

VIII.C. OUTPUT FROM ANALYSIS IN UNRESOLVED RESONANCE REGION

As with the resolved resonance region, each SAMMY/URR run may produce several output files:

- (1) The SAMMY.LPT file contains details of the calculations.
- (2) For runs which involve the solution of Bayes' equations and hence the generation of updated parameter values (a "Bayes run" as opposed to a "no-Bayes run" which simply calculates cross sections), an output file SAMMY.PAR is provided in the annotated form described in Table VIII B.2. (This file, of course, is quite different from the file by the same name produced in a resolved resonance region run.)
- (3) For Bayes runs, a COVariance file SAMMY.COV is produced, which contains (among other things) the final parameter covariance matrix; see below for more detail.
- (4) Files SAMMY.NDF and SAMMY.N32 contain the URR portion of ENDF File 2 and 32, respectively; these files are produced when the appropriate command is in the INPut file.
- (5) Files SAMMY.NDX and SAMMY.N3X contain the same information as in SAMMY.NDF and SAMMY.N32 respectively, but also include comment lines defining the parameters whose values are given. Only the uncertainty values are given in SAMMY.N3X; correlations are printed only in SAMMY.N32.

The binary COVariance file SAMMY.COV can be used as input to a subsequent SAMMY run that uses the same R-matrix parameters but different data sets and different normalizations, in a similar fashion to sequential runs in the RRR. There are slight differences, however, in the usage of this COVariance file; no auxiliary program comparable to SAMAMR is required here, as there is only one type of data-reduction parameter (the normalizations). The user must simply rename and modify the SAMMY.PAR file to contain the appropriate normalization parameters for the data sets about to be analyzed. The output PARAmeter file will contain card set 10a of Table VIII B.2; PARAmeter files to be used as input will use either card set 10 (for new data sets for which the normalizations have not yet been defined) or card set 10a (to re-use normalizations already defined for the current data sets). See test case tr145 for examples.

To use an output SAMMY.PAR file as input to a new run without the accompanying COV file, it is necessary to delete the first line of the file; this line reads as follows:

COVARIANCE MATRIX FRom old run is used

When the COV file is to be used (for sequential runs), keep this line in the PARAmeter file.

Test cases tr073, tr088, tr127, tr128, tr133, tr145, and others provide sample input and output for URR calculations.