

Kevin Matthew Black

CONTACT INFORMATION

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EDUCATION

Boston University, Boston, MA USA

PhD, May 2005

- Dissertation Topic: “A Precision Measurement of the Top Quark Mass”
- Advisor: Meenakshi Narain

M.A., Physics, May 2000

Wesleyan University, Middletown, CT USA

B.A., Physics with Honors, May, 1999

HONORS AND AWARDS

US ATLAS Scholar Award, 2014-2015

Visiting Scientist, Argonne National Laboratory, 2014-2015

2013 European Physical Society High Energy and Particle Physics Prize, for an outstanding contribution to High Energy Physics, awarded to the ATLAS and CMS collaborations, “for the discovery of a Higgs boson, as predicted by the Brout-Englert-Higgs mechanism”

Honors in Physics, BA, Undergraduate Thesis “Photodissociation Dynamics of Diatomic Sodium”, May 1999

PROFESSIONAL EXPERIENCE

University of Wisconsin-Madison, Madison, WI USA

Chair

2024 - present

Associate Chair for Graduate Program

2021-2024

Professor

August 2018 - present

Boston University, Boston , MA USA

Associate Chair and Director of Graduate Studies, Physics Department **July 2017 - July 2018**

Associate Professor (with Tenure)

May 2016 - August 2018

Assistant Professor

September 2010 - May 2016

Harvard University, Cambridge, MA USA

Research Scientist

February 2008 - August 2010

Post-Doctoral Research Scientist

February 2005 - January 2008

Boston University, Boston , MA USA

Graduate Research Assistant

September 2000 - February 2005

Teaching Fellow

September 1999 - May 2000

Wesleyan University, Middletown , CT USA

Undergraduate Research Assistant

September 1997 - May 1999

Teaching Assistant

September 1997 - May 1999

LEADERSHIP ROLES CMS

GEM Institutional Board Chair (2024-)
LHC Physics Center (LPC) Co-Coordinator (2020 - 2024)
CMS GEM Upgrade Deputy Coordinator (2023 - 2024))
CMS GEM Electronics Coordinator (2021-2023)
CMS GEM Review Coordinator (2018-2022)
US CMS L3 GEM electronics CAM (2018-present)
CMS GEM Deputy Run Coordinator (2020 - 2021)

ATLAS

US ATLAS L3 Manager for L0 MDT Trigger Project (2017-2018)
US ATLAS L1 Physics Support Deputy Manager (2016-2018)
Convener of the ATLAS Muon Trigger Signature Group (2013-2015)
Convener of the ATLAS Exotic Heavy Quark Subgroup (2013-2014)
US ATLAS Speakers Committee Chair (2013-2014)
Deputy Convener of ATLAS Muon Trigger Signature Group (2012-2013)
Deputy US ATLAS Speakers Committee Chair (2012-2013, 2015)
Convener of the ATLAS Lepton+X physics subgroup (2008-2010)
ATLAS Reprocessing Coordinator (2011)
US ATLAS Analysis Forum Chair (2009-2011)
ATLAS Muon Software Release Coordinator (2009-2011)
Convener of the US ATLAS Exotics Working group (2008-2011)
Convener of the US ATLAS Muon Performance group (2008-2011)
ATLAS Muon Commissioning Software Coordinator (2008-2010)
Convener of the ATLAS Dilepton working group (2006-2008)

Community

Snowmass Muon Collider Forum Energy Frontier Co-convener (2020-2022)
CPAD MPGD co-convener (2022)

DØ

Operations Leader for the D0 Silicon Track Trigger (2004-2005)

**NATIONAL
COMMITTEE
MEMBERSHIP**

DPF Tanaka Dissertation Award Selection Committee (vice-chair 2023, chair 2024)
Particle Data Group (author) (2017-present)
Vice Chair US LHC Users Organization Executive Committee (2021-2022)
Elected US LHC Users Organization Executive Committee Member (USLEC) (2019-2022), (2014-2015)
Secretary of USLEC (2015)
Chair of USLEC Election and Communications subcommittee (2014-2015)
US ATLAS Analysis Support Manager Search Committee (2014)
Particle and Nuclear Interaction Conference, MIT, Financial Aid Committee (2011)

PEER REVIEW**External Review**

Department of Energy, Energy Frontier Comparative Review Panel (2021)
Natural Sciences and Engineering Research Council of Canada (NSERC) (2020-present)
Reviewer for Science Bulletin (2020 - present)
Reviewer for Computing and Software for Big Science (2019-present)
Reviewer for Italian Ministry of Education, Universities and Research (MIUR) (2018-present)

Reviewer for Physics Letters B (2011-present)
Reviewer for Particle Data Group (2014)
Macmillan Publisher Reviewer of Physics Textbooks (2016-present)

CMS Analysis Review committees

GEM Magnet Test, editor (2022)
Run-3 Detector Paper, editor (2022)
GEM background simulation, language editor (2021)
SUSY stop 0-lepton Search, Chair (2020-2021)
VLQ ZH all met + jets , Chair (2020-2021)
VLQ ZT 1-lepton Search, (2020-2022)
Vector-Like Quarks in the all Hadronic Mode (2018-2023)
W helicity in Top Decays (ATLAS and CMS Combination) (2018-2020)

ATLAS Editorial Boards

Wt Cross Section, Chair (2016-2018)
Exotics Model Independent Search, Chair (2016-2018)
SUSY trilepton Search (2016)
Higgs Lepton-Flavor Violation, Chair (2014-2015)
Inclusive Four Lepton Line Shape (2014-2015)
Z to Four Lepton Cross-Section and Branching Ratio, Chair (2013-2014)
TeV Gravity in same sign dimuons, Chair (2013)
Dark Matter Searches in Mono-Z events, Chair (2012-2013)
Diboson Production at 8 TeV (2012)
Higgs to ZZ to Four Leptons (2011), (2012)
Strong Gravity in same-sign dilepton events (2011)
Strong Gravity in lepton+jet events (2011)
ZZ Production (2011)

EXTERNAL FUNDING

CMS Task: DOE Umbrella Grant, UW Madison, DOE, \$4,100,000 Co-Pi (2023-2026)
TAC-HEP High Energy Advanced Computing Training Grant, DOE \$4,000,000, CO-PI (2022-2027)
CMS LPC Coordinator funds, DOE \$615,000, PI (2020-2024)
CMS Task: DOE Umbrella Grant, UW Madison, DOE, \$3,900,000 Co-Pi (2020-2023)
HL-LHC Upgrade MREFC (GEM Integration), NSF, Pi of subaward, \$450,000 (2020-2025)
CMS GEM EMU Operations, Co-Pi, DOE, \$500,000 annually(2020)
Empowering U.S. Institutions at the Energy Frontier (Phase 2 LOMDT), NSF, \$140,000 PI (2017-2018)
LHC Research at Boston University, DOE, \$1,455,000, Co-PI (2016-2019)
Empowering U.S. Institutions at the Energy Frontier (Tier 2 computing), NSF, \$3,045,333, Co-PI (2017-2022)
US ATLAS Scholars Award, DOE, \$65,000, PI (2014-2015)
Energy Frontier Research with ATLAS, DOE, \$1,695,000, Co-PI (2013-2016)
Empowering U.S. Institutions at the Energy Frontier (Tier 2 computing), NSF, \$2,048,000, Co-PI (2012-2015)
Exotic Physics With The Top Quark, DOE, PI, \$304,000, PI (2012-2016)

WORKSHOP AND CONFERENCE ORGANIZATION

Lepton Photon, Local Organizing Committee (2025)
USLUA Annual Workshop, Local Organizing Committee (2023)
Coordinating Panel for Advanced Detectors, MPOD co-chair (2022)
Snowmass Muon Collider Forum, co-chair (2020-2022)
Snowmass Effects of Covid Panel organizer (2022)
Snowmass Diversity and Equity Panel (2022)

US CMS Annual Workshop Local and USCMS committee (2022)
US CMS Annual Workshop (2020)
US ATLAS Annual Software and Computing Workshop, Organizer and Host, BU (2017)
US ATLAS Annual Workshop, Top Quark Session Chair, ANL (2017)
Deep Inelastic Scattering, New Physics Session Organizer, Hamburg Germany (March 2016)
American Physical Society Division of Particles and Fields, Beyond the Standard Model Collider Session Organizer, University of Michigan (August 2015)
Vector-Like Quark Workshop, Argonne National Laboratory, Chair (May 2015)
US LHC Users Association Annual Meeting, Session Chair, Organizer, ANL (2014)
US ATLAS Annual Workshop, Top Quark Physics Session Chair, University of Michigan (2012)
US ATLAS Annual Workshop, Host and Chair, Boston University (2011)
LHC for ILC workshop organizer, BSM Session Chair, Fermilab (2007)
Boston Area Muon Consortium Organizer, Boston Area Universities (2008-2010)

**TASK FORCES &
COMMITTEES**

CMS:

CMS Implementation Taskforce for Diversity and Inclusion - Chair (2020-2023)
CMS Diversity and Inclusion Committee (2020-present)
CMS Thesis Awards Committee (2022-present)
US CMS Constitution Committee (2019-2020)
LPC Speakers Committee (2018-2020)
US CMS Annual Meeting Committee (2020,2021,2022)

ATLAS:

ATLAS Speakers Committee (2017-2018)
ATLAS Physics Convener Selection Committee (2017)
ATLAS Physics Office (2017)
ATLAS Analysis Format Task Force (2013-2014)
US ATLAS Physics Support Committee (2011-2012)
ATLAS Software Reprocessing Coordinator (2011)
ATLAS Muon Data Reprocessing Coordinator (2009-2011)
ATLAS Top Dilepton Cross-Section Review Committee (2009-2010)
ATLAS Muon Reconstruction and Analysis Task Force (2008-2011)
ATLAS Software and Performance Management Board (2008-2010)
ATLAS Analysis Data Format Task Force (2007-2008)
ATLAS Muon Software Review Committee (2008-2009)
ATLAS Data Format Documentation Leader (2007-2009)
ATLAS Cosmic Ray Muon Analysis Task Force (2008-2011)
US ATLAS Muon Performance/Software Analysis Support Leader (2006-2011)
Chair of the Harvard High Energy Physics Seminar Committee (2005-2008)

TEACHING

University of Wisconsin-Madison

“General Physics” (2022)
“Physics Today” (2021)
“Introduction to the Ideas of Modern Physics” (2019,2020)
“Introduction to Particle Physics” (2019,2020)
“Graduate Research Seminar” (2018)

Boston University

“Modern Physics 2” - Special Topics in Modern physics for physics majors (2018)
“Elementary Physics : Studio” - Introductory physics course, studio format (2016-2017)
“Elementary Physics” - Introductory physics course (2010, 2011, 2012)
“Computing and Analysis in High Energy Physics - Advanced undergraduate seminar course for BU
Abroad Program, new course design, Geneva (2012)
“Introduction to Modern Physics” - Modern physics for engineering students (2013, 2014)

“Modern Physics” - Modern physics for physics majors (2013, 2014)
GRE Preparation Sessions (2011-2014)

MEDIA AND
OUTREACH

Boston Area High School Particle Physics Outreach (with Prof. Tulika Bose) (2015-2017)
US LHC Users Association (USLUA) Trip to Washington DC to Lobby Congress for Science Funding (2014, 2015, 2020)
BU Physics Alumni Reunion Research Talk (2014)
BU Research Magazine 2013, Cover, “Equal and Opposite Forces” (2013)
BU Today, “BU Shares Credit for Big Discovery of Small Particle” (2012)
Lecture on Higgs Boson Discovery to High School Physics Teachers (2012)
Short documentary films directed by Liz Mermin, “CERN people” (2012)
BU Daily Free Press, “Still More Glorious Dawn” (2011)

UNIVERSITY
SERVICE

University of Wisconsin-Madison

Associate Chair for Graduate Program, UW Physics (2021-2024)
University Budget Approach Coordinating Committee (2024)
University Curriculum Committee (2024) Graduate School Academic Planning Council (2022-2024)
College of Letters and Sciences Curriculum Committee (2023-2026)
University Graduate Faculty Executive Committee (2020-2028)
University Budget Committee (2022-2026), Chair (2023-2024)
University Climate Survey Task Force (2022)
Physics Graduate Student First Year Committee, Chair, 2022-present
Physics Graduate Student Recruitment Committee, Chair, 2022-present
Physics Graduate Committee (Chair 2020-current) , (2018-present)
Mentoring Committee (Ilya Esterlis) (2023-2024)
Physics Nominations Committee, (2020 - 2021)
Physics Curriculum Committee, (2020-present)
Physics Diversity and Inclusion Committee (Chair) (2019-2021)
Mentoring Committee (Keith Bechtol), Chair (2018-2023)
Physics Council (2019-present)
Physics Financial Committee (2019-2020)
Physics Comprehensive Examination Committee (2018-2019)

Boston University

Director of Graduate Studies and Associate Chair (2017-2018)
College of Arts and Sciences Diversity and Inclusion Committee (2016-2017)
Faculty and Student Member of Sexual Assault Prevention Training Planning Committee (2018)
Faculty Council, Graduate Program Assessment, CAS Natural Sciences Representative (2017-2018)
Physics Graduate Assessment Committee, Chair, (2015-2017)
High Energy Physics Seminar, Chair, (2016-2017)
Physics Diversity Committee, Chair (2016-2017)
Physics Undergraduate Committee (2017)
Physics Graduate Conversions Committee, Chair (2014-2015), member 2011-2013, 2016-2017
University of Geneva Study Abroad Program - Director of Physics Research at CERN (2011-2012)
Physics Comprehensive Examination Committee (2014-2015)
Geneva Study Abroad Program Physics Committee (2010-2015)
Physics Graduate Admissions Committee (2010-2015)
Elementary Physics Course Development Committee (2010-2014)
Physics Computing Committee (2014)

PROFESSIONAL
DEVELOPMENT

UW Chair Leadership, University of Wisconsin-Madison (2024)
Conflict Resolution Workshop, University of Wisconsin-Madison (2024)
Research Mentoring Workshop, University of Wisconsin-Madison (2024)
Mentoring Students with a Diverse Background Workshop, University of Wisconsin-Madison (2020)
Blended Learning Workshop, Boston University (2015)
Improv Science Workshop, Boston University (2014)
APS New Faculty Workshop, American Physical Society, Maryland (2012)

MENTORSHIP

Scientists

Associate Scientist, University of Wisconsin-Madison:

Pieter Everaets (2020-present)

Assistant Scientist, University of Wisconsin-Madison:

Laurent Petre (2023-present)

Assistant Scientist, University of Wisconsin-Madison:

Camilla Galloni, Primary research mentor (2024-present)

Post-Doctoral Scholars

CMS, University of Wisconsin-Madison:

Camilla Galloni, Primary research mentor (2019-2024)

ATLAS, Boston University:

Lidia Dell'Asta, Primary research mentor (2011-2018)

Kevin Finelli, Secondary research mentor (2016-2018)

Louis Hellary, Secondary research mentor (2012-2015)

Graduate Students

CMS, University of Wisconsin-Madison:

Wren Vettens (2018- 2024)

Dylan Teague (2019-present)

Abby Warden (2019-present)

Anagha Ardavin (2020-present)

Lael Verace (2023-present)

ATLAS, Boston University:

Alex Sherman, Primary research advisor (2014-2019), Diamond Foundry

Efe Yigitbasi, Secondary research advisor (2015 - 2018), post-doc UF

Clare Bernard, PhD 2014, Primary research advisor (2010-2014) (Data Scientist)

Kevin Sanders, Primary research advisor (2015)

Jeremy Love, Secondary advisor, Second reader on PhD Thesis (2010-2012) (DOE Program Manager)

Mike Kruskal, Secondary advisor (2010-2015)

Alex Long, Secondary advisor (2011-2015)

Undergraduate Students

CMS, University of Wisconsin-Madison

Ashling Quinn (2020-2023)
Yitong Liu, (2019-2020)
Evie Mahsem (2020 - 2022)
Abhishek Mharte (2020)
ATLAS, Boston University
Michael Carrigan, UROP (2016-2017), Work for Distinction (2018)
Josh Levin (2014-2015)
Jessica Allen, UROP (2015-2017), Work for Distinction (2017)
Robby Finnan (2015)
William Nash (2013-2014) (now a research technician at Mass General Hospital)
Alice Sady (Williams University - Geneva Program) (2012) (now a graduate student at Johns Hopkins University, NSF Graduate Fellowship)
Kelsey Bilsback (2012), UROP (now a graduate student at Colorado State University)
Nawiun Awal (2010-2012), Work For Distinction (2012) (now a graduate student at NYU)

External Thesis Committees

Stefano Zambito , Brandeis University (2015)
Serdar Gozpinar, Brandeis University (2012)

Students mentored as a Post-Doc while at Harvard

Michael Kagan (2007-2010) (Panofski Fellow at SLAC)
Laura Geanty (2007-2010) (Faculty at University of Oregon)
Lashkar Kashif (2005-2010) (Data Scientist)
Verena Martinez (2006-2010) (Faculty at UMASS Amherst)
Giovanni Zevi Della Porti (2007-2010) (now a post-doc at UCSD)
Ben Smith (2006-2010) (now a software engineer at Box)
Emily Thompson (2008-2010) (Data Scientist)
Jack Kearny (2009) (Data Scientist)
Tomo Lasovich (2009) (Data Scientist)
Megan Thompson (2008)

PUBLICATIONS

I am an coauthor of over 1000 published in peer reviewed journals as a member of the CMS, ATLAS and DØ Collaborations. The full list can be found at:

<http://inspirehep.net/search?p=exactauthor%3AK.M.Black.1&sf=earliestdate>.

Here I highlight only the publications which I have made key contributions. In high energy experimental physics it is conventional to list all authors alphabetically regardless of specific contribution.

Refereed Journal Articles

1. Muon Collider Forum Report, K.M Black et. all, JINST 19 T02015 (2024)
2. Towards a Muon Collider, EPJC, 83 864 (2023)
3. Development of the CMS detector for the CERN LHC Run 3, JINST 19 P05064 (2023)
4. A “Cool” route to the Higgs boson and beyond. The Cool Copper Collider, JINST, 18, P07053 (2023)
5. Quality Control of Mass-Produced GEM Detectors for the CMS GE1/1 Muon Upgrade, submitted to NIM, arXiv:arXiv:2203.12037 (2022)
6. Performance of a Triple-GEM Demonstrator in pp Collisions at the CMS Detector, submitted to NIM, arXiv:2107.09364 (2022)
7. Dynamical Electroweak Symmetry Breaking Review; K. Black, M. Narain, and S Chivukula, Particle Data Group (2021)
8. Modeling the triple-GEM detector response to background particles for the CMS Experiment, submitted to NIM, arXiv:2107.03621 (2021)
9. Detector Control System for the GE1/1 slice test, JINST 15 (2020) 05, P05023
10. Dynamical Electroweak Symmetry Breaking Review; K. Black, M. Narain, and S Chivukula, Particle Data Group (2019)
11. Measurement of the production cross-section of a single top quark in association with a Z boson in proton–proton collisions at 13 TeV with the ATLAS detector, Phys. Lett. B 780 (2018) 557
12. Dynamical Electroweak Symmetry Breaking Review; K. Black, M. Narain, and S Chivukula, Particle Data Group (2017)
13. Performance of the ATLAS Trigger System in 2015, Eur. Phys. J. C 77 (2017) 317
14. Search for lepton-flavour-violating decays of the Higgs and Z bosons with the ATLAS detector, Eur. Phys. J. C (2017) 77: 70
15. Measurement of W^\pm and Z-boson production cross sections in pp collisions at $\sqrt{s} = 13$ TeV with the ATLAS detector, Phys. Lett. B 759 (2016) 601
16. Evidence for the Higgs-boson Yukawa coupling to tau leptons with the ATLAS detector, The ATLAS Collaboration, JHEP, (2015) 117
17. Performance of the ATLAS muon trigger in pp collisions at $\sqrt{s} = 8$ TeV, The ATLAS Collaboration, Eur. Phys. J. C (2015) 75: 120
18. Measurements of top-quark pair differential cross-sections in the $l+jets$ channel in pp collisions at $\sqrt{s} = 7$ TeV using the ATLAS detector, The ATLAS Collaboration, Phys. Rev. D 90, 072004, (2014)
19. Muon Reconstruction Efficiency and Momentum Resolution of the ATLAS Experiment in Proton-Proton Collisions at $\sqrt{s} = 7$ TeV in 2010, The ATLAS Collaboration, Eur. Phys. J. C (2014) 74:3034, (2014)

20. Measurement of the $4l$ Cross Section at the Z Resonance and Determination of the Branching Fraction of $Z \rightarrow 4l$ in pp Collisions at $\sqrt{s} = 7$ and 8 TeV with ATLAS, The ATLAS Collaboration, Phys. Rev. Lett. 112, 231806 (2014)
21. Search for pair and single production of new heavy quarks that decay to a Z boson and a third-generation quark in pp collisions at $\sqrt{s}=8$ TeV with the ATLAS detector, The ATLAS Collaboration, JHEP 11 (2014) 104
22. Search for Quantum Black Hole Production in High-Invariant-Mass Lepton+Jet Final States Using pp Collisions at $\sqrt{s} = 8$ TeV and the ATLAS Detector, The ATLAS Collaboration, Phys. Rev. Lett. 112 (2014) 9, 091804
23. Search for dark matter in events with a hadronically decaying W or Z boson and missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector, The ATLAS Collaboration, Phys. Rev. Lett. 112 (2014) 4, 041802
24. Search for microscopic black holes in a like-sign dimuon final state using large track multiplicity with the ATLAS detector, The ATLAS Collaboration Phys. Rev. D88 (2013) 7, 072001
25. Observation of a new particle in the search for the Standard Model Higgs boson with the ATLAS detector at the LHC, The ATLAS Collaboration, Phys. Lett. B 716 (2012)
26. Search for contact interactions in dilepton events from pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector, The ATLAS Collaboration, Phys. Lett. B712 (2012) 40-58
27. Search for strong gravity signatures in same-sign dimuon final states using the ATLAS detector at the LHC, The ATLAS Collaboration, Phys. Lett. B709 (2012) 322-340
28. Performance of the ATLAS Trigger System in 2010, The ATLAS Collaboration, Eur. Phys. J, C72 (2012) 1849
29. Search for high-mass states with one lepton plus missing transverse momentum in proton-proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS Detector, The ATLAS Collaboration, Phys. Lett. B701 (2011) 50-59
30. Search for the Standard Model Higgs boson in the decay channel $H \rightarrow ZZ^* \rightarrow 4l$ with the ATLAS detector, ATLAS Collaboration, Phys. Lett. B705 (2011) 435-451
31. Search for high mass dilepton resonances in pp collisions at $\sqrt{s} = 7$ TeV with the ATLAS experiment, The ATLAS Collaboration, Phys. Lett. B700 (2011) 163-180
32. Multivariate discrimination and the Higgs + W/Z search, K.M. Black et al. , JHEP 1104 (2011) 069
33. Measurement of the $W \rightarrow l\nu$ and $Z \rightarrow ll$ production cross sections in proton proton collisions at $\sqrt{s} = 7$ TeV with the ATLAS detector, The ATLAS Collaboration, JHEP 1012 (2010) 060
34. Commissioning the ATLAS Muon Spectrometer with Cosmic Rays, The ATLAS Collaboration, Eur. Phys J. C70 (2010) 875-916
35. Measurement of the Top Quark Mass in the Lepton+Jets Channel using Matrix Method, The DØ Collaboration, Phys. Rev. D 75, 092001 (2007)
36. Probing the $1^2\Sigma_u^+$ cation state by low-energy dissociative ionization of Na_2 , B. Delahunty, K.Black, and L. Huwel, Physical Review A, 60 , 1179 (1999)

Conference Notes

1. Trigger and Data Acquisition Technical Design Review, LOMDT Chapter, ATLAS Collaboration (2017)
2. Evidence for Higgs Boson Decays to the $\tau^+\tau^-$ Final State with the ATLAS Detector, ATLAS-CONF-2013-108
<http://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2013-108/>

3. Measurement of top quark pair differential cross-sections in the l+jets channel in pp collisions at $\sqrt{s}=7$ TeV using the ATLAS detector, ATLAS-CONF-2013-099
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2013-099/>
4. ATLAS measurements of the 7 and 8 TeV cross sections for $Z \rightarrow 4l$ in pp collisions, ATLAS-CONF-2013-055
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2013-055/>
5. Performance of the ATLAS muon trigger in 2011, ATLAS-CONF-2012-099
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2012-099/>
6. Observation of an excess of events in the search for the Standard Model Higgs boson in the $H \rightarrow ZZ^* \rightarrow 4l$ channel with the ATLAS detector, ATLAS-CONF-2012-092
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2012-092/>
7. Searches for TeV-gravity signatures in final states with leptons and jets with the ATLAS detector at $\sqrt{s}=7$ TeV, ATLAS-CONF-2011-147
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2011-147/>
8. Search for the Standard Model Higgs boson in the decay channel H to ZZ to $llll$ with the ATLAS detector, ATLAS-CONF-2011-131
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2011-131/>
9. Measurement of the ZZ Production Cross Section in Proton-Proton Collisions at $\sqrt{s}=7$ TeV with the ATLAS Detector, ATLAS-CONF-2011-107
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2011-107/>
10. Search for strong gravity effects in same-sign dimuon final states, ATLAS-CONF-2011-065
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2011-065/>
11. Muon reconstruction efficiency in reprocessed 2010 LHC proton-proton collision data recorded with the ATLAS detector, ATLAS-CONF-2011-063
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2011-063/>
12. Measurement of the $Z \rightarrow ll$ production cross section in proton-proton collisions at $\sqrt{s}=7$ TeV with the ATLAS detector, ATLAS-CONF-2010-076
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2010-076/>
13. Measurement of the $W \rightarrow l\nu$ production cross-section and observation of $Z \rightarrow ll$ production in proton-proton collisions at $\sqrt{s}=7$ TeV with the ATLAS detector, ATLAS-CONF-2010-051
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2010-051/>
14. Observation of $W \rightarrow l\nu$ and $Z \rightarrow ll$ production in proton-proton collisions at $\sqrt{s}=7$ TeV with the ATLAS detector, ATLAS-CONF-2010-044
<https://atlas.web.cern.ch/Atlas/GROUPS/PHYSICS/CONFNOTES/ATLAS-CONF-2010-044/>
15. Expected Performance of the ATLAS Experiment, Detector, Trigger and Physics, ATLAS Collaboration CERN-OPEN-2008-020, Geneva, 2008
<https://cds.cern.ch/record/1125884?ln=en>
16. Measurement of the Top Quark Mass in the Lepton+Jets Channel using $D\bar{O}$ Run II Data: The Low Bias Template Method, 2005, $D\bar{O}$ -CONF-NOTE 4728
<http://www-d0.fnal.gov/Run2Physics/WWW/results/prelim/TOP/T12/T12.pdf>

Archive and Workshop Papers

1. Muon Collider Forum Report, arXiv, :2209.01318 (2022)
2. Micro-Pattern Gaseous Detectors, arXiv, 2209.05202 (2022)
3. Summarizing experimental sensitivities of collider experiments to dark matter models and comparison to other experiments, arXiv 2206.03456 (2022)
4. MPGDs for tracking and Muon detection at future high energy physics colliders, arXiv:2203.06525 (2022)

5. Prospects for Heavy WIMP Dark Matter Searches at Muon Colliders, arXiv 2205.10404
6. Prospects for the Measurement of the Standard Model Higgs Pair Production at the Muon Colliders, arXiv:arXiv:2203.08874 (2022)
7. Snowmass 2013 Top quark working group report, K. Black, et al., arXiv 1311.2028 (2013)
8. New Particles Working Group of the Snowmass 2013 Community Summer Study, K Black et al., arXiv 1311.0299 (2013)
9. Sensitivity to the Single Production of Vector-Like Quarks at an Upgraded Large Hadron Collider, K.M. Black et al.,1309.1888 (2013)
10. Low-scale technicolor at the 10-TeV LHC, K. Black et al., Les Houches Proceedings 2009
11. New Physics at the LHC: A Les Houches Report. Physics at TeV Colliders 2007, New Physics Working Group, Les Houches 2007 arXiv:0802.3715
12. The $D\bar{D}$ Run II impact parameter trigger, Adams et al., arXiv:physics/0701195

PRESENTATIONS

Conferences and Workshops

1. Invited Talk “Muon Collider Detector Overview, Muon Collider Workshop, Pittsburgh, Nov 2023
2. Invited Talk “CMS Highlights and Preparation for the HL-LHC”, First African Workshop in High Energy Physics, Nov 2023
3. Invited Talk “Muon Collider : Snowmass Overview”, FNAL Muon Collider Workshop, Sept 2022
4. Invited Talk, “ATLAS Top Quark Results”, IHEP 2017, Protvino, Russia, July 2017
5. Invited Talk, “Exotica searches at ATLAS”, Mitchell, College Station Texas, May 2016
6. Invited Talk, “The upgraded ATLAS Trigger and DAQ system for the second LHC run”, DPF, Ann Arbor Michigan, July 2015
7. Invited Talk, “Exotic Physics Results at the LHC”, Physics in Collision, Beijing China, September 2013
8. Poster, “Performance of the ATLAS Muon Trigger”, Lepton Photon, SLAC, July 2013
9. Invited Talk, “Vector Like Quarks at an Upgraded LHC”, Snowmass: Energy Frontier Workshop, Brookhaven, March 2013
10. Invited Talk, “Standard Model Measurements”, The Next Magnificent Mile of the Higgs, Northwestern University, May 2012
11. Invited Talk, “Top Decays at the LHC”, The Next Step at the LHC 2012, University of Chicago, June 2012
12. Invited Talk, “MiniReview on Beyond the Standard Model Theories”, DPF 2011, Brown University, August 2011
13. Plenary Talk, “ATLAS Results”, Low-X 2011, Santiago De Compostela, Spain, June 2011
14. Invited Talk, “ATLAS Distributed Analysis”, Open Science Grid All Hands Meeting, Harvard, April 2011
15. Invited Talk, “W+jets prospects”, LHC@BNL: Joint Theory/Experiment Workshop on Early Physics at the LHC, BNL, July 2010
16. Invited Talk, “W results”, The Physics of the W and Z Bosons, BNL, May 2010
17. Invited Talk, “ATLAS Results”, Terrascale Workshop, University of Washington, June 2010

18. Invited Talk, “Conditions Database and Prompt Reconstruction of ATLAS Data ICCMSE”, Rhodes, Greece, October 2009
19. Poster, “Cosmic Ray Charge Asymmetry Measurement”, NYU ATLAS Workshop of the Americas, NYU, August 2009
20. Invited Talk, “Beyond the Standard Model with Leptons and Jets”, DPF, Detroit July 2009,
21. Invited Talk, “Beyond the Standard Model Physics at ATLAS”, Beyond the Standard Model Monte Carlo Workshop, UC Davis, March 2009
22. Plenary Talk, “Black Holes and Gravitons at the LHC”, Moriond QCD, La Thuile March 2008
23. Invited Talk, “Exotics with First Year Data at the LHC”, SLAC ATLAS Workshop, June 2007
24. Invited Talk, “Prospects for Little Higgs Searches at the LHC”, PASCOS 2006, Columbus OH, November 2006
25. Contributed Talk, “Measurement of the Top Quark Mass at D0 using a Template Method”, DPF, Riverside, CA, August 2004:
26. Poster, “The Silicon Track Trigger at DØ” Lepton Photon, Batavia, IL, August 2003
27. Contributed Talk, “Prospects for a Measurement of the Top Quark Mass in Run II at the Tevatron”, APS March Meeting, Albuquerque, NM, March 2002
28. Contributed Talk, “Molecular Photo-Dissociative Ionization Near Threshold in Na_2 ”, APS March Meeting, Albuquerque, NM, May 1998

Seminars and Colloquia

1. Invited Seminar, “Search for new Physics with the Top Quark”, University of Wisconsin, December 2017
2. Invited Seminar, “Search for new Physics with the Top Quark”, Maryland, March 2017
3. Fermilab Wine and Cheese, “Search For Vector Like Quarks with the ATLAS Detector”, Fermilab, June 2015
4. Invited Seminar, “Vector Like Quarks with the ATLAS Detector”, Northeastern University, April 2015
5. Invited Seminar, “Vector Like Quarks with the ATLAS Detector”, UMASS Amherst, March 2015
6. Invited Seminar, “Search for Vector Like Quarks with the ATLAS Detector”, Argonne National Lab, August 2014
7. Invited Seminar, “Search for Vector Like Quarks in the Z+heavy quark channel with ATLAS”, Fermilab, July 2014

8. Invited Colloquium , “Observation of a New Boson at 125 GeV” , Boston University, September 2012
9. Invited Seminar, “Muon Commissioning and New Physics” , Boston University, March 2010
10. Invited Seminar, “Muon Commissioning and New Physics” , LBNL , Berkeley, March 2010
11. Invited Seminar, “Muon Commissioning and New Physics” , Houston University, Houston, TX March 2010
12. Invited Colloquium, “Muon Commissioning and New Physics” , University of Alabama, Tuscaloosa, AL March 2010
13. Invited Seminar, “Status of ATLAS, Prospects for Early Physics, and Cosmic Ray Commissioning” , Northwestern University, Evanston, October 2009
14. Invited Seminar, “Status of ATLAS, Prospects for Early Physics, and Cosmic Ray Commissioning” , Indiana University, Bloomington , October 2009
15. Invited Seminar, “Status of ATLAS, Prospects for Early Physics, and Cosmic Ray Commissioning” , University of Massachusetts, Amherst MA, October 2009
16. Invited Seminar, “Muon Reconstruction and Identification” , Argonne National Lab, May 2009
17. Invited Seminar, “W/Z+jets at the LHC” , Brookhaven National Laboratory, February 2009
18. Invited Colloquium, “Uncovering new physics at the LHC” , Iowa State University, March 2008
19. Invited Seminar, “New physics at the LHC” , Boston University, February 2008
20. Invited Seminar, “Prospects for Discovery of Beyond the Standard Model Physics with Early LHC Data” , University of Massachusetts, Amherst Sept 2007