

ELIZABETH J. BEISE

Department of Physics, University of Maryland
College Park, MD 20742

web page: <http://www.glue.umd.edu/~beise>

Professional Preparation:

Carleton College, Northfield, MN,	Physics	B.A. (<i>cum laude</i>), 1981
Massachusetts Institute of Technology	Physics	Ph.D., 1988
California Institute of Technology	Nuclear Physics	1988-93

Appointments:

2002-	Professor, Department of Physics, University of Maryland
2004-2006	National Science Foundation Program Director for Nuclear Physics
1997-2002	Associate Professor, Department of Physics, University of Maryland
1993-97	Assistant Professor, Department of Physics, University of Maryland
1990-93	Senior Research Fellow Kellogg Radiation Lab, California Institute of Technology
1988-90	Research Fellow, Kellogg Radiation Lab, California Institute of Technology

Honors and Awards:

U Md Faculty-mentor Phillip Merrill Scholarship Award (2004-05)
APS Fellow, 2002
Maria Goeppert-Mayer Award, APS, 1998
APS Centennial Speaker, 1998/99 academic year
University of Maryland General Research Board Semester Award, Fall 1997
Peter T. Demos Award for research at the Bates Accelerator, 1988

Selected Professional Service:

MIT Laboratory for Nuclear Science Advisory Board, 2007-
American Physical Society (APS) General Councillor, 2007-2010
APS Topical Group on Hadronic Physics, Nominating Committee, 2007
APS Budget Committee, 2008-2010
APS Lillienfeld Prize Committee, 2007-2009 (Chair 2008)
APS Division of Nuclear Physics (DNP) Committees:
(Program, Executive, Summer School, Nominations, Fellowship)
DOE Office of Nuclear Physics Committee of Visitors (Chair), 2007
Carnegie Mellon University President's Advisory Board for Physics, 2007
NSAC Long Range Plan Writing Group, 2007, 2001, 1995
Physical Review C Editorial Board, 2005-2007
TUNL Advisory Committee, 2002-
Institute for Nuclear Theory Advisory Panel, 2002-2004
Member, Nuclear Science Advisory Committee (NSAC), 1999-2002

Selected Recent Publications:

1. Determination of the Pion Charge Form Factor at $Q^2=1.60$ and 2.45 (GeV/c)², T. Horn *et al.*, Phys. Rev. Lett. **97**, 192001 (2006).
2. Observation of the Radiative Decay Mode of the Free Neutron, J.S. Nico *et al.*, Nature **444**, 1059 (2006).

3. Strange Quark Contributions to Parity-Violating Asymmetries in the Forward G0 Electron-proton Scattering Experiment, D.S. Armstrong, *et al.*, Phys. Rev. Lett. **95**, 092001 (2005).
4. The SAMPLE experiment and weak nucleon structure, E. J. Beise, M. L. Pitt, and D. T. Spayde, Prog. Part. Nucl. Phys. **54**, 289 (2005).
5. The strange quark contribution to the proton's magnetic moment, D.T. Spayde, T. Averett, D. Barkhuff, D. H. Beck, E. J. Beise, H. Breuer, R. Carr, S. Covrig, G. Dodson, K. Dow, M. Farkhondeh, B. W. Filippone, W. Franklin, R. Hasty, T. M. Ito, W. Korsch, S. Kowalski, R. D. McKeown, B. Mueller, M. L. Pitt, M. J. Ramsey-Musolf, J. Ritter, R. Tieulent, E. Tsentalovich, S.P. Wells, B. Yang, T. Zwart, Phys. Lett. **B583**, 79 (2004).
Parity-violating Electron Deuteron Scattering and the Proton's Neutral Weak Axial Vector Form Factor, T. Ito, T. Averett, D. Barkhuff, G. Batigne, D.H. Beck, E.J. Beise, A. Blake, H. Breuer, R. Carr, B. Clasio, S. Covrig, A. Danagoulian, G. Dodson, K. Dow, D. Dutta, M. Farkhondeh, B.W. Filippone, W. Franklin, C. Furget, H. Gao, J. Gao, K. Gustafsson, L. Hannelius, R. Hasty, A.M. Hawthorne-Allen, M.C. Herda, C.E. Jones, P. King, W. Korsch, S. Kowalski, S. Kox, K. Kramer, P. Lee, J. Liu, J.W. Martin, R.D. McKeown, B. Mueller, M.L. Pitt, B. Plaster, G. Quémener, J.-S. Réal, J. Ritter, J. Roche, V. Savu, R. Schiavilla, J. Seely, D. Spayde, R. Suleiman, S. Taylor, R. Tieulent, B. Tipton, E. Tsentalovich, S.P. Wells, B. Yang, J. Yuan, J. Yun, and T. Zwart, Phys. Rev. Lett. **92**, 102003 (2004).
6. Parity violation in elastic electron-proton scattering and the proton's strange magnetic form factor, D. T. Spayde, T. Averett, D. Barkhuff, D. H. Beck, E. J. Beise, C. Benson, H. Breuer, R. Carr, S. Covrig, J. DelCorso, G. Dodson, K. Dow, C. Eppstein, M. Farkhondeh, B. W. Filippone, P. Frazier, R. Hasty, T. M. Ito, C. E. Jones, W. Korsch, S. Kowalski, P. Lee, E. Maneva, K. McCarty, R. D. McKeown, J. Mikell, B. Mueller, P. Naik, M. Pitt, J. Ritter, V. Savu, M. Sullivan, R. Tieulent, E. Tsentalovich, S. P. Wells, B. Yang, and T. Zwart, Phys. Rev. Lett. **84**, 1106 (2000).
7. Measurement of tensor polarization in elastic electron-deuteron scattering at large momentum transfer, D. Abbott, A. Ahmidouch, H. Anklin, J. Arvieux, J. Ball, S. Beedoe, E. J. Beise, L. Bimbot, W. Boeglin, H. Breuer, R. Carlini, N. S. Chant, S. Danagoulian, K. Dow, J.-E. Ducret, J. Dunne, R. Ent, L. Ewell, L. Eyraud, C. Furget, M. Garçon, R. Gilman, C. Glashausser, P. Gueye, K. Gustafsson, K. Hafidi, A. Honegger, J. Jourdan, S. Kox, G. Kumbartzki, L. Lu, A. Lung, D. Mack, P. Markowitz, J. McIntyre, D. Meekins, F. Merchez, J. Mitchell, R. Mohring, S. Mtingwa, H. Mrktchyan, D. Pitz, L. Qin, R. Ransome, J.-S. Réal, P. G. Roos, P. Rutt, R. Sawafta, S. Stepanyan, R. Tieulent, E. Tomasi-Gustafsson, W. Turchinets, K. Vansyoc, J. Volmer, E. Voutier, W. Vulcan, C. Williamson, S. A. Wood, C. Yan, J. Zhao, and W. Zhao, Phys. Rev. Lett. **84**, 5053 (2000).
8. A precise measurement of the deuteron elastic structure function $A(Q^2)$, D. Abbott, A. Ahmidouch, H. Anklin, J. Arvieux, J. Ball, S. Beedoe, E.J. Beise, L. Bimbot, W. Boeglin, H. Breuer, R. Carlini, N.S. Chant, S. Danagoulian, K. Dow, J.-E. Ducret, J. Dunne, R. Ent, L. Ewell, L. Eyraud, C. Furget, M. Garçon, R. Gilman, C. Glashausser, P. Gueye, K. Gustafsson, K. Hafidi, A. Honegger, J. Jourdan, S. Kox, G. Kumbartzki, L. Lu, A. Lung, D. Mack, P. Markowitz, J. McIntyre, D. Meekins, F. Merchez, J. Mitchell, R. Mohring, S. Mtingwa, H. Mrktchyan, D. Pitz, L. Qin, R. Ransome, J.-S. Real, P.G. Roos, P. Rutt, R. Sawafta, S. Stepanyan, R. Tieulent, E. Tomasi-Gustafsson, W. Turchinets, K. Vansyoc, J. Volmer, E. Voutier, W. Vulcan, C. Williamson, S.A. Wood, C. Yan, J. Zhao, and W. Zhao, Phys. Rev. Lett. **82**, 1379 (1999).
9. A high power liquid hydrogen target for parity violation experiments, E. J. Beise, D. H. Beck, E. Candell, R. Carr, F. Duncan, T. Forest, W. Korsch, J. W. Mark, R. D. McKeown, B. A. Mueller, M. Pitt, and S. Wells, Nucl. Instrum. Methods **A378**, 383 (1996).

10. Intermediate-energy semileptonic probes of the hadronic neutral current, M. J. Musolf, T. W. Donnelly, J. Dubach, S. J. Pollock, S. Kowalski, and E. J. Beise, *Physics Reports* **239**, 1 (1994).

Dissertation Advisor: Robert P. Redwine, M.I.T

Postdoctoral Advisor: Robert McKeown, Caltech

Graduated Ph.D. students:

T. Horn (2006): The Pion Charge Form Factor through Pion Electroproduction

J. Liu (2006): A Measurement of the Strange Quark Contributions to the Electromagnetic Form Factors of the Nucleon

D.T. Spayde (2001): Measurement of the Strange Magnetic Form Factor of the Proton using Elastic Electron Scattering

K. Gustafsson (2000): Measurement of Deuteron Tensor Polarization in Elastic Electron Scattering

R. Mohring (1999): A Comparison of Longitudinal and Transverse Cross Sections in the $p(e, e'K^+)\Lambda$ and $p(e, e'K^+)\Sigma^0$ Reactions

Current Advisees: C. Ellis, J. Miller, T. Langford, P. Adhikari

Recent Teaching Assignments:

2008	Fall	PHYS 405	Advanced Experiments for Majors
	Spring	PHYS 405	Advanced Experiments for Majors
	Spring	PHYS 441	Introduction to Subatomic Physics
2007	Fall	PHYS 174	Introductory Laboratory for Majors
	Spring	PHYS 405	Advanced Experiments for Majors
2006	Fall	PHYS 174	Introductory Laboratory for Majors
	Spring		on leave at National Science Foundation
2005	Fall	PHYS 174	Introductory Laboratory for Majors
	Spring		on leave at National Science Foundation
2004	Fall	PHYS 174	Introductory Laboratory for Majors
	Spring	PHYS 171	Introductory Physics for Majors
2003	Fall	PHYS 276	Electricity and Magnetism Lab for Majors
	Spring	PHYS 275	Mechanics Lab for Majors
2002	Fall	PHYS 276	Electricity and Magnetism Lab for Majors
	Spring	PHYS 275	Mechanics Lab for Majors
2001	Fall	PHYS 276	Electricity and Magnetism Lab for Majors

Selected Departmental and Campus Service

2008	Chair, University Honors Director Search Committee
2007-2008	University's Strategic Planning Steering Committee (SPSC)
2007-2008	Chair, University's SPSC CORE Major Initiative Committee
2007-	Chair, Qualifying Exam Committee
2007-2009	Physics Dept. Salary Advisory Committee
2007	University Medal Selection Committee
2006-	Honors Program Steering Committee
2006-2009	Academic Planning Advisory Committee (APAC)
2006	Chair, Search Committee for Maryland co-Director of the Joint Quantum Institute
2005-2006	Campus Middle States Review Committee, Standard 12 (General Education)
2003-2005	Chair, Campus CORE (general education) Committee
2001-2003	Campus Programs, Curriculum and Courses Committee
1998-2000	Physics Appointment, Promotion, and Tenure Committee
1995-1997	Physics Dept. Salary Advisory Committee