

Particles final project

First Draft

Coding Part

Comments

1. When calculating answers to part 1, you really should into account relativistic effect as well. When the proton' s velocity is close to the speed of light, its mass will increase significantly which will affect the energy equation too.

2. Part 1B incorrect. Why is the mass 125??

It is 125 GeV, so you need to first change this to energy IN JOULES (not in eV), and then change to mass from $E=mc^2$.

The velocity you obtained is actually higher than the speed of light, which is impossible!

3. Part 2A/2B: wrong, when we accelerate the particles with larger and larger electric field, it is easier to accelerate them in the same amount of time to the same speed. Hence, you require less time to obtain the same speed, hence the necessary length should decrease, not increase.

Part 2C is missing

4. Task 3C: why is your radius a matrix of values? It should just be a single number...