

# CHRISTINE A. AIDALA

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High-energy experimental nuclear physics; nucleon structure; QCD dynamics in hadrons/hadronization.

## EDUCATION:

**Columbia University** Ph.D. program, Physics, 2002-05. M.A. 2004. M.Phil. 2005. Ph.D. 2005.  
**University of Chicago** Ph.D. program, Physics, 1999-2000. Medical leave starting March 2000.  
**Yale University** 1995-99. B.S. in Physics, B.S. in Music 1999.

## RESEARCH POSITIONS HELD:

September 2012-present. **Assistant Professor of Physics, University of Michigan.**

January-July 2012. **Scientist 2, Los Alamos National Laboratory.** PHENIX Experiment at the Relativistic Heavy Ion Collider (RHIC), Brookhaven National Laboratory, and E906, Fermi National Accelerator Laboratory.

January 2009-December 2011. **Frederick Reines Distinguished Postdoctoral Fellow, LANL, PHENIX and E906.**

January 2006-December 2008. **Postdoctoral Research Associate, UMass Amherst, PHENIX.**

September 2002-December 2005. **Graduate Research Assistant, Columbia University, PHENIX.**  
Thesis advisor: B.A. Cole.

September 2001-August 2002. **Physics Associate, BNL, PHENIX.**

June 1999-January 2000. **Graduate researcher, U. of Chicago, OPAL Experiment at CERN.** J. Pilcher.

1998-99. **Senior thesis, Yale U.,** polarized proton studies for the HERA e+p collider. V.W. Hughes.

Summer 1998. **CERN Summer Student Program,** data acquisition in a silicon lab. P. Weilhammer.

Summer 1997. **BNL Summer Student Program,** STAR Experiment at RHIC. T.J. Hallman.

Summer 1996. **Wright Nuclear Structure Laboratory, Yale U.,** low-energy nuclear structure. R.F. Casten.

## RESEARCH EXPERIENCE (since 2001):

### Data analysis:

- Transverse single-spin asymmetry in forward eta meson production in high-energy polarized proton-proton collisions, probing quark and gluon spin-momentum correlations within transversely polarized protons and in the hadronization of quarks to eta mesons.
- Transverse single-spin asymmetry in midrapidity neutral pion production in high-energy polarized proton-proton collisions, probing gluon spin-momentum correlations within transversely polarized protons.
- Double-helicity asymmetry in midrapidity charged hadron production in high-energy polarized proton collisions, sensitive to the gluon spin contribution to the spin of the proton.
- Cross section for midrapidity charged hadron production in moderate-energy proton-proton collisions, to test the energy range of the applicability of different techniques in perturbative QCD calculations.
- Spin transfer to antilambda baryons in high-energy polarized proton collisions, to study spin-momentum correlations in the hadronization into antilambda particles of quarks scattered from polarized protons.

### Phenomenology:

- Parameterization of transverse-momentum-dependent parton distribution functions from world Drell-Yan as well as Z and W boson data
- Constraints on  $Q^2$  evolution of transverse-momentum-dependent parton distribution functions
- Parameterization of world data on the hadronization of quarks and gluons into eta mesons

### Simulations:

- GEANT 3 implementation of three upgrade/proposed detectors for PHENIX
- Extensive experience working with the PYTHIA event generator for proton-proton collisions

### Hardware, electronics, and experimental operations:

- Maintenance of E906 liquid hydrogen and liquid deuterium targets
- Assembly and testing of PHENIX Forward Silicon Vertex Detector
- Preparation and testing of E906 Station 4 proportional tubes
- Maintenance and operations support for PHENIX Muon Trackers
- Studies for development of electronics-level trigger for high- $p_T$  charged pions in p+p collisions.
- Period Coordinator for operations, PHENIX 2007, 2008, and 2011 runs
- Deputy online data production manager, PHENIX 2006 run

TEACHING AND MENTORSHIP EXPERIENCE:

Teaching at U. of Michigan:

Physics 288: **The Physics of Music**, Winter 2015.

Physics 405: **Intermediate Electricity and Magnetism**, Fall 2014.

Physics 351: **Mathematical Methods of Theoretical Physics I**, Fall 2012, Winter 2013, Fall 2013.

Student advising and thesis committee membership:

- Thesis advisor, B.J. Ramson, U. of Michigan, May 2013-present
- Thesis co-advisor, M. Febbraro, U. of Michigan, May 2013-present
- Thesis advisor, J.D. Osborn, U. of Michigan, May 2014-present
- Undergraduate research advisor for M. Barber, R. Cernak, M. Wood, E. Cizmas, A.S. White, C.M. Culkin, U. of Michigan.
- Faculty advisor for W. Qian as an associate editor for the Journal of Young Investigators, 2012-2014
- Thesis committee, M. Bales, U. of Michigan
- Thesis committee, T. Engelmores, Columbia U.
- Prospectus committee, A. Kaplan, Z. Qu, U. of Michigan
- Prospectus committee, G. Kaur, Wayne State U.
- Sponsor for R.J. Belmont, Vanderbilt U., as a Visiting Scholar at U. of Michigan to complete thesis, 2012
- Supervision of A. Datta, UMass Amherst, throughout thesis analyses, September 2007-February 2012
- Supervision of R. Han, Peking U., in completion of thesis analysis, May-December 2007

AWARDS AND RECOGNITION:

**Willie Hobbs Moore: Aspire, Advance, Achieve Award**, for outstanding service as a mentor to the U-M Society of Women in Physics, University of Michigan, 2014.

**Nominee, Alexander M. Cruickshank Award**, Board of Trustees, Gordon Research Conferences, 2014.

**Essayist for *Blazing the Trail: Essays by Leading Women in Science***. E. Ideal and R. Meharchand, eds. CreateSpace Independent Publishing, 2013.

**Distinguished Women Physicists Lecture Series colloquium speaker**, U. of Connecticut, 2012.

**Invited Fellow, 50th anniversary celebration of the International School on Subnuclear Physics**, Erice, Italy, June–July 2011. Organized by G. 't Hooft and A. Zichichi.

**Sambamurti Memorial Lectureship**, BNL, 2008. *"For her contributions to the RHIC Spin Program, notably her leadership in the measurement of the transverse spin structure of the proton using pions."*

**Vernon Hughes Travel Fellowship**, 2004.

**Luise Meyer-Schutzmeister Award**, Association for Women in Science, 2004.

**GAANN Fellowship**, U.S. Department of Education, through University of Chicago, 1999.

**Scholarship Recipient**, Long Island Chapter of the **American Nuclear Society**, 1999.

Nominee for **Barry M. Goldwater Scholarship**, Yale University, 1998.

CONFERENCE, WORKSHOP, AND SCHOOL ORGANIZATION:

**Member, Local Organizing Committee, APS Division of Particles and Fields Meeting 2015**, Ann Arbor, MI, August 3-7, 2015.

**Chair, Workshop on Opportunities for Polarized Physics at Fermilab**, May 20-22, 2013.

**Member, International Organizing Committee, 3rd Workshop on the QCD Structure of the Nucleon (QCD-N12)**, Bilbao, Spain, October 22-26, 2012.

**Member, Program Committee, 19th Particles and Nuclei International Conference (PANIC 2011)** and Co-organizer for session on Quarks and Gluons in Hadrons, MIT, July 24-29, 2011.

**Co-organizer, Workshop on Transverse-Momentum-Dependent Distributions, ECT\***, Trento, Italy, June 21-25, 2010.

**Principal organizer, Symposium on Educational and Public Outreach**, sponsored by the RHIC-AGS Users Executive Comm. and the National User Facility Organization, BNL, June 9, 2010.

**Co-convenor, Spin Physics Working Group, 18th International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS 2010)**, Florence, Italy, April 17-23, 2010.

**Co-organizer, Workshop on Transverse Spin Physics**, RHIC-AGS Users Mtg, BNL, June 2009.

**Principal Organizer, 4th PHENIX Spinfest School on QCD Physics**, BNL, August 2008.

**Co-organizer, 2nd PHENIX Spinfest School on QCD Physics**, BNL, August 2006.

**Principal Organizer, Workshop on the Helicity Structure of the Nucleon**, RHIC-AGS Users Meeting, BNL, June 2006.

**Co-organizer, Workshop on Proton Spin Physics**, RHIC-AGS Users Meeting, BNL, June 2005.

**OTHER SERVICE AND EXPERIENCE:**

**Member, U. of Michigan Undergrad Curriculum and Concerns Comm.**, Sept 2012-present.

**Faculty advisor, U. of Michigan Society of Women in Physics (SWIP)**, Sept 2012-present.

**Elected Member-At-Large, Executive Committee of the American Physical Society Topical Group on Hadronic Physics**, January 2014-present (term ends December 2015). <http://www.aps.org/units/ghp/>

**Elected member, PHENIX Executive Council**, March 2011-present (second term ends February 2017). The EC is responsible for establishing scientific priorities for the experiment, with members selected for their scientific judgment, technical expertise, and commitment to the experiment.

**U. of Michigan representative, PHENIX Institutional Board**, November 2012-present.

**Member, APS Topical Group on Hadronic Physics Dissertation Award Committee**, 2014.

**Member, RHIC Thesis Award Committee**, 2014, 2011.

**Elected member, National User Facility Organization (NUFO) Steering Committee**, June 2011-June 2014. <http://www.nufo.org>

**U. of Michigan HEP/Astro/Nuclear Seminar organizer**, 2012-2014. **Chair** 2013-14.

**Member, BNL Work-Life Balance Committee**, April 2010-June 2012.

**Elected member, RHIC-AGS Users Executive Committee**, June 2009-June 2012.

**Moderator, Panel discussion: The Future of RHIC Upgrades**, RHIC Users Open Forum Meeting, Meeting of the APS Division of Nuclear Physics, October 2011.

**Member, PHENIX Decadal Plan Writing Committee**, March-September 2010.

**Member, PHENIX Speakers Bureau**, April 2009-February 2010.

**Lecturer, European Graduate School on Complex Systems of Hadrons and Nuclei (HANUC)**, The Structure of the Nucleon. Turin, Italy, March 2009.

**Member, PHENIX Forward Calorimeter Upgrade Internal Review Comm.**, Jan-Feb 2009.

**Co-convenor, PHENIX Spin Physics Working Group**, January 2007-April 2009. Oversaw and coordinated all analysis activities within Working Group; approved scientific results for public release by the collaboration.

**Member, PHENIX Spokesperson Selection Task Force**, May-July 2006.

**Elected Student/Postdoc Representative, RHIC-AGS Users Executive Comm.**, 2004-05.

INVITED CONFERENCE AND WORKSHOP PRESENTATIONS:

Seminars and colloquia listed separately below.

For a complete listing of all presentations, please see <http://www-personal.umich.edu/~caidala/index.html>.

**4th International Workshop on Nucleon Structure at Large Bjorken-x**, Frascati, Italy, November 2014. *Nucleon Structure Physics at the Relativistic Heavy Ion Collider*.

**Gordon Conference on Photonuclear Reactions**, Holderness, NH, August 2014. *Parton Correlations In and Across Nucleons*.

**4th International Workshop on Transverse Polarization Phenomena in Hard Processes (Transversity 2014)**, Chia, Italy, June 2014. *Transversity 2014 Closing Remarks: Moving Forward in the Era of Quantitative QCD*.

**APS Division of Nuclear Physics Fall Meeting, RHIC Users Forum**, Newport News, VA, October 2013. *Advancing QCD at RHIC by Studying the Partonic Bound States of Everyday Matter*.

**APS Division of Nuclear Physics Fall Meeting**, Newport Beach, CA, October 2012. *Entering the Electronic Age at RHIC: eRHIC*.

**APS Division of Nuclear Physics Fall Meeting**, East Lansing, MI, October 2011. *The Electron-Ion Collider: Tackling QCD from the Inside (of Nucleons and Nuclei) Out*.

**Quarks, Hadrons, and LHC**, Mumbai, India, August 2011. *Transverse-Momentum-Dependent Distributions and Transverse Spin Phenomena at RHIC*.

**Gluons and the Quark Sea at High Energies: Workshop to develop the physics case of a high-energy Electron-Ion Collider**, INT, U. of Washington, September-November 2010. *Probing QCD in Hadrons Through Transverse-Momentum-Dependent Distributions at RHIC—Or—Why Use Messy  $p+p$  Collisions to Study What's Happening Inside the Nucleon?*

**Electromagnetic Interactions with Nucleons and Nuclei (EINN 2009)** Workshop on Partonic Transverse Momentum Distributions, Milos, Greece, September-October 2009. *Single-Spin Asymmetries and Transverse-Momentum-Dependent Distributions at RHIC*.

**18th International Symposium on Spin Physics (SPIN2008)**, Charlottesville, VA, October 2008. *Spin in Hadron Reactions*. (Plenary)

**Gordon Conference on Photonuclear Reactions**, Tilton, NH, August 2008. *Transverse Spin Physics at RHIC*.

**2nd International Workshop on Transverse Polarization Phenomena in Hard Processes (Transversity 2008)**, Ferrara, Italy, May 2008. *Transversity and Transverse-Momentum-Dependent Distribution Measurements from PHENIX and BRAHMS*.

**24th Winter Workshop on Nuclear Dynamics**, South Padre Island, TX, April 2008. *Peering into Hadronic Matter: The Electron-Ion Collider*.

**International Workshop on Structure and Spectroscopy**, Freiburg, Germany, March 2007. *Recent Spin Physics Results from RHIC*.

**Spin Structure of the Nucleon Workshop**, Nashville, TN, October 2006. *Recent Spin Physics Results from PHENIX*.

**International Workshop on Transversity: New Developments in Nucleon Spin Structure**, ICT\*, Trento, Italy, June 2004. *Single Transverse Spin Asymmetries at RHIC*.

SEMINARS, COLLOQUIA, AND PUBLIC LECTURES:

**Seminar: Ohio U.**, Jan 2014. *Investigating Proton Structure at the Relativistic Heavy Ion Collider*.

**Colloquium: U. of Notre Dame**, Jan 2014. *From Quarks and Gluons to the World Around Us: Advancing Quantum Chromodynamics by Probing Nucleon Structure*.

**Public lecture: U. of Michigan Saturday Morning Physics series**, Mar 2013. *Peering Into the Proton*. [https://www.youtube.com/watch?v=iLNches\\_G6M](https://www.youtube.com/watch?v=iLNches_G6M)

**Seminar: University of D0**, Fermilab, Mar 2013. *Investigating Proton Structure at the Relativistic Heavy Ion Collider*.

**Seminar: Wayne State U.**, Jan 2013. *Investigating Proton Structure at the Relativistic Heavy Ion Collider*.

**Colloquium: Triangle Nuclear Theory series, Duke U.**, Feb 2012. *The Electron-Ion Collider: Tackling QCD from the Inside (of Nucleons and Nuclei) Out*.

**Colloquium: UConn**, Jan 2012. *From Quarks and Gluons to the World Around Us: Understanding Quantum Chromodynamics by Exploring Nucleon Structure*.

**Seminars: LANL, Rutgers U.**, Sep - Oct 2011. *The PHENIX Decadal Plan: Crafting the Future of the Relativistic Heavy Ion Collider*.

**Seminar: Stony Brook U.**, Feb 2011. *From Quarks and Gluons to the World Around Us: Advancing into the Era of Quantitative QCD via Investigation of Nucleon Structure*.

**Seminars: DESY-Hamburg, DESY-Zeuthen**, Oct 2010. *Investigating the Spin Structure of the Proton at the Relativistic Heavy Ion Collider*.

**Seminar: INFN Ferrara**, Jun 2010. *Investigating the Spin Structure of the Proton at RHIC: Recent Results*.

**Colloquium, Catholic U. of America**, Dec 2009. *Getting Protons to Study Themselves: Investigating Proton Structure at the Relativistic Heavy Ion Collider*.

**Seminar: LANL**, Oct 2009. *The Electron-Ion Collider: Tackling QCD from the Inside (of Nucleons and Nuclei) Out*.

**Seminar:** JLab, May 2009. *Investigating the Spin Structure of the Proton at RHIC.*

**Seminars:** LANL, Columbia U., Jan - Feb 2009. *Frontiers in Nucleon Structure.*

**Seminars:** Michigan State U., U. of Kentucky, Kent State U., 2008. *The Emerging QCD Frontier: The Electron-Ion Collider.*

**Seminar:** INFN Torino, Jun 2008. *Recent Spin Physics Results from RHIC.*

**Seminar:** INFN Pavia, Jun 2008. *Recent Results from the PHENIX Experiment at RHIC.*

**Colloquium:** Old Dominion U., Sep 2007. *A Novel Shakedown of the Proton Spin Breakdown: How the Field Has Become Wider with a Polarized Proton Collider.*

**Seminars:** UMass Amherst, INFN Cagliari, 2006. *Recent Spin Physics Results from PHENIX.*

**Seminar:** Mt. Holyoke College, 2006. *The Whole Story Behind a Half: The Quest to Understand the Protons Spin.*

**Seminars:** IUCF, LANL, LBL, 2005. *Studying the Transverse Spin Structure of the Proton at PHENIX.*

**Seminars:** CERN, Laboratori Nazionali di Frascati, INFN Torino, INFN Ferrara, 2004. *Recent Spin Results from PHENIX.*

**Outreach seminars promoting physics graduate study:** Bryn Mawr, Mt. Holyoke, Smith, Vassar, Barnard, Wellesley, and Amherst Colleges, 2003-04. Sponsored by Columbia University.

**Colloquium:** Vassar College, Dec 2003. *Flying High with PHENIX: Surveying the Landscape for Quark-Gluon Plasma and the Secrets of the Protons Spin.*

CHRISTINE A. AIDALA  
PUBLICATION LIST  
PAPERS SUBMITTED FOR PUBLICATION:

1. **One 4-twist helix snake to maintain polarization in 8–120 GeV proton rings.** F. Antoulinakis, E.A. Ljungman, A. Tai, C.A. Aidala, E.D. Courant, A.D. Krisch, W. Lorenzon, P.D. Meyers, R.S. Raymond, D.W. Sivers, M.A. Leonova, Y.S. Derbenev, V.S. Morozov, A.M. Kondratenko. arXiv:1309.1063

PHENIX Collaboration papers (significant contribution made to those in *bold italic*):

1. ***Inclusive cross sections, charge ratio and double-helicity asymmetries for  $\pi^+$  and  $\pi^-$  production in  $p + p$  collisions at  $\sqrt{s} = 200$  GeV.*** A. Adare et al. arXiv:1409.1907
2. Centrality dependence of thermal photon production in  $\sqrt{s_{NN}} = 200$  GeV Au+Au collisions. A. Adare et al. arXiv:1405.3940
3. The cross section for  $b\bar{b}$  production via dielectrons in  $d$ +Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. arXiv:1405.4004
4. Heavy quark production and elliptic flow in Au+Au collisions at  $\sqrt{s_{NN}} = 62.4$  GeV. A. Adare et al. arXiv:1405.3301
5. Measurement of  $K_S^0$  and  $K^{*0}$  in  $p + p$ ,  $d$ +Au, and Cu+Cu collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. arXiv:1405.3628
6. Measurements of long-range angular correlation and quadrupole anisotropy of pions and (anti)protons in central  $d$ +Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. arXiv:1404.7461
7. Comparison of the space-time extent of the emission source in  $d$ +Au and Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. arXiv:1404.5291
8. Measurement of the  $v(1S + 2S + 3S)$  cross section in  $p + p$  and Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. arXiv:1404.2246
9. Nuclear matter effects on  $J/\psi$  production in asymmetric Cu+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. C. Aidala et al. arXiv:1404.1873

PUBLICATIONS IN PEER-REVIEWED JOURNALS:

1. **Limits on transverse-momentum-dependent evolution from semi-inclusive deep-inelastic scattering at moderate  $Q$ .** C.A. Aidala, B. Field, L.P. Gamberg, and T.C. Rogers. Phys. Rev. D89:094002, 2014.
2. **The PHENIX Forward Silicon Vertex Detector.** C. Aidala et al. Nucl. Instrum. Meth. A755:44, 2014.
3. **The spin structure of the nucleon.** C.A. Aidala, S.D. Bass, D. Hasch, and G.K. Mallot. Rev. Mod. Phys. 85:655, 2013. (Invited submission)
4. **Global analysis of fragmentation functions for eta mesons.** C.A. Aidala, F. Ellinghaus, R. Sassot, J.P. Seele, and M. Stratmann. Phys. Rev. D83:034002, 2011.

5. **Towards an understanding of nucleon spin structure: from hard to soft scales.** S.D. Bass and C.A. Aidala. Int. J. Mod. Phys. A21:4407-4424, 2006.
6. **A hadron-blind detector for PHENIX.** C. Aidala et al. Nucl. Instrum. Meth. A502:200-204, 2003.

PHENIX Collaboration papers (significant contribution made to those in *bold italic*):

1. ***Cross section and transverse single-spin asymmetry of  $\eta$  mesons in  $p^\uparrow + p$  collisions at  $\sqrt{s} = 200$  GeV at forward rapidity.*** A. Adare et al. Accepted by Phys. Rev. D. arXiv:1406.3541
2. Low-mass vector meson production at forward rapidity in  $p + p$  collisions at  $\sqrt{s} = 200$  GeV. A. Adare et al. Phys. Rev. D90:012006, 2014.
3. PHENIX centrality categorization in d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C90:034902, 2014.
4. System-size dependence of open-heavy-flavor production in nucleus-nucleus collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C90:034903, 2014.
5. Inclusive double-helicity asymmetry in neutral pion and eta meson production in p+p collisions at  $\sqrt{s} = 200$  GeV. A. Adare et al. Phys. Rev. D90:012007, 2014.
6. Measurement of transverse-single-spin asymmetries for midrapidity and forward-rapidity production of hadrons in polarized p+p collisions at  $\sqrt{s} = 200$  and 62 GeV. A. Adare et al. Phys. Rev. D90:012006, 2014.
7. Cold nuclear matter effects on heavy quark production at forward and backward rapidities in d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. Lett. 112:252301, 2014.
8. Azimuthal-angle dependence of charged-pion-interferometry measurements with respect to 2nd- and 3rd-order event plane in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. Lett 112:222301, 2014.
9. Transverse-energy distributions at midrapidity in p+p, d+Au, and Au+Au collisions at  $\sqrt{s_{NN}} = 62.4$ –200 GeV and implications for particle-production models. S.S. Adler et al. Phys. Rev. C89:044905, 2014.
10. Heavy flavor electron-muon correlations in p+p and d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C:034915, 2014.
11. Azimuthal anisotropy of  $\pi^0$  and eta mesons in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C88:064910, 2013.
12. Quadrupole anisotropy in dihadron azimuthal correlations in central d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. Lett. 111:212301, 2013.
13. Nuclear modification of  $\psi'$ ,  $\chi_c$  and  $J/\psi$  production in d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. Lett. 111:202301, 2013.
14. ***Spectra and ratios of identified particles in Au+Au and d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV.*** A. Adare et al. Phys. Rev. C88:024906, 2013.

15. Inclusive cross section and transverse single spin asymmetry for very forward neutron production in polarized p+p collisions at  $\sqrt{s} = 200$  GeV. A. Adare et al. Phys. Rev. D88:032006, 2013.
16. Medium modification of jet fragmentation in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV measured in direct photon-hadron correlations. A. Adare et al. Phys. Rev. Lett. 111:32301, 2013.
17. Direct photon production in d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C87:054907, 2013.
18. Upsilon (1S+2S+3S) production in d+Au and p+p collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C87:044909, 2013.
19. Neutral pion production with respect to centrality and reaction plane in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C87:034911, 2013.
20. Transverse-momentum dependence of the  $J/\psi$  nuclear modification in d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C87:034904, 2013.
21. Double spin asymmetry of electrons from heavy flavor decays in p+p collisions at  $\sqrt{s} = 200$  GeV. A. Adare et al. Phys. Rev. D87:012001, 2012.
22. Direct photon production in p+p collisions at  $\sqrt{s} = 200$  GeV at midrapidity. A. Adare et al. Phys. Rev. D86:072008, 2012.
23. Cold-nuclear-matter effects on heavy quark production in d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. Lett. 109:242301, 2012.
24.  $J/\psi$  suppression at forward rapidity in Au+Au collisions at  $\sqrt{s_{NN}} = 39$  and 62.4 GeV. A. Adare et al. Phys. Rev. C86:064901, 2012.
25. Measurement of direct photons in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. S. Afanasiev et al. Phys. Rev. Lett 109:152302, 2012.
26. Evolution of  $\pi^0$  suppression in Au+Au collisions from  $\sqrt{s_{NN}} = 39$  to 200 GeV. A. Adare et al. Phys. Rev. Lett. 109:152301, 2012.
27. Observation of direct-photon collective flow in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. Lett. 109:122302, 2012.
28. Nuclear modification factor for open-heavy-flavor-production at forward rapidity in Cu+Cu collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C86:024909, 2012.
29. Deviation from quark-number scaling of the anisotropy parameter  $v_2$  of pions, kaons, and protons in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C85:064914, 2012.
30. Ground and excited charmonium state production in p+p collisions at  $\sqrt{s} = 200$  GeV. A. Adare et al. Phys. Rev. D85:092004, 2012.
31. Measurements of higher-order flow harmonics in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. Lett. 107:252301, 2011.
32. The PHENIX Decadal Plan: Crafting the future of RHIC. C.A. Aidala for the PHENIX Collaboration. J. Phys. Conf. Ser. 316:012017, 2011.

33. ***Cross sections and double-spin asymmetries of midrapidity inclusive charged hadron production in p+p collisions at  $\sqrt{s} = 62.4$  GeV.*** A. Adare et al. Phys. Rev. D86:092006, 2012.
34. Measurement of direct photon  $v_2$  in  $\sqrt{s_{NN}} = 200$  GeV Au+Au collisions. A. Adare et al. Phys. Rev. Lett. 109:122302, 2012.
35.  $J/\psi$  suppression at forward rapidity in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C84:054912, 2011.
36. Suppression of back-to-back hadron pairs at forward rapidity in d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. Lett. 107:172301, 2011.
37. Production of omega mesons in p+p, d+Au, Cu+Cu, and Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C84:044902, 2011.
38. Cold nuclear matter effects on  $J/\psi$  yields as a function of rapidity and nuclear geometry in d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. Lett. 107:142301, 2011.
39. Heavy quark production in p+p and energy loss and flow of heavy quarks in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C84:044905, 2011.
40. Suppression of away-side jet fragments with respect to the reaction plane in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C84:024904, 2011.
41. ***Cross section and double-helicity asymmetry in charged hadron production in p+p collisions at  $\sqrt{s} = 62.4$  GeV at PHENIX.*** C.A. Aidala for the PHENIX Collaboration. J. Phys. Conf. Ser. 295:012093, 2011.
42. Event structure and double helicity asymmetry in jet production from polarized p+p collisions at  $\sqrt{s} = 200$  GeV. A. Adare et al. Phys. Rev. D84:012006, 2011.
43. Identified charged hadron production in p+p collisions at  $\sqrt{s} = 200$  and 62.4 GeV. A. Adare et al. Phys. Rev. C83:064903, 2011.
44. Azimuthal correlations of electrons from heavy-flavor decay with hadrons in p+p and Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C83:044912, 2011.
45. ***Measurement of neutral mesons in p+p collisions at  $\sqrt{s} = 200$  GeV and scaling properties of hadron production.*** A. Adare et al. Phys. Rev. D83:052004, 2011.
46. Nuclear modification factors of phi mesons in d+Au, Cu+Cu and Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV. A. Adare et al. Phys. Rev. C83:024909, 2011.
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3. **Transversity and transverse-momentum-dependent distribution measurements from PHENIX and BRAHMS.** C. Aidala for the PHENIX and BRAHMS Collaborations. Proceedings of the 2nd International Workshop on Transverse Polarization Phenomena in Hard Processes (Transversity 2008), Ferrara, Italy, May 2008. (Invited talk) arXiv:0808.4139 [hep-ex]
4. **Peering into hadronic matter: The Electron-Ion Collider.** C.A. Aidala for the Electron-Ion Collider Collaboration. Proceedings of the 24th Winter Workshop on Nuclear Dynamics, South Padre Island, TX, Apr 2008. (Invited talk) arXiv:0806.4933 [nucl-ex]
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