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Research note

## Study of nuclear level densities for exotic nuclei

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### Abstract

Nuclear level density (NLD) is one of the properties of nuclei with widespread applications in astrophysics and nuclear medicine. Since there has been little experimental and theoretical research on the study of nuclei which are far from stability line, studying NLD for these nuclei is of crucial importance. Also, as NLD is an important input for nuclear reaction codes, hence studying the methods for calculation of this parameter is essential. Besides introducing various methods and models for calculating NLD for practical applications, we used exact spectra distribution (SPDM) for determining NLD of two neutron and proton enriched exotic nuclei with the same mass number.

**Keywords:** nuclear level density, exotic nuclei, nuclear reaction codes, nuclear structure

For full article, refer to the Persian section