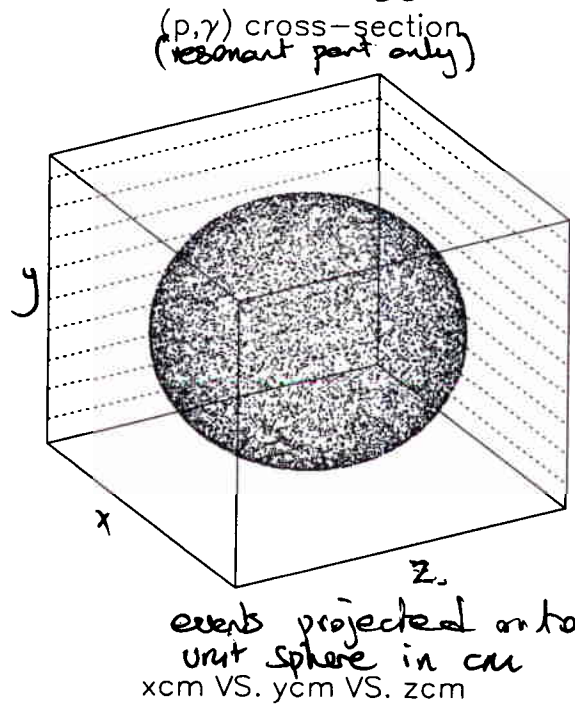
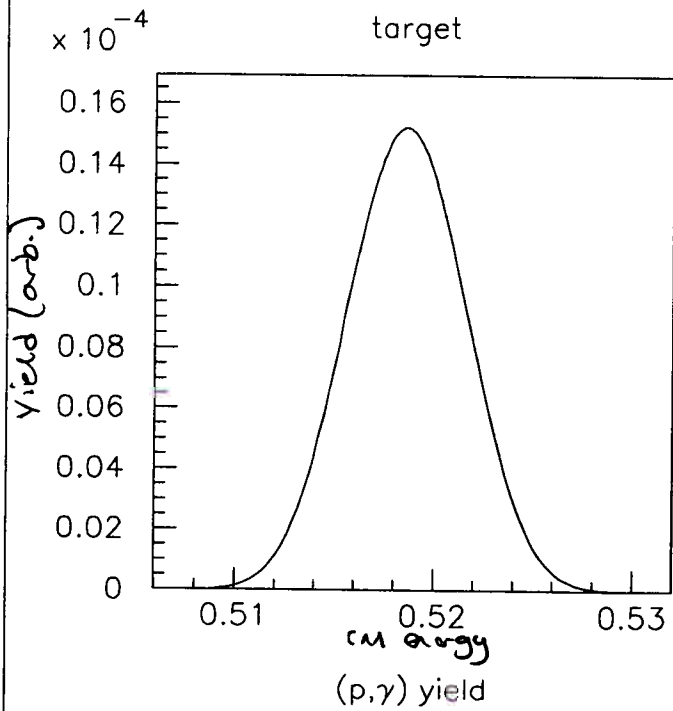
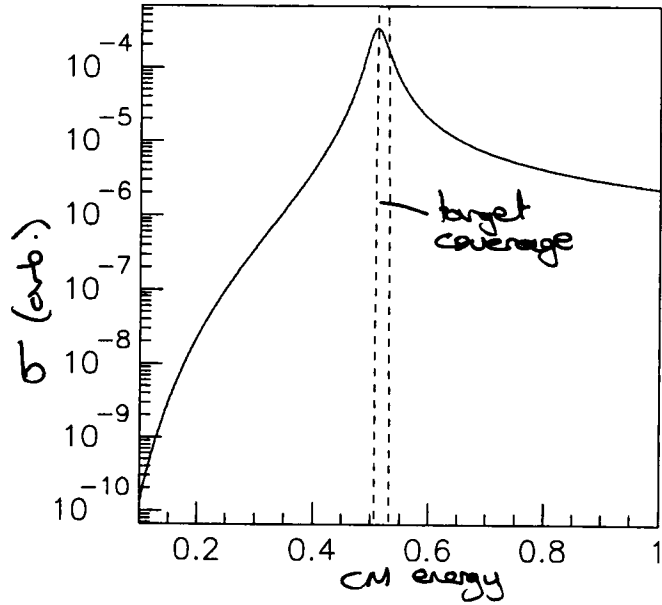
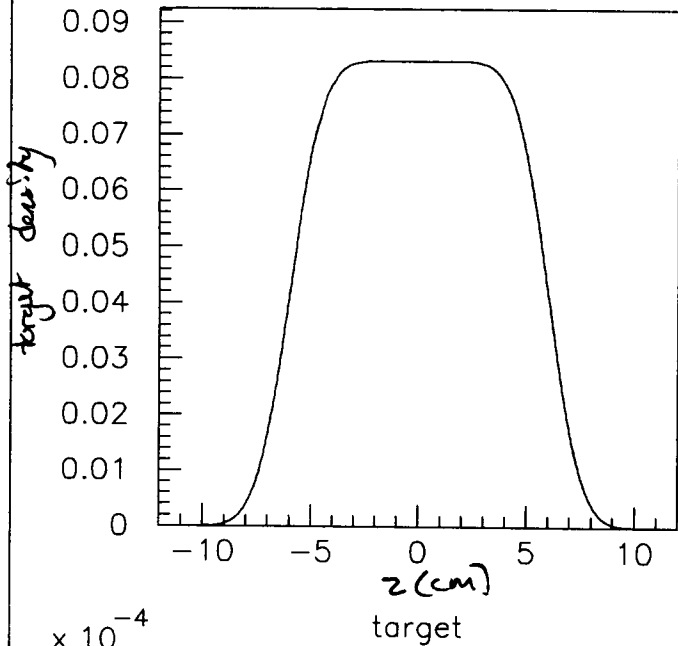
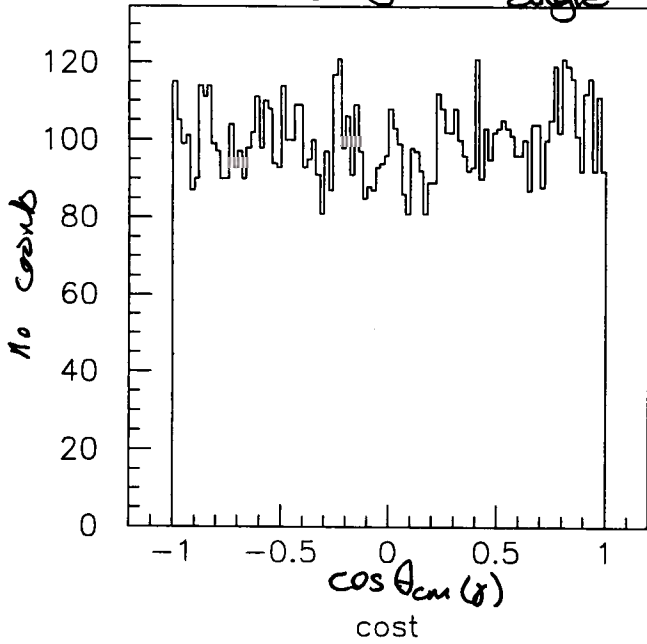


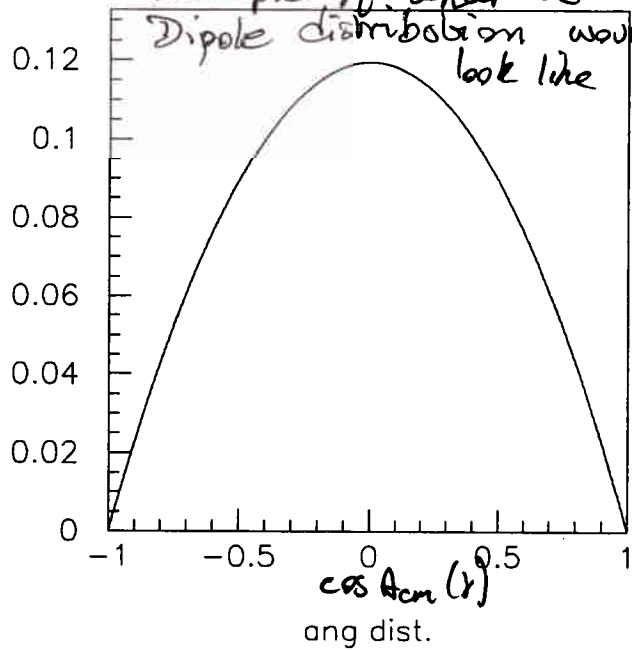
Monte-Carlo
 $^{13}\text{C}(p,\gamma)^{14}\text{N}$ @ 558 keV/u



randomly generated cm angle

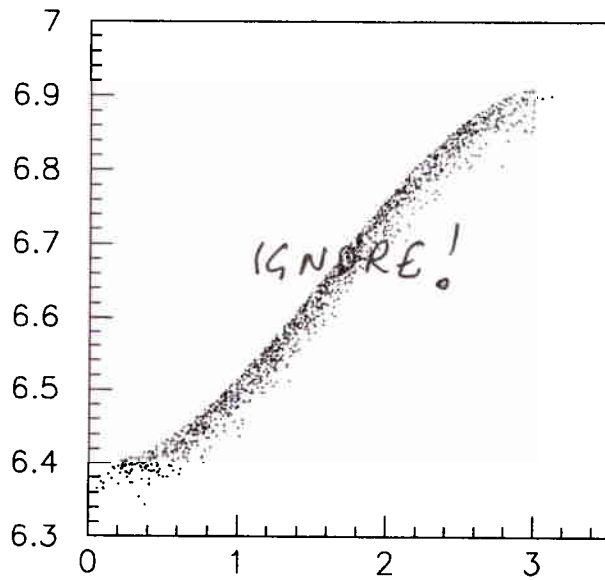


example of what a Dipole distribution would look like

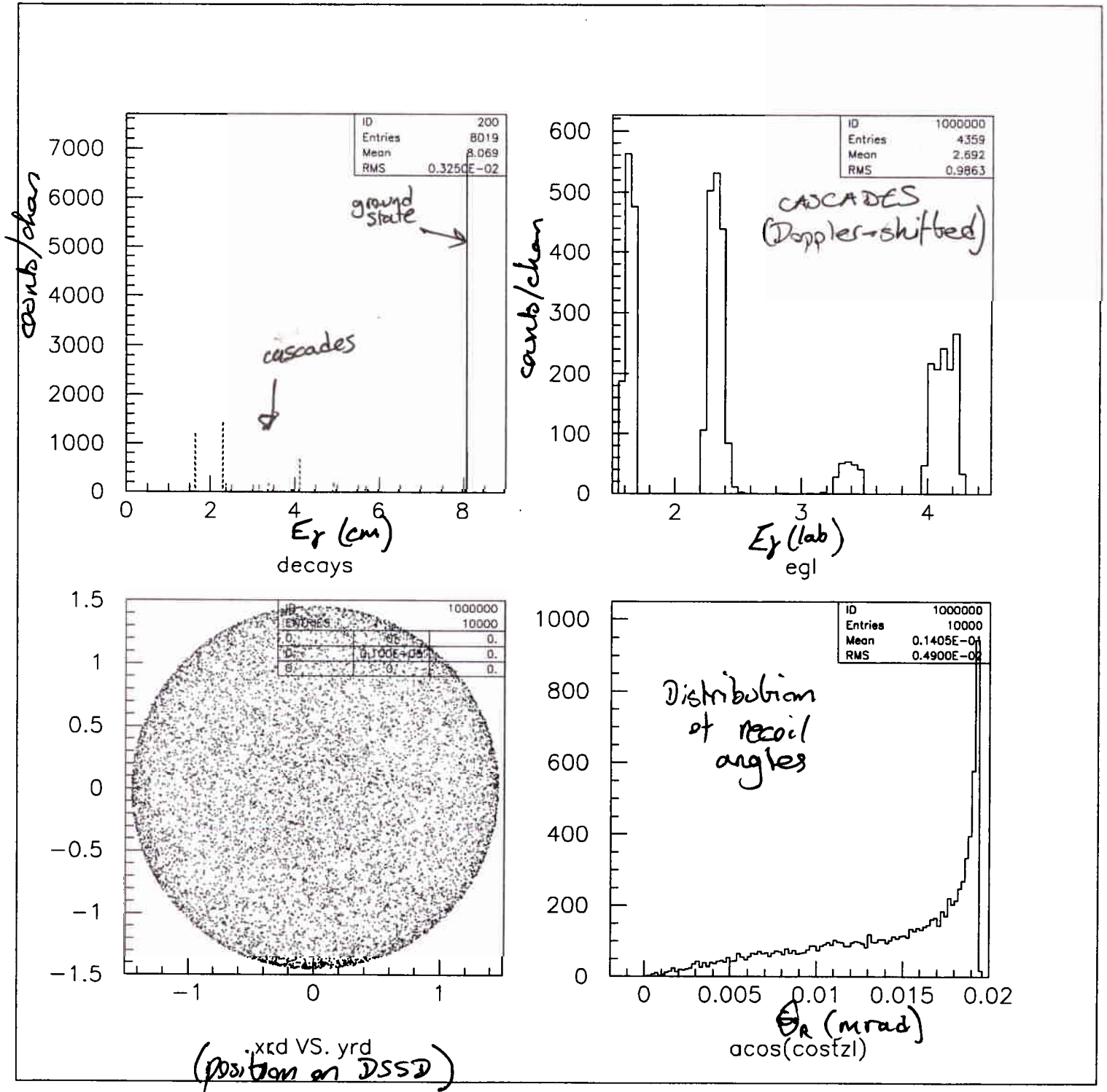


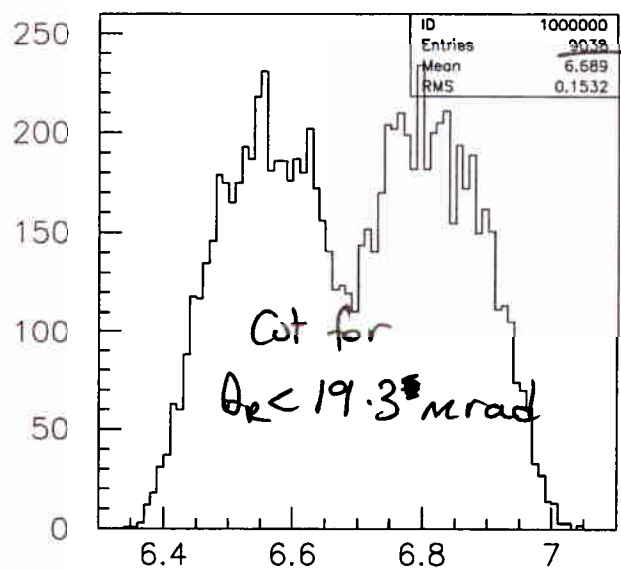
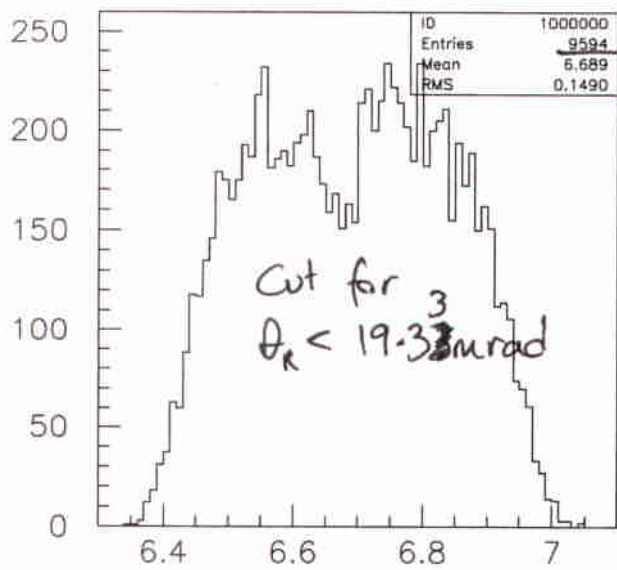
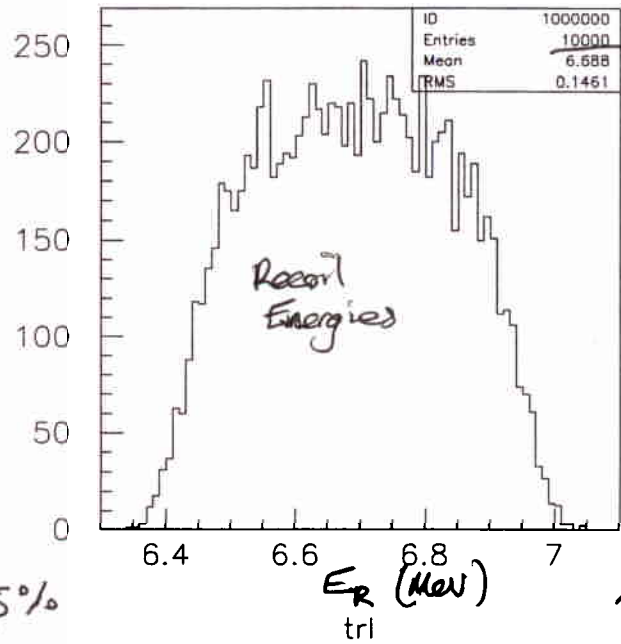
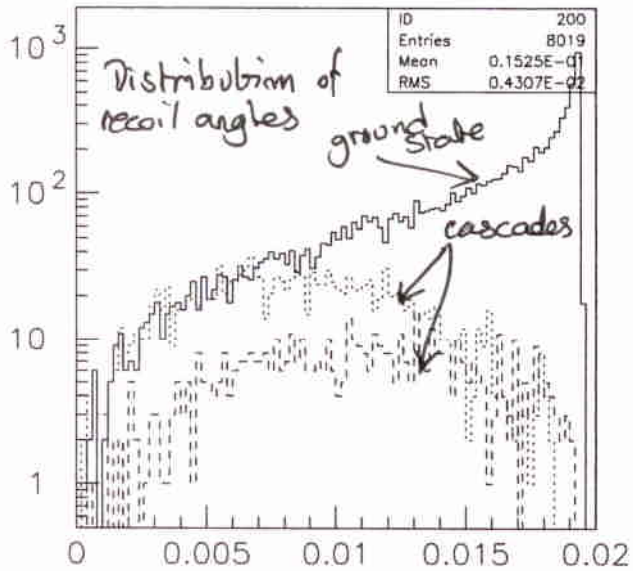
$$T_r - M_r = \gamma(E_r^* + v\beta_r \cos\theta_r)$$

⇒ Recall energy distribution maps θ_r distribⁿ.



trl VS. acos(cost)





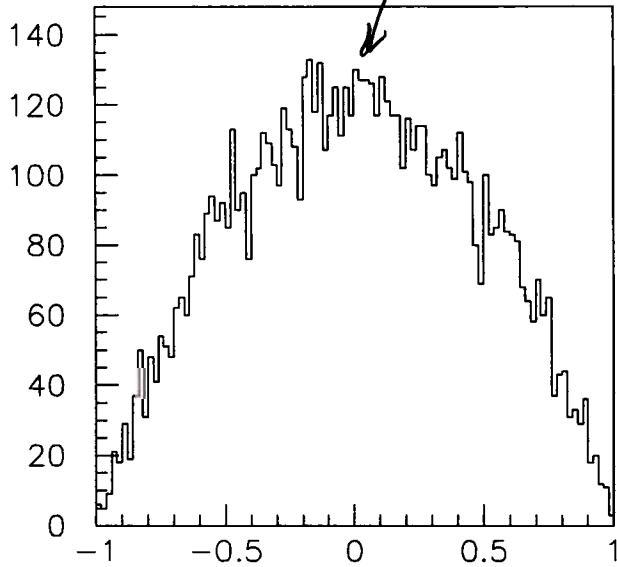
$\sim 5\%$

$\sim 10\%$

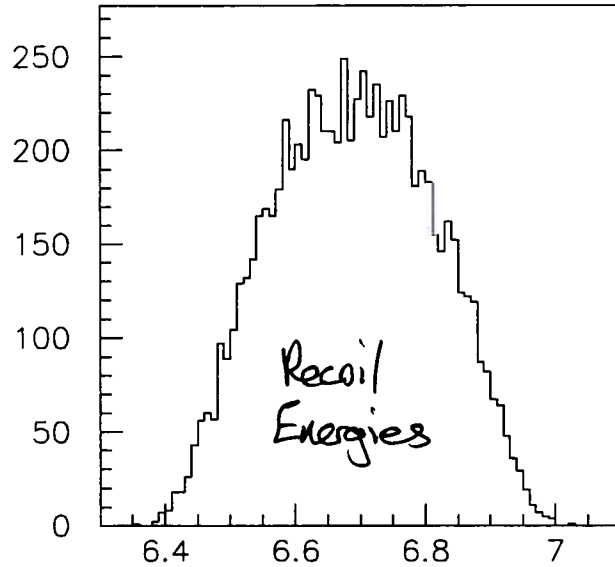
trl

trl

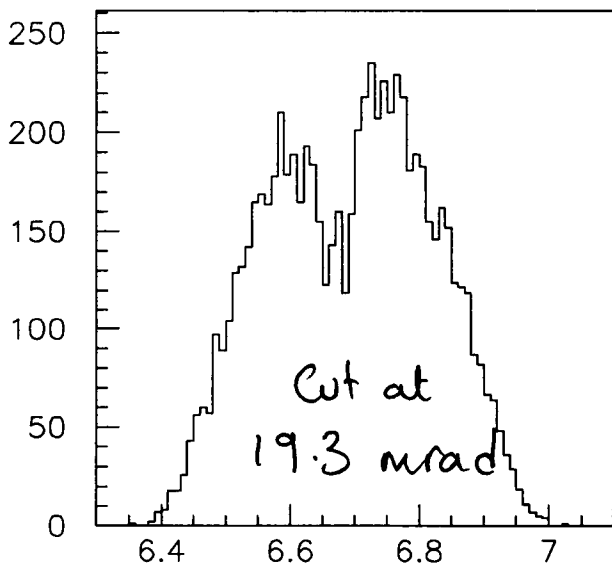
Example for a Dipole distribution
 max at $\theta_{cm} = 90^\circ$



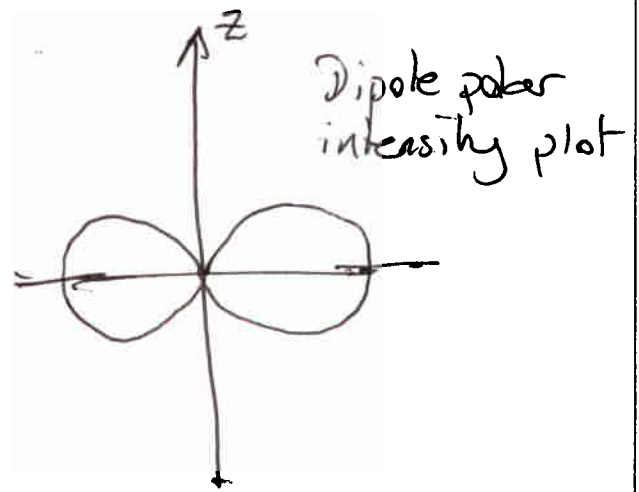
cost



trl



trl



THINGS TO DO: put in z-position of interaction (and range straggling), multiple scattering, detector effects.