

Justin Frantz - Curriculum Vitae
Assistant Professor - Ohio University - frantz@ohio.edu
Athens, OH 45701 - 646-228-2539 - www.phy.ohiou.edu/~frantz/

RESEARCH HIGHLIGHTS

- Intellectual leader of PHENIX Direct Photon-Jet measurements culminating as senior lead for Quark Matter 2012 release (and invited talk giver) of first RHIC measurement of fragmentation modification/enhancement in photon hadron correlations
- Recognized RHI jet correlations expertise including *e.g.* Invited talks like *RHIC High P_T Results*, 2013 RHIC Users Meeting and *RHIC Upgrades* at 2013 Wayne State Jet Workshop
- Founding Co-Convener of reconfigured PHENIX Hard Scattering/Heavy Flavor/Jets Physics and Multiple-time Co-Convener of Hard Scattering Physics Working Group
- Continuous National Science Foundation funding since 2010 at ~\$100K per year, including several additional supplemental grants totally over \$100K in that time period.
- Operating manager and leader of upgrade/repair project PHENIX Lead-Glass EM Calorimeter
- sPHENIX Hadronic Calorimeter prototype completion, management, detector design, and beam testing project performed almost completely by my Ohio group alone.

More detail on the above items can be found in later sections.

EDUCATION

Columbia University - Physics M.A. M.Phil., Ph.D. Feb. 2005
Dissertation: *Direct Photon Shine: Direct Photon and Pi^0 Production in 200 GeV Au+Au Collisions* Dissertation Advisor: Brian Cole (with Jamie Nagle)

Harvard University Physics B.A. *cum laude* June 1996

PROFESSIONAL EXPERIENCE

Ohio University (Athens, OH) 8/08-current
Assistant Professor

SUNY Stony Brook (State Univ. of NY; Stony Brook, NY) 1/05-8/08
Post-doctoral Research Scientist: Supervisor: Barbara Jacak

Columbia University Graduate Physics Program (New York, NY) 8/98-1/05
Experimental Research Fellow/Teaching Assistant Heavy Ion / Neutrino Groups

Baan Software / formerly Aurum/Antalys Inc. (Denver, CO) 6/96-8/98
Software Development/Engineering Team Lead/Consultant

NASA/ Goddard Spaceflight Center (Greenbelt, MD) 6/95-8/95
Intern in Solar Physics- Mentor: Madhulika Guhathakurta

RESEARCH HONORS AND AWARDS

2008 BNL Goldhaber Distinguished Fellowship <http://www.bnl.gov/hr/goldhaber.asp> (did not accept in order to take current faculty position at Ohio University)

RESEARCH LEADERSHIP

Nominated for the Executive Council of PHENIX Collaboration Brookhaven National Laboratory, (2011 & 2012)

Co-Organizer 2013 American Physical Society Ohio Section Meeting at Ohio University "From Quarks to Superclusters" <http://www.phy.ohiou.edu/osaps13/>

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Organizer 2010 Midwest Critical Mass Relativistic Heavy Ion Workshop, involving more than 30 researchers from 6 major research institutions in the nearby multi-state area, including Ohio State, Kent State, Michigan State, U Illinois at Chicago, Wayne State, and Purdue.
<http://www.phy.ohiou.edu/MCM/>

Department of Energy JET Collaboration Summer School Instructor on Direct Photons in Nuclear Physics (June 16, 2010)

Scientific Advisory Committee Member, Annual Winter Workshop Nuclear Dynamics WWND Conference (since 2010)

Lead Co-organizer, Heavy Ion Physics in Ohio Seminar Group arranging occasional common seminar for State of Ohio Relativistic Heavy Ion researchers (~10 faculty/~20 people) Ohio State/Kent State/Ohio University

PHENIX Co-convenor providing Coordination/Facilitation/Weekly Meetings for/Final Approval of Physics Analysis for ~500 Member Collaboration) Hard Scattering/Heavy Flavor/Jets Physics Working Group. PHENIX Collaboration (2011-2013) Hard Scattering/Photon Group (2010 & 2005-2008)

PHENIX Correlation Measurements Topical Group Convenor PHENIX Collaboration, facilitating and holding meetings for 20-30 collaboration members interested in correlation analysis. (June 2013-current)

PHENIX Detector Council Member, Operations Manager for Lead-Glass Electromagnetic Calorimeter. PHENIX Collaboration (August 2009-current)

RESEARCH SERVICE

PHENIX Review Panel for Forward Calorimeter, Brookhaven National Lab PHENIX Group (April 21, 2010)

PHENIX Speakers Bureau Member (chooses speakers to give PHENIX talks) (2008 & 2013)

NSF Proposal Reviewer, National Science Foundation. (2012)

PROFESSIONAL MEMBERSHIPS

American Physical Society.

American Association of Physics Teachers (Appalachian Region)

Sigma Xi

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TEACHING HIGHLIGHTS

Project Coordinator of Active Learning course redesign (SCALEUP-like) for Calculus-based Introductory Physics sequence including lead authorship of approved ~\$48,500 internal Ohio University proposal to College of Arts and Sciences Initiative. (2011 – present)

Invited Panelist in Panel Discussion at Plenary Session, Interlink Alliance Faculty Development Workshop (and other Interlink Alliance sponsored HBCU-Ohio partnership participation) <http://www.nccu.edu/conferences/interlinkAlliance/> (March 10, 2012).

Reviewer for Cambridge University Press, Cambridge University Press, Graduate Quantum Mechanics Textbook Review (June 3, 2011)

Invited Panelist for Discussion on Teaching Development Resources- Ohio University New Faculty Workshop (September 2, 2009)

RESEARCH FUNDING

Base Grant (Renewal), *QGP Strong Coupling Mechanisms and Jet Modification Via Direct Photon Jet-Quenching Probes, RHIC-PHENIX vs. LHC-ATLAS*, NSF, Frantz, J (Principal Investigator)., \$300,000, Funded. (2013-present)

Contract, *Beam Test for Hadronic Calorimeter Prototype*, Department of Energy/ Brookhaven National Laboratory, Federal, Frantz, J. (Principal Investigator), \$12,070, Funded. (2012)

Supplemental Grant, *Further improvements to the PHENIX Photon Measurements*, NSF, Frantz, J., \$24,300, Funded. (2012-2013).

Grant, *Improved (and Decisive) Measurements of Photon Physics at RHIC with the PHENIX Lead-Glass Electromagnetic Calorimeter*, Includes continual replacement project of bad PMT's/HV Bases. NSF, Frantz, J., \$81,254, Funded. (2011-2012)

Base Grant, *Studying Jet Modification using New Techniques in Direct Photon-Jet 2-Particle Correlation Measurements at RHIC/PHENIX*, NSF, Frantz, J. (Principal), \$299,092, Funded. (2010-2013)

Grant, *Reconfigurable Hadronic Calorimeter Prototype*, (Early sPHENIX R&D) DOE Brookhaven National Laboratory, Frantz, J. (Principal), \$25,000, Funded. (2011-present)

Sponsored Research, *Funds for Operating the PHENIX PbGl Calorimeter*, Brookhaven National Laboratory, Frantz, J., \$1,596, Funded. (2010)

Ohio University Research Challenge Funding totaling \$20,000

Ohio University Startup Funds \$250,000

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SELECTED UNFUNDED PROPOSALS

Grant, *Liquid Scintillator Forward Calorimetry R & D for an Electron Ion Collider Detector*, Department of Energy, Federal Frantz, J., Kotchetkov, D. (Supporting), \$25,340, Not Funded. (April 4, 2011).

Grant, *A compact tungsten-scintillator prototype electromagnetic calorimeter with projective design*, Department of Energy, Federal, Frantz, J. (Principal), \$312,629, Not Funded. (March 17, 2011)

Grant, *Reconfigurable Gas Calorimeter for High Energy Physics*, Department of Energy, Federal. Frantz, J. (Principal), Kotchetkov, D. (Co-Principal), \$579,594, Not Funded. (January 29, 2010).

TEACHING FUNDING

Grant: *Improving Conceptual Learning and Reducing DFW Rates in Introductory Calculus Based Physics Physics 2050 Redesign Proposal*. Frantz, J., et.al. \$48,500, Funded http://www.phy.ohiou.edu/~frantz/pdfa_materials/Phy2050_Redesign.pdf (December 2011)

SELECTED PUBLICATIONS

A selection of high impact publications, mostly since my 2008 arrival at Ohio University, to which I've made major contributions:

- 1) *Medium Modification of Jet Fragmentation in Au+Au Collisions at $\sqrt{s_{NN}} = 200\text{GeV}$ I Measured in Direct Photon-2 Hadron Correlations*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J Accepted, Physical Review Letters (2013) arXiv:1212.3323.

First RHIC measurement of enhancement in γ -h fragmentation function. I was the senior team lead for this analyses including having partially advised the 2007 dataset analysis, convened the hard scattering Physics Working group which reviewed the 2010 analysis, and performed with my student a key competing analysis to the 2010 analysis which among other things derived important systematic error levels for higher order (e.g. v_3) flow contributions.

- 2) *Cold-Nuclear-Matter Effects on Heavy-Quark Production in d+Au Collisions at $\sqrt{s_{NN}}=200\text{GeV}$* , Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 109, 242301. (2012)

First RHIC observation of surprisingly large initial state effects in Heavy Flavor production. I was convener for the relevant working group which approved this analysis, and also lead a small team tasked by the PHENIX spokesperson with resolving a conflict between two competing analyses on this subject, which included a personal mini-analysis which showed that the two analyses were actually not in disagreement allowing for its publication.

- 3) *Measurements of Higher-Order Flow Harmonics in Au+Au Collisions at $\sqrt{s_{NN}} = 200\text{ GeV}$* Adare, et. al. (PHENIX Collaboration) Frantz, J. Phys. Rev. Lett. 107, 252301 (2011)

First RHIC publication of v_3 . I was the primary writing author of this paper, advised one of the key student analyzers, and as working group convener at the time, reviewed and approved the part of the measurement techniques used for cross checks (two-particle correlations).

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- 4) *PHENIX 2010 Decadal Plan*. Nagle, J., et.al. (PHENIX Collaboration), Frantz, J., http://www.phenix.bnl.gov/phenix/WWW/docs/decadal/2010/phenix_decadal10_full_refs.pdf
see also arXiv: [1207.6378](https://arxiv.org/abs/1207.6378) (2010)
Technical Report on the future plans of the PHENIX Collaboration which was the basis for the sPHENIX project. I made contributions of the calculations, plots, and text for the section on Direct Photon-Jet physics in the next decade at PHENIX/RHIC.
- 5) *High p_T Direct Photon and π^0 Triggered Azimuthal Jet Correlations in $\sqrt{s}=200$ GeV $p+p$ Collisions*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review D, 82, 072001. (2010)
First application of event-by-event (background reducing) photon isolation cuts in direct photon-hadron correlations at RHIC. I participated in much of the analysis for this paper, including development of the methods, was convener for many parts of its approval, helped advising the student analyzer, and co-authored/edited parts of the paper.
- 6) *Photon-Hadron Jet Correlations in $p+p$ and $Au+Au$ Collisions at $\sqrt{s_{NN}} = 200$ GeV* (PHENIX Collaboration) Phys. Rev. C 80, 024908 (2009) arXiv:1303.1794
First RHIC publication of Direct Photon-hadron correlations. I was the primary author and analyzer of the data in this paper.
- 7) *Suppression of away-side jet fragments with respect to the reaction plane in $Au+Au$ collisions at $\sqrt{s_{NN}} = 200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 84, 024904. (2009)
First RHIC publication of the detailed reaction plane dependence of awayside jet suppression in very high p_T di-hadron correlations. I substantially advised the student analyzer, edited parts of the paper, and was convener for parts of its approval.
- 8) *A Detailed Study of High- p_T Neutral Pion Suppression and Azimuthal Anisotropy in $Au+Au$ Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 76, 034904 (2007)
First of a series of PHENIX publications of reaction plane dependence of the suppression at the highest jet energies at RHIC, which continues to challenge jet quenching theory. I was primary author and one of the main analyzers.
- 9) *Centrality dependence of direct photon production in $\sqrt{s_{NN}} = 200$ -GeV $Au + Au$ collisions*. By PHENIX Collaboration (S.S. Adler et al.). Phys.Rev.Lett.94:232301 (2005)
First RHIC measurement of direct photons in heavy ion collisions. This was my Ph. D. thesis measurement.

FULL LIST OF OTHER PUBLICATIONS

This full list also includes some first authorships and several PHENIX publications per year to which I've also made contributions through PWG convenership (*e.g.* strategy, approval, etc.), readings, paper preparation committees (15 total) involving writing/editing/plot prep, etc.

- 10) *Quadrupole anisotropy in dihadron azimuthal correlations in central $d+Au$ collisions at $\sqrt{s_{NN}}=200$ GeV* (PHENIX Collaboration) Submitted to Physical Review Letters (2013) <http://arxiv.org/abs/arXiv:1303.1794>

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- 11) *Nuclear modification of ψ' , χ_c and J/ψ production in $d+Au$ collisions at $\sqrt{s_{NN}} = 200$ GeV* Submitted to Physical Review Letters (2013) arXiv:1305.5516
- 12) *Spectra and ratios of identified particles in $Au+Au$ and $d+Au$ collisions at $\sqrt{s_{NN}}=200$ GeV* Submitted to Physical Review C (2013), arXiv:1304.3410
- 13) *Inclusive cross section and single transverse spin asymmetry for very forward neutron production in polarized $p+p$ collision at $\sqrt{s} = 200$ GeV* Submitted to Physical Review D (2013) arXiv:1209.3283
- 14) *Transverse-Momentum Dependence of the J/ψ Nuclear Modification in $d+Au$ Collisions at $\sqrt{s_{NN}}=200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J, Phys. Rev. C 87, 034904 (2013)
- 15) *Direct photon production in $d+Au$ collisions at $\sqrt{s_{NN}}=200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Phys. Rev. C 87, 054907 (2013)
- 16) *Upsilon ($1S+2S+3S$) production in $d+Au$ and $p+p$ collisions at $\sqrt{s_{NN}}=200$ GeV and cold-nuclear matter effects*, Adare, A. et. al. (PHENIX Collaboration) Frantz, J: Phys. Rev. C 87, 044909 (2013) arXiv: 1211.4017
- 17) *Neutral pion production with respect to centrality and reaction plane in $Au + Au$ collisions at $\sqrt{s_{NN}}=200$* , Frantz, J., Adare, A. et. al. (PHENIX Collaboration), Phys. Rev. C 87, 034911 (2013)
- 18) Conference Proceeding, *Direct photon-hadron and Di-hadron correlations measured in PHENIX*, Frantz, J., Kotchetkov, D., Journal of Physics Conference Series, 389, 012021 (2012)
- 19) Conference Proceeding, *Direct photon and Photon-Jet Correlations in PHENIX*, Frantz, J., Quark Matter 12 Issue Nucl.Phys. A904-905 693c-696c
- 20) *J/ψ suppression at forward rapidity in $Au + Au$ collisions at $\sqrt{s_{NN}}=39$ and 62.4 GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review C, 86, 064901 (2012)
- 21) *Cross sections and double-helicity asymmetries of midrapidity inclusive charged hadrons in $p+p$ collisions at $\sqrt{s}=62.4$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review D, 86, 092006. (2012)
- 22) *Direct photon production in $p+p$ collisions at $\sqrt{s}=200$ GeV at midrapidity*, Adare, A. et. al. (PHENIX Collaboration) A., Frantz, J., Physical Review D, 86, 072008. (2012)
- 23) *Measurement of Direct Photons in $Au+Au$ Collisions at $\sqrt{s_{NN}}=200$ GeV*, Afanasiev, A. et. al. (PHENIX Collaboration) S., Frantz, J., Physical Review Letters, 109, 152302 (2012)
- 24) *Evolution of π^0 Suppression in $Au+Au$ Collisions from $\sqrt{s_{NN}}=39$ to 200 GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 109, 152301. (2012)

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- 25) *Observation of direct-photon collective flow in $\sqrt{s_{NN}}=200$ GeV Au+Au collisions*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 109, 122302. (2012)
- 26) *Nuclear-modification factor for open-heavy-flavor production at forward rapidity in Cu+Cu collisions at $\sqrt{s_{NN}}=200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review C, 86, 024909 (2012)
- 27) *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*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review C, 85, 064914 (2011)
- 28) *Ground and excited charmonium state production in p+p collisions at $\sqrt{s}=200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review D, 85, 092004. (2012)
- 29) *J/psi suppression at forward rapidity in Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review C, 84, 054912. (2012)
- 30) *Suppression of back-to-back hadron pairs at forward rapidity in d+Au Collisions at $s_{NN}=200$ GeV.*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 107, 172301 (2011)
- 31) *Heavy Quark Production in p+p and Energy Loss and Flow of Heavy Quarks in Au+Au Collisions at $\sqrt{s_{NN}}=200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review C, C84, 044905 (2011)
- 32) *Production of omega mesons in p+p, d+Au, Cu+Cu and Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Rev. C, 84, 044902. (2011)
- 33) *Cold Nuclear Matter Effects on J/psi Yields as a Function of Rapidity and Nuclear Geometry in Deuteron-Gold Collisions at $\sqrt{s_{NN}} = 200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 84, 054912. (2011)
- 34) *Identified charged hadron spectra in p+p collisions at $\sqrt{s} = 200$ and 62.4 GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review C, 83, 064903 (2011)
- 35) *Azimuthal Correlations of Electrons from Heavy Flavor Decay with hadrons in Au+Au and p+p Collisions at $\sqrt{s} = 200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review C, 83, 044912. (2011)
- 36) *Measurement of neutral mesons in p+p collisions at $\sqrt{s} = 200$ GeV and scaling properties of hadron production*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review D, 83, 052004. (2011)
- 37) *Nuclear modification factors of phi mesons in d+Au, Cu+Cu and Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review C, C83, 024909 (2011)

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- 38) *Cross Section and Parity Violating Spin Asymmetries of W^{\pm} Boson Production in Polarized $p+p$ Collisions at $\sqrt{s}=500$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 106, 062001. (2011)
- 39) *Cross section and double helicity asymmetry for eta mesons and their comparison to neutral pion production in proton-proton collisions at $\sqrt{s} = 200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 83, 032001. (2011)
- 40) *Event Structure and Double Helicity Asymmetry in Jet Production from Polarized $p+p$ Collisions at $\sqrt{s} = 200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review D, 84, 012006. (2011)
- 41) *Azimuthal anisotropy of neutral pion production in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV: Path-length dependence of jet quenching and the role of initial geometry*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 105, 142301 (2010).
- 42) *Measurement of Transverse Single-Spin Asymmetries for J/psi Production in Polarized $p+p$ Collisions at $\sqrt{s} = 200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Phys.Rev. D82 112008, (2010) Erratum-ibid. 099904 D86 (2012)
- 43) *Elliptic and hexadecapole flow of charged hadrons in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 105, 062301. (2010)
- 44) *Transverse momentum dependence of eta meson suppression in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review C, 82, 1 011902, (2010)
- 45) *Transverse momentum dependence of J/psi polarization at mid-rapidity in $p+p$ collisions at $\sqrt{s}=200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review D, 82, 012001 (2010)
- 46) *Transition in yield and azimuthal shape modification in dihadron correlations in relativistic heavy ion collisions*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 104, 252301 (2010)
- 47) *Detailed measurement of the $e+e$ - pair continuum in $p+p$ and Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV and implications for direct photon production*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review C, 81, 034911. (2010)
- 48) *Enhanced production of direct photons in Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV and implications for the initial temperature*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review Letters, 104, 132301. (2010)
- 49) *Double Helicity Dependence of Jet Properties from Dihadrons in Longitudinally Polarized $p+p$ Collisions at $\sqrt{s} = 200$ GeV*, Adare, A. et. al. (PHENIX Collaboration), Frantz, J., Physical Review D, 81, 012002. (2010)

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- 50) *High- p_T π^0 Production with Respect to the Reaction Plane in Au + Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 80, 054907 (2009)
- 51) *Charged kaon interferometric probes of space-time evolution in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 103, 142301 (2009)
- 52) *Systematic Studies of Elliptic Flow Measurements in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 80, 024909 (2009)
- 53) *Measurement of Bottom versus Charm as a Function of Transverse Momentum with Electron-Hadron Correlations in p+p Collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 103, 082002 (2009)
- 54) *Photoproduction of J/ψ and of high mass e^+e^- in ultra-peripheral Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Physics Letters B 679, 321 (2009)
- 55) *Gluon-Spin Contribution to the Proton Spin from the Double-Helicity Asymmetry in Inclusive π^0 Production in Polarized p+p Collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 103, 012003 (2009)
- 56) *Cold Nuclear Matter Effects on J/ψ Production as Constrained by Deuteron-Gold Measurements at $\sqrt{s_{NN}} = 200$ GeV (and Erratum)*, Erratum A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 79, 059901 (2009) A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 77, 024912 (2008)
- 57) *Inclusive cross section and double helicity asymmetry for π^0 production in p+p collisions at $\sqrt{s} = 62.4$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. D 79, 012003 (2009)
- 58) *Dilepton mass spectra in $\bar{p}+p$ collisions at $\sqrt{s} = 200$ GeV and the contribution from open charm*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Physics Letters B 670, 313 (2009)
- 59) *Suppression pattern of neutral pions at high transverse momentum in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV and constraints on medium transport coefficients*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 101, 232301 (2008)
- 60) *Onset of π^0 suppression studied in Cu+Cu collisions at $\sqrt{s_{NN}} = 22.4, 62.4, \text{ and } 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 101, 162301 (2008)
- 61) *Charged hadron multiplicity fluctuations in Au+Au and Cu+Cu collisions from $\sqrt{s_{NN}} = 22.5$ to 200 GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 78, 044902 (2008)
- 62) *J/ψ Production in $\sqrt{s_{NN}} = 200$ GeV Cu+Cu Collisions*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 101, 122301 (2008)

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- 63) *Particle-species dependent modification of jet-induced correlations in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 101, 082301 (2008)
- 64) *Dihadron azimuthal correlations in Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 78, 014901 (2008)
- 65) *Quantitative constraints on the transport properties of hot partonic matter from semi-inclusive single high transverse momentum pion suppression in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 77, 064907 (2008)
- 66) *Source breakup dynamics in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV via three-dimensional two-pion source imaging*" A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 100, 232301 (2008)
- 67) *Centrality dependence of charged hadron production in deuteron-gold and nucleon-gold collisions at $\sqrt{s}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 77, 014905 (2008)
- 68) *Transverse momentum and centrality dependence of dihadron correlations in Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV: Jet-quenching and the response of partonic matter*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 77, 011901 (2008)
- 69) *Measurement of Single Muons at Forward Rapidity in p+p Collisions at $\sqrt{s} = 200$ GeV and Implications for Charm Production*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. D 76, 092002 (2007)
- 70) *Inclusive cross section and double helicity asymmetry for π^0 production in p+p collisions at $\sqrt{s}=200$ GeV: Implications for the polarized gluon distribution in the proton*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. D 76, 051106 (2007)
- 71) *Measurement of density correlations in pseudorapidity via charged particle multiplicity fluctuations in Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 76, 034903 (2007)
- 72) *Elliptic Flow for phi Mesons and (Anti)deuterons in Au + Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 99, 052301 (2007)
- 73) *J/psi production versus transverse momentum and rapidity in p+p collisions at $\sqrt{s} = 200$ -GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 98, 232002 (2007)
- 74) *J/psi Production vs Centrality, Transverse Momentum, and Rapidity in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ -GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 98, 232301 (2007)
- 75) *System Size and Energy Dependence of Jet-Induced Hadron Pair Correlation Shapes in Relativistic Nuclear Collisions*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 98, 232302 (2007)
- 76) *Correlated Production of p and \bar{p} in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV, Production of omega meson at Large Transverse Momenta in p+p and d+Au Collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 75, 051902 (2007)

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- 77) Conference Proceedings: *Jet Probes At RHIC* Frantz, J. FRIF LPTHE-Jussieu Workshop 2006 Proceedings Ed. Salam, G. et al SLAC eConf C0601121 (2006)
- 78) Conference Proceedings: *Illuminating RHIC Matter with the Multi-purpose Direct Photon* Frantz J. QuarkMatter 2006 Proceedings J.Phys. G34 S389-S396 (2007)
- 79) *Energy Loss and Flow of Heavy Quarks in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 98, 172301 (2007)
- 80) *Centrality Dependence of π^0 and eta Production at Large Transverse Momentum in $\sqrt{s_{NN}} = 200$ GeV d+Au Collisions*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 98, 172302 (2007)
- 81) *Scaling properties of azimuthal anisotropy in Au+Au and Cu+Cu collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 98, 162301 (2007)
- 82) *Evidence for a long-range component in the pion emission source in Au+Au Collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 98, 132301 (2007)
- 83) *High transverse momentum eta meson production in p+p, d+Au, and Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 75,024909 (2007)
- 84) *Measurement of Direct Photon Production in p+p collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 98, 012002 (2007)
- 85) *Measurement of high- p_T Single Electrons from Heavy-Flavor Decays in p+p Collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 97,252002 (2006)
- 86) *Jet Properties from Di-Hadron Correlations in p+p Collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. D 74, 072002 (2006)
- 87) *Nuclear Effects on Hadron Production in d+Au and p+p Collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 74, 024904 (2006)
- 88) *Modifications to Di-Jet Hadron Pair Correlations in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 97, 052301 (2006)
- 89) *Azimuthal Angle Correlations for Rapidity Separated Hadron Pairs in d+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 96, 222301 (2006)
- 90) *An Update on the Double Helicity Asymmetry in Inclusive Midrapidity π^0 Production for Polarized p+p Collisions at $\sqrt{s}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. D 73, 091102(R) (2006)
- 91) *Common suppression pattern of high p_T eta and π^0 in Au+Au at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 96, 202301 (2006)

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- 92) *Nuclear Modification of Single Electron Spectra and Implications for Heavy Quark Energy Loss in Au + Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 96, 032301 (2006)
- 93) *π^0 /photon v_2 in Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 96, 032302 (2006)
- 94) *Jet Structure from dihadron correlations in d+Au collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 73, 054903 (2006)
- 95) *Single Electrons from Heavy-Flavor Decays in p+p Collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 96, 032001 (2006)
- 96) *J/psi Production and Nuclear Effects for d+Au and p+p Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 96, 012304 (2006)
- 97) Conference Proceedings: *Return of the volcano: PHENIX azimuthal correlations 62.4-GeV Au + Au*. By PHENIX Collaboration (Michael McCumber, Justin Frantz) Quark Matter 2005 Proceedings (QM 2005), Acta Phys. Hung. A27 213-216 (2006)
- 98) *Measurement of Transverse Single-Spin Asymmetries for Mid-rapidity Production of Neutral Pions and Charged Hadrons in Polarized p+p Collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 95, 202001 (2005)
- 99) *Measurement of Single Electron Event Anisotropy in Au+Au Collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 72, 024901(2005)
- 100) *Production of phi mesons at mid-rapidity in $\sqrt{s_{NN}} = 200$ GeV Au+Au collisions at RHIC*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 72, 014903 (2005)
- 101) *Saturation of azimuthal anisotropy in Au + Au collisions at $\sqrt{s_{NN}} = 62 - 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 94, 232302 (2005)
- 102) *Formation of dense partonic matter in relativistic nucleus-nucleus collisions at RHIC: Experimental evaluation by the PHENIX Collaboration*, A. Adare et. al. (PHENIX Collaboration) Frantz, J. Nuclear Physics A Volume 757, Issues 1-2 , 8 (2005),
- 103) *Jet Structure of Baryon Excess in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 71, 051902(R) (2005)
- 104) *Mid-Rapidity Direct-Photon Production in p+p Collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. D 71, 071102(R) (2005)
- 105) *Deuteron and anti-deuteron production in Au+Au collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 94, 122302 (2005)
- 106) *Systematic Studies of the Centrality and $\sqrt{s_{NN}}$ Dependence of $dE_{T}/d\eta$ and $dN_{ch}/d\eta$ in Heavy Ion Collisions at Mid-rapidity*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 71, 034908 (2005)
- 107) *Nuclear Modification Factors At Forward Rapidities in d+Au Collisions at $\sqrt{s_{nn}} 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 94, 082302 (2005)

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- 108) *Centrality Dependence of Charm Production from a Measurement of Single Electrons in Au+Au Collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 94, 082301 (2005)
- 109) *Double Helicity Asymmetry in Inclusive Mid-Rapidity neutral pion Production for Polarized p+p Collisions at $\sqrt{s}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 93, 202002 (2004)
- 110) *Bose-Einstein Correlations of Charged Pion Pairs in Au+Au Collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 93, 152302 (2004)
- 111) *Measurement of Non-Random Event-by-Event Average Transverse Momentum Fluctuations in $\sqrt{s_{NN}}=200$ GeV Au+Au Collisions*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 93, 092301 (2004)
- 112) *High-pt Charged Hadron Suppression in Au+Au Collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 69, 034910 (2004)
- 113) *Identified Charged Particle Spectra and Yields in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 69, 034909 (2004)
- 114) *Single Identified Hadron Spectra from $\sqrt{s_{NN}} = 130$ GeV Au+Au Collisions at RHIC*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 69, 024904 (2004)
- 115) *J/Psi production from proton-proton collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 92, 051802 (2004)
- 116) *J/Psi production in Au-Au collisions at $\sqrt{s_{NN}}=200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. C 69, 014901 (2004)
- 117) *Midrapidity Neutral Pion Production in Proton-Proton Collisions at $\sqrt{s} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 91, 241803 (2003)
- 118) *Elliptic Flow of Identified Hadrons in Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 91, 182301 (2003)
- 119) *Scaling properties of proton anti-proton production in $\sqrt{s_{NN}} 200$ GeV Au+Au collisions*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 91, 172301 (2003)
- 120) *Absence of Suppression in Particle Production at Large Transverse Momentum in $\sqrt{s_{NN}} = 200$ GeV d+Au Collisions*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 91, 072303 (2003)
- 121) *Suppressed π^0 Production at Large Transverse Momentum in Central Au+Au Collisions at $\sqrt{s_{NN}} = 200$ GeV*, A. Adare et. al. (PHENIX Collaboration) Frantz, J., Phys. Rev. Lett. 91, 072301 (2003)
- 122) *PHENIX on-line systems* S.S.Adler (PHENIX Collaboration) Frantz, J., Nucl.Instrum.Meth. A499 560-592 (2003)
- 123) *PHENIX detector overview* K.Adcox, et. al. (PHENIX Collaboration) (K. Adcox et al.). Nucl.Instrum.Meth. A499 469-479 (2003)

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INVITED TALKS ABOUT RHIC (NON-PHENIX)

1. 2013 2nd Annual Wayne State Jet Workshop RHIC, Detroit MI, *RHIC Jet Results and Future Plans*. (Aug 21, 2013)
2. 2013 RHIC/AGS Users Meeting Users Meeting, Brookhaven National Lab, Upton, NY *High p_T Physics at RHIC* (June 26, 2013)
3. 2010 JET Collaboration Summer School, US Department of Energy, LBNL, Lawrence Berkeley National Lab, Berkeley, CA *Direct Photon Physics in Hadron and Heavy Ion Colliders*, (June 17, 2010)
4. DNP09 3rd Joint Meeting of the American Physical Society (APS) Division of Nuclear Physics (DNP) and the Physical Society of Japan, Hawaii, HI *Studying Jet Modification with Direct Photon-Hadron Correlations in RHIC Collisions* (Oct 13, 2009)
5. ISMD07: International Symposium on Multi-particle Dynamics, LBL Berkeley CA, *Probing RHIC Matter with High p_T Spectra and Correlations of Jets w/ Other Probes* (August 8, 2007)
6. QuarkMatter 2006, ShangHai, China , *Illuminating RHIC Matter with the Multi-purpose Direct Photon* Plenary Talk, (November 16, 2006)
7. 2006 FRIF Workshop on the Non-Perturbative QCD of Hadron Jets: Power Corrections and Event Shapes. *Jet Physics at RHIC*, LPHE Jussieu; Paris, France, (January 13, 2006)
8. 2005 RHIC/AGS Users Meeting *The RHIC Photon Feast* Direct Photon Workshop, Brookhaven National Lab, Upton, NY (June 21, 2005)

INVITED PHENIX TALKS

1. 2013 JET Collaboration Meeting, Columbus, OH, *Jet Physics In PHENIX* (June 11, 2013)
2. WWND13 Winter Workshop of Nuclear Dynamics 2012, Dorado Del Mar, Puerto Rico, *Two-particle correlations in PHENIX and Beyond*, Frantz, J. (April 10, 2012)
3. Quark Matter 2012, Washington, DC, *Steps from Qualitative to Quantitive: Prompt Photon Production and Photon-Jet-Hadron Correlations in PHENIX*, Frantz, J. (Presenter & Author), Invited. (August 14, 2012)
4. Hard Probes 2012, Cagliari, Sardinia, Italy, *Energy Loss and Correlation Observables at PHENIX/RHIC* . (May 29, 2012)
5. 2012 INT Special Workshop on the Ridge In Heavy Ion Collisions, Institute of Nuclear Theory, S12-51w, University of Washington, Seattle, WA, *Two-particle Correlation Results in PHENIX*, (May 7, 2012).
6. WWND12 Winter Workshop of Nuclear Dynamics 2012, Dorado Del Mar, Puerto Rico, *Direct Photon-Jet and Di-Jet 2-particle Correlations in PHENIX/RHIC*, (April 10, 2012).

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7. WWND11 Winter Workshop of Nuclear Dynamics 2011, Winter Park, Colorado, *Direct Photon-Jet 2-particle Correlations in PHENIX/RHIC*, (February 11, 2011).
8. MCM10 Midwest Critical Mass Workshop, University of Toledo, Ohio-State University, Ohio University, Toledo, OH, *Welcome and Introduction to Ohio PHENIX Direct Photon Physics*, (October 22, 2010).
9. ETD-HIC07: Early Time Dynamics in Heavy Ions 2007, McGill University, Montreal Canada *Jet Energy Loss Observables in PHENIX*, (July 17 2007)
10. QNP06 Quark/Nuclear Physics Madrid, Spain, *RHIC Hard and Soft Photon Probes in PHENIX: Status, New/Near Future Results & Improvements, Directions* Parallel Session Talk (June 6, 2006)
11. Quark Matter QuarkMatter 2004 *PHENIX Direct Photons in 200 GeV p+p and Au+Au Collisions: Probing Hard Scattering Production*, Parallel Session Invited Talk, Oakland, CA, (January 7, 2004)

OTHER INVITED TALKS

1. Department of Energy Electron Ion-Collider (EIC) Detector R & D Committee Meeting, Department of Energy Brookhaven National Lab, Brookhaven Lab Upton, NY, *Liquid scintillator calorimetry for the Electron Ion Collider*, Frantz, J. (Author Only), Kotchetkov, D. (Presenter & Author). (May 9, 2011)
2. American Association of Physics Teachers (AAPT) Apphalacian Region Meeting, AAPT, Athens, OH, *A Hybrid SCALEUP Course Redesign*, (October 20, 2012).
3. INPP Open House, Ohio University Institute of Nuclear and Particle Physics, Athens, OH, Recent Developments in Relativistic Heavy Ion Physics (October 2008 & 2010).

SEMINARS AND COLLOQUIA

1. Seminar: Purdue University, Purdue University, West Layfayette, IN, *Direct Photon-Jet and Energy Loss Observables at RHIC..* (December 5, 2012).
2. Seminar: Wayne State University, Wayne State University, Detroit Michigan, *Direct Photon-Jet and Energy Loss Observables at RHIC and Beyond*. (March 30, 2012).
3. Seminar: Brookhaven Physics Department Seminar, Brookhaven National Lab, Brookhaven Lab Upton, NY, *Higher order Harmonics in Soft Particle Flow By Phenix*, (November 15, 2011).
4. Seminar: Kent State University, Kent State University, Kent, OH, *Direct Photon-Jet and Di-Jet 2-particle Correlations in PHENIX/RHIC*, (April 8, 2011)

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5. Seminar: Workshop for Next-decade PHENIX Calorimetry Upgrades, Brookhaven National Laboratory, Upton, NY, *Scintillator Calorimetry for the PHENIX Upgrades*, (December 14, 2010).
6. Seminar: ALICE Collaboration PHOS Detector Group, CERN Laboratory, Geneva, Switzerland, *A New Control System for the PHENIX PbPb Electromagnetic Calorimeter*, (August 25, 2010).
7. Seminar: University of Kentucky Lexington, KY, *Exploring Jet Energy Loss At RHIC* (April 16th 2009)
8. Seminar: The Ohio State University Columbus OH “*Quark Matter09 Hard Scattering Highlights*” special seminar, part of the (“hip-ohio” series see Outreach) (April 14th, 2009)
- 9.
10. Seminar: Brookhaven National Laboratory Upton, NY “*Recent First RHIC Measurement of Direct Photon-Hadron Jet Correlations by PHENIX*” (August 25th, 2009)
11. Colloquium: Ohio University Athens, OH *Probing Hot (and Cold!) QCD Matter in Heavy Ion Collisions with Jets and Direct Photons at RHIC* (Jan 28 2008)
12. Seminar: SUNY Stony Brook Lunch with the Theorists Seminar Series *Selected RHIC/PHENIX Jet Topics* Stony Brook, NY, (two-three times 2005-2008)
13. Seminar: Particle Nuclear Seminar *Probing RHIC Matter Via Photon Channel Measurements at PHENIX* Special Nuclear Seminar, SUNY Stony Brook, StonyBrook, NY, (November 17, 2003)
14. Seminar: Particle Nuclear Seminar *Direct Photons’ Shine at PHENIX* Particle/Nuclear Seminar, Physics Dept. University of Colorado, Boulder CO (March 8, 2004)
15. Seminar: Particle Nuclear Seminar *Direct Photons’ Shine at PHENIX*, Physics Department, University of California at Riverside, Riverside, CA (March 30, 2004)

CONTRIBUTED TALKS, POSTERS, AND OTHER PRESENTATIONS

1. Society of Physics Students, Ohio University, OU Physics Dept, *Heavy Ion and Particle Physics*, (February 2012 & 2011).
2. DNP 07 APS Division of Nuclear Physics Meeting, Newport News, VA *Jet Energy Loss Observables in PHENIX* (October 11, 2007)
3. Quark Matter 2005, Budapest, Hungary *Return of the volcano: PHENIX azimuthal correlations 62.4-GeV Au + Au* [Poster] (w/ Michael McCumber) (August 2005)
4. DNP03 APS Division of Nuclear Physics Meeting, Tucson, AZ, *Direct γ in 200 GeV AuAu Collisions at PHENIX* , (October 12, 2003)
5. APS Annual April Meeting 2003, *Direct Photons in 200 GeV AuAu* , Philadelphia, PA, (April 2003)

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6. QuarkMatter 2002 *The Art of Tagging Direct Photons* [Poster] Conference, Poster Session, Nantes, France (July 2002)
7. APS Annual April Meeting 2002, *Enhancing a Direct γ Signal over a π^0 Background* Albuquerque, NM (April 2002)
8. Fermilab 2000 New Perspectives Conference *Hot Horn Handling and The MiniBoone Experiment* Batavia, IL, (July 2000)
9. Fermilab 1999 New Perspectives Conference (w/ Liubo Borrisov and Jessica Cronk) Batavia, IL, *Nutev* [Poster] (July 1999)

OHIO UNIVERSITY MENTORING

Dmitri Kotchetkov (2009-2013) Postdoctoral Research Scholar. Topics: PHENIX Lead-Glass Detector projects, Detector Development Projects, sPHENIX HCal Prototype project, Cu+Cu Direct Photon Analysis.

Nowo Rivel – Ph. D. Candidate (Expected Fall 2014). Topic: Photon Isolation and Other Event by Event Identification Techniques for γ -h Measurements in A+A Collisions

2011 Ohio University Research Expo First prize Poster Award winner

Bing Xia – Ph. D. Candidate (Expected Summer 2014) Topic: Direct Photon-Hadron Correlations in d+Au collisions at 200 GeV.

Tyler Danley – current Masters Thesis Project candidate. Topic: Very High pT Meson and Direct Photon Azimuthal Asymmetry in 200 GeV Au+Au collisions.

Joe Zeallear – Undergraduate, Miscellaneous PHENIX summer projects 2009-2011.

Andrew Dewald – Undergraduate, PHENIX Special studies and summer project 2012-2013.

2013 NASA Ohio Space Grant Consortium STEM Scholarship Winner: Studies of Energy Deposition by High Energy Particles with PHENIX and Applications to Ultra High-Energy Cosmic Ray Collisions

OUTREACH

Nuclear Physics US Congressional Lobbying Day Participant, Washington DC (May 6, 2013)

2013 Spotlight on Learning Faculty Development Teaching Workshop Parallel Session talk Ohio University. (April 20th, 2013)

2011 Ohio University Physics And Astronomy Department Open House Volunteer. (November 7, 2011)

Ohio U. Institute of Nuclear and Particle Physics (INPP) Annual Open House (2008-present)

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TEACHING

Undergraduate: First Year Introductory Physics (Calculus based and Algebra based courses).
Advanced Undergraduate Labs, Standard and Nuclear

Graduate: Quantum Mechanics, Nuclear/Particle/Heavy Ion Physics

UNIVERSITY SERVICE

Dissertation Defense Committee for Rakitha Beminiwattha (Prospectus/Thesis) (2008-2013)

Dissertation Defense Committee for Shamim Akhtar (Prospectus), (December 7, 2012).

Dissertation Defense Committee for Wei Tang, (Prospectus/Thesis) (2008-2012)

Dissertation Defense Committee of Dustin Keller (Thesis) (October 30, 2010).

College of Arts and Sciences Course Redesign Initiative Committee (2011 - Present).

University organizer of Interlink Alliance Phone Conference, (February 29, 2012).

Institute of Nuclear and Particle Physics (INPP) Member. (2008-present)

Institute INPP Nuclear Lunch Journal Club Weekly Topic Advisor 1-2 times per year (2008 - Present).

Department Physics 2050 Series Course Redesign, Committee Chair. (April 1, 2011 - Present).

Department Colloquium Committee, Committee Member (2010 - Present).

Department Nuclear Physics Faculty Search Committee, (2012- 2013).

Department Undergraduate Curriculum Committee, Committee Member. (2010-current).

Department Oral Qualifying Examination Committee for Norman Palma, (2010).

Department Oral Qualifying Examination Committee for YingDi Liu, (2010).

Department Quantum Mechanics Graduate Curriculum Special Committee (2010).

NON ACADEMIC ACTIVITIES

Active parent of two including Kindermusic, Dance, chaperoning. Athens, OH (2008-present)

Pastoral Advisory Council Member Athens Catholic Community. Athens, OH (2012-13)

Deer Lake 5K Memorial Run Chalk Hill PA (July 2010 & 2011)