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EDUCATION and EMPLOYMENT

Indiana University	**Professor**, Physics	2010-present
	Associate Professor, Physics	2007-2010
	Assistant Professor, Physics	2002-2007
Harvard University	**Research Associate**, Physics	1999-2002
Boston University	**Ph.D.**, Physics	1994-1999
Congressional Research Service, Library of Congress		1993-1994
Massachusetts Institute of Technology	**B.S.**, Physics	1989-1993

RESEARCH

Department of Energy Outstanding Junior Investigator

Awarded in 2003 for "Development of an Experiment to Search for Oscillations of ν_μ to ν_e Using the NuMI Neutrino Beam".

NOvA Experiment (FNAL E929)

• Co-spokesman 2006-present. NOvA is a collaboration of 169 physicists and engineers from 34 institutions and 6 countries.

• The NOvA experiment is to be placed in the NuMI beamline to search for electron neutrino appearance using beams of neutrinos and anti-neutrinos. The laboratory at Ash River, MN is complete and work is underway to install the 14 kt detector. Completion is expected in 2014. In addition to co-spokesman role, responsibilities have included near detector optimization, calculations of neutrino fluxes, calculations of potential cosmic-ray backgrounds, calculations of galactic supernova signal, and development of the reconstruction, simulation, and online monitoring frameworks.

• Participated and oversaw construction of NOvA prototype detector while on sabbatical at Fermilab from Fall 2010 - Summer 2011.

• Proposed to upgrade to NOvA near detector ("SciNOvA") with a fine-grained detector to aid background estimates and studies of di-nucleon correlations in-quasi elastic scattering.

• Supervise the work of two post-docs. Supervised undergraduate senior thesis, "NOvA's Supernova Neutrino Trigger: Analysis and Comparison with Other Neutrino Detectors" by Joulein Tatar (2006) and work of two graduate students studying cluster and vertex finding.

MINOS and MIPP Experiments (FNAL E875 and E907)

• Thesis advisor for Nathan Mayer who recently defended his thesis "Measurement of the $M_{\mathrm{A}}^{\mathrm{QE}}$ Parameter Using Multiple Quasi-Elastic Dominated Sub-samples in the MINOS Near Detector". This work represents the first measurement of M_A^{QE} using a high-A nucleus.

• Work on MIPP experiment (Fermilab E907) which made measurements of hadron production in support of the MINOS experiment. Primary responsibilities on MIPP were refurbishment and maintenance of the Ring Imaging Cherenkov counter, deployment of the interaction trigger used by the experiment, and coordination of the installation and alignment of the NuMI/MINOS target. Other responsibilities include coordination and production of a portion of the online software as well as the offline reconstructions tools. The software

framework has been made publicly available and is in use by other experiments. The MIPP experiment collected a total of 15 million events on nuclear targets ranging from H_2 to Bi. Of particular importance to MINOS are the 1.5M events collected on the NuMI target.
• Chair of the neutral-current PRL paper committee, MINOS's first publication of limits on participation of sterile neutrinos in oscillations at the atmospheric mass-splitting scale.
• Chair of the atmospheric neutrino PRL paper committee, MINOS's first publication of physics data recorded with the far detector.
• Member of charged-current PRL paper committee, first publication of MINOS results using the NuMI beam.
• NuMI Beam Monte Carlo Coordinator and Neutrino Beam Systematics Working Group Coordinator (–2006) with responsibility for the development and maintenance of beam transport Monte Carlo simulation programs used to predict the MINOS neutrino fluxes.
• Supervised graduate student Nicholas Graf who completed his Ph.D. in August of 2008 on "Measurement of the Charged Kaon Mass with the MIPP Ring Imaging Cherenkov Detector".
• Supervised undergraduate projects including development of DAQ monitoring software for the MIPP experiment, and studies of the optimal representation of the MINOS magnetic field in software.

Super–Kamiokande Experiment (1996-2006)
• Data analysis in the Atmospheric Neutrino and Proton Decay group, including analysis of oscillations of muon neutrinos to mixed sterile and active states and other exotic solutions to the atmospheric neutrino problem. Worked with IU Professor Alan Kostelecky to investigate possible signatures of CPT violation in the SK atmospheric neutrino data.
• Primary author *Phys. Rev. Let.*: "Evidence for oscillation of atmospheric neutrinos".
• Work on paper committees for combined analysis of SK-I fully-contained, partially-contained, and upward-going muon atmospheric neutrino data.

Boston University, 1995-1999
Super–Kamiokande Experiment, Research Assistant with Professor James Stone
Thesis: Evidence for Oscillations of Atmospheric Neutrinos with Super–Kamiokande

Congressional Research Service, Library of Congress, 1993-1994
• Conducted survey of state support for environmental technology R&D and research related to legislation, hearings, and constituent requests.

Massachusetts Institute of Technology, 1992-1993
Radio Astronomy
Undergraduate Research with Professor Jacqueline Hewitt
Thesis: A Search for Variability in the Einstein Ring MG1131+0456

TEACHING

Awards

• "Outstanding Contributions to Teaching" in 2007 selected by IU undergraduate physics students.
• Department of Physics Konopinski Award for Excellence in Teaching, 2004.
• Nominated for Student Alumni Association Student Choice Award, 2004.

Courses

• 2011 - 13: P221/2, Honors Physics I&II
Undertook a major reworking of our honors physics course. Developed 7 midterm laboratory projects to help students learn lab and data-analysis skills. Also developed 7 new problems sets in addition to the daily homework to give students practice with solving more open-ended problems.
• Spring 2010: P301, Modern Physics
• Fall 2009: P105, Basic Physics of Sound
• Spring 2006,'07: P453, Quantum physics I for undergraduates.
• Spring 2007: S405 Readings in Physics. Devised individualized course of study for undergraduate senior student interested in neutrino physics.
• Fall 2004,'05,'08, Spring '09: Instructor for P309, Intermediate Physics Laboratory. Laboratory course for 2^{nd} and 3^{rd} year physics majors.
• Fall 2004: Instructor for P801, Readings in physics. Devised an individual course of study for graduate student who was preparing for Ph.D qualifying examination.
• Fall 2002 - Spring 2004, Fall 2007: Instructor for P221 (fall semesters) and P222 (spring semesters), Physics I and II for science majors, calculus based.

Learning project

Participant in "Freshman Learning Project" (June 2008). FLP is an intensive learning process about teaching first-year students and gateway courses culminating in a two-week seminar that is designed to help faculty from all departments understand the obstacles faced by students in their introductory classes and to develop new ways to help students overcome these obstacles.

SERVICE, LEADERSHIP, and OUTREACH

• Member of "LBNE Physics Working Group" charged with physics studies related to the reconfiguration of the Long Baseline Neutrino Experiment, a planned $800M project to study leptonic CP violation.
• Member of program planning committee for 12^{th} and 13^{th} International Workshop on Next Generation Nucleon Decay and Neutrino Detectors, October 2011&2012
• Panelist for DOE review of scientific computing R&D conducted at National laboratories, February, 2011.
• Member of IU college promotions committee, 2011-2012
• Member of IU Scholarship of Teaching and Learning Advisory Board, 2011 - 2012
• Neutrino mass and mixing working group convener for the Conference on Intersections of Nuclear and Particle Physics, San Diego, May 2009.
• U.S. coordinator for the neutrino oscillations working group for the Neutrino Factory workshops in 2005 and 2006. NUFACT international scientific programming committee 2007–2009.
• Member of thesis defense committees for students on MINOS, D0, and MiniBooNE.
• Department committee work including graduate admissions, graduate student recruitment

(chair '08-'09), teaching of physics (chair '09-'10), prospective graduate student visit (chair '04-'07), department awards, and computer facilities.
• Fermilab User's Executive Committee, 2003-2004
• Participated in discussions of revisions to the neutrino pages in the particle data handbook in light of neutrino oscillation results.
• Participated in meetings at the Indiana Department of Education to set content and format of the high school Physics Core 40 End-of-Course Assessment test.
• Presented talks about neutrino physics to group of high school teachers visiting IU, groups of undergraduate physics club students visiting IU, and to general public at IU's annual physics open house.

PUBLICATIONS

Five most recent:
[1] P. Adamson *et al.* [MINOS Collaboration], "Measurements of atmospheric neutrinos and antineutrinos in the MINOS Far Detector," Phys. Rev. D **86**, 052007 (2012) [arXiv:1208.2915 [hep-ex]].
[2] P. Adamson *et al.* [MINOS Collaboration], "An improved measurement of muon antineutrino disappearance in MINOS," Phys. Rev. Lett. **108**, 191801 (2012) [arXiv:1202.2772 [hep-ex]].
[3] P. Adamson *et al.* [The MINOS Collaboration], "Search for Lorentz invariance and CPT violation with muon antineutrinos in the MINOS Near Detector," arXiv:1201.2631 [hep-ex].
[4] T. Akiri *et al.* [LBNE Collaboration], "The 2010 Interim Report of the Long-Baseline Neutrino Experiment Collaboration Physics Working Groups," arXiv:1110.6249 [hep-ex].
[5] K. Abe *et al.* [Super-Kamiokande Collaboration], "The Search for $n - \bar{n}$ oscillation in Super-Kamiokande I," arXiv:1109.4227 [hep-ex].

Five most cited:
[6] *Evidence for oscillation of atmospheric neutrinos.* Super-Kamiokande Collaboration (Y. Fukuda et al.). Phys. Rev. Lett. **81**:1562-1567,1998. hep-ex/9807003
[7] *Solar B-8 and hep neutrino measurements from 1258 days of Super-Kamiokande data.* Super-Kamiokande Collaboration (S. Fukuda et al.). Phys. Rev. Lett. **86**:5651-5655, 2001. hep-ex/0103032
[8] *Measurement of a small atmospheric muon-neutrino / electron-neutrino ratio.* Super-Kamiokande Collaboration (Y. Fukuda et al.)., Phys.Lett. **B433**:9-18, 1998. hep-ex/9803006.
[9] *Tau neutrinos favored over sterile neutrinos in atmospheric muon-neutrino oscillations.* Super-Kamiokande Collaboration (S. Fukuda et al.). Phys. Rev. Lett. **85**:3999-4003, 2000. hep-ex/0009001
[10] S. Fukuda *et al.* [Super-Kamiokande Collaboration], "Determination of solar neutrino oscillation parameters using 1496 days of Super-Kamiokande I data," Phys. Lett. B **539**, 179 (2002) [hep-ex/0205075].

Remaining in chronological order:
[11] P. Adamson *et al.* [MINOS Collaboration], "Search for the disappearance of muon antineutrinos in the NuMI neutrino beam," Phys. Rev. D **84**, 071103 (2011) [arXiv:1108.1509 [hep-ex]].
[12] P. Adamson *et al.* [MINOS Collaboration], "Improved search for muon-neutrino to electron-neutrino oscillations in MINOS," Phys. Rev. Lett. **107**, 181802 (2011)

[arXiv:1108.0015 [hep-ex]].
[13] P. Adamson *et al.* [MINOS Collaboration], "Active to sterile neutrino mixing limits from neutral-current interactions in MINOS," Phys. Rev. Lett. **107**, 011802 (2011) [arXiv:1104.3922 [hep-ex]].
[14] P. Adamson *et al.* [MINOS Collaboration], "First direct observation of muon antineutrino disappearance," Phys. Rev. Lett. **107**, 021801 (2011) [arXiv:1104.0344 [hep-ex]].
[15] P. Adamson *et al.* [The MINOS Collaboration], "Measurement of the neutrino mass splitting and flavor mixing by MINOS," Phys. Rev. Lett. **106**, 181801 (2011) [arXiv:1103.0340 [hep-ex]].
[16] P. Adamson *et al.* [MINOS Collaboration], "Measurement of the underground atmospheric muon charge ratio using the MINOS Near Detector," [arXiv:1012.3391 [hep-ex]].
[17] T. S. Nigmanov *et al.* [MIPP Collaboration], "Forward Neutron Production at the Fermilab Main Injector," Submitted to: Phys.Rev.D. [arXiv:1010.6291 [hep-ex]].
[18] P. Adamson *et al.* [MINOS Collaboration], "Observation in the MINOS far detector of the shadowing of cosmic rays by the sun and moon," Astropart. Phys. **34**, 457-466 (2011). [arXiv:1008.1719 [hep-ex]].
[19] P. Adamson *et al.* [MINOS Collaboration], "A Search for Lorentz Invariance and CPT Violation with the MINOS Far Detector," Phys. Rev. Lett. **105**, 151601 (2010). [arXiv:1007.2791 [hep-ex]].
[20] P. Adamson *et al.* [The MINOS Collaboration], "New constraints on muon-neutrino to electron-neutrino transitions in MINOS," Phys. Rev. **D82**, 051102 (2010). [arXiv:1006.0996 [hep-ex]].
[21] P. Adamson *et al.* [The MINOS Collaboration], *Search for sterile neutrino mixing in the MINOS long baseline experiment*, Submitted to Phys.Rev.D, arXiv:1001.0336 [hep-ex].
[22] P. Adamson *et al.* [MINOS Collaboration], *Neutrino and Antineutrino Inclusive Charged-current Cross Section Measurements with the MINOS Near Detector*, Submitted to Phys.Rev.D, arXiv:0910.2201 [hep-ex].
[23] N. Graf *et al.* [MIPP Collaboration], *Charged Kaon Mass Measurement using the Cherenkov Effect*, Accepted by Nucl.Instrum.Meth.A, arXiv:0909.0971 [hep-ex].
[24] P. Adamson *et al.* [MINOS Collaboration], *Observation of muon intensity variations by season with the MINOS far detector*, Phys. Rev. D **81**, 012001 (2010) [arXiv:0909.4012 [hep-ex]].
[25] P. Adamson *et al.* [MINOS Collaboration], *Search for muon-neutrino to electron-neutrino transitions in MINOS*, Phys. Rev. Lett. **103**, 261802 (2009) [arXiv:0909.4996 [hep-ex]].
[26] *Sudden stratospheric warmings seen in MINOS deep underground muon data,* S. Osprey *et al.* [MINOS collaboration], Geophys. Res. Lett. **36**, L05809 (2009).
[27] *First Study of Neutron Tagging with a Water Cherenkov Detector,* H. Watanabe *et al.* [Super-Kamiokande Collaboration], arXiv:0811.0735 [hep-ex].
[28] *First Measurement of ν_μ and ν_e Events in an Off-Axis Horn-Focused Neutrino Beam.* MiniBooNE/MINOS Collaboration (P. Adamson et al.), Phys. Rev. Lett. **102**, 211801 (2009) [arXiv:0809.2447 [hep-ex]].
[29] *Testing Lorentz Invariance and CPT Conservation with NuMI Neutrinos in the MINOS Near Detector.* MINOS Collaboration (P. Adamson et al.). Phys. Rev. Lett. **101**:151601 (2008). arXiv:0806.4945 [hep-ex]

[30] *Search for active neutrino disappearance using neutral-current interactions in the MINOS long-baseline experiment.* MINOS Collaboration (P. Adamson et al.). Phys. Rev. Lett. **101**:221804 (2008) arXiv:0807.2424 [hep-ex]
[31] *Measurement of Neutrino Oscillations with the MINOS Detectors in the NuMI Beam.* MINOS Collaboration (P. Adamson et al.). Phys. Rev. Lett. **101**:131802, 2008. arXiv:0806.2237 [hep-ex]
[32] *The Magnetized steel and scintillator calorimeters of the MINOS experiment.* MINOS Collaboration (D.G. Michael et al.). Nucl. Instrum. Meth. A **596**, 190 (2008) [arXiv:0805.3170 [physics.ins-det]].
[33] *Solar neutrino measurements in Super-Kamiokande-II.* Super-Kamiokande Collaboration (J.P. Cravens et al.). Phys. Rev. **D78**:032002, 2008. arXiv:0803.4312 [hep-ex]
[34] *Search for Matter-Dependent Atmospheric Neutrino Oscillations in Super-Kamiokande.* Super-Kamiokande Collaboration (K. Abe et al.). Phys. Rev. **D77**:052001, 2008. arXiv:0801.0776 [hep-ex]
[35] *A Study of Muon Neutrino Disappearance Using the Fermilab Main Injector Neutrino Beam.* MINOS Collaboration (P. Adamson et al.). Phys. Rev. **D77**:072002, 2008. arXiv:0711.0769 [hep-ex]
[36] *Study of TeV neutrinos with upward showering muons in Super-Kamiokande.* Super-Kamiokande Collaboration (S. Desai et al.). Astropart. Phys. **29**:42-54, 2008. arXiv:0711.0053 [hep-ex]
[37] *The NOvA Technical Design Report.* NOvA Collaboration (D.S. Ayres et al.).
[38] *Measurement of neutrino velocity with the MINOS detectors and NuMI neutrino beam.* MINOS Collaboration (P. Adamson et al.). Phys. Rev. **D76**:072005, 2007. arXiv:0706.0437 [hep-ex]
[39] *Search for Supernova Neutrino Bursts at Super-Kamiokande.* Super-Kamiokande Collaboration (M. Ikeda et al.). Astrophys. J. **669**:519-524, 2007. arXiv:0706.2283 [astro-ph]
[40] *Measurement of the atmospheric muon charge ratio at TeV energies with MINOS.* MINOS Collaboration (P. Adamson et al.). Phys. Rev. **D76**:052003, 2007. arXiv:0705.3815 [hep-ex]
[41] *Report of the US long baseline neutrino experiment study.* V. Barger et al., arXiv:0705.4396 [hep-ph]
[42] *Charge-separated atmospheric neutrino-induced muons in the MINOS far detector.* MINOS Collaboration (P. Adamson et al.). Phys. Rev. *D75*:092003, 2007. hep-ex/0701045
[43] *Proposal to upgrade the MIPP experiment.* MIPP Collaboration (D. Isenhower et al.). hep-ex/0609057
[44] *Search for neutral Q-balls in super-Kamiokande II.* Super-Kamiokande Collaboration (Y. Takenaga et al.). Phys. Lett. **B647**:18-22, 2007. hep-ex/0608057
[45] *Proposal for continuously-variable neutrino beam energy for the NuMI facility.* Mikhail Kostin, Sacha Kopp (Texas U.) , Mark Messier (Harvard U.) , Deborah A. Harris, Jim Hylen, Adam Para (Fermilab) . FERMILAB-TM-2353-AD, Jul 2006.
[46] *A Measurement of atmospheric neutrino flux consistent with tau neutrino appearance.* Super-Kamiokande Collaboration (K. Abe et al.). Phys. Rev. Lett. **97**:171801, 2006. hep-ex/0607059
[47] *Observation of muon neutrino disappearance with the MINOS detectors and the NuMI neutrino beam.* MINOS Collaboration (D.G. Michael et al.). Phys. Rev. Lett.

97:191801,2006. hep-ex/0607088
[**48**] *Review of neutrino oscllations experiments.* M.D. Messier (Indiana U.). In the Proceedings of 4th Flavor Physics and CP Violation Conference (FPCP 2006), Vancouver, British Columbia, Canada. hep-ex/0606013
[**49**] *Search for Diffuse Astrophysical Neutrino Flux Using Ultrahigh Energy Upward-Going Muons in Super-Kamiokande I.* Super-Kamiokande Collaboration (Molly E.C. Swanson et al.). Astrophys. J. **652**:206-215,2006. astro-ph/0606126
[**50**] *High energy neutrino astronomy using upward-going muons in Super-Kamiokande-I.* K. Abe et al. Astrophys. J. **652**:198, 2006. astro-ph/0606413
[**51**] *Three flavor neutrino oscillation analysis of atmospheric neutrinos in Super-Kamiokande.* Super-Kamiokande Collaboration (J. Hosaka et al.). Phys. Rev. **D74**:032002, 2006. hep-ex/0604011
[**52**] *Summary of the neutrino oscillations working group at NuFact05.* K. Long (Imperial Coll., London) , M.D. Messier (Indiana U.) , O. Yasuda (Tokyo Metropolitan U.). Prepared for 7th International Workshop on Neutrino Factories and Superbeams (NuFact 05), Frascati, Italy, Nucl. Phys. Proc. Suppl. **155**:102-110, 2006.
[**53**] *First observations of separated atmospheric nu(mu) and anti-nu(mu) events in the MINOS detector.* MINOS Collaboration (P. Adamson et al.). Phys. Rev. **D73**:072002, 2006. hep-ex/0512036
[**54**] *Observation of the anisotropy of 10-TeV primary cosmic ray nuclei flux with the Super-Kamiokande-I detector.* Super-Kamiokande Collaboration (G. Guillian et al.). Phys. Rev. **D75**:062003, 2007. astro-ph/0508468
[**55**] *Solar neutrino measurements in Super-Kamiokande-I.* Super-Kamkiokande Collaboration (J. Hosaka et al.). Phys.Rev.D73:112001, 2006. hep-ex/0508053
[**56**] *Search for nucleon decay via modes favored by supersymmetric grand unification models in Super-Kamiokande-I.* Super-Kamiokande Collaboration (K. Kobayashi et al.). Phys. Rev. **D72**:052007, 2005. hep-ex/0502026
[**57**] *A Measurement of atmospheric neutrino oscillation parameters by SUPER-KAMIOKANDE I.* Super-Kamiokande Collaboration (Y. Ashie et al.). Phys. Rev. **D71**:112005, 2005. hep-ex/0501064
[**58**] *Testing CPT conservation using atmospheric neutrinos.* M.D. Messier (Indiana U.). Prepared for 3rd Meeting on CPT and Lorentz Symmetry (CPT 04), Bloomington, Indiana, 4-7 Aug 2004. Published in Bloomington 2004, CPT and Lorentz symmetry.
[**59**] *Search for dark matter WIMPs using upward through-going muons in Super-Kamiokande.* Super-Kamiokande Collaboration (S. Desai et al.). Phys. Rev. **D70**:083523, 2004, Erratum-ibid. **D70**:109901, 2004. hep-ex/0404025
[**60**] *Evidence for an oscillatory signature in atmospheric neutrino oscillation.* Super-Kamiokande Collaboration (Y. Ashie et al.). Phys. Rev. Lett. **93**:101801, 2004. hep-ex/0404034
[**61**] *NOvA: Proposal to build a 30 kiloton off-axis detector to study $\nu_\mu \to \nu_e$ oscillations in the NuMI beamline.* By NOvA Collaboration (D.S. Ayres et al.). hep-ex/0503053
[**62**] *Limits on the neutrino magnetic moment using 1496 days of Super-Kamiokande-I solar neutrino data.* Super-Kamiokande Collaboration (D.W. Liu et al.). Phys. Rev. Lett. **93**:021802, 2004. hep-ex/0402015
[**63**] *Precise measurement of the solar neutrino day / night and seasonal variation in Super-Kamiokande-1.* Super-Kamiokande Collaboration (M.B. Smy et al.). Phys. Rev. **D69**:011104,2004. hep-ex/0309011

[**64**] *A Search for periodic modulations of the solar neutrino flux in Super-Kamiokande I.* Super-Kamiokande (J. Yoo et al.). Phys. Rev. **D68**:092002, 2003. hep-ex/0307070
[**65**] *Search for anti-nu(e) from the sun at Super-Kamiokande I.* Super-Kamiokande Collaboration (Y. Gando et al.). Phys. Rev. Lett. **90**:171302, 2003. hep-ex/0212067
[**66**] *Detector R and D for future neutrino experiments with the NuMI beamline.* G. Barenboim et al., A Report to Fermilab Directorate from the Study Group on Future Neutrino Experiments at Fermilab. hep-ex/0304017
[**67**] *Letter of intent to build an off-axis detector to study $\nu_\mu \to \nu_e$ oscillations with the NuMI neutrino beam.* NOvA Collaboration (D. Ayres et al.). hep-ex/0210005
[**68**] *Search for supernova relic neutrinos at SUPER-KAMIOKANDE.* Super-Kamiokande Collaboration (M. Malek et al.). Phys. Rev. Lett. **90**:061101, 2003. hep-ex/0209028
[**69**] *The Hadron hose: Continuous toroidal focusing for conventional neutrino beams.* J. Hylen et al. Nucl. Instrum. Meth. **A498**:29-51, 2003. hep-ex/0210051
[**70**] *Search for neutrinos from gamma-ray bursts using Super-Kamiokande.* Super-Kamiokande Collaboration (S. Fukuda et al.). Astrophys. J. **578**:317-324, 2002. astro-ph/0205304
[**71**] *Study of the atmospheric neutrino flux in the multi-GeV energy range.* Super-Kamiokande Collaboration (Y. Fukuda et al.). Phys. Lett. **B436**:33-41, 1998. hep-ex/9805006
[**72**] *Status of the atmospheric neutrino studies.* M.D. Messier (Harvard U.). Prepared for 3rd Workshop on Neutrino Oscillations and Their Origin (NOON 2001), Kashiwa, Japan, 5-8 Dec 2001.
[**73**] *The MINOS experiment.* M.D. Messier (Harvard U.). Prepared for 3rd Workshop on Neutrino Oscillations and Their Origin (NOON 2001), Kashiwa, Japan, 5-8 Dec 2001.
[**74**] *Proposal for hadron production measurements using the NA49 detector for use in long-baseline and atmospheric neutrino flux calculations.* M.G. Catanesi et al., CERN Server EXP CERN-NA-049
[**75**] *Constraints on neutrino oscillations using 1258 days of Super-Kamiokande solar neutrino data.* Super-Kamiokande Collaboration (S. Fukuda et al.). Phys. Rev. Lett. **86**:5656-5660, 2001. hep-ex/0103033
[**76**] *Atmospheric neutrino results from Super-Kamiokande.* M.D. Messier (Harvard U.). Prepared for DPF 2000: The Meeting of the Division of Particles and Fields of the American Physical Society, Columbus, Ohio, 9-12 Aug 2000. Published in Int.J.Mod.Phys.A16S1B:733-735,2001.
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[**78**] *Neutrino induced upward stopping muons in Super-Kamiokande.* Super-Kamiokande Collaboration (Y. Fukuda et al.). Phys. Lett. **B467**:185-193, 1999. hep-ex/9908049
[**79**] *Search for proton decay through $p \to \bar{K}^+$ in a large water Cherenkov detector.* Super-Kamiokande Collaboration (Y. Hayato et al.). Phys. Rev. Lett. **83**:1529-1533, 1999. hep-ex/9904020
[**80**] *Measurement of radon concentrations at Super-Kamiokande.* SuperKamiokade Collaboration (Y. Takeuchi et al.). Phys. Lett. **B452**:418-424, 1999. hep-ex/9903006
[**81**] *Observation of the east - west anisotropy of the atmospheric neutrino flux.* Super-Kamiokande Collaboration (T. Futagami et al.). Phys. Rev. Lett. **82**:5194-5197, 1999. astro-ph/9901139
[**82**] *Constraints on neutrino oscillation parameters from the measurement of day night*

solar neutrino fluxes at Super-Kamiokande. Super-Kamiokande Collaboration (Y. Fukuda et al.). Phys. Rev. Lett. **82**:1810-1814, 1999. hep-ex/9812009
[**83**] *Measurement of the solar neutrino energy spectrum using neutrino electron scattering*. Super-Kamiokande Collaboration (Y. Fukuda et al.). Phys. Rev. Lett. **82**:2430-2434, 1999. hep-ex/9812011
[**84**] *Measurement of the flux and zenith angle distribution of upward through going muons by Super-Kamiokande*. Super-Kamiokande Collaboration (Y. Fukuda et al.). Phys. Rev. Lett. **82**:2644-2648, 1999. hep-ex/9812014
[**85**] *Calibration of Super-Kamiokande using an electron linac*. Super-Kamiokande Collaboration (M. Nakahata et al.). Nucl. Instrum. Meth. **A421**:113-129, 1999. hep-ex/9807027
[**86**] *Search for proton decay via $p \to e^+\pi^0$ in a large water Cherenkov detector*. Super-Kamiokande Collaboration (M. Shiozawa et al.). Phys. Rev. Lett. **81**:3319-3323, 1998. hep-ex/9806014
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[**88**] *Variability in the Einstein ring gravitational lens MG 1131+0456*, J.N. Hewitt, G.H. Chen, M.D. Messier, Astronomical Journal **109**, (1995) 1956.

PRESENTATIONS

• *MINOS, NOvA : Long baseline neutrino experiments at Fermilab*, XLVIIth Rencontres de Moriond, Electroweak Interactions and Unified Theories Session, La Thuile, Italy, 4 – 10 March 2012.
• Panelist, "Neutrino Oscillation Experiments in the 2010's in Light of Recent θ_{13} Results", Fundamental Physics at the Intensity Frontier, Rockville, MD, November 30 - December 2, 2011.
• *The NOvA Experiment*, Physics department colloquium, Tufts University, Medford, MA, November 4$^{\text{th}}$, 2011.
• *The NOvA Experiment*, Colloquium on "Towards CP Violation in Neutrino Physics", Prague, Czech Republic. October 10th, 2011.
• *Status of the NOvA Experiment and Near Detector Options*, Presentation to the Fermilab Physics Advisory Committee at their annual summer retreat in Aspen, CO. June 23, 2011.
• *Recent results from long baseline neutrino experiments*, Conference on Heavy Quarks and Leptons, Laboratori Nazionali di Frascati, Italy, October 11 – 15, 2010.
• Physics department colloquium, University of Tennessee, Knoxville, February 22, 2010.
• Physics department colloquium, Rose-Hulman Institute of Technology, May 10, 2010.
• *Much ado about (almost!) nothing: Experimental searches for neutrino mass and mixing*, Inaugural Fall 2009 Meeting of the Prairie Section of the American Physical Society, Iowa City, Iowa, November 12-14, 2009.
• *Progress on experiments with existing facilities: Neutrinos*, 4$^{\text{th}}$ Workshop on Physics with a high intensity proton source, Fermilab, Batavia, IL, November 9–10, 2009
• *Totally Active Scintillator Detectors*, European Strategy for Future Neutrino Physics, CERN, Geneva CH, October 1–3, 2009.
• *The NOvA Experiment at Fermilab*, Symposium on the Chemistry and Physics of Neutrino Experiments, 238th National Meeting of the American Chemical Society, Washington, D.C., August 16–20, 2009.

• *Detector basics*, Three lectures given as part of the International Neutrino Summer School, Fermilab, July 7–17, 2009.
• *The NOvA Experiment*, Public lecture on the physics of the NOvA experiment following the ground breaking at the laboratory cite, Orr, MN, May, 2009.
• *Existing and future long-baseline neutrino oscillation experiments*, 9$^{\text{th}}$ meeting of the International Committee for Future Accelerators, SLAC National Accelerator Laboratory, October 28-31, 2008.
• *The NOvA Experiment at Fermilab*, 34$^{\text{th}}$ International Conference on High Energy Physics, Philadelphia, PA, July 29 - August 5, 2008.
• *Neutrino Detectors for Future Facilities*, three lectures given as part of the Neutrino Factory Summer School, Benasque, Spain, June 16-18, 2008.
• *The NOvA Prototype Detectors* and *Overburden requirements and cosmic-ray backgrounds for neutrino experiments*, International Workshop on the Golden Channel at a Neutrino Factory, IFIC, Valencia, Spain, June 27-30, 2007.
• *The NOvA Experiment*, CRYODET 2 Workshop, LNGS, Grand Sasso, June 14-15, 2007.
• *Neutrino oscilation working group report - Experiments*, 8$^{\text{th}}$ International Workshop on Neutrino Factories, Superbeams, and Betabeams, UC Irvine, California, August 24-30, 2006.
• *NOvA and Other U.S. Activities*, 2nd International Workshop on a Far Detector in Korea for the J-PARC Neutrino Beam, Soeul, Korea, July 13,14, 2006.
• *Review of neutrino oscillation experiments*, 4$^{\text{th}}$ Flavor Physics and CP Violation Conference (FPCP), Vancouver, British Columbia, Canada, April 9-12, 2006.
• *The MIPP Experiment at Fermilab*, III International Workshop on "Neutrino Oscillations in Venice", Istituto Veneto di Scienze, Lettere ed Arti, Palazzo Franchetti - Campo S.Stefano Venice, Italy. February 7-10, 2006,
• *The MIPP Experiment*, 5$^{\text{th}}$ International Workshop on Neutrino Beams and Instrumentation, Fermilab, IL, July 6-11, 2005.
• *Physics reach of future superbeam facilities*, Plenary talk to the 7$^{\text{th}}$ International Workshop on Neutrino Factories and Superbeams, Frascati, Italy, June 21-26, 2005.
• *Atmospheric and Accelerator Neutrinos Experiments*, Invited talk, Joint meeting of the DPF and DNP divisions of the American Physical Society, Tampa, FL, April 16-19, 2005.
• *Life in the Neutrino Matrix, Current and Future Directions in Neutrino Physics*, Physics Department Colloquium, Indiana University, February 2, 2005.
• *Much Ado About (Almost!) Nothing: Experimental Searches for Neutrino Mass and Mixing*, Physics Department Colloquium, Boston University, October 19, 2004.
• *The NOvA Experiment*, XXIst International Conference on Neutrino Physics and Astrophysics (Neutrino'04), Paris, France, June 14-19, 2004.
• *Capabilities of a Super–Kamiokande Class Detector for Use in Long Baseline Experiments*, Neutrino Super Beam, Detectors and Proton Decay, Joint BNL/UCLA - American Physical Society Workshop, Brookhaven National Laboratory, March 3-5, 2004.
• *Pion Production Experiments*, Weak Interactions and Neutrinos (WIN'03), Lake Geneva, Wisconsin, October 6-11, 2003.
• *The MIPP Experiment*, Indiana University Cyclotron Facility Seminar Series, January 31, 2003.