

KYUNGSEON JOO
University of Connecticut
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Education

Massachusetts Institute of Technology, Cambridge, MA
Ph.D., Physics, June 1997

University of Utah, Salt Lake City, UT
M.S., Electrical and Computer Engineering

Seoul National University, Seoul, South Korea
B.S., Physics

Professional Positions

Full Professor, 2011 – present
University of Connecticut, Department of Physics, Storrs, CT

Visiting Professor, Summer, 2019
Universität Gießen, Gießen, Germany

Fulbright Scholar and Visiting Professor, 2015 – 2016
University of Paris-Sud, IPN-Orsay, Orsay, France

Program Manager, 2013 – 2015
Department of Energy (DOE), Office of Science, Washington, DC

Program Director of Nuclear Physics, 2010 – 2012
National Science Foundation (NSF), Arlington, VA

Associate Professor of Physics, 2007 – 2011
University of Connecticut, Storrs, CT

Assistant Professor of Physics, 2002 – 2007
University of Connecticut, Storrs, CT

Postdoctoral Fellow, 2000 – 2002
Jefferson Lab, Newport News, VA

Postdoctoral Associate, 1997 – 2000
University of Virginia, Charlottesville, VA

Honors/Synergetic Activities

Chair, The CLAS Collaboration, 2019 – present.

President, Association of Korean Physicists in America (AKPA), 2019 – present.

Fulbright Scholar, 2015-2016.

DOE Office of Science Appreciation Award, 2015.

Program Manager, Department of Energy (DOE), Office of Science, Washington, DC, 2013 – 2015

Program Director of Nuclear Physics, National Science Foundation (NSF), Arlington, VA, 2010 - 2012

Current Postocs supervised (2 postdocs)

A. Kim, S. Diehl.

Current Ph.D. Students supervised (6 Ph.D. students)

R. Capobianco, T. O’Connell, V. Klimenco, R. Santos, K. Tazgin, K. Wei.

Current Undergraduates supervised (2 undergraduates)

M. Riberdy, P. Simmerling.

Former Ph.D. Students

B. Clary (Ph.D., 2020, Postdoc at Lawrence Livermore National Lab, Livermore, CA).

F. Cao (Ph.D., 2019, Data Scientist, MORSE Corp., Cambridge, MA)

D. Riser (Ph.D., 2019, Data Scientist, US-Department of Defense, Washington DC).

N. Harrison (PhD, 2015, Assistant Professor at the U. of North Georgia, Oakwood, GA).

T. Mineeva (PhD, 2013, Research Scientist at U. Santa Maria, Valparaíso, Chile).

E. Seder (PhD, 2013, Researcher at Ericsson Research, Pisa, Italy).

W. Gohn (PhD, 2013, Sr. Staff Scientist at Siemens, Chicago, IL).

I. Shin (PhD, 2012, Staff Scientist at Institute of Basic Science in South Korea).

N. Markov (PhD, 2012, Postdoc at Jefferson Lab, Newport News, VA).

B. Zhao (PhD, 2008, Research Scientist at Nanometrics, Austin, TX).

Former Postdocs

M. Ungaro (Staff Scientist at Jefferson Lab, Newport News, VA).

E. Isupov (Staff Scientist at Moscow State University, Moscow, Russia).

N. Markov (Postdoc at Jefferson Lab, Newport News, VA).

N. Sato (Staff Scientist, Jefferson Lab, Newport News, VA).

Currently Active Extramural Grants (8 Grants)

1. DOE Office of Science’s Medium Energy Nuclear Physics Program, “Medium Energy Nuclear Physics Experiment in Hall B at Jefferson Lab,” – **\$1.41M**, 04/15/2019 - 04/14/2022, Kyungseon Joo (Sole PI).

2. DOE Office of Science’s Quantum Information Science Program, “Workshop on Nuclear Physics and Quantum Information Science,” – **\$24,000**, 09/01/2019 – 08/31/2021, Kyungseon Joo (PI), Robin Cote (Co-PI).

3. National Science Foundation (NSF) Campus Cyberinfrastructure (CC) Program, “Shared Computing Infrastructure for Large-scale Science Problems,” – **\$400,000**, 08/01/2019 – 07/31/2021, Richard Jones (PI), Kyungseon Joo (Co-PI), C. Battersby (Co-PI), V. Cormier (Co-PI), J. Yan (Co-PI).

4. National Science Foundation (NSF) IRES Program, “Studying Nucleon Structure in Orsay, France,” - **\$248,000**, 06/01/2017 – 05/30/2021, Peter Schweitzer (PI), Kyungseon Joo (Co-PI), Gail Dodge (Co-PI).

5. DOE/Brookhaven National Lab Electron Ion Collider (EIC) Detector R&D Program, “EIC Background Studies and the Impact on the IR and Detector Design,” – **\$300,000**, 01/01/2018 – 12/31/2021, Latifa Elouadrhiri (PI), Charles Hyde (Co-PI), Kyungseon Joo (Co-PI).

6. DOE/Jefferson Lab, "Studies of the Nucleon Structure," – **\$63,000**, 11/01/2019 – 10/31/2021, Peter Schweitzer (PI), Kyungseon Joo (Co-PI).
7. DOE Office of Science's Medium Energy Nuclear Physics Program, 'U.S.-Japan Hadronic Physics Exchange Program for Studies of Hadron Structure and QCD," – **\$231,000**, 9/15/2020 – 9/14/2023, Kyungseon Joo (Sole PI).
8. DOE Office of Science's Quantum Information Science Program, "A Pathfinder for Nuclear Physics Quantum Simulation," – **\$600,000**, 10/01/2020 – 9/30/2022, Ian Cloët (PI), Mark Saffman (Co-PI), Kyungseon Joo (Co-PI), and Robin Cote (Co-PI).

Jefferson Lab PAC Approved Experiments As a Co-Spokesperson

A. 12 GeV Experiments

1. JLAB-E12-06-112: "Probing the Proton's Quark Dynamics in Semi-Inclusive Pion Production at 12 GeV," K. Joo (co-spokesperson).
2. JLab-C12-11-111, "Transverse spin effects in SIDIS at 11 GeV with a transversely polarized target using the CLAS12 Detector," K. Joo (co-spokesperson).
3. JLab-E12-09-008, "Studies of the Boer-Mulders Asymmetry in Kaon Electroproduction with Hydrogen and Deuterium Targets," K. Joo (co-spokesperson).
4. JLAB-E12-06-117: "Quark Propagation and Hadron Formation in π^0 and η channels," K. Joo (co-spokesperson).
5. JLAB-E12-09-003: "Nucleon Resonance Studies with CLAS12," K. Joo (co-spokesperson).
6. JLAB-E12-06-108: "Hard Exclusive Electroproduction of π^0 and η with CLAS12," K. Joo (co-spokesperson).
7. JLAB-E12-06-117A, "Di-hadron measurements in electron-nucleus scattering with CLAS12," – K. Joo (co-spokesperson).

B. 6 GeV Experiments

1. JLAB-PR-05-114: "Deeply Virtual Compton Scattering at 6 GeV with polarized target and polarized beam using the CLAS detector," K. Joo (co-spokesperson).
2. JLAB-PR-04-116: "Beyond Born Approximation: A Precise Comparison of Positron-Proton and Electron-Proton Elastic Scattering in CLAS," K. Joo (co-spokesperson).
3. JLAB-PR-01-103: "Single Pion Production in the Resonance Region at Low Q^2 ," K. Joo (co-spokesperson).
4. JLAB-PR-00-112: "Exclusive Kaon Production in Hall B at 6 GeV," K. Joo (co-spokesperson).
5. JLAB-PR-99-006: "Polarization Observables in $H(e, e'K^+)\Lambda$," K. Joo (co-spokesperson).

Refereed Journal Publications

1. S. Diehl *et al.* (CLAS Collaboration), "Extraction of Beam Asymmetries $A_{LU}^{\sin\varphi}$ from the Hard π^+ Channel off the Unpolarized Hydrogen Target in a Wide Range of Kinematics," Phys. Rev. Lett. 125, 182001 (2020).
2. A. Schmidt *et al.* (CLAS Collaboration), "Probing the Core of the Strong Nuclear Interaction", Nature 578, 540 (2020).
3. N. Zachariou *et al.* (CLAS Collaboration), "Beam-Target Helicity Asymmetry E in $K^+\Sigma^+$ Photoproduction on the Neutron," Phys. Lett. B 808 (2020).
4. N. Markov *et al.* (CLAS Collaboration), "Exclusive π^0p Electroproduction off Protons in the Resonance Region at Photon Virtualities $0.4 < Q^2 < 1 \text{ GeV}^2$," Phys. Rev. C 101, 015208 (2020).
5. M. Duer *et al.* (CLAS Collaboration), "Measurement of Nuclear Transparency Ratios for Protons and Neutrons," arXiv:1811.01823, accepted for publication in Phys. Rev. Lett. (2019).
6. M. Hattawy *et al.* (CLAS Collaboration), "Exploring the Structure of the Bound Proton with Deeply Virtual Compton Scattering," Phys. Rev. Lett. 123, 032502 (2019).
7. M. Duer *et al.* (CLAS Collaboration), "Direct Observation of Proton-Neutron Short-Range Correlation Dominance in Heavy Nuclei," Phys. Rev. Lett. 122, 172502 (2019).
8. P. Roy *et al.* (CLAS Collaboration), "First Measurements of the Double-Polarization Observables F, P, and H in ω Photoproduction off Transversely-Polarized Protons in the N^* Resonance Region," Phys. Rev. Lett. 122, 162301 (2019).
9. Schmookler *et al.* (CLAS Collaboration), "Modified Structure of Protons and Neutrons in 2 Correlated Pairs," Nature 566, 354 (2019).
10. Zhao *et al.* (CLAS Collaboration), "Measurement of the Beam Spin Asymmetry of $ep \rightarrow e'p'\eta$ in the Deep-Inelastic Regime with CLAS," Phys. Lett. B. 789, 426 (2019).
11. Golovatch *et al.* (CLAS Collaboration), "First Results on Nucleon Resonance Photocouplings from $\gamma^* p \rightarrow \pi^+\pi^-p$ Cross Sections," Phys. Lett. B 788, 371 (2019).
12. J. Goetz *et al.* (CLAS Collaboration), "Study of Ξ^* Photoproduction from Threshold to $W=3.3 \text{ GeV}$," Phys. Rev. 98, 062201(R) (2018).
13. D.H. Ho *et al.* (CLAS Collaboration), "Beam-Target Helicity Asymmetry E in $K^0\Lambda$ and $K^0\Sigma^0$ Photoproduction on the Neutron," Phys. Rev. C 98, 045205 (2018).
14. N. Saylor *et al.* (CLAS Collaboration), "Measurement of Unpolarized and Polarized Cross Sections for Deeply Virtual Compton on the Proton at Jefferson Laboratory with CLAS," Phys. Rev. C 98, 045203 (2018).
15. S. Lombardo *et al.* (CLAS Collaboration), "Photoproduction of K^+K^- Meson Pairs on the Proton," Phys. Rev. D 98, 052009 (2018).
16. Cohen *et al.* (CLAS Collaboration), "The Center of Mass Motion of Short-Range Correlated Nucleon Pairs Studies via the $A(e,e'pp)$ Reaction," Phys. Rev. Lett. 121, 095201 (2018).
17. Fedotov *et al.* (CLAS Collaboration), "Measurements of $\gamma^* p \rightarrow p' \pi^+\pi^-$ Cross Section with the CLAS Detector for $0.4 \text{ GeV}^2 < Q^2 < 1.0 \text{ GeV}^2$ and $1.3 \text{ GeV} < W < 1.825 \text{ GeV}$," Phys. Rev. C 98, 025203 (2018).
18. J. Bono *et al.* (CLAS Collaboration), "First Measurement of Ξ^- Polarization in Photoproduction," Phys. Lett. B 783, 280 (2018).

19. M. Kunkel *et al.* (CLAS Collaboration), "Exclusive Photoproduction of π^0 up to Large Values of Mandelstam Variables s, t , and u with CLAS," Phys. Rev. C 98, 015207 (2018).
20. S. Jawalkar *et al.* (CLAS Collaboration), "Semi-Inclusive π^0 Target and Beam-Target Asymmetries from 6 GeV Electron Scattering with CLAS," Phys. Lett. B 782, 662 (2018).
21. T. Chetry *et al.* (CLAS Collaboration), "Differential Cross Section for $\gamma d \rightarrow \omega d$ Using CLAS at Jefferson Lab," Phys. Lett. B 782, 646 (2018).
22. M. Duer *et al.* (CLAS Collaboration), "Probing High Momentum Protons and Neutrons in Asymmetric Nuclei," Nature 560, 617 (2018).
23. P. Roy *et al.* (CLAS Collaboration), "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," Phys. Rev. C 97, 055202 (2018).
24. K. Park *et al.* (CLAS Collaboration), "Hard Exclusive Pion Electroproduction at Backward," Phys. Lett. B 780, 340-345 (2018).
25. S. Chandvar *et al.* (CLAS Collaboration), "Double K_S^0 Photoproduction off the Proton at CLAS," Phys. Rev. C 97, 025203 (2018).
26. K. P. Adhikari *et al.* (CLAS Collaboration), "Measurement of the Q^2 Dependence of the Deuteron Spin Structure Function g_1 and its Moments at $0.02 < Q^2 < 0.7 \text{ GeV}^2$ with CLAS," Phys. Rev. Lett. 120, 062501 (2018).
27. Z. Akbar *et al.* (CLAS Collaboration), "Measurement of the Helicity Difference E in $\omega \rightarrow \pi^+ \pi^- \pi^0$ Photoproduction," Phys. Rev. C 96, 065209 (2017).
28. R.G. Fersch *et al.* (CLAS Collaboration), "Determination of the Proton Spin Structure Functions for $0.05 < Q^2 < 5 \text{ GeV}^2$ Using CLAS," Phys. Rev. C 96, 065208 (2017).
29. N. Compton *et al.* (CLAS Collaboration), "Measurement of the Differential and Total Cross Sections of the $\gamma d \rightarrow K^0 \Lambda$ Reaction within the Resonance Region," Phys. Rev. C 96, 065201 (2017).
30. M. Hattawy *et al.* (CLAS Collaboration), "First Exclusive Measurement of Deeply Virtual Compton Scattering off ^4He : Toward the 3D Tomography of Nuclei," Phys. Rev. Lett. 119, 202004 (2017).
31. P.T. Mattione *et al.* (CLAS Collaboration), "Differential Cross Section Measurements for $\gamma n \rightarrow \pi^- p$ Above the First Nucleon Resonance Region," Phys. Rev. C 96, 035204 (2017).
32. E.L. Isupov *et al.* (CLAS Collaboration), "Measurements of $ep \rightarrow e' \pi^+ \pi^- p$ Cross Sections with CLAS at $1.40 \text{ GeV} < W < 2.0 \text{ GeV}$ and $2.0 \text{ GeV}^2 < Q^2 < 5.0 \text{ GeV}^2$," Phys. Rev. C 96, 025209 (2017).
33. P. Collins *et al.* (CLAS Collaboration), "Photon Beam Asymmetry Σ in the Reaction $\gamma p \rightarrow p \omega$ for $E_\gamma = 1.152$ to 1.876 GeV ," Phys. Lett. B 773, 112 (2017).
34. Ho *et al.* (CLAS Collaboration), "Beam-Target E Asymmetry for $\gamma n \rightarrow \pi^- p$ in the N^* Resonance Region," Phys. Rev. Lett. 118, 242002 (2017).
35. P. Collins *et al.* (CLAS Collaboration), "Photon Beam Asymmetry Σ for η and η' Photoproduction from the Proton," Phys. Lett. B 771, 213 (2017).
36. A.V. Anisovich *et al.* (CLAS Collaboration), "Differential Cross Sections and Polarization Observables from CLAS K^* Photoproduction and the Search for New N^* States," Phys. Lett. B 771, 142 (2017).

37. Rimal *et al.* (*CLAS Collaboration*), "Measurement of Two-Photon Exchange Effect by Comparing Elastic e^{\pm} -p Cross Sections," *Phys. Rev. C* 95, 065201 (2017).
38. P. Bosted *et al.* (*CLAS Collaboration*), "Target and Beam-Target Spin Asymmetries in Exclusive π^0 Electroproduction for $Q^2 > 1 \text{ GeV}^2$ $ep \rightarrow e'\pi^0p$," *Phys. Rev. C* 95, 035207 (2017).
39. P. Bosted *et al.* (*CLAS Collaboration*), "Target and Beam-Target Spin Asymmetries in Exclusive π^+ Electroproduction for $Q^2 > 1 \text{ GeV}^2$ $ep \rightarrow e'\pi^+n$," *Phys. Rev. C* 95, 035206 (2017).
40. Bedlinskiy *et al.* (*CLAS Collaboration*), "Exclusive η Electroproduction at $W > 2 \text{ GeV}$ with CLAS and Transversity GPDs," *Phys. Rev. C* 95, 035202 (2017).
41. M. Mayer *et al.* (*CLAS Collaboration*), "Beam-Target Double Spin Asymmetry in Quasi-Elastic Electron Scattering off the Deuteron with CLAS," *Phys. Rev. C* 95, 024005 (2017).
42. A. Kim *et al.* (*CLAS Collaboration*), "Target and Double Spin Asymmetries of Deeply Virtual π^0 Production with a Longitudinally Polarized Proton Target and CLAS," *Phys. Lett. B* 768, 168 (2017).
43. P. Bosted *et al.* (*CLAS Collaboration*), "Target and Beam-Target Spin Asymmetries in Exclusive π^+ and π^- Electroproduction with 1.6 to 5.7 GeV Electrons," *Phys. Rev. C* 94, 055201 (2016).
44. X. Zheng *et al.* (*CLAS Collaboration*), "Measurement of Target and Double-Spin Asymmetries for the $ep \rightarrow e\pi^+(n)$ Reaction in the Nucleon Resonance Region at Low Q^2 ," *Phys. Rev. C* 94, 045206 (2016).
45. R. Dickson *et al.* (*CLAS Collaboration*), "Photoproduction of the f_1 Meson," *Phys. Rev. C* 93, 065202 (2016).
46. C.A. Paterson *et al.* (*CLAS Collaboration*), "Photoproduction of Λ and Σ^0 Hyperons Using Linearly Polarized Photons," *Phys. Rev. C* 93, 065201 (2016).
47. A. Senderovich *et al.* (*CLAS Collaboration*), "First Measurements of the Helicity Asymmetry E in η Photoproduction on the Proton," *Phys. Lett. B* 755, 64 (2016).
48. H.S. Jo *et al.* (*CLAS Collaboration*), "Cross Sections for the Exclusive Photon Electroproduction on the Proton and Generalized Parton Distributions," *Phys. Rev. Lett.* 115, 212003 (2015).
49. N. Guler *et al.* (*CLAS Collaboration*), "Precise Determination of the Deuteron Spin Structure at Low to Moderate Q^2 with CLAS and Extraction of the Neutron Contribution," *Phys. Rev. C* 92, 055201 (2015).
50. M.E. McCracken *et al.* (*CLAS Collaboration*), "A Search for Baryon- and Lepton-Number Violating Decays of Λ Hyperons Using the CLAS Detector at Jefferson Laboratory," *Phys. Rev. D* 92, 072002 (2015).
51. S. Strauch *et al.* (*CLAS Collaboration*), "First Measurement of the Polarization Observable E in the $p(\gamma,\pi^+)n$ Reaction up to 2.25 GeV," *Phys. Lett. B* 750, 53 (2015).
52. N. Zachariou *et al.* (*CLAS Collaboration*), "Determination of the Beam-Spin Asymmetry of Deuteron Photodisintegration in the Energy Region $E_\gamma = 1.1 - 2.3 \text{ GeV}$," *Phys. Rev. C* 91, 055202 (2015).
53. K. Park *et al.* (*CLAS Collaboration*), "Measurements of $ep \rightarrow e' \pi^+ n$ at $1.6 < W < 2.0 \text{ GeV}$ and Extraction of Nucleon Resonance Electrocouplings at CLAS," *Phys. Rev. C* 91, 045203 (2015).
54. S. Pisano *et al.* (*CLAS Collaboration*), "Single and Double Spin Asymmetries for Deeply Virtual Compton Scattering Measured with CLAS and a Longitudinally Polarized Proton Target," *Phys. Rev. D* 91, 052014 (2015).
55. Adikaram *et al.* (*CLAS Collaboration*), "Towards a Resolution of the Proton Form Factor Problem: New Electron and Positron Scattering Data," *Phys. Rev. Lett.* 114, 062003 (2015).

56. Seder *et al.* (CLAS Collaboration), "Longitudinal Target-Spin Asymmetries for Deeply Virtual Compton Scattering," Phys. Rev. Lett. 114, 032001 (2015).
57. O. Hen *et al.* (CLAS Collaboration), "Momentum Sharing in Imbalanced Fermi Systems," Science 346, 614 (2014)
58. M.D. Mestayer *et al.* (CLAS Collaboration), "Flavor Dependence of q-q Creation Observed in the Exclusive Limit," Phys. Rev. Lett. 113, 152004 (2014).
59. M. Gabrielyan *et al.* (CLAS Collaboration), "Induced Polarization of $\Lambda(1116)$ in Kaon Electroproduction," Phys. Rev. C 90, 035202 (2014).
60. Y. Prok *et al.* (CLAS Collaboration), "Precision Measurements of g_1 of the Proton and the Deuteron with 6 GeV Electrons," Phys. Rev. C 90, 025212 (2014).
61. Bedlinskiy *et al.* (CLAS Collaboration), "Exclusive π^0 Electroproduction at $W > 2$ GeV with CLAS," Phys. Rev. C 90, 025205 (2014).
62. B. Dey *et al.* (CLAS Collaboration), "Data Analysis Techniques, Differential Cross Sections, and Spin Density Matrix Elements for the Reaction $\gamma p \rightarrow \phi p$," Phys. Rev. C 89, 055208 (2014).
63. Seraydaryan *et al.* (CLAS Collaboration), " ϕ Meson Photoproduction on Hydrogen in the Neutral Decay Mode," Phys. Rev. C 89, 055206 (2014).
64. S. Tkachenko *et al.* (CLAS Collaboration), "Measurement of the Free Neutron Structure Function Using Spectator Tagging in Inelastic $d(e,e'p_s)X$ Scattering with CLAS," Phys. Rev. C 89, 045206 (2014).
65. W. Gohn *et al.* (CLAS Collaboration), "Beam-spin Asymmetries from Semi-inclusive Pion Electroproduction," Phys. Rev. D 89, 072011 (2014).
66. K. Moriya *et al.* (CLAS Collaboration), "Differential Photoproduction Cross Sections for the $\Sigma^0(1385)$, $\Lambda(1405)$, and $\Lambda(1520)$," Phys. Rev. C 88, 045201 (2013).
67. K. Moriya *et al.* (CLAS Collaboration), "Measurement of the Spin and Parity of the $\Lambda(1405)$," Phys. Rev. Lett. 112, 082004 (2014).
68. M. Dugger *et al.* (CLAS Collaboration), "Beam Asymmetry Σ for π^+ and π^0 Photoproduction on the Proton for Photon Energies from 1.102 to 1.862 GeV," Phys. Rev. C 88, 065203 (2013).
69. H.Y. Lu *et al.* (CLAS Collaboration), "First Observation of the Line Shape of the $\Lambda(1405)$ in Electroproduction," Phys. Rev. C 88, 045202 (2013).
70. K. Moriya *et al.* (CLAS Collaboration), "Measurement of the Sigma pi Photoproduction Line Shapes Near the $\Lambda(1405)$," Phys. Rev. C. 87, 035206 (2013).
71. M. Moteabbed *et al.* (CLAS Collaboration), "Demonstration of a Novel Technique to Measure Two-Photon Exchange Effects in Elastic e^+p Scattering," Phys. Rev. C 88, 025210 (2013).
72. W. Tang *et al.* (CLAS Collaboration), "Cross sections for $\gamma^*p \rightarrow K^{*+}\Lambda$ and $\gamma^*p \rightarrow K^{*+}\Sigma^+$ reactions," Phys. Rev. C 87, 065204 (2013).
73. Pomerantz *et al.* (CLAS Collaboration), "Hard Two Body Photo-integration of ^3He ," Phys. Rev. Lett. 110, 242301 (2013).
74. C. Nepali *et al.* (CLAS Collaboration), "Transverse Polarization of $\Sigma^+(1189)$ in Photoproduction on a Hydrogen Target in CLAS," Phys. Rev. C 87, 045206 (2013).

75. D.S. Carman *et al.* (CLAS Collaboration), "Separated Structure Functions for Exclusive $K^+\Lambda$ and $K^+\Sigma^0$ Electroproduction at 5.5 GeV with CLAS," *Phys. Rev. C* 87, 025204 (2013).
76. O. Hen *et al.* (CLAS Collaboration), "Measurement of transparency ratios for protons from short-range correlated pairs," *Phys. Lett. B* 722, 242301 (2013).
77. K. Park *et al.* (CLAS Collaboration), "Deep exclusive Ξ^+ electroproduction off the proton at CLAS," *Eur. Phys. J. A* 49 16 (2013).
78. P. Khetarpal *et al.* (CLAS Collaboration), "Near Threshold Neutral Pion Electroproduction at High Momentum Transfers and Generalized Form Factors," *Phys. Rev. C* 87, 045205 (2013).
79. Bedlinksiy *et al.* (CLAS Collaboration), "Measurement of Exclusive π^0 Electroproduction Structure Functions and their Relationship to Transversity GPDs," *Phys. Rev. Lett.* 109, 112001 (2012).
80. V. Mokeev *et al.* (CLAS Collaboration), "A comparison of forward and backward pp pair knockout in $^3\text{He}(e,e'pp)n$," *Phys. Rev. C* 86, 035203 (2012).
81. Baghdasaryan *et al.* (CLAS Collaboration), "Measurement of the Sigma pi Photoproduction Line Shapes Near the $\Lambda(1405)$," *Phys. Rev. C* 85, 064318 (2012).
82. D. Keller *et al.* (CLAS Collaboration), "Branching ratio of the electromagnetic decay of $\Sigma^+(1385)$," *Phys. Rev. D* 85, 059903 (2012).
83. Park *et al.* (CLAS Collaboration), "Measurement of the generalized form factors near threshold via $\Sigma^*p \rightarrow \pi\pi^+$ at high Q^2 ," *Phys. Rev. C* 85, 035208 (2012).
84. Eginyan *et al.* (CLAS Collaboration), "Upper limits for the photoproduction cross section for the $\phi^-(1860)$ pentaquark state off the deuteron," *Phys. Rev. C* 85, 015205 (2012).
85. R. ASaturyan *et al.*, "Semi-inclusive charged-pion electroproduction off protons and deuterons: cross sections, ratios, and access to the quark-parton model at low energies," *Phys. Rev. C* 85, 015202 (2012).
86. S.H. Hwang *et al.*, "Spin-Density Matrix Elements for $\gamma p \rightarrow K^*\Sigma^+$ at $E_\gamma=1.85\text{-}3.0$ GeV with Evidence for the $\kappa(800)$ Meson Exchange," *Phys. Rev. Lett.* 108, 092001 (2012).
87. D. Keller *et al.* (CLAS Collaboration), "Electromagnetic decay of $\Xi^0(1385)$ to $\Lambda\gamma$," *Phys. Rev. D* 83, 072004 (2011).
88. A. Daniel *et al.* (CLAS Collaboration), "Measurements of the nuclear multiplicity ratio for K_s0 hadronization at CLAS," *Phys. Lett. B* 706, 26-31 (2011).
89. M. Aghasyan *et al.* (CLAS Collaboration), "Precise measurements of beam spin asymmetries in semi-inclusive π^0 production," *Phys. Lett. B* 704, 397-402 (2011).
90. X. Qian *et al.* (CLAS Collaboration), "Near-threshold photoproduction of Ξ mesons from deuterium," *Phys. Lett. B* 696, 338 (2011).
91. Avakian *et al.* (CLAS Collaboration), "Measurement of Single- and Double-Spin Asymmetries in Deep Inelastic Pion Electroproduction with a Longitudinally Polarized Target," *Phys. Rev. Lett.* 105, 262002 (2010).
92. H. Baghdasaryan *et al.* (CLAS Collaboration), "Tensor correlations Measured in $^3\text{H}(e,e'pp)n$," *Phys. Rev. Lett.* 105, 222501 (2010).
93. S. Anefalos *et al.* (CLAS Collaboration), "Differential cross section of $\gamma n \rightarrow K^+\Sigma^-$ on bound neutrons with incident photons from 1.1 to 3.6 GeV," *Phys. Lett. B* 688, 289 (2010).

94. M. Wood *et al.* (CLAS Collaboration), "Absorption of the ω and ϕ Mesons in Nuclei," Phys. Rev. Lett. 105, 112301 (2010).
95. B. Dey *et al.* (CLAS Collaboration), "Differential Cross Sections and Recoil Polarizations for the Reaction $\gamma p \rightarrow K^+ \Sigma^0$," Phys. Rev. C 82, 025202 (2010).
96. M. Osikpenko *et al.* (CLAS Collaboration), "Measurement of the Nucleon Structure Function F_2 in the Nuclear Medium and Evaluation of its Moments," Nucl. Phys. A 845, 1-32 (2010).
97. Y. Ilieva *et al.* (CLAS Collaboration), "Observation of a Backward Peak in the $\gamma d \rightarrow \pi^0 d$ Cross Section Near the η Threshold," Eur. Phys. J. A 43, 261 (2010).
98. W. Chen *et al.* (CLAS Collaboration), "A Measurement of the Differential Cross Section for the Reaction $\gamma n \rightarrow \pi^- p$ from Deuterium," Phys. Rev. Lett. 103, 012301 (2009).
99. M. Williams *et al.* (CLAS Collaboration), "Partial Wave Analysis of the Reaction $\gamma p \rightarrow p \omega$ and the Search for Nucleon Resonances," Phys. Rev. C 80, 065209 (2009).
100. M. Williams *et al.* (CLAS Collaboration), "Differential Cross Sections and Spin Density Matrix Elements for $\gamma p \rightarrow p \omega$," Phys. Rev. C 80, 065208 (2009).
101. I.G. Aznauryan *et al.* (CLAS Collaboration), "Electroexcitation of Nucleon Resonances from CLAS Data on Single Pion Electroproduction," Phys. Rev. C 80, 055203 (2009).
102. M. Williams *et al.* (CLAS Collaboration), "Differential Cross Sections for the Reactions $\gamma p \rightarrow p \eta$ and $\gamma p \rightarrow p \eta'$," Phys. Rev. C 80, 045213 (2009).
103. M. Battaglieri *et al.* (CLAS Collaboration), "Photoproduction of $\pi^+ \pi^-$ Meson Pairs on the Proton," Phys. Rev. D 80, 072005 (2009).
104. G. Gavalian *et al.* (CLAS Collaboration), "Beam Spin Asymmetries in DVCS with CLAS at 4.8 GeV," Phys. Rev. C 80, 035206 (2009).
105. R. Nasseripour *et al.* (CLAS Collaboration), "Photodisintegration of ^4He into $p+t$," Phys. Rev. C 80, 044603 (2009).
106. X. Qian *et al.* (CLAS Collaboration), "The Extraction of ϕ -N Total Cross Section from $d(\gamma, pK^+K^-)n$," Phys. Lett. B 680, 417 (2009).
107. M. Osipenko *et al.* (CLAS Collaboration), "Measurement of Unpolarized Semi-Inclusive π^+ Electroproduction off the Proton," Phys. Rev. D 80, 032004 (2009).
108. M. Dugger *et al.* (CLAS Collaboration), " π^+ Photoproduction on the Proton for Photon Energies from 0.725 to 2.875 GeV," Phys. Rev. C 79, 065206 (2009).
109. D.S. Carman *et al.* (CLAS Collaboration), "Beam-Recoil Polarization Transfer in the Nucleon Resonance Region in the Exclusive $e p \rightarrow e' K^+ \Lambda$ and $e p \rightarrow e' K^+ \Sigma^0$ Reactions," Phys. Rev. C 79, 065205 (2009).
110. Lachinet *et al.* (CLAS Collaboration), "A Precise Measurement of the Neutron Magnetic Form Factor G_M^n in the Few-GeV² Region," Phys. Rev. Lett. 102, 192001 (2009).
111. M. Battaglieri *et al.* (CLAS Collaboration), "First measurement of direct $f_0(980)$ photoproduction on the proton," Phys. Rev. Lett. 102, 102002 (2009).
112. G.V. Fedotov *et al.* (CLAS Collaboration), "Electroproduction of $p \bar{\Delta}^+ \bar{\Delta}^-$ off protons at $0.2 < Q^2 < 0.6\text{-GeV}^2$ and $1.3 < W < 1.57\text{-GeV}$ with CLAS," Phys. Rev. C 79, 015204 (2009).

113. S.A. Morrow *et al.* (CLAS Collaboration), "Exclusive η^0 electroproduction on the proton at CLAS," *Eur. Phys. J A* 39, 5-31 (2009).
114. N. Nozar *et al.* (CLAS Collaboration), "Search for the photo-excitation of exotic mesons in the $\pi^+ \pi^+ \pi^-$ system," *Phys. Rev. Lett.* 102, 102001 (2009).
115. Y. Pork *et al.* (CLAS Collaboration), "Moments of the Spin Structure Functions g_1^p and g_1^d for $0.05 < Q^2 < 3.0 \text{ GeV}^2$," *Phys. Lett. B* 672, 12-16 (2009).
116. A.S. Biselli *et al.* (CLAS Collaboration), "First measurement of target and double spin asymmetries for $ep \rightarrow e p \pi^0$ in the nucleon resonance region above the $\Delta(1232)$," *Phys. Rev. C* 78, 045204 (2008).
117. I.G. Azauryan *et al.* (CLAS Collaboration), "Electroexcitation of the Roper resonance for $1.7 < Q^2 < 4.5 \text{ GeV}^2$ in $ep \rightarrow e p \pi^+$," *Phys. Rev. C* 78, 045209 (2008).
118. J.P. Santoro *et al.* (CLAS Collaboration), "Electroproduction of $\eta(1020)$ mesons at $1.4 < Q^2 < 3.8 \text{ GeV}^2$ measured with the CLAS spectrometer," *Phys. Rev. C* 78, 025210 (2008).
119. P.E. Bosted *et al.* (CLAS Collaboration), "Ratios of N15/C12 and $^4\text{He}/^{12}\text{C}$ inclusive electroproduction cross sections in the nucleon resonance region," *Phys. Rev. C* 78, 015202 (2008).
120. M.H. Wood *et al.* (CLAS Collaboration), "Light Vector Mesons in the Nuclear Medium," *Phys. Rev. C* 78, 015201 (2008).
121. R. Nasseripour *et al.* (CLAS Collaboration), "Polarized Structure Function F_2^{LT} for $p(e, e'K^+) \Lambda$ in the Nucleon Resonance Region," *Phys. Rev. C* 77, 065208 (2008).
122. H. Mkrtchyan *et al.* (CLAS Collaboration), "Transverse momentum dependence of semi-inclusive pion production," *Phys. Lett. B* 665, 20-25 (2008).
123. F.X. Girod *et al.* (CLAS Collaboration), "Deeply virtual Compton scattering beam-spin asymmetries," *Phys. Rev. Lett.* 100, 162002, 6pp (2008).
124. R. De Masi *et al.* (CLAS Collaboration), "Measurement of $ep \rightarrow e p \pi^0$ beam spin asymmetries above the resonance region," *Phys. Rev. C* 77, 042201, 5pp (2008).
125. D.G. Ireland *et al.* (CLAS Collaboration), "A Bayesian analysis of pentaquark signals from CLAS data," *Phys. Rev. Lett.* 100, 052001, 6pp (2008).
126. Park *et al.* (CLAS Collaboration), "Cross sections and beam asymmetries for $ep \rightarrow e n \pi^+$ in the nucleon resonance region for $1.7 < Q^2 < 4.5 \text{ GeV}^2$," *Phys. Rev. C* 77, 015208, 23pp (2008).
127. R. Nasseripour *et al.* (CLAS Collaboration), "Search for medium modification of the ρ meson," *Phys. Rev. Lett.* 99, 262302, 33pp (2007).
128. T. Mibe *et al.* (CLAS Collaboration), "First measurement of coherent η -meson photoproduction on deuteron at low energies," *Phys. Rev. C* 76, 052202, 6pp (2007).
129. M. Dugger *et al.* (CLAS Collaboration), " π^0 photoproduction on the proton for photon energies from 0.675 to 2.875 GeV," *Phys. Rev. C* 76, 025211, 20pp (2007).
130. Guo *et al.* (CLAS Collaboration), "Cascade production in the reactions $\gamma p \rightarrow K^+ K^+ (X)$ and $\gamma p \rightarrow K^- K^- (X)$," *Phys. Rev. C* 76, 025208, 9pp (2007).
131. H. Denizli *et al.* (CLAS Collaboration), " Q^2 dependence of the S11(1535) photocoupling and evidence for a P-wave resonance in eta electroproduction," *Phys. Rev. C* 76, 015204, 31pp (2007).

132. K.S. Egiyan *et al.* (CLAS Collaboration), "Experimental study of exclusive $D(e,e'p)n$ reaction mechanisms at high Q^2 ," Phys. Rev. Lett. 98, 262502, 6pp (2007).
133. V.D. Burkert *et al.* (CLAS Collaboration), "Isobar channels in the production of $\pi^+\pi^-$ pairs on a proton by virtual photons," Phys. At. Nucl. 70 427-440 (2007).
134. P. Ambrozewicz *et al.* (CLAS Collaboration), "Separated Structure Functions for the Exclusive Electroproduction of $K^+\Lambda$ and $K^+\Sigma^0$ Final States," Phys. Rev. C 75, 04203 26pp (2007).
135. T. Navasardyan *et al.* (CLAS Collaboration), "Onset of Quark-Hadron Duality in Pion Electroproduction," Phys. Rev. Lett. 98, 022001 5pp (2007).
136. Hleiqawi *et al.* (CLAS Collaboration), "Cross sections for the $\gamma p \rightarrow K^* \Sigma^+$ reaction at $E_\gamma = 1.7 - 3.0$ GeV," Phys. Rev. C 75, 042201 6pp (2007).
137. R.K. Bradford *et al.* (CLAS Collaboration), "First measurement of beam-recoil observables C_x and C_z in hyperon photoproduction," Phys. Rev. C 75, 035205 25pp (2007).
138. P.E. Bosted *et al.* (CLAS Collaboration), "Quark-hadron duality in spin structure functions g_1^p and g_1^d ," Phys. Rev. C 75, 035203 15pp (2007).
139. Ungaro *et al.* (CLAS Collaboration), "Measurement of $N \rightarrow \Delta(1232)$ Transition at High Momentum Transfer by π^0 Electroproduction," Phys. Rev. Lett. 97, 112003 6pp (2006).
140. K.V. Dharmawardane *et al.* (CLAS Collaboration), "Measurement of x - and Q^2 - Dependence of the Asymmetry A_1 on the Nucleon," Phys. Lett. B 641, 11-17 (2006).
141. V. Kubarovsky *et al.* (CLAS Collaboration), "Search for Θ^+ Pentaquark in the Exclusive Reaction of $\gamma p \rightarrow K^+ K^- p$," Phys. Rev. Lett. 97, 102001 6pp (2006).
142. R. De Vita *et al.* (CLAS Collaboration), "Search for Ξ^+ Pentaquark in the reactions of $\gamma p \rightarrow K^0 K^+ n$ and $\gamma p \rightarrow K^0 K^0 p$," Phys. Rev. D 74, 032001 16pp (2006).
143. S. Chen *et al.* (CLAS Collaboration), "Measurement of Deeply Virtual Compton Scattering with a Polarized-Proton Target," Phys. Rev. Lett. 97, 072002 5pp (2006).
144. S. Niccolai *et al.* (CLAS Collaboration), "Search for the Ξ^+ Pentaquark in the $\gamma d \rightarrow \Lambda n K^+$ reaction measured with CLAS," Phys. Rev. Lett. 97, 032001 6pp (2006).
145. B. McKinnon *et al.* (CLAS Collaboration), "Search for Ξ^+ Pentaquark in the Reaction $\gamma d \rightarrow p K^+ K^- n$," Phys. Rev. Lett. 96, 212001 6pp (2006).
146. Osipenko *et al.* (CLAS Collaboration), "The deuteron Structure Function F_2 with CLAS," Phys. Rev. C 73, 045205 22pp (2006).
147. O. Klimenko *et al.* (CLAS Collaboration), "Electron Scattering from High-Momentum Neutrons in Deuterium," Phys. Rev. C 73, 035212 14pp (2006).
148. R. Bradford *et al.* (CLAS Collaboration), "Differential Cross Sections for $\gamma p \rightarrow K^+ Y$ for Λ and Σ^0 Hyperons," Phys. Rev. C 73, 035202 36pp (2006).
149. H. Egiyan and K. Joo *et al.* (CLAS Collaboration), "Single Ξ^+ Electroproduction on the Proton in the First and Second Resonance Regions at $0.25 \text{ GeV}^2 < Q^2 < 0.65 \text{ GeV}^2$ Using CLAS," Phys. Rev. C 73, 025204 32pp (2006).
150. K.S. Egiyan *et al.* (CLAS Collaboration), "Measurement of 2- and 3-Nucleon Short Range Correlation Probabilities in Nuclei," Phys. Rev. Lett. 96, 082051 6pp (2006).

151. Dugger *et al.* (CLAS Collaboration), “ η' Photoproduction on the Proton for Photon Energies from 1.527 to 2.227 GeV,” Phys. Rev. Lett. 96, 062001 6pp (2006).
152. M. Battaglieri *et al.* (CLAS Collaboration), “Search for θ^+ Pentaquark in high statistics measurement of $\gamma p \rightarrow K^0 K^+ n$ at CLAS,” Phys. Rev. Lett. 96, 042001 6pp (2006).
153. S. Strauch *et al.* (CLAS Collaboration), “Beam Helicity Asymmetries in Double-Charged-Pion Photoproduction on the proton,” Phys. Rev. Lett. 95, 162003 6pp (2005).
154. K. Joo *et al.* (CLAS Collaboration), “Measurement of the Polarized Structure Function σ_{LT} for Pion Electroproduction in the Roper Resonance Region,” Phys. Rev. C 72, 058202 5pp (2005).
155. S. Taylor *et al.* (CLAS Collaboration), “Radiative decays of the $\Sigma(1385)$ and $\Lambda(1520)$ Hyperons,” Phys. Rev. C 71, 054609 14pp (2005).
156. Morand *et al.* (CLAS Collaboration), “Deeply Virtual and Exclusive Electroproduction of Omega Mesons,” European Physics Journal A 24, 445-458 (2005).
157. J. Price *et al.* (CLAS Collaboration), “Exclusive Photoproduction of the Cascade (Ξ) Hyperons,” Phys. Rev. C 71, 058201 5pp (2005).
158. I.G. Aznauryan, V.D. Burkert, H. Egiyan, K. Joo, R. Minehart and L.C. Smith, “Electroexcitation of the $P_{33}(1232)$, $P_{11}(1440)$, $D_{13}(1520)$, and $S_{11}(1535)$ at $Q^2 = 0.40$ and $Q^2 = 0.65$ (GeV/c)²,” Phys. Rev. C 71, 015201 9pp (2005).
159. C. Hadjidakis *et al.* (CLAS Collaboration), “Exclusive Ξ^0 Meson Electroproduction from Hydrogen at CLAS,” Phys. Lett. B 605, 256 9pp (2005).
160. Rossi *et al.* (CLAS Collaboration), “Onset of Asymptotic Scaling in Deuteron Photodisintegration,” Phys. Rev. Lett. 94, 012301 5pp (2005).
161. D. Protopopescu *et al.* (CLAS Collaboration), “Survey of A_{LT} Asymmetries in Semi-exclusive Electro Scattering on ^3He and ^{12}C ,” Nucl. Phys. A 748, 357 17pp (2005).
162. A.V. Stavinsky *et al.* (CLAS Collaboration), “Proton Source Size Measurements in the $eA \rightarrow e'ppX$ Reaction,” Phys. Rev. Lett. 93, 192301 6pp (2004).
163. S. Niccolai *et al.* (CLAS Collaboration), “Complete Measurement of Three-body Photodisintegration of ^3He for Photon Energies between 0.35 and 1.55 GeV,” Phys. Rev. C 70, 064003 18pp (2004).
164. K. Joo *et al.* (CLAS Collaboration), “Measurement of the polarized structure function σ_{LT} for $p(e, e'\pi^+)n$ in the $\Delta(1232)$ resonance region,” Phys. Rev. C 70, 042201 6pp (2004).
165. K.G. Fissum *et al.*, “Dynamics of the Quasi-elastic $^{16}\text{O}(e, e'p)$ Reaction at $Q^2=0.8$ (GeV/c)²,” Phys. Rev. C 70, 034606 30pp (2004).
166. J. Alcorn *et al.*, “Basic Instrumentation for Hall A at Jefferson Lab,” Nucl. Inst. and Meth. A 522, 294-346 (2004).
167. J.M. Grames *et al.*, “Unique Electron Polarimeter Analyzing Power Comparison and Precision Spin Based Energy Measurement,” Phys. Rev. ST Accel. Beams 7, 042802 18pp (2004).
168. Mirazita *et al.* (CLAS Collaboration), “Complete Angular Distribution Measurements of Two-Body Deuteron Photodisintegration between 0.5 and 3 GeV,” Phys. Rev. C 70, 014005 12pp (2004).
169. H. Avakian *et al.* (CLAS Collaboration), “Measurement of Beam Spin Asymmetries for Deep Inelastic Ξ^+ Electroproduction,” Phys. Rev. D 69, 112004 7pp (2004).

170. J.W.C. McNabb *et al.* (CLAS Collaboration), "Hyperon Photoproduction in the Nucleon Resonance Region," Phys. Rev. C 69, 042201 5pp (2004).
171. K. McCormick *et al.* (CLAS Collaboration), "Tensor Polarization of the ϕ meson Photoproduced at High t ," Phys. Rev. C 69, 032203 5pp (2004).
172. R. Niyazov *et al.* (CLAS Collaboration), "Two-Nucleon Momentum Distributions Measured in ${}^3\text{He}(e,e'pp)n$," Phys. Rev. Lett. 92, 052303 5pp (2004).
173. V. Kubarovsky *et al.* (CLAS Collaboration), "Observation of an exotic baryon with $S=+1$ in photoproduction from the proton," Phys. Rev. Lett. 92, 032001 5pp (2004).
174. S. Stepanyan *et al.* (CLAS Collaboration), "Observation of an exotic $S = +1$ baryon in exclusive photoproduction from the deuteron," Phys. Rev. Lett. 91, 252001 5pp (2003).
175. R. Fatemi *et al.* (CLAS Collaboration), "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" Phys. Rev. Lett. 91, 222002 6pp (2003).
176. K. Joo *et al.* (CLAS Collaboration), "Measurement of the polarized structure function σ_{LT} for $p(e,e'\pi^0)n$ in the $\Delta(1232)$ resonance region," Phys. Rev. C 68, 032201 5pp (2003).
177. A. Biselli *et al.* (CLAS Collaboration), "Study of $ep \rightarrow e\pi^0$ in the $\Delta(1232)$ mass region using polarization asymmetries," Phys. Rev. C 68, 035202 14pp (2003).
178. K.S. Egiyan *et al.* (CLAS Collaboration), "Observation of Nuclear Scaling in the $A(e,e')$ Reaction at $x_B > 1$," Phys. Rev. C 68, 014313 10pp (2003).
179. Osipenko *et al.* (CLAS Collaboration), "A Kinematically Complete Measurement of the Proton Structure Function F_2 in the Resonance Region and Evaluation of its Moments," Phys. Rev. D 67, 092001 18pp (2003).
180. M. Ripani *et al.* (CLAS Collaboration), "Measurement of $ep \rightarrow ep\pi^+\pi^-$ and baryon resonance analysis," Phys. Rev. Lett. 91, 022002 6pp (2003).
181. J. Yun *et al.* (CLAS Collaboration), "Measurement of Inclusive Spin Structure Functions of the Deuteron with CLAS," Phys. Rev. C 67, 055204 13pp (2003).
182. B. Mecking *et al.* (CLAS Collaboration), "The CEBAF Large Acceptance Spectrometer," Nucl. Instr. and Meth. A 503, 513-553 (2003).
183. D.S. Carman *et al.* (CLAS Collaboration), "First measurement of transferred polarization in the exclusive $ep \rightarrow e'K^+\Lambda$ reaction," Phys. Rev. Lett. 90, 131804 6pp (2003).
184. M. Battaglieri *et al.* (CLAS Collaboration), "Photoproduction of the η meson on the proton at large momentum transfer," Phys. Rev. Lett. 90, 022002 5pp (2003).
185. M. Dugger *et al.* (CLAS Collaboration), " η photoproduction on the proton for photon energies from 0.75 to 1.95 GeV ," Phys. Rev. Lett. 89, 222002 6pp (2002).
186. Akushevich, A. Afanasev, V.D. Burkert and K. Joo "QED radiative corrections in processes of exclusive pion electroproduction," Phys. Rev. D 66, 074004 13pp (2002).
187. K. Joo *et al.* (CLAS Collaboration), " Q^2 dependence of quadrupole strength in the $\gamma^*p \rightarrow \Delta(1232) \rightarrow p\pi^0$ transition," Phys. Rev. Lett. 88, 122001 5pp (2002).
188. Z.-L. Zhou *et al.*, "Performance of a compact detector package for the out-of-plane spectrometer system," Nucl. Instr. Meth. A 484, 365-380 (2002).

189. R. De Vita *et al.* (CLAS Collaboration), "First Measurement of the Double Spin Asymmetry in $ep \rightarrow e' \pi^+ n$ in the Resonance Region," *Phys. Rev. Lett.* 88, 082001 6pp (2001).
190. S. Stepanyan *et al.* (CLAS Collaboration), "Observation of exclusive DVCS in polarized electron beam asymmetry measurements," *Phys. Rev. Lett.* 87, 182002 5pp (2001).
191. S. Barrow *et al.* (CLAS Collaboration), "Electroproduction of the $\Lambda(1520)$ Hyperon," *Phys. Rev. C* 64, 044601 10pp (2001).
192. Z.-L. Zhou *et al.*, "Relativistic effects and two-body currents in ${}^2\text{H}(e,e'p)n$ using out-of-plane detection," *Phys. Rev. Lett.* 87, 172301 4pp (2001).
193. M. Battaglieri *et al.* (CLAS Collaboration), "Photoproduction of π^0 Meson on the Proton at Large Momentum Transfer" *Phys. Rev. Lett.* 87, 172002 5pp (2001).
194. Liyanage *et al.*, "Dynamics of the ${}^{16}\text{O}(e,e'p)$ Reaction at High Missing Energies," *Phys. Rev. Lett.* 86, 5670 5pp (2001).
195. K. Lukashin *et al.* (CLAS Collaboration), "Exclusive electroproduction of ϕ mesons at 4.2-GeV," *Phys. Rev. C* 63, 065205 11pp (2001).
196. R. Thompson *et al.* (CLAS Collaboration), "The $p(e,e'p)\eta$ at and above the $S_{11}(1535)$ baryon resonance," *Phys. Rev. Lett.* 86 1702 5pp (2001).
197. C. Mertz *et al.*, "Search for strength in the electroexcitation of the $\Delta(1232)$," *Phys. Rev. Lett.* 86, 2936 4pp (2001).
198. E. Anciant *et al.* (CLAS Collaboration), "Photoproduction of $\phi(1020)$ mesons on the proton at large momentum transfer," *Phys. Rev. Lett.* 85, 4682 5pp (2000).
199. S. Malov *et al.* (CLAS Collaboration), "Polarization transfer in the ${}^{16}\text{O}(e,e'p){}^{15}\text{N}$ reaction." *Phys. Rev. C* 62, 057302 5pp (2000).
200. J. Gao *et al.* (CLAS Collaboration), "Dynamical Relativistic Effects Observed in Quasielastic 1p-shell Proton Knockout from ${}^{16}\text{O}$," *Phys. Rev. Lett.* 84, 3265 5pp (2000).
201. D. Barkhuff *et al.*, "Measurement of Recoil Proton Polarizations in the Electrodisintegration of Deuterium by Polarized Electrons," *Phys. Lett. B* 470, 39 6pp (1999).
202. G. A. Warren *et al.*, "Induced Proton Polarization for π^0 Electroproduction at $Q^2 = 0.126 \text{ GeV}^2/c^2$ around the $\Delta(1232)$ Resonance," *Phys. Rev. C* 58 3722 4pp (1998).
203. M. Holtrop *et al.*, "A Measurement of the Interference Structure Function, R_{LT} , for the ${}^{12}\text{C}(e,e'p)$ Reaction in the Quasielastic Region," *Phys. Rev. C* 58, 3205 7pp (1998).
204. B. M. Milbrath *et al.*, "A Comparison of the Polarization Observables in Electron Scattering from the Proton and Deuteron," *Phys. Rev. Lett.* 80, 452 4pp (1998).
205. R. Woo *et al.*, "Measurement of the Induced Proton Polarization P_n in the ${}^{12}\text{C}(e,e'p)$ Reaction," *Phys. Rev. Lett.* 80, 456 5pp (1998).
206. T. Zwart *et al.*, "A Precise Measurement of the Beam Energy and First Moment Obtained through Electron Spin Precession," *Nucl. Instr. Meth. A* 384, 299-306 (1997).

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