

Prof. EDA EŐKUT

Personal Information

Email: eeskut@cu.edu.tr

Web: <https://avesis.cu.edu.tr//eeskut>

Address: ukurova niversitesi, Fen-Edebiyat Fakltesi, Fizik Blm Sarıam-ADANA

International Researcher IDs

ORCID: 0000-0001-8328-3314

Publons / Web Of Science ResearcherID: B-8905-2018

ScopusID: 6602158406

Yoksis Researcher ID: 4571

Education Information

Doctorate, Cukurova University, Fen Bilimleri Enstits, Fizik, Turkey 1987 - 1992

Postgraduate, Cukurova University, Fen Bilimleri Enstits, Fizik, Turkey 1983 - 1986

Undergraduate, Cukurova University, Fen Edebiyat Fakltesi, Fizik, Turkey 1979 - 1983

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Production of Secondaries at Supercollider Energies , Cukurova University, Fizik, Yksek Enerji FiziĐi, 1992

Postgraduate, Yksek Enerjili Elastik Hadronik Saılma ile İlgili Deneysel Veriler ve Fenomenoloji , Cukurova University, Fizik, Fizik/Yksek Enerji FiziĐi, 1986

Research Areas

Physics, Basic Particles and Areas, Natural Sciences

Academic Titles / Tasks

Professor, Cukurova University, Fen-Edebiyat Fakltesi, Fizik, 2001 - Continues

Associate Professor, Cukurova University, Fen-Edebiyat Fakltesi, Fizik, 1995 - 2001

Assistant Professor, Cukurova University, Fen-Edebiyat Fakltesi, Fizik, 1993 - 1995

Research Assistant, Cukurova University, Fen-Edebiyat Fakltesi, Fizik, 1984 - 1993

Academic and Administrative Experience

Cukurova University, Fizik, Fizik, 2010 - Continues

Cukurova University, Fizik, Fizik, 2003 - 2006

Cukurova University, Fen Edebiyat Fakültesi, 2002 - 2005

Advising Theses

- Eşkut E., 13 TeV'lik pp Çarpışmalarında Enerji Akışının CMS Deneyi ile Ölçülmesi, Doctorate, E.PINAR(Student), 2023
- Eşkut E., İleri hadronik kalorimetre (HF)'in LED'lerinde gözlenen tekleme problemi, Postgraduate, B.KAPLAN(Student), 2022
- Eşkut E., DETERMINATION OF THE JET ENERGY SCALE CORRECTIONS FOR THE LOW PT JETS IN PROTON-PROTON COLLISIONS AT $\sqrt{s}= 13$ TeV WITH THE CMS EXPERIMENT, Doctorate, Z.Şeyma(Student), 2020
- Eşkut E., İLERİ BÖLGE JETLERİ İÇİN BELİRLENEN JET ENERJİ DÜZELTME FAKTÖRLERİNİN TESTİ, Postgraduate, A.ŞAHİN(Student), 2020
- Eşkut E., CMS DEDEKTÖRÜNÜN HB KALORİMETRESİNDE YENİLENEN KALİBRASYON BİRİMLERİNİN LAZER TESTLERİ ANALİZİ, Postgraduate, B.Tuğçe(Student), 2020
- EŞKUT E., Measurement of Energy Density as a Function of Pseudorapidity in proto-proton Collisions at 13 TeV with the CMS Experiment LHC, Doctorate, Ç.Zorbilmez(Student), 2019
- EŞKUT E., Hadronik İleri Kalorimetre (HF)'de Kullanılan QIE10 Kartlarının Pedestal,CAPID, ICI Testleri, Postgraduate, İ.Baldan(Student), 2017
- EŞKUT E., Measurements of Inclusive Low-PT Jets Cross-Section and Azimuthal Angle Decorrelation of Jets with Large Rapidity Separation Using Run I CMS Data, Doctorate, İ.Hoş(Student), 2016
- EŞKUT E., Inclusive Forward Jet Cross Section Measurement in Proton-Proton Collisions at $\sqrt{s}=7$ TeV, Doctorate, S.Girgis(Student), 2014
- EŞKUT E., İleri Hadronik Kalorimetre (HF)'de Kullanılacak olan Yeni Foto Çoğaltıcı Tüp (FÇT)'lerin Testleri ve Farklı Jet Algoritmalarında ve Jet Tiplerinde Jet Analizi, Postgraduate, F.Hayal(Student), 2013
- EŞKUT E., CMS Deneyindeki HB ve HE Kalorimetresindeki HFD'lerin Gürültü Analizleri ve HO Test Düzenindeki SiFÇ'lerin Self Trigger Analizi, Postgraduate, Z.Şeyma(Student), 2013
- EŞKUT E., CMS'deki Hadronik Dış Kalorimetre (HO) için HO904 Kararlılık Testlerinde LED Analizi, Postgraduate, M.Özcan(Student), 2013
- EŞKUT E., CMS'deki ZDC Dedektörü İçim Akım Ayırıcı Devre, Postgraduate, Ç.Zorbilmez(Student), 2012
- EŞKUT E., CMS'in HF Detektöründeki FÇT(Foto Çoğaltıcı Tüp)'lerin Yüksek Voltaj Altındaki Davranışlarının İncelenmesi (, Postgraduate, E.Pnar(Student), 2009
- EŞKUT E., Performance Improvement of an AGATA Segmented Germanium Detector, Doctorate, S.Aydın(Student), 2009
- EŞKUT E., Low-x QCD with Jets in the CMS Hadron Forward Calorimeter in Proton-Proton Collisions at 14 TeV and Test Studies of Forward Calorimeters, Doctorate, S.Çerçi(Student), 2009
- EŞKUT E., CMS CASTOR Detektöründe Kullanılan Kuvartz Plakaların Ütülmesi ve Dedektöre Montajı, Postgraduate, A.Ayhan(Student), 2009
- EŞKUT E., ATLAS MDT'leri için hodoskop sistemi, Postgraduate, H.Şahiner(Student), 2007
- EŞKUT E., CMS (Compact Muon Solenoid) Deneyindeki CASTOR Detektörünün Test Veri Analizleri, Postgraduate, N.Aksay(Student), 2006
- EŞKUT E., Study of the Response of the CMS Hadron Calorimeter, Doctorate, S.Esen(Student), 2006
- EŞKUT E., 12C+12C ve 16O+16O nükleer reaksiyonlarının esnek ve esnek olmayan etkileşmelerinin yeni çiftlenim potansiyeli kullanılarak incelenmesi, Postgraduate, S.Aydın(Student), 2004
- EŞKUT E., CMS Deneyinde CP Kırınımı, Postgraduate, S.Çerçi(Student), 2003
- EŞKUT E., Nötrino Fiziğinde Son Gelişmeler, Postgraduate, H.Topaklı(Student), 2003
- EŞKUT E., CMS Deneyinde Araştırılacak Fizik Konuları, Postgraduate, S.Esen(Student), 2001
- EŞKUT E., CMS (Compact Muon Solenoid) Deneyinde Kullanılacak Olan VFCAL (En İleri Kalorimetre)'in Enerji Lineerliliği, Postgraduate, S.Sancar(Student), 2000
- EŞKUT E., Güneşsel ve Atmosferik Nötrino Problemleri, Postgraduate, H.Öztürk(Student), 1997

Jury Memberships

Associate Professor Exam, Doçentlik sınavında jüri üyesi, Ankara Üniversitesi, March, 2017
Associate Professor Exam, Doçentlik sınavı, Eskişehir Üniversitesi, April, 2015
Associate Professor Exam, Doçentlik Sınav Jürisi, ÜAK/Boğaziçi Üniv., June, 2014
Associate Professor Exam, Doçentlik Sınav Jürisi, ÜAK/Boğaziçi Üniv., October, 2013
Associate Professor Exam, Doçentlik Sınav Jürisi, ÜAK/Ankara TOBB Univ., July, 2012
Associate Professor Exam, Doçentlik Sınav Jürisi, ÜAK/Çukurova Üniv., April, 2010

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Searches for Pair-Produced Multijet Resonances Using Data Scouting in Proton-Proton Collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical review letters, vol.133, no.20, pp.201803, 2024 (SCI-Expanded)
- II. **Search for Soft Unclustered Energy Patterns in Proton-Proton Collisions at 13 TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical review letters, vol.133, no.19, pp.191902, 2024 (SCI-Expanded)
- III. **Measurement of the polarizations of prompt and non-prompt [Formula presented] and $\psi(2S)$ mesons produced in pp collisions at $s=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.858, 2024 (SCI-Expanded)
- IV. **Observation of double Formula Presented meson production in Formula Presented collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.110, no.9, 2024 (SCI-Expanded)
- V. **Performance of the CMS high-level trigger during LHC Run 2**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Benato L., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., et al.
Journal of Instrumentation, vol.19, no.11, 2024 (SCI-Expanded)
- VI. **Search for the Z Boson Decay to $\tau\tau\mu\mu$ in Proton-Proton Collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical review letters, vol.133, no.16, pp.161805, 2024 (SCI-Expanded)
- VII. **Observation of Enhanced Long-Range Elliptic Anisotropies Inside High-Multiplicity Jets in pp Collisions at $\sqrt{s}=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical review letters, vol.133, no.14, pp.142301, 2024 (SCI-Expanded)
- VIII. **Measurement of the $B_s^0 \rightarrow J/\psi K_S^0$ effective lifetime from proton-proton collisions at $s = 13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.10, 2024 (SCI-Expanded)
- IX. **K_S^0 and $\Lambda(\Lambda^-)$ two-particle femtoscopic correlations in PbPb collisions at $s_{NN}=5.02$ TeV**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.857, 2024 (SCI-Expanded)

- X. **Measurement of the production cross section of a Higgs boson with large transverse momentum in its decays to a pair of τ leptons 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.857, 2024 (SCI-Expanded)
- XI. **Observation of the $\Lambda b^0 \rightarrow J/\psi \Xi^- K^+$ decay**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Valle A. E. D., Hussain P., et al.
European Physical Journal C, vol.84, no.10, 2024 (SCI-Expanded)
- XII. **Searches for violation of Lorentz invariance in top quark pair production using dilepton events in 13 TeV proton-proton collisions**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.857, 2024 (SCI-Expanded)
- XIII. **Search for production of a single vectorlike quark decaying to tH or tZ in the all-hadronic final state in pp collisions at [Formula presented]**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.110, no.7, 2024 (SCI-Expanded)
- XIV. **Measurement of differential ZZ + jets production cross sections in pp 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.10, 2024 (SCI-Expanded)
- XV. **Search for Higgs boson pair production with one associated vector boson 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.10, 2024 (SCI-Expanded)
- XVI. **Search for a resonance decaying to a W boson and a photon in proton-proton collisions at $s = 13\text{TeV}$ using leptonic W boson decays**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.9, 2024 (SCI-Expanded)
- XVII. **Performance of the CMS electromagnetic calorimeter in pp collisions at $\sqrt{s} = 13\text{TeV}$**
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 Instrumentation, vol.19, no.9, 2024 (SCI-Expanded)
- XVIII. **Performance of CMS muon reconstruction from proton-proton to heavy ion collisions**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of Instrumentation, vol.19, no.9, 2024 (SCI-Expanded)
- XIX. **Measurement of Energy Correlators inside Jets and Determination of the Strong Coupling Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review Letters, vol.133, no.7, 2024 (SCI-Expanded)
- XX. **Search for new physics in high-mass diphoton events from proton-proton collisions at $s = 13\text{TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.8, 2024 (SCI-Expanded)

- XXI. **Measurement of multijet azimuthal correlations and determination of the strong coupling in proton-proton collisions at $s=13\text{TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
European Physical Journal C, vol.84, no.8, 2024 (SCI-Expanded)
- XXII. **Constraints on anomalous Higgs boson couplings from its production and decay using the WW channel in proton-proton collisions at $s=13\text{TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
European Physical Journal C, vol.84, no.8, 2024 (SCI-Expanded)
- XXIII. **Search for long-lived particles decaying in the CMS muon detectors in proton-proton collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.110, no.3, 2024 (SCI-Expanded)
- XXIV. **Evidence for tWZ production in proton-proton collisions at $s=13\text{ TeV}$ in multilepton final states**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.855, 2024 (SCI-Expanded)
- XXV. **Observation of the Formula Presented Meson and Suppression of Formula Presented States in Pb-Pb Collisions at Formula Presented**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Physical Review Letters, vol.133, no.2, 2024 (SCI-Expanded)
- XXVI. **Search for Narrow Trijet Resonances in Proton-Proton Collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Physical Review Letters, vol.133, no.1, 2024 (SCI-Expanded)
- XXVII. **Search for high-mass exclusive diphoton production with tagged protons in proton-proton collisions at Formula Presented**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Physical Review D, vol.110, no.1, 2024 (SCI-Expanded)
- XXVIII. **Search for a scalar or pseudoscalar dilepton resonance produced in association with a massive vector boson or top quark-antiquark pair in multilepton events at $\sqrt{s}=13\text{ TeV}$**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Physical Review D, vol.110, no.1, 2024 (SCI-Expanded)
- XXIX. **Search for long-lived heavy neutral leptons decaying in the CMS muon detectors in proton-proton collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.110, no.1, 2024 (SCI-Expanded)
- XXX. **Observation of the Formula Presented decay and studies of the Formula Presented baryon in proton-proton collisions at Formula Presented**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physical Review D, vol.110, no.1, 2024 (SCI-Expanded)
- XXXI. **Extracting the speed of sound in quark-gluon plasma with ultrarelativistic lead-lead collisions at the LHC**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M.,

- Hussain P., Jeitler M., et al.
Reports on Progress in Physics, vol.87, no.7, 2024 (SCI-Expanded)
- XXXII. **Search for dark QCD with emerging jets in proton-proton collisions at $s = 13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.7, 2024 (SCI-Expanded)
- XXXIII. **Search for ZZ and ZH production in the $bb\bar{b}\bar{b}$ final state using proton-proton collisions at $s=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
European Physical Journal C, vol.84, no.7, 2024 (SCI-Expanded)
- XXXIV. **Combination of Measurements of the Top Quark Mass from Data Collected by the ATLAS and CMS Experiments at $\sqrt{s}=7$ 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)
- XXXV. **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)
- XXXVI. **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)
- XXXVII. **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)
- XXXVIII. **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)
- XXXIX. **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)
- XL. **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)
- XLI. **Search for the lepton flavor violating $\tau \rightarrow 3\mu$ decay in proton-proton collisions at $s=13$ TeV**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.853, 2024 (SCI-Expanded)
- XLII. **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)
- XLIII. **Search for an exotic decay of the Higgs boson into a Z boson and a pseudoscalar particle 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.
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.852, 2024 (SCI-Expanded)
- XLIV. **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)
- XLV. **Search for a new resonance decaying into two spin-0 bosons in a final state with two photons and two bottom quarks in proton-proton collisions at (Formula presented.)**
Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.5, 2024 (SCI-Expanded)
- XLVI. **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)
- XLVII. **Search for W' bosons decaying to a top and a bottom quark in leptonic final states in proton-proton collisions at $s = 13 \text{ TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Journal of High Energy Physics, vol.2024, no.5, 2024 (SCI-Expanded)
- XLVIII. **Search for long-lived particles decaying to final states with a pair of muons in proton-proton collisions at $s = 13.6 \text{ TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Hussain P., Jeitler M., et al.
Journal of High Energy Physics, vol.2024, no.5, 2024 (SCI-Expanded)
- XLIX. **Measurement of the primary Lund jet plane density in proton-proton collisions at $s = 13 \text{ TeV}$**
Hayrapetyan A., Tumasyan A., Adam W., Andrejkovic J., Bergauer T., Chatterjee S., Damanakis K., Dragicevic M., Escalante Del Valle A., Hussain P., et al.
Journal of High Energy Physics, vol.2024, no.5, 2024 (SCI-Expanded)
- L. **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.
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- LI. **Inclusive and differential cross section measurements of $t\bar{t}b\bar{b}$ production in the lepton+jets channel at $s = 13 \text{ TeV}$**
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