

Priscilla Cushman Biographical Sketch

Education

Harvard University	Physics and Philosophy	AB	1976
Rutgers University	Physics	PhD	1985
Rockefeller University	HEP Research Fellow		1985-88

Professional Experience

2000-present	Director of Undergraduate Studies in Physics, University of Minnesota
2000-present	Professor of Physics, University of Minnesota
1993-2000	Associate Professor of Physics, University of Minnesota
1993	Associate Professor of Physics, Yale University
1988-1992	Assistant Professor of Physics, Yale University

Most-closely related Publications

1. D.S. Akerib et al. (CDMS Collab), Limits on Spin-Independent Interactions of Weakly Interacting Massive Particles with Nucleons from the Two-Tower Run of the Cryogenic Dark Matter Search, Phys. Rev. Lett. **96**, 011302 (2006)
2. P. Cushman, Status of Low Background Counting Facilities in the USA, LRT2004, Sudbury, Canada, Dec 12-14, 2004. AIP Conf Proc **785**, pp 20-26. (ed. B. Cleveland, R. Ford, M.Chen).
3. E. Aprile, P. Cushman, K. Ni, P. Shagin Detection of liquid xenon scintillation light with a Silicon Photomultiplier, Nucl. Instr. and Meth. A **556**, pp 215-218 (2006). physics/0501002
4. P. Cushman, Muon g-2 constraints on SUSY dark matter reviewed and predicted, New Astronomy Reviews Vol 49, Pages 125-131 (2005); hep-ph/0501190.
5. D. S. Akerib et al. (CDMS Collaboration) Limits on spin-dependent WIMP-nucleon interactions from the Cryogenic Dark Matter Search, Phys. Rev. D **73**, 011102 (2006)

Other Significant or Related Publications

1. D.S. Akerib et al. (CDMS Collab) Exclusion Limits on the WIMP-Nucleon Cross-Section from the First Run of the Cryogenic Dark Matter Search in the Soudan Underground Lab Phys. Rev. **D72**, 052009 (2005). arXiv:astro-ph/0507190
2. G.W. Bennett et al. (g-2 Collab) Measurement of the Negative Muon Anomalous Magnetic Moment to 0.7 ppm, hep-ex/0401008, Physical Review Letters **92**, 161802 (2004).
3. D.S. Akerib et al. (CDMS Collab) First Results from the Cryogenic Dark Matter Search in the Soudan Underground Laboratory, Physical Review Letters **93**, 211301 (2004).
4. P.B. Cushman and A.J. Heering Problems and Solutions in high-rate multi-channel Hybrid Photodiode design: The CMS Experience. Transactions in Nuclear Science (TNS-00147-2001), IEEE Trans.Nucl.Sci.49:963-970 (2002)
5. G.W. Bennett et al. (g-2 Collab) Measurement of the Positive Muon Anomalous Magnetic Moment to 0.7 ppm. Phys.Rev.Lett.89:101804, Erratum-ibid.89:129903 (2002)

Synergistic Activities

1. Performed numerous reviews of University Physics Departments via site visits (2000-2005). Organized by APS Committee on the Status of Women in Physics, researching climate for women and minorities.
2. Developed new physics LibEd curriculum at Minnesota using energy and environmental themes. Wrote textbook: Energy and the Environment: Physics Principles and Applications, P.Cushman, ISBN 0-7872-5391-X, Kendall/Hunt Publishers (1998).
3. Physics Committees: Argonne Lab DOE Review (2006), NSF PNA Review panel (2005), NSF-DOE SAGENAP Committee (2002), SLAC Review (2001), Brookhaven User's Executive Committee (1997-1999) , Member-at-large APS Topical Group on Fundamental Constants (1996-98),
4. Science Editor (pro bona) Carolrhoda Books (division of Lerner) - Biographies of scientists and inventors for Middle School readers: Einstein, Farnsworth, etc.
5. "Science Works!" a Minneapolis public schools systematic reform effort in K-8 science. A program supported in part by the National Science Foundation and Medtronics. Worked in the Partnership Teaching program and the Science Kit Training Sessions for Elementary Teachers.
6. Principle Investigator – QuarkNet chapter of University of Minnesota. Summer conferences for high school teachers, development of a network for HEP-related special education materials for high schools.
7. Outreach coordinator for CDMS at Soudan and the RET-Minnesota summer teachers.
8. DUSEL Solicitation 1: co-PI of Low-Background Counting Facilities and Prototyping working group

Collaborators (authors)

CDMS II Collaboration http://cdms.berkeley.edu/cdms_collab.html

The g-2 Collaboration <http://www.g-2.bnl.gov/collab.html>

US-CMS HCAL Collaborators: specifically A. Heering, D. Green, J.Freeman, J. Elias, A. Skuja, E. Aprile (Columbia)

Graduate Advisor: Prof. Tom Devlin, Rutgers University

Postdoc Sponsor: Prof. Rodney Cool (deceased), Rockefeller University

19 thesis grad students and 9 postdocs over 14 years

Graduate Students (last 5 yrs)

Joel Kindem (VP, DigiRad Corp.), Long Duong (University of Minnesota), Ron McNabb (University of Illinois, Champaign-Urbana), Steven Giron (College of St Catherine), Dean Miller (Robins, Kaplan, Miller & Ciresi), Ben Bousquet (College of Gustavus Adolphus) , Angela Reisetter, Tao Qian, , Xinxe Qiu

Postdoctoral Scholars (last 5 yrs)

Charles Timmermans (University of Nijmegen, Netherlands), David Zimmerman (Lawrence Berkeley National Laboratory), Ivan Kronkvist (Software Services, Minneapolis), Arjan Heering (FNAL/CERN), Long Duong (University of Minnesota), Petr Shagin (Rice University)