

Refereed Publications

IUCF

FY2002

* experimental work done at another laboratory

† NSF support acknowledged

*† Azimuthal anisotropy of K_S^0 and $\Lambda + \bar{\Lambda}$ production at midrapidity from Au+Au collisions at $\sqrt{s_{NN}} = 130$ GeV, C. Adler *et al.*, for the STAR Collaboration, Phys. Rev. Lett. **89**, 132301 (2002).

*† Breakup time scale studied in the 8 GeV/c $\pi^- + ^{197}\text{Au}$ reaction, L. Pienkowski, K. Kwiatkowski, T. Lefort, W.-c. Hsi, L. Beaulieu, V.E. Viola, A. Botvina, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, E. Winchester, S.J. Yennello, B. Back, H. Breuer, S. Gushue, and L.P. Remsberg, Phys. Rev. C **65**, 064606 (2002).

† Compressing spin-polarized ^3He with a modified diaphragm pump, T.R. Gentile, D.R. Rich, A.K. Thompson, W.M. Snow, and G.L. Jones, J. of Research Natl. Inst. Stand. Technol. **106**, 709 (2001).

† Comparison between chiral and meson-theoretic nucleon-nucleon potentials through (p,p') reactions, F. Sammarruca, D. Alonso, and E.J. Stephenson, Phys. Rev. C **65**, 047601 (2002).

*† \bar{d} and ^3He production in $\sqrt{s_{NN}} = 130$ GeV Au+Au collisions, C. Adler *et al.* for the STAR Collaboration, Phys. Rev. Lett. **87**, 262301 (2001).

*† Elliptic flow from two- and four-particle correlations in Au+Au collisions at $\sqrt{s_{NN}} = 130$ GeV, C. Adler *et al.*, for the STAR Collaboration, Phys. Rev. C **66**, 034904 (2002).

*† Event-by-event analysis of proton-induced nuclear multifragmentation: Determination of the phase transition universality class in a system with extreme finite-size constraints, M. Kleine Berkenbusch, W. Bauer, K. Dillman, S. Pratt, L. Beaulieu, K. Kwiatkowski, T. Lefort, W.-c. Hsi, V.E. Viola, S.J. Yennello, R.G. Korteling, and H. Breuer, Phys. Rev. Lett. **88**, 022701 (2002).

*† Fragment isospin as a probe of heavy-ion collisions, H. Xu, R. Alfaro, B. Davin, L. Beaulieu, Y. Larochele, T. Lefort, R. Yanez, S. Hudan, R.T. de Souza, T.X. Liu, X.D. Liu, W.G. Lynch, R. Shomin, W.P. Tan, M.B. Tsang, A. Vander Molen, A. Wagner, H.F. Xi, C.K. Gelbke, R.J. Charity, L.G. Sobotka, and A.S. Botvina, Phys. Rev. C **65**, 061602 (2002).

*† Fragment production in noncentral collisions of intermediate-energy heavy ions, B. Davin, R. Alfaro, H. Xu, L. Beaulieu, Y. Larochele, T. Lefort, R. Yanez, S. Hudan, A.L. Caraley, R.T. de Souza, T.X. Liu, X.D. Liu, W.G. Lynch, R. Shomin, W.P. Tan, M.B. Tsang, A. Vander Molen, A. Wagner, H.F. Xi, C.K. Gelbke, R.J. Charity and L.G. Sobotka, Phys. Rev. C **65**, 064614 (2002).

* High resolution beam line for the Grand Raiden spectrometer, T. Wakasa, K. Hatanaka, Y. Gujita, G.P.A. Berg, H. Fujimura, H. Fujita, M. Itoh, J. Kamiya, T. Kawabata, K. Nagayama, T. Noro, H. Sakaguchi, Y. Shimbara, H. Takeda, K. Tamura, H. Ueno, M. Uchida, M. Uraki, and M. Yosoi, Nucl. Instrum. and Methods A **482**, 79 (2002).

* High spin two-neutron-hole states via the $^{208}\text{Pb}(p,t)^{206}\text{Pb}$ reaction at 120 MeV, Dimitris N. Mihailidis, Norton M. Hintz, Anil Sethi, and E.J. Stephenson, Phys. Rev. C **64**, 054608 (2001).

*† Identified particle elliptic flow in Au+Au collisions at $\sqrt{s_{NN}} = 130$ GeV, C. Adler *et al.* for the STAR Collaboration, Phys. Rev. Lett. **87**, 182301 (2001).

* LASSA: a large area silicon strip array for isotopic identifications of charged particles, B. Davin, R.T. de Souza, R. Yanez, Y. Larochele, R. Alfaro, H.S. Xu, A. Alexander, K. Bastin, L. Beaulieu, J. Dorsett, G. Fleener, L. Gelovani, T. Lefort, J. Poehlman, R.J. Charity, L.G. Sobotka, J. Elson, A. Wagner, T.X. Liu, X.D. Liu, W.G. Lynch, L. Morris, R. Shomin, W.P. Tan, M.B. Tsang, G. Verde, and J. Yurkon, Nucl. Instrum. and Methods A **473**, 302 (2001).

*† Liquid to vapor phase transition in excited nuclei, J.B. Elliot, L.G. Moretto, L. Phair, G.J. Wozniak, L. Beaulieu, H. Breuer, R.G. Korteling, K. Kwiatkowski, T. Lefort, L. Pienkowski, A. Ruangma, V.E. Viola, and S.J. Yennello, Phys. Rev. Lett. **88**, 042701 (2002).

*† Measurement of analyzing power for proton-carbon elastic scattering in the coulomb-nuclear interference

region with a 22-GeV/c polarized proton beam, J. Tojo, I. Alekseev, M. Bai, B. Bassalleck, G. Bunce, A. Deshpande, J. Doskow, S. Eilerts, D.E. Fields, Y. Goto, H. Huang, V. Hughes, K. Imai, M. Ishihara, V. Kanavets, K. Kurita, K. Kwiatkowski, B. Lewis, W. Lozowski, Y. Makdisi, H.-O. Meyer, B.V. Morozov, M. Nakamura, B. Przewoski, T. Rinckel, T. Roser, A. Rusek, N. Saito, B. Smith, D. Svirida, M. Syphers, A. Taketani, T.L. Thomas, D. Underwood, D. Wolfe, K. Yamamoto, and L. Zhu, Phys. Rev. Lett. **89**, 052302 (2002).

* Measurement of analyzing powers of π^+ and π^- produced on a hydrogen and a carbon target with a 22-GeV/c incident polarized proton beam, C.E. Allgower, K.W. Krueger, T.E. Kasprzyk, H.M. Spinka, D.G. Underwood, A. Yokosawa, G. Bunce, H. Huang, Y. Makdisi, T. Roser, M. Syphers, A.A. Derevschikov, Yu. A. Matulenko, L.V. Nogach, S.B. Nurushev, A.N. Vasiliev, M. Bai, S.Y. Lee, Y. Goto, N. Hayashi, T. Ichihara, M. Okamura, N. Saito, H. En'yo, K. Imai, Y. Kondo, Y. Nakada, M. Nakamura, H. Saito, H. Sakai, T. Wakasa, K. Yako, V. Baturine, A. Ogawa, V. Ghazikhanian, G. Igo, S. Trentalange, C. Whitten, N.I. Belikov, and A.I. Pavlinov, Phys. Rev. D **65**, 092008 (2002).

*† Measurement of inclusive antiprotons from Au+Au collisions at $\sqrt{s_{NN}} = 130$ GeV, C. Adler *et al.* for the STAR Collaboration, Phys. Rev. Lett. **87**, 262302 (2001).

* A measurement of the absolute neutron beam polarization produced by an optically pumped ^3He neutron spin filter, D.R. Rich, J.D. Bowman, B.E. Crawford, P.P.J. Delheij, M.A. Espy, T. Haseyama, G. Jones, C.D. Keith, J. Knudson, M.B. Leuschner, A. Masaiki, Y. Masuda, Y. Matsuda, S.I. Penttilä, V.R. Pomeroy, D.A. Smith, W.M. Snow, J.J. Szymanski, S.L. Stephenson, A.K. Thompson, and V. Yuan, Nucl. Instrum. and Methods A **481**, 431 (2002).

* A measurement of the strange quark contribution to the nucleon spin via neutrino-nucleon elastic scattering, R. Tayloe, Nucl. Phys. B **105**, 62 (2002).

*† Midrapidity Λ and $\bar{\Lambda}$ production in Au+Au collisions at $\sqrt{s_{NN}} = 130$ GeV, C. Adler *et al.*, for the STAR collaboration, Phys. Rev. Lett. **89**, 092301 (2002).

*† Midrapidity ϕ production in Au+Au Collisions at $\sqrt{s_{NN}} = 130$ GeV, C. Adler *et al.* for the STAR Collaboration, Phys. Rev. C **65**, 1901 (2002)

* Near-scission emission of intermediate mass fragments in $^{12}\text{C}+^{232}\text{Th}$ at $E/A = 16$ and 22 MeV, T.A. Bredeweg, R. Yanez, B.P. Davin, K. Kwiatkowski, R.T. de Souza, R. Lemmon, R. Popescu, R.J. Charity, L.G. Sobotka, D. Hofman, and N. Carjan, Phys. Rev. C **66**, 014608 (2002).

† Polarization transfer in quasifree (\vec{p}, \vec{n}) reactions on C, Ca, and Pb targets at 197 MeV, C. Hautala, J. Rapaport, M. Palarczyk, D.L. Prout, D.A. Cooper, G. Savopoulos, B. Anderson, A. Baldwin, C.C. Foster, C.D. Goodman, K. Hicks, R. Howes, M.S. Islam, B.A. Luther, D.M. Manley, R. Madey, E. Sugarbaker, T.N. Taddeucci, I. Van Heerden, J. Watson, X. Yang, and W.-M. Zhang, Phys. Rev. C **65**, 034612 (2002).

† Polarization transfer in quasifree (\vec{p}, \vec{n}) reactions on ^2H and $^3,^4\text{He}$ targets at 197 MeV, D.L. Prout, J. Rapaport, M. Palarczyk, D.A. Cooper, G. Savopoulos, C. Hautala, B. Anderson, A. Baldwin, C.C. Foster, W. Glöckle, C.D. Goodman, R. Howes, M.S. Islam, B.A. Luther, R. Madey, D.M. Manley, J. Sowinski, E. Sugarbaker, T.N. Taddeucci, I. Van Heerden, J. Watson, H. Witala, X. Yang, and W.-M. Zhang, Phys. Rev. C **65**, 034611 (2002).

† Polarization transfer measurements for the $^{13}\text{C}(\vec{p}, \vec{n})^{13}\text{N}$ reaction at 197 MeV and empirical isovector spin-longitudinal response for the $(1/2)_{g.s.}^- \rightarrow (1/2)_1^+$ transition, X. Wang, J. Rapaport, M. Palarczyk, C. Hautala, X. Yang, D.L. Prout, B. Anderson, A.R. Baldwin, J. Olmsted, J.W. Watson, W.-M Zhang, I. Van Heerden, E.J. Stephenson, R. Howes, S. Parks, B.A. Brown, and F. Sammarruca, Phys. Rev. C **66**, 014606 (2002).

Polarized ^3He neutron spin filter development and application at Indiana University and NIST, D.R. Rich, S. Fan, T.R. Gentile, D. Hussey, G.L. Jones, B. Neff, W.M. Snow, and A.K. Thompson, Physica B **305**, 203 (2001).

Quadrupole-mode transfer function and the nonlinear Mathieu instability, Weiming Guo and S.Y. Lee, Phys. Rev. E **65**, 066505 (2002).

Realization of matching conditions for high-resolution spectrometers, H. Fujita, Y. Fujita, G.P.A. Berg, A.D. Bacher, C.C. Foster, K. Hara, K. Hatanka, T. Kawabata, T. Noro, H. Sakaguchi, Y. Shimbara, T. Shinada, E.J. Stephenson, H. Ueno, and M. Yosoi, Nucl. Instrum. Methods A **484**, 17 (2002).

* Resonant and non resonant K^- production in pp reactions at 2.85 GeV, The DISTO Collaboration: J. Ritman, F. Balestra, Y. Bedfer, R. Bertini, L.C. Bland, A. Brenschede, F. Brochard, M.P. Bussa, Seonho Choi, M. Debowski, R. Dressler, M. Dziedzic, J.-Cl. Faivre, I.V. Falomkin, L. Fava, L. Ferrero, J. Foryciarz, I. Fröhlich, V. Frolov, R. Garfagnini, A. Grasso, E. Grosse, S. Heinz, V.V. Ivanov, W.W. Jacobs, W. Kühn, A. Maggiora, M. Maggiora, A. Manara, D. Panzieri, H.-W. Pfaff, G. Piragino, G.B. Pontecorvo, A. Popov, P. Salabura, V. Tchalyshov, F. Tosello, S.E. Vigdor, and G. Zosi, Nucl. Phys. **A694**, 395 (2001).

RF voltage modulations and the coupled bunch instabilities, M.H. Wang and S.Y. Lee, Journal of Appl. Phys. **92**, 555 (2002).

Setting bounds on critical exponents with event-by-event analysis of nuclear fragmentation data, W. Bauer, M. Kleine Berkenbusch, L. Beaulieu, T. Lefort, R.G. Korteling, K. Kwiatkowski, H. Breuer, S. Pratt, W.C. Hsi, V.E. Viola, and S.J. Yennello, Acta Physica Hungarica New Series-Heavy Ion Physics **15**, 417 (2002).

† Spin Correlations in $\bar{p}\bar{p} \rightarrow pn\pi^+$ pion production near threshold, W.W. Daehnick, Swapan K. Saha, R.W. Flammang, H.O. Meyer, J.T. Balewski, R.E. Pollock, B. von Przewoski, T. Rinckel, P. Thörngren-Engblom, A. Wellinghausen, B. Lorentz, R. Rathmann, B. Schwartz, T. Wise, and P.V. Pancella, Phys. Rev. C **65**, 4003 (2002).

*† Thermal excitation-energy deposition in 5-15 GeV/c hadron-induced reactions with ^{197}Au . I. Reconstruction of thermal source properties, T. Lefort, L. Beaulieu, K. Kwiatkowski, W.-c. Hsi, V.E. Viola, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, E. Winchester, S.J. Yennello, L. Pienkowski, R.G. Korteling, and H. Breuer, Phys. Rev. C **64**, 064603 (2001).

*† Thermal excitation-energy deposition in 5-15 GeV/c hadron-induced reactions with ^{197}Au . II. Relation between excitation energy and reaction variables, L. Beaulieu, T. Lefort, K. Kwiatkowski, W.-c. Hsi, G. Wang, D.S. Bracken, E. Cornell, D.S. Ginger, K.B. Morley, V.E. Viola, F. Gimeon-Nogues, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, E. Winchester, S.J. Yennello, R.G. Korteling, L. Pienkowski, H. Breuer, B. Back, S. Gushue, L.P. Remsberg, M.J. Huang, W.G. Lurch, M.B. Tsang, H. Xi, Phys. Rev. C **64**, 064604 (2001).

† 99.6% spin-flip efficiency in the presence of a strong Siberian snake, B.B. Blinov, Z.B. Etienne, A.D. Krisch, M.A. Leonova, W. Lorenzon, V.S. Morozov, C.C. Peters, V.K. Wong, K. Yonehara, V.A. Anferov, P. Schwandt, E.J. Stephenson, B. von Przewoski, and H. Sato, Phys. Rev. Lett. **88**, 014801 (2002).

*† ρ^0 meson production in the pp \rightarrow pp $\pi^+\pi^-$ reaction at 3.67 GeV/c, F. Balestra, Y. Bedfer, R. Bertini, L.C. Bland, A. Brenschede, F. Brochard, M.P. Bussa, Seonho Choi, M.L. Colantoni, R. Dressler, M. Dziedzic, J.-Cl. Faivre, A. Ferrero, L. Ferrero, J. Foryciarz, I. Fröhlich, V. Frolov, R. Garfagnini, A. Grasso, S. Heinz, W.W. Jacobs, W. Kühn, A. Maggiora, M. Maggiora, A. Manara, D. Panzieri, H.-W. Pfaff, G. Piragino, A. Popov, J. Ritman, P. Salabura, V. Tchalyshov, F. Tosello, S.E. Vigdor, and G. Zosi, Phys. Rev. Lett. **89**, 092001 (2002).

Submitted

*† Azimuthal anisotropy and correlations in the hard scattering regime at RHIC, C. Adler *et al.*, for the STAR collaboration, submitted to Phys. Rev. Lett.

*† Centrality dependence of high- p_T hadron suppression in Au+Au collisions at $\sqrt{s_{NN}} = 130$ GeV, C. Adler *et al.*, for the STAR collaboration, submitted to Phys. Rev. Lett.

*† Coherent ρ^0 production in ultra-peripheral heavy ion collisions, C. Adler *et al.*, for the STAR collaboration, submitted to Phys. Rev. Lett.

*† Kaon production and kaon to pion ratio in Au+Au collisions at $\sqrt{s_{NN}} = 130$ GeV, C. Adler *et al.*, for the STAR collaboration, submitted to Phys. Rev. Lett.

† $K^(829)^0$ production in relativistic heavy ion collisions at $\sqrt{s_{NN}} = 130$ GeV, C. Adler *et al.*, for the STAR collaboration, submitted to Phys. Rev. Lett.

* Progress toward a new measurement of the parity violating asymmetry in $\bar{n} + p \rightarrow d + \gamma$, W.M. Snow, W.S. Wilburn, J.D. Bowman, M.B. Leuschner, S.I. Pentilla, V.R. Pomeroy, D.R. Rich, E.I. Sharapov, and

V. Yuan, accepted for publication in Nucl. Instrum. and Methods.

* Simultaneous polarization analysis of Zeeman splitting of surface scattered neutrons using a polarized ^3He neutron spin analyzer, D. Hussey, C. Bailey, W.M. Snow, D. Rich, S. Fan, B. Neff, G.P. Felcher, and S. te Velthuis, accepted for publication in Physica A.

Conference Proceedings

- invited, ◦ contributed, ¶ poster

Proceedings on prior conferences published in FY2002

Workshop on Fundamental Physics with Pulsed Neutron Beams, Durham, North Carolina, June 1-3, 2000, eds. C.R. Gould, G.L. Greene, F. Plasil, and W.M. Snow (World Scientific, 2001).

- The Indiana-NIST-Hamilton polarized ^3He spin filter program, T.R. Gentile, D.R. Rich, A.K. Thompson, C. Bailey, M. Gericke, D. Hussey, B. Neff, W.M. Snow, G.L. Jones, and E. Wildman, p. 230.
- Measurement of the parity violating asymmetry in A_γ in $\vec{n} + p \rightarrow d + \gamma$, W.M. Snow, A. Bazhenov, C.S. Blessinger, J.D. Bowman, T.E. Chupp, K.P. Coulter, S.J. Freeman, B.K. Fujikawa, T.R. Gentile, G.L. Greene, G. Hansen, G.E. Hogan, S. Ishimoto, G.L. Jones, J.N. Knudson, E. Kolomenski, S.K. Lamoreaux, M.B. Leuschner, A. Msaiki, Y. Masuda, Y. Matsuda, G.L. Morgan, K. Morimoto, C.L. Morris, H. Nann, S.I. Pentilla, A. Pirozkov, V.R. Pomeroy, D.R. Rich, A. Serebrov, E.I. Sharapov, D.A. Smith, T.B. Smith, W.S. Wilburn, R.C. Welch, F.E. Weitfeldt, V.W. Yuan, and J. Zerger, p. 203.
- Workshop summary: Fundamental neutron physics in the United States: An opportunity in nuclear, particle, and astrophysics for the next decade, G. Greene, W.M. Snow, C. Gould, and F. Plasil, p. 235.

International Workshop on the Spin Structure of the Proton and Polarized Collider Physics, Trento, Italy, July 23-28, 2001, Nucl. Phys. Proc. Suppl. 105, 62 (2002).

- A measurement of the strange quark contribution to the nucleon spin via neutrino-nucleon elastic scattering, R. Tayloe.

Proc. of the Ninth International Workshop on Polarized Sources and Targets, Nashville, Indiana, USA, Sept. 30 - Oct. 4, 2001, eds. V.D. Derenchuk and B. v. Przewoski, World Scientific, 2002

- Development of a polarized deuteron beam for the IUCF Cooler, E.J. Stephenson, C.E. Allgower, A.D. Bacher, V. Derenchuk, H. Nann, P. Pancella, and T. Rinckel, p. 304.
- Development of polarized ^3He -based neutron spin filters at IUCF, W.M. Snow, D. Hussey, C. Bailey, A. Belov, T.B. Smith, T.R. Gentile, D.R. Rich, A.K. Thompson, and G.L. Jones, p. 248.
- Nuclear polarization of recombined hydrogen atoms, T. Wise, W. Haeberli, B. Lorentz, P.A. Quin, F. Rathmann, B. Schwartz, T.G. Walker, A. Wellinghausen, J.T. Balewski, J. Duskow, H.O. Meyer, R.E. Pollock, B. v. Przewoski, T. Rinckel, Swapan K. Saha, and P.V. Pancella, p. 16.
- A polarimeter for proton beams with a very low duty factor, E.J. Stephenson, S. Golbeck, B. von Przewoski, T. Rinckel, and P. Schwandt, p. 294.
- Recent improvements in CIPIOS intensity and operation, V.P. Derenchuk and A.S. Belov, p. 210.
- * RHIC pC CNI polarimeter, current status and future plans, I.G. Alekseev, M. Bai, B. Bassalleck, G. Bunce, A. Deshpande, S. Dhawan, J. Duskow, S. Eilerts, D.E. Fields, Y. Goto, H. Huang, V. Hughes, K. Imai, M. Ishihara, V.P. Kanavets, K. Kurita, K. Kwiatkowski, B. Lewis, B. Lozowski, W. Mackay, Y. Makdisi, H.O. Meyer, B.V. Morozov, M. Nakamura, B. v. Przewoski, T. Rinckel, T. Roser, A. Rusek, N. Saito, B. Smith, H. Spinka, D.N. Svirida, M. Syphers, A. Taketani, T.L. Thomas, J. Tojo, D. Underwood, D. Wolfe, K. Yamamoto, and L. Zhu, p. 299.
- A vector and tensor polarized internal deuterium target for the IUCF Cooler, B. v. Przewoski, J. Balewski, W.W. Daehnick, J. Duskow, W. Haeberli, R. Ibal, B. Lorentz, H.O. Meyer, P.V. Pancella, R.E. Pollock,

F. Rathmann, T. Rinckel, Swapan K. Saha, B. Schwartz, P. Thorngr n-Engblom, A. Wellinghausen, T.J. Whitaker, and T. Wise, p. 57.

Conferences held in FY2002

First Joint Meeting of the Nuclear Physics Divisions of APS and JPS, Wailea, Maui, Hawaii, October 17–20, 2001, Bull. Am. Phys. Soc. 46, 2001.

- ¶ BoONE oil scintillation tests at IUCF, N. Walbridge, R. Tayloe, and H. Meyer, p. 108.
- * Caloric curve for 8 GeV/c negative pion and antiproton on gold reactions, A. Ruangma, R. LaForest, E. Martin, E. Ramakrishnan, D.J. Rowland, E.M. Winchester, S.J. Yennello, L. Beaulieu, W.C. Hsi, K. Kwiatkowski, T. Lafort, V.E. Viola, L. Pienkowski, R.G. Korteling, H. Breuer, S. Gushue, L.P. Remsburg, B. Back, and A. Botvina, p. 48.
- Commissioning of a magnetic channel to search for the isospin-forbidden $dd \rightarrow \alpha\pi^0$ reaction, E.J. Stephenson, C. Allgower, V. Anferov, A.D. Bacher, G.P.A. Berg, J. Doskow, C.C. Foster, W. Fox, D. Friesel, T. Hall, H. Nann, T. Rinckel, K. Solberg, M.A. Pickar, P.V. Pancella, N. Chujko, A. Kuznetsov, V. Medvedev, D. Patalahka, A. Prudkoglyad, P.A. Semenov, A. Smith, H.M. Spinka, J. Rapaport, S. Shastri, G.A. Miller, and U. von Kolck, p. 144.
- Comparison between chiral and one-boson-exchange nucleon-nucleon potentials through (p,p') reactions, F. Sammarruca, D. Alonso, and E.J. Stephenson, p. 139.
- Complete set of polarization observables in $pp \rightarrow pp\pi^0$ near threshold, H.O. Meyer, A. Wellinghausen, J.T. Balewski, J. Doskow, R.E. Pollock, B.v. Przewoski, T. Rinckel, P. Th rngren-Engblom, L.D. Knutson, W. Haeberli, B. Lorentz, F. Rathmann, B. Schwartz, T. Wise, W.W. Daehnick, Swapan K. Saha, and P.V. Pancella, p. 62.
- * Low energy neutrino spectroscopy, T. Bowles *et al.* for the LENS Collaboration, p. 66.
- ¶ Magnetic field analysis of a solenoid for storing and transporting polarized ^3He , J. Hartfield and W.M. Snow, p. 101.
- * Measuring the proton asymmetry from the decay of polarized neutrons, A.K. Komives, M.S. Dewey, T.R. Gentile, J.S. Nico, A.K. Thompson, and W.M. Snow, p. 25.
- * A measurement of the strange-spin of the nucleon via neutrino-nucleon elastic scattering, R. Tayloe for the LSND Collaboration, p. 120.
- ¶ * Raytracing at the Grand Raiden spectrometer at RCNP, H. Abend, R.G.T. Zegers, M. Fujiwara, H. Fujimura, K. Hara, M. Yosoi, H. Fujita, Y. Fujita, T. Mibe, H.P. Yoshita, H. Akimune, H. Yamagata, K. Yamasaki, T. Kawabata, M. Uchida, T. Ishikawa, A.M. van der Berg, M.N. Harakeh, S. Gales, S. Nakayama, and H. Toyokawa, p. 96.
- Polarization transfer in (\vec{p}, \vec{n}) reactions at 197 MeV, J. Rapaport, M. Palarczyk, C. Hautala, X. Yang, K. Hicks, D.L. Prout, G. Savopoulos, C.C. Foster, C.D. Goodman, J. Sowinski, I. van Heerden, D. Cooper, E. Sugarbaker, B. Anderson, A. Baldwin, D.M. Manley, R. Madey, J. Watson, W.-M. Zhang, R. Howes, M.S. Islam, T.N. Taddeucci, B.A. Luther, W. Gl ckle, and H. Witafa, p. 47.
- Scintillator properties of mineral oil, N. Walbridge, H.O. Meyer, and R. Tayloe, p. 123.
- Spin correlations and the three nucleon force in pd elastic scattering at 135 and 200 MeV, B. von Przewoski for the PINTEX Collaboration, p. 132.
- Vector and tensor polarized deuterium target at the IUCF Cooler, J. Balewski, J. Doskow, H.O. Meyer, R.E. Pollock, B.v. Przewoski, T. Rinckel, A. Wellinghausen, T.J. Whitaker, W. Haeberli, B. Schwartz, B. Lorentz, F. Rathmann, and P.V. Pancella, p. 81.

Workshop on Heavy Ion Reactions and Matter under Extreme Conditions, Michigan State University, East Lansing, Michigan, November 16-17, 2001

- Non-Equilibrium Cluster Emission, Vic Viola.

International Conference on Accelerator and Large Experimental Physics Control Systems, San Jose, CA, November 27-30, 2001.

- ¶ Design of the MPRI Control System, J.C. Collins, M. Ball, B. Broderick, J. Katuin, Wm. Manwaring, and N. Schreuder.

International Workshop on Hadron Structure and Hadron Spectroscopy, Trieste, Italy, February 18-20, 2002.

- The Spin Program at STAR, Scott W. Wissink, for the STAR Collaboration.

Workshop on testing QCD through spin observables in nuclear targets, University of Virginia, Charlottesville, VA, April 18-20, 2002.

- Review of polarized, internal deuterium targets, B. von Przewoski.

April 2002 Meeting of the American Physical Society, Albuquerque, New Mexico, April 20-23, 2002, Bull. Am. Phys. Soc. 47.

- Precision Measurement of the n-H, n-D, and n-³He Coherent Scattering Length, K. Schoen, T. Black, W.M. Snow, P. Huffman, M. Arif, H. Kaiser, D. Jacobson, S. Werner, and S. Lamoreaux, p. 99.
- Spin correlation observables in $\vec{p}\vec{d} \rightarrow t\pi^+$ at 250 and 275 MeV, B. von Przewoski, J. Doskow, R. Ibal, H.O. Meyer, R.E. Pollock, T. Rinckel, T.J. Whitaker, W.W. Daehnick, Swapan K. Saha, P.V. Pancella, P. Thörngren-Engblom, and T. Wise, p. 203.
- Effects of the exact Pauli exclusion operator on (p,p') reactions, E.J. Stephenson, R.C. Johnson, and F. Sammarruca, p. 204.

International Conference on Neutrino Physics and Astrophysics, Munich, Germany, May 25-30, 2002.

- The miniBooNE experiment: Status and plans, R. Tayloe.

European Particle Accelerator Conference 2002, Paris, France, June 2-7, 2002.

- A p+deuterium proton polarimeter at 200 MeV, H. Huang, T. Roser, Z. Zelenski, E. Stephenson, and R. Toole

Annual Meeting of the Canadian Association of Physics, Quebec City, Quebec, Canada, June 3, 2002.

- The Nucleus Liquid-Gas Phase Transition, Vic Viola.

National Meeting of the American Chemical Society, Boston, Massachusetts, August 19-20, 2002

- Vaporizing Nuclei, Vic Viola.

The 15th International Spin Physics Symposium, Brookhaven National Laboratory, Upton, NY, September 9-14, 2002.

- Forward p + p $\rightarrow \pi^0 + X$ Production at STAR, G. Rakness.
- Midrapidity Spin Asymmetries at STAR, J. Balewski.
- Polarized D⁻ Operation and Development of the IUCF Ion Source CIPIOS, V. Derenchuk.
- Polarized Internal Target Experiments (PINTEX) at the Indiana Cooler, B. von Przewoski.
- Spin and the Three-Nucleon Force Effects, B. von Przewoski.
- Summary of the PST2001 Workshop, V. Derenchuk.

Colloquia

Vic Viola

- Matter at the Extremes: from Nuclei to Supernovae, Department of Chemistry, University of Missouri at Rolla, October 17, 2001.

Seminars

Rolf Ibal

- Kaon Production with MOMO at COSY, Indiana University Cyclotron Facility, November 9, 2001.

Barbaba von Przewoski

- Pintex, Indiana University Cyclotron Facility, January 11, 2002.
- Spin correlations and the three nucleon force in p+d elastic scattering at 135 and 200 MeV, University of Michigan, Ann Arbor, MI, February 15, 2002.

Edward J. Stephenson

- CSB, Indiana University Cyclotron Facility, April 12, 2002.