**Table VI B.2 (continued)**

| C:L | P, T | Variable Name | Meaning (units) | Notes |
|---|---|---|---|---|
| 3a:1 | 1-80, A | WHAT | "`R-EXTernal parameters follow`". This card set 3a is an alternative, not a supplement, to card set 3. It is not permitted to use both. | |
| 3a:2 | 1-2, I | IGROUP | Spin group number | |
| | 3, I | ICHN | Channel number | If zero, SAMMY assumes 1. |
| | 4, I | $ISE_\alpha^{down}$ | Vary $E_\alpha^{down}$ ? | 0 = no, 1 = yes, 3 = PUP |
| | 5, I | $ISE_\alpha^{up}$ | Vary $E_\alpha^{up}$ ? | 0 = no, 1 = yes, 3 = PUP |
| | 6, I | $ISR_{con,\alpha}$ | Vary $R_{con,\alpha}$ ? | 0 = no, 1 = yes, 3 = PUP |
| | 7, I | $ISR_{lin,\alpha}$ | Vary $R_{lin,\alpha}$ ? | 0 = no, 1 = yes, 3 = PUP |
| | 8, I | $ISs_{con,\alpha}$ | Vary $s_{con,\alpha}$ ? | 0 = no, 1 = yes, 3 = PUP |
| | 9, I | $ISs_{lin,\alpha}$ | Vary $s_{lin,\alpha}$ ? | 0 = no, 1 = yes, 3 = PUP |
| | 10, I | $ISR_{q,\alpha}$ | Vary $R_{q,\alpha}$ ? | 0 = no, 1 = yes, 3 = PUP |
| | 11-20, F | $E_\alpha^{down}$ | Logarithmic singularity below energy range (eV) | Parameters of the logarithmic parameterization of the external R-matrix for quantum numbers α (i.e., for IGROUP and ICHN), of the form given in Eq. (IIB1d.1). |
| | 21-30, F | $E_\alpha^{up}$ | Logarithmic singularity above energy range (eV) | |
| | 31-40, F | $R_{con,\alpha}$ | Constant term | |
| | 41-50, F | $R_{lin,\alpha}$ | Linear Term ($eV^{-1}$) | |
| | 51-60, F | $s_{con,\alpha}$ | Constant coefficient of logarithmic term (must be non-negative) | |
| | 61-70, F | $s_{lin,\alpha}$ | Linear coefficient of logarithmic term | |
| | 71-80, F | $R_{q,\alpha}$ | Quadratic term | |
| 3a:3 etc. | Repeat line 2 as many times as desired. Include only those spin groups and channels for which you wish to parameterize the external R-matrix in this manner. | | | |
| 3a: Last (blank) | | | | |