

glauber calculates the differential cross section for elastic scattering based on pre-calculated S-matrices $S(b)$ computed from the nuclear potentials only. glauber adds the necessary Coulomb contributions for charged particles, as was discussed in lectures and in J.M. Brooke, J.S. Al-Khalili, and J.A. Tostevin PRC 59 1560. glauber asks for a filename containing the following data and for the name of the file for the output of the cross sections. The output file tabulates:

theta (degrees) sigma (mb/sr) sigma/rutherford (charged case)

```
%-----
50.0      12      6
1         0      1.25
20
```

```
%-----
Elab/nucleon      mass target  charge target
mass proj.        charge proj.   Coulomb radius parameter
max scattering angle
```

NB: The Coulomb radius is multiplied as follows depending on the projectile (amp) and target (amt) masses.

```
if(amp.gt.4.d0)then
  rc = rcoul * (amt**(0.333333333333)+amp**(0.333333333333))
else
  rc = rcoul * (amt**(0.333333333333))
endif
```

```
%-----
```