

Ph 205b Problem Set 7

1. Calculate the differential section $\frac{d\sigma}{d\Omega}$ for $\gamma\gamma \rightarrow e^+e^-$. Don't look in the text for the solution. Work at high energies and neglect the electron mass.

2. Calculate $\frac{d\sigma}{d\Omega}$ for $e^-\gamma \rightarrow e^-\gamma$. Again don't copy the text, try it yourself and neglect the electron mass.

3. (Bonus problem)

Calculate $\frac{d\sigma}{d\Omega}$ for Moller Scattering $e^-e^- \rightarrow e^-e^-$. (Hint: electrons are identical particles.)