

The form of the ccfull data set is shown below.

Data should be created in a file called ccfull.inp

Output from the code is to:

OUTPUT        potential, barrier and cross section  
cross.dat     tabulated cross section versus Ecm, sigma(Ecm)  
barr\_dist     calculated distribution of barriers, D(Ecm)

ccfull data set format:

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The first line: AP,ZP,AT,ZT

The second line: RP,IVIBROTP,RT,IVIBROTT

(The radius parameter used in the coupling Hamiltonian)

(IVIBROT: option for intrinsic degree of freedom

= -1; no excitation (inert)

= 0 ; vibrational coupling

= 1 ; rotational coupling

IVIBROTP: for projectile excitation

IVIBROTT: for target excitation)

The third line: OMEGAT,BETAT,LAMBDAT,NPHONONT (if IVIBROTT=0)

E2T,BETA2T,BETA4T,NROTT (if IVIBROTT=1)

(Input for the target excitation)

(This line is irrelevant if IVIBROTT = -1.)

(NROT: the number of levels in the rotational band to be  
included (up to  $I^{\pi}=2*NROTT+$  states are included)  
e.g. if NROTT=2, then 0+, 2+ and 4+ in the target  
are included.)

The 4th line: OMEGAT2,BETAT2,LAMBDAT2,NPHONONT2

(Input for target phonon excitation; the second mode of  
excitation.

For example, the first mode (LAMBDAT) may be a quadrupole  
vib. and the second mode (LAMBDAT2) may be an octupole vib.  
in the target nucleus.)

(No second target phonon excitation if NPHONONT2=0

OMEGAT2, BETAT2, and LAMBDAT2 are irrelevant  
if NPHONONT2=0)

The 5th line: OMEGAP,BETAP,LAMBDAP,NPHONONP (if IVIBROTP=0)

E2P,BETA2P,BETA4P,NROTP (if IVIBROTP=1)

(Input for the projectile excitation)

(This line is irrelevant if IVIBROTP = -1.)

(NROT: the number of levels in the rotational band to be  
included (up to  $I^{\pi}=2*NROTP+$  states are included)  
e.g. if NROTP=2, then 0+, 2+ and 4+ in the projectile  
are included.)

The 6th line: NTRANS,QTRANS,FTR

(Input for pair transfer channel)

(NTRANS is either 0 OR 1)

No transfer ch. if NTRANS=0

QTRANS and FTR are irrelevant if NTRANS=0)

(Coupling form factor:

$FTRANS(R)=FTR * d VN/ dR$ )

The 7th line: V0,R0,A0 (Potential parameters)

The 8th line: EMIN,EMAX,DE

The 9th line: RMAX,DR