

Michael F. Vineyard
Department of Physics and Astronomy
Union College
Schenectady, NY 12308
vineyard@union.edu
www1.union.edu/~vineyard

Education

- Ph.D., Physics, Florida State University, 1984
- M.S., Physics, Florida State University, 1981
- B.S., Physics, Stockton State College, 1978

Experience

- 2002-present - Frank and Marie Louise Bailey Professor of Physics, Union College
- 2002-2008, 2009-2012 - Chair of the Department of Physics and Astronomy, Union College
- 2000-2002 - The Robert Edward and Lena Frazer Loving Chair in Physics, University of Richmond
- 2000-2001 - Visiting Scientist, Thomas Jefferson National Accelerator Facility
- 1992-2002 - Associate Professor of Physics, University of Richmond
- 1993-1994 - Visiting Scientist, Continuous Electron Beam Accelerator Facility
- 1987 (Summer) - Visiting Scientist, Argonne National Laboratory
- 1986-1992 - Assistant Professor of Physics, University of Richmond
- 1984-1986 - Research Associate, Argonne National Laboratory

Current Research Activities

Ion-beam analysis of environmental samples using the Union College 1.1-MV Pelletron Accelerator

Grants

Over \$2M in research and curriculum development grants from the U.S. Department of Energy and the National Science Foundation

Recent Publications (* indicates undergraduate co-authors)

1. Michael F. Vineyard, Scott M. LaBrake, Sajju Chalise,* Morgan L. Clark,* Skye T. Conlan,* and Zachary H. Porat,* "PIXE Analysis of Synthetic Turf," *Environment and Ecology Research* **6**(1), 60-65 (2018).
2. M. F. Vineyard, S. Chalise,* M. L. Clark,* S. M. LaBrake, A. M. McCalmont,* B. C. McGuire,* I. I. Mendez,* H. C. Watson, and J. T. Yoskowitz,* "Undergraduate Research and Training in Ion-Beam Analysis of Environmental Materials," *Conference on the Application of Accelerators in Research and Industry, CAARI 2016, Physics Procedia* **90**, 344-353 (2017).
3. M. F. Vineyard, S. M. LaBrake, S. F. Ali,* B. J. Nadeski,* A. D. Safiq,* J. W. Smith,* and J. T. Yoskowitz,* "Characterization of Atmospheric Aerosols in the Adirondack Mountains using PIXE, SEM/EDX, and Micro-Raman Spectroscopies," *Nucl. Instr. Meth. Phys. Res. B* **350**, 77 (2015).
4. H. Seraydaryan *et al.* (The CLAS Collaboration), " ϕ -meson photoproduction on Hydrogen in the neutral decay mode," *Phys. Rev. C* **89**, 055206 (2014).
5. K. Moriya *et al.* (The CLAS Collaboration), "Differential Photoproduction Cross Sections of the $\Sigma^0(1385)$, $\Lambda(1405)$, and $\Lambda(1520)$," *Phys. Rev. C* **88**, 045201 (2013).
6. I. Pomerantz *et al.* (The CLAS Collaboration), "Hard Two-body Photodisintegration of ^3He ," *Phys. Rev. Lett.* **110** 242301 (2013).
7. Scott M. LaBrake, Michael F. Vineyard, Colin F. Turley,* Robert D. Moore,* and Christopher Johnson,* "Construction of a scattering chamber for ion-beam analysis of environmental materials in undergraduate physics research," *22nd International Conference on Applications of Accelerators in Research and Industry (CAARI 2012)*, *AIP Conf. Proc.* **1525**, 745 (2013).
8. I. Bedlinskiy *et al.* (The CLAS Collaboration), "Measurement of Exclusive π^0 Electroproduction Structure Functions and their Relationship to Transversity GPDs," *Phys. Rev. Lett.* **109**, 112001 (2012).
9. V.I. Mokeev *et al.* (The CLAS Collaboration), "A Study of the $P_{11}(1440)$ and $D_{13}(1520)$ resonances from CLAS data on $ep \rightarrow e'\pi^+\pi^-p'$," *Phys. Rev. C* **86**, 035203 (2012).
10. M. Anghinolfi *et al.* (The CLAS Collaboration), "Comment on "Observation of a narrow structure in $^1\text{H}(\gamma, K_S^0)\text{X}$ via interference with ϕ -meson production",," *Phys. Rev. C* **86**, 069801 (2012).
11. Scott M. LaBrake, Michael F. Vineyard, Maria V. Battaglia,* Katie J. Schuff,* Colin L. Gleason,* Charles I. Harrington,* Shivani Pathak,* Colin F. Turley,* and Robert D. Moore,* "Using PIXE to Teach Materials Analysis at Union College," *21st International Conference on Applications of Accelerators in Research and Industry (CAARI 2010)*, *AIP Conf. Proc.* **1336**, 748 (2011).