

Abstract Submitted
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Actinide Studies with Ultracold Neutrons¹ LEAH BROUSSARD,
Los Alamos National Laboratory — Understanding the aging of nuclear material components is critical to the mission of the National Nuclear Security Administration, and has applications for the nuclear energy industry and space science. The mechanism describing the energy transfer of fission fragments to the material is not well understood and represents one of the modern challenges facing nuclear scientists. A new technique in which ultracold neutrons (UCNs) are used to induce fission at specific depths near the material surface is being developed at the Los Alamos Neutron Science Center. We have performed the first characterizations of fission rates and material sputtered from the surface as a function of UCN energy. We will present an update on the development of a new beamline and detection scheme and preliminary results from the 2014 accelerator cycle.

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