

# Indian Institute of Technology Delhi

## Department of Physics

### Numerical Methods

#### Assisgment III

1. Write a program to simulate 2 dimensional Rutherford back scattering experiment, with the incoming particle having a Gaussian profile. Convert the uniform distribution to Gaussian distribution for this problem. Plot the fraction of scattered particles as a function of the standard deviation  $\sigma = 0.1, 0.5, 1, 5$  of the Gaussian profile?

#### **Instructions**

Program with comments. A pdf with your results, graph (This shows how good you fit is) and commands for compiling your program.