

Abstract Submitted  
for the DNP15 Meeting of  
The American Physical Society

**Cosmic-ray imaging of spent fuel casks** ELENA GUARDINCERRI, J. MATTHEW DURHAM, CHRISTOPHER MORRIS, DANIEL POULSON, KENIE PLAUD-RAMOS, JOSEPH FABRITIUS, JEFFREY BACON, Los Alamos National Laboratory, PHILIP WINSTON, DAVID CHICHESTER, Idaho National Laboratory — Muon radiography was used to image the inside of a partially loaded Westinghouse MC-10 dry cask containing spent nuclear fuel at Idaho National Laboratory. We present here the results of a 100 hours long measurement taken in May 2015 with two muon trackers placed outside the cask. The data clearly show the location of the missing fuel bundles and demonstrate the feasibility of using cosmic rays to monitor fuel casks against illicit diversion of their content.

Elena Guardincerri  
Los Alamos National Laboratory

Date submitted: 26 Jun 2015

Electronic form version 1.4