

This program is an interactive one (a front-end) to help to automatically generate a data set (called dfold.xxx) for input to the dfold program. Once the data set is created, dfold should be run using the standard redirect construction: dfold < dfold.xxx

A typical run with the answers given to calculate the potential for 12C+9Be at 100 MeV per nucleon (to file dfold.12C+9Be) is as follows.

HF projectile density version

Enter title
my_run
Output file trailer
12C+9Be
Output is to file: dfold.12C+9Be
Enter PROJECTILE mass and charge
12 6
Enter TARGET mass and charge
9 4
Enter Laboratory energy per nucleon
100
PROJECTILE density type

(1) Gaussian
(2) Woods-Saxon
(3) Delta function
(4) 3 parameter Fermi
(5) r**pwr*Yukawa
(6) r**pwr*Gaussian
(7) Oscillator
(8) read Alex Brown HF densities
(9) read from other file
1
f(r)=C*exp[-(r/gamma)**2]
Enter projectile rms radius
2.32
TARGET matter density type

(1) Gaussian
(2) Woods-Saxon
(3) Delta function
(4) 3 parameter Fermi
(5) r**pwr*Yukawa
(6) r**pwr*Gaussian
(7) Oscillator
(8) read Alex Brown HF densities
(9) read from other file
1
f(r)=C*exp[-(r/gamma)**2]
Enter target rms radius
2.36
Enter effective interaction type
(1) Gaussian
(2) Delta function
1
f(r)=C*exp[(r/gamma)**2]
Enter gammapp and gammappn values
(1) < 100MeV/u defaults [0.5 fm]
(2) Read values
1
signp = 72.8215499828477 mb
sigpp = signn = 28.53350512831817 mb

Alphas are ratios of real to imaginary amplitudes
Use defaults (1) or choose pp and np alphas (2)
1
using < 100MeV/u Ray defaults 1.87 1.0