

# CURRICULUM VITAE

**Eric D. Zimmerman**

Revised September 9, 2010

## Address:

Department of Physics, UCB 390  
University of Colorado  
Boulder, CO 80309  
Telephone: (303) 735-5338; Fax: (303) 492-5119  
Electronic Mail: [edz@colorado.edu](mailto:edz@colorado.edu)

## Education:

Ph.D. in physics, The University of Chicago, 1998  
Thesis: *Measurement of the Branching Ratio of  $\pi^0 \rightarrow e^+e^-$  Using  $K_L \rightarrow 3\pi^0$  Decays in Flight*  
Advisor: Y. W. Wah

S.B. in physics, Massachusetts Institute of Technology, 1993  
Thesis: *Measurement of the Correlation Spectrum of Electrostatic Potential Fluctuations in a Toroidal Helimak Plasma*  
Advisor: S. C. Luckhardt

## Academic positions:

Associate Professor, Department of Physics, The University of Colorado at Boulder, May 2008 to present.

Assistant Professor, Department of Physics, The University of Colorado at Boulder, August 2001 to May 2008.

Associate Research Scientist, Columbia University Nevis Laboratories, July 2000 to August 2001, on Fermilab experiments E815 (NuTeV) and E898 (BooNE).

Postdoctoral Research Associate, Columbia University Nevis Laboratories, December 1998 to June 2000, on Fermilab experiments E815 (NuTeV) and E898 (BooNE). Mentor: M. H. Shaevitz.

Research Assistant, Enrico Fermi Institute, The University of Chicago, 1993-1998, on Fermilab experiments E799 and E832 (KTeV).

Teaching assistant, Department of Physics, The University of Chicago, 1993-1994. Taught laboratory and recitation sections in introductory physics.

Undergraduate research, MIT Plasma Fusion Center, 1990-1993.

Grader, Departments of Physics and Electrical Engineering, Massachusetts Institute of Technology, 1991-1993.

**Postdocs supervised:**

- Martin M. Tzanov (Postdoc 2005-2010, Ph.D. Univ. of Pittsburgh 2005. Present address: Asst. Prof., Louisiana State University, Baton Rouge, La.)
- Terrence L. Hart (Postdoc 2002-2005, Ph.D. Ohio State University, 2001) Present address: University of Mississippi

**Graduate Students:**

- Patrick Toale, Ph.D. 2004. Present address: Asst. Prof., University of Alabama, Tuscaloosa, Ala.
- Rune Niclasen, M.S. Univ. of Copenhagen 2000, Ph.D. 2006. Present address: Transvision, Copenhagen, Denmark.
- Michael Wilking, B.S. Univ. of Minnesota 2001, Ph.D. 2009. Present address: TRIUMF, Vancouver, Canada.
- Robert Nelson, B.S. UC-Santa Barbara 2003, Ph.D. 2010. Present address: Caltech, Pasadena, Ca.
- Andrew Missert, B.A. Univ. of Rochester 2008, Ph.D. expected 2015

**Undergraduate Thesis Students:**

- Hoyt A. Koepke, B.S. *summa cum laude* 2004. Present address: University of British Columbia
- Joshua Spitz, B.S. *summa cum laude* 2006. Present address: Yale University
- Zhon Butcher, B.S. *magna cum laude* 2008. Present address: University of Massachusetts at Amherst

## CONFERENCE TALKS AND SEMINARS

**Eric D. Zimmerman**

Revised September 9, 2010

1. Tokai-mura, Japan: 7th International Workshop on Neutrino Beams and Instrumentation (NBI2010), August 2010
2. Tokai-mura, Japan: 2nd International Neutrino Summer School, Invited lecture, August 2010
3. SLAC, Calif.: SLAC Summer Institute Topical Conference, invited plenary, August 2010
4. Paris, France: International Conference on High Energy Physics, parallel talk, July 2010
5. University of Tokyo, Institute for Cosmic Ray Research/Kamioka Observatory seminar, August 2009
6. Japan Proton Accelerator Research Center, High Energy Physics seminar, July 2009
7. Université Libre de Bruxelles (Belgium), High Energy Physics seminar, May 2008
8. Harvard University, High Energy Physics seminar, April 2008
9. La Thuile, Italy: Rencontres de Moriond, invited plenary talk, March 2008
10. University of Rochester: High Energy Physics Seminar, October 2007
11. Colorado State University: Physics Colloquium, September 2007
12. University of Colorado: Physics Colloquium, September 2007
13. UC-San Diego: High Energy Physics Seminar, May 2007
14. UCLA: High Energy Physics Seminar, May 2007
15. UC-Santa Barbara: High Energy Physics Seminar, May 2007
16. UC-Irvine: Joint Particle Seminar, May 2007
17. SUNY-Stony Brook: High Energy Physics Seminar, May 2007
18. Brookhaven National Laboratory: Particle Physics Seminar, April 2007

19. Jacksonville, Fla.: American Physical Society April Meeting, invited parallel talk, April 2007
20. University of Colorado: Nuclear/High Energy Physics Seminar, April 2007
21. Imperial College London, United Kingdom: High Energy Physics Seminar, November 2006
22. CERN, Switzerland: Sixth International workshop on Neutrino Beams and Instrumentation, invited plenary talk, September 2006
23. Búzios, Rio de Janeiro, Brazil: XXVI Physics In Collision conference, invited plenary talk, July 2006
24. Santa Fe, N. M.: Particles and Nuclei International Conference (PANIC) 2005, invited parallel talk, October 2005
25. Fermilab, Ill.: Fifth International Workshop on Neutrino Beams and Instrumentation, one invited talk, July 2005
26. Uppsala, Sweden: Lepton-Photon 2005, invited plenary talk, July 2005
27. Colorado State University: Physics Colloquium, December 2004
28. University of Colorado: Physics Colloquium, October 2004
29. KEK, Tsukuba, Japan: NP04 workshop, September 2004
30. University of Illinois: High Energy Physics seminar, November 2003
31. Osaka University, Japan: High Energy Physics seminar, November 2003
32. KEK, Tsukuba, Japan: Fourth International Workshop on Neutrino Beams and Instrumentation, two invited talks, November 2003
33. KEK, Tsukuba, Japan: Physics Seminar, February 2003
34. Kanazawa, Japan: 3rd Conference on Neutrino Oscillations and their Origin (NOON2003), Invited talk, February 2003
35. Santa Cruz, Calif.: 7th International Workshop on Tau Lepton Physics (Tau02), Invited talk, September 2002
36. SLAC, Calif.: SLAC Experimental Physics Seminar, March 2002
37. CERN, Switzerland: Third International workshop on Neutrino Beams and Instrumentation, two talks (one invited, one contributed), March 2002
38. University of Illinois: High Energy Physics Seminar, April 2001

39. UC-Santa Barbara: Physics Colloquium and High Energy Physics Seminar, March 2001
40. Brown University: Particle/Astroparticle Physics Seminar, March 2001
41. University of Colorado: Physics Colloquium, February 2001
42. SUNY-Stony Brook: High Energy Physics Seminar, February 2001
43. California Institute of Technology: High Energy Physics seminar, January 2001
44. University of Chicago: High Energy Physics seminar, November 2000
45. Buffalo, NY: APS New York Symposium: Invited plenary talk, October 2000
46. New York University: Physics Colloquium, September 2000
47. University of Cincinnati: High Energy Physics seminar, September 2000
48. SLAC, Calif.: SLAC Summer Institute 2000: Invited plenary, August 2000
49. Québec City: Conference on the Intersections of Nuclear and Particle Physics (CIPANP 2000): Invited talk, parallel session, May 2000
50. University of Virginia: Physics Colloquium, March 2000
51. Fermilab: Neutrino Factory Physics Study talk, Fermilab, February 2000
52. University of Chicago: High Energy Physics lunch seminar, January 2000
53. Fermilab: Joint Experimental Theoretical Physics (“Wine and Cheese” seminar), December 1999
54. Harvard University: High Energy Physics seminar, October 1999
55. DESY, Germany: DESY Theory Workshop, contributed parallel talk, September 1999
56. University of Chicago: High Energy Physics seminar, October 1998
57. Fermilab: Heavy Quarks at Fixed Target conference (HQ98): Plenary talk, October 1998
58. Columbia University: Nuclear/Particle Physics seminar, September 1998
59. Cornell University: High Energy Physics (Journal Club) seminar, September 1998
60. Lawrence Berkeley Lab: High Energy Physics seminar, September 1998
61. Los Alamos National Laboratory: High Energy Physics seminar, August 1998

# LIST OF PUBLICATIONS<sup>1</sup>

**Eric D. Zimmerman**

Revised January 2010

1. E. Abouzaid *et al.*, Dispersive Analysis of  $K_{L\mu 3}^0$  and  $K_{Le 3}^0$  Scalar and Vector Form Factors using KTeV Data,” arXiv:0912.1291 [hep-ex], submitted to *Phys. Rev D*.
2. A. A. Aguilar-Arevalo *et al.*, “Measurement of  $\nu_\mu$  and  $\bar{\nu}_\mu$  Induced Neutral Current Single  $\pi^0$  Production Cross-Section on Mineral Oil at  $E_\nu \sim 1$  GeV,” arXiv:0911.2063[hep-ex], *Phys. Rev. D* **81** 013005 (2010).
3. A. A. Aguilar-Arevalo *et al.*, “A Search for Core-Collapse Supernovae Using the MiniBooNE Neutrino Detector,” arXiv:0910.3182[astro-ph.HE], accepted by *Phys. Rev. D*, in press.
4. A. A. Aguilar-Arevalo *et al.*, “Measurement of the  $\nu_\mu$  Charged Current  $\pi^+$  to Quasi-Elastic Cross Section Ratio on Mineral Oil in a 0.8 GeV Neutrino Beam” *Phys. Rev. Lett.* **103** 081801 (2009).
5. A. A. Aguilar-Arevalo *et al.*, “A Search for Electron Antineutrino Appearance at the  $\Delta m^2 \sim 1$  eV<sup>2</sup> Scale,” *Phys. Rev. Lett.* **103** 111801 (2009).
6. A. A. Aguilar-Arevalo *et al.*, “A Search for Muon Neutrino and Antineutrino Disappearance at MiniBooNE,” *Phys. Rev. Lett.* **103** 061802 (2009).
7. P. Adamson *et al.*, “First Measurement of  $\nu_\mu$  and  $\nu_e$  Events in an Off-Axis Horn-Focused Neutrino Beam,” *Phys. Rev. Lett.* **102** 211801 (2009).
8. A. A. Aguilar-Arevalo *et al.*, “Unexplained Excess of Electron-Like Events from a 1-GeV Neutrino Beam,” *Phys. Rev. Lett.* **102** 101802 (2009).
9. A. A. Aguilar-Arevalo *et al.*, “The MiniBooNE Detector,” *Nucl. Instrum. Meth.* **A599** 28 (2009).
10. E. D. Zimmerman, “Measurements from KTeV of Rare Decays of the  $K_L^0$  and  $\pi^0$ ,” arXiv:0806.3994[hep-ex], Proceedings of the 43d Rencontres de Moriond on Electroweak Interactions and Unified Theories, La Thuile, Italy, March 2008.
11. K. Hiraide *et al.*, “Search for Charged Current Coherent Pion Production on Carbon in a Few-GeV Neutrino Beam,” *Phys. Rev. D* **78** 112004 (2008).

---

<sup>1</sup>Conference proceedings are listed only for talks given by EDZ.

12. E. Abouzaid *et al.*, “Detailed Study of the  $K_L \rightarrow \pi^0\pi^0\pi^0$  Dalitz Plot,” *Phys. Rev.* **D78** 032009 (2008).
13. A. A. Aguilar-Arevalo *et al.*, “The Neutrino Flux Prediction at MiniBooNE,” arXiv:0806.1449[hep-ex]. Accepted by *Phys. Rev.* **D79** 072002 (2009).
14. A. A. Aguilar-Arevalo *et al.*, “Compatibility of High- $\Delta m^2$   $\nu_e$  and  $\bar{\nu}_e$  Neutrino Oscillation Searches,” *Phys. Rev.* **D78** 012007 (2008).
15. E. Abouzaid *et al.*, “Final results from the KTeV Experiment on the Decay  $K_L \rightarrow \pi^0\gamma\gamma$ ,” *Phys. Rev.* **D77** 112004 (2008).
16. A. A. Aguilar-Arevalo *et al.*, “First Observation of Coherent  $\pi^0$  Production in Neutrino-Nucleus Interactions with  $E_\nu < 2$  GeV,” *Phys. Lett.* **B664** 41 (2008).
17. E. Abouzaid *et al.*, “Determination of the Parity of the Neutral Pion via the Four-Electron Decay,” *Phys. Rev. Lett.* **100** 182001 (2008).
18. E. Abouzaid *et al.*, “Search for Lepton Flavor Violating Decays of the Neutral Kaon,” *Phys. Rev. Lett.* **100** 131803 (2008).
19. E. Abouzaid *et al.*, “Search for the rare decay  $K_L^0 \rightarrow \pi^0\pi^0\gamma$ ,” *Phys. Rev.* **D78** 032014 (2008).
20. A. A. Aguilar-Arevalo *et al.*, “Measurement of Muon Neutrino Quasi-Elastic Scattering on Carbon,” *Phys. Rev. Lett.* **100** 032301 (2008).
21. E. D. Zimmerman, “Neutrino Physics at Short Baseline,” in *Proceedings of XXVI Physics in Collision, Búzios, Rio de Janeiro, 2006*, edited by J. T. de Mello Neto, SLAC-eConf C060706 (2007).
22. D. Mason *et al.*, “Measurement of the Nucleon Strange-Antistrange Asymmetry at Next-to-Leading Order in QCD from NuTeV Dimuon Data,” *Phys. Rev. Lett.* **99** 192001 (2007).
23. E. Abouzaid *et al.*, “Measurement of the Decay  $K_L^0 \rightarrow \pi^0 e^+ e^- \gamma$ ,” *Phys. Rev.* **D76** 052001 (2007).
24. E. Abouzaid *et al.*, “First observation of  $K_L^0 \rightarrow \pi^\pm e^\mp \nu e^+ e^-$ ,” *Phys. Rev. Lett.* **99** 081803 (2007).
25. A. A. Aguilar-Arevalo *et al.*, “Constraining Muon Internal Bremsstrahlung as a Contribution to the MiniBooNE Low Energy Excess,” FERMILAB-PUB-07-559-E, e-print arXiv:0710.3897 [hep-ex] (2007).
26. A. A. Aguilar-Arevalo *et al.*, “A Search for Electron Neutrino Appearance at the  $\Delta m^2 \sim 1$  eV<sup>2</sup> Scale,” *Phys. Rev. Lett.* **98** 231801 (2007).

27. E. Abouzaid *et al.*, “Measurements of the Decay  $K_L^0 \rightarrow e^+e^-\gamma$ ,” *Phys. Rev. Lett.* **99** 051804 (2007).
28. V. Barger *et al.*, “Report of the US long baseline neutrino experiment study,” (49 authors, 1 EDZ group) FERMILAB-0801-AD-E, BNL-77973-2007-IR (2007).
29. E. Abouzaid *et al.*, “Measurement of the Rare Decay  $\pi^0 \rightarrow e^+e^-$ ,” *Phys. Rev.* **D75** 012004 (2007).
30. E. Abouzaid *et al.*, “ $\Xi^0$  and  $\bar{\Xi}^0$  Polarization Measurements at 800 GeV/c,” *Phys. Rev.* **D75** 012005 (2007).
31. E. Abouzaid *et al.*, “Improved  $K_L \rightarrow \pi^+e^-\nu$  Form Factor and Phase Space Integral with Reduced Model Uncertainty,” *Phys. Rev.* **D74** 097101 (2006).
32. E. D. Zimmerman, “The Henderson Mine as an Underground Laboratory,” *AIP Conf. Proc.* **842** 1097 (2006), Proc. of Particles and Nuclei International Conference (PANIC05), Santa Fe, N. M. 2005.
33. A. Aguilar-Arevalo *et al.*, “Bringing the SciBar detector to the booster neutrino beam,” FERMILAB-PROPOSAL-0954, hep-ex/0601022 (2006).
34. E. Abouzaid *et al.*, “Measurement of Direct Photon Emission in the  $K_L \rightarrow \pi^+\pi^-\gamma$  decay mode,” *Phys. Rev.* **D74** 032004 (2006).
35. E. D. Zimmerman, “Neutrino Physics at Short Baseline,” *Int. J. Mod. Phys.* **A21** 1869 (2006), Proc. of Lepton and Photon Interactions at High Energies, Uppsala, Sweden 2005.
36. M. Tzanov *et al.*, “Precise Measurement of Neutrino and Anti-Neutrino Differential Cross-Sections,” *Phys. Rev.* **D74** 012008 (2006).
37. E. Abouzaid *et al.*, “A Measurement of the  $K^0$  Charge Radius and a CP Violating Asymmetry together with a Search for CP Violating E1 Direct Photon Emission in the Rare Decay  $K_L^0 \rightarrow \pi^+\pi^-e^+e^-$ ,” *Phys. Rev. Lett.* **96** 101801 (2006).
38. T. Alexopoulos *et al.*, “Measurements of the Branching Fractions and Decay Distributions for  $K_L^0 \rightarrow \pi^+\mu^-\nu\gamma$  and  $K_L^0 \rightarrow \pi^+e^-\nu\gamma$ ,” *Phys. Rev.* **D71** 012001 (2005).
39. T. Alexopoulos *et al.*, “Measurements of Semileptonic  $K_L^0$  Decay Form Factors,” *Phys. Rev.* **D70** 092007 (2004).
40. T. Alexopoulos *et al.*, “Measurements of  $K_L^0$  Branching Fractions and the CP violation parameter  $|\eta_{+-}|$ ,” *Phys. Rev.* **D70** 092006 (2004).
41. E. D. Zimmerman, “BooNE at Six Months,” Workshop on Neutrino Oscillations and their Origin (NOON 2003), Kanazawa, Japan. World Scientific (2004).

42. T. Alexopoulos *et al.*, “A Determination of the Cabibbo-Kobayashi-Maskawa Parameter  $|V_{us}|$  using  $K_L$  Decays,” *Phys. Rev. Lett.* **93** 181802 (2004).
43. K. S. McFarland *et al.*, “Nuclear Effects and the NuTeV  $\sin^2(\theta_W)$  Measurement,” *Nucl. Phys. Proc. Suppl.* **112** 226 (2002).
44. A. Alavi-Harati *et al.*, “Search for the  $K_L \rightarrow \pi^0 \pi^0 e^+ e^-$  Decay in the KTeV Experiment,” *Phys. Rev. Lett.* **89** 211801 (2002).
45. E. D. Zimmerman, “BooNE has Begun,” 7th International Workshop on Tau Lepton Physics (Tau02), Santa Cruz, Calif., 10-13 Sept., 2002. **eConf C0209101:TH05,2002** (2002).
46. A. Alavi-Harati *et al.*, “Measurements of Direct  $CP$  Violation,  $CPT$  Symmetry, and other Parameters in the Neutral Kaon System,” *Phys. Rev.* **D67** 012005 (2003).
47. G. P. Zeller *et al.*, “Reply to the Comment on ‘A Precise Determination of Electroweak Parameters in Neutrino Nucleon Scattering,’ ” e-print hep-ex/0207052 (2002), Submitted to *Phys. Rev. Lett.*
48. G. P. Zeller *et al.*, “On the Effect of Asymmetric Strange Seas and Isospin Violating Parton Distribution Functions on  $\sin^2 \theta_W$  Measured in the NuTeV Experiment,” *Phys. Rev.* **D65** 111103 (2002).
49. A. Alavi-Harati *et al.*, “A Measurement of the  $K_L$  Charge Asymmetry,” *Phys. Rev. Lett.* **88** 181601 (2002).
50. S. Avvakumov *et al.*, “A Search for  $\nu_\mu \rightarrow \nu_e$  and  $\bar{\nu}_\mu \rightarrow \bar{\nu}_e$  Oscillations at NuTeV,” *Phys. Rev. Lett.* **89** 011804 (2002).
51. G. P. Zeller *et al.*, “A Precise Determination of Electroweak Parameters in Neutrino Nucleon Scattering,” *Phys. Rev. Lett.* **88** 091802 (2002).
52. A. Alavi-Harati *et al.*, “Radiative Decay Width Measurements of Neutral Kaon Excitations using the Primakoff Effect,” *Phys. Rev. Lett.* **89** 072001 (2002).
53. M. Artuso, B. Gavela, B. Kayser, C. McGrew, P. Rankin, and E. D. Zimmerman, “Flavor Physics: The Flavor Physics (P2) Working Group,” FERMILAB-CONF-01-428, SNOWMASS-2001-P2001, SLAC-eConf C010630, *Proceedings of the APS / DPF / DPB Summer Study on the Future of Particle Physics (Snowmass 2001)*, Snowmass, Colorado, 2001.
54. A. Alavi-Harati *et al.*, “Branching Ratio Measurement of the Decay  $K_L \rightarrow e^+ e^- \mu^+ \mu^-$ ,” *Phys. Rev. Lett.* **87** 111802 (2001).
55. B. T. Fleming *et al.*, “Results of the Survey on the Future of HEP,” e-print hep-ex/0108040.

56. A. Alavi-Harati *et al.*, “A New Measurement of the Radiative  $K_{e3}$  Branching Ratio and Photon Spectrum,” *Phys. Rev.* **D64** 112004 (2001).
57. A. Alavi-Harati *et al.*, “First Measurement of Form Factors of the Decay  $\Xi^0 \rightarrow \Sigma^+ e^- \bar{\nu}_e$ ,” *Phys. Rev. Lett.* **87** 132001 (2001).
58. A. Alavi-Harati *et al.*, “Measurement of the Branching Ratio and Form Factor of  $K_L^0 \rightarrow \mu^+ \mu^- \gamma$ ” *Phys. Rev. Lett.* **87** 071801 (2001).
59. A. Alavi-Harati *et al.*, “Measurements of the Rare Decay  $K_L \rightarrow e^+ e^- e^+ e^-$ ,” *Phys. Rev. Lett.* **86** 5425 (2001).
60. U.-K. Yang *et al.*, “Extraction of  $R = \sigma_L/\sigma_T$  from CCFR Fe- $\nu_\mu$  and Fe- $\bar{\nu}_\mu$  Differential Cross-Sections,” *Phys. Rev. Lett.* **87** 251802 (2001).
61. T. Adams *et al.*, “Observation of an Anomalous Number of Dimuon Events in a High Energy Neutrino Beam,” *Phys. Rev. Lett.* **87** 041801 (2001).
62. J. A. Formaggio *et al.*, “Search for the Lepton Number Violating Process  $\bar{\nu}_\mu e \rightarrow \mu^- \bar{\nu}_e$ ,” *Phys. Rev. Lett.* **87** 071803 (2001).
63. M. Goncharov *et al.*, “Precise Measurement of Dimuon Production Cross-sections in  $\nu_\mu$ -Fe and  $\bar{\nu}_\mu$ -Fe Deep Inelastic Scattering at the Tevatron,” *Phys. Rev.* **D64** 112006 (2001).
64. B. T. Fleming *et al.*, “A First Measurement of Low- $x$ , Low- $Q^2$  Structure Functions in Neutrino Scattering,” *Phys. Rev. Lett.* **86** 5430 (2001).
65. A. Alavi-Harati *et al.*, “First Observation of the Decay  $K_L \rightarrow \pi^0 e^+ e^- \gamma$ ,” *Phys. Rev. Lett.* **87** 021801 (2001).
66. A. Alavi-Harati *et al.*, “Search for the Decay  $K_L^0 \rightarrow \pi^0 e^+ e^-$ ,” *Phys. Rev. Lett.* **86** 397 (2001)
67. U.-K. Yang *et al.*, “Measurements of  $F_2$  and  $x F_3'$  from CCFR  $\nu_\mu$ -Fe and  $\bar{\nu}_\mu$ -Fe Data in a Physics Model Independent Way,” *Phys. Rev. Lett.* **86** 2742 (2001).
68. A. Alton *et al.*, “Observation of Neutral Current Charm Production in  $\nu_\mu$ -Fe Scattering at the Tevatron,” *Phys. Rev.* **D64** 012002 (2001).
69. A. Alavi-Harati *et al.*, “Study of the  $K_L^0 \rightarrow \pi^+ \pi^- \gamma$  Direct Emission Vertex,” *Phys. Rev. Lett.* **86** 761 (2001)
70. A. Alton *et al.*, “Search for Light to Heavy Quark Flavor Changing Neutral Currents in  $\nu_\mu$ -N and  $\bar{\nu}_\mu$ -N Scattering at the Tevatron,” *Phys. Rev.* **D63** 012001 (2001)

71. E. D. Zimmerman, "Recent Results Addressing the KARMEN Timing Anomaly," *AIP conference proceedings No. 549: 7th Conference on Intersections of Particle and Nuclear Physics*, Quebec City (2000)
72. A. Alavi-Harati *et al.*, "Search for the decay  $K_L \rightarrow \pi^0 \mu^+ \mu^-$ ," *Phys. Rev. Lett.* **84** 5279 (2000)
73. J. Formaggio *et al.*, "Search for a 33.9 MeV/ $c^2$  Neutral Particle in Pion Decay," *Phys. Rev. Lett.* **84** 4043 (2000)
74. C. Albright *et al.*, "Physics at a Neutrino Factory," FERMILAB-FN-692 (2000)
75. A. Alavi-Harati *et al.*, "Observation of the decay  $K_L \rightarrow \mu^+ \mu^- \gamma \gamma$ ," *Phys. Rev.* **D62** 112001 (2000)
76. A. Alavi-Harati *et al.*, "Search for the Weak Decay of a Lightly Bound  $H^0$  Dibaryon," *Phys. Rev. Lett.* **84** 2593 (2000)
77. A. Alavi-Harati *et al.*, "Search for the Decay  $K_L \rightarrow \pi^0 \nu \bar{\nu}$  using  $\pi^0 \rightarrow e^+ e^- \gamma$ ," *Phys. Rev.* **D61** 072006 (2000)
78. T. Adams *et al.*, "Evidence for Diffractive Charm Production in  $\nu_\mu$ -Fe and  $\bar{\nu}$ -Fe Scattering at the Tevatron," *Phys. Rev.* **D61** 092001 (2000)
79. A. Alavi-Harati *et al.*, "Observation of  $CP$  Violation in  $K_L \rightarrow \pi^+ \pi^- e^+ e^-$  Decays," *Phys. Rev. Lett.* **84** 408 (2000)
80. A. Vaitaitis *et al.*, "Search for Neutral Heavy Leptons in a High Energy Neutrino Beam," *Phys. Rev. Lett.* **83** 4943 (1999)
81. A. Alavi-Harati *et al.*, "Light Gluino Search for Decays Containing  $\pi^+ \pi^-$  or  $\pi^0$  from a Neutral Hadron Beam at Fermilab" *Phys. Rev. Lett.* **83** 2128 (1999)
82. A. Alavi-Harati *et al.*, "Measurement of the Branching Ratio of  $\pi^0 \rightarrow e^+ e^-$  Using  $K_L \rightarrow 3\pi^0$  Decays in Flight" *Phys. Rev. Lett.* **83** 922 (1999)
83. A. Alavi-Harati *et al.*, "Measurement of the Decay  $K_L \rightarrow \pi^0 \gamma \gamma$ " *Phys. Rev. Lett.* **83** 917 (1999)
84. A. Alavi-Harati *et al.*, "Observation of Direct  $CP$  Violation in  $K_{S,L} \rightarrow \pi \pi$  Decays" *Phys. Rev. Lett.* **83** 22 (1999)
85. A. Affolder *et al.*, "Observation of the Decay  $\Xi^0 \rightarrow \Sigma^+ e^- \bar{\nu}_e$ " *Phys. Rev. Lett.* **82** 3751 (1999)
86. J. Adams *et al.*, "Search for the Decay  $K_L \rightarrow \pi^0 \nu \bar{\nu}$ " *Phys. Lett.* **B447** 240 (1999)

87. E. D. Zimmerman, "Use of the  $K_L \rightarrow 3\pi^0$  Decay as a Tagged Photon Source to Measure Material Thickness in a Neutral Kaon Beam" *Nucl. Inst. and Meth.* A426 229 (1999)
88. R. Ford *et al.*, "A Low Cost, 400 Gauss 18 inch Gap C-Magnet Using Permanent Magnet Technology," *Nucl. Inst. and Meth.* **A426** 238 (1999)
89. E. D. Zimmerman, "Measurement of the Branching Ratio of  $\pi^0 \rightarrow e^+e^-$  using  $K_L \rightarrow 3\pi^0$  Decays in Flight" PhD Thesis, The University of Chicago (1998)
90. E. D. Zimmerman, "Rare Decays of the  $K_L$  and  $\pi^0$ : New Results from E799-II and E832" *AIP conference proceedings No. 459: Workshop on Heavy Quarks at Fixed Target (HQ98)*, Batavia, Illinois (1998)
91. J. Adams *et al.*, "Measurement of the Branching Fraction of the Decay  $K_L \rightarrow \pi^+\pi^-e^+e^-$ ," *Phys. Rev. Lett.* **80** 4123 (1998)
92. J. Adams *et al.*, "Search for Light Gluinos via the Spontaneous Appearance of  $\pi^+\pi^-$  pairs with an 800 GeV/c Proton Beam at Fermilab," *Phys. Rev. Lett.* **79** 4083 (1997)
93. G. E. Graham *et al.*, "Design and Test Results of a Transition Radiation Detector for a Fermilab Fixed Target Rare Kaon Decay Experiment," *Nucl. Inst. and Meth.* **A367** 224 (1995)
94. E. D. Zimmerman and S. C. Luckhardt, "Measurement of the Correlation Spectrum of Electrostatic Potential Fluctuations in an ECRH Helimak Plasma," *J. Fusion Energy* **12** 289 (1993)
95. E. D. Zimmerman *et al.*, "Measurement of the Correlation Spectrum of Electrostatic Potential Fluctuations in a toroidal ECRH Plasma," AIP Conference Proceedings No. 289: Tenth Topical Conference on RF Power in Plasmas, Boston, Mass., 1993