Basis of the theory of Superunification

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The basis of the theory of Superunification is electric e and magnetic g integer (whole) charges-quarks. Entire quarks have no mass. Entire electric quark has an electric charge e equal to the elemental charge of an electron. The elementary magnetic charge g is related to the elementary electric charge e by the ratio g=Ce and is measured in Leons, where C is the speed of light [2]. The value of the elementary electric charge e is verified with tremendous precision. Entire quarks are the most stable constants in the universe and are independent of pressure, temperature, speed, the quantum density of the medium, gravitation, and the entire range of natural factors.
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When discussing the development of the fundamental theory, the scientific basis of the theory is placed in the leading positions. Developing the special theory of relativity (STR), Einstein used the constancy of the speed of light as the basis. It is then true that the speed of light has become a variable quantity already in the general theory of relativity, and the basis is represented by the geometry of the distorted four-dimensional space-time. In quantum chromodynamics (QCD), the basis is represented by quarks, fractional electrical charges, which are not detected in experiment. References to single effects, as if they belong to fine charges, are not convincing and can be explained using different approaches.

The basis in the theory of Superunification is represented by integer elementary electrical ±e and magnetic ±g charges-quarks. These four are integer quarks, i.e., bricks of construction of the universe. Entire quarks are part of a quanton and quantized space-time. These four charges – quarks are sufficient to construct from them all the main elementary particles: electron, positron, proton, neutron, neutrino, photon and, hopefully, other investigators will form the structure of all known elementary particles with the appropriate properties and in future will determine the entire variety of inanimate and living nature.

The charges – quarks are the elementary integer quarks e and g of weightless matter. These are the most stable constants in the universe and are independent of pressure, temperature, speed, the quantum density of the medium, gravitation, and the entire range of natural factors. **The elementary electrical charge $e = 1.6 \cdot 10^{-19}$ C is so stable that it could be measured with the accuracy to e^{-21}.** This is the most stable constant. At present, this is the really fantastic accuracy which can be only be achieved in science. No other constant is equal to the elementary electrical charge as regards the measurement accuracy. On the basis of the colossal stability of the electrical charge it may be assumed that such a charge cannot be fractional because this would violate the basic properties of the charge as the most stable constant

No direct measurements have been taken of the value of the elementary magnetic charge. From the procedural viewpoint, these measurements can be taken because magnetic charges do not exist in the free state. They are bonded in a dipole inside a quanton. However, analyzing the Maxwell equations and taking into account in them the total symmetry between electricity and magnetism when the elementary electrical and magnetic charges are regarded as equal partners, it may be accepted with a high degree of probability that the stability of the magnetic monopole is not lower than the stability of the elementary electrical charge.

Thus, the basis in the theory of Superunification is represented by the most stable constants of nature: electrical and magnetic monopoles (quarks – charges). Up to now, none of the currently available series has had such a fundamental basis whose carrier is the space-time quantum (quanton), including these constants.

The attempt for solving similar problems have been carried out for a long time in the framework of quantum chromodynamics (QCD) which was based at the beginning on three quarks, and now the number of parameters in QCD has exceeded 100, increasing the number of problems requiring a solution. I do not want to criticize QCD. QCD fulfilled its role by the introduction of quarks. I would like to only mention that in addition to justification of the charge in adrons, and description of the action of nuclear forces, it is important to solve the problem of formation of the mass of adrons and this can in principle be carried out by QCD. The quarks must be regarded as whole electrical and magnetic charges, and the interaction of whole quarks should be transferred to quantons and the capacity of the electrical monopoles in different combinations to realize spherical deformation of the quantized space-time. In this case, it should be possible to describe the structure and condition of any elementary particle, not only of adrons, but also of leptons determining the presence or absence in them of the non-compensated charge and mass.

The attempts to explain the presence of mass in the elementary particles by introduction to quantum theory of other particles, the so-called Higgs particles, which transfer mass to other particles, have proved to be unsustainable, regardless of the application of the most advanced mathematical apparatus. According to theoretical predictions, the Higgs particles should be detected by experiments in a giant accelerator (super collider) in CERN (Geneva). However, these particles have not been detected. The theory of EQM and Superunification has already saved billions of dollars to the world scientific community, describing the structure of elementary particles and also the nature of the gravitational field and mass. To substantiate this, it was necessary to develop the theory of EQM and Superunification based on whole elementary charges – quarks of the monopole type, and the first stage to unification is the unification of electricity and magnetism into electromagnetism.

References:

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