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Scientific Research Project

Four Dimensional Space with Speed Faster than the Speed of Light

Effects of Prof. Christos Drossinakis, Bettina Maria Haller and IWAG students of Four Dimensional Space with Speed Faster than the Speed of Light

Prof. Ignat Ignatov DSc

1. Theoretical analyses of the research of the Project

Full findings of the formulae for phasographic dissemination of information.

The periodical movement of a mass point, whose law of movement is of the kind: $x=A \sin(\omega t + \omega)$ is called simply harmonic (or sinus) oscillation, $\omega t + \phi_0$ is called flicker phase – initial phase, A-amplitude, T-period, ω-angular rate, x-coordinate of mass point (elongation). The following

dependencies are valid T=2πω, v = 1/T-frequency, ω=2πv. If we replace T=2πv in the formula x=A sin (ωt+ϕ_0) we receive X=A sin (2πvt+ϕ_0).

The sinus oscillations may arise in electric oscillatory systems. Then in such systems arise electromagnetic waves. These waves are emitted through antenna. If the current in the antenna varies by sinus law, the vectors of the electromagnetic field can be described with the equations:

$\vec{E}= \vec{E}_0 \sin 2\pi vt \qquad \vec{B} = \vec{B}_0 \sin 2\pi vt \qquad \vec{E} = c\vec{B},$

where $\vec{E}$ is the vector of the electromagnetic field, $\vec{B}$ - of magnetic induction, and c is the speed of electromagnetic waves, which is equal to the speed of light in vacuum. It is 300 000 km/sec. The vector $\vec{E}$ is perpendicular to $\vec{B}$, and both vectors are perpendicular to the wave propagation direction. From the above formulae it is evident that $\vec{E}$ and $\vec{B}$ change in the same way as the mass point, which moves according to a sinus law.

In order to explain the dissemination of information beyond our present time, we can examine the matter waves of De Broglie. He is the founder of the wave mechanics.

Let a particle P with weight m moves uniformly with speed V. We connect it with a rectangular coordinate system K' (O', X', Y', Z'), where 0'=P. The system K' moves against another one with coordinates K (O, X, Y, Z). The positions of the axes of both systems are as follows: OX≡O'X', OY ∥ O'Y',OZ ∥ O'Z'. At the initial moment t=0 we have 0≡0'. The transition between both systems is given by Lorentz formulae:

x '= $\frac{1}{a}$ (x - vt)y'= y z'= z t '= $\frac{1}{a}$ (t - $\frac{v}{c^2}$ x) a

a = $\sqrt{1-b^2}$b = $\frac{v}{c}$

The wave that is connected in the system K' is stationary, i.e. its amplitude is constant at any point in space.

The wave function in the system K is selected in the type:

P' (x', y', z', t') = A(x', y', z') sin(2π $\frac{v_0}{a}$t'+ δ)Then the function in the system K according to the above formulae has the type [6, c. 39]:

P(x,y,z,t) = A[$\frac{1}{a}$(x-vt),y,z]sin[2π$\frac{v_0}{a}\left(t-\frac{v}{c^2}x\right)+\delta$]

The second article in this function is a spreading OX wave with frequency V and phase velocity V, expressed by the formulae v = $\frac{v_0}{a}$,u =$\frac{c^2}{v}$. In all cases v<c, henceu>c. That takes us to the conclusion that the phase velocity is higher than the speed of light.

De Broglie's waves are expressed by the formula.

$P(x,y,z,t) = A[\frac{1}{a}(x-vt),y,z]\sin[2\pi\frac{v_0}{a}\left(t-\frac{v}{c^2}x\right)+\delta]$

It is evident from it that the amplitude carries three dimensional information, and not two dimensional, as it is in the electromagnetic waves. In the phase is contained the phase velocity. The amplitude in De Broglie's waves is expressed with the formula

$A[\frac{1}{a}(x-vt),y,z]$. Herexis the length, yis the width, andzis the depth of the three dimensional object. The phase is defined by the formula:

$2\pi\frac{v_0}{a}\left(t-\frac{v}{c^2}x\right)+\delta$, and hereu = $\frac{c^2}{v}$is the phase velocity that brings information from the fourth dimension – time t,contained in the flicker phase.

2. Results:

The research project with distant influence diffraction grating in water is successful.
29.04.2020
The Figure 1 shows the diffraction dispersion after influence of IAWG group.

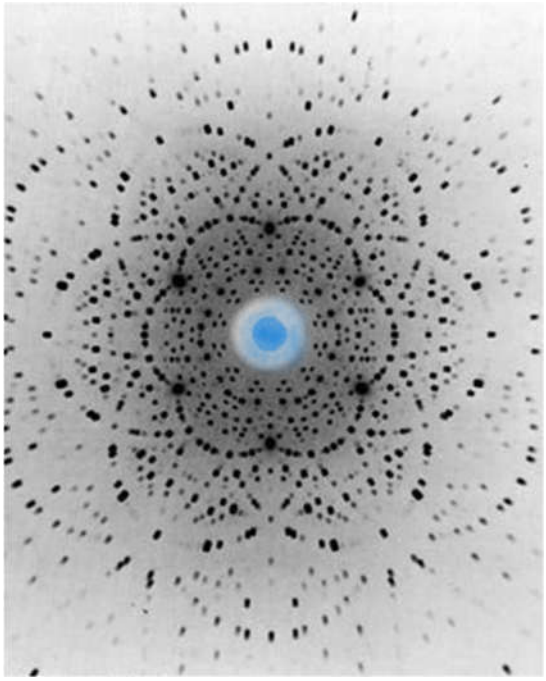

Figure 1

The speed D is: **341 000 km/sec**.
The s[eed of the light is c=299 793 km/sec
The difference of
341 000 - 299 793 = **41 207 km/sec**
is essential.

The research project with distant influence diffraction grating in water is successful.
08.07.2020

The speed D is: **353 000 km/sec**.
The speed of the light is c=299 793 km/sec
The difference of
353 000 - 299 793 = 53 207 km / sec.
is essential.

14.10.2020
The Figure 2 shows the diffraction dispersion after influence of IAWG group.

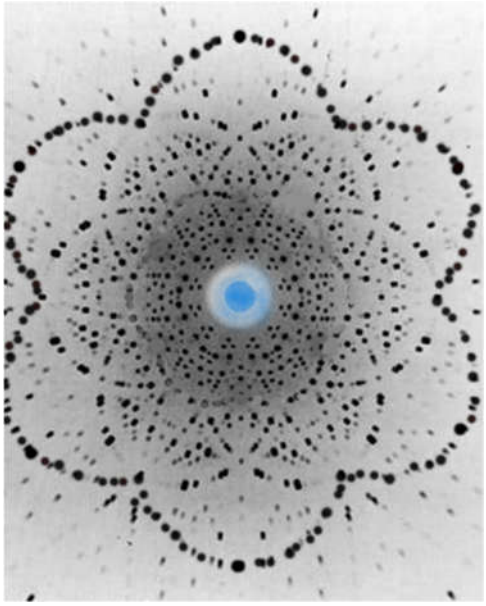

Figure 2

The speed D is: **373 000 km/sec.**
The speed of the light is c=299 793 km/sec
The difference of
373 000 - 299 793 = **73 207 km/sec**
is essential.

3. Conclusion

The experiment of Prof. Christos Drossinakis, Bettina Maria Haller and IWAG students of Four Dimensional Space with Speed Faster than the Speed of Light is successful.
There is reiteration of distant wave with speed more than speed of light.
The theoretical model of Prof. Ignatov is from 1996 and in 2020 we performed successful registration.

Prof. Dr. Ignat Ignatov DSc.

The research is with the collaboration of IAWG - Internationale Akademie für Wissenschaftliche Geistheilung with Direktor Prof. Dr.h. c. Christos Drossinakis.