

Physics 418, Homework Assignment

Due in Class, Wednesday, March 10, 2004

Masses of particles like K , Σ , etc., for some of these problems can be found on the inside front cover of Griffiths, or on our website in the “Particle Data Group” listings under “Particle Listings 2003”.

1. Prove the following relation among the dimensionless relativistic variables:

$$\gamma^2 - \eta^2 = 1$$

2. Griffiths, Problem 3.15
3. Griffiths, Problem 3.17
4. Griffiths, Problem 3.19
5. Griffiths, Problem 3.21
6. Griffiths, Problem 3.23
7. Griffiths, Problem 4.11
8. Griffiths, Problem 4.21
9. Griffiths, Problem 4.24
10. Griffiths, Problem 4.28