Dear friends,

This experiment is the end of the Theory of Relativity.

Michelson-Morley experiment is right but is not sufficient for the experimental proof of ether.

Christos A. Tsolkas October 2002

EXPERIMENTAL PROOF OF THE EXISTENCE OF ETHER

PERFORMANCE OF EXPERIMENT II (see www.tsolkas.gr)

SUMMARY

The aim of carrying out experiment II, described below, is to experimentally demonstrate the following:

- a) Ether exists in Nature.
- b) All celestial bodies (apparently the Earth itself) are surrounded by an etherosphere.
- c) The speed of light c is not constant for all inertial frames of reference as the Theory of Relativity erroneously holds.

1. Checking the timers

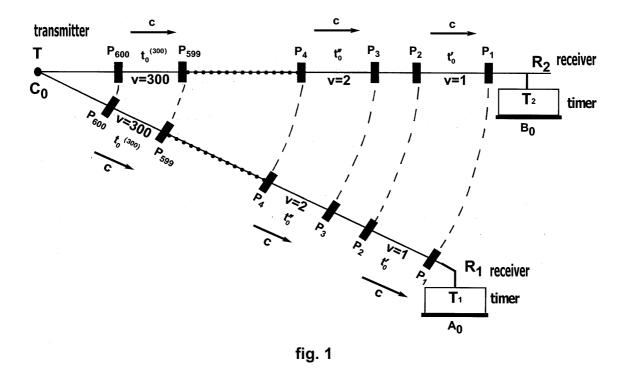
For the performance of experiment II, two high-precision timers T_1 and T_2 (HAMEG-8122) were used.

Prior to conducting the experiment, the two timers T_1 and T_2 were checked.

This check took place as follows:

The two timers T_1 and T_2 were connected to two receivers R_1 and R_2 respectively, and were later placed at rest in two positions A_0 and B_0 on the ground.

An electromagnetic-wave transmitter T was placed in position C₀, (fig. 1).



From transmitter T, v couples of pulses (v = 1, 2, 3, ... 300) are emitted, i.e. the $(P_1 - P_2)_1$, $(P_3 - P_4)_2$, $(P_5 - P_6)_3$, ... $(P_{599} - P_{600})_{300}$ couples of pulses.

The time duration of each couple of pulses is t_0 , t_0 , t_0 , t_0 respectively, where:

1 sec
$$< t_0$$
', t_0 '', t_0 ''', t_0 ⁽³⁰⁰⁾ < 2 sec (1)

Furthermore, the time between the successive couples of pulses is 5 sec approximately.

Note: In the first couple of pulses, e.g. in $(P_1 - P_2)_1$ (Fig. 1), P_1 is the front of the first pulse and P_2 is also the front of the second pulse. Apparently, the same applies for all the other couples of pulses.

Under ideal conditions, both timers T_1 and T_2 should record respectively the exact same times t_0 , t_0 , t_0 , ..., t_0 .

In practice, however, this is not the case, for in the course of measurements various types of error occur.

According to all the above, therefore, the times t_0 ', t_0 '', t_0 ''', t_0 ⁽³⁰⁰⁾ are recorded as t_1 , t_2 , t_3 , t_{300} and as t_1 ', t_2 , t_3 , t_{300} by timers T_1 and T_2 respectively.

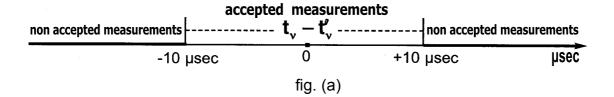
In this way, the time value t_0 of the first couple of pulses $(P_1 - P_2)_1$ is recorded as time t_1 by timer T_1 and as t_1 by timer T_2 , and so forth for the rest couples of pulses.

Let us assume that for every couple of pulses v, (v = 1,2,3,...300), t_v is the time recorded by timer T_1 and t'_v is the corresponding time recorded by timer T_2 .

Then, from the set of the above couples of pulses v = 300 emitted by transmitter T, we accept those measurements for which the time difference t_v - t_v , displayed by the two timers T_1 and T_2 , is the following:

$$-10\mu sec < t_v - t_v' < +10\mu sec$$
 (2)

The other measurements are rejected. fig. (a).



Hence, according to relation (2), out of the v = 300 couples of pulses that were transmitted, measurements were accepted for (102) couples of pulses. These measurements are included in Table I here below.

Note: Relation (2) was selected as the most appropriate one for the best possible statistical result of measurements.

<u>Table I</u>

			· - · · · · · · · · · · · · · · · · · ·
	Timer T₁	Timer T ₂	Timers T ₁ and T ₂
assept. measur.	•	<u> </u>	time difference
measur.	(sec)	(sec)	(sec)
		,	(360)
1.	1.56323784	1,56323599	1,85E-06
2.	1,36783674	1,36783142	5,32E-06
3.	1,45304503	1,45304285	2,18E-06
4.	1,48325313	1,48325631	-3,18E-06
5.	1,58638601	1,58637989	6,12E-06
6.	1,32670616	1,32669915	7,01E-06
7.	1,3520568	1,35206136	-4,56E-06
8.	1,80366705	1,80367244	-5,39E-06
9.	1,2560388	1,25603049	8,31E-06
10.	1,34005129	1,34004219	9,1E-06
11.	1,35293321	1,35293642	-3,21E-06
12.	1,25000915	1,25000099	8,16E-06
13.	1,36390411	1,36390085	3,26E-06
14.	1,69321768	1,69321216	5,52E-06
15.	1,72464621	1,72463905	7,16E-06
16.	1,81000814	1,80999904	9,1E-06
17.	1,36449693	1,3645011	-4,17E-06
18.	1,3648372	1,364831	6,2E-06
19.	1,36355207	1,36354985	2,22E-06
20.	1,74625573	1,74625318	2,55E-06
21.	1,49386707	1,49387219	-5,12E-06
22.	1,5635289 1,49368077	1,56353109	-2,19E-06 5,62E-06
23. 24.	1,58393449	1,49367515	4,4E-06
2 4 . 25.	1,80460417	1,58393009 1,80460099	3,18E-06
26.	1,82463188	1,82463643	-4,55E-06
27.	1,75161528	1,75161011	5,17E-06
28.	1,72492946	1,72493518	-5,72E-06
29.	1,46321133	1,46321819	-6,86E-06
30.	1,35426895	1,35426005	8,9E-06
31.	1,26424515	1,26424099	4,16E-06
32.	1,42590631	1,42590015	6,16E-06
33.	1,80426763	1,80426976	-2,13E-06
34.	1,83446127	1,83 44 5526	6,01E-06
35.	1,60992441	1,60991809	6,32E-06
36.	1,29354312	1,29354631	-3,19E-06
37.	1,3640032	1,36399905	4,15E-06
38.	1,49000765	1,49000052	7,13E-06
39.	1,76900521 1,31463808	1,76899909	6,12E-06 5,55E-06
40. 41.	1,48325261	1,31463253 1,48324632	5,55E-06 6,29E-06
41. 42.	1,58325672	1,5832499	6,82E-06
42. 43.	1,6246393	1,62463216	7,14E-06
44.	1,41552363	1,41551601	7,62E-06
45.	1,50322502	1,50322919	-4,17E-06
46.	1,99992387	1,99991509	8,78E-06
47.	1,52358928	1,52358146	7,82E-06
48.	1,41362882	1,41362072	8,1E-06
49.	1,61989592	1,6199011	-5,18E-06
50.	1,59324076	1,59324631	-5,55E-06
51.	1,49891279	1,4989181	-5,31E-06
52.	1,42358552	1,42357616	9,36E-06
53.	1,29324994	1,29324279	7,15E-06
54.	1,29394408	1,2939497	-5,62E-06
55.	1,62484034	1,62483519	5,15E-06

56. 1,73493308 1,73493979 -6,71E-06 57. 1,3259437 1,32594876 5,61E-06 58. 1,5058296 1,50592429 5,31E-06 60. 1,55329694 1,55329942 5,31E-06 61. 1,62484028 1,62483351 5,18E-06 62. 1,59630312 1,596299 4,12E-06 63. 1,38867427 1,39868695 5,32E-06 64. 1,40000688 1,40000155 5,13E-06 65. 1,42016187 1,4201671 5,23E-06 66. 1,3229326 1,3229321 6,16E-06 67. 1,21371417 1,21370899 5,18E-06 68. 1,5950061 1,59499955 6,55E-06 69. 1,97690428 1,97690001 4,27E-06 70. 1,55481871 1,55481871 -5,56E-06 71. 1,863907 1,86390163 5,37E-06 72. 1,20361663 1,20361219 4,44E-06 74. 1,59383649 1,59382913 7,36E-06 75. 1,40390823 1,40391301 4,78E-06					
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		, S,	,, S ₂	_ S.	
		$t_{\rm m} = \frac{1}{400}$	$t'_{m} = \frac{-2}{400}$	$\delta_{\rm m} = \frac{3}{400}$	
$t_{\rm m} = 1,50378753$ $t_{\rm m}' = 1,50378538$ $\delta_{\rm m} = 2,15.10^{-6}$		102 102 102			
	t _m	= 1,50378753	t' _m = 1,50378538	$\delta_{\rm m} = 2,15.10^{-6}$	

Finally, from the information stated above, it results that:

On the basis of relation (2) and Table I, the average value t_m of the times recorded by timer T_1 is the following:

$$t_{\rm m} = 1,50378753$$
 (3)

Moreover, the average value t'_m of the times recorded by timer T_2 is the following:

$$t'_{m} = 1,50378538$$
 (4)

We will now examine the fraction $\frac{t_m}{t_m'}$.

From relations (3) and (4) the following is obtained:

$$\left(\frac{t_{m}}{t'_{m}}\right) = \frac{150378753}{150378538} \quad \text{or} \quad$$

$$\left(\frac{t_{m}}{t'_{m}}\right) = 1,000001430$$
 (5)

Apparently, under ideal conditions (that is in the absence of error) fraction $\frac{t_m}{t_m'}$ should be as follows:

$$\left(\frac{t_{m}}{t'_{m}}\right) = 1$$
theoret. (6)

Therefore, fraction $\frac{t_m}{t_m'}$ of relations (5) and (6) presents a difference $\Delta,$ which is:

$$\left(\frac{t_{m}}{t'_{m}}\right) - \left(\frac{t_{m}}{t'_{m}}\right) = \Delta = 1,000001430 - 1 \quad \text{or}$$

$$\Delta = 1,430.10^{-6}$$
(7)

Conclusion

This difference Δ = 1,430.10⁻⁶ of relation (7) is the error in the measurements yielded by timers T₁ and T₂ during their check.

Obviously, this difference Δ will be taken into account during the performance of the experiment which will be elaborated below.

In addition, based on relations (3) and (4) it is observed that timer T_1 precedes timer T_2 by one time difference δ_m which is the following:

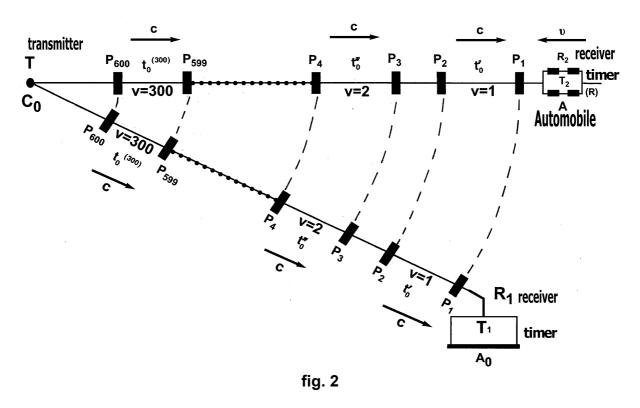
$$\delta_{m} = t_{m} - t_{m}' = 1,50378753 - 1,50378538$$
 or

$$\delta_{\rm m}$$
 = 2,15.10⁻⁶ or

$$\delta_{\rm m}$$
 = 2,15 μ sec

2. Carrying out the experiment

The experiment was carried out on a straight road, 4 km long, fig. 2.



Timer T_1 was connected to receiver R_1 and was steadily placed on the ground, in position A_0 .

Also, timer T_2 was connected to receiver R_2 and was placed in an automobile A running at a velocity $v_0 = 120$ km/h towards transmitter T.

While automobile A was in motion, approximately (300) couples of pulses (v = 300) were emitted by transmitter T.

The time durations t_0 ', t_0 ''', t_0 ''', $t_0^{(300)}$ of these couples of pulses were recorded as t_1 , t_2 , t_3 , t_{300} by the ground-based timer T_1 , and as t_1 , t_2 , t_3 , t_{300} by timer T_2 found in the automobile A.

The time between successive couples of pulses was 5 sec approximately. The recording of time readings displayed by timers T_1 and T_2 was effected by two respective video cameras.

Hence, according to relation (2), out of the (300) couples of pulses that were emitted by transmitter T, measurements were accepted for (105) couples of pulses.

The rest of the measurements were rejected as they were at variance with relation (2).

Finally, the measurements which were accepted for the (105) couples of pulses are contained in Table II.

Table II

		<u> </u>	
	Times T	Time o # T	Timers T ₁ and T ₂
accept.	Timer T₁	Timer T ₂	time difference
measur.	(sec)	(sec)	
	` ,	,	(sec)
1.	1,46353581	1,46352899	6,82E-06
2.	1,35040511	1,35040055	4,56E-06
3.	1,82453495	1,82453148	3,47E-06
4.	1,31000941	1,31000099	8,42E-06
5.	1,38424238	1,384236	6,38E-06
6.	1,64399685	1,6439905	6,35E-06
7.	1,40353289	1,40352799	4,9E-06
8.	1,69359707	1,69359015	6,92E-06
9.	1,55300805	1,55300059	7,46E-0 6
10.	1,94494484	1,94493699	7,85E-06
11.	1,44625937	1,44625105	8,32E-06
12.	1,61892967	1,61893355	-3,88E-06
13.	1,55481435	1,55480999	4,36E-06
14.	1,62313604	1,62313355	2,49E-06
15.	1,74660307	1,74659999	3,08E-06
16.	1,39920363	1,39920049	3,14E-06
17.	1,83009209	1,83009555	-3,46E-06
18.	1,8199393	1,81993515	4,15E-06
19.	1,54591098	1,54590409	6,89E-06
20.	1,3900083	1,39000099	7,31E-06
21.	1,72430347	1,72430599	-2,52E-06
22.	1,73420761	1,73420199	5,62E-06
23.	1,36048546	1,3604889	-3,44E-06
24.	1,62010438	1,62009999	4,39E-06
25.	1,69503551	1,69503155	3,96E-06
26.	1,59849859	1,59850105	-2,46E-06
27.	1,68812964	1,68813305	-3,41E-06
28.	1,40001064 1,88421014	1,40001299	-2,35E-06
29.	1,88421014	1,88420599	4,15E-06 7,35E-06
30.	1,46326449	1,3540395 1,46325588	7,33E-06 8,61E-06
31.	1,69315501	1,46325566	6,02E-06
32.	1,34004797	1,89314699	8,31E-06
33. 34.	1,84350507	1,84350099	4,08E-06
1	1,94693017		-2,82E-06
35. 36.	1,66421969	1,94693299 1,6642243	-2,62E-06 -4,61E-06
36. 37.	1,57313641	1,57313055	5,86E-06
37. 38.	1,48999523	1,48999005	5,86E-06
39.	1,31874266	1,31874612	-3,46E-06
39. 40.	1,59999764	1,59999342	4,22E-06
40. 41.	1,49449686	1,49449999	-3,13E-06
42.	1,36553986	1,36554328	-3,42E-06
43.	1,61354959	1,6135421	7,49E-06
44.	1,45244711	1,45244369	3,42E-06
45.	1.47423207	1,47423623	-4,16E-06
46.	1,35000172	1.35000467	-2,95E-06
47.	1,84331353	1,84330915	4,38E-06
48.	1,50423341	1,50422609	7,32E-06
49.	1,36009743	1.36009085	6,58E-06
50.	1,49393048	1,49392236	8,12E-06
51.	1,29365559	1,29365243	3,16E-06
52.	1,38417059	1,38416634	4,25E-06
53.	1,59826657	1,59826139	5,18E-06
54.	1,340007	1,34000099	6,01E-06
55.	1,53426215	1,53426861	-6,46E-06
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56.	1,48364223	1,48363515	7,08E-06
57.	1,69004967	1,69004155	8,12E-06
58.	1,75343119	1,75342218	9,01E-06
59.	1,67425455	1,67425166	2,89E-06
60.	1,86355586	1,8635512	4,66E-06
61.	1,49359143	1,49359901	-7,58E-06
62.	1,39484267	1,39483615	6,52E-06
63.	1,40000782	1,3999959	8,23E-06
64.	1,64424178	1,6442361	5,68E-06
65.	1,2445956	1,24459976	-4,16E-06
66.	1,55393818	1,5539426	-4,42E-06
67.	1,886362 44	1,88635612	6,32E-06
68.	1,73454637	1,73453921	7,16E-06
69.	1,38493919	1,38493109	8,1E-06
70.	1,82643021	1,8264357	-5,49E-06
71.	1,7935645	1,79356835	-3,85E-06
72.	1,93652063	1,93652539	-4,76E-06
73.	1,68375544	1,68374632	9,12E-06
74.	1,35991865	1,35991319	5,46E-06
75.	1,11994252	1,119936	6,52E-06
76.	1,35363686	1,3536425	-5,64E-06
77.	1,49394569	1,49394924	-3,55E-06
78.	1,46385961	1,46385249	7,12E-06
79.	1,35386737	1,35386255	4,82E-06
80.	1,94423258	1,94423679	-4,21E-06
81.	1,35867531	1,35867216	3,15E-06
82.	1,4935728	1,49356818	4,62E-06
83.	1,35374768	1,35374232	5,36E-06
84.	1,49398821	1,49398219	6,02E-06
85.	1;46924888	1,46925519	-6,31E-06 -7,12E-06
86.	1,36493287 1,26356193	1,36493999	-7,12E-06 -8,16E-06
87.	1,38344946	1,26357009 1,38344216	7,3E-06
88.	1,83424454	1,83423618	8,36E-06
89. 90.	1,69999334	1,69999955	-6,21E-06
90. 91.	1,92414009	1,92413099	9,1E-06
92.	1,40324079	1,40323525	5,54E-06
93.	1,36430571	1,36429939	6,32E-06
94.	1.35893913	1.35894635	-7,22E-06
95.	1,39423603	1,39424439	-8,36E-06
96.	1,40464275	1,404649	-6,25E-06
97.	1,21660797	1,21660035	7,62E-06
98.	1,75394208	1,75394999	-7,91E-06
99.	1,34000852	1,34000042	8,1E-06
100.	1,85323784	1,8532463	-8,46E-06
101.	1,69424428	1,69423516	9,12E-06
102.	1,29315168	1,29314632	5,36E-06
103.	1,93460787	1,93461599	-8,12E-06
104.	1,83703849	1,837032	6,49E-06
105.	1,99993902	1,99993165	7,37E-06
S	=163,6603051	S ₂ = 163,6600422	S ₃ = 0,00026286
J,			
	$t_{\rm m} = \frac{S_1}{105}$	$t'_{m} = \frac{S_{2}}{105}$	$\delta_{\rm m} = \frac{S_3}{105}$
t	= 1,55866957	t' _m = 1,55866706	$\delta_{\rm m} = 2,51.10^{-6}$
° m	-,000001	-m -,	-,

COMMENT: From a statistical point of view, the greater the number v (e.g. v = 10.000) of the couples of pulses emitted by transmitter T, the smaller the error which occurs in the result of the experiment.

Therefore, on the basis of what has been stated above, the following are observed:

a) According to the Theory of Relativity, velocity V_{κ} of the electromagnetic couples of pulses $(P_1-P_2)_1$, $(P_3-P_4)_2$, $(P_5-P_6)_3$, ... $(P_{599}-P_{600})_{300}$ relative to automobile A, fig 2 should be:

$$V_{\kappa} = c$$
 (8)

b) On the contrary, however, according to the "New Theory of Ether" (see $\underline{www.tsolkas.gr}$) the above velocity V_{κ} should be:

$$V_{\kappa} = c + v \tag{9}$$

where,
$$V_{\kappa} = c \frac{t}{t'}$$
 (10)

[see Experiment II, relations (4) and (5)].

In relation (10), for one couple of pulses, e.g. for $(P_1 - P_2)_1$ which has a time duration t_0^{\prime} :

t = the time recorded by the ground-based timer T₁ and,

t' = the time recorded by timer T_2 found in automobile A.

 $c = 3.10^8$ m/sec the speed of light.

However, during the performance of the experiment and on the basis of measurements shown in Table II, it results that:

$$t_{m} \, = \, 1\!,\!55866957$$
 and
$$t_{m}' \, = \, 1\!,\!55866706$$
 (11)

where t_m is the average value of the times recorded by timer T_1 , and t'_m is the average value of the times recorded by timer T_2 .

Consequently, relation (11) gives:

$$\frac{t_{m}}{t'_{m}} = 1,000001610 \qquad (12)$$

By eliminating the initial error yielded by timers T_1 and T_2 , i.e. the difference Δ in relation (7), relation (12) gives the following:

$$\frac{t_m}{t_m'} = 1,000001610 - 1,430 \cdot 10^{-6}$$
 or

$$\frac{t_{m}}{t'_{m}} = 1,000000180 \tag{13}$$

Conclusion

Value $\frac{t_m}{t_m'} =$ 1,000000180 of relation (13) is the final value (net value) obtained

by the experiment, free from any type of error.

Therefore, from relations (13) and (10), it results that:

$$V_{\kappa} = c \frac{t_{m}}{t_{m}'} = 3.10^{8} \text{m/sec} - 1000000180$$
 or

$$V_{K} = 3,00000054 \text{ m/sec}$$
 (14)

Consequently, on the basis of relation (14), it has been experimentally demonstrated that velocity V_{κ} of the electromagnetic waves relative to automobile A, which nears transmitter T at a velocity v, is greater than the speed of light $c = 3.10^8$ m/sec, i.e. $V_{\kappa} = c + v$.

Verification. Relations (14) and (9) yield:

$$V_{K} = c + \upsilon$$
 or $v = V_{K} - c = 300000054 \text{ m/sec} - 3.10^{8} \text{ m/sec}$ or $v = 194.4 \text{ km/h}$ (15)

That is to say, according to relation (15) and on the basis of measurements made during the performance of the experiment (Table II), it resulted that automobile A moves towards transmitter T at a velocity υ = 194,4 km/h, whereas in reality automobile A moves at a velocity υ = 120 km/h.

In other words, there is an error ϵ = 62%, in the real velocity υ = 120 km/h of automobile A.

In principle, this error ε =62%, is deemed satisfactory.

I hope that the performance of the above experiment will be repeated with the use of state-of-the-art technological means, and therefore this error ϵ = 62%, will be considerably reduced.

Overall, from the performance of the experiment the following important conclusion is drawn:

CONCLUSION

The velocity V_K of electromagnetic waves relative to automobile A, which nears transmitter T at a velocity v, is greater than the speed of light $c = 3.10^8$ m/sec, i.e. $V_K = c + v$.

<u>Note</u>: If automobile A moves away from transmitter T at a velocity v, then the velocity V_{κ} will be less than the speed of light $c = 3.10^8$ m/sec, i.e. $V_{\kappa} = c - v$.

This fact signifies that the second postulate of the Theory of Relativity is not valid. That is to say, the speed c of light is not constant for all inertial frames of reference.

Consequently, based on the results of the experiment, it should be accepted that the Theory of Relativity is utterly false and that ether exists in nature.

Finally, it should be stressed that, the experiment's positive result which was obtained together with the negative outcome of the well-known Michelson-Morley experiment leads us to the conclusion that ether exists in nature and that the Earth (together with all other celestial bodies) is surrounded by an etherosphere (such as, for example, the air's atmosphere which surrounds the Earth).

COMMENT: The above experiment can be carried out in two different ways that are described below:

- a) Instead of an automobile, an aircraft A of high velocity $\boldsymbol{\upsilon}$ can be used, Pict.
 - 1. The time duration of all couples of pulses emitted by transmitter T, fig. 2 should be constant. e.g:

$$t'_0 = t''_0 = t'''_0 = \dots = t_0^{(300)} = 1sec$$

This can be attained by means of a pulse generator connected to transmitter T. The time between successive couples of pulses should be, for example, 3 sec.

b) Instead of an automobile, an aircraft A of high velocity υ can be used, Pict. 1. together with one only couple of pulses, e.g. the $(P_1-P_2)_1$, fig. 2. The time duration of this couple of pulses should be much greater, e.g. $t_0' = 180$ sec.



Pict. 1

3. Technological means used in the experiment

During the performance of the above experiment the following equipment was used:

- A VHF transmitter (50 W)
- A VHF antenna
- Two VHF receivers (5 W)
- Two video cameras
- Two inverters for ~ 220 V.
- Three car batteries (12 V)
- An automobile

The pulses emitted by transmitter T had a frequency v = 144 MHz.

CONCLUSION

Through the performance of Experiment II described above, it has been

demonstrated that the Theory of Relativity is false.

To resolve any doubts, one can repeat this experiment step by step. The cost

involved is relatively low (\$5.000 approximately).

I truly lament the fact that several universities, research centers,

scientists, etc, have not comprehended (or refuse to do so) the

paramount significance of the (3) experiments elaborated on

www.tsolkas.gr.

I believe that scientific experts will soon understand the importance of these

(3) experiments and that they will proceed with their performance by

employing the most modern technological means available today.

I am sure that these experiments, once carried out, will radically change the

history of Physics.

Finally, I would like to point out once more to the visitors of this site the

following:

Dear friends,

The Theory of Relativity is a scientific fallacy which has led Physics

astray.

THE THEORY OF RELATIVITY IS WRONG!

Why are scientific experts reluctant to conduct these (3) experiments?

Christos A. Tsolkas

October 2002.

P.S. Should readers have a different opinion, objections, or comments to make in relation to what has been stated above, they are welcome to publish their views on the Internet.

Thank you.

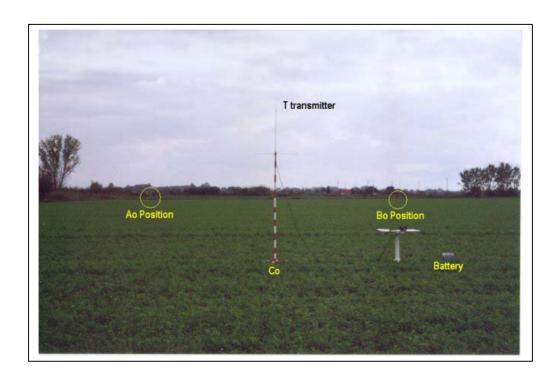
PICTURES

ZOOM:Position A o ,pict.2

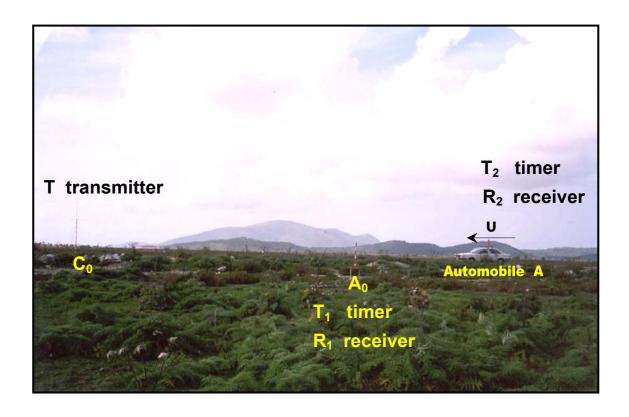


ZOOM:Position B o ,pict.2

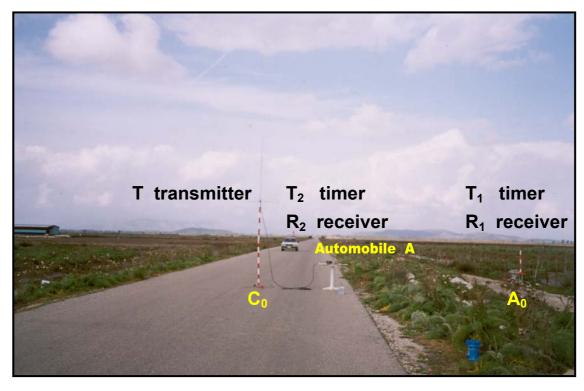




Pict.2 Checking the timers (fig. 1)



Pict.3(a) Carrying out the experiment (fig.2)



Pict.3(b) Carrying out the experiment (fig.2)



Pict.4 Timers T_1 and T_2