

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

Contribution ID: 6

Type: **not specified**

1. What's in old Sigma / 2. The ENDF project / 3. GNDS

Tuesday, 16 January 2024 09:30 (1 hour)

1. What's in old Sigma

Sigma is a web app designed and hosted by the National Nuclear Data Center (NNDC) for the visualization of ENDF reaction data. Sigma allows the user to browse the contents of ENDF files in a mostly easy to use manner and, at one point, allowed the comparisons of ENDF data with experimental data from EXFOR. Currently the site is not well maintained at the NNDC for a number of reasons. This presentation described the operation of the legacy system and provided recommendations for a “refreshed” web app using GNDS and EXFOR-JSON as a foundation.

1. The ENDF project

The Evaluated Nuclear Data File (ENDF) library is the most widely used nuclear reaction data library in the United States. In this presentation, a brief overview of the ENDF project history, management of the Cross Section Evaluation Working Group, and the next ENDF release were provided. Emphasis was placed on the open nature of CSEWG and ENDF, evident from the beginning of the project. Also presented was the current review process for ENDF files, the status of the current Beta3 library and the status of the drafting of the library summary paper.

1. GNDS

The Generalized Nuclear Database Structure (GNDS) is the successor format to the legacy ENDF format. The legacy ENDF format was designed to work on obsolete computational hardware and uses an outdated data model. This data model was adapted over the succeeding 50 years and now does not clearly follow a data model consistent with the understanding of the main user base of the library. GNDS is a complete redesign of the format and data model. GNDS can store both evaluated and processed data in the same hierarchy. GNDS is much easier to learn and use than the legacy ENDF format. The data community is still in the process of adopting GNDS.

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