

David,

You have the written the following, but I do not understand the symbols or the math.

$$l(g) = c^3/G$$

Using  $c = (e u)^{-2}$  we have

$$l(g) = (e u)^{-6}/G$$

In this equation, can one assume that the zero vacuum is constant throughout the universe?

Does one have to assume a zero vacuum? I also do not understand this sentence.

The following is my best guess as to what you are trying to say. Is this correct?

$$Z_s = c^3/G$$

$$Z_s^2 = c^6/G$$

$$\text{Set: } c^2 = 1/\epsilon_0\mu_0$$

$$Z_s^2 = 1/\epsilon_0^3\mu_0^3G^2$$

Since I have been encouraging people to test the charge conversion constant,  $\eta$ , I will demonstrate by converting  $Z_s^2 = 1/\epsilon_0^3\mu_0^3G^2$  to properties of spacetime.

It has previously been shown that using  $\eta \equiv \sqrt{\frac{G}{4\pi\epsilon_0c^4}}$

$$\epsilon_0\eta^2 = G/4\pi c^4 \quad \text{and} \quad \mu_0/\eta^2 = 4\pi c^2/G$$

$$Z_s^2 = 1/\epsilon_0^3\mu_0^3G^2 = \left(\frac{4\pi c^4}{G}\right)^3 \left(\frac{G}{4\pi c^2}\right)^3 \frac{1}{G^2} = \frac{c^6}{G^2}$$

$$Z_s = \frac{c^3}{G} \quad \text{Success!}$$