

Priscilla Cushman

Education

Harvard University	Physics and Philosophy	AB	1976
Rutgers University	Physics	PhD	1985

Professional Experience

2008-present Co-Spokesman of SuperCDMS Experiment
2004-present Manager of the Low Background Counting Facility, Soudan Lab
2000-2005 Director of Undergraduate Studies, University of Minnesota
2000-present Professor of Physics, University of Minnesota
1993-2000 Associate Professor of Physics, University of Minnesota
1992-1993 Associate Professor of Physics, Yale University
1988-92 Assistant Professor of Physics, Yale University
1989-90 SSC Fellowship (DOE)
1985-88 Research Associate, Rockefeller University
1979-85 Research Assistant, Fermi National Laboratory
1976-79 Senior Scientist, Aeronautical Research Associates of Princeton

Five Publications related to Proposal

Z. Ahmed et al. (CDMS Collaboration) Dark Matter Search Results from the CDMS II Experiment *Science* 26 March 2010 Vol. 327. no. 5973, pp. 1619 – 1621.

P. Cushman, Dark matter searches: Technology and backgrounds, Nucl. Instr. and Meth. **A579**, pp 437-442 (2007)

P. Cushman, Low Level Counting Infrastructure and Requirements. Chapter 8 of the DUSEL NSF Solicitation 1 White Paper. December 2006. peer-reviewed and posted at http://www.deepscience.org/docs_reports/

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.

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).

Five Recent Publications

Z. Ahmed et al. (CDMS Collaboration) Low-threshold analysis of CDMS shallow-site data. Phys Rev **D82**:122004 (2010) arXiv:1010.4290

Z. Ahmed et al. (CDMS Experiment) Search for Axions with the CDMS Experiment, Cover Article: 2 October 2009 issue of Phys. Rev. Lett. **103**, No.141802 (2009) arXiv:0902.4693v1

G.W. Bennett et al. (Muon (g-2) Collab.) An Improved Limit on the Muon Electric Dipole Moment, Phys. Rev. D 80, 052008 (2009) arXiv:0811.1207v1

Z. Ahmed et al. (CDMS Collaboration) A Search for WIMPs with the First Five-Tower Data from CDMS at the Soudan Underground Laboratory, Phys. Rev. Lett. 011301 Jan 2009. [arXiv:0802.3530v2 astro-ph]

G. W. Bennett et al. (Muon (g-2) Collaboration), Final report of the E821 muon anomalous magnetic moment measurement at BNL, Phys. Rev. **D73**, 072003 (2006)

Synergistic Activities

1. Science review panels: e.g. HEPAP (2007-2009), Review of Laboratory Non-Accelerator Research Program (Sept 2010), various NSERC, NSF and DOE reviews.
2. APS Committee on the Status of Women in Physics: (Site visits to 4 universities).
3. Science Editor (pro bona) Carolrhoda Books (division of Lerner) - Biographies of scientists and inventors for Middle School readers: Einstein, Farnsworth, etc.
4. Soudan CDMS outreach coordinator. Tours, curriculum packets, open house, displays.
5. Founded UMinn Quarknet chapter, PI for 5 yrs, organize HS teacher conferences.

Collaborators

CDMS II and SuperCDMS Collaboration

US-CMS HCAL Collaborators: specifically A. Heering, D. Green, J. Freeman, A. Skuja
AARM (NSF) K.Keeter, D-M Mei, R. Schnee

Graduate Advisor: Prof. Tom Devlin, Rutgers University

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

23 thesis grad students and 14 postdocs over 20 years

Graduate Students (last 5 yrs)

Ron McNabb (University of Illinois, Champaign-Urbana), Ben Bousquet (College of Gustavus Adolphus), Angela Reisetter (St Olafs), Tao Qian (Penn), Xinjie Qiu (Stanford), Scott Fallows (Minnesota), Tom Hofer (Minnesota), Matthew Fritts (Minnesota)

Postdoctoral Scholars (last 5 yrs)

Long Duong (SBIR), Petr Shagin (Rice University), Oleg Kamaev (Queens University), Anthony Villano (Minnesota)