

Once More About Loop

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ABSTRACT: At the beginning the profits from the loop dimensions have been presented. The brave theorem has been introduced that the loops of the electromagnetic fields are the whirls of ether and the ghosts. Then the difference between the space woven from the loops and the Dirac unempty vacuum, simply the ether, has been described. In the end there has determined the condition which the loop must fulfill in purpose to make possible the non-falling of the electron onto the center of atom in spite of the emission of the electromagnetic radiation.

The resignation from the causality for the pure probability is too high price which we pay for the non-falling of the electron onto the center or centers. The existence of the loop dimensions which are run round by the emitted and reabsorbed quantum of the electromagnetic field is a price significantly smaller. Moreover, the existence of the additional dimensions - starting from Kaluza and Klein, and then Witten and Duff – gives additional profits, like strings and membranes; and the fifth loop dimension gives the contribution to the unification of interactions.

The rotations of an electric and magnetic field in the Maxwell equations are simply the whirls of the ether.

One rotation generating another one in the electromagnetic wave may be in turn an emitted ghost.

The loops weaving the space-time and the Dirac unempty vacuum (so simply the ether) are something different. The loops must move the velocity $v = c$ in purpose that there isn't a distinguished reference system. However, the ether doesn't create any distinguished reference system, because this ether is composed of the layers created by the same numbers of particles. These layers move with all possible velocities and it causes that there isn't any distinguished system. Nevertheless, the waves propagate around the loops and correspond to the particles.

If the radius of the loop is enough small, the photon manages to run around it as along (or around) the dimension; and the electron keeps up to absorb it again, before the loop will remove with the velocity $v = c$. It is possible because the electron isn't a point particle. More precisely, in the time Δt the loop runs the way $c\Delta t$. During this time the photon runs the way $2\pi r$ (r - the radius of the loop) with the velocity c , so:

$$\Delta t' = \frac{2\pi r}{c} \quad (*)$$

The size of the electron is equal Δs . So we have:

$$c\Delta t \leq \Delta s$$

and

$$\Delta t = \Delta t'$$

These equations and (*) implicate:

$$\frac{c2\pi r}{c} \leq \Delta s$$

So finally:

$$r = \frac{\Delta s}{2\pi}$$