

Abstract Submitted
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Reconstruction of a Proton Accelerator for 25 keV Electron Experiments JORDAN WATKINS, SCOTT WILLIAMS, Angelo State University — Accelerators have always been an important part of atomic physics research, and we are currently working to reconstruct and renovate the accelerator at ASU (previously used for proton experiments). During this process, we have been updating and rebuilding the accelerator for use in 25 keV electron bremsstrahlung experiments involving gas targets. This process has included acquiring an electron source, which has involved stripping down various cathode ray tube (CRT) devices. Work has also begun on restructuring the accelerator's voltages for use with an electron source. After deconstruction of the proton accelerator is complete, we will utilize useful parts to minimize cost and reconstruct the accelerator into a more compact and user-friendly form. A new chamber for gas-targets will also be necessary, thus the gas-delivery and vacuum systems will also need work. Also, the cooling system will need some work considering the last used coolant was kerosene. Though the project seems ambitious, we have already taken major steps in its completion and we hope to have a finished product by the end of this summer semester.

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