

THE NATURE OF GRAVITATION

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In the given work attempt to understand the nature of gravitation on the basis of quantum concepts is done. It supposed, that in a basis of gravitation lay zero fluctuations of quantum fields which are identified with the chaos "surrounding" the Universe. The gravitational field is result of transformation by a physical body of distant chaos in near chaos.

Key words: gravitation, particles, zero fluctuations, « phantoms of particles », chaos, transformation.

The investigation of nature of gravitation should begin best of all with large quotation from R.Feynman [1]:

Many mechanisms of gravitation were offered. Interestingly to consider one of them, because one or other scientist hitted upon it from time to time ... First this opening happened approximately in 1750. Imagine that in space rushes about in various directions with enormous speed great number of particles, only slightly taken in a matter. Taken in, they pass their impulse to Earth. But because their amount is identical in all directions, all impulses are counterbalanced. When not far away there is a Sun, particles approach Earth through Sun, partly taken in it, so from Sun come less them than from the opposite side. Consequently, Earth will feel an impulse, directed to a Sun, and it is not hard to see that impulse will be reverse the square of distance: such is a law of change of spatial angle under which a Sun is visible with growth of distance. What badly in this mechanism? Those conclusions which ensue from him are incorrect. A new anxiety appears: Earth in the motion round a Sun will test more collisions with particles at the front, than behind. . Therefore at the front Earth will get more impulses, than behind, and must feel resistance the motion, and it would tell on deceleration of its motion on an orbit. It is possible to count up, how many time it may need Earth to stop as a

result of such resistance; appears, not too much; and since Earth however moves on the orbit, all this mechanics does not pass. And no mechanism was offered, which would not predict the additional, non-existent phenomena.

End of quotation.

An author however wants to make an effort to explain the mechanism of gravitation on the basis of quantum presentations.

Let Feynman's «particles» will be zero vibrations of the quantum fields. In obedience to the quantum theory of the field, if there is not a particle in some state, there is as though a “ghost” of particle, zero oscillation on birth of particle, but not arriving at birth. This «ghost» has a half of energy of particle in its state, and as such unfilled states are of endless great number, the total value of energy of «ghosts» is endless [2] - [5]. To make the real particle out of «ghost», it is needed to spend large enough energy with jump, therefore all sea of «ghosts» does not hinder motion of bodies. This endless «basement» does not need to physicists, investigating the collisions of particles, and they get rid of it by special technique.

In author's paper [6] supposition is done, that our Universe is «surrounded» by the sea of chaos. If to examine the curved secluded space of Universe, a concept «surrounded» is necessary to be examined not in ordinary geometrical sense, but in generalized. It is suggested by way of chaos to understand an aggregate of all zero vibrations, thus far from bodies chaos consists not of «ghosts» of normal particles, but of the «ghosts» of some ephemeral particles, for example, of neutrino, photons, and possibly without some «ghosts» at all. This chaos on the nature is so indefinite that it is not in some system of co-ordinates; it just forms space. Near-by from macroscopic bodies, under influence of bodies and of their constituent particles, chaos becomes the aggregate of «ghosts» of normal particles. The bodies combine “ghosts” into larger units and cool chaos, because the «ghosts» of normal particles absorb in itself energy, proper their mass. This near chaos finds the inertial system of co-ordinates, related to the center of body, and in

other indefinite. It strengthens the above-mentioned assertion, that chaos does not create resistance motion of body.

Let chaos press on macroscopic bodies like that, how on Earth on them presses air. Then between two bodies, due to enlarged and cooled chaos, pressure will fall down. From exteriority of bodies the decompressing will not be, because the pressure created by all endless chaos, and between bodies the partial effect of the secluded vessel is carried out, and pressure falls down. For that cause bodies are attracted to each other.

The gravity field is result of transformation of distant chaos by macroscopic body into near one. The farther from a body, the chaos transformation is weaker.

References

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