

Consultancy Meeting on Information Exchange on Developments and Operations of Nuclear Data Dissemination Services

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endf-parserpy: A Python package for working with ENDF-6 files

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The ENDF-6 file format is adopted by the major nuclear data libraries for storing and disseminating evaluated nuclear data. However, publicly available tools supporting scientists in the translation of their data into the ENDF-6 format are scarce, posing an obstacle to newcomers to the nuclear data field. This presentation elaborates on the design and functionality of the recently developed Python package `endf-parserpy` to improve this situation regarding nuclear data development. Its unique design feature is that it leverages a formal ENDF description to enable a bidirectional one-to-one translation between ENDF-6 formatted data and Python dictionaries. This functionality in combination with Python's powerful facilities for data handling greatly facilitates the creation and manipulation of ENDF-6 files as well as access to their data. Furthermore, this package provides rigorous format validation, semantically meaningful comparisons of ENDF-6 files and the loss-free translation from and to other container formats, such as JSON. The package is available on the Python Package Index (PyPi) and fully documented. Further details can be found at its GitHub repository <https://github.com/iaea-nds/endf-parserpy>

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