

**Curriculum Vitae for Kensuke Okada**  
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### **Positions Held:**

*April 2006-present. Research Fellow*

RIKEN-BNL Research Center, Bldg. 510A BNL Upton, NY 11973

*April 2003-March 2006. Postdoctoral Research Associate*

RIKEN-BNL Research Center, Bldg. 510A BNL Upton, NY 11973

*June 2001-March 2003. Contract Researcher*

RIKEN, 2-1 Hirosawa, Wako, Saitama, 351-0198, Japan

*April 1995-May 2001. Graduate Research Assistant*

Nagoya University, Furo, Chikusa, Nagoya, 464-8602, Japan

Fermi National Accelerator Laboratory, Batavia, IL 60510-5011

### **Education:**

Ph.D., Nagoya University, 2001. Thesis advisor: Prof. Kimio Niwa

M.A., Nagoya University, 1995.

B.S., Nagoya University, 1993.

### **Teaching Experience:**

**Local adviser for graduate students visiting RIKEN BNL Research Center, 2003-present:**

Kenichi Karatsu (*"Production cross section and parity violating asymmetry of W bosons in p+p collisions at  $\sqrt{s}=500\text{GeV}$ "*, Ph.D. thesis at Kyoto University, 2011.)

Robert Bennett (*"Longitudinal double spin asymmetry of photon production in polarized protons at 200 GeV"*, Ph.D. thesis at Stony Brook University, 2009.)

Kohichi Sakashita (*"Prompt photon production in polarized proton-proton collision at PHENIX"*, Ph.D. thesis at Tokyo Institute of Technology, 2009.)

Takuma Horaguchi (*"Prompt photon production in proton-proton collisions at  $\sqrt{s}=200\text{GeV}$ "*, Ph.D. thesis at Tokyo Institute of Technology, 2006.)

**Teaching assistant, 1997:**

Tutor of a pre-seminar course for freshmen at Nagoya University. Continued mentoring the undergraduate students at their request. In their senior year, three of students joined our research group for senior year research.

## Research Experience:

### PHENIX experiment 2001- present

PHENIX is one of two large multi-purpose experiments at the Relativistic Heavy Ion Collider (RHIC). There are two main physics programs; nuclear spin structure and hot dense nuclear matter. The spin program uses the world's only polarized proton collider to study the nucleon spin structure and the fundamental properties of the strong nuclear interactions. The hot dense nuclear matter is produced by high energy heavy ion collision.

**Contributions to instrumentations** for the spin and heavy ion programs. Responsible for the PHENIX central spectrometer trigger system. This system selects rare events in high rate collisions and is critical both for the spin and heavy ion physics. Developed a sophisticated system to monitor trigger performance and to eliminate malfunctioning units efficiently preserving the largest possible detector acceptance.

**Contributions to the spin physics.** Played leading role in the development of several key analysis methods for the spin program.

- Transverse spin and spin-momentum correlations:

Transverse polarization of quarks and correlations between transvers quark spin and motion in polarized protons can cause azimuthal asymmetries in the final state of hadron collision. Measured the production cross section of charged hadrons and carefully removing experimental backgrounds. Measured the left-right asymmetry of neutral pion and charged hadron production. The results set a limit on transverse spin and transvers momentum correlation for quark in the transversely polarized protons. The result is published in "*Measurement of Transverse Single-Spin Asymmetries for Mid-rapidity Production of Neutral Pions and Charged Hadrons in Polarized  $p+p$  Collisions at  $\sqrt{s}=200\text{GeV}$* " (Phys. Rev. Lett. 95: 202001,2005).

- Gluon polarization ( $\Delta G$ ) in the proton:

The direct photon is theoretically the simplest and the cleanest probe for the gluon spin component in the proton, and at the same time it is an important reference for the heavy ion collisions. Experimentally there are a lot of background photons and a careful analysis is needed to identify the signal. Other collider experiments usually apply an "isolation" requirement to reduce those backgrounds, which in principle introduces an experimental bias.

Developed an analysis method to measure the direct photon without the "isolation" requirement. In addition, analyzed the event shape by applying the "isolation" cut. Mentored a graduate student to measure the first double spin asymmetry in the direct photon production.

The cross section result was published in "*Measurement of Direct Photon Production in p+p collisions at  $\sqrt{s}=200$  GeV*" (Phys. Rev. Lett. 98:012002,2007), served as the chair of this publication.

Measured the double spin asymmetry of direct photon production (PHENIX preliminary, Robert Bennett Ph.D. thesis at Stony Brook University.)

Preparing a full paper of the cross section measurement with an improved statistics.

- Anti-quark polarization ( $\Delta q$ -bar) in the proton, probed by W boson:

The W-boson measurement was not possible until we firstly collected p+p data at the top energy of RHIC in 2009. The parity violating spin asymmetry measurement with real W bosons is unique at RHIC. This is the main topic of the RHIC spin program for the next few years.

Because, unlike other analyses after 9 years of RHIC operation, it was the first time and required to develop a new analysis method, a task force was formed before the data taking period. Collected people, led a planning, calibrations and the analysis, and then finalized the result.

The result was published in "*Cross Section and Parity Violating Spin Asymmetries of  $W^\pm$  Boson Production in Polarized p+p Collisions at  $\sqrt{s}=500$  GeV*" (Phys. Rev. Lett. 106:062001,2011), served as the co-chair of this publication.

**Contributions to the rest of publications** through working group and private discussion, the operation of trigger system, and detector calibrations.

## **DONUT 1995-2001**

The experiment firstly observed tau neutrino interactions. The neutrino beam was provided by Fermi National Accelerator Laboratory (FNAL). Nagoya University group was responsible to the emulsion target and the scintillation fiber tracking (SFT) system. Those are the key components of the experiment. The group was lead by Prof. Kimio Niwa. He got a Nishina prize (2004) with the result of this experiment. I was the first student of this experiment.

In first years, built the SFT system and the emulsion target, measured background levels for the design of the beam line, operated the SFT and the emulsion target during the beam time. Spent the last years to develop a new analysis technique which uses the maximum capability of the automatic emulsion scanning system. It requires a very precise alignment.

The result was published in Physics Letters B513:23-29, 2001.

## **Contributions to Management and Leadership:**

W boson analysis task force co-chair *December 2008- September 2010*

This task force was formed in preparation for the first 500 GeV p+p data taking in 2009. Collected people and led the data taking planning and the analysis. It is finished with a publication on Physical Review Letters.

PHENIX spin physics working group co-convenor *January 2008-January 2010*

This is one of 5 physics working groups in PHENIX. All results related to spin physics are discussed in this working group and reviewed by the conveners.

PHENIX 2008 spin coordinator *November, 2007 - March, 2008*

In the p+p running, the experimental operation is very complicated with special calibrations, triggers, and high rate backgrounds. Coordinated those tasks.

PHENIX Spinfest Organizer *June 11-July 27, 2007*

It was the third spinfest aimed to stimulate activities of PHENIX spin physics working group. This time, collected 30 people at RIKEN (Saitama, Japan). Initiated regular local meetings. This style became a standard framework in the following spinfest activities.

## **Workshop Organization:**

The Physics of W and Z Bosons Co-organizers June 24-25, 2010

RHIC-AGS Annual Users' Meeting (Longitudinal Spin session) Co-organizers June 1, 2009

## **Selected Presentations:**

*"Measurement of Longitudinal Spin Asymmetries From  $W^\pm$  Boson Decay in Polarized pp Collisions at  $\sqrt{s}=500$  GeV at RHIC-PHENIX"* (Spin2010, Julich, Germany October 1)

*"Observation of W decay in 500GeV p+p collisions at PHENIX"* (Lake Louise Winter Institute, Alberta, Canada, February 14-20, 2010)

*"RHIC-spin program for the next several years"* (DNP/JPS Joint Fall Meeting Waikoloa, Hawaii, October 13-17, 2009)

*"Studying the spin structure of the proton at PHENIX"* (Circum-Pan-Pacific Symposium, Yamagata, Japan September 15-18, 2009)

*"Measurements of proton spin structure at RHIC-PHENIX"* (Winter Workshop on Nuclear Dynamics, Big Sky, Montana, February 1-8, 2009)

*"PHENIX EM Probes"* (Hard Probes at A Toxa, Galicia, Spain June 8-14, 2008)

*"Study of proton helicity structure in polarized p+p collisions at RHIC"* (JPS at Sapporo September 22, 2007)

*"Study of proton helicity structure in polarized p+p collisions at PHENIX"* (DIS at Munich April 17, 2007)

### **Selected Publications:**

*"Cross Section and Parity Violating Spin Asymmetries of  $W^\pm$  Boson Production in Polarized p+p Collisions at  $\sqrt{s}=500$  GeV"* Phys. Rev. Lett. 106: 062001, 2011.

*"Measurement of direct photon production in p + p collisions at  $\sqrt{s} = 200$ -GeV"* Phys. Rev. Lett. 98: 012002, 2007.

*"Improved measurement of double helicity asymmetry in inclusive midrapidity  $\pi^0$  production for polarized p+p collisions at  $\sqrt{s}= 200$ -GeV"* Phys. Rev. D73: 091102, 2006.

*"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"* Phys. Rev. Lett. 95: 202001, 2005.

*"Double helicity asymmetry in inclusive mid-rapidity  $\pi^0$  production for polarized p + p collisions at  $\sqrt{s}= 200$ -GeV"* Phys. Rev. Lett. 93:202002, 2004.

*"Mid-rapidity neutral pion production in proton proton collisions at  $\sqrt{s}= 200$ -GeV"* Phys. Rev. Lett. 91:241803, 2003.

*"Observation of tau neutrino interactions"* Phys. Lett. B504: 218, 2001

## List of Presentations:

### ----- Conferences-----

“Delta G and Delta qbar at PHENIX”

Circum-Pan-Pacific Symposium on High Energy Spin Physics

Cairns, QLD Australia (June 20, 2011)

“Measurement of Longitudinal Spin Asymmetries From  $W^\pm$  Boson Decay in Polarized pp Collisions at  $\sqrt{s}=500$  GeV at RHIC-PHENIX”

Spin2010 conference

Julich, Germany (October 1, 2010)

“Observation of W decay in 500GeV p+p collisions at PHENIX”

Lake Louise Winter Workshop (LLWI)

Lake Louise, Alberta, Canada (February 14-20, 2010)

“Status of W analysis in PHENIX Central Arm”

RHIC Spin Collaboration meeting

Berkeley, LA (November 20-22, 2009)

“RHIC-spin program for the next several years “

DNP/JPS Joint Fall Meeting

Waikoloa, Hawaii (October 13-17, 2009)

“Studying the spin structure of the proton at PHENIX”

Circum-Pan-Pacific Symposium

Yamagata, Japan (September 15-18, 2009)

“Measurements of proton spin structure at RHIC-PHENIX”

Winter Workshop on Nuclear Dynamics

Big Sky, Montana, USA (February 1-8, 2009)

“PHENIX EM Probes”

International Conference on Hard Probes of High Energy Nuclear Collisions

A Toxa, Galicia, Spain (June 8-14, 2008)

“Study of proton helicity structure in polarized p+p collisions at PHENIX”

XV International Workshop on Deep-Inelastic scattering and Related Subjects

Munich, Germany (April 17, 2007)

“Probing spin-structure of proton with the PHENIX Central Arm Detectors”

XI Workshop on High Energy Spin Physics

Dubna, Russia (September 27- October 1, 2005)

“PHENIX Run5pp Analysis”

Annual RHIC and AGS Users Meeting

BNL NY, USA (June 20-24, 2005)

“Measurement of the direct photon cross section in proton-proton collisions at  $\sqrt{s}=200\text{GeV}$ ”

16th International Spin Physics Symposium (SPIN2004)  
Abdus Salam International Centre for Theoretical Physics (ICTP),  
Trieste, Italy (October 10-16 2004)

“delta-G Measurement at RHIC-PHENIX”  
Circum-Pan-Pacific Symposium On High Energy Spin Physics (SPIN 2003)  
Seattle Washington, USA (August 4-7, 2003)

“Transverse Asymmetry in Charged Hadron Production in  $\sqrt{s}=200$  GeV p+p Collisions at PHENIX”  
15th International Spin Physics Symposium (SPIN2002)  
Brookhaven National Lab NY, USA (September 9-14, 2002)

“Results from DONUT”  
Europhysics Neutrino Oscillation Workshop (NOW 2000)  
Conca Specchiulla, Otranto, Lecce, Italy (September 9-16, 2000)

----- **Japan physical society meeting / Division of nuclear physics meeting** -----

“Measurement of Longitudinal Spin Asymmetries from  $W^{\pm}$  Boson Decay in polarized pp Collisions”  
Japan Physical Society meeting  
Fukuoka, Japan (September 11-14, 2010)

“PHENIX Central arm physics with  $\sqrt{s}=500$ GeV(polarized) collisions”  
Japan Physical Society meeting  
Yamagata, Japan (September 23, 2008)

“Study of proton helicity structure in polarized p+p collisions at RHIC”  
Japan Physical Society meeting  
Sapporo, Japan (September 22, 2007)

“Measurement of Direct Photon Production in p+p collisions at  $\sqrt{s}=200$ GeV”  
Japan Physical Society meeting  
Nara, Japan (September 20, 2006)

“Measurement of Direct Photons in  $\sqrt{s}=200$ GeV p+p collisions”  
Japan Physical Society meeting (DNP/JPS joint meeting)  
Hawaii, USA (September 20, 2005)

“Search for the Direct photon  $\sqrt{s}=200$ GeV pp Collisions with the statistical subtraction method”  
Japan Physical Society meeting  
Kochi, Japan (September 27, 2004)

“Measurement of the single transverse-spin asymmetry in charged hadrons in  $\sqrt{s}=200$ GeV p+p collisions”  
Japan Physical Society meeting  
Miyagi, Japan (March 30, 2003)

“EMCal-RICH level1 trigger performance at PHENIX”  
Division of nuclear physics meeting  
Michigan, USA (October 12, 2002)

“Transverse Asymmetry in Charged Hadron Production in  $\sqrt{s}=200$  GeV p+p Collisions at PHENIX”  
Japan Physical Society meeting  
Tokyo, Japan (September 15, 2002)

“EMCal-RICH trigger performance at PHENIX”  
Japan Physical Society meeting  
Shiga, Japan (March , 2002)

----- **Seminars** -----

“Proton spin physics with the polarized proton proton collider”  
EPP Seminar (in Japanese)  
Kyushu University (July 8, 2011)

“W physics”  
PHENIX FOCUS seminar  
BNL, Upton NY(March 30, 2010)

“Direct photon measurements”  
PHENIX FOCUS seminar  
BNL, Upton NY (June 23, 2009)

“Direct photons at PHENIX”  
RBRC Symposium  
BNL, Upton NY (December 6, 2006)

“Direct Photon Production in p+p collisions at  $\sqrt{s}=200$ GeV “  
RIKEN Lunch Seminar  
BNL, Upton NY (November 10, 2005)

## List of Publications:

----- **PHENIX experiment**-----

P-1) Suppression of back-to-back hadron pairs at forward rapidity in d+Au Collisions at  $\sqrt{s_{NN}}=200$  GeV.  
Phys.Rev.Lett.107:172301,2011 arXiv:1105.5112

P-2) J/psi suppression at forward rapidity in Au+Au collisions at  $\sqrt{s_{NN}}=200$  GeV.  
Phys.Rev.C84:054912,2011 arXiv:1103.6269

P-3) Suppression of away-side jet fragments with respect to the reaction plane in Au+Au collisions at  $\sqrt{s_{NN}}$   
= 200 GeV.  
Phys.Rev.C84:024904,2011 arXiv:1010.1521

P-4) Cold Nuclear Matter Effects on J/. Yields as a Function of Rapidity and Nuclear Geometry in Deuteron-Gold Collisions at  $\sqrt{s_{NN}}=200$  GeV.  
Phys.Rev.Lett.107:142301,2011 arXiv:1010.1246

P-5) Event Structure and Double Helicity Asymmetry in Jet Production from Polarized p+p Collisions at  $\sqrt{s}=200$  GeV.

Phys.Rev.D84:012006,2011. arXiv:1009.4921

P-6) Identified charged hadron production in  $\sqrt{s}=200$  GeV and 62.4 GeV.

Phys.Rev.C83:064903,2011. arXiv:1102.0753

P-7) Azimuthal correlations of electrons from heavy-flavor decay with hadrons in p+p and Au+Au collisions at  $\sqrt{s_{NN}}=200$  GeV.

Phys.Rev.C83:044912,2011. arXiv:1011.1477

P-8) Cross Section and Parity Violating Spin Asymmetries of  $W^{\pm}$  Boson Production in Polarized p+p Collisions at  $\sqrt{s}=500$  GeV.

Phys.Rev.Lett.106:062001,2011. arXiv:1009.0505

P-9) Cross section and double helicity asymmetry for  $\eta$  mesons and their comparison to neutral pion production in p+p collisions at  $\sqrt{s}=200$  GeV.

Phys.Rev.D83:032001,2011. arXiv:1009.6224

P-10) Measurement of Transverse Single-Spin Asymmetries for J/psi Production in Polarized p+p Collisions at  $\sqrt{s} = 200$  GeV.

Phys.Rev.D82:112008,2010. arXiv:1009.4864

P-11) High  $p_T$  direct photon and  $\pi^0$  triggered azimuthal jet correlations and measurement of  $k_T$  for isolated direct photons in p+p collisions at  $\sqrt{s}=200$  GeV.

Phys.Rev.D82:072001,2010. arXiv:1006.1347

P-12) 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.

Phys.Rev.Lett.105:142301,2010. arXiv:1006.3740

P-13) Measurement of neutral mesons in p+p collisions at  $\sqrt{s}=200$  GeV and scaling properties of hadron production.

Phys.Rev.D83:052004,2011. arXiv:1005.3674

P-14) Transverse momentum dependence of meson suppression  $\eta$  suppression in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV.

Phys.Rev.C82:011902,2010. arXiv:1005.4916

P-15) Nuclear modification factors of phi mesons in d+Au, Cu+Cu and Au+Au collisions at  $\sqrt{s_{NN}}=200$  GeV.

Phys.Rev.C83:024909,2011. arXiv:1004.3532

P-16) Trends in Yield and Azimuthal Shape Modification in Dihadron Correlations in Relativistic Heavy Ion Collisions.

Phys.Rev.Lett.104:252301,2010. arXiv:1002.1077

P-17) Elliptic and hexadecapole flow of charged hadrons in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV.

Phys.Rev.Lett.105:062301,2010. arXiv:1003.5586

P-18) 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.  
Phys.Rev.C81:034911,2010. arXiv:0912.0244

P-19) Enhanced production of direct photons in Au+Au collisions at  $\sqrt{s_{NN}}=200$  GeV and implications for the initial temperature.  
Phys.Rev.Lett.104:132301,2010. arXiv:0804.4168

P-20) Double Helicity Dependence of Jet Properties from Dihadrons in Longitudinally Polarized p+p Collisions at  $s^{**}(1/2) = 200$ -GeV.  
Phys.Rev.D81:012002,2010. arXiv:0910.1029

P-21) Systematic Studies of Elliptic Flow Measurements in Au+Au Collisions at  $s^{**}(1/2) = 200$ -GeV.  
Phys.Rev.C80:024909,2009. arXiv:0905.1070

P-22) Photoproduction of J/psi and of high mass e+e- in ultra-peripheral Au+Au collisions at  $s^{**}(1/2) = 200$ -GeV.  
Phys.Lett.B679:321-329,2009. arXiv:0903.2041

P-23) Photon-Hadron Jet Correlations in p+p and Au+Au Collisions at  $s^{**}(1/2) = 200$ -GeV.  
Phys.Rev.C80:024908,2009. arXiv:0903.3399

P-24) Measurement of Bottom versus Charm as a Function of Transverse Momentum with Electron-Hadron Correlations in p+p Collisions at  $\sqrt{s}=200$  GeV.  
Phys.Rev.Lett.103:082002,2009. arXiv:0903.4851

P-25) Kaon interferometric probes of space-time evolution in Au+Au collisions at  $s(NN)^{**}(1/2) = 200$ -GeV.  
Phys.Rev.Lett.103:142301,2009. arXiv:0903.4863

P-26) High-pT pi0 Production with Respect to the Reaction Plane in Au + Au Collisions at  $s(NN)^{**}(1/2) = 200$ -GeV.  
Phys.Rev.C80:054907,2009. arXiv:0903.4886

P-27) The Polarized gluon contribution to the proton spin from the double helicity asymmetry in inclusive pi0 production in polarized p + p collisions at  $s^{**}(1/2) = 200$ -GeV.  
Phys.Rev.Lett.103:012003,2009. arXiv:0810.0694

P-28) Inclusive cross section and double helicity asymmetry for pi^0 production in p+p collisions at  $\sqrt{s} = 62.4$  GeV.  
Phys.Rev.D79:012003,2009. arXiv:0810.0701

P-29) Charged hadron multiplicity fluctuations in Au+Au and Cu+Cu collisions from  $\sqrt{s_{NN}} = 22.5$  to 200 GeV.  
Phys.Rev.C78:044902,2008. arXiv:0805.1521

P-30) Dilepton mass spectra in p+p collisions at  $s^{**}(1/2) = 200$ -GeV and the contribution from open charm.  
Phys.Lett.B670:313-320,2009. arXiv:0802.0050

P-31) J/psi Production in  $s(NN)^{**}(1/2) = 200$ -GeV Cu+Cu Collisions.  
Phys.Rev.Lett.101:122301,2008. arXiv:0801.0220

P-32) Quantitative Constraints on the Opacity of Hot Partonic Matter from Semi-Inclusive Single High Transverse Momentum Pion Suppression in Au+Au collisions at  $s(NN)^{1/2} = 200$ -GeV. Phys.Rev.C77:064907,2008. arXiv:0801.1665

P-33) Suppression pattern of neutral pions at high transverse momentum in Au + Au collisions at  $s(NN)^{1/2} = 200$ -GeV and constraints on medium transport coefficients. Phys.Rev.Lett.101:232301,2008. arXiv:0801.4020

P-34) Dihadron azimuthal correlations in Au+Au collisions at  $s(NN)^{1/2} = 200$ -GeV. Phys.Rev.C78:014901,2008. arXiv:0801.4545

P-35) Energy dependence of  $\pi^0$  production in Cu + Cu collisions at  $s(NN)^{1/2} = 22.4$ -GeV, 62.4-GeV, and 200-GeV. Phys.Rev.Lett.101:162301,2008. arXiv:0801.4555

P-36) Particle-species dependent modification of jet-induced correlations in Au+Au collisions at  $s(NN)^{1/2} = 200$ -GeV. Phys.Rev.Lett.101:082301,2008. arXiv:0712.3033

P-37) Source breakup dynamics in Au+Au Collisions at  $s(NN)^{1/2} = 200$ -GeV via three-dimensional two-pion source imaging. Phys.Rev.Lett.100:232301,2008. arXiv:0712.4372

P-38) Cold Nuclear Matter Effects on J/Psi as Constrained by Deuteron-Gold Measurements at  $s(NN)^{1/2} = 200$ -GeV. Phys.Rev.C77:024912,2008. arXiv:0711.3917

P-39) Centrality dependence of charged hadron production in deuteron + gold and nucleon + gold collisions at  $s(NN)^{1/2} = 200$ -GeV. Phys.Rev.C77:014905,2008. arXiv:0708.2416

P-40) Transverse momentum and centrality dependence of dihadron correlations in Au+Au collisions at  $s(NN)^{1/2} = 200$ -GeV: Jet-quenching and the response of partonic matter. Phys.Rev.C77:011901,2008. arXiv:0705.3238

P-41) Measurement of density correlations in pseudorapidity via charged particle multiplicity fluctuations in Au+Au collisions at  $s(NN)^{1/2} = 200$ -GeV. Phys.Rev.C76:034903,2007. arXiv:0704.2894

P-42) Inclusive cross-section and double helicity asymmetry for  $\pi^0$  production in p + p collisions at  $s^{1/2} = 200$ -GeV: Implications for the polarized gluon distribution in the proton. Phys.Rev.D76:051106,2007. arXiv:0704.3599

P-43) Elliptic flow for phi mesons and (anti)deuterons in Au + Au collisions at  $s(NN)^{1/2} = 200$ -GeV. Phys.Rev.Lett.99:052301,2007. nucl-ex/0703024

P-44) High transverse momentum eta meson production in p+p, d+Au and Au+Au collisions at  $S(NN)^{1/2} = 200$ -GeV. Phys.Rev.C75:024909,2007. nucl-ex/0611006

P-45) A Detailed Study of High-p(T) Neutral Pion Suppression and Azimuthal Anisotropy in Au+Au Collisions at  $s(NN)^{1/2} = 200$ -GeV.  
Phys.Rev.C76:034904,2007. nucl-ex/0611007

P-46) J / psi production versus transverse momentum and rapidity in p+p collisions at  $s^{1/2} = 200$ -GeV.  
Phys.Rev.Lett.98:232002,2007. hep-ex/0611020

P-47) Correlated Production of p and anti-p in Au+Au Collisions at  $s(NN)^{1/2} = 200$ -GeV.  
Phys.Lett.B649:359-369,2007. nucl-ex/0611016

P-48) Energy Loss and Flow of Heavy Quarks in Au+Au Collisions at  $s(NN)^{1/2} = 200$ -GeV.  
Phys.Rev.Lett.98:172301,2007. nucl-ex/0611018

P-49) System Size and Energy Dependence of Jet-Induced Hadron Pair Correlation Shapes in Cu+Cu and Au+Au Collisions at  $s(NN)^{1/2} = 200$  and 62.4-GeV.  
Phys.Rev.Lett.98:232302,2007. nucl-ex/0611019

P-50) J/psi Production vs Centrality, Transverse Momentum, and Rapidity in Au+Au Collisions at  $s(NN)^{1/2} = 200$ -GeV.  
Phys.Rev.Lett.98:232301,2007. nucl-ex/0611020

P-51) Production of omega mesons at Large Transverse Momenta in p + p and d + Au Collisions at  $s^{1/2}(NN) = 200$ -GeV.  
Phys.Rev.C75:051902,2007. nucl-ex/0611031

P-52) Centrality Dependence of pi<sup>0</sup> and eta Production at Large Transverse Momentum in  $\sqrt{s_{NN}} = 200$  GeV d+Au Collisions.  
Phys.Rev.Lett.98:172302,2007. nucl-ex/0610036

P-53) Measurement of high-p(T) single electrons from heavy-flavor decays in p+p collisions at  $s^{1/2} = 200$ -GeV.  
Phys.Rev.Lett.97:252002,2006. hep-ex/0609010

P-54) Measurement of direct photon production in p + p collisions at  $s^{1/2} = 200$ -GeV.  
Phys.Rev.Lett.98:012002,2007. hep-ex/0609031

P-55) Measurement of Single Muons at Forward Rapidity in p+p Collisions at  $s^{1/2} = 200$ -GeV and Implications for Charm Production.  
Phys.Rev.D76:092002,2007. hep-ex/0609032

P-56) Scaling properties of azimuthal anisotropy in Au+Au and Cu+Cu collisions at  $s(NN) = 200$ -GeV.  
Phys.Rev.Lett.98:162301,2007. nucl-ex/0608033

P-57) Jet properties from dihadron correlations in p+p collisions at  $s^{1/2} = 200$ -GeV.  
Phys.Rev.D74:072002,2006. hep-ex/0605039

P-58) Evidence for a long-range component in the pion emission source in Au + Au collisions at  $s(NN)^{1/2} = 200$ -GeV.  
Phys.Rev.Lett.98:132301,2007. nucl-ex/0605032

- P-59) Nuclear effects on hadron production in d+Au and p+p collisions at  $s(NN)^{1/2} = 200\text{-GeV}$ .  
Phys.Rev.C74:024904,2006. nucl-ex/0603010
- P-60) Azimuthal angle correlations for rapidity separated hadron pairs in d + Au Collisions at  $s(NN)^{1/2} = 200\text{-GeV}$ .  
Phys.Rev.Lett.96:222301,2006. nucl-ex/0603017
- P-61) Improved measurement of double helicity asymmetry in inclusive midrapidity  $\pi^0$  production for polarized p+p collisions at  $s^{1/2} = 200\text{-GeV}$ .  
Phys.Rev.D73:091102,2006. hep-ex/0602004
- P-62) Common suppression pattern of eta and  $\pi^0$  mesons at high transverse momentum in Au+Au collisions at  $S(NN)^{1/2} = 200\text{-GeV}$ .  
Phys.Rev.Lett.96:202301,2006. nucl-ex/0601037
- P-63) Measurement of transverse single-spin asymmetries for mid-rapidity production of neutral pions and charged hadrons in polarized p+p collisions at  $s^{1/2} = 200\text{-GeV}$ .  
Phys.Rev.Lett.95:202001,2005, hep-ex/0507073
- P-64) Jet structure from dihadron correlations in d+Au collisions at  $s(NN)^{1/2} = 200\text{-GeV}$ .  
Phys.Rev.C73:054903,2006, nucl-ex/0510021
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