

# Einstein whispering about Higgs

## Essay

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*"Mass of a body is a measure of its energy-content".*  
Albert Einstein

*"What we observe as material bodies and forces are nothing  
but shapes and variations in the structure of space".*  
Ervin Schrodinger

Higgs mechanism starting idea seems wrong and so the whole model of Higgs mechanism seems a failure: "Must be a field which is giving mass to elementary particles". This idea is against mass-energy equivalence principle which is one of the pillars of physics: "Mass of a body is a measure of its energy-content" [1].

The right starting idea is: "Must be a field of energy out of which are made all particles". This energy field is universal space itself. The idea of an "empty space" deprived of physical properties is the main obstacle for the progress of physics. Ervin Schrodinger used to say: "What we observe as material bodies and forces are nothing but shapes and variations in the structure of space" [2].

Mass-less particles as photons and gluons have energy and so they have mass. The term "mass-less" particle is wrong. Mass-less particles have no "inertial mass" which I will explain below. The formula for the energy of the photon is  $E = h\nu$ . We can combine this formula with  $E = mc^2$  and we will get mass of the photon is  $m = \frac{h\nu}{c^2}$ .

Every particle is a structure of space energy and is diminishing energy density of space exactly for the amount of its energy-mass. The energy density of space where there is no particle is Planck energy density  $\rho_{PE}$ . Energy density of space  $\rho_{SE}$  in the centre of a given particle which has no rest mass is following:

$$\rho_{SE} = \rho_{PE} - \frac{E}{l_p^3},$$

where  $E$  is the energy of the particle and  $l_p^3$  is Planck volume. Energy density of space  $\rho_{SE}$  in the centre of a given massive particle with a given volume is following:

$$\rho_{SE} = \rho_{PE} - \frac{mc^2}{V},$$

where  $m$  is the mass of the particle and  $V$  is its volume. The formula above is also valid for massive bodies and stellar objects. The formula for the mass of a given massive particle is following:

$$m = \frac{(\rho_{PE} - \rho_{SE}) \cdot V}{c^2}.$$

Proton mass is 938 MeV/c<sup>2</sup>. In LHC proton is accelerated close to the light speed and is additionally absorbing the energy of the space which represents its relativistic mass which is 6,5 TeV/c<sup>2</sup>. Additional absorption of the energy is due to the “dragging effect” of space energy with the fast moving physical object. Relativistic mass of the proton we can express in following formula:

$$m = \frac{\gamma \cdot (\rho_{PE} - \rho_{SE}) \cdot V}{c^2},$$

where  $\gamma$  is the Lorentz factor. In LHC millions of relativistic proton collisions happen every second. Very rarely (once in a billion collisions) happens that energy flux of a 125 GeV/c<sup>2</sup> is released. We call this energy flux Higgs boson. Out of this experimental data, a whole “story” of Higgs mechanism is deduced. Higgs mechanism is the most mysterious model of modern physics. It does not answer the most fundamental questions:

- physical properties of Higgs field are not known
- how Higgs field interacts with the gravity field is not known
- how Higgs field interacts with the electromagnetic field is not known
- how Higgs field interacts with relativistic particle giving him relativistic mass is not known [3].

Acceptance of Higgs mechanism in physics and delivery of Nobel prize shows the deepest crisis of physics since ever. World known physicists are delivering speeches on Higgs praising the discovery of Higgs boson as the most prestigious discovery of modern physics. Higgs boson is not a “particle” which would exist in the universe on its own. It is manmade momentary flux of energy and is not proving existence of Higgs field which was never observed and measured [4].

This is what spirit of Albert Einstein is whispering in my ears. Do you hear it? The whole mainstream physics is blinded by the illusion of Higgs mechanism. The caravan of physics is wandering into the desert. Physics has a deep thirst for the Truth. Who will be the first discovering that Higgs mechanism is not more than Fata Morgana?

#### References:

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