Publication List

Rex Tayloe, Indiana University
April 22, 2007

Submitted Publications

(with A. A. Aguilar-Arevalo *et al.*), "A Search for Electron Neutrino Appearance at the Delta $m^2 \sim 1$ eV^2 Scale", arXiv:0704.1500v2 [hep-ex], submitted to Physics Review Letters.

Refereed Publications

T. Katori, V. A. Kostelecky and R. Tayloe, "Global three-parameter model for neutrino oscillations using Lorentz violation," Phys. Rev. D **74**, 105009 (2006) [arXiv:hep-ph/0606154].

(with K. D. Paschke *et al.*), "Experimental determination of the complete spin structure for anti-proton proton → anti-lambda lambda at p(p) = 1.637-GeV/c," Phys. Rev. C **74**, 015206 (2006) [arXiv:nucl-ex/0605025].

R. Tayloe *et al.*, "A large-volume detector capable of charged-particle tracking," Nucl. Instrum. Meth. A **562**, 198 (2006).

(with L. B. Auerbach et al.) "Tests of Lorentz violation in anti-nu/mu → anti-nu/e oscillations," Phys. Rev. D **72**, 076004 (2005).

(with L. B. Auerbach et al.) "Search for $\pi^0 \to \nu_\mu \bar{\nu}_\mu$ decay in LSND", Phys. Rev. Lett. **92**, 091801 (2004).

(with B. Bassalleck et al.) "Measurement of spin transfer observables in anti-proton proton → anti-lambda lambda at 1.637-GeV/c", Phys. Rev. Lett. 89, 212302 (2002).

(with L.B. Auerbach et al.) "Measurements of Charged Current Reactions of muon neutrinos on ^{12}C" Phys. Rev. C **66**, 015501 (2002).

(with L.B. Auerbach et al.) "Measurements of Charged Current Reactions of ν_e on ^{12}C" Phys. Rev. C **64**, 065501 (2001).

(with A. Aguilar, et al.) " Evidence for Neutrino Oscillations from the Observation of Electron Anti-neutrinos in a Muon Anti-Neutrino Beam", Phys. Rev. D **64**, 112007 (2001).
(with L.B. Auerbach et al.) "Measurement of electron-neutrino electron elastic scattering", Phys. Rev. D. **63**, 112001 (2001).

(with P. D. Barnes et al.) "Measurement of the $\overline{p}p \to K_S K_S \eta$ cross section at beam momenta in the regions of 1.45 and 1.7 GeV/c", Phys. Lett. B **516**, 257 (2001).

(with C. Athanassopoulos et al.) "Results on $\nu_\mu \to \nu_e$ Neutrino Oscillations from the LSND Experiment", Phys. Rev. Lett. **81**, 1774 (1998).

(with C. Athanassopoulos et al.) "Evidence for $\nu_\mu \to \nu_e$ Oscillations from Pion Decay in Flight Neutrinos", Phys. Rev. C. **58**, 2489 (1998).

(with R. Imlay et al.) "New Results on Electron-Neutrino Carbon Scattering and Muon-Neutrino Carbon Scattering at LSND" Nucl. Phys. A , **629**, 531 (1998).

(with C. Athanassopoulos et al.) "Measurements of the Reactions $^{12}C(\nu_\mu, \mu^-)\ ^{12}N_{g.s.}$ and $^{12}C(\nu_\mu, \mu^-)\ X$", Phys. Rev. C. **56**, 2806 (1997).

(with C. Athanassopoulos et al.) "Measurement of the Reactions $^{12}C(\nu_e, e^-)\ ^{12}N_{g.s.}$ and $^{12}C(\nu_e, e^-)\ ^{12}N^*$", Phys. Rev. C. **55**, 2078 (1997).

(with C. Athanassopoulos et al.) "The Liquid Scintillator Neutrino Detector and LAMPF Neutrino Source", Nucl. Instrum. Methods A **388**, 149 (1997).

(with P.D. Barnes et al.) "Measurement of the Reactions $\overline{p}p \to \overline{\Sigma^+}\Sigma^+$ and $\overline{p}p \to \overline{\Sigma^-}\Sigma^-$ Close to Threshold", Phys. Lett. B **402**, 227 (1997).

(with M. Lovetere et al.) " ϕ – ϕ Excitation-Function at LEAR", Nucl. Phys. B **S56A**, 256 (1997).

(with C. Athanassopoulos et al.) "Evidence for Neutrino Oscillations from Muon Decay at Rest", Phys. Rev. C. **54**, 2685 (1996).

(with C. Athanassopoulos et al.) "Evidence for $\bar{\nu}_\mu \to \bar{\nu}_e$ Oscillations from the LSND Experiment at the Los Alamos Meson Physics Facility", Phys. Rev. Lett. **77**, 3082 (1996).
(with P.D. Barnes et al.) "Measurement of the $\overline{p}p \to \overline{\Lambda}\Lambda$ and $\overline{p}p \to \overline{\Sigma}^0\Lambda + c.c.$ Reactions at 1.726 and 1.771 GeV/c", Phys. Rev. C **54**, 2831 (1996).

(with P.D. Barnes et al.) "Observables in High-Statistics Measurements of the Reaction $\overline{p}p \to \overline{\Lambda}\Lambda$", Phys. Rev. C **54**, 1877 (1996).

(with L. Bertolotto et al.) "Observation of $\phi\phi$ production in the reaction $\overline{p}p \to 4K^\pm$ at 1.4 GeV/c incident $\overline{p}$ momentum", Phys. Lett. B **345**, 325 (1995).

(with P.D. Barnes et al.) "Study of the reaction $\overline{p}p \to \overline{\Lambda}\Lambda$ below 6 MeV excess energy", Phys. Lett. B **331**, 203 (1994).

(with P.D. Barnes et al.) "From $\overline{p}p \to \overline{\Lambda}\Lambda$ to $\overline{p}p \to \overline{\Sigma^\pm}\Sigma^\pm$ with PS185 at LEAR", Nucl. Phys. A **558**, 277 (1993).

(with D. Babusci et al.) "Lead/scintillating fiber electromagnetic calorimeters with $4.8\%/\sqrt{E[\mathrm{GeV}]}$ energy resolution in the 20–80 MeV range" Nucl. Instrum. Methods A **332**, 444 (1993).

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(with D.W. Hertzog et al.) "A high-resolution lead/scintillating fiber electromagnetic calorimeter", Nucl. Instrum. Methods A **294**, 446 (1990).

Conference Proceedings

R. Tayloe, "Neutrinos, oscillations and new physics: An introduction," *Proceedings of the Particles and Nuclei International Conference (PANIC 05), Santa Fe, New Mexico, 24-28 Oct 2005*, AIP Conf. Proc. **842**, 748 (2006).

T. Katori and R. Tayloe, "Lorentz and CPT Violation with LSND", *Proceedings of the 3rd Meeting on CPT and Lorentz Symmetry, Bloomington, Indiana, 4-7 August 2004*, (World Scientific, 2005), pp.150-158.

(with S. Brice et al.) "The FINeSSE Detector", *Proceedings of the 3rd International Workshop on Neutrino Nucleus Interactions in the Few GeV Region (NuInt04), Gran Sasso, Assergi, Italy, 17-21 Mar 2004*, Nucl. Phys. Proc. Suppl. 139, 317 (2005).

R. Tayloe representing the BooNE Collaboration, "The miniboone experiment: status and plans", *Proceedings of the XXth International Conference on Neutrino Physics and Astrophysics, Munich, Germany, 2002*, Nucl. Phys. Proc. Suppl. 1118, 157 (2003).

(with J.L. Raaf et al.) "Mineral oil tests for the miniboone detector", *Proceedings of the IEEE 2001 Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC), San Diego, California, 4-10 Nov 2001*, IEEE Trans. Nucl. Sci. 49 , 957 (2002).

R. Tayloe, "A measurement of the strange quark contribution to the nucleon spin via neutrino-nucleon elastic scattering", *Proceedings of the ECT* Conference on the Spin Structure of the Proton, Trento, Italy, 23-28 Jul 2001*, Nucl. Phys. Proc. Suppl. 105, 62 (2002).

R. Tayloe representing the BooNE Collaboration, "The Booster Neutrino Experiment: BooNE", *Proceedings of the International Workshop on Next Generation Nucleion Decay and Neutrino Detector (NNN99)*, edited by M. V. Diwan and C. K. Jung (AIP Conference Proceedings, 2000), pp.205-210.

R. Tayloe representing the LSND Collaboration, "Latest Results from the LSND Experiment" *Proceedings of the 14th Lake Louise Winter Institute on Electroweak Physics*, edited by A. Astbury, B. A. Campbell, F. C. Khanna, J. Pinfold, and M. G. Vincter (World Scientific, 2000), pp.545-552.

R. Tayloe representing the LSND Collaboration, "Status and Future Plans of the LSND Experiment" *Proceedings of the Ringberg Euroconference on New Trends in Neutrino Physics*, edited by B. A. Kniehl, G. G. Raffelt, and N. Schmitz (World Scientific, 1998), pp.36-45.

R. Tayloe representing the LSND Collaboration, "Evidence for Neutrino Oscillations from Muon Decay at Rest" *Proceedings of the 14th International Conference on Particles and Nuclei : PANIC 96*, edited by Carl E. Carlson and John J. Domingo, pp. 581-582.

R. Tayloe representing the PS185 Collaboration, "An Investigation of the $\overline{p}p \to \overline{\Lambda}\Lambda$ and $\overline{p}p \to \overline{\Sigma}^0\Lambda + c.c.$ Reactions near Threshold", *Proceedings of the 7th International Conference on the Structure of Baryons*, edited by B.F. Gibson et al (World Scientific, 1995), pp. 381-384.

R. Tayloe representing the PS185 Collaboration, "New results from the PS185 experiment at LEAR", *Proceedings of the International Conference on Intersections of Particle and Nuclear Physics*, edited by Susan J. Seestrom (AIP Press, 1994), pp. 445-447.

Articles and Preprints

(with M.G. Albrow et al.) "Physics at a Fermilab Proton Driver",arXiv:hep-ex/0509019 (2005).

(with S. J. Brice, S. Geer, and K. Paul) "Low-energy neutrino beams with an upgraded Fermilab proton driver", arXiv:hep-ex/0408135 (2004).

(with L. Bugel *et al.*), "A Proposal for a near detector experiment on the booster neutrino beamline: FINeSSE: Fermilab intense neutrino scattering scintillator experiment," arXiv:hep-ex/0402007 (2004).

(with B. von Przewoski and J. Whitmore) "A New Life for Indiana's Cyclotron", CERN Cour. **43N5**, 13 (2003).