

### **Problem Set 4**

PHY 781 - Spring 2016

Assigned: Wednesday, April 6 Due: Wednesday, Apr. 20

#### **Problem 1: Mott's Formula**

Derive Mott's formula, which is given in Peskin, 5.1. (You do not need to derive it two different ways as is asked in Peskin, 5.1. Just do whatever is easiest for you.)

#### **Problem 2: Bhabba Scattering**

Peskin, Problem 5.2

#### **Problem 3: Decays of Positronium Bound States**

Read pp. 148-153 and then do Peskin, 5.4, **part a only**

Please write down how many hours you spent on this problem set.