

**PH354      Hmw5,      due 2/22/11**

Calculate the differential cross section

$$\frac{d\sigma}{d\cos\theta}$$

for  $A + B \rightarrow C + D$  with an invariant matrix element:

$$\mathcal{M} = \frac{e^2(P_A + P_C) \cdot (P_B + P_D)}{(P_A - P_C)^2} \quad .$$