

Defining and Delimiting of the Elementary Particle

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Abstract: giving a new definition and boundary of the elementary particle

Main viewpoints and conclusions:

The elementary particle is the fundamental physical constituents of the universe; is the most basic building blocks and constituent units of matter. ^[1]

The elementary particle has the same and consistent ingredient; a further internal spatial structure; and the different spatial distribution of volume ingredient density. It hasn't the further and smaller basic unit component (or called basic unit module) which with unique and only ingredients, structures, behaviors or functions different from the other parts of the elementary particle (the parent particle).

Each and every elementary particle could appears alone and independent existence as a single individual; and never decay even absolutely stable; could combine with the other elementary particle as a complete and independent basic unit component and module. ^[2]

So, the elementary particle is the absolutely stable subatomic particles that have the same ingredient or even with a further internal spatial structure; could appear and existence as a single individual at the state of alone and independent.

Wherefore, there be only protons, electrons and neutrinos are the elementary particle in nature. And they constitute all the composite particles and matter. ^{[1][3]}

References

- [1] *Particle physics*
https://en.wikipedia.org/wiki/Particle_physics
- [2] *A. O. Barut, Stable particles as building blocks of matter, ICTP Preprint IC/79/40 (April, 1979)*
- [3] *Redefining leptons (or called mesons) and baryons*
<http://vixra.org/abs/1503.0151>