

Abstract Submitted
for the DNP10 Meeting of
The American Physical Society

Tuning the LANSCE proton beam for optimum ultracold neutron production RAYMOND RIOS, Los Alamos National Lab, UCNA COLLABORATION — The UCNA experiment uses LANSCE's 800 MeV proton beam incident on a spallation tungsten target to ultimately generate ultracold neutrons (UCN). Optimizing the proton beam's alignment and size on the target has a direct relationship with the overall UCN production. The beam must be switched over daily from a separate experiment to the tungsten target and retuned. Standard beam diagnostics cannot be used within 8 m of the target due to the level of shielding that surrounds the target and extends up along the proton beam line. This presentation will detail the effectiveness of the various methods employed to obtain beam positioning and monitoring which include a cold neutron detector, drift fast neutron tube detector, inline MWPC beam profile monitor, and, the latest, a set of carefully positioned thermocouples.

Raymond Rios
Los Alamos National Lab

Date submitted: 01 Jul 2010

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