

Additional Senior Personnel: Michael F. Vineyard

Professional Preparation

- Stockton State College, Physics, B.S., 1978
- Florida State University, Physics, M.S., 1981
- Florida State University, Experimental Nuclear Physics, Ph.D., 1984
- Argonne National Laboratory, Postdoctoral Research Associate in Nuclear Physics, 1984-1986

Appointments

- 2002-present - Frank and Marie Louise Bailey Professor of Physics and Chair of the Department of Physics and Astronomy, Union College
- 2000-2001 - Visiting Scientist, Thomas Jefferson National Accelerator Facility
- 2000-2002 - The Robert Edward and Lena Frazer Loving Chair in Physics, University of Richmond
- 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

Publications Closely Related to the Proposed Project

- R. De Vita *et al.* (The CLAS Collaboration), "Search for the Θ^+ pentaquark in the reactions $\gamma p \rightarrow \bar{K}^0 K^+ n$ and $\gamma p \rightarrow \bar{K}^0 K^0 p$," Phys. Rev. D **74**, 032001 (2006).
- K.V. Dharmawardane *et al.* (The CLAS Collaboration), "Measurement of the x- and Q^2 -Dependence of the Asymmetry A_1 on the Nucleon," Phys. Lett. B **641**, 11 (2006).
- S. Chen *et al.* (The CLAS Collaboration), "Measurement of Deeply Virtual Compton Scattering with a Polarized-Proton Target," Phys. Rev. Lett. **97**, 072002 (2006).
- S. Niccolai *et al.* (The CLAS Collaboration), "Search for the Θ^+ Pentaquark in the $\gamma d \rightarrow \Lambda n K^+$ Reaction Measured with the CLAS Spectrometer," Phys. Rev. Lett. **97**, 032001 (2006).
- F. Chinchilla, M. F. Vineyard, and G. P. Gilfoyle, "Development and Maintenance of a Linux Computing Cluster", Bull. Am. Phys. Soc. **45**(5), 19 (2000).

Other Significant Publications

- B. McKinnon *et al.* (The CLAS Collaboration), "Search for the Θ^+ Pentaquark in the Reaction $\gamma d \rightarrow p K^- K^+ n$," Phys. Rev. Lett. **96**, 212001 (2006).
- A. Klimenko *et al.* (The CLAS Collaboration), "Electron scattering from high-momentum neutrons in deuterium," Phys. Rev. C **73**, 035212 (2006).

- H. Egiyan *et al.* (The CLAS Collaboration), "Single π^+ electroproduction on the proton in the first and second resonance regions at 0.25 GeV² ; Q² ; 0.65 GeV² using CLAS," Phys. Rev. C **73**, 025204 (2006).
- R. Bradford *et al.* (The CLAS Collaboration), "Differential cross sections for $\gamma + p \rightarrow K^+ + Y$ for Λ and Σ^0 hyperons," Phys. Rev. C **73**, 035202 (2006).
- M. Battaglieri *et al.* (The CLAS Collaboration), "Search for $\theta^+(1540)$ Pentaquark in High-Statistics Measurement of $\gamma p \rightarrow \bar{K}^0 K^+ n$ at CLAS," Phys. Rev. Lett. **96**, 042001 (2006).

Synergistic Activities

- Developed Mossbauer, relativistic dynamics, and muon decay experiments for the upper-level physics laboratory course at Union College (2004-present).
- Developed a Sophomore Research Seminar in environmental physics at Union College that includes particle-induced X-ray emission and liquid chromatography/mass spectrometry experiments (2006-present).
- Participated in the development and operation of the Capital District Physics Teachers Union, an outreach program focused on high school physics teachers in the capital district of New York (2003-present).
- Developed a 'workshop physics' course for the general physics with calculus sequence at the University of Richmond (1994-2002). The video analysis component of this project was funded by the National Science Foundation (\$7,943, 1995). The course has received considerable attention with visits from colleagues at other institutions and two talks at recent workshops.
- Developed a two-semester electronics laboratory course with emphasis on scientific instrumentation and computer aided circuit design. Part of the project was funded by the National Science Foundation (\$25,000, 1992).

Collaborators and Other Affiliations

- Collaborators - The CEBAF Large Acceptance Spectrometer (CLAS) Collaboration (35 institutions)
- Graduate Advisor - K. W. Kemper, Florida State University
- Postdoctoral Advisor - D. G. Kovar, U. S. Department of Energy