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Education

2008 PhD in Physics, University of Washington, Seattle, Washington

2003 MSc in Physics, University of Washington, Seattle, Washington

2000 BS in Physics, *Magna cum laude*, Arizona State Univeristy, Tempe, Arizona

Publications & Presentations

Journal articles

"there are definitely more than this now, including edelweiss papers"

"An Independent Measurement of the Total Active 8B Solar Neutrino Flux Using an Array of 3He Proportional Counters at the Sudbury Neutrino Observatory", B. Aharmin, et al, Phys. Rev Lett. 101 111301, (2008)

"An array of low-background 3He proportional counters for the Sudbury Neutrino Observatory", J. F. Amsbaugh, et al, Nucl. Instrum. Meth. A 579, 1054 (2007)

"Sudbury Neutrino Observatory Neutral Current Detectors Signal Readout System", G. A. Cox, et al, IEEE Trans. Nucl. Sci. 51, 2227 (2004)

"Sudbury Neutrino Observatory Neutrino Current Detector Acquisition Software Overview", M. A. Howe, et al, IEEE Trans. Nucl. Sci. 51, 878 (2004)

"Sudbury Neutrino Observatory Neutral Current Detectors Signal Readout System", John F. Amsbaugh et al. Nucl. Instrum. Meth. A, 579, 1054-1080,

"Measurement of the nu(e) and Total 8B Solar Neutrino Fluxes with the Sudbury Neutrino Observatory Phase I Data Set", SNO Collaboration. nucl-ex/0610020.

"A Search for Neutrinos from the Solar hep Reaction and the Diffuse Supernova Neutrino Background with the Sudbury Neutrino Observatory", SNO Collaboration. ApJ 653, 1545 (2006).

"A Search for Periodicities in the 8B Solar Neutrino Flux Measured by the Sudbury Neutrino Observatory", SNO Collaboration. Phys. Rev. D. 72 052010 (2005).

"Electron Energy Spectra, Fluxes, and Day-Night Asymmetries of 8B Solar Neutrinos from the 391-Day Salt Phase SNO Data Set", SNO Collaboration. Phys. Rev. C. 72 055502 (2005).

"Electron Antineutrino Search at the Sudbury Neutrino Observatory", SNO Collaboration. Phys. Rev. D. 70 093014 (2004).

"Constraints on Nucleon Decay via Invisible Modes from the Sudbury Neutrino Observatory", SNO Collaboration. Phys. Rev. Lett. 92, 102004 (2004).

"Neutral Current and Day Night Measurements from the Pure D2O Phase of SNO", SNO Collaboration. Nucl. Phys. Proc. Suppl. 118, pp. 3-14 (2003).

"Measurement of the Total Active 8B Solar Neutrino Flux at the Sudbury Neutrino Observatory with Enhanced Neutral Current Sensitivity", SNO Collaboration. Phys. Rev. Lett. 92 181301 (2004).

"Direct Evidence for Neutrino Flavor Transformation from Neutral-Current Interactions in SNO", SNO Collaboration. AIP Conf. Proc. 646, pp. 43-58 (2003).

"Solar Neutrino Observations at the Sudbury Neutrino Observatory", SNO Collaboration. Proceedings of 30th SLAC Summer Institute on Particle Physics. pp TTH01 (2002). hep-ex/0211013.

"Measurement of CC Interactions Produced by B-8 Solar Neutrinos at SNO", SNO Collaboration. Prepared for International Europhysics Conference on High-Energy Physics (HEP 2001), Budapest, Hungary, 12-18 Jul 2001.

"Measurement of Day and Night Neutrino Energy Spectra at SNO and Constrains on Neutrino Mixing Parameters", SNO Collaboration. Phys. Rev. Lett. 89 011302 (2002).

"Direct Evidence for Neutrino Flavor Transformation from Neutral-Current Interactions in the Sudbury Neutrino Observatory", SNO Collaboration. Phys. Rev. Lett. 89 011301 (2002).

"First Results from the Sudbury Neutrino Observatory", SNO Collaboration. Prepared for the NO-VE International Workshop on Neutrino Oscillations in Venice, Italy, 24-26 Jul 2001.

"Neutrino Observations from the Sudbury Neutrino Observatory", SNO Collaboration. AIP Conf. Proc. 610, pp 218-230 (2002).

"Measurement of □e+d □p+p+e- Interactions Produced by 8B Solar Neutrinos at the Sudbury Neutrino Observatory", SNO Collaboration. Phys. Rev. Lett. 87 071301 (2001).

Presentations

2011 "Edelweiss at UW", CENPA Seminar, Univeristy of Washington, Seattle, Washington
Invited Talk

2011 "APS meeting" "SNO's Final Solar Neutrino Flux Measurement: The NCD Phase",
2008 Institut fur Kernphysik Seminar, Karlsruhe, Germany

2005 "Event Identification in SNO's NCD Phase", APS/Japanese Physics Society - HAW05, Kanapali, Maui, Hawaii

2003 "Need to put in all presentations"

Professional Experience

2010- *Postdoktorand*, IEKP, Karlsruher Institut fur Technologie, Karlsruhe, Germany
present

Member of the EDELWEISS collaboration (WIMP Analysis)
Member of the EURECA experiment (Conceptual design development)

2009 *Visiting Scholar*, CENPA, University of Washington, Seattle, Washington

KATRIN focal-plane detector characterization and commissioning (analysis software)

2008-2009 *Assistant Professor*, Digipen Institute of Technology, Redmond, Washington

Calculus-based

2008 *Postdoktorand*, IKP, Karlsruher Institut fur Technologie, Karlsruhe, Germany

Member of the KATRIN collaboration (Bremsstrahlung production simulations for KATIN rear-wall)

2000-2008 *Graduate Research Assistant*, CENPA, University of Washington, Seattle, Washington
Advisor: John F. Wilkerson

Member of the SNO collaboration
Software:
Hardware:
Analysis:

1999-2000 *Lab Assistant*, Ion Beam Analysis of Materials (IBeAM) Lab, Arizona St. Univerity, Tempe, Arizona
Advisor: Robert Culbertson

Trained to run IBeAM Tandem Accelerator (MV)
Debugged and wrote LabVIEW data acquisition software

1998-1999 *Teaching Assistant*, Arizona St. Univerity, Tempe, Arizona

Laboratory section of introductory physics course.

1998 *Summer Research Assistant*, NSF Research Experience for Undergraduates Program, Purdue Univeristy, West Lafayette, Indiana
Advisor: Albert Chang

Investigation of quantum-scale electron-beam lithography on GaAs substrates utilitzing a scanning electron microscope.

Committes and Affiliations

APS Member

Units: Division of Nuclear Physics, Division of Particles and Fields, Forum for Graduate Student Affairs, Northwest Section

2003 *APS Forum for Graduate Student Affairs Nominating Committee*

Society of Physics Students, Arizona State Univeristy, Tempe, Arizona

Sigma Pi Sigma Honor Society, Arizona State Univeristy Chapter, Tempe, Arizona

Software and Computing

Fluent in C (DAQ software, analysis), C++ (analysis, DAQ software), Python, ROOT software package

General experience with Fortran (simulation, theoretical calculations), PENELOPE, Matlab, LabVIEW, Perl, Geant4, Grid computing (Sun Grid, XGrid), Databases (SQL, CouchDB), Javascript, HTML, XML