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Massless Bose Particles -Hions and the Possibilities of Real Space-Time Engineering

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Recently, within the framework of the stochastic Yang-Mills equations for the gauge symmetry group $SU(2) \times U(1)$, the possibility of the evidence of massless Bose particles with spin-1- The formation of a scalar field from an ensemble of chions as a result of Bose condensation of entangled pairs of chions with a common spin of 0 is theoretically substantiated. has been proven [1]. The formation of a scalar field from an ensemble of hions as a result of Bose condensation of entangled pairs of hions with a common spin of 0 is theoretically substantiated. In such a field, pairs of hions are not entangled, but the system is assumed to have a net zero spin on fairly small spatial scales. The main goal of our experiment was to demonstrate the possibility of manipulating the refractive indices of empty space (vacuum) by external influence on the vector field and thereby prove the reality of implementing space-time engineering. Recall that when speaking about space-time engineering, scientists usually mean manipulating the structure of space-time itself. Such possibilities are usually associated with so-called wormholes, which can appear in the fabric of space-time according to Einstein's general theory of relativity and connect remote regions of space in the shortest possible way. It is obvious that only supernatural beings are capable of creating and controlling such technologies, and it is doubtful that even in the distant future humanity will be able to master such technologies. However, changing and controlling space-time remains one of the greatest problems of modern quantum physics, and even its partial solution can lead to incredible technological development of human civilization. As is well known, light passing through one slit form a diffraction pattern. We modified this experiment by placing a cylinder behind the diffraction slit, on which a light guide is wound. When two independent low-power laser sources of the visible range of light are switched on, one of which falls on the slit and the other propagates along the light guide, a redistribution of light intensity is observed in individual diffraction zones. Moreover, as precision measurements of light intensity in various diffraction zones have shown, in individual pixels the change in light intensity relative to the normal value amounts to tens of percent. Moreover, as precision measurements of light intensity in various diffraction zones have shown, in individual pixels the change in light intensity relative to the normal value amounts to tens of percent. This effect is so significant that it cannot be explained within the framework of classical or quantum electrodynamics. Latter indicates the formation of a phase object of a complex structure on the path of propagation of a diffracting light beam and, accordingly, a new, still unknown type of polarization of the quantum vacuum. As multilateral analysis and numerical estimates show, such polarization can arise as a result of reorientation of hions spins under the action of an external electromagnetic field.

In other words, this experiment indirectly proves the existence of hions that form physical space itself, the possibility of manipulating them with the help of external influences and, accordingly, the implementation of space-time engineering.

[1] A.S. Gevorgyan, Quantum Vacuum: The Structure of Empty Space-Time and Quintessence with Gauge Symmetry Group $SU(2) \times U(1)$, Particles, 2019, Vol. 2(2), pp. 281-308; doi:10.3390/particles2020019

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