search for displaced supersymmetry in events with an electron and a muon with large impact parameters**

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.

Physical Review Letters, vol.114, no.6, 2015 (SCI-Expanded)

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

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.

Journal of Instrumentation, vol.10, no.2, 2015 (SCI-Expanded)

:CCXXXIX. **Differential cross section measurements for the production of a W boson in association with jets in proton-proton collisions at $s=7$ TeV**

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.741, pp.12-37, 2015 (SCI-Expanded)

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

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., Ghete V., et al.

Physical Review Letters, vol.114, no.5, 2015 (SCI-Expanded)

CCCXLI. **Search for long-lived neutral particles decaying to quark-antiquark pairs in proton-proton collisions at $s = 8$ TeV**

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.

Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.91, no.1, 2015 (SCI-Expanded)

CCCXLII. **Measurement of the W boson helicity in events with a single reconstructed top quark in pp collisions at $\sqrt{s} = 8$ TeV**

The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., et al.

Journal of High Energy Physics, vol.2015, no.1, 2015 (SCI-Expanded)

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

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.740, pp.250-272, 2015 (SCI-Expanded)

CCCXLIV. **Search for new resonances decaying via WZ to leptons in proton-proton collisions at $s=8$ TeV**

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.740, pp.83-104, 2015 (SCI-Expanded)

CCCXLV. **Measurement of the ratio of the production cross sections times branching fractions of $B_c \pm \rightarrow J/\psi \pi \pm$ and $B \pm \rightarrow J/\psi K \pm$ and (Formula presented.) in pp collisions at (Formula presented.) TeV**

The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.

Journal of High Energy Physics, vol.2015, no.1, 2015 (SCI-Expanded)

- CCCXLVI. **Study of Z production in PbPb and pp collisions at (Formula presented.) TeV in the dimuon and dielectron decay channels**
The CMS collaboration C., Chatrchyan S., Khachatryan V., Sirunyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Journal of High Energy Physics, vol.2015, no.3, 2015 (SCI-Expanded)
- CCCXLVII. **Measurement of the production cross section ratio $\sigma(\chi_{b2}(1P))/\sigma(\chi_{b1}(1P))$ in pp collisions at $s=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.743, pp.383-402, 2015 (SCI-Expanded)
- CCXLVIII. **Measurement of electroweak production of two jets in association with a Z boson in proton-proton collisions at $\sqrt{s}=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
European Physical Journal C, vol.75, no.2, 2015 (SCI-Expanded)
- CCCXLIX. **Search for disappearing tracks in proton-proton collisions at TeV.**
The CMS collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Friedl M., Frühwirth R., et al.
Journal of High Energy Physics, vol.2015, no.1, 2015 (SCI-Expanded)
- CCCL. **Measurement of prompt $\psi(2S)$ to J/ψ yield ratios in Pb-Pb and p - p collisions at $s_{NN} = 2.76\text{ TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physical Review Letters, vol.113, no.26, 2014 (SCI-Expanded)
- CCCLI. **Searches for heavy Higgs bosons in two-Higgs-doublet models and for $t \rightarrow ch$ decay using multilepton and diphoton final states in pp collisions at 8 TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.90, no.11, 2014 (SCI-Expanded)
- CCCLII. **Search for pair production of third-generation scalar leptoquarks and top squarks in proton-proton collisions at [Formula presented] TeV**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.739, pp.229-249, 2014 (SCI-Expanded)
- CCCLIII. **Measurement of the $t\bar{t}$ production cross section in pp collisions at $\sqrt{s}=8\text{ TeV}$ in dilepton final states containing one τ lepton**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.739, pp.23-43, 2014 (SCI-Expanded)
- CCCLIV. **Search for supersymmetry with razor variables in pp collisions at $s = 7\text{TeV}$**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.90, no.11, 2014 (SCI-Expanded)
- CCCLV. **CMS Collaboration**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Nuclear Physics A, vol.932, pp.595-620, 2014 (SCI-Expanded)
- CCCLVI. **Searches for electroweak neutralino and chargino production in channels with Higgs, Z, and W bosons in pp collisions at 8 TeV**

- Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.90, no.9, 2014 (SCI-Expanded)
- CCCLVII. **Measurement of differential cross sections for the production of a pair of isolated photons in pp collisions at $s=7\text{TeV}$**
CMS Collaboration C., Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., et al.
European Physical Journal C, vol.74, no.11, pp.1-30, 2014 (SCI-Expanded)
- CCCLVIII. **Search for heavy neutrinos and W bosons with right-handed couplings in proton–proton collisions at (Formula presented.)**
CMS Collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
European Physical Journal C, vol.74, no.11, 2014 (SCI-Expanded)
- CCCLIX. **CMS Collaboration**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Nuclear Physics A, vol.931, pp.1241-1265, 2014 (SCI-Expanded)
- CCCLX. **Observation of the diphoton decay of the Higgs boson and measurement of its properties**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
European Physical Journal C, vol.74, no.10, pp.1-49, 2014 (SCI-Expanded)
- CCCLXI. **Measurement of pseudorapidity distributions of charged particles in proton–proton collisions at (Equation Present) TeV by the CMS and TOTEM experiments**
The CMS and TOTEM Collaborations C., Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., et al.
European Physical Journal C, vol.74, no.10, pp.1-26, 2014 (SCI-Expanded)
- CCCLXII. **Measurement of the ratio of inclusive jet cross sections using the anti- k_T algorithm with radius parameters $R=0.5$ and 0.7 in pp collisions at $s=7\text{TeV}$**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.90, no.7, 2014 (SCI-Expanded)
- CCCLXIII. **Evidence of b -jet quenching in PbPb collisions at $s_{NN}=2.76\text{TeV}$**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Physical Review Letters, vol.113, no.13, 2014 (SCI-Expanded)
- CCCLXIV. **Constraints on the Higgs boson width from off-shell production and decay to Z-boson pairs**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.736, pp.64-85, 2014 (SCI-Expanded)
- CCCLXV. **Measurement of the ratio $B(t\rightarrow Wb)/B(t\rightarrow Wq)$ in pp collisions at $s=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.736, pp.33-57, 2014 (SCI-Expanded)
- CCCLXVI. **Search for top-squark pairs decaying into Higgs or Z bosons in pp collisions at $\sqrt{s}=8\text{TeV}$**
Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.736, pp.371-397, 2014 (SCI-Expanded)
- CCCLXVII. **Measurement of top quark–antiquark pair production in association with a W or Z boson in pp**

collisions at $\sqrt{s} = 8$ TeV

The CMS Collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.

European Physical Journal C, vol.74, no.9, 2014 (SCI-Expanded)

:CCLXVIII. Searches for electroweak production of charginos, neutralinos, and sleptons decaying to leptons and W, Z, and Higgs bosons in pp collisions at 8 TeV

The CMS Collaboration C., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.

European Physical Journal C, vol.74, no.9, 2014 (SCI-Expanded)

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

Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.

Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.90, no.3, 2014 (SCI-Expanded)

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

Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.

Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.90, no.3, 2014 (SCI-Expanded)

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

Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.

Physical Review C - Nuclear Physics, vol.90, no.2, 2014 (SCI-Expanded)

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

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.

Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.90, no.3, 2014 (SCI-Expanded)

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

Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.

Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.90, no.3, 2014 (SCI-Expanded)

:CCLXXIV. Measurement of WZ and ZZ production in pp collisions at (Formula presented.) in final states with b-tagged jets

Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.

European Physical Journal C, vol.74, no.8, pp.1-22, 2014 (SCI-Expanded)

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

Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.

European Physical Journal C, vol.74, no.8, pp.1-35, 2014 (SCI-Expanded)

:CCLXXVI. Measurement of jet multiplicity distributions in (Formula presented.) production in pp collisions at (Formula presented.)

Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.

European Physical Journal C, vol.74, no.8, pp.1-29, 2014 (SCI-Expanded)

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

Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.735, pp.204-225, 2014 (SCI-

Expanded)

- :CLXXVIII. **Studies of dijet transverse momentum balance and pseudorapidity distributions in pPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
European Physical Journal C, vol.74, no.7, 2014 (SCI-Expanded)
- :CCLXXIX. **Observation of a peaking structure in the $J/\psi\phi$ mass spectrum from $B_{\pm} \rightarrow J/\psi\phi K_{\pm}$ decays**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.734, pp.261-281, 2014 (SCI-Expanded)
- CCCLXXX. **Observation of the associated production of a single top quark -and a W boson in pp collisions at $s = 8$ TeV**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Physical Review Letters, vol.112, no.23, 2014 (SCI-Expanded)
- :CCLXXXI. **Alignment of the CMS tracker with LHC and cosmic ray data**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Journal of Instrumentation, vol.9, no.6, 2014 (SCI-Expanded)
- CCLXXXII. **Measurement of four-jet production in proton-proton collisions at $s = 7$ TeV**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.89, no.9, 2014 (SCI-Expanded)
- :CLXXXIII. **Measurement of inclusive W and Z boson production cross sections in pp collisions at $s = 8$ TeV**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Physical Review Letters, vol.112, no.19, 2014 (SCI-Expanded)
- :CLXXXIV. **Measurement of the properties of a Higgs boson in the four-lepton final state**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.89, no.9, 2014 (SCI-Expanded)
- CCLXXXV. **Measurement of the $W\gamma$ and $Z\gamma$ inclusive cross sections in pp collisions at $s = 7$ TeV and limits on anomalous triple gauge boson couplings**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Physical Review D - Particles, Fields, Gravitation and Cosmology, vol.89, no.9, 2014 (SCI-Expanded)
- :CLXXXVI. **Measurements of $t\bar{t}$ spin correlations and top-quark polarization using dilepton final states in pp collisions at $s = 7$ TeV**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Physical Review Letters, vol.112, no.18, 2014 (SCI-Expanded)
- CLXXXVII. **Search for new physics in the multijet and missing transverse momentum final state in proton-proton collisions at $\sqrt{s} = 8$ TeV**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
Journal of High Energy Physics, vol.2014, no.6, 2014 (SCI-Expanded)
- :LXXXVIII. **Study of the production of charged pions, kaons, and protons in pPb collisions at $\sqrt{s_{NN}} = 5.02$ TeV**
Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., et al.
European Physical Journal C, vol.74, no.6, pp.1-27, 2014 (SCI-Expanded)

13LXXXIX. **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**

Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Erö J., Fabjan C., Friedl M., Frühwirth R., et al.

Journal of High Energy Physics, vol.2014, no.6, 2014 (SCI-Expanded)

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

Chatrchyan S., Khachatryan V., Sirunyan A., Tumasyan A., Adam W., Aguilo E., Bergauer T., Dragicevic M., Erö J., Fabjan C., et al.

Physical Review Letters, vol.111, no.8, 2013 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- 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 pb¹ 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

Metrics

Publication: 391

Citation (WoS): 274

Citation (Scopus): 15148

H-Index (WoS): 5

H-Index (Scopus): 65

Non Academic Experience

RWTH Aachen Üniversitesi

RWTH Aachen Üniversitesi