

**Physics 752, Elementary Particles II, Spring 2007, O.W. Greenberg**

Homework: Assignment 3, due 2/19/07

1. Draw the lines of constant  $\theta$  at fixed incident electron energy for three different angles on the graph with coordinates  $(2M\nu, Q^2)$ . Show how the lines change with increasing  $\theta$ .
2. What should you vary and in what direction if you want to measure  $W_1$  and  $W_2$  at a given  $(2M\nu, Q^2)$  for different values of  $\theta$ ?
3. Calculate the structure functions for elastic scattering of electrons and pointlike spin-0 particles.