

## Prof. Aytül ADIGÜZEL

### Personal Information

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### International Researcher IDs

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### Education Information

Doctorate, Cukurova University, Fen Bilimleri, Turkey 2007 - 2014

Postgraduate, Cukurova University, Fen Bilimleri, Turkey 2003 - 2007

Masters (Non-Thesis), Cukurova University, Fen Bilimleri, Turkey 2003 - 2004

Undergraduate, Niğde Üniversitesi, Fen Edebiyat Fakültesi, Turkey 1999 - 2003

### Certificates, Courses and Trainings

Data Analysis, Beyond the Standard Model: Results with the 7 TeV LHC Collision Data, ICTP, 2011

Data Analysis, Using Physics Analysis Toolkit in CMS data analysis (CERN), CERN, 2009

Data Analysis, Hızlandırıcı ve Parçacık Fiziğinde Bilgisayar Uygulamaları Okulu, Türkiye Atom Enerjisi Kurumu(TAEK), 2009

Data Analysis, YEF@TR-GRID Okulu, Türkiye Atom Enerjisi Kurumu (TAEK), 2008

### Dissertations

Doctorate, Search For a  $W'$  Gauge Boson Decaying to  $WZ$  in Proton-Proton Collisions at  $\sqrt{s} = 7$  TeV, Cukurova University, Fen Bilimleri, Fizik, 2014

Postgraduate, CMS Deneyindeki Supersimetri Araştırmaları, Cukurova University, Fen Bilimleri, Fizik, 2007

### Research Areas

Physics, Basic Particles and Areas, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Istanbul University, Faculty of Science, Department of Physics, 2018 - Continues

Assistant Professor, Istanbul University, Faculty of Science, Department of Physics, 2017 - 2018

Assistant Professor, Istanbul University, Faculty of Science, Department of Physics, 2017 - 2017

## Academic and Administrative Experience

Doktora Sonrası Araştırmacı (PostDoc), Bogazici University, Faculty Of Science And Letters, Department Of Physics, 2016 - 2017

## Courses

Algorithm and Introduction to Computer Programming, Undergraduate, 2023 - 2024  
Event Generators and Fast Simulation in Particle Physics -1, Postgraduate, 2021 - 2022  
Data Analysis and Simulations I in High Energy Physics, Undergraduate, 2021 - 2022  
İLERİ FİZİK UYGULAMALARI 2, Undergraduate, 2019 - 2020, 2017 - 2018  
Kişisel Proje 1, Undergraduate, 2019 - 2020  
Temel Tanecikler 1, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018  
Fizik IV, Undergraduate, 2018 - 2019  
İLERİ FİZİK UYGULAMALARI 1, Undergraduate, 2019 - 2020  
Fizik IV, Undergraduate, 2018 - 2019  
İLERİ FİZİK UYGULAMALARI 2, Undergraduate, 2017 - 2018  
Parçacık Dedektörleri Fiziğine Giriş, Undergraduate, 2017 - 2018  
Temel Tanecikler 2, Undergraduate, 2017 - 2018  
Temel Tanecikler, Undergraduate, 2018 - 2019, 2017 - 2018  
BİLGİSAYAR KULLANIMI, Undergraduate, 2016 - 2017  
İLERİ FİZİK UYGULAMALARI 1, Undergraduate, 2017 - 2018

## Advising Theses

Adıgüzel A., S Bandında RF Güç Kaynağı ve Dolaştırıcı Tasarımı, Üretimi ve Proton Demet Hattında Kullanımları, Doctorate, O.Koçer(Student), Continues  
Adıgüzel A., Hafif iyonları hızlandırmak için RFQ Çalışmaları, Doctorate, Ş.Esen(Student), Continues  
Adıgüzel A., ATLAS Verisi ile E6 Büyük Birleşim Teorisi Tarafından Öngörülen Vektör Benzeri Ağır Leptonların Aranması, Postgraduate, A.Sansar(Student), 2024  
Adıgüzel A., Çetinkaya H., 20KeV Mikrodalga Deşarj İyon Kaynağında Benzetim Çalışmaları ve Düşük Enerjili Demet Aktarım (DEDA) Hattı Ölçümleri, Postgraduate, A.Hamparsunoğlu(Student), 2022  
Adıgüzel A., Space charge calculations and electromagnetic field measurements for low beta proton accelerator, Postgraduate, Ş.Esen(Student), 2021  
Adıgüzel A., Design, Production and Measurements of an RF Circulator in the UHF Band, Postgraduate, O.Koçer(Student), 2019

## Jury Memberships

Doctorate, Doctorate, Marmara Üniversitesi, October, 2023  
Post Graduate, Post Graduate, İstanbul Aydın Üniversitesi, April, 2020

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Measurements of Lund subjet multiplicities in 13 TeV proton-proton collisions with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., Abreu H., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.859, 2024 (SCI-Expanded)
- II. **Search for pair production of boosted Higgs bosons via vector-boson fusion in the  $bb\bar{b}b$  final state**

**using pp collisions at  $s=13\text{TeV}$  with the ATLAS detector**

Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.

Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.858, 2024 (SCI-Expanded)

- III. **Search for Light Long-Lived Particles in pp Collisions at  $\sqrt{s}=13\text{ TeV}$  Using Displaced Vertices in the ATLAS Inner Detector**

Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.

Physical review letters, vol.133, no.16, pp.161803, 2024 (SCI-Expanded)
- IV. **Search for the Exclusive W Boson Hadronic Decays  $W^{\pm}\rightarrow\pi^{\pm}\gamma$ ,  $W^{\pm}\rightarrow K^{\pm}\gamma$  and  $W^{\pm}\rightarrow\rho^{\pm}\gamma$  with the ATLAS Detector**

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.133, no.16, pp.161804, 2024 (SCI-Expanded)
- V. **Combination and summary of ATLAS dark matter searches interpreted in a 2HDM with a pseudo-scalar mediator using  $139\text{ fb}^{-1}$  of  $s=13\text{ TeV}$  pp collision data**

Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.

Science Bulletin, vol.69, no.19, pp.3005-3035, 2024 (SCI-Expanded)
- VI. **Determination of the Relative Sign of the Higgs Boson Couplings to W and Z Bosons Using WH Production via Vector-Boson Fusion with the ATLAS Detector**

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.133, no.14, pp.141801, 2024 (SCI-Expanded)
- VII. **Fiducial and differential cross-section measurements of electroweak  $W\gamma jj$  production in pp collisions at  $s=13\text{ TeV}$  with the ATLAS detector**

Zwalinski L., Zou W., Zormpa O., Zorbas T., Zoch K., Zoccoli A., Živković L., Ziolkowski M., Zinsser J., Zimine N., et al.

European Physical Journal C, vol.84, no.10, 2024 (SCI-Expanded)
- VIII. **Measurements of inclusive and differential cross-sections of  $t\bar{t}\gamma$  production in pp collisions at  $s = 13\text{ TeV}$  with the ATLAS detector**

Aad G., Aakvaag E., Abbott B., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., Abreu H., et al.

Journal of High Energy Physics, vol.2024, no.10, 2024 (SCI-Expanded)
- IX. **Search for a resonance decaying into a scalar particle and a Higgs boson in final states with leptons and two photons in proton-proton collisions at  $s = 13\text{ TeV}$  with the ATLAS detector**

Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.

Journal of High Energy Physics, vol.2024, no.10, 2024 (SCI-Expanded)
- X. **Constraints on simplified dark matter models involving an s-channel mediator with the ATLAS detector in pp collisions at  $s=13\text{ TeV}$** 

Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.

European Physical Journal C, vol.84, no.10, 2024 (SCI-Expanded)
- XI. **Precise test of lepton flavour universality in W-boson decays into muons and electrons in pp collisions at  $s=13\text{TeV}$  with the ATLAS detector**

Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.

European Physical Journal C, vol.84, no.10, 2024 (SCI-Expanded)
- XII. **Sensor response and radiation damage effects for 3D pixels in the ATLAS IBL Detector**

Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.

Journal of Instrumentation, vol.19, no.10, 2024 (SCI-Expanded)

- XIII. **Observation of quantum entanglement with top quarks at the ATLAS detector**  
Zwalinski L., Zou W., Zormpa O., Zorbas T., Zoch K., Zoccoli A., Živković L., Ziolkowski M., Zinsser J., Zimine N., et al.  
Nature, vol.633, no.8030, pp.542-547, 2024 (SCI-Expanded)
- XIV. **Studies of the Energy Dependence of Diboson Polarization Fractions and the Radiation-Amplitude-Zero Effect in WZ Production with the ATLAS Detector**  
Aad G., Aakvaag E., Abbott B., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., Abreu H., et al.  
Physical review letters, vol.133, no.10, pp.101802, 2024 (SCI-Expanded)
- XV. **Combination of Searches for Higgs Boson Pair Production in pp Collisions at  $\sqrt{s}=13$  TeV with the ATLAS Detector**  
Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.  
Physical review letters, vol.133, no.10, pp.101801, 2024 (SCI-Expanded)
- XVI. **Search for heavy Majorana neutrinos in  $e^{\pm}e^{\pm}$  and  $e^{\pm}\mu^{\pm}$  final states via WW scattering in pp collisions at  $s=13$  TeV with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.856, 2024 (SCI-Expanded)
- XVII. **Measurements of the production cross-section for a Z boson in association with b- or c-jets in proton-proton collisions at  $s=13$  TeV with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.  
European Physical Journal C, vol.84, no.9, 2024 (SCI-Expanded)
- XVIII. **Simultaneous energy and mass calibration of large-radius jets with the ATLAS detector using a deep neural network**  
Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.  
Machine Learning: Science and Technology, vol.5, no.3, 2024 (SCI-Expanded)
- XIX. **Search for decays of the Higgs boson into a pair of pseudoscalar particles decaying into Formula Presented using Formula Presented collisions at Formula Presented with the ATLAS detector**  
Filmer E., Gallagher J., Grant C., Green M., Jackson P., Kong A., Pandya H., Ruggieri T., Saha S., Ting E., et al.  
Physical Review D, vol.110, no.5, 2024 (SCI-Expanded)
- XX. **Search for pair-produced higgsinos decaying via Higgs or Z bosons to final states containing a pair of photons and a pair of b-jets with the ATLAS detector**  
Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.856, 2024 (SCI-Expanded)
- XXI. **Search for dark mesons decaying to top and bottom quarks in proton-proton collisions at  $s = 13$  TeV with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.  
Journal of High Energy Physics, vol.2024, no.9, 2024 (SCI-Expanded)
- XXII. **Search for the nonresonant production of Higgs boson pairs via gluon fusion and vector-boson fusion in the Formula Presented final state in proton-proton collisions at Formula Presented with the ATLAS detector**  
Filmer E., Grant C., Jackson P., Kong A., Pandya H., Potti H., Ruggieri T., Saha S., Ting E., White M., et al.  
Physical Review D, vol.110, no.3, 2024 (SCI-Expanded)
- XXIII. **Combination of searches for Higgs boson decays into a photon and a massless dark photon using pp collisions at  $s= 13$  TeV with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A.,

- Abramowicz H., et al.  
Journal of High Energy Physics, vol.2024, no.8, 2024 (SCI-Expanded)
- XXIV. **Differential cross-sections for events with missing transverse momentum and jets measured with the ATLAS detector in 13 TeV proton-proton collisions**  
Aad G., Aakvaag E., Abbott B., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., Abreu H., et al.  
Journal of High Energy Physics, vol.2024, no.8, 2024 (SCI-Expanded)
- XXV. **Measurement of the  $VH, H \rightarrow \tau\tau$  process with the ATLAS detector at 13 TeV**  
Aad G., Aakvaag E., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.855, 2024 (SCI-Expanded)
- XXVI. **Accuracy versus precision in boosted top tagging with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.  
Journal of Instrumentation, vol.19, no.8, 2024 (SCI-Expanded)
- XXVII. **Measurement of differential cross-sections in  $t\bar{t}$  and  $t\bar{t} + \text{jets}$  production in the lepton+jets final state in pp collisions at  $s = 13$  TeV using  $140 \text{ fb}^{-1}$  of ATLAS data**  
Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Acharya B., et al.  
Journal of High Energy Physics, vol.2024, no.8, 2024 (SCI-Expanded)
- XXVIII. **Measurement of ZZ production cross-sections in the four-lepton final state in pp collisions at  $s=13.6\text{TeV}$  with the ATLAS experiment**  
Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Acharya B., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.855, 2024 (SCI-Expanded)
- XXIX. **Searches for exclusive Higgs boson decays into  $D\eta$  and Z boson decays into  $D0\gamma$  and  $Ks0\gamma$  in pp collisions at  $s=13\text{TeV}$  with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., Abreu H., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.855, 2024 (SCI-Expanded)
- XXX. **Search for non-resonant Higgs boson pair production in final states with leptons, taus, and photons in pp collisions at  $s = 13$  TeV with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.  
Journal of High Energy Physics, vol.2024, no.8, 2024 (SCI-Expanded)
- XXXI. **Calibration of a soft secondary vertex tagger using proton-proton collisions at Formula Presented with the ATLAS detector**  
Filmer E., Grant C., Green M., Jackson P., Kong A., Pandya H., Ruggeri T., Saha S., Ting E., White M., et al.  
Physical Review D, vol.110, no.3, 2024 (SCI-Expanded)
- XXXII. **Search for low-mass resonances decaying into two jets and produced in association with a photon or a jet at Formula Presented with the ATLAS detector**  
Filmer E., Grant C., Jackson P., Kong A., Pandya H., Potti H., Ruggeri T., Saha S., Ting E., White M., et al.  
Physical Review D, no.3, 2024 (SCI-Expanded)
- XXXIII. **Search for leptoquark pair production decaying into  $te^{-}e^{+}$  or  $t\mu^{-}\mu^{+}$  in multi-lepton final states in pp collisions at  $s=13\text{TeV}$  with the ATLAS detector**  
Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Hoffman A. C. A., et al.  
European Physical Journal C, vol.84, no.8, 2024 (SCI-Expanded)
- XXXIV. **Statistical Combination of ATLAS Run 2 Searches for Charginos and Neutralinos at the LHC**  
Filmer E., Grant C., Jackson P., Kong A., Pandya H., Potti H., Ruggeri T., Ting E., White M., Gingrich D., et al.  
Physical Review Letters, vol.133, no.3, 2024 (SCI-Expanded)

- XXXV. **Search for light long-lived neutral particles from Higgs boson decays via vector-boson-fusion production from pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
Zwalinski L., Zou W., Zormpa O., Zorbas T., Zoch K., Zoccoli A., Živković L., Ziolkowski M., Zinsser J., Zimine N., et al.  
European Physical Journal C, vol.84, no.7, 2024 (SCI-Expanded)
- XXXVI. **Search for charged-lepton-flavor violating Formula Presented interactions in top-quark production and decay in Formula Presented collisions at Formula Presented with the ATLAS detector at the LHC**  
Filmer E., Grant C., Jackson P., Kong A., Pandya H., Potti H., Ruggeri T., Saha S., Ting E., White M., et al.  
Physical Review D, vol.110, no.1, 2024 (SCI-Expanded)
- XXXVII. **Measurement of t-channel single-top-quark production in pp collisions at  $s=5.02$  TeV with the ATLAS detector**  
Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Acharya B., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.854, 2024 (SCI-Expanded)
- XXXVIII. **Measurement of vector boson production cross sections and their ratios using pp collisions at  $s=13.6$  TeV with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.854, 2024 (SCI-Expanded)
- XXXIX. **Search for pair-production of vector-like quarks in lepton+jets final states containing at least one b-tagged jet using the Run 2 data from the ATLAS experiment**  
Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Acharya B., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.854, 2024 (SCI-Expanded)
- XL. **Search for flavour-changing neutral-current couplings between the top quark and the Higgs boson in multi-lepton final states in 13 TeV pp collisions with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abeling K., Abicht N., Abidi S., Aboelela M., Aboulhorma A., Abramowicz H., Abreu H., et al.  
European Physical Journal C, vol.84, no.7, 2024 (SCI-Expanded)
- XLI. **Observation of electroweak production of  $W+W-$  in association with jets in proton-proton collisions at  $s = 13$  TeV with the ATLAS detector**  
Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Acharya B., et al.  
Journal of High Energy Physics, vol.2024, no.7, 2024 (SCI-Expanded)
- XLII. **Measurement of the Z boson invisible width at  $s=13$  TeV with the ATLAS detector**  
Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Acharya B., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.854, 2024 (SCI-Expanded)
- XLIII. **Search for short- and long-lived axion-like particles in  $H\rightarrow aa\rightarrow 4\gamma$  decays with the ATLAS experiment 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.  
European Physical Journal C, vol.84, no.7, 2024 (SCI-Expanded)
- XLIV. **Inclusive and differential cross-section measurements of  $t\bar{t}Z$  production in pp collisions at  $s = 13$  TeV with the ATLAS detector, including EFT and spin-correlation interpretations**  
Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Acharya B., et al.  
Journal of High Energy Physics, vol.2024, no.7, 2024 (SCI-Expanded)
- XLV. **A search for top-squark pair production, in final states containing a top quark, a charm quark and missing transverse momentum, using the  $139\text{ fb}^{-1}$  of pp collision data collected by the ATLAS detector**  
Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Acharya B., et al.

al.

Journal of High Energy Physics, vol.2024, no.7, 2024 (SCI-Expanded)

- XLVI. **Combination of searches for pair-produced leptoquarks at  $s=13$  TeV with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abeling K., Abicht N., Abidi S., Abouhorma A., Abramowicz H., Abreu H., Abulaiti Y., et al.  
al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.854, 2024 (SCI-Expanded)
- XLVII. **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)
- XLVIII. **Combination of Searches for Resonant Higgs Boson Pair Production Using Formula Presented Collisions at Formula Presented with the ATLAS Detector**  
Filmer E., Grant C., Jackson P., Kong A., Pandya H., Potti H., Ruggieri T., Ting E., White M., Gingrich D., et al.  
Physical Review Letters, vol.132, no.23, 2024 (SCI-Expanded)
- XLIX. **Search for singly produced vectorlike top partners in multilepton final states with Formula Presented of Formula Presented collision data at Formula Presented with the ATLAS detector**  
Filmer E., Jackson P., Kong A., Potti H., Ruggieri T., Ting E., White M., Gingrich D., Lindon J., Nishu N., et al.  
Physical Review D, vol.109, no.11, 2024 (SCI-Expanded)
- L. **Measurement of jet substructure in boosted Formula Presented events with the ATLAS detector using Formula Presented of 13 TeV Formula Presented collisions**  
Filmer E., Grant C., Jackson P., Kong A., Pandya H., Potti H., Ruggieri T., Ting E., White M., Gingrich D., et al.  
Physical Review D, vol.109, no.11, 2024 (SCI-Expanded)
- LI. **Beam-induced backgrounds measured in the ATLAS detector during local gas injection into the LHC beam vacuum**  
Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Abouhorma A., Abramowicz H., et al.  
Journal of Instrumentation, vol.19, no.6, 2024 (SCI-Expanded)
- LII. **Measurements of electroweak  $W\pm Z$  boson pair production in association with two jets in pp collisions at  $s = 13$  TeV with the ATLAS detector**  
Aad G., Aakvaag E., Abbott B., Abdelhameed S., Abeling K., Abicht N., Abidi S., Aboelela M., Abouhorma A., Abramowicz H., et al.  
Journal of High Energy Physics, vol.2024, no.6, 2024 (SCI-Expanded)
- LIII. **Search for pair production of higgsinos in events with two Higgs bosons and missing transverse momentum in Formula Presented Formula Presented collisions at the ATLAS experiment**  
Filmer E., Grant C., Jackson P., Kong A., Pandya H., Potti H., Ruggieri T., Ting E., White M., Gingrich D., et al.  
Physical Review D, vol.109, no.11, 2024 (SCI-Expanded)
- LIV. **Search for high-mass resonances in final states with a Formula Presented-lepton and missing transverse momentum with the ATLAS detector**  
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- CVI. **Search for periodic signals in the dielectron and diphoton invariant mass spectra using 139 fb<sup>-1</sup> of pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
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- CXV. Strong Constraints on Jet Quenching in Centrality-Dependent p+Pb Collisions at 5.02 TeV from ATLAS**  
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- CXXIII. Search for displaced photons produced in exotic decays of the Higgs boson using 13 TeV pp collisions with the ATLAS detector**  
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- CXXIV. **Measurements of  $W+W^-$  production in decay topologies inspired by searches for electroweak supersymmetry**  
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- CXXV. **Measurement of the inclusive  $W$  production cross section in the lepton+jets channel in  $pp$  collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector using support vector machines**  
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- CXXVII. **Measurements of Higgs boson production by gluon-gluon fusion and vector-boson fusion using  $H\rightarrow WW^*\rightarrow e\nu\mu\nu$  decays in  $pp$  collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CXXX. **Search for flavor-changing neutral-current couplings between the top quark and the  $Z$  boson with proton-proton collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CXXXV. **Combination of searches for invisible decays of the Higgs boson using 139 fb<sup>-1</sup> of proton-proton collision data at  $\sqrt{s}=13$  TeV collected with the ATLAS experiment**  
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- CXLIV. **Search for excited  $\tau$ -leptons and leptoquarks in the final state with  $\tau$ -leptons and jets in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
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- CXLVII. **Search for a new scalar resonance in flavour-changing neutral-current top-quark decays  $t \rightarrow qX$  ( $q = u, c$ ), with  $X \rightarrow bb^-$ , in proton-proton collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
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- CXLVIII. **Inclusive and differential cross-sections for dilepton  $t\bar{t}$  production measured in  $\sqrt{s} = 13$  TeV pp collisions with the ATLAS detector**  
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- CXLIX. **Search in diphoton and dielectron final states for displaced production of Higgs or Z bosons with the ATLAS detector in Formula Presented pp collisions**  
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- CLII. **Search for leptonic charge asymmetry in  $t\bar{t} W$  production in final states with three leptons at  $\sqrt{s} = 13$  TeV**  
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- CLIII. **Model-independent search for the presence of new physics in events including  $H \rightarrow \gamma\gamma$  with  $\sqrt{s} = 13$  TeV pp data recorded by the ATLAS detector at the LHC**  
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- CLIV. **Search for pair-produced scalar and vector leptoquarks decaying into third-generation quarks and first- or second-generation leptons in pp collisions with the ATLAS detector**  
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- CLV. **Measurement of the properties of Higgs boson production at  $\sqrt{s} = 13$  TeV in the  $H \rightarrow \gamma\gamma$  channel using 139 fb $^{-1}$  of pp collision data with the ATLAS experiment**  
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- CLVI. **Search for long-lived, massive particles in events with displaced vertices and multiple jets in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
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- CLVII. **Search for a new  $Z'$  gauge boson in  $4\mu$  events with the ATLAS experiment**  
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- CLVIII. **A search for heavy Higgs bosons decaying into vector bosons in same-sign two-lepton final states in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
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- CLIX. **Determination of the strong coupling constant from transverse energy-energy correlations in multijet events at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
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- CLX. **Search for high-mass  $W\gamma$  and  $Z\gamma$  resonances using hadronic  $W/Z$  boson decays from 139 fb<sup>-1</sup> of pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
Aad G., Abbott B., Abbott D., Abed Abud A., Abeling K., Abhayasinghe D., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., et al.  
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- CLXI. **Measurement of cross sections for production of a Z boson in association with a flavor-inclusive or doubly b-tagged large-radius jet in proton-proton collisions at Formula Presented with the ATLAS experiment**  
Jackson P., Kong A., Oliver J., Ruggeri T., Sharma A., White M., Jain V., Swift S., Gingrich D., Pinfold J., et al.  
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- CLXII. **ATLAS flavour-tagging algorithms for the LHC Run 2 pp collision dataset**  
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- CLXIII. **Search for  $t\bar{t} H/A \rightarrow t\bar{t} t\bar{t}$  production in the multilepton final state in proton-proton collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.  
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- CLXIV. **Search for dark matter produced in association with a dark Higgs boson decaying into  $W^+ W^-$  in the one-lepton final state at  $\sqrt{s} = 13$  TeV using 139 fb<sup>-1</sup> of pp collisions recorded with the ATLAS detector**  
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- CLXV. **Exclusive dielectron production in ultraperipheral Pb+Pb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV with ATLAS**  
Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.  
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- CLXVI. **Measurements of  $Z\gamma$ +jets differential cross sections in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS**

**detector**

Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.

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- CLXVII. **Search for dark photons from Higgs boson decays via ZH production with a photon plus missing transverse momentum signature from pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**

Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.

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- CLXVIII. **Search for heavy, long-lived, charged particles with large ionisation energy loss in pp collisions at  $\sqrt{s} = 13$  TeV using the ATLAS experiment and the full Run 2 dataset**

Aad G., Abbott B., Abbott D., Abed Abud A., Abeling K., Abhayasinghe D., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., et al.

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- CLXIX. **Measurement of  $Z\gamma\gamma$  production in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**

Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.

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- CLXX. **Search for direct pair production of sleptons and charginos decaying to two leptons and neutralinos with mass splittings near the W-boson mass in  $\sqrt{s} = 13$  TeV pp collisions with the ATLAS detector**

Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.

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- CLXXI. **Cross-section measurements for the production of a Z boson in association with high-transverse-momentum jets in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**

Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.

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- CLXXII. **Observation of four-top-quark production in the multilepton final state with the ATLAS detector**

Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Hoffman A. C. A., et al.

European Physical Journal C, vol.83, no.6, 2023 (SCI-Expanded)

- CLXXIII. **Measurement of electroweak  $Z(\nu\nu^-)\gamma jj$  production and limits on anomalous quartic gauge couplings in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**

Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.

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- CLXXIV. **Searches for new phenomena in events with two leptons, jets, and missing transverse momentum in  $139 \text{ fb}^{-1}$  of  $\sqrt{s}=13$  TeV pp collisions with the ATLAS detector**

Aad G., Abbott B., Abbott D., Abud A. A., Abeling K., Abhayasinghe D., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., et al.

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- CLXXV. **Constraints on spin-0 dark matter mediators and invisible Higgs decays using ATLAS 13 TeV pp collision data with two top quarks and missing transverse momentum in the final state**

Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Hoffman A. C. A., et al.

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- CLXXVI. **Measurements of observables sensitive to colour reconnection in  $t\bar{t}$  events with the ATLAS detector at  $\sqrt{s}= 13$  TeV**

Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Hoffman A. C. A., et al.

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- CLXXVII. **Measurement of the top-quark mass using a leptonic invariant mass in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
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- CLXXVIII. **Search for heavy resonances decaying into a Z or W boson and a Higgs boson in final states with leptons and b-jets in  $139 \text{ fb}^{-1}$  of pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.  
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- CLXXIX. **Search for light long-lived neutral particles that decay to collimated pairs of leptons or light hadrons in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
Aad G., Abbott B., Abbott D., Abed Abud A., Abeling K., Abhayasinghe D., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., et al.  
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- CLXXX. **A search for new resonances in multiple final states with a high transverse momentum Z boson in  $\sqrt{s} = 13$  TeV pp collisions with the ATLAS detector**  
Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.  
Journal of High Energy Physics, vol.2023, no.6, 2023 (SCI-Expanded)
- CLXXXI. **Measurement of the  $t\bar{t}$  production cross-section in pp collisions at  $\sqrt{s} = 5.02$  TeV with the ATLAS detector**  
Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.  
Journal of High Energy Physics, vol.2023, no.6, 2023 (SCI-Expanded)
- CLXXXII. **Search for flavour-changing neutral current interactions of the top quark and the Higgs boson in events with a pair of  $\tau$ -leptons in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Abusleme Hoffman A., et al.  
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- CLXXXIII. **Search for Higgs boson pair production in association with a vector boson in pp collisions at  $\sqrt{s}=13\text{TeV}$  with the ATLAS detector**  
Aad G., Abbott B., Abbott D., Abeling K., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., Abulaiti Y., Hoffman A. C. A., et al.  
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- CLXXXIV. **Measurement of muon pairs produced via  $\gamma\gamma$  scattering in nonultraperipheral Pb + Pb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV with the ATLAS detector**  
Aad G., Abbott B., Abbott D., Abidinov O., Abud A. A., Abeling K., Abhayasinghe D., Abidi S., AbouZeid O., Abraham N., et al.  
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- CLXXXV. **Measurement of the total cross section and  $\rho$ -parameter from elastic scattering in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CLXXXVI. **Production of  $\Upsilon(nS)$  mesons in Pb + Pb and pp collisions at 5.02 TeV**  
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- CLXXXVII. **Measurement of the nuclear modification factor of b-jets in 5.02 TeV Pb+Pb collisions with the**

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### CLXXXIX. **Correlations between flow and transverse momentum in Xe + Xe and Pb + Pb collisions at the LHC with the ATLAS detector: A probe of the heavy-ion initial state and nuclear deformation**

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### CXC. **Measurement of the total and differential Higgs boson production cross-sections at $\sqrt{s} = 13$ TeV with the ATLAS detector by combining the $H \rightarrow ZZ^* \rightarrow 4\ell$ and $H \rightarrow \gamma\gamma$ decay channels**

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**CXCIX. Measurements of Higgs boson production cross-sections in the  $H \rightarrow \tau + \tau -$  decay channel in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**

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**CC. Study of  $Bc \rightarrow J/\psi D_s^+$  and  $Bc \rightarrow J/\psi D_s^{*+}$  decays in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**

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**CCI. Measurements of the Higgs boson inclusive and differential fiducial cross-sections in the diphoton decay channel with pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**

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**CCII. Modelling and computational improvements to the simulation of single vector-boson plus jet processes for the ATLAS experiment**

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**CCIII. Direct constraint on the Higgs-charm coupling from a search for Higgs boson decays into charm quarks with the ATLAS detector**

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**CCIV. Search for long-lived charginos based on a disappearing-track signature using 136 fb<sup>-1</sup> of pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**

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**CCV. Two-particle Bose-Einstein correlations in pp collisions at  $\sqrt{s}=13$  TeV measured with the ATLAS detector at the LHC**

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**CCVI. Constraints on Higgs boson properties using  $WW^*(\rightarrow e\nu\mu\nu)$  jj production in 36.1fb<sup>-1</sup> of  $\sqrt{s}=13$  TeV pp collisions with the ATLAS detector**

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**CCVII. Search for associated production of a Z boson with an invisibly decaying Higgs boson or dark matter candidates at  $s=13$  TeV with the ATLAS detector**

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**CCVIII. Measurement of the nuclear modification factor for muons from charm and bottom hadrons in Pb+Pb collisions at 5.02 TeV with the ATLAS detector**

- Aad G., Abbott B., Abbott D., Abed Abud A., Abeling K., Abhayasinghe D., Abidi S., Aboulhorma A., Abramowicz H., Abreu H., et al.  
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- CCX. **Search for neutral long-lived particles in pp collisions at  $\sqrt{s} = 13$  TeV that decay into displaced hadronic jets in the ATLAS calorimeter**  
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- CCXI. **Measurement of Higgs boson decay into b-quarks in associated production with a top-quark pair in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
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- CCXII. **Constraints on Higgs boson production with large transverse momentum using  $H \rightarrow b b^{-}$  decays in the ATLAS detector**  
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- CCXIII. **Search for resonant pair production of Higgs bosons in the  $b b^{-} b b^{-}$  final state using pp collisions at  $s = 13$  TeV with the ATLAS detector**  
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- CCXIV. **Search for single production of a vectorlike T quark decaying into a Higgs boson and top quark with fully hadronic final states using the ATLAS detector**  
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- CCXV. **Determination of the parton distribution functions of the proton using diverse ATLAS data from pp collisions at  $\sqrt{s} = 7, 8$  and 13 TeV**  
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- CCXVI. **Measurement of the energy asymmetry in  $t t^{-} j$  production at 13 TeV with the ATLAS experiment and interpretation in the SMEFT framework**  
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- CCXVII. **Search for flavour-changing neutral-current interactions of a top quark and a gluon in pp collisions at  $\sqrt{s} = 13$  TeV with the ATLAS detector**  
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- CCXVIII. **The ATLAS inner detector trigger performance in pp collisions at 13 TeV during LHC Run 2**  
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- CCXXIX. **Measurement of the energy response of the ATLAS calorimeter to charged pions from  $W^\pm \rightarrow \tau^\pm (\rightarrow \pi^\pm \nu_\tau) \nu_\tau$  events in Run 2 data**  
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- CCXX. **Search for Higgs bosons decaying into new spin-0 or spin-1 particles in four-lepton final states with the ATLAS detector with 139 fb<sup>-1</sup> of pp collision data at  $\sqrt{s} = 13$  TeV**  
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- CCXXI. **Observation of electroweak production of two jets in association with an isolated photon and missing transverse momentum, and search for a Higgs boson decaying into invisible particles at 13 TeV with the ATLAS detector**  
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- CCXXII. **Measurement of the c-jet mistagging efficiency in  $t\bar{t}$  events using pp collision data at  $\sqrt{s}=13$  TeV collected with the ATLAS detector**  
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- CCXXIII. **Search for Higgs boson decays into a pair of pseudoscalar particles in the  $b\bar{b}\mu\mu$  final state with the ATLAS detector in pp collisions at  $s = 13$  TeV**  
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- CCXXIV. **Operation and performance of the ATLAS semiconductor tracker in LHC Run 2**  
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- CCXXV. **Search for heavy particles in the b -tagged dijet mass distribution with additional b -tagged jets in proton-proton collisions at  $s = 13$  TeV with the ATLAS experiment**  
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- CCXXVII. **Performance of the ATLAS Level-1 topological trigger in Run 2**  
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- CCXXIX. **Configuration and performance of the ATLAS b-jet triggers in Run 2**  
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- CCXXX. **Search for resonances decaying into photon pairs in 139 fb(-1) of pp collisions at root s=13 TeV with the ATLAS detector**  
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- CCXXXI. **Measurement of the production cross section of pairs of isolated photons in pp collisions at 13 TeV with the ATLAS detector**  
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- CCXXXII. **Search for R-parity-violating supersymmetry in a final state containing leptons and many jets with the ATLAS experiment using root s=13 TeV proton-proton collision data**  
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- CCXXXIII. **Measurement of the  $t\bar{t}$  production cross section in pp collisions at root 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., Abramowicz H., Abreu H., Abulaiti Y., et al.  
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- CCXXXIV. **Search for exotic decays of the Higgs boson into long-lived particles in pp collisions at root s=13 TeV using displaced vertices in the ATLAS inner detector**  
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- CCXXXV. **Search for dark matter produced in association with a Standard Model Higgs boson decaying into b-quarks using the full Run 2 dataset from the ATLAS detector**  
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- CCXXXVI. **Search for dark matter produced in association with a single top quark in root s=13 TeV pp collisions with the ATLAS detector**  
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- CCXXXVIII. **Search for New Phenomena in Final States with Two Leptons and One or No b-Tagged Jets at root S=13 TeV Using the ATLAS Detector**  
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- CCXL. **Search for bottom-squark pair production in pp collision events at  $\sqrt{s}=13$  TeV with hadronically decaying tau-leptons, b-jets, and missing transverse momentum using the ATLAS detector**  
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- CCXLI. **Measurements of the inclusive and differential production cross sections of a top-quark-antiquark pair in association with a Z boson at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCXLII. **Exclusive dimuon production in ultraperipheral Pb plus Pb collisions at  $\sqrt{S\text{-NN}}=5.02$  TeV with ATLAS**  
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- CCXLIII. **Jet energy scale and resolution measured in proton-proton collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCXLVI. **Measurement of the relative  $B\text{-c}(+/-)/B\text{-}+/-$  production cross section with the ATLAS detector at  $\sqrt{s}=8$  TeV**  
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- CCXLVIII. **Search for charged-lepton-flavour violation in Z-boson decays with the ATLAS detector**  
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- CCXLIX. **Measurements of differential cross-sections in four-lepton events in 13 TeV proton-proton collisions with the ATLAS detector**  
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- CCL. **Search for squarks and gluinos in final states with one isolated lepton, jets, and missing transverse momentum at  $\sqrt{s}=13$  with the ATLAS detector**  
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- CCLI. **Test of the universality of tau and mu lepton couplings in W-boson decays with the ATLAS detector**  
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- CCLII. **Muon reconstruction and identification efficiency in ATLAS using the full Run 2 pp collision data set at  $\sqrt{s}=13$  TeV**  
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- CCLIII. **Search for Displaced Leptons in  $\sqrt{s}=13$  TeV pp Collisions with the ATLAS Detector**  
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- CCLIV. **A search for the decays of stopped long-lived particles at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCLV. **Search for supersymmetry in events with four or more charged leptons in 139 fb<sup>-1</sup> of  $\sqrt{s}=13$  TeV pp collisions with the ATLAS detector**  
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- CCLVI. **Performance of the ATLAS RPC detector and Level-1 muon barrel trigger at  $\sqrt{s}=13$  TeV**  
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- CCLVII. **Determination of the parton distribution functions of the proton from ATLAS measurements of differential W<sup>+</sup>/<sup>-</sup> and Z boson production in association with jets**  
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- CCLVIII. **Measurements of W+W<sup>+</sup> ≥ 1 jet production cross-sections in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCLIX. **Measurements of Higgs bosons decaying to bottom quarks from vvector boson fusion production with the ATLAS experiment at  $\sqrt{s}=13$  TeV**  
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- CCLX. **Search for trilepton resonances from chargino and neutralino pair production in  $\sqrt{s}=13$  TeV pp collisions with the ATLAS detector**  
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- CCLXI. **Search for doubly and singly charged Higgs bosons decaying into vector bosons in multi-lepton final states with the ATLAS detector using proton-proton collisions at root  $s=13$  TeV**  
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- CCLXII. **Search for pair production of third-generation scalar leptoquarks decaying into a top quark and a tau-lepton in pp collisions at root  $s=13$  TeV with the ATLAS detector**  
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- CCLXIII. **Search for new phenomena in events with an energetic jet and missing transverse momentum in pp collisions at root  $s=13$  TeV with the ATLAS detector**  
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- CCLXIV. **Search for charged Higgs bosons decaying into a top quark and a bottom quark at root  $s=13$  TeV with the ATLAS detector**  
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- CCLXV. **Observation of photon-induced  $W^+ W^-$  production in pp collisions at root  $s=13$  TeV using the ATLAS detector**  
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- CCLXVI. **Search for a heavy Higgs boson decaying into a Z boson and another heavy Higgs boson in the  $llbb$  and  $llWW$  final states in pp collisions at root  $s=13$  TeV with the ATLAS detector**  
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- CCLXVII. **CutLang as an analysis description language for introducing students to analyses in particle physics**  
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- CCLXVIII. **Measurement of the associated production of a Higgs boson decaying into b-quarks with a vector boson at high transverse momentum in pp collisions at root  $s=13$  TeV with the ATLAS detector**  
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- CCLXIX. **Search for new phenomena in final states with b-jets and missing transverse momentum in root  $s=13$  TeV pp collisions with the ATLAS detector**  
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- CCLXX. **Optimisation of large-radius jet reconstruction for the ATLAS detector in 13 TeV proton-proton collisions**  
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- CCLXXI. **Search for heavy resonances decaying into a pair of Z bosons in the  $l(+)l(-)l'(+)'(-)$  and  $l(+)l(-)\nu(\nu)\overline{\nu}$  final states using 139 fb<sup>-1</sup> of proton-proton collisions at root  $s=13$ TeV with the ATLAS detector**

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- CCLXXII. **Measurement of the CP-violating phase  $\phi(s)$  in  $B\text{-}s(0) \rightarrow J/\psi \phi$  decays in ATLAS at 13 TeV**  
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- CCLXXIII. **Search for new phenomena in events with two opposite-charge leptons, jets and missing transverse momentum in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCLXXIV. **Search for pair production of scalar leptoquarks decaying into first- or second-generation leptons and top quarks in proton-proton collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCLXXV. **Search for type-III seesaw heavy leptons in dilepton final states in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCLXXVI. **Measurement of light-by-light scattering and search for axion-like particles with 2.2 nb<sup>-1</sup> of Pb+Pb data with the ATLAS detector**  
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- CCLXXVII. **Search for Dark Matter Produced in Association with a Dark Higgs Boson Decaying into (WW<sup>-/+</sup>)-W<sup>-/+</sup> or ZZ in Fully Hadronic Final States from  $\sqrt{s}=13$  TeV pp Collisions Recorded with the ATLAS Detector**  
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- CCLXXVIII. **Search for Higgs boson production in association with a high-energy photon via vector-boson fusion with decay into bottom quark pairs at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCLXXIX. **Longitudinal Flow Decorrelations in Xe plus Xe Collisions at  $\sqrt{s(NN)}=5.44$  TeV with the ATLAS Detector**  
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- CCLXXX. **Measurements of  $WH$  and  $ZH$  production in the  $H \rightarrow b\bar{b}$  stretchy="false"><overbar></mml:mover> decay channel in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCLXXXI. **Differential cross-section measurements for the electroweak production of dijets in association with a Z boson in proton-proton collisions at ATLAS**  
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- CCLXXXII. **Search for dark matter in association with an energetic photon in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CLXXXIII. **Medium-Induced Modification of Z-Tagged Charged Particle Yields in Pb plus Pb Collisions at 5.02 TeV with the ATLAS Detector**  
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- CLXXXIV. **Search for squarks and gluinos in final states with jets and missing transverse momentum using 139 fb<sup>-1</sup> of  $\sqrt{s}=13$  TeV pp collision data with the ATLAS detector**  
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- CCLXXXV. **Measurement of the jet mass in high transverse momentum  $Z(\rightarrow b\bar{b})\gamma$  production at  $\sqrt{s}=13$  TeV using the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CLXXXVI. **Measurements of top-quark pair single- and double-differential cross-sections in the all-hadronic channel in pp collisions at  $\sqrt{s}=13$  TeV using the ATLAS detector**  
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- CLXXXVII. **A search for the dimuon decay of the Standard Model Higgs boson with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- LXXXVIII. **Search for phenomena beyond the Standard Model in events with large b-jet multiplicity using the ATLAS detector at the LHC**  
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- CLXXXIX. **Measurement of hadronic event shapes in high-p(T) multijet final states at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CCXC. **Search for Higgs boson decays into two new low-mass spin-0 particles in the 4b channel with the ATLAS detector using pp collisions at  $\sqrt{s}=13$  TeV**  
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- CCXCI. **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  $\sqrt{s}=13$  TeV with the ATLAS detector**

- Aad G., Abbott B., Abbott D. C., Abud A. A., Abeling K., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CCXCII. **Observation and Measurement of Forward Proton Scattering in Association with Lepton Pairs Produced via the Photon Fusion Mechanism at ATLAS**  
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- CCXCIII. **Determination of jet calibration and energy resolution in proton-proton collisions at  $\sqrt{s}=8$  TeV using the ATLAS detector**  
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.  
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- CCXCIV. **Search for Heavy Resonances Decaying into a Photon and a Hadronically Decaying Higgs Boson 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., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CCXCV. **Search for heavy diboson resonances in semileptonic final states in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCXCVI. **Alignment of the ATLAS Inner Detector in Run 2**  
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- CCXCVII. **Evidence for  $\overline{t}t$  production in the multilepton final state in proton-proton collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCXCVIII. **Performance of the upgraded PreProcessor of the ATLAS Level-1 Calorimeter Trigger**  
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 INSTRUMENTATION, vol.15, no.11, 2020 (SCI-Expanded)
- CCXCIX. **Search for top squarks in events with a Higgs or Z boson using 139 fb<sup>-1</sup> of pp collision data 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., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CCC. **Reconstruction and identification of boosted di-tau systems in a search for Higgs boson pairs using 13 TeV proton-proton collision data in ATLAS**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CCCI. **Search for new non-resonant phenomena in high-mass dilepton final states with the ATLAS detector**  
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- CCCII. **Search for Higgs Boson Decays into a Z Boson and a Light Hadronically Decaying Resonance Using 13 TeV pp Collision Data from the ATLAS Detector**  
Aaboud M., Aad G., Abbott B., Abbott D. C., Abdinov O., Abud A. A., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., et al.  
PHYSICAL REVIEW LETTERS, vol.125, no.22, 2020 (SCI-Expanded)
- CCCIII. **Measurement of the  $t\bar{t}$  production cross-section in the lepton plus jets channel at  $\sqrt{s}=13$  TeV with the ATLAS experiment**  
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.  
PHYSICS LETTERS B, vol.810, 2020 (SCI-Expanded)
- CCCIV. **Measurements of the Higgs boson inclusive and differential fiducial cross sections in the  $4l$  decay channel at  $\sqrt{s}=13$  TeV**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
EUROPEAN PHYSICAL JOURNAL C, vol.80, no.10, 2020 (SCI-Expanded)
- CCCIV. **Search for pairs of scalar leptoquarks decaying into quarks and electrons or muons in  $\sqrt{s}=13$  TeV pp collisions with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CCCVI. **Higgs boson production cross-section measurements and their EFT interpretation in the  $4l$  decay channel at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CCCVII. **Operation of the ATLAS trigger system in Run 2**  
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- CCCVIII. **A search for the Z gamma decay mode of the Higgs boson in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCCIX. **Search for  $t\bar{t}$  resonances in fully hadronic final states in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCCX. **Search for direct production of electroweakinos in final states with missing transverse momentum and a Higgs boson decaying into photons in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCCXI. **Search for new phenomena in final states with large jet multiplicities and missing transverse momentum using  $\sqrt{s}=13$  TeV proton-proton collisions recorded by ATLAS in Run 2 of the LHC**  
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- CCCXII. **Measurements of inclusive and differential cross-sections of combined  $t\bar{t}\gamma$  and  $tW\gamma$  production in the  $e\mu$**

**channel at 13 TeV with the ATLAS detector**

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**CCCXIII. Performance of the ATLAS muon triggers in Run 2**

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**CCCXIV. Dijet Resonance Search with Weak Supervision Using  $\sqrt{s}=13$  TeV pp Collisions in the ATLAS Detector**

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**CCCXV. CP Properties of Higgs Boson Interactions with Top Quarks in the  $(t\bar{t})\rightarrow H\rightarrow\gamma\gamma$  with the ATLAS Detector**

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.

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**CCCXVI. Measurements of top-quark pair spin correlations in the  $e\mu$  channel at  $\sqrt{s}=13$  TeV using pp collisions in the ATLAS detector**

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

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**CCCXVII. Search for long-lived, massive particles in events with a displaced vertex and a muon with large impact parameter 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., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

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

**CCCXVIII. Measurement of azimuthal anisotropy of muons from charm and bottom hadrons Pb plus Pb collisions at  $\sqrt{s_{NN}}=5.02$  TeV with the ATLAS detector**

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.

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**CCCXIX. Search for a scalar partner of the top quark in the all-hadronic  $t(\bar{t})\rightarrow b\bar{b} + \text{missing transverse momentum}$  final state at  $\sqrt{s}=13$  TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

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**CCCXX. Search for heavy neutral Higgs bosons produced in association with b-quarks and decaying into b-quarks at  $\sqrt{s}=13$  TeV with the ATLAS detector**

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

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

**CCCXXI. Search for direct production of electroweakinos in final states with one lepton, missing transverse momentum and a Higgs boson decaying into two b-jets 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., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

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**CCCXXII. Combination of the W boson polarization measurements in top quark decays using ATLAS and CMS data at  $\sqrt{s}=8$  TeV**



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- CCCXXIII. **Performance of the missing transverse momentum triggers for the ATLAS detector during Run-2 data taking**  
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- CCCXXIV. **Measurements of the production cross-section for a Z boson in association with b-jets in proton-proton collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CCCXXV. **Observation of the associated production of a top quark and a Z boson in pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCCXXVI. **Search for Heavy Higgs Bosons Decaying into Two Tau Leptons with the ATLAS Detector Using pp Collisions at  $\sqrt{s}=13$  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.  
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- CCCXXVII. **Measurement of the transverse momentum distribution of Drell-Yan lepton pairs in proton-proton collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
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- CCCXXVIII. **Search for the  $HH \rightarrow b\bar{b}$  process via vector-boson fusion production using proton-proton collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CCCXXIX. **Measurement of the Lund Jet Plane Using Charged Particles in 13 TeV Proton-Proton Collisions with the ATLAS Detector**  
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.  
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- CCCXXX. **Measurement of the tt production cross-section and lepton differential distributions in e mu dilepton events from 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., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CCCXXXI. **Search for squarks and gluinos in final states with same-sign leptons and jets using 139 fb<sup>-1</sup> of data collected with the ATLAS detector**  
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.  
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- CCCXXXII. **Search for dijet resonances in events with an isolated charged lepton using  $\sqrt{s}=13$  TeV proton-proton collision data collected by the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L.,

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- :CCXXXIII. **Test of CP invariance in vector-boson fusion production of the Higgs boson in the  $H \rightarrow \tau\tau$  channel in proton-proton collisions at  $\sqrt{s}=13\text{TeV}$  with the ATLAS detector**  
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.  
PHYSICS LETTERS B, vol.805, 2020 (SCI-Expanded)
- :CCXXXIV. **Search for light long-lived neutral particles produced in pp collisions at  $\sqrt{s}=13\text{ TeV}$  and decaying into collimated leptons or light hadrons with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CCCXXXV. **Evidence for electroweak production of two jets in association with a Z gamma pair in pp collisions at  $\sqrt{s}=13\text{ TeV}$  with the ATLAS detector**  
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.  
PHYSICS LETTERS B, vol.803, 2020 (SCI-Expanded)
- :CCXXXVI. **Search for chargino-neutralino production with mass splittings near the electroweak scale in three-lepton final states in  $\sqrt{s}=13\text{ TeV}$  pp collisions with the ATLAS detector**  
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.  
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- CCXXXVII. **ATLAS data quality operations and performance for 2015-2018 data-taking**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
JOURNAL OF INSTRUMENTATION, vol.15, no.4, 2020 (SCI-Expanded)
- :CXXXVIII. **Search for long-lived neutral particles produced in pp collisions at  $\sqrt{s}=13\text{ TeV}$  decaying into displaced hadronic jets in the ATLAS inner detector and muon spectrometer**  
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.  
PHYSICAL REVIEW D, vol.101, no.5, 2020 (SCI-Expanded)
- :CCXXXIX. **Measurement of soft-drop jet observables in pp collisions with the ATLAS detector at  $\sqrt{s}=13\text{ TeV}$**   
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.  
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- CCCXL. **Searches for electroweak production of supersymmetric particles with compressed mass spectra in  $\sqrt{s}=13\text{ TeV}$  pp collisions with the ATLAS detector**  
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.  
PHYSICAL REVIEW D, vol.101, no.5, 2020 (SCI-Expanded)
- CCCXLI. **Z boson production in Pb plus Pb collisions at  $\sqrt{s_{NN}}=5.02\text{ TeV}$  measured by the ATLAS experiment**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICS LETTERS B, vol.802, 2020 (SCI-Expanded)
- CCCXLII. **Measurement of isolated-photon plus two-jet production in pp collisions at  $\sqrt{s}=13\text{ TeV}$  with the ATLAS detector**  
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.3, 2020 (SCI-Expanded)
- CCCXLIII. **Search for new resonances in mass distributions of jet pairs using  $139\text{ fb}^{-1}$  of pp collisions at root**

**$\sqrt{s}=13\text{TeV}$  with the ATLAS detector**

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.3, 2020 (SCI-Expanded)

**CCCXLIV. Measurement of the  $Z(\rightarrow l^{+}l^{-})\gamma$  production cross-section in pp collisions at  $\sqrt{s}=13\text{ TeV}$  with the ATLAS detector**

Aad G., Abbott B., Abbott D. C., Abud 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.3, 2020 (SCI-Expanded)

**CCCXLV. Search for direct stau production in events with two hadronic tau-leptons in  $\sqrt{s}=13\text{ TeV}$  pp collisions with the ATLAS detector**

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.

PHYSICAL REVIEW D, vol.101, no.3, 2020 (SCI-Expanded)

**CCCXLVI. Measurement of Azimuthal Anisotropy of Muons from Charm and Bottom Hadrons in pp Collisions at  $\sqrt{s}=13\text{ TeV}$  with the ATLAS Detector**

Aaboud M., Aad G., Abbott B., Abidinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW LETTERS, vol.124, no.8, 2020 (SCI-Expanded)

**CCCXLVII. Search for electroweak production of charginos and sleptons decaying into final states with two leptons and missing transverse momentum in  $\sqrt{s}=13\text{ TeV}$  pp collisions using the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abidinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

EUROPEAN PHYSICAL JOURNAL C, vol.80, no.2, 2020 (SCI-Expanded)

**:CCXLVIII. Measurement of the azimuthal anisotropy of charged-particle production in Xe plus Xe collisions at  $\sqrt{s_{NN}}=5.44\text{ TeV}$  with the ATLAS detector**

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.

PHYSICAL REVIEW C, vol.101, no.2, 2020 (SCI-Expanded)

**CCCXLIX. Search for non-resonant Higgs boson pair production in the  $b\bar{b}l\nu l\nu$  final state with the ATLAS detector in pp collisions at  $\sqrt{s}=13\text{ TeV}$**

Aaboud M., Aad G., Abbott B., Abidinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICS LETTERS B, vol.801, 2020 (SCI-Expanded)

**CCCL. Search for the Higgs boson decays  $H \rightarrow ee$  and  $H \rightarrow e\mu$  in pp collisions at  $\sqrt{s}=13\text{ TeV}$  with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abidinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICS LETTERS B, vol.801, 2020 (SCI-Expanded)

**CCCLI. Search for displaced vertices of oppositely charged leptons from decays of long-lived particles in pp collisions at  $\sqrt{s}=13\text{ TeV}$  with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abidinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICS LETTERS B, vol.801, 2020 (SCI-Expanded)

**CCCLII. Measurement of differential cross sections for single diffractive dissociation in  $\sqrt{s}=8\text{ TeV}$  pp collisions using the ATLAS ALFA spectrometer**

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

JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.2, 2020 (SCI-Expanded)

**CCCLIII. Transverse momentum and process dependent azimuthal anisotropies in  $\sqrt{s_{NN}}=8.16\text{ TeV}$  p plus Pb collisions with the ATLAS detector**

- Aaboud M., Aad G., Abbott B., Abbott D. C., Abdinov O., Abud A. A., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., et al.  
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- CCCLIV. **Measurement of long-range two-particle azimuthal correlations in Z-boson tagged pp collisions at root s=8 and 13 TeV**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
EUROPEAN PHYSICAL JOURNAL C, vol.80, no.1, 2020 (SCI-Expanded)
- CCCLV. **Search for Magnetic Monopoles and Stable High-Electric-Charge Objects in 13 TeV Proton-Proton Collisions with the ATLAS Detector**  
Aad G., Abbott B., Abbott D. C., Abdinov O., Abud A. A., Abeling K., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., et al.  
PHYSICAL REVIEW LETTERS, vol.124, no.3, 2020 (SCI-Expanded)
- CCCLVI. **Performance of electron and photon triggers in ATLAS during LHC Run 2**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
EUROPEAN PHYSICAL JOURNAL C, vol.80, no.1, 2020 (SCI-Expanded)
- CCCLVII. **Searches for lepton-flavour-violating decays of the Higgs boson in root s=13 TeV pp collisions with the ATLAS detector**  
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.  
PHYSICS LETTERS B, vol.800, 2020 (SCI-Expanded)
- CCCLVIII. **Search for flavour-changing neutral currents in processes with one top quark and a photon using 81 fb(-1) of pp collisions at root s=13 TeV with the ATLAS experiment**  
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.  
PHYSICS LETTERS B, vol.800, 2020 (SCI-Expanded)
- CCCLIX. **Combination of searches for Higgs boson pairs in pp collisions at root 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., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICS LETTERS B, vol.800, 2020 (SCI-Expanded)
- CCCLX. **Combined measurements of Higgs boson production and decay using up to 80 fb(-1) of proton-proton collision data at root S=13 TeV collected with the ATLAS experiment**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICAL REVIEW D, vol.101, no.1, 2020 (SCI-Expanded)
- CCCLXI. **Measurement of J/psi production in association with a W-+/- boson with pp data at 8 TeV**  
Aaboud M., Aad G., Abbott B., Abbott D. C., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., et al.  
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- CCCLXII. **Fluctuations of anisotropic flow in Pb plus Pb collisions at root s(NN)=5.02 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abbott D. C., Abdinov O., Abud A. A., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., et al.  
JOURNAL OF HIGH ENERGY PHYSICS, vol.2020, no.1, 2020 (SCI-Expanded)
- CCCLXIII. **Measurement of angular and momentum distributions of charged particles within and around jets in Pb plus Pb and pp collisions at root s(NN)=5.02 TeV with the ATLAS detector**  
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.  
PHYSICAL REVIEW C, vol.100, no.6, 2019 (SCI-Expanded)

- CCCLXIV. **Measurement of flow harmonics correlations with mean transverse momentum in lead-lead and proton-lead collisions at  $\sqrt{s(NN)}=5.02$  TeV with the ATLAS detector**  
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.  
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- CCCLXV. **Measurements of top-quark pair differential and double-differential cross-sections in the  $l$  plus jets channel with pp collisions at  $\sqrt{s}=13$  TeV using the ATLAS detector**  
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.  
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- CCCLXVI. **Search for bottom-squark pair production with the ATLAS detector in final states containing Higgs bosons, b-jets and missing transverse momentum**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
JOURNAL OF HIGH ENERGY PHYSICS, no.12, 2019 (SCI-Expanded)
- CCCLXVII. **Electron and photon performance measurements with the ATLAS detector using the 2015-2017 LHC proton-proton collision data**  
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- CCLXXXV. **Measurement of the cross-section and charge asymmetry of W bosons produced in proton-proton**

**collisions at root s=8 TeV with the ATLAS detector**

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**CLXXXVI. Searches for scalar leptoquarks and differential cross-section measurements in dilepton-dijet events in proton-proton collisions at a centre-of-mass energy of root s=13 TeV with the ATLAS experiment**

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**CLXXXVII. Search for excited electrons singly produced in proton-proton collisions at root s=13 TeV with the ATLAS experiment at the LHC**

Aaboud M., Aad G., Abbott B., Abbott D. C., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., et al.

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**LXXXVIII. Search for electroweak diboson production in association with a high-mass dijet system in semileptonic final states in pp collisions at root s=13 TeV with the ATLAS detector**

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**CLXXXIX. Search for low-mass resonances decaying into two jets and produced in association with a photon using pp collisions root s=13 TeV with the ATLAS detector**

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

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**CCCCXI. Measurement of jet-substructure observables in top quark, W boson and light jet production in proton-proton collisions at root s=13 TeV with the ATLAS detector**

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**CCCCXIII. Search for chargino and neutralino production in final states with a Higgs boson and missing transverse momentum at root s=13 TeV with the ATLAS detector**

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

PHYSICAL REVIEW D, vol.100, no.1, 2019 (SCI-Expanded)

**CCCCXIV. Comparison of Fragmentation Functions for Jets Dominated by Light Quarks and Gluons from pp and Pb plus Pb Collisions in ATLAS**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW LETTERS, vol.123, no.4, 2019 (SCI-Expanded)

**CCCCXV. Search for scalar resonances decaying into mu(+)mu(-) in events with and without b-tagged jets produced in proton-proton collisions at root s=13 TeV with the ATLAS detector**

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

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CCCXCVI. **Measurement of  $W^{+/-}Z$  production cross sections and gauge boson polarisation in pp collisions at root  $s=13$  TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abbott D. C., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., et al.

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CCCXCVII. **Combination of Searches for Invisible Higgs Boson Decays with the ATLAS Experiment**

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

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CCCXCVIII. **Search for invisible Higgs boson decays in vector boson fusion at root  $s=13$  TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

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CCCXCIX. **Observation of electroweak  $W^{+/-}Z$  boson pair production in association with two jets in pp collisions at root  $s=13$  TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

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CD. **Search for long-lived neutral particles in pp collisions at root  $s=13$  TeV that decay into displaced hadronic jets in the ATLAS calorimeter**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

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CDI. **Modelling radiation damage to pixel sensors in the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abbott D. C., Abdinov O., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

JOURNAL OF INSTRUMENTATION, vol.14, 2019 (SCI-Expanded)

CDII. **Search for heavy charged long-lived particles in the ATLAS detector in 36.1 fb<sup>-1</sup> of proton-proton collision data at root  $s=13$  TeV**

Aaboud M., Aad G., Abbott B., Abbott D. C., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., et al.

PHYSICAL REVIEW D, vol.99, no.9, 2019 (SCI-Expanded)

CDIII. **Search for single production of vector-like quarks decaying into  $Wb$  in pp collisions at root  $s=13$  TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

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CDIV. **Measurement of  $VH, H \rightarrow b\bar{b}$  production as a function of the vector-boson transverse momentum in 13 TeV pp collisions with the ATLAS detector**

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

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CDV. **Constraints on mediator-based dark matter and scalar dark energy models using root  $s=13$  TeV pp collision data collected by the ATLAS detector**

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

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- CDVI. **Search for top-quark decays  $t \rightarrow Hq$  with 36 fb<sup>-1</sup> of pp collision data at root s=13 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CDVII. **Search for Higgs boson pair production in the  $WW^{(*)}WW^{(*)}$  decay channel using ATLAS data recorded at root s=13 TeV**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CDVIII. **Search for heavy particles decaying into a top-quark pair in the fully hadronic final state in pp collisions at root s=13 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICAL REVIEW D, vol.99, no.9, 2019 (SCI-Expanded)
- CDIX. **Search for large missing transverse momentum in association with one top-quark in proton-proton collisions at root s=13 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CDX. **Measurements of inclusive and differential fiducial cross-sections of  $t\bar{t}\gamma$  production in leptonic final states at root s=13 TeV in ATLAS**  
Aaboud M., Aad G., Abbott B., Abbott D. C., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., et al.  
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- CDXI. **Combinations of single-top-quark production cross-section measurements and vertical bar f(LV)V(tb)vertical bar determinations at root s=7 and 8 TeV with the ATLAS and CMS experiments**  
Aaboud M., Aad G., Abbott B., Abbott D., Abdinov O., Abed Abud A., Abhayasinghe D., Abidi S., AbouZeid O., Abraham N., et al.  
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- CDXII. **Measurement of the  $t\bar{t}Z$  and  $t\bar{t}W$  cross sections in proton-proton collisions at root s=13 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abbott D. C., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., et al.  
PHYSICAL REVIEW D, vol.99, no.7, 2019 (SCI-Expanded)
- CDXIII. **Study of the rare decays of  $B^0$  and  $B^0$  mesons into muon pairs using data collected during 2015 and 2016 with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
JOURNAL OF HIGH ENERGY PHYSICS, no.4, 2019 (SCI-Expanded)
- CDXIV. **Search for the Production of a Long-Lived Neutral Particle Decaying within the ATLAS Hadronic Calorimeter in Association with a Z Boson from pp Collisions at root s=13 TeV**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICAL REVIEW LETTERS, vol.122, no.15, 2019 (SCI-Expanded)
- CDXV. **Measurement of the ratio of cross sections for inclusive isolated-photon production in pp collisions at root s=13 and 8 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CDXVI. **Search for Higgs boson pair production in the  $b\bar{b}WW^*$  decay mode at root s=13 TeV with**

**the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

JOURNAL OF HIGH ENERGY PHYSICS, no.4, 2019 (SCI-Expanded)

**CDXVII. Cross-section measurements of the Higgs boson decaying into a pair of tau-leptons in proton-proton collisions at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW D, vol.99, no.7, 2019 (SCI-Expanded)

**CDXVIII. Measurement of the four-lepton invariant mass spectrum in 13 TeV proton-proton collisions with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

JOURNAL OF HIGH ENERGY PHYSICS, no.4, 2019 (SCI-Expanded)

**CDXIX. Measurements of inclusive and differential fiducial cross-sections of t(t)over-bar production with additional heavy-flavour jets in proton-proton collisions at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

JOURNAL OF HIGH ENERGY PHYSICS, no.4, 2019 (SCI-Expanded)

**CDXX. Measurement of the top quark mass in the t(t)over-bar -> lepton plus jets channel from root s=8 TeV ATLAS data and combination with previous results**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

EUROPEAN PHYSICAL JOURNAL C, vol.79, no.4, 2019 (SCI-Expanded)

**CDXXI. Study of the hard double-parton scattering contribution to inclusive four-lepton production in pp collisions at root s=8 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICS LETTERS B, vol.790, pp.595-614, 2019 (SCI-Expanded)

**CDXXII. Search for Higgs boson decays into a pair of light bosons in the bb mu mu final state in pp collision at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICS LETTERS B, vol.790, pp.1-21, 2019 (SCI-Expanded)

**CDXXIII. Measurements of W and Z boson production in pp collisions at root s=5.02 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

EUROPEAN PHYSICAL JOURNAL C, vol.79, no.2, 2019 (SCI-Expanded)

**CDXXIV. Measurement of photon-jet transverse momentum correlations in 5.02 TeV Pb + Pb and pp collisions with ATLAS**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICS LETTERS B, vol.789, pp.167-190, 2019 (SCI-Expanded)

**CDXXV. Measurements of gluon-gluon fusion and vector-boson fusion Higgs boson production cross-sections in the H -> WW\* -> e nu mu nu decay channel in pp collisions at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICS LETTERS B, vol.789, pp.508-529, 2019 (SCI-Expanded)

**CDXXVI. Search for doubly charged scalar bosons decaying into same-sign W boson pairs with the ATLAS**

**detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

EUROPEAN PHYSICAL JOURNAL C, vol.79, no.1, 2019 (SCI-Expanded)

**CDXXVII. Search for squarks and gluinos in final states with hadronically decaying tau-leptons, jets, and missing transverse momentum using pp collisions at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW D, vol.99, no.1, 2019 (SCI-Expanded)

**CDXXVIII. Search for pairs of highly collimated photon-jets in pp collisions at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW D, vol.99, no.1, 2019 (SCI-Expanded)

**CDXXIX. Search for vector-boson resonances decaying to a top quark and bottom quark in the lepton plus jets final state in pp collisions at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICS LETTERS B, vol.788, pp.347-370, 2019 (SCI-Expanded)

**CDXXX. Search for heavy Majorana or Dirac neutrinos and right-handed W gauge bosons in final states with two charged leptons and two jets at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

JOURNAL OF HIGH ENERGY PHYSICS, no.1, 2019 (SCI-Expanded)

**CDXXXI. Search for long-lived particles in final states with displaced dimuon vertices in pp collisions at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW D, vol.99, no.1, 2019 (SCI-Expanded)

**CDXXXII. 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. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW D, vol.98, no.11, 2018 (SCI-Expanded)

**CDXXXIII. Search for Higgs boson pair production in the..WW \* channel using pp collision data recorded at v s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

EUROPEAN PHYSICAL JOURNAL C, vol.78, no.12, 2018 (SCI-Expanded)

**CDXXXIV. Search for resonant W Z production in the fully leptonic final state in proton-proton collisions at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICS LETTERS B, vol.787, pp.68-88, 2018 (SCI-Expanded)

**CDXXXV. Measurement of the azimuthal anisotropy of charged particles produced in root s NN=5.02 TeV Pb+Pb collisions with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

EUROPEAN PHYSICAL JOURNAL C, vol.78, no.12, 2018 (SCI-Expanded)

**CDXXXVI. Search for new phenomena in events with same-charge leptons and b-jets in pp collisions at >=13**

### TeV with the ATLAS detector

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., et al.

JOURNAL OF HIGH ENERGY PHYSICS, no.12, 2018 (SCI-Expanded)

CDXXXVII. **Comparison between simulated and observed LHC beam backgrounds in the ATLAS experiment at E-beam=4 TeV**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., Abreu H., et al.

JOURNAL OF INSTRUMENTATION, vol.13, 2018 (SCI-Expanded)

DXXXVIII. **Combination of the Searches for Pair-Produced Vectorlike Partners of the Third-Generation Quarks at root s=13 TeV with the ATLAS Detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW LETTERS, vol.121, no.21, 2018 (SCI-Expanded)

CDXXXIX. **Observation of Centrality-Dependent Acoplanarity for Muon Pairs Produced via Two-Photon Scattering in Pb plus Pb Collisions at root s(NN)=5.02 TeV with the ATLAS Detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW LETTERS, vol.121, no.21, 2018 (SCI-Expanded)

CDXL. **Search for chargino-neutralino production using recursive jigsaw reconstruction in final states with two or three charged leptons in proton-proton collisions at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW D, vol.98, no.9, 2018 (SCI-Expanded)

CDXLI. **Search for lepton-flavor-violating decays of the Z boson into a  $\tau$  lepton and a light lepton with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW D, vol.98, no.9, 2018 (SCI-Expanded)

CDXLII. **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. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICAL REVIEW D, vol.98, no.9, 2018 (SCI-Expanded)

CDXLIII. **Search for charged Higgs bosons decaying into top and bottom quarks at root s=13TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

JOURNAL OF HIGH ENERGY PHYSICS, no.11, 2018 (SCI-Expanded)

CDXLIV. **Observation of  $H \rightarrow b\bar{b}$  decays and  $VH$  production with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICS LETTERS B, vol.786, pp.59-86, 2018 (SCI-Expanded)

CDXLV. **Combined measurement of differential and total cross sections in the  $H \rightarrow \gamma\gamma$  and the  $H \rightarrow ZZ^* \rightarrow 4l$  decay channels at root s=13 TeV with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

PHYSICS LETTERS B, vol.786, pp.114-133, 2018 (SCI-Expanded)

CDXLVI. **Constraints on off-shell Higgs boson production and the Higgs boson total width in  $ZZ \rightarrow 4l$  and  $ZZ \rightarrow 2l2\nu$  final states with the ATLAS detector**

Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N.

- L., Abramowicz H., et al.  
PHYSICS LETTERS B, vol.786, pp.223-244, 2018 (SCI-Expanded)
- CDXLVII. **Searches for exclusive Higgs and Z boson decays into J/psi gamma, psi (2S) gamma, and Upsilon(nS) gamma at root s=13 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICS LETTERS B, vol.786, pp.134-155, 2018 (SCI-Expanded)
- CDXLVIII. **Search for pair production of heavy vectorlike quarks decaying into hadronic 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. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICAL REVIEW D, vol.98, no.9, 2018 (SCI-Expanded)
- CDXLIX. **Search for Higgs boson pair production in the gamma gamma b(b)over-bar final state with 13TeV pp collision data collected by the ATLAS experiment**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CDL. **Search for dark matter in events with a hadronically decaying vector boson and missing transverse momentum in pp collisions at root s=13 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
JOURNAL OF HIGH ENERGY PHYSICS, no.10, 2018 (SCI-Expanded)
- CDLI. **Measurement of the suppression and azimuthal anisotropy of muons from heavy-flavor decays in Pb plus Pb collisions at root s(NN)=2.76 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICAL REVIEW C, vol.98, no.4, 2018 (SCI-Expanded)
- CDLII. **Probing the Quantum Interference between Singly and Doubly Resonant Top-Quark Production in pp Collisions at root s=13 TeV with the ATLAS Detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICAL REVIEW LETTERS, vol.121, no.15, 2018 (SCI-Expanded)
- CDLIII. **Search for the Higgs boson produced in association with a vector boson and decaying into two spin-zero particles in the H -> aa -> 4b channel in pp collisions at root s=13 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
JOURNAL OF HIGH ENERGY PHYSICS, no.10, 2018 (SCI-Expanded)
- CDLIV. **Pseudorapidity and transverse momentum dependence of flow harmonics in pPb and PbPb collisions**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Erofeev J., et al.  
PHYSICAL REVIEW C, vol.98, no.4, 2018 (SCI-Expanded)
- CDLV. **Prompt and non-prompt J/psi elliptic flow in Pb plus Pb collisions at root S-NN=5.02 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
EUROPEAN PHYSICAL JOURNAL C, vol.78, no.9, 2018 (SCI-Expanded)
- CDLVI. **Combination of searches for heavy resonances decaying into bosonic and leptonic final states using 36 fb(-1) of proton-proton collision data at root s=13 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.

- PHYSICAL REVIEW D, vol.98, no.5, 2018 (SCI-Expanded)
- CDLVII. **Search for charged Higgs bosons decaying via  $H^{\pm} \rightarrow \tau(\pm)\nu(\tau)$  in the tau plus jets and tau plus lepton final states with 36 fb<sup>-1</sup> of pp collision data recorded at root s=13 TeV with the ATLAS experiment**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
JOURNAL OF HIGH ENERGY PHYSICS, no.9, 2018 (SCI-Expanded)
- CDLVIII. **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. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICS LETTERS B, vol.784, pp.173-191, 2018 (SCI-Expanded)
- CDLIX. **Search for Higgs bosons produced via vector-boson fusion and decaying into bottom quark pairs in root s=13 TeV pp collisions with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICAL REVIEW D, vol.98, no.5, 2018 (SCI-Expanded)
- CDLX. **Search for resonances in the mass distribution of jet pairs with one or two jets identified as b-jets in proton-proton collisions at root s=13 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICAL REVIEW D, vol.98, no.3, 2018 (SCI-Expanded)
- CDLXI. **Measurements of b-jet tagging efficiency with the ATLAS detector using  $t(\bar{t})$  events at root s=13 TeV**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
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- CDLXII. **Measurement of jet fragmentation in Pb plus Pb and pp collisions at root S-NN=5.02 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICAL REVIEW C, vol.98, no.2, 2018 (SCI-Expanded)
- CDLXIII. **Search for pair production of heavy vector-like quarks decaying into high-(PT) W bosons and top quarks in the lepton-plus-jets final state in pp collisions at root s=13 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., et al.  
JOURNAL OF HIGH ENERGY PHYSICS, no.8, 2018 (SCI-Expanded)
- CDLXIV. **Search for flavor-changing neutral currents in top quark decays  $t \rightarrow Hc$  and  $t \rightarrow Hu$  in multilepton final states in proton-proton collisions at root s=13 TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abdinov O., Abeloos B., Abhayasinghe D. K., Abidi S. H., Abouzeid O. S., Abraham N. L., Abramowicz H., et al.  
PHYSICAL REVIEW D, vol.98, no.3, 2018 (SCI-Expanded)
- CDLXV. **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. H., AbouZeid O. S., Abraham N. L., Abramowicz H., Abreu H., et al.  
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- CDLXVI. **Measurement of the underlying event activity in inclusive Z boson production in proton-proton collisions at root s=13 TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroee J., et al.

JOURNAL OF HIGH ENERGY PHYSICS, no.7, 2018 (SCI-Expanded)

- CDLXVII. **Search for  $W^- \rightarrow tb$  decays in the hadronic final state using pp collisions at  $\sqrt{s}=13$  TeV with the ATLAS detector**  
Aaboud M., Aad G., Abbott B., Abidinov O., Abeloos B., Abidi S. H., AbouZeid O. S., Abraham N. L., Abramowicz H., Abreu H., et al.  
PHYSICS LETTERS B, vol.781, pp.327-348, 2018 (SCI-Expanded)
- CDLXVIII. **Search for single production of a vector-like T quark decaying to a Z boson and a top quark in proton-proton collisions at  $\sqrt{s}=13$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroo J., et al.  
PHYSICS LETTERS B, vol.781, pp.574-600, 2018 (SCI-Expanded)
- CDLXIX. **Bose-Einstein correlations in pp, pPb, and PbPb collisions at  $\sqrt{s(NN)}=0.9-7$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroo J., et al.  
PHYSICAL REVIEW C, vol.97, no.6, 2018 (SCI-Expanded)
- CDLXX. **Measurement of Prompt D-0 Meson Azimuthal Anisotropy in Pb-Pb Collisions at  $\sqrt{s-NN}=5.02$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroo J., et al.  
PHYSICAL REVIEW LETTERS, vol.120, no.20, 2018 (SCI-Expanded)
- CDLXXI. **Search for supersymmetry in events with one lepton and multiple jets exploiting the angular correlation between the lepton and the missing transverse momentum in proton-proton collisions at  $\sqrt{s}=13$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroo J., et al.  
PHYSICS LETTERS B, vol.780, pp.384-409, 2018 (SCI-Expanded)
- CDLXXII. **Measurement of normalized differential  $t(\bar{t})$  cross sections in the dilepton channel from pp collisions at  $\sqrt{s}=13$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroo J., et al.  
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- CDLXXIII. **Search for vectorlike light-flavor quark partners in proton-proton collisions at  $\sqrt{s}=8$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroo J., Flechl M., et al.  
PHYSICAL REVIEW D, vol.97, no.7, 2018 (SCI-Expanded)
- CDLXXIV. **Measurement of associated Z + charm production in proton-proton collisions at  $\sqrt{s}=8$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroo J., et al.  
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- CDLXXV. **Search for supersymmetry with Higgs boson to diphoton decays using the razor variables at  $\sqrt{s}=13$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroo J., et al.  
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- CDLXXVI. **Suppression of Excited gamma States Relative to the Ground State in Pb-Pb Collisions at  $\sqrt{s(NN)}=5.02$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroo J., Flechl M., et al.  
PHYSICAL REVIEW LETTERS, vol.120, no.14, 2018 (SCI-Expanded)
- CDLXXVII. **Study of dijet events with a large rapidity gap between the two leading jets in pp collisions at  $\sqrt{s}=7$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroo J.,

- Flechl M., et al.  
European Physical Journal C, vol.78, no.3, 2018 (SCI-Expanded)
- DLXXVIII. **Search for the pair production of third-generation squarks with two-body decays to a bottom or charm quark and a neutralino in proton-proton collisions at root s=13 TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., et al.  
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- CDLXXIX. **Search for Higgs boson pair production in events with two bottom quarks and two tau leptons in proton-proton collisions at root s=13 TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., et al.  
PHYSICS LETTERS B, vol.778, pp.101-127, 2018 (SCI-Expanded)
- CDLXXX. **Search for natural supersymmetry in events with top quark pairs and photons in pp collisions at root s=8 TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., Flechl M., et al.  
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- CDLXXXI. **Search for electroweak production of charginos and neutralinos in multilepton final states in proton-proton collisions at root s=13 TeV**  
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- CDLXXXII. **Search for Higgsino pair production in pp collisions at root s=13 TeV in final states with large missing transverse momentum and two Higgs bosons decaying via  $H \rightarrow b\bar{b}$**   
Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., et al.  
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- DLXXXIII. **Measurements of  $t\bar{t}$  cross sections in association with b jets and inclusive jets and their ratio using dilepton final states in pp collisions at root s=13 TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Ero J., Flechl M., et al.  
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- DLXXXIV. **Azimuthal anisotropy of charged particles with transverse momentum up to 100 GeV/c in PbPb collisions at root S-NN=5.02 TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., Flechl M., et al.  
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- CDLXXXV. **Search for resonant and nonresonant Higgs boson pair production in the  $b\bar{b}\ell\nu\ell\nu$  final state in proton-proton collisions at root s=13 TeV**  
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- DLXXXVI. **Brightness and uniformity measurements of plastic scintillator tiles at the CERN H2 test beam**  
Chatrchyan S., Sirunyan A. M., Tumasyan A., Litomin A., Mossolov V., Shumeiko N., Van de Klundert M., Van Haevermaet H., Van Mechelen P., Van Spilbeeck A., et al.  
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- DLXXXVII. **Search for supersymmetry in events with at least one photon, missing transverse momentum, and large transverse event activity in proton-proton collisions at root s=13 TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogi F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., et al.  
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- DLXXXVIII. **Measurement of the differential cross sections for the associated production of a W boson and jets in proton-proton collisions at  $s = 13$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., et al.  
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- DLXXXIX. **Particle-flow reconstruction and global event description with the CMS detector**  
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- CDXC. **Search for Supersymmetry in pp Collisions at  $\sqrt{s}=13$  TeV in the Single-Lepton Final State Using the Sum of Masses of Large-Radius Jets**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Ero J., et al.  
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- CDXCI. **Search for new phenomena with the MT 2 variable in the all-hadronic final state produced in proton-proton collisions at  $\sqrt{s}=13$  TeV**  
Sirunyan A. M., Tumasyan A., Johnson A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., et al.  
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- CDXCII. **Search for Low Mass Vector Resonances Decaying to Quark-Antiquark Pairs in Proton-Proton Collisions at  $\sqrt{s}=13$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., et al.  
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- CDXCIII. **Search for physics beyond the standard model in events with two leptons of same sign, missing transverse momentum, and jets in proton-proton collisions at  $\sqrt{s}=13$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Ambrogio F., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., et al.  
European Physical Journal C, vol.77, no.9, 2017 (SCI-Expanded)
- CDXCIV. **Search for third-generation scalar leptoquarks and heavy right-handed neutrinos in final states with two tau leptons and two jets in proton-proton collisions at  $\sqrt{s}=13$  TeV**  
Sirunyan A. M., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., Flechl M., et al.  
JOURNAL OF HIGH ENERGY PHYSICS, no.7, 2017 (SCI-Expanded)
- CDXCV. **Search for supersymmetry in events with photons and missing transverse energy in pp collisions at 13 TeV**  
Khachatryan V., Sirunyan A. M., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.769, pp.391-412, 2017 (SCI-Expanded)
- CDXCVI. **Search for high-mass diphoton resonances in proton-proton collisions at 13 TeV and combination with 8 TeV search**  
Khachatryan V., Sirunyan A. M., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., et al.  
Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, vol.767, pp.147-170, 2017 (SCI-Expanded)
- CDXCVII. **The CMS trigger system**  
Khachatryan V., Sirunyan A. M., Tumasyan A., Adam W., Asilar E., Bergauer T., Brandstetter J., Brondolin E., Dragicevic M., Eroe J., et al.  
Journal of Instrumentation, vol.12, no.1, 2017 (SCI-Expanded)
- CDXCVIII. **Measurement of the properties of a Higgs boson in the four-lepton final state**

Chatrchyan S., Khachatryan V., Sirunyan A. M., Tumasyan A., Adam W., Bergauer T., Dragicevic M., Eroo J., Fabjan C., Friedl M., et al.  
PHYSICAL REVIEW D, vol.89, no.9, 2014 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Software Performance of the ATLAS Track Reconstruction for LHC Run 3**  
Aad G., Abbott B., Abeling K., Abicht N., Abidi S., Abouhorma A., Abramowicz H., Abreu H., Abulaiti Y., Acharya B., et al.  
Computing and Software for Big Science, vol.8, no.1, 2024 (Scopus)
- II. **Deep Generative Models for Fast Photon Shower Simulation in ATLAS**  
Aad G., Abbott B., Abbott D., Abud A. A., Abeling K., Abhayasinghe D., Abidi S., Abouhorma A., Abramowicz H., Abreu H., et al.  
Computing and Software for Big Science, vol.8, no.1, 2024 (Scopus)
- III. **AtlFast3: The Next Generation of Fast Simulation in ATLAS**  
Aad G., Abbott B., Abbott D., Abud A. A., Abeling K., Abhayasinghe D., Abidi S., Abouhorma A., Abramowicz H., Abreu H., et al.  
Computing and Software for Big Science, vol.6, no.1, 2022 (Scopus)
- IV. **Emulating the impact of additional proton-proton interactions in the ATLAS simulation by presampling sets of inelastic Monte Carlo events**  
Aad G., Abbott B., Abbott D., Abud A. A., Abeling K., Abhayasinghe D., Abidi S., AbouZeid O., Abraham N., Abramowicz H., et al.  
Computing and Software for Big Science, vol.6, no.1, 2022 (Scopus)
- V. **Monitoring Akkuyu nuclear reactor using antineutrino flux measurement**  
ÖZTÜRK S., ADIGÜZEL A., ÖZCAN V. E., Ünel N. G.  
TURKISH JOURNAL OF PHYSICS, vol.41, no.1, pp.41-46, 2017 (ESCI)

## Refereed Congress / Symposium Publications in Proceedings

- I. **KAHVE Laboratory Status and Plans**  
Adıgüzel A.  
Türk Fizik Derneği VIII. Uluslararası Katılımlı Parçacık Hızlandırıcıları ve Uygulamaları Kongres, Muğla, Turkey, 5 - 07 September 2022, pp.2
- II. **Permanent Magnet Microwave Discharge Ion Source & Its LEBT Line**  
Açıksöz S., Çetinkaya H., Öz S., Adıgüzel A.  
Türk Fizik Derneği 37. Uluslararası Fizik Konferansı, Muğla, Turkey, 1 - 05 September 2021, pp.146
- III. **Analysis Description Language & CutLang Interpreter for HEP**  
Adıgüzel A., Göktürk B., Örgen B., Özcan V. E., Sekmen S., Şen B., Ünel N. G.  
Türk Fizik Derneği 37. Uluslararası Fizik Konferansı, Muğla, Turkey, 1 - 05 December 2021, pp.131
- IV. **KAHVELab 800 MHz Radio Frequency Quadrupole (RFQ) Proton Accelerator Design, Simulation and Manufacturing Progress**  
Adıgüzel A., Baran B., Çağlar A., Çelebi E., Çetinkaya H., Esen Ş., Karatay A., Kaya Ü., Koçer O., Öz S., et al.  
Türk Fizik Derneği 37. Uluslararası Fizik Konferansı, Muğla, Turkey, 1 September - 05 December 2021, pp.136
- V. **LEBT Line Design, Construction and Results from Measurement Box at KAHVELab**  
Halis D., Açıksöz S., Adıgüzel A., Çetinkaya H., Esen Ş., İlhan T. B., Kılıçgedik A., Oğuz S., Özbey A., Özcan V. E., et al.  
Türk Fizik Derneği 37. Uluslararası Fizik Konferansı, Muğla, Turkey, 1 - 05 September 2021, pp.134
- VI. **Control Systems of DC Accelerators at KAHVELab**  
İlhan T. B., Açıksöz S., Adıgüzel A., Er M. F., Öz S., Özcan V. E.  
Türk Fizik Derneği 37. Uluslararası Fizik Konferansı, Bodrum, Türkiye, Muğla, Turkey, 1 - 05 September 2021,

pp.148

- VII. **Space Charge Calculations for Low Beta Proton Beam and Its Effect on Emittance**  
Esen Ş., Adıgüzel A., Çetinkaya H., Oğur S., Özcan V. E., Ünel N. G.  
Türk Fizik Derneği 37. Uluslararası Fizik Konferansı, Muğla, Turkey, 1 September - 05 December 2021, pp.147
- VIII. **Proton Test Beam At KAHVE Laboratory and its Microwave Discharge Ion Source**  
Adıgüzel A.  
Türk Fizik Derneği 36. Uluslararası Fizik Konferansı, İstanbul, Turkey, 1 - 05 September 2020, pp.102
- IX. **Beam Diagnostics for Low Energy Proton Beam**  
Adıgüzel A., Çetinkaya H., Özcan V. E., Özbey A.  
Türk Fizik Derneği 36. Uluslararası Fizik Konferansı, İstanbul, Turkey, 1 - 05 September 2020, pp.103
- X. **UPGRADE OF THE 8 KEV MICROWAVE DISCHARGE ION SOURCE AT KAHVELAB**  
Adıgüzel A., Çetinkaya H., Aşıcı C., Halis Taşdemir D., Hamparsunoğlu A., Özcan V. E., Ünel N. G., Öz S., Özbey A.  
TÜRK FİZİK DERNEĞİ 35. ULUSLARARASI FİZİK KONFERANSI, Muğla, Turkey, 4 - 08 September 2019, pp.250
- XI. **Performance of the KAHVELab-farm and Computing Tests for Heavy Quark Search Software**  
ADIGÜZEL A., Göktürk B., İştin S., Kaya Ü., Kırpıcı S. M., Özcan V. E., Ünel N. G., Sultansoy S.  
TÜRK FİZİK DERNEĞİ 34. ULUSLARARASI FİZİK KONFERANSI, Muğla, Turkey, 5 - 09 September 2018, pp.344
- XII. **EXPERIMENTAL HIGH ENERGY PHYSICS SUMMER SCHOOL FOR HIGH SCHOOLS**  
Kırpıcı S. M., ADIGÜZEL A., Gürbüz S., Özcan V. E.  
TÜRK FİZİK DERNEĞİ 34. ULUSLARARASI FİZİK KONFERANSI, Muğla, Turkey, 5 September - 09 December 2018, pp.415
- XIII. **MONITORING AKKUYU NUCLEAR REACTOR USING ANTINEUTRINO FLUX MEASUREMENT**  
Öztürk S., ADIGÜZEL A., Özcan V. E., Ünel N. G.  
TÜRK FİZİK DERNEĞİ 34. ULUSLARARASI FİZİK KONFERANSI, Muğla, Turkey, 5 - 09 September 2018, pp.343
- XIV. **Comparison 2016 data and simulation for the ATLAS Transition Radiation Tracker (TRT) tracking characteristics using the TRT xAOD**  
ADIGÜZEL A.  
TÜRK FİZİK DERNEĞİ 34. ULUSLARARASI FİZİK KONFERANSI, Muğla, Turkey, 5 - 09 September 2018, pp.331
- XV. **Design, Simulation And Construction Of A Delay Wire Chamber**  
ADIGÜZEL A., ERGENLİK E.  
TÜRK FİZİK DERNEĞİ 33. Uluslararası Fizik Kongresi, Muğla, Turkey, 5 - 10 September 2017, pp.1-4

## Other Publications

### I. Search for New Resonances

Adıgüzel A.

Presentation, pp.1-7, 2020

## Supported Projects

Adıgüzel A., Özcan V. E., TUBİTAK Project, Mev Enerjili Elektron Hızlandırıcısı Tasarım Yazılımı, 2023 - 2026

Adıgüzel A., Çetin S. A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Data Taking, Data Analysis and Operation, Maintenance and Upgrade of Detector Systems at the CERN-ATLAS Experiment, 2020 - 2023

Özcan V. E., Adıgüzel A., Çetinkaya H., Ünel G., TUBİTAK Project, Endüstriyel Uygulamalar İçin MeV Enerjili Elektron Hızlandırıcısı, 2021 - 2022

ADIGÜZEL A., AÇIKSÖZ S., YASUN Ş., ESEN Ş., KOÇER O., HALİS D., ÖZCAN V. E., ÜNEL N. G., ÇETİNKAYA H., ÖZ S., et al., Project Supported by Higher Education Institutions, Proton hızlandırıcısı için RF güç ölçer ve güvenlik kilidi tasarımı ve üretimi, 2021 - 2022

Özcan V. E., Adıgüzel A., TUBİTAK Project, UHF Bandında Kompakt Proton Hızlandırıcısı, 2019 - 2022

Adıgüzel A., Ünel N. G., Özcan V. E., Çetinkaya H., Özbey A., Aşıcı C., Koçer O., Hamparsunoğlu A., Halis Taşdemir D., Project

Supported by Higher Education Institutions, The Production, Transfer and Measurements of Proton Beam via Microwave Ion Source, 2019 - 2020

ADIGÜZEL A., TUBITAK Project, Doğa Eğitimi ve Bilim Okulları, 2018 - 2018

Adıgüzel A., Çetin S. A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, CERN-ATLAS Deneyinde 2016 Veri Alımı, Veri Analizi, TRT ve TDAQ Sistemleri Bakım ve İşletilmesi, 2016 - 2017

ADIGÜZEL A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, CMS Deneyinde HKAL ın Yenileme İyileştirme Çalışmaları ve Fizik Analizleri, 2014 - 2017

ADIGÜZEL A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, CMS Deneyinde Detektör Kurulumu Yenilenmesi ve Fizik Çalışmaları, 2009 - 2013

ADIGÜZEL A., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, CERN deki CMS Deneyinde Ağır İyon Çalışmalar, 2004 - 2008

## Memberships / Tasks in Scientific Organizations

Feza Gürsey - Fizik ve Matematik Uygulama ve Araştırma Merkezi , Member, 2020 - Continues, Turkey

Türk Fizik Derneği, Board Member, 2019 - Continues

Avrupa Nükleer Araştırma Merkezi (CERN), Member, 2008 - Continues

## Scientific Refereeing

TURKISH JOURNAL OF PHYSICS, National Scientific Refreed Journal, October 2020

American Institute of Physics (AIP), Other Indexed Journal, October 2018

Project Supported by Higher Education Institutions, March 2018

Canadian Journal of Physics, SCI Journal, November 2017

## Tasks In Event Organizations

Adıgüzel A., Türk Fizik Derneği 36. Uluslararası Fizik Konferansı, Scientific Congress, İstanbul, Turkey, Eylül 2020

Adıgüzel A., 7th Internationally Participated Congress on Particle Accelerators and Applications, Scientific Congress, Muğla, Turkey, Eylül 2019

## Metrics

Publication: 519

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H-Index (WoS): 111

H-Index (Scopus): 114

## Congress and Symposium Activities

International Conference on Neutrinos and Dark Matter (NDM-2020) , Invited Speaker, Al-Kharijah, Egypt, 2020

3rd International Turkey-Iran Joint Conference on LHC Physics, Attendee, İstanbul, Turkey, 2019

ATLAS Collaboration Week, Attendee, Geneve, Switzerland, 2019

ATLAS TRT Week, Invited Speaker, Geneve, Switzerland, 2019

Yüksek Enerji Fiziği, Astrofizik ve Kozmoloji Çalıştayı, Attendee, İstanbul, Turkey, 2019

Turkish Physical Society 34th International Physics Congress, Attendee, Muğla, Turkey, 2018

Yüksek Enerji Fiziği, Astrofizik ve Kozmoloji Çalıştayı, Attendee, Muğla, Turkey, 2018  
Turkish Physical Society 33rd International Physics Congress, Attendee, Muğla, Turkey, 2017  
Turkish Physical Society 32nd International Physics Congress, Attendee, Muğla, Turkey, 2016  
Hızlandırıcı ve Algıç Fiziği Çalıştayı, Attendee, İstanbul, Turkey, 2016  
İstanbul Üniversitesi Fen Fakültesi 6. Fizik Çalıştayı, Attendee, İstanbul, Turkey, 2016  
9th International Physics Conference of the Balkan Physical Union, Attendee, İstanbul, Turkey, 2015  
Beyond the Standard Model: Results with the 7 TeV LHC Collision Data, Attendee, Trieste, Italy, 2011  
CMS Physics Week, Attendee, Muğla, Turkey, 2010  
Using Physics Analysis Toolkit in CMS data analysis (CERN), Attendee, Geneva, Switzerland, 2009

### **Invited Talks**

Search for New Resonances, Conference, International Conference on Neutrinos and Dark Matter (NDM-2020) , Egypt, January 2020

### **Awards**

Adıgüzel A., 2015 Yılı Türk Fizik Derneği Prof. Dr. Şevket Erk Genç Bilim İnsanı Ödülü, Türk Fizik Derneği, August 2015