

# CURRICULUM VITAE

## THOMAS K. HEMMICK

### BUSINESS ADDRESS:

Department of Physics  
Stony Brook University  
Stony Brook, N.Y. 11794  
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### HOME ADDRESS:

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Cutchogue, N.Y. 11935  
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**PERSONAL:** Born: May 16, 1961

Married: August 11, 1985 (to Lucinda Martin Hemmick)

Father of one: Nicholas Lloyd Hemmick, born November 3, 1990.

Grandfather of one: Sofia Mae Hemmick, born February 25, 2013.

Citizenship: USA

### EDUCATION:

B.S.	Physics Towson State University, Towson, MD	1979-1983
M.A.	Physics University of Rochester, Rochester, NY	1983-1985
Ph.D.	Physics University of Rochester Rochester, NY	1983-1989

### THESIS:

Title: A Search for Anomalously Heavy Isotopes of Low Z Nuclei.

Supervisor: David Elmore

### AWARDS, FELLOWSHIPS and POSITIONS HELD:

2021 ATHENA PID Co-convenor  
2020 sPHENIX Executive Council  
2020 L2 Manager for sPHENIX TPC  
2020 EIC Yellow Report PID Co-convenor  
2019 EIC Yellow Report PID Co-convenor  
2019 sPHENIX Executive Council  
2019 L2 Manager for sPHENIX TPC  
2019 DoE Review Panel for ALICE USA  
2018 sPHENIX Executive Council  
2018 L2 Manager for sPHENIX TPC  
2018 DoE Review Panel for ALICE USA  
2017 sPHENIX Executive Council  
2017 L2 Manager for sPHENIX TPC

2017 Center for Teaching, Innovation, & Digital Education Award for Teaching Excellence  
 2017 DoE Review Panel for ALICE USA  
 2016 Director's Review Panelist, Lawrence Berkeley National Lab  
 2016 DoE Review Panel for ALICE USA Collaboration  
 2016 S-Bold Online Education Grant for Online Physics Lab Classes  
 2015 sPHENIX Executive Council  
 2015 sPHENIX L2 Tracking Subsystem Manager  
 2015 Jefferson Lab 12 GeV Upgrade Director's Review Panelist  
 2015 DoE Review Panel for ALICE USA Collaboration  
 2015 PHENIX Executive Council  
 2014 Jefferson Lab 12 GeV Upgrade Director's Review Panelist  
 2014 University Committee for Online Education (S-BOLD)  
 2012 Expert Committee for Experiments @ FAIR  
 2012 University Committee on Online Education (MOOCS)  
 2010 University Committee on General Education, chair  
 2009 University Committee on General Education, chair  
 2008 Co-Director Center for Accelerator Science and Education (CASE)  
 2007 Distinguished Teaching Professor  
 2007 Brookhaven National Laboratory Program Advisory Committee Member  
 2005 PHENIX Executive Council Member  
 2004 Host of *Worlds of Physics* (seminars for the general public)  
 2003 PHENIX Analysis Coordinator  
 2001 PHENIX Detector Council Member  
 2000 PHENIX Executive Council Member  
 2000 QM2000 Local Organizing Committee member  
 1999 Co-organizer, RHI Session of PANIC '99.  
 1998 Sabbatical at Brookhaven National Laboratory  
 1998 Excellence in Teaching Selection Committee, chair  
 1997 Excellence in Teaching Selection Committee, member  
 1997 APS Division of Nuclear Physics Program Committee  
 1996 Chancellor's Award for Excellence in Teaching  
 1996 President's Award for Excellence in Teaching  
 1995 Associate Professor of Physics, SUNY Stony Brook  
 1995 University Merit Award for Excellence in Teaching  
 1993 Member AGS User's Executive Committee  
 1991 Assistant Professor of Physics, SUNY Stony Brook  
 1988 Associate Research Physicist, Yale University  
 1986 Elon J. Hooker Fellowship, award for chemistry related research  
 1983 Research Associate in Physics, University of Rochester  
 1983 Edward I. Rubendall Award, outstanding senior physics major  
 1983 Outstanding Undergraduate Research Award, Towson Chapter of Sigma Xi  
 1982 Edward I Rubendall Award, outstanding senior physics major

1981 Edward I. Rubendall Award, outstanding junior physics major  
1980 University Research Grant for work in holographic interferometry  
1979 Presidential Scholarship, Towson State University

## PUBLICATIONS OF THOMAS K. HEMMICK

1. **Transverse single-spin asymmetries of midrapidity  $\pi^0$  and  $\eta$  mesons in polarized p+p collisions at  $\sqrt{s}=200$  GeV** Submitted: Nov 28, 2020 e-Print: 2011.14187
2. **Transverse momentum dependent forward neutron single spin asymmetries in transversely polarized p+p collisions at  $\sqrt{s}=200$  GeV** Submitted: Nov 28, 2020 e-Print: e-Print: 2011.14187
3. **Measurement of the ion blocking by the passive bi-polar grid** Submitted: Jul 27, 2020 e-Print: e-Print: 2007.13616
4. **Design Studies of High-Resolution Readout Planes Using Zigzags With GEM Detectors** Submitted: Jun 11, 2020 Published: IEEE Trans.Nucl.Sci. 67 (2020)
5. **Production of  $\pi^0, \eta, \text{ and } K_S$  mesons in U+U collisions at  $\sqrt{s_{NN}} = 192$  GeV** Submitted: May 29, 2020 Published: Phys.Rev.C 102 (2020) 064905
6. **Production of  $b\bar{b}$  at forward rapidity in pp+pp collisions at  $\sqrt{s}=510$  GeV** Submitted: May 28, 2020 Published: Phys.Rev.D 102 (2020) 9, 092002
7. **Polarization and cross section of midrapidity  $J/\psi$  production in p+p collisions at  $\sqrt{s} = 510$  GeV** Submitted: May 28, 2020 Published: Phys.Rev.D 102 (2020) 7, 072008
8. **Measurement of jet-medium interactions via direct photon-hadron correlations in Au+Au and d+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Submitted: May 28, 2020 Published: Phys.Rev.C 102 (2020) 5, 054910
9. **Measurement of charged pion double spin asymmetries at midrapidity in longitudinally polarized p+p collisions at  $\sqrt{s} = 510$  GeV** Submitted: Apr 6, 2020 Published: Phys.Rev.D 102 (2020) 3, 032001
10.  **$J/\psi$  and  $\psi(2S)\psi(2S)$  production at forward rapidity in p+p collisions at  $\sqrt{s}=510$  GeV** Submitted: Dec 31, 2019 Published: Phys.Rev.D 101 (2020) 5, 052006
11. **Study of a Passive Gating Grid for Ion Back Flow Suppression** Submitted: Dec 9, 2019 Published: J.Phys.Conf.Ser. 1498 (2020) 1, 012026

12. **Measurement of  $J/\psi$  at forward and backward rapidity in p+p, p+Al, p+Au, and  $^3He$ +Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Submitted: Oct 31, 2019 Published: Phys.Rev.C 102 (2020) 1, 014902
13. **Passive Gating Grid for Ion Back Flow Suppression in High Luminosity Collider Experiments** Submitted: Oct, 2019 Published: NSS/MIC 2019
14. **Nuclear-modification factor of charged hadrons at forward and backward rapidity in p+Al and p+Au collisions at collisions at  $\sqrt{s_{NN}}=200$  GeV** Submitted: Jun 24, 2019 Published: Phys.Rev.C 101 (2020) 3, 034910
15. **A Study of “Zigzag” Strip Readout for Micromegas Detectors** Submitted: Nov, 2018 Published: NSS/MIC 2018
16. **Results from a Prototype Combination TPC Cherenkov Detector with GEM Readout** Published: IEEE Trans. Nucl. Sci., 2019
17. **Design Studies for a TPC Readout Plane Using Zigzag Patterns with Multistage GEM Detectors** Published: IEEE Trans. Nucl. Sci., 2018
18. **Nuclear dependence of transverse single-spin asymmetry of charged hadrons at forward and backward rapidity in polarized  $p+p$  and  $p+Au$  collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1903.07422 Submitted: 2019-03-18 Published: PRL , 2019-09-17
19. **Scaling properties of direct photons in heavy ion collisions** Preprint: arXiv:1805.04084 Submitted: 2018-05-11 Published: PRL , 2019-07-10
20. **Measurement of two-particle correlations with respect to second and third-order event planes** Submitted: 2018-03-05 Published: PRL , 2019-07-10
21. **Measurement of Charm and Bottom Production from Semileptonic Hadron Decays in p+p Collisions at  $\sqrt{s} = 200$  GeV** Submitted: 2019-01-24 Published: PRD , 2019-05-13
22. **Transverse Momentum Broadening in Dihadron Angular Correlations in  $\sqrt{s} = 200$  GeV p+A Collisions** Submitted: 2018-09-24 Published: PRC , 2019-04-18
23. **Measurements of  $mumu$  pairs from open heavy flavor and Drell-Yan in pp collisions at  $\sqrt{s} = 200$  GeV** Submitted: 2018-05-07 Published: PRD , 2019-04-10
24. **Multiparticle azimuthal correlations for extracting event-by-event elliptic and triangular flow in Au+Au collisions at  $\sqrt{s} = 200$  GeV** Submitted: 2018-04-26 Published: PRC , 2019-02-06

25. **Measurements of triangular anisotropy in p/d+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Submitted: 2018-05-09 Published: Nature , 2018-12-10
26. **Pseudorapidity dependence of particle production and elliptic flow in small nuclear collisions of p+Al, p+Au, d+Au, and 3He+Au at 200 GeV** Submitted: 2018-07-31 Published: PRL , 2018-11-29
27. **Production of  $\pi^0$  and eta mesons in Cu+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Submitted: 2018-05-14 Published: PRC , 2018-11-19
28. **Low momentum direct photons in Cu+Cu at  $\sqrt{s_{NN}} = 200$  GeV** Submitted: 2018-05-11 Published: PRD , 2018-11-15
29. **Phi meson production at forward rapidity in p+p collisions at  $\sqrt{s} = 510$  GeV and its energy dependence from RHIC to LHC** Submitted: 2017-10-04 Published: Phy. Rev. D , 2018-11-09
30. **Nonperturbative transverse momentum dependent evolution effects in p+p collisions at  $\sqrt{s}=200$  GeV and  $\sqrt{s}=510$  GeV** Submitted: 2018-05-07
31. **Correlations of  $\mu\mu$ ,  $e\mu$ , and  $ee$  pairs from  $\sqrt{s}=200$  GeV pp collisions and implications for cc and bb production** Preprint: arXiv:1805.04075 Submitted: 2018-05-11
32. **Cross section and Single spin asymmetry of forward  $W-\mu$  measured in polarized p + p collisions at  $s=510$ GeV** Submitted: 2018-04-12 Published: PRD , 2018-08-14
33. **Transverse Single-SpinAsymmetry in  $J/\psi$  Production in Polarized p + p, p + Al, and p + Au Collisions at  $\sqrt{s} = 200$ GeV in PHENIX** Submitted: 2018-05-04 Published: PRC , 2018-07-30
34. **Measurement of emission angle anisotropy of high pT hadrons via long-range angular correlation in d+Au and p+p collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1711.09003 Submitted: 2017-11-26 Published: PRC , 2018-07-26
35. **Measurement of identified particle azimuthal anisotropy in p+Au and 3He+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1710.09736 Submitted: 2017-10-26 Published: PRC , 2018-06-11
36. **Measurements of two-pion Bose-Einstein correlations and their Levy parameters in 200 GeV Au+Au collisions** Preprint: arXiv:1709.05649 Submitted: 2017-09-18 Published: PRC , 2018-06-11

37. **Measurements of multiparticle correlations in d+Au collisions at 200, 62.4, 39, and 19.6 GeV and implications for collective behavior** Preprint: arXiv:1707.06108 Submitted: 2017-07-19 Published: PRL , 2018-02-06
38. **Working Title: Nuclear dependence of transverse single spin asymmetry for forward neutron production in polarized p+A collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1703.10941 Submitted: 2017-04-02 Published: PRL , 2018-01-08
39. **Beam energy and system-size dependence of the space-time extent of the pion emission source produced in heavy ion collisions** Preprint: arXiv:1410.2559 Submitted: 2014-10-09
40. **Comparison of the space-time extent of the emission source in d+Au and Au+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1404.5291 Submitted: 2014-04-21
41. **Enhancement of the dielectron continuum in  $\sqrt{s_{NN}} = 200$  GeV Au+Au collisions** Preprint: arXiv:0706.3034 Submitted: 2007-06-21
42. **Measurements of azimuthal anisotropy in d+Au collisions at  $\sqrt{s_{NN}}=200, 62.4, 39, \text{ and } 19.6$  GeV** Preprint: arXiv:1708.06983 Submitted: 2017-08-23 Published: PRC , 2017-12-26
43. **B-meson production at forward and backward rapidity in p+p and Cu+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1702.01085 Submitted: 2017-02-06 Published: PRC , 2017-12-04
44. **e+e- pairs from open heavy flavor in p+p and d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1702.01084 Submitted: 2017-02-06 Published: PRC , 2017-08-18
45. **Cross section and transverse single-spin asymmetry of single muons from open heavy flavor decays in polarized p+p collisions at  $\sqrt{s} = 200$  GeV** Preprint: arXiv:1703.09333 Submitted: 2017-03-28 Published: PRD , 2017-06-12
46. **Angular Decay Coefficients of  $J/\psi$  Mesons at Forward Rapidity from p+p Collisions at  $\sqrt{s} = 510\text{GeV}$**  Preprint: arXiv:1612.06807 Submitted: 2016-12-22 Published: , 2017-05-08
47. **Fraction of B-meson decayed J/psi measured in p+p collisions at root-sNN=510 GeV** Preprint: arXiv:1701.01342 Submitted: 2017-01-05 Published: PRD , 2017-05-02

48. **Nonperturbative Transverse Momentum Evolution Effects in Dihadron and Direct Photon Hadron Angular Correlations at  $\sqrt{s}=510$  GeV**  
Preprint: arXiv:1609.04769 Submitted: 2016-09-15 Published: PRD , 2017-04-04
49. **Measurement of long-range angular correlations and azimuthal anisotropies in high multiplicity p+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1609.02894 Submitted: 2016-09-09 Published: Phys. Rev. C , 2017-03-24
50. **J/psi and psi(2s) production at forward rapidity in p+p collisions at  $\sqrt{s}=200$  GeV** Preprint: arXiv:1609.06550 Submitted: 2016-09-21 Published: PRD , 2017-03-09
51.  **$J/\psi$  longitudinal double spin asymmetry measurement at forward rapidity in  $p + p$  collisions at  $\sqrt{s} = 510$  GeV** Preprint: arXiv:1606.01815 Submitted: 2016-06-06 Published: PRD , 2016-12-29
52. **Elliptical and triangular flow of soft direct photons in Au+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1509.07758 Submitted: 2015-09-28 Published: PRC , 2016-12-06
53. **Measurement of 1st, 2nd and 3rd azimuthal anisotropy in Cu+Au collisions** Preprint: arXiv:1509.07784 Submitted: 2015-09-28 Published: PRC , 2016-11-28
54. **Measurements of identified particle higher harmonic flow in Au+Au collisions at  $\sqrt{s_{NN}}=200$ GeV** Preprint: arXiv:1412.1038 Published: PRL , 2016-05-31
55. **Jet Production in d+Au Collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1509.04657 Published: PRL , 2016-03-25
56. **Measurement of parity violating spin asymmetries in  $W^\pm$  production at mid-rapidity in longitudinally polarized p+p collisions at  $\sqrt{s}=510$  GeV** Preprint: arXiv:1504.07451 Published: PRD , 2016-03-23
57. **Charm and bottom production via single electrons from semi-leptonic D and B meson decays produced in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1509.04662 Published: PRC , 2016-03-07
58. **System size dependence of the forward J/psi production in PHENIX** Preprint: arXiv:1509.05380 Published: PRC , 2016-03-03
59. **System dependence of fractional momentum loss of high pT hadrons in relativistic heavy ion collisions** Preprint: arXiv:1509.06735 Published: PRC , 2016-02-22

60. **Nuclear matter effects on  $\phi$  meson production in Cu+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1509.06337 Published: PRC , 2016-02-04
61. **Charged particle multiplicity and transverse energy production in heavy ion collisions spanning  $\sqrt{s_{NN}} = 7.7$  GeV to 200 GeV** Preprint: arXiv:1509.06727 Published: PRC , 2016-02-03
62. **Measurement of higher cumulants of net-charge multiplicity distributions in Au+Au collisions at  $\sqrt{s_{NN}} = 7.7$  to 200 GeV** Preprint: arXiv:1506.07834 Published: PRL , 2016-01-19
63. **e+e- pair production in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1509.04667 Published: PRC , 2016-01-11
64. **Inclusive cross section and double helicity asymmetry for  $\pi^0$  production in  $p + p$  collisions at  $\sqrt{s} = 510$  GeV** Preprint: arXiv:1510.02317 Published: PRD , 2016-01-07
65. **Phi Meson Production at Forward Rapidity in d+Au Collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1506.08181 Published: PRC , 2015-10-19
66. **Measurements of  $v_2$ ,  $v_3$  in high multiplicity events from 3He+Au collisions at 200 GeV** Preprint: arXiv:1507.06273 Published: PRL , 2015-09-28
67. **Systematic study of charged pion and kaon femtoscopy in Au+Au collisions at  $\sqrt{s_{NN}}=200$ GeV** Preprint: arXiv:1504.05168 Published: PRC , 2015-09-23
68. **Systematic Study of  $v_2$  in Cu + Cu and Au + Au Collisions at  $\sqrt{s_{NN}} = 62.4 - 200$  GeV** Preprint: arXiv:1412.1043 Published: PRC , 2015-09-23
69. **Centrality dependence of thermal photon production in  $\sqrt{s_{NN}}=200$  GeV Au+Au collisions** Preprint: arXiv:1405.3940 Published: PRC , 2015-06-05
70. **Measurements of long-range angular correlation and quadrupole anisotropy of pions and (anti)protons in central d+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1404.7461 Published: PRL , 2015-05-12
71. **Heavy Quark Production and Elliptic Flow in Au+Au Collisions at  $\sqrt{s_{NN}}=62.4$ GeV** Preprint: arXiv:1405.3301 Published: PRC , 2015-04-28
72. **Closing the Door for Dark Photons as the Explanation for the Muon g-2 Anomaly** Preprint: arXiv:1409.0851 Published: PRL , 2015-03-10



73. **Measurement of the Upsilon cross section in p+p and implications to the nuclear modification factor in Au+Au at  $\sqrt{s} = 200$  GeV** Preprint: arXiv:1404.2246 Published: PRC , 2015-02-24
74. **Constraining gluon polarization contribution to the proton spin with high  $p_T$  charged pion production in p+p collisions at  $\sqrt{s} = 200$  GeV** Preprint: arXiv:1409.1907 Published: PRD , 2015-02-02
75. **The cross-section for  $bar{b}$  production via dielectrons in d+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1405.4004 Published: PRC , 2015-01-26
76. **Performance of a Quintuple-GEM Based RICH Detector Prototype** Preprint: arXiv:1501.03530 Submitted: 2015-01-14 Published: IEEE Trans. Nucl. Sci., 2015
77. **Nuclear matter effects on J/psi production in asymmetric Cu+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1404.1873 Published: PRC , 2014-12-18
78. **Measurement of  $K_S^0$  and  $K^{*0}$  in  $p+p$ ,  $d+Au$  and  $Cu+Cu$  collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1405.3628 Published: PRC , 2014-11-07
79. **Cross Section and Transverse Single Spin Asymmetry of  $\eta$  Mesons in  $p^\uparrow + p$  collisions at  $\sqrt{s} = 200$  GeV at Forward Rapidity** Preprint: arXiv:1406.3541 Published: PRD , 2014-10-20
80. **Low Mass Vector Mesons Production at forward rapidity in p+p Collisions at  $\sqrt{s} = 200$  GeV** Preprint: arXiv:1405.4260 Published: PRD , 2014-09-08
81. **PHENIX Centrality Categorization in d+Au Collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1310.4793 Published: PRC , 2014-09-05
82. **System-size dependence of open-heavy-flavor production in nucleus-nucleus collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1310.8286 Published: PRC , 2014-09-05
83. **Inclusive Double-Helicity Asymmetries in Neutral Pion and Eta Meson Production in p+p Collisions at  $\sqrt{s} = 200$  GeV** Preprint: arXiv:1402.6296 Published: PRD , 2014-07-17
84. **Measurement of transverse-single-spin asymmetries for midrapidity and forward-rapidity production of hadrons in polarized p+p collisions at  $\sqrt{s} = 200$  and  $62$  GeV** Preprint: arXiv:1312.1995 Published: PRD , 2014-07-17

85. **Cold nuclear matter effects on heavy-quark production at forward and backward rapidities in d+Au collisions at  $\sqrt{s_{NN}}=200$  GeV**  
Preprint: arXiv:1310.1005 Published: PRL , 2014-06-25
86. **Azimuthal-angle dependence of charged-pion-interferometry measurements with respect to 2nd and 3rd-order event plane in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1401.7680 Published: PRL , 2014-06-03
87. **Transverse-energy distributions at midrapidity in p+p, d+Au, and Au+Au collisions at  $\sqrt{s_{NN}}=62.4 - 200$  GeV and implications for particle-production models** Preprint: arXiv:1312.6676 Published: PRC , 2014-04-09
88. **Heavy-flavor electron-muon correlations in p+p and d+Au collisions at  $\sqrt{s} = 200$  GeV** Preprint: arXiv:1311.1427 Published: PRC , 2014-03-31
89. **Azimuthal anisotropy of  $\pi^0$  and eta mesons in Au+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1309.4437 Published: PRC , 2013-12-20
90. **Quadrupole anisotropy in dihadron azimuthal correlations in central d+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1303.1794 Published: PRL , 2013-11-20
91. **Nuclear modification of  $\psi'$ ,  $\chi_c$  and J/psi production in d+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1305.5516 Published: PRL , 2013-11-12
92. **Spectra and ratios of identified particles in Au+Au and d+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1304.3410 Published: PRC , 2013-08-22
93. **Inclusive cross section and single transverse spin asymmetry for very forward neutron production in polarized p+p collision at  $\sqrt{s} = 200$  GeV** Preprint: arXiv:1209.3283 Published: PRD , 2013-08-08
94. **Medium modification of jet fragmentation in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV measured in direct photon-hadron correlations** Preprint: arXiv:1212.3323 Published: PRL , 2013-07-16
95. **Direct photon production in d+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1208.1234 Published: PRC , 2013-05-17
96. **Upsilon (1S+2S+3S) production in d+Au and p+p collisions at  $\sqrt{s_{NN}}=200$  GeV and cold-nuclear matter effects** Preprint: arXiv:1211.4017 Published: PRC , 2013-04-25

97. **Neutral pion production with respect to centrality and reaction plane in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1208.2254  
Published: PRC , 2013-03-28
98. **Transverse-Momentum Dependence of the J/psi Nuclear Modification in d+Au Collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1204.0777  
Published: PRC , 2013-03-14
99. **Double Spin Asymmetry of Electrons from Heavy Flavor Decays in p+p Collisions at  $\sqrt{s}=200$  GeV** Preprint: arXiv:1209.3278 Published: PRD , 2013-01-29
100. **Cold-nuclear-matter effects on heavy-quark production in d+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1208.1293 Published: PRL , 2012-12-12
101. **J/psi suppression at forward rapidity in Au+Au collisions at  $\sqrt{s_{NN}}=39$  and **62.4 GeV**** Preprint: arXiv:1208.2251 Published: PRC , 2012-12-06
102. **Measurement of Transverse Single-Spin Asymmetries for J/psi Production in Polarized p+p Collisions at  $\sqrt{s} = 200$  GeV (and Erratum)** Erratum Preprint: arXiv:1009.4864 Erratum Published: PRD , 2012-11-20
103. **Cross Sections and Double Helicity Asymmetries of Mid-Rapidity Inclusive Charged Hadrons in p+p at  $\sqrt{s} = 62.4$  GeV** Preprint: arXiv:1202.4020  
Published: PRD , 2012-11-08
104. **Direct Photon Production in p+p Collisions at  $\sqrt{s}=200$  GeV in Mid-rapidity** Preprint: arXiv:1205.5533 Published: PRD , 2012-10-23
105. **Measurement of Direct Photons in Au+Au Collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1205.5759 Published: PRL , 2012-10-12
106. **Evolution of pi 0 suppression in Au+Au collisions from  $\sqrt{s_{NN}} = 39$  to **200 GeV**** Preprint: arXiv:1204.1526 Published: PRL , 2012-10-12
107. **Observation of direct-photon collective flow in Au+Au collisions at  $\sqrt{s_{NN}}=200$ GeV** Preprint: arXiv:1105.4126 Published: PRL , 2012-09-19
108. **Nuclear-Modification Factor for Open-Heavy-Flavor Production at Forward Rapidity in Cu+Cu Collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1204.0754 Published: PRC , 2012-08-20
109. **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** Preprint: arXiv:1203.2644 Published: PRC , 2012-06-27

110. **Ground and excited charmonium state production in p+p collisions at  $\sqrt{s}=200$  GeV** Preprint: arXiv:1105.1966 Published: PRD , 2012-05-09
111. **Measurements of Higher-Order Flow Harmonics in Au+Au Collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1105.3928 Published: PRL , 2011-12-15
112. **J/psi suppression at forward rapidity in Au+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1103.6269 Published: PRC , 2011-11-21
113. **Suppression of back-to-back hadron pairs at forward rapidity in d+Au Collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1105.5112 inSPIRE Published: Phys. Rev. Lett. 107, 172301 (2011)
114. **J/psi suppression at forward rapidity in Au+Au collisions at  $\sqrt{s_{NN}}=200$  GeV** Preprint: arXiv:1103.6269 inSPIRE Published: Phys. Rev. C 84, 054912 (2011)
115. **Measurements of Higher-Order Flow Harmonics in Au+Au Collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1105.3928 inSPIRE Published: Phys. Rev. Lett. 107, 252301 (2011)
116. **Suppression of away-side jet fragments with respect to the reaction plane in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1010.1521 inSPIRE Published: Phys. Rev. C 84, 024904 (2011)
117. **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** Preprint: arXiv:1010.1246 inSPIRE Published: Phys. Rev. Lett. 107, 142301 (2011)
118. **Production of omega mesons in p+p, d+Au, Cu+Cu and Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** Preprint: arXiv:1105.3467 inSPIRE Published: Phys. Rev. C 84, 044902 (2011)
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258. **Recent Results on Relativistic Heavy Ion Collisions from AGS Experiment E814:  $^{28}\text{Si} + \text{Al}$ ,  $\text{Cu}$ , and  $\text{Pb}$  at 14.6 GeV per Nucleon.**  
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259. **Charged Particle Multiplicity in  $^{28}\text{Si} + \text{Al}$ ,  $\text{Cu}$ , and  $\text{Pb}$  Reactions at  $E_{\text{lab}} = 14.6$  GeV/nucleon.**  
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273. **Measurement of the  $^{36}\text{Ar}(n,p)^{36}\text{Cl}$  Cross Section.**  
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274. **Neutron Activation/Accelerator Mass Spectrometry: A New Technique for Measuring Light Elements in Ultrapure Materials.**  
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275. **A Search for Anomalously Heavy Isotopes of Low Z Nuclei.**  
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276. **Determination of Os Isotope and Re/Os Ratios Using AMS.**  
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277. **Accelerator Mass Spectrometry at the University of Rochester.**  
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278.  **$^{36}\text{Cl}$ : A Tracer in Groundwater in the Aquia Formation of Southern Maryland.**  
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279. **A Search for Anomalously Heavy Isotopes of Low Z Nuclei.**  
D. Nitz, *et. al* AIP Conference Proceedings 150 **Intersections Between Particle and Nuclear Physics**, Lake Louise, Canada, (1986) 1143.
280. **An Electrostatic Beam Line for Accelerator Mass Spectroscopy of Exotic Particles.**  
D. Elmore, *et. al* Nucl. Inst. and Meth. **B10/11** (1985) 738.
281. **The Rochester Tandem Accelerator Mass Spectrometry Program.**  
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282. **Measurement of the Group Birefringence of Calcite Crystals.**  
T.K. Hemmick, Towson State University Honors Thesis (1983).
283. **Holographic Detection of Defects Under the Surface of Solid Objects.**  
T.K. Hemmick, *et. al* Am.J. Phys. **51** (1983) 984.

#### INVITED PRESENTATIONS BY THOMAS K. HEMMICK

1. T.K. Hemmick PID at the EIC; 4th FCC Physics and Experiments Workshop, CERN, November 2020
2. T.K. Hemmick PID at the EIC; 4th EIC Yellow Report Workshop, Berkeley, September 2020
3. T.K. Hemmick PID at the EIC; 3rd EIC Yellow Report Workshop, Catholic University, July 2020
4. T.K. Hemmick PID at the EIC; 2nd EIC Yellow Report Workshop, Pavia, May 2020
5. T.K. Hemmick PID at the EIC; 1st EIC Yellow Report Workshop, Temple University, February 2020
6. T.K. Hemmick The sPHENIX TPC; Future TPC Workshop, CERN July 2019
7. T.K. Hemmick Tracking Technology for the EIC; AGS/RHIC User's Group, BNL June 2019
8. T.K. Hemmick EIC Alternative Tracking: TPC TPCC Straws...; EIC Tracking Workshop 2018, Charlottesville, VA 2018
9. T.K. Hemmick Cherenkov Detector work at Stony Brook University; CPAD 2017, Albuquerque, NM 2017

10. T.K. Hemmick TPCs for EIC: Developments and Challenges; EIC User's Group, Trieste IT July 2017
11. N. Cronin & T.K. Hemmick An Online Lab Effort; AAPT 2017, Cincinnati OH July 2017
12. T.K. Hemmick: Applications of MPGD at BNL/Jlab and the Future EIC; MPGD 2017, Philadelphia, May 2017
13. T.K. Hemmick: The sPHENIX TPC; BNL Instrumentation Seminar, April 2017
14. T.K.Hemmick: First Results from a Prototype Combination TPC-Cherenkov Detector with GEM Readout; IEEE NSS, Strassbourg France, November 2016.
15. T.K.Hemmick: Cherenkov Detector work at Stony Brook University; RICH 2016, Bled Slovenia, September 2016.
16. T.K.Hemmick: Hadronic and Nuclear Physics at the Electron-Ion Collider; Gordon Conference, NH, August 2016.
17. T.K.Hemmick: Performance of a Quintuple-GEM Based RICH Detector; IEEE NSS, San Diego CA, November 2015.
18. T.K.Hemmick: RHIC to eRHIC Revolution within Evolution; Yale University Nuclear Physics Seminar, April 2015.
19. T.K.Hemmick: The Beauty of the Many-Body Strong Interaction; Colloquium University of Alabama, November 2014.
20. T.K. Hemmick: Lectures on Many Body Parton Physics; Jyvaskyla Summer School, Jyvasklya University, August 2014.
21. T.K. Hemmick: RHIC to eRHIC: Revolution within Evolution; Lawrence Berkeley National Laboratory, Berkeley, CA, February 2014.
22. T.K. Hemmick: EIC ep Facilities and Program; QCD Frontiers Workshop Newport News, VA, October 2013.
23. T.K. Hemmick: R&D efforts PHENIX; Future Trends Workshop, Beijing China, August 2013.
24. T.K. Hemmick: R&D efforts for the Electron-Ion Collider: Emphasis on Tracking and RICH; CPAD, University of Colorado, April 2013.
25. T.K. Hemmick: Lectures on Experimental Relativistic Heavy Ion Physics; National Nuclear Physics Summer School, Sante Fe, New Mexico, July 2012.
26. T.K. Hemmick: Single Electron Measurements in the Heavy Quark Sector; Strange Quark Matter, Krakow, Poland, November 2011.

27. T.K. Hemmick: Exploring Early Times in the QGP Evolution through Direct Virtual Photons; Nuclear Physics Seminar, Charlottesville VA, November 2011.
28. T.K. Hemmick: 1: 300,000 times Hotter than the Center of the Sun 2: Nature's Ultimate Gluon Density: Accelerating Past the Boundaries of Human Knowledge; Particle Accelerator Conference, New York City, October 2011.
29. T.K. Hemmick: Dileptons: Getting to the heart of the matter; Wuhan Nuclear Physics Summer School, Central China Normal University, July 2011.
30. T.K. Hemmick: Lectures on Experimental Relativistic Heavy Ion Physics; CERN-FermiLab HEP Summer School, CERN, June 2011.
31. T.K. Hemmick: Experimental Introduction to Quark-Gluon Plasma; International Conference on the Physics and Astrophysics of Quark-Gluon Plasma, Goa, India, December 2010.
32. T.K. Hemmick: Dileptons and charm at RHIC; Hot Topics in Nuclear Physics Workshop, Rehovot Israel, October 2010.
33. T.K. Hemmick: In-medium Modifications of Hadrons; International Nuclear Physics Conference; Vancouver CANADA, July 2010.
34. T.K. Hemmick: Sailing the Perfect Fluid: Highlights and Discoveries of the four RHIC experiments.; 905010 Symposium, Brookhaven National Laboratory, Upton NY, June 2010.
35. T.K. Hemmick: *Photon and Dileptons probes of the Quark-Gluon Plasma at RHIC*; JET Symposium, Berkeley CA, June 2010.
36. T.K. Hemmick: Changing Up in a Large Lecture Class: Connecting with many students; Stony Brook University Spring Colloquium, May 2010.
37. T.K. Hemmick: Sailing the Perfect Fluid: Adventures at the Highest Temperatures Created by Man; Colloquium, Stony Brook University, Computer Science, April 2010.
38. T.K. Hemmick: *Measuring the Initial Temperature at RHIC*; Lake Louise Winter Institute, Lake Louise, Alberta Canada, February 2010.
39. T.K. Hemmick: *Dileptons and CHarm at RHIC*; International Workshop XXXVIII on Gross Properties of Nuclei and Nuclear Excitations Hirschegg, Kleinwalsertal, Austria, January 2010.
40. T.K. Hemmick: *The Center for Accelerator Science and Education*; BAF meeting, Brookhaven National Laboratory, January 2009.

41. T.K. Hemmick: *Sailing the Perfect Fluid*; Colloquium, University of New Mexico, November 2008.
42. T.K. Hemmick: *The Center for Accelerator Science and Education*; Colloquium, Stony Brook University, October 2008.
43. T.K. Hemmick: *Sailing the Perfect Fluid*; Worlds of Physics, Stony Brook, New York, September 2008.
44. T.K. Hemmick: *The Birth of the Universe Not with a Bang, but with a Splash*; Astronomy Jamboree, Custer Institute, Southold, New York, October 2007.
45. T.K. Hemmick: *The Birth of the Universe Not with a Bang, but with a Splash*; Worlds of Physics, Stony Brook, New York, May 2007.
46. T.K. Hemmick: *Relativistic Heavy Ion Collisions: Adventures at the Highest Energy Densities Created by Man*; Colloquium, Purdue University, February 2007.
47. T.K. Hemmick: *A Student's Guide to Hard Collisions at RHIC*; Quark Matter 2006, Shanghai, China, November 2006.
48. T.K. Hemmick: *The RHIC Heavy Ion Program*; Conference on the Intersections of Particle and Nuclear Physics, Puerto Rico, June 2006.
49. T.K. Hemmick: *RHIC Physics: Adventures at the Highest Temperatures Created in the Lab*; Particle and Nuclear Intersections Conference, Santa Fe, NM, October 2005.
50. T.K. Hemmick: *Recreating the Birth of the Universe: Adventures at the Highest Temperatures Created by Man*; Long Island Physics Teachers Association, Stony Brook, New York, December 2004.
51. T.K. Hemmick: *Results from RHIC*; Colloquium, Argonne National Lab, Chicago Illinois, June 2004.
52. T.K. Hemmick: *Results from RHIC*; Quantum Field Theory in High Energy Physics, Peterhof, Russia, June 2004.
53. T.K. Hemmick: *Results from RHIC*; ECT Workshop "Onset of Deconfinement", Trento, Italy, April 2004.
54. T.K. Hemmick: *Opening Talk*; Quark Matter 2004, Oakland, California, January 2004.
55. T.K. Hemmick: *Results from PHENIX*; BNL Special Colloquium/Press Conference, Brookhaven, New York, June 2003.
56. T.K. Hemmick: *The PHENIX Detector at RHIC*; CMS Heavy Ion Meeting, Gatchina Russia, June 2000.

57. T.K. Hemmick: *A Prototype Hadron Blind Detector*; RICH 98 Conference, Ein Gedi, Israel, November 1998.
58. T.K. Hemmick: *The PHENIX RICH Detectors*; RICH 98 Conference, Ein Gedi, Israel, November 1998.
59. T.K. Hemmick: *Nuclear Flow Results at the AGS*; APS Spring meeting, Columbus, Ohio, Apr. 1998. Invited talk, Relativistic Heavy Ion Workshop.
60. T.K. Hemmick: *Hadronic Experimental Results Summary Talk*; presented at the Quark Matter 97 conference, Tsukuba, Japan, Dec. 1997.
61. T.K. Hemmick: *Flow measurements at 10 GeV/nucleon*; presented at the American Chemical Society conference, Las Vegas, Nevada, Aug. 1997.
62. T.K. Hemmick: *Recent Results from Relativistic Heavy Ion Collisions*; presented at the Intersection of Particle and Nuclear Physics Conference, Big Sky, Montana, Jul. 1997.
63. T.K. Hemmick: *Summary of the Relativistic Heavy Ion Program at the AGS*; presented at the AGS User's Meeting, Brookhaven National Lab, Upton, New York, May 1997.
64. T.K. Hemmick: *Can we melt the nucleon: Achieving the next phase of matter*; colloquium presented at Kent State University, Kent, Ohio, Oct. (1996).
65. T.K. Hemmick: *Conference Summary Talk*; presented at the Third HIPAGS Conference, WSU, Detroit, Aug. 1996.
66. T.K. Hemmick for the E877 collaboration: *Flow Studies at 10.8 GeV/nucleon*; presented at the Quark Matter 96 conference, Heidelberg, Germany, May 1996, Invited talk, plenary session.
67. T.K. Hemmick for the PHENIX collaboration: *Decay Anisotropy: A Possible Tool for  $e^+e^-$  Studies*; presented at the 2<sup>nd</sup> Workshop on Electromagnetic Probes of the Quark-Gluon Plasma, Seattle, Washington January 1996. Invited talk.
68. T.K. Hemmick for the E877 collaboration: *Recent results on Flow and Particle Spectra in Heavy Ion Collisions at 10 AGeV/c*; presented at the 4<sup>th</sup> International Workshop on Relativistic Aspects of Nuclear Physics, Rio de Janeiro, Brazil August 1995. Invited talk.
69. T.K. Hemmick for the E814/E877 collaboration: *Measurement of the  $\Delta$  Resonance through low  $P_t$  pion spectra*; presented at the 5<sup>th</sup> Conference on the Intersections of Particle and Nuclear Physics, June 1994. Invited parallel session.

70. T.K. Hemmick for the E814/E877 collaboration: *Toward Thermalization in AGS Heavy Ion Collisions*; nuclear physics seminar presented at Florida State University, June 1994.
71. T.K. Hemmick for the E814/E877 collaboration: *Relativistic Heavy Ion Collisions at the AGS: What Energy and Baryon Density have we achieved?* colloquium presented at SUNY Stony Brook, March 1994.
72. T.K. Hemmick for the E814/E877 collaboration: *Relativistic Heavy Ion Collisions at the AGS: Evidence for Resonance Matter*; nuclear physics seminar at the Michigan State University National Superconducting Cyclotron Laboratory, November 1993.
73. T.K. Hemmick for the E814/E877 collaboration: *Evidence for the Formation of Thermalized Resonance Matter in AGS Heavy Ion Collisions*; nuclear physics seminar presented at Wayne State University, November 1993.
74. T.K. Hemmick for the E814/E877 collaboration: *Relativistic Heavy Ion Collisions: Probing the Limits of Energy and Baryon Density*; Colloquium presented at the University of Rochester, October 1993.
75. T.K. Hemmick for the E814/E877 collaboration: *Low  $P_t$  Enhancement in Meson Spectra from Relativistic Heavy Ion Collisions*; Fall Meeting of the APS division of Nuclear Physics, Asilomar California. Invited talk, plenary session.
76. T.K. Hemmick for the E814 collaboration: *Pion Enhancement in  $28\text{Si} + \text{Pb}$  Collisions at  $14.6 \text{ A GeV}/c$ .*; presented at Quark Matter '93, Borlange SWEDEN, June 1993.
77. T.K. Hemmick for the E814 collaboration: *Low  $P_t$  Meson Spectra from  $14.6 \text{ A GeV Si} + \text{Nucleus Collisions}$ .*; presented at the Ninth Winter Workshop on Nuclear Dynamics, Key West Fl., Jan. 1993.
78. T.K. Hemmick for the E814 collaboration: *Hadron Spectra at Low  $P_t$  in E814/877*.; presented at the Second HIPAGS Conference, MIT, Boston., Jan. 1993.
79. T.K. Hemmick for the E814 collaboration: *Recent Results on Relativistic Heavy Ion Collisions from AGS Experiment E814:  $28\text{Si} + \text{Al, Cu, and Pb}$  at  $14.6 \text{ GeV}$  per Nucleon.*; presented at the Eighth Winter Workshop on Nuclear Dynamics, Jackson Hole Wy., Jan. 1992.
80. T.K. Hemmick for the E814 collaboration: *Recent Results from Experiment E814*; presented at the annual AGS Users Meeting, BNL April 1991.
81. T.K. Hemmick for the E814 collaboration: *Results on the Production of Exotic Objects in Relativistic Nucleus Nucleus Collisions*; presented at the Quark Matter 90 conference.

82. T.K. Hemmick for the E814 collaboration: *Tracking Chambers of Novel Design for use in Relativistic Heavy Ion Beams*; presented at the 1989 Meeting of the American Physical Society.
83. T. Hossain, D. Elmore, T.K. Hemmick, P.W. Kubik, S. Jiang: *Neutron Activation/Accelerator Mass Spectrometry: A New Technique for Measuring Light Elements in Ultrapure Materials*; presented at the 1987 meeting of the American Physical Society, Division of Nuclear Physics.
84. T.K. Hemmick, D. Elmore P.W. Kubik, S.L. Olsen;, D. Nits, D. Ciampa, H. Kagan, T. Gentile, P.F. Smith, B.B. McInteer, J. Bigeliesen: *A Search for Anomalously Heavy Isotopes of Low-Z Nuclei*; presented at the Fourth International Symposium on Accelerator Mass Spectrometry, April 1987.
85. T.K. Hemmick, D. Elmore, P.W. Kubik, S.L. Olsen, D. Nits, D. Ciampa, H. Kagan, T. Gentile: *A Search for Anomalously Heavy Hydrogen-like Nuclei*; presented at 1986 Spring meeting of the American Physical Society.
86. T.K. Hemmick, H.E. Bates: *A Measurement of the Speed of Light Using Microwave Interferometry*; presented at 1983 Spring meeting of the American Physical Society, SPS invited speaker.
87. T.K. Hemmick, W.K. Huang, Y.D. Song: *Holographic Detection of Defects Under the Surface of Solid Objects*; presented at 1981 Fall meeting of the Optical Society of America, contributed paper.