3 Talk Patric 15.06

RESULT Values from EXYZ.txt - we had some 0 values, so I removed them and the stopping power that came out was the exact same from SRIM table, as one would expect $= 2.25 MeV \frac{cm^2}{g}$.

LEARNING Figure suggests that energy loss is continuous. This is misleading, since collisions happen.

RESULT Density calculated for Rb Gas:

$$7 * 10^{14} \frac{particles}{cm^3} * \frac{85g}{mol} * \frac{1mol}{6.022 * 10^{23} particles} \approx 1 * 10^{-}7 \frac{g}{cm^3}. \quad (1)$$

REDO SIMULATIONS WITH SMALLER ENERGY STEPS /PLOT ONLY 10 PARTICLES

Coordinates X,Y,Z are strange in file COLLISON.txt. Check out why and understand if recoils are happening in only 1 atom. Understand what is being shown - one shell, inner shells, etc etc.

Explain process through which proton is losing energy, eg Bremsstrahlung, Ionization of particles... and what is the major contribution.

Match energies lost shown at COLLISON.txt and EXYZ.txt.

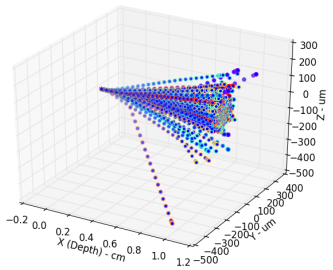

Figure 1: Trajectories of 1000 protons with $E_0 = 300 MeV$ accelerated against Rb.