

Monitoring the Human Health by Measuring the Biofield "Aura": An Overview

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Abstract—Various life processes in human beings involve physiological and mental activity. Interestingly, electromagnetic field is associated with such activities. Psychological perception of one's environment or a person's thought process induces characteristic electrical impulses in the brain. These signals travel throughout the central, sympathetic and parasympathetic nervous system, creating the unique electromagnetic field of the organism that can radiate out of the body and is termed 'Aura' or 'Bio-energy field'. Thus, this radiation field has the information about the individual's physiological and mental status. Any changes in homeostasis, including parasitic infection, genetic mutation, arterial constriction, etc., will produce a corresponding modification in the bio-energy field that in turn would lead to various diseases. Thus, 'aura' gives the signature of the status of health prior to its manifestation in the physical body. Therefore, human health can be effectively monitored by measuring this radiation field.

Keywords— Biofield, Aura, Human Radiation, Kirlianphotography, Bio-electromagnetism.

I. INTRODUCTION

It is well known that when atoms undergo any movement, be it translation, rotation or vibration, quantifiable and measurable electromagnetic radiation is produced which is evident from acoustic and vibrational spectroscopy. Like all matter, cells in our bodies are also made up of electrons, protons, neutrons and other fundamental particles which are always in a state of vibratory motion. So when these particles vibrate, an electromagnetic radiation is emitted which results into the formation of an electromagnetic field around our body. Similarly, when our psychological and emotional energies are sent throughout the body as electrical impulses along the biological (neural) and energy (meridian) pathways, these transmissions (in addition to the atomic and molecular vibrations) cause electromagnetic fields to radiate outside the body [1].

A meridian carries energy the way an artery carries blood and affects every physiological system [2]. The nerves and nerve synapses carry electrical impulses which can be as large as 100 millivolts (mV) for neuron firings, and sometimes as large as 3 volts for motor impulses (to move the muscles). These electrical impulses radiate large electromagnetic energy in accordance with the principles of spectroscopy [3]. These radiating fields form a complete

energy body surrounding the physical body and is popularly known as human Aura. A small number of scientists have been talking about the concept of a biologic field central to life ([4]-[6]) now called 'Biological Energy Field' (BEF) or simply 'Biofield'. BEF is a more scientific term for the so called 'Human Energy Field' or Aura. BEF is formed by the body in space, produced by the body's emissions (due to one's own physical processes, emotions or thoughts) and interactions with the processes of the environment (emissions of other individuals and the surrounding environment including electromagnetic fields, gravitational fields, etc.).

Since everything in this universe is made up of the same constituent particles electron, protons, neutrons etc. that means everything has an aura. Scientific research has found that this radiation field extends all around our body for about 4-5 feet (in an average healthy body) and appears to be depleted in cases of unhealthy persons [7]. The tangible features (frequency, waveform, etc.) of these radiating electromagnetic fields are characteristic of the physiological and mental activity that generated them. The aura of a person is thus directly connected to the level of health of the person. A person is considered to be healthy in terms of physical vitality, mental clarity, emotional well-being as well as highly positive spiritual energies. So a person who is healthy at all these levels has a more intense aura and vice versa in the case of an unhealthy person.

The normal frequency range of (healthy) human biofield is believed to be 62-68 MHz [8]. However, the alpha band of EEG, which is associated with relaxation and meditation, comprises brain waves at 8 to 10 Hz. When electromagnetic fields in this frequency range are applied to the human, the brain is dynamically entrained at those frequencies, and the person goes into a psychophysiological state of relaxation. [6].

II. BIO-ELECTROMAGNETISM

Bio-electromagnetism is the study of the interaction between electromagnetic fields and biological entities. Most of the molecules in the human body interact weakly with electromagnetic fields in the radio frequency or extremely low frequency bands. Areas of study include electrical or electromagnetic fields produced by living cells, tissues or organisms; for example, the cell membrane potential and the electric currents that flow

in nerves and muscles, as a result of action potentials. Others include animal navigation utilizing the geomagnetic field, potential effects of man-made sources of electromagnetic fields like mobile phones, and developing new therapies to treat various conditions. The term can also refer to the ability of living cells, tissues, and organisms to produce electrical fields and the response of cells to electromagnetic fields [9].

Bio-electromagnetics research has uncovered a surprising fact. Extremely low intensity, low frequency EM fields with energy content even less than the physical thermal noise limit can produce biological effects ([10]-[11]). At such extremely low levels, the energy content of the signal is even less than the random energy of molecular motion at physiological temperature. It seems very unlikely that such extremely low-level fields can act energetically on physical bodies of organisms directly. Rather they seem to interact with the biofield. Health effects from extremely low frequency (ELF) electric and magnetic fields (0 to 300 Hz) generated by power lines, and radio/microwave frequencies (RF) (10 MHz - 300 GHz) emitted by radio antennas and wireless networks have been well studied ([12]-[16]). Some of the specific frequency windows are as follows: 2 Hz, nerve regeneration; 10 Hz, ligament healing; 15, 20, and 72 Hz, stimulation of capillary formation and fibroblast proliferation [6].

However, the intermediate range (IR) used increasingly in modern telecommunications (300 Hz to 10 MHz) has been studied far less. Direct effects of electromagnetism on human health have been difficult to prove, and documented life threatening interferences from electromagnetic fields are limited to medical devices such as pacemakers and other electronic implants. However, a number of studies have been conducted with artificial magnetic fields and electric fields to investigate for example their effects on cell metabolism, apoptosis and tumor growth. Electromagnetic radiation in the intermediate frequency range is being used in modern medical practice for the treatment of bone healing and for nerve stimulation and regeneration. Alternating electric fields in the frequency range of 100–300 kHz are now approved as Tumor Treating Fields- a novel cancer therapy ([17]-[18]).

III. SCIENTIFIC MEASUREMENT of BIOFIELD

The biofield may be conceived of as a very complex dynamic standing wave having a broad spectral bandwidth which is composed of many different electromagnetic frequencies, analogous to a musical symphony with many harmonics that change over time [19]. Computing the biofield seems to be an impossible task because of the large number of dynamic elements and their network of interactions involved in its formation. Measuring the biofield of a person is however possible although difficult owing to its weak intensity and time-dependent nature.

A. Kirlian photography

The Scientific research on capturing this subtle energy field through electronic instruments was started by Semyon Kirlian. The captured image is known as Kirlian image which is the result of a gas discharge, "fluorescence" or glow that appears around the edge of a subject after it is placed in a high-intensity electrical field. Kirlian image is produced on the photographic plate when an object on a photographic plate is connected to a high-voltage source.

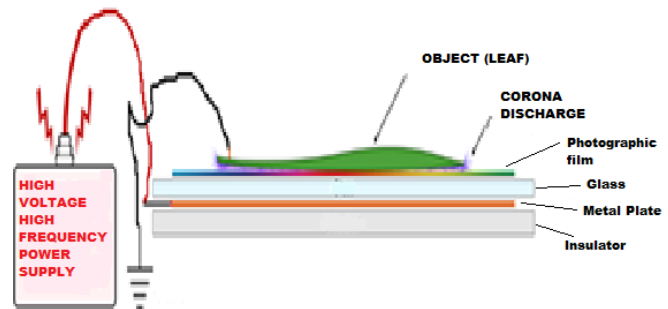


Fig. 1 Typical Kirlian photography setup for non-alive objects [20]

To record a Kirlian image a sheet of photographic film is placed on top of metal plate (sometimes separated by a transparent glass sheet). Then the object to be photographed is placed on top of photographic film. High voltage is applied to metal plate and then the electrical coronal discharge between the metal plate and the object is captured in the photographic film. Photographs of inanimate objects such as coins, keys and leaves can be made more effectively by grounding the object to the earth, or to the opposite polarity of the high voltage source. Grounding the object creates a stronger corona discharge ([21], [22]).

The high voltage frequency applied to the metal plate rips the electrons off the atom. The air around the photographic object becomes ionized. If that air contains any amount of moisture content then the resulting image will be a glowing silhouette around the object, which the scientist call as "corona plasma discharge". Kirlian believed that these photographs depicted 'AURA' that surrounds living being. Scientists were able to photograph the electromagnetic field around human fingers with the help of Kirlian camera. Pehk et.al suggested that most of the variations in the images of the corona of a living subject who is in contact with the photographic film can be accounted for by the presence of moisture on or within the subject's surface [23].

Dr. Konstantin Korotkov & Krishna Madappa have developed a GDV (Gas Discharge Visualization) technique to see a Kirlian image of the whole human body and aura. GDV refers to the process in which Biological

Emission and Optical Radiation is stimulated by Electromagnetic Field Amplified by Gas Discharge and is visualized through Computer Data Processing. The GDV image graphically represents the distribution of energy flow in space and the interaction of this energy with the energy around it. These scientists suggest that this technology can be used for early detection of cancer, heart disease and other medical conditions. Dr. Korotkov claims that this GDV tool can map the real data or information inside of the human aura by measuring altered states of consciousness, chakra energy amplitude and alignment, vital signs, and energy integration [24].

It was found, that objects which are not alive, do not change parameters of their "aura" more than 2%. Living objects however can change their aura field dramatically and quickly. This provides scientists with unique tools to study physics of life and consciousness using bio-electrography[25]. Prof. Bundzen found that the response in Kirlian Aura seems to precede (appear as soon or earlier than) electric processes in the brain during a decision making process and suggests that health can be effectively evaluated based on GDV parameters[26]. Rubik and Brooks [27] recorded the Digital High-Voltage Electro-photographic Measures of the Fingertips of some persons Pre and Post-Qigong (a Chinese system of breathing exercises, body postures and movements, and mental concentration). They observed that post-qigong the GDV-images became more uniformly dense circles of light around the fingers, which seemed to be an indication of improved energy regulation.

B. Polycontrast Interference Photography

Polycontrast Interference Photography or PIP visualizes patterns of light radiating from biological organisms and inanimate objects. In the late 1980s, using microchip technology, Harry Oldfield developed a scanner which could provide a real time, moving image of the energy field. This system became known as Polycontrast Interference Photography or PIP. Oldfield thought that the human energy field might possibly interfere with photons both ways when the incident ray travelled towards the object and when the reflected ray bounced off the object([28]-[30]).

Oldfield devised a computer program which would analyse the radiation intensities of different frequencies being reflected from the person or object being scanned. To see the body's energy field with PIP, ideally the person should be in a room with full spectrum lighting at a controlled output, standing against a white backdrop. A specialised video camera takes photographs using various filters that get analysed by special PIP software. PIP examines photon (light) interference and its changes in and around the body. This interference is generated when wide spectrum radiation falls on the energy field. Depending on the

density of the energy in the energy field, various colour shades are generated (the word 'colour' here is only indicative of various different frequencies). These colour shades are tested by the computer program. The PIP software program allocates a number to each specific grade or frequency of radiation and then recodes every number into the visible light range so that we can see it, otherwise the interference pattern is invisible. PIP uses software on a PC with a video feed and takes a scan of bio-energy and light energy interference. An image is generated live on a monitor where signals from the video camera are graded into clearly visible colours. The computer screen then displays a picture of the energy field from and around the body.

The PIP system shows up many patterns and colours which a trained eye can relate to a person's energy balance and well-being. Although some of these things are expected to be connected to health, the system in the present state of affairs does not take the place of conventional medical examination or diagnosis ([28]-[29]). Further research is required in this field to use PIP as a diagnostic tool.

C. Resonance Field Imaging

RFI measures Bio energy field generated around living beings and identifies the type and the function of these bio energy fields. It generates the psychological profile of the living beings and expresses the effect of psychology on the human health. Thus, physicians can explore the bio-energy field image to make 'Psychological Level Interpretations' and 'Health Level Interpretations' and take appropriate professional decisions [31]. Resonance Field Imaging involves the use of an Electro-Magnetic Field sensing device to scan a body, object, or environment. It is an experimental electromagnetic measurement and imaging process similar to NMR imaging technique. RFI needs an RF digital frequency counter with an antenna tunable over a wide range of frequencies (much lower than required for MRI) which is pointed at each part of the radiation field. A sensor gives the information of the resonant frequency in the standard specific unit. The RFI technology provides objective data and informative interpretation for radiation field and identifies the type and function of bio-energies present in specific regions in the human brain. Data obtained can be used to generate full bio energy charts of the individuals with the help of a software program ([32] – [34]).

CONCLUSION

Everything and everyone in the world has a radiation field, i.e. 'Energy body' or Aura. Human Aura provides the unique signatures of the person's physical, mental, emotional and spiritual state. It appears that any changes in the status of person's health be it physical, mental,

emotional or spiritual, changes his aura field dramatically and quickly. Hence complete healing of a patient will be when the distortions/deviations in his 'energy body' disappear along with the physical symptoms of the ailment. There may be two pathways of health restoration. First is the conventional one where all the medicines and treatments are aimed to treat the physical body and as the physical body recovers, the aura follows and restores to its healthy state. Complete restoration of health is not possible until the aura becomes healthy. A second and a faster method may be to heal the 'energy body' itself with the help of some radiation assisting devices, and the physical body will quickly follow the changes to restore health. With the later as a future goal, the need is to (i) record the human radiation field scientifically, and then (ii) identify the signatures of various physiological and psychological conditions in this radiation field. The three techniques discussed here for recording the Biofield are based on different phenomenon, i.e., fluorescence, interference, and resonance. Of these RFI involves least cost and seems to be most promising.

REFERENCES

- [1] (2014) Eden Energy Medicine website. [Online]. Available: <http://innersource.net/em/66-handout-bank1/hbbasicprinciples/291-the-nine-primary-energy-systems.html>
- [2] Energy Medicine by Donna Eden & David Feinstein, Tarcher/Penguin Putnam, 2008. Available online at <http://innersource.net/em/66-handout-bank1/hbbasicprinciples/291-the-nine-primary-energy-systems.html>
- [3] (2014) Physiology Web website. [Online]. Available: http://www.physiologyweb.com/lecture_notes/neuronal_action_potential/neuronal_action_potential_important_features.html#z2okFsLfkdlVjneCXUWepsFXJBW7OQ8
- [4] W. A. Tiller, "What are subtle energies?" *Journal of Scientific Exploration*, vol. 7, pp. 293–304, 1993.
- [5] S. Savva, "Toward a cybernetic model of the organism," *Advances in Mind Body Medicine*, vol. 14, pp. 292–301, 1998.
- [6] B. Rubik, "The Biofield Hypothesis: Its Biophysical Basis and Role in Medicine," *The Journal Of Alternative And Complementary Medicine*, Vol. 8, pp. 703–717, 2002.
- [7] N. Sharma (2014) BioField Global Research Inc. webpage on What is Human Aura. [Online]. Available: <http://www.biofieldglobal.org/what-is-human-aura.html>
- [8] C. L. Ross, *Etiology –How to Detect Disease in Your Energy Field Before it Manifests in Your Body*, revised ed. E-book. [Online]. Available: <http://books.google.co.in/books?id=xrnNAwAAQBAJ&printsec=frontcover#v=onepage&q&f=false>, page 32, 2013
- [9] (2014) The Wikipedia website. [Online]. Available: http://en.wikipedia.org/wiki/Bioelectromagnetics#cite_note-1
- [10] W. R. Adey, and S. M. Bawin, "Brain interactions with weak electric and magnetic fields," *Neurosciences Research Program Bulletin*, vol. 15, pp. 1–129, 1977.
- [11] D. Brown, "The Energy Body and Its Functions," *Annals of the New York Academy of Sciences*, vol. 1172, pp. 312–337, 2009.
- [12] Y. Touitou, B. Selmaoui, "The effects of extremely low-frequency magnetic fields on melatonin and cortisol, two marker rhythms of the circadian system," *Dialogues Clin Neuroscience*, vol. 14, pp. 381–399, 2012.
- [13] WHO Report, "Extremely Low Frequency Fields Environmental Health Criteria Monograph No. 238," chapter 5, pp. 118–161, 2007.
- [14] M. Repacholi, Ed., *Encyclopedia of Occupational Health and Safety*, VLF and ELF Electric and Magnetic Fields. International Labor Organization, Geneva, 2011.
- [15] M. M. Dawoud, "High Frequency Radiation and Human Exposure," in *Proceedings of the International Conference on Non-Ionizing Radiation at UNITEN (ICNIR 2003) Electromagnetic Fields and Our Health*, 2003. Available online: <http://www.who.int/peh-emf/meetings/archive/en/keynote5dawoud.pdf>
- [16] R. F. Does, "Microwaves, Radio Waves, and Other Types of Radiofrequency Radiation," *American Cancer Society Medical Review*, October 2013, Available online at: <http://www.cancer.org/cancer/cancercauses/radiationexposure/ndcancer/radiofrequency-radiation>
- [17] WHO Report, "Electromagnetic fields & public health: Intermediate Frequencies (IF)," Information sheet February 2005. World Health Organization, 2005.
- [18] M. Wartenberg, N. Wirtz, A. Grob, W. Niedermeier, J. Hescheler, S. C. Peters, and H. Sauer, "Direct current electrical fields induce apoptosis in oral mucosa cancer cells by NADPH oxidase-derived reactive oxygen species," *Bioelectromagnetics*, Vol. 29, pp. 47–54, January 2008.
- [19] B. Rubik, "The unifying concept of information in acupuncture and other energy medicine modalities," *Journal of Alternative and Complementary Medicine*, vol. 3, pp. S67–S76, 1997.
- [20] (2014) Graphic by Wikipedia User:MrX [Online]. Available: http://en.wikipedia.org/wiki/Kirlian_photography#mediaviewer/File:Kirlian_Photography_Cross_Section.png
- [21] (2014) [Online]. Available: http://en.wikipedia.org/wiki/Kirlian_photography
- [22] (2014) Images Scientific Instruments. [Online]. Available: <http://www.imagesco.com/articles/kirlian/kirlian-photography.html>
- [23] J. O. Pehek, H. J. Kyler, and D. L. Faust, "Image Modulative Corona Discharge Photography," *Science*, vol. 194, pp. 263–270, October 1976. Available online at 10.1126/science.968480
- [24] K. Madappa. (2014) Sedona creativelife website. [Online]. Available: <http://www.sedonacreativelife.com/pre0840.html>
- [25] T. J. Chalko, "Is chance or choice the essence of Nature?" *NU Journal of Discovery*, Vol. 2, pp. 3–13, March 2001. Available online at <http://nujournal.net/choice.html>
- [26] P. V. Bundzen, and K. G. Korotkov, "Health evaluation based on GDV parameters," in *Proc. International Scientific Congress on Bioelectrography*, St. Petersburg, Russia, 2000, pp. 5–7.
- [27] B. Rubik, and A. J. Brooks, "Digital High-Voltage Electrophotographic Measures of the Fingertips of Subjects Pre- and Post-Qigong," *Evidence Based Integrative Medicine*, vol. 2, pp. 245–252, 2005.
- [28] (2008) The Oldfield systems website. [Online]. Available: <http://www.electrocrystal.com/pip.html>
- [29] (2013) Spiritual Science Research Foundation Inc., <http://www.spiritualresearchfoundation.org/spiritualresearch/studies-with-biofeedback-and-other-equipment/pip/introduction>
- [30] (2010) The Oldfield systems website. [Online]. Available: [http://www.electrocrystal.com/media/PIP%20Brochure%20\(e-mail\)%20Jan2010.pdf](http://www.electrocrystal.com/media/PIP%20Brochure%20(e-mail)%20Jan2010.pdf)
- [31] (2006) Doug Harper, RESONANT FIELD IMAGING™ Bioenergy Field Image Interpretations. [Online].

Available: <http://www.item-bioenergy.com/rfi/SampleRFIReport.doc>

- [32] (2014) Biofield Global Research Inc. website. [Online]. Available: <http://www.biofieldglobal.org/resonant-field-imagingtrade-rfitrade.html>
- [33] (2014) ITEM website. [Online]. Available: <http://www.item-bioenergy.com/rfi/RFIVerificationStudy.pdf>
- [34] (2014) BioField Global Research Inc. website. [Online]. Available: <http://www.biofieldglobal.org/resonant-field-imagingtrade-rfitrade.html>