Table VI B.2 (continued)

NOTES for card set "Last B", `Explicit covariance` information.

For `EXPLIcit` input of parameter uncertainties, values for variables NN, MM, KK, LL, and VV are described here. Explicit uncertainties need not be given for every parameter, but only for those for which the default value appears inadequate. Also note that uncertainties associated with parameters of most card sets may be provided along with values for those parameters. When that option is available, it is the preferred method of input.

(a) To explicitly input the initial (prior) uncertainty on resonance parameters, find the number of the resonance (i.e., count lines in card set 1 in this file). That number is "NN" and goes in columns 1-5, right-adjusted. The value of MM for columns 6-10 is 1 if the parameter of interest is E_λ, 2 if $\Gamma\gamma$, 3 if Γ_{c1}, 4 if Γ_{c2}, , and so on. KK and LL are zero. VV then represents the *absolute* value of the uncertainty for this parameter, in the same units as the parameter itself.

(b) To explicitly input the prior uncertainty on R-external parameters, set NN = (1000 plus IGROUP), where IGROUP is the group number. Let MM = 1 for E_α^{down} , 2 for E_α^{up}, 3 for $R_{con,\alpha}$, 4 for $R_{lin,\alpha}$, 5 for $c_{con,\alpha}$, 6 for $c_{lin,\alpha}$, and 7 for $R_{q,\alpha}$, all for channel 1. If using "card set 3" to input R-external for channel 2, use MM = 6, 7, 8, 9, 10, and for channel 3, use MM = 11, 12, 13, 14, 15. If using "card set 3a," use MM = 8, 9, 10, 11, 12, 13, 14; for channel 3, use 15 through 21. The absolute value of the uncertainty on that parameter is then given by VV.

(c) To explicitly input the prior uncertainty on broadening parameters, the preferred method is to specify uncertainties along with values in card set 4. To use the EXPLIcit option, set NN = 2000 + n, where n = 1 for radius, 2 for effective temperature, 3 for sample thickness, and so on. (MM is irrelevant here.) The absolute uncertainty on that parameter is VV.

(d) To explicitly input the prior uncertainty on normalization or background parameters , the preferred method is to use card set 6. If, however, that is undesirable or correlations are wanted, then the EXPLIcit option may be used. Set NN = 3000 + n, where n = 1 for ANORM, n = 2 for BACKA, and so on. VV is the absolute uncertainty on that parameter.

(e) To explicitly input the prior uncertainty on the radii, the preferred method is to use card set 7a. To use the EXPLIcit option with card set 7, set NN = 4000 + n, where n is the radius pair number (i.e., the "line number," minus one, in card set 7). Also set MM = 1 for potential scattering radius, MM = 2 for the channel radius, or MM = 1 if the two radii are treated as identical. VV is the absolute uncertainty on the radius. (No uncertainty is permitted on the mass AWRI.)

(f) To input prior uncertainties on Oak Ridge resolution function parameters, the preferred method is to use card set 9. If, however, that is undesirable or correlations are wanted, then the EXPLIcit option may be used. Set NN = 5000 + n, where n represents the parameters in the order in which they were presented. MM may be set to zero.

(g) For data-reduction parameters of card set 8, use NN = 6000 + n.

(h) For isotopic abundances of card set 10, use NN = 7000 + n.

(i) For miscellaneous parameters of card set 11, use NN = 8000 + n.

Table VI B.2 (continued)

(j) For background function parameters of card set 13, use NN = 13000 + *n*.

(k) To explicitly input correlations between the uncertainties on two parameters, let NN and MM indicate the first parameter, as in (a) through (j) above. The second parameter is indicated by KK and LL (analogous to NN and MM, respectively). The correlation coefficient is then given by VV. Note that VV is in the range from −1 to +1.