THE MOVING ELECTRIC CHARGE EXPERIMENT

ABSTRACT

The moving electric charge experiment, which is elaborated below, is a very important experiment of Physics.
This experiment proves in a very simple way that the axiomatic foundation of the Special Theory of Relativity is false.
More specifically, this experiment will demonstrate that the second postulate of the Special Theory of Relativity –namely that "the laws of physics are the same in all inertial frames of reference (equivalence of inertial frames of reference)"-- is utterly erroneous.

Finally, the moving electric charge experiment is a simple, low-cost experiment that can de easily performed by university students, universities, institutes, etc.

Note: The moving electric charge experiment is in essence Experiment 15 described on www.tsolkas.gr.

THE EXPERIMENT

1. Equipment

To perform the moving electric charge experiment, we will need an electrostatic device, in this case a Wimshurst machine (photo 1).

Photo 1

We place electrodes A and B of the Wimshurst machine at a distance r = 4 cm from one another (Photo. 2).

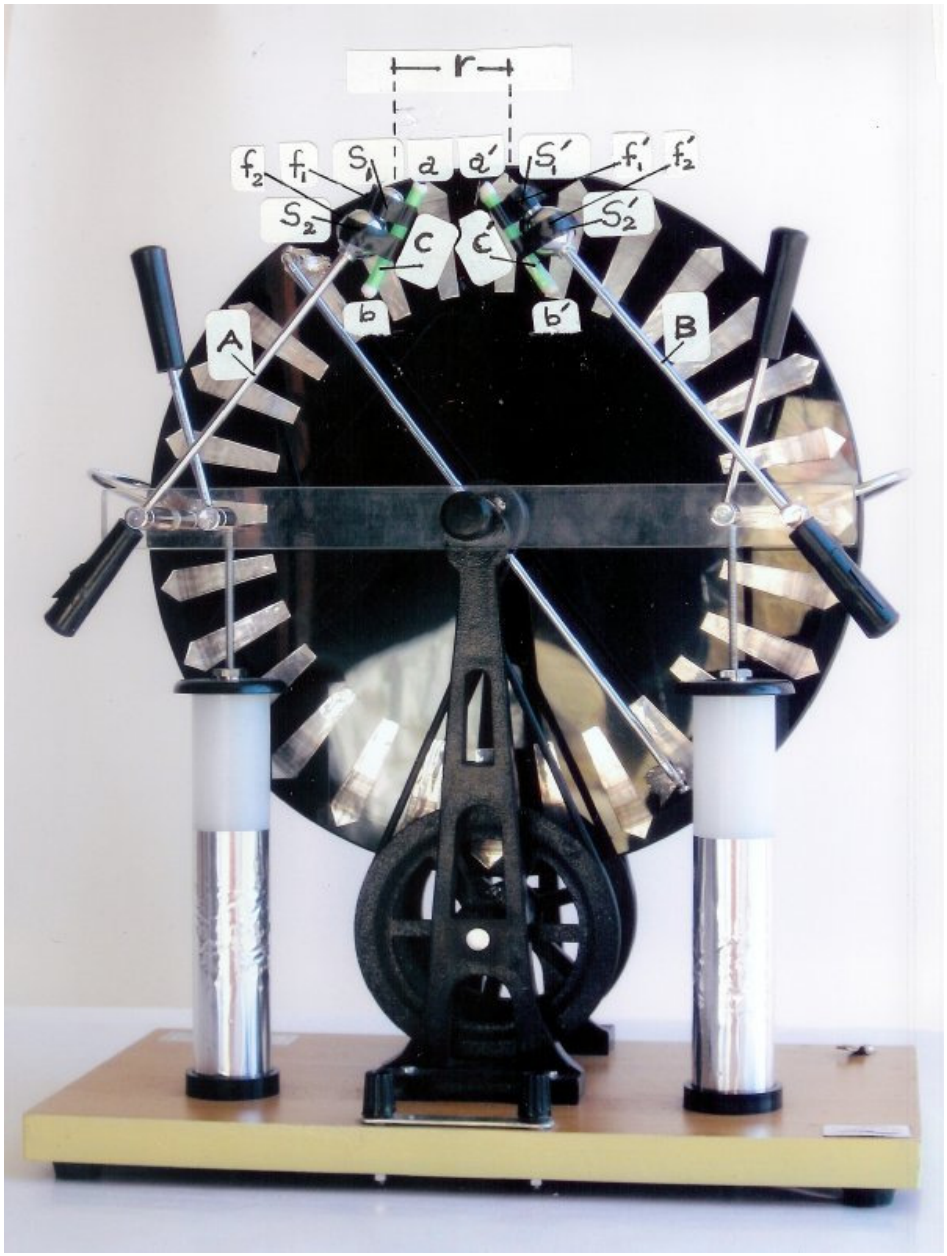

Photo 2

In a plastic tube C of diameter d = 0,5 cm (e.g. a drinking straw), we insert 15 – 20 steel sewing needles of length l = 3,4 cm (the needle brand used in this experiment is shown in photo 3).

Photo 3

Note: Plastic tube C is filled with needles until it becomes solid and unable to hold any more needles.
We now seal the two ends of plastic tube C with two paper caps a and b.
Then we bring plastic tube C into contact with the two spheres S_1 and S_2 of electrode A, and we fixedly secure plastic tube C using two pieces of adhesive (insulating) tape f_1 and f_2.
Plastic tube C and electrode A are on the same level, which is parallel to the discs of the Wimshurst machine.
We repeat the exact same steps for electrode B and plastic tube C΄ which is filled with an equal number of needles. That is, plastic tubes C and C΄contain an approximately equal amount of needles.
Note: Once plastic tubes C και C΄ (filled with needles) are found in position r = 4 cm and the Wimshurst machine is running, care must be taken so that no electric spark is generated between spheres S_1 και $S΄_1$ of electrodes A and B.

2. Checking and selecting needles

Before conducting the experiment, the needles which are to be used for filling up plastic tubes C and C΄ must be demagnetized either totally or to a very large degree. The latter can be achieved by two methods:

Method 1: This method consists in using a demagnetization device. Needles are demagnetized before being inserted in plastic tubes C and C′.
Method 2: This method consists in selecting the needles which are to be placed in plastic tubes C and C′ as follows:
We take a vial of iron filings (Photo 4).

Photo 4

We sift the iron filings (two or three times) using a ≈0,5mm-hole sieve (Photo 5).

Photo 5

In this way the iron filings are finely sieved into an "iron powder". With the "iron powder" we form a heap P of height h = 1 cm (Fig. 1).
Note: In Fig.1 the red dots represent the "iron powder".

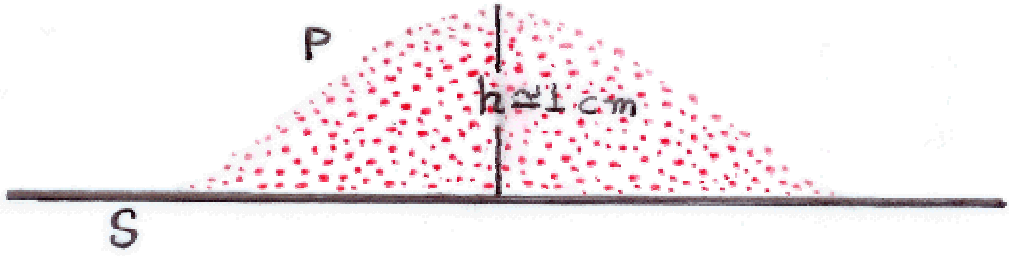

Fig. 1

In order to select the needles with which plastic tubes C and C′ are to be filled, we proceed as follows:
We hold each needle β by its non-pointed end (the eye), and fully insert it into heap P, moving it slowly and parallel to surface S of the table, where the "iron powder" is found (Fig. 2).

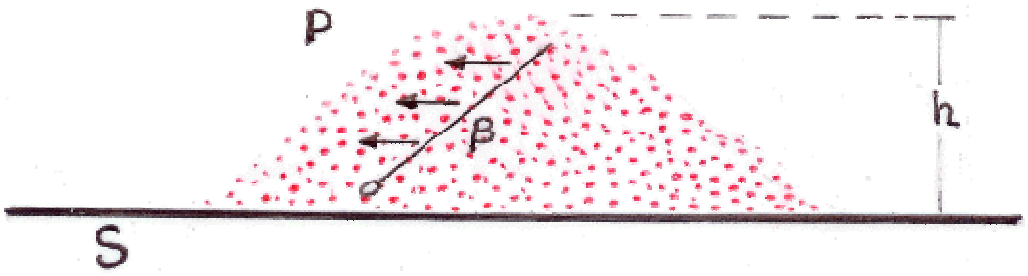

Fig. 2

Once the needle is taken out of heap P, then (with a magnifying lens) we can observe on its surface the presence of a few iron filings or none at all.
Selection criterion: The needles to be selected (by the above method) for filling plastic tubes C and C′ are those having: a) "**very few (e.g. 0-10) iron filings** attached to their upper part and b) **no iron filings at all hanging** from their lower part (Fig. 3).

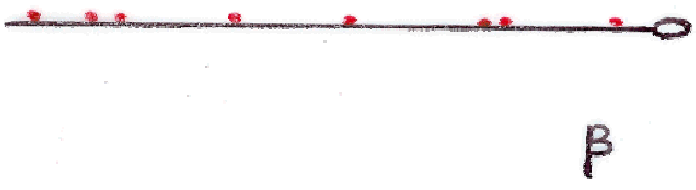

Fig. 3

So, the needles which will be used for filling up plastic tubes C and C´are those meeting cases (a) and (b) of the above "selection criterion".
Note: For the moving electric charge experiment, the selection of needles was carried out according to Method 2.

PERFORMING THE EXPERIMENT

The moving electric charge experiment is performed in two phases as follows:
PHASE I: We place the Wimshurst machine (Photo 2) together with plastic tubes C and C´ (filled with the demagnetized needles) inside an automobile which is at rest (v = 0) relative to the Earth. Apparently, in Phase I, the Wimshurst machine can also be steadily placed on top of a laboratory table.
Then we proceed as follows:

a) We activate the Wimshurst machine for a time t_1 = 6 min, ensuring that electrodes A and B do not come into contact with capacitators C_1 and C_2 of the machine. In this case, bars A_0 and B_0 are "lifted up" (Photo 6).

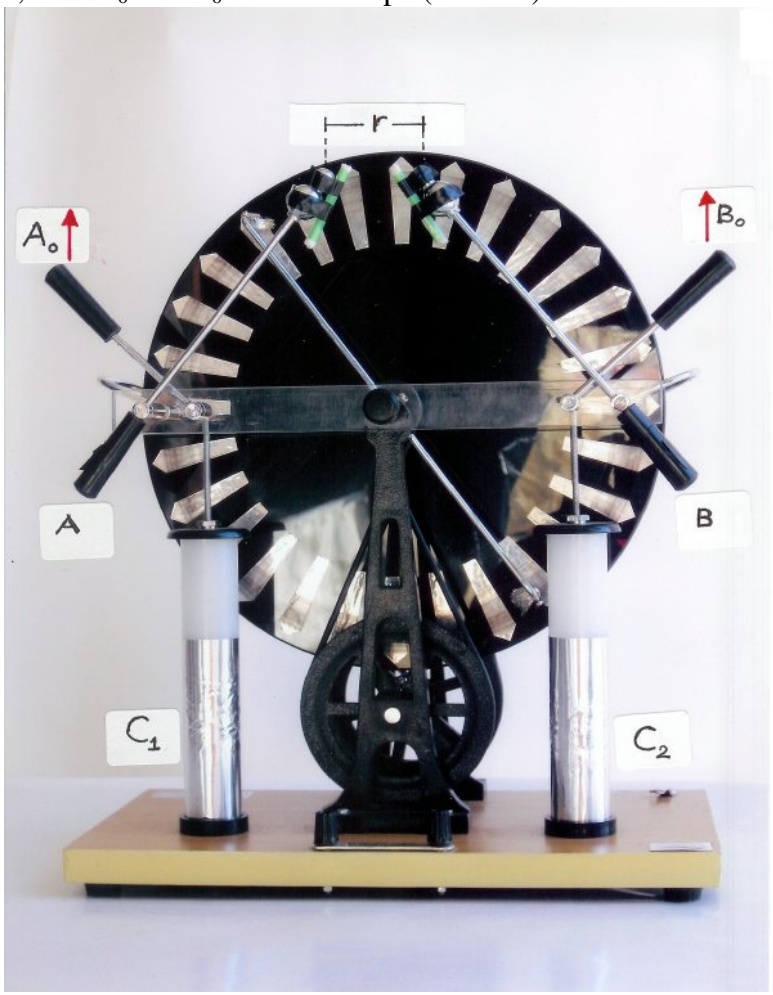

Photo 6

b) Then, for a time t_2 = 4 min we bring electrodes A and B into contact with capacitators C_1 and C_2 of the machine.
In this case, bars A_0 and B_0 are "lowered" (Photo 7).

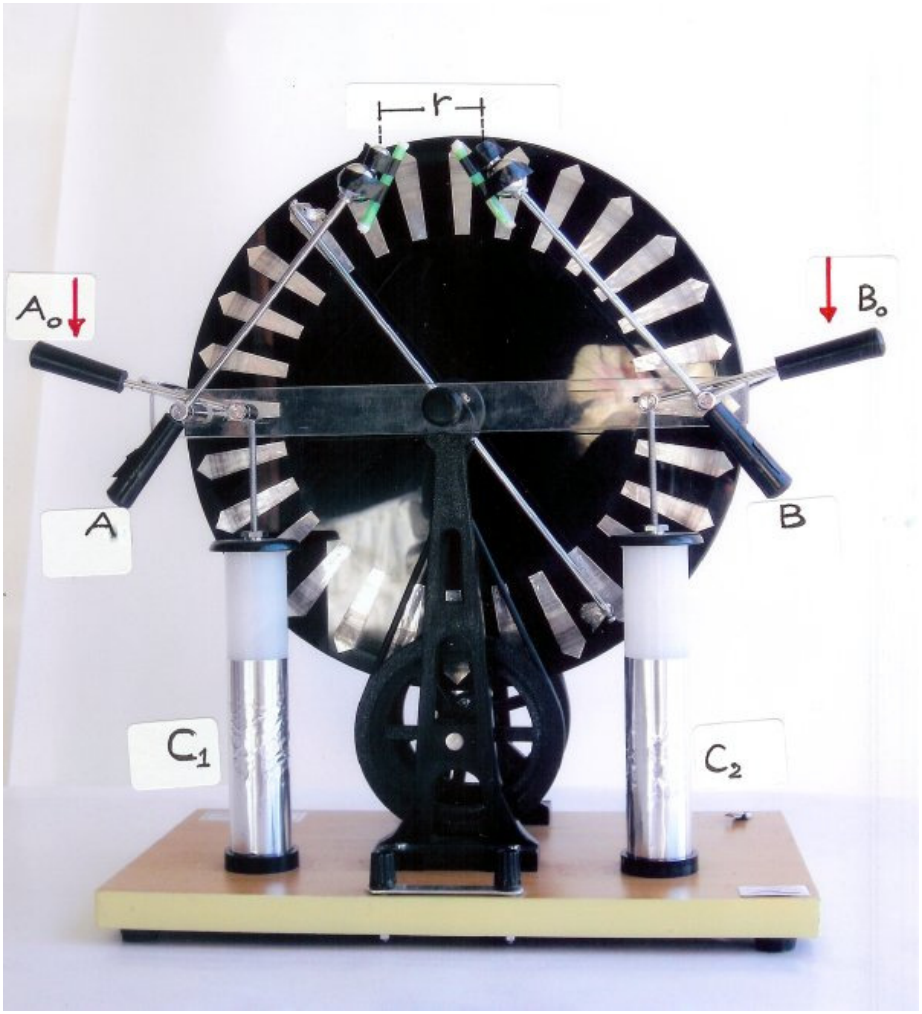

Photo 7

At this point, Phase I of the experiment is completed.
The next step is to remove the demagnetized needles from plastic tubes C and C′ and verify whether they have been magnetized or not by using method 2 (Fig. 2) described above.

Conclusion

During Phase I of the experiment, the needles **were not magnetized** but retained their initial demagnetized state as when placed in plastic tubes C and C′.

PHASE II: In this phase of the experiment, we place the Wimshurst machine (together with plastic tubes C and C′ containing the demagnetized needles) inside an automobile moving at a velocity v = 160 km/h relative to the Earth.
Then we repeat Phase I in the moving automobile. That is, we repeat steps (a) and (b) of Phase I.

Note: In Phase II of the experiment, the discs of the Wimshurst machine are vertical to the direction of the automobile's motion.
At this point, Phase II of the experiment is completed.
The next step is to remove the demagnetized needles from plastic tubes C and C´ and verify whether they have been magnetized or not by using method 2 (Fig. 2) described above.

Conclusion

From Phase II of the experiment it resulted that the needles **were magnetized**.
More specifically, by employing method 2 of Fig. 2 referred to above, **a large number of needles were magnetized by attracting a large amount of iron filings**, as shown in Fig. 4.

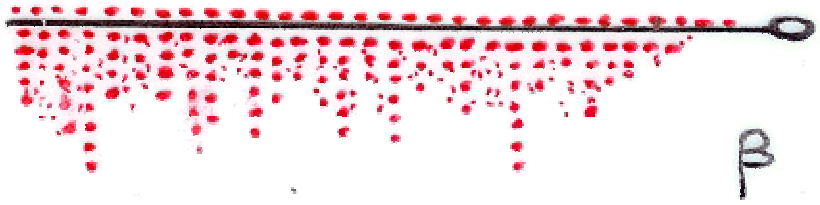

Fig. 4

Recapitulation

After everything analyzed above, it can be observed that when performing the moving electric charge experiment, the demagnetized needles contained in plastic tubes C and C´ retain their non-magnetic state in Phase I, while in Phase II they are magnetized at all times!!!, both for an observer (O) in a moving automobile and an inertial observer **(O')** found outside of the moving vehicle.
Conversely, Einstein (according to the second postulate of the axiomatic foundation of the Special Theory of Relativity) holds that in Phase II the needles are magnetized only in the case of inertial observer (O') found outside of the moving automobile, and never in the case of observer (O) sitting in the same vehicle! Apparently, this is Einstein's major error!!!

Results of the experiment

In Phase I of the moving electric charge experiment the needles remain always demagnetized (Photo 8).

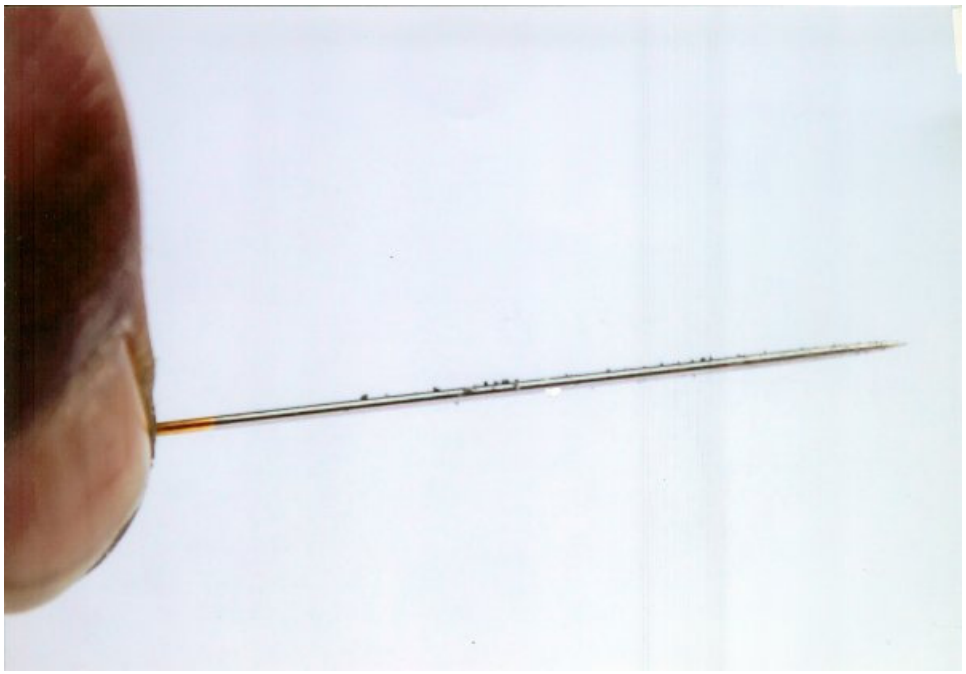

Photo 8

On the contrary, in Phase II they are always magnetized!!! (Photo 9).

Photo 9

CONCLUSION

Based on the results of Phase I and II of the moving electric charge experiment, it is proven that the axiomatic foundation of the Special Theory of Relativity is false.

In a nutshell: **"The laws of physics are not the same in all inertial frames of reference as Einstein wrongly asserts"**.

In conclusion, the results of the above experiment unquestionably demonstrate the following:

1. The Theory of Relativity is a totally false theory of Physics.
2. Ether (i.e. "the dark matter") exists in the universe (more analytical information on www.tsolkas.gr), and
3. Contemporary physics is on a large measure a fallacy, not reflecting physical reality.
   For this reason, physics, as we know it today, needs to be reviewed and rebuilt on new foundations, according to the axiomatic foundation and the laws of the Electrogravitational Theory –the latter is discussed on www.tsolkas.gr.

NOTE: The moving electric charge experiment (Phase II) was conducted five times on the bypass of the Agrinio National Road (from the Kouvara site to the Kefalovryso Aetolikou site), with an automobile running at a velocity $v = 160$ Km/h.

The same result was obtained five times: the demagnetized needles contained in plastic tubes C and C΄ (in Phase II) are always magnetized!!!

Apparently, if the moving electric charge experiment is conducted with the use of an electrostatic generator (Wimshurst, Van de Graff, etc) of higher power and at greater speeds, for instance, if Phase II is carried out on an aeroplane, satellite, spaceship, etc, we will probably obtain greater quantitative results.

Note: Earlier on, I considered necessary to describe in detail the materials needed and the steps to be followed for the performance of the moving electric charge experiment, as guidance to anyone interested in conducting this very simple yet important Physics experiment.

QUESTION

Following everything discussed above, a simple question comes up:

Question: Why do Universities, etc, refuse to carry out this simple, low-cost experiment (estimated at $300), so that physics professors can finally establish that the Theory of Relativity is indeed an absolutely false theory?

EPILOGUE

The results of the moving electric charge experiment show in the most categorical and unquestioning way that the Theory of Relativity is an utterly erroneous theory of Physics.

The Theory of Relativity is nothing more but a fallacy, and in no case does it represent physical reality.

Therefore, this is why the Theory of Relativity must cease **"here and now"** to be taught in Universities, etc, for the simple fact that it is the greatest ever scientific fallacy in the history of Physics. In conclusion, I would like to emphasize that **the results of the moving electric charge experiment mark the definite end of the Theory of Relativity.**

Acknowledgements: I would like to thank my brother Photis Tsolkas for his valuable help in the performance of this experiment.

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Agrinio, January 17, 2010