

Victor E. Viola, Jr.

BIOGRAPHICAL SKETCH

VIOLA, Victor E., Jr., Department of Chemistry, Indiana University, Bloomington, Indiana 47405. Born, Abilene - Kansas, April 8, 1935; Married 1962 (Nancy); three children (Charley, Randy and Gina Viola-Brown). University of Kansas, A.B. 1957; University of California, Berkeley, Ph.D., 1961. Lawrence Berkeley Laboratory, Postdoctoral Fellow and University of California, Instructor 1961-62. Centre Européenne pour la Recherche Nucléaire, NSF and Ford Foundation Postdoctoral Fellow 1963-64. Argonne National Laboratory, Research Associate 1964-66. University of Maryland, Assistant Professor of Chemistry 1966-68, Associate Professor of Chemistry 1968-74, Professor of Chemistry 1974-80. University of California, Visiting Professor 1973-74, Indiana University, Professor of Chemistry 1980 -, Director, Indiana University Cyclotron Facility 1986-7, Distinguished Professor of Chemistry, 1990, Adjunct Professor of Physics, 1998. Distinguished Professor Emeritus 2005.

RESEARCH ARTICLES

*Indicates articles that are dual-listed

I. Nuclear Fission

1. Fission Induced in Gold with Carbon Ions, V.E. Viola, H.M. Blann and T.D. Thomas, Proc. Conf. on Reactions between Complex Nuclei (New York; John Wiley and Sons, Inc.) 224 (1960).
2. Total Cross Sections for Fission of ^{238}U With ^4He and Heavy Ions, V.E. Viola, Jr. and T. Sikkeland, Phys. Rev. **128**, 767 (1962).
3. Angular Distribution of Fragments from Fission Induced by Heavy Ions in Gold and Bismuth, V.E. Viola, Jr., T.D. Thomas, and G.T. Seaborg, Phys. Rev. **129**, 2710 (1963).
4. Kinetic Energy Release in Heavy-Ion-Induced Fission, V.E. Viola, Jr., and T. Sikkeland, Phys. Rev. **130**, 2044 (1963).
5. La Fission par Ions Lourds (in French), V.E. Viola, Compte Rendu de Journées d'Etudes sur les Réactions Nucleaires par Ions Lourds (Bordeaux, France, University of Bordeaux) 128 (1984).
6. Fission Fragment Anisotropy in Reactions of 24-MeV ^2H and 48-MeV ^4He in ^{238}U , V.E. Viola, Jr., J.M. Alexander, and A.R. Trips, Phys. Rev. **138**, 1434 (1965).
7. Fission Barriers and Half-Lives of the Trans-Radium Elements, V.E. Viola, Jr., and B.D. Wilkins, Nucl. Phys. **82**, 65 (1966).
8. Correlation of Fission Fragment Kinetic Energy Data, V.E. Viola, Jr., Nucl. Data, Sect. **A1**, 391 (1966).

9. Fission Excitation Functions in Interactions of ^{11}B , ^{12}C , ^{14}C , ^{16}O and ^{19}F with Various Targets, T. Sikkeland, J.E. Clarkson, N.H. Steiger-Shafir, and V.E. Viola, Jr., *Phys. Rev. C* **3**, 329 (1971).
10. Fission of ^{238}U , ^{209}Bi and ^{197}Au with Intermediate-Energy ^4He Ions, V.E. Viola, M.M. Minor, C.T. Roche and R.G. Clark, *Physics and Chemistry of Fission*, Vol. 1 (Int. At. Energy Agency, Vienna) 391 (1974).
11. Fragment Angular Distributions from Fission of ^{238}U , ^{209}Bi and ^{197}Au by 140-MeV ^4He Ions, R.G. Clark, W.G. Meyer, M.M. Minor, C.T. Roche, and V.E. Viola, Jr., *Z. Phys.* **A274**, 131 (1975).
12. Mass and Kinetic Energy Distributions in Near-Barrier Fission of ^{182}W , B.D. Wilkins, B.B. Back, J.E. Gindler, B.G. Glagola, K. Kwiatkowski, S.H. Zhou and B.E. Viola, *Phys. Rev. C* **30**, 1229 (1984).
13. Systematics of Fission Fragment Total Kinetic Energy Release, V.E. Viola, M. Walker and K. Kwiatkowski, *Phys. Rev. C* **31**, 1550 (1985).
14. Radiochemical Measurements of 200 MeV Proton-Induced Fission of ^{133}Cs , B.J. Wagner, T.E. Ward and V.E. Viola, *Phys. Rev. C* **31**, 1934 (1985).
15. Kinetic Energy Release in Fission, V.e. Viola, North American Meeting of the ACS, Toronto, Canada (Indiana Nuclear Chemistry Report INC-40007-54, unpublished) 1988.
16. *Fission: A Filter for the Study of Nuclear Reaction Mechanisms, V.E. Viola, *Nuclear Physics A* **502**, 531c (1989).
17. Neck Emission of IMFs in the Fission of Hot Heavy Nuclei, D.E. Fields, K. Kwiatkowski, K.B. Morley, E. Renshaw, J.L. Wile, S.J. Yennello, V.E. Viola and R.G. Korteling, *Phys. Rev. Lett.*, **69**, 3713 (1992).
18. Emission of Intermediate Mass Fragments during Fission, S.L. Chen, R.T. de Souza, E. Cornell, B. Davin, T.M. Hamilton, D. Hulbert, K. Kwiatkowski, Y. Lou, V.E. Viola, R.G. Korteling and J.L. Wile, *Phys. Rev. C* **54**, 2114 (1996).

II. Nuclear Properties and Systematics

19. Nuclear Systematics of the Heavy Elements I: Energetics and Masses, V.E. Viola, Jr., and G.T. Seaborg, *J. Inorg. Nucl. Chem.* **28**, 697 (1966).
20. Nuclear Systematics of the Heavy Elements II: Lifetimes, V.E. Viola, Jr., and G.T. Seaborg, *J. Inorg. Nucl. Chem.* **28**, 741 (1966).
21. *Fission Barriers and Half-Lives of the Trans-Radium Elements, V.E. Viola, Jr., and B.D. Wilkins, *Nucl. Phys.* **82**, 65 (1966).
22. *Correlation of Fission Fragment Kinetic Energy Data, V.E. Viola, Jr., *Nucl. Data, Sect. A* **1**, 391 (1966).
23. Nuclear Stability in the Region of the 158 Neutrons, V.E. Viola, Jr., *J. Inorg. Nucl. Chem.* **30**, 2601 (1968).
24. Identification of the Nuclide ^{226}U , V.E. Viola, Jr., M.M. Minor, and C.T. Roche, *Nucl. Phys.* **A217**, 372 (1973).
25. A Mass Table for $50 \leq Z \leq 118$, $130 \leq A \leq 311$ Derived from Nuclear Energy Systematics, V.E. Viola, Jr., J.A. Swant, and J. Graber, *Nucl. Data Tables* **13**, 35 (1974).

26. Alpha Decay of Natural ^{186}Os , V.E. Viola, Jr., C.T. Roche, and M.M. Minor, J. Inorg. Nucl. Chem. **37**, 11 (1975).
27. Possible Production of Actinide Spontaneous Fission Activities in Damped Collisions of $^{209}\text{Bi} + ^{56}\text{Fe}$, V.E. Viola, Jr., A.C. Mignerey, H. Breuer, K.L. Wolf, B.G. Glagola, W.W. Wilcke, W.U. Schröder, J.R. Huizenga, J.R. Birkelund and D. Hilscher, Phys. Rev. C **22**, 122 (1980).
28. Production of Neutron-Excess Nuclei in ^{56}Fe -Induced Reactions, H. Breuer, K.L. Wolf, B.G. Glagola, K. Kwiatkowski, A.C. Mignerey, V.E. Viola, W. W. Wilcke, W.U. Schröder, J.R. Huizenga, D. Hilscher, and J. Birkelund, Phys. Rev. C **22**, 2454 (1980).
29. *Excitation Functions for A\$ 6 Fragments Formed in ^1H - and ^4He -Induced Reactions on Light Nuclei, S.M. Read and V.E. Viola, Jr., Atomic and Nuclear Data Tables **31**, 359 (1984).
30. *Systematics of Fission Fragment Total Kinetic Energy Release, V.E. Viola, M. Walker and K. Kwiatkowski, Phys. Rev. C **31**, 1550 (1985).

III. Linear Momentum Transfer

31. Momentum Transfer in Heavy-Ion-Induced Fission, T. Sikkeland, E.L. Haines, and V.E. Viola, Jr., Phys. Rev. **125**, 767 (1962).
32. Direct Interaction in Reactions Between Heavy Ions and ^{238}U , T. Sikkeland and V.E. Viola, Jr., *Proc. Int. Symp. on Direct Interactions and Nuclear Reaction Mechanisms*, Padua, Italy, (New York: Gordon and Breach, 1962), p. 952.
33. Direct Interaction Effects in the Fission of ^{238}U with 63.5-MeV ^4He Ions, V.E. Viola, Jr., M.M. Minor, A.E. Salwin, R.O. Bondelid, and R.B. Theus, Nucl. Phys. **A174**, 321 (1971).
34. Linear Momentum Transfer in Reactions Between 140-MeV ^4He Ions and Heavy Nuclei, V.E. Viola, Jr., C.T. Roche, W.G. Meyer, and R.G. Clark, Phys. Rev. C **10**, 2416 (1974).
35. Incomplete Momentum Transfer in Peripheral Heavy-Ion Collisions at 20 MeV/A, P. Dyer, T.C. Awes, C.K. Gelbke, B.B. Back, A. Mignerey, K.L. Wolf, H. Breuer, V.E. Viola, Jr., and W.G. Meyer, Phys. Rev. Lett. **42**, 560 (1979).
36. Reaction Mechanism Studies with 7-35 MeV/Nucleon ^4He Ions Incident on Heavy Target Nuclei, W.G. Meyer, V.E. Viola, Jr., R.G. Clark, S.M. Read, and R.B. Theus, Phys. Rev. C **20**, 1716 (1979).
37. *Coalescence of Light Particles in the Reaction $^{16}\text{O} + ^{238}\text{U}$ at 315 MeV, T.C. Awes, C.K. Gelbke, G. Poggi, B.B. Back, B.G. Glagola, H. Breuer, V.E. Viola, and T.J.M. Symons, Phys. Rev. Lett. **45**, 513 (1980).
38. *Precompound Emission of Light Particles in the Reaction $^{16}\text{O} + ^{233}\text{U}$ at 20 MeV/u, T.C. Awes, G. Poggi, C.K. Gelbke, B.B. Back, B.G. Glagola, H. Breuer, V.E. Viola, and T.J.M. Symons, Phys. Rev. C **24**, 89 (1981).
39. *Search for Multifragmentation near Threshold in the $^3\text{He} + ^{\text{nat}}\text{Ag}$ System, S.J. Yennello, K. Kwiatkowski, N.R. Yoder, R. Paneta J.L. Wile, D.E. Fields, V.E. Viola, E.C. Pollacco, C. Volant, R. Dayras, R. Legrain, S. Harar, Y. Cassagnou, E. Hourani and E. Norbeck, (*Proc. of Sixth Winter Workshop on*

- Nuclear Dynamics*, Lawrence Berkeley Laboratory LBL-18709; ed. J. Randrup) p. 107.
40. Linear Momentum Transfer in Non-Relativistic Heavy-Ion Collisions, V.E. Viola, B.B. Back, K.L. Wolf, T.C. Awes, C.K. Gelbke, and H. Breuer, *Phys. Rev. C* **26**, 178 (1982).
 41. *Energy Deposition in Intermediate-Energy Nucleon-Nucleus Collisions, K. Kwiatkowski, S.H. Zhou, T.E. Ward, V.E. Viola, Jr., H. Breuer, G.J. Mathews, A.C. Mignerey and A. Gokmen, *Phys. Rev. Lett.* **50**, 1648 (1983).
 42. *Intranuclear Cascade Calculations of Momentum Transfer in Light-Ion Collisions with Complex Nuclei, L. Woo, K. Kwiatkowski, and V.E. Viola, Jr., *Phys. Lett.* **132B**, 283 (1983).
 43. Limitations on Linear Momentum Transfer in ^{14}N -Induced Reactions on ^{238}U and $E/A=15, 20, 25$ and 30 MeV, M.B. Tsang, D.R. Klecsh, C.B. Chitwood, D.J. Fields, C.K. Gelbke, W.G. Lynch, H. Utsonomiya, K. Kwiatkowski, V.E. Viola, Jr., and M. Fatyga, *Phys. Lett.* **134B**, 169 (1984).
 44. Linear Momentum Transfer in 50-150 MeV Proton-Induced Reactions with ^{238}U . M. Fatyga, K. Kwiatkowski, H.J. Karwowski, L.W. Woo, and V.E. Viola, *Phys. Rev. C* **32**, 1496 (1985).
 45. Evolution of Nucleus-Nucleus Collision Mechanisms from the Barrier to Beyond the Fermi Energy, M. Fatyga, K. Kwiatkowski, V.E. Viola, C.B. Chitwood, D.J. Fields, C.K. Gelbke, W.G. Lynch, J. Pochodzalla, M.B. Tsang, and M. Blann, *Phys. Rev. Lett.* **55**, 1376 (1985).
 46. Linear Momentum Transfer and Light Particle Emission in the $^{238}\text{U}(^6\text{Li}, \text{ffx})$ Reaction at 150 MeV, M. Fatyga, H.J. Karwowski, K. Kwiatkowski, L. Nowicki, V.E. Viola and K. Hicks, in *Phys. Rev. C* **35**, 568 (1987).
 47. *Complex Fragment Emission Sources Characterized by Linear Momentum Transfer Measurements, K. Kwiatkowski, M. Fatyga, V.E. Viola, R. Byrd, W. Skulski, W.G. Wilson, L.W. Woo, H. Karwowski, M.B. Tsang, W.G. Lynch, J. Pochodzalla, G.K. Gelbke, D.J. Fields and C.B. Chitwood, *Nucl. Phys.* **A471**, 271c (1987).
 48. *Mechanisms of Momentum and Energy Transfer in Intermediate-Energy Collisions, V.E. Viola, *Nucl. Phys.* **A471**, 53c (1987).
 49. Linear Momentum Transfer in the Reaction of 64-269 MeV ^3He with ^{238}U , W. Skulski, M. Fatyga, H.J. Karwowski, K. Kwiatkowski, V.E. Viola, and K. Hicks, *Phys. Rev. C* **40**, 1279 (1989).

IV. Nuclear Astrophysics

50. On the Production of Nuclides with $A \leq 250$ in Stellar Nucleosynthesis, V.E. Viola, Jr. *Nucl. Phys.* **A139**, 188 (1969).
51. The "+" Reaction and the Origin of ^7Li , C.H. King, H.H. Rossner, S.M. Austin, W.S. Chien, G.J. Mathews, V.E. Viola, Jr., and R.G. Clark, *Phys. Rev. Lett.* **35**, 988 (1975).
52. Li, Be and B Production in Reactions of 45-100 MeV Protons with ^{12}C : Astrophysical Implications, C.T. Roche, R.G. Clark, and V.E. Viola, Jr., *Phys. Rev. C* **14**, 410 (1976).

53. r-Process Nucleosynthesis of Superheavy Nuclei and Nuclear Mass Tables, G.J. Mathews and V.E. Viola, Jr., *Nature* **261**, 382 (1976).
54. Production of A=6 and 7 Isotopes in the "+" Reaction, B.G. Glagola, G.J. Mathews, H.F. Breuer, V.E. Viola, Jr., P.G. Roos, A. Nadasen, and S.M. Austin, *Phys. Rev. Lett.* **41**, 1698 (1978).
55. Nucleosynthesis of Li, Be and B: Contributions from the p + ¹⁶O Reaction at 50-90 MeV, R.A. Moyle, B.G. Glagola, G.J. Mathews, and V.E. Viola, Jr., *Phys. Rev. C* **19**, 631 (1979).
56. On the Light Element Abundances, Galactic Evolution, and a More Sensitive Indicator of the Universal Baryon Density, G.J. Mathews, and V.E. Viola, Jr., *Astrophys. J.* **228**, 375 (1979).
57. Production of ⁶He, ⁶Li, ⁷Li and ⁷Be in the " + " Reaction between 60-160 MeV, B.G. Glagola, V.E. Viola, H. Breuer, A. Nadasen, P.G. Roos, N.S. Chant, S.M. Austin, and G.J. Mathews, *Phys. Rev. C* **25**, 256 (1982).
58. *Fragment Mass, Energy and Angular Distributions for the ¹²C (⁴He, heavy ion) Reaction between 49 and 159 MeV, A. Gokmen, H. Breuer, A.C. Mignerey, B.G. Glagola, K. Kwiatkowski and V.E. Viola, Jr., *Phys. Rev. C* **29**, 1595 (1984).
59. Systematic Excitation Functions for A\$ 6 Fragments Formed in ¹H- and ⁴He-Induced Reactions on Light Nuclei, S.M. Read and V.E. Viola, Jr., *Atomic and Nuclear Data Tables* **31**, 359 (1984).
60. Astrophysical Production Rates for Li, Be and B Isotopes from Energetic ¹H and ⁴He Reactions with ⁴He, ¹²C, ¹⁴N and ¹⁶O, T.P. Walker, G.J. Mathews and V.E. Viola, Jr., *Astrophys. J.* **299**, 745 (1985).
61. Cross Sections for He, Li, and Be Isotopes Produced in the " + " Reaction at 198.4 MeV, L.W. Woo, K. Kwiatkowski, S.H. Zhou and V.E. Viola, *Phys. Rev. C* **32**, 706 (1985).
62. *The Cosmic Synthesis of Li, Be and B, V.E. Viola and G.J. Mathews, *Sci. Am.* **225**, 39 (1987).
63. Cross Sections for A = 6-30 Fragments from the ⁴He + ²⁸Si Reaction at 117 and 198 MeV, L.W. Woo, K. Kwiatkowski, W.G. Wilson, V.E. Viola, H. Breuer and G.J. Mathews, *Phys. Rev. C* **47**, 267 (1993).

V. Damped Collisions

64. A Study of Strongly Damped Collisions in the Reaction of 600-MeV ⁸⁴Kr Ions on a ²⁰⁹Bi Target, K.L. Wolf, J.P. Unik, J.R. Huizenga, J. Birkelund, H. Freiesleben, and V.E. Viola, Jr., *Phys. Rev. Lett.* **33**, 1105 (1974).
65. Study of the ²⁰⁹Be + ¹³⁶Xe Reaction, W.U. Schroder, J.R. Birkelund, J.R. Huizenga, K.L. Wolf, J.P. Unik, and V.E. Viola, Jr., *Phys. Rev. Lett.* **36**, 514 (1976).
66. Energy Dissipation and Nucleon Transfer in Heavy Ion Reactions, J.R. Huizenga, J.R. Birkelund, W.U. Schröder, K.L. Wolf, and V.E. Viola, Jr., *Phys. Rev. Lett.* **37**, 885 (1976).
67. Interaction Times for Damped Heavy-Ion Collisions, V.E. Viola, W. Schröder, J. Birkelund, J. Huizenga, and K.L. Wolf, *Phys. Rev. C* **16**, 623 (1977).

68. Dissipation, Mass Exchange and the Microscopic Time Scale of Heavy-Ion Collisions, W. Schröder, J. Birkelund, J. Huizenga, V.E. Viola, and K.L. Wolf, *Phys. Lett.* **71B**, 283 (1977).
69. Mechanisms of Very Heavy-Ion collisions: the Reaction $^{209}\text{Bi} + ^{136}\text{Xe}$ 1130 MeV Bombarding Energy, W. Schröder, J. Birkelund, J. Huizenga, V.E. Viola, and K.L. Wolf, *Phys. Rep.* **45**, 301 (1978).
70. Neutron Emission from the $^{165}\text{Ho} + ^{56}\text{Fe}$ Reaction at 8.5 MeV/A, D. Hilscher, J.R. Birkelund, A.D. Hoover, W.U. Schröder, W.W. Wilcke, J.R. Huizenga, A. Mignerey, K.L. Wolf, H. Breuer, and V.E. Viola, Jr., *Phys. Rev. C* **20**, 576 (1979).
71. Nucleon Exchange and A/Z Equilibration in Interactions of 8.3 MeV/u ^{56}Fe Ions with ^{56}Fe , ^{165}Ho and ^{209}Bi , H.F. Breuer, B.G. Glagola, V.E. Viola, A. Mignerey, K.L. Wolf, J.H. Birkelund, D. Hilscher, W.U. Schröder, W.W. Wilcke, and J.R. Huizenga, *Phys. Rev. Lett.* **43**, 191 (1979).
72. Structure in the Energy Spectra of the Fragments Produced in Damped Heavy-Ion Reactions, D. Hilscher, J.R. Birkelund, A.D. Hoover, W.U. Schröder, W.W. Wilcke, J.R. Huizenga, A. Mignerey, K.L. Wolf, H. F. Breuer, and V.E. Viola, *Phys. Rev. C* **20**, 556 (1979).
73. *Production of Neutron-Excess Nuclei in ^{56}Fe -Induced Reactions, H. Breuer, K.L. Wolf, B.G. Glagola, K. Kwiatkowski, A.C. Mignerey, V.E. Viola, W. W. Wilcke, W.U. Schröder, J.R. Huizenga, D. Hilscher, and J. Birkelund, *Phys. Rev. C* **22**, 2454 (1980).
74. The Dependence of Isobaric Charge Distributions on Energy Loss and Mass Asymmetry in Damped Collisions, A.C. Mignerey, V.E. Viola, H. Breuer, K.L. Wolf, B.G. Glagola, J.R. Birkelund, D. Hilscher, J.R. Huizenga, W.U. Schröder, and W.W. Wilcke, *Phys. Rev. Lett.* **45**, 509 (1980).
75. Bombarding-Energy Dependence of the $^{209}\text{Bi} + ^{136}\text{Xe}$ Reaction, W.W. Wilcke, J.R. Birkelund, A.D. Hoover, J.R. Huizenga, W.U. Schröder, V.E. Viola, K.L. Wolf, and A.C. Mignerey, *Phys. Rev. C* **22**, 128 (1980).
76. Mechanisms of Heavy-Ion Dissipative Collisions: The $^{209}\text{Bi} + ^{84}\text{Kr}$ Reaction at 712 MeV, J.R. Birkelund, H. Freiesleben, J.R. Huizenga, W.U. Schröder, W.W. Wilcke, K.L. Wolf, J.P. Unik and V.E. Viola, Jr., *Phys. Rev. C* **26**, 1984 (1982).
77. $^{165}\text{Ho} + ^{56}\text{Fe}$ Reaction at $E_{\text{lab}} = 462$ MeV, A.D. Hoover, J.R. Birkelund, D. Hilscher, W.U. Schröder, W.W. Wileke, J.R. Huizenga, H. Breuer, A.C. Mignerey, V.E. Viola and K.L. Wolf, *Phys. Rev. C* **25**, 256 (1982).
78. The Analysis of Simultaneous Mass and Charge Data From Damped Heavy-Ion Reactions, H. Breuer, N.R. Yoder, A.C. Mignerey, V.E. Viola, K. Kwiatkowski and K.L. Wolf, *Nucl. Inst. Meth.* **204**, 419 (1983).
79. Charge and Mass Exchange in ^{56}Fe -Induced Reactions at 8.3 MeV/u. H. Breuer, A.C. Mignerey, V.E. Viola, Jr., K.L. Wolf, J.R. Birkelund, D. Hilscher, J.R. Huizenga, W.U. Schröder and W.W. Wilcke, *Phys. Rev. C* **28**, 1080 (1983).
80. Bombarding Energy Dependence of the $^{144}\text{Sm} + ^{84}\text{Kr}$ Reaction, A.C. Mignerey, K.L. Wolf, V.E. Viola, Jr., J.R. Birkelund, W.U. Schröder and J.R. Huizenga, *Phys. Rev. C* **29**, 158 (1984).

81. Excitation Energy Division in the 9 MeV/Nucleon $^{56}\text{Fe} + ^{165}\text{Ho}$ Reaction, D.R. Benton, H. Breuer, F. Zhazaie, K. Kwiatkowski, V.E. Viola, S. Bradley, A.C. Mignerey, A.P. Weston-Dawkes and R.J. McDonald, *Phys. Lett.* **B185**, 326 (1987).
82. Distribution of Excitation Energy in the 505 MeV $^{56}\text{Fe} + ^{165}\text{Ho}$ Reaction, D.R. Benton, H. Breuer, F. Khazaie, K. Kwiatkowski, V. E. Viola, S. Bradley, A.C. Mignerey and A.P. Weston-Dawkes, *Phys. Rev. C* **38** 1207 (1988).
83. Evolution of Mass and Charge Asymmetry in Damped Heavy-ion Reactions, R.T. De Souza, W.U. Schröder, J.R. Huizenga, R. Paneta, K. Kwiatkowski, V.E. Viola, and H. Breuer, *Phys. Rev. C* **37**, 1783 (1988).
84. N/Z Equilibration in Damped Collisions Induced by $E/A = 8.5$ MeV ^{58}Ni and ^{64}Ni on ^{238}U , R. Paneta, S.H. Zhou, K. Kwiatkowski, W.G. Wilson, V.E. Viola, H. Breuer, D. Benton, F. Khazaie, R.J. McDonald, A. C. Mignerey, A. Weston-Dawkes, R.T. de Souza, J.R. Huizenga and W.U. Schröder, *Phys. Rev. C* **38**, 195 (1988).
85. Nucleon Exchange and Heat Partition in Damped Collisions, R. Paneta, K. Kwiatkowski, S.H. Zhou, V.E. Viola, H. Breuer, M.A. McMahan, R. Randrup and A.C. Mignerey, *Phys. Rev. C* **39**, 1197 (1989).
86. Nucleon-Exchange Properties of the $E/A = 8.5$ MeV $^{74}\text{Ge} + ^{165}\text{Ho}$ Reaction, R. Paneta, K. Kwiatkowski, S.H. Zhou, V.E. Viola, H. Breuer, M.A. McMahan, W. Kehoe and A.C. Mignerey, *Phys. Rev. C* **41**, 942 (1990).
87. Heat Partition in the $E/A = 8.5$ MeV $^{74}\text{Ge} + ^{165}\text{Ho}$ Reaction, K. Kwiatkowski, R. Paneta, S.H. Zhou, V.E. Viola, H. Breuer, M.A. McMahan, and A.C. Mignerey, to be published in *Phys. Rev. C* **41**, 958 (1990).
88. Comment on "Energy Partition in Near-barrier Strongly Damped Collisions in $^{58}\text{Ni} + ^{208}\text{Pb}$ ", V.E. Viola, K. Kwiatkowski, H. Breuer and R. Paneta, *Phys. Rev. C* **47**, 3001 (1993).

VI. Intermediate-Mass-Fragment Emission

89. Fragments from Uranium Irradiated by 2.1 GeV/Nucleon Deuterons and Alpha Particles, A.M. Zebelman, A.M. Poskanzer, J.D. Bowman, R.G. Sextro, and V.E. Viola, Jr., *Phys. Rev. C* **11**, 1280 (1975).
90. Energy Deposition in Intermediate-Energy Nucleon-Nucleus Collisions, K. Kwiatkowski, S.H. Zhou, T.E. Ward, V.E. Viola, Jr., H. Breuer, G.J. Mathews, A.C. Mignerey and A. Gokmen, *Phys. Rev. Lett.* **50**, 1648 (1983).
91. Fragment Mass, Energy and Angular Distributions for the ^{12}C (^4He , heavy ion) Reaction between 49 and 159 MeV, A. Gokmen, H. Breuer, A.C. Mignerey, B.G. Glagola, K. Kwiatkowski and V.E. Viola, Jr., *Phys. Rev. C* **29**, 1595 (1984).
92. Intermediate-Mass-Fragment Production in the Reaction of 200 MeV ^3He with Ag, K. Kwiatkowski, J. Bashkin, H. Karwowski, M. Fatyga, and V.E. Viola, *Phys. Lett.* **B171**, 41 (1986).
93. Source Properties of Intermediate-Mass Fragments Emitted in the $E/A = 35$ MeV $^{14}\text{N} + ^{232}\text{Th}$ Reaction, M. Fatyga, K. Kwiatkowski, V.E. Viola, W.G.

- Wilson, M.B. Tsang, J. Pochodzalla, W.G. Lynch, C.K. Gelbke, C.B. Chitwood, T. Nayak and Z. Chen, Phys. Rev. Lett. **58**, 2527 (1987).
94. Source Properties of Intermediate Mass Fragments Emitted in the 270 MeV $^3\text{He} + ^{232}\text{Th}$ Reaction, M. Fatyga, R. Byrd, K. Kwiatkowski, W.G. Wilson, L.W. Woo, V.E. Viola, H.J. Karwowski, J. Jastrzebski and W. Skulski, in Phys. Lett. B**185**, 321 (1987).
 95. Complex Fragment Emission Sources Characterized by Linear Momentum Transfer Measurements, K. Kwiatkowski, M. Fatyga, V.E. Viola, R. Byrd, W. Skulski, W.G. Wilson, L.W. Woo, H. Karwowski, M.B. Tsang, W.G. Lynch, J. Pochodzalla, G.K. Gelbke, D.J. Fields and C.B. Chitwood, Nucl. Phys. A**471**, 271c (1987).
 96. Non-Equilibrium versus Equilibrium Emission of Complex Fragments from Hot Nuclei, D.E. Fields, K. Kwiatkowski, D. Bonser, R.W. Viola, V.E. Viola, W.G. Lynch, J. Pochodzalla, M.B. Tsang, C.K. Gelbke, D.J. Fields and S.M. Austin, Phys. Lett. B**220**, 356 (1989).
 97. Emission of Energetic Protons at Backward Angles in Central Collisions, W. Skulski, M. Fatyga, K. Kwiatkowski, H. Karwowski, L.W. Woo, and V.E. Viola, Phys. Lett. B**218**, 7 (1989).
 98. Intermediate Mass Fragment Emission in the 161 MeV p+Ag Reactions, S.J. Yennello, K. Kwiatkowski, S. Rose, L.W. Woo, S.H. Zhou and V.E. Viola, Phys. Rev. C **41**, 79 (1990).
 99. Complex Fragment Emission from the $^3\text{He} + ^{\text{nat}}\text{Ag}$ system between 0.48 and 3.6 GeV, S.J. Yennello, K. Kwiatkowski, V.E. Viola, R. Paneta, D.E. Fields, E.C. Pollacco, C. Volant, R. Dayras, R. Legrain, Y. Cassagnou, S. Harar and E. Hourani, Phys. Lett. B **246**, 26 (1990).
 100. Search for the Onset of Multifragmentation in the Reaction $^3\text{He} + ^{\text{nat}}\text{Ag}$, E.C. Pollacco, C. Volant, R. Dayras, Y. Cassagnou, S. Harar, R. Legrain, C. Mazur, S.J. Yennello, K. Kwiatkowski, N.R. Yoder, V.E. Viola, R. Planeta, J.L. Wile, D.E. Fields, E. Hourani and E. Norbeck, Nucl. Phys. A**519**, 197 (1990).
 101. Complex Fragment Emission in the $E/A = 60\text{-}100$ MeV $^{14}\text{N} + ^{\text{nat}}\text{Ag}$, ^{197}Au Reactions, J.L. Wile, D.E. Fields, K. Kwiatkowski, K.B. Morley, E. Renshaw, S.J. Yennello, V.E. Viola, N. Carlin, C.K. Gelbke, W.G. Gong, W.G. Lynch, R.T. de Souza, M.B. Tsang and H.M. Xi, Phys. Lett. B **264**, 26 (1991).
 102. Analyzing Powers and Isotope Ratios for the $^{\text{nat}}\text{Ag}(\bar{P}, \text{IMF})$ Reaction at 200 MeV, E. Renshaw, S.J. Yennello, K. Kwiatkowski, R. Planeta, L.W. Woo and V.E. Viola, Phys. Rev. C **44**, 2618 (1991).
 103. Mechanisms of Intermediate-Mass-Fragment Formation from Threshold to $E/A = 100$ MeV, V.E. Viola, J.L. Wile, D.E. Fields, K. Kwiatkowski, S.J. Yennello, H.M. Xi, M.B. Tsang, R.T. de Souza, E. Renshaw, J. Pochodzalla, K.B. Morley, W.G. Lynch, W.G. Gong, C.K. Gelbke, D.J. Fields and N. Carlin, Nucl. Phys. A **538**, 91 (1992).
 104. *Neck Emission of IMFs in the Fission of Hot Heavy Nuclei, D.E. Fields, K. Kwiatkowski, K.B. Morley, E. Renshaw, J.L. Wile, S.J. Yennello, V.E. Viola and R.G. Korteling, Phys. Rev. Lett., **69**, 3713 (1992).
 105. Excitation Functions for Complex Fragment Emission in the $E/A = 20 - 100$ MeV $^{14}\text{N} + ^{\text{nat}}\text{Ag}$, ^{197}Au Reactions, J.L. Wile, D.E. Fields, K. Kwiatkowski,

- S.J. Yennello, K.B. Morley, E. Renshaw, V.E. Viola, C.K. Gelbke, W.G. Lynch, N. Carlin, H.M. Xi, W.G. Gong, M.B. Tsang, J. Pochodzalla, R.T. deSouza, D.J. Fields and Sam M. Austin, Phys. Rev. C. 45, 2300 (1992).
106. Isotopic Yields of IMFs Emitted in the $E/A = 50$ MeV ${}^4\text{He} + {}^{116,124}\text{Sn}$ Reactions, J. Brzychczyk, D. S. Bracken, K. Kwiatkowski, K.B. Morley, E. Renshaw and V.E. Viola, Phys. Rev. C **47**, 1553 (1993).
107. Studies of IMF Emission in the ${}^3\text{He} + {}^{\text{nat}}\text{Ag}$ Reaction between 0.48 and 3.6 GeV, S.J. Yennello, K. Kwiatkowski, E.C. Pollacco, C. Volant, Y. Cassagnou, R. Dayras, D.E. Fields, S. Harar, E. Hourani, R. Legrain, E. Norbeck, R. Paneta, J.L. Wile, N.R. Yoder and V.E. Viola, Phys. Rev. C. **48**, 1092 (1993).
108. *Emission of Intermediate Mass Fragments during Fission, S.L. Chen, R.T. de Souza, E. Cornell, B. Davin, T.M. Hamilton, D. Hulbert, K. Kwiatkowski, Y. Lou, V.E. Viola, R.G. Korteling and J.L. Wile, Phys. Rev. C **54**, 2114 (1996).
109. Complex Fragment Emission in the 200-MeV ${}^4\text{He} + {}^{\text{nat}}\text{Ag}$, ${}^{197}\text{Au}$ Reactions, J. Zhang, K. Kwiatkowski, D. Bonser, M. Fatyga, S.D. Coon, K. Stith, V.E. Viola, L.W. Woo and S.J. Yennello, Phys. Rev. C **56**, 1918 (1997).
110. Experimental Evidence for Dynamical Decay of Nuclear Matter, R. Yanez, T.A. Bredeweg, E. Cornell, B. Davin, R.T. de Souza, K. Kwiatkowski, V.E. Viola, R. Lemmon and R. Popescu, Phys. Rev. Lett. **82**, 3585 (1999).
111. *Isospin Fractionation in Nuclear Fragmentation, G. Verde, H.S. Xu, T.X. Liu, X.D. Liu, W.G. Lynch, W.P. Tan, M.B. Tsang, A. VanderMolen, A. Wagner, H.F. Xi, C.K. Gelbke, L. Beaulieu, B. Davin, Y. Larochele, T. Lefort, R.T. De Souza, R. Yanez, F. Viola, R.J. Charity and L. G. Sobotka, Nucl. Phys. A, **681**, 267c-274c (2001).
112. *Isotope yields from central ${}^{112,124}\text{Sn} + {}^{112,124}\text{Sn}$ collisions. T.X. Liu, M.J. van Goethem, X.D. Liu, W.G. Lynch, R. Shomin, W.P. Tan, M.B. Tsang, G. Verde, A. Wagner, H.F. Xi, H.S. Xu, M. Colonna, M. Di Toro, M. Zielinska-Pfabe, H.H. Wolter, L. Geaulieu, B. Davin, Y. Larochele, T. Lefort, R.T. de Souza, R. Yanez, V.E. Viola, R.J. Charity, L.G. Sobotka Phys, Rev. C, **69**, 014603 (2004).
113. *Excitation and decay of projectile like fragments formed in dissipative peripheral collisions at intermediate energies. Yanez, R.; Hudan, S.; Alfaro, R.; Davin, B.; Larochele, Y.; Xu, H.; Beaulieu, L.; Lefort, T.; Viola, V. E.; de Souza, R. T.; Liu, T. X.; Liu, X. D.; Lynch, W. G.; Shomin, R.; Tan, W. P.; Tsang, M. B.; Vander Molen, A.; Wagner, A.; Xi, H. F.; Charity, R. J.; Sobotka, L. G. Physical Review C **68**, 011602/1-011602/5 (2003)

VII. Multifragmentation

114. *Search for the Onset of Multifragmentation in the Reaction ${}^3\text{He} + {}^{\text{nat}}\text{Ag}$, E.C. Pollacco, C. Volant, R. Dayras, Y. Cassagnou, S. Harar, R. Legrain, C. Mazur,

- S.J. Yennello, K. Kwiatkowski, N.R. Yoder, V.E. Viola, R. Planeta, J.L. Wile, D.E. Fields, E. Hourani and E. Norbeck, Nucl. Phys. **A519**, 197 (1990).
115. Multifragment Emission in Reactions Induced by 0.90- and 3.6-GeV ^3He Ions on $^{\text{nat}}\text{Ag}$, S.J. Yennello, E.C. Pollacco, K. Kwiatkowski, C. Volant, R. Dayra, Y. Cassagnou, R. Legrain, E. Worbeck, V.E. Viola, J.L. Wile and N.R. Yoder, Phys. Rev. Lett. **67**, 671 (1991).
 116. Energy Dissipation and Multifragment Decay in the $^3\text{He} + ^{\text{nat}}\text{Ag}$ System, K. Kwiatkowski, W.A. Friedman, L.W. Woo, V.E. Viola, E.C. Pollacco, C. Volant and S.J. Yennello, Phys. Rev. C **49**, 1516(1994).
 117. Multifragmentation in the 4.8 GeV $^3\text{He} + ^{\text{nat}}\text{Ag}$, ^{197}Au Reactions, K. Kwiatkowski, K.B. Morley, C. Volant, E. Renshaw Foxford, D.S. Bracken, H. Breuer, J. Brzychczyk, W.A. Friedman, R.G. Korteling, R. Legrain, E.C. Pollacco, V.E. Viola and N.R. Yoder, Phys. Rev. Lett. **74**, 3756 (1995).
 118. *The Indiana Silicon Sphere 4π Detector Array, K. Kwiatkowski, K.B. Morley, D.S. Bracken, J. Dorsett, E. Renshaw Foxford, N. Madden, J. Ottarson, V.E. Viola and N.R. Yoder, Nucl. Instr. Meth., A **360**, 571 (1995).
 119. Saturation of Deposition Energy in Relativistic ^3He -Induced Reactions, K.B. Morley, K. Kwiatkowski, D.S. Bracken, E. Renshaw Foxford, V.E. Viola, N.R. Yoder, R. Le grain, E.C. Pollacco, C. Volant, R.G. Korteling, L.W. Woo, H. Breuer and J. Brzychczyk, Physics Letters, B **355**, 52 (1995).
 120. 4π Studies of the 1.8 - 4.8 GeV $^3\text{He} + ^{\text{nat}}\text{Ag}$, ^{197}Au Reactions; I. Energy Deposition, K.B. Morley, K. Kwiatkowski, D.S. Bracken, E. Renshaw Foxford, V.E. Viola, L.W. Woo, N.R. Yoder, R. Legrain, E.C. Pollacco, C. Volant, R.G. Korteling, H. Breuer and J. Brzychczyk, Phys. Rev. C **54**, 737 (1996).
 121. 4π Studies of the 1.8 - 4.8 GeV $^3\text{He} + ^{\text{nat}}\text{Ag}$, ^{197}Au Reactions; II. Energy Deposition, E. Renshaw Foxford, K. Kwiatkowski, D.S. Bracken, K.B. Morley, V.E. Viola, N.R. Yoder, C. Volant, E.C. Pollacco, R. Legrain, , R.G. Korteling, W.A. Friedman, J. Brzychczyk, H. Breuer, Phys. Rev. C **54**, 737 (1996).
 122. *Cavitation and Penetration in Central Collisions with Light Ions, G. Wang, K. Kwiatkowski, V.E. Viola, W. Bauer, and P. Danielewicz, Phys. Rev. C **53**, 1811 (1996).
 123. Time Dependence of Multifragmentation in Light-Ion-Induced Reactions, G. Wang, D.S. Bracken, E. Renshaw Foxford, W.A. Friedman, R.G. Korteling, K. Kwiatkowski, R. Legrain, K.B. Morley, E.C. Pollacco, V.E. Viola and C. Volant, Phys. Lett. B **393**, 290 (1997).

124. Probing the Nuclear EOS with GeV Light-Ion Beams, V.E. Viola, W.-c. Hsi, K. Kwiatkowski, G. Wang, D.S. Bracken, H. Breuer, J. Brzychczyk, Y.Y. Chu, E. Cornell, E. Foxford, F. Gimeno-Nogues, D.S. Ginger, S. Gushue, M.J. Huang, R.G. Korteling, R. Legrain, W.G. Lynch, K.B. Morley, E.C. Pollacco, E. Ramakrishnan, L.P. Remsberg, N.R. Yoder, D. Rowland, S.J. Yennello, M.B. Tsang, H. Xu, C. Volant and Nucl. Phys. **A626**, 287c-294c (1997).
125. Formation of Hot Nuclei with GeV p and π^- Beams, W.-c. Hsi, K. Kwiatkowski, G. Wang, D.S. Bracken, E. Cornell, D.S. Ginger, V.E. Viola, N.R. Yoder, R.G. Korteling, F. Gimeno-Nogues, E. Ramakrishnan, D. Rowland, S.J. Yennello, M.J. Huang, W.G. Lynch, M.B. Tsang, H. Xu, Y.Y. Chu, S. Gushue, L.P. Remsberg, K.B. Morley and H. Breuer, Phys. Rev. Lett. **79**, 817 (1997).
126. Time Scale for Emission of Soft Ejectiles in the Disassembly of Hot Nuclei, G. Wang, K. Kwiatkowski, D.S. Bracken, E. Foxford, W.-c. Hsi, R.G. Korteling, R. Legrain, K.B. Morley, E.C. Pollacco, V.E. Viola and C. Volant, Phys. Rev. C **57** R2786-2789 (1998).
127. Heating Nuclear Matter with GeV ^3He Beams, K. Kwiatkowski, D.S. Bracken, E. Renshaw Foxford, K.B. Morley, V.E. Viola, E.C. Pollacco, C. Volant and R.G. Korteling, Phys. Lett. B **423**, 21-26, (1998).
128. Multifragmentation : Thermal vs. Dynamic Effects, K. Kwiatkowski, W.-c Hsi, V.E. Viola, G. Wang, D.S. Bracken, H. Breuer, E. Cornell, E. Renshaw Foxford, F. Gimeno-Nogues, D.S. Ginger, S. Gushue, R.G. Korteling, W.G. Lynch, K.B. Morley, E.C. Pollacco, E. Ramakrishnan, L.P. Remsberg, M.B. Tsang, C. Volant, S.J. Yennello, H. Xu, and N.R. Yoder, Nucl.Phys. **A630**, 168c-175c (1998).
129. Sideways-Peaked Angular Distributions in Hadron-Induced Multifragmentation: Shock Waves, Geometry or Kinematics? W.-c. Hsi, K. Kwiatkowski, G. Wang, A. Botvina, D.S. Bracken, H. Breuer, E. Cornell, W.A. Friedman, F. Gimeno-Nogues, D.S. Ginger, S. Gushue, R. Huang, R.G. Korteling, W.G. Lynch, K.B. Morley, E. Ramakrishnan, L.P. Remsberg, D. Rowland, M.B. Tsang, V.E. Viola, H. Xu, S.J. Yennello, and N.R. Yoder, Phys. Rev. C **58**, R13 (1998).
130. Diversity of Fragment Sizes in Multifragmentation of Gold Nuclei Induced by Relativistic ^3He Ions, J. Brzychczyk, E.C. Pollacco, C. Volant, R. Legrain, K. Kwiatkowski, D.S. Bracken, K.B. Morley, E. Renshaw Foxford, V.E. Viola, N.R. Yoder, J. Cugnon, R.G. Korteling and H. Breuer, Phys. Rev. C **58**, R1372 (1998).

131. How to Boil a Nucleus, V.E. Viola and K. Kwiatkowski, *American Scientist* **86**, 449-455, (1998).
132. Double Isotope-Ratio Thermometers: The Influence of Emission-Time Scales, V.E. Viola and K. Kwiatkowski and W.A. Friedman, *Phys. Rev. C* **59**, 2660, (1999).
133. Exclusive Studies of Angular Distributions in GeV Hadron-Induced Reactions with ^{197}Au , W.-c. Hsi, K. Kwiatkowski, G. Wang, D.S. Bracken, E. Cornell, D.S. Ginger, N.R. Yoder, V.E. Viola, R.G. Korteling, K.B. Morley, R. Huang, W.G. Lynch, M.B. Tsang, H. Xu, F. Gimeno-Nogues, E. Ramakrishnan, D. Rowland, S.J. Yennello, H. Breuer, S. Gushue, L.P. Remsberg, A. Botvina and W.A. Friedman, *Phys. Rev. C* **60**, 034609-1 !034609-10 (1999).
134. Source Size and Time Dependence of Multifragmentation Induced by GeV ^3He Beams, G. Wang, K. Kwiatkowski, D.S. Bracken, E. Renshaw Foxford, W.-c. Hsi, K.B. Morley, V.E. Viola., N.R. Yoder, E.C. Pollacco, R. Legrain, C. Volant, R.G. Korteling, W.A. Friedman, A. Botvina, J. Brzychczyk and H. Breuer, *Phys. Rev. C* **60**, 014603-1 – 014603-12 (1999).
135. Heating Nuclei with 8 GeV/c Antiprotons, T. Lefort, K. Kwiatkowski, W.-c. Hsi, L. Beaulieu, V.E. Viola, L. Pienkowski, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, E. Winchester, S.J. Yennello, S. Gushue, L.P. Remsberg, B. Back, and H. Breuer, *Nucl. Phys.A* **655**, 275c (1999).
136. Heating ^{197}Au Nuclei with GeV/c Antiproton and π^+ Beams, T. Lefort, K. Kwiatkowski, W.-c. Hsi, L. Pienkowski, L. Beaulieu, B. Back, H. Breuer, S. Gushue, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, L.P. Remsberg, D. Rowland, A. Ruangma, V.E. Viola, E. Winchester and S.J. Yennello, *Phys. Rev. Lett.* **83**, 4033-4036 (1999).
137. Thermal Excitation of Heavy Nuclei with 5-15 GeVc Antiproton, Proton and Pion Beams, L. Beaulieu, K. Kwiatkowski, W.-c. Hsi, T. Lefort, L. Pienkowski, R.G. Korteling, G. Wang, B. Back, D.S. Bracken, H. Breuer, E. Cornell, F. Gimeno-Nogues, D.S. Ginger, S. Gushue, M.J. Huang, R. Laforest, W.G. Lynch, E. Martin, K.B. Morley, E. Ramakrishnan, L.P. Remsberg, D. Rowland, A. Ruangma, M. B. Tsang, V.E. Viola, E. Winchester, H. Xu, S.J. Yennello, *Phys. Lett. B.* **163** 159 (1999).
138. Multifragmentation with GeV Light-Ion Beams, K. Kwiatkowski, W.-c. Hsi, G. Wang, T. Lefort, D.S. Bracken, E. Cornell, E. Renshaw Foxford, D.S. Ginger, V.E. Viola, N.R. Yoder, R.G. Korteling, E.C. Pollacco, R. Legrain, C. Volant, F. Gimeno-Nogues, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, E. Winchester, S.J. Yenello, W.G. Lynch, M.B. Tsang, H. Xu, H. Breuer, K.B. Morley, S. Gushue, L.P. Remsberg, L.

- Pienkowski, J. Brzychczyk, A. Botvina, and W.A. Friedman, Nucl. Phys. **A654**, 786c-791c (1999).
139. Signals for a Transition from Surface to Bulk Emission in Thermal Multifragmentation, L. Beaulieu, K. Kwiatkowski, W.-c. Hsi, T. Lefort, R. de Souza, G. Wang, D.S. Bracken, E. Cornell, D.S. Ginger, V.E. Viola, L. Pienkowski, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, E. Winchester, S.J. Yennello, S. Gushue, L.P. Remsberg, H. Breuer, and B. Back, Phys. Rev. Lett. **84**, 5971 (2000).
 140. Thermal Expansion Effects in the 8 GeV/c $\pi^- + ^{197}\text{Au}$ Reaction, T. Lefort, L. Beaulieu, A. Botvina, D. Durand, W.A. Friedman, K. Kwiatkowski, W.-c. Hsi, L. Pienkowski, B. Back, H. Breuer, S. Gushue, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, L.P. Remsberg, D. Rowland, A. Ruangma, V.E. Viola, E. Winchester, and S.J. Yennello, Phys. Rev. C **62**, 031604-1-5, (2000).
 141. Testing Binomial Reducibility and Thermal Scaling in Hadron-Induced Multifragmentation, L. Beaulieu, T. Lefort, K. Kwiatkowski, W.-c. Hsi, L. Pienkowski, H. Breuer, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, V.E. Viola, E. Winchester and S.J. Yennello, Phys. Rev. C **63**, 031302(R) (2001).
 142. Signals for the Transition from Liquid to Gas in Hot Nuclei, V.E. Viola, T. Lefort, L. Beaulieu, K. Kwiatkowski, G. Wang, R. de Souza, L. Pienkowski, A. Botvina, H. Breuer, D. Durand, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, E. Winchester, S.J. Yennello, Nucl. Phys. **A681**, 267c-274c (2001).
 143. 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**, 064603-1-064603-12 (2001).
 144. 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. Gimeno-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, Phys. Rev. C **64**, 064604-1-064604-11 (2001).
 145. 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, L. Pienkowski, S. Pratt, V.E. Viola and S.J. Yennello, Heavy-Ion Physics, **15**, 217 (2001).

146. 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, B. Back, H. Breuer, S. Gushue, L.P. Remsberg, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, E. Winchester and S.J. Yennello, Phys. Rev. C **65**, 064606-1 (2002).
147. Liquid to Vapor Phase Transition in Excited Nuclei, J.B. Elliott, 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).
148. Event-by-Event Analysis of Proton-Induced Nuclear Multifragmentation: Determination of Phase Transition Universality-Class in System with Extreme Finite-Size Constraints, M. K. Berkenbusch, W. Bauer, K. Dillman, S. Pratt, T. Lefort, K. Kwiatkowski, V.E. Viola, L. Beaulieu, A. Ruangma, S.J. Yennello, R.G. Korteling, L. Pienkowski, Phys. Rev. Lett. **88**, 022701 (2002).
149. The Nuclear Liquid-Gas Phase Transition: Studies with the ISiS array, V.E. Viola and K. Kwiatkowski, Nucl. Phys. News Intl. **12**, 35 (2002).
150. Caloric Curves for 8 GeV/c $\pi, \bar{P} + {}^{197}\text{Au}$ reactions, A. Ruangma, R. Laforest, E. Martin, E. Ramakrishnan, D. J. Rowland, M. Veselsky, E. M. Winchester, S.J. Yennello, L. Beaulieu, W.-c. Hsi, K. Kwiatkowski, T. Lefort, V.E. Viola, A. Botvina, R. G. Korteling, L. Pienkowski, H. Breuer, S. Gushue, L. P. Remsberg, B. Back, Phys. Rev. C **66**, 044603 (2002)..
151. Tracking the Phase-Transition Energy in the Disassembly of Hot Nuclei, C. B. Das, S. Das Gupta, L. Beaulieu, T. Lefort, K. Kwiatkowski, V.E. Viola, S.J. Yennello, L. Pienkowski, R.G. Korteling and H. Breuer, Phys. Rev. C **66**, 044602 (2002).
152. Excitation and decay of projectile like fragments formed in dissipative peripheral collisions at intermediate energies. Yanez, R.; Hudan, S.; Alfaro, R.; Davin, B.; Larochelle, Y.; Xu, H.; Beaulieu, L.; Lefort, T.; Viola, V. E.; de Souza, R. T.; Liu, T. X.; Liu, X. D.; Lynch, W. G.; Shomin, R.; Tan, W. P.; Tsang, M. B.; Vander Molen, A.; Wagner, A.; Xi, H. F.; Charity, R. J.; Sobotka, L. G. Physical Review C **68**, 011602/1-011602/5 (2003).
153. *Moving-Source and Caloric Curve Analyses of Reactions Induced by 1.8-4.8 GeV ${}^3\text{He}$ Beams on ${}^{\text{nat}}\text{Ag}$ and ${}^{197}\text{Au}$ Nuclei, D. S. Bracken, K. Kwiatkowski, E. Renshaw Foxford, K.B. Morley, V.E. Viola, N.R. Yoder, J. Brzychczyk, R.G. Korteling, C. Volant, R. Legrain, E.C. Pollaco, H. Breuer, Phys. Rev. C **69**, 034612 (2004).

154. The Nuclear Liquid-Gas Phase Transition: Q.E.D, V.E. Viola, Nucl. Phys. A734, 487 (2004).
155. *Breakup densities of hot nuclei: Implication for the caloric curve, V. E. Viola, K. Kwiatkowski, J. B. Natowitz and S. J. Yennello, Phys. Rev. Lett. **93**, 132701-1 (2004).
156. Comment on Breakup Densities of Hot Nuclei, V.E. Viola, K. Kwiatkowski, S. J. Yennello and J.B. Natowitz, Phys. Lett. B **637**, 176-178 (2006).
157. *Light-Ion Induced Multifragmentation: The ISiS Project, V.E. Viola and the ISiS collaboration, Phys. Rept. **434**, 1-46 (2006).
158. *Calorimetry, V.E. Viola and R. Bougault, European Phys. J., **A30**, 215-226 (2006).
159. Collision Geometry Dependence of the Thermal Excitation Energy Deposition in 8-15 GeV/c hadron-Au Reactions, R. Soltz, R.J. Newby, J.L. Kay, M. Hefner, L. Beaulieu, T. Lefort, K. Kwiatkowski and V.E. Viola, Phys. Rev. Lett. submitted (2008)
160. Exclusive Studies of the 130-270 meV ^3H and 200 MeV Proton-Induced Reactions on ^{27}Al , $^{\text{nat}}\text{Ag}$ and ^{197}Au , D.S. Ginger, K. Kwiatkowski, G. Wang, W.-c His, S. Hudan, E. Cornell, R.T. de Souza and V.E. Viola, Phys. Rev. C **78**, 034601 (2008).

VIII. Reaction Dynamics

A. *Elastic Scattering*

161. Elastic Scattering of ^{40}Ar and ^{84}Kr Ions from ^{209}Bi and ^{238}U , J. Birkelund, J. Huizenga, K.L. Wolf, J.P. Unik, V.E. Viola, Jr., and H. Freiesleben, Phys. Rev. C **13**, 133 (1976).
162. Elastic Scattering of ^{16}O and ^{20}Ne from ^{235}U , V.E. Viola, Jr., R.G. Clark, W.G. Meyer, R.G. Sextro, and A.M. Zebelman, Z. Phys. **A277**, 141 (1976).
163. $^4\text{He} + ^4\text{He}$ Elastic Scattering at 158.2 MeV, A. Nadasen, P.G. Roos, H.G. Pugh, P. Frisbee, B.G. Glagola, G.J. Mathews, and V.E. Viola, Jr., Phys. Rev. C **18**, 2792 (1978).

B. *Equilibrium/Nonequilibrium Phenomena*

164. Complete Fusion Studies of the $^{20}\text{Ne} + ^{235}\text{U}$ System, W.G. Meyer, R.G. Clark, V.E. Viola, Jr., A.M. Zebelman, and R.G. Sextro, Nucl. Phys. **A261**, 174 (1976).

165. Light-Particle Spectra Observed in Central and Peripheral Collisions of 20-MeV/u $^{16}\text{O} + ^{238}\text{U}$, C.K. Gelbke, T.C. Awes, B.B. Back, A.C. Mignerey, K.L. Wolf, P. Dyer, H. Breuer and V.E. Viola, Jr., Phys. Lett. **87B**, 43 (1979).
166. Coalescence of Light Particles in the Reaction $^{16}\text{O} + ^{238}\text{U}$ at 315 MeV, T.C. Awes, C.K. Gelbke, G. Poggi, B.B. Back, B.G. Glagola, H. Breuer, V.E. Viola, and T.J.M. Symons, Phys. Rev. Lett. **45**, 513 (1980).
167. Enhanced Emission of Nonequilibrium Light Particles in the Reaction Plane, M.B. Tsang, D.R. Klesch, C.B. Chitwood, D.R. Fields, W.G. Lynch, C.K. Gelbke, K. Kwiatkowski and V.E. Viola, Jr., Phys. Rev. Lett. **52**, 1967 (1984).
168. *Evolution of Nucleus-Nucleus Collision Mechanisms from the Barrier to Beyond the Fermi Energy, M. Fatyga, K. Kwiatkowski, V.E. Viola, C.B. Chitwood, D.J. Fields, C.K. Gelbke, W.G. Lynch, J. Pochodzalla, M.B. Tsang, and M. Blann, Phys. Rev. Lett. **55**, 1376 (1985).
169. *Nucleus-Nucleus Collisions: A Laboratory for Studying Equilibration Phenomena, V.E. Viola, Accounts of Chemical Research, **20**, 32 (1987).
170. *Mechanisms of Momentum and Energy Transfer in Intermediate-Energy Collisions, V.E. Viola, Nucl. Phys. **A471**, 53c (1987).
171. *Fission: A Filter for the Study of Nuclear Reaction Mechanisms, V.E. Viola, Nuclear Physics **A502**, 531c (1989).
172. *Complex Fragment Emission in the 200-MeV $^4\text{He} + ^{\text{nat}}\text{Ag}, ^{197}\text{Au}$ Reactions, J. Zhang, K. Kwiatkowski, D. Bonser, M. Fatyga, S.D. Coon, K. Stith, V.E. Viola, L.W. Woo and S.J. Yennello, Phys. Rev. C **56**, 1918 (1997).
173. Evaporation Residue as a Dominant Exit Channel at High Thermal Energies in $^3\text{He} + \text{Ag}$ Reactions, E.C. Pollacco, J. Brzychczyk, C. Volant, R. Legrain, R.G. Korteling, D.S. Bracken, K. Kwiatkowski, K.B. Morley, E. Renshaw Foxford, V.E. Viola, N.R. Yoder, H. Breuer and J. Cugnon, Phys. Lett. B **482**, 349-355 (2000).
174. Excitation and decay of projectile like fragments formed in dissipative peripheral collisions at intermediate energies. Yanez, R.; Hudan, S.; Alfaro, R.; Davin, B.; Larochele, Y.; Xu, H.; Beaulieu, L.; Lefort, T.; Viola, V. E.; de Souza, R. T.; Liu, T. X.; Liu, X. D.; Lynch, W. G.; Shomin, R.; Tan, W. P.; Tsang, M. B.; Vander Molen, A.; Wagner, A.; Xi, H. F.; Charity, R. J.; Sobotka, L. G. Physical Review C **68**, 011602/1-011602/5 (2003).
175. Interplay of initial deformation and Coulomb proximity on nuclear decay. S. Hudan, R. Alfaro, L. Beaulieu, B. Davin, Y. Larochele, T. Lefort, V.E. Viola, H. Xu, R. Yanez, R.T. de Souza, R.J. Charity, L.G. Sobotka, 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, Phys. Rev. C **70**, 031601/1-031601/5 (2004).

C. *BUU/INC Calculations*

176. Inclusion of Deuteron and Alpha-Particle Clusters in the Intranuclear-Cascade Code, G.J. Mathews, R.A. Moyle, B.G. Glagola, and V.E. Viola, Phys. Rev. C **25**, 2181 (1982)
177. Intranuclear Cascade Calculations of Momentum Transfer in Light-Ion Collisions with Complex Nuclei, L. Woo, K. Kwiatkowski, and V.E. Viola, Jr., Phys. Lett. **132B**, 283 (1983).
178. Intranuclear Cascade and Fermi-Breakup Calculations of ^1H and ^4He -Induced Reactions on light target nuclei, A. Gokmen, G.J. Mathews and V.E. Viola, Jr., Phys. Rev. C **29**, 1606 (1984).
179. *Cavitation and Penetration in Central Collisions with Light Ions, G. Wang, K. Kwiatkowski, V.E. Viola, W. Bauer, and P. Danielewicz, Phys. Rev. C **53**, 1811 (1996).
180. Effects Of In-Medium Cross Sections And Optical Potential On Thermal Source Formation In the $p+^{197}\text{Au}$ Reactions at 6.2 and 14.6 GeV/c, S. Turbide, L. Beaulieu, K. Kwiatkowski, P. Danielewicz, W.-c. Hsi, G. Wang, T. Lefort, D.S. Bracken, H. Breuer, E. Cornell, F. Gimeno-Nogues, D.S. Ginger, S. Gushue, R. Korteling, K.B. Morley, E. Ramakrishnan, L.P. Remsberg, D. Rowland, R. Roy, V.E. Viola and S.J. Yennello, Phys. Rev. C **70**, 014608 (2004).

D. *Particle-Particle correlations: Properties of Hot Nuclei*

181. Two-Proton Correlation Functions for Equilibrium and Non-Equilibrium Emission, W.G. Gong, C.K. Gelbke, N. Carlin, R.T. de Souza, Y.D. Kim, W.G. Lynch, T. Murakami, G. Poggi, D. Sanderson, M.B. Tsang, H.M. Xi, D.E. Fields, K. Kwiatkowski, R. Paneta, V.E. Viola and S.J. Yennello, Phys. Lett. B **246**, 21 (1990).
182. Intensity-Interferometric Test of Nuclear Collision Geometries obtained from the Boltzmann-Uehling-Uhlenbeck Equation, W.G. Gong, W. Bauer, C.K. Gelbke, N. Carlin, R.T. deSouza, Y.D. Kim, W.G. Lynch, T. Murakami, G. Poggi, D.P. Sanderson, M.B. Tsang, H.M. Xi, S. Pratt, D.E. Fields, K. Kwiatkowski, R. Paneta, V.E. Viola and S.J. Yennello, Phys. Rev. Lett. **65**, 2114 (1990).
183. Space-Time Evolution of the Reactions $^{14}\text{N} + ^{27}\text{Al}$, ^{197}Au at $E/A = 75$ MeV and $^{129}\text{Xe} + ^{27}\text{Al}$, ^{122}Sn at $E/A = 31$ MeV Probed by Two-proton Intensity Interferometry, W.G. Gong, C.K. Gelbke, W. Bauer, N. Carlin, R.T. de Souza, Y.D. Kim, W.G. Lynch, T. Murakami, G. Poggi, D. Sanderson, M.B. Tsang,

- H.M. Xi, D.E. Fields, K. Kwiatkowski, R. Paneta, V.E. Viola and S.J. Yennello, Phys. Rev. C **43**, 1804 (1991).
184. Light Particle Correlations for the $^3\text{He} + ^{\text{nat}}\text{Ag}$ Reaction at 200 MeV, F. Zhu, W.G. Lynch, T. Murakami, C.K. Gelbke, Y.D. Kim, T.K. Nayak, R. Pelak, M.B. Tsang, H.M. Xi, W.G. Gong, W. Bauer, K. Kwiatkowski, R. Paneta, S. Rose, V.E. Viola, L.W. Woo and J. Zhang, Phys. Rev. C **44**, R582 (1991).
 185. Two-deuteron Correlation Functions in $^{14}\text{N}+^{27}\text{Al}$ Collisions at $E/A=75$ MeV, W.G. Gong, P. Danielwicz, C.K. Gelbke, N. Carlin, R. T. de Souza, Y.D. Kim, W.G. Lynch, T. Murakami, G. Poggi, M.B. Tsang, H.M. Xi, S. Pratt, K. Kwiatkowski, V.E. Viola, S.J. Yennello and J.C. Shillcock, Phys. Rev. C **47**, R429 (1993).
 186. Emission Temperatures from Widely Separated States in ^{14}N - and ^{129}Xe -induced Reactions, C. Schwarz, W.G. Gong, N. Carlin, C.K. Gelbke, Y.D. Kim, W.G. Lynch, T. Murakami, G. Poggi, R.T. deSouza, M.B. Tsang, H.M. Xi, D.E. Fields, K. Kwiatkowski, V.E. Viola and S.J. Yennello, Phys. Rec. C **48**, 676 (1993).
 187. Proton Evaporation Timescales from Longitudinal and Transverse Two-proton Correlation Functions, M.A. Lisa, W.G. Gong, C.K. Gelbke, S. Pratt, N. Carlin, R.T. de Souza, Y.D. Kim, W.G. Lynch, T. Murakami, G. Poggi, M.B. Tsang, H.M. Xi, K. Kwiatkowski, V.E. Viola and S.J. Yennello, Phys. Rev. C **49**, 2788 (1994).
 188. Excited State Populations for Equilibrium and Non-Equilibrium Emission, F. Zhu, M.J. Huang, W.G. Lynch, T. Murakami, Y.D. Kim, T.K. Nayak, R. Pelak, M.B. Tsang, H.M. Xi, W.G. Gray, K. Kwiatkowski, R. Planeta, S. Rose, V.E. Viola, L.W. Woo, S.J. Yennello and J. Zhang, Phys. Lett. B **322**, 43 (1994).
 189. Anomaous Populations of Particle-Unbound States in ^{10}B , C. Schwarz, W.G. Gong, N. Carlin, C.K. Gelbke, Y.D. Kim, W.G. Lynch, T. Murakami, G. Poggi, R.T. deSouza, M.B. Tsang, H.M. Xi, K. Kwiatkowski, V.E. Viola and S.J. Yennello, Phys. Rev. C **49**, 3316 (1994).
 190. *Signals for a Transition from Surface to Bulk Emission in Thermal Multifragmentation, L. Beaulieu, K. Kwiatkowski, W.-c. Hsi, T. Lefort, R. de Souza, G. Wang, D.S. Bracken, E. Cornell, D.S. Ginger, V.E. Viola, L. Pienkowski, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, E. Winchester, S.J. Yennello, S. Gushue, L.P. Remsberg, H. Breuer, and B. Back, Phys. Rev. Lett. **84**, 5971 (2000).

E. Isospin Studies

191. *Isotopic Yields of IMFs Emitted in the $E/A = 50$ MeV ${}^4\text{He} + {}^{116,124}\text{Sn}$ Reactions, J. Brzychczyk, D. S. Bracken, K. Kwiatkowski, K.B. Morley, E. Renshaw and V.E. Viola, *Phys. Rev. C* **47**, 1553 (1993).
192. Double Isotope-Ratio Thermometers: The Influence of Emission-Time Scales, V.E. Viola and K. Kwiatkowski and W.A. Friedman, *Phys. Rev. C* **59**, 2660, (1999).
193. Isospin Fractionation in Nuclear Multifragmentation, H.S. Xu, M.B. Tsang, T.X. Liu, X.D. Liu, W.G. Lynch, W.P. Tan, G. Verde, A. VanderMolen, A. Wagner, H.F. Xu, C.K. Gelbke, L. Beaulieu, B. Davin, Y. Larochelle, T. Lefort, R.T. de Souza, R. Yanez, V.E. Viola, R.J. Charity and L.G. Sobotka, *Phys. Rev. Lett.* **85**, 716-719 (2000).
194. Isospin Fractionation in Nuclear Fragmentation, G. Verde, H.S. Xu, T.X. Liu, X.D. Liu, W.G. Lynch, W.P. Tan, M.B. Tsang, A. VanderMolen, A. Wagner, H.F. Xi, C.K. Gelbke, L. Beaulieu, B. Davin, Y. Larochelle, T. Lefort, R.T. De Souza, R. Yanez, F. Viola, R.J. Charity and L. G. Sobotka, *Nucl. Phys. A*, **681**, 267c-274c (2001).
195. Isospin diffusion and the nuclear symmetry in heavy ion reactions, M.B. Tsang, T.X. Liu, L. Shi, P. Danielewicz, P. Gelbke, X.D. Liu, W.G. Lynch, W.P. Tan, G. Verde, A. Wagner, H.S. Xu, W.A. Friedman, L. Beaulieu, L. Davin, R.T. DeSouza, Y. Larochelle, T. Lefort, R. Yanez, V.E. Viola, R.J. Charity, L.G. Sobotka, *Phys. Rev. Lett.*, *Phys. Rev. Lett.* **92**, 062701 (2004).
196. Isotope yields from central ${}^{112,124}\text{Sn} + {}^{112,124}\text{Sn}$ collisions. T.X. Liu, M.J. van Goethem, X.D. Liu, W.G. Lynch, R. Shomin, W.P. Tan, M.B. Tsang, G. Verde, A. Wagner, H.F. Xi, H.S. Xu, M. Colonna, M. Di Toro, M. Zielinska-Pfabe, H.H. Wolter, L. Geaulieu, B. Davin, Y. Larochelle, T. Lefort, R.T. de Souza, R. Yanez, V.E. Viola, R.J. Charity, L.G. Sobotka *Phys. Rev. C*, **69**, 014603 (2004).

IX. Education

197. Stellar Nucleosynthesis as a Vehicle for the Teaching of Nuclear Chemistry, V.E. Viola, Jr., *J. Chem. Ed.* **50**, 311 (1973).
198. The Big Bang: Cooking Up a Universe, V.E. Viola, Jr., *Sciquest* **54**, 7 (1981).
199. Nucleosynthesis of the Chemical Elements”, V.E. Viola, *Treb. Soc. Cat. Biol.* **39**, 49-71 (1986)
200. Formation of Chemical Elements and the Origin of our Universe, V.E. Viola, *J. Chem. Ed.* **67**, 723 (1990).

201. Teaching Nuclear Chemistry, A Cosmological Approach, V.E. Viola, J. Chem. Ed. **71**, 841 (1994).

X. Instrumentation

202. Graphite Supporting Films for Thin Sources, V.E. Viola, Jr. and D.J. O'Connell, Nucl. Instrum. Methods **32**, 125 (1965).
203. Use of Position-Sensitive Semiconductor Detectors in the Study of Heavy Element Nuclear Reactions, M.M. Minor, V.E. Viola, Jr., A.E. Salwin, R.B. Theus, and R.O. Bondelid, Nucl. Instrum. Methods **99**, 63 (1972).
204. A Detector System for Discrete Nuclide Identification of Ions with $A \# 60$, K. Kwiatkowski, S.H. Zhou, W. Wilson, V.E. Viola, Jr., and H. Breuer, Nucl. Instr. Meth. **225**, 65 (1984).
205. A Logarithmic, Large-Solid-Angle Detector Telescope for Nuclear Fragmentation Studies, K. Kwiatkowski, K. Komisarcik, J.L. Wile, S.J. Yennello, D.E. Fields, V.E. Viola and B.G. Glagola, Nucl. Instr. Meth. A **299**, 166 (1990).
206. A 4π Charged-particle Detector Array for Light-ion-induced Nuclear Fragmentation Studies, K. Kwiatkowski, A. Alexander, D.S. Bracken, J. Brzychczyk, J. Dorsett, R. Ensmann, E. Renshaw Foxford, T. Hamilton, K. Komisarcik, K.N. McDonald, K.B. Morley, J. Poehlman, C. Powell, V.E. Viola, N.R. Yoder, J. Ottarson and N. Madden, Nucl. Instr. Meth. A **353**, 212 (1994).
207. The Indiana Silicon Sphere 4π Detector Array, K. Kwiatkowski, K.B. Morley, D.S. Bracken, J. Dorsett, E. Renshaw Foxford, N. Madden, J. Ottarson, V.E. Viola and N.R. Yoder, Nucl. Instr. Meth., A **360**, 571 (1995).
208. Charging Effects in Passivated Silicon Detectors, D.S. Bracken, K. Kwiatkowski, K. Komisarcik, A.J. Rader, E. Renshaw Foxford and V.E. Viola, Nucl. Instr. Meth., A **365**, 424, (1995).

OTHER WRITTEN WORK

I. Books or Chapters Authored or Edited

1. *The Heart of Matter: A Nuclear Module*, V.E. Viola, (Harper & Row, Evanston, First edition, (1973); New York, second edition, (1980), 112 pp.
2. *The Heart of Matter: Teacher's Guide*, V.E. Viola, (Harper and Row, Evanston, first edition, (1973); New York, second edition, 1980), 99 pp.
3. *Proceedings of Winter Workshop on Nuclear Dynamics III*, V.E. Viola, editor (USDOE-TIS Publication CONF-8403101, 1984).
4. *Proc. of the Workshop on Nuclear Dynamics IV*, V.E. Viola, editor, CONF-860270, UC-34C, 1986.
5. The Origin of the Chemical Elements, V.E. Viola, chapter in the *Macmillan Encyclopedia of Chemistry*, (MacMillan Publishing Co., New York) 1997 pp. 1110-1119.
6. Nuclear Reactions, V.E. Viola, in *Handbook of Nuclear Chemistry – Vol. 1*, p. 137-189, S. Vertes, S. Nagy and Z. Klenscar (eds.), 2004 Kluwer Academic Publishers, The Netherlands.

II. Popular Articles

1. The Cosmic Synthesis of Li, Be and B, V.E. Viola and G.J. Mathews, *Sci. Am.* **225**, 39 (1987).
2. How to Boil a Nucleus, V.E. Viola and K. Kwiatkowski, *American Scientist* **86**, 449-455, (1998).
3. The Nuclear Liquid-Gas Phase Transition: Studies with the ISiS array, V.E. Viola and K. Kwiatkowski, *Nucl. Phys. News Intl.* **12**, 35 (2002).
4. There Ain't No Fish in Mud Crick (short story), *Big Muddy: A Journal of the Mississippi Valley* (summer 2012).

III. Selected Summary/Overview Articles

1. *La Fission par Ions Lourds (in French), V.E. Viola, Jr., *Compte Rendu des Journées d'Etudes sur les Réactions Nucléaires par Ions Lourds* (Bordeaux, France: University of Bordeaux, 1964). p. 128.
2. Energy Dissipation in Nucleus-Nucleus Collisions: Damped Collisions, V.E. Viola, Jr., in *Collective Motion and Giant Resonances, Proc. of XVth Mikoajki Summer*

School of Nuclear Physics, Poland, Sept. 5-17, 1983 (Harwood Academic Publisher, Ed. Z. Wilhelmi and Mikicinska-Habior) p. 365 (1986).

3. Energy Dissipation in Nucleus-Nucleus Collisions: The Transition from Mean Field to Nucleon-Nucleon Regimes, V.E. Viola, *ibid.* p. 399 (1986).
4. *Kinetic Energy Release in Fission, V.E. Viola, North American Meeting of ACS, Toronto, Canada, June, 1988, Indiana Nuclear Chemistry Report INC-40007-54 (unpublished).
5. Nucleon Exchange and Excitation Energy Division in Damped Collisions, V.E. Viola, R. Paneta, K. Kwiatkowski, S.H. Zhou and H. Breuer, *Proc. 20th Masurian Summer School on Nuclear Physics*, Mikoajki, Poland, Sept. 1988. (Adam Hilger, Bristol and Philadelphia, 1989) p.71 (1989).
6. Fission: A Filter for the Study of Nuclear Reaction Mechanisms, V.E. Viola, *Nuclear Physics A***502**, 531c (1989).
7. Mechanisms of Complex Fragment Emission in Intermediate-Energy Collisions, V.E. Viola and K. Kwiatkowski, *XIII Symposium on Nuclear Physics* (Oaxtepec, Mexico; ed. E.R. Chavez-Lomeli, 1990) p. 245.
8. Intermediate-Mass Fragment Emission: Probing Nuclear Dynamics at High Excitation Energies, V.E. Viola and K. Kwiatkowski, *AIP Conf. Proc.*, **250**, 205 (1992).
9. LiBeB Nucleosynthesis and Clues to the Chemical Evolution of the Universe, V.E. Viola, ACS New Orleans Meeting, September 1999, in *Origin of the Elements in the Solar System: Implications of Post-1957 Observations*, Editor, O. Manuel (Kluwer Academic/Plenum Publishers, New York, 2000) p. 189-202.
10. Light-Ion Induced Multifragmentation: The ISiS Project, V.E. Viola and the ISiS collaboration, *Phys. Rept.* **434**, 1-46 (2006).

IV. Conference Proceedings

1. Direct Interaction in Reactions Between Heavy Ions and ^{238}U , T. Sikkeland and V.E. Viola, Jr., *Proc. Int. Symp. on Direct Interactions and Nuclear Reaction Mechanisms*, Padua, Italy, (New York: Gordon and Breach, 1962), p. 952.
2. Momentum Transfer in Heavy-Ion-Induced Reactions II, T. Sikkeland and V.E. Viola, Jr., *Proc. 3rd Conf. on Reactions Between Complex Nuclei*, Asilomar, Ca (Berkeley: University of California Press, 1963), p. 232.
3. Nuclear Systematics and the Prediction of Heavy Element Stability, V.E. Viola, Jr., *Proc. 3rd Int'l Conf. on Atomic Masses* (Winnipeg: University of Manitoba Press, 1967), p. 135.

4. Intensity and Phase Space Limitations of Various Heavy-Ion Acceleration Methods, M.P. Reiser and V.E. Viola, Jr., *Proc. Conf. on Heavy Ion Sources* (Washington, D.C.: U.S. Atomic Energy Commission, 1979), p. 227.
5. Li, Be and B Production in Proton-Induced Reactions: Implications for Astrophysics and Space Radiation Effects, R.G. Clark, C.T. Roche, G.J. Mathews, and V.E. Viola, Jr., *Proc. Conf. on Nuclear Cross Sections and Technology* (NBS Special Publication 425), Vol. II, 504 (1975).
6. Strongly Damped Collisions in the $^{84}\text{Kr} + ^{209}\text{Bi}$ Reactions, V.E. Viola, Jr., K.L. Wolf, J.P. Unik, J.R. Huizenga, J. Birkelund, and H. Freiesleben, *Proc. 2nd Int'l Conf. on Clustering Phenomena in Nuclei* (U.S. Dept. of Commerce, ORO-4856-26), 509 (1975).
7. Fragment Charge Distributions from the $^{209}\text{Bi} + ^{136}\text{Xe}$ Reaction at 1130 MeV, J.R. Birkelund, W.U. Schroder, J.R. Huizenga, K.L. Wolf, J.P. Unik, and V.E. Viola, Jr., *Proc. Symp. on Macroscopic Features of Heavy-Ion Collisions*, Vol. II, 451 (1976).
8. The Dependence of Nuclear Orbiting and Charge Exchange on Bombarding Energy in the $^{84}\text{Kr} + ^{144}\text{Sm}$ Reaction, K. Wolf, A. Mignerey, D. Raich, V.E. Viola, Jr., R. Boudrie, W. Schroder, J. Birkelund, and J. Huizenga, *Proc. Topical Conf. on Heavy-Ion Collections* (US TIS CONF-770602, Dept. of Commerce), 497 (1977).
9. Structure in the Energy Spectra of Damped Products from the $^{56}\text{Fe} + ^{56}\text{Fe}$ Reaction, A.C. Mignerey, K.L. Wolf, H. Breuer, B.G. Glagola, V.E. Viola, J.R. Birkelund, D. Hilscher, J.R. Huizenga, W.U. Schröder, and W.W. Wilcke, *Proc. Int'l Symp. on Continuum Spectra in Heavy-Ion Reactions*, San Antonio, TX, 2 (1979).
10. Synthesis of Superheavy Elements in the r-Process, V.E. Viola, Jr., and G.J. Mathews, *Proc. Int'l Symp. on Superheavy Elements* (Oxford, England: Pergamon Press, 1978), p. 499.
11. Nucleon Exchange and A/Z Equilibration in ^{56}Fe -Induced Reactions, H. Breuer, A.C. Mignerey, B.G. Glagola, V.E. Viola, K.L. Wolf, J.R. Birkelund, D. Hilscher, J.R. Huizenga, W.U. Schröder, and W.W. Wilcke, *Proc. Int'l Symp. on Continuum Spectra in Heavy-Ion Reactions*, San Antonio, Texas, 3 (1979).
12. Neutron Emission in the Strongly Damped Reaction $^{136}\text{Xe} + ^{165}\text{Ho}$ at 8.5 MeV/u, D. Hilscher, W.U. Schröder, J.R. Birkelund, W.W. Wilcke, J.R. Huizenga, K.L. Wolf, H. Breuer, A.C. Mignerey, and V.E. Viola, *Proc. Symp. on Deep-Inelastic and Fusion Reactions*, Munich (Heidelberg: Springer-Verlag, 1980).
13. Charge and Mass Exchange in Fe-Induced Reactions, A.C. Mignerey, H. Breuer, B.G. Glagola, V.E. Viola, K.L. Wolf, J.R. Birkelund, D. Hilscher, J.R. Huizenga, W.U. Schroder, and W.W. Wilcke, *Proc. Int'l Workshop on Gross Properties of Nuclei and Nuclear Excitations VIII*, Hirschegg, Austria, p. 104 (1980).
14. Charge and Mass Exchange in ^{56}Fe -Induced Reactions, H. Breuer, K. Kwiatkowski, A.C. Mignerey, V.E. Viola, B.G. Glagola, K.L. Wolf, J.R. Birkelund, D. Hilscher, J.R. Huizenga, W.U. Schröder, and W.W. Wilcke, *Proc. Workshop on Nuclear Dynamics*, Granlibakken, CA (LBL-10688, 1980).

15. Production of Exotic Nuclei in ^{56}Fe -Induced Reactions, V.E. Viola, K. Kwiatkowski, H. Breuer, A.C. Mignerey, K.L. Wolf, B.G. Glagola, J.R. Birkelund, D. Hilscher, J.R. Huizenga, W.U. Schroder, and W.W. Wilcke, *Proc. Int'l Workshop on Gross Properties of Nuclei and Nuclear Excitations*, Hirschegg, Austria, p. 135 (1981).
16. Charge and Mass Variances in ^{56}Fe -Induced Reactions, H. Breuer, A.C. Mignerey, V.E. Viola, K.L. Wolf, J.R. Birkelund, D. Hilscher, J.R. Huizenga, W.U. Schroder, and W.W. Wilcke, *Proc. Int'l Workshop on Gross Properties of Nuclei and Nuclear Excitations*, Hirschegg, Austria, p. 162 (1981).
17. Synthesis of the Chemical Elements, V.E. Viola, Jr., *Proc. NATO Adv. Study Inst. on Cosmochemistry and the Origin of Life*, Maratea, Italy, (D. Reidel Publ. Co., 1983), p. 35.
18. Studies of the Reaction of 270 MeV ^{37}Cl on ^{40}Ca and ^{209}Bi , A.C. Mignerey, H. Breuer, K.L. Wolf, V.E. Viola, R.R. Betts, C. Davids and B.G. Glagola, *Proc. 14th Masurian Summer School on Nuclear Physics*, (Mikoajki, Poland, 30 August - 12 September, 1981).
19. Linear Momentum Transfer in Nucleus-Nucleus Collisions, V.E. Viola, B.B. Back, K.L. Wolf, T.C. Awes, C.K. Gelbke, and H. Breuer, *Proc. Workshop on Nuclear Dynamics*, Granlibakken, CA, p. 45 (1982).
20. Mass and Charge Distributions in Reactions of ^{40}Ca and ^{209}Bi with ^{37}Cl , A.C. Mignerey, A. Gokmen, H. Breuer, K.L. Wolf, R.R. Betts, C. Davids, B.G. Glagola, and V.E. Viola, *Proc. Workshop on Nuclear Dynamics*, Granlibakken, CA p.70 (1982).
21. Global Studies of the $p + ^{27}\text{Al}$ Reaction at 180 MeV, *Proc. Int. Conf. on Interactions between Intermediate-Energy Nucleons in Nuclei*, S.H. Zhou, K. Kwiatkowski, T.E. Ward, V.E. Viola, Jr., G.J. Mathews, H. Breuer, A. Gokmen and A.C. Mignerey (Am. Inst. Phys. NY 1983) p. 254.
22. Nucleon and Energy Exchange in Low-Energy Heavy-Ion Reactions, H. Breuer, A. Gokmen, A.C. Mignerey, K. Kwiatkowski, V.E. Viola, J.R. Birkelund, J.R. Huizenga, W.U. Schroder, W. Wilcke, H.J. Wollersheim, B.G. Glagola and K.L. Wolf, *Proc. Winter Workshop on Nuclear Dynamic III* (Copper Mountain, CO, March 1984), US DOE TIS CONF-8403101, p. 58.
23. Quasi Elastic Structure in the Reaction $^{56}\text{Fe} + ^{56}\text{Fe}$ at 14.6 MeV/Nucleon, A.C. Mignerey, C. Merouane, S. Bradley, D. Benton, H. Breuer, J.D. Silk, K. Kwiatkowski, V.E. Viola, Jr., T.C. Awes, F.E. Obenshain and S. Pontoppidan, *ibid.*, p. 76.
24. Linear Momentum Transfer in Intermediate-Energy Projectile-Nucleus Collisions, K. Kwiatkowski, M. Fatyga, H.J. Karwowski, L.W. Woo, V.E. Viola, Jr., M.B. Tsang, C.B. Chitwood, D.J. Fields, C.K. Gelbke and W.G. Lynch, *ibid.*, p. 126.
25. Intermediate-Mass-Fragment Production in the Reaction of 200-MeV ^3He with Ag, K. Kwiatkowski, J. Bashkin, H. Karwowski, M. Fatyga and V.E. Viola, *Proc. of the Int. Workshop on Gross Properties of Nuclei and Nuclear Excitation XIV*, Hirschegg, Austria, (Jan. 1986) ISSN 0720-8715, p. 84.
26. Source Properties of Intermediate Mass Fragments Emitted in the 270 MeV $^3\text{He} + ^{232}\text{Th}$ Reaction, M. Fatyga, R. Byrd, K. Kwiatkowski, W.G. Wilson, L.W. Woo, V.E. Viola, Jr., H.J. Karwowski, J. Jastrzebski and W. Skulski, *Proceedings of Winter Workshop on Nuclear Dynamics IV*, Copper Mountain, CO, Feb. 24-28, 1986, CONF-860a270, UC-34C, p. 102.

27. Emission of Energetic Protons at Backward Angles in Central Collisions, W. Skulski, M. Fatyga, K. Kwiatkowski, H. Karwowski, L.W. Woo and V.E. Viola, *Proceedings of Winter Workshop on Nuclear Dynamics IV*, Copper Mountain, CO, Feb. 24-28, 1986, CONF-860270, UC-34C, p. 108.
28. Excitation Energy Division in the 9 MeV/Nucleon $^{56}\text{Fe} + ^{165}\text{Ho}$ Reaction, D.R. Benton, H. Breuer, F. Khazaie, K. Kwiatkowski, V.E. Viola, S. Bradley, A.C. Mignerey, A.P. Weston-Dawkes and R.J. McDonald, *Proceedings of Winter Workshop on Nuclear Dynamics IV*, Copper Mountain, CO, Feb. 24-28, 1986, CONF-860270, US-34C, p. 36.
29. Linear Momentum Transfer in Projectile-Nucleus Collisions, V.E. Viola and K. Kwiatkowski, *Proc. of Symposium on the Many Facets of Heavy-Ion Fusion Reactions*, Argonne, IL, March 24-26, 1986, Argonne National Laboratory Report ANL-PHY-86-1, 1986, p. 237.
30. Linear Momentum and Energy Transfer in Nucleus-Nucleus Collisions, V.E. Viola, Nuclear Fission and Heavy-Ion-Induced Reactions, (Harwood Academic Publishers, Ed. W.U. Schröder). *Proc. of Int. Sym. on Nuclear Fission and Heavy-Ion-Induced Reactions*, Rochester, NY, April 27-29, 1986 p. 337).
31. Linear Momentum Balance in the $^3\text{He} + ^{238}\text{U}$ Reaction, W. Skulski, M. Fatyga, H.J. Karwowski, K. Kwiatkowski, V.E. Viola and K. Hicks, *Int. Summer School on Nuclear Physics*, Mikolajki, Poland, Sept. 1-13 (1986).
32. Nuclear Reactions During Cosmic Ray Transport, V.E. Viola, L.W. Woo and K. Kwiatkowski, in *Origin and Distribution of Elements*, ed. G.J. Mathews (World Scientific, New Jersey), p. 272 (1988).
33. Co-existence of Equilibrated and Non-equilibrated Sources of Complex Fragments at Intermediate Energies, V.E. Viola, *Proc. of Eighth High-Energy Heavy-Ion Study*, (LBL-24580, CONF-8711116, UC-34C), p. 297 (1988).
34. Relative Strengths of Equilibrated and Non-Equilibrated Sources of IMFs in E/A - 20-50 MeV ^{14}N -Induced Reactions, K. Kwiatkowski, D.E. Fields, D. Bonser, R.W. Viola, V.E. Viola, C.K. Gelbke, D.J. Fields, W.G. Lynch, J. Pochodzalla and M.B. Tsang, *Proc. Third Int. Conf. on Nucleus-Nucleus Collisions*, (Centre de Publications de l'Universite de Caen, ISBN 2-905461-30-6), P. 108 (1988)*.
35. Charge Drift in Damped Reactions, J.R. Huizenga, R.T. de Souza, W.U. Schröder, R. Płaneta, K. Kwiatkowski, V.E. Viola and H. Breuer, *ibid*, p. 132.
36. Nucleon Exchange and Excitation Energy Division in Damped Collisions, V.E. Viola, R. Paneta, K. Kwiatkowski, S.H. Zhou and H. Breuer, *Proc. 20th Masurian Summer School on Nuclear Physics*, Mikoajki, Poland, Sept. 1988. (Adam Hilger, Bristol and Philadelphia, 1989) p. 71 (1989).
37. Equilibrated and Non-Equilibrated Sources of Complex Fragments from Hot Nuclei, V.E. Viola, K. Kwiatkowski, S.J. Yennello and D.E. Fields, *Proc. Sym. on Nuclear Dynamics and Nuclear Disassembly*, (World Scientific, Singapore) p. 82 (1989).
38. Fission as a Probe for Investigation of Nuclear Reaction Mechanisms, V.E. Viola, in *Proceeds of Conference on 50 Years with Nuclear Fission*, (Am. Nucl. Soc., La Grange Park, IL) V.II, p. 497 (1989).
39. Nucleon Exchange and Heat Partition in $^{76}\text{Ge} + ^{165}\text{Ho}$ Collisions at Energy 8.5MeV/A, R. Płaneta, K. Kwiatkowski, S.H. Zhou, V.E. Viola, H. Breuer, M.

- McMahan and W. Kehoe, to be published in *Proc. of XXIV Zakopane School on Nuclear Physics*, Zakopane, Poland, April, 1989.
40. Multifragmentation in the $^3\text{He} + ^{\text{nat}}\text{Ag}$ System, S.J. Yennello, K. Kwiatkowski, N.R. Yoder, R. Paneta, J.L. Wile, D.E. Fields, V.E. Viola, E.C. Pollacco, C. Volant, R. Dayras, R. Legrain, S. Harar, Y. Cassagnou, E. Hourani and E. Norbeck, to be published in *Proc. of XVIII Int. Workshop on Gross Properties of Nuclei and Excitations*, Hirschegg, Austria, January, 1990.
 41. Excitation Functions for Complex Fragments Emitted in ^{14}N -Induced Reactions from $E/A = 20\text{-}100$ MeV, D.E. Fields, J.L. Wile, K. Kwiatkowski, S.J. Yennello, E. Renshaw, K.B. Morley, V.E. Viola, N. Carlin, R. de Souza, C.K. Gelbke, W.G. Lynch, M.B. Tsang, H.M. Xi and W.G. Gong (*Proc. of Sixth Winter Workshop on Nuclear Dynamics*, Lawrence Berkeley Laboratory LBL-18709; ed. J. Randrup) p. 159.
 42. Search for Multifragmentation near Threshold in the $^3\text{He} + ^{\text{nat}}\text{Ag}$ System, S.J. Yennello, K. Kwiatkowski, N.R. Yoder, R. Paneta, J.L. Wile, D.E. Fields, V.E. Viola, E.C. Pollacco, C. Volant, R. Dayras, R. Legrain, S. Harar, Y. Cassagnou, E. Hourani and E. Norbeck, (*Proc. of Sixth Winter Workshop on Nuclear Dynamics*, Lawrence Berkeley Laboratory LBL-18709; ed. J. Randrup) p. 107.
 43. The Role of Boron in Cosmology, V.E. Viola, *Boron-Rich Solids*, Am. Inst. Phys. Conf. Proc. 231, New York, eds. D. Emin, T.L. Aselage, A.C. Switendick, B. Morosin and C.L. Beckel, p. 1 (1991), *Proc. of the 10th International Symposium on Boron, Borides and Related compounds*, Albuquerque, NM, August 27-30, 1990, (Am. Inst. Phys.; ed. D. Emin, et al.), p.1 (1991).
 44. Complex Fragments Emitted in the $0.48\text{-}3.6$ GeV $^3\text{He} + \text{Ag}$ Reaction, E.C. Pollacco, R. Dayras, C. Volant, R. Legrain, Y. Cassagnou, S. Harar, K. Kwiatkowski, S.J. Yennello, R. Paneta, J. Wile, N.R. Yoder, D.E. Fields, V.E. Viola, E. Hourani and E. Norbeck, to be published in *Proc. of Int. Workshop on Nucl. Dynamics*, Elba, Italy, April, 1990.
 45. Two-proton Correlation Functions for Equilibrium and Non-Equilibrium Emission, C.K. Gelbke, W.G. Gong, N. Carlin, R.T. de Souza, Y.D. Kim, W.G. Lynch, T. Murakami, G. Poggi, D. Sanderson, M.B. Tsang, H.M. Xi, D.E. Fields, K. Kwiatkowski, R. Paneta, V.E. Viola and S.J. Yennello, *Proc. of Int. Workshop on Particle Correlations and Interferometry in Nuclear Collisions*, Nantes, France, June 1990, ed.: D. Ardouin (World Scientific Publ., Singapore, 1990) p. 183.
 46. Multifragmentation Induced by Intermediate Energy ^3He Projectiles, C. Volant, E.C. Pollacco, R. Dayras, R. Legrain, Y. Cassagnou, S.J. Yennello, K. Kwiatkowski, N.R. Yoder, J.L. Wile, V.E. Viola and E. Norbeck, *Proc. of XIX International Workshop on Gross Properties of Nuclei and Nuclear Excitations*, Hirschegg, Austria, Jan. 21-26, 1991.
 47. Multifragment Emission in Light-Ion-Induced Reactions, S.J. Yennello, K. Kwiatkowski, N.R. Yoder, J.L. Wile, V.E. Viola, E.C. Pollacco, C. Volant, R. Dayras, R. Legrain, Y. Cassagnou and E. Norbeck, *Proc. of 7th Winter Workshop on Nuclear Dynamics*, Key West, FL, Jan. 1991, to be published by World Scientific, Singapore, Eds. J. Kapusta and W. Bauer.
 48. Intermediate-Mass-Fragment Emission: Probing Nuclear Dynamics at High Excitation Energies, V.E. Viola and K. Kwiatkowski, *Proc. of Workshop: Towards a*

Unified Picture of Nuclear Dynamics, Kanazawa, Japan, June 6-8, 1991, to be published by Am. Inst. Phys., ed. F. Sakata.

49. Multifragmentation Induced by Intermediate Energy ^3He Projectiles, E.C. Pollacco, C. Volant, R. Dayras, R. Legrain, Y. Cassagnou, S.J. Yennello, K. Kwiatkowski, N.R. Yoder, J.L. Wile, V.E. Viola and E. Norbeck, *Proc. of 6th Int. Conf. on Nuclear Reaction Mechanisms*, Varenna, Italy, June, 1991, ed. E. Gadioli.
50. Emission of IMFs Normal to the Fission Axis in Hot Heavy Nuclei, D.E. Fields, J.L. Wile, K. Kwiatkowski, K.B. Morley, E. Renshaw, S.J. Yennello, V.E. Viola and R.G. Korteling, to be published in *Proc. of VIIIth Winter Workshop on Nuclear Dynamics*. (Jackson Hole, WY, Jan. 19-25, 1992, World Scientific).
51. Multifragmentation in ^3He -Induced Reactions, K. Kwiatkowski, D.S. Bracken, H. Breuer, J. Brzychczyk, E. Renshaw Foxford, W.A. Friedman, R.G. Korteling, R. Legrain, K.B. Morley, E.C. Pollacco, V.E. Viola, C. Volant and N.R. Yoder, *Proc. of Tenth Winter Workshop on Nuclear Dynamics*, (World Scientific. eds. J. Harris, A. Miguerey and W. Bauer). p. 294 (1994).
52. ^3He -Induced Reactions on $^{\text{nat}}\text{Ag}$ and ^{197}Au at 1.8, 3.6 and 4.8 GeV, J. Brzychczyk, E.C. Pollacco, C. Volant, R. Legrain, K. Kwiatkowski, K.B. Morley, E. Renshaw Foxford, D.S. Bracken, V.E. Viola, N.R. Yoder, W.A. Friedman, R.G. Korteling, H. Breuer and J. Cugnon, to be published in *Proc. of XXXIII Int. Winter Meeting on Nuclear Physics*, January, 1995.
53. Saturation of Deposition Energy and Expansion Effects in Light-Ion-Induced Reactions, K. Kwiatkowski, K.B. Morley, D.S. Bracken, E. Renshaw Foxford, V.E. Viola, G. Wang, N.R. Yoder, R. Legrain, E.C. Pollacco, C. Volant, R.G. Korteling, W.A. Friedman, J. Brzychczyk and H. Breuer, to be published in *Proc. of 11th Winter Workshop on Nuclear Dynamics*, February, 1995.
54. Δ -Enhanced Multifragmentation, V.E. Viola, K. Kwiatkowski, D.S. Bracken, E. Renshaw Foxford, K.B. Morley, G. Wang, N.R. Yoder, R. Legrain, E.C. Pollacco, C. Volant, R.G. Korteling, W.A. Friedman, J. Brzychczyk and H. Breuer, to be published in *Proc. of ACS Awards Symposium for J.B. Natowitz*, April 1995.
55. Light-Ion-Induced Multifragmentation: A Fast, Evolutionary Process, V. E. Viola, D. S. Bracken, E. Renshaw Foxford, D. Ginger, W. -C. Hsi, K. Kwiatkowski, K. B. Morley, G. Wang, R. G. Korteling, R. Legrain, E. C. Pollacco and C. Volant, *Proc. 12th Winter Workshop on Nuclear Dynamics, Snowbird*, Utah (ed. W. Bauer and G. Westfall, World Scientific), p. 57 (1996).
56. Toward Limits of Excitation Energy in the Reaction ^3He (1.8 GeV) + $^{\text{nat}}\text{Ag}$, E. C. Pollacco, J. Brzychczyk, C. Volant, R. Legrain, L. Nalpas, D. S. Bracken, H. Breuer, R. G. Korteling, K. Kwiatkowski, K. B. Morley, E. Renshaw Foxford, V. E. Viola and N. R. Yoder, *Proc. 12th Winter Workshop on Nuclear Dynamics, Snowbird*, Utah (ed. W. Bauer and G. Westfall, World Scientific), p. 145 (1996).
57. Dynamics of GeV Light-Ion-Induced Reactions, K. Kwiatkowski, D.S. Bracken, E. Renshaw Foxford, D.S. Ginger, W.-C. Hsi, K.B. Morley, V.E. Viola, G. Wang, R.G. Korteling, R. Legrain, E. C. Pollacco and C. Volant, *Proc. of CRIS 96 Symposium*, Catania, Italy (ed. S. Costa and A. Insolia, World Scientific), p. 357 (1997).
58. Light-Ion-Induced Multifragmentation, K. Kwiatkowski, D. Bracken, E. Foxford, K.B. Morley, V.E. Viola, G. Wang, R.G. Korteling, R. Legrain, E.C. Pollacco and C.

- Volant, to be published in *Proceedings of 35th International Winter Meeting on Nuclear Physics*, Bormio, Italy, Feb. 1997, ed. I. Iori, p. 432.
59. Heating the Nuclear Liquid with GeV Hadrons, V.E. Viola, K. Kwiatkowski, W.-c. Hsi, G. Wang, D.S. Bracken, H. Breuer, E. Cornell, E. Renshaw Foxford, F. Gimeno-Nogues, D.S. Ginger, S. Gushue, R.G. Korteling, R. Legrain, W.G. Lynch, K.B. Morley, E.C. Pollacco, E. Ramakrishnan, M.B. Tsang, C. Volant, S.J. Yennello, H. Xi and N.R. Yoder, *Proceedings of 8th International Conference on Nuclear Reaction Mechanisms*, Varenna, Italy, June 9-14, 1997, ed. E. Gadioli, p. 198.
 60. Hadron-Induced Multifragmentation W.-c. Hsi, K. Kwiatkowski, G. Wang, D.S. Bracken, H. Breuer, Y.Y. Chu, E. Cornell, F. Gimeno-Nogues, D.S. Ginger, S. Gushue, M.J. Huang, R.G. Korteling, W.G. Lynch, K.B. Morley, E. Ramakrishnan, L.P. Remsberg, D. Rowland, M.B. Tsang, V.E. Viola, H. Xi, S.J. Yennello and N.R. Yoder, *Advances in Nuclear Dynamics 3* (eds. W. Bauer and A. Mignerey, Plenum Press, New York), p. 197 (1998).
 61. Dynamic and Statistical Effects in Light-Ion-Induced Multifragmentation, K. Kwiatkowski, W.-c. Hsi, G. Wang, A. Botvina, D.S. Bracken, H. Breuer, E. Cornell, W.A. Friedman, F. Gimeno-Nogues, D.S. Ginger, S. Gushue, R. Huang, R.G. Korteling, W.G. Lynch, K.B. Morley, E.C. Pollacco, E. Ramakrishnan, L.P. Remsberg, E. Renshaw Foxford, D. Rowland, M.B. Tsang, V.E. Viola, H. Xi, C. Volant, and S.J. Yennello, *Advances in Nuclear Dynamics 4*, Edited by Bauer and Ritter, Plenum Press, NY, 1998.
 62. Boiling a Nucleus, E.C. Pollacco, J. Brzychczyk, R. Legrain, C. Volant, K. Kwiatkowski, E. Renshaw Foxford, D.S. Bracken, K.B. Morley and V.E. Viola, *Proc. of XXI Symposium on Nuclear Physics*, Oaxtepec, Mexico, Jan., 1998.
 63. Ternary Fission in Alpha- and Carbon-Induced Reactions on Thorium Targets, T. Bredeweg, R. Yanez, E. Cornell, B. Davin, K. Kwiatkowski, V.E. Viola, R.T. de Souza, R. Lemmon, R. Popescu, R.G. Korteling, and J.L. Wile, *Proc. of XXXIV Intl. Workshop on Nuclear Physics*, Bormio, Italy, ed. I. Iori, 251 (1998).
 64. Isolating the Thermal Degree of Freedom in Nuclear Multifragmentation, V.E. Viola, T. Lefort, K. Kwiatkowski, W.-c. Hsi, L. Beaulieu, L. Pienkowski, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, E. Winchester, S.J. Yennello, S. Gushue, L.P. Remsberg, B. Back and H. Breuer, Hirscheegg '99: Multifragmentation *Proceedings of the Multifragmentation, Intl. Workshop XXVII on Gross Properties of Nuclei and Nuclear Excitations*, Hirscheegg, Austria, 17-23 January 1999 (Gesellschaft für Schwerionenforschung mbH Darmstadt, 1999), p. 93-103.
 65. Heating ^{197}Au Nuclei with GeV/c Antiproton and π Beams, T. Lefort, K. Kwiatkowski, W.-c. Hsi, L. Pienkowski, L. Beaulieu, B. Back, H. Breuer, S. Gushue, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, L.P. Remsberg, D. Rowland, A. Ruangma, V.E. Viola, E. Winchester and S.J. Yennello, published in *Proceedings of the XXXVII International Winter Meeting on Nuclear Physics*, Bormio, Italy, (Jan. 25-30, 1999).
 66. Heating of Nuclear Matter and Multifragmentation: Antiprotons vs. Pions, L. Beaulieu, T. Lefort, W.-c. Hsi, K. Kwiatkowski, V.E. Viola, L. Pienkowski, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, D. Rowland, A. Ruangma, E. Winchester, S.J. Yennello, H. Breuer, S. Gushue and L.P. Remsberg, B. Back,

- Proceedings of 15th Winter Workshop on Nuclear Dynamics*, Park City, UT, Jan. 9-16, 1999. Editor W. Bauer and G.D. Westfall (Kluwer Academic/Plenum Publishers, New York, 2000), p. 93-103.
67. Thermally-Induced Multifragmentation in the 8 GeV/c $\pi^- + {}^{197}\text{Au}$ Reaction, T. Lefort, L. Beaulieu, A. Botvina, D. Durand, K. Kwiatkowski, R.T. de Souza, W.-c. Hsi, L. Pienkowski, B. Back, H. Breuer, S. Gushue, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, L.P. Remsburg, D. Rowland, A. Ruangma, V.E. Viola, E. Winchester, S.J. Yennello, to be published in the *Proceedings of the XXXVIII International Winter Meeting on Nuclear Physics*, editors, I. Iori and A. Moroni (Stompatto Presso, Milan, Italy, 2000) p. 419.
 68. Phase Transition Signals in Thermally Excited Nuclei, E900: 5-15 GeV/c p, π^- and ${}^{197}\text{Au}$, V.E. Viola, K. Kwiatkowski, L. Beaulieu, T. Lefort, B. Back, A. Botvina, H. Breuer, D. Durand, S. Gushue, W.-c. Hsi, R.G. Korteling, R. Laforest, E. Martin, L. Pienkowski, E. Ramakrishnan, L.P. Remsburg, D. Rowland, A. Ruangma, E. Winchester, S.J. Yennello, *Nucleus-Nucleus Collisions*, Editors, G.C. Bonsignori, M. Bruno, A. Ventura and D. Vretenar (World Scientific, 2001) p. 231.
 69. Setting Bounds on Critical Exponents with Event-by-Event Analysis of Nuclear Fragmentation Data, W. Bauer, M.K. Berkenbusch, L. Beaulieu, R. Lefort, R.G. Korteling, K. Kwiatkowski, L. Pienkowski, S. Pratt, A. Ruangma, V.E. Viola, and S.J. Yennello, 17th *Proc. of the Winter Workshop on Nuclear Dynamics*, Park City, UT, March 10-17, 2001.
 70. Breakup Time Scale Studied in the 8 GeV/c $\pi^- + \text{Au}$ Reaction, L. Pienkowski, K. Kwiatkowski, T. Lefort, W.-c. Hsi, L. Beaulieu, V.E. Viola, A. Botvina, B. Back, H. Breuer, S. Gushue, R.G. Korteling, R. Laforest, E. Martin, E. Ramakrishnan, L.P. Remsburg, D. Rowland, A. Ruangma, E. Winchester and S.J. Yennello., *Proc. of Int. Nucl. Phys. Conf.*, American Institute of Physics **610**, (2002).
 71. The coexistence curve of finite charged nuclear matter, Elliott, J. B.; Moretto, L. G.; Phair, L.; Wozniak, G. J.; Beaulieu, L.; Breuer, H.; Korteling, R. G.; Kwiatkowski, K.; Lefort, T.; Pienkowski, L.; Ruangma, A.; Viola, V. E.; Yennello, S. J.; Albergo, S.; Bieser, F.; Brady, F. P.; Caccia, Z.; Cebra, D. A.; Chacon, A. D.; Chance, J. L.; Choi, Y.; Costa, S.; Gilkes, M. L.; Hauger, J. A.; Hirsch, A. S.; Hjort, E. L.; Insolia, A.; Justice, M.; Keane, D.; Kintner, J. C.; Lindenstruth, V.; Lisa, M. A.; Matis, H. S.; McMahan, M.; McParland, C.; Mueller, W. F. J.; Olson, D. L.; Partlan, M. D.; Porile, N. T.; Potenza, R.; Rai, G.; Rasmussen, J.; Ritter, H. G.; Romanski, J.; Romero, J. L.; Russo, G. V.; Sann, H.; Scharenberg, R. P.; Scott, A.; Shao, Y.; Srivastava, B. K.; Symons, T. J. M.; Tincknell, M.; Tuve, C.; Wang, S.; Warren, P.; Wieman, H. H.; Wienold, T.; Wolf, K. AIP Conference Proceedings (2002), 610(Nuclear Physics in the 21st Century), 683-687.
 72. V.E. Viola, Multifragmentation and supernovae phenomena: Is there a connection? Abstracts of Papers, 228th ACS National Meeting, Philadelphia, PA, United States, August 22-26, 2004 (2004)