

Empirical approach to nuclear structure with masses and neutron-capture cross sections

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Abstract

Considering the importance of nuclear masses, a recent study will be discussed in which it is possible to predict neutron capture cross sections from empirical nuclear masses using a simple correlation. The talk will cover estimates of neutron capture cross sections in different regions and noticeable effects on a well-known phase/shape transition region using this simple method.

This talk will be given collaboration with A. Couture from LANL and R.F. Casten from MSU and Yale University.