

Calculation of Neutron Resonance Spacing with Microscopic Theory

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Abstract: Nuclear level spacings calculated with a microscopic theory are compared with spacings determined from neutron resonance experiment. The gross features of the experimental data due to nuclear shells are reproduced with the microscopic theory. The experimental data for nuclei with statistically deformed nuclei have also been tested with level density formula including low energy rotational levels. The experimental data for the actinide nuclei and the lanthanide nuclei are found to be consistent with the theory which includes collective rotational levels.

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Key words: nuclear level spacing

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