**Christos A. Tsolkas** 

# THE THEORY OF RELATIVITY IS WRONG

# THREE PROPOSED EXPERIMENTS

2001

**Dear Frieds**,

The Theory of Relativity is completely wrong!

Should you doubt this, carry out the following three experiments.

The Theory of Relativity: END!

Christos A. Tsolkas July 2001

# **INTRODUCTION**

This paper elaborates on three new experiments, namely:

- 1. The experiment of two aircraft.
- 2. The aircraft experiment through the emission of electromagnetic wave train of a specific length, and
- 3. The GL experiment.

The objective of these three experiments is to prove –once more– whether the Theory of Relativity is accurate or false, and more precisely, to demonstrate whether both postulates of the Special Theory of Relativity are valid.

In essence, these three experiments will demonstrate the existence or nonexistence of ether, and more precisely of the etherosphere which surrounds the Earth; in general, they will set out to prove whether every celestial body is surrounded by an etherosphere or not.

These three experiments are of great importance to Physics, for their outcome will enable us to assert once more whether our knowledge of Physics is well founded or not.

I hope that the "Experts" will comprehend the paramount importance of these three experiments and that they will proceed with their realization. So many experiments have been carried out so far in order to prove the "accuracy" of the Theory of Relativity. We have nothing to lose by conducting another three. After all, one has to bear in mind that to dare and to constantly doubt are fundamental to Scientific Research.

#### THE EXPERIMENT OF TWO AIRCRAFT

Let us assume (fig.1) that we have two aircraft A and B (combat aircraft, commercial aircraft or passenger plane, --the type is not of the essence) flying at a distance L from one another. They are moving across the same straight line, at the same speed v towards the same direction and at the same altitude h above the surface of the earth. As it is known, both aircraft A and B constitute an inertial frame of reference (Galilean) moving at a constant velocity v in relation to the surface of the Earth (namely, in relation to the etherosphere of the Earth).





I) At some point in time  $t_1$  the transmitter of aircraft A transmits to aircraft B an instant electromagnetic signal which is received by the receiver of aircraft B at some other point in time,  $t_2$ . As a result, the time needed for the signal to get from aircraft A to aircraft B is:

$$t = t_2 - t_1$$
 (1)

Readings  $t_1$  and  $t_2$  are recorded by the chronometers found respectively on aircraft A and B.

II) Similarly, after a while (for instance, after 1 min), at some point in time  $t_1$  the transmitter of aircraft B transmits to aircraft A another instant

electromagnetic signal which reaches the receiver of aircraft A at some point in time  $t_2$ .

As a result, the time needed for the signal to get from aircraft B to aircraft A is:

$$t' = t_2' - t_1'$$
 (2)

Readings  $t_1$  and  $t_2$  are recorded by the chronometers found respectively on aircraft B and A.

# CONCLUSION

During the performance of the experiment, **the pilots of aircraft A and B** by comparing time values *t* and *t* conclude that:

a) If the chronometers show that *t* is equal to *t'*, namely that:

$$t = t' = \frac{L}{C}$$

then the Theory of Relativity is **RIGHT**.

b) However, if the two chronometers show that t does not equal t', namely that t > t',

then the Theory of Relativity is undoubtedly **WRONG**.

NOTE: C = velocity of the light = 3.10<sup>8</sup> m/sec, in relation to the surface of the Earth (namely, in relation to the etherosphere of the Earth)

### EXAMPLE

Let us assume, for example, that in our experiment L = 30 km (distance L is measured by the RADAR of aircraft A), v = 540 km/h and c = 300.000 km/sec; then, if our experiment proves that time values t and t' are not equal, the time difference t - t' measured by the pilots will be:

L = (c - v) t (3) case I and,

L = (c+v) t' (4) case II, respectively.

From relations (3) and (4), we have:

 $t-t'= 2Lv/(c^2-v^2) = 10^{-10} \text{ sec}$ 

This time can easily measured by the individual chronometers found on the two aircraft.

In my personal view, should this experiment be carried out, time values t and t' measured by the pilots of aircraft A and B will not be equal, and namely t > t'. As a result, it will be proven beyond any doubt that the Theory of Relativity is an erroneous theory of Physics. In particular, in this case it will be demonstrated that the two known postulates of the Special Theory of Relativity are not valid.

# THE AIRCRAFT EXPERIMENT THROUGH THE EMISSION OF AN ELECTROMAGNETIC WAVE TRAIN OF SPECIFIC LENGTH.

## THE EXPERIMENT

Let us assume (fig. 2) that we have a transmitter A emitting electromagnetic radiation, which is firmly installed at an altitude h above the surface of the Earth, for instance, on a high spot.



fig. 2

EARTH

An aircraft B is moving towards transmitter A at a steady velocity v, across a straight line and at the same altitude *h*.

As it is known, in this case, aircraft B constitutes an inertial frame of reference (Galilean) moving at steady velocity v in relation to the Earth (namely, in relation to the Earth's etherosphere).

During the performance of the experiment and over a certain (known) time *t*, transmitter A transmits to aircraft B a continuous electromagnetic wave train, for instance, microwaves or a LASER beam.

Thus, during this transmission, the length of the above-mentioned wave train  $A_o B_o = \ell$  in relation to the frame of reference of the Earth (namely in relation to the Earth's etherosphere) will be:

$$\ell = c t \qquad (1)$$

(*c* = the speed of light =  $3 \ 10^8$  m/sec in relation to the Earth's frame of reference, namely in relation to the Earth's etherosphere).

Let us consider, however, what the Theory of Relativity holds.

As it is known, according to the Theory of Relativity the velocity  $V_k$  of the above-mentioned transmitted electromagnetic wave train  $A_o B_{o}$ , in relation to the inertial frame of reference of aircraft B, should be equal to c, namely:

$$V_k = c \tag{2}$$

for (according to the Theory of Relativity) the velocity of the electromagnetic waves (i.e. in our case of the electromagnetic wave train  $A_oB_o$ ) is the same for all inertial frames of reference and is moreover equal to *c*; hence, it will be also the same --i.e. *c*-- for the inertial frame of reference of aircraft B.

Yet, the following question arises:

Is what the Theory of Relativity maintains, i.e.  $V_k = c$ , valid or not?

The answer to the above question will be given following the realization of the actual experiment, which will be elaborated on below. The reasoning that we will adopt is the following:

According to Classical Physics and on the basis of the new ether model (Earth – etherosphere surrounding the Earth), aircraft B will meet wave-train wave  $A_oB_o = \ell$  and will go through it in time.

$$t' = \frac{\ell}{c+\upsilon} \tag{3}$$

where in relation (3) c + v is the velocity  $V_k$  of the electromagnetic wave train  $A_oB_o$  in relation to the inertial frame of reference of aircraft B, namely :

$$V_k = c + v \tag{4}$$

Thus, from relation (1) and (4) relation (3) becomes:

$$V_{k} = c \frac{t}{t'}$$
(5)

In relation (5), the values of *c* and *t* are known *a priori* in our experiment. As regards the value of t', it can be found experimentally, as follows:

During the realization of the experiment, at the point where aircraft B meets the first end  $B_o$  of wave train  $A_oB_{o}$ , the chronometer will record a certain time  $t_1$ .

Similarly, when aircraft B runs through the entire wave train  $A_oB_o$  and at the moment in which it abandons the last end  $A_o$  of the wave train, the chronometer will record another time  $t_2$ .

As a result, time t' needed for aircraft B to run through the entire wave train  $A_o B_o$  will be :

$$t' = t_2 - t_1 \tag{6}$$

On the basis of relation (6), relation (5) becomes :

$$V_k = c \frac{t}{t_2 - t_1} \tag{7}$$

As a result, values c, t,  $t_2$  and  $t_1$  in relation (7) are all known in our experiment.

The crucial question that arises now is the following:

# QUESTION

If in relation (7) we replace these known values c, t,  $t_2$  and  $t_1$ ,  $(t)=t_2-t_1$ , the resulting value for  $V_k$  will be:

a) 
$$V_k = c + v = c \frac{t}{t'} > c = 3 \ 10^8 \text{ m/sec}$$

according to the new ether model, or will be:

**b)** 
$$V_k = \frac{c+\upsilon}{1+\frac{\upsilon \cdot c}{c^2}} = c= 3 \ 10^8 \text{ m/sec}$$

according to the Theory of Relativity ?

The answer to the above-stated question (**in my opinion**) is that, should the experiment be carried out, the value of  $V_k$  that results from relation (7) will be greater than the value of the speed of light *c*, namely it will be:

$$V_k > c = 3 \ 10^8 \text{ m/sec.}$$

In other words, the electromagnetic wave train  $A_oB_o$  in relation to the inertial frame of reference of aircraft B will have a velocity  $V_k$  greater than the speed of light *c*.

However, we are well aware that this fact is at total variance with the premise of the Special Theory of Relativity. Therefore, in the event that the latter is true, *viz.* should relation (7) yield a value  $V_{\kappa} > c = 3 \ 10^8 \text{ m/sec}$ , the Theory of Relativity is undoubtedly inaccurate.

# EXAMPLE

Let us assume that, in our experiment, are:  $t = 3 \sec t$   $t' = t_2 - t_1 = 2,999997 \sec c$ .  $c = 3 \ 10^8 \ m/sec$ . Then, from the relation (7), we have :  $V_k = 300.000.300 \ m/sec$  (8), namely  $V_k > c = 3 \ 10^8 \ m/sec$ in relation to the inertial frame of reference of aircraft B. Also, from relations (4) and (8), the velocity v of aircraft B is:  $v = 300 \ m/sec$ 

# THE EXPERIMENT GL

# THE EXPERIMENTAL APPARATUS (fig. 3)

- D = platform (D).
- $\Phi$  = light source of wavelength  $\lambda$ .
- L = light beam, from the light source  $\Phi$ .
- $M_o$ ,  $M'_o$  = flat mirrors (or prism T) for seperation of the light beam L in two light beams L<sub>1</sub> and L<sub>2</sub>.
- $S_1$ ,  $S_2$  = closed tubes full water.
- $S_3$ ,  $S_4$  = closed tubes full benzol.
- $M_1, M_2, M_3, M'_1, M'_2, M'_3 =$ flat mirrors.
- P = observer on platform (D).
- P' = observer standing stationary onto the surface of Earth.
- $K_0$  = central light fringe.

#### THE EXPERIMENT.

The experiment GL, is executed as follows:



# Phase I. The platform (D), is stationary relatively to an observer P' standing stationary, onto the surface of Earth.

In this case, the light source  $\Phi$ , emits a light beam L, which then, falling onto the prism T, is divided in two light beams L<sub>1</sub> and L<sub>2</sub>.

The light beam  $L_1$  coming through the water of the tubes  $S_1$ ,  $S_2$  and the light beam  $L_2$  coming through the benzol of the tubes  $S_3$ ,  $S_4$  falling onto the mirrors  $M_1$ ,  $M_2$ ,  $M_3$  -  $M'_1$ ,  $M'_2$ ,  $M'_3$  respectively, are reflected.

As a result, the above beams  $L_1$  and  $L_2$  interfere forming vertical rectilinear light and dark interference fringes, in the dioptre.

During this phase of experiment, the vertical thread of the crossthread of dioptre is placed right on middle  $K_0$  of the central light fringe.

# Phase II. The platform (D), has uniform motion, with constant velocity v, relatively to an observer P', standing stationary, onto the surface of the Earth.

In this case, for the observer P, the total time  $t_1$  for the light, from light source  $\Phi$  to the middle  $K_o$  of central light fringe, through the tubes  $S_1$  and  $S_2$ , will be:

$$t_{1} = \frac{\ell}{\frac{c}{n_{1}} - f_{1}\upsilon + \upsilon} + \frac{\ell}{\frac{c}{n_{1}} + f_{1}\upsilon - \upsilon}$$
(1)

Where:  $\frac{c}{n_1} - f_1 \upsilon + \upsilon$  = velocity of the light beam L<sub>1</sub> into the water of the tube S<sub>1</sub> for the observer P,

 $\frac{c}{n_1} + f_1 \upsilon - \upsilon =$ velocity of the light beam L<sub>1</sub> into the water of the tube S<sub>2</sub> for the observer P

c = velocity of the light = 310<sup>8</sup>m/sec, in relation to the Earth's frame of reference, namely in relation to the Earth's etherosphere.

 $n_1$  = index of refraction of the water.

 $\upsilon$  = velocity of the platform (D).

 $f_1$  = Fizeau's drag coefficient, for the water.

In the same way, for the observer P, total time  $t_2$  for the light, from light source  $\Phi$  to the middle K<sub>o</sub> of central light fringe, through the tubes S<sub>3</sub> and S<sub>4</sub>, will be:

$$t_{2} = \frac{\ell'}{\frac{c}{n_{2}} + f_{2}\upsilon - \upsilon} + \frac{\ell'}{\frac{c}{n_{2}} - f_{2}\upsilon + \upsilon}$$
(2)

Where:

 $\frac{c}{n_2} + f_2 \upsilon - \upsilon$ 

= velocity of the light beam  $L_2$  into the benzol of the tube  $S_3$ , for

the observer P  $\frac{c}{n_2} - f_2 \upsilon + \upsilon$  = velocity of the light beam L<sub>2</sub> into the benzol of the tube S<sub>4</sub>, for the observer P

 $n_2$  = index of refraction of the benzol.

 $f_2$  = Fizeau's drag coefficient for the benzol.

From the relations (1) and (2), we get:

$$\Delta t = t_2 - t_1 = \left(\frac{\ell'}{\frac{c}{n_2} + f_2 \upsilon - \upsilon} + \frac{\ell'}{\frac{c}{n_2} - f_2 \upsilon + \upsilon}\right) - \left(\frac{\ell}{\frac{c}{n_1} - f_1 \upsilon + \upsilon} + \frac{\ell}{\frac{c}{n_1} + f_1 \upsilon - \upsilon}\right)$$
(3)

where: 
$$f_1 = 1 - \frac{1}{n_1^2}$$
 (4)

and  $f_2 = 1 - \frac{1}{n_2^2}$  (5)

The relation (3) means that, in this case (phase II), the observer P, will observe a shift  $\delta$  of the interference fringes, which is equal to:

$$\delta = \frac{c\Delta t}{\lambda} \neq 0$$
 fringes (6)

As it is Known, the Theory of Relativity, during the execution of the experiment GL, fig.3 accepts that:

In phase II of the experiment for the observer P the shift  $\delta$  of the interference fringes, will always be  $\delta$ =0 fringes. But is this correct?

In my personal opinion, should the experiment be carried out, observer P will observe in phase II a shift  $\delta$  of the interference fringes  $\delta \neq 0$ .

As a result, if during the execution of the experiment (phase II) the observer P should observe a shift  $\delta$  of the interference fringes  $\delta \neq 0$ , then

the whole philosophy and the entire axiomatic foundation of the Special Theory of Relativity is wrong.

## EXAMPLE

Let us suppose our experiment is carried out given the following:

$$\ell = 1,00 \text{ m}$$

$$\ell' = 0,90 \text{ m}$$

$$\lambda = 5,3 \cdot 10^{-7} \text{m} \text{ (monochromatic yellow light).}$$

$$\upsilon = 0,1 \text{ m/sec (velocity of the platform (D)).}$$

$$C = 3 \cdot 10^8 \text{ m/sec.}$$

$$n_1 = 1,33 \text{ (index of refraction of the water)}$$

$$n_2 = 1,50 \text{ (index of refraction of the benzol)}$$
(7)

From the relations (4) and (5), we have:

$$f_1 = 1 - \frac{1}{n_1^2} = 1 - \frac{1}{1,33^2} = 0,43$$
 (8)

and 
$$f_2 = 1 - \frac{1}{n_2^2} = 1 - \frac{1}{1,50^2} = 0,55$$
 (9)

Substituting the above values (7), (8), and (9) in the relation (3), we get:

$$\Delta t \approx 1,3333333 \cdot 10^{-10} \text{ sec}$$
 (10)

and from the relation (6), we have a shift  $\delta$ , which is equal to:

$$\delta = \frac{c\Delta t}{\lambda} = 75.471$$
 fringes (11)

for the observer P.

Conversely, according to the Theory of Relativity for the observer P the shift  $\delta$  of the interference fringes, will always be  $\delta$ =0 fringes. Consequently, which is right,  $\delta$ =0 fringes or  $\delta$ =75.471 fringes?

In my personal view  $\delta$ = 75.471 fringes is right and not  $\delta$ =0 fringes.

# **ATTENTION!**

Should the experimental apparatus of the experiments by J.P. Cedarholm – C.H. Townes, Michelson – Morley, e.t.c. by placed on a moving vehicle (i.e. train, aircraft, satellite e.t.c.) then the existence of the etherosphere of the Earth will be immediately proven. Unfortunately, this has never taken place to date. Hence, this is the grave mistake of all Physicists who

dealt with the existence of ether in nature.

# THE NEW ETHERIC MODEL OF THE UNIVERSE

- 1. The Theory of Relativity is an erroneous theory of Physics (that is, the two postulates of the special Theory of Relativity are not valid).
- 2. Ether exists in nature and constitutes a fundamental element of our material universe.
- 3. The Earth is surrounded by its etherosphere, in general all celestial bodies are surrounded by their etherosphere.
- 4. Ether is, the "dark matter" of the universe.
- 5. The three fundamental Laws of ether, according to new etheric model of Electrogravitic Theory, are:
  - a. The law of attraction.
  - b. The law of inertia.
  - c. The law of action reaction.

NOTE: See, Bibliography by Christos Tsolkas.

# CONCLUSION

- 1. The Theory of Relativity (in my personal view) is an erroneous theory of Physics, in the course of all these years (since its appearance to this day), many considerations have been accepted as regards the **substance**, the **constitutive elements** and the **properties** of ether.
- 2. I firmly believe that should these experiments be realized, their outcome will demonstrate beyond any doubt that the Theory of Relativity, which unluckily for so many years was considered to be correct, is an inaccurate theory.

## BIBLIOGRAPHY

- 1. Christos Tsolkas, "Disputing the Theory of Relativity", 1986.
- 2. Christos Tsolkas, "The Electrogravitic Theory of Material Bodies", 1988.
- 3. Christos Tsolkas, "About Unified Fields of Elementary Particles and the Structure of the Nucleus", 1989.
- 4. Christos Tsolkas, "Theory of Relativity, Right or Wrong?" (Three Proposed Experiments), 2001.
- 5. Christos Tsolkas, "About the Attraction and Inertia of Ether", 1994.
- 6. Christos Tsolkas, "Ether Quantum Mechanics, (EQM)", 1995.

Copyright 2001, Christos A. Tsolkas Address: G. Drosini 2, 301 00 Agrinio GREECE

e-mail: tsolkas1@otenet.gr

Internet: www.tsolkas.gr