Abstract Submitted
for the SES15 Meeting of
The American Physical Society

Accessing Basic Nuclear Data in LaTeX Documents BILL NET-
TLES, GEOFFREY POORE, Union University, Jackson, TN — A LaTeX package,
`nucleardata.sty`, has been developed which allows users to access basic nuclear
data such as mass (atomic and nuclear), half life, decay modes and Q-values, ground
state spin, and simple reaction Q-values. Users can typeset these data simply by
referring to Z and A or the chemical symbol and A without having to look them up
from a separate source. This can greatly reduce the preparation time of homework
and test documents. Users can also use the package along with additional embedded
Python code to randomly select nuclides for student exercises and access the data
for both questions and answers. The package is supported by the PythonTeX pack-
age which allows Python code to be embedded in a LaTeX document and its output
to be typeset. A variety of LaTeX commands are implemented in the package, and
these will be discussed along with a presentation of simple examples. The data are
built into the package and are extracted from the ENSDF and the Ame2003 atomic
mass evaluation (II)[1].

[1]G.Audi, A.H.Wapstra and C.Thibault, **Nuclear Physics** A729 p. 337-676, De-
cember 22, 2003

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Date submitted: 13 Oct 2015   Electronic form version 1.4