

Can we split the quantum?

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Abstract

Today's mass production of antimatter (current, electrons (negatively charged matter)) has changed the way we live and communicate. Still, the same is to some extent very simple and primitive. A question of far reaching importance is can we split the quantum to develop a more powerful technology to enable a more effective industrial mass production of antimatter?

Keywords

Quantum theory, Special relativity, Unified field theory, Causality

1. Introduction

In principle, a nucleus of an atom is able to split into smaller parts (nuclear fission) out of itself (spontaneous fission) or by external manipulation. Historically, the starting point of the nuclear fission research was an experiment of Enrico Fermi [1], who irradiated uranium with neutrons in 1934. Independently from Hahn, Meitner and Straßmann, a working group around Irène Joliot-Curie at the Radium Institute in Paris was dedicated to the same field of research. Finally, nuclear fission was discovered on December 17, 1938 by the German physicist Otto Hahn [2] and his assistant Fritz Strassmann. In fact, nuclear fission was explained theoretically in January 1939 by Lise Meitner and her nephew Otto Robert Frisch. Today, several types of linear accelerator used to accelerate quantum mechanical objects and to collide the same. Time after time, more and more smaller parts are created. Still, the scientist were not able to split the quantum.

2. Material and Methods

2.1. Definitions

Definition. Quantum mechanical particle $M_{(0)p}$

Let $M_{(0)p}$ denote a quantum mechanical particle $_{0p}$ as viewed from the standpoint of a co-moving observer.

Definition. The charge of the quantum mechanical particle $Q_{(0p)}$

In physics charge is a characteristic of a property of matter. The elementary or unit charge is denoted by q , while the charge of a quantum mechanical object is denoted as Q . A quantum mechanical object $_{0p}$ can possess a negative or a positive charge. The two types of charge are equal and opposite. Neutron's does not have charge. The amount of charge carried by a quantum mechanical object $_{0p}$ is always a multiple of the elementary charge, that is, the charge carried by a single quantum mechanical object. Thus far, it is $Q_{(0p)} = N \times q$.

Definition. The anti charge of a quantum mechanical particle $Q_{(0p)}$

All but charge of a quantum mechanical object $_{0p}$ is denoted as anti charge $Q_{(0p)}$.

Properties.

Due to this definition it is

$$Q_{(0p)} + Q_{(0p)} = M_{(0p)} \quad (1)$$

The *normalisation* of the relationship between charge and anti charge follows as

$$(Q_{(0p)} / M_{(0p)}) + (Q_{(0p)} / M_{(0p)}) = (M_{(0p)} / M_{(0p)}) = 1 \quad (2)$$

or in other words

$$Q_{(0p)} = M_{(0p)} \times (1 - (Q_{(0p)} / M_{(0p)})) \quad (3)$$

2.2. Axioms

This theory is based on the following axiom.

Axiom I.

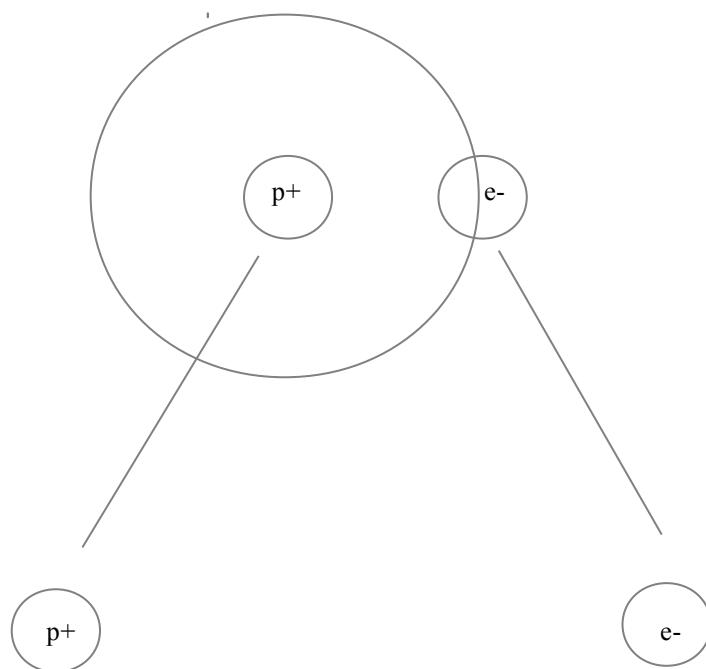
$$+1 = +1.$$

3. Results

3.1. Separation of protons from electrons

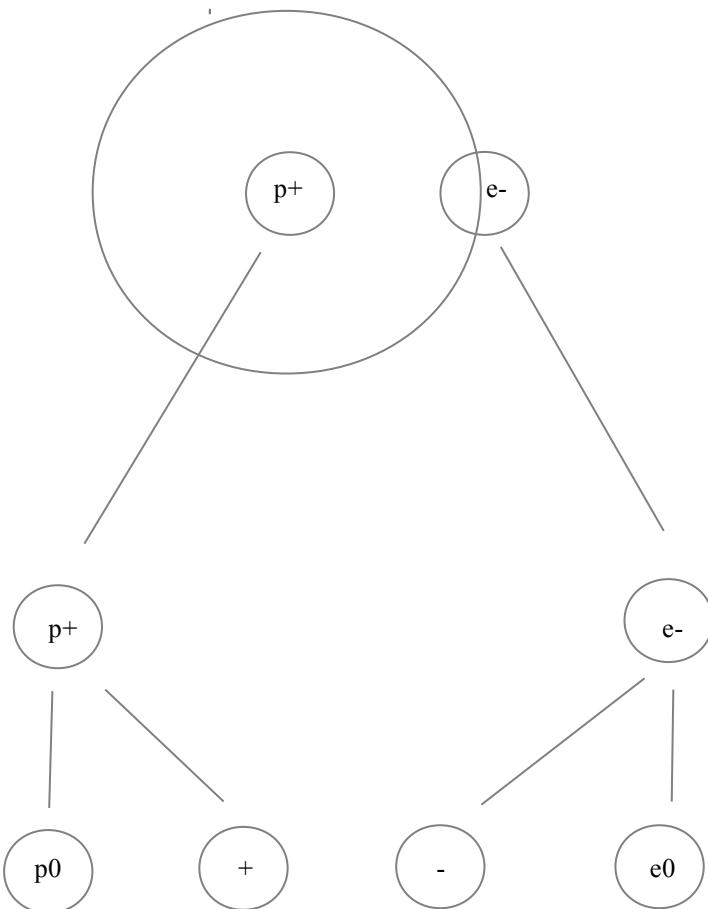
As an example, we regard the hydrogen atom. By chemical, physical or other means the proton (p^+) is separated from an electron (e^-). Both particles are stored in an apparatus. The following picture demonstrates this process.

Figure 1. Separation of protons and electrons.



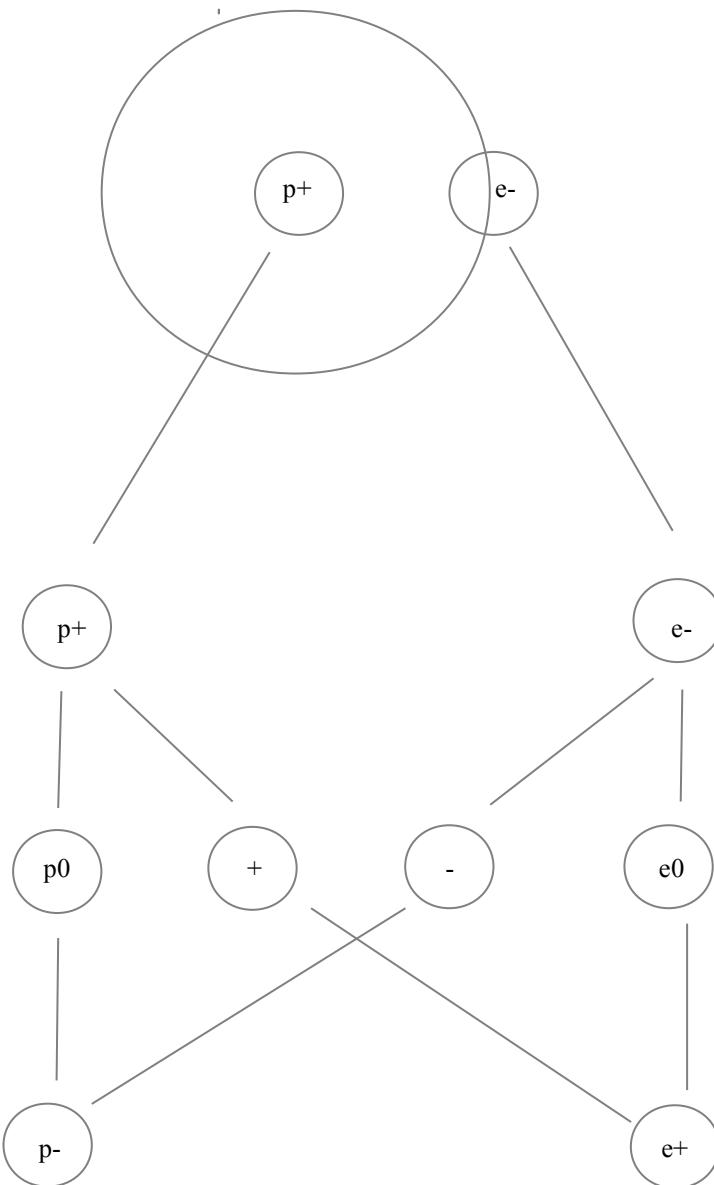
3.2. Separation of charge and mass of a quantum mechanical object

The next step is to separate the charge from a quantum mechanical object and to separate both in different instruments. In this respect, magnetic field, acceleration, heat, coldness, pressure et cetera is of use. Under conditions of our sun (mass production of photons (objects without charge)) it is not documented that charge is transferred somehow somewhere. Thus far and of preliminary purposes, other conditions than those of our sun could yield a desired result.

Figure 2. Separation of charge and mass.

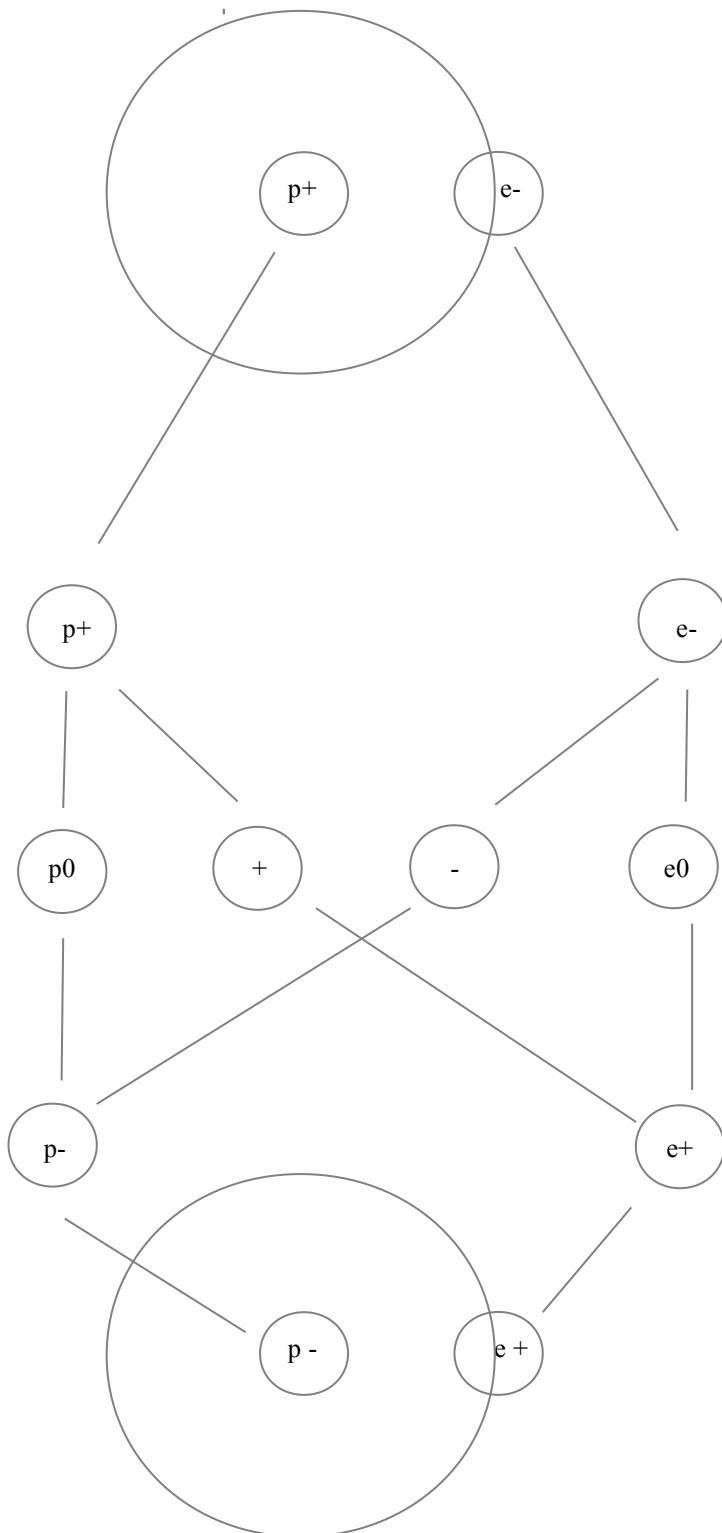
3.3. Rearrangement of charge and mass of a quantum mechanical object

In this step, the negative charge of an electron is combined with the chargeless proton. In the same respect, the chargeless electron ($e0$) is combined with the positive charge of the proton.

Figure 3. Rearrangement of charge and mass

3.4. Industrial mass production of antimatter

The next step is to produce antimatter while combining an antiproton with an positron.

Figure 4. Mass production of antimatter

4. Discussion

This is a highly speculative paper of very limited practical value. For the first it is neither clear can we and if yes how can we separate charge from mass. The next step is to solve the problem of storage of charge et cetera. Suppose all the problems where solved, what remains to be done?

The strategic potential of the described technology lies in the industrial mass production of antimatter with all the positive and negative impact on human society. The military is thirsty for its matter-antimatter bomb while we, the people, are looking for new sources for our energy supply and better fuel and engines for interplanetary and other journeys.

5. Conclusion

The time is right to split the quantum.

Acknowledgements

None.

References

- [1] Fermi, Enrico (25 March 1934). Radioattività indotta da bombardamento di neutroni. *La Ricerca Scientifica*, **1**, 283.
- [2] Hahn, O. and Strassmann, F. (1939) Über den Nachweis und das Verhalten der bei der Bestrahlung des Urans mittels Neutronen entstehenden Erdalkalimetalle. *Naturwissenschaften*, **27**, 11–15.