Protons are perfectly stable or their lifetime is enormous

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Abstract

Stable particles (**p +, n0, D, He-3, α**) moving with speeds (**0,3 c – 0,99 c**) creates baryons and mesons.
Stable **electrons** moving with speeds (**0,99 c – c**) creates leptons (**μ–, τ–**), neutrinos (**νe, νμ, ντ**) and bosons **W +, W-, Z**.
Speeds of electrons and protons in atoms are smaller. For example: An electron moving at a speed $\mathbf{v_e = 0{,}003c}$ creates spectral line **Hα.**
Weak interactions are caused with stable **electrons,** which creates leptons, neutrinos and bosons **W +, W-, Z**.
The strong interactions are caused with stable particles (**p +, n0, D, He-3, α**), which creates baryons and mesons. Therefore creation and annihilation operators in physics are irrelevant.

Decay modes „elementary particles“

Introduction

It used to be considered gospel that protons, unlike, say, neutrons, live forever, never decaying into smaller pieces. Then in the 1970's, theorists realized that their candidates for a grand unified theory, merging all the forces except gravity, implied that protons must be unstable. Wait long enough and, very occasionally, one should break down. The trick is to catch it in the act. Sitting in underground laboratories, shielded from cosmic rays and other disturbances, experimenters have whiled away the years watching large tanks of water, waiting for a proton inside one of the atoms to give up the ghost. So far the fatality rate is zero, meaning that either protons are perfectly stable or their lifetime is enormous -- an estimated billion trillion trillion years or more.

Informations

The strong interactions are caused with stable particles (p +, n0, D, He-3, α), which creates baryons and mesons. Therefore creation and annihilation operators in physics are irrelevant.

Then in the 1970's, theorists realized that their candidates for a grand unified theory, merging all the forces except gravity, implied that protons must be unstable ,see you decay modes:

Higgs Boson 125300 MeV/c2 = proton velocity v = 0,9928305 c
Top quark: 173 400MeV/c2= proton velocity v = 0,994766c
Top quark: 169 100MeV/c2= proton velocity v = 0,994637c
* GeV/c2 Bottom quark = proton velocity v = 0,8665c

Δ particles = proton velocity v = 0,82188 c
Ωoc = proton velocity v = 0,8212451756 c
c quark: 1340 MeV/c2 = proton velocity v = 0,73333 c
s quark= 119,1311MeV/c2 = proton velocity v = 0,73333 c
c quark: 1270 MeV/c2 = proton velocity v = 0,72585 c
s quark: 117,41941 MeV/c2 = proton velocity v = 0,72585 c
c quark: 1160 MeV/c2 = proton velocity v = 0,713 c
s quark=114,485493763640 MeV/c2 = proton velocity v = 0,713 c
Down quark: 4,8MeV/c2 = proton velocity v =0,094686c
Up quark: 3,72637 MeV/c2 = proton velocity v =0,094686c
Down quark: 2,92697671 MeV/c2 = proton velocity v = 0,075c
Up quark: 2,4MeV/c2 = proton velocity v = 0,075c

Shortened Great Table of Elementary Particles
http://vixra.org/pdf/1404.0246v1.pdf

Great Table of Elementary Particles
http://vixra.org/pdf/1404.0243v1.pdf

What is Quark?
http://vixra.org/pdf/1405.0307v1.pdf

Kinetic Energy
http://vixra.org/pdf/1405.0334v1.pdf

Particles, Waves and Trends in Physics
http://vixra.org/pdf/1404.0273v1.pdf

Conclusion:

All movements in physics are based on principle of **action - reaction** and on velocity of stable particles (**e-, p+,n0, D, He-3, α**).

Action creates unstable particles (leptons, baryons, mesons) in direction of motion of stable particles (e-, p+,n0, D, He-3, alfa).

Reaction creates unstable particles (neutrínos, mesons and baryons) against direction of motion of stable particles (e-, p+,n0, D, He-3, alfa).

Accompanying activity of reaction on movement of stable particles in environment is wave.

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