

SAMMY Workshop

Part 7a

Dr. Nancy M. Larson
Oak Ridge National Laboratory

Part 7a, Relationship to ENDF

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ENDF as SAMMY input

- ***SAMMY can read ENDF files***

- R-matrix parameters from File 2, LRU=1 (RRR only)

- Which versions?

- LRF = 1 (“Single-Level Breit Wigner”)

- LRF = 2 (“Multilevel Breit Wigner”)

- LRF = 3 (so-called “Reich Moore”)

- LRF = 7 (new “R-Matrix Limited”)

Read these for starting parameters, but do not use Breit-Wigner for new analyses!

A highly restricted version of Reich-Moore

New format for ENDF/VII, fully compatible with all SAMMY conventions

ENDF as input, cont.

- **R-matrix parameters from File 2, cont.**
 - **SAMMY can read the entire ENDF file and search for the MAT number**
 - **SAMMY will create SAMMY-style INPut and PARAmeter files**
 - **User should edit these for use in future SAMMY runs**
 - **In particular, remove command to use SLBW or MLBW!**

ENDF as input, cont.

- **Parameter covariance information from File 32**
 - **LCOMP = 1**
 - Single “short-range” only → complete covariance matrix
 - **LCOMP = 2**
 - New option for ENDF, compact covariance matrix
 - Approximate, for use when the full covariance matrix involves too many numbers for use of LCOMP = 1
- **Point-wise cross sections from File 3, for use as SAMMY’s DATA file**
 - (even though it is not real experimental data)

ENDF as SAMMY output

- ***SAMMY can write ENDF files***
 - R-matrix parameters from File 2, LRU=1
 - LRF = 1, 2, 3, or 7
 - Parameter covariance information from File 32
 - LCOMP = 1 or 2
 - Maybe ... hasn't really been used
 - Point-wise cross sections from File 3
 - Ditto