

Abstract Submitted
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Fission Product Chain Yield Measurements at NCERC T.A BRE-DEWEG, E.M. BOND, D.E. DRY, M.E.GOODEN BOND, S.K. HANSON, L.A. HUDSTON, M.R. JAMES, I. MAY, W.J. OLDHAM, R.S. RUNDBERG, Los Alamos National Laboratory — Fission product chain yields were historically determined by chemical separation and beta counting of fissile samples irradiated in carefully controlled fission chamber experiments^{1,2}. These measurements provided the means to extract absolute fission product yields (yield per fission, or Y_i/f for the i^{th} fission product) that are included in the international nuclear data libraries, and ultimately used to model and characterize multiplying systems. However, re-evaluations conducted at Los Alamos National Lab and Lawrence Livermore National Lab in 2005-2009 for neutron-induced fission of ^{235}U and ^{239}Pu highlighted disagreement among many of the measurements^{1,2,3}. This led to several new, targeted experimental programs to resolve these disagreements. In this presentation we will highlight recent efforts to address these discrepancies using energy-integral measurements at the National Criticality Experiments Research Center (NCERC), and outline our plans to complete the work over the next several years.

¹ H.D. Selby, *et al.*, Nucl. Data Sheets 111, 2891 (2010)

² M.B. Chadwick, *et al.*, Nucl. Data Sheets 111, 2923 (2010)

³ J. Laurec, *et al.*, Nucl. Data Sheets 111, 2965 (2010)

Todd Bredeweg
Los Alamos National Laboratory

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