Curriculum Vitae
Dr. Peter Alan Steinberg
Associate Scientist
Brookhaven National Laboratory

General:

Name:	Dr. Peter Alan Steinberg
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WWW:	http://www.rhic.bnl.gov/~steinber
Birth:	November 21, 1969 in Chicago, Illinois, USA
Nationality:	U.S.A.

Employment History:

8/03 - present	Associate Scientist at Brookhaven National Laboratory, Supervisor: M. Baker
8/02 - 2/03	Fulbright Scholar at the University of Cape Town, South Africa, Host: J. Cleymans
12/99 - 7/02	Associate Scientist at Brookhaven National Laboratory, Supervisor: M. Baker
2/98 - 11/99	Post-doc at Columbia University, Nevis Labs, Supervisors: W.A. Zajc and B.A. Cole.
	Experiment: PHENIX at RHIC, Brookhaven, Spokesman: W.A. Zajc

Research Interests:

Experimental Nuclear and High-Energy Physics.
Silicon Detectors. Event building and high-level trigger systems.
Software environments and tools for high energy physics collaborations.

Current Research & Affiliations:

Research Group:	Heavy Ion Group, BNL Chemistry Department (PI: M. Baker)
Honorary:	UCT-CERN Research Centre, University of Cape Town (PI: J. Cleymans)
Experiment:	PHOBOS at RHIC, Brookhaven, Spokesman: W. Busza

Responsibilities:

8/03 - present	Project Manager of PHOBOS Experiment
2/01 - 8/03	Head of PHOBOS Software
3/00 - present	Co-convenor of Multiplicity Physics Working Group
11/99 - 2/01	Head of PHOBOS Online Computing
2/98 - 11/99	Development and Implementation of PHENIX Event Builder

Committees:

8/03-	Nuclear Physics Planning Group - Brookhaven National Laboratory

8/03-	RHIC Planning Committee - Brookhaven National Laboratory
1/01	Local Organizing Committee and Organizer for Student Pre-Conference Symposium. Quark Matter 2001, Stony Brook, NY.

Education:

2/98	PhD. Received "Search for Disoriented Chiral Condensates in 158 AGev Pb+Pb Collisions"
9/93 - 1/98	PhD. Student in Physics at the Massachusetts Institute of Technology Thesis advisor - Bolek Wyslouch.
9/92 - 6/93	Physics coursework at Yale University
5/92	Completion of B.A. in Political Science at Yale University
9/88 - 5/92	Yale University, New Haven, Connecticut
9/74 - 5/88	Francis W. Parker School, Chicago, Illinois

Awards and Honors:

7/03 - present	Honorary Research Associate at University of Cape Town, South Africa
8/02 - 03/03	Fulbright Award for Lecturing and Research in Cape Town, South Africa
5/92	Philo S. Bennett Prize for Best Senior Essay in Political Philosophy
9/88	National Merit Scholarship

Teaching Experience

3/03 - 5/03	Honours Module on Particle Physics (textbook: D.H. Perkins)
2/03 - 5/03	Laboratory Instructor & Grader for PHY110A, University of Cape Town, South Africa

<u>Publications and Talks</u>:

Selected Publications:

- "Centrality dependence of charged antiparticle to particle ratios near mid-rapidity in d+Au collisions at s(NN)**1/2=200 GeV" (submitted to Phys. Rev. C Rapid Comm.).
- "Centrality Dependence of the Charged Hadron Transverse Momentum Spectra in d+Au Collisions at s(NN)**1/2=200 GeV", Phys. Rev. Lett. 91, 072302 (2003).
- J. Cleymans, B. Kampfer, P. Steinberg, S. Wheaton, "Strangeness Saturation: Energy- and System- Size Dependence" (submitted to Physical Review C).
- B. B. Back *et al.* [PHOBOS Collaboration], "Comparison of the Total Charged-Particle Multiplicity in High-Energy Heavy Ion Collisions with e+e- and pp/pbar-p Data" (submitted to Phys. Rev. Lett.)
- B. B. Back *et al.* [PHOBOS Collaboration], "The Significance of the Fragmentation Region in Ultra-relativistic Heavy Ion Collisions", Phys. Rev. Lett. 91, 052303 (2003).
- B. B. Back *et al.* [PHOBOS Collaboration], "Charged Hadron Momentum Distributions in Au+Au Collisions at s(NN)**(1/2) = 200 GeV" (Submitted to Physics Letters B).
- B. B. Back *et al.* [PHOBOS Collaboration], "Ratios of charged antiparticles to particles near mid-rapidity in Au + Au collisions at s(NN)**(1/2) = 200-GeV," Phys. Rev. C 67, 021901R (2003).
- B. B. Back *et al.* [PHOBOS Collaboration], "Pseudorapidity and centrality dependence of the collective flow of charged particles in Au + Au collisions at s(NN)**(1/2) = 130-GeV," Phys. Rev. Lett. 89, 222301 (2002).
- B. B. Back *et al.* [PHOBOS Collaboration], "Centrality dependence of the charged particle multiplicity near mid-rapidity in Au + Au collisions at s(NN)**(1/2) = 130-GeV and 200-GeV," Phys. Rev. C **65**, 061901 (2002).
- B. B. Back *et al.* [PHOBOS Collaboration], "Charged-particle pseudorapidity density distributions from Au + Au collisions at s(NN)**(1/2) = 130-GeV," Phys. Rev. Lett. **87**, 102303 (2001).
- B. B. Back *et al.* [PHOBOS Collaboration], "Energy dependence of particle multiplicities in central Au + Au collisions," Phys. Rev. Lett. **88**, 022302 (2002).
- B. B. Back *et al.* [PHOBOS Collaboration], "Centrality dependence of charged particle multiplicity at mid-rapidity in Au + Au collisions at s(NN)**(1/2) = 130-GeV," Phys. Rev. C **65**, 031901 (2002).
- B. B. Back *et al.* [PHOBOS Collaboration], "Ratios of charged antiparticles to particles near mid-rapidity in Au + Au collisions at s(N N)**(1/2) = 130-GeV," Phys. Rev. Lett. **87**, 102301 (2001).
- P. Steinberg *et al.* [PHENIX Collaboration], "The data collection modules and ATM-based event builder for the PHENIX experiment at RHIC," IEEE Trans. Nucl. Sci. **47**, 304 (2000).

- M. M. Aggarwal *et al.* , “Scaling of particle and transverse energy production in 208-Pb + 208-Pb collisions at 158-A-GeV,” Eur. Phys. J. C **18**, 651 (2001).
- B. B. Back *et al.* [PHOBOS Collaboration], “Charged particle multiplicity near mid-rapidity in central Au + Au collisions at s**(1/2) = 56-A/GeV and 130-A/GeV,” Phys. Rev. Lett. **85**, 3100 (2000).
- M. M. Aggarwal *et al.*, “Centrality dependence of neutral pion production in 158-A-GeV Pb-208 + Pb-208 collisions,” Phys. Rev. Lett. **81**, 4087 (1998).
- M. M. Aggarwal *et al.* [WA98 Collaboration], “Search for disoriented chiral condensates in 158-A-GeV Pb + Pb collisions,” Phys. Lett. B **420**, 169 (1998).
- W. T. Lin *et al.*, “Development of a double metal, AC-coupled silicon pad detector,” Nucl. Instrum. Meth. A **389**, 415 (1997).

Conference Proceedings:

- “Status of Parton Saturation at RHIC”, for the International Symposium on Multiparticle Dynamics XXXIII (ISMD2003), Krakow, Poland, 5-11 September 2003.
- “Dynamics of Soft Particle Production in Heavy Ion Collisions”, for the Conference on the Intersections of Particle and Nuclear Physics (CIPANP2003), New York City, New York, USA, 19-23 May 2003.
- “Universal Behavior of Charged Particle Production in Heavy Ion Collisions at RHIC”, for ICHEP2002, Amsterdam, The Netherlands, 24-31 July 2002.
- “Universal Behavior of Charged Particle Production in Heavy Ion Collisions”, for Quark Matter 2002, Nantes, France, 18-24 July 2002.
- “Relativistic Heavy Ion Physics: Results from AGS to RHIC”, presented at 22nd Physics in Collision Conference (PIC 2002), Stanford, California, 20-22 Jun 2002.
- “Systematics of charged particle production in heavy ion collisions with the PHOBOS detector at RHIC.” Talk given at 31st International Symposium on Multiparticle Dynamics (ISMD 2001), Datong, China, 1-7 Sep 2001.
- “Global Observables at RHIC”. Proceedings for talk given at “Quark Matter 2001”, Stony Brook, January 14-20, 2001.
- “Multiparticle Bose-Einstein Correlations In Heavy Ion Collision”. Proceedings for talk given at the “International Symposium on Multiparticle Dynamics”, Providence, August 1999.
- “Isospin Fluctuations in Heavy Ion Collisions”. Proceedings for talk given at “APS Centennial Meeting”, Atlanta, Georgia, March 1999.
- “Searching for DCCs with the WA98 Experiment”. Proceedings for “Particle Distributions in Hadronic and Nuclear Collisions”, Chicago, Illinois, June 11-13, 1998.
- “Search for DCCs with the WA98 Experiment”. Proceedings of the UICHEP Summer Workshop Author of proceedings for ‘International Symposium on Multiparticle Dynamics XXVI”, Frascati, Italy, September 1997.

- "Search for Disoriented Chiral Condensates in 158 Pb+Pb collisions". Co-author of proceedings for the invited talk given by Bolek Wyslouch at ICHEP '96, Warsaw, Poland, July 1996.
- "Search for Disoriented Chiral Condensates in 158 Pb+Pb collisions". Co-author of proceedings for the invited talk given by Bolek Wyslouch at the "International Symposium on Multiparticle Dynamics XXV", Faro, Portugal, August 1996.

Talks:

- "Landau Hydrodynamics & RHIC Phenomenology", Invited talk presented at the RIKEN/BNL Workshop "Collective flow and QGP properties", 17-19 November 2003.
- "Status of Parton Saturation at RHIC", Invited talk presented at Forward Physics at RHIC Workshop, Brookhaven National Lab, 9 October 2003.
- "Status of Parton Saturation at RHIC", Invited talk presented at ISMD2003, Krakow, Poland, 5-11 September 2003.
- "Dynamics of Soft Particle Production in Heavy Ion Collisions", Invited talk presented at CIPANP2003, New York, NY, 19-24 May 2003.
- "Universal Aspects of Particle Production in Heavy Ion Collisions", Nuclear and Particle Physics Colloquium presented at Massachusetts Institute of Technology, Cambridge, MA, February 3, 2003.
- "Universal Aspects of Particle Production in Heavy Ion Collisions", Colloquium presented at Schonland Research Centre for Nuclear Sciences, University of the Witwatersrand, Johannesburg, South Africa, December 10, 2002.
- "Relativistic Heavy Ion Phyics: Results from AGS to RHIC". Colloquium presented at the University of Stellenbosch, South Africa, November 8, 2002.
- "Relativistic Heavy Ion Phyics: Results from AGS to RHIC". Colloquium presented at the University of Cape Town, South Africa, August 14, 2002.
- "Universal Behavior of Charged Particle Production in Heavy Ion Collisions". Parallel session at ICHEP 2002, Amsterdam, The Netherlands, July 24-31, 2002.
- "Universal Behavior of Charged Particle Production in Heavy Ion Collisions". Parallel session at Quark Matter 2002, Nantes, France, July 18-24, 2002.
- "Relativistic Heavy Ion Collisions: Recent Results". Invited talk presented at Physics in Collision XXII, Stanford, CA, June 20-22, 2002.
- "Everything Counts: Multiplicity Measurements in High Energy Collisions". Invited talk presented at the ITP Workshop "QCD in the RHIC Era", UC Santa Barbara, April 8-12, 2002.
- "Counting on QCD: Multiplicity Measurements in High Energy Collisions". Physics Department Colloquium at Brookhaven National Laboratory, December 4, 2001.
- "RHIC: QCD Matter in the Laboratory". Colloquium given at George Washington University, Washington, D.C., November 15, 2001.

- “Recent Results from PHOBOS @ RHIC”. Invited talk presented at the International Symposium on Multiparticle Dynamics, Datong, China, September 1-7, 2001.
- “Energy and Centrality Dependence of Global Observables in Heavy Ion Collisions”. Invited talk presented at the national meeting of the American Chemical Society, Chicago, August 25-29, 2001.
- “A Tale of Two Glauber Calculations: Monte Carlo and Optical Limit Approaches”. Invited talk given at the Glauber2001 Workshop at Brookhaven National Laboratory, July 19, 2001.
- “Elliptic flow and Particle Ratios with PHOBOS”. Invited talk at RHIC/INT Workshop, Lawrence Berkeley National Laboratory, May 31 - June 2, 2001.
- “RHIC Rapporteur II: Global and Flow Observables”. Invited talk at Quark Matter 2001, Stony Brook, January 14-20, 2001.
- “Results from the PHOBOS Experiment at RHIC”. Invited talk at the Annual Fall Meeting of the Division of Nuclear Physics (DNP) of the American Physical Society (APS), Williamsburg, Virginia, October 4-7, 2000.
- “ROOT in the PHOBOS Online System”. Talk given at the “2nd ROOT Workshop”, CERN, Geneva, February 3-5, 2000.
- “Multiparticle Bose-Einstein Correlations In Heavy Ion Collision”. Talk given at the “International Symposium on Multiparticle Dynamics”, Providence, RI, August 1999.
- “Data Collection Modules and an ATM-based Event Builder for the PHENIX Experiment at RHIC”. Talk given at the IEEE “Real Time ’99”, Sante Fe, New Mexico, June 13-18, 1999.
- “Charged Multiplicity Measurements with WA98”. Invited talk at PHOBOS Collaboration Meeting, April 18, 1999.
- “Disoriented Chiral Condensates: recent results”. Talk given at the APS Centennial Meeting, Atlanta, Georgia, March 21-25, 1999.
- “Prolegomena to Future DCC Analyses”. Invited talk at the “Workshop on Event-by-Event Physics”, Trento, Italy, September 21-25, 1998.
- “Development of an ATM-based Event Builder for the PHENIX Experiment at RHIC”. Talk given at “Applications of ATM in High Energy Physics”, Paris, September 21-22, 1998.
- “Development of an ATM-based Event Builder for the PHENIX Experiment at RHIC”. Talk given at CHEP98, Chicago, August 31 - September 4, 1988.
- “Searching for DCCs with the WA98 Experiment”. Invited talk at the “Nuclear Chemistry Gordon Research Conference”, New London, NH, June 17, 1998.
- “Searching for DCCs with the WA98 Experiment”. Invited talk for “Particle Distributions in Hadronic and Nuclear Collisions”, Chicago, Illinois, June 11-13, 1998.
- “Search for DCCs with the WA98 Experiment”. Invited talk at the UICHEP Summer Workshop

- "Search for Disoriented Chiral Condensates in 158 Pb+Pb collisions". Invited talk at the "International Symposium on Multiparticle Dynamics '97", Frascati, Italy, September 11, 1997.
- "Searching for DCCs with WA98 at the CERN SPS". Talk given at "RHIC '97", Brookhaven National Laboratory, Upton, NY, July 6-10, 1997.
- "Searching for Disoriented Chiral Condensates". Talk given at the "RHIC/INT Winter Workshop", Lawrence Berkeley Laboratory, February 21-22, 1997.
- "Search for Disoriented Chiral Condensates in 158 Pb+Pb collisions". Invited talk at "Phase Transitions '97", Niels Bohr Institute, Copenhagen, Denmark, November 25-30, 1997.
- "Charged Multplicity Measurements in WA98". Invited talk at the "International Workshop on Disoriented Chiral Condensates", Trento, Italy, October 21-25, 1996.

Invited Seminars:

- "Universal Aspects of Particle Production in Heavy Ion Collisions", Seminar given at the University of the Western Cape (UWC), Belleville, South Africa, 28 March 2003.
- "Universal Aspects of Particle Production in Heavy Ion Collisions", Seminar presented at Triangle Nuclear Theory Seminar, Duke University, Durham, NC, January 20, 2003.
- "Systematics of Charged Particle Production at RHIC with the PHOBOS Detector". Seminar given at Lawrence Berkeley Laboratory, November 6, 2001.
- "Isospin Fluctuations in Heavy Ion Collisions". Invited Seminar given at the University of Illinois in Chicago, Chicago, Illinois, September 1999
- "Isospin Fluctuations in Heavy Ion Collisions". Invited Seminar given at BNL, Upton, NY, August 1999
- "Isospin Fluctuations in Heavy Ion Collisions". Invited Seminar given at MIT, Cambridge, MA, March 1999
- "Search for DCCs with WA98 at the CERN SPS". Invited Seminar given at Oak Ridge National Lab, November, 1997.
- "Search for DCCs with WA98 at the CERN SPS". Invited Seminar given at Yale University, New Haven, CT, October 14, 1997.
- "Search for DCCs with WA98 at the CERN SPS". Invited Seminar given at Argonne National Lab, October 1, 1997.
- "Search for DCCs with WA98 at the CERN SPS". Invited Seminar given at Nevis Labs, Columbia University, Irvington, NY, July 24, 1997.
- "Search for Disoriented Chiral Condensates in 158 Pb+Pb collisions". Invited seminar at the University of Lund, Sweden, December 2, 1996.

Posters:

- "Bose-Einstein Correlations and Charge Fluctuations". Poster presented at "Quark Matter '99", Torino, Italy, May 10-15, 1999.
- "Search for DCCs with WA98". Poster presented at "Quark Matter '96", Heidelberg, Germany, May 21-25, 1996.