Curriculum Vitae for **William A. Zajc**

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EDUCATION

1975-82: Ph.D, University of California
Adviser: Dr. K.M. Crowe
Thesis: "Bose-Einstein Correlations in Heavy Ion Collisions"

1971-75: B.S, California Institute of Technology

PROFESSIONAL EXPERIENCE

1996 to present: Professor of Physics, Columbia University

1990 to 1996: Associate Professor of Physics, Columbia University

1987-90: Assistant Professor of Physics, Columbia University

1984-86: Assistant Professor of Physics, University of Pennsylvania

1982-84: Post-doctoral research fellow, University of Pennsylvania

AWARDS

Fellow, American Physical Society

RESEARCH

- Spokesperson, PHENIX Experiment at RHIC, 1997-2006
- Co-spokesman, BNL AGS Experiment #859
- Participant, BNL AGS Experiment #866
- Participant, BNL AGS Experiment #910
- Participant, CERN ISR Experiment R807
- Former Institutional Board member for the PHENIX BNL RHIC Experiment
- Former Detector Council member for the PHENIX BNL RHIC Experiment
- Former Executive Council member for the PHENIX BNL RHIC Experiment

SERVICE TO PROFESSION

- Chair-Elect, APS Division of Nuclear Physics, 2000-10.
- Review Committee, Chief Scientist of RIKEN Radiation Laboratory (Tokyo), 2009
- Deputy Chair, APS Division of Nuclear Physics, 2008-9.
- Co-Organizer, AAAS Symposium "Quest for the Perfect Liquid:
  Connecting Heavy Ions, String Theory, and Cold Atoms", February 2008.
- Review Committee, Instrumentation Division, Brookhaven National Laboratory, 2008
- Review Committee, Center for Nuclear Physics and Astrophysics, U. of Washington, 2008
- Review Committee, Wright Nuclear Structure Laboratory, Yale University, 2007
- Member, Nuclear Physics Long Range Planning Group, 2007.
- Advisory Committee, Institute for Nuclear Theory (2007 start)
- Science Council, Jefferson National Laboratory (2007 start)
- Science and Technology Steering Committee, Brookhaven Science Associates (2006 start).
- NSAC Subcommittee on Implementation of 2002 Long Range Plan, March-June, 2005.
- Executive Committee, Division of Nuclear Physics, 2004-6.
- External Review Committee of Wayne State University Physics Department, February, 2005
- NSAC (Nuclear Science Advisory Committee), 2004-present.
- Member, National Task Force on High Energy Density Physics, 2003-4
- NSAC Subcommittee on Categorizing Future Facilities, February, 2003.
- Editorial Committee, *Annual Reviews of Nuclear and Particle Science*, 2002-2007.
- Member, U.S Nuclear Physics Long Range Plan Working Group, 2001.
- Fellowship Committee, Division of Nuclear Physics, 2001-2
- Member, U.S Nuclear Physics Long Range Plan Working Group, 1995
- Co-convenor, Heavy Ion Town Meeting, January 1995
- Program Committee, Division of Nuclear Physics, 1994-6
- AGS Users Executive Committee (1991-3).
- Nuclear Physics representative to ESNet Steering Committee, (1990-93).
- Referee, *Physical Review Letters*.
- Referee, *Physical Letters B*.
- Referee, *Reviews of Modern Physics*.
- Reviewer, von Helmholtz Research Foundation.
- Divisional Associate Editor for Nuclear Physics for *Physical Review Letters*, 1996-9.
- Grant reviewer, Department of Energy
- Grant reviewer, National Science Foundation
- Nuclear Physics Program Representative to the ESnet Steering Committee (1993-94)
- Technical Review Committee for BNL Experiment #896, 1992.

SERVICE TO PROFESSION (Continued)

- International Advisory Committee, International Conference on Strangeness in Quark Matter (SQM2009), October 2009.
- International Advisory Committee, International Conference on Nucleus-Nucleus Collisions, August 2009.
- International Advisory Committee, Quark Matter 2009.
- International Organizing Committee, Particles and Nuclei in Collision, November, 2008.
- International Advisory Committee, Workshop on Particle Correlation and Femtoscopy (WPCF), September, 2008.
- International Advisory Committee, International Conference on High Energy Physics, August, 2008.
- Organizing Committee, BNL Symposium on RHIC and Its Impact on Nuclear Science, May, 2008.
- International Advisory Committee, Quark Matter 2008.
- International Advisory Committee, International Conference on Strangeness in Quark Matter (SQM2007), June 2007.
- International Advisory Committee, Hadron Collider Physics Symposium 2007.
- International Advisory Committee, International Conference on Nuclear Physics, June, 2007.
- International Advisory Committee, Workshop on Particle Correlation and Femtoscopy (WPCF), September, 2006.
- International Advisory Committee, Quark Matter 2006.
- International Advisory Committee, Hadron Collider Physics Symposium 2006.
- International Advisory Committee, International Conference on Strangeness in Quark Matter (SQM2006), March 2006.
- International Organizing Committee, Particles and Nuclei in Collision, 2005.
- International Advisory Committee, Quark Matter 2005.
- International Organizing Committee, Fifth International Conference on Physics and Astrophysics of Quark-Gluon Plasma, February, 2005.
- International Advisory Committee, International Conference on Strangeness in Quark Matter (SQM2004), September 2004.
- International Advisory Committee, International Conference on Strangeness in Quark Matter (SQM2003), March 2003.
- International Advisory Committee, International Conference on Particles and Nuclei (PANIC2002), September 2002.
- Program Committee, Workshop on QCD and Experimental Physics Program at RHIC, Beijing, China, August 2002.
- International Organizing Committee, Quark Matter 2002.
- International Organizing Committee, Pan American Study Institute (PASI) on New States of Matter in Hadronic Interactions, January 2002.
- International Organizing Committee, Cracow Epiphany Conference on Quarks and Gluons in Extreme Conditions, January 2002.
- International Organizing Committee, 6th International Conference on Strange Quarks in Matter, September 2002.
- International Organizing Committee, Fourth International Conference on Physics and Astrophysics of Quark-Gluon Plasma, September, 2001.
- International Organizing Committee, Quark Matter 2001.
- Co-convenor for Relativistic Heavy Ion Collisions, 30th International Symposium on Multiparticle Dynamics, October 2000.
- International Organizing Committee, International Symposium on Nuclear Physics 2000.
- International Organizing Committee, Hadron Collider Physics 1999.
- International Organizing Committee, CRIS98-Cantania Relativistic Ion Studies

SERVICE TO PROFESSION (Continued)

- Co-Organizer, International Workshop on Particle Interferometry
  in High Energy Heavy Ion Reactions , September 1996
- Organizing Commitee, Brookhaven Theory Workshop on Relativistic Heavy Ions, July 1996
- Co-Organizer, INT Workshop on Electromagnetic Probes of the QGP, January 1996
- Co-Organizer, International Workshop on Particle Interferometry
  in High Energy Heavy Ion Reactions , September 1996
- Organizing Committee, Brookhaven Theory Workshop on Relativistic Heavy Ions, July 1996
- Co-Organizer, INT Workshop on Electromagnetic Probes of the QGP, January 1996
- International Organizing Committee, Relativistic Aspects of Nuclear Physics, 1995
- Co-convenor, Heavy Ion Session, 5th Conf. on the Intersections of Particle and Nuclear Physics (1994)
- Co-convenor, Heavy Ion Session, 27th Int. Conference on High Energy Physics (1994)
- Organizing Committee, Second Conference on Heavy Ion Physics at the AGS (1993)
- Organizing Committee, First Conference on Heavy Ion Physics at the AGS (1992)
- Co-convenor, Heavy Ion Session, 26th Int. Conference on High Energy Physics (1992)

1 Publications in Refereed Journals

[1] Absolute Transition Probabilities in Ni I, W.W. Lennard et al., Nucl. Instr. and Meth. **110**, 385 (1973).

[2] Orbital Recoupling Dominance in the A=20 Giant M1 Transition, C.J. Martoff et al., Phys. Rev. Lett. **46**, 891 (1981).

[3] Pions Produced Near the Center-Of-Mass Velocity in Heavy Ion Collisions, K. A. Frankel et al., Phys. Rev. **C25**, 1102–1104 (1982).

[4] Strong Coulomb Effects on Pions Produced in Heavy Ion Collisions, J. P. Sullivan et al., Phys. Rev. **C25**, 1499–1517 (1982).

[5] Spin-flip Transitions in ^{13}C and ^{19}F Probed with the (π^-, γ) Reaction, C. j. Martoff et al., Phys. Rev. **C27**, 1621–1635 (1983).

[6] A Comparison of Hadron Production in p-$\bar{\text{p}}$ and p-p Collisions in the Central Region at $\sqrt{s} = 53$ GeV, T. Akesson et al., Nucl. Phys. **B228**, 409 (1983).

[7] The Dominance of Jets at Large Transverse Energy in a Full Azimuth Hadron Calorimeter At Isr Energies, T. Akesson et al., Phys. Lett. **B128**, 354 (1983).

[8] Bose-Einstein Correlations in α-α, p-p and p-$\bar{\text{p}}$ Interactions, T. Akesson et al., Phys. Lett. **B129**, 269 (1983).

[9] p_T And E_T Multiplicity Correlations in p-p, p-α and α-α Interactions at $\sqrt{s} = 31.5$ GeV And 44 GeV, H. Gordon et al., Phys. Rev. **D28**, 2736–2740 (1983).

[10] A Study of Exclusive Central Hadron Production at the ISR as a Search for Gluonium States, T. Akesson et al., Phys. Lett. **B133**, 268 (1983).

[11] Anti-Baryon Production in the Central Region at the ISR, T. Akesson et al., Nucl. Phys. **B246**, 1 (1984).

[12] Properties of Jets in High E_T Events Produced In p-p Collisions At $\sqrt{s} = 63$ GeV, T. Akesson et al., Z. Phys. **C25**, 13 (1984).

[13] Two-pion correlations in heavy ion collisions, W. A. Zajc et al., Phys. Rev. **C29**, 2173–2187 (1984).

[14] Rapidity and Charge Correlations of Centrally Produced Charged Particles in Events with a High-Momentum π_0 Near 11^o, T. Akesson et al., Phys. Rev. **D31**, 976 (1985).

[15] A Measurement of α-α Elastic Scattering at the CERN ISR, T. Akesson et al., Phys. Lett. **B152**, 140 (1985).

[16] Production of Prompt Positrons at Low Transverse Momentum In 63 GeV p-p Collisions At The CERN Intersecting Storage Rings, T. Akesson et al., Phys. Lett. **B152**, 411 (1985).

[17] Bose-Einstein correlations between kaons, T. Akesson et al., Phys. Lett. **B155**, 128 (1985).

[18] A Comparison of Direct Photon, π^0, and η Production in p-$\bar{\text{p}}$ and p-p Interactions at the CERN ISR, T. Akesson et al., Phys. Lett. **B158**, 282 (1985).

[19] Pions Produced near Mid-Rapidity in High Energy Heavy Ion Collisions, K. A. Frankel et al., Phys. Rev. **C32**, 975 (1985).

[20] Search for Quark Deconfinement: Strangeness Production in pp, dd, p-α and $\alpha - \alpha$ Collisions at $\sqrt{s_{NN}}$= 31.5 and 44 GeV,, T. Akesson et al., Phys. Rev. Lett. **55**, 2535 (1985).

[21] A Search for Glueballs and a Study of Double Pomeron Exchange at the CERN Intersecting Storage Rings, T. Akesson et al., Nucl. Phys. **B264**, 154 (1986).

[22] Dijet Production Cross Section and Fragmentation of Jets Produced in pp Collisions at $\sqrt{s}$= 63 GeV, T. Akesson et al., Z. Phys. **C30**, 27 (1986).

[24] A Study of the Production of two Direct Photons In p-p Collisions at the CERN ISR, T. Akesson et al., Z. Phys. **C32**, 491 (1986).

[25] KNO Scaling Isn't What It Used To Be, W.A. Zajc, Phys. Lett. **175B**, 219 (1986).

[26] Inclusive η Production at Low Transverse Momentum in 63 GeV p-p Collisions at the CERN Intersecting Storage Rings, T. Akesson et al., Phys. Lett. **B178**, 447 (1986).

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[29] Monte Carlo Methods for the Generation of Events with Bose-Einstein Correlations, William A. Zajc, Phys. Rev. **D35**, 3396 (1987).

[30] Measurement Of Energy Emission From O+A And p+A Collisions At 14.5-Gev/C Per Nucleon With a Lead Glass Array, T. Abbott et al., Phys. Lett. **197B**, 285 (1987).

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[32] Observation of a Nonspherical Pion Source in Relativistic Heavy Ion Collisions, A. D. Chacon et al., Phys. Rev. Lett. **60**, 780–783 (1988).

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[34] Proton Production From Si+Au Collisions at 14.5/A-Gev, T. Abbott et al., Nucl. Phys. **A498**, 409–414 (1989).

[35] Kaon and pion production in central Si+Au collisions at 14.6-A/GeV/c, T. Abbott et al., Phys. Rev. Lett. **64**, 847–850 (1990).

[36] Comparison of p+A and Si+Au Collisions at 14.6 GeV/c, T. Abbott et al., Phys. Rev. Lett. **66**, 1567 (1991).

[37] Forward and transverse energies in relativistic heavy ion collisions at 14.6-GeV/c per nucleon, T. Abbott et al., Phys. Rev. **C44**, 1611–1619 (1991).

[38] Pion correlations in relativistic heavy ion collisions for three symmetric systems, A. D. Chacon et al., Phys. Rev. **C43**, 2670–2688 (1991).

[39] Anti-protron production in 14.6-A/GeV/c SI + A collisions, T. Abott et al., Nucl. Phys. **A525**, 455–458 (1991).

[40] Particle production in Si + A and p A collisions at 14.6- A/GeV/c, T. Abbott et al., Nucl. Phys. **A525**, 231–236 (1991).

[41] Anti-proton production in 14.6-A/GeV/c Si + A collisions, T. Abbott et al., Phys. Lett. **B271**, 447–452 (1991).

[42] Bose-Einstein correlations in 14.6-A-GeV/c Si-28+A collisions, T. Abbott et al., Nucl. Phys. **A525**, 531c–536c (1991).

[43] Global transverse energy distributions in relativistic nuclear collisions at 14.6-A/GeV/c, T. Abbott et al., Phys. Rev. **C45**, 2933–2951 (1992).

[44] Measurement of particle production in proton induced reactions at 14.6-GeV/c, T. Abbott et al., Phys. Rev. **D45**, 3906–3920 (1992).

[45] Bose-Einstein correlations in Si + Al and Si + Au collisions at 14.6-A/GeV/c, T. Abbott et al., Phys. Rev. Lett. **69**, 1030–1033 (1992).

[46] Centrality dependence of K+ and pi+ multiplicities from Si + A collisions at 14.6-A-GeV/c. E802 Collaboration, T. Abbott et al., Phys. Lett. **B291**, 341–346 (1992).

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[48] Azimuthal asymmetries of particles emitted in relativistic heavy ion collisions, T. Abbott et al., Phys. Rev. Lett. **70**, 1393–1396 (1993).

[49] Anti-proton production in p + A collisions at 14.6-GeV/c, T. Abbott et al., Phys. Rev. **C47**, 1351–1355 (1993).

[50] Global transverse energy distributions in Si + Al, Au at 14.6-A/GeV/c and Au + Au at 11.6-A.GeV/c, L. Ahle et al., Phys. Lett. **B332**, 258–264 (1994).

[51] Intermittency in central collisions of O-16 + A at 14.6/A- GeV/c, T. Abbott et al., Phys. Lett. **B337**, 254–260 (1994).

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[55] Production of Phi mesons in central Si-28 + Au-196 collisions at 14.6-A/GeV/c, Y. Akiba et al., Phys. Rev. Lett. **76**, 2021–2024 (1996).

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[58] Two-particle rapidity correlations from the Bose-Einstein effect in central Si-28 + Au collisions at 14.6-A-GeV/c and intermittency, Y. Akiba et al., Phys. Rev. **C56**, 1544–1552 (1997).

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[60] Proton, deuteron, and triton emission at target rapidity in Au + Au collisions at 10.20-A-GeV: Spectra and directed flow, L. Ahle et al., Phys. Rev. **C57**, 1416–1427 (1998).

[61] Kaon production in Au + Au collisions at 11.6-A-GeV/c, L. Ahle et al., Phys. Rev. **C58**, 3523–3538 (1998).

[62] Centrality and collision system dependence of anti-proton production from p + A to Au + Au collisions at AGS energies, L. Ahle et al., Nucl. Phys. **A638**, 427–430 (1998).

[63] Antiproton production in Au + Au collisions at 11.7-A- GeV/c, L. Ahle et al., Phys. Rev. Lett. **81**, 2650–2654 (1998).

[64] Simultaneous multiplicity and forward energy characterization of particle spectra in Au + Au collisions at 11.6-A-GeV/c, L. Ahle et al., Phys. Rev. **C59**, 2173–2188 (1999).

[65] Centrality dependence of kaon yields in Si + A and Au + Au collisions at the AGS, L. Ahle et al., Phys. Rev. **C60**, 044904 (1999).

[66] Measuring centrality with slow protons in proton nucleus collisions at 18-GeV/c, I. Chemakin et al., Phys. Rev. **C60**, 024902 (1999).

[67] Proton and deuteron production in Au + Au reactions at 11.6/A-GeV/c, L. Ahle et al., Phys. Rev. **C60**, 064901 (1999).

[68] Particle production at the AGS: An excitation function, L. Ahle et al., Nucl. Phys. **A661**, 472–475 (1999).

[69] Semi-inclusive Lambda and K(S) production in p Au collisions at 17.5-GeV/c, I. Chemakin et al., Phys. Rev. Lett. **85**, 4868–4871 (2000).

[70] Antiproton production in p+A collisions at 12.3 and 17.5 GeV/c, I. Chemakin et al., Phys. Rev. **C64**, 064908 (2001).

[71] Centrality dependence of charged particle multiplicity in Au+Au collisions at $\sqrt{s_{NN}} = 130$ GeV, K. Adcox et al., Phys. Rev. Lett. **86**, 3500–3505 (2001).

[72] Systematics of midrapidity transverse energy distributions in limited apertures from p+Be to Au+Au collisions at relativistic energies, T. Abbott et al., Phys. Rev. **C63**, 064602 (2001).

[73] Event-by-event fluctuations in mean p(T) and mean e(T) in $\sqrt{s_{NN}} = 130$ GeV Au + Au collisions, K. Adcox et al., Phys. Rev. **C66**, 024901 (2002).

[74] Measurement of the mid-rapidity transverse energy distribution from $\sqrt{s_{NN}} = 130$ GeV Au + Au collisions at RHIC, K. Adcox et al., Phys. Rev. Lett. **87**, 052301 (2001).

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[81] Measurement of the Lambda and anti-Lambda particles in Au + Au collisions at $\sqrt{s_{NN}} = 130$ GeV, K. Adcox et al., Phys. Rev. Lett. **89**, 092302 (2002).

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[155] The Fluid Nature of Quark-Gluon Plasma, W. A. Zajc, Nucl. Phys. **A805**, 283–294 (2008).

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[157] 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., (2009).

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2 Publications in Conference Proceedings

[1] Pion Interferometry for Relativistic Heavy Ion Collisions, W. A. Zajc et al., in Proceedings of the Conference on High-Energy Nuclear Collisions and Properties of Dense Matter, Hakone, Japan (1980).

[2] Two Pion Correlations in Heavy Ion Collisions, W. A. Zajc et al., In *Berkeley 1981, Proceedings, High Energy Heavy Ion Study*, 350-355.

[3] Two-Pion Correlations in Heavy Ion Collisions: Measurement of Source Dimensions Using Pion Interferometry, W. A. Zajc et al., published in *Helv. Phys. Acta* **56**, 556, (1983).

[4] Calculational Methods For Generation of Bose Correlated States, W. A. Zajc, In *Brookhaven 1985, Proceedings, Experiments for a Relativistic Heavy Ion Collider*, 117-148.

[5] Intensity Interferometry Measurements in a 4Π Detector at the Proposed Rhic, W. A. Zajc, In Brookhaven 1985, Proceedings, Experiments For A Relativistic Heavy Ion Collider, 83-116.

[6] Prototypical Bose-Einstein Experiments, William A. Zajc, in Proceedings of the 2nd Int. Conf. on Local Equilibrium in Strong Interaction Physics (LESIP II), Santa Fe, N. Mex., Apr 8-12, 1986.

[7] New results from the Brookhaven and CERN heavy ion programs, W. A. Zajc, in Proceedings of the 3rd Conference on the Intersections between Particle and Nuclear Physics, Rockport, ME, 14-19 May 1988.

[8] Bose-Einstein Measurement at RHIC in Light of New Data, W. A. Zajc, *Proceedings of the RHIC Detector Workshop*, July 18-22, 1988, B. Shivakumar and P. Vincent, ed. (BNL-52185).

[9] Extracting physics from two particle correlations, W. A. Zajc, in Proceedings of the International Workshop on Local Equilibrium in Strong Interaction Physics - LESIP IV: Correlations and Multiparticle, Marburg, W.Germany, 14-16 May 1990.

[10] Interferometry: New ideas and new directions, W. A. Zajc, Nucl. Phys. **A525**, 315c–326c (1991).

[11] The E859 Level II Trigger System, W. A. Zajc, in Proceedings of the 4th Conference on the Intersections between Particle and Nuclear Physics, W.T.H. Van Oers, ed., Tucson, AZ, 24-May-1991 (AIP Conf. Proc. #243).

[12] A pedestrian's guide to interferometry, W. A. Zajc, in Proceedings of the NATO Advanced Study Institute on Particle Production in Highly Excited Matter, Castelvecchio Pascoli, Italy, 12-24 Jul 1992.

[13] Critical evidence for quark gluon plasma, W. A. Zajc, in Proceedings of the 12th International Conference on Physics in Collision, Boulder CO, 10-12 Jun 1992.

[14] Exploring dense nuclear matter with nuclear collisions, B. A. Cole and W. A. Zajc, in Proceedings of the International Symposium on Medium Energy Physics (ISMEP 94), Beijing, China, 22-26 Aug 1994.

[15] HBT in PHENIX, STAR and ALICE, W. A. Zajc, Proceedings of the QM95 Conference Workshop on RHIC Detectors, Monterey, CA, 8 January, 1995.

[16] The PHENIX physics program, W. A. Zajc, in Proceedings of the BNL RHIC Theory Workshop, Brookhaven National Laboratory, July, 1996.

[17] The PHENIX physics program at RHIC, W. A. Zajc, in Proceedings of the 5th International Conference on Relativistic Aspects of Nuclear Physics, Rio de Janeiro, Brazil, 27-29 Aug 1997.

[18] Imaging the Final-State Phase Space in Heavy Ion Collisions, W.A. Zajc, Nucl. Phys. **A630**, 511c (1998).

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3 Reports and Technical Journals

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[2] On Monte Carlo Generation of E_T Spectra, W.A. Zajc, R807 internal note, May 1983.

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[4] KNO Scaling and The Landau Distribution, William A. Zajc, UPR-0226T.

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[7] Data Analysis and Graphics at DRL, W.A. Zajc, University of Pennsylvania internal report, October 1984.

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[9] Offline Computing and Networking, J. A. Appel et al., ANL-HEP-CP-86-74.

[10] Detector Requirements For Intensity Interferometry Measurements, W. A. Zajc, In *Berkeley 1984, Proceedings, Detectors For Relativistic Nuclear Collisions*, 121-132.

[11] A Model Study of the Effect of e/π on Jet Resolution, W.A. Zajc, D0-Note #332, 1986.

[12] Preliminary Results of GEANT-based Simulation of the Test Calorimeter, W.A. Zajc, D0-Note #333, 1986.

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[15] On the Need for Low Energy Test Beam Data, W.A. Zajc, D0-Note #403, 1986.

[16] Results of Testing a CC EM module with Cosmic Rays, E. Gardella et al., D0-Note #536, 1987.

[17] Calorimetry For A 4π Rhic Detector, A. Poskanzer et al., in Proc. of 2nd RHIC Workshop, Berkeley, CA, May 25-29, 1987.

[18] Bose-Einstein Correlations: From Statistics To Dynamics, William A. Zajc, NEVIS-R-1384.

[19] Single Track Momentum Resolution in the E802 Spectrometer, I. Juricic and W.A. Zajc, E802 Note #21, 1988.

[20] User's Guide for the E802/E859 Event Display, C.G. Parsons B. Cole and W.A. Zajc, E802 Note #37, 1989.

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[25] Construction of a highly segmented high-resolution TOF system, S. Nagamiya et al., in Proceedings of the Fourth Workshop on Experiments and Detectors for Relativistic Heavy Ion Collider, M. Fatyga and B. Moskowitz, ed., BNL Report # BNL-52262 (1990).

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[33] Networking in Nuclear Physics, in the ESnet Program Plan, published by DOE-ER, 1995.

[34] Coulomb Final State Interaction in Pion Interferometry for the Processes of High Multiplicity, D. V. Anchishkin, W. A. Zajc, and G. M. Zinovev, (1995).

[35] Monte Carlo studies of the performance of scintillator detectors for time-of-flight measurements, X. H. Yang et al., Nucl. Instrum. Meth. **A354**, 270–279 (1995).

[36] White Paper on Intermediate and High Energy Heavy Ion Physics, J. Harris, W. Lynch and W. Zajc, report submitted to the Nuclear Science Advisory Committee.

[37] Data collection modules for the PHENIX experiment, C. Y. Chi, B. Cole, J. L. Nagle, W. Sippach, and W. A. Zajc, IEEE Trans. Nucl. Sci. **45**, 1913 (1998).

[38] The influence of high multiplicities at RHIC on the Gamow factor, D. V. Anchishkin, W. A. Zajc, and G. M. Zinovev, (1999).

[39] The data collection modules and ATM-based event builder for the PHENIX experiment at RHIC, P. Steinberg et al., IEEE Trans. Nucl. Sci. **47**, 304–308 (2000).

[40] Heavy ion collider detectors, W. A. Zajc, Nucl. Instrum. Meth. **A453**, 25–31 (2000).

[41] PHENIX on-line and off-line computing, S. S. Adler et al., Nucl. Instrum. Meth. **A499**, 593–602 (2003).

[42] PHENIX on-line systems, S. S. Adler et al., Nucl. Instrum. Meth. **A499**, 560–592 (2003).

[43] PHENIX detector overview, K. Adcox et al., Nucl. Instrum. Meth. **A499**, 469–479 (2003).

4 Invited Talks and Lectures

[1] *Particle Production in d-d, p-α, and α-α Collisions at the CERN ISR*, First International Conference on the Intersections Between Particle and Nuclear Physics, Steamboat Springs, Colorado, May 29, 1984.

[2] *The Two-Pion Trilogy*, 3 Lectures, presented at Brookhaven National Laboratory, August 1985.

[3] *Prototypical Bose-Einstein Experiments*, Second International Workshop on Local Equilibrium in Strong Interaction Physics, Santa Fe, New Mexico, April 10, 1986.

[4] *Critical Review of Hadron Interferometry*, Aspen Workshop on Multiparticle Strong Interaction Dynamics, August 6, 1986.

[5] *Systematic Aspects of Bose-Einstein Correlations*, Shandong Workshop on Multiparticle Production, Jinan, Shandong, China, July 1, 1987.

[6] *New Results from the Brookhaven and CERN Heavy Ion Programs*, Third International Conference on Intersections Between Particle and Nuclear Physics, Rockport, Maine, May 25, 1988.

[7] *Methods of Experimental Heavy Ion Physics*, 4 Lectures presented at the Brookhaven Summer School on Heavy Ion Physics, Brookhaven National Laboratory, July 11-15, 1987.

[8] *Comparison of Nucleus-Nucleus and Proton-Nucleus Collisions at AGS Energies*, APS Division of Nuclear Physics Annual Meeting, October 13, 1989.

[9] *Bose-Einstein Measurements in Heavy Ion Collisions*, presented at "Heavy Ion Physics at the AGS", Brookhaven National Laboratory, March 6, 1990.

[10] *Interferometry in Nuclear Collisions*, rapporteur talk, Quark Matter '90, Menton, France, May 7-11, 1990.

[11] *Review of Bose-Einstein Correlations in* pp *and* p-A *Collisions*, presented at the 4th Conference on the Intersections between Particle and Nuclear Physics, Tucson, AZ, 24-May-1991.

[12] *Phenomenology of Relativistic Heavy Ion Collisions*, four lectures presented at the Fourth Annual Summer School in Nuclear Physics Research, Madison, WI June 17-28, 1991.

[13] *Recent Developments in Hadron Interferometry*, 21st International Symposium on Multiparticle Dynamics, Wuhan, China, 24-Sep-91.

[14] *Recent Results from E802 and E859*, Invited Talk at Quark Matter '91, Gatlinburg, TN, 13-Nov-91.

[15] *Critical Evidence for Quark Gluon Plasma,* Invited Talk at *Physics in Collision*, Boulder, CO, 10-Jun-1992.

[16] *Intensity Interferometry*, two lectures at the NATO Advanced Study Institute on Particle Production in Highly Excited Matter, Lucca, Italy, July 12-24, 1992.

[17] *Heavy Ion Collisions at Relativistic Energies,* XV Workshop on Nuclear Physics in Brazil, Caxambu, Brazil, 11-Sep-92.

[18] *Exploring Dense Nuclear Matter with Heavy Ion Collisions* International Symposium on Medium Energy Physics, Beijing, China, August 22-26, 1994.

[19] *Future Opportunities in Heavy Ion Physics* APS Division of Nuclear Physics Annual Meeting, Williamsburg, VA, October 26-28, 1994.

[20] *HBT in STAR/PHENIX/ALICE* , QM95 Workshop on Physics with the Collider Detectors at RHIC and LHC, Monterey, CA, 08 January 1995.

[21] *HBT: Past, Present and Future* , Internation Symposium on Quantum Interferometry Studies in Nuclear Collisions, Hiroshima, Japan, 17-20 Apr, 1995.

[22] *Experimental Summary*, summary talk at the INT Workshop on Electromagnetic Probes of the Plasma, Seattle, WA, January 1996.

[23] *PHENIX Physics*, presented at the RHIC Theory Workshop, Brookhaven National Laboratory, July 1996.

[24] *Precision Two-Particle Correlations in E859*, presented at the Il Trento Workshop on HBT, Trento, Italy, September 1996.

[25] *Investigating the Phases of Nuclear Matter*, invited plenary talk at the Division of Nuclear Physics meeting, October, 1996.

[26] *High p_T Physics with PHENIX*, presented at the LBNL/INT workshop on RHIC Physics, February 1997.

[27] *Imaging the Final-State Phase Space in Heavy Ion Collisions*, presented at Nucleus-Nucleus 97, Gatlinburg, TN, June 1997.

[28] *The PHENIX Physics Program at RHIC*, presented at the 5th International Conference on Relativistic Aspects of Nuclear Physics, Rio de Janeiro, Brazil, Aug 1997.

[29] *Day-1 Physics at RHIC*, conference summary talk for the the RHIC Winter Workshop at LBNL, January 1998.

[30] *Experimental Methods*, 3 lectures presented at the RHIC Theory Summer School, Brookhaven National Laboratory, July 1998.

[31] *PHENIX Overview*, presented at the RIKEN/BNL Workshop on Quarkonium, Brookhaven National Laboratory, September 1998.

[32] *Searching for the Quark-Gluon Plasma at RHIC*, Boston Physics Department Colloquium, March 30, 1999.

[33] *Collider Detectors for Heavy Ion Physics*, presented at Instrumentation '99 Conference, Hammamatsu City, Japan, November 1999.

[34] *Relativistic Heavy Ion Collisions: The Past Through the Future*, presented at the 7th Conference on the Intersections between Particle and Nuclear Physics, Quebec City, Canada, May 2000.

[35] *RHIC Experimental Review*, presented at the RIKEN/BNL Workshop on Transversity, Brookhaven National Laboratory, September 2000.

[36] *A Pedestrian's Guide to RHIC and Its Experiments*, presented at student mini-symposium for Quark Matter 2001, Stony Brook, NY, January 2001.

[37] *PHENIX Overview*, presented at Quark Matter 2001, Stony Brook, NY, January 2001.

[38] *Introduction to RHIC Physics Upgrades*, presented at Nuclear Physics Long Range Planning meeting, Sante Fe, NM, March 2001.

[39] *Introduction to RHIC Science,* presented to the HEPAP sub-panel on the Future Direction of High Energy Physics, Brookhaven National Laboratory, April 2001.

[40] *RHIC and the Search for Quark-Gluon Plasma Formation,* presented at the 27th International Conference on Anomalous Absorption in Plasmas, Sedona, AZ, June 2001.

[41] *Results from RHIC Run-1,* presented at the 2001 SLAC Summer Study Institute, Palo Alto, CA August 2001.

[42] *A Year at RHIC,* presented at the 2001 Erice School on New Forms of Matter, Erice, Italy, August 2001.

[43] *The PHENIX Physics Program at RHIC* (2 lectures), and *HBT Tutorial* (2 lectures), presented at the 2002 Pan American Study Institute, Sao Paolo, Brazil, January 2002.

[44] *First Results from RHIC,* presented at the Annual Meeting of the American Physical Society, Albuquerque, NM April 2002.

[45] *The Quest for Old Physics at RHIC*, California Institute of Technology Physics Seminar, February 27, 2003.

[46] *The Science of RHIC*, University of Chicago Physics Department Colloquium, May 15, 2003.

[47] *Recent Discoveries at RHIC- Do They Indicate a New State of Matter?*, Fermi National Accelerator Laboratory Colloquium, July 30, 2003.

[48] *Recent Discoveries at RHIC- Do They Indicate a New State of Matter?*, University of Wisconsin Physics Department Colloquium, October 17, 2003.

[49] *RHIC and the Universe*, presented at the Annual Meeting of the Division of Nuclear Physics, Tucson, AR, October 2003.

[50] *Recent Discoveries at RHIC- Do They Indicate a New State of Matter?*, Rutgers University Physics Department Colloquium, February 4, 2004.

[51] *Recent Discoveries at RHIC*, Peter Axel Memorial Lecture, University of Illinois Urbana-Champaign, April 2004.

[52] *Recent Discoveries at RHIC- Do They Indicate a New State of Matter?*, Duke University Physics Department Colloquium, April 4, 2004.

[53] *The Search for New States of Matter at RHIC*, presented at the 50th Anniversary Jubilee of the Physics Department of Weizmann Instittue, May 2004.

[54] *PHENIX Highlights and Discoveries*, presented at the RBRC Worskhop on the Strongly Interacting QGP, May 2004.

[55] *Experimental Review of Hard Processes*, presented at Rencontres du Vietnam, Hanoi, Vietnam August 2004.

[56] *RHIC Experimental Overview: What We Have (not) Learned*, presented at QCD and String Theory, Kavli Institute, Santa Barbara, November 2004.

[57] *Pursuing the Perfect Primordial Fluid: Reproducing the Early Universe at RHIC*, presented at Kyoto Symposium on Phase Transitions, Kyoto, Japan, February 2005.

[58] *Pursuing the Perfect Primordial Fluid: Reproducing the Early Universe at RHIC*, presented at Frontiers of Physics in the 21st Century, AAAS Meeting, Washington, D.C., February 2005.

[59] *RHIC II Science and Perspective*, presented at Particles and Nuclei in Collision 2005, Sante Fe, New Mexico, October 2005.

[60] *The Fluid Nature of Quark-Gluon Plasma*, University of Illinois Physics Department Colloquium, April 6, 2006.

[61] *J/Ψ's at RHIC*, Brookhaven National Laboratory Symposium for Helmut Satz, May 9, 2006.

[62] *New Dimensions in Relativistic Heavy Ion Collisions*, presented at "Nuclear Physics- The Core of Matter, The Fuel of Stars; Argonne Symposium Celebrating John Schiffer", Argonne National Laboratory, September 22, 2006.

[63] *Fundamental Investigations in QCD*, plenary symposium on Future Directions in Nuclear Physics, Division of Nuclear Physics meeting, Nashville, TN; September 22, 2006.

[64] *RHIC II Upgrade and Science Program*, QCD Town Meeting for the Nuclear Physics Long Range Plan, Rutgers University; January 13, 2007.

[65] *The Fluid Nature of Quark-Gluon Plasma*, invited talk presented at Deep Inelastic Scattering 2007 (DIS07), Munich, Germany; April 16, 2007.

[66] *The Fluid Nature of Quark-Gluon Plasma*, invited talk presented at the International Conference on Nuclear Physics (INPC07), Tokyo, Japan; June 7, 2007.

[67] *The Fluid Nature of Quark-Gluon Plasma*, invited talk presented at the Gordon Research Conference on Nuclear Physics, Newport, RI; July 17, 2007.

[68] *Directions in Nuclear and Particle Physics*, invited talk at the Symposium on the 60th anniversary of Brookhaven National Laboratory, BNL; October 19, 2007.

[69] *Limits on the Viscosity to Entropy Density Ratio from PHENIX Data on Single Electron Production*, invited talk at the 24th Winter Workshop on Nuclear Dynamics, South Padre Island, TX, April 7, 2008.

[70] *How RHIC Discovered the Fluid Formerly Known as QGP*, invited talk at the Institute for Nuclear Theory Workshop "From Strings to Things", May 2008.

[71] *Quark-Gluon Plasma at RHIC (and in QCD and String Theory)*, invited talk at the PASCOS08 Symposium, Perimeter Institute, Waterloo, Canada, May 2008.

[72] *Experimental Summary*, invited talk at Strange Quark Matter 2008, Beijing, China, October, 2008.

[73] *Exploring the Lower Limits of Perfection*, invited talk at Division of Nuclear Physics workshop on "Quantifying the Nature of the sQGP", October, 2008.

[74] *The Fluid Nature of Quark-Gluon Plasma*, University of Michigan Physics Department Colloquium, November 19, 2008.

[75] *The Fluid Nature of Quark-Gluon Plasma*, Harvard University Physics Department Colloquium, March 9, 2009.

[76] *The Fluid Nature of Quark-Gluon Plasma*, 1st Zaev Frankel Memorial Lecture, the Weizmann Institute, Rehovot, Israel, March 12, 2009.

[77] *Creating a Coherent Account of Chaotic Correlations*, Symposium in Honor of Prof. Miklos Gyulassy's 60th Birthday, Lawrence Berkely National Laboratory, March 27, 2009.

[78] *Pre-Summary: Puzzles, Progress, Prospects*, opening talk at Quark Matter 2009, Knoxville, TN, March 2009.

[79] *Heavy Ion Physics "versus" AdS/CFT*, workshop on "New Ideas in Hadronization: Intersections between QCD, AdS/CFT and the QGP", Durham, U.K., April 2009.