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Overview of Nuclear Physics Data: Databases, Web Applications and Teaching Tools¹

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The mission of the United States Nuclear Data Program (USNDP) is to provide current, accurate, and authoritative data for use in pure and applied areas of nuclear science and engineering. This is accomplished by compiling, evaluating, and disseminating extensive datasets. Our main products include the Evaluated Nuclear Structure File (ENSDF) containing information on nuclear structure and decay properties and the Evaluated Nuclear Data File (ENDF) containing information on neutron-induced reactions. The National Nuclear Data Center (NNDC), through the website www.nndc.bnl.gov, provides web-based retrieval systems for these and many other databases. In addition, the NNDC hosts several on-line physics tools, useful for calculating various quantities relating to basic nuclear physics. In this talk, I will first introduce the quantities which are evaluated and recommended in our databases. I will then outline the searching capabilities which allow one to quickly and efficiently retrieve data. Finally, I will demonstrate how the database searches and web applications can provide effective teaching tools concerning the structure of nuclei and how they interact.

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