

Abstract Submitted
for the DNP06 Meeting of
The American Physical Society

Covariance analysis for the fission program at LANSCE F. TOVESSON, T.S. HILL, K.M. HANSON, P. TALOU, T. KAWANO, R.C. HAIGHT, L. BONNEAU, Los Alamos National Laboratory — An experimental program at Los Alamos Neutron Scattering Center (LANSCE) has been developed to precisely measure differential fission cross sections over 10 decades in incident neutron energy for a range of actinides relevant to advanced nuclear reactor designs and transmutation concepts. As the need for uncertainty quantification (UQ) and covariance matrix evaluations significantly increased in the past few years, the detailed assessment and reporting of experimental uncertainties has become crucial. We will report on the analysis of the sensitivity vectors and covariance matrices for some of the fission data taken at LANSCE and provide examples of the impact experimental covariance data has in the evaluation process.

Fredrik Tovesson
Los Alamos National Laboratory

Date submitted: 05 Jul 2006

Electronic form version 1.4