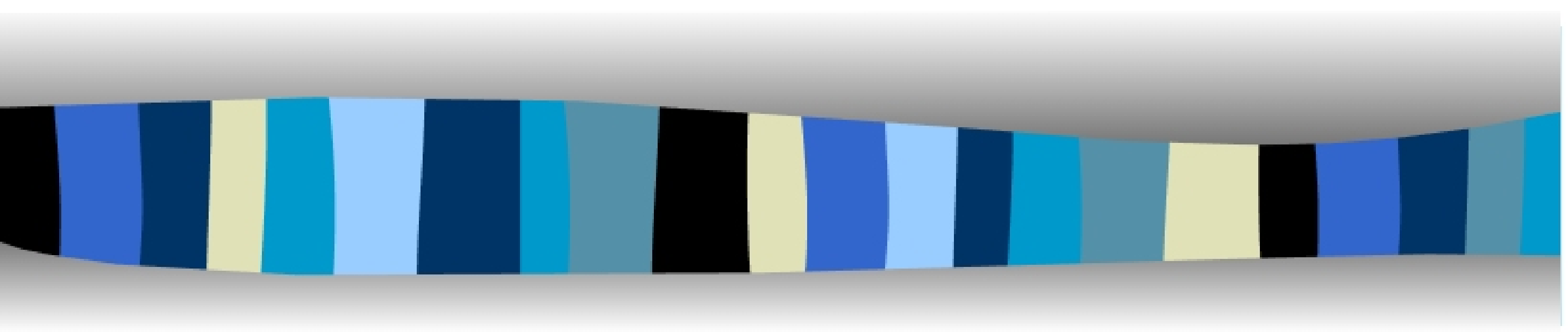
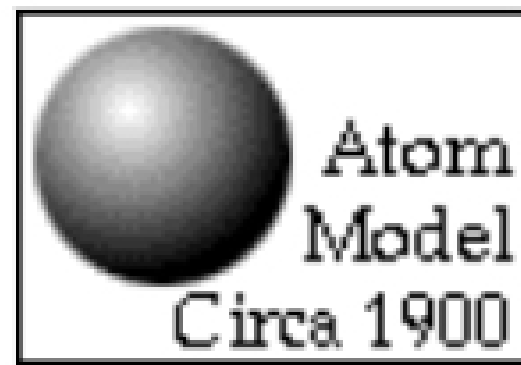
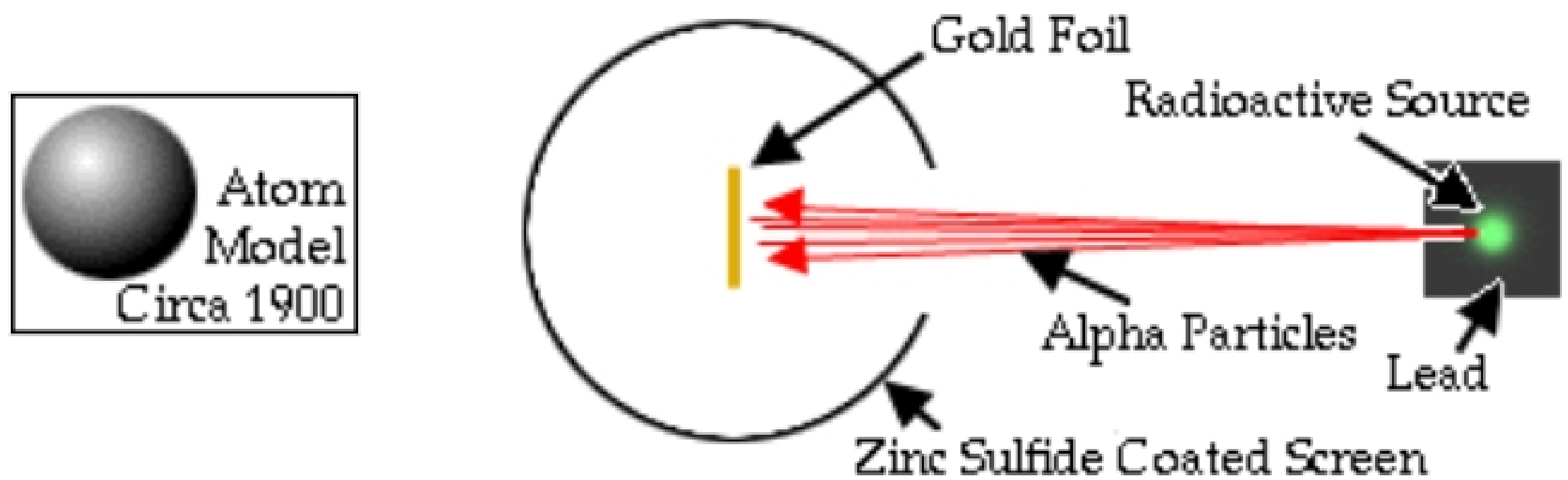


# The Nucleus

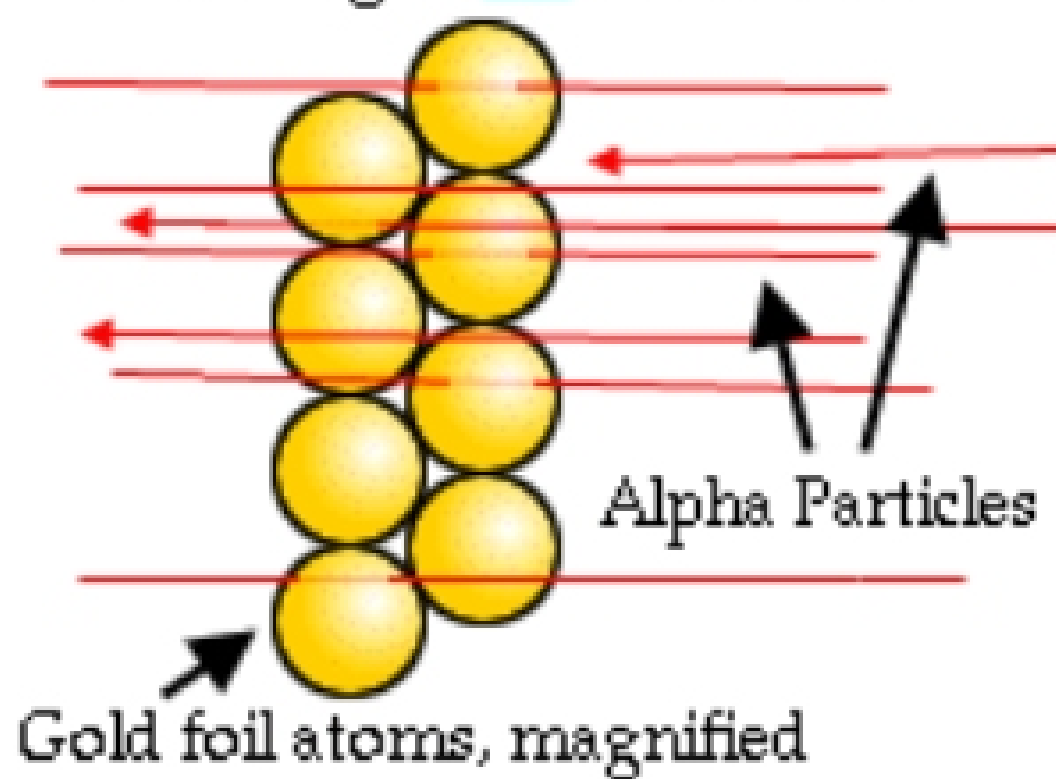


PHY 3101  
D. Acosta

# Rutherford Scattering

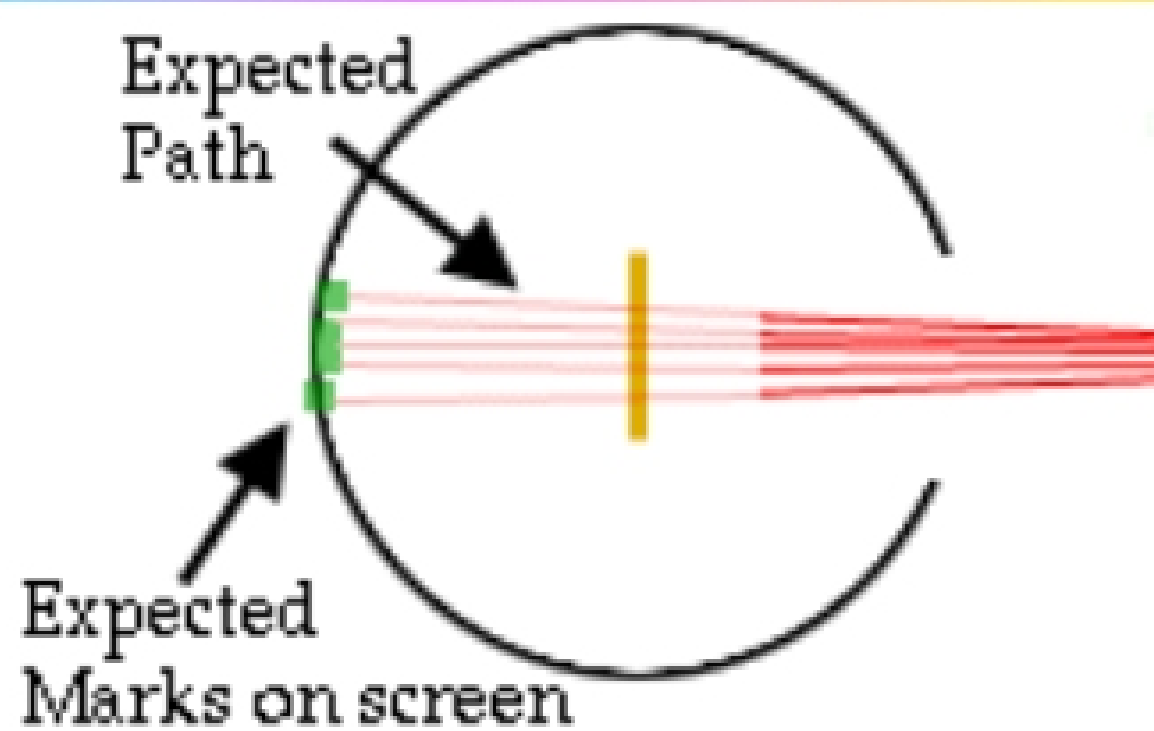


Detail of Gold Foil  
According to old Atom Model

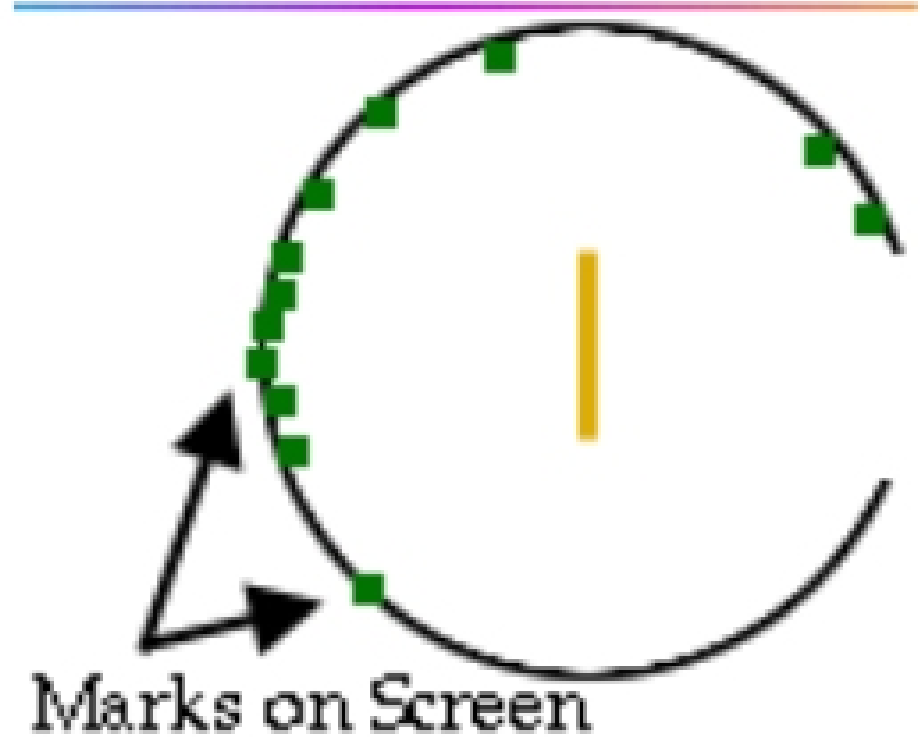


Experiments by Geiger & Marsden in 1909

## The Predicted Result:

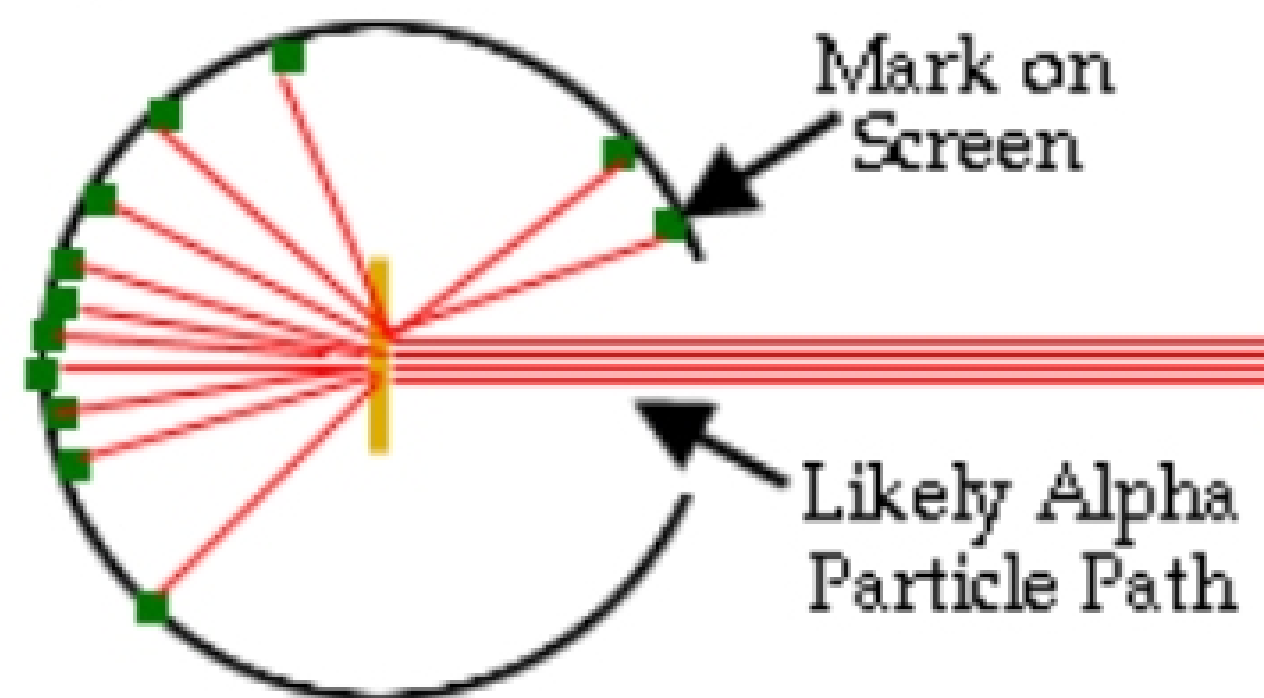


## The Result

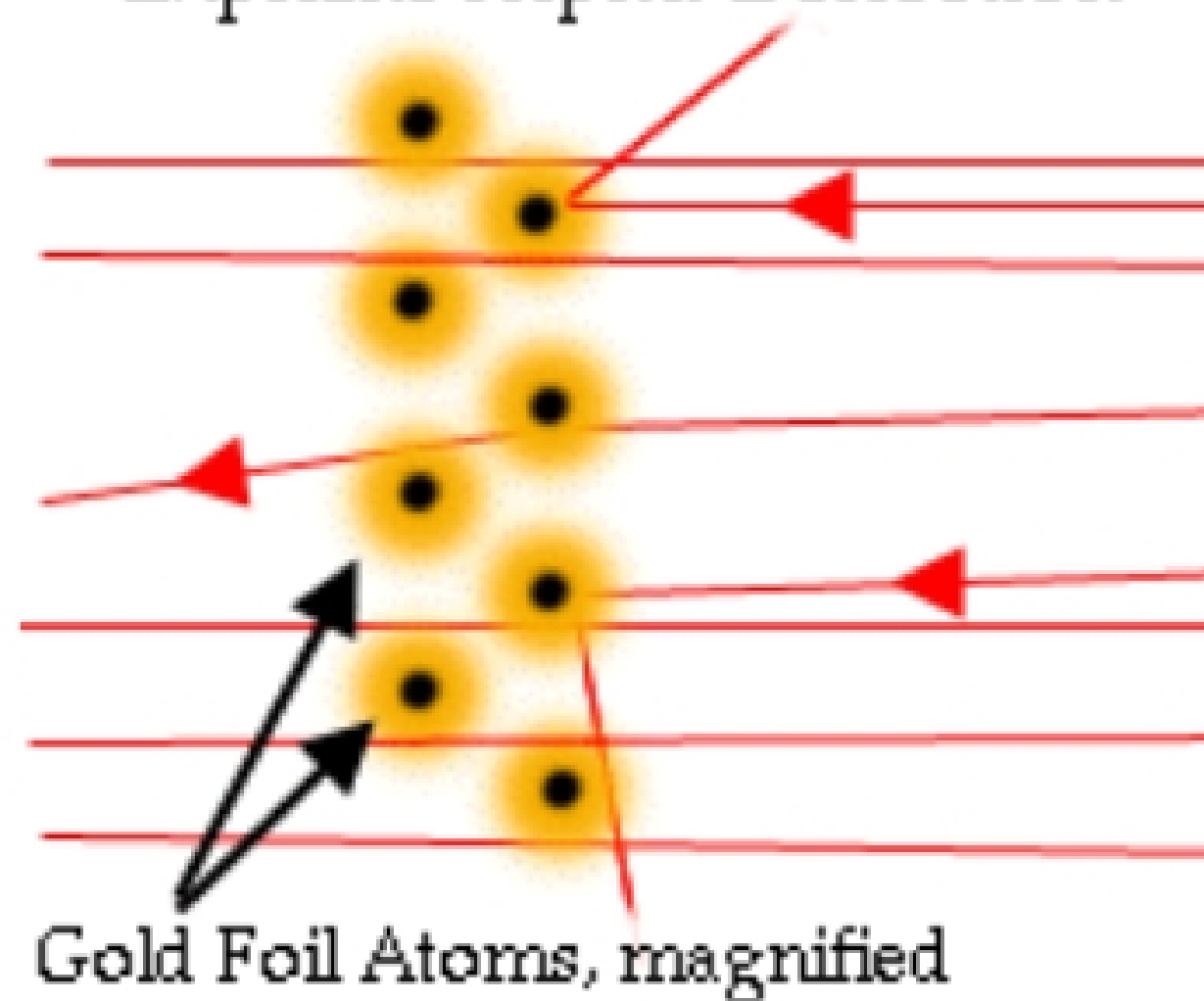


# Rutherford Model of the Atom

Extrapolation of Result:



The Positive Nucleus Theory  
Explains Alpha Deflection



Conclusion: the atom contains  
a positive nucleus  $< 10$  fm in  
size ( $1 \text{ fm} = 10^{-15} \text{ m}$ )

