

Abstract Submitted
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Tests of spurious levels for neutron or proton resonance data¹ R.C. ROLLER, J.F. SHRINER, JR., Tenn. Tech. Univ. — Nuclear level densities are important in a variety of applications. One method of determining these densities near separation energies is the measurement of resonances with either neutron or proton beams. However, experimental limitations often lead to levels being missed or levels being mistakenly included. Resonance levels are believed to be described by random matrix theory (RMT); therefore, the effects on the nearest-neighbor spacing distributions (NNSD) of both missing and spurious levels are known. We have studied via Monte Carlo and maximum-likelihood methods how well the analysis of spacing distributions can provide estimates of the fraction of spurious or missing levels in a set of energy levels. Results will be presented.

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R.C. Roller
Tenn. Tech. Univ.

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