Abstract Submitted
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Understanding Na22 Cosmic Abundances S. STATTEL, Columbia University, J.A. CAGGIANO, L. BUCHMANN, TRIUMF, J.M. D'AURIA, Simon Fraser Univ., D.A. HUTCHEON, M. TRINCZEK, C. VOCKENHUBER, J. PEARSON, C. RUIZ, TRIUMF, K. SNOVER, U. Washington, J.J. RESSLER, Simon Fraser Univ., J. JOSE, Barcelona, A. SALLASKA, D. STORM, A. GARCIA, U. Washington, DRAGON TEAM — 22Na is an elusive cosmic gamma ray emitter that should be abundant as a product of novae, but this isotope is as of yet unobserved except in the central galactic bulge. The discrepancy could be resolved through a recent measurement of 23Mg structure, which discovered a level that may have significant implications on the rate for 22Na destruction via the 22Na(p,gamma)23Mg reaction. One of the main goals of this project is to perform a direct (p,gamma) measurement of the new resonance using a beam of protons that will be accelerated to impinge on a 22Na radioactive target. The target will be produced at TRIUMF-ISAC in Canada. We are currently in the beginning stages of setting up this experiment at CENPA. I will explain the motivations for the experiment, describe the set up, and present calculations that allow optimization of our beam-line design.

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