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Education Information

Doctorate, Ankara University, Fen Bilimleri Enstitüsü, Fizik (Dr), Turkey 2006 - 2012

Postgraduate, Ankara University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), Turkey 2003 - 2006

Undergraduate, Dokuz Eylül University, Fen Fakültesi, Fizik Bölümü, Turkey 1998 - 2003

Dissertations

Doctorate, Büyük hadron çarpıştırıcısında üçüncü aile sfermyonlarının üretimi, Ankara University, Fen Bilimleri Enstitüsü, Fizik (Dr), 2012

Postgraduate, Üst kuarkın FCNC üretimi, Ankara University, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli), 2005

Courses

Fizik II - FIZ108, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015

SAYISAL HESAPLAMA YÖNTEMLERİ VE SAĞLIK FİZİĞİ UYGULAMALARI, Postgraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017

Fizik I - FIZ 107, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016

Advising Theses

KUDAY S., Beyin tümörü radyoterapisinde saha dışı dozların gate simülasyonları yoluyla yüksek kesinlikli ölçümü, Postgraduate, M.SÖNMEZ(Student), 2021

KUDAY S., MR Distorsiyonunun SRS planlarına etkisi, Postgraduate, D.SENA(Student), 2020

KUDAY S., Medikal görüntüleme gate simülasyonları yoluyla dual-izotop uygulamaları ve enerji çözünürlüğü araştırmaları, Postgraduate, Y.ŞENGELEN(Student), 2020

KUDAY S., Hızlandırıcı tabanlı radyoizotop üretimi ve potansiyelinin simülasyonlar yoluyla araştırılması, Postgraduate, Ş.AKÇAY(Student), 2020

KUDAY S., Onkolojik görüntüleme gate yazılımı yoluyla SPECT/BT simülasyonlarının dinamik kaynaklar üzerine uygulanması, Postgraduate, B.AYNACI(Student), 2018

KUDAY S., Prostat IMRT'de "Sliding Window" ve "Step and Shoot" tekniklerinin karşılaştırılması, Postgraduate, İ.SAĞLAM(Student), 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Observation of electroweak production of two jets and a Z-boson pair**
Aad, Et Al. G., Collaboration A., Abbott ., Abbott D., Yıldız H., Türk Çakır İ., Kудay S., Çakır O.
NATURE PHYSICS, vol.19, pp.237-253, 2023 (SCI-Expanded)
- II. **The observation of jet azimuthal angular decorrelations at FCC-ep**
HOŞ İ., KUDAY S., Saygın H.
International Journal of Modern Physics A, vol.38, no.3, 2023 (SCI-Expanded)
- III. **Study of $B_c \rightarrow J/\psi D_s$ and $B_c \rightarrow J/\psi D_s^*$ decays in pp collisions at $\sqrt{s}=13$ TeV with the ATLAS detector**
Aad G., Abbott B., Abbott D. C., Abud A. A., Abeling K., Abhayasinghe D. K., Abidi S. H., Aboulhorma A., Abramowicz H., Abreu H., et al.
JOURNAL OF HIGH ENERGY PHYSICS, vol.2022, no.8, 2022 (SCI-Expanded)
- IV. **Test of the universality of tau and mu lepton couplings in W-boson decays with the ATLAS detector**
Aad G., Abbott B., Abbott D., Abud A. A., Abeling K., Abhayasinghe D., Abidi S., AbouZeid O., Abraham N., Abramowicz H., et al.
NATURE PHYSICS, vol.17, no.7, pp.813-833, 2021 (SCI-Expanded)
- V. **Search for charged-lepton-flavour violation in Z-boson decays with the ATLAS detector**
Aad G., Abbott B., Abbott D., Abud A. A., Abeling K., Abhayasinghe D., Abidi S., Zeid O. S. A., Abraham N., Abramowicz H., et al.
NATURE PHYSICS, vol.17, no.7, pp.819-842, 2021 (SCI-Expanded)
- VI. **Search for resonances decaying into a weak vector boson and a Higgs boson in the fully hadronic final state produced in proton - proton collisions at root s=13 TeV with the ATLAS detector**
Aad G., Abbott B., Abbott D., Abud A. A., Abeling K., Abhayasinghe D., Abidi S., Abouzeid O., Abraham N., Abramowicz H., et al.
PHYSICAL REVIEW D, vol.102, no.11, 2020 (SCI-Expanded)
- VII. **AZIMUTHAL ANGULAR DECORRELATION OF JETS AT FUTURE HIGH-ENERGY COLLIDERS**
Hos I., Saygin H., KUDAY S.
ACTA PHYSICA POLONICA B, vol.50, no.2, pp.149-158, 2019 (SCI-Expanded)
- VIII. **Search for pair and single production of vectorlike quarks in final states with at least one Z boson decaying into a pair of electrons or muons in pp collision data collected with the ATLAS detector at root s=13 TeV**
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D., Abidi S., Abouzeid O., Abraham N., Abramowicz H., et al.
PHYSICAL REVIEW D, vol.98, no.11, 2018 (SCI-Expanded)
- IX. **Search for lepton-flavor violation in different-flavor, high-mass final states in pp collisions at root s=13 TeV with the ATLAS detector**
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D., Abidi S., Abouzeid O., Abraham N., Abramowicz H., et al.
PHYSICAL REVIEW D, vol.98, no.9, 2018 (SCI-Expanded)
- X. **Measurements of Higgs boson properties in the diphoton decay channel with 36 fb⁻¹ of pp collision data at root s=13 TeV with the ATLAS detector**
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abidi S., Abouzeid O., Abraham N., Abramowicz H., Abreu H., et al.
PHYSICAL REVIEW D, vol.98, no.5, 2018 (SCI-Expanded)
- XI. **Observation of Higgs boson production in association with a top quark pair at the LHC with the ATLAS detector**
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D., Abidi S., AbouZeid O., Abraham N., Abramowicz H., et al.
PHYSICS LETTERS B, vol.784, pp.173-191, 2018 (SCI-Expanded)

- XII. **Search for top squarks decaying to tau sleptons in pp collisions at root s=13 TeV with the ATLAS detector**
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abidi S., Abouzeid O., Abraham N., Abramowicz H., Abreu H., et al.
PHYSICAL REVIEW D, vol.98, no.3, 2018 (SCI-Expanded)
- XIII. **Search for heavy particles decaying into top-quark pairs using lepton-plus-jets events in proton-proton collisions at root s=13 TeV with the ATLAS detector**
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abidi S., AbouZeid O., Abraham N., Abramowicz H., Abreu H., et al.
EUROPEAN PHYSICAL JOURNAL C, vol.78, no.7, 2018 (SCI-Expanded)
- XIV. **Projections for neutral Di-Boson and Di-Higgs interactions at FCC-he collider**
KUDAY S., Saygin H., Hos L., Cetin F.
NUCLEAR PHYSICS B, vol.932, pp.1-14, 2018 (SCI-Expanded)
- XV. **Search for new phenomena in final states with an energetic jet and large missing transverse momentum in pp collisions at root s=13 TeV using the ATLAS detector**
Aaboud M., Aad G., Abbott B., Abdallah J., Abdinov O., Abeloos B., Aben R., Abouzeid O., Abraham N., Abramowicz H., et al.
PHYSICAL REVIEW D, vol.94, no.3, 2016 (SCI-Expanded)
- XVI. **Probing charged Higgs boson couplings at a future circular hadron collider**
Cakir I. T., KUDAY S., Saygin H., Senol A., Cakir O.
PHYSICAL REVIEW D, vol.94, no.1, 2016 (SCI-Expanded)
- XVII. **Measurement of jet charge in dijet events from root s=8 TeV pp collisions with the ATLAS detector**
Aad G., Abbott B., Abdallah J., Abdinov O., Aben R., Abolins M., Abouzeid O., Abramowicz H., Abreu H., Abreu R., et al.
PHYSICAL REVIEW D, vol.93, no.5, 2016 (SCI-Expanded)
- XVIII. **Search for invisible decays of a Higgs boson using vector-boson fusion in pp collisions at root s=8 TeV with the ATLAS detector**
The ATLAS collaboration A., Aad G., Abbott B., Abdallah J., Abdinov O., Aben R., Abolins M., AbouZeid O., Abramowicz H., Abreu H., et al.
JOURNAL OF HIGH ENERGY PHYSICS, no.1, 2016 (SCI-Expanded)
- XIX. **Search for an additional, heavy Higgs boson in the H -> ZZ decay channel at root s=8 TeV in pp collision data with the ATLAS detector**
Aad G., Abbott B., Abdallah J., Abdinov O., Aben R., Abolins M., AbouZeid O., Abramowicz H., Abreu H., Abreu R., et al.
EUROPEAN PHYSICAL JOURNAL C, vol.76, no.1, 2016 (SCI-Expanded)
- XX. **Constraints on new phenomena via Higgs boson couplings and invisible decays with the ATLAS detector**
The ATLAS collaboration A., Aad G., Abbott B., Abdallah J., Abdinov O., Aben R., Abolins M., AbouZeid O., Abramowicz H., Abreu H., et al.
JOURNAL OF HIGH ENERGY PHYSICS, no.11, 2015 (SCI-Expanded)
- XXI. **Search for long-lived, weakly interacting particles that decay to displaced hadronic jets in proton-proton collisions at root s=8 TeV with the ATLAS detector**
Aad G., Abbott B., Abdallah J., Abdinov O., Aben R., Abolins M., Abouzeid O., Abramowicz H., Abreu H., Abreu R., et al.
PHYSICAL REVIEW D, vol.92, no.1, 2015 (SCI-Expanded)
- XXII. **Measurement of the transverse polarization of Lambda and (Lambda)over-bar hyperons produced in proton-proton collisions at root s=7 TeV using the ATLAS detector**
Aad G., Abbott B., Abdallah J., Abdel Khalek S., Abdinov O., Aben R., Abi B., Abolins M., Abouzeid O., Abramowicz H., et al.
PHYSICAL REVIEW D, vol.91, no.3, 2015 (SCI-Expanded)
- XXIII. **Measurement of Higgs boson production in the diphoton decay channel in pp collisions at center-of-mass energies of 7 and 8 TeV with the ATLAS detector**
Aad G., Abbott B., Abdallah J., Abdel Khalek S., Abdinov O., Aben R., Abi B., Abolins M., Abou Zeid O., Abramowicz H., et al.

- PHYSICAL REVIEW D, vol.90, no.11, 2014 (SCI-Expanded)
- XXIV. **Resonant production of Sbottom via RPV couplings at the LHeC**
KUDAY S.
JOURNAL OF THE KOREAN PHYSICAL SOCIETY, vol.64, no.12, pp.1783-1787, 2014 (SCI-Expanded)
- XXV. **Pair production of new heavy leptons with $U(1)'$ charge at linear colliders**
ARI V., Cakir O., KUDAY S.
International Journal of Modern Physics A, vol.29, no.11-12, 2014 (SCI-Expanded)
- XXVI. **Single production of fourth family sneutrino via rpv couplings at linear colliders**
ÇAKIR O., KUDAY S., Çakir I., Sultansoy S.
Modern Physics Letters A, vol.27, no.28, 2012 (SCI-Expanded)
- XXVII. **Resonant production of the fourth family slepton at the LHC**
Cakir O., KUDAY S., Cakir I. T., Sultansoy S.
Acta Physica Polonica B, vol.43, no.1, pp.63-70, 2012 (SCI-Expanded)

Articles Published in Other Journals

- I. **Comparison of Proton and Photon Radiotherapy for Left-sided Breast Cancer via Dosimetric Calculations**
i., Kудay S.
Cumhuriyet Science Journal, vol.44, no.3, pp.590-594, 2023 (Peer-Reviewed Journal)
- II. **Comparison of Accelerator Based Radioisotope Production Potentials in Medical Imaging**
Akçay Ş., KUDAY S.
Cumhuriyet Science Journal, vol.41, no.1, pp.152-159, 2020 (Peer-Reviewed Journal)
- III. **Dose Calculations of SPECT Simulations on Dynamical Targets with GATE / GEANT4**
KUDAY S.
Cumhuriyet Science Journal, vol.40, no.2, pp.347-354, 2019 (Peer-Reviewed Journal)

Refereed Congress / Symposium Publications in Proceedings

- I. **A Virtualized Tier-3g Facility Installation for WLCG Network of CERN**
SAYGIN H., KUDAY S., Alici A., TÜRK ÇAKIR İ.
19th International Workshop on Advanced Computing and Analysis Techniques in Physics Research, Saas-Fee, Switzerland, 11 - 15 March 2019, vol.1525, pp.12060-12066
- II. **PET ve SPECT Görüntülemeye Geant4 ve GATE tabanlı Benzetimler yoluyla Tanı Geliştirme Çalışmaları**
KUDAY S.
22. Ege Onkoloji Günleri, İzmir, Turkey, 26 - 28 February 2020
- III. **Effect of Distortion to Radiosurgery Treatment Plans For Brain Metastases**
Turan D. S., KUDAY S., Küçük N.
3. Anadolu Uluslararası Uygulamalı Bilimler Kongresi, Diyarbakır, Turkey, 28 - 29 December 2019
- IV. **13 TeV'de p-p Çarpışmasında ATLAS Dedektörü ile BtW Bozunum Kanalı için Vektör-Benzeri Aşağı Tipli Kuarkların Tek Üretimini Araştırılması**
KUDAY S., TÜRK ÇAKIR İ., ÇAKIR O.
1. Ulusal CERN ile ilgili Faaliyetler Çalıştayı, Ankara, Turkey, 4 - 05 October 2018
- V. **ATLAS Detektöründe Tekli Vektör Benzeri B-Kuark Analizleri**
KUDAY S., TÜRK ÇAKIR İ., ÇAKIR O.
İstanbul Yüksek Enerji Fiziği Çalıştayı (YEFİST 2018), İstanbul, Turkey, 28 - 29 April 2018
- VI. **FCC-ee Çarpıştırıcısında $\gamma\gamma$ Üretimleri Yoluyla Higgs ve Ayar Bozonu Anormal Bağlaşımları**
KUDAY S., TÜRK ÇAKIR İ., ŞENOL A.

İstanbul Yüksek Enerji Fiziği Çalıştayı (YEFİST 2016), İstanbul, Turkey, 16 - 17 April 2016

VII. **Büyük Hadron Çarpıştırıcısı'nda HZZ' Bağlaşımlarının Ölçümü**

KUDAY S., ARI V., ÇAKIR O.

Ankara Yüksek Enerji Fiziği Günleri, Ankara, Turkey, 12 - 14 February 2015

VIII. **Beam diagnostics of E-gun test stand at TARLA**

KAYA Ç., AKSOY A., Karsli O., KOÇ B., Kazancı E., Polat C., Karakilic V., KUDAY S., AYDIN A., YILDIZ M., et al.

5th International Particle Accelerator Conference, IPAC 2014, Dresden, Germany, 15 - 20 June 2014, pp.704-706

IX. **Beam Diagnostics E-GUN Test Stand at TARLA**

KAYA Ç., AKSOY A., AYDIN A., Karakılıç V., Karşı Ö., Kazancı E., KOÇ İ. B., KUDAY S., Polat E., Şara İ., et al.

IPAC2014: 5th International Particle Accelerator Conference, Dresden, Germany, 15 - 20 June 2014

X. **Dördüncü Aile Snötrino Tek Üretiminin R-Parite Bozan Süreçler Yoluyla Araştırılması**

KUDAY S., TÜRK ÇAKIR İ., ÇAKIR O., SULTANOV S.

İzmir Yüksek Enerji Fiziği ve Uygulamaları Çalıştayı, İzmir, Turkey, 19 - 23 June 2012

XI. **LHC'de R-Parite Bozan Slepton Rezonansının Araştırılması**

KUDAY S., ÇAKIR O., TÜRK ÇAKIR İ., SULTANOV S.

Ankara Yüksek Enerji Fiziği Günleri, Ankara, Turkey, 27 - 30 December 2011

XII. **Pair Production of Stop and Sbottom at the LHC**

KUDAY S., ÇAKIR O.

Turkish Physical Society 27th International Physics Congress, İstanbul, Turkey, 14 - 17 September 2010

XIII. **Süpersimetri ve LSP**

KUDAY S.

Ankara Yüksek Enerji Fiziği Günleri, Ankara, Turkey, 29 - 30 May 2009

Metrics

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Citation (WoS): 1414

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