



Nuclear Experiment

Derivation and quantitative analysis of the differential self-interrogation Feynman-alpha method

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A stochastic theory for a branching process in a neutron population with two energy levels is used to assess the applicability of the differential self-interrogation Feynman-alpha method by numerically estimated reaction intensities from Monte Carlo simulations. More specifically, the variance to mean or Feynman-alpha formula is applied to investigate the appearing exponentials using the numerically obtained reaction intensities.

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