



College of William and Mary  
Curriculum Vita

PERSONAL INFORMATION

1. **Name:** **Patricia Vahle**  
Office Address: William Small Physical Laboratory  
Department of Physics  
College of William and Mary  
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Home Address: 82A Regina Road  
London N4 3PP UK  
(until December 2007)  
Phone: (505) 480-6799
2. **Position:** Assistant Professor

EDUCATION

3. Academic degrees
  - Ph.D. (2004), Physics, University of Texas at Austin;  
Karol Lang, Supervisor; "The Calibration of Electromagnetic Interactions in the MINOS Detectors"; FERMILAB-THESIS-2004-35; UMI-31-43483-MC
  - B.S. (1997), Physics and Mathematics, New Mexico State University

ACADEMIC POSITIONS

4. Teaching and research positions
  - College of William and Mary (Williamsburg, VA); Assistant Professor in Physics; August 2007-Present
  - University College London (London, England); Postdoctoral Research Fellow; August 2004-January 2008

- University of Texas at Austin (Austin, TX); Graduate Research Assistant and Teaching Assistant; September 1998-August 2004
- Argonne National Laboratory (Argonne, IL); Undergraduate Internship; Summers of 1995, 1996, 1997
- New Mexico State University (Las Cruces, NM); Mathematics and Physics Tutor; September 1993-August 1998

## HONORS, PRIZES AND AWARDS

5. Professional prizes, awards, honors, editorial positions on scholarly journals, service on review boards outside the College and offices in professional societies

- SET for Britain's Poster Competition for Young Physicists at the House of Commons, Runner-up to the Cavendish Medal, 2005
- University of Texas at Austin Continuing Fellowship, 2002-2003
- DOE Student Delegate to the 51st Meeting of Nobel Laureates in Lindau, Germany, 2001
- Deborah Louise Thomas Outstanding Tutor Award, 1994, 1996
- American Vacuum Society Scholarship, 1993
- New Mexico State University, Presidents Association Scholarship recipient, 1993-1997

## COURSES TAUGHT

6. Courses taught

- Particle and Nuclear Physics (Co-lectured, University College London, 2006)
- Third Year Physics Project Course (University College London, 2005, 2006)

## FELLOWSHIPS AND GRANTS

7. Fellowships and Grants

- a. All fellowships, grants, contracts awarded by outside agencies (None)
- b. All summer grants and Faculty Research Assignments received from William and Mary (None)

## RESEARCH

8. Scholarly activity under the following separate headings with full bibliographic data

- a. Refereed publications in periodicals, chapters in books, law review articles and conference proceedings
  - MEASUREMENT OF THE ATMOSPHERIC MUON CHARGE RATIO AT TeV ENERGIES WITH MINOS, P. Adamson *et al.* Phys. Rev. D76:052003, 2007.
  - CHARGE-SEPARATED ATMOSPHERIC NEUTRINO-INDUCED MUONS IN THE MINOS FAR DETECTOR, P. Adamson *et al.* Phys. Rev. D75:092003, 2007.
  - OBSERVATION OF MUON NEUTRINO DISAPPEARANCE WITH THE MINOS DETECTORS AND THE NuMI NEUTRINO BEAM, D.G. Michael *et al.* Phys. Rev. Lett. 97:191801, 2006.
  - THE MINOS CALIBRATION DETECTOR, P. Adamson, *et al.* Nucl. Instrum. Meth. A556, 2006. pp. 119-133.
  - FIRST OBSERVATIONS OF SEPARATED ATMOSPHERIC  $\nu_\mu$  and  $\bar{\nu}_\mu$  EVENTS IN THE MINOS DETECTOR, P. Adamson *et al.* Phys. Rev. D73:072002, 2006.
  - CHARACTERIZATION OF 1600 HAMAMATSU 16-ANODE PHOTOMULTIPLIERS FOR THE MINOS FAR DETECTOR, K. Lang, *et al.* Nucl. Instrum. Meth. A545, 2005. pp. 852-871.
  - SPONTANEOUS LIGHT EMISSION FROM FIBERS IN MINOS, S. Avvakumov, *et. al.* Nucl. Instrum. Meth. A545, 2005. pp. 145-155.
  - ON THE LINEARITY OF THE MINOS LIGHT-INJECTION CALIBRATION SYSTEM. P. Adamson, *et al.* Nucl. Instrum. Meth. A521, 2004. pp. 361-366.

- A COMPREHENSIVE CHARACTERIZATION OF HAMAMATSU 16- AND 64- ANODE PMTS, K. Lang *et al.* Nucl. Instrum. Meth. A461, 2001. pp. 571-573.
- INTRODUCING SUPERSYMMETRIC QUANTUM MECHANICS VIA THE DIRAC EQUATION, Patricia Vahle and Budh Ram. American Journal of Physics. November 1997, p. 1112-1113.

b. Books written (None)

c. Edited volumes

- *Neutrino Oscillations: Present Status and Future Plans*, Jennifer Thomas and Patricia Vahle, Editors. To be published by World Scientific Publishing.

d. Articles published in non-refereed conference proceedings

- MINOS RESULTS AFTER TWO YEARS RUNNING, P. Vahle *et al.* Twelfth International Workshop on Neutrino Telescopes, Venice, Italy, March 6-9, 2007.
- FIRST RESULTS FROM THE MINOS CALIBRATION DETECTOR, P. Vahle *et al.*, Presented at the 10th International Conference on Calorimetry in High Energy Physics, California Institute of Technology, Pasadena, California, March 25-29, 2002.

e. Invited scholarly papers and talks

- 'OBSERVATION OF MUON NEUTRINO DISAPPEARANCE WITH THE MINOS DETECTORS IN THE NuMI NEUTRINO BEAM. 2007 Annual Meeting of the Division of Nuclear Physics of the American Physical Society, Newport News, VA. October 10-13, 2007.
- MINOS RESULTS AFTER TWO YEARS RUNNING. XII International Workshop on Neutrino Telescopes, Istituto Veneto di Scienze, Lettere ed Arti, Palazzo Franchetti-Campo S. Stefano, Venice, March 6-9, 2007.

- OBSERVATION OF MUON NEUTRINO DISAPPEARANCE WITH THE MINOS DETECTORS IN THE NuMI NEUTRINO BEAM. Eighth International Workshop on Neutrino Factories, Superbeams and Betabeams. University of California, Irvine CA. August 24-30, 2006.

- f. Contributed scholarly papers and talks (None)
- g. Reviews of books, software, etc. (None)
- h. Juried shows, exhibitions, and performances (None)
- i. Unjuried shows, exhibitions, and performances (None)
- j. Unrefereed publications not listed above (None)
- k. Research reports from grant or contract work (None)
- l. Performances by others of music, poetry, etc. you have written (None)
- m. Published software, audio, multimedia, etc. materials (None)
- n. Work in progress or submitted
  - MINOS, J. Thomas and P. Vahle, to be submitted to Contemporary Physics.
- o. Other scholarly activity, including papers presented at professional meetings and publications of abstracts
  - THE MINOS NEAR DETECTOR. The XXII International Conference on Neutrino Physics and Astrophysics Poster Session, Santa Fe, New Mexico, June13-19, 2006.

## PROFESSIONAL SERVICE

### 9. Professional Service Activities

- a. College committee service (None)
- b. Other professional service not included in item 5 above

- Co-convener, MINOS  $\nu_e$  working group, MINOS Collaboration (2007-Present)
- Co-convener, MINOS beam systematics working group, MINOS Collaboration (2006-2007)