CURRICULUM VITA

Barry Graham Ritchie

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Contents

1 Education

- Doctor of Philosophy, Department of Physics and Astronomy,
  University of South Carolina, December 1979
  Dissertation: *Experimental and Theoretical Investigations of the Decays of* ^{206}Fr *and* ^{208}Fr
  Advisor: Frank T. Avignone, III

- Master of Science, Department of Physics and Astronomy,
  University of South Carolina, June 1978
  Thesis: *Internal Conversion Electron Studies in* ^{187}Au *and* ^{187}Hg
  Advisor: Frank T. Avignone, III

- Bachelor of Science, *cum laude*, Appalachian State University, June 1975
  Major: Physics. Minor: Education (with North Carolina Public School Teaching Certification)

2 Employment

2.1 Current employment

Professor of Physics, Department of Physics, ASU, 1996 to present

2.2 Previous employment

Senior Advisor to the Provost, Arizona State University (ASU), 2015-2016
Vice Provost for Academic Personnel, Arizona State University (ASU), 2012-2015
Interim Vice President and Dean, New College of Interdisciplinary Arts and Sciences, ASU, 2006-07
Chair, Department of Physics and Astronomy, ASU, 2000-06
Associate Chair, Department of Physics and Astronomy, ASU, 1994-2000
Associate Professor of Physics, Department of Physics and Astronomy, ASU, 1990-96
Visiting Associate Professor of Physics, Department of Physics, University of Virginia, 1990-91
Assistant Professor of Physics, ASU, 1984-90
Research Associate, Department of Physics, University of Maryland, 1984-85
Postdoctoral Fellow, Department of Physics and Astronomy, University of South Carolina, 1979-83
Laboratory Graduate Participant, UNISOR, Oak Ridge National Laboratory, 1977-79
Science Teacher, Project Upward Bound, Appalachian State University, 1975

3 Research and Teaching Interests

My research explores baryon and meson spectroscopy through the use of electromagnetic probes. In particular, I use photoproduction of mesons and excited baryons from the proton in order to explore the spectrum of excited states of systems of quarks and gluons. These studies advance our understanding of how quarks are assembled into the protons and neutrons that make up atomic nuclei. In the past, I have also led or participated in investigations of neutron-deficient heavy nuclei created in heavy ion reactions, pion interactions with nuclei, pion beta decay, and neutrino oscillations. All these investigations probe the fundamental interactions between the most basic constituents of matter - quarks, gluons, and leptons.

4 Professional Affiliations

American Physical Society
CEBAF Large Acceptance Spectrometer Collaboration
Jefferson Lab Users' Group
Jefferson Lab Glue-X/Hall D Collaboration

5 Teaching

5.1 Teaching awards and recognitions

Dean's Quality Teaching Award, College of Liberal Arts and Sciences, ASU - 1996
Outstanding Teaching Award, Department of Physics and Astronomy, ASU - 1990, 2018
Honor Student Teacher, Appalachian State University - 1975

5.2 Courses taught

(F = Fall Semester, S = Spring Semester, H = Hybrid [otherwise, face-to-face])

PHY 121 -University Physics I: Mechanics	(F '89)
PHY 131 -University Physics II: Electricity and Magnetism	(S '90)
PHY 310 -Classical Particles and Fields I	(F '08, F '10, F '17, F '18, S '18H)
PHY 311 -Classical Particles and Fields II	(S '09, S '18, F '18H, S '18, S '18H)
PHY 321 -Classical Mechanics I	(F '86, F '87, F '88)
PHY 322 -Classical Mechanics II	(S '87, S '88, S '89)
PHY 331 -Electricity and Magnetism I	(F '92, F '93, F '94, F '95)
PHY 332 -Electricity and Magnetism II	(S '93, S '94, S '95, S '96)
PHY 334 -Advanced Laboratory I	(F '97, S '98, F '98, S '99, S '00)
PHY 462 -Nuclear Physics	(S '89, S '96, S '97)
PHY 494 -Special Topics: Synthesis of the Sciences	(F '96)
PHY 494 -Special Topics: Topics in Nuclear and Particle Physics	(F '06,S '07)
PHY 561 -Nuclear Physics I	(F '85, F '99)
PHY 562 -Nuclear Physics II	(S '86)

5.3 Graduate student mentoring

5.3.1 Dissertations and theses chaired

Ross Tucker, Doctor of Philosophy; May 2016
Thesis: *Spin Observables in η Meson Photoproduction from the Proton*

Brian Thomas Morrison, Doctor of Philosophy; December 2011
Thesis: *Helicity Asymmetry E in Eta(547) Meson Photoproduction from the Proton*

Patrick Collins, Doctor of Philosophy; December 2009
Dissertation: *Beam Asymmetry in Eta(547) and Eta(958) Meson Photoproduction from the Proton*

Michael Robert Dugger, Doctor of Philosophy; December 2001
Dissertation: *Photoproduction of Eta(549) and Eta(958) by 0.7-1.8 GeV Photons*

David Lawrence, Doctor of Philosophy; May 1998
Dissertation: *Initial Tests of the Pion Beta Decay Detector*

Bernard George Ofenloch, Doctor of Philosophy; May 1996
Dissertation: *A Study of the Isovector Spin Flip Mechanism of the Pion-Nucleus Interaction*

Robert Anthony Giannelli, Doctor of Philosophy; May 1995
Dissertation: *Pion Absorption below 135 MeV*

Joffa Michele Applegate, Master of Science; June 1992
Thesis: *A Study of Isospin Symmetry Breaking in ^{12}C with 50 MeV Pions*

5.3.2 Current graduate students

Sebastian Cole, Doctor of Philosophy; expected graduation: August 2018

5.4 Undergraduate and high school student mentoring

5.4.1 Previous honors students

Susan K. Beckman, Bachelor of Science with Honors, May 1993
Thesis: *Coherent η and η' Photoproduction from Deuterium*

Sean E. Marshall, Honors Project (PHY 310 footnote 19), Fall 2008.
Title: *Aerobraking around Mars*

Tanner Wolfram, Honors Project (PHY 310 footnote 19), Fall 2017.
Title: *Numerical solutions of classical mechanics problems*

5.4.2 Current honors students

Rachel Proctor-Murphy

5.4.3 Other undergraduate students

The following students worked with my research group for at least one semester during their undergraduate career at ASU:

Todd Averett	Eric Beck	James Beck	Shep Bryan (current)
Martha Cassetti	Sebastian Cole	James Dekorse	Barbara Franklin
Andrew Gamalski	Miguel Garcia	Austin Godber	Todd Hodges
John Jacob	Jon Koliner	Robert Lee (current)	Aaron Miles
Eric Podany	Benjamin Prather	Laura Rocha	Laura Sparks
Corey Stephenson	Brandon Sumner	Brianna Thorpe	Ross Tucker
Aaron Vanderpool	Jamie Winterton		

5.4.4 High school students

The following high school students worked with my research group for at least one semester:
Andrew Gamalski Kyle Sinclair Geoff Tuttle

6 Service

6.1 Departmental service

(listed alphabetically)

Associate Chair, ‘94-00
Awards Committee, ‘93-94
Budget and Policy Committee, ‘87-88 (elected), *ex-officio* ‘00-06
Colloquium Committee, ‘85-87 (chair ‘85-86)
Committee on Committees, (elected) ‘85-87, ‘89-90
Condensed Matter Experimentalist Search Committee, ‘85-86
Department Chair Search Committee, ‘93-94
Director, Undergraduate Programs, ‘09-‘10
Faculty Secretary, ‘86-87
Graduate Examination Committee, ‘85-87, ’08-present
Medium-Energy Experimentalist Search Committee, ‘87-89
New Physics Curriculum Implementation Team, ‘91-94
Personnel Committee, (elected) ‘91-93
Physical Sciences H-Wing Building Design, ‘85-87
Physics Majors Experience Committee (*ad hoc*), ‘85-89
Physics Research Experience for Undergraduates Program (Director), ‘92-98
Quality of Instruction Committee (Chair), ‘18-19
Society of Physics Students faculty advisor, ‘86-90
Superconducting Super Collider Stimulated Growth Committee (*ad hoc*), ‘87-88
Undergraduate advisor, ‘94-96
Undergraduate Program Committee, ‘89-90, ‘91-93 (chair), ‘08-‘10
Undergraduate Program Director (interim) ‘09-‘10

6.2 College service

Chair, Kinesiology Department Chair Search, 2003-04
CLAS Academic Standards Committee, 1993-95

6.3 University service

Search Committee, Dean, Fulton Schools of Engineering, 2015-2016
Search Committee, Dean, Office of Graduate Education, 2015-2016
Director, 2013 Higher Learning Commission Re-Accreditation and Self-Study, 2009-2013
Member, Social Embeddedness Steering Committee, 2004-2007
Chair, Academic Chairs and Directors’ Council, 2004-2006
University Club Advisory Board, 2003-2005
Search Committee, Associate Dean for Academic Personnel, CLAS 2002-2003
Academic Professionals Task Force, 2003-2004
Search Committee, Associate Dean, Graduate College, 2000-2001
OVPR Cost Policy Implementation Study Group, 1997-1999
Graduate Council, ‘96-98
Department of Physics and Astronomy Heptennial Review Committee, 1996-1998

6.4 Professional service

Spokesman, LAMPF experiments 567, 811, 828, 948, 966, 1085, 1117, 1226, and 1227
Spokesman, CEBAF experiments 91-008, 94-008
Low Energy Pion Channel Working Group Chair, LAMPF Users' Group, '82, '85, '90-94
Technical Advisory Panel Representative, Hall B, CEBAF, '90-92
Member, Board of Directors, LAMPF Users' Group, Inc., '92-94
LAMPF Experimental Facilities Panel member, '90-94
CEBAF Large Acceptance Spectrometer Collaboration:
    Chair, Real Photon Physics
    Working Group, CLAS Coordinating Committee, '95-99
Zone Councilor, National Council, Society of Physics Students, '88-95
Member, External Visiting Committee, Physics Department, New Mexico State University 2004-2006
Member, Academic Board of Directors, Metanexus Institute, '07 to '10
Chair Elect, Four-Corners Section, American Physical Society, 2017-8
Chair, Four-Corners Section, American Physical Society, 2018-9
Reviewer (including Review Panel) service for National Science Foundation, Department of Energy, and the Research Corporation
Reviewer service for Physical Review C, Physical Review Letters, and Nuclear Physics A

7 Research

7.1 Summary in numbers

218 papers in refereed journals
    Total citations for published papers[†]: 11,440
    Papers with 500 or more citations[†]: 3
    Papers with 250-499 citations[†]: 4
    Papers with 100-249 citations[†]: 25
    Papers with 50-99 citations[†]: 28
    Papers with 10-49 or more citations[†]: 97
    Hirsch index[†] $h = 56$
10 invited talks
83 contributed papers at topical conferences *
173 abstracts or talks at APS and similar meetings *
20 colloquia or seminars
26 grants, awards, and contracts
$5,165,069 total research funding (credited/attributed specifically to BGR: $3,613,154)

[†] Statistics according to the INSPIRE high energy physics database (as of January 18, 2018) using the search phrase: `find a ritchie, b OR a richie, b NOT (a ritchie, brian OR a ritchie, b w)`.

* Note: I am a charter member of the CEBAF Large Acceptance Spectrometer Collaboration. Due to the number of scientists (> 250) in the CLAS Collaboration, hundreds of abstracts and papers have been presented to professional meetings with the byline "... and the CLAS Collaboration." Only those CLAS Collaboration papers or presentations in which one or more members of my research group (including me) was involved are counted in the summary numbers above; those are also the only such items listed below under the appropriate sections.

7.2 Research personnel supervised (excluding students)

7.2.1 Postdoctoral research associates

Nathan Sparks, Postdoctoral Research Associate, 2015 - 2017
Patrick Collins, Postdoctoral Research Associate, 2014 - 2016
Kei Moriya, Postdoctoral Research Associate, 2014-2015
Igor Senderovich, Postdoctoral Research Associate, 2012 -2016

7.2.2 Research professors

Michael Dugger, Associate Research Professor, 2002-2017; presently Associate Professor, ASU Polytechnic campus
Eugene Pasyuk, Research Professor, 1999-2010; presently Staff Scientist, Jefferson Lab

7.3 Refereed publications

1. **"Decay of high-spin isomers in ^{150,151,152}Ho,"** K.S. Toth, C.R. Bingham, H.K. Carter, B.G. Ritchie, D. C. Sousa, and D.R. Zolnowski, Phys. Rev. C **20**, 298-306 (1979).
2. **"A new high temperature ISOL ion source,"** R.L. Mlekodaj, E.H. Spejewski and B.G. Ritchie, Nucl. Instrum. and Meth. **171**, 451-455 (1980).
3. **"Electron and positron decays of ^{206}Fr and ^{208}Fr and the energy levels of ^{206}Rn and ^{208}Rn,"** B.G. Ritchie, F.T. Avignone III, H.K. Carter, R.L. Mlekodaj, and E.H. Spejewski, Phys. Rev. C **23**, 1717-1725 (1981).
4. **"Alpha decay properties of ^{205,206,207,208}Fr; identification of ^{206m}Fr,"** B.G. Ritchie, K.S. Toth, H.K. Carter, R.L. Mlekodaj, and E.H. Spejewski, Phys. Rev. C **23**, 2342-2344 (1981).
5. **"π + d $\rightarrow$ p+p at 20 to 65 MeV,"** B.G. Ritchie, R. D. Edge, D.J. Malbrough, B.M. Preedom, F.E. Bertrand, E.E. Gross, F.E. Obenshain, J.R. Wu, M. Blecher, K. Gotow, R.L. Burman, R. Carlini, M.E. Hamm, M.J. Leitch, and M.A. Moinester, Phys. Rev. C **24**, 552-560 (1981).
6. **"Pion-nucleus inelastic scattering at 80 MeV,"** M. Blecher, K. Gotow, R. Ng, R.L. Burman, R. Carlini, S. Dam, M.V. Hynes, M.J. Leitch, V. Sanberg, R. Auble, F.E. Bertrand, E.E. Gross, F.E. Obenshain, J. Wu, G. Blanpied, B.M. Preedom, B.G. Ritchie, W. Bertozzi, M.A. Kovash, and R.P. Redwine, Phys. Rev. C **25**, 2554-2562 (1982).
7. **"Precision mass difference measurements in light rubidium and krypton isotopes utilizing beta endpoints,"** D.M. Moltz, K.S. Toth, F.T. Avignone III, H. Noma, B.G. Ritchie, and B.D. Kern, Phys. Lett. B **113**, 16-20 (1982).
8. **"The determination of relative signs of neutron and proton transition matrix elements for the ^{34}S($0^+ \rightarrow 2^+_2$) transition,"** A.M. Bernstein, R.A. Miskimen, B. Quinn, S.A. Wood, M.V. Hynes, G.S. Blanpied, B.G. Ritchie, and V.R. Brown, Phys. Rev. Lett. **49**, 451-454 (1982).
9. **"π +d $\rightarrow$ p+p at 65 to 140 MeV,"** B.G. Ritchie, G.S. Blanpied, R.S. Moore, B.M. Preedom, K. Gotow, R.C. Minehart, J. Boswell, G. Das, H.J. Ziock, N.S. Chant, P.G. Roos, W.J. Burger, S. Gilad, and R.P. Redwine, Phys. Rev. C **27**, 1685-1692 (1983).
10. **"π^+p scattering from 65 to 140 MeV,"** B.G. Ritchie, R.S. Moore, B.M. Preedom, K. Gotow, R. C. Minehart, G. Das, H.J. Ziock, and W.J. Burger, Phys. Lett. B **125**, 128-132 (1983).
11. **"πd$\rightarrow$ pp below 330 MeV,"** B.G. Ritchie, Phys. Rev. C **28**, 926-928 (1983).
12. **"DWIA (p,p') predictions using electromagnetically determined densities: comparison with experiments,"** R.A. Miskimen, A.M. Bernstein, B. Quinn, S.A. Wood, M.V. Hynes, G.S. Blanpied, B.G. Ritchie, and V.A. Brown, Phys. Lett. B **131**, 26-30 (1983).
13. **"Isospin effects in π^+carbon elastic scattering at 65 and 80 MeV,"** M. Blecher, K. Gotow, R.L. Burman, M.V. Hynes, M.J. Leitch, N.S. Chant, L. Rees, P.G. Roos, F.E. Bertrand, E.E. Gross, F.E. Obershain, T.P. Sjoreen, G.S. Blanpied, B.M. Preedom, and B.G. Ritchie, Phys. Rev. C **28**, 2033-2041 (1983).
14. **"Pion-nucleus elastic scattering at 80 MeV,"** M.J. Leitch, R.L. Burman, R. Carlini, S. Dam, V. Sandberg, M. Blecher, K. Gotow, R. Ng, R. Auble, F.E. Bertrand, E.E. Gross, F.E. Obenshain, J. Wu, G.S. Blanpied, B.M. Preedom, B.G. Ritchie, W. Bertozzi, M.V. Hynes, M.A. Kovash, and R.P. Redwine, Phys. Rev. C **29**, 561-568 (1984).
15. **"The role of pion absorption on quasi-deuterons in ^{12}C(π^+,2p),"** B.G. Ritchie, N.S. Chant, and P.G. Roos, Phys. Rev. C **30**, 969-972 (1984).
16. **"Excitation of the ground state rotational band in ^{20}Ne by 0.8 GeV Protons,"** G.S. Blanpied, G.A. Balchin, G.E. Langston, B.G. Ritchie, M.L. Barlett, G.W. Hoffmann, J.A. McGill, M.A. Franey, M. Gazzaly, and B.H. Wildenthal, Phys. Rev. C **30**, 1233-1237 (1984).
17. **"Reply to 'Role of pion absorption on quasi-deuterons in ^{12}Cπ^+,2p)',"** B.G. Ritchie, N.S. Chant, and P.G. Roos, Phys. Rev. C **32**, 334-335 (1985).
18. **"Isospin effect in π^{+14}C elastic scattering at 50 MeV,"** C-S. Mishra, B.M. Preedom, B.G. Ritchie, R.S. Moore, M. Blecher, K. Gotow, R.L. Burman, M.V. Hynes, E. Piasetsky, N.S. Chant, P.G. Roos, F.E. Bertrand, T. Sjoreen, F.E. Obenshain, and E.E. Gross, Phys. Rev. C **32**, 995-998 (1985).
19. **"Elastic scattering of 0.8 GeV protons from the non-zero-spin nuclei ^{13}C and ^{14}N,"** G.S. Blanpied, B.G. Ritchie, M.L. Barlett, G.W. Hoffmann, J.A. McGill, M.A. Franey, and M. Gazzaly, Phys. Rev. C **32**, 2152-2154 (1985).
20. **"Multipole moments for ^{12}C coupled channels analysis of 0.8 and 1.0 GeV proton scattering,"** G.S. Blanpied, C.S. Mishra, and B.G. Ritchie, Phys. Rev. C **33**, 1527-1530 (1986).
21. **"The ^{58}Ni(π^+,2p) reaction at 160 MeV,"** W.J. Burger, E. Beise, S. Gilad, R.P. Redwine, P.G. Roos, N.S. Chant, H. Breuer, G. Ciangaru, J.D. Silk, G.S. Blanpied, B.M. Preedom, B.G. Ritchie, M. Blecher, K. Gotow, D.M. Lee, and H. Ziock, Phys. Rev. Lett. **57**, 58-61 (1986).
22. **"Elastic scattering of 65 MeV positive and negative pions from nickel isotopes,"** B. Fick, M. Blecher, K. Gotow, D. Wright, R.L. Boudrie, R.L. Burman, D. Mack, B.G. Ritchie, P.G. Roos, J. Escalante, C.S. Mishra, B.M. Preedom, and S. Whisnant, Phys. Rev. C **34**, 643-647 (1986).

23. **"Excitation of isobaric analog states of ^{165}Ho by pion single charge exchange,"** J.N. Knudsen, J.R. Comfort, R.A. Gianelli, B.G. Ritchie, D. Rothenberger, D. Pocanic, S.S. Hanna, J.D. Bowman, H.W. Baer, A.G. Bergmann, P.A. Heusi, S. Hoibraten, R.A. Loveman, S.H. Rokni, H.L. Crannell, D.I. Sober, W.J. Fickinger, and H. Marshak, Phys. Rev. C **35**, 1382-1387 (1987).
24. **"(π^-,p) reactions at low excitation energy,"** G.S. Blanpied, C.S. Mishra, G.S. Adams, B.M. Preedom, C.S. Whisnant, J.-P. Egger, C.L. Morris, H. Breuer, N.S. Chant, B.G. Ritchie, B.H. Wildenthal, B. Hoistad, and B.A. Brown, Phys. Rev. C **35**, 1567-1569 (1987).
25. **"Indication of pionic atom anomalies in pion-nucleus elastic scattering,"** D.H. Wright, M. Blecher, K. Masutani, R.L. Boudrie, R.L. Burman, M.J. Leitch, M. Alsolami, G. Blanpied, J.A. Escalante, C.S. Mishra, G. Pignault, B.M. Preedom, C.S. Whisnant, and B.G. Ritchie, Phys. Rev. C **35**, 2258-2261 (1987).
26. **"Elastic scattering of 30 MeV positive and negative pions from nickel isotopes,"** D.H. Wright, M. Blecher, B.G. Ritchie, R.L. Boudrie, R.L. Burman, M.J. Leitch, M. Alsolami, G. Blanpied, J.A. Escalante, C.S. Mishra, G. Pignault, B.M. Preedom, and C.S. Whisnant, Phys. Rev. C **36**, 1472-1478 (1987).
27. **"Elastic scattering of 19.5 and 30 MeV negative pions from ^{12}C,"** D.H. Wright, M. Blecher, R. L. Boudrie, R.L. Burman, M.J. Leitch, B.G. Ritchie, D. Rothenberger, Z. Weinfeld, M. Alsolami, G. Blanpied, J.A. Escalante, C.S. Mishra, G. Pignault, B.M. Preedom, and C.S. Whisnant, Phys. Rev. C **36**, 2139-2142 (1987).
28. **"Inelastic pion scattering from ^{13}C at 65 MeV,"** J.H. Mitchell, J.T. Brack, R.J. Peterson, R.A. Ristinen, J.L. Ullmann, R.L. Boudrie, B.G. Ritchie, and J.A. Escalante, Phys. Rev. C **37**, 710-718 (1988).
29. **"Elastic scattering of 19.5 and 30 MeV positive and negative pions from ^{40}Ca,"** D.H. Wright, M. Blecher, B.G. Ritchie, D. Rothenberger, R.L. Burman, Z. Weinfield, J.A. Escalante, C.S. Mishra, and C.S. Whisnant, Phys. Rev. C **37**, 1155-1160 (1988).
30. **"Elastic and inelastic scattering of 0.8 GeV protons from ^{40}Ar,"** G.S. Blanpied, B.G. Ritchie, M.L. Barlett, R.W. Ferguson, J.A. McGill, and B.H. Wildenthal, Phys. Rev. C **37**, 1304-1306 (1988).
31. **"50 MeV pion inelastic scattering to the 1^+ doublet in ^{12}C,"** B.G. Ritchie, J.A. Escalante, G.S. Adams, M. Al-Solami, N. Lasheen, G. Pignault, B.M. Preedom, C.S. Whisnant, J.H. Mitchell, R.J. Peterson, R.L. Boudrie, and D.H. Wright, Phys. Rev. C **37**, 1347-1349 (1988).
32. **"Elastic and inelastic scattering of 0.8 GeV polarized protons from ^{24}Mg and ^{26}Mg,"** G.S. Blanpied, B.G. Ritchie, M.L. Barlett, G.W. Hoffmann, J.A. McGill, E.C. Milner, K.W. Jones, S.K. Nanda, R. deSwiniarski, Phys. Rev. C **37**, 1987-1999 (1988).
33. **"Elastic scattering of 50 MeV pions from ^{58,60,64}Ni,"** C.S. Mishra, B. Fick, M. Blecher, W. Burger, R.L. Burman, G. Ciangaru, J. Escalante, K. Gotow, M.V. Hynes, B.M. Preedom, B.G. Ritchie, C.S. Whisnant, and D. Wright, Phys. Rev. C **38**, 1316-1321 (1988).
34. **"Elastic and inelastic scattering of 0.8 GeV protons from ^{20}Ne and ^{22}Ne,"** G.S. Blanpied, B.G. Ritchie, M.L. Barlett, R.W. Ferguson, G.W. Hoffmann, J.A. McGill, and B.H. Wildenthal, Phys. Rev. C **38**, 2180-2186 (1988).
35. **"Inelastic scattering of pions by ^{10}B,"** B. Zeidman, D.F. Geesaman, P. Zupranski, R.E. Segel, G. C. Morrison, C. Olmer, G.R. Burleson, S.E. Greene, R.L. Boudrie, C.L. Morris, L.W. Swenson, G.S. Blanpied, B.G Ritchie, and C.L. Harvey Johnstone, Phys. Rev. C **38**, 2251-2258 (1988).
36. **"Coupled channels analysis of positive pion inelastic scattering from ^{28}Si at 50 MeV,"** C.S. Whisnant, G.S. Adams, C.S. Mishra, J.A. Escalante, M.A. Al-Solami, B.M. Preedom, B.G. Ritchie, and D.H. Wright, Phys. Rev. C **39**, 1935-1943 (1989).
37. **"Charged particle multiplicities following pion absorption on ^{6}Li,"** R.D. Ransome, V.R. Cupps, S. Dawson, R.W. Fergerson, A. Green, C.L. Morris, J. A. McGill, J.R. Comfort, B.G. Ritchie, J. Tinsley, J. D. Zumbro, R.A. Loveman, P.C. Gugelot, D.L. Watson, and C.F. Moore, Phys. Rev. Lett. **64**, 372-375 (1990).
38. **"^{16}O(π^+,2p) reaction at 165 MeV,"** S.D. Hyman, D.J. Mack, H. Breuer, N.S. Chant, F. Khazaie, B.G. Ritchie, P.G. Roos, J.D. Silk, P.-A. Amaudruz, Th.S. Bauer, C.H.Q Ingram, G.S. Kyle, D. Renker, R.A. Schumacher, U. Sennhauser, and W.J. Burger, Phys. Rev. C **41**, 409-413 (1990).
39. **"50 MeV π^+ and π^- scattering from ^{12}C,"** B.G. Ritchie, J.A. Escalante, B.M. Preedom, G.S. Adams, M. Al-Solami, N. Lasheen, C.-S. Mishra, G. Pignault, C.S. Whisnant, J.H. Mitchell, R.J. Peterson, R.L. Boudrie, and D.H. Wright, Phys. Rev. C **41**, 1668-1673 (1990).
40. **"Pion elastic and inelastic scattering from ^{24}Mg and ^{26}Mg,"** G.S. Blanpied, J. Hernandez, C.S. Mishra, W.K. Mize, C.S. Whisnant, B.G. Ritchie, C.L. Morris, S.J. Seestrom-Morris, C. Fred Moore, P.A. Seidl, R.A. Lindgren, B.H. Wildenthal, and R. Gilman, Phys. Rev. C **41**, 1625-1636 (1990).
41. **"The reaction ^{58}Ni(π^+,pp) at 160 MeV,"** W.J. Burger, E. Beise, G.S. Blanpied, M. Blecher, H. Breuer, N.S. Chant, G. Ciangaru, S. Gilad, K. Gotow, D.M. Lee, B.M. Preedom, R.P. Redwine, B.G. Ritchie, P. G. Roos, J.D. Silk, and H. Ziock, Phys. Rev. C **41**, 2215-2228 (1990).

42. **"Analyzing powers for the reaction π^- p $\rightarrow \pi^o$n at T_{π^-} = 161 MeV,"** J.J. Goergen, J.R. Comfort, T. Averett, J. Dekorse, B. Franklin, B.G. Ritchie, J.R. Tinsley, G. Kyle, B. Berman, G. Burleson, K. Cranston, A. Klein, J.A. Faucett, J.J. Jarmer, J.N. Knudson, S. Penttila, N. Tanaka, B. Brinkmoeller, D. Dehnhard, Y.F. Yen, S. Hoibraten, H. Breuer, B.S. Flanders, M.A. Khandaker, D.L. Naples, D. Zhang, M.L. Barlett, G.W. Hoffmann, and M. Purcell, Phys. Rev. D **42**, 2374-2376 (1990).
43. **"Systematics of pion absorption on ^{6}Li,"** R.D. Ransome, V.R. Cupps, S. Dawson, R.W. Fergerson, A. Green, C.L. Morris, J.A. McGill, J.R. Comfort, B.G. Ritchie, J. Tinsley, J.D. Zumbro, R.A. Loveman, P.C. Gugelot, D.L. Watson, and C.F. Moore, Phys. Rev. C **42**, 1500-1518 (1990).
44. **"Total and differential cross sections for $\pi^+ d \rightarrow p + p$ below 21 MeV,"** B.G. Ritchie, R.C. Minehart, T.D. Averett, G.S. Blanpied, K. Giovanetti, B.M. Preedom, D. Rothenberger, L.C. Smith, and J.R. Tinsley, Phys. Rev. Lett. **66**, 568-571 (1991).
45. **"Neutron deformation in ^{165}Ho,"** J.N. Knudson, J.D. Bowman, S.I. Pentilla, J.R. Comfort, B.G. Ritchie, J. Goergen, D. Mathis, J. Tinsley, S.S. Hanna, B. King, D. Pocanic, R.A. Loveman, L.S. Fritz, and N.S. Dixon, Phys. Rev. Lett. **66**, 1026-1030 (1991).
46. **"Asymmetry measurements of pion elastic scattering from polarized ^{13}C,"** Yi-Fen Yen, B. Brinkmoeller, S. Chakravarti, D. Dehnhard, S.M. Sterbenz, Yi-Ju Yu, Brian Berman, G.R. Burleson, K. Cranston, A. Klein, G.S. Kyle, R. Alarcon, T. Averett, J.R. Comfort, J. Goergen, B. Ritchie, J.M. Tinsley, G.W. Hoffmann, K. Johnson, M. Purcell, H. Ward, A. Williams, J.A. Faucett, S.J. Greene, J.J. Jarmer, J.A. McGill, C.L. Morris, S. Pentilla, N. Tanaka, E. Insko, R. Ivie, J.M. O'Donnell, D. Smith, S. Hoibraten, and M. Khandaker, Phys. Rev. Lett. **66**, 1959-1963 (1991).
47. **"Analyzing powers for pion charge exchange on polarized ^{13}C,"** J.J. Goergen, J.R. Comfort, J.R. Tinsley, T. Averett, J. Dekorse, B. Franklin, B.G. Ritchie, G. Kyle, A. Klein, B. Berman, G. Burleson, K. Cranston, J.A. Faucett, J.J. Jarmer, J.N. Knudson, S. Penttila, N. Tanaka, B. Brinkmoeller, D. Dehnhard, Yi-Fen Yen, S. Hoibraten, H. Breuer, B.S. Flanders, M.A. Khandaker, D.L. Naples, D. Zhang, M.L. Barlett, G.W. Hoffmann, and M. Purcell, Phys. Rev. Lett. **66**, 2193-2196 (1991).
48. **"Parametrization of total and differential cross sections for $\pi d \rightarrow pp$ below 1 GeV,"** B. G. Ritchie, Phys. Rev. C **44**, 533-537 (1991).
49. **"Pion scattering to 6$^-$stretched states in ^{24}Mg and ^{26}Mg,"** R.A. Lindgren, B.L. Clausen, G.S. Blanpied, C.S. Mishra, W.K. Mize, C.S. Whisnant, B.G. Ritchie, C.L. Morris, S.J. Seestrom-Morris, C. Fred Moore, P.A. Seidl, B.H. Wildenthal, R. Gilman, and J.A. Carr, Phys. Rev. C **44**, 2413-2418 (1991).
50. **"Pion absorption in heavy nuclei,"** R.D. Ransome, C.L. Morris, V.R. Cupps, R.W. Fergerson, J. A. McGill, D.L. Watson, J.D. Zumbro, B.G. Ritchie, J.R. Comfort, J.R. Tinsley, R.A. Loveman, S. Dawson, A. Green, P.C. Gugelot, and C. Fred Moore, Phys. Rev. C **44**, 509-513 (1992).
51. **"Dominance of the two-nucleon mechanism in ^{16}O(π^+, 2p) at 115 MeV,"** D. J. Mack, H. Breuer, N.S. Chant, S.D. Hyman, F. Khazaie, B.G. Ritchie, P.G. Roos, J.D. Silk, P.-A. Amaudruz, Th.S. Bauer, C.H.Q. Ingram, G.S. Kyle, D. Renker, R.A. Schumacher, and U. Sennhauser, Phys. Rev. C **45**, 1767 (1992).
52. **"Energy dependence of the total ^{12}C($\pi^+, 2p$) cross section,"** M.K. Jones, B.G. Ritchie, C.L. Morris, R.D. Ransome, J.A. McGill, D.L. Watson, C. Fred Moore, D. Clayton, K. Pujara, I. Brown, and P. Campbell, Phys. Lett. B **278**, 419-422 (1992).
53. **"Pion absorption in light nuclei,"** R.D. Ransome, C.L. Morris, M.K. Jones, B.G. Ritchie, D.L. Watson, J.A. McGill, K. Pujara, D.B. Clayton, I. Brown, P. Campbell, and C. Fred Moore, Phys. Rev. C **45**, 273-278 (1992).
54. **"A superconducting radio-frequency cavity for manipulating the phase space of pion beams at LAMPF,"** J.M. O'Donnell, J. Davis, R.A. DeHaven, E. Gray, R. Johnson, R.E. Lomax, B.J. McCloud, J.A. McGill, C.L. Morris, J. Novak, B. Rusnak, G. Tubb, J.M. Applegate, T.D. Averett, J. Beck, B.G. Ritchie, E. Haebel, D. Kiehlmann, U. Klein, M. Peiniger, P. Schafer, H. Vogel, H. Ward, and C. Fred Moore, Nucl. Instr. and Meth. A **317**, 445-452 (1992).
55. **"$\pi^+ + d \rightarrow p + p$ below 21 MeV,"** B.G. Ritchie, T. D. Averett, D. Rothenberger, J.R. Tinsley, R.C. Minehart, K. Giovanetti, L.C. Smith, G.S. Blanpied, and B.M. Preedom, Phys. Rev. C **47**, 21-28 (1993).
56. **"Systematics of the DIAS cross section at 50 MeV,"** H. Ward, J.M. Applegate, N. Auerbach, J. Beck, J. Johnson, K. Koch, C. Fred Moore, S. Mordechai, C.L. Morris, J.M. O'Donnell, M. Rawool-Sullivan, B.G. Ritchie, D. Watson, and C. Whitley, Phys. Rev. C **47**, 687-692 (1993).
57. **"Energy dependence of the two-nucleon component of pion absorption on ^{16}O,"** S.D. Hyman, D. J. Mack, P.G. Roos, H. Breuer, N.S. Chant, F. Khazaie, B.G. Ritchie, J.D. Silk, G.S. Kyle, P.A. Amaudruz, Th.S. Bauer, C.H.Q. Ingram, D. Renker, R.A. Schumacher, U. Sennhauser, and W.J. Burger, Phys. Rev. C **47**, 1184 (1993).
58. **"Low energy pion scattering to 1$^-$states in ^{12}C,"** C.M. Kormanyos, R.J. Peterson, J. Applegate, J. Beck, T.D. Averett, B.G. Ritchie, C.L. Morris, J. McGill, and D.S. Oakley, Phys. Rev. C **48**, 250-255 (1993).

59. **"Pion absorption in ^{4}He above the Δ resonance,"** L.C. Smith, R.C. Minehart, O.K. Baker, D.B. Day, K.L. Giovannetti, R. Lourie, R.M. Marshall, B. Milbrath, B.G. Ritchie, R.M. Sealock, D. Tedeschi, and S.T. Thornton, Phys. Rev. C **48**, R485-489 (1993).
60. **"Pion absorption above the Δ(1232) resonance,"** M.K. Jones, R.D. Ransome, V.R. Cupps, R.W. Fergerson, C.L. Morris, J.A. McGill, J.D. Zumbro, J.R. Comfort, B.G. Ritchie, J.R. Tinsley, P.C. Gugelot, and C. Fred Moore, Phys. Rev. C **48**, 2800-2818 (1993).
61. **"Pion elastic scattering from polarized ^{13}C in the energy region of the P_{33} resonance,"** Yi-Fen Yen, B. Brinkmoller, D. Dehnhard, M.A. Franey, S.M. Sterbenz, Brian Berman, G.R. Burleson, K. Cranston, A. Klein, G.S. Kyle, R. Alarcon, T. Averett, J.R. Comfort, J.J. Goergen, B.G. Ritchie, J. R. Tinsley, M. Barlett, G.W. Hoffmann, K. Johnson, C.F. Moore, M. Purcell, H. Ward, A. Williams, J.A. Faucett, S.J. Greene, J.J. Jarmer, J.A. McGill, C.L. Morris, S.I. Penttila, N. Tanaka, H.T. Fortune, E. Insko, R. Ivie, J.M. O'Donnell, D. Smith, M.A. Khandakar, and S. Chakravarti, Phys. Rev. C **50**, 897-908 (1994).
62. **"Neutron deformation in ^{165}Ho,"** J.N. Knudson, J. D. Bowman, S.I. Penttila, J.R. Comfort, J. Tinsley, B.G. Ritchie, J. Goergen, D. Mathis, S.S. Hanna, B. King, D. Pocanic, R.A. Loveman, L.S. Fritz, and N. S. Dixon, Phys. Rev. C **50**, 909-916 (1994).
63. **"Isospin splitting of transition amplitudes from photoproduction of eta mesons on deuterium,"** P. Hoffmann-Rothe, E. Hourany, M. Breuer, J.-P. Didelez, M. Rigney, J. Ajaka, G. Anton, J. Arends, G. Berrier-Rosin, W. Beulertz, G. Blanpied, A. Bock, G.V. Edel, R. Frascaria, G. Noldeke, B. Preedom, B. Ritchie, L. Rosier, B. Saghai, M. Schumacher, F. Smend, S. Whisnant, and B. Zucht, Prog. Nucl. Part. Phys. **36**, 131-136 (1996).
64. **"Pion-nucleus spin-flip strength at low and resonance energies,"** B.G. Ofenloch, R.A. Giannelli, B.G. Ritchie, J.M. O'Donnell, J.N. Knudson, C.L. Morris, C.M. Kormanyos, A. Saunders, J.Z. Williams, R.A. Lindgren, and B.L. Clausen, Phys. Rev. C **55**, 1295-1303 (1997).
65. **"Break-up and coherent photoproduction of η mesons on the deuteron,"** P. Hoffmann-Rothe, M. Krebeck, J. Hey, M. Breuer, G.V. Edel, E. Hourany, M. Rigney, J. Ajaka, G. Anton, J. Arends, G. Berrier-Rosin, W. Beulertz, G. Blanpied, A. Bock, J.-P. Didelez, K. Helbing, R. Maass, G. Noldeke, B. Preedom, B. Ritchie, L. Rosier, B. Saghai, M. Schumacher, and F. Smend, Phys. Rev. Lett. **78**, 4697-4700 (1997).
66. "**Pion-nucleus spin-flip strength at low and resonance energies,"** B.G. Ofenloch, R.A. Giannelli, B. G. Ritchie, J.M. O'Donnell, J.N. Knudson, C.L. Morris, C.M. Kormanyos, A. Saunders, J.Z. Williams, R.A. Lindgren, B.L. Clausen, Phys. Rev. C **55**, 1295-1303 (1997).
67. **"The Palo Verde neutrino oscillation experiment,"** F. Boehm, J. Busenitz, B. Cook, G. Gratta, J. Hanson, H. Henrikson, J. Kornis, D. Lawrence, K. Lou, N. Mascarenhas, D. Michael, L. Miller, V.M. Novikov, A. Piepke, S. Pittalwala, B. Ritchie, D. Tracy, A. Vital, P. Vogel, Y.F. Wang, R. Wilferd, S. Yang, S. Young, Nucl. Phys. B Proc Supp **66**, 396-9 (1998).
68. **"Investigation of short-range nucleon-nucleon correlations using the reaction ^{12}C$(e, e'pp)$ in close to 4π geometry",** K.I. Blomqvist, W.U. Boeglin, R. Bohm, M. Distler, R. Edelhoff, J. Friedrich, R. Geiges, M.K. Jones, M. Kahrau, M. Korn, H. Kramer, K.W. Krygier, V. Kunde, M. Kuss, A. Liesenfeld, K. Merle, C.L. Morris, R. Neuhausen, E.A. J.M. Offermann, T. Pospischil, M. Potokar, R.D. Ransome, A.W. Richter, B.G. Ritchie, A. Rokavec, G. Rosner, J. Ryckebusch, P. Sauer, S. Schardt, B. Vodenik, A. Wagner, T. Walcher, S. Wolf, M.K. Yadav, Phys. Lett. B **421**, 71-8 (1998).
69. **"The Palo Verde reactor neutrino experiment – a test for long baseline neutrino oscillations,"** F. Boehm, J. Hanson, H. Henrikson, D. Michael, V.M. Novikov, A. Piepke, P. Vogel, S. Yang, G. Gratta, L. Miller, D. Tracy, Y.F. Wang, J. Busenitz, J. Cornis, A. Vital, J. Wolf, M. Dugger, D. Lawrence, B. Ritchie, S. Pittalwala, R. Wilferd, S. Young, Prog. Part. and Nucl. Phys. **40**, 253-262 (1998).
70. **"The Palo Verde reactor neutrino experiment: a test for long baseline neutrino oscillations,"** F. Boehm, J. Busenitz, J. Cornis, M. Dugger, G. Gratta, J. Hanson, H. Henrikson, D. Lawrence, D. Michael, L. Miller, V. M. Novikov, A. Piepke, S. Pittalwala, B. Ritchie, D. Tracy, A. Vital, J.P. Vogel, Y.F. Wang, R. Wilferd, J. Wolf, S. Young, Nucl. Phys. B Proc. Supp. **70**, 191-194 (1999).
71. **"The bremsstrahlung tagged photon beam in Hall B at JLab,"** D.I. Sober, Hall Crannell, Alberto Longhi, S. K. Matthews, J.T. O'Brien, B.L. Berman, W.J. Briscoe, Philip L. Cole, J.P. Connelly, W.R. Dodge, L.Y. Murphy, S.A. Philips, M.K. Dugger, D. Lawrence, B.G. Ritchie, E.S. Smith, James M. Lambert, E. Anciant, G. Audit, T. Auger, C. Marchand, M. Klusman, J. Napolitano, M.A. Khandaker, C.W. Salgado and A.J. Sarty, Nucl. Instr. and Meth. in Phys. Res. A **440**, 263-284 (2000).
72. **"Multiproton final states in pion absorption below the Δ(33) resonance,"** R.A. Giannelli, B.G. Ritchie, J.M. Applegate, E. Beck, J. Beck, A.O. Vanderpool, C.L. Morris, M. Rahwool-Sullivan, M. K. Jones, R.D. Ransome, M. Yadav, D.L. Watson, K. Oganesjan, E.A. Pasyuk, F.F. Guber, A.I. Reshetin, Phys. Rev. C **61**, 054615-1 to 054615-18 (2000).

73. **"Results from the Palo Verde neutrino oscillation experiment,"** F. Boehm F.J. Busenitz, B. Cook, G. Gratta, H. Henrikson, J. Kornis, D. Lawrence, K.B. Lee, K. McKinny L. Miller, V. Novikov, A. Piepke, B. Ritchie, D. Tracy, P. Vogel, Y. F. Wang, J. Wolf, Phys. Rev. D **62**, 072002-1 to 072002-18 (2000).
74. **"Neutron production by cosmic-ray muons at shallow depth,"** F. Boehm, J. Busenitz, B. Cook, G. Gratta, H. Henrikson, J. Kornis, D. Lawrence, K.B. Lee, K. McKinny, L. Miller, V. Novikov, A. Piepke, B. Ritchie, D. Tracy, P. Vogel, Y. F. Wang, J. Wolf, Phys. Rev. D **62**, 092005-1 to 092005-6 (2000).
75. **"Photoproduction of φ(1020) mesons on the proton at large momentum transfer,"** E. Anciant, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **85**, 46824686 (2000).
76. **"The $ep \to e'p\eta$ reaction at and above the S_{11}(1535) baryon resonance,"** R. Thompson, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **86**, 1702-1706 (2000).
77. **"Exclusive electroproduction of φ mesons at 4.2 GeV,"** K. Lukashin, *et al.* (The CLAS Collaboration), Phys. Rev. C **63**, 065205-1 to 065205-11 (2000).
78. **"Electroproduction of the Λ(1520) hyperon,"** S. P. Barrow, *et al.* (The CLAS Collaboration), Phys. Rev. C **64**, 044601-1 to 044601-10 (2001).
79. **"Photoproduction of the ρ^0 meson on the proton at large momentum transfer,"** M. Battaglieri, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **87**, 1720021 to 172002-6 (2001).
80. **"Observation of exclusive deeply virtual Compton scattering in polarized electron beam asymmetry measurements,"** S. Stepanyan, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **87**, 182002-1 to 182002-6 (2001).
81. **"Final results from the Palo Verde neutrino oscillation experiment,"** F. Boehm, J. Busenitz, B. Cook, G. Gratta, H. Henrikson, J. Kornis, D. Lawrence, K.B. Lee, K. McKinny L. Miller, V. Novikov, A. Piepke, B. Ritchie, D. Tracy, P. Vogel, Y.F. Wang, J. Wolf, Phys. Rev. D **64**, 112001-1 to 112001-10.
82. **"Observation of exclusive deeply virtual Compton scattering in polarized electron beam asymmetry measurements,"** S. Stepanyan, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **87**, 182002-1 to 182002-5 (2001).
83. **"Exclusive electroproduction of phi mesons at 4.2 GeV,"** K. Lukashin, *et al.* (The CLAS Collaboration), Phys. Rev. C **64**, 059901-1 to 059901-11 (2001).
84. **"First measurement of the double spin asymmetry in $\vec{e}\vec{p} \to e\pi^+ n$ in the resonance region,"** R. De Vita, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **88**, 082001-1 to 082001-6 (2002).
85. **"Q^2 dependence of quadrupole strength in the $\gamma + p \to \Delta^+(1232) \to p\pi^0$ transition,"** K. Joo, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **88**, 122001-1 to 122001-5 (2002).
86. **"η photoproduction on the proton for photon energies from 0.75 to 1.95 GeV,"** M. Dugger, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **88**, 222002-1 to 222002-5 (2002).
87. **"Photoproduction of the ω meson on the proton at large momentum transfer,"** M. Battaglieri, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **90**, 0220021 to 0222002-5 (2002).
88. **"First measurement of the transferred polarization in the exclusive $\vec{e}p \to e'K\Lambda$ reaction,"** D.S. Carman, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **90**, 131804-1 to 131804-6 (2003).
89. **"The CEBAF large acceptance spectrometer (CLAS),"** B.A. Mecking, *et al.* (The CLAS Collaboration), Nucl. Instrum. and Meth. A **503**, 513-553 (2003).
90. **"Measurement of inclusive spin structure functions of the deuteron,"** J. Yun, *et al.* (The CLAS Collaboration), Phys. Rev. C **67**, 055203-1 to 055203-10 (2003).
91. **"Kinematically complete measurement of the proton structure function F_2 in the resonance region and evaluation of its moments,"** M. Osipenko, *et al.* (The CLAS Collaboration), Phys. Rev. D **67**, 092001-1 to 092001-18 (2003).
92. **"Measurement of $ep \to ep\pi^+\pi^-$ and baryon resonance analysis,"** M. Ripani, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **91**, 222002-1 to 222002-6 (2003).
93. **"Observation of nuclear scaling in the $A(e,e')$ reaction at $x_B > 1$,"** K.Sh. Egiyan, *et al.* (The CLAS Collaboration), Phys. Rev. C **68**, 014313-1 to 014313-10 (2003).
94. **"$ep \to ep\pi^0$ reaction studied in the $\Delta(1232)$ mass region using polarization asymmetries,"** A. Biselli, *et al.* (The CLAS Collaboration), Phys. Rev. C **68**, 035202-1 to 035202-10 (2003).
95. **"Measurement of the polarized structure function σ_{LT} for $p(\vec{e},e'p)\pi^0$ in the $\Delta(1232)$ resonance region,"** K. Joo, et al. (The CLAS Collaboration), Phys. Rev. C 68, 032201-1 to 032201-5 (2003).
96. **"Measurement of the proton spin structure function $g_1(x,Q^2)$ for Q^2 from 0.15 to 1.6 GeV^2 with CLAS,"** R. Fatemi, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **91**, 222002-1 to 222002-6 (2003).
97. **"Observation of an exotic $S = +1$ baryon in exclusive photoproduction from the deuteron,"** S. Stepanyan, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **91**, 252002-1 to 252001-6 (2003).
98. **"Observation of an exotic baryon with $S = +1$ in photoproduction from the proton,"** V. Kubarovsky, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **92**, 032001-1 to 032001-5 (2004).

99. **"Two-nucleon momentum distributions measured in ^{3}He$(e,epp)n$,"** R.A. Niyazov, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **92**, 052303-1 to 052303-5 (2004).
100. **"Tensor polarization of the phi meson photoproduced at high t,"** K. McCormick, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **92**, 032203-1 to 032203-5 (2004).
101. **"Hyperon photoproduction in the nucleon resonance region,"** J.W.C. McNabb, *et al.* (The CLAS Collaboration), Phys. Rev. C **69**, 042201-1 to 042201-5 (2004).
102. **"Design, commissioning and performance of the PIBETA detector at PSI,"** E. Frlez, D. Pocanic, K.A. Assamagan, Y. Bagaturia, V.A. Baranov, W. Bertl, C. Bronnimann, M. Bychkov, J.F. Crawford, M. Daum, T. Flugel, R. Frosch, R. Horisberger, V. A. Kalinnikov, V.V. Karpukhin, N.V. Khomutov, J.E. Koglin, A.S. Korenchenko, S.M. Korenchenko, T. Kozlowski, B. Krause, N.P. Kravchuk, N.A. Kuchinsky, W. Li, D.W. Lawrence, R.C. Minehart, D. Mzhavia, H. Obermeier,D. Renker, B.G. Ritchie, S. Ritt, T. Sakhelashvili, R. Schnyder, V.V. Sidorkin, P.L. Slocum, L.C. Smith, N. Soic, W.A. Stephens, I. Supek, Z. Tsamalaidze, B.A. VanDevender, Y. Wang, H.P. Wirtz, and K.O.H. Ziock, Nucl. Instrum. and Meth. A **526**, 300-347 (2004).
103. **"Measurement of beam-spin asymmetries for π^+ electroproduction above the baryon resonance region,"** H. Avakian, *et al.* (The CLAS Collaboration), Phys. Rev. D **69**, 112004-1 to 112004-7 (2004).
104. **"Complete angular distribution measurements of two-body deuteron photodisintegration between 0.5 and 3 GeV,"** M. Mirazita, *et al.* (The CLAS Collaboration), Phys. Rev. C **70**, 014005-1 to 014005-12 (2004).
105. **"Proton source size measurements in the $eA \to e'ppX$ reaction,"** A.V. Stavinsky, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **93** '2301-1 to '2301-6 (2004).
106. **"Precise measurement of the pion axial form factor in the $\pi^+ \to e\,\nu\gamma$ decay,"** E. Frlez, D. Pocanic, V. A. Baranov, W. Bertl, M. Bychkov, N.V. Khomutov, A.S. Korenchenko, S.M. Korenchenko, T. Kozlowski, N.P. Kravchuk, N.A. Kuchinsky, W. Li, R.C. Minehart, D. Mzhavia, B.G. Ritchie, S. Ritt, A.M. Rozhdestvensky, V.V. Sidorkin, L. C. Smith, I. Supek, Z. Tsamalaidze, B. A. VanDevender, E.P. Velicheva, Y. Wang, H.P. Wirtz, and K.O.H. Ziock, Phys. Rev. Lett. **93**, 181804-1 to 181804-4 (2004).
107. **"Precise measurement of the $\pi^+ \to \pi^0 e\nu$ branching ratio,"** D. Pocanic, E. Frlez, V.A. Baranov, W. Bertl, C. Bronnimann, M. Bychkov, J.F. Crawford, M. Daum, N.V. Khomutov, A.S. Korenchenko, S. M. Korenchenko, T. Kozlowski, N.P. Kravchuk, N. A. Kuchinsky, W. Li, R.C. Minehart, D. Mzhavia, B.G. Ritchie, S. Ritt, A.M. Rozhdestvensky, V.V. Sidorkin, L.C. Smith, I. Supek, Z. Tsamalaidze, B.A. VanDevender, Y. Wang, H.P. Wirtz, and K.O.H. Ziock, Phys. Rev. Lett. **93**, 181803-1 to 181803-4 (2004).
108. **"Measurement of the polarized structure function σ_{LT} for $p(\vec{e},e'\pi^+)n$ in the $\Delta(1232)$ resonance region,"** K. Joo, et al. (The CLAS Collaboration), Phys. Rev. C **70**, 042201-1 to 042201-6 (2004).
109. **"Complete measurement of three-body photodisintegration of ^{3}He for photon energies between 0.35 and 1.55 GeV,"** S. Niccolai, *et al.* (The CLAS Collaboration), Phys. Rev. C **70**, 064003-1 to 064003-18 (2004).
110. **"Exclusive ρ^0 meson electroproduction from hydrogen at CLAS,"** C. Hadjidakis, *et al.* (The CLAS Collaboration), Phys. Lett. B **605**, 256-264 (2005).
111. **"Onset of asymptotic scaling in deuteron photodisintegration,"** P. Rossi, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **93**, 012301-1 to 012301-4 (2005).
112. **"Survey of A_{LT}' asymmetries in semi-exclusive electron scattering on ^{4}He and ^{12}C,"** D. Protopopescu, *et al.* (The CLAS Collaboration), Nucl. Phys. A **748**, 357-373 (2005).
113. **"The PIBETA spectrometer for studying rare and forbidden decays of muons and pions,"** V. A. Baranov, V. A. Kalinnikov, V. V. Karpukhin, N. V. Khomutov, A. S. Korenchenko, S. M. Korenchenko, N. P. Kravchuk, N. A. Kuchinskii, D. A. Mzhaviya, A. M. Rozhdestvenskii, V. V. Sidorkin, Z. B. Tsamalaidze, T. Sakhelashvili, E. Frlez, D. Pocanic, W. Li, R. C. Minehart, L. C. Smith, W. A. Stephens, K. O. H. Ziock, W. Bertl, R. Horisberger, S. Ritt, R. Schnyder, H.-P. Wirtz, B. G. Ritchie, I Supek, and T. Kozlowski, Nuclear Instruments and Experimental Techniques **48**, 168-176 (2005).
114. **"Exclusive photoproduction of the cascade (Ξ) hyperon,"** J. W. Price *et al.* (The CLAS Collaboration), Phys. Rev. C **71**, 058201-1 to 058201-5 (2005).
115. **"Radiative decays of the Σ^0(1385) and Λ(1520) hyperons,"** S. Taylor *et al.* (The CLAS Collaboration), Phys. Rev. C **71**, 054609-1 to 054609-14 (2005).
116. **"Deeply virtual and exclusive electroproduction of omega mesons,"** L. Morand, *et al.* (The CLAS Collaboration), Eur. J. Phys. A **24**, 445-458 (2005).
117. **"Beam-helicity asymmetries in double-charged pion photoproduction on the proton,"** S. Strauch, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **95**, 162003-1 to 162003-5 (2005).
118. **"Measurement of the polarized structure function σ_{LT} for pion electroproduction in the Roper-resonance region,"** K. Joo, *et al.* (The CLAS Collaboration), Phys. Rev. C **72**, 058202-1 to 058202-5 (2005).

119. "**Search for Θ^+(1540) pentaquark in high- statistics measurement of $\gamma p \to K^0 K^+ n$ at CLAS,**" M. Battaglieri, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **96**, 042001-1 to 042001-6 (2006).
120. "**η' photoproduction on the proton for photon energies from 1.527 to 2.227 GeV,**" M. Dugger, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **96**, 062001-1 to 062001-6 (2006).
121. **"Single π^+ electroproduction on the proton in the first and second resonance regions at 0.25 GeV^2 < Q^2 < 0.65 GeV^2,"** H. Egiyan, *et al.* (The CLAS Collaboration), Phys. Rev. C **73**, 025204-1 to 025204-32 (2006).
122. **"Measurement of two- and three-nucleon short-range correlations probabilities in nuclei,"** K. S. Egiyan, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **96**, 082501-1 to 035212-6 (2006).
123. **"Electron scattering from high-momentum neutrons in deuterium,"** A. V. Klimenko, *et al.* (The CLAS Collaboration), Phys. Rev. C **73**, 035212-1 to 035212-14 (2006).
124. **"Differential cross sections for $\gamma p \to K^+ + Y$ for Λ and Σ^0 hyperons,"** R. Bradford, *et al.* (The CLAS Collaboration), Phys. Rev. C **73**, 035202-1 to 035202-36 (2006).
125. **"Measurement of the deuteron structure function F_2 in the resonance region and the evaluation of its moments,"** M. Osipenko, *et al.* (The CLAS Collaboration), Phys. Rev. C **73**, 045205-1 to 045205-22 (2006).
126. "**Search for the Θ^+pentaquark in the reaction of $\gamma d \to p K^- K^+ n$,**" B. McKinnon, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **96**, 212001-1 to 212001-6 (2006).
127. "**Search for the Θ^+ pentaquark in the reaction $\gamma d \to \Lambda n K^+$ reaction measured with the CLAS spectrometer,**" S. Niccolai, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **97**, 032001-1 to 032001-6 (2006).
128. **"Measurement of deeply virtual Compton scattering with a polarized-proton target," S. Chen,** *et al.* (The CLAS Collaboration), Phys. Rev. Lett. 97, 072001-1 to 072001-6 (2006).
129. **"Search for Θ^+pentaquark in the reactions $\gamma p \to K^0 K^+ n$ and $\gamma p \to K^0 K^0 p$,"** R. De Vita *et al.* (The CLAS Collaboration), Phys. Rev. D 74, 032001-1 to 032001-14 (2006).
130. "**Search for Θ^{++}pentaquarks in the exclusive reaction $\gamma p \to K^+ K^- p$,**" V. Kubarovsky, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **97**, 102001-1 to 102001-6 (2006).
131. **"Measurement of the $N \to \Delta^+$(1232) transition at high-momentum transfer by π^0 electroproduction,"** M. Ungaro, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **97**, 112003-1 to 112003-6 (2006).
132. **"Measurement of the x- and Q_2-dependence of the asymmetry A_1 on the nucleon,"** K.V. Dharmawardane, *et al.* (The CLAS Collaboration), Phys. Lett. B **641**, 11-17 (2006).
133. **"First measurement of beam recoil observables C_x and C_z in hyperon photoproduction,"** R. K. Bradford *et al.* (The CLAS Collaboration), Phys. Rev. C **75**, 035205-1 to 035205-25 (2007).
134. **"Separated structure functions for the exclusive electroproduction of $K^+\Lambda$ and $K^+\Sigma^0$ final states,"** P. Ambrozewicz *et al.* (The CLAS Collaboration), Phys. Rev. C **75**, 045203-1 to 045203-26 (2007).
135. **"Cross sections for the $\gamma p \to K^{-*}\Sigma^*$ reaction at E_γ = 1.7-3.0 GeV,"** I. Hleiqawi *et al.* (The CLAS Collaboration), Phys. Rev. C **75**, 042201-1 to 042201-6 (2007).
136. **"Experimental study of exclusive $^2H(e,e'p)n$ reaction mechanisms at high Q^2,"** K. S. Egiyan *et al.* (The CLAS Collaboration), Phys. Rev. C **75**, 042201-1 to 042201-6 (2007).
137. "**π^0 photoproduction on the proton for photon energies from 0.675 to 2.875 GeV,**" M. Dugger *et al.* (The CLAS Collaboration), Phys. Rev. C **75**, 042201-1 to 042201-6 (2007).
138. **"Cascade production in the reactions $\gamma p \to K^- K^+(X)$ and $K^+ K^- \pi^-(X)$,"** L. Guo *et al.* (The CLAS Collaboration), Phys. Rev. C **75**, 042201-1 to 042201-6 (2007).
139. **"Measurement of coherent ϕ meson production from the deuteron at low energies,"** T. Mibe *et al.* (The CLAS Collaboration), Phys. Rev. C **75**, R052202-1 to R052202-6 (2007).
140. **"Search for medium modifications of the ρ meson,"** R. Nasseripour *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **99**, 262302-1 to 262302-6 (2007).
141. **"Cross sections and beam asymmetries for $\vec{e}p \to en\pi^+$ in the nucleon resonance region for 1.7 $\leq Q^2 \leq$ 4.5 GeV^2,"** K. Park *et al.* (The CLAS Collaboration), Phys. Rev. C **77**, 015208-1 to 015208-17 (2008).
142. **"Bayesian analysis of pentaquark signals from CLAS data,"** D.G. Ireland *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **100**, 052001-1 to 052001-5 (2008).
143. **"Measurement of $ep \to ep\pi^0$ beam spin asymmetries above the resonance region,"** R. De Masi *et al.* (The CLAS Collaboration), Phys. Rev. C **77**, R042201-1 to R042201-5 (2008).
144. **"Measurement of deeply virtual compton scattering beam-spin asymmetries,"** F. X. Girod *et*

al. (The CLAS Collaboration), Phys. Rev. Lett. **100**, 162002-1 to 162002-6 (2008).

145. **"Polarized structure function $\sigma_{LT'}$ for $^1\mathbf{H}(\vec{e},e'K^+)\Lambda$ in the nucleon resonance region,"** R. Nasseripour *et al.* (The CLAS Collaboration), Phys. Rev. C **77**, 065208-1 to 065208-15 (2008).
146. **"Light vector mesons in the nuclear medium,"** M.H. Wood *et al.* (The CLAS Collaboration), Phys. Rev. C **78**, 015201-1 to 015201-15 (2008).
147. **"Electroproduction of ϕ(1020) mesons at 1.4 $\leq Q^2 \leq$ 3.8 GeV^2 measured with the CLAS spectrometer,"** J.P. Santoro *et al.* (The CLAS Collaboration), Phys. Rev. C **78**, 025210-1 to 025210-14 (2008).
148. **"Electroexcitation of the Roper resonance for 1.7 $< Q^2 <$4.5 GeV^2 in $\vec{e}p \to en\pi^+$,"** J.P. Santoro *et al.* (The CLAS Collaboration), Phys. Rev. C **78**, 045209-1 to 045209-7 (2008).
149. **"First measurement of target and double spin asymmetries for $\vec{e}\vec{p} \to ep\pi^0$ in the nucleon resonance region above the Δ(1232),"** A.S. Biselli *et al.* (The CLAS Collaboration), Phys. Rev. C **78**, 045204-1 to 045204-11 (2008).
150. **"Search for the photo-excitation of exotic mesons in the $\pi^+\pi^+\pi^-$ system,"** M. Nozar *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **100**, 102002-1 to 102002-6 (2009).
151. **"Exclusive ρ^0 electroproduction on the proton at CLAS,"** S.A. Morrow *et al.* (The CLAS Collaboration), Eur. Phys. J. A **39**, 5-31 (2009).
152. **"Moments of the spin structure functions $g_1(p)$ and g_1(d) for $0.05 < Q^2 < 3.0$ GeV^2,"** Y. Prok *et al.* (The CLAS Collaboration), Phys. Lett. B **672**, 12-16 (2009).
153. **"Electroproduction of $p\pi^+\pi^-$ off protons at 0.2 $< Q^2 <$ 0.6-GeV^2 and $1.3 < W <$ 1.57-GeV with CLAS,"** G.V. Fedotov *et al.* (The CLAS Collaboration), Phys. Rev. C **79**, 015204-1 to 015204-23 (2009).
154. **"Measurement of unpolarized semi-inclusive π^+ electroproduction off the proton,"** M. Osipenko *et al.* (The CLAS Collaboration), Phys. Rev. D **79**, 032004-1 to 032004-33 (2009).
155. **"Measurement of direct $f_0(980)$ photoproduction on the proton,"** M. Battaglieri *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **102**, 102001-1 to 102001-6 (2009).
156. **"Precise Measurement of the Neutron Magnetic Form Factor $G^n(M)$ in the Few-GeV^2 Region,"** J. Lachinet *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **102**, 192001-1 to 192001-6 (2009).
157. **"Measurement of the differential cross section for the reaction $\gamma n \to \pi^- p$ from deuterium,"** W. Chen *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **103**, 012301-1 to 012301-6 (2009).
158. **"Beam-recoil polarization transfer in the nucleon resonance region in the exclusive $\vec{e}p \to e'K^+\vec{\Lambda}$ and $\vec{e}p \to e'K^+\vec{\Sigma}^0$ reactions at CLAS,"** D. S. Carman *et al.* (The CLAS Collaboration), Phys. Rev. C **79**, 065205-1 to 065205-11 (2009).
159. **"π^+ photoproduction on the proton for photon energies from 0.725 to 2.875 GeV,"** M. Dugger *et al.* (The CLAS Collaboration), Phys. Rev. C **79**, 065206-1 to 065206-14 (2009).
160. **"The extraction of $\phi - N$ total cross section from $d(\gamma, pK^+K^-)n$,"** X. Qian *et al.* (The CLAS Collaboration), Phys. Lett. B **680**, 417-422 (2009).
161. **"Beam Spin Asymmetries in deeply virtual Compton scattering (DVCS) with CLAS at 4.8 GeV,"** G. Gavalian *et al.* (The CLAS Collaboration), Phys. Rev. C **80**, 035206-1 to 035206-14 (2009).
162. **"Photodisintegration of ^{4}He into $p + t$,"** R. Nasseripour *et al.* (The CLAS Collaboration), Phys. Rev. C **80**, 044603-1 to 044603-11 (2009).
163. **"Nuclear Targets for a Precision Measurement of the Neutral Pion Radiative Width,"** P. Martel *et al.* (The PrimEx Collaboration), Nucl. Instr. Meth. A **612**, 46-49 (2009).
164. **"Differential cross sections for the reactions $\gamma p \to p\eta$ and $\gamma p \to p\eta'$,"** M. Williams *et al.* (The CLAS Collaboration), Phys. Rev. C **80**, 045213-1 to 045213-11 (2009).
165. **"Photoproduction of $\pi^+\pi^-$ meson pairs on the proton,"** M. Battaglieri *et al.* (The CLAS Collaboration), Phys. Rev. D **80**, 072005-1 to 072005-23 (2009).
166. **"Electroexcitation of nucleon resonances from CLAS data on single pion electroproduction,"** I.G. Aznauryan *et al.* (The CLAS Collaboration), Phys. Rev. C **80**, 055203-1 to 055203-22 (2009).
167. **"Differential cross sections and spin density matrix elements for the reaction $\gamma p \to p\omega$,"** M. Williams *et al.* (The CLAS Collaboration), Phys. Rev. C **80**, 065208-1 to 065208-21 (2009).
168. **"Partial wave analysis of the reaction $\gamma p \to p\omega$ and the search for nucleon resonances,"** M. Williams *et al.* (The CLAS Collaboration), Phys. Rev. C **80**, 065209-1 to 065209-18 (2009).
169. **"Evidence for a backward peak in the $\gamma d \to \pi^0 d$ cross section near the η threshold,"** Y. Ilieva *et al.* (The CLAS Collaboration), Eur. Phys. Jour. A **43**, 261-267 (2010).
170. **"Differential cross section and recoil polarization measurements for the $\gamma p \to K^+\Lambda$ reaction using CLAS at Jefferson Lab ,"** M. E. McCracken *et al.* (The CLAS Collaboration), Phys. Rev. C **81**, 025201-1 to 025201-20 (2010).
171. **"Differential cross section of $\gamma n \to K^+\Sigma^-$ on bound neutrons with incident photons from 1.1 to 3.6 GeV,"** S. A. Pereira *et al.* (The CLAS Collaboration), Phys. Lett. B **688**, 289-293 (2010).
172. **"Differential cross sections and recoil polarizations for the reaction $\gamma p \to K^+\Sigma^0$,"** B. Dey *et al.*

(The CLAS Collaboration), Phys. Rev. C **82**, 025202-1 to 025202-20 (2010).

173. **"Near-threshold photoproduction of phi mesons from deuterium,"** X. Qian *et al.* (The CLAS Collaboration), Phys. Lett. B **696**, 338-342 (2011).
174. **"Coherent photoproduction of π^+ from ^{3}He,"** R. Nasseripour *et al.* (The CLAS Collaboration), Phys. Rev. C **83**, 034001-1 to 034001-11 (2011).
175. **"New Measurement of the π^0 Radiative Decay Width,"** I. Larin *et al.* (The PrimEx Collaboration), Phys. Rev. Lett. **106**, 162303-1 to 162303-5 (2011).
176. **"Electromagnetic decay of the Σ^0(1385) to $\Lambda\gamma$,"** D. Keller *et al.* (The CLAS Collaboration), Phys. Rev. D **83**, 072004-1 to 072004-14 (2011).
177. **"Upper limits for the photoproduction cross section for the ϕ^{--}(1860) pentaquark state off the deuteron,"** H. Egiyan *et al.* (The CLAS Collaboration), Phys. Rev. C **85**, 015205-1 to 015205-9 (2012).
178. **"Branching ratio of the electromagnetic decay of the Σ^+1385),"** D. Keller *et al.* (The CLAS Collaboration), Phys. Rev. D **85**, 052004-1 to 052004-20 (2012).
179. **"Measurement of the generalized form factors near threshold via $\gamma * p \to n\pi^+$ at high Q^2,"** K. Gothe *et al.* (The CLAS Collaboration), Phys. Rev. C **85**, 035208-1 to 035208-15 (2012).
180. **"Evidence for the onset of color transparency in ρ^0 electroproduction off nuclei ,"** L. El Fassi *et al.* (The CLAS Collaboration), Phys. Lett. B **712**, 326-330 (2012).
181. **"Comment on 'Observation of a narrow structure in $^1H(\gamma, K^0_S)X$ via interference with ϕ-meson production', "** M. Anghinolfi *et al.* (The CLAS Collaboration), Phys. Rev. C **86**, 069801-1 to 069801-2 (2012).
182. **"Measurement of the $\Sigma\pi$ photoproduction line shapes near the Λ(1405) ,"** K. Moriya *et al.* (The CLAS Collaboration), Phys. Rev. C **87**, 035206-1 to 035206-24 (2013).
183. **"Transverse polarization of Σ^+(1189) in photoproduction on a hydrogen target in CLAS,"** C. S. Nepali *et al.* (The CLAS Collaboration), Phys. Rev. C **87**, 045206-1 to 045206-10 (2013).
184. **"Measurement of transparency ratios for protons from short-range correlated pairs,"** O. Hen *et al.* (The CLAS Collaboration), Phys. Lett. B **722**, 63-68 (2013).
185. **"Hard Two-Body Photodisintegration of ^{3}He,"** I. Pomerantz *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **110**, 242301-1 to 242301-7 (2013).
186. **"Cross sections for the $\gamma p \to K^{*+}\Lambda$ and $\gamma p \to K^{*+}\Sigma^0$ reactions measured at CLAS ,"** W. Tang *et al.* (The CLAS Collaboration), Phys. Rev. C **87**, 065204-1 to 065204-13 (2013).
187. **"Differential photoproduction cross sections of the Σ^0(1385), Λ(1405), and Λ(1520),"** K. Moriya *et al.* (The CLAS Collaboration), Phys. Rev. C **88**, 045201-1 to 045201-20 (2013).
188. **"Beam asymmetry Σ for π^+ and π^0 photoproduction on the proton for photon energies from 1.102 to 1.862 GeV ,"** M. Dugger *et al.* (The CLAS Collaboration), Phys. Rev. C **88**, 065203-1 to 65203-20 (2013).
189. **"Spin and parity measurement of the Λ(1405) baryon"**, K. Moriya,*et al.* (CLAS Collaboration), Phys. Rev. Lett. **112**, 082004-1 to 082004-6 (2014).
190. **"Beam-spin asymmetries from semi-inclusive pion electroproduction"**, W. Gohn, *et al.* (CLAS Collaboration), Phys. Rev. D **89**, 072011-1 to 072011-15 (2014).
191. **"ϕ meson photoproduction on hydrogen in the neutral decay mode"**, H. Seraydaryan, *et al.* (CLAS Collaboration), Phys. Rev. C **89**, 055206-1 to 055206-17 (2014).
192. **"Data analysis techniques, differential cross sections, and spin density matrix elements for the reaction $\gamma p \to \phi p$"**, B. Dey, *et al.* (CLAS Collaboration), Phys. Rev. C **89**, 055208-1 to 055208-31 (2014).
193. **"Data analysis techniques, differential cross sections, and spin density matrix elements for the reaction $\gamma p \to \phi p$ (vol 89, 055208, 2014)"**, B. Dey, *et al.* (CLAS Collaboration), Phys. Rev. C **90**, 019901-1 (2014) to 019901-2.
194. **"Exclusive π^0 electroproduction at $W > 2$ GeV with CLAS"**, I. Bedlinskiy, *et al.* (CLAS Collaboration), Phys. Rev. C **90**, 025205-1 to 025205-26 (2014).
195. **"Momentum sharing in imbalanced Fermi systems"**, O. Hen, *et al.* (CLAS Collaboration), Science **346**, 614-617 (2014).
196. **"High precision photon flux determination for photon tagging experiments"**, A. Teymurazyan, *et al.* (PrimEx Collaboration), Nucl. Instrum. Meth. A **767**, 300-309 (2014).
197. **"First measurement of the polarization observable E in the $\overrightarrow{p}\overrightarrow{\gamma} \to \pi^+ n$ reaction up to 2.25 GeV"**, S. Strauch, *et al.* (CLAS Collaboration), Phys. Lett. B **750**, 53-58 (2015).
198. **"First measurement of the helicity asymmetry E in eta photoproduction"** , I. Senderovich, *et al.* (CLAS Collaboration), Phys. Lett. B **755**, 64-69 (2016).
199. **"Photoproduction of Λ and Σ^0 hyperons using linearly polarized photons"** , C. A. Paterson, *et al.* (CLAS Collaboration), Phys. Rev. C **89**, 065201-1 to 065201-14 (2016).
200. **"Measurement of the beam asymmetry Σ for π^0 and η photoproduction on the proton at $E_\gamma = 9$**

GeV" , H. Al Ghoul, *et al.* (GlueX Collaboration), Phys. Rev. C **95**, 042201(R)-1 to 042201(R)-6 (2017).

201. **"Beam-target helicity asymmetry for $\vec{\gamma}\vec{n} \to \pi^- p$ in the N^* resonance region,"** D. Ho *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **118**, 242002-1 to 242002-6 (2017).
202. **" Differential cross sections and polarization observables from CLAS K^* photoproduction and the search for new N^* states"** , A. V. Anisovich, *et al.* (CLAS Collaboration), Phys. Lett. B **771**, 142-150 (2017).
203. **"Photon beam asymmetry Σ for η and η' photoproduction from the proton"** , P. Collins, *et al.* (CLAS Collaboration), Phys. Lett. B **771**, 213-221 (2017).
204. **"Measurements of $ep \to e'\pi^+\pi^- p'$ cross sections with CLAS at 1.40 GeV $< W <$ 2.0 GeV and 2. 0 GeV^2 $< Q^2 <$ 5.0 GeV^2"** , E. L. Isupov, *et al.* (CLAS Collaboration), Phys. Rev. C **96**, 025209-1 to 025209-19 (2017).
205. **"$N^* \to N\eta'$ decays from photoproduction of η'-mesons off protons"**, A. V. Anisovich, V. Burkert, P. M. Collins, M. Dugger, E. Klempt, V.A. Nikonov, B.G. Ritchie, A.V. Sarantsev, U. Thoma, Phys. Lett. B **772**, 247-252 (2017).
206. **"Differential cross section measurements for $\gamma n \to \pi^- p$ above the first nucleon resonance region"** , P. Mattione, *et al.* (CLAS Collaboration), Phys. Rev. C **96**, 035204-1 to 035204-20 (2017).
207. **"Design and construction of a high-energy photon polarimeter"**, M. Dugger, *et al.*, Nucl. Instrum. Meth. A **867**, 115-127 (2017).
208. **"Photon beam asymmetry Σ in the reaction $\vec{\gamma}p \to p\omega$ for E_γ =1.152 to 1.876 GeV"** , P. Collins, *et al.* (CLAS Collaboration), Phys. Lett. B **773**, 112-120 (2017).
209. **"First exclusive measurement of deeply virtual Compton scattering off ^{4}He: Toward the 3D tomography of nuclei,"** M. Hattawy, *et al.* (The CLAS Collaboration), Phys. Rev. Lett. **118**, 202004-1 to 202004-7 (2017).
210. **"Measurement of the differential and total cross sections of the $\gamma d \to K^0\Lambda(p)$ reaction within the resonance region"**, N. Compton, *et al.* (CLAS Collaboration), Phys. Rev. C **96**, 065201-1 to 065201-17 (2017).
211. **"Measurement of the helicity asymmetry E in $\omega \to \pi^+\pi^-\pi^0$ photoproduction"** , Z. Akbar, *et al.* (CLAS Collaboration), Phys. Rev. C **96**, 065209-1 to 065209-11 (2017).
212. **"Double K^0_S photoproduction off the proton at CLAS"** , S. Chandavar, *et al.* (CLAS Collaboration), Phys. Rev. C **97**, 025203-1 to 025203-11 (2018).
213. **"Measurement of the beam asymmetry Σ and the target asymmetry T in the photoproduction of ω mesons off the proton using CLAS at Jefferson Laboratory"** , P. Roy, *et al.* (CLAS Collaboration), Phys. Rev. C **97**, 055203-1 to 055203-14 (2018).
214. **"Differential cross section for $\gamma d \to \omega d$ for using CLAS at Jefferson Lab"** , T. Chetry, *et al.* (CLAS Collaboration), Phys. Lett. B **782**, 646-651 (2018).
215. **"Exclusive photoproduction of π^0 up to large values of Mandelstam variables s, t, and u with CLAS"** , M. Kunkel, *et al.* (CLAS Collaboration), Phys. Rev. C **98**, 015207-1 to 015207-8 (2018).
216. **"Measurements of the $\gamma_v p \to p'\pi^+\pi^-$ cross section with the CLAS detector for** 0.4 **GeV**^{2} $< Q^2 <$ 1.0 **GeV**^{2} **and** 1.3 **GeV** $< W <$ 1.825 **GeV"** , G. V. Fedotov, *et al.* (CLAS Collaboration), Phys. Rev. C **98**, 025203-1 to 025203-19 (2018).
217. **"Photoproduction of K^+K^- meson pairs on the proton"** , S. Lombardo, *et al.* (CLAS Collaboration), Phys. Rev. C **98**, 052009-1 to 052009-17 (2018).
218. **"Proton-η' interactions at threshold"** , A. V. Anisovich, V. Burkert, M.Dugger, E. Klempt, V. A. Nikonov, B. G. Ritchie, A. V. Sarantsev, U. Thoma, Phys. Lett. B **785**, 626-630 (2018).

7.4 Proceedings edited and published

Hadronic Probes and Nuclear Interactions, edited by J. R. Comfort, W. R. Gibbs, and B. G. Ritchie, AIP Conference Proceedings No. 138 (AIP, New York, 1985).

7.5 Invited talks at conferences

1. **"Experimental Nuclear Physics with Pions."** Invited talk at the SACS-AAPT Annual Meeting, Columbia, South Carolina, April 8, l982
2. **"Recent Results on πd$\rightarrow$ pp."** Invited talk at the Fifth Nordic Meeting on Intermediate and High Energy Nuclear Physics, Geilo, Norway, January 9-15, l983.
3. **"The Scruncher: Status, Results, and Prospects."** Invited talk at the LAMPF Users' Group Inc. Meeting, Los Alamos, NM, August 1991.
4. **"Recent Results with the LAMPF BGO Ball."** Invited talk at the Fifth International Oberjoch Meeting on Pion-Nuclear Physics, Oberjoch, Germany, August 30-September 4, 1993.
5. **"η and η' Studies at CEBAF."** Invited talk at the CEBAF/NMSU Workshop on the Structure of the η, Las Cruces, NM, March 11-15, 1996.
6. **"Studies of η and η' Photoproduction from Nucleons in Hall B."** Invited talk at the TJNAF Meson Photoproduction Workshop, Newport News, VA, June 11, 1997.
7. **"Photo-and Electroproduction of η and η' Mesons with CLAS."** Invited talk at the NSTAR 2000 Workshop, Thomas Jefferson National Laboratory, Newport News, VA, February 16, 1999.
8. **"Photoproduction of η and η' Mesons."** Invited talk at the Workshop on New Aspects of Quark Nuclear Physics with Polarized Photons, Honolulu, HI, February 18, 2003.
9. **"Recent results on η and η' photoproduction from the proton."** Invited talk at the Second Symposium on Threshold Meson Production in pp and pd Interaction, Jagellonian University, Krakow, Poland, June 1-3, 2004.
10. **"Latest Results from FROST at Jefferson Lab."** Invited talk at the 13th International Conference on Meson-Nucleon Physics and the Structure of the Nucleon (MENU 2013), Rome, Italy, September 30 - October 4, 2013.

7.6 Colloquia and seminars

1. **"Overview of the Universities Isotope Separator at Oak Ridge-UNISOR",** United States Coast Guard Academy, June 1979.
2. **"Overview of the Universities Isotope Separator at Oak Ridge-UNISOR",** Westminster College (PA), May 29, 1979.
3. **"Experimental and Theoretical Investigations of the Decays of ^{206}Fr and ^{208}Fr",** University of South Carolina, February 7, 1980.
4. **"Experimental and Theoretical Investigations of the Decays of ^{206}Fr and ^{208}Fr",** Bloomsburg State College, April 30, 1982.
5. **"Recent Results on πd$\rightarrow$ pp",** Vrije University, Amsterdam, The Netherlands, January 17, 1983.
6. **"Recent Results on πd$\rightarrow$ pp",** Karlsruhe Nuclear Reseach Center, Karlsruhe, West Germany, January 18, 1983.
7. **"Recent Results on πd$\rightarrow$ pp",** Swiss Institute for Nuclear Research, Villigen, Switzerland, January 20, 1983.
8. **"Recent Results on πd$\rightarrow$ pp",** University of Neuchatel, Neuchatel, Switzerland, January 24, 1983.
9. **"Recent Results on πd$\rightarrow$ pp"**, Center for Nuclear Studies, Paris, January 26, 1983.
10. **"Recent Results on πd$\rightarrow$ pp",** University of Mississippi, February 10, 1983.
11. **"Recent Results on πd$\rightarrow$ pp",** University of Maryland, January 1984.
12. **"Recent Results on πd$\rightarrow$ pp",** Arizona State University, April 7, 1984.
13. **"πd$\rightarrow$ pp: Results and Fundamentals",** New Mexico State University, February 15, 1990.
14. **"πd$\rightarrow$ pp: Results and Fundamentals",** University of South Carolina, March 15, 1990.
15. **"Low Energy Pion Studies of the 1^+Doublet in ^{12}C",** University of Virginia, October 18, 1990.

16. **"Photoproduction of Eta Mesons",** Arizona State University, October 11, 1991.
17. **"Photoproduction of Eta Mesons",** Catholic University of America, April 2, 1992.
18. **"Physics with Tagged Photons",** Arizona State University, April 29, 1993.
19. **"Studies in Pion Physics",** Northern Arizona University, March 24, 1994
20. **"First Physics Results with Real Photons at Jefferson Laboratory",** Arizona State University, January 28, 1999.

7.7 Contributed papers at topical conferences

In addition to activity in other collaborations, I am also a member of the CEBAF Large Acceptance Spectrometer Collaboration. Due to the number of scientists (more than 200) in the CLAS Collaboration, a large number of papers have been presented to professional meetings with the byline "... and the CLAS Collaboration." While those papers may list "CLAS Collaboration" in the byline, only those in which one or more members of my research group was involved are counted in the summary numbers above; those are also the only such items listed below under the appropriate sections.

1. **"The $\pi^+ + d \rightarrow p + p$ Reaction with T_π = 20 to 65 MeV,"** B.G. Ritchie, F.E. Bertrand, M. Blecher, R.L. Burman, R. Carlini, R.D. Edge, K. Gotow, E.E. Gross, M.E. Hamm, M.J. Leitch, D.J. Malbrough, M.A. Moinester, F.E. Obenshain, B.M. Preedom, and J.R. Wu, Proc. of the International Conference on Nuclear Physics, Aug. 24-30, l980, Berkeley, CA, LBL-11118, p. 712.
2. **"$\pi^+$and π^-Elastic Scattering from ^{12}C, ^{48}Ca, ^{90}Zr, ^{208}Pb at 80 MeV,"** M.J. Leitch, M. Blecher, R. Auble, F.E. Bertrand, G. Blanpied, R.L. Burman, R. Carlini, S.H. Dam, W. Gaskin, K. Gotow, E.E. Gross, M.V. Hynes, M.A. Kovash, F.E. Obenshain, B.M. Preedom, R.P. Redwine, B. Ritchie, V.D. Sandberg, and J. Wu, Proc. of the International Conference on Nuclear Physics, Aug. 24-30, l980, Berkeley, CA, LBL-11118, p. 716.
3. **"Giant Resonance Excitation of ^{40}Ca with $\pi^+$and π^-at 80 MeV,"** M. Blecher, R. Auble, F.E. Bertrand, G. Blanpied, R.L. Burman, R. Carlini, S.H. Dam, W. Gaskin, K. Gotow, E.E. Gross, M.V. Hynes, M.A. Kovash, M.J. Leitch, F.E. Obenshain, B.M. Preedom, R.P. Redwine, B. Ritchie, V.D. Sandberg, J. Wu, Proc. of the International Conference on Nuclear Physics, Aug. 24-30, l980, Berkeley, CA, LBL-11118, p. 264.
4. **"80 MeV π^-Nucleus Elastic Scattering,"** M. Blecher, R. Auble, F.E. Bertrand, W. Bertozzi, G. Blanpied, R.L. Burman, R. Carlini, S. Dam, W. Gaskin, K. Gotow, E.E. Gross, M.V.Hynes, M.A. Kovash, M. J. Leitch, F.E. Obenshain, B.M. Preedom, R.P. Redwine, B.G. Ritchie, V. Sandberg, and J. Wu, IXth International Conference on High Energy Physics and Nuclear Structure, Versailles, France, July 6-10, l981, p. 288.
5. **"80 MeV π^-Nucleus Inelastic Scattering,"** R. Ng, M. Blecher, R. Auble, F.E. Bertrand W. Bertozzi, G. Blanpied, R.L. Burman, R. Carlini, S. Dam, W. Gaskin, K. Gotow, E.E. Gross, M.V. Hynes, M.A. Kovash, M.J. Leitch, F.E. Obenshain, B.M. Preedom, R.P. Redwine, B.G. Ritchie, V. Sandberg, and J. Wu, IXth International Conference on High Energy Physics and Nuclear Structure, Versailles, France, July 6-10, l981, p. 303.
6. **"Giant Resonance Excitation in ^{40}Ca with 80 MeV π^+,"** M. Blecher, R. Auble, F.E. Bertrand W. Bertozzi, G. Blanpied, R.L. Burman, R. Carlini, S. Dam, W. Gaskin, K. Gotow, E.E. Gross, M.V. Hynes, M.A. Kovash, M.J. Leitch, F.E. Obenshain, B.M. Preedom, R.P. Redwine, B.G. Ritchie, V. Sandberg, and J. Wu, IXth International Conference on High Energy Physics and Nuclear Structure, Versailles, France, July 6-10, l981, p. 306.
7. **"Inelastic Pion Scattering from ^{10}Band ^{11}B,"** D.F. Geesaman, B. Zeidman, P. Zupranski, R.E. Segal, C. L. Morris, R.L. Boudrie, S. Greene, B.G. Ritchie, G. S. Blanpied, C.L. Harvey, L.W. Swenson, and G.C. Morrison, IXth International Conference on High Energy Physics and Nuclear Structure, Versailles, France, July 6-10, l981, p. 302.
8. **"π +d $\rightarrow$ p+p at 20 to 65 MeV,"** B.G. Ritchie, R.D. Edge, D.J. Malbrough, B.M. Preedom, F.E. Bertrand, E.E. Gross, F.E. Obenshain, J.R. Wu, M. Blecher, K. Gotow, R.L. Burman, R. Carlini, M.E. Hamm, M.J. Leitch, and M.A. Moinester, IXth International Conference on High Energy Physics and Nuclear Structure, Versailles, France, July 6-10, '81, p. 334.
9. **"Precision Mass Measurements Using Beta Endpoints,"** D.M. Moltz, K.S. Toth, F.T. Avignone III, H. Noma, B.G. Ritchie, and B.D. Kern, in Proceedings of the Fourth International Symposium on Nuclei Far from Stability, Ed. by P.G. Hansen and O.B. Nielsen (CERN, Geneva, l981), p. 141.
10. **"Elastic Scattering of $\pi^\pm$ from ^{12}C, ^{13}C, and ^{14}C at 80 MeV,"** M. Blecher, K. Gotow, G.S. Blanpied, B.M. Preedom, B.G. Ritchie, F.E. Bertrand, E.E. Gross, F.E. Obenshain, T.P. Sjoreen, N.S. Chant, L. Rees, P.G. Roos, R.L. Burman, M.V. Hynes, and M. J. Leitch, International Conference on Nuclear Structure, Amsterdam, The Netherlands, Aug. 30-Sept. 3, l982.
11. **"Excitation of the Ground State Rotational Band in ^{20}Ne, ^{24}Mg, and ^{26}Mg by 0.8 GeV Polarized Protons,"** G.S. Blanpied, B.G. Ritchie, M.L. Barlett, G.W. Hoffmann, J.A. McGill, E.C. Milner, C. Glashausser, K.W. Jones, S.K. Nanda, R. deSwiniarski, M.A. Franey, M. Gazzaly, and B.H. Wildenthal, International Conference on Nuclear Structure, Amsterdam, The Netherlands, Aug. 30-Sept. 3, l982.
12. **"π^+Ni Elastic Scattering-Sensitivity to the Neutron Radius,"** B. Fick, M. Blecher, K. Gotow, D. Wright, G. Blanpied, J.A. Escalante, C-S. Mishra, B. M. Preedom, R.L. Burman, M. Hynes, G. Ciangaru, N. Chant, P. Roos, B.G. Ritchie, F.E. Bertrand, E.E. Gross, F. Obenshain, and W. Burger, Particles and Nuclei International Conference, Heidelberg, West Germany, July 30-August 3, 1984.

13. **"Inelastic Pion Scattering from ^{24}Mg and ^{26}Mg,"** G.S. Blanpied, J. Hernandez, C.S. Mishra, S. Whisnant, C. Fred Moore, P.A. Seidl, R. Gilman, C.L. Morris, R.A. Lindgren, B.G. Ritchie, S.J. Seestrom-Morris, B.H. Wildenthal, Particles and Nuclei International Conference, Heidelberg, West Germany, July 30-August 3, 1984.
14. **"Elastic Pion Scattering from ^{14}C at 50 MeV,"** C.S. Mishra, G.S. Blanpied, B.G. Ritchie, R.S. Moore, M. Blecher, K. Gotow, R.L. Burman, M.V. Hynes, E. Piasetsky, N.S. Chant, P.G. Roos, F.E. Bertrand, T. Sjoreen, F.E. Obenshain, and E.E. Gross, Particles and Nuclei International Conference, Heidelberg, West Germany, July 30-August 3, 1984.
15. **"Proton Scattering from ^{22}Ne at 0.8 GeV,"** G.S. Blanpied, B.G. Ritchie, M.L. Barlett, R.W. Ferguson, G.W. Hoffman, B.H. Wildenthal, and J.A. McGill, Particles and Nuclei International Conference, Heidelberg, West Germany, July 30-August 3, 1984.
16. **"Indication of Pionic Atom Anomalies in Elastic Pion Scattering in Calcium at '.5 and 30 MeV,"** D.H. Wright, M. Blecher, B.G. Ritchie, D. Rothenberger, R.L. Boudrie, R.L. Burman, Z. Weinfeld, J.A. Escalante, C.S. Mishra, and C.S. Whisnant, Particles and Nuclei International Conference, Kyoto, Japan.
17. **"Elastic Scattering of Positive and Negative Pions from ^{64,60,58}Ni at 30 MeV,"** D.H. Wright, M. Blecher, K. Masutani, R. Seki, B.G. Ritchie, R.L. Boudrie, R.L. Burman, M.J. Leitch, M. Alsolami, J.A. Escalante, C.S. Mishra, G. Pignault, B.M. Preedom, and C.S. Whisnant, Particles and Nuclei International Conference, Kyoto, Japan.
18. **"Asymmetry Measurements of Pion Elastic Scattering from Polarized ^{13}C,"** Yi-Fen Yen, B. Brinkmoeller, S. Chakravarti, D. Dehnhard, S.M. Sterbenz, Yi-Ju Yu, Brian Berman, G.R. Burleson, K. Cranston, A. Klein, G.S. Kyle, R. Alarcon, T. Averett, J.R. Comfort, J. Goergen, B. Ritchie, J.M. Tinsley, G. W. Hoffmann, K. Johnson, M. Purcell, H. Ward, A. Williams, J.A. Faucett, S.J. Greene, J.J. Jarmer, J.A. McGill, C.L. Morris, S. Pentilla, N. Tanaka, E. Insko, R. Ivie, J.M. O'Donnell, D. Smith, S. Hoibraten, and M. Khandaker, Particles and Nuclei International Conference XII, June 25-29, 1990, Cambridge, MA (1990).
19. **"Positive Pion Absorption in ^{6}Li from 50 to 200 MeV,"** R.D. Ransome, V.R. Cupps, S. Dawson, R.W. Fergerson, A. Green, C.L. Morris, J.A. McGill, J.R. Comfort, B.G. Ritchie, J. Tinsley, R.A. Loveman, J.D. Zumbro, C. Fred Moore, P.C. Gugelot, and D.L. Watson, Particles and Nuclei International Conference XII, June 25-29, '90, Cambridge, MA (1990).
20. **"A Study of the Reaction ^{6}Li(π^+, 2p) around the $\Delta(3,3)$ Resonance,"** D. Zhang, H. Breuer, N.S. Chant, B.S. Flanders, S.D. Hyman, M.A. Khandakar, D.J. Mack, P.G. Roos, J.D. Silk, K. Dhuga, G.S. Kyle, M. Wang, P.-A. Amaudruz, C.H.Q. Ingram, R.A. Schumacher, U. Sennhauser, J. Jacob, B.G. Ritchie, D. Rothenberger, J. McDonald, and D.A. Williams, Particles and Nuclei International Conference XII, June 25-29, 1990, Cambridge, MA (1990).
21. **"Analyzing Power Measurements for the (π^+,π^0) Reaction on Polarized ^{13}C,"** J. Gorgen, J. Comfort, T. Averett, J. DeKorse, B. Franklin, B. Ritchie, J. Tinsley, G. Kyle, B. Berman, G.R. Burleson, K. Cranston, A. Klein, J.A. Faucett, J. Jarmer, J.N. Knudson, S. Pentilla , N. Tanaka, B. Brinkmoeller, D. Dehnhard, Y.F. Fen, H. Breuer, M.A. Khandakar, D.L. Naples, B.S. Flanders, D. Zhang, M. Barlett, G.W. Hoffmann, M. Purcell, and S. Høibråten, Paris-90 Conference, July 9-13, 1990, Paris, Colloque de Physique **6**, 583 (1990).
22. **"Pion Elastic Scattering from Polarized ^{13}C in the Energy Region of the [3,3] Resonance,"** Yi-Fen, B. Brinkmoller, D. Dehnhard, S.M. Sterbenz, Yi-Ju Yu, Brian Berman, G.R. Burleson, K. Cranston, A. Klein, G.S. Kyle, R. Alarcon, T. Averett, J.R. Comfort, J. Goergen, B. Ritchie, and J.R. Tinsley, G.W. Hoffmann, K. Johnson, M. Purcell, H. Ward, A. Williams, J.A. Faucett, S.J. Greene, J. Jarmer, J.A. McGill, C.L. Morris, S. Pentilla, N. Tanaka, H.T. Fortune, E. Insko, R. Ivie, J.M. O'Donnell, D. Smith, S. Hoibraten, M. Khandakar, and S. Chakravarti, Paris-90 Conference, July 9-13, 1990, Colloque de Physique **51**, 587 (1990).
23. **"Pion Absorption on Light Nuclei,"** R.D. Ransome, C.L. Morris, D.L. Watson, M.K. Jones, B.G. Ritchie, J.A. McGill, and C.F. Moore, in Pions in Nuclei, edited by E. Oset, M.J. Vicente Vacas, and G. Garcia Recio, (World Scientific, New Jersey, 1992) 486-494.
24. **"Evidence for Physics Beyond the Quasi-Deuteron Model in Pion Absorption,"** C.L. Morris, R.D. Ransome, B.G. Ritchie, J.D. Zumbro, D.L. Watson, and C.F. Moore, in Pions in Nuclei, edited by E. Oset, M.J. Vicente Vacas, and G. Garcia Recio, (World Scientific, New Jersey, 1992) 495-504.
25. **"Overview of Hall B Photon Tagger,"** Barry G. Ritchie, in "CEBAF 1992 Summer Workshop", edited by Franz Gross and Roy Holt, AIP Conference Proceedings No. 269, (American Institute of Physics, New York, 1993), 547-550.
26. **"Photoproduction of Eta Mesons from Threshold to 1.2 GeV,"** M. Rigney, M. Breuer, P. Hoffman-Rothe, G. Anton, J. Arends, G. Berrier-Rosin, W. Beulertz, G. Blanpied, A. Bock, M. Bruns, J.-P. Didelez, C. Djalali, G. v. Edel, R. Frascaria, R. Maass, K. Helbing, J. Hey, G. Noldeke, E. Hourani, M. Mayers, B. Preedom, B. Ritchie, L. Rosier, B. Saghai, M. Schumacher, F. Smend, S. Whisnant, and B. Zucht, in *Few Body Problems in Physics*, edited by Franz Gross, AIP

Conference Proceedings No. 334, (American Institute of Physics, New York, 1995), 510-511.

27. **"Photoproduction of Eta Mesons from Threshold to 1.2 GeV,"** P. Hoffman-Rothe, E. Hourany, M. Breuer, J.-P. Didelez, M. Rigney, J. Ajaka, G. Anton, J. Arends, G. Berrier-Rosin, W. Beulertz, G. Blanpied, A. Bock, M. Bruns, G. v. Edel, R. Frascaria, K. Helbing, J. Hey, M. Krebeck, R. Maass, G. Noldeke, B. Preedom, B. Ritchie, L. Rosier, B. Saghai, M. Schumacher, F. Smend, S. Whisnant, and B. Zucht, in *Mesons and Light Nuclei '95*, edited by J. Adam, J. Dobes, R. Mach, M. Sotona, and J. Dolejsi, Few-Body Systems Supplementum 9 (Springer-Verlag, New York, 1995), 223-226.
28. **"Electromagnetic Excitation of Baryon Resonances and the CLAS N* Program,"** Volker Burkert and the CLAS Collaboration, N* Workshop, Trento, Italy, May, '98.
29. **"Search for Missing Resonances in $\gamma p \rightarrow X \rightarrow \omega p$,"** Franz Klein and the CLAS Collaboration, Baryons 98, University of Bonn, Bonn, Germany, September 22-26, 1998.
30. **"Preliminary Angular Distribution in π^0 Electroproduction in the Delta Region at Q^2Higher than 0.5 (GeV/c)^2,"** Marco Battaglieri and the CLAS Collaboration, Baryons 98, University of Bonn, Bonn, Germany, September 22-26, 1998.
31. **"Real Photon Experiments at JLab Using the Hall B Photon Tagger,"** William J. Briscoe, Catalina Cetina, Sasha A. Phillips, and the CLAS Collaboration, Nuclear and Particle Physics Workshop, Dubrovnik, Croatia, November 3-10, 1998.
32. **"First Preliminary Results from CLAS,"** Mauro Taiuti and the CLAS Collaboration, Perspectives in Hadronic Physics, Trieste, Italy, May 10-14, 1999.
33. **"Recent Results from CLAS,"** William Hersman and the CLAS Collaboration, 4th Workshop on Electromagnetically Induced Two Hadron Emission, Grenada, Spain, May 26-29, 1999.
34. **"Strangeness Photoproduction with CLAS at Jefferson Lab,"** Reinhard Schumacher and the CLAS Collaboration, PANIC99: XV International Conference on Particles and Nuclei, Uppsala, Sweden, June 10-16, 1999.
35. **"Hyperon Electroproduction with CLAS,"** Mac Mestayer and the CLAS Collaboration, PANIC99: XV International Conference on Particles and Nuclei, Uppsala, Sweden, June 10-16, 1999.
36. **"Electro- and Photoproduction of ω(738) Mesons Using CLAS at Jefferson Lab,"** Joe Manak and the CLAS Collaboration, PANIC99: XV International Conference on Particles and Nuclei, Uppsala, Sweden, June 10-16, 1999.
37. **"CLAS-A Large Acceptance Spectrometer for Intermediate Energy Electromagnetic Nuclear Physics,"** Will Brooks and the CLAS Collaboration, PANIC99: XV International Conference on Particles and Nuclei, Uppsala, Sweden, June 10-16, 1999.
38. **"Studies of N* Resonances with Electromagnetic and Pion Probes,"** Steve Dytman and the CLAS Collaboration, Leptons and Hadrons as Complementary Probes of Strong QCD, Juelich, Germany, June 17-19, 1999.
39. **"The Photoproduction of Vector Mesons at High t,"** Claude Marchand and the CLAS Collaboration, Leptons and Hadrons as Complementary Probes of Strong QCD, Juelich, Germany, June 17-19, 1999.
40. **"Topics of Few-Body Physics at J-Lab,"** William Hersman and the CLAS Collaboration, KEK-Tanashi International Symposium on Hadron and Nuclear Physics with Electromagnetic Probes, Tokyo, Japan, October 25-27, 1999.
41. **"Nucleon Structure Functions,"** A. Skabelin and the CLAS Collaboration, Proceedings of CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000; ed. Zoreh Parsa and William J. Marciano, American Institute of Physics Conference Proceedings No. 549 (AIP, Melville, New York, 2000).
42. **"Photoproduction of Vector Mesons off the Proton and Large Transfer,"** J.M. Laget and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
43. **"Photo- and Electro-production of Vector Mesons,"** J.M. Laget and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
44. **"Eta Electroproduction in the S_{11}(1535) Region with CLAS,"** J.A. Mueller and the CLAS Collaboration, Proceedings of CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000; ed. Zoreh Parsa and William J. Marciano, American Institute of Physics Conference Proceedings No. 549 (AIP, Melville, New York, 2000), pp. 255-258.
45. **"Single Pion Electroproduction from CLAS,"** K. Joo and the CLAS Collaboration, Proceedings of CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000; ed. Zoreh Parsa and William J. Marciano, American Institute of Physics Conference Proceedings No. 549 (AIP, Melville, New York, 2000), pp. 434-437.
46. **"Inclusive Asymmetries and Spin Structure Function Integrals for the Deuteron,"** S. Kuhn and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.

47. **"Direct Observation of Two Nucleon Correlations in Nuclei with CLAS,"** L. Weinstein and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
48. **"Searching for *NN* correlations in Helium using CLAS,"** B. Zhang and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
49. **"Study of Short Range Correlations in Nuclei with CLAS,"** K. Egiyan and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
50. **"Measurement of the Polarized Beam Asymmetry on Nuclei with CLAS,"** M. Holtrop and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
51. **"Photoproduction of the φ(1020) Meson Near Threshold,"** D.J. Tedeschi and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
52. **"Exclusive π^-Production from Polarized Deuterons,"** M. Bektasoglu and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
53. **"Spin structure functions of the Deuteron,"** J. Yun and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
54. **"Extraction of g_p in the Resonance Region,"** R. Fatemi and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 2228, 2000.
55. **"Electroproduction of the Λ(1520) hyperon,"** S.P. Barrow and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
56. **"Single π^0 Electroproduction in Δ(1232) Resonance Region using CLAS at Jefferson Lab,"** K. Joo and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
57. **"Photoproduction of Σ^+ Hyperons,"** B. Carnahan and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
58. **"Kaon Photoproduction on Deuterium,"** I. Niculescu and the CLAS Collaboration, CIPANP 2000 - 7th Conference on the Intersections of Particle and Nuclear Physics, Quebec City, Quebec, Canada; May 22-28, 2000.
59. **"Eta and Eta' Photoproduction from the Proton Using CLAS,"** E. Pasyuk and the CLAS Collaboration, Baryons 2002: Ninth International Conference on the Structure of Baryons, Newport News, Virginia; March 3-8, 2002.
60. **"Photoproduction of the Xi Hyperons,"** J. Price and the CLAS Collaboration, Baryons 2002: Ninth International Conference on the Structure of Baryons, Newport News, Virginia; March 3-8, 2002.
61. **"Deuteron Two-Body Photodisintegration in the Quark Hadron Picture,"** M. Mirazita and the CLAS Collaboration, MESON2002 Workshop, Cracow, Poland; May 24-28, 2002.
62. **"Deuteron Two-Body Photodisintegration in the Quark Hadron Picture,"** F. Ronchetti and the CLAS Collaboration, QNP2002, Julich, Germany; June 9-14, 2002.
63. **"Search for Three-Body Effects in the γ^3*He* $\rightarrow$ *ppn* Reaction Measured with the CLAS Detector,"** S. Niccolai and the CLAS Collaboration, XVIII European Conference on Few-Body Problems (BLED 2002), Bled, Slovenia; September 8-14, 2002.
64. **"Deuteron Photodisintegration in the Quark Hadron Picture,"** F. Ronchetti and the CLAS Collaboration, 5th International Conference on Quark Confinement and the Hadron Spectrum, Gargnano, Italy; September 10-14, 2002.
65. **"PWD Analysis of Two Charged Pion Photoproduction at CLAS,"** M. Bellis and the CLAS Collaboration, 8th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2003), New York, NY; May 19-24, 2003.
66. **"Observation of a Color Transparency Signature in the d(*e,e'p*)nReaction with Double Scattering,"** K. Egiyan and the CLAS Collaboration, 8th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2003), New York, NY; May 19-24, 2003.
67. **"Three Pion Photoproduction with CLAS,"** M. Nozar and the CLAS Collaboration, 8th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2003), New York, NY; May 19-24, 2003.
68. **"Evidence for an Exotic S= +1 Baryon State in Photoproduction Reactions in CLAS,"** S. Stepanyan and the CLAS Collaboration, 8th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2003), New York, NY; May 19-24, 2003.

69. **"Photoproduction of the ρ^0Meson at CLAS Using Linearly Polarized Photons,"** C. Gordon and the CLAS Collaboration, 8th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2003), New York, NY; May 19-24, 2003.
70. **"K-Lambda Photoproduction with Linearly Polarized Photons at CLAS,"** J. Melone and the CLAS Collaboration, 8th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2003), New York, NY; May 19-24, 2003.
71. **"Photoproduction of Two-Charged Pions from a Hydrogen Target with Circularly Polarized Photons,"** S. Strauch and the CLAS Collaboration, 8th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2003), New York, NY; May 19-24, 2003.
72. **"Study of Coherent Pion Photoproduction on Deuterium,"** Y. Ilieva and the CLAS Collaboration, 17th International IUPAP Conference on Few-Body Problems in Physics, Durham, NC; June 5-10, 2003.
73. **"Three-Body Photodisintegration of 3He Measured with CLAS,"** S. Niccolai and the CLAS Collaboration, 17th International IUPAP Conference on Few-Body Problems in Physics, Durham, NC; June 5-10, 2003.
74. **"Angular Distributions for the $\gamma d \rightarrow pn$ Reaction in the Few GeV Region,"** F. Ronchetti and the CLAS Collaboration, 17th International IUPAP Conference on Few-Body Problems in Physics, Durham, NC; June 5-10, 2003.
75. **"Search for Exotic Mesons in $\pi^+\pi^-\pi^0$ Decay in the Reaction $\gamma p \rightarrow \pi^+\pi^0\pi^- p$,"** J. Li and the CLAS Collaboration, KEK Workshop on Nuclear Chiral Dynamics, Tsukuba, Japan; March 18-20, 2004.
76. **"Search for New Baryons States from Double Charged Pion Reactions,"** V. Burkert and the CLAS Collaboration, NSTAR2004, Grenoble, France; March 24-27, 2004.
77. **"Search for Pentaquark States on a Proton Target with CLAS,"** R. DeVita and the CLAS Collaboration, NSTAR2004, Grenoble, France; March 24-27, 2004.
78. **"Search for the Θ^+ Exotic Pentaquark in the $\gamma\,^3He \rightarrow p\Lambda\Theta^+$ Reaction,"** S. Niccolai and the CLAS Collaboration, NSTAR2004, Grenoble, France; March 24-27, 2004.
79. **"Partial Wave Analysis of the $\pi^+\pi^-\pi^0$ System in Photoproduction at CLAS,"** M. Nozar and the CLAS Collaboration, Quarks and Nuclear Physics (QNP 2004), Bloomington, IN; May 23-28, 2004.
80. **"Onset of Asymptotic Scaling in Deuteron Photodisintegration,"** P. Rossi and the CLAS Collaboration, International Nuclear Physics Conference (INPC 2004), Goteborg, Sweden; June 27 -July 2, 2004.
81. **"Measurement of Structure Function $g_1 p$ with CLAS at Jefferson Lab,"** Y. Prok and the CLAS Collaboration, GDH 2004, Norfolk, VA; July 2-5, 2004.
82. **"Onset of Asymptotic Scaling in Deuteron Photodisintegration,"** M. Mirazita and the CLAS Collaboration, The 'th European Conference on Few-Body Problems in Physics (FB'), Groningen, Netherlands; August 23-27, 2004.
83. **"Polarization in exclusive electro-and photoproduction at CLAS,"** M. Mestayer and the CLAS Collaboration, SPIN2004, Trieste, Italy; October 10-16, 2004.

7.8 Abstracts at meetings

In addition to activity in other collaborations, I am also a member of the CEBAF Large Acceptance Spectrometer Collaboration. Due to the number of scientists (more than 200) in the CLAS Collaboration, a large number of abstracts have been presented to professional meetings with the byline "... and the CLAS Collaboration." While those abstracts may list "CLAS Collaboration" in the byline, only those in which one or more members of my research group was involved are counted in the summary numbers above; those are also the only such items listed below under the appropriate sections.

1. **"A New High-Temperature Ion Source for On-Line Isotope Separation,"** R.L. Mlekodaj, E.H. Spejewski, H.K. Carter, and B.G. Ritchie, Bull. Amer. Phys. Soc. **24**, 596 ('79).
2. **"Low-Lying Level Structure of ^{208}Rn and the Interacting Boson Approximation,"** B.G. Ritchie, F.T. Avignone III, H.K. Carter, R.L. Mlekodaj, and E.H. Spejewski, Bull. Amer. Phys. Soc. **24**, 685 ('79).
3. **"Precision Mass Measurements Using Beta Endpoints,"** D.M. Moltz, K.S. Toth, F.T. Avignone III, H. Nona, B.G. Ritchie, and B.D. Kern, Bull. Amer. Phys. Soc. **26**, 1136 (1981).
4. **"0.8 GeV Polarized Proton Scattering on ^{24},^{26}Mg,"** B.G. Ritchie, G.S. Blanpied, G.A. Balchin, G.E. Langston, W.A. Gaskin, M. Barlett, R. Fergerson, G.W. Hoffman, J. Marshall, J.A. McGill, E.C. Milner, R. deSwiniarski, C. Glashausser, K.W. Jones, and S.K. Nanda, Bull. Amer. Phys. Soc. **27**, 730 (1982).
5. **"Proton Scattering at 650 and 800 MeV on ^{30}Si, ^{34}S, and ^{42}Ca,"** R.A. Miskimen, A.M. Bernstein, B. Quinn, S.A. Wood, M.V. Hynes, G.S. Blanpied, B.G. Ritchie, and V.R. Brown, Bull. Amer. Phys. Soc. **27**, 730 (1982).
6. **"Comparison of the $\pi^{\pm}$ Elastic Scattering from ^{14}C and ^{12}C at 50 MeV,"** C.S. Mishra, B.M. Preedom, G.S. Blanpied, B.G. Ritchie, S. Moore, M. Blecher, K. Gotow, M. Artuso, R.L. Burman, M. Hynes, E. Piasetzky, N. Chant, P. Roos, L. Rees, F.E. Bertrand, and T.P. Sjoreen, Bull. Amer. Phys. Soc. **28**, 7' (1983).
7. **"πd$\rightarrow$ pp from 0 to 250 MeV,"** B.G. Ritchie, Bull. Amer. Phys. Soc. **28**, 659 (1983).
8. **"Scattering of $\pi^{\pm}$ from ^{26}Mg,"** G.S. Blanpied, J. Hernandez, B.G. Ritchie, C.F. Moore, P. Seidl, R. Gilman, and C.L. Morris, Bull. Amer. Phys. Soc. **28**, 7' (1983).
9. **"Elastic Pion Scattering from Carbon Isotopes,"** M. Blecher, K. Gotow, R.L. Burman, M.V. Hynes, M.J. Leitch, N.S. Chant, L. Rees, P.G. Roos, F.E. Bertrand, E.E. Gross, F.E. Obershain, T.P. Sjoreen, G.S. Blanpied, B.M. Preedom, and B.G. Ritchie, Bull. Amer. Phys. Soc. **28**, 7' (1983).
10. **"A Study of (π^-,p) Reactions: A Search for Bound States,"** C-S. Mishra, G.S. Adams, G.S. Blanpied, B.M. Preedom, C.S. Whisnant, J.P. Egger, B.H. Wildenthal, H. Breuer, D. Benton, N.S. Chant, B.G. Ritchie, B. Hoistad, A. Brown, S. Gilad, and R.P. Redwine, Bull. Amer. Phys. Soc. **29**, 1051 (1984).
11. **"Pion Elastic Scattering From ^{58},^{60},^{64}Ni at 65 MeV,"** B. Fick, G. Blanpied, M. Blecher, J. Escalante, K. Gotow, D. Mack, C.S. Mishra, B.M. Preedom, B. Ritchie, P. Roos, S. Whisnant, and D. Wright, Bull. Amer. Phys. Soc. **30**, 786 (1985).
12. **"π^-Elastic Scattering at 50 MeV from Ni Isotopes in the Region of the Diffraction Minimum,"** B. Fick, G. Blanpied, M. Blecher, J. Escalante, K. Go-tow, D. Mack, C.S. Mishra, B.M. Preedom, B. Ritchie, P. Roos, S. Whisnant, and D. Wright, Bull. Amer. Phys. Soc. **30**, 785 (1985).
13. **"Forward-Angle Differential Cross Sections for the ^{165}Ho (π^+,π^o) Reaction at 165 MeV,"** J.N. Knudson, J.R. Comfort, R.A. Gianelli, B.G. Ritchie, D. Rothenberger, J.D. Bowman, H.W. Baer, P.A. Heusi, F. Irom, S.S. Hanna, D. Pocanic, S. Hoibraten, R.A. Loveman, S.H. Rokni, C.J. Seftor, A.G. Bergmann, and W.J. Fickinger, Bull. Amer. Phys. Soc. **30**, 1255(1985).
14. **"πd$\rightarrow$ pp at 30 MeV,"** M.A. Al-Salami, B.G. Ritchie, R.C. Minehart, G.S. Blanpied, J.A. Escalante, R. Marshall, C-S. Mishra, G. Pignault, B.M. Preedom, C.S. Whisnant, and D. Wright, Bull. Amer. Phys. Soc. **31**, 800 (1986).
15. **"Pion-induced Monopole Transitions,"** C.S. Whisnant, G.S. Adams, M.A. Al-Salami, J.A. Escalante, B.M. Preedom, B.G. Ritchie, Bull. Amer. Phys. Soc. **31**, 801 (1986).
16. **"Excitation of the 1^+ Doublet in ^{12}C by 50 MeV Pions,"** J.A. Escalante, B.G. Ritchie, B.M. Preedom, G.S. Adams, M. Al-Solami, G.S. Blanpied, R.L. Boudrie, N. Lasheen, J. Mitchell, C.S. Mishra, J. Peterson, G. Pignault, C.S. Whisnant, and D. Wright, Bull. Amer. Phys. Soc. **31**, 801 (1986).
17. **"30 MeV $\pi^+$and π^-Elastic Scattering from Nickel Isotopes,"** D.H. Wright, M. Blecher, M. Al-Salami, G. Blanpied, J.A. Escalante, C.S. Mishra, G. Pignault, B.M. Preedom, C.S. Whisnant, R.L. Boudrie, R.L. Burman, M.J. Leitch, B.G. Ritchie, Bull. Amer. Phys. Soc. **31**, 802 (1986).
18. **"Low Energy Measurements of Inelastic Pion Scattering Cross Sections on ^{13}C,"** J.M. Mitchell, J.T. Brack, R.J. Peterson, R.A. Ristinen, J.L. Ullmann, B. Ritchie, J. Escalante, and R.L. Boudrie, Bull. Amer. Phys. Soc. **31**, 842 (1986).
19. **"(π,p) Reactions at 90 MeV,"** C-S. Mishra, G.S. Blanpied, G. Pignault, B.M. Preedom, J-P. Egger, E. Bovet, and B.G. Ritchie, Bull. Amer. Phys. Soc. **31**, 857 (1986).

20. **"Continuum Study of the Exclusive (π^+,p) Reaction at 90 and 120 MeV,"** C-S. Mishra, G.S. Blanpied, G. Pignault, B.M. Preedom, C.S. Whisnant, J-P. Egger, E. Bovet, and B.G. Ritchie, Bull. Amer. Phys. Soc. **31**, 858 (1986).
21. **"Experimental Features of Pion Absorption at $\Delta(1232)$ Resonance Energies,"** G. Kyle, H. Breuer, N. Chant, F. Khazaie, D. Mack, B. Ritchie, P. Roos, J. Silk, P-A. Amaudruz, Th.S. Bauer, C.H.Q. Ingram, D. Renker, U. Sennhauser, R. Schumacher, and W. Burger, Bull. Amer. Phys. Soc. **31**, 1204 (1986).
22. **"Measurement of the Reaction ^{16}O(π^+,2p)^{14}Ni at 115 MeV,"** H. Breuer, N.S. Chant, F. Khazaie, D. Mack, B.G. Ritchie, P.G. Roos, J.D. Silk, P.A. Amaudruz, Th.S. Bauer, G. Kyle, Ch.Q. Ingram, D. Renker, R.A. Schumacher, and U. Sennhauser, Bull. Amer. Phys. Soc. **32**, 1118 (1987).
23. **"Direct Multinucleon Absorption of 115 MeV Pions on ^{16}O,"** J.D. Silk, H. Breuer, N.S. Chant, F. Khazaie, D. Mack, B. Ritchie, P. Roos, P.A. Amaudruz, Th.S. Bauer, G. Kyle, Ch.Q. Ingram, D. Renker, R.A. Schumacher, and U. Sennhauser, Bull. Amer. Phys. Soc. **32**, 1118 (1987).
24. **"Charged Particle Multiplicities Following Pion Absorption,"** R.D. Ransome, R.W. Ferguson, C. Glashausser, C.L. Morris, J.A. McGill, J.R. Comfort, B.G. Ritchie, J. Tinsley, J.D. Zumbro, R.A. Loveman, P.C. Gugelot, and C.F. Moore, Bull. Amer. Phys. Soc. **32**, 1438 (1987).
25. **"Charged Particle Multiplicities Following Pion Absorption,"** R.D. Ransome, V.R. Cupps, R.W. Ferguson, C. Glashausser, C.L. Morris, J.A. McGill, J.R. Comfort, B.G. Ritchie, J. Tinsley, J.D. Zumbro, R.A. Loveman, P.C. Gugelot, and C.F. Moore, Bull. Amer. Phys. Soc. **32**, 1560 (1987).
26. **"Production of Eta Mesons by Intermediate Energy Protons from Nuclei,"** G.S. Blanpied, J-P. Didelez, T. Reposeur, R. Frascaria, J.P. Hermier, R. Siebert, E. Warde, B. Saghai, B.M. Preedom, E. Bovet, J-P. Egger, G. Battistoni, C. Bloise, and B.G. Ritchie, Bull. Amer. Phys. Soc. **32**, 1560 (1987).
27. **"Measurement of the Reaction ^{16}O(π^+,2p)^{14}N at 165 MeV,"** S.D. Hyman, H. Breuer, N.S. Chant, F. Khazaie, D. Mack, B.G. Ritchie, P.G. Roos, J.D. Silk, P.A. Amaudruz, Th.S. Bauer, G. Kyle, Ch.Q. Ingram, D. Renker, R.A. Schumacher, U. Sennhauser, W.J. Burger, Bull. Amer. Phys. Soc. **33**, 902(1988).
28. **"Low Energy Positive Pion Absorption on ^{6}Li,"** D. Rothenberger, B.G. Ritchie, J.R. Comfort, R.A. Giannelli, J. Tinsley, N.S. Chant, D. Mack, P.G. Roos, J.D. Silk, G.S. Kyle, M. Rawool, J.A. Escalante, and B.M. Preedom, Bull. Amer. Phys. Soc. **33**, 903(1988).
29. **"^{10}B(π^+,2p) at 115 MeV,"** B.G. Ritchie, D. Rothenberger, J.R. Comfort, R.A. Giannelli, J. Tinsley, N.S. Chant, D. Mack, P.G. Roos, J.D. Silk, G.S. Kyle, M. Rawool, J.A. Escalante, and B.M. Preedom, Bull. Amer. Phys. Soc. **33**, 903(1988).
30. **"Measurement of the Reaction ^{6}Li(π^+,2p)^{4}He Over the $\Delta(1232)$ Resonance Region,"** D. Zhang, H. Breuer, N.S. Chant, B.S. Flanders, S.D. Hyman, D.J. Mack, P.G. Roos, J.D. Silk, K. Dhuga, G.S. Kyle, M. Wang, P.-A. Amaudruz, W.J. Burger, C.H.Q. Ingram, R.A. Schumacher, U. Sennhauser, B.G. Ritchie, D. Rothenberger, Bull. Amer. Phys. Soc. **33**, 1586 (1988).
31. **"Dominance of Two-Nucleon Mechanism in O(π^+,2p) at 115 MeV,"** D. Mack, H. Breuer, N. S. Chant, F. Khazaie, B.G. Ritchie, P.G. Roos, J.D. Silk, P. A. Amaudruz, Th.S. Bauer, Ch.Q. Ingram, G. Kyle, D. Renker, R.A. Schumacher, U. Sennhauser, W. Burger, Bull. Amer. Phys. Soc. **33**, 1587 (1988).
32. **"Coincidence Measurements of the Reaction ^{16}O(π^+,2p) ^{14}N at 165 MeV,"** S.D. Hyman, H. Breuer, N.S. Chant, F. Khazaie, D. Mack, B.G. Ritchie, P.G. Roos, J.D. Silk, P.A. Amaudruz, Th.S. Bauer, G. Kyle, Ch.Q. Ingram, D. Renker, R.A. Schumacher, U. Sennhauser, and W.J. Burger, Bull. Amer. Phys. Soc. **33**, 1607 (1988).
33. **"Energy Dependence of the ^{6}Li(π^+,2p) Reaction,"** D. Zhang, H. Breuer, N.S. Chant, B.S. Flanders, S.D. Hyman, D.J. Mack, P.G. Roos, J.D. Silk, K. Dhuga, G.S. Kyle, M. Wang, P.-A. Amaudruz, C.H.Q. Ingram, R.A. Schumacher, U. Sennhauser, J. Jacob, B.G. Ritchie, D. Rothenberger, J. MacDonald, and A. Williams, Bull. Amer. Phys. Soc. **33**, 1607 (1988).
34. **"Pion Absorption on Deuterium at Energies below 20 MeV,"** B.G. Ritchie, T.D. Averett, D. Rothenberger, J. Tinsley, R.C. Minehart, K. Giovanetti, L.C. Smith, G.S. Blanpied, and B.M. Preedom, Bull. Amer. Phys. Soc. **34**, 1203 (1989).
35. **"Pion Absorption on ^{6}Li at Low Energies,"** D. Rothenberger, B.G. Ritchie, J.R. Comfort, R.A. Giannelli, J. Tinsley, N.S. Chant, D. Mack, P.G. Roos, J.D. Silk, G.S. Kyle, M. Rawool, J.A. Escalante, and B.M. Preedom, Bull. Amer. Phys. Soc. **34**, 1203 (1989).
36. **"Inclusive and Exclusive Measurements of the Reaction ^{16}O(π^+,2p) ^{14}N at 165 MeV,"** S.D. Hyman, H. Breuer, N.S. Chant, F.Khazaie, D. Mack, B.G. Ritchie, P.G. Roos, J.D. Silk, P.A. Amaudruz, Th.S. Bauer, G. Kyle, Ch.Q. Ingram, D. Renker, R.A. Schumacher, U. Sennhauser, and W.J. Burger, Bull. Amer. Phys. Soc. **34**, 1205 (1989).
37. **"Energy Dependence of the ^{6}Li(π^+,2p) Reaction,"** D. Zhang, H. Breuer, N.S. Chant, B.S. Flanders, S.D. Hyman, D.J. Mack, P.G. Roos, J.D. Silk, K. Dhuga, G.S. Kyle, M. Wang, P.-A. Amaudruz, C.H.Q. Ingram, R.A. Schumacher, U. Sennhauser, J. Jacob, B.G. Ritchie, D. Rothenberger, J. MacDonald, and A. Williams, Bull. Amer. Phys. Soc. **34**, 1205 (1989).

38. **"Systematics of Pion Absorption on ^{6}Li,"** R.D. Ransome, V.R. Cupps, S. Dawson, R.W. Fergerson, A. Green, C.L. Morris, J.A. McGill, J.R. Comfort, B.G. Ritchie, J. Tinsley, J.D. Zumbro, R.A. Loveman, P.C. Gugelot, D.L. Watson, and C. Fred Moore, Bull. Amer. Phys. Soc. **35**, (1990).
39. **"Energy Dependence of the ^{6}Li(π^+,2p) Reaction,"** D. Zhang, H. Breuer, N.S. Chant, B.S. Flanders, S.D. Hyman, D.J. Mack, P.G. Roos, J.D. Silk, K. Dhuga, G.S. Kyle, M. Wang, P.-A. Amaudruz, C.H.Q. Ingram, R.A. Schumacher, U. Sennhauser, J. Jacob, B.G. Ritchie, D. Rothenberger, J. MacDonald, and A. Williams, Bull. Amer. Phys. Soc. **35**, (1990).
40. **"Excitation Function for Partial Cross Sections for Pion Absorption on ^{12}C,"** C. L. Morris, John McGill, Ronald Ransome, Mark Jones, David Clayton, Kunal Pujara, Barry Ritchie, Ian Brown, Paul Campbell, Doug Watson, and C. Fred. Moore, Bull Amer. Phys. Soc. **36**, 1299 (1991).
41. **"50 and 65 MeV $\pi^\pm$ from ^{12}C with the 'Scruncher',"** B.G. Ritchie, J. M. Applegate, T. D. Averett, J. Beck, D.S. Oakley, C. Kormanyos, R. J. Peterson, J.A. McGill, C.L. Morris, C.F. Moore, M. Snell, and H. Ward, Bull. Amer. Phys. Soc. **36**, 1299 (1991).
42. **"Parametrization of the Total and Differential Cross Sections for the Reaction $\pi^+ + d \rightarrow p + p$ below 1 GeV,"** B. G. Ritchie, Bull. Amer. Phys. Soc. **36**, 1300 (1991).
43. **"The SCRUNCHER–A Superconducting Radio-Frequency Cavity for Manipulating the Phase Space of Pion Beams at LAMPF,"** J.M. O'Donnell, J. Davis, R.A. DeHaven, E. Gray, R. Johnson, R.E. Lomax, B.J. McCloud, J.A. McGill, C.L. Morris, J. Novak, B. Rusnak, G. Tubb, J.M. Applegate, T.D. Averett, J. Beck, B.G. Ritchie, E. Haebel, D. Kiehlmann, U. Klein, M. Peiniger, P. Schafer, H. Vogel, H. Ward, and C. Fred Moore, Bull. Amer. Phys. Soc. **37**, 1278 (1992).
44. **"Pion Scattering to an Isoscalar Electric Dipole State in ^{12}C,"** C. Kormanyos, R.J. Peterson, J. Applegate, B.G. Ritchie, C.L. Morris, J. McGill, and D. S. Oakley, Bull. Amer. Phys. Soc. **37**, 1304 (1992).
45. **"Inelastic Pion Scattering on ^{10}B at 65 MeV,"** B.G. Ofenloch, R.A. Giannelli, B.G. Ritchie, J.M. O'Donnell, C.L. Morris, J.N. Knudson, C. Kormanyos, A. Saunders, J.Z. Williams, R.A. Lindgren, and B.L. Clausen, Bull. Amer. Phys. Soc. **38**, 1817 (1993).
46. **"T_π and A Dependence of the (π^+,2p) Total Cross Sections below 135 MeV,"** R.A. Giannelli, J.M. Applegate, E. Beck, J. Beck, B.G. Ritchie, A.O. Vanderpool, M.K. Jones, R.D. Ransome, M. Yadav, D.L. Watson, K.O. Oganesjan, E.A. Pasyuk, A.I. Reshetin, F.F. Guber, C.L. Morris, and M. Rawool-Sullivan, Bull. Amer. Phys. Soc. **38**, 1817 (1993).
47. **"Measurement of ^{12}C(e,e'pp) Cross Sections at MAMI,"** M. Yadav and the Virtual Photon Collaboration A1 at MAMI, Bull. Amer. Phys. Soc. **38**, 1820 (1993).
48. **"η Photo-Production on the Proton and Neutron to 1.2 GeV,"** M. Rigney, M. Breuer, P. Hoffman-Rothe, G. Anton, J. Arends, W. Beulertz, A. Bock, M. Gemander, K. Helbing, J. Hey, G. Noldeke, B. Zucht, G. Berrier-Ronsin, J.P. Didelez, E. Hourani, G. Rappenecker, L. Rosier, M. Bruns, G. Edel, G. Galler, M. Schumacher, F. Smend, B. Ritchie, G. Blanpied, C. Djalali, M. Mayers, B. Preedom, S. Whisnant, and B. Saghai, Bull. Amer. Phys. Soc. **38**, 1860 (1993).
49. **"Pion Absorption below 135 MeV,"** R.A. Giannelli, J.M. Applegate, E. Beck, J. Beck, B.G. Ritchie, A.O. Vanderpool, M.K. Jones, R.D. Ransome, M. Yadav, D.L. Watson, K.O. Oganesjan, E. A. Pasyuk, C.L. Morris, M. Rawool-Sullivan, A.I. Reshetin, F.F. Guber, Bull. Amer. Phys. Soc. **39**, 1145 (1994).
50. **"Inclusive Pion-Deuteron Scattering at Low Energies,"** S.K. Beckman, R.A. Giannelli, J.M. Applegate, E. Beck, J. Beck, B.G. Ritchie, A.O. Vanderpool, M.K. Jones, R.D. Ransome, M. Yadav, D.L. Watson, K.O. Oganesjan, E.A. Pasyuk, C.L. Morris, M. Rawool-Sullivan, A.I. Reshetin, F.F. Guber, Bull. Amer. Phys. Soc. **39**, 1145 (1994).
51. **"Distorted Wave Analyses of ^{10}B(π^+, π^+) at 65 MeV,"** B.G. Ofenloch, R.A. Giannelli, B.G. Ritchie, J.M. O'Donnell, C.L. Morris, J.N. Knudson, C.M. Kormanyos, A. Saunders, J.Z. Williams, R.A. Lindgren, B.L. Clausen, Bull. Amer. Phys. Soc. **39**, 1145 (1994).
52. **"Response of the PIBETA CsI Calorimeter Array to 10-70 MeV $e^\pm$ and Tagged Photons,"** E. Frlež, J.E. Koglin, R.C. Minehart, D. Počanić, S. Ritt, P.L. Slocum, C. Brőnnimann, T. Flugel, B. Krause, D. Renker, D.W. Lawrence, B.G. Ritchie, Bull. Amer. Phys. Soc. **42**, 1662 (1997).
53. **"Angular Resolution of the PIBETA Calorimeter and Its Acceptance for π and μ Radiative Decays,"** D. Počanić T. Flugel, C. Brőnnimann, B. Krause, D. Renker, E. Frlež, J.E. Koglin, R.C. Minehart, S. Ritt, P.L. Slocum, D.W. Lawrence, B.G. Ritchie, Bull. Amer. Phys. Soc. **42**, 994 (1997).
54. **"An Energy Clustering Algorithm for the PIBETA Calorimeter,"** P.L. Slocum, E. Frlež, J.E. Koglin, R.C. Minehart, D. Počanić, S. Ritt, C. Brőnnimann, T. Flugel, B. Krause, D. Renker, D.W. Lawrence, B.G. Ritchie, Bull. Amer. Phys. Soc. **42**, 994 (1997).
55. **"The Palo Verde Neutrino Oscillation Experiment,"** Dillon Tracy, D. Lawrence, B. Ritchie, F. Boehm, J. Hanson, H. Henrikson, D. Michael, V.M. Novikov, A. Piepke, P. Vogel, S. Pittalwala, R. Wilferd, S. Young, G. Gratta, L. Miller, Y-F. Wang, J.

Busenitz, J. Kornis, A. Vital, J. Wolf, Bull. Amer. Phys. Soc. **43**, (1998).

56. **"Initial Results of Meson Electroproduction Experiments at CLAS,"** Steven A. Dytman, CLAS Collaboration, Bull. Amer. Phys. Soc. **43**, 1547 (1998).
57. **"Phi-meson Electroproduction at CEBAF (JLab),"** Konstantin Loukachine, Elton Smith, CLAS Collaboration, Bull. Amer. Phys. Soc. **43**, 1566 (1998).
58. **"A New Measurement of $(e,e'p)\eta$ at CLAS,"** Richard A. Thompson, CLAS Collaboration, Bull. Amer. Phys. Soc. **43**, 1593 (1998).
59. **"Electroproduction of Λ(1115) and Λ(1520) via the Reactions $e+ p \rightarrow e + k^+ + (p+ k^-)$ and $e+ p \rightarrow e + k^+ + (p+ \pi^-)$,"** S. Barrow, S. McAleer, CLAS Collaboration, Bull. Amer. Phys. Soc. **43**, 1594 (1998).
60. **"Status of the Palo Verde Reactor Neutrino Oscillation Experiment,"** Andreas Piepke, Palo Verde Collaboration, Bull. Amer. Phys. Soc. **43**, 1563 (1998).
61. **"The Kaon Angular Distributions for Λ and Σ^0 Electroproduction at CLAS,"** Robert Feuerbach, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 731 (1999).
62. **"Single π^0 Electroproduction with CLAS,"** Kungseon Joo, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 999 (1999).
63. **"Single π^+ Electroproduction Experiments Using the CLAS at Jefferson Lab,"** Hovanes Egiyan, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 999 (1999).
64. **"Electroproduction of ω(783) Mesons Using CLAS at Jefferson Lab,"** A. Coleman, H. Funsten, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 999 (1999).
65. **"Kinematic Dependence of the Σ^0/Λ Ratio in Kaon Electroproduction,"** Gabriel Niculescu, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 999 (1999).
66. **"Photon-Induced Reactions on Hydrogen Using the CLAS Spectrometer and Photon Tagger at Jefferson Lab,"** B.G. Ritchie, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 1000 (1999).
67. **"Initial Studies of the Reaction $\gamma p \rightarrow p\pi^+\pi^-$at CLAS Using Tagged Photons on Hydrogen,"** Michael Klusman, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 1000 (1999).
68. **"Study of the Chiral Axial Anomaly in the $\gamma p \rightarrow \pi^+\pi^0 n$Reaction at Low t Using CLAS and the Photon Tagger,"** Burin Asavapibhop, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 1000 (1999).
69. **"Initial Results of Kaon Photoproduction on Hydrogen at CLAS,"** John McNabb, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 1000 (1999).
70. **"A Study of the Radiative Decays of the Lower-Lying Excited-State Hyperons Using CLAS,"** Simon Taylor (Rice University), CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 1001 (1999).
71. **"Photofission of Heavy Nuclei at Intermediate Energies,"** C. Cetina, B.L. Berman, W.J. Briscoe, G. Feldman, L.Y. Murphy, J.C. Sanabria, H.L. Crannell, A. Longhi, D.I. Sober, S.P. Barrow, G.YA. Kezerashvili, V. Nedere, Jefferson Lab Photon Tagger Collaboration, Bull. Amer. Phys. Soc. **44**, 1001 (1999).
72. **"Commissioning of the PIBETA Detector at PSI,"** E. Frlež, PIBETA Collaboration, Bull. Amer. Phys. Soc. **44**, 1409 (1999).
73. **"First results obtained with the PIBETA Detector,"** D. Pocanic, PIBETA Collaboration, Bull. Amer. Phys. Soc. **44**, 1409 (1999).
74. **"Particle Identification with the CEBAF Large Acceptance Spectrometer (CLAS),"** Elouadrhiri Latifa, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 1410 (1999).
75. **"First Measurements Using a Polarized Target in CLAS,"** Renee Fatemi, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 1410 (1999).
76. **"The polarized target for electron scattering experiments at TJNAF Hall B,"** Raffaella De Vita, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 1410 (1999).
77. **"Initial Results from the Palo Verde Neutrino Oscillation Experiment,"** Lester Miller, Palo Verde Collaboration, Bull. Amer. Phys. Soc. **44**, 1531 (1999).
78. **"Inclusive and Exclusive Measurements of Polarized Structure Functions using CLAS,"** Tony Forest, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 16 (1999).
79. **"The *N** Program with CLAS,"** James A. Mueller, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 29 (1999).
80. **"Two Pion Electroproduction with the CLAS Detector at Jefferson Laboratory,"** Marco Ripani, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 29 (1999).
81. **"Photoproduction of η and η' Mesons on the Proton,"** Michael Dugger, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 29 (1999).
82. **"η Electroproduction in the S_{11}(1535) Resonance Region,"** Kui Young Kim, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 29 (1999).
83. **"Electro- and Photoproduction of ω Mesons with the CLAS Detector,"** Franz Klein, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 30 (1999).
84. **"Initial Results of Kaon Photoproduction at CLAS,"** John McNabb, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 30 (1999).

85. **" Preliminary Results for Λ and Σ^0 Electroproduction at CLAS,"** Robert Feuerbach, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 30 (1999).
86. **"The Q^2Dependence of the Λ(1520) Density Matrix,"** Steve Barrow, CLAS Collaboration, Bull. Amer. Phys. Soc. **44**, 30 (1999).
87. **"Multiproton final states in positive pion absorption below the $\Delta(1232)$ resonance,"** B.G. Ritchie, R.A. Giannelli, J. M. Applegate, E. Beck, J. Beck, R.D. Ransome, M.K. Jones, M. Yadav, C.L. Morris, M. Rahwool-Sullivan, D.L. Watson, K.O. Oganesjan, E.A. Pasyuk, F.F. Guber, A.I. Reshetin, Bull. Amer. Phys. Soc. **44**, 44 (1999).
88. **"Study of rare pion decays with the PIBETA detector,"** D. Pocanic, PIBETA Collaboration, Bull. Amer. Phys. Soc. **44**, 66 (1999).
89. **"Preliminary Results of Λ(1116) Recoil Polarization in Electroproduction,"** Simeon McAleer, CLAS Collaboration, Bull. Amer. Phys. Soc. **45**, (2000).
90. **"A preliminary measurement of the decay $\Sigma(1385) \rightarrow \gamma\Lambda$,"** Simon Taylor, CLAS Collaboration, Bull. Amer. Phys. Soc. **45**, (2000).
91. **"Photoproduction of Ξ Hyperons,"** John W. Price, CLAS Collaboration, Bull. Amer. Phys. Soc. **45**, (2000).
92. **"Measurement of the $\gamma p \rightarrow p\pi^0\pi^0$Reaction,"** Sasha Philips, CLAS Collaboration, Bull. Amer. Phys. Soc. **45**, (2000).
93. **"Single π^+ Electroproduction Experiments Using the CLAS at Jefferson Lab,"** Hovanes Egiyan, CLAS Collaboration, Bull. Amer. Phys. Soc. **45**, (2000).
94. **"Electroproduction of the φ(1020) Vector Meson at 4 GeV,"** Konstantin Loukachine, Elton Smith, CLAS Collaboration, Bull. Amer. Phys. Soc. **45**, (2000).
95. **"Study of the Axial Anomaly in the $\gamma p \rightarrow \pi^+\pi^0 n$ Reaction at Low tUsing CLAS and the Photon Tagger,"** Burin Asavapibhop, CLAS Collaboration, Bull. Amer. Phys. Soc. **45**, (2000).
96. **"A Precise Measurement of the Pion Beta Decay Rate,"** Dinko Pocanic, PIBETA Collaboration, Bull. Amer. Phys. Soc. **45**, (2000).
97. **"Study of Rare Pion and Muon Decays with the PIBETA Detector,"** E. Frlež, PIBETA Collaboration, Bull. Amer. Phys. Soc. **45**, (2000).
98. **"Photoproduction of Σ^+,"** B. Carnahan and the CLAS Collaboration, Bull. Amer. Phys. Soc. **46**, No. 2, 118 (2001).
99. **"Photoproduction of Hyperon Resonances,"** H. Juengst and the CLAS Collaboration, Bull. Amer. Phys. Soc. 46, No. 2, 118 (2001).
100. **"First Results on Deep Virtual Compton Scattering at 4 GeV to 5 GeV with CLAS at Jefferson Lab,"** S. Stepanyan and the CLAS Collaboration, Bull. Amer. Phys. Soc. **46**, No. 2, 118 (2001).
101. **"The Physics with Linearly Polarized Photons in Hall B of Jefferson Lab,"** P. Cole and the CLAS Collaboration, Bull. Amer. Phys. Soc. **46**, No. 7, 144 (2001).
102. **"Detailed Study of the Radiative Pion Decay,"** Emil Frlez and the PIBETA Collaboration, Bull. Amer. Phys. Soc. **46**, No. 7, 24 (2001).
103. **"Strangeonium Photo-Production at CLAS,"** L. Guo and the CLAS Collaboration, Bull. Amer. Phys. Soc. **46**, No. 7, 61 (2001).
104. **"Study of the Axial Anomaly in the $\gamma p \rightarrow \pi^+\pi^0 p$ Reaction,"** D. Lawrence and the CLAS Collaboration, Bull. Amer. Phys. Soc. **46**, No. 7, 90 (2001).
105. **"Precision Measurement of $\Gamma(\pi^0 \rightarrow \gamma\gamma)$ via the Primakov Effect,"** D. Lawrence and the PRIMEX Collaboration, Bull. Amer. Phys. Soc. **46**, No. 7, 82 (2001).
106. **"Beam Profile Tomography in the PIBETA Experiment,"** Weidong Li and the PIBETA Collaboration, Bull. Amer. Phys. Soc. **46**, No. 7, 24 (2001).
107. **"New results on the pion beta decay rate,"** Dinko Pocanic and the PIBETA Collaboration, Bull. Amer. Phys. Soc. **46**, No. 7, 24 (2001).
108. **"An Instrumented Collimator for Enhancing the Degree of Linear Polarization for the g8 Run in Hall B of JLab,"** P.L. Cole and the CLAS Collaboration, Bull. Amer. Phys. Soc. **47**, No. 2, 77 (2002).
109. **"Eta Electroproduction at CLAS,"** S.A. Dytman and the CLAS Collaboration, Bull. Amer. Phys. Soc. **47**, No. 2, 52 (2002).
110. **"Single π^+Electroproduction Experiments at CLAS,"** H. Egiyan and the CLAS Collaboration, Bull. Amer. Phys. Soc. **47**, No. 2, 51 (2002).
111. **"Analysis of the Single Pion Electroproduction Data from CLAS,"** H. Egiyan and the CLAS Collaboration, Bull. Amer. Phys. Soc. **47**, No. 2, 94 (2002).
112. **"Development of a Precision Hybrid Electromagnetic Calorimeter at JLab,"** L. Gan and the PrimEx Collaboration, Bull. Amer. Phys. Soc. **47**, No. 2, 77 (2002).
113. **"Elementary Λ and Σ^0 Photoproduction Cross Sections and Induced Polarizations with CLAS at Jefferson Lab,"** J. McNabb and the CLAS Collaboration, Bull. Amer. Phys. Soc. **47**, No. 2, 51 (2002).
114. **"Two Charged Pion Photoproduction at CLAS,"** M. Bellis and the CLAS Collaboration, Bull. Amer. Phys. Soc. **47**, No. 6, 34 (2002).

115. **"Photoproduction of Mesons Decaying to $K^-K^+\pi^+$ at CLAS,"** L. Guo and the CLAS Collaboration, Bull. Amer. Phys. Soc. **47**, No. 6, 33 (2002).
116. **"Calibration of the UTEP/ORSAY Instrumented Collimator Using the g8a Data Set,"** R. Mammei and the CLAS Collaboration, Bull. Amer. Phys. Soc. **47**, No. 6, 56 (2002).
117. **"Meson Spectroscopy in Photoproduction at CLAS,"** M. Nozar and the CLAS Collaboration, Bull. Amer. Phys. Soc. **47**, No. 6, 33 (2002).
118. **"Lifetime of the Neutral Pion by the Primakoff Effect,"** J. Perry and the PrimEx Collaboration, Bull. Amer. Phys. Soc. **47**, No. 6, 51 (2002).
119. **"Recent Results from the PIBETA Experiment,"** D. Pocanic and the PiBeta Collaboration, Bull. Amer. Phys. Soc. **47**, No. 6, 88 (2002).
120. **"Deuteron Two-Body Photodisintegration in the Quark-Hadron Picture,"** F. Ronchetti and the CLAS Collaboration, Bull. Amer. Phys. Soc. **47**, No. 6, 25 (2002).
121. **"Helicity Asymmetry of the γp Cross Section for Photon Energies Between 2.5 and 5.3 GeV,"** L. Todor and the CLAS Collaboration, Bull. Amer. Phys. Soc. **47**, No. 6, 25 (2002).
122. **"A New High Precision Measurement of Radiative Pion and Muon Decays,"** Emil Frlez and the PIBETA Collaboration, Bull. Amer. Phys. Soc. **48**, No. 2, 41 (2003).
123. **"A New Measurement of the Pion Beta Decay Rate,"** Weidong Li and the PIBETA Collaboration, Bull. Amer. Phys. Soc. **48**, No. 2, 41 (2003).
124. **"The PIBETA Detector Waveform Digitizing System,"** Brent VanDevender and the PIBETA Collaboration, Bull. Amer. Phys. Soc. **48**, No. 2, 124 (2003).
125. **"CLAS Measurement of $\sigma_{LT'}$ in the Resonance Region,"** K. Joo and the CLAS Collaboration, Bull. Amer. Phys. Soc. **48**, No. 2, 138 (2003).
126. **"Photoproduction of Two Charged Pions from Hydrogen with Circularly Polarized Photons,"** S. Strauch and the CLAS Collaboration, Bull. Amer. Phys. Soc. **48**, No. 2, 139 (2003).
127. **"Photoproduction of η' Mesons on the Proton,"** M. Dugger and the CLAS Collaboration, Bull. Amer. Phys. Soc. **48**, No. 2, 139 (2003).
128. **"Photoproduction of the Σ^+,"** B. Carnahan and the CLAS Collaboration, Bull. Amer. Phys. Soc. **48**, No. 2, 183 (2003).
129. **"Helicity Asymmetries in Double Charged Pion Photoproduction from Hydrogen with Circularly Polarized Photons,"** S. Strauch and the CLAS Collaboration, Bull. Amer. Phys. Soc. **49**, No. 2, 135 (2004).
130. **"Search for Resonance Contributions in Electro- and Photoproduction of the ω at CLAS,"** F. Klein and the CLAS Collaboration, Bull. Amer. Phys. Soc. **49**, No. 2, 136 (2004).
131. **"Search for Exotic Pentaquark Θ^+Baryon State in the $\gamma d \rightarrow \Lambda\Theta^+$Reaction,"** M. Mirazita and the CLAS Collaboration, Bull. Amer. Phys. Soc. **49**, No. 2, 136 (2004).
132. **"Coherent Pion Photoproduction on Deuterium,"** Y. Ilieva and the CLAS Collaboration, Bull. Amer. Phys. Soc. **49**, No. 2, 165 (2004).
133. **"Pentaquark Search with Quasi-Free Photoproduction in Deuterium,"** N. Baltzel and the CLAS Collaboration, Bull. Amer. Phys. Soc. **49**, No. 6, 80 (2004).
134. **"Search for Pentaquark States in High Statistic Experiment on Proton Target at CLAS,"** M. Ungaro and the CLAS Collaboration, Bull. Amer. Phys. Soc. **49**, No. 6, 81 (2004).
135. **"Measurement of C_x, C_z and $d\sigma/d\Omega$ for $K^+\Lambda$ and $K^+\Sigma$ Photoproduction,"** R. Schumacher, R. Bradford and the CLAS Collaboration, Bull. Amer. Phys. Soc. **50**, No. 2, 104 (2005).
136. **"Photodisintegration of a Proton Pair in ^{3}He,"** S. Strauch and the CLAS Collaboration, Bull. Amer. Phys. Soc. **50**, No. 2, 121 (2005).
137. **"Photodisintegration of ^{4}He (γ, tp) into t+p,"** N. Benmouna and the CLAS Collaboration, Bull. Amer. Phys. Soc. **50**, No. 2, 122(2005).
138. **"Coherent Pion Photoproduction on Deuterium at Momentum Transfers $|t|$ up to 2.2 GeV^2,"** Y. Ilieva and the CLAS Collaboration, Bull. Amer. Phys. Soc. **50**, No. 2, 122 (2004).
139. **"Θ^+ Search with Quasi-Free Photoproduction in Deuterium,"** N. Baltzel, D. Tedeschi and the CLAS Collaboration, Bull. Amer. Phys. Soc. **50**, No. 2, 189 (2005).
140. **"Search for Θ^+ in $\gamma\ d \rightarrow\ K^+\ K^-\ p$ (n) reaction,"** T. Mibe, K. Hicks, D. Carman, S. Stepanyan and the CLAS Collaboration, Bull. Amer. Phys. Soc. **50**, No. 2, 189(2005).
141. **"Λ Photoproduction on the Neutron,"** P. Nadel-Turonski and the CLAS Collaboration, Bull. Amer. Phys. Soc. **50**, No. 6, 74 (2005).
142. **"Θ^+ Search with $\gamma\ n \rightarrow\ p\ K_s{}^0\ K^-$ at Jefferson Lab,"** N. Balzel, D. Tedechi and the CLAS Collaboration, Bull. Amer. Phys. Soc. **50**, No. 6, 89 (2005).
143. **"Ξ spectroscopy in photoproduction on a proton target at Lefferson Lab,"** L. Guo and the CLAS Collaboration, Bull. Amer. Phys. Soc. **50**, No. 6, 123 (2005).
144. **"Coherent Vector Meson Photoproduction off the Deuteron,"** A. Gonenc, B. Laue, L. Kramer and the CLAS Collaboration, Bull. Amer. Phys. Soc. **50**, No. 6, 125 (2005).

145. **"Search for Medium Effects on Light Vector Mesons,"** R. Naseripour, C. Djalali, C. Tor, M. Wood, D. Weygand and the CLAS Collaboration, Bull. Amer. Phys. Soc. **50**, No. 6, 125 (2005).
146. **"Coherent φ meson photoproduction on the deuteron,"** T. Mibe, D. Tedeschi, and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 2, 31 (2006).
147. **"Searching for $\varphi(1860)^{--}$ pentaquark state in photoinduced reactions using the CLAS detector,"** J. Langheinrich, H. Egiyan, and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 2, 31 (2006).
148. **"Search for the Θ^+ pentaquark with photoproduction off deuterium at CLAS,"** K. Hicks, and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 2, 32 (2006).
149. **"K^{*0} photoproduction off the proton at CLAS,"** I. Hleiqawi, K. Hicks, and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 2, 32 (2006).
150. **"First observation of the $f_1(1285)/\eta(1295)$ meson in photoproduction,"** R. Dickson and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 27 (2006).
151. **"K^* vector meson photoproduction on a proton target at Jefferson Lab,"** L. Guo and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 27 (2006).
152. **"$\Sigma^-(1385)$ photoproduction on a proton target at Jefferson Lab,"** L. Guo and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 27 (2006).
153. **"photoproduction of the $\varphi(1020)$ meson near threshold,"** D. Tedeschi and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 27 (2006).
154. **"Measurement of the $\pi^+\pi^-$ photoproduction in double-polarization experiments using CLAS,"** C. Hanretty and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 28 (2006).
155. **"Search for new forms of hadronic matter in photoproduction,"** L. Blaszczyk and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 28 (2006).
156. **"The search for the $\varphi(1860)^{--}$pentaquark with CLAS,"** M. Holtrop, H. Egiyan, J. Langheinrich and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 28 (2006).
157. **"Θ^+ search in CLAS with the $\gamma d \to pK_sK^-(p)$,"** N. Baltzell, D. Tedeschi, and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 28 (2006).
158. **"PWA of $\rho\omega$ in photoproduction using CLAS,"** M. Williams and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 29 (2006).
159. **"A coupled partial wave analysis of $p\eta$ and $p\eta'$ in photoproduction using CLAS,"** Z. Krahn and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 29 (2006).
160. **"A PWA of $p\pi^+\pi^-$ in photoproduction using CLAS,"** M. Bellis and the CLAS Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 29 (2006).
161. **"Measurement of the Compton scattering cross section during PrimEx experiment at Jefferson Lab,"** P. Ambrozewicz and the PrimEx Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 78 (2006).
162. **"Precision measurement of the pair production cross section in the Jefferson Lab PrimEx experiment,"** A. Teymurazyan and the PrimEx Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 79 (2006).
163. **"π^0 meson radiative width results on ^{12}C from the PrimEx Collaboration at Jefferson Lab,"** E. Clinton and the PrimEx Collaboration, Bull. Amer. Phys. Soc. **51**, No. 6, 79 (2006).
164. **"Cross sections for $\gamma p \to p\eta$ and $\gamma p \to p\eta'$ using data from CLAS at Jefferson Lab,"** Mike Williams and the CLAS Collaboration, Bull. Amer. Phys. Soc. **53**, No. 12, 38 (2008).
165. **"Results of PrimEx experiment,"** Pawel Ambrozewicz and the PrimEx Collaboration, Bull. Amer. Phys. Soc. **53**, No. 12, 84 (2008).
166. **"Cross section measurement of the $\gamma n \to \pi^- p$ process from deuterium,"** Wei Chen and the CLAS Collaboration, Bull. Amer. Phys. Soc. **53**, No. 12, 103 (2008).
167. **"π^+ photoproduction on the proton from 0.675 to 2.875 GeV,"** Barry Ritchie and the CLAS Collaboration, Bull. Amer. Phys. Soc. **53**, No. 12, 124 (2008).
168. **"Photon beam asymmetries for π^0 and π^+ photoproduction from the proton,"** Michael Dugger and the CLAS Collaboration, Bull. Amer. Phys. Soc. **53**, No. 12, 124 (2008).
169. **"Beam asymmetries in η photoproduction from the proton,"** Patrick Collins and the CLAS Collaboration, Bull. Amer. Phys. Soc. **53**, No. 12, 124 (2008).
170. **"Σ^+ photoproduction on the proton,"** Gavik Gavalian, M. Amarian, and the CLAS Collaboration, Bull. Amer. Phys. Soc. **53**, No. 12, 125 (2008).
171. **"Photoproduction of $\Lambda(1520)$ and interference effect in particle production,"** Chandra Nepali, Moskov Amarian, Gavik Gavalian, M. Amarian, and the CLAS Collaboration, Bull. Amer. Phys. Soc. **53**, No. 12, 125 (2008).
172. **"Differential cross sections for $\gamma p \to p\pi^+\pi-$ using CLAS,"** Matthew Bellis and the CLAS Collaboration, Bull. Amer. Phys. Soc. **53**, No. 12, 125 (2008).
173. **"A triplet polarimeter for use in the Jefferson Lab GlueX experiment ,"** Brianna Thorpe, M. Dugger, and B. G. Ritchie , Bull. Amer. Phys. Soc. **60**, No. 4, BAPS.2015.APR.T1.14 (2015).

7.9 Grants, awards and contracts

1. **"Experimental Nuclear Physics with Pions,"** B.G. Ritchie, Principal Investigator, ASU Faculty Grant-In-Aid, January 1, 1985-December 31, 1985, $3,000.
2. **"Experimental Nuclear Physics with Intermediate Energy Probes,"** B.G. Ritchie, Principal Investigator, J.R. Comfort, Co-Principal Investigator, National Science Foundation Grant PHY-8418848 to Arizona State University, March 1, 1985-August 31, 1986, $48,000 (individual PI credit not apportioned).
3. **"Research in Experimental Medium Energy Physics,"** J.R. Comfort, Principal Investigator, B.G. Ritchie, Co-Principal Investigator, National Science Foundation Grant PHY-8520513 to Arizona State University, March 1, 1986-February 28, 1989, $407,667 (individual PI credit not apportioned).
4. **"A Computer System for the Experimental Medium Energy Program at ASU,"** B.G. Ritchie, Principal Investigator, J.R. Comfort, Co-Principal Investigator, National Science Foundation Grant PHY8617121 to Arizona State University, March 1, 1985-August 31, 1986, $43,500 (individual PI credit not apportioned).
5. **"Fundamental Interactions in the Nuclear Medium,"** J.R. Comfort, Principal Investigator, B.G. Ritchie, Co-Principal Investigator, National Science Foundation Grant PHY-8520513 to Arizona State University, March 1, 1989-August 30, 1991, $641,164 (individual PI credit not apportioned).
6. **"Nuclear Physics Mentorship,"** B.G. Ritchie, Principal Investigator, Coalition to Increase Minority Doctorates, August 15, 1991-December 31, 1991, $250.
7. **"Physics REU Program at Arizona State University,"** B.G. Ritchie, Principal Investigator, National Science Foundation Grant DMR-9200055 to Arizona State University, March 1, 1992-September 30, 1995, $165,000.
8. **"Intermediate Energy Physics at Arizona State University,"** B.G. Ritchie, Principal Investigator, National Science Foundation Grant PHY-9122560 to Arizona State University, May 1, 1992-October 31, 1995, $261,000.
9. **"Graduate Mentorship in Nuclear Physics,"** B.G. Ritchie, Principal Investigator, Coalition to Increase Minority Degrees project F92GLA004, August 15, 1992-December 31, 1992, $500.
10. **"Photonuclear Physics at CEBAF,"** B.G. Ritchie, Principal Investigator, Continuous Electron Beam Accelerator Facility contract, $12,320.
11. **"Meson Physics at Arizona State University,"** B.G. Ritchie, Principal Investigator, National Science Foundation Grant PHY-9503918 to Arizona State University, May 1, 1995-April 30, 1996, $252,000.
12. **"Physics REU Program at Arizona State University,"** B.G. Ritchie, Principal Investigator, Robert Culbertson, Co-PI, National Science Foundation Grant DMR-9531053 to Arizona State University, January 1, 1996-December 31, 1997, $88,000.
13. **"ASU Participation in Palo Verde Neutrino Oscillation Experiment,"** B.G. Ritchie, Principal Investigator, ASU internal funds (DoPA, CLAS, OVPRSI) of $250,000.
14. **"Meson Physics at Arizona State University,"** B.G. Ritchie, Principal Investigator, National Science Foundation Grant PHY-9870259 to Arizona State University, June 15, 1998-November 30, 2001, $275,000.
15. **"Bridge Faculty Agreement with Thomas Jefferson National Accelerator Facility,"** B.G. Ritchie, Principal Investigator, Thomas Jefferson National Accelerator Facility contract, $90,299.
16. **"Meson Physics at Arizona State University,"** B.G. Ritchie, Principal Investigator, National Science Foundation Grant PHY-0098785 to Arizona State University, August 1, 2001-July 31, 2004, $345,001.
17. **"Meson Physics at Arizona State University,"** B.G. Ritchie, Principal Investigator, National Science Foundation Grant PHY-0354820 to Arizona State University, August 15, 2004-July 31, 2007, $323,000.
18. **"Photonuclear Physics at Jefferson Lab,"** B.G. Ritchie, Principal Investigator, Thomas Jefferson National Accelerator Facility contract to Arizona State University, June 16, 2004-August 30, 2004, $14,344.
19. **"Photonuclear Physics at Jefferson Lab,"** B.G. Ritchie, Principal Investigator, Thomas Jefferson National Accelerator Facility contract to Arizona State University, June 16, 2005-August 15, 2006, $15,065.
20. **"Facing the Challenges of Transhumanism: Religion, Science, and Technology,"** H. Tirosh-Samuelson, Principal Investigator, B. G. Ritchie, Co-Principal Investigator (with others), Metanexus Institute grant to Arizona State University, August 16, 2006-August 15, 2010, $310,000 (credited to BGR: $17,500).
21. **"Photonuclear Physics at Jefferson Lab,"** B.G. Ritchie, Principal Investigator, Thomas Jefferson National Accelerator Facility contract to Arizona State University, June 16, 2006-August 15, 2007, $15,722.
22. **"Photonuclear Physics at Jefferson Lab,"** B.G. Ritchie, Principal Investigator, Thomas Jefferson National Accelerator Facility contract to Arizona State University, June 16, 2007-December 31, 2008, $18,572.
23. **"Meson Photoproduction at Jefferson Lab,"** B.G. Ritchie, Principal Investigator, Thomas Jefferson National Accelerator Facility contract to Arizona State University, January 1, 2009-February 4, 2010, $105,665.
24. **"Meson Physics at Arizona State University,"** B.G. Ritchie, Principal Investigator, M. Dugger and

E. Pasyuk, Co-Principal Investigators, National Science Foundation Grant PHY-0653630 to Arizona State University, August 15, 2007-July 31, 2010, $480,000 (credited to BGR: $240,000).

25. **"Meson Physics at Arizona State University,"** B.G. Ritchie, Principal Investigator, M. Dugger, Co-Principal Investigators, National Science Foundation Grant PHY-0969201 to Arizona State University, September 1, 2010-August 31, 2013, $510,000 (credited to BGR: $255,000).
26. **"Meson Physics at Arizona State University,"** B.G. Ritchie, Principal Investigator, M. Dugger, Co-Principal Investigators, National Science Foundation Grant PHY-1306737 to Arizona State University, September 1, 2013-July 31, 2018, $490,000 (credited to BGR: $250,000).