

Notes on the Electromagnetic Interaction of Gravity

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Abstract

In this article we give some notes and significant points about the work in unified theory that was made in parts and small papers. This is necessary for understanding the papers and all the work.

Main article

The work in our theory of electromagnetic interaction of gravity is based on 7 hypotheses that were presented in the following papers:

<http://www.wbabin.net/science/alexandris.pdf> or
<http://www.acadjournal.com/2006/V17/part5/p2/>

The two papers are similar but the first has numbers to all the functions .The most difficult hypotheses for acceptance by experimental physicists are 2 and 3. Hypothesis 2 says electric charge is equalized to mass. Hypothesis 3 concerns an oscillation that has the form: $T = \theta_0 \cdot 2\pi \cdot (\lambda/g)^{1/2}$, with $\theta_0 = 1$. From hypothesis 2 arises mass that we call "meg" and for that mass we find relations with particles and the fine structure of the proton,

<http://www.acadjournal.com/2008/V22/part3/p1/> (paper)
<http://www.wbabin.net/science/alexandris12.pdf> (the radius of nucleus paper)
<http://www.wbabin.net/science/alexandris11.pdf> (a prediction of Higgs meson)

Hypothesis 3 in function (16) of paper,

<http://www.acadjournal.com/2006/V17/part5/p2/>

gives Planck's mass in agreement with the GUT theory and it remains to find its existence in experimental matter.

From 7 hypotheses arises a relationship of constants: equations (76),(77) of a paper on electromagnetic interaction of gravity :

<http://www.wbabin.net/science/alexandris.pdf>

that gives a new constant in physics

$\pi^* = 3,1598...$ with units

From this equation in paper: <http://www.wbabin.net/science/alexandris9.pdf>

We find agreement with GUT and in paper,
<http://www.wbabin.net/science/alexandris13.pdf>

we find the mass of electron or positron for the temperature of CMB radiation.
In function (102) of the paper on electromagnetic interaction with gravity:

<http://www.wbabin.net/science/alexandris.pdf>

we find Planck's temperature if we use l_g as Planck's length and we find the indexes $n_1=10$, $n_2=12$ at (142) . But the problem with GUT is that l_c is the smaller length and not l_g .This asyphony with GUT arises because in (94) we use the density of electric charge $\rho_c l = Q/\lambda \cdot l_c^2$ and not $\rho_c = Q/ l_c^3$.If we do that, then (102) we have temperature that depends only on m l_c and not on $(\lambda \cdot l_c)^{1/2} = l_g$.Because l_c is the smaller length, we use $l_c =$ Planck's length and we have planck's temperature and indexes $n_1=10$, $n_2=12$.Also for length l_g we have $T \cdot l_g = 2 \sim$ Wiens's constant . The same relation $T \cdot l_g$ we find in the same paper in (171) using the Stefan-Boltzman law and hypothesis 7, Also we find again $n_1=10$, $n_2=12$.Also in (176) , (177) in the squares of energies we find indexes $n_1=10,5$ and $n_2=12,6$.These aproximations of indexes are improved in paper:

<http://www.acadjournal.com/2008/V22/part3/p1/>

in functions (01) until (08) .

With this approach we find in different ways the same indexes .So we could find the shape of the CMB factor in paper:

<http://www.wbabin.net/science/alexandris13.pdf>

Also using the main transformations of the paper on electromagnetic interaction:

<http://www.wbabin.net/science/alexandris.pdf>

and parameter β function (91), we find the temperature of cores in the Sun and Earth as a good approximation by a function of density of matter(ρ_m) under the pressure of gravity in paper:

<http://www.wbabin.net/science/alexandris12.pdf>

but in this paper, the length we use is l_g .From the functions, the length that appears is l_c so

$$\begin{aligned} \rho_m &= 8,96 \cdot 10^{-4} \cdot T^2 / l_c \\ \text{sqrt}(m) &= (3/100) l_c \cdot T & , \text{ for volume } l_c^3 \\ m &= 8,96 \cdot 10^{-4} \cdot V \cdot T^2 / l_c \end{aligned}$$

V is the volume, m is the mass , l_c is the electromagnetic length , l_g is the length of gravity and $l_c = l_g / \text{sqrt}(2\pi) = l_g / 2,5$.

We do not know the temperature of the core of the Sun so we must try both lengths. If the radius of the Sun is l_c , then the temperature is $3,16 \cdot 10^7 \text{ K}$ for the volume of a sphere. If the radius is l_g , the temperature is $2 \cdot 10^7 \text{ K}$, if l_g is the diameter of the Sun then the temperature of the core is $2,8 \cdot 10^7 \text{ K}$. We understand that it is difficult to verify the differences of these hypotheses, but we are close to the real temperature of the core of the Sun. The significant thing is that the functions are in force in low temperatures and that gives hope for experiments in a laboratory. The function of density could be a universal law.

So the functions work in macrocosmos as in microcosmos. That means that the hypotheses cover a complete universal theory.

*Typographical error in paper: <http://www.acadjournal.com/2008/V22/part3/pl/>
The constant k that appears in the first page, symbols is the 5.1b but we must use the 5.1a, $k = 3,437 \cdot 10^{-11} \text{ Cb/kg}$
*The calculation of the earth-moon system is not correct.

END

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