

ENDF-6 Format Manual Status

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U.S. DEPARTMENT OF
ENERGY

Office of
Science

Where to find the in-dev manual

The image shows a screenshot of the National Nuclear Data Center (NNDC) website. A red arrow points to the URL www.nndc.bnl.gov in the browser's address bar. Another red arrow points to the 'Reactions' tab in the navigation menu. A third red arrow points to the 'In-development ENDF-6 Format Manual' link in the 'Reactions' section. The website header includes the NNDC logo, 'National Nuclear Data Center', and 'BROOKHAVEN NATIONAL LABORATORY'. The main content area features a 'Chart of Nuclides' with various data sources listed, and a 'Mini-CSEWG 2017' announcement. The navigation menu includes 'Main', 'Structure & Decay', 'Reactions', 'Bibliography', 'Networks & Links', 'Publications', and 'Meetings'. The 'Reactions' section is expanded, showing 'Experimental data', 'Codes', 'Evaluated ENDF data', 'Other evaluated data', and 'Tools'.

www.nndc.bnl.gov

Reactions tab

The link

www.nndc.bnl.gov

Reactions

In-development ENDF-6 Format Manual

Experimental data

- ▶ EXFOR Experimental nuclear reaction data
- ▶ The EXFOR project
- ▶ EXFOR Basics Short guide

Codes

- ▶ Checking & utility codes
- ▶ Reaction codes
- ▶ EMPIRE Nuclear Reaction Model Code

Evaluated ENDF data

- ▶ ENDF/B-VII.1 Current ENDF release
- ▶ ENDF/B-VIII.0 In-development ENDF library
- ▶ The ENDF project
- ▶ Sigma ENDF Retrieval & Plotting
- ▶ Current ENDF-6 Format Manual
- ▶ In-development ENDF-6 Format Manual
- ▶ Introduction to ENDF Formats
- ▶ ADVANCE ENDF continuous integration system

Other evaluated data

- ▶ Atlas of Neutron Resonances Parameters & thermal values
- ▶ Atomic Mass Evaluation
- ▶ IRDF International Reactor Dosimetry File
- ▶ Monitor Reactions IAEA recommended charged-particle cross sections
- ▶ RIPL-3 Reference Input Parameter Library

Tools

- ▶ CapGam Thermal neutron capture γ -rays
- ▶ Gamma Ray Atlas Following Inelastic Scattering of Fast Neutrons Downloadable software platform
- ▶ EXFOR/ENDF Plotting
- ▶ NucRates MACS and astrophysical reaction rates
- ▶ MyENDF Integrated web tool for evaluators
- ▶ Q-value Calculator
- ▶ USNDP/CSEWG GForge Collaboration server

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Reactions

The in-dev manual will become the B-VIII.0 manual once approved

The link

www.nndc.bnl.gov

NSR XUNDL ENSDF
NuDat Databases MIRD
CS ISRS ENDF
Chart of Nuclides
Atlas of n Resonances
Empire
Nuclear Tools and

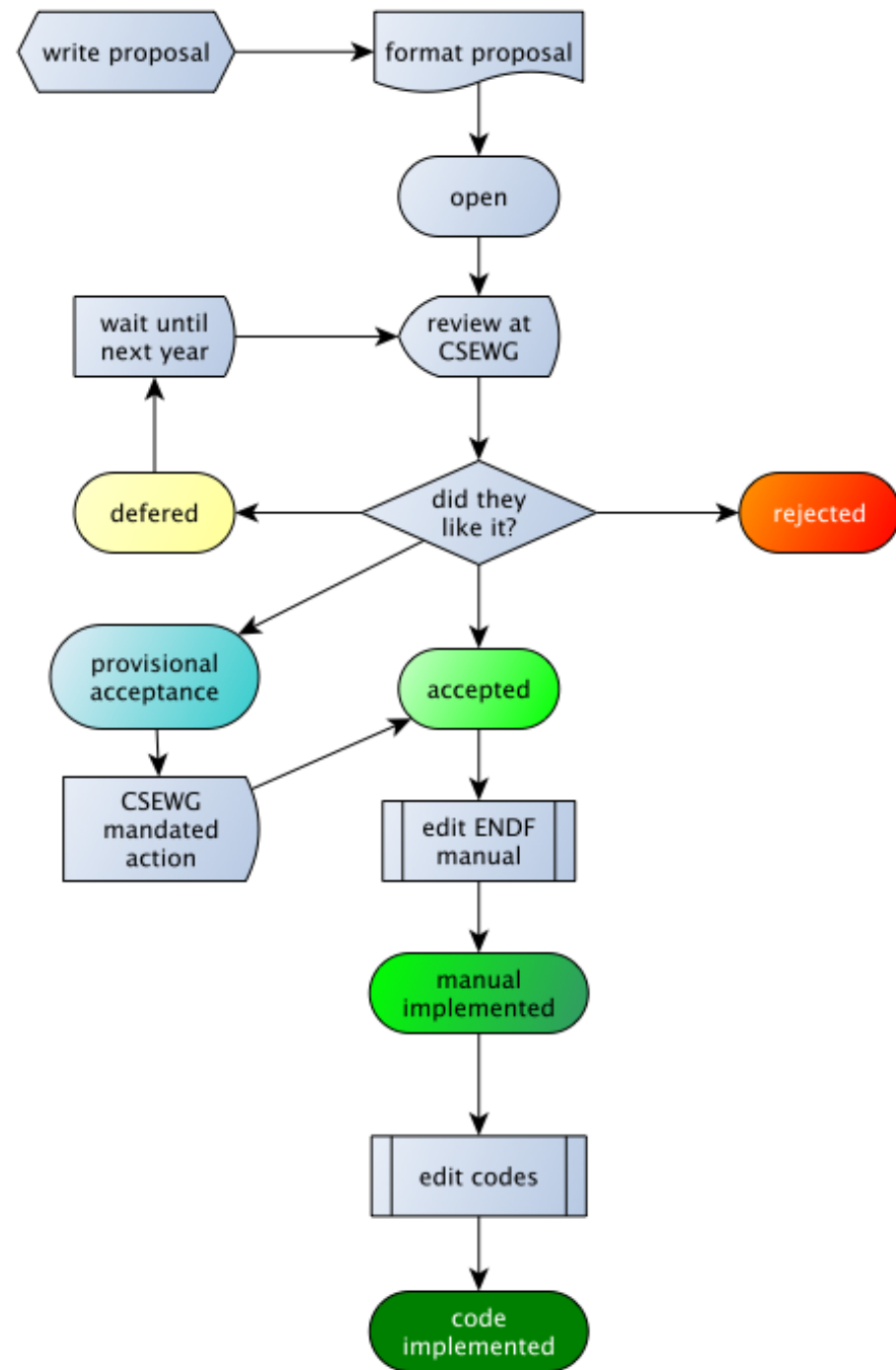
Mini-CSEWG 2017
INDICO
Integrated Digital Conference
Mini-CSWEG, May 4 - May 5, 2017
at Los Alamos National Lab.

Meetings

- ▶ EXFOR Experimental nuclear reaction data
- ▶ The EXFOR project
- ▶ EXFOR Basics Short guide
- Codes
- ▶ Checking & utility codes
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Life cycle of a format change (as understood by GForge)

- Now is on main manual GForge page



Format changes

ID	Summary
997	Allow MF=4/5 for incident gamma evaluations
✓	Fission energy release (No Tracker?)
✓ 1061	format change in MF6/MT18 to accommodate P(Mg) and multiplicity-dependent PFGS.

Format changes

Not physically possible, see discussion in previous CSEWG. I move we reject.

ID	Summary
997	Allow MF=4/5 for incident gamma evaluations
✓	Fission energy release (No Tracker?)
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Format changes

Both implemented in NNDC codes

ID	Summary
997	Allow MF=4/5 for incident gamma evaluations
✓	Fission energy release (No Tracker?)
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Typos

ID	Summary
✓ 950	Incoherent scattering in chapter 27
✓ 1000	Equation reference for scattering radius in File 2
✓ 006	Allowed float format not specific/clear enough

Improvements

ID	Summary
834	Add MLBW angular distribution discussion
939 ✓	"Codes and Formats Subcommittee Leadership" list needs updating
942 ✓	Need new preface for upcoming format manual release to go with new ENDF release
1062 ✓	Legendre moment coefficient definitions differ between Chap. 4 and Appendix B
1062 ✓	Clarify differential cross section notation

So what's left before ENDF/B-VIII?

- “Changelog” appendix (optional, but nice to have)
- Proofreading, volunteers?
- Anything else?