Nuclear Group Publications (since 1990)

1990 (5) 10*

P.A. DeYoung, C.J. Gelderloos*, D. Kortering*, J. Sarafa*, K. Zienert*, M.S. Gordon, G.P. Gilfoyle, X. Lu, R.L. McGrath, D.M. deCastro Rizzo, J.M. Alexander, G. Auger, S. Kox, L.C. Vaz, C. Beck, D.J. Henderson, D.G. Kovar, and M. Vineyard, "Particle-Particle Correlations and Lifetimes of Composite Nuclei: New tests for the Evaporation Model and for Statistical Equilibrium." Phys. Rev.**C41**, R1885 (1990).

R.L. McGrath, A. Elmaani, J.M. Alexander, P.A. DeYoung, T. Ethvignot, M.S. Gordon, and E. Renshaw, "A Monte Carlo Reaction Simulation for Small-Angle Correlation Between Light Charged Particles." Computer Physics Communications **59**, 507 (1990).

Paul A. DeYoung and James D. van Putten, "A Continuous Automatic Correction Algorithm for Instrumental Drifts." Nucl. Instr. and Meth. **A292**, 681 (1990).

P.A. DeYoung, J.M. Alexander, J.J. Kolata, D. Kortering*, R.A. Kryger, C.J. Gelderloos*, M.S. Gordon, R.L. McGrath, J. Sarafa*, and R. Sedlar*, "Probing the Lifetime of Excited Composite Nuclei with Particle-Particle Correlations." Proceedings of the Corinne 90 conference (Nantes, France), International Workshop on Particle Correlations and Interferometry in Nuclear Collisions, edited by D. Ardouin, World Scientific (1990).

R.A. Kryger, J.J. Kolata, W. Chung, R.J. Tighe, J.J. Vega, P.A. DeYoung, C. Copi*, J. Sarafa*, D.G. Kovar, G.P. Gilfoyle, and S.K. Sigworth, "Two Particle Correlations from Neutron-Light Charged Particle Coincidences." Phys. Rev. Lett. **65**, 2118 (1990).

1991 (1) 0*

W.E. Parker, M. Kaplan, D.J. Moses, G. La Rana, D. Logan, R. Lacey, J.M. Alexander, D.M. de Castro Rizzo, P. DeYoung, R.J. Welberry, J.T. Boger, "Charge Particle Evaporation from Hot Composite Nuclei: Evidence Over a Broad Z Range for Distortions from Cold Nuclear Profiles." Phys. Rev. **C44**, 774 (1991).

1992 (3) 3*

G.P. Gilfoyle, M.S. Gordon, R.L. McGrath, G. Auger, J.M. Alexander, D.G. Kovar, M.F. Vineyard, C. Beck, D.J. Henderson, P.A. DeYoung and D. Kortering*, "Heavy Residue Production in 215 MeV $^{16}O+^{27}Al$ Reactions." Phys. Rev. **C46**, 265 (1992).

M.S. Gordon, R.L. McGrath, J.M. Alexander, P.A. DeYoung, Xiu qin Lu, D.M. de Castro Rizzo, and G.P. Gilfoyle, "Particle-Particle Correlations: Independent Particle Emission versus Sequential Decay of Heavy Fragments." Phys. Rev. **C46**, R1 (1992).

R.A. Kryger, J.J. Kolata, W. Chung, S. Dixit, R.J. Tighe, J.J. Vega, P.A. DeYoung, C. Copi*, J. Sarafa*, D.G. Kovar, G.P. Gilfoyle, and S.K. Sigworth, "Neutron-Charged

Particle Correlation in the 3.8 MeV per Nucleon $^{16}O+^{12}C$ and 13.4 MeV per Nucleon $^{16}O+^{27}Al$ Reactions." Phys. Rev. **C46**, 1887 (1992).

1993 (1) 0*

P.A. DeYoung, P.L. Jolivette, and N. Rouze, "Experimental Verification of the Heisenberg Uncertainty Principle – An Advanced Undergraduate Laboratory." Am. J. Phys. **61**, 560 (1993).

1994 (3) 2*

J. Boger, John M. Alexander, A. Elmaani, S. Kox, Roy A. Lacey, and A. Narayanan, D. J. Moses, M. A. McMahan, P. A. DeYoung and C. J. Gelderloos*, "Intermediate Mass Fragments from the Reactions 486, 550, 640, and 730 MeV $^{86}Kr+^{63}Cu$." Phys. Rev. **C49,** 1597 - 1602 (1994).

J. Boger, John M. Alexander, G. Auger, A. Elmaani, S. Kox, Roy A. Lacey, and A. Narayanan, Morton Kaplan, D. J. Moses, M. A. McMahan, P. A. DeYoung, C. J. Gelderloos*, G. Gilfoyle, "Light Charged Particle and Intermediate Mass Fragment Emission in the Reaction 640 MeV $^{86}Kr+^{63}Cu$." Phys. Rev. **C49**, 1576 - 1586 (1994).

J.W. Harris and the STAR Collaboration, "The STAR Experiment at the Relativistic Heavy Ion Collider." Nucl. Phys. **A566**, 277c (1994).

1995 (1) 0*

P.A. DeYoung, N.N. Ajitanand, J.M. Alexander, V. Datar, C.J. Gelderloos, G. Gilfoyle, M.S. Gordon, R.L. McGrath, G. F. Peaslee, and J. Sarafa; "Correlation Measurements of Light Charged Particles Emitted from $^{32}S + ^{27}Al$ Reactions at Energies of 105 MeV and 215 MeV." Phys. Rev., **C52**, 3488 (1995).

1996 (4) 6*

P.A. DeYoung, T. Butler*, C. Dykstra*, G. Gilfoyle, M. Nimchek, A. Snyder, J. Hinnefeld, M. Kaplan, J.J. Kolata, J. Kugi, P. Santi, W. Chung, and R. Kryger, "Small Angle Neutron-Neutron Correlation Functions for the $^{16}O+^{27}Al$ Reaction at 220 MeV." Nucl. Phys. **A597**, 127 (1996).

P.A. DeYoung, D. LaPointe*, J. Levy*, and W. Lorenz*, "Non-linear Coupled Oscillators and Fourier Transforms - An Advanced Undergraduate Laboratory." Am. J. Phys. **64**, 898 (1996).

M. Kaplan, C. Brown, J. Downer, Z. Milosevich, E. Vardaci, J. Whitfield, C. Copi*, and P. DeYoung, "Probing the Degrees of Freedom in Hot Composite Nuclei via Charged Particle Emission Studies." Advances in Nuclear Dynamics, Edited by W. Bauer and A. Mignerey, Plenum Press New York **113** (1996).

C.J. Gelderloos, J.M. Alexander, J. Boger, M.T. Magda, A. Narayanan, P. DeYoung, A. Elmaani, M.A. McMahan, "Classical tests for statistical evaporation at 680 MeV Ar+Ag." Phys. Rev. **C54**, 3056 (1996).

1997 (1) 5*

P.A.DeYoung, C.Dykstra*, P.Gonthier, C.Mader, G.F.Peaslee, D.Peterson*, R.Sedlar*, S.Sundbeck*, N.Shaw*, G.Westfall, D.Craig, R.Lacey, T.Li, T.Reposeur, A.Vander Molen, J.Winfield, S.Yennello, and A.Nadasen, "Sensitivity of Small-angle Correlations of Light Charged Particles to Reaction Mechanisms in the $^{16}O + ^{27}Al$ reaction at 40 MeV nucleon." Phys. Rev. **C56**, 244 (1997).

1998 (4) 7*

E. Colin, R. Sun, N. N. Ajitanand, J. M. Alexander, M. A. Barton*, P. A. DeYoung, A. Elmaani, C. J. Gelderloos, E. E. Gualtieri, D. Guinet, S. Hannuschke, J. A. Jaasma*, L. Kowalski, R. A. Lacey, J. Lauret, E. Norbeck, R. Pak, G. F. Peaslee, M. Stern, N. T. B. Stone, S. D. Sundbeck*, A. M. Vander Molen, G. D. Westfall, and J. Yee, "Splintering Central Collisions: Systematics of Momentum and Energy Deposition for (17-115) A MeV ^{40}Ar." Phys. Rev. **C57**, R1032 (1998).

G. F. Peaslee, J. M. Lantz, M. M. Walczak, "The Benign Hamburger." J. College Sci. Teaching **28,** 21 (1998).

P. A. DeYoung, B. Hughey*, P. L. Jolivette, G. F. Peaslee, J. J. Kolata, V. Guimaraes, D. Peterson, P. Santi, H. C. Griffin, J. A. Zimmerman, J. D. Hinnefeld, "Fusion of a Neutron Skin Nucleus: The $^{209}Bi(^{6}He,4n)$ Reaction." Phys. Rev. **C58**, 3442 (1998).

J. J. Kolata, V. Guimaraes, D. Peterson, P. Santi, R. White-Stevens, P. A. DeYoung, G. F. Peaslee, B. Hughey*, B. Atallah*, M. Kern*, P. L. Jolivette, J. A. Zimmerman, M. Y. Lee, F. D. Becchetti, E. F. Aguilera, E. Martinez-Quiroz, J. D. Hinnefeld, "Sub-Barrier Fusion of ^{6}He with ^{209}Bi." Phys. Rev. Lett. **81**, 4580 (1998).

1999 (5) 6*

De Young, Paul A., "Distributing the Research Model: Working with Faculty on Sabbatical." Council on Undergraduate Research Quarterly **20,** 25-27 (1999).

G. F. Peaslee, J. D. Wilcox*, D. A. Carlson*, R. J. Timmer*, A. L. VanWyngarden*, and E. C. Hansen, "A Comparison between PIXE Studies and Electron Microprobe Studies of Rocks from Southern India." Proceedings, 15th International Conference of the Application of Accelerators in Research and Industry, AIP Press **475**, 456 (1999).

M. Y. Lee, F. D. Becchetti, T. W. O'Donnell, D. A. Roberts, J. A. Zimmerman, J. J. Kolata, V. Guimaraes, D. Peterson, P. Santi, P. A. DeYoung, G. F. Peaslee, and J. D. Hinnefeld, "Study of Nuclear Reactions with Intense High-purity Low-energy

Radioactive Ion Beams Using a Versatile Multi-configuration Dual Superconducting-Solonoid System." Nucl. Instr. Meth. Phys. Research **A422,** 536 (1999).

C. M. Mader, P. J. Jolivette, and G. F. Peaslee, "The Restructured "Advanced Laboratory" at Hope College: A Step Toward Independence." Proceedings, 15th International Conference of the Application of Accelerators in Research and Industry, AIP Press **475**, 1110 (1999).

C.M. Brown, Z. Milosevich, M. Kaplan, E. Vardaci, P. DeYoung, J.P. Whitfield, D. Peterson*, C. Dykstra*, P. Karol, and M.A. McMahan, "Light Charged Particle Emission in the Matched Reactions 280 MeV ^{40}Ar+^{27}Al and 670 MeV ^{55}Mn+^{12}C: Inclusive Studies." Phys. Rev. **C60**, 064612 (1999).

2000 (9) 28*

P. DeYoung, C.M. Brown, Z. Milosevich, M. Kaplan, E. Vardaci, J.P. Whitfield, D. Peterson, C. Dykstra*, P. Karol, and M.A. McMahan, "Light Charged Particle Emission in the Matched Reactions 280 MeV ^{40}Ar+^{27}Al and 670 MeV ^{55}Mn+^{12}C: Coincidence Results." Phys. Rev. **C61**, 054611 (2000).

R. Sun, E. Colin, N. N. Ajitanand, J. M. Alexander, M. A. Barton*, P. Danielewicz, P. A. DeYoung, K. L. Drake*, A. Elmaani, C. J. Gelderloos, E. E. Gualtieri, D. Guinet, S. Hannuschke, J. A. Jaasma*, L. Kowalski, R. A. Lacey, J. Lauret, E. Norbeck, R. Pak, G. F. Peaslee, M. Stern, N. T. B. Stone, S. D. Sundbeck*, A. M. Vander Molen, G. D. Westfall, and J. Yee, "Nuclear Stopping and Energy Removal in Central Heavy Ion Collisions of up to 115 MeV Nucleon." Phys. Rev. Lett. **84**, 43 (2000).

P. A. DeYoung, M. J. Goupell*, B. V. Atallah*, J. A. Haglund*, P. L. Jolivette, M. K. MacDermaid*, G. F. Peaslee, J. J. Kolata, E. D. Berners, D. Peterson, J. von Schwarzenberg, and J. D. Hinnefeld, "Evidence for Non-Equilibrium Proton Emission in a Low-Energy Heavy-Ion Reaction." Phys. Rev., **C61**, 024603 (2000).

Rulin Sun, E. Colin, N. N. Ajitanand, John M. Alexander, M. A. Barton*, P. A. DeYoung, K. L. Drake*, A. Elmaani, C. J. Gelderloos, E. E. Gualtieri*, D. Guinet, S. Hannuschke, J. A. Jaasma*, L. Kowalski, Roy A. Lacey, J. Lauret, E. Norbeck, R. Pak, G. F. Peaslee, M. Stern, N. T. B. Stone, S. D. Sundbeck*, A. M. Vander Molen, G. D. Westfall, L. B. Yang, and J. Yee, "Isotropic Emission Components in Splintering Central Collisions: 17-115 A MeV ^{40}Ar + Cu, Ag, Au." Phys. Rev. **C61**, 061601 (2000).

E. Colin, Rulin Sun, N. N. Ajitanand, John M. Alexander, M. A. Barton*, P. A. DeYoung, K. L. Drake*, A. Elmaani, C. J. Gelderloos, E. E. Gualtieri*, D. Guinet, S. Hannuschke, J. A. Jaasma*, L. Kowalski, Roy A. Lacey, J. Lauret, E. Norbeck, R. Pak, G. F. Peaslee, M. Stern, N. T. B. Stone, S. D. Sundbeck*, A. M. Vander Molen, G. D. Westfall, L. B. Yang, and J. Yee, "Nuclear Disassembly in Violent Central Collisions at Intermediate Energies: 65-115 A MeV ^{40}Ar + Cu, Ag, Au." Phys. Rev. **C61**, 067602 (2000).

E. F. Aguilera, J. J. Kolata, F. M. Nunes, F. D. Becchetti, P. A. DeYoung, M. Goupell*, V. Guimares, B. Hughey*, M. Y. Lee, D. Lizcano, E. Martinez-Quiroz, A. Nowlin*, T. W. O'Donnell, G. F. Peaslee, D. Peterson, P. Santi, and R. White-Stevens, "Transfer and/or Breakup Modes in the ^{6}He + ^{209}Bi Reaction Near the Coulomb Barrier." Phys. Rev. Lett. **84**, 5058 (2000).

B. E. Bodenbender, E. C. Hansen, G. F. Peaslee, J. W. Peterson, "The Environmental Science Minor: A Disciplinary Approach to Interdisciplinary Studies with aGrounding in Undergraduate Research." CUR Quarterly December, **72** (2000).

P. A. DeYoung, B. Atallah*, B. Hughey*, P. L. Jolivette, M. Kern*, G. F. Peaslee, V. Guimarães, J. J. Kolata, D. Peterson, P. Santi, R. White-Stevens, E. F. Aguilera, E. Martinez-Quiroz, F. D. Becchetti, M. Y. Lee, J. A. Zimmerman, J. D. Hinnefeld and O. A. Capurro, "Angular Momentum in the ^{6}He + ^{209}Bi Reaction Deduced from Isomer Ratio Measurements." Phys. Rev. **C62**, 047601 (2000).

D. Lizcano, E. F. Aguilera, E. Martinez Quiroz, J. J. Kolata, V. Guimaraes, D. Peterson, P. Santi, R. White Stevens, P. A. DeYoung, G. F. Peaslee, M. Goupell*, B. Hughey*, A. Nowlin*, F. D. Bechetti, T. O'Donnell, M. Y. Lee, and F. M. Nunez, "Alpha Particle Emission from ^{6}He + ^{209}Bi ." Rev. Mex. Fis. **46**, 116 (2000).

2001 (6) 6*

Z. Milosevich, E. Vardaci, P.A. DeYoung, C.M. Brown, M. Kaplan, J.P. Whitfield, D. Petersen, C. Dykstra, M. Barton*, P.J. Karol, and M.A. McMahan, "Small Angle Particle-Particle Correlation Measurements in the Reactions 280 MeV ^{40}Ar+^{27}Al and 670 MeV ^{55}Mn+^{12}C." Nucl. Phys. **A686**, 460 (2001).

M.Kaplan, C.J. Copi*, P.A. DeYoung, G.J. Gilfoyle, P.J. Karol, D.J. Moses, W.E. Parker, K.E. Rehm, J.Sarafa*, and E. Vardaci, "Studies of Light Charged Particle Emission From Fission and ER Reactions in the System 344 MeV ^{28}Si+^{121}Sb→^{149}Tb (E=240 MeV)." Nucl. Phys. **A686,** 527 (2001).

De Young, Paul A., "Elliptic Flow in Au+Au Collisions at Snn=^{130}BeV. The STAR Collaboration." Phys. Rev. Lett. **86,** 403 (2001).

R. L. Varner, J. R. Beene, M. Chartier, J. F. Liang, D. Shapira, D. Bazin, B. Blank, B. Sherrill, M. Thoennessen, P. A. DeYoung, and G. F. Peaslee, "Excitation of the Isovector Giant Quadrupole Resonance in ^{208}Pb by Coulomb Inelastic Scattering." Nucl. Phys. **A687**, 140c (2001).

E.F. Aguilera, J.J. Kolata, F.D. Becchetti, P.A. DeYoung, J.D. Hinnefeld,A. Horváth, L. O. Lamm, Hye-Young Lee, D. Lizcano, E. Martinez-Quiroz, P. Mohr, T.W. O'Donnell, D. A. Roberts, and G. Rogachev, "Elastic Scattering and Transfer in the ^{6}He+^{209}Bi System Below the Coulomb Barrier." Phys. Rev. **C63**, 061603 (2001).

G. V. Rogachev, J. J. Kolata, F. D. Becchetti, P. A. DeYoung, M. Hencheck, K. Hellend*, J. D. Hinnefeld, B. Hughey*, P. L. Jolivette, L. M. Kiessel*, H. Y. Lee, M. Y. Lee, T. W. O'Donnell, G. F. Peaslee, D. Peterson, D. A. Roberts, P. Santi, and S. A. Shaheen, "Proton Elastic Scattering from ^{7}Be at Low Energies." Phys. Rev. **C64**, 061601 (2001).

2002 (4) 0*

P.A. De Young, B. Mulder, "Rapid, Precise Position Measurements in the General Physics Laboratory." American Journal of Physics **70,** 1226 (2002).

J. J. Kolata, V. Z. Goldberg, L. O. Lamm, M. G. Marino, C. J. O'Keeffe, G. Rogachev, E. F. Aguilera, H. García-Martínez, E. Martinez-Quiroz, P. Rosales, F. D. Becchetti, T. W. O'Donnell, D. A. Roberts, J. A. Brown, P. A. DeYoung, J. D. Hinnefeld, S. A. Shaheen, "Elastic Scattering and Transfer in the ^{8}Li+^{208}Pb System Near the Coulomb Barrier." Phys. Rev. **C65**, 054616 (2002).

T. J. Ognibene, G. Bench, T. A. Brown, G. F. Peaslee, and J. S. Vogel, "A new accelerator Mass Spectrometry System for ^{14}C-quantification of Biochemical Sample." Int. J. Mass. Spect. **218**, 255 (2002).

G. F. Peaslee, "The PUI Provision in the NSF-MRI Program." CUR Quarterly XXIII **78**, (2002).

2003 (8) 2*

G.V. Rogachev, J.J. Kolata, L.V. Grigorenko, F.D. Becchetti, P.A. DeYoung, J.D. Hinnefeld, L.O. Lamm, J. Lupton, T.W. O´Donnell, D.A. Roberts, and S. Shaheen, "Final State Interaction or a ^{3}H Excited State?" Phys. Rev. **C68**, 024602 (2003).

B. Luther, T. Baumann, M. Thoennessen, J. Brown, P. DeYoung, J. Finck, J. Hinnefeld, R. Howes, K. Kemper, P. Pancella, G. Peaslee, W. Rogers and S. Tabor, "MoNA - The Modular Neutron Array." Nuclear Instruments and Methods **A505**, 33-35 (2003).

F. D. Becchetti, M. Y. Lee, T. W. O'Donnell, D. A. Roberts, J. J. Kolata, L. O. Lamm, G. Rogachev, V. Guimarães, P. A. DeYoung and S. Vincent, "The Twinsol Low-energy Radioactive Nuclear Beam Apparatus: Status and Recent Results." Nuclear Instruments and Methods **A505**, 377-380 (2003).

L.R. Gasques, L.C. Chamon, D. Pereira, V. Guimaraes, A. Lepine-Szily, M.A.G. Alvarez, E.S.Rossi Jr., C. P.Silva, B. V. Carlson, J. J. Kolata, L. Lamm, D. Peterson, P. Santi, S. Vincent, P. A. DeYoung, G. F. Peaslee, "Experimental Determination of the Surface Density for the ^{6}He Exotic Nucleus." Phys. Rev. **C67**, 024602 (2003).

P. Santi, J. J. Kolata, V. Guimaraes, D. Peterson, R. White-Stevens, E. Rischette, D. Bazin, B. M. Sherrill, A. Navin, P. A. DeYoung, P. L. Jolivette, G. F. Peaslee, and R. T.

Guray, "Structure of the ^{10}Li Nucleus via the ^{9}Li(d,p)^{10}Li Reaction." Phys. Rev. **C67**, 024606 (2003).

Ted J. Ognibene, Graham Bench, John S. Vogel, Graham F. Peaslee, and Steve Murov, "A High Throughput Method for the Conversion of CO_2 Obtained from Biochemical Samples to Graphite in Septa-sealed Vials for Quantification of ^{14}C Samples via Accelerator Mass Spectrometry." J. Anal. Chem. **75**, 2192-2196 (2003).

Paul DeYoung, Benjamin B. Hilldore*, Lee M. Kiessel*, and Graham F. Peaslee, "Analysis of Event-Mode Data with Interactive Data Language." Nucl. Instr. and Methods **A505**, 294 (2003).

T. Baumann, J. A. Brown, P. DeYoung, J.E. Finck, J. D. Hinnefeld, R. Howes, K.W.Kemper, B.A.Luther, P.V.Pancella, G. F. Peaslee, W. F. Rogers, S. L. Tabor and M. Thoennessen, "MoNA - The Modular Neutron Array at the NSCL." AIP Conference Proceedings **680**, 554-556 (2003).

2004 (5) 4*

J.P. Bychowski*, P.A. DeYoung, B.B. Hilldore*, J.D. Hinnefeld, A. Vida*, F.D. Becchetti, J. Lupton, T.W. O'Donnell, J.J Kolata, G. Rogachev, and M. Hencheck, "^{209}Bi(^{6}He,a) Reaction Mechanisms Studied Near the Coulomb Barrier Using n-a Coincidence Measurements." Phys. Lett. **B596,** 26-31 (2004).

R.R.C.Clement, D.Bazin, W.Benenson, B.A.Brown, A.L.Cole, M.W.Cooper, P.A.DeYoung, A.Estrade, M.A.Famiano, N.H.Frank, A.Gade, T.Glasmacher, P.T.Hosmer, W.G.Lynch, F.Montes, W.F.Mueller, G.F.Peaslee, P.Santi, H.Schatz, B.M.Sherrill, M.-J.van Goethem, M.S.Wallace, "New Approach for Measuring Properties of rp-Process Nuclei." Phys. Rev. Lett., **92**,172502 (2004).

J.J.Kolata, E.F.Aguilera, F.D.Becchetti, Y.Chen, P.A.DeYoung, H.Garcia-Martinez, J.D.Hinnefeld, J.H.Lupton, E.Martinez-Quiroz, G.F.Peaslee, "Elastic Scattering of ^{10}Be on ^{208}Pb near the Coulomb Barrier." Phys.Rev. **C69**, 047601 (2004).

G.V.Rogachev, P.Boutachkov, A.Aprahamian, F.D.Becchetti, J.P.Bychowski*, Y.Chen, G.Chubarian, P.A.DeYoung, V.Z.Goldberg, J.J.Kolata, L.O.Lamm, G.F.Peaslee, M.Quinn, B.B.Skorodumov, A.Wohr, "Analog States of ^{7}He Observed via the ^{6}He(p, n) Reaction." Phys. Rev. Lett. **92**, 232502 (2004).

G.V.Rogachev, A.Aprahamian, F.D.Becchetti, P.Boutachkov, Y.Chen, G.Chubarian, P.A.DeYoung, A.Fomichev, V.Z.Goldberg, M.S.Golovkov, J.J.Kolata, Yu.Ts.Oganessian, G.F.Peaslee, M.Quinn, A.Rodin, B.B.Skorodumov, R.S.Slepnev, G.Ter-Akopian, W.H.Trzaska, A.Wohr, R.Wolski, "Structure of exotic ^{7}He and ^{9}He." Nucl.Phys. **A746**, 229c (2004).

2005 (8) 12*

F. D. Becchetti, R. S. Raymond, D. A. Roberts, J. Lucido, P. A. DeYoung, B. Hilldore*, J. Bychowski*, A. J. Huisman*, P. J. VanWylen*, J. J. Kolata, G. Rogachev, and J. D. Hinnefeld, "The (^{8}Li,α) Reaction at Low Energy: Direct ^{4}He Cluster Transfer?" Physical Review **C71**, 054610 (2005).

P.A. DeYoung, and G.F. Peaslee, "Simplified Electronic Signal Processing in the Small Nuclear Physics Laboratory." Nucl. Inst. and Meth. **A551**, 487 (2005).

P.A.DeYoung, P.J.Mears*, J.J.Kolata, E.F.Aguilera, F.D.Becchetti, Y.Chen, M.Cloughesy, H.Griffin, C.Guess*, J.D.Hinnefeld, H.Jiang, S.R.Jones, U.Khadka*, D.Lizcano, E.Martinez-Quiroz, M.Ojaniega, G.F.Peaslee, A.Pena*, J.Rieth*, S.VanDenDriessche, J.A.Zimmerman, "Two-neutron Transfer in the ^{6}He + ^{209}Bi Reaction near the Coulomb Barrier." Phys. Rev. **C71**, 051601 (2005).

G.V. Rogachev, A.A.Aprahamian, F.D.Becchetti, P.Boutachkov, Y.Chen, G.Chubarian, P.A.DeYoung, A.Fomichev, V.Z.Goldberg, M.S.Golovkov, J.J.Kolata, Yu.Ts.Oganessian, G.F.Peaslee, M.Quinn, A.Rodin, B.B.Skorodumov, R.S.Slepnev, G.Ter-Akopian, W.H.Trzaska, A.Wohr, R.Wolski, "Isobaric Analog States as a Tool for Spectroscopy of Exotic Nuclei." Nucl. Instrum. Methods Phys. Res. **B241**, 977 (2005).

R. H. Howes,T. Baumann, M. Thoennessen, J. Brown, P. A. DeYoung, J. Finck, J. Hinnefeld, K. W. Kemper, B. Luther, P. V. Pancella, G. F. Peaslee, W. F. Rogers, S. Tabor, "Fabrication of a Modular Neutron Array: A Collaborative Approach to Undergraduate Research." Am. J. Phys.**73**, 122 (2005).

P.Boutachkov, G.V.Rogachev, V.Z.Goldberg, A.Aprahamian, F.D.Becchetti, J.P.Bychowski*, Y.Chen, G.Chubarian, P.A.DeYoung, J.J.Kolata, L.O.Lamm, G.F.Peaslee, M.Quinn, B.B.Skorodumov, A.Wohr, "Doppler Shift as a Tool for Studies of Isobaric Analog States of Neutron-Rich Nuclei: Application to ^{7}He." Phys. Rev. Lett. **95**,132502 (2005).

P.Boutachkov, G.V.Rogachev, V.Z.Goldberg, A.Aprahamian, F.D.Becchetti, J.P.Bychowski*, Y.Chen, G.Chubarian, P.A.DeYoung, J.J.Kolata, L.O.Lamm, G.F.Peaslee, M.Quinn, B.B.Skorodumov, A.Wohr, "Isobaric Analog States of Neutron-rich Nuclei. Doppler Shift as a Measurement Tool for Resonance Excitation Functions." Eur. Phys. J. **A25**, (Supplement 1), 259 (2005).

T. Baumann, J. Boike, J. Brown, M. Bullinger, J.P. Bychowski*, S. Clark, K. Daum, P.A. DeYoung, J.V. Evans, J. Finck, N. Frank, A. Grant, J. Hinnefeld, G.W. Hitt, R.H. Howes, B. Isselhardt, K.W. Kemper, J. Longacre, Y. Lu, B. Luther, S.T. Marley, D. McCollum, E. McDonald, U. Onwuemene, P.V. Pancella, G.F.Peaslee, W.A. Peters, M. Rajabali, J. Robertson, W.F. Rogers, S.L. Tabor, M. Thoennessen, E. Tryggestad, R.E. Turner, P.J. VanWylen, N. Walker, "Construction of a Modular Large-Area Neutron Detector for the NSCL." Nucl. Instr. Meth. **A543**, 517 (2005).

2006 (6) 6*

A. Horvath, K. Ieki, A. Kiss, A. Galonsky, M. Thoennessen, T. Baumann, D. Bazin, C. A. Bertulani, C. Bordeanu, N. Carlin, M. Csanad, F. Deak, P. DeYoung, N. Frank, T. Fukuchi, Zs. Fulop, A. Gade, D. Galaviz, C. Hoffman, R. Izsk, W. A. Peters, H. Schelin, A. Schiller, R. Sugo, Z. Seres, and G. I. Veres, "Can the neutron-capture cross sections be measured with Coulomb dissociation?" Eur. Phys. J. **A27**, s1.217 (2006).

J.J.Kolata, H.Amro, M.Cloughesy, P.A.DeYoung, J.Rieth*, J.P.Bychowski*, G.Peaslee, "A Large Segmented Neutron Detector for Reaction Studies with Radioactive Beams Near the Coulomb Barrier." Nucl. Instr. Meth. Phys. Res. **A557**, 594 (2006).

P.Boutachkov, G.V.Rogachev, V.Z.Goldberg, A.Aprahamian, F.D.Becchetti, J.P.Bychowski*, Y.Chen, G.Chubarian, P.A.DeYoung, J.J.Kolata, L.O.Lamm, G.F.Peaslee, M.Quinn, B.B.Skorodumov, A.Wohr, "Doppler Shift as a Tool for Studies of Resonant (p,n) Reactions with RIBs: Spectroscopy of ^{7}He." AIP Conf. Proc. **819**, 221 (2006).

H. Amro, F.D. Becchetti, Yu Chen, H. Jiang, M. Orajuega, H.C. Griffin, J.J. Kolata, B.B. Skorodumov, J.D.Hinnefeld, and G.F.Peaslee, "α-stripping Reactions with Exotic Nuclei: ^{12}C(^{7}Be,^{3}He)^{16}O." AIP Conf. Proc. **819**, 557 (2006).

E.F. Aguilera, E. Martinez-Quiroz, H. Garcia-Martinez, D. Lizcano, J.J. Kolata, L.O. Lamm, G. Rogachev, P.A. DeYoung, C. Guess*, U. Khadka*, P.J. Mears*, F.D. Becchetti, Y. Chen, H. Jiang, J.D. Hinnefeld, and G.F. Peaslee, "Protons from ^{8}B+^{58}Ni." Revista Mexicana de Fisica **52**, 41 (2006).

A. Schiller, T. Baumann, D. Bazin, J. Brown, P. DeYoung, N. Frank, A. Gade, J. Hinnefeld, R. Howes, R.A. Kryger, J.-L. Lecouey, B. Luther, W.A. Peters, J.R. Terry, M. Thoennessen, and K. Yoneda, "First Results from MoNA." Proceedings of the International Conference of Frontiers in Nuclear Structure, Astrophysics, and Reactions, Sept. 12-17, 2005. AIP Conf. Proc. **831**, 92 (2006).

2007 (8) 7*

H. Amro, F.D. Becchetti, Hao Jing, M. Ojaruega, J.J. Kolata, B. Skorodumov, G. Peaslee, P. DeYoung, D. Denby*, J.D. Hinnefeld., "BaF Array for γ-tagged Studies with Radioactive Nuclear Beams." Nucl. Instr. and Meth. **A579**, 31 (2007).

G.V. Rogachev, J.J. Kolata, A.S. Volya, F.D. Becchetti, and P.A. DeYoung, "Spectroscopy of ^{9}C via Resonance Scattering of Protons on ^{8}B." Phys. Rev. **C75**, 014603 (2007).

A. Schiller, N. Frank, T. Baumann, D. Bazin, B.A. Brown, J. Brown, P.A. DeYoung, J.E. Finck, A. Gade, J. Hinnefeld, R. Howes, J.-L. Lecouey, B. Luther, W.A. Peters, H. Scheit, M. Thoennessen, and J.A. Tostevin, "Selective Population and Neutron Decay of an Excited State of ^{23}O." Phys. Rev. Lett. **99**, 112501 (2007).

J.S. Pinter*, K.L. Brown, P.A. DeYoung, G.F. Peaslee, "Amperometric Detection of Hydrazine by Cyclic Voltammetry and Flow Injection Analysis Using Ruthenium Modified Glassy Carbon Electrodes," Talanta **71**, 1219 (2007).

J. J. Kolata, H. Amro, F. D. Becchetti, J. A. Brown, P. A. DeYoung, M. Hencheck, J. D. Hinnefeld, G. F. Peaslee, A. L. Fritsch, C. Hall, U. Khadka*, Patrick J. Mears, P. O'Rourke, D. Padilla*, J. Rieth*, Tabatha Spencer, and T. Williams, "Breakup of ^{6}He Incident on ^{209}Bi Near the Coulomb Barrier," Phys. Rev. **C75**, 031302 (2007).

H. Amro, F.D. Becchetti, Yu Chen, H. Jiang, M. Ojaruega, M.J. Golobish, H.C. Griffin, J.J. Kolata, B. Skorodumov, G.F. Peaslee, P.A. DeYoung, P. Mears*, D. Denby*, J. Brown, J.D. Hinnefeld, and A.M. Moro, "^{7}Be-induced alpha-transfer reaction on ^{12}C", Eur. Phys. J. Special Topics **150**, 1–4 (2007).

N. Frank, T. Baumann, D. Bazin, J. Brown, P. DeYoung, J.E. Finck, A. Gade, J. Hinnefeld, R. Howes, J.-L. Lecouey, B. Luther, W.A. Peters, H. Scheit, A. Schiller, and M. Thoennessen, "Exploring Neutron-Rich Oxygen Isotopes with MoNA." Proceeding of the International Conference on Proton Emitting Nuclei and Related Topics, PROCON07, Edited by L. Ferreira, AIP Conference Proceedings **961**, 143 (2007).

N. Frank, A. Schiller, T. Baumann, D. Bazin, J. Brown, P.A. DeYoung, J.E. Finck, A. Gade, J. Hinnefeld, R. Howes, J.-L. Lecouey, B. Luther, W.A. Peters, H. Scheit, and M. Thoennessen, "Observation of the First Excited State in ^{23}O." Proceedings of the 23rd Winter Workshop on Nuclear Dynamics, edited by W.Bauer, R. Bellwied, and J.W. Harris. EP Systema, Budapest, Hungary **187** (2007).

2008 (9) 14*

N. Frank, A. Schiller, T. Baumann, D. Bazin, A. Gade, J.-L. Lecouey, W.A. Peters, H. Scheit, M. Thoennessen, J. Brown, P.A. DeYoung, J.E. Finck, J. Hinnefeld, R. Howes, And B. Luther, "Population Of Neutron Unbound States Via Two-Proton Knockout Reactions." 9th International Spring Seminar on Nuclear Physics, Vico Equense, May 20-24, edited by Aldo Covello, World Scientific **23** (2008).

P.J. Voss, J.E. Finck, R. Howes, J. Brown, T. Baumann, A. Schiller, M. Thoennessen, P.A. DeYoung, G. Peaslee, J. Hinnefeld, B. Luther, P.V. Pancella, and W.F. Rogers, "Big Physics at Small Places: The Mongol Horde Model of Undergraduate Research." Journal of College Teaching and Learning, **5**, 37 (2008).

D.H. Denby*, P.A. DeYoung, T. Baumann, D. Bazin, E. Breitback, J. Brown, N. Frank, A. Gade, C.C. Hall*, J. Hinnefeld, C.R. Hoffman, R. Howes, R.A. Jenson, B. Luther, S.M. Mosby, C.W. Olson, W.A. Peters, A. Schiller, A. Spyrou, and M. Thoennessen, "Ground State Energy and Width of the ^{7}He from ^{8}Li Proton Knockout." Phys. Rev. **C78**, 044303 (2008).

N. Frank, T. Baumann, D. Bazin, B.A. Brown, J. Brown, P.A. DeYoung, J.E. Finck, A. Gade, J. Hinnefeld, R. Howes, J.-L. Lecouey, B. Luther, W.A. Peters, H. Scheit, A. Schiller, M. Thoennessen, J. Tostevin, "Neutron Decay Spectroscopy of Neutron-Rich Oxygen Isotopes." Nucl. Phys. **A813**, 199 (2008).

G. Christian, W.A. Peters, D. Absalon, D. Albertson, T. Baumann, D. Bazin, E. Breitbach, J. Brown, P.L. Cole, D. Denby*, P.A. DeYoung, J.E. Finck, N. Frank, A. Fritsch, C. Hall*, A.M. Hayes, J. Hinnefeld, C.R. Hoffman, R. Howes, B. Luther, E. Mosby, S. Mosby, D. Padilla*, P.V. Pancella, G.F. Peaslee, W.F. Rogers, A. Schiller, M.J. Strongman, M. Thoennessen, L.O. Wagner, "Production of nuclei in neutron unbound states via primary fragmentation of ^{48}Ca." Nucl. Phys. **A801**, 101 (2008).

C.R. Hoffman, T. Baumann, D. Bazin, J. Brown, G. Christian, P.A. DeYoung, J.E. Finck, N. Frank, J. Hinnefeld, R. Howes, P. Mears*, E. Mosby, S. Mosby, J. Reith*, B. Rizzo, W.F. Rogers, G.F. Peaslee, W.A. Peters, A. Schiller, M.J. Scott, S.L. Tabor, M. Thoennessen, P.J. Voss, T. Williams, "Determination of the N = 16 Shell Closure at the Oxygen Drip Line." Phys. Rev. Lett. **100**, 152502 (2008).

J.M. Lunderberg*, R.J. Bartlett*, A.M. Behm*, C. Contreras, P.A. DeYoung, N.L. Hoogeveen*, A.J. Huisman*, G.F. Peaslee, J.K. Postma*; "PIXE as a complement to trace metal analysis of sediments by ICP-OES." Nucl. Instr. Meth. **B266,** 4782-4787 (2008).

Carl Van Faasen, Jennifer Soukhome, Graham Peaslee, "An Environmental History of the Lake Macatawa Watershed." Holland Litho, Holland, MI 2008.

E.F. Aguilera, E. Martinez-Quiroz, P. Rosales, D. Lizcano, A. Gomez-Comacho, J.J. Kolata, L.O. Lamm, V. Guimaraes, R. Lichtenthaler, O. Camargo, F.D. Becchetti, H. Jiang, P.A. DeYoung, and P.J. Mears*, "Elastic Scattering of a Proton-Halo Nucleus: ^{8}B+^{58}Ni." Revista Mexicana de Fisica **54**, 1 (2008).

2009 (5) 5*

Aguilera, E. F., Martinez-Quiroz, E., Lizcano, D., Gómez-Camacho, A., Kolata, J. J., Lamm, L. O., Guimarães, V., Lichtenthäler, R., Camargo, O., Becchetti, F. D., Jiang, H., Deyoung, P. A., Mears*, P. J., Belyaeva, T. L., "Reaction cross sections for ^{8}B, ^{7}Be, and ^{6}Li+^{58}Ni near the Coulomb barrier: Proton-halo effects." Phys. Rev. **C79** 021601 (2009).

C.R. Hoffman, T. Baumann, D. Bazin, J. Brown, G. Christian, D.H. Denby*, P.A. DeYoung, J.E. Finck, N. Frank, J. Hinnefeld, S. Mosby, W.A. Peters, W.F. Rogers, A. Spyrou, A. Schiller, M.J. Scott, S.L. Tabor, M. Thoennessen, and P.J. Voss, "Doubly Magic ^{24}O." Phys. Lett. **B672**, 17-21 (2009).

W. A. Peters, T. Baumann, G. A. Christian, D. Denby*, P. A. DeYoung, J. E. Finck, N. Frank, C. C. Hall*, J. Hinnefeld, A. Schiller, M. J. Strongman, and M. Thoennessen,

"Efficiency of the Modular Neutron Array (MoNA)." AIP Conf. Proc. **1099**, 807-811 (2009).

Jennifer Soukhome, Graham Peaslee, Carl Van Faasen, and William Statema*, "Watershed Investigations: 12 Labs for High School Science." NSTA Press, Arlington, VA (2009).

M.J. Strongman, A. Spyrou, C.R. Hoffman, T. Baumann, D. Bazin, J. Brown, P.A. DeYoung, J.E. Finck, N. Frank, S. Mosby, W. Rogers, W.A. Peters, A. Schiller, S.L. Tabor, and M. Thoennessen, "Disappearance of the N=14 Shell." Phys. Rev. **C80**, 021302(R) (2009).

2010 (5) 15*

A. Spyrou, T. Baumann, D. Bazin, G. Blanchon, A. Bonaccorso, E. Breitbach*, J. Brown, A. DeLine*, P.A. DeYoung, J.E. Finck, N. Frank, S. Mosby, W.A. Peters, A. Russel*, A. Schiller, M.J. Strongman, and M. Thoennessen, "First Evidence for a Virtual ^{18}B Ground State." Phys. Lett. **B 683**, 129 (2010).

C.C. Hall*, E.M. Lunderberg*, P.A. DeYoung, T. Baumann, D. Bazin, G. Blanchon, A. Bonaccorso, B.A. Brown, J. Brown, G. Christian, D.H. Denby*, J. Finck, N. Frank, A. Gade, J. Hinnefeld, C.R Hoffman, B. Luther, S. Mosby, W.A. Peters, A. Spyrou, and M. Thoennessen, "First observation of excited states in ^{12}Li." Phys. Rev. **C 81**, 021301(R) (2010).

J.D. Warner*, P.A. DeYoung, L.A. Ellsworth*, M.J. Rycenga*, L.M. Kiessel*, and G.F. Peaslee, "Quantitative Analysis of Metalloprotein Stoichiometry with PIXE and PESA." Accepted for publication in Nucl. Instr. and Meth. **B**, (2010).

G.F. Peaslee and P.A. DeYoung, "An Undergraduate Ion Beam Analysis Laboratory." Contribution SM/AE-02 in the Proceedings of International Topical Meeting on Nuclear Research Applications and Utilization of Accelerators, 4-8 May 2009, Vienna IAEA, Vienna, 2010. ISBN 978-92-0-150410-4. This publication will be freely available online with the following link:
http://www–pub.iaea.org/MTCD/publications/PDF/P1433_CD/datasets/foreword.html.

Jennifer Hampton, Alyssa Frey, Nicholas Wozniak, Timothy Nagi, Matthew Keller, J. Lunderberg, Graham Peaslee, and Paul DeYoung, "Particle-Induced X-ray Emission Analysis of Electrodeposited Alloy Film Composition." Submitted to J. Electrochem. Soc. (2010).

2011 (1) 4*

P.A. DeYoung, P.J. Mears*, C.C. Hall*, D.J. Padilla*, R.A. Sampson*, and G.F. Peaslee "Comparison of Glass Fragments Using Particle Induced X-Ray Emission (PIXE) Spectrometry." Scheduled

for publication in the Journal of Forensic Sciences, (2011).