

Ryan Edward Mitchell

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EDUCATION

Ph.D., Physics, University of Tennessee, 2003.
Dissertation, "Photoproduction of the K^+K^- (1750)"
Dr. Thomas Handler

B.A., Physics and B.S. Mathematics, North Central College, 1997.
Senior Honors Thesis, "Evolution of the Standard Model"
Dr. Herman White, Fermilab

SPECIALIZATION

Experimental Particle and Nuclear Physics

EMPLOYMENT

Assistant Scientist, Indiana University. 2008 – present.

Research Associate, Indiana University. 2007 – 2008.
Visiting Fellow at Cornell University,
CLEO Deputy Run Manager.

Teaching Associate, Cornell University. 2007.

Postdoctoral Fellow, Indiana University. 2004 – 2007.
2006 – 2007:

Visiting Fellow at Cornell University,
Analysis of CLEO data, CLEO trigger expert.

2004 – 2006:

Analysis of Brookhaven E852 data, preparations for
the GlueX experiment to take place at Jefferson Lab, VA.

Research Assistant, University of Tennessee. 2000 – 2003.

Analysis of Fermilab E831 (FOCUS) photoproduction data,
simulations and R&D for the BTeV experiment at Fermilab.

Teaching Assistant, University of Tennessee. 1997 – 2000, 2003.

INFN Fellowship, Milan, Italy. 2002.

SLAC Summer Employment, Palo Alto, CA. 1998.

TEACHING EXPERIENCE

Teaching Associate

Spring 2007, Cornell University

Intro Heat and Electromagnetism Lab

Co-organizer of Experimental Techniques in Particle Physics Seminar

Fall 2004, Indiana University.

<http://dustbunny.physics.indiana.edu/techniques/>

Teaching Assistantships

*Fall 1997 – Spring 2000, Fall 2003, University of Tennessee.
Intro Physics Lab I and II for Biology Majors (with recitation)
Intro Physics Lab I and II for Engineers
Honors Physics Lab I and II*

**GRADUATE
MENTORING**

Brad Schaefer

*Fall 2008 – present, Indiana University.
Simulations of the GlueX Forward Calorimeter.*

**UNDER-
GRADUATE
MENTORING**

Jake Bennett

*Summer 2007, Cornell University REU program.
Analysis of χ_{cJ} radiative decays to light quarks in CLEO.*

Jonathan Dickey and Matt Mikels

*Summer 2005, Indiana University.
Analysis of η and η' meson production in Brookhaven's E852
experiment.*

Robert Koffie

*Fall 2004, Indiana University.
Measurements of properties of scintillator bars using lasers.*

Matt Mikels

*Summer 2004, Indiana University.
Study of particle identification algorithms in the GlueX detector
using GEANT.*

INVITED TALKS

1. "Status and Prospects for Meson Spectroscopy: An Experimentalist's Perspective," Lattice QCD and Experiment: Revealing the Structure of Hadrons (Jefferson National Laboratory), November 21, 2008.
2. "Analysis on the Grid: Development of a Collaborative Analysis Toolkit," Physics and Methods in Meson Spectroscopy (Munich, Germany), October 23, 2008.
3. "Charmonium: An Experimental Review," 34th International Conference of High Energy Physics (ICHEP) (Philadelphia, PA), August 2008.
4. "The Transition $\psi(2S) \rightarrow \gamma\eta_c$ at CLEO-c," International Workshop on Heavy Quarkonium 2007 (Hamburg, Germany), October 17, 2007.
5. "Bottomonium and Charmonium at CLEO," 42nd Rencontres de Moriond on QCD and Hadronic Interactions (La Thuile, Italy), March 18, 2007.
6. "A PWA of 3π Final States and a Search for the $\pi_1(1600)$," Hadron 2005 (Rio de Janeiro, Brazil), August 22, 2005.
7. "Searches for Mesons with Gluonic Degrees of Freedom," High Energy Physics Seminar (Indiana University), April 11, 2005.
8. "Observation of a $1750 \text{ MeV}/c^2$ State in the Diffractive Photoproduction of K^+K^- ," Photon 2003 (Frascati, Italy), April 9, 2003.
9. "Light Quark Vectors and Photoproduction," Noon Particle Physics Seminar (University of Tennessee), January, 2003.

10. "Light Quark Vectors and Photoproduction," Seminar at the Laboratori Nazionali di Frascati (LNF) (Frascati, Italy), October 17, 2002.
11. "Why We Believe in Quarks: Philosophical and Sociological Underpinnings," Philosophy Department Klatch (University of Tennessee), July, 2002.
12. "Why We Believe in Quarks: Experimental Foundations," Particle Physics Seminar (University of Tennessee), April 3, 2002.

OTHER TALKS

1. "Observation of a 1750 MeV/ c^2 State in the Diffractive Photoproduction of K^+K^- ," CIPANP 2003 (New York City, New York), May 24, 2003.
2. "Properties of the 1750 MeV/ c^2 Photoproduced Enhancement in K^+K^- ," 5th International Conference on Quark Confinement (Gargnano, Italy), September 13, 2002.
3. "Properties of the 1750 MeV/ c^2 Photoproduced Enhancement in K^+K^- ," Talk at DPF (Williamsburg, Virginia), May 27, 2002.

PUBLICATIONS (PRIMARY AUTHOR)

1. R. E. Mitchell *et al.* [CLEO Collaboration], " J/ψ and $\psi(2S)$ Radiative Transitions to η_c ," Phys. Rev. Lett. **102**, 011801 (2009) [arXiv:0805.0252 [hep-ex]].
2. J. V. Bennett *et al.* [CLEO Collaboration], "Observation of χ_{cJ} radiative decays to light vector mesons," Phys. Rev. Lett. **101**, 151801 (2008) [arXiv:0807.3718 [hep-ex]].
3. R. E. Mitchell, "An Experimental Review of Charmonium," Proceedings of the 34th International Conference of High Energy Physics, Philadelphia, PA (2008) [arXiv:0810.3231 [hep-ex]].
4. R. E. Mitchell, "Bottomonium and Charmonium at CLEO," Proceedings of the 42nd Recontres de Moriond, La Thuile, Italy (2007) [arXiv:0705.2899 [hep-ex]].
5. S. P. Denisov *et al.*, "A Study Of The Time And Amplitude Characteristics Of The Scintillation Counter Two Meters Long With $\Phi\epsilon\Upsilon$ - 115m Photomultiplier Tubes," Instrum. Exp. Tech. **49**, 494 (2006) [Prib. Tekh. Eksp. **49**, 50 (2006)].
6. A. R. Dzierba *et al.*, "A partial wave analysis of the $\pi^-\pi^-\pi^+$ and $\pi^-\pi^0\pi^0$ systems and the search for a $J^{PC} = 1^{-+}$ meson," Phys. Rev. D **73**, 072001 (2006) [arXiv:hep-ex/0510068].
7. R. E. Mitchell, "PWA of 3π final states and a search for the $\pi_1(1600)$," Proceedings of Hadron 2005, Rio de Janeiro, Brazil, AIP Conf. Proc. **814**, 473 (2006) [arXiv:hep-ex/0510075].
8. R. E. Mitchell, "Observation of a 1750 MeV/ c^2 State in the Diffractive Photoproduction of K^+K^- ," Proceedings of Photon 2003, Gargnano, Italy, Nucl. Phys. B **126** (2004).
9. R. E. Mitchell, "Observation of a 1750 MeV/ c^2 state in the peripheral photoproduction of K^+K^- ," Proceedings of the 8th Conference on the Intersections of Particle and Nuclear Physics (CIPANP 2003), New York, NY, AIP Conf. Proc. **698**, 559 (2004).
10. J. M. Link *et al.* [FOCUS Collaboration], "Observation of a 1750 MeV/ c^2 enhancement in the diffractive photoproduction of K^+K^- ," Phys. Lett. B **545**, 50 (2002) [arXiv:hep-ex/0208027].

**PUBLICATIONS
(INTERNAL
REVIEWER)**

1. P. Naik *et al.* [CLEO Collaboration], “Observation of η' decays to $\pi^+\pi^-\pi^0$ and $\pi^+\pi^-e^+e^-$,” Phys. Rev. Lett. **102**, 061801 (2009) [arXiv:0809.2587 [hep-ex]].
2. R. A. Briere *et al.* [CLEO Collaboration], “Inclusive $\chi_{bJ}(nP)$ Decays to D^0X ,” Phys. Rev. D **78**, 092007 (2008) [arXiv:0807.3757 [hep-ex]].
3. D. M. Asner *et al.*, “Observation of $\chi_b(1P_J, 2P_J)$ decays to light hadrons,” Phys. Rev. D **78**, 091103 (2008) [arXiv:0808.0933 [hep-ex]].
4. Q. He *et al.* [CLEO Collaboration], “Observation of $\Upsilon(2S) \rightarrow \eta\Upsilon(1S)$ and search for related transitions,” Phys. Rev. Lett. **101**, 192001 (2008) [arXiv:0806.3027 [hep-ex]].
5. J. Libby *et al.* [CLEO Collaboration], “Measurement of the η' -meson mass using $J/\psi \rightarrow \gamma\eta'$,” Phys. Rev. Lett. **101**, 182002 (2008) [arXiv:0806.2344 [hep-ex]].
6. G. S. Adams *et al.* [CLEO Collaboration], “Observation of $J/\psi \rightarrow 3\gamma$,” Phys. Rev. Lett. **101**, 101801 (2008) [arXiv:0806.0671 [hep-ex]].
7. P. Rubin *et al.* [CLEO Collaboration], “Search for invisible decays of the $\Upsilon(1S)$ resonance,” Phys. Rev. D **75**, 031104 (2007) [arXiv:hep-ex/0612051].

**PUBLICATIONS
(COAUTHOR)**

1. P. U. E. Onyisi *et al.* [CLEO Collaboration], “Improved Measurement of Absolute Branching Fraction of D_s to $\tau\nu$,” Phys. Rev. D **79**, 052002 (2009) [arXiv:0901.1147 [hep-ex]].
2. J. P. Alexander *et al.* [CLEO Collaboration], “Measurement of $B(D_s^+ \rightarrow \ell^+\nu)$ and the Decay Constant $f_{D_s^+}$ From 600 pb^{-1} of e^\pm Annihilation Data Near 4170 MeV,” Phys. Rev. D **79**, 052001 (2009) [arXiv:0901.1216 [hep-ex]].
3. S. R. Bhari *et al.* [CLEO Collaboration], “Improved Measurement of Branching Fractions for $\pi\pi$ Transitions among $\Upsilon(nS)$ States,” Phys. Rev. D **79**, 011103 (2009) [arXiv:0809.1110 [hep-ex]].
4. Q. He *et al.* [CLEO Collaboration], “First Observation of Exclusive χ_{cJ} Decays to Two Charged and Two Neutral Hadrons,” Phys. Rev. D **78**, 092004 (2008) [arXiv:0806.1227 [hep-ex]].
5. P. Rubin *et al.* [CLEO Collaboration], “Search for CP Violation in the Dalitz-Plot Analysis of $D^\pm \rightarrow K^+K^-\pi^\pm$,” Phys. Rev. D **78**, 072003 (2008) [arXiv:0807.4545 [hep-ex]].
6. B. I. Eisenstein *et al.* [CLEO Collaboration], “Precision Measurement of $\mathcal{B}(D^+ \rightarrow \mu^+\nu)$ and the Pseudoscalar Decay Constant f_{D^+} ,” Phys. Rev. D **78**, 052003 (2008) [arXiv:0806.2112 [hep-ex]].
7. D. Besson *et al.* [CLEO Collaboration], “Inclusive Radiative J/ψ Decays,” Phys. Rev. D **78**, 032012 (2008) [arXiv:0806.0315 [hep-ex]].
8. P. Naik *et al.* [CLEO Collaboration], “Measurement of Exclusive Baryon-Antibaryon Decays of χ_{cJ} Mesons,” Phys. Rev. D **78**, 031101 (2008) [arXiv:0806.1715 [hep-ex]].
9. W. Love *et al.* [CLEO Collaboration], “Search for Lepton Flavor Violation in Υ Decays,” Phys. Rev. Lett. **101**, 201601 (2008) [arXiv:0807.2695 [hep-ex]].
10. S. Dobbs *et al.* [CLEO Collaboration], “Precision Measurement of the Mass of the $h_c(1P_1)$ State of Charmonium,” Phys. Rev. Lett. **101**, 182003 (2008) [arXiv:0805.4599 [hep-ex]].
11. W. Love *et al.* [CLEO Collaboration], “Search for Very Light CP-Odd Higgs Boson in Radiative Decays of $\Upsilon(S-1)$,” Phys. Rev. Lett. **101**, 151802 (2008) [arXiv:0807.1427 [hep-ex]].

12. D. Cronin-Hennessy *et al.* [CLEO Collaboration], “A Study of the Decays $D^0 \rightarrow \pi^- e^+ \nu_e$, $D^0 \rightarrow K^- e^+ \nu_e$, $D^+ \rightarrow \pi^0 e^+ \nu_e$, and $D^+ \rightarrow \bar{K}^0 e^+ \nu_e$,” Phys. Rev. Lett. **100**, 251802 (2008) [arXiv:0712.0998 [hep-ex]].
13. H. Mendez *et al.* [CLEO Collaboration], “Branching Fractions for Transitions of $\psi(2S)$ to J/ψ ,” Phys. Rev. D **78**, 011102 (2008) [arXiv:0804.4432 [hep-ex]].
14. G. Bonvicini *et al.* [CLEO Collaboration], “Absolute Branching Fractions of Cabibbo-Suppressed $D \rightarrow K\bar{K}$ Decays,” Phys. Rev. D **77**, 091106 (2008) [arXiv:0803.0793 [hep-ex]].
15. S. B. Athar *et al.* [CLEO Collaboration], “First Observation of the Decay $D_s^+ \rightarrow p\bar{n}$,” Phys. Rev. Lett. **100**, 181802 (2008) [arXiv:0803.1118 [hep-ex]].
16. K. M. Ecklund *et al.* [CLEO Collaboration], “Two-Photon Widths of the χ_{cJ} States of Charmonium,” Phys. Rev. D **78**, 091501(R) (2008) [arXiv:0803.2869 [hep-ex]].
17. G. S. Adams *et al.* [CLEO Collaboration], “ χ_{c0} and χ_{c2} Decays into $\eta\eta$, $\eta\eta'$, and $\eta'\eta'$ Final States,” Phys. Rev. D **75**, 071101 (2007) [arXiv:hep-ex/0611013].
18. J. L. Rosner *et al.* [CLEO Collaboration], “Determination of the Strong Phase in $D^0 \rightarrow K^+ \pi^-$ Using Quantum-Correlated Measurements,” Phys. Rev. Lett. **100**, 221801 (2008) [arXiv:0802.2264 [hep-ex]].
19. D. M. Asner *et al.* [CLEO Collaboration], “Determination of the $D^0 \rightarrow K^+ \pi^-$ Relative Strong Phase Using Quantum-Correlated Measurements in $e^+ e^- \rightarrow D^0 \bar{D}^0$ at CLEO,” Phys. Rev. D **78**, 012001 (2008) [arXiv:0802.2268 [hep-ex]].
20. M. Artuso *et al.* [CLEO Collaboration], “Measurement of exclusive D meson decays to η and η' final states and SU(3) amplitude analysis,” Phys. Rev. D **77**, 092003 (2008) [arXiv:0802.2664 [hep-ex]].
21. G. Bonvicini *et al.* [CLEO Collaboration], “Dalitz plot analysis of the $D^+ \rightarrow K^- \pi^+ \pi^+$ decay,” Phys. Rev. D **78**, 052001 (2008) [arXiv:0802.4214 [hep-ex]].
22. R. E. Mitchell *et al.* [CLEO Collaboration], “Observation of $D^+ \rightarrow \eta e^+ \nu_e$,” Phys. Rev. Lett. **102**, 081801 (2009) [arXiv:0802.4222 [hep-ex]].
23. J. P. Alexander *et al.* [CLEO Collaboration], “Absolute Measurement of Hadronic Branching Fractions of the D_s^+ Meson,” Phys. Rev. Lett. **100**, 161804 (2008) [arXiv:0801.0680 [hep-ex]].
24. K. M. Ecklund *et al.* [CLEO Collaboration], “Measurement of the Absolute Branching Fraction of $D_s^+ \rightarrow \tau^+ \nu_\tau$ Decay,” Phys. Rev. Lett. **100**, 161801 (2008) [arXiv:0712.1175 [hep-ex]].
25. S. Dobbs *et al.* [CLEO Collaboration], “A Study of the Semileptonic Charm Decays $D^0 \rightarrow \pi^- e^+ \nu_e$, $D^+ \rightarrow \pi^0 e^+ \nu_e$, $D^0 \rightarrow K^- e^+ \nu_e$, and $D^+ \rightarrow \bar{K}^0 e^+ \nu_e$,” Phys. Rev. D **77**, 112005 (2008) [arXiv:0712.1020 [hep-ex]].
26. Q. He *et al.* [CLEO Collaboration], “Comparison of $D \rightarrow K_S^0 \pi$ and $D \rightarrow K_L^0 \pi$ Decay Rates,” Phys. Rev. Lett. **100**, 091801 (2008) [arXiv:0711.1463 [hep-ex]].
27. S. Dobbs *et al.* [CLEO Collaboration], “Measurement of Absolute Hadronic Branching Fractions of D Mesons and $e^+ e^- \rightarrow D\bar{D}$ Cross Sections at the $\psi(3770)$,” Phys. Rev. D **76**, 112001 (2007) [arXiv:0709.3783 [hep-ex]].
28. G. S. Adams *et al.* [CLEO Collaboration], “Suppressed Decays of D_s^+ Mesons to Two Pseudoscalar Mesons,” Phys. Rev. Lett. **99**, 191805 (2007) [arXiv:0708.0139 [hep-ex]].
29. A. Lopez *et al.* [CLEO Collaboration], “Measurement of Prominent η Decay Branching Fractions,” Phys. Rev. Lett. **99**, 122001 (2007) [arXiv:0707.1601 [hep-ex]].

30. D. Cronin-Hennessy *et al.* [CLEO Collaboration], “Study of Di-Pion Transitions Among $\Upsilon(3S)$, $\Upsilon(2S)$, and $\Upsilon(1S)$ States,” Phys. Rev. D **76**, 072001 (2007) [arXiv:0706.2317 [hep-ex]].
31. D. Besson *et al.* [CLEO Collaboration], “Measurement of the Total Hadronic Cross Section in e^+e^- Annihilations below 10.56 GeV,” Phys. Rev. D **76**, 072008 (2007) [arXiv:0706.2813 [hep-ex]].
32. M. Artuso *et al.* [CLEO Collaboration], “Evidence for the Decay $D^0 \rightarrow K^-\pi^+\pi^-e^+\nu_e$,” Phys. Rev. Lett. **99**, 191801 (2007) [arXiv:0705.4276 [hep-ex]].
33. D. H. Miller *et al.* [CLEO Collaboration], “Measurement of the η -Meson Mass using $\psi(2S) \rightarrow \eta J/\psi$,” Phys. Rev. Lett. **99**, 122002 (2007) [arXiv:0707.1810 [hep-ex]].
34. T. K. Pedlar *et al.* [CLEO Collaboration], “Measurement of $B(D_s^+ \rightarrow l^+\nu)$ and the decay constant $f(D_s^+)$,” Phys. Rev. D **76**, 072002 (2007) [arXiv:0704.0437 [hep-ex]].
35. M. Artuso *et al.* [CLEO Collaboration], “Measurement of the decay constant $f(D_s^+)$ using $D_s^+ \rightarrow l^+\nu$,” Phys. Rev. Lett. **99**, 071802 (2007) [arXiv:0704.0629 [hep-ex]].
36. R. A. Briere *et al.* [CLEO Collaboration], “Comparison of particle production in quark and gluon fragmentation at $\sqrt{s} \sim 10$ GeV,” Phys. Rev. D **76**, 012005 (2007) [arXiv:0704.2766 [hep-ex]].
37. J. L. Rosner *et al.* [CLEO Collaboration], “Measurement of Upper Limits for $\Upsilon \rightarrow \gamma + \mathcal{R}$ Decays,” Phys. Rev. D **76**, 117102 (2007) [arXiv:0704.2773 [hep-ex]].
38. G. Bonvicini *et al.* [CLEO Collaboration], “Dalitz plot analysis of the $D^+ \rightarrow \pi^-\pi^+\pi^+$ decay,” Phys. Rev. D **76**, 012001 (2007) [arXiv:0704.3954 [hep-ex]].
39. N. E. Adam *et al.* [CLEO Collaboration], “A Study of Exclusive Charmless Semileptonic B Decay and $|V_{ub}|$,” Phys. Rev. Lett. **99**, 041802 (2007) [arXiv:hep-ex/0703041].
40. R. Gray *et al.* [CLEO Collaboration], “A Study of Exclusive Charmless Semileptonic B Decays and Extraction of $|V_{ub}|$ at CLEO,” Phys. Rev. D **76**, 012007 (2007) [arXiv:hep-ex/0703042].
41. C. Cawfield *et al.* [CLEO Collaboration], “A precision determination of the D^0 mass,” Phys. Rev. Lett. **98**, 092002 (2007) [arXiv:hep-ex/0701016].
42. Q. He *et al.* [CLEO Collaboration], “Confirmation of the $Y(4260)$ resonance production in ISR,” Phys. Rev. D **74**, 091104 (2006) [arXiv:hep-ex/0611021].
43. S. B. Athar *et al.* [CLEO Collaboration], “ χ_{cJ} decays to $h^+h^-h^0$,” arXiv:hep-ex/0611032.
44. G. S. Huang *et al.* [CLEO Collaboration], “Measurement of Inclusive Production of η , η' and ϕ Mesons in D^0 , D^+ and D_s^+ Decays,” Phys. Rev. D **74**, 112005 (2006) [arXiv:hep-ex/0610008].
45. J. M. Link *et al.* [FOCUS Collaboration], “Study of the doubly and singly Cabibbo suppressed decays $D^+ \rightarrow K^+\pi^+\pi^-$ and $D_s^+ \rightarrow K^+\pi^+\pi^-$,” Phys. Lett. B **601**, 10 (2004) [arXiv:hep-ex/0407014].
46. J. M. Link *et al.* [FOCUS Collaboration], “Measurement of the ratio of the vector to pseudoscalar charm semileptonic decay rate $\Gamma(D^+ \rightarrow \overline{K}^{*0}\mu^+\nu_\mu)/\Gamma(D^+ \rightarrow \overline{K}^0\mu^+\nu_\mu)$,” Phys. Lett. B **598**, 33 (2004) [arXiv:hep-ex/0406060].
47. J. M. Link *et al.* [FOCUS Collaboration], “New measurements of the $D_s^+ \rightarrow \phi\mu^+\nu$ form factor ratios,” Phys. Lett. B **586**, 183 (2004) [arXiv:hep-ex/0401001].

48. J. M. Link *et al.* [FOCUS Collaboration], “Measurements of six-body hadronic decays of the D^0 charmed meson,” Phys. Lett. B **586**, 21 (2004) [arXiv:hep-ex/0401019].
49. J. M. Link *et al.* [FOCUS Collaboration], “Dalitz plot analysis of D_s^+ and D^+ decay to $\pi^+\pi^-\pi^+$ using the K-matrix formalism,” Phys. Lett. B **585**, 200 (2004) [arXiv:hep-ex/0312040].
50. J. M. Link *et al.* [FOCUS Collaboration], “Measurement of masses and widths of excited charm mesons D_2^* and evidence for broad states,” Phys. Lett. B **586**, 11 (2004) [arXiv:hep-ex/0312060].
51. J. M. Link *et al.* [FOCUS Collaboration], “Charm-anticharm baryon production asymmetries in photon nucleon interactions,” Phys. Lett. B **581**, 39 (2004) [arXiv:hep-ex/0311022].
52. J. M. Link *et al.* [FOCUS Collaboration], “Study of hadronic five-body decays of charmed mesons involving K_S^0 ,” Phys. Lett. B **586**, 191 (2004) [arXiv:hep-ex/0310051].
53. J. M. Link *et al.* [FOCUS Collaboration], “Study of the decay mode $D^0 \rightarrow K^-K^-K^+\pi^+$,” Phys. Lett. B **575**, 190 (2003) [arXiv:hep-ex/0308054].
54. J. M. Link *et al.* [FOCUS Collaboration], “Search for rare and forbidden 3-body di-muon decays of the charmed mesons D^+ and D_s^+ ,” Phys. Lett. B **572**, 21 (2003) [arXiv:hep-ex/0306049].
55. J. M. Link *et al.* [FOCUS Collaboration], “Studies of correlations between D and \bar{D} mesons in high energy photoproduction,” Phys. Lett. B **566**, 51 (2003) [arXiv:hep-ex/0305018].
56. J. M. Link *et al.* [FOCUS Collaboration], “Measurements of Ξ_c^+ branching ratios,” Phys. Lett. B **571**, 139 (2003) [arXiv:hep-ex/0305038].
57. J. M. Link *et al.* [FOCUS Collaboration], “Measurement of the Ω_c^0 lifetime,” Phys. Lett. B **561**, 41 (2003) [arXiv:hep-ex/0302033].
58. J. M. Link *et al.* [FOCUS Collaboration], “Study of the Cabibbo-suppressed decay modes $D^0 \rightarrow \pi^-\pi^+$ and $D^0 \rightarrow K^-K^+$,” Phys. Lett. B **555**, 167 (2003) [arXiv:hep-ex/0212058].
59. J. M. Link *et al.* [FOCUS Collaboration], “Study of hadronic five-body decays of charmed mesons,” Phys. Lett. B **561**, 225 (2003) [arXiv:hep-ex/0211056].
60. J. M. Link *et al.*, “Charm system tests of CPT and Lorentz invariance with FOCUS,” Phys. Lett. B **556**, 7 (2003) [arXiv:hep-ex/0208034].
61. J. M. Link *et al.* [FOCUS Collaboration], “New measurements of the $D^+ \rightarrow \bar{K}^{*0}\mu^+\nu$ form factor ratios,” Phys. Lett. B **544**, 89 (2002) [arXiv:hep-ex/0207049].
62. J. M. Link *et al.* [FOCUS Collaboration], “Measurements of relative branching ratios of Λ_c^+ decays into states containing Σ ,” Phys. Lett. B **540**, 25 (2002) [arXiv:hep-ex/0206013].
63. J. M. Link *et al.* [FOCUS Collaboration], “Measurement of the D^+ and D_s^+ decays into $K^+K^-K^+$,” Phys. Lett. B **541**, 227 (2002) [arXiv:hep-ex/0206049].
64. J. M. Link *et al.* [Focus Collaboration], “New measurements of the $\Gamma(D^+ \rightarrow \bar{K}^{*0}\mu^+\nu)/\Gamma(D^+ \rightarrow K^-\pi^+\pi^+)$ and $\Gamma(D_s^+ \rightarrow \phi\mu^+\nu)/\Gamma(D_s^+ \rightarrow \phi\pi^+)$ branching ratios,” Phys. Lett. B **541**, 243 (2002) [arXiv:hep-ex/0206056].
65. J. M. Link *et al.* [Focus Collaboration], “A new measurement of the Ξ_c^0 lifetime,” Phys. Lett. B **541**, 211 (2002) [arXiv:hep-ex/0206069].

66. J. M. Link *et al.* [FOCUS Collaboration], “The target silicon detector for the FOCUS spectrometer,” Nucl. Instrum. Meth. A **516**, 364 (2004) [arXiv:hep-ex/0204023].
67. J. M. Link *et al.* [FOCUS Collaboration], “Evidence for new interference phenomena in the decay $D^+ \rightarrow K^- \pi^+ \mu^+ \nu$,” Phys. Lett. B **535**, 43 (2002) [arXiv:hep-ex/0203031].
68. J. M. Link *et al.* [FOCUS Collaboration], “New measurements of the D^0 and D^+ lifetimes,” Phys. Lett. B **537**, 192 (2002) [arXiv:hep-ex/0203037].
69. J. M. Link *et al.* [FOCUS Collaboration], “A high statistics measurement of the Λ_c^+ lifetime,” Phys. Rev. Lett. **88**, 161801 (2002) [arXiv:hep-ex/0202001].
70. J. M. Link *et al.* [FOCUS Collaboration], “Measurement of natural widths of Σ_c^0 and Σ_c^{++} baryons,” Phys. Lett. B **525**, 205 (2002) [arXiv:hep-ex/0111027].
71. J. M. Link *et al.* [FOCUS Collaboration], “A new measurement of the Ξ_c^+ lifetime,” Phys. Lett. B **523**, 53 (2001) [arXiv:hep-ex/0110002].
72. J. M. Link *et al.* [FOCUS Collaboration], “Search for CP violation in the decays $D^+ \rightarrow K_S \pi^+$ and $D^+ \rightarrow K_S K^+$,” Phys. Rev. Lett. **88**, 041602 (2002) [Erratum-ibid. **88**, 159903 (2002)] [arXiv:hep-ex/0109022].
73. J. M. Link *et al.* [FOCUS Collaboration], “Reconstruction of Vees, kinks, Ξ^- ’s, and Ω^- ’s in the FOCUS spectrometer,” Nucl. Instrum. Meth. A **484**, 174 (2002) [arXiv:hep-ex/0109028].
74. J. M. Link *et al.* [FOCUS Collaboration], “Cerenkov particle identification in FOCUS,” Nucl. Instrum. Meth. A **484**, 270 (2002) [arXiv:hep-ex/0108011].

**PROFESSIONAL
SOCIETIES**

American Physical Society, topical group on hadron physics, forum on the history of physics.

Sigma Xi, judge in the 2005 Indiana University STARS research competition.