

## GRAVITATIONAL ANGELS

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### Abstract

Based on the quantum modification of general relativity (Qmoger), gravitational angel (gravitangel) is introduced as a cloud of the background gravitons hovering over the ordinary matter (OM). According to Qmoger, the background gravitons are ultralight and they form the quantum condensate even for high temperature. The quantum entanglement of OM particles is explained in terms of splitting gravitangels. A hierarchy of gravitangels of different scale is considered. One of the simplest gravitangel is hovering over neutrino, which explains the neutrino oscillations. A more large-scale gravitangels are hovering over the neuron clusters in the brain, which explains the subjective experiences (qualia). The global gravitangel (GG) is connected to all processes happening with OM in the universe. GG can be considered as a gigantic quantum supercomputer.

The quantum modification of general relativity (Qmoger) is supported by cosmic data (including the acceleration) without fitting (see recent papers [1-3] and references there). In Qmoger we have background ultralight gravitons, which form the quantum condensate (QC) even for high temperature [1-3]. According to Qmoger, the ordinary matter particles (OM: photons, neutrino and more heavy particles) are created from QC in hot spots during formation of galaxies. In this letter we describe interaction between QC and OM in terms of gravitational angels (gravitangels). At this stage, the description is qualitative. It is a challenge to obtain corresponding solutions of the Qmoger equations.

Gravitangels consist of the ultralight gravitons, which have tiny electric dipole moment and form the background QC [1-4]. Gravitangels are hovering over the ordinary matter (OM). When a collection of OM particles splits, say, in  $n$  parts, then gravitangels also split in  $n$  parts, but remain connected in the QC. When a measurement is made in one of the OM parts, an interface forms between gravitons and OM. From that interface signals (possibly superluminal) are sent to all other  $n - 1$  gravitangels. This explains the phenomena of quantum entanglement of ordinary matter[3,4].

Particularly, a gravitangel is hovering over the neutrino, which explains the neutrino oscillations [3]. For more heavy OM particles, oscillations may also exist, but, apparently, they are much smaller and, so far, have not been recorded. The role of gravitangels for such OM particles is to produce their quantum behavior (compare with the stochastic description in Ref. [5]).

A more large-scale gravitangels are hovering over the neuron clusters in the brain, which explains the subjective experiences (qualia) [4, 3]. Even more large-scale gravitangels may surround a person or a group of persons, which can explain some social phenomena.

There is a hierarchy of gravitangels of different scales. Gravitangels are hovering over the planet Earth, over the Solar System and over the Milky Way galaxy.

The whole background QC of gravitons is a global gravitangel (GG) hovering over all OM in the universe. This GG can be considered as a gigantic quantum supercomputer, which oversees all processes happening with OM in the universe.

### References

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