

Karl J. Slifer

Department of Physics, University of New Hampshire
Demeritt Hall, 9 Library Way. Durham, NH 03824
Phone: (603) 862-2827 Email: karl.slifer@unh.edu

Professional Preparation

Temple University	B.S. in Physics.	1990 – 1995
Temple University	Ph.D. in Nuclear Physics	1997 – 2004
University of Virginia	Postdoctoral Research Assistant	2004 – 2008
	Institute of Nuclear and Particle Physics	

Appointments

2008 – 2014. Assistant Professor, Dept. of Physics, University of New Hampshire.
2014 – . Associate Professor, Dept. of Physics, University of New Hampshire.

Externally Funded Grants and Contracts

Co-Principal Investigator: DOE Epscor proposal. *Novel Physics of Dark Matter: Detection of Axion Condensate*. \$186,555.00. 01/2020 - 12/2021. PI : Vesna F. Mitrovic, Brown University. Status: *Pending*

Project Director and Principal Investigator: DOE Nuclear Physics Grant DE-FG02-88ER40410. *Electromagnetic Studies of Nucleon and Nuclear Structure*. \$1,893,000. 01/2018 - 12/2020. Co-PIs : M. Holtrop, E. Long.

Project Director and Principal Investigator: DOE Nuclear Physics Grant DE-FG02-88ER40410. *Electromagnetic Studies of Nucleon and Nuclear Structure*. \$1,403,000. 01/2015 - 12/2017. Co-PIs : M. Holtrop, P. Solvignon.

Principal Investigator: DOE Nuclear Physics Grant DE-SC0014168 *New Studies of Short-Range Correlations and their effects on Nuclei*. \$150,000. 07/2016 - 07/2017.

Co-Principal Investigator: DOE Nuclear Physics Grant DE-FG02-88ER40410. *Electromagnetic Studies of Nucleon and Nuclear Structure*. \$1,194,000. 01/2012 - 12/2014. Co-PI : M. Holtrop.

Co-Principal Investigator: DOE Nuclear Physics Grant DE-FG02-88ER40410. *Electromagnetic Studies of Nucleon and Nuclear Structure*. \$1,290,000. 01/2009 - 12/2011. Co-PIs : J. Calarco, M. Holtrop.

Principal Investigator: Jefferson Science Associates 14B778. *Graduate Student Support*. \$33,523.10. 01/2012 - 08/2012.

Principal Investigator: Jefferson Science Associates Initiatives. *Tensor Spin Observables Workshop Support*. \$2,000. 2014. Co-PIs : D. Higinbotham, C. Keith, E. Long, M. Sargsian, P. Solvignon.

Principal Investigator: Jefferson Science Associates Initiatives. *Promising Young Scientist Grant*. \$10,584, 2009-2015. Co-PIs : W. DeConnick, E. Brash, P. Solvignon.

Principal Investigator: Jefferson Science Associates Initiatives. *Spin Structure at Long Distance Meeting Support*. \$3,200. 2009. Co-PI : J.-P. Chen.

Leadership in Research

Spokesman & Contact for Jefferson Lab E08-027, *The Proton g_2 Structure Function*.

Spokesman for Jefferson Lab E06-017, *The Deuteron/Neutron Extended GDH Sum*.

Spokesman & Contact for Jefferson Lab E12-13-011, *Tensor Structure Function b_1* .

Spokesman for Jefferson Lab E12-15-005, *Tensor Asymmetry A_{zz} in $x > 1$ region*.

Post-Doctoral Research Associates Mentored

Dr. James Maxwell Projects: Installation and running of Jefferson Lab E08-027.
Polarized solid target development at UNH.

Dr. Elena Long Projects: Planning and analysis of Jefferson Lab E12-13-011.
Polarized solid target development at UNH.

Ph.D. Student Mentorship

Tobias Badman Topic : Jefferson Lab E08-027, *The Proton g_2 Structure Function*.
Ph.D. awarded in 2017.

Ryan Zielinski Topic : Jefferson Lab E08-027, *The Proton g_2 Structure Function*.
Ph.D. awarded in 2017.

Sujie Li Topic: Jefferson Lab E12-11-112 : *SRC accessed with mirror nuclei*.
Defense of thesis proposal on Nov 2, 2015. Ph.D. 2019 (expected).

Sandra Santiesteban Topic: Jefferson Lab E12-06-105. *Inclusive Scattering at $x > 1$* .
Ph.D. 2020 (expected).

David Ruth Topic : Fermilab E1039, *The Polarized Drell Yan Experiment*.
Ph.D. 2022 (expected).

Synergistic Activities

- 2019 Elected to Jefferson Lab Hall A&C Coordinating Committee.
- 2019 Elected Vice Chair of UNH Radiation Safety Committee.
- 2019 Grant reviewer for the Department of Energy Early Career Award.
- 2019 Grant reviewer for the Unites States - Israel Binational Science Foundation.
- 2019 Financial support from JLab Visitor Program to study EIC Tensor Physics.
- 2018 Reviewer, European Journal of Physics.
- 2018 Grant Reviewer, Department of Energy.
- 2018 APS GHP Dissertaion Award Selection Committee.
- 2018 APS GHP Executive Nomination Committee.
- 2018 Chair of session, ECT*. Nucleon Spin Structure at Low Q^2 .
- 2017 Nominated for APS Group on Hadronic Physics (GHP) Executive Committee.
- 2016 Grant Reviewer, Department of Energy.
- 2016 Host, Frontiers and Careers in Nuclear Physics workshop at UNH.
- 2015 Grant Reviewer, National Science Foundation and Department of Energy.
- 2014 Elected to UNH Faculty Senate as the Physics Department Representative.
- 2014 Grant Reviewer, National Science Foundation.
- 2014 Chair, Tensor Polarized Solid Target Workshop. Newport News, VA.
- 2014 Committe Member, JLab User Group Board of Directors Nomination Panel.
- 2013 Chair, CLAS analysis review panel of the JLab EG1-DVCS experiment.
- 2013 Grant reviewer for the Unites States - Israel Binational Science Foundation.
- 2013 Interviewed for *Physics Out Loud* - Jefferson Lab's YouTube video glossary.
- 2012 Convener, 7th International Workshop on Chiral Dynamics, Newport News VA.
- 2012 Grant reviewer, Department of Energy Office of Nuclear Physics.
- 2012 Chair (*Spin Structure Session*), Jefferson Lab Annual User Group Meeting.
- 2011 Panelist (User representative), *IT for the 12 GeV Era*, JLab Internal Review.
- 2010 Chair (*Polarized Fixed Targets Session*), The Polarized Drell-Yan Workshop Santa Fe, New Mexico.
- 2010 Proposal reviewer, UNH Undergraduate Research Opportunities Program.
- 2010 Elected to JLab User Group Board of Directors: Two year term.
- 2009 Chair, Jefferson Science Associates Promising Young Physicist program.
- 2009 Member of the organizing committee, and chief editor of the proceedings for the *Spin Structure at Long Distances Workshop*. March 2009. Jefferson Lab.
- 2009 Elected to the Jefferson Lab Hall A Coordinating Committee: Two year term.
- 2009 Local Organizing Committee, Fall Meeting New England Section of the APS.
- 2007 Local Organizing Committee, Jefferson Lab User Group Meeting.
- 2007 Judge for the JLab/SURA Graduate Student Poster Competition.
- 2006 Elected to JLab User Group Board of Directors : Two year term.

Honors & Awards

- 2004 Southeastern Universities Research Association Thesis Prize.
- 2004 Temple University Outstanding Research by a Graduate Student Award.
- 1995 Temple University College of Arts & Sciences Excellence in Physics Award.
- 1990 Temple University Outstanding Achievement Full Tuition Scholarship.
- 1990 National Merit Scholar Honorable Mention.
- 1990 Robert C. Byrd Honors Scholarship.

Teaching

Year	Term	Course	Student Enrollment	Student Evaluation [†]
2019	Spring	943 Quantum Mechanics I	8	4.80
2018	Fall	505 Modern Physics	32	4.13
2018	Fall	407R General Physics I Recitation	43	4.55
2018	Spring	702 Quantum Mechanics II	20	4.20
2018	Spring	407R General Physics I Recitation	45	4.60
2017	Fall	505 Modern Physics	25	4.78
2017	Spring	702 Quantum Mechanics II	9	4.75
2016	Fall	720-820 Nuclear & Particle Physics	5	5.00
2016	Fall	408 General Physics II Recitation	45	4.47
2016	Spring	720-820 Nuclear & Particle Physics	12	5.00
2016	Spring	408R General Physics II Recitation	22	4.59
2015	Spring	402 College Physics II	141	4.09
2015	Spring	402 College Physics II	110	3.82
2014	Spring	402 College Physics II	130	4.68
2014	Spring	402 College Physics II	155	4.84
2013	Spring	402 College Physics II	151	4.74
2013	Spring	402 College Physics II	116	4.79
2012	Summer	407 General Physics I	25	4.86
2012	Summer	401 College Physics I	42	4.69
2012	Spring	705-805 Experimental Physics II	15	—
2012	Spring	720-820 Nuclear Physics	10	4.50
2011	Spring	705-805 Experimental Physics II	19	4.70
2010	Fall	407 General Physics I	134	4.38
2010	Spring	705-805 Experimental Physics II	24	4.45
2009	Fall	407 General Physics I	117	4.31
2009	Spring	705-805 Experimental Physics II	16	3.67
2008	Fall	407 General Physics I Recitation	31	4.57
2008	Fall	407 General Physics I Recitation	31	4.95

[†] Overall rating on a scale from 1-5.

Graduate Student Thesis Committee Membership

Sarah Jones	Thesis advisor: M. Lessard	Ph.D. 2010.
Jinyoung Park	Thesis advisor: Li-Jen Chen	M.S. 2010.
Parikshit Junnarkar	Thesis advisor: S. Beane	Ph.D. 2013.
Camden Ertley	Thesis advisor: M. McConnell	Ph.D. 2014.
Amanda Madden	Thesis advisor: J. Ryan	Ph.D. 2015.
Stephen Abbot	Thesis advisor: K. Germaschewski	Ph.D. 2015.
Trevor Leonard	Thesis advisor: E. Mobius	Ph.D. 2016.
Maxwell Grady	Thesis advisor: K. Pohl	Ph. D. 2017.
Dan Tran	Thesis advisor: J. Connell	Ph.D. 2019.
Brad Yale	Thesis advisor: M. Holtrop	Ph.D. 2019.
Steven Anderson	Thesis advisor: B Hersman	Ph.D. 2019.
Kyle McCarty	Thesis advisor: M. Holtrop	Ph.D. 2019 (anticipated).
Leiqa Kurbany	Thesis advisor: E. Long	Ph.D. 2021 (anticipated).

Undergraduate Student Mentorship

Lily Soucy	Research Topic : Deuteron NMR lineshape analysis.
Matt Roy	Research Topic : Density measurement of cryogenic solids.
Brent Lawson	Research Topic : Exclusive production of ϕ vector mesons. Recipient of URA poster prize.
Thomas Collins	Research Topic : Tempo-doping of Butanol.
Lucas Jameson	Research Topic : Solidification of NH_3 target material.
Jay Yost	Research topic : Solidification of NH_3 target material.
Tristan Anderson	Research topic : Solid target cryogenic thermometry. Recipient of UNH Undergraduate Research Award.
Nick LaJoie	Research topic : 3D printing of DNP target cups.
Caitlyn Meditz	Research topic : LabView control of NMR instrumentation.
Makenzie O'Meara	Research topic : NMR polarimetry in solid targets.
Justin Gilman	Research topic : QMeter optimization for NMR polarimeter.
Zain Abbas	Research topic: Solid target cryogenic thermometry. Recipient of UNH Undergraduate Research Award.
Austin Atkins	Research topic: Solid target NMR polarimeter system. Preparation of irradiated target material for the E08-027 experiment.
John Donaghy	Senior thesis : <i>NMR Polarimeter for DNP Targets</i> . Recipient of a DOE SULI Internship, and an UNH UROP grant.
Trevor Bielarski	Independent study : <i>Deuteron Polarimetry for JLab EG4</i> . Also spent the summer of 2010 at JLab working on a ^3He polarimeter.
Gregory Hadcock	Geant4 simulations for the Jefferson Lab E08-027 experiment.

Invited Conference and Workshop Talks (Presenter : K. Slifer)

“Polarized Structure Functions of Spin-1 Targets”, **MENU2019: The 15th Inter-**

national Conference on Meson-Nucleon Physics and the Structure of the Nucleon, June 2 to June 7, 2019. Pittsburg, PA.

“Spin Structure at Low Q^2 ” **SPIN2018: XXIIIrd International Symposium on Spin Physics**, September 10-14, 2018. Ferrara, Italy.

“Spin Structure at Low Q^2 ” **9th International Workshop on Chiral Dynamics**. September 17-21, 2018. Durham, NC.

“Duality in Spin Structure Functions” **Quark Hadron Duality Workshop: Probing the Transition from Free to Confined Quarks**, September 23-25, 2018. James Madison University, Harrisonburg, VA.

“The g_{2p} Experiment”, **ECT*. Nucleon Spin Structure at Low Q^2 A Hyperfine View**, July 2-6, 2018. Trento Italy.

“Tensor Polarized DIS Experiments”, **Polarized Light Ion Physics with the EIC**, February 2, 2018, Gent, Belgium.

“Spin Results from Jefferson Lab”, **9th Workshop on Hadron Physics in China and Opportunities**, July 25, 2017. Nanjing China.

“New Experiments with Tensor Polarized Targets”, **ECT* The Proton Mass: At the heart of most visible matter**, April 4, 2017. Trento Italy.

“Nucleon Spin Results from the JLab Program”, **Hadronic Physics with Lepton & Hadron Beams**, September 5, 2017. Jefferson Lab, Newport News VA.

“Nucleon Spin Structure with Lepton Beams at low Q^2 ”, (Plenary Talk), **SPIN2016: XXIInd International Symposium on Spin Physics**, September 25-30, 2016. University of Illinois at Urbana-Champaign, IL.

“Spin Structure and Doubly Virtual Compton Scattering” (Invited) **CIPANP 2015: Twelfth Conference on the Intersections of Particle and Nuclear Physics**. May 19-25, 2015, Vail, CO. (Presented on my behalf by E. Long).

“Spin Measurements at Jefferson Lab Hall A”, (Invited) **International Workshop on Diffraction in High-Energy Physics**, September 10-16, 2014, Primosten (Croatia).

“Spin Structure at Large Bjorken x”, (Invited) **4th International Workshop on Nucleon Structure at Large Bjorken x**, November 17-21, 2014, Frascati, Italy.

“Nucleon Spin Structure at Low Q^2 ”, (Invited) **The Gordon Research Conference on Photonuclear Reactions**, August 10 - 15, 2014, Holderness, NH.

“New Physics Ideas from the Tensor Polarized Target Workshop”, **2014 Jefferson Lab Hall A&C Joint Meeting**, June 5, 2014. Newport News VA.

“The Deuteron Polarized Tensor Structure Function b_1 ”, **The Tensor Spin Observables Workshop**, March 10-12, 2014. Newport News VA.

“Novel Physics with Tensor Polarized Targets”, **The 2013 International Workshop on Polarized Sources, Targets & Polarimetry**, September 9 - 13, 2013, Charlottesville, VA.

“The Generalized Spin Polarizabilities of the Nucleon”, **2013 European Centre for Theoretical Studies in Nuclear Physics and Related Areas (ECT): Workshop on Compton scattering off Protons and Light Nuclei: Pinning down the Nucleon Polarizabilities**, July 29 - August 2, 2013, Trento, Italy.

“The Role of g_{2p} in Determining the Proton Radius”, **2012 European Centre for Theoretical Studies in Nuclear Physics and Related Areas (ECT): Workshop on the Proton Radius Puzzle**, October 29 - November 2, 2012, Trento, Italy.

“Preliminary Results from the g_{2p} Experiment”, **2012 Jefferson Lab User Group Meeting**, June 4-6, 2012. Jefferson Lab, Newport News, VA.

“Nucleon Spin Structure Results from Jefferson Lab”, **Electromagnetic Interactions with Nucleons and Nuclei, EINN 2011**. Oct. 31 to Nov. 4, 2011. Cyprus.

“Excited Nucleons and Nucleon Spin Structure”, (Plenary Talk), **NSTAR2011 : The 8th International Workshop on the Physics of Excited Nucleons**. May 17-20, 2011. Jefferson Lab, Newport News, VA.

“Deuteron Tensor Structure Functions”, **Workshop on High Luminosity Polarized Targets for the 12GeV Era**, June 17-18, 2010. Newport News, VA.

“Spin Structure at Long Distance”, **2010 Jefferson Lab User Group Meeting**, June 7-9, 2010. Jefferson Lab, Newport News, VA.

“Spin Structure of the Nucleon”, **Electron-Nucleus Scattering XI**, June 2010. Elba, Italy.

“Study of the GDH Sum Rule of ^3He at Jefferson Lab”, **VIth International Workshop on Chiral Dynamics**, July 6-10, 2009. Bern, Switzerland.

“Longitudinal Spin Physics at Jefferson Lab”, **2009 RHIC & AGS Annual Users’ Meeting**, June 1-5, 2009. Brookhaven National Laboratory. Upton, NY.

“Spin Response of the Proton in the Resonance Region”, **DIS09: XVIIth International Workshop on Deep-Inelastic Scattering and Related Subjects**, April 26-30, 2009. Madrid, Spain.

“The Proton g_2 Structure Function”, **Spin Structure at Long Distance Workshop**, March 12-13, 2009. Jefferson Lab, Newport News, VA.

“Spin Content of the Nucleon”, (Plenary Talk), **SPIN2008: XVIIIth International Symposium on Spin Physics**, October 6-11 2008. Charlottesville, VA.

“Recent Results from the JLab Spin Physics Program.” **New Trends in High-Energy Physics**, September 15-22, 2007. Crimea, Ukraine.

“Radiation Damage in Polarized Ammonia Solids.” **XIIth International Workshop on Polarized Sources, Targets & Polarimetry**, September 10-14, 2007. Brookhaven National Laboratory. Upton, NY.

“Nucleon Resonance Spin Structure: The RSS experiment.” **XVth International Workshop on Deep-Inelastic Scattering and Related Subjects**, April 16, 2007. Munich. (My talk was presented by Z.-E. Meziani due to a missed connecting flight).

“Recent Results from the JLab Spin Program.” **2nd Meeting of the APS Topical Group on Hadronic Physics**. October 23, 2006. Nashville Tenn.

“The Hall C Spin Program at JLab.” **Advanced Studies Institute: Symmetries and Spin**, August 2, 2005. Prague, Czechoslovakia.

“The Generalized GDH Sum on ^3He .” **3rd International Symposium on the GDH Sum Rule and the Spin Structure of the Nucleon**, June 2004. Norfolk, VA.

Invited Seminars (Presenter : K. Slifer)

“Research and Career Perspectives in Nuclear Physics”, (Invited) **Frontiers and Careers in Photonuclear Physics**, August 4-6, 2016, University of New Hampshire. Durham NH.

“Research and Career Perspectives in Nuclear Physics”, (Invited) **Frontiers and Careers in Photonuclear Physics**, August 7-9, 2014, Massachusetts Institute of Technology. Cambridge MA.

“Low Energy Spin Structure of the Nucleon”, **Johannes Gutenberg Universität, Mainz, Institute for Nuclear Physics**, Oct 7, 2013. Mainz, Germany.

“The g_{2p} Experiment”, **Jefferson Lab Graduate Student Seminar**, April 8, 2012. Newport News, VA.

“Proton Spin Structure”, **Hebrew University of Jerusalem’s Racah Institute of Physics**, Nov 7, 2011. Jerusalem, Israel.

“Spin Structure at Long Distance”, **UNH Nuclear Physics Seminar**, May 7, 2010. Durham, NH.

“Spin Structure at Long Distance” **University of Massachusetts Amherst, HEP/Nuclear Physics Seminar**, March 27, 2009. Amherst, MA.

“Spin Structure at Long Distance” **Argonne National Laboratory, Physics Division Seminar**, February 24, 2009. Argonne, Illinois.

“The g_2 Structure Function.” **Ohio University, Department of Physics and Astronomy Seminar**, February 17, 2009. Columbus, Ohio.

“Neutron(^3He) Spin Structure Functions at Low Q^2 .” **University of New Hampshire, Nuclear Physics Seminar**, February 4, 2004. Durham, New Hampshire.

“Neutron(^3He) Spin Structure Functions at Low Q^2 .” **University of Virginia, Nuclear Physics Seminar**, December 9, 2003. Charlottesville, Virginia.

“Neutron(^3He) Spin Structure Functions at Low Q^2 .” **Duke University/TUNL, Nuclear Physics Seminar**, November 18, 2003. Durham, North Carolina.

Publications in Refereed Journals

I. Albayrak *et al.* [E06-009 Collaboration], “Measurements of Non-Singlet Moments of the Nucleon Structure Functions and Comparison to Predictions from Lattice QCD for $Q^2 = 4 \text{ GeV}^2$ ” *Measurements of Nonsinglet Moments of the Nucleon Structure Functions and Comparison to Predictions from Lattice QCD for $Q^2 = 4 \text{ GeV}^2$,” Phys. Rev. Lett. **123**, no. 2, 022501 (2019) doi:10.1103/PhysRevLett.123.022501 [arXiv:1807.06061 [nucl-ex]].*

A. Liyanage *et al.*, “Proton Form Factor Ratio, $\mu_p G_E^p/G_M^p$ from Double Spin Asymmetry,” arXiv:1806.11156 [nucl-ex]. Submitted to PRL.

W. Armstrong *et al.* [SANE Collaboration], “Revealing Color Forces with Transverse Polarized Electron Scattering,” Phys. Rev. Lett. **122**, no. 2, 022002 (2019). doi:10.1103/PhysRevLett.122.022002 [arXiv:1805.08835 [nucl-ex]].

Z. Ye *et al.* [Hall A Collaboration], “Search for three-nucleon short-range correlations in light nuclei,” Phys. Rev. C **97**, no. 6, 065204 (2018) doi:10.1103/PhysRevC.97.065204 [arXiv:1712.07009 [nucl-ex]].

J. D. Maxwell *et al.*, “Design and Performance of the Spin Asymmetries of the Nucleon Experiment,” Nucl. Instrum. Meth. A **885**, 145 (2018) doi:10.1016/j.nima.2017.12.008 [arXiv:1711.09089 [physics.ins-det]].

K. P. Adhikari *et al.* [EG4 Collaboration], “Measurement of the Q^2 Dependence of the Deuteron Spin Structure Function g_1 and its Moments at Low Q^2 with CLAS,” Phys. Rev. Lett. **120**, no. 6, 062501 (2018) doi:10.1103/PhysRevLett.120.062501 [arXiv:1711.01974 [nucl-ex]].

- X. Zheng *et al.* [EG4 Collaboration], “Measurement of Target and Double-Spin Asymmetries for the $\vec{e}p \rightarrow e\pi^+(n)$ Reaction in the Nucleon Resonance Region at Low Q^2 ,” arXiv:1607.03924 [nucl-ex]. *Phys. Rev. C* **94** (2016) no.4, 045206.
- P. Zhu *et al.*, [g2p Collaboration], “Beam Position Reconstruction for the g2p Experiment in Hall A at Jefferson Lab,” *Nucl. Instrum. Meth. A* **808**, 1 (2016)
- C. Fanelli *et al.*, “Polarization Transfer in Wide-Angle Compton Scattering and Single-Pion Photoproduction from the Proton,” *Phys. Rev. Lett.* **115**, 15, 152001 (2015).
- P. Solvignon, N. Liyanage, J.P. Chen, S. Choi, K. Slifer, *et al.*, “Moments of the Neutron g_2 Structure Function at Intermediate Q^2 ,” *Phys. Rev. C* **92**, 1, 015208 (2015).
- M. Defurne *et al.* “E00-110 experiment at Jefferson Lab Hall A: Deeply virtual Compton scattering off the proton at 6 GeV,” *Phys. Rev. C* **92**, 5, 055202 (2015).
- I. Korover *et al.* “Probing the Repulsive Core of the Nucleon-Nucleon Interaction via the $4\text{He}(e,e'pN)$ Triple-Coincidence Reaction.” *Phys. Rev. Lett.* **113** 022501 (2014).
- J. Pierce, J. Maxwell, T. Badman, J. Brock, C. Carlin, D. Crabb, D. Day, N. Kvaltine, D. Meekins, J. Mulholland, J. Shields, K. Slifer, and C. Keith. “Dynamically Polarized Target for the g2p and GEp Experiments at Jefferson Lab.” *Nucl. Inst. Meth. A* **738** 54-60 (2014).
- P. Monaghan *et al.*, “Measurement of the $^{12}\text{C}(e, e'p)^{11}\text{B}$ two-body breakup reaction at high missing momentum,” *J. Phys. G* **41**, 105109 (2014) [arXiv:1301.7027 [nucl-ex]].
- S. Abrahamyan *et al.* “New Measurements of the Transverse Beam Asymmetry for Elastic Electron Scattering from Selected Nuclei,” *Phys. Rev. Lett.* **109**, 192501 (2012).
- S. Abrahamyan *et al.*, “Measurement of the Neutron Radius of ^{208}Pb Through Parity-Violation in Electron Scattering,” *Phys. Rev. Lett.* **108**, 112502 (2012).
- N. Fomin *et al.*, “New Measurements of High-momentum Nucleons and Short-Range Structures in Nuclei,” *Phys. Rev. Lett.* **108**, 092502 (2012).
- W. U. Boeglin *et al.* “Probing the High Momentum Component of the Deuteron at High Q^2 ,” *Phys. Rev. Lett.* **107**, 262501 (2011).
- G. Ron *et al.*, Low Q^2 Measurements of the Proton Form Factor Ratio. *Phys. Rev. C* **84** 055204 (2011).
- E. Fuchey *et al.*, “Exclusive Neutral Pion Electroproduction in the Deeply Virtual Regime,” *Phys. Rev. C* **83**, 025201 (2011).
- J. Glister *et al.*, “Polarization Observables in Deuteron Photodisintegration below 360 MeV,” *Phys. Lett. B* **697**, 194 (2011).

- N. Fomin *et al.*, “Scaling of the F_2 structure Function in Nuclei and Quark Distributions at $x > 1$,” *Phys. Rev. Lett.* **105**, 212502 (2010).
- K. Slifer *et al.*, “Probing Quark-Gluon Interactions with Transverse Polarized Scattering,” *Phys. Rev. Lett.* **105**, 101601 (2010).
- J. Seely *et al.*, “New measurements of the EMC effect in very light nuclei,” *Phys. Rev. Lett.* **103**, 202301 (2009).
- J.P. Chen, W. Melnitchouk and K. Slifer, editors. “Proceedings of the Spin Structure at Long Distance Workshop”. AIP Conference Proceedings, 2009.
- P. Bosted *et al.* “Search for Sub-threshold Photoproduction of J/Psi Mesons,” *Phys. Rev. C* **79**, 015209 (2009).
- R. Subedi *et al.*, “Probing Cold Dense Nuclear Matter,” *Science* **320**, 1476 (2008).
- P. Solvignon *et al.* “Quark-Hadron Duality in Neutron (He-3) Spin Structure,” *Phys. Rev. Lett.* **101**, 182502 (2008).
- K. Slifer *et al.* “He-3 Spin-Dependent Cross Sections and Sum Rules,” *Phys. Rev. Lett.* **101**, 022303 (2008).
- M. Mazouz *et al.* “Deeply virtual compton scattering off the neutron,” *Phys. Rev. Lett.* **99**, 242501 (2007).
- G. Ron *et al.* “The Proton Elastic Form Factor Ratio $\mu_p G_E^p/G_M^p$ at Low Momentum Transfer,” *Phys. Rev. Lett.* **99**, 202002 (2007).
- R. Shneor *et al.* “Investigation of proton-proton short-range correlations via the C12(e, e’pp) reaction,” *Phys. Rev. Lett.* **99**, 072501 (2007).
- X. Jiang *et al.* “Recoil-Proton Polarization in High-Energy Deuteron Photodisintegration with Circularly Polarized Photons,” *Phys. Rev. Lett.* **98**, 182302 (2007).
- A. Danagoulian *et al.*, “Compton scattering cross section on the proton at high momentum transfer,” *Phys. Rev. Lett.* **98**, 152001 (2007).
- B. Anderson *et al.*, “Extraction of the neutron magnetic form factor from quasi-elastic ${}^3\vec{H}e(\vec{e}, e')$ at $Q^2 = 0.1 - 0.6$ (GeV/c) 2 ,” *Phys. Rev. C* **75**, 034003 (2007).
- A. Acha *et al.*, “Precision Measurements of the Nucleon Strange Form Factors at $Q^2 \approx 0.1$ GeV 2 ,” *Phys. Rev. Lett.* **98**, 032301 (2007).
- F. R. Wesselmann, K. Slifer, S. Tajima *et al.* “Proton Spin Structure in the Resonance Region,” *Phys. Rev. Lett.* **98**, (2007) 132003.

- M. K. Jones *et al.* “Proton G_E/G_M from Beam-Target Asymmetry,” *Phys. Rev. C* **74**, 035201 (2006).
- K. Slifer, “Determining How Spin Arises in the Nucleon,” *On Target*, January 2006.
- C. Munoz Camacho *et al.*, “Scaling tests of the cross section for deeply virtual Compton scattering,” *Phys. Rev. Lett.* **97**, 262002 (2006).
- K. Slifer “The Hall C Spin Program at JLab.” *Czech. J. Phys.* **55** (2005) A1-432.
- K. Kramer *et al.*, “Measurement of the Q^2 -dependence of the Neutron Spin Structure Function g_2^n in the Range $0.57 \leq Q^2 \leq 1.34 \text{ GeV}^2$,” *Phys. Rev. Lett.* **95**, 142002 (2005).
- D. J. Hamilton *et al.*, “Polarization transfer in proton Compton scattering at high momentum transfer”, *Phys. Rev. Lett.* **94**, 242001 (2005).
- I.A. Qattan *et al.*, “Precision Rosenbluth measurement of the proton elastic form factors”, *Phys. Rev. Lett.* **94**, 142301 (2005).
- Z.-E. Meziani *et al.* “Higher Twist and Color Polarizabilities in the Neutron,” *Phys. Lett. B* **613**, 148 (2005).
- X. Zheng *et al.*, “Precision measurement of the neutron spin asymmetries and spin-dependent structure functions in the valence quark region”, *Phys. Rev.* **C70**, 065207 (2004).
- J. Alcorn *et al.*, “Basic Instrumentation for Hall A at Jefferson Lab”, *Nucl. Instrum. Meth.* **A522**, 294 (2004).
- X. Zheng, *et al.*, “Precision Measurement of the Neutron Spin Asymmetry A_1^n and Spin-Flavor Decomposition in the Valence Quark Region”, *Phys. Rev. Lett.* **92**, 012004 (2004).
- A. Deur *et al.*, “Experimental Determination of the Evolution of the Bjorken Integral at Low Q^2 ,” *Phys. Rev. Lett.* **93**, 212001 (2004).
- M. Amarian *et al.* “Measurement of the Generalized Forward Spin Polarizabilities of the Neutron,” *Phys. Rev. Lett.* **93**, 152301 (2004).
- M. Amarian, *et al.* “ Q^2 Evolution of the Neutron Spin Structure Moments using a ^3He Target,” *Phys. Rev. Lett.* **92**, 022301 (2004).
- W. Xu, *et al.*, “Plane-Wave Impulse Approximation Extraction of the Neutron Magnetic Form Factor from Quasielastic $^3\vec{H}e(\vec{e},e')$ at $Q^2=0.3$ to 0.6 (GeV/c)^2 ”, *Phys. Rev. C* **67**, 012201 (2003).
- M. Amarian, *et al.* “The Q^2 Evolution of the Generalized GDH Integral for the Neutron” *Phys. Rev. Lett.* **89**, 242301 (2002).

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