

Table VIII B.1. Formats for original PARAmeter file for treatment of the unresolved resonance region

Card set	Line No.	Description
1	1–4	First four lines are alphanumeric title
2	1	Number of iterations, fitting tolerance (essentially delta chi squared). Note that integers are to be specified as real numbers. All formats are F10.
	2	Mass in amu, radius in Fermi (or use default), neutron binding energy in MeV, pairing energy PE in MeV. Again, formats are F10; note that the energy units are MeV, as opposed to the usual SAMMY standard of eV.
3	1,2,...	Center-of-mass excitation energy (in eV), spin, and parity for the n th target level (beginning with ground state). Repeat as many times as needed.
	Last	(Blank)
4	1	Strength function S_c , uncertainty, distant-level parameter R_c^∞ , uncertainty, radiation width $\langle \Gamma_\gamma \rangle$ in eV, uncertainty, mean level spacing D in eV for $l = 0$
	2	Strength function, uncertainty, distant-level parameter, uncertainty, radiation width in eV, uncertainty, for $l = 1$
	3	Strength function, uncertainty, distant-level parameter, uncertainty, radiation width in eV, uncertainty, for $l = 2$
	4,5,...	As above, for higher l values as needed
	Last	(Blank)
5	1	For the lowest J value for $l = 0$, Average fission width $\langle \Gamma_f \rangle$ (eV) Degree of freedom ν_f for fission width distribution Hill-Wheeler threshold energy E_{HW} Hill-Wheeler threshold width W_{HW} Uncertainty on the average fission width
	2,3,...	Repeat line 1 for each possible value of J for $l = 0$.

Table VIII B.1 (continued)

Card set	Line No.	Description
5, cont.	4,5,...	<p>Repeat lines 1-3 for each possible value of J for $l = 1, 2, \dots$</p> <p>For a given spin J and parity (even or odd l), only one set of values is actually used for $\langle \Gamma_f \rangle$ and the other parameters. Nevertheless, all J and l must be included in this list. Only the values associated with the lowest l value will be used for the calculations; the other values will be ignored.</p> <p>For example, the ground state of ^{235}U is $7/2^-$. For $l = 0$, $J^\pi = 3^-, 4^-$. For $l = 1$, $J^\pi = 2^+, 3^+, 4^+, 5^+$. For $l = 2$, $J^\pi = 1^-, 2^-, 3^-, 4^-, 5^-, 6^-$. The 3^- and 4^- values used in the calculations will be those given for $l = 0$. The values given for $J^\pi = 3^-$ and 4^- with $l = 2$ will be ignored.</p>
	Last	(Blank)
6	1	Type of cross-section data (TOTAL, CAPTURE, FISSION, or INELASTIC)
	2	Uncertainties are RELATIVE or ABSOLUTE
	3	Energy, cross section, and uncertainty for first data point. Normalization and uncertainty (a and Δa) for this data set.
	4,...	Energy, cross section, uncertainty. (Note: if RELATIVE then these need to be specified only for first data point; the others are assumed to be the same.)
	Last	(Blank)
6x	All	Repeat card set 6 as many times as needed, in any order
7	1	<p>The single word "NORMALIZATION".</p> <p>(Card set 7 is present only if the command "EXPERIMENTAL DATA ARE in separate files" appears in card set 3 of the INPUT file.)</p>
	2	Type of cross section, normalization parameters a , Δa , b , Δb , c , Δc , where the normalization for this data set is given by $norm = a + b E^c$
	3,etc.	Repeat Line 2 once for each data set. Normalizations must appear in the same order in which the data sets appear. SAMMY will check to be sure the data types are consistent.