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Gettysburg College Proton Accelerator EZEQUIEL LINARES, None, BRET E. CRAWFORD COLLABORATION — The proton accelerator at Gettysburg College creates beams of protons with energies approximately 50-200 keV. The low-energy particles that are generated are applicable to the study of material surfaces such as in the proton damage of polydimethylsiloxane (PDMS), a coating on satellites that protects components from energetic particles. The stability of the proton beams energy and flux is crucial to get reliable data on how protons affect the surfaces. Recently an Arduino-based feedback system and monitor were developed to control the beam energy and stability. I am working on a replacement control system that uses the LabWindows-CVI software. This setup will allow for better control and monitoring of various aspects of the experiment in a versatile and flexible programing environment. In the poster, the creation of the feedback system in LabWindows-CVI will be discussed along with the PID algorithm that is used to stabilize the beam energy.

Ezequiel Linares
None

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