BNL Activities Related to Formats and Processing and ENDF-102 Manual Updates

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a passion for discovery



# Mea Culpa

- I learned only last week that all the manual updates were being pushed to the wrong staging area, the pre-built current *in-development* manual is not available to the outside world.
- I will fix it early next week



# **Big things are coming**

- Revised manual must be released with ENDF/B-VIII. This is the last major CSEWG meeting before then, I recommend we no longer accept format changes after this meeting.
- Both ENDF-6 manual and GND specifications due with ENDF/B-VIII.



## **Manual updates**



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# **Errors/Typos**

6 errors/typos were opened in FY16, I've fixed one

	ID	Summary	Status
	950	Incoherent scattering in chapter 27	Open
	1000	Equation reference for scattering radius in File 2	Open
	1004	Equations for phase space distributions (MF=6, LAW=6) messed up	Open
	1005	In LRF=7, clarify the meaning of a negative channel spin SCH	Open
	1006	Allowed float format not specific/clear enough	Open
Proc	992	Clarify upper energy range of Madland Nix PFNS model	Closed

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992	PFNS model	Closed

## Improvements

#### I updated the constants in appendix H

ID	Summary	Status
834	Add MLBW angular distribution discussion	Open
939	Codes and Formats Subcommittee Leadership list needs updating	Open
941	Clarify kinematics discussion in appendix E	Open
942	Need new preface for upcoming format manual release to go with new ENDF release	Open
0.05	Explain the 80 column punchcard format and the ENDF manual notation describing how to	0
985	populate it	Open
1001	Use quotes correctly in LaTeX	"ongoing"
942 985 1001	Need new preface for upcoming format manual release to go with new ENDF release Explain the 80 column punchcard format and the ENDF manual notation describing how to populate it Use quotes correctly in LaTeX	Open Open "ongoinc

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## **Format changes**



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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	Status
900	Introduce a flag for lognormal distribution of inherently positive parameters	Open
981	Add NSUB=19 for Neutron Standards Sublibrary	Implemented
982	Reword the INT=6 charged particle interpolation rule	Open
983	Clearly define legal characters in an ENDF TEXT field	Open
984	Clearly define legal numbers in ENDF format	Open
997	Allow MF=4/5 for incident gamma evaluations	Open
1028	<u>'LCT' option for specifying product frames in MF 6</u>	Open
1033	Clarify the allowed floating point number formats	Open
1034	ZAID for TSL evaluations	Open
1035	Revise MAT number assignments in light of new evaluations	Open

ORY

LABYNA

ULTIN

nnu

# [#900] Log normal flag

- Originally submitted in 2015, request to add lognormal flag for covariance on inherently positive data
- Waiting action :

We need an example file to learn how to use this data properly.

Should we reject/defer this format proposal?



# [#997] Allow MF=4/5 for incident gamma evaluations

• At the start of Chapter 4, the ENDF manual states:

File 4 is used to describe the angular distribution of emitted particles. It is used for reactions with incident neutrons only, and should not be used for any other incident particle.

- However, MF 4/5 appear in a bunch of incident gamma evaluations: g-090\_Th\_232, g-092\_U\_233, g-092\_U\_234, etc., where they are used to give outgoing neutron distributions for MT=16, 18 and a few others.
- The ENDF manual be updated to allow using MF=4/5 for incident gammas.

