

Are Physics Constants Universal in Time and Space?

Nikos Alexandris
nalxhal@yahoo.gr
<http://www.nalxchal.blogspot.com>

We have the function that gives positron - electrons for a temperature of 2,73K (CMB radiation). This function includes the universal constants .What does that function say to us? CMB radiation comes from everywhere in the sky, so the physics constants (on earth) are everywhere the same in the visible universe, like the rest mass of the electron.The function has no time. But it gives plank 's temperature if we input the hypothesis that gravity force is equal and opposite the electric force. If we accept the hypothesis of the Big Bang , we can think that 2,73K is the minimum temperature of the universe and the universe is in balance as an open system with limits.

The basic principle of physics (not laws) is that all physics constants are universal and the same in time. Constants are the same everywhere in universe, like cmb radiation.

Experimental news:

Neutrino Mass

Note 12-4-2009

In a previous paper, we gave predictions for the neutrino mass of $2,72\text{eV}/c^2$ and $3,81\text{eV}/c^2$. Newest experimental events in 2009 predict the mass of the neutrino between $2,1\text{eV}$ - 0.4eV . After that event we could say that the prediction of the paper is wrong, but we have one more hope, because the predicted masses are for the length, l_c . We have one more effort with two lengths, λ, l_g .

l_e is the l_c length and for the neutrino, there are two possibilities with two lengths $l_g = \sqrt{2\pi} \cdot l_c = 2,5 \cdot l_c$ and $\lambda = 2\pi \cdot l_c$

So the predictions are: for

$$l_g: E = 2,72 / 2,5 = 1,088\text{eV} ,$$

$$\lambda: E = 2,72 / 6,28 = 0,433\text{eV}$$

Also for $3,81\text{eV}$ we have

$$l_g : E = 3,81 / 2,5 = 1,524\text{eV} ,$$

$$\lambda: E = 3,81 / 6,28 = 0,606\text{eV}$$

$$\sqrt{2\pi} = 2,5 , 2\pi = 6,28$$

The predictions are based on two hypotheses :

1. fine structure is analysed with coefficient : 2^5
2. The energy is the neutrino particle.

If the predictions are false, the theory is not false but if predictions are true it will be a great achievement. The prediction was a separate effort of my theory.

CMB Radiation

Note 16-4-2009

http://en.wikipedia.org/wiki/Cosmic_microwave_background_radiation

Precise measurements of cosmic background radiation are critical to cosmology, since any proposed model of the universe must explain this radiation. The CMBR has a thermal black body spectrum at a temperature of 2.725 K, thus the spectrum peaks in the microwave range frequency of 160.2 GHz, corresponding to a 1.9 mm wavelength.

1mm agrees with Wien's law

<http://www.phy.duke.edu/~kolena/cmb.htm>

If we use Wien's law for 2,725K, we get a value of length 1mm. If we use about double the Wien's constant of my theory, we get the length $lg = 1,9\text{mm}-2\text{mm}$, lg is the gravity length and CMBR in this way is a gravitational(!) wave.

This procedure is different because we try to use the length in Wien's law of 1mm. If we use the lengths λ, lg, lc of my theory, we have an agreement with Stefan Boltzman's law and a length, $\lambda=1,05\text{mm}$, with double Wien's constant but the temperature is 5 times more than 2,725K and the coefficient of the shape is one.

My opinion for the time being is that if we accept the temperature of 2,725K of Plank's law we can use the length 1,9mm with double Wien's constant and in the Stefan Boltzman law, the coefficient of shape $64\pi^2$. So we can have an agreement with all three laws: Plank, modified Wien's law(?) (double constant), Stefan Boltzman's law.

Unfortunately, double Wien's constant does not exist in experiments up to now. Some scientists insist on the length of 1mm as it is extracted from Wien's law, and that is the length I used in my paper.

The solution will be found only within the science community.

<http://hyperphysics.phy-astr.gsu.edu/hbase/bkg3k.html>

Electron and CMBR: <http://cosmology.berkeley.edu/~yuki/CMBpol/CMBpol.htm>

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