

# Kevin Matthew Black

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## 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

*Full 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**

US CMS L3 Manager for GEM electronics upgrade (2018-present)  
CMS GEM Review Coordinator (2018-present)  
CMS GEM Deputy Run Coordinator (2020-present)

**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)

**D0**

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

NATIONAL  
COMMITTEE  
MEMBERSHIP

Particle Data Group (author) (2017-present)  
Elected US LHC Users Organization Executive Committee Member (USLEC) (2014-2015), (2019-2020)  
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**

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**

SUSY 0-lepton Search, Chair (2020-present)  
VLQ ZH all hadronic search, Chair (2020-present)  
Vector-Like Quarks in the all Hadronic Mode (2018-present)  
W Helicity in Top Decays (ATLAS and CMS Combination) (2019-2020)

**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, UW Madison , DOE \$3,900,000 (submitted), Co-Pi (2020-2023)  
HL-LHC Upgrade MREFC (GEM Integration), NSF \$450,000 , PI (2020-2024)  
CMS GEM EMU Operations , DOE \$400,000 annual, Co-Pi (2020-)  
HL-LHC Upgrade (CMS GEM Management ), NSF, \$8,500 PI (2019)  
Empowering U.S. Institutions at the Energy Frontier (Phase 2 L0MDT ), 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  
ORGANIZATION

US CMS Annual Meeting , UW (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:**  
US CMS Constitution Committee (2019-present)  
LPPC Speakers Committee (2018-present)

**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:**

The Ideas of Modern Physics (2019)  
Introduction to Particle Physics (2019,2020)  
Graduate Student 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 Fund-  
ing (2014, 2015)  
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**

University Graduate Executive Committee (2020-2024)  
Physics Curriculum Committee, Chair (2020-present)  
Physics Diversity and Inclusion Committee (Chair) (2019-present)  
Mentoring Committee (Keith Bechtol), Chair (2018-present)  
Physics Council (2019-present)  
Physics Financial Committee (2019-present)  
Physics Graduate Committee (2018-present)  
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-current)  
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

Blended Learning Workshop, Boston University (2015)  
Improv Science Workshop, Boston University (2014)  
APS New Faculty Workshop, American Physical Society, Maryland (2012)

MENTORSHIP

**Assistant Scientist:**  
Pieter Everaerts (2020-present)

**Post-Doctoral Scholars**

**CMS:**  
Camila Galloni, Primary research mentor (2019-present)

**ATLAS:**  
Lidia Dell'Asta, Primary research mentor (2011-2019)  
Kevin Finelli, Secondary research mentor (2016-2010)  
Louis Hellary, Secondary research mentor (2012-2015)

**Graduate Students**

**CMS:**  
Wren Vetten (2018-present)  
Dylan Teague (2018-present)  
Abby Warden (2019-present)  
Anagha Ardavin (2020-present)

**ATLAS:**  
Alex Sherman, Primary research advisor (2014-2019)  
Efe Yigitbasi, Secondary research advisor (2015 - 2019)  
Clare Bernard, PhD 2014, Primary research advisor (2010-2014) (now a data scientist TAMR)  
Kevin Sanders, Primary research advisor (2015)  
Jeremy Love, Secondary advisor, Second reader on PhD Thesis (2010-2012) (now a post-doc at ANL)  
Mike Kruskal, Secondary advisor (2010-2015)  
Alex Long, Secondary advisor (2011-2015)

**Undergraduate Students**

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 Billsback (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)

#### **2005-2010 - As a Post-Doc while at Harvard**

Michael Kagan (2007-2010) (now a post-doc at SLAC)  
Laura Geanty (2007-2010) (now a post-doc at LBNL)  
Lashkar Kashif (2005-2010) (now a post-doc at Wisconsin University)  
Verena Martinez (2006-2010) (now an assistant professor at UIUC)  
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) (now a data scientist at INSIGHT)  
Jack Kearny (2009) (now a post-doc at FNAL)  
Tomo Lasovich (2009) (now a graduate student at Harvard)

#### **PUBLICATIONS**

I am an coauthor of 1010 papers are published in peer reviewed journals as a member of the CMS, ATLAS and DØ Collaborations. The full list can be found at:

<https://inspirehep.net/authors/1020223>

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. Three papers on CMS are in preparation.

#### **Refereed Journal Articles**

1. Dynamical Electroweak Symmetry Breaking Review; K. Black, M. Narain, and S Chivukula, Particle Data Group (2019)
2. 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
3. Dynamical Electroweak Symmetry Breaking Review; K. Black, M. Narain, and S Chivukula, Particle Data Group (2017)
4. Performance of the ATLAS Trigger System in 2015, Eur. Phys. J. C 77 (2017) 317
5. Search for lepton-flavour-violating decays of the Higgs and Z bosons with the ATLAS detector, Eur. Phys. J. C (2017) 77: 70
6. 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
7. Evidence for the Higgs-boson Yukawa coupling to tau leptons with the ATLAS detector, The ATLAS Collaboration, JHEP, (2015) 117
8. Performance of the ATLAS muon trigger in pp collisions at  $\sqrt{s}=8$  TeV, The ATLAS Collaboration, Eur. Phys. J. C (2015) 75: 120

9. Measurements of top-quark pair differential cross-sections in the 1+jets channel in pp collisions at  $\sqrt{s} = 7$  TeV using the ATLAS detector, The ATLAS Collaboration, Phys. Rev. D 90, 072004, (2014)
10. 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)
11. 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)
12. 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
13. 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
14. 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
15. 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
16. 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)
17. 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
18. 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
19. Performance of the ATLAS Trigger System in 2010, The ATLAS Collaboration, Eur. Phys. J, C72 (2012) 1849
20. 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
21. 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
22. 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
23. Multivariate discrimination and the Higgs + W/Z search, K.M. Black et al. , JHEP 1104 (2011) 069
24. 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
25. Commissioning the ATLAS Muon Spectrometer with Cosmic Rays, The ATLAS Collaboration, Eur. Phys J. C70 (2010) 875-916
26. Measurement of the Top Quark Mass in the Lepton+Jets Channel using Matrix Method, The DØ Collaboration, Phys. Rev. D 75, 092001 (2007)
27. 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, L0MDT 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 1+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-2011-13  
<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. Snowmass 2013 Top quark working group report, K. Black, et al., arXiv 1311.2028 (2013)



2. New Particles Working Group of the Snowmass 2013 Community Summer Study, K Black et al., arXiv 1311.0299 (2013)
3. Sensitivity to the Single Production of Vector-Like Quarks at an Upgraded Large Hadron Collider, K.M. Black et al., 1309.1888 (2013)
4. Low-scale technicolor at the 10-TeV LHC, K. Black et al., Les Houches Proceedings 2009
5. New Physics at the LHC: A Les Houches Report. Physics at TeV Colliders 2007, New Physics Working Group, Les Houches 2007 arXiv:0802.3715
6. The  $D\bar{D}$  Run II impact parameter trigger, Adams et al., arXiv:physics/0701195

**Conferences and Workshops**

1. Invited Talk, “ATLAS Top Quark Results”, IHEP 2017, Protvino, Russia , July 2017
2. Invited Talk, “Exotica searhes at ATLAS”, Mitchel, College Station Texas, May 2016
3. Invited Talk, “The upgraded ATLAS Trigger and DAQ system for the second LHC run” , DPF, Ann Arbor Michigan, July 2015
4. Invited Talk, “Exotic Physics Results at the LHC” , Physics in Collision, Beijing China, September 2013
5. Poster, “Performance of the ATLAS Muon Trigger”, Lepton Photon, SLAC, July 2013
6. Invited Talk, “Vector Like Quarks at an Upgraded LHC” , Snowmass: Energy Frontier Workshop, Brookhaven, March 2013
7. Invited Talk, “Standard Model Measurements”, The Next Magnificent Mile of the Higgs, Northwestern University, May 2012
8. Invited Talk, “Top Decays at the LHC” , The Next Step at the LHC 2012, University of Chicago, June 2012
9. Invited Talk, “MiniReview on Beyond the Standard Model Theories” , DPF 2011, Brown University, August 2011
10. Plenary Talk, “ATLAS Results”, Low-X 2011, Santiago De Compostella, Spain, June 2011
11. Invited Talk, “ATLAS Distributed Analysis” , Open Science Grid All Hands Meeting, Harvard, April 2011
12. Invited Talk, “W+jets prospects”, LHC@BNL: Joint Theory/Experiment Workshop on Early Physics at the LHC, BNL, July 2010
13. Invited Talk, “W results”, The Physics of the W and Z Bosons, BNL, May 2010
14. Invited Talk, “ATLAS Results” , Terrascale Workshop, University of Washington, June 2010
15. Invited Talk, “Conditions Database and Prompt Reconstruction of ATLAS Data ICCMSE” , Rhodes, Greece, October 2009
16. Poster, “ Cosmic Ray Charge Asymmetry Measurement” , NYU ATLAS Workshop of the Americas, NYU, August 2009
17. Invited Talk, “Beyond the Standard Model with Leptons and Jets” , DPF, Detroit July 2009,
18. Invited Talk, “Beyond the Standard Model Physics at ATLAS” , Beyond the Standard Model Monte Carlo Workshop, UC Davis, March 2009

19. Plenary Talk, “Black Holes and Gravitons at the LHC”, Moriond QCD, La Thuile March 2008
20. Invited Talk, “Exotics with First Year Data at the LHC”, SLAC ATLAS Workshop, June 2007
21. Invited Talk, “Prospects for Little Higgs Searches at the LHC”, PASCOS 2006, Columbus OH, November 2006
22. Contributed Talk, “Measurement of the Top Quark Mass at D0 using a Template Method”, DPF, Riverside, CA, August 2004:
23. Poster, “The Silicon Track Trigger at DØ” Lepton Photon, Batavia, IL, August 2003
24. Contributed Talk, “Prospects for a Measurement of the Top Quark Mass in Run II at the Tevatron”, APS March Meeting, Albuquerque, NM, March 2002
25. 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