

Abstract

Based upon my theory (<http://vixra.org/abs/1010.0035>) I predict that gravitational waves will propagate at 299800,5 km/s through earth. This can be tested when two or more gravitational-wave detectors, located at different places on earth, observe the same gravitational wave and measure its speed when it propagate from detector A, through earth, to detector B. According to my theory, gravitational waves will still propagate with the speed 299792,458 km/s in vacuum outside earth. This is the same speed as we already have observed light and gravitational waves propagate with in vacuum outside earth. However, according to my theory, it will propagate with a slightly higher speed in the frame of reference inside earth.

Main equation in my theory is:

$$e = \frac{mc^2}{(1 + ((r \times (Ap1 / Ap2)) / RS))^2}$$

Where

e = Energy contained within particle 1

r = Distance between particle 1 and 2

Ap1/Ap2 = Surface area of particle 1 / surface area of particle 2

RS = Distance between particle 1 and "All particles original state, the state of singularity, that (in my theory) surrounds / encircles the Universe (S)" for example, 46,5 billion light years (see reference 2)"

Gravitational waves and its speed

c = Maximum Speed limit

Light speed measured above earth is: 299792,458 km/s

Let us see if c, the maximum speed limit, is faster than the light speed measured above earth to 299792,458 km/s:

First: This thesis, and my main equation and theory, is based on the following speculative assumption:

That the physical frame of reference inside earth is different relative to the physical frame of reference above earth.

On basis of that assumption, I have set r to be equal to: The distance between earth and the gravitational center in our local galaxy group, that lies somewhere between the Milky way and the Andromeda galaxy, about 1 250 000 lightyears from earth.

This fact must be part of the equation, here in r, when we shall calculate:

Frame 1. Light speed, as measured above earth, relative to

Frame 2. The speed limit, c, that might be higher inside the earth

The reason for this, frame 1, is that light above earth is, as far as I understand, mostly affected/bent by the gravitational center in our local galaxy group, other factors that might affect light above earth is in my opinion negligible. But, frame 2, inside the earth, is different because of the mass density there, and within that frame the relevant r must be close to 0, in my opinion.

OK. Let us go through the math based upon the main equation as described above:

$$\frac{e}{m} = \frac{c^2}{(1 + ((r \times (Ap1 / Ap2)) / RS))^2}$$

$$\frac{c^2}{e/m} = (1 + ((r \times (Ap1 / Ap2)) / RS))^2$$

$$\frac{c^2}{e/m} = (1 + ((1250000 \times (1/1)) / 46500000000))^2$$

$$\frac{c^2}{e/m} = 1,00005376416349$$

$$\sqrt{\frac{c^2}{e/m}} = \frac{c}{e/m} = 1,00002688172043$$

C (maximum speed limit inside earth) = 0,002688 % faster than light speed measured above earth.

Explained on basis of the momentum of a massless photon (p):

$$e = \text{lightspeed} \times p = \frac{e}{p} = \text{lightspeed} = \frac{c}{(1 + ((r \times (Ap1 / Ap2)) / RS))}$$

$$\frac{e}{p} = \text{lightspeed} = \frac{c}{(1 + ((1250000 \times (1/1)) / 46500000000))}$$

Lightspeed above earth is measured to: 299792,458 km/s

$$299792,458 = \frac{c}{(1 + ((1250000 \times (1/1)) / 46500000000))}$$

$$299792,458 \times (1 + ((1250000 \times (1/1)) / 46500000000)) = c$$

$$c = 299800,516937043$$

$$\frac{c}{\text{Lightspeed above earth}} = \frac{299800,516937043}{299792,458} = 1,00002688172043$$

C (maximum speed limit inside earth) = 0,002688 % faster than light speed measured above earth.

Conclusion: My theory predict that gravitational waves will propagate inside earth with the speed 299800,5 km/s.

References:

1. <http://vixra.org/abs/1010.0035>: A Philosophical And Mathematical Theory Of Everything.
2. <https://www.space.com/24073-how-big-is-the-universe.html>

