

Abstract Submitted  
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**A Quadrupole Band-Pass Filter for a White Proton Source**

JONATHON MORROW, JERRY PETERSON, University of Colorado — The LANSCE facility at Los Alamos National Laboratory uses a beam of 800 MeV protons as a source of continuous (white) beams of neutrons, used for a wide range of basic and applied science. The same source also provides a white source of protons, which would be very useful for research, if some degree of energy resolution were available. We are designing a quadrupole magnet system that will provide such energy resolution by focusing only the desired momentum onto a sample, with protons of more or less momentum more widely diffused. Results will be given for designs based on simple thin lens optics to understand the criteria and general trends. A full design will require use of magnetic beam transport codes and a specific magnet system.

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