

The differences between new elementary particle physics and the Standard Model of particle physics

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Abstract: giving the main difference between new particle physics
with the Standard Model of particle physics

Main viewpoints and conclusions:

The main difference between new elementary particle physics with the Standard Model of particle physics is:

In new elementary particle physics that beyond the Standard Model, there are no exist *quark definition* and *quark particles system*; but, in the Standard Model of particle physics, there are exist *quark definition* and *quark particles system*.^{[1][2]}

Besides, the bump which at an energy of 750 gigaelectronvolts (GeV), such the particle should really be there, and it is just only a *X-lepton* or called *X-meson* that different from the π , μ , τ , k , ρ , ω , φ and the other leptons that have been known; another situation is that it is a *X-baryon* which hasn't been observed until now.^{[3][4]}

References

[1] *Quarks take wrong turns*

<http://phys.org/news/2004-04-quarks-wrong.html#nRlv>

[2] *A. O. Barut, Stable particles as building blocks of matter*

ICTP Preprint IC/79/40 (April, 1979)

[3] *Scientists say hoped-for physics particle was just a blip (Update 2)*

<http://phys.org/news/2016-08-burp-intriguing-hints-physics-particle.html>

[4] *Redefining leptons (or called mesons) and baryons*

<http://rxiv.org/abs/1503.0151>