

Dynamic Environmental Energy Assessment and 4G LTE/5G/WIFI/Bluetooth electromagnetic radiation and effects on the environment with the application of SPIRO® filters

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2021

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Author Commitment

I, José Joaquín Machado, student of the Center for Higher Studies in Natural and Manual Therapies, in the study program of:

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I declare that:

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Title	" Dynamic evaluation of environmental energy and 4G LTE / 5G / WIFI / Bluetooth electromagnetic radiation and improvements with the application of SPIRO filters®"
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Summary	
Program	University Expert in Biophotonics
Keywords	Biophotonics, GDV, EPI, Electromagnetic Radiation, SPIRO, 4G LTE, 5G, WIFI, Bluetooth, Bio-Well, Sputnik.
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Madrid, October 26, 2021



INDEX

1. Preface.....	05
2. Summary.....	07
3. Justification of the Topic chosen	08
4. Introduction.....	11
5. Objectives.....	14
6. Methodology and Sources	15
7. Results.....	16
8. Conclusions.....	20
9. Bibliographic References	23

1. PREFACE

This research work has been carried out by José Joaquín Machado, a student at the Center for Higher Studies in Natural and Manual Therapies, in the Biophotonics study program, under the title of: "Dynamic evaluation of environmental energy and 4G LTE / 5G / WIFI / Bluetooth electromagnetic radiation and improvements with the application of SPIRO filters",[®] with the guidance of tutor Julián Marín.

The author, as a researcher of electromagnetic fields for more than 15 years and a specialist in the environmental monitoring of radiofrequency and microwave electromagnetic radiation, has dedicated himself exhaustively to the study of techniques, instruments and tools that allow him to analyze high-frequency signals and their environmental impact. In this sense, after vast experience in measurements and experimental field tests, he has raised the thesis that electromagnetic pollution, also known as electrosmog, more than a set of environmental interferences, is an alteration of the radiation spins, whose effect leaves a trace in the environment, in the form of a fundamental electromagnetic disturbance.

The author considers the preliminary research of Prof. Korotkov and his scientific team in the field of environmental scanner, by means of the electrophotonic sensor (Sputnik), as a potential tool to observe the alterations of radiation spins caused by high-frequency electrosmog, by performing dynamic studies of environmental energy and the observation of alterations in the environment.

In this sense, the author has decided to carry out this work with the professional purpose of confirming, with alternative methods, the changes in environmental energy caused by electrosmog and the improvements that can be seen in this environmental energy level due to the application of SPIRO[®] filters.

Author's Acknowledgements

To Professor Konstantin Korotkov, for his valuable research and contributions in the field of electrobiophotonics and in the improvement of the gaseous discharge visualization technique or GDV. The contributions of his studies over several decades, following the scientific method, but asking the non-traditional questions and experimental tests, which are often not carried out in the scientific community, bring a renewed vision to science about the possibilities and fields

yet to be explored. Undoubtedly, Prof. Korotkov's GDV device and its sensors and evaluation tools are of appreciable value for the author's future research.

To Professors Christian Bordes, Dmitry Orlov and Vladimir Voeikov for the classes and teachings given in the training of university experts. Their experiences and knowledge have enriched the understanding of the subject matter in question.

To the tutor Julián Marín, for his knowledge and very valuable guidance at the time of the elaboration of this research work and his understanding of the GDV tool for the application of the necessary techniques for its development.

2. SUMMARY

Background:

Electrosmog could induce changes in the level of environmental activity.

Objective:

Perform a temporal dynamic evaluation with the GDV device and the Sputnik electrophonic sensor for the comparative analysis of the ambient basal energy and the present levels of electrosmog from 4G LTE/5G/WIFI/Bluetooth high-frequency sources, observing the changes that occur after the implementation of the SPIRO filters®.

Methodology:

Type of Study: DYNAMIC – COMPARATIVE TEST.

Elements of the Study:

SPIRO® Disc Filters

SPUTNIK Electrophotonic Sensor

GDV Device

Result:

Reduction of the Environmental Activity Level, as well as notable improvements in the parameters evaluated by the electrophotonic sensor.

Conclusions:

The method of temporal dynamic evaluation of the energy of the environment with the GDV device and the Sputnik electrophotonic sensor is an effective tool to test the environmental changes produced by SPIRO filters®. The dynamics of environmental energy do not suggest a relationship with the level of electrosmog present in the area, however the value known as: Level of Environmental Activity was reduced when controlling for electrosmog pollution (4G LTE, 5G, Bluetooth and WIFI).

Keywords:

Sputnik / Bio-Well / Biophotonics / Electrophotonics / Electrosmog / SPIRO

3. JUSTIFICATION OF THE CHOSEN TOPIC

The present research study focuses on two parts: the first part consists of carrying out an environmental scan with the GDV device and the Sputnik electrophonic sensor, for the analysis and dynamic monitoring of environmental energy and the determination of whether there is any relationship with the electromagnetic radiation of electrosmog; and the second part of the study focuses on the comparative analysis of environmental energy once the SPIRO® filters have been implemented in the evaluated environment.

Regarding the first part of the study, the author has reviewed the available scientific literature around the environmental scanner with the GDV device and the electrophotonic sensor on the www.sputnik.bio-well.com portal; reviewing more than 35 publications in conjunction with the studies conducted by Prof. Korotkov. No studies have been found to relate electromagnetic emissions from electrosmog and the basal energy of the environment.

This type of electromagnetic radiation, known as electrosmog or electropollution, is found in the electromagnetic spectrum of frequencies of NRIs (Non-Ionizing Radiation) and, for this reason, is not capable of ionizing the medium through which it passes. This has caused them to be considered in science as negligible radiation in terms of environmental impact. So far, it is unknown if there is any electromagnetic signature or trace that can be related in electrophotonic environmental scanning and electrosmog.

Currently, the investigation and detection of electrosmog is carried out through the use of specialized instruments, such as frequency meters, gaussimeters, independent field meters of electric and magnetic field, RFI (Radio Frequency Interference) and EMI (Electromagnetic Interference) meters. However, these systems fail to detect environmental energy disturbances in the assessed space.

For the second part of the study, the objective is focused on the application of SPIRO filters®. SPIRO® filters have previously shown a positive modification of electromagnetically contaminated environments through technical telecommunications studies, such as the OTA (*Over-The-Air*) test, analyzing the propagation pattern of radiation emitted by telecommunications devices and evidencing an optimization of that propagation. They have also shown a mitigation of interference in terms of reducing peaks and abnormal concentrations; as well as providing greater stability and uniformity to the propagation of these signals. Since SPIRO® filters are organizers of radiation spins, the present research work seeks to observe the changes that can be seen in environmental energy through their application.

In this way, it will be possible to relate the basal state of environmental energy to the level of electromagnetic pollution present in a given space and the modification of such environmental energy after the neutralization of said pollution, by means of the sufficient application of SPIRO® filters, proportional to the levels of artificial electromagnetic exposure.

Currently, the implementation of hyper-connected systems in urban areas through public WiFi networks, Bluetooth and 5G especially, has implied an increase in electrosmog emissions in a significant way. In the next decade, an increase of at least 100 times is expected to the current levels of artificial electromagnetic emission.

Understanding electromagnetic pollution as an imbalance and disorder of electromagnetic charges, produced by all electrical appliances and telecommunications signals, the hyperconnectivity brought about by the massive implementation of WiFi, Bluetooth and now 5G networks, projects a future panorama of a massive environmental electromagnetic disturbance with important and severe implications in the natural ecosystem.

The applications of the GDV technique with environmental sensors such as Sputnik make it possible to evaluate the electromagnetically contaminated medium from a fundamental level. And it can be constituted in the future as an additional instrument in large-scale environmental assessments in urban areas where the industrial implementation of the SPIRO® system will be required. For this reason, GDVs are considered as a technique that can provide an approach to science to evaluate subtle changes in electromagnetic disturbance, and this would open the dialogue of implementing new methods of determination to know whether or not a place is under an electromagnetic environmental charge.

Environmental measurements using the technique used in this research study are subject to the detection of environmental changes not related to electrosmog, such as geopathies, thunderstorms, the influence of people's own emissions on the evaluated environment, among others. In this sense, the uncertainty factor is high and variable; however, a correct monitoring of electrosmog emitting sources and field strengths could be related to environmental energy if appreciable changes in the environment are observed when the SPIRO® filters are introduced.

In materials analysis, SPIRO® filters have a highly organized nanomagnetism of low entropy, so their implementation in any medium must be able to be captured by the GDV system. If such a

change in the environment is proven, it could be tested in turn if there is a relationship in the change in environmental energy depending on the previous basal level and depending on the levels of electrosmog present; or if, on the contrary, the changes in the environment are independent of the level of electrosmog found in the evaluated space.

5G works with tubular links, which bring a difficulty in detection through traditional high-frequency radiation monitoring instruments. This difficulty does not refer exclusively to the change of frequencies in which this new generation of telecommunications operates, but to the way in which they operate per se. The day 5G networks operate without previous generation support (4G LTE), it will result in an apparent drop in background levels of microwave radiation, and it will be very necessary to explore new ways to capture environmental energy disturbances. The GDV technique holds great promise for the resolution of this future issue.

4. INTRODUCTION

4.1 Environmental Energy Scanning

Environmental energy measurements using the GDV device are carried out by using an electrophotonic sensor (Sputnik antenna), which measures the energy of the environment in a

given area by means of the propagation of short pulses of standing electromagnetic waves in space.

Prof. Korotkov (2021) refers to Sputnik (ambient electrophotonic sensor) as "*The same process that occurs at sea when Tsunami waves propagate: they move in the sea almost without fading and only show up when they meet the shore. In this case, the same thing happens. When it reaches an obstacle, the electromagnetic wave is partially reflected and partially absorbed, depending on the properties of the substance and, above all, its conductivity. An obstacle can be both the wall of the room and the human body. Based on this, the recorded signal changes.*"

The GDV technique with the electrophotonic environmental sensor allows the scanning of the environment by recording the temporal dynamics of the ambient energy. This makes it possible to identify calm areas in a given place or areas with high disturbance, as well as to identify atmospheric changes, cosmic changes in lunar and solar phases, and geoactive zones (especially those areas of geoactive stress).

In the present study, the environmental scan will be analyzed in comparison with the collected values of the electrosmog levels present in the evaluated area and the changes observable at the time of implementing the SPIRO® filter.

4.2 Electromagnetic Radiation from Electrosmog

First of all, it should be noted that Electromagnetic Radiation is not synonymous with Electrosmog or something negative or harmful. Electromagnetic fields are part of the natural processes of the evolution of the universe, and, in itself, the human being could be defined as a set of electromagnetic fields. The fundamental composition of all matter and everything is made up of the same vibrating particles called electrons and photons, which are the protagonists of the electromagnetic phenomenon.

Electropollution or electrosmog is an imbalance and disorder of electromagnetic charges produced by all electrical appliances and telecommunications signals. Its origin is born with the use of electricity, producing electric and magnetic fields with behaviors considered "artificial" around everything that uses some type of current, whether AC (Alternating Current) or DC (Direct Current), and grows exponentially with the development of telecommunications and wireless and intelligent technologies.

The action of encoding a message and transporting it by means of an electromagnetic wave modifies the natural spin of the fundamental particles, due to the polarization that the electromagnetic wave takes. In other words, repeated observations define this phenomenon of artificial polarization as the origin of the electromagnetic problem of telecommunications, which we call Electrosmog. Electrosmog is also present in the electrical transmission network of alternating current and in the accumulation of harmonics and transients that flow in the electrical wiring in the form of noise in the line. Electrosmog is also composed of the low-frequency electrostatic and magnetostatic discharges associated with electrical appliances and polarized magnetic flux.

Electrosmog can be divided and classified in many ways, the most practical and useful for scientific studies being the following:

- 1. Low-Frequency Electropollution:** Includes electromagnetic waves and fields with low frequency oscillations; that is, between 0 Hz and 400 KHz.
- 2. High Frequency Electropollution:** Comprises electromagnetic waves carrying data and information with higher frequency oscillations, ranging from 1 MHz to 300 GHz.

Televisions, radio transmitters, computers, laptops, electronic tablets, game consoles, cordless phones, cell phones, household appliances, power lines, and many other accessories of modern life, create these electromagnetic fields and waves that are harmful to health.

4.3 SPIRO® filters

SPIRO® filters are composed of the so-called SPIRO® material (*Spin Radiation Organizer*) which, in simple terms, consists of films that are made up of nanoparticles with magnetic moments that, together, present stable natural domains. These properties of applied nanomagnetism promote natural polarization responses in the fundamental particles with which it interacts, reducing the level of entropy that these non-ionizing radiations from artificial sources carry in the form of electromagnetic disturbances; thus resulting in an SOI (*Spin-Orbit Interaction*) and coherent domains of low entropy and strong stability in their domain walls (Bloch Walls). This makes the emissions compatible with the body's bioelectrical system, facilitating a healthy electromagnetic climate at the cellular level.

This phenomenon described consists of allowing the fundamental particles, which bring an artificial polarization, to take their natural magnetic moment and form domains that follow the natural order similar to the natural magnetic order that the SPIRO® system exhibits. Consequently, SPIRO® operates as a passive filter for these particles, a guide for them to take their own natural order and, in this way, reduce the chaos produced by the disturbing effect and electromagnetic pollution.

In other words, the effect of SPIRO® is not to block the passage of the waves, but to filter the disturbances by reducing the level of entropy of the system without affecting the destination and trajectory of the radiation. In fact, it has been proven that the effect of the SPIRO® material on microwave waves can be observed in an improvement of the radiation propagation pattern.

The range of action of SPIRO® filters is variable in terms of the reach radius of each product, and varies according to the amount of films contained in each product. SPIRO® films, as a nano-composite material, have a residual effect of magnetic dominance that extends several centimeters or meters depending on the amount of films contained in the product. It is important to note that the number of films not only gives a greater extension of range, but also a greater magnetic force on their domain walls, capable of filtering higher levels of electromagnetic pollution.

The number of SPIRO® filmine incorporated into a product is determined by the type of emission that the product is intended to filter, whether it is extreme low-frequency near-field contamination from alternating current, near-field emissions from direct current electronic devices, far-field radio frequency or microwave emissions, or a set of all of these. This calculation is what we call SPIRO® Filtering Power.

5. OBJECTIVES

5.1 General Objective:

Perform a temporal dynamic evaluation with the GDV device and the Sputnik electrophotonic sensor for the comparative analysis of the ambient basal energy and the present levels of electrosmog from 4G LTE/5G/WIFI/Bluetooth high-frequency sources, observing the changes that occur after the implementation of the SPIRO filters®.

5.2 Specific Objectives:

- 5.2.1 To observe if there is any observable comparative change after the implementation of the SPIRO filters in the evaluated space, specifically in the particular parameter developed by Dimitri Orlov and known as: "Environmental Activity Level".
- 5.2.2 Observe if there are appreciable changes in the parameters: Area, Intensity, Energy, Deviation, Entropy after the implementation of the SPIRO filters®.
- 5.2.3 To observe the variations in energy in the environment in relation to the electromagnetic impulses of near- and far-field electrosmog, through the monitoring and spectral analysis of signals, as well as the switching on of WIFI, Bluetooth and 4G LTE and 5G mobile phone signals in the evaluated space. And in this way determine if there is any relationship between electrosmog and dynamic variations of energy in the environment.

6 METHODOLOGY AND SOURCES

Sources:

KOROTKOV, K. (2014). *Energy Fields Electrophotonic Analysis in Humans and Nature*. ISBN 97814992216264

VOEIKOV, V. & KOROTKOV, K. (2017). *The Emerging Science of Water*. ISBN 9781973736820

KOROTKOV, K. (2021). *Health at the tips of the fingers*. ISBN 9798464107618

KOROTKOV, K. (2018). *The Energy of Health*. ISBN 9781726049870

Techniques used:

A public space in a residential area was chosen, where the GDV device and the SPUTNIK Electrophotonic Sensor were placed, and two consecutive measurements of 50 min each were made, introducing the SPIRO® Disco filter. The environment was evaluated during the studies in spectral analysis of microwave frequencies 4G LTE, 5G, Bluetooth and WIFI.

Instruments:

SPUTNIK Electrophotonic Sensor

GDV Device

SPIRO® Disc Filter

Laptop MacBook Pro

Envionic Model Field Analyzer Meter FA845 (300 MHz – 6 GHz)

RF Detector Safe and Sound Pro (650 MHz – 10 GHz)

APPs: Speed Test, RFBenckMark, Internet Speed

7 RESULTS

The evaluation process was carried out in a public area of residential apartments, a quiet and calm area of the place with little influx of people was chosen.

The Sputnik electrophotonic sensor was used for environmental scanning in two stages:

- Study 1: 50 min scan
- Study 2: 50 min scan

Interval between Study 1 and Study 2: Five (5) min.

Variable applied: Application of SPIRO® filter for environments in Study 2.

Conditions in terms of Electromagnetic Pollution:

- WiFi: 79 active signals
- Mobile Operators: Five (5)
- Types of Mobile Signal Received: 4G, LTE, 5G.

In the graphs below we will see the comparative analysis of both studies.

- The values of study 1 (Without the SPIRO filters)[®] are highlighted in orange dots.
- Highlighted in purple dots the values of study 2 (With SPIRO filters)[®]

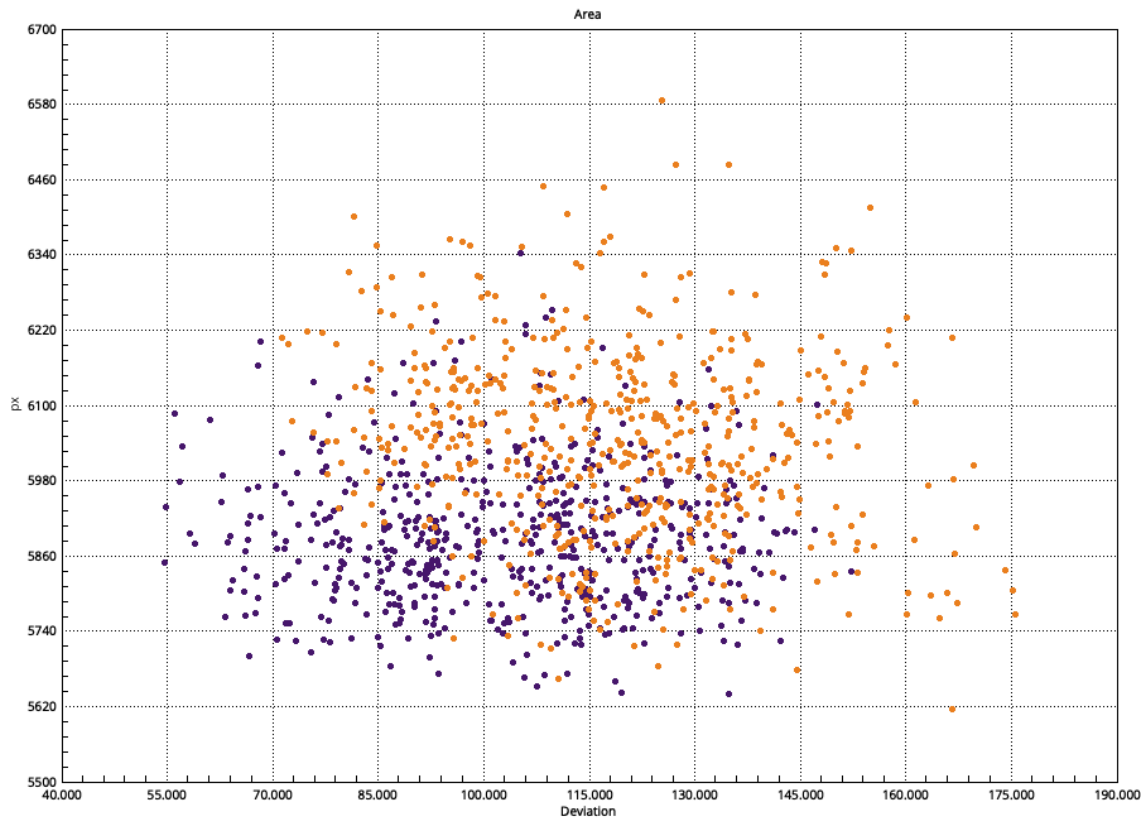


Figure 1 – Area Comparison

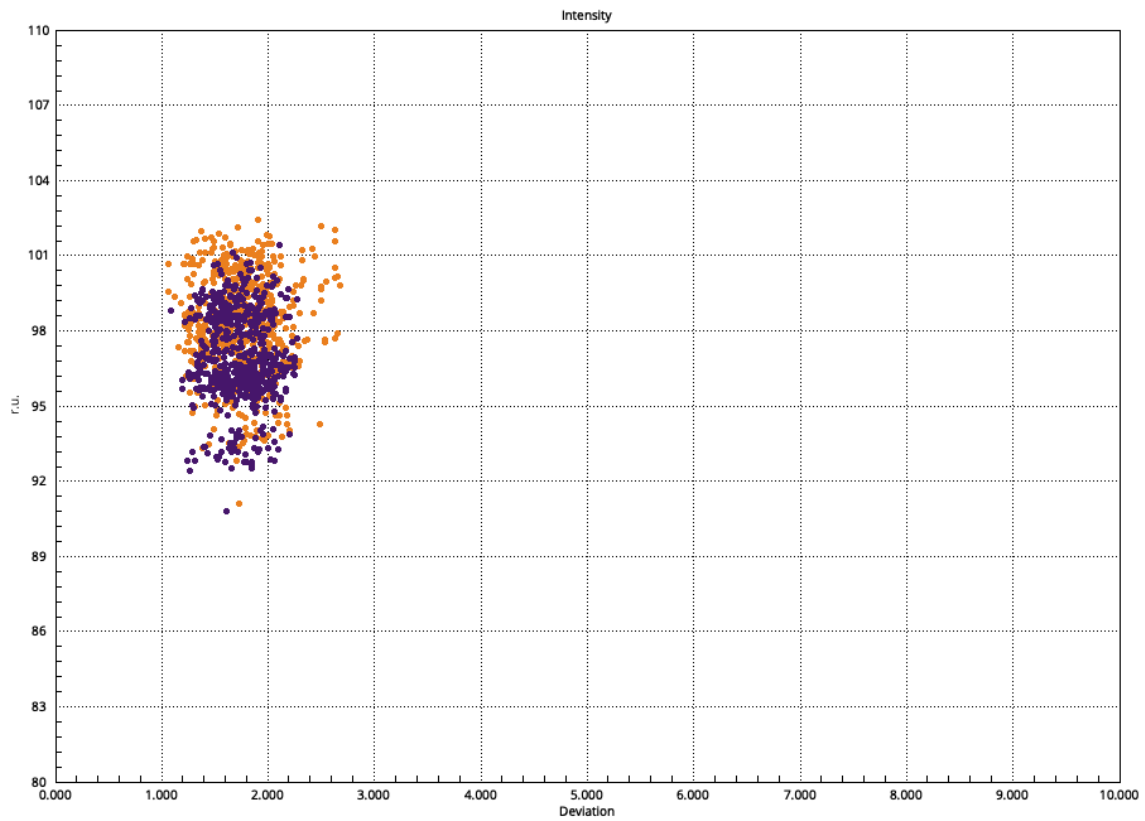


Figure 2 – Intensity comparison

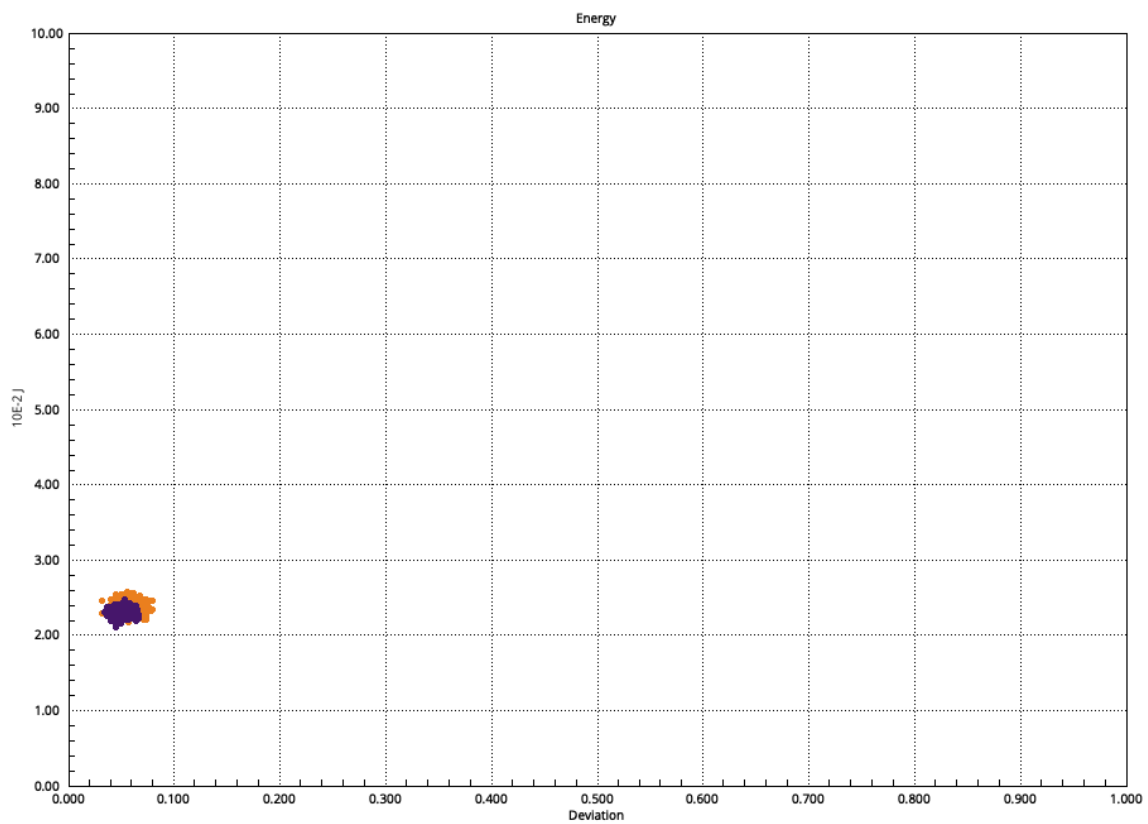


Figure 3 – Energy comparison

For the comparative analysis, the author chose the last seven (7) minutes of both studies, ranging from minute 43 to minute 50. In order to analyze a more reliable and stable sample of the environment and to be able to ensure sufficient time for passive application of the applied nano-magnetism of the SPIRO® disk in the analyzed environment.

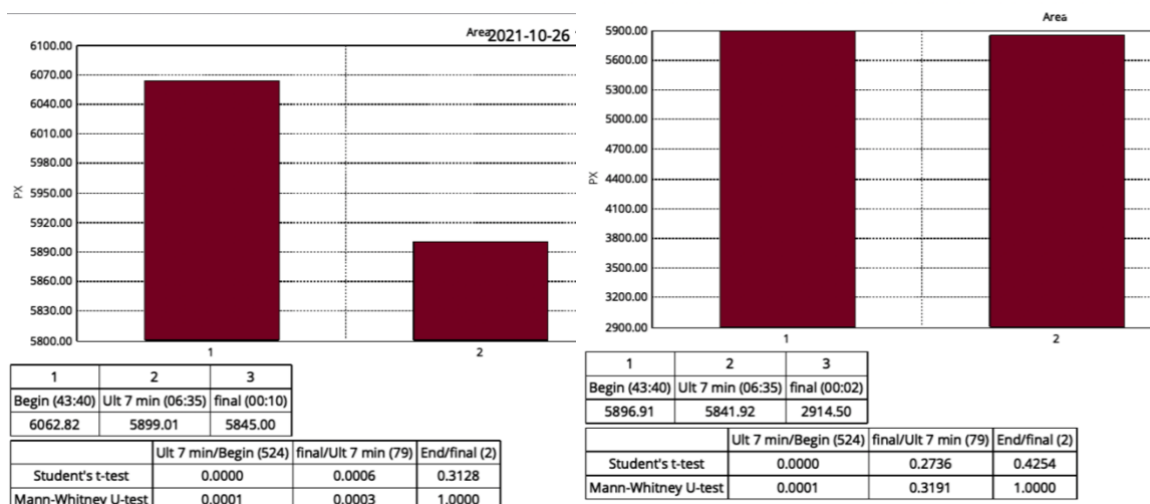


Figure 4 – Comparison Last 7 min AREA

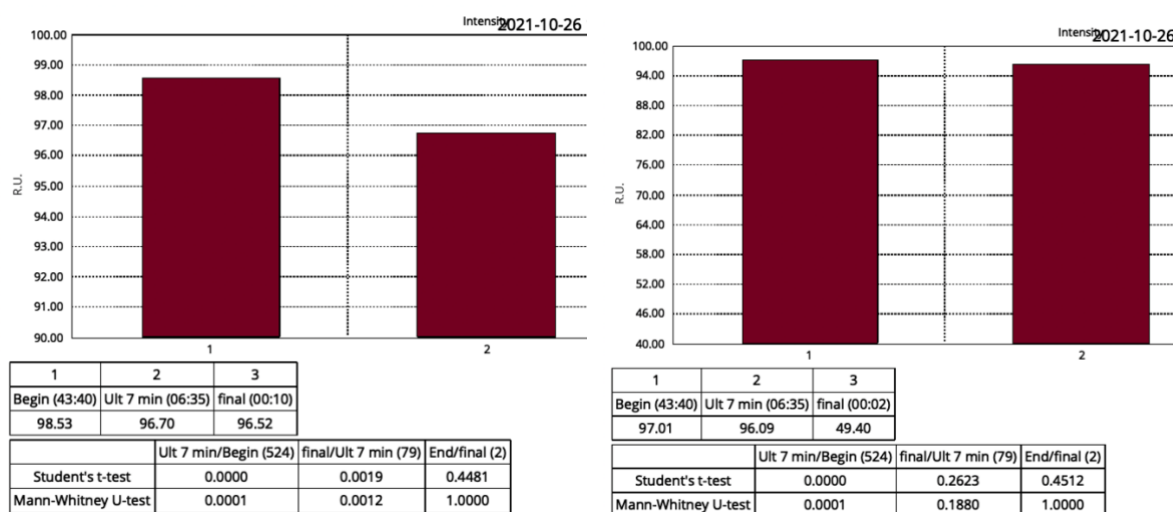


Figure 5 – Comparison Last 7 min INTENSITY

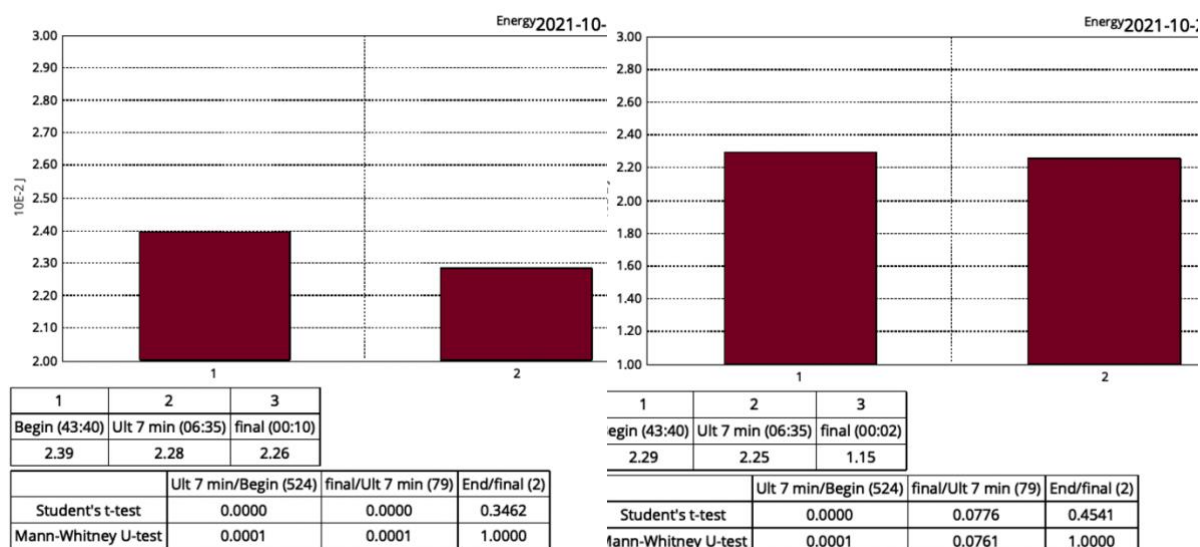


Figure 6 – Comparison Last 7 min ENERGY

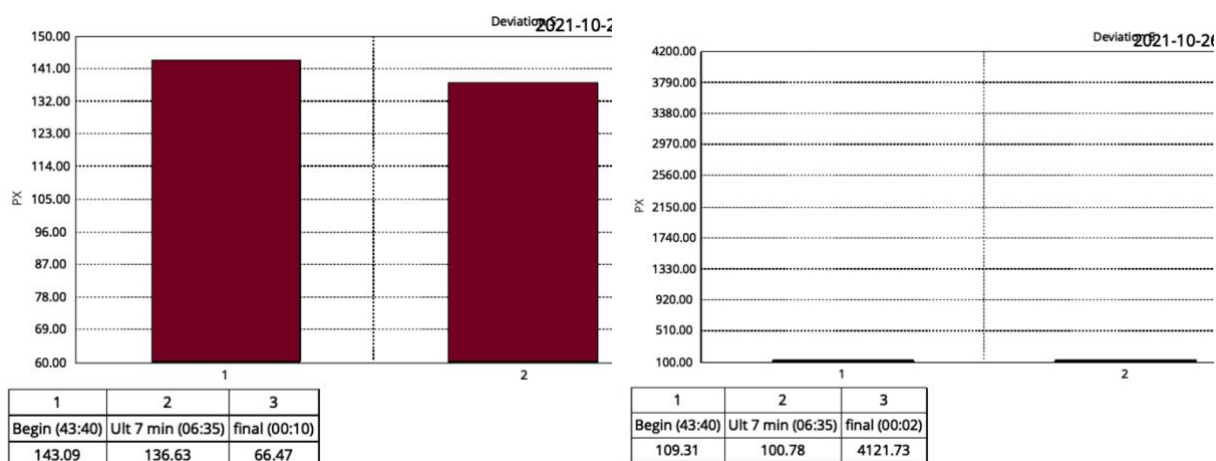


Figure 7 – Comparison Last 7 min DEVIATION

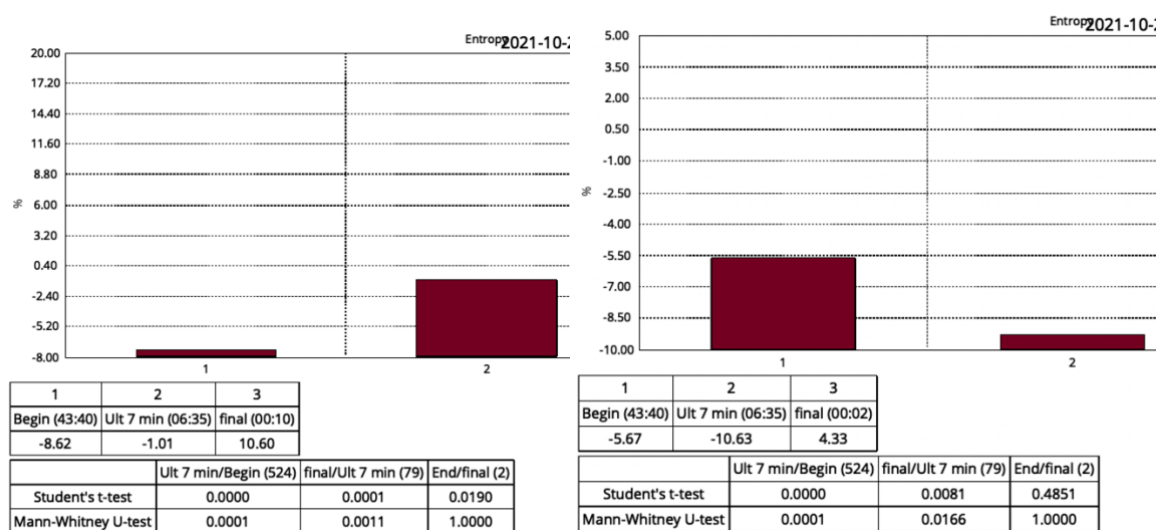


Figure 8 – Comparison Last 7 min ENTROPIA

8 CONCLUSIONS

From the dynamic evaluation carried out in two stages of fifty (50) minutes, significant changes in the analyzed values are observed, as can be seen from the analysis of the results obtained from both environmental scans.

Considerations:

From **Figure 1**, the comparative values in the **area** parameter show that Study 2 marked with purple dots, expresses a higher and more stable level of grouping than the expressed values collected from Study 1, which also show a higher deviation index. This observation has been verified in **Figure 4**, where it can be compared that in terms of values there is a quantitative change, which the author will express later.

Figure 2 shows that in the intensity parameter, the data show a lower deviation index in Study 2 (purple dots) compared to Study 1 (orange dots). This observation has been verified in **Figure 5**, where it can be compared that in terms of values, there is a quantitative change, which the author will express later.

From Figure 3, it can be seen that in the energy parameter, a higher concentration can be seen towards the left vertical axis with a lower deviation index. This observation has been verified in **Figure 6**, where it can be compared that in terms of values there is a quantitative change, which the author will express later.

From **Figure 7**, it can be seen that in the deviation parameter, there is a clear difference of significant decrease in the values of Study 2 with respect to the values obtained in Study 1.

From **Figure 8**, it can be seen that in the entropy parameter, there is a clear expression of antagonistic change between the values of Study 2 with respect to the values obtained in Study 1.

After spectral monitoring of the high microwave frequencies of telecommunications, specifically 4G LTE, 5G, Bluetooth and WIFI mobile signals, in relation to the variations expressed in the temporal dynamics of energy in the environment evaluated with the Sputnik electrophonic sensor, it was observed that with the implementation of the SPIRO® filters (Disk) there was a decrease in interference and an optimization of LTE and 5G signals in terms of their uniform and

balanced propagation in space. The mobile device present in space showed an improvement in connectivity due to interference reduction and not signal amplification.

The author, taking into consideration the uncertainty factor of the measurements collected, in order to obtain the most reliable parameter possible of "Environmental Activity", excluded the first 43 minutes of the collected measurement, and established a comparative evaluation established in a specific period, corresponding to the last 7 minutes of both studies. The values obtained comparatively confirmed the preliminary analysis obtained in each parameter established for the environmental scan.

The Environmental Activity Index showed an appreciable improvement in the energy level, after the implementation of the SPIRO filters®. (See Figure 9)

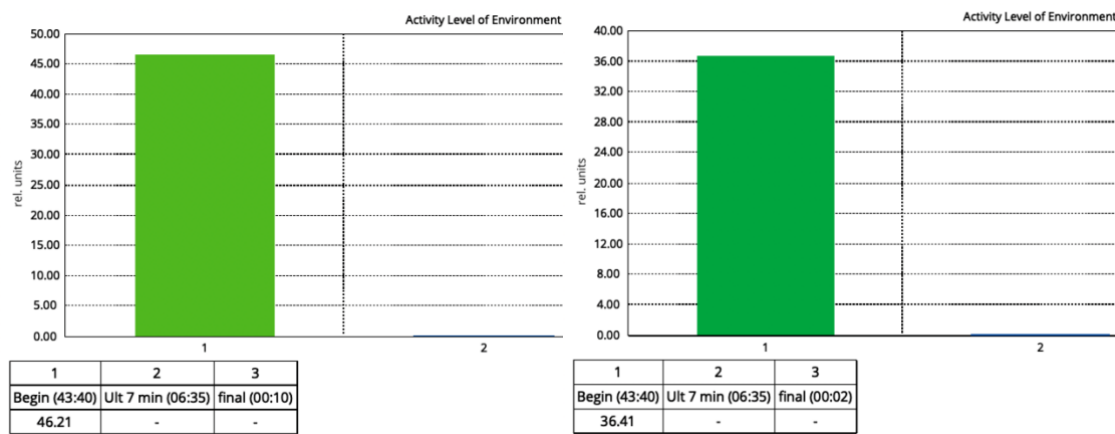


Figure 9 (Comparisons of Study 1 and Study 2)

Type of the environment	Use	Influence on a person
Hypoactive / geopatogenic stress	No use	Slows down drastically, sucks the energy
Low activity	Meditation	Slowing down the metabolism, calming down
Normal activity	Sleep, restoring the energy, leisure	Maintaining normal functional activity
High activity	Work, sport activities	Activation of metabolism
Hyperactive	No use	Hyperactivation, fast exhaustion
Abnormal	No use	Chaotic changes of stress level

Figure 10 (Level of Environmental Activity)

Significant changes were observed in the values collected after the implementation of the SPIRO® filters in the evaluated environment. It is confirmed that environmental scanning with the Sputnik electrophotonic sensor is an effective tool to verify the influence of SPIRO® filters in a given space.

After the implementation of the SPIRO® filters in the evaluated space, it is confirmed that there is an observable comparative change, specifically in the particular parameter developed by Dimitri Orlov and known as: "Environmental Activity Level".

The evaluated area was without traffic activity of people, it was an area of great calm and moderate air flow, soft and stable sounds. However, electromagnetically, he was immersed in an exhibition of Electrosmog Alta; in terms of LTE and 5G microwave high-frequency signals, additionally 10 Bluetooth transmitters and 79 WiFi signals. The level of environmental activity in Study 1 was **46.21**. Once the SPIRO® filters were implemented, according to the level of exposure to Electrosmog detected, it was possible to observe, after the analysis carried out, how it had an impact on a decrease in the level of activity of the environment to **36.41**.

It is concluded that in some way the evaluated environment presented a greater activity not equivalent to the external calm activity of the evaluated area prior to the implementation of the SPIRO® filters, which could be an expression of environmental stress in the face of Electrosmog.

The data obtained by the Bio-Well software have shown that in all the parameters evaluated, the implementation of the SPIRO® filters produced significant and appreciable changes. The characteristics of these changes indicate a positive trend of SPIRO® filters in the environment, as evidenced in Figures 1 to Figure 8.

The author has not found a relationship between the monitored electrosmog pulses and the dynamic oscillations of energy in the environment, according to the parameters analyzed by the electrophonic sensor. However, additional tests and studies would be required in order to confirm or deny any possible link between one parameter and another.

9 BIBLIOGRAPHIC REFERENCES

BIENKOWSKI, P. and TRZASKA H. (2012) *Electromagnetic Measurements in the Near Field*. ISBN 9781891121067

KOROTKOV, K. (2014). *Energy Fields Electrophotonic Analysis in Humans and Nature*. ISBN 97814992216264

VOEIKOV, V. & KOROTKOV, K. (2017). *The Emerging Science of Water*. ISBN 9781973736820

KOROTKOV, K. (2021). *Health at the tips of the fingers*. ISBN 9798464107618

KOROTKOV, K. (2018). *The Energy of Health*. ISBN 9781726049870