

Abstract Submitted
for the APR08 Meeting of
The American Physical Society

Calculation of Level Densities for Nuclei Far from the Line of Stability¹ SHALEEN SHUKLA, STEVEN GRIMES, Ohio University — Nuclear level densities provide crucial input in any statistical model calculation of compound nuclear decay, applied to the various processes like the study of fission hindrance in heavy nuclei, the yields of evaporation residues to populate certain exotic nuclei, production of heavy elements in stellar processes etc. We calculate nuclear level densities for nuclei near the drip line. We use a single fermion model with non interacting fermions and spectral distribution methods which allow moments to be calculated in huge spaces using a fairly small sum. We shall present results some typical results for mass number in the range 40 - 100. We are also investigating the effect of two-body interaction on these nuclei and would also present some results showing its effect.

¹Supported by Grant: DE-FG02-88ER40387 of US-DOE.

Shaleen Shukla
Ohio University

Date submitted: 13 Jan 2008

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