Some Applications of the Lumineferous Ether Theory

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e.falkner@online.de

Electron diffraction

If a "naked" electron is put into a vacuum, the vacuum becomes polarized, i.e. the electron attracts "virtual" invisible positrons, which together with other electrons form the particles of lumineferous ether or zero-energy elementary photons which fill the whole universe. Thus the surrounding electrons also become partially free and attract positrons in the next layer. This procedure continues further in the surrounding ether, proportional to $1/r^2$, whereby around each free charge, a wavelike charge distribution in the ether is produced. In other words: The electric charge of free electron produces in the surrounding ether from fixed zero-energy photons with *m=0*, fixed photons with a "visible" *m>0* (so called field quanta). The charge pattern around the electron has thus an approximately sinusoidal form (fig. 1, 2):

$$q(r) \propto \frac{\cos(r)}{(1+r)^2} \text{ and } \int q(r)dV = e$$

with a wavelength $\lambda_o = 2d$, which is a special case of the De-Broglie wavelength of the electric field of a fixed electron or the special case of a Compton wavelength of the electron, whereby d is the distance of particles of lumineferous ether.

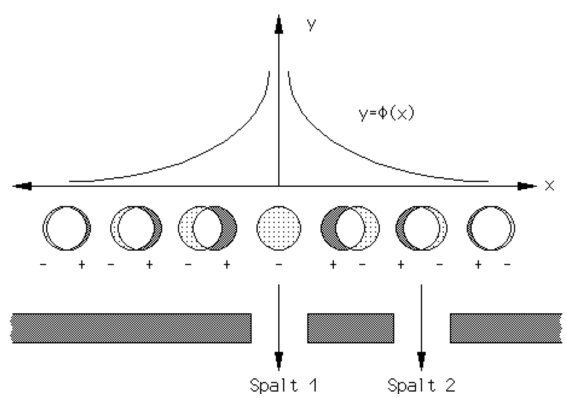

Figure 1: Vacuum polarization i.e. polarization of the ether particles (virtual electron-positron pairs or elementary photons) in the surrounding aria of an electron (represented only linear for the sake of simplicity). One sees a "wavelike" charge pattern around the electron, which is responsible for electron diffraction. Both partial fields of the electron unite after passage through the slits to a single field and thus affect the further electron's flight direction.

If the electron is accelerated, the electromagnetic field must again be developed with the speed of light out of each position of the electron, and a part of the original field must be radiated. For the moved electrons, one receives the wavelength and frequency of the associated electromagnetic field:

$$\frac{v}{c} = \frac{\lambda_o}{\lambda}, \quad \lambda = \frac{\lambda_o c}{v} \text{ and } f = \frac{v}{\lambda}.$$

Thus the total energy of the moving field would be:

$$E = hf = \frac{hv^2}{\lambda_o c} = mv^2 \text{ with } m = m_e = \frac{h}{\lambda_o c}.$$

The kinetic energy is only half as large, since in the electromagnetic field of the electron, no oscillation energy is contained. At high speeds, the Doppler effect must be considered because of the finite propagation velocity of the field. A mass which is assigned to the electromagnetic field, is responsible for the electromagnetic radiation of the accelerated charge due to the mass' inertia.

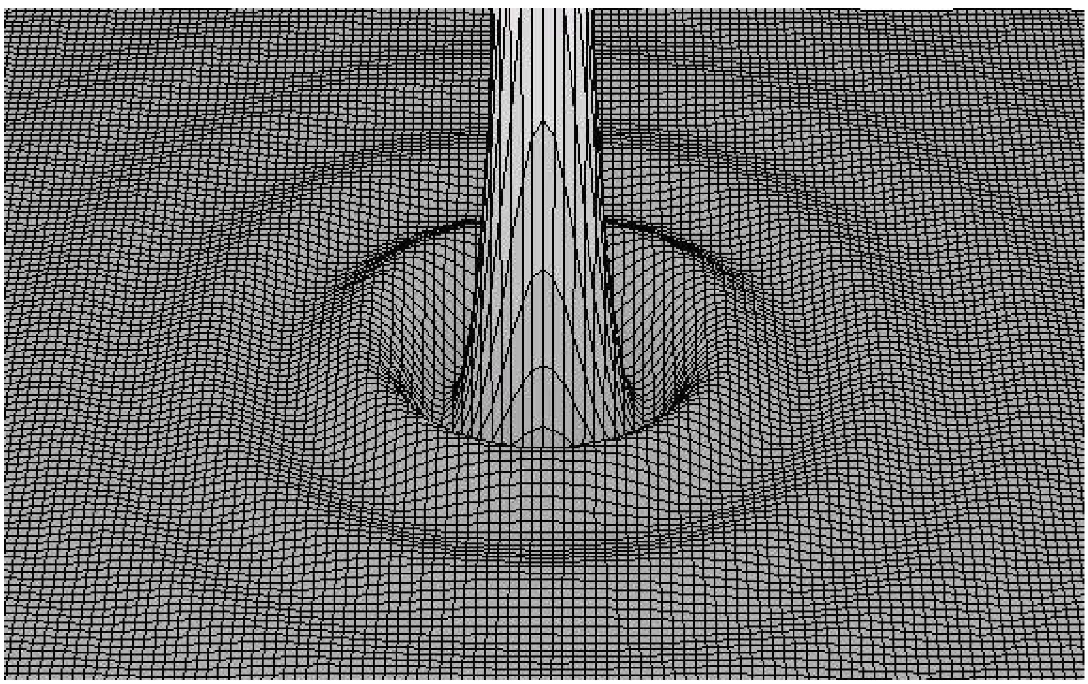

Figure 2: Wavelike charge pattern around an electron, which is produced by vacuum polarization (qualitatively).

Hydrogen atom

From a proton and an electron alone, a hydrogen atom can never be constructed. That is, the atomic formation a great many virtual of electron-positron pairs must be involved, whereby a charged standing wave, as a diaphragm swinging in space is formed around the proton. The electron is to be seen no more as one single particle, but forms equally with other vacuum electrons an oscillating charge cloud. From there, it is clear that no certain place can be assigned to the atom-bound electrons at a given time, since they are at the same time in each place of the wave or charge cloud proportionately. If any electron is removed from this charge diaphragm (ejected), the whole diaphragm breaks down with the speed of light. The total charge of the wave is to be understood as the sum of the free charge portions of all of the wave electrons taking part. The interaction among themselves is transferred with the speed of light. The electron wave – charge cloud – thus consists of many swinging electron portions, exactly the same as exists with an acoustic wave from many swinging atoms or molecules. The square of the wave function of the electron is thus not to be interpreted as probability density of individual electrons of an atom shell but as the energy density of the electron wave. Here it is still to be noticed that only two electrons form a whole wave in the atom. Similar to it, electromagnetic waves or its particles – photons - consist likewise of two particles (positron and electron). Remark: Into a sphere with the radius of the order of magnitude of the Bohr radius (r=52,9177 pm), by closest-packing lattice, maximally about 10^{14} ether particles (ether radius for instance 1fm) could be pressed together.

Beta plus decay

A vacuum particle or electron-positron pair with the visible mass m=0 is split up by electromagnetic attraction between a nuclear charge and an electron of a “virtual” pair. The electron merges with a nuclear proton, becoming a nuclear neutron, while the positron is emitted at the same time. Competing case: Capture of an electron from a near shell (a positron is not emitted in this case). Example of a beta plus decay:

$$^{40}_{19}Ka \rightarrow ^{40}_{19}Ka + e^+ + e^- \rightarrow ^{40}_{18}Ar + e^+$$

and electron capture:

$$\frac{40}{19}Ka + e^- \rightarrow \frac{40}{18}Ar \;\; ,$$

whereby a proton is converted into a neutron: $p^+ + e^- = n$. Remark: The neutrino postulated by physics is in this example of the beta plus decay nothing else than the electron absorbed from the ether. One sees this also from the fact that for such a process, a minimum energy of 1,022MeV is necessary (splitting a virtual elementary photon – electron-positron pair).

Strong interaction

The predominant portion of the strong interaction is obviously of electromagnetic origin and is understood as a shielded coulomb potential (Yukawa potential), whereby the transmission of interaction is obtained by direct contact. In deuterium, a proton and a neutron “struggle” for the electron of the neutron (2 protons and 1 electron) whereby their particle characteristics are occasionally exchanged (proton changes to the neutron and in reverse). Only in a nuclear compound are neutrons permanently stable because there are no pure neutrons nearby. It is to be assumed that still another non-electromagnetic portion of the strong interaction must exist, which cannot cause a mass defect. A reason for this assumption is the too-largely computed mass of the neutron, which would have to be somewhat smaller than the sum of the masses of the electron and the proton because of the mass defect. The measurements showed that with certain nuclear reactions, a much smaller energy is measured as demanded of the theory, which is why, in order to get around the problem, the existence of an unknown "invisible“ particle (neutrino) was postulated, which can interact with the matter just as extremely weak as a particle of the lumineferous ether. In this case however, an opposite mechanism would be likewise not be possible and an emission of the neutrinos would be extremely improbable (principle of action-reaction). Example: The postulated neutrino reaction: $\overline{\nu}_e + p \rightarrow n + e^+$ reads in this case correctly: $p + e^- + e^+ \rightarrow n + e^+$, whereby an ether particle (pair of electron and positron) is also here split up by the electromagnetic force.