

Abstract Submitted  
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**Neutron Capture and Fission Measurements on Actinides at DANCE**<sup>1</sup> ANDRII CHYZH, CHING-YEN WU, ELAINE KWAN, RODGER HENDERSON, JULIE GOSTIC, LLNL, JOHN ULLMANN, MARIAN JANDEL, TODD BREDEWEG, AARON COUTURE, HYE YOUNG LEE, ROBERT HAIGHT, JOHN O'DONNELL, LANL — Neutron capture and fission measurements on actinides are important in nuclear engineering and physics. DANCE (Detector for Advanced Neutron Capture Measurement build at LANL) together with PPAC (avalanche technique based fission tagging detector designed and fabricated at LLNL) were used to measure the prompt  $\gamma$ -ray energy and multiplicity distributions in the spontaneous fission of  $^{252}\text{Cf}$ . These measured spectra together with the unfolded ones will be presented. The unfolding technique will be described. In addition the  $^{238}\text{Pu}(n, \gamma)$  cross section will be presented, which was measured using DANCE alone and also is the first such measurement in a laboratory environment.

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