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# Dynamical and Biological Properties of the Electrical Field about the Shroud of Turin Replica

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**Abstract**— Experimental research on the detection and analysis of the biological and electric activity related to the Shroud of Turin replica is described. It was discovered that the placing of objects with textual and image information leads to the appearance of the probable interferential wave patterns between the Shroud and the objects. Some basic experimental results and the ideas related to the phenomena are presented.

**Keywords**—*Shroud of Turin replica; electrical field; wave patterns; influence upon seeds germination*

## I. INTRODUCTION

Lots of experiments have been carried out and many interesting hypotheses have been examined all over the world in order to explain the body image of the Shroud of Turin. But none of them can completely explain the mysterious image [1]. This critical compendium considers the most important of the hypotheses and concludes that certain types of radiation could be responsible for the formation of the image. It was confirmed by recent experiments with ultraviolet laser light [2]. The researchers achieved a superficial, Shroud-like coloration in a narrow range of irradiation parameters, a result never so far obtained with chemical contact methods (dyes, chemical paste, powder, acids, vapours, etc.) and approached only by the corona discharge technique when the ionized air emits visible and ultraviolet radiation. But the obtained results still do not make it possible to formulate a certain and practicable hypothesis on how the Shroud image was formed.

In such a situation one must suppose that not leaving the generally used methods it is necessary to try explaining such extremely unusual artifact by using out of the ordinary ideas and methods. We dare to think that our ideas can help to learn new properties of the Shroud and open a new approach for studies.

In other words, such a unique artefact should be studied not only as a regular physical object but also as the artefact having certain extraordinary properties which are conditioned not only the Shroud itself. The methods of study therefore should not be limited to a researcher's typical notions of possible physical characteristics of the Shroud. For instance, in accordance with the generally accepted scientific view there are no known physical fields related to the images of the Shroud. This may be the reason that so far there have been no attempts to measure electromagnetic or other fields related to the Shroud. But from our point of view it is possible to

suppose that there could be present some unknown physical field connecting the Shroud with the subtle world. Another assumption is related to the fact that the contemporary technologies can produce high-quality copies of the Shroud of Turin. It means that there is a copy's remarkable likeness to the original. It is plausible to believe that the good copies possess the main field properties similar to those of the Shroud of Turin. This can be related to the case when a good copy of a miracle-working icon becomes miracle-working itself. It also seems reasonable to suggest that the external measurable effects would be stronger when the Shroud is influenced by the information related to Jesus Christ personality.

From the physical point of view the above mentioned assumptions could be regarded to be closely related to the discovery of non-local interactions that could not be explained in the framework of the laws of classical physics. The non-local interaction phenomenon means that any two things are able to instantaneously communicate with each other regardless of the distance separating them – even if they are many light years apart. This phenomenon is also called “quantum entanglement”. The great physicists Niels Bohr and Albert Einstein clashed over the implications of apparent non-localities in quantum mechanics, but neither imagined the universe could actually be non-local. Yet work by theorist John S. Bell in the 1960s and by the experimenters beginning in the 1980s (Alain Aspect, Marcus Aspelmeyer and others) has conclusively confirmed the non-local quantum nature of the world. It is suggested that information transfer occurs practically instantaneously and there exists a real physical field, which might be responsible for it.

Before we begin the description of the experiments let us introduce a short story of a Shroud of Turin replica, which has been transferred to the Christians of Belarus. Its colours and size fully correspond to the original. The Shroud was conveyed to Minsk, capital of Belarus on May 4, 2002. Since this day it has been kept in the Minsk Roman Catholic Church of Saints Simon and Helena. The main investigations described below were carried out during the years of 2007 – 2009.

## II. INFLUENCE OF THE SHROUD ON BIOLOGICAL OBJECTS

The biological experiment was aimed at determining whether the Shroud affects in this or that way any biological objects placed near it. For similar studies seeds of various

plants are often used. In our case, wheat grains were chosen. The experiment was carried out in August 2007. Eight cups of grains were arranged near the Shroud as shown in Fig. 1, 2. Five cups were placed near the Shroud (no. 1 – 5) at a distance less than one meter, the rest were placed at larger distances in different areas of a room (no. 6 – 8). This experiment and most others were conducted in the church where the Shroud replica is kept. The quantity of grains in each cup and its watering remained the same throughout the experiment. The analysis of the quantity of the sprouted grains and the level of their germination proved significant differences for different cups.

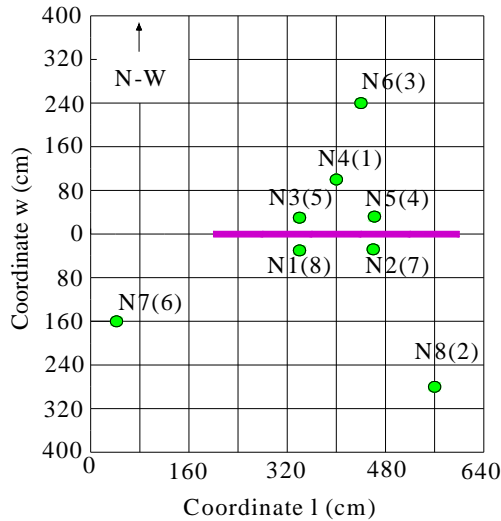


Fig. 1. The position of cups with wheat grains



Fig. 2. Two cups with grains near the Shroud

The most unexpected results were obtained when comparing the sprouted grains in cups 1, 2, 3, and 5 placed at a close distance to the Shroud and those in cup 4. The level of germination and quantity of the shoots appeared to be different in different cups. It seems surprising especially if we take into consideration the fact that the distance between the cups is relatively small, less than a meter. The difference in their germination indicates the presence of an unknown biophysical factor changing itself dramatically within a very short distance. Fig. 3 shows the distribution of the cups in regard to

the quantity of the grains sprouted. The figures in brackets next to the number of the cups (Fig. 1) correspond to the place each of the cups gained according to the quantity of the sprouted grains. As we can see the cups 4, 8, and 6 are characterized by the best germination and the greatest quantity of the shoots. It is possible, that the Shroud may have a positive impact on wheat grains, and perhaps on other biological objects, provided they are placed not very close to the Shroud.

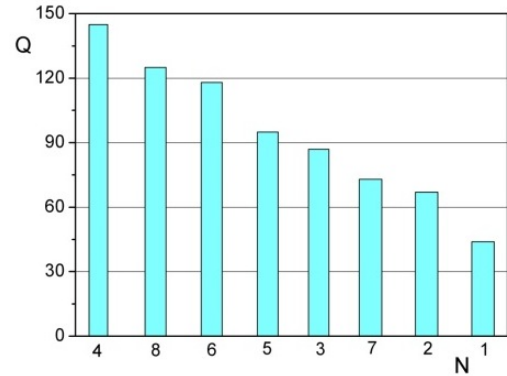


Fig. 3. Quantity of shoots in different cups

It should also be assumed that there is a fairly small space around the Shroud having negative influence on the nearby biological objects.

### III. FIELD PATTERNS AROUND THE SHROUD

The purpose of the experiments described below was to obtain some information about the unknown physical factor and to explain at least to some extent the above results. When choosing an approach that can lead to the relevant information, we proceed from the opinion stated in a number of scientific papers that the certain insufficiently known field really exists and is closely linked to the relatively well-studied electromagnetic field. Moreover, it is argued that the presence in any area of a source of this little-known field leads to a certain electromagnetic activity in same area. This means that at least the presence of the original field can be detected indirectly, by measuring the electromagnetic characteristics of the space near the Shroud. Not dwelling on the unsuccessful attempts, let us describe those experiments that have given important data relating to an electrical activity around the Shroud.

During the experiment a set of the difference in electric potential between any two nearby points (5...10 cm distance) on the imaginary surface surrounding the Shroud was being measured. This surface was formed by a horizontal section made perpendicular to the Shroud and located at its middle level. A special two-channel digital electrometer consisting of the two identical antennas and a receiver was used for the measurements. The antennal unit is connected to the receiver inputs by a flexible electric cable. Photo of the electrometer is shown in Fig 4. The receiver has two identical input channels which convert very small antennal currents to measureable

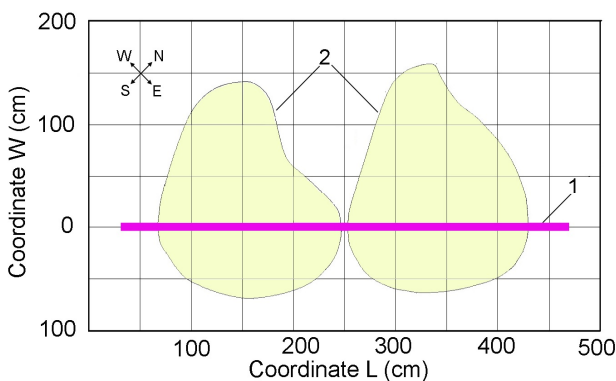
voltages and display its difference. It would be noted that this design feature makes the device tolerant of electrically noisy environments. The received electrical noisy voltages on the both channel outputs are practically identical and their difference is very small. Every antenna is a conducting disc



Fig. 4. Photo of the electrometer

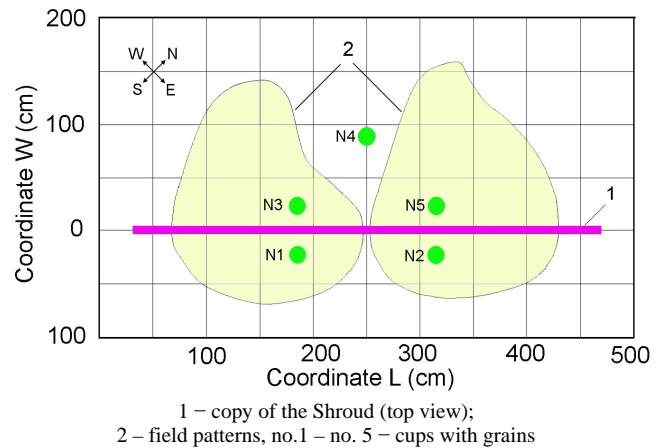
placed during measurement at a predetermined height above floor. The disc will charge and reach a potential which is equal to the potential at that height. Electric potentials are detected using charge integrating sensitive amplifiers having ultra high input impedance. The time of the integration can be controlled in the range 50 msec up to 2 sec. In our case the electrometer acts mostly as an indicator, although it can be calibrated. The receiver attached electronics and batteries, all integrated in a portable shoulder case.

During the measurements the antennal unit was located at the middle level of the Shroud. It means that a constant distance from the antennal unit to the floor was being kept. In the process of scanning of the surface (by means of a slow change of the antennal unit position) a sudden increase of the electric potential difference between some of the nearby points (between centres of the disc antennas) of the horizontal section was discovered. The projections of these unusual places (points) on the floor were being marked by little circles of the cardboard (see photos below). Two closed curves surrounding the Shroud were fitted to the circles (marked number 2 in Fig. 5). They show the projection of the found places (points) around the middle of the Shroud on the floor. The results were obtained in August 2008.



1 - copy of the Shroud (top view); 2 - boundaries of the field patterns  
Fig. 5. Cross section of the field patterns around the Shroud

The curves were usually disposed within the limits of 0.5 – 3.0 m from the Shroud. The form of these areas, which we called the information field patterns (IFP) or field patterns (FP), was changing throughout the day. The position of the IFPs correlates well with the above described data related to the significant differences in the quantity and level of germination of the sprouted grains depending on the location of the cups. Fig. 6 presents the obtained IFPs together with the first five cups. It follows that the cups with worse developed shoots were located inside the FPs.

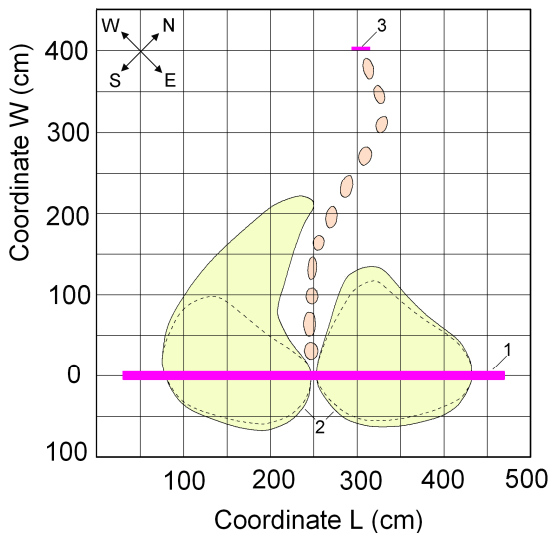


1 - copy of the Shroud (top view); 2 - field patterns, no.1 – no. 5 - cups with grains  
Fig. 6. Cross section of the field patterns surrounding the Shroud

Thus, it is plausible to assume that a certain field, localized within the IFP has an adverse effect on biological objects (at least on wheat grains). In contrast to it, the influence on grains located outside of the FPs is definitely positive. Certainly, further biological experiments aimed at a detailed investigation of the discovered phenomenon should be carried out. The results could help to reveal the properties of the field patterns, emerging around the Shroud.

#### IV. INFLUENCE OF THE TEXTUAL INFORMATION ON THE FIELD PATTERNS OF THE SHROUD

The most unusual results were gained in the experiment described below. On August 12, 2008 (approximately by noon) the FP shown in Fig. 6 by dotted lines was obtained. Then, at a distance of approximately 4 m from the Shroud, at the level of its middle a standard clean sheet of paper was placed. Measurements, carried out approximately 1.5 hours after placing the sheet showed that there were no significant changes in the FP shape. After that, at the same location similar sheet of paper but with the printed text of the Lord's Prayer (in Belarusian) was placed. Two hours later the measurements were repeated. The results are presented in Fig. 7. Photos illustrating this experiment can be seen in Fig. 8. It is easy to see that the structure, shape and size of the formed FPs have changed considerably. The main difference lies in the appearance of a peculiar path consisting of 11 mini patterns (resembling traces), which lead to the text of the Lord's Prayer! Note also that the changes of the left part of the



1 – copy of the Shroud (top view); 2 – cross section of the field patterns boundaries; 3 – sheet of paper with the Lord's Prayer text

Fig. 7. Section of the field patterns surrounding the Shroud after putting a sheet of paper with the Lord's Prayer text (in Belarusian)

IFP related to the front body image of Jesus Christ are also characterized by the protrusion in the direction of the Prayer. These features probably indicate the resonant nature of information interaction that could be interpreted, at least, as

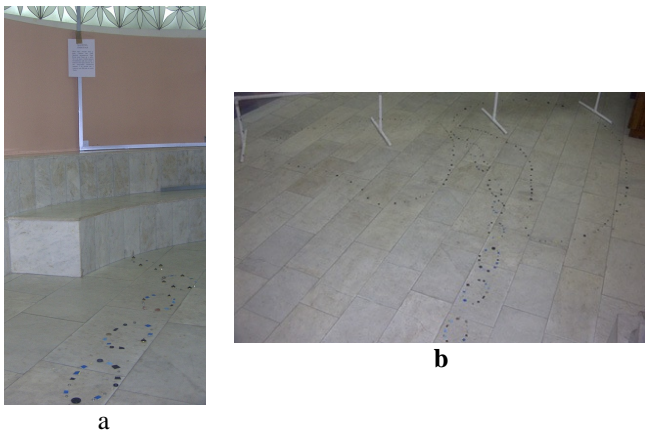


Fig. 8. Section of the field patterns near the Shroud after putting the sheet of paper with the Lord's Prayer text.

confirmation of close connection between Jesus Christ and the Shroud. Therefore we suppose that the "traces" have appeared as a result of the coherent interaction between the information radiation (IR) of the Shroud and the IR from the sheet with meaningful textual information. The reason for the interaction seems to be an external IR related to Jesus Christ, which creates the alike structured "information" waves both from the Shroud and from the Prayer text. Their total interferential interaction probably leads to the peculiar path consisting of the mini wave patterns between the Shroud and the text of the Lord's Prayer. The similar shapes of the interferential patterns are known from the optical electronics. They could be

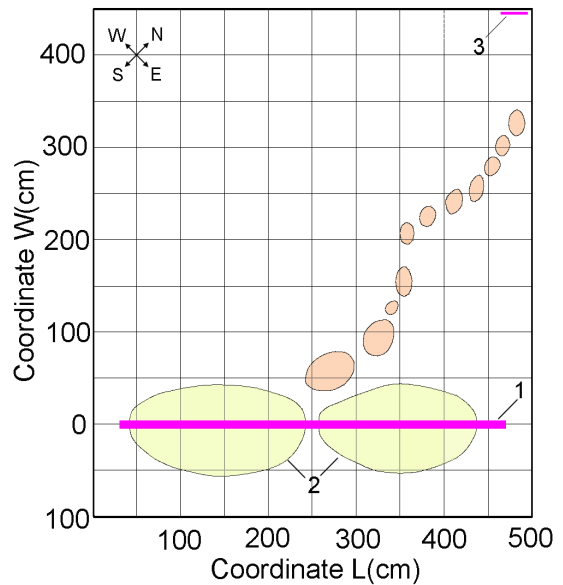
obtained by interaction of the light beams having curvilinear wavefronts [3].

#### V. INFLUENCE OF THE IMAGE INFORMATION ON THE FIELD PATTERNS OF THE SHROUD

After the astonishing results described above, the information linkage of the Shroud with meaningful image information has looked less unexpected. A cross with the figure of crucified Jesus Christ was chosen as a meaningful image. The experiment was carried out on August 25, 2008. The crucifixion was put at a distance of approximately 4.5m from the Shroud. The measurements were carried out approximately three hours later. Fig. 9 shows the measured field patterns. The principal feature of the FP in comparison



a



b

1 – copy of the Shroud (top view);  
2 – cross section of the field patterns boundaries;  
3 – Christ's crucifixion

Fig. 9. Field patterns of the Shroud after putting the crucifixion of Jesus Christ.

with the above experiment is also the emergence of a peculiar chain of mini-patterns leading to the crucifixion. The number of mini-patterns is also 11. The obtained "traces" show the linkage between the Shroud and the crucifixion of Jesus Christ. It should be noted that qualitatively the same but more complex patterns were obtained in August 2009 by using other meaningful information.

## VI. DISCUSSION and CONCLUSIONS

No similar experiments were described in any literature available, so it's difficult to compare the obtained results with any others. When choosing a suitable scientific approach that could lead to the obtained phenomena, we proceed from the opinion stated in a number of scientific papers that a certain insufficiently well-defined field really exists and is closely linked to the relatively well-studied electric, magnetic and electromagnetic (EM) fields. It is often observed that an ordinary electromagnetic field manifests extremely unusual properties that are not supposed to be in its nature [4]. Moreover, it is argued that the presence in any area of a source of this little-known field leads to a certain electric (electromagnetic) activity in the same area. And so, it can be that our results reflect the presence of this kind of field about the Shroud replica. It should be noted that we have already detected the similar patterns when studying the electric field surrounding some flowering plants [5]. We suppose that they have only some formal resemblance with the patterns detected about the Shroud of Turin replica. Nevertheless, it can be assumed that in both cases these patterns reflect the presence of the unstudied phenomena and open new approach for studying them.

It seems that the natural way of answering arising questions is to continue the investigations. It should be noted that the main experiments were repeated during three years and always led to the above described and also new phenomena. We believe that one of the most important results of our study is that a technical possibility to indirectly detect the subtle information interaction has been revealed.

The experimentally obtained complex dynamics of the field patterns influenced by the information related to Jesus

Christ personality confirms the close linkage between Jesus Christ and the Shroud. It should be noted that there is an interesting feature of the space field patterns behaviour. Their presence was observed by measuring during near an hour after the Shroud was taken away. We assume that a further and far more detailed study and explanation of the information interaction could be of great importance to religion and modern science.

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