

1. Kogut, problem 2-3. Also find the γ factor of the pions and the fractional difference between the pion velocity and c ? In other words, what is $(c - v)/c$? This exercise is a good example of it being important to keep the required accuracy as you go along (and that organizing the calculation properly can allow you to be lazy but smart). Finally it is important to not believe everything you read in the solutions in the back of the book.
2. Kogut, problem 2-5.
3. The flux of cosmic-ray induced muons is about 100 muons per square meter per second at sea level on the Earth's surface. Estimate (to within a factor of 3) the probability that a muon is passing through your body this instant.