

Table VIII B.3. Energy ranges encountered in the unresolved resonance region***EMIN and EMAX for this run –***

- EMIN & EMAX refer to the min and max energies of the data to be fitted.
- EMIN & EMAX can be given in the INPut file.
 - “USE ENERGY LIMITS AS GIVEN IN THE INPUT FILE” must be specified (otherwise the values are ignored).
 - The same EMIN & EMAX apply to all data sets.
- If EMIN & EMAX are not given in the INPut file (or the command line is not used), then EMIN & EMAX are set to the min and max energies occurring in the data sets.

For each data set i –

- Actual range for which data exist = E_{min_i} and E_{max_i}
 - never defined in the SAMMY input but seen in the data file
- Range to be used in this calculation
 - All data points (from E_{min_i} to E_{max_i}) will be used unless EMIN & EMAX are specified in INPut file [and command line is there].
 - The same EMIN & EMAX are used for all data sets.

For the parameters, there are Numurr regions –

- Energy limits are specified in the PARAmeter file.
 - Engur0 is the “MINImum energy” for the first region.
 - If Engur0 is not given, then it will be set equal to EMIN.
 - Engurr(n) is the “Energy Maximum” for the n^{th} region.
 - If a “MINImum energy” is specified for region n ($n > 1$), the code will check whether it is equal to Engurr($n-1$) and abort if it isn't.

Region number	Energy at start of region	Energy at end of region
1	Engur0	Engurr(1)
2	Engurr(1)	Engurr(2)
3	Engurr(2)	Engurr(3)
...		
Numurr	Engurr(Numurr-1)	Engurr(Numurr)

- If $EMAX > Engurr(Numurr)$
 - If data are to be used above Engurr(Numurr), the code will print an error message and abort, because parameters are not defined above Engurr(Numurr).

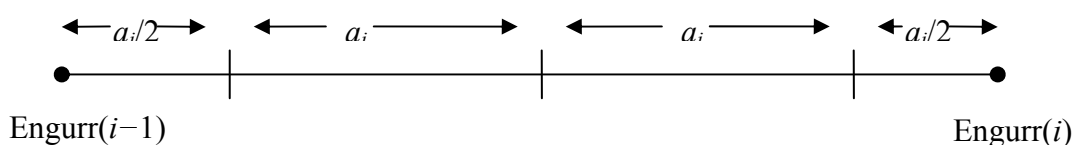
Table VIII B.3 (continued)

For the ENDF file –

- Provided energy limits are given elsewhere, it is NOT necessary to include any data sets for the run that generates the ENDF file.

- If the *.ndf file contains the key word “Energy=”, then
 - Only and exactly the energies given here are used in the ENDF file [tr133g, h, j].
 - Energies must be in monotonically increasing order.
 - The minimum and maximum energies to be printed in the ENDF file are the minimum and maximum energies from this list.
 - The command “INCLUDE MIN & MAX Energies in endf file” is ignored (test case tr133 runs h and j).

- If the *.ndf file contains key word “NUMber = N ”, then
 - This key word is ignored if “Energy =” key word is given.
 - The minimum and maximum energies to be printed in the ENDF file are Engur0 and Engurr(Numurr) for this run (defined above).
 - If $N = 1$, only the midpoint energy value for each parameter region will appear in the ENDF file (test case tr133 run b).
 - For $N > 1$, in each of the Numurr parameter regions, N equally-spaced points are used in the ENDF file. So $a_i = ((\text{Engurr}(i) - \text{Engurr}(i-1))/N$ in the figure below [tr133a].



- If the command “INCLUDE MIN & MAX Energies in endf file” appears in the INPut file, then Engur0 & Engurr(Numurr) are also included in the ENDF listing (tr133 runs e and f, with NU=3 and 1, respectively).