



Bio-Well

A Revolutionary Instrument to Reveal Energy Fields of Human and Nature

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What can you do with your Bio-Well instrument?

Measuring the Human Energy Field

Human Energy Field (HEF) – is the most sensitive reflection of a person's physical, emotional and in some cases, spiritual conditions.

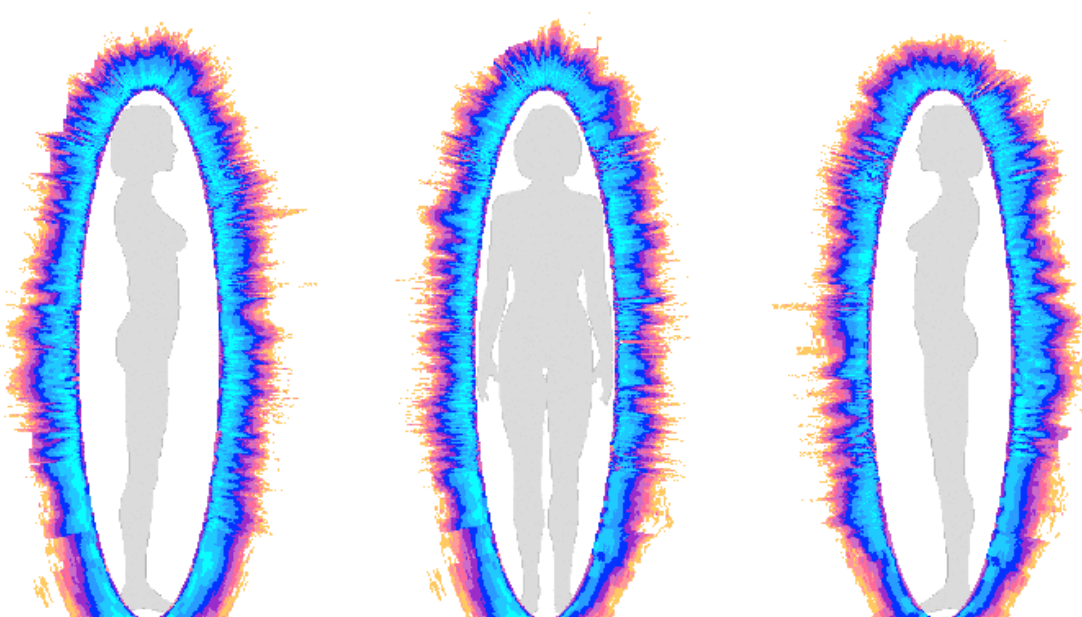
The Bio-Well instrument measures from 10 fingers of both hands, using sophisticated software to create an image of HEF. The principle is based on the connection of fingers with different organs and systems of the body through Chinese energy meridians. This idea was originally proposed by Dr. Voll in Germany and later developed by Dr. Mandel, and then clinically verified and corrected by Dr. Korotkov's team in Russia. The image which the Bio-Well instrument creates, is based on concepts from Traditional Chinese Medicine and verified by 15 years of clinical experience from hundreds of medical doctors with many thousands of patients.

Bio-Well is not a medical instrument. It gives you an impression of your Energy Field and allows you to see it's day-to-day transformation and the influence of different situations and stimulus to your HEF and hence, to your state of being.

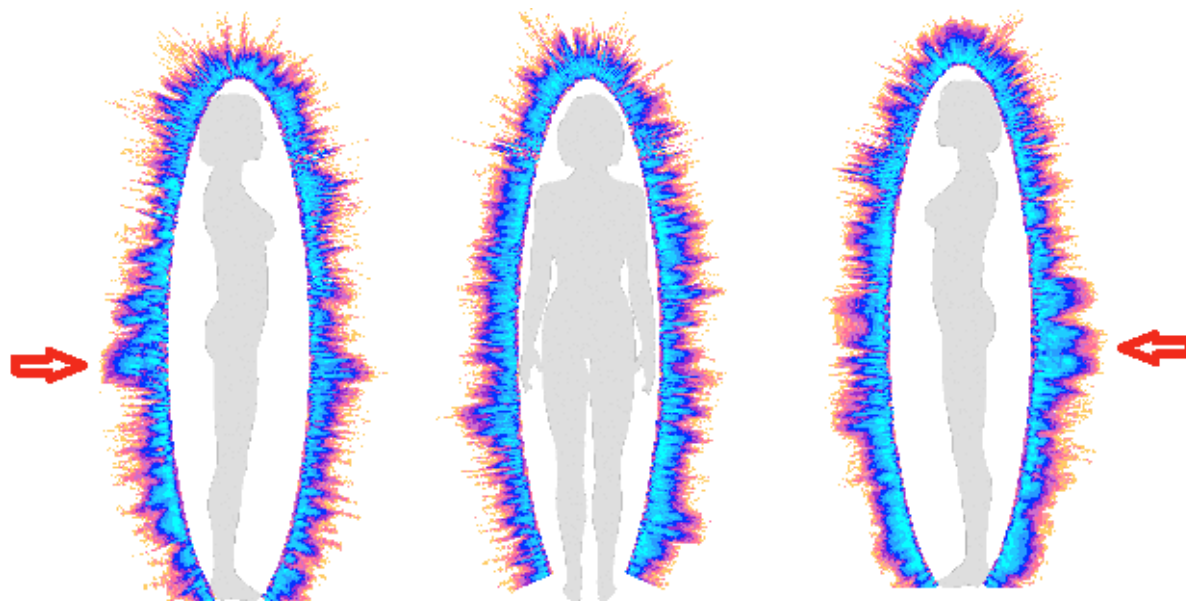
The Energy Field program is designed to process GDV images and to build a model of the Human Energy Field using the information obtained from 10 GDV images of human fingers. The creation of the energy field is based on a diagnostic map. The image Bio-Well provides shows the Human Energy Field around the human contour represented in tables and diagrams in numeric form.

Let us see what is good and what is bad in Energy Fields.

Healthy strong condition

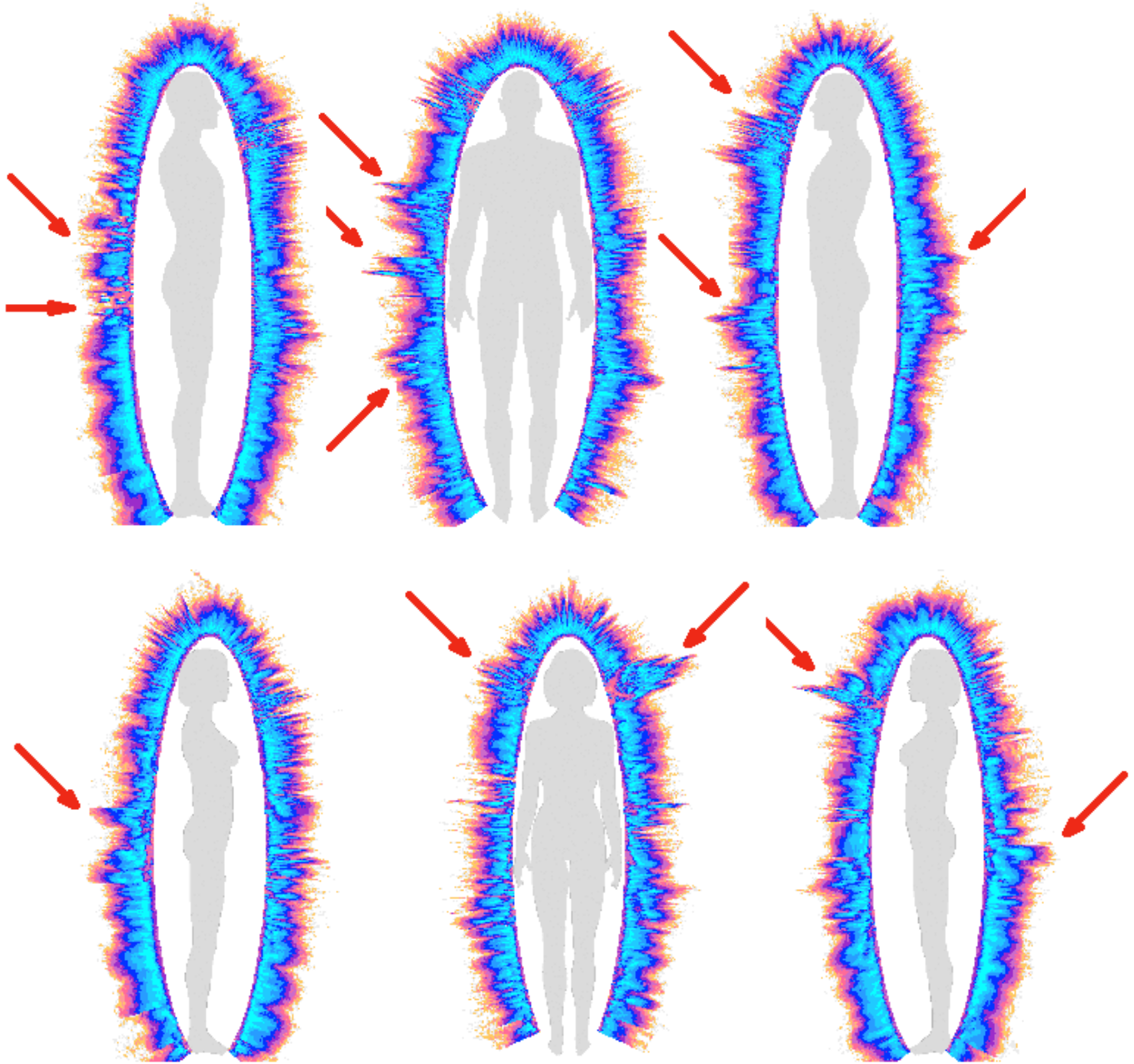


This HEF is uniform, without breaks, holes, or strong out-bursts, and it is of the optimal size. This is an apparently healthy person in a good mood state. A person achieved this condition after two weeks of exercises and meditation. Her initial condition was not as good.

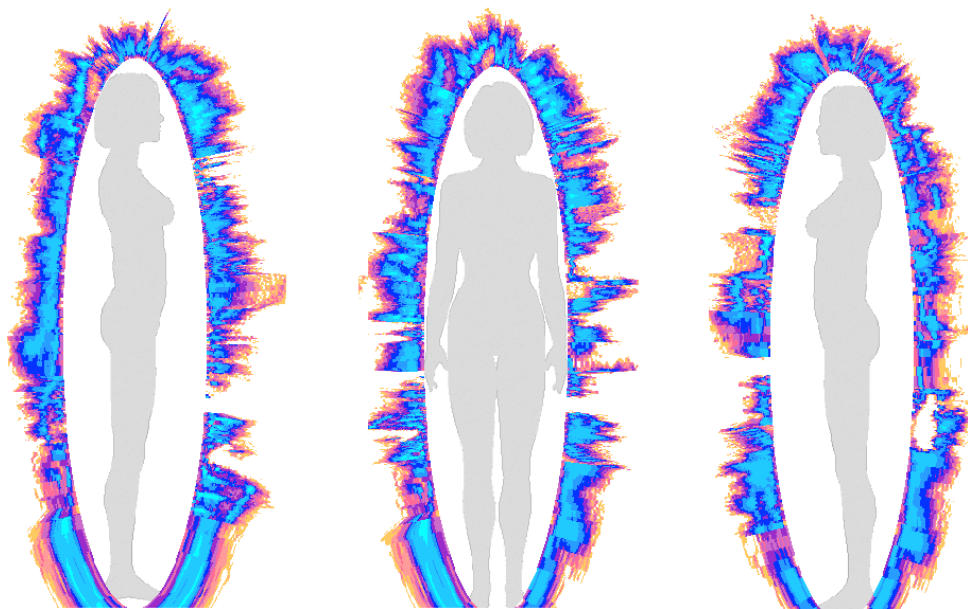


The same person two weeks before. As you see, this Energy Field is not as strong, but still, it is quite uniform. Please pay attention to strong out-bursts in the coccyx area – this is clear indication of a strong problem in the lower part of the spine. After series of exercises, this problem was practically reduced (see previous images).

Although we know it is not typical to find a person with zero to no health problems. Even though appropriate diet, lifestyle, medications, and therapies may assist a person toward health, any lingering issue will remain in the Energy Field. Please see a couple of examples of this kind below. Arrows indicate the areas of attention.

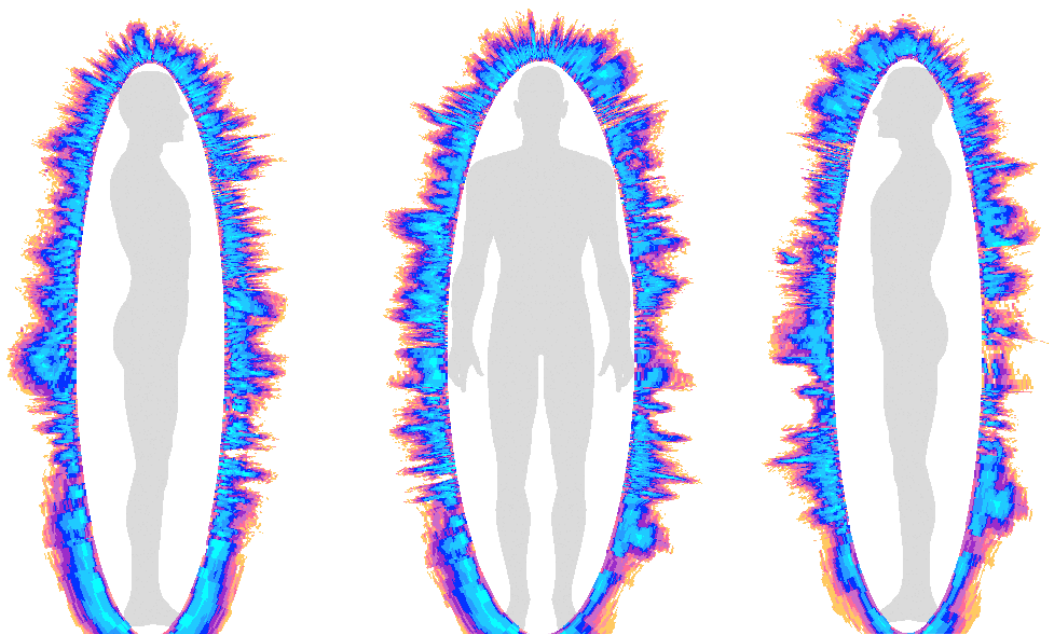


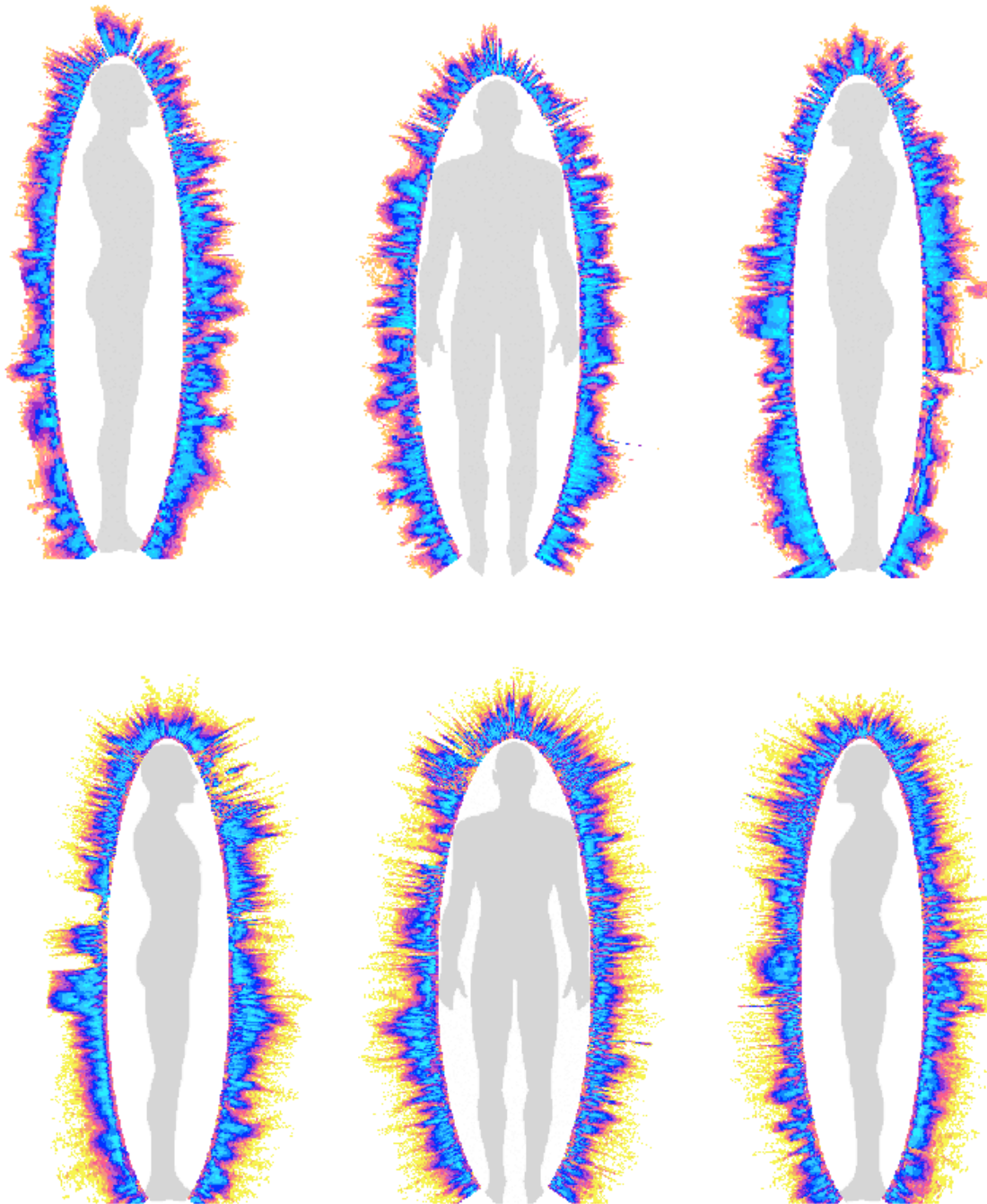
Health Problems



As you see from these images, there are many holes in the Energy Field, the overall contour is uneven, a lot of jiggling in the head area. This person has many health problems, which need attention from a doctor. In particular, please, pay attention to the solid blue band in the lower leg area. This is an indication of the bad condition of the vines on the legs. An experienced person can make detailed analysis from the images of the Energy Field, but this needs special training.

Several more examples:

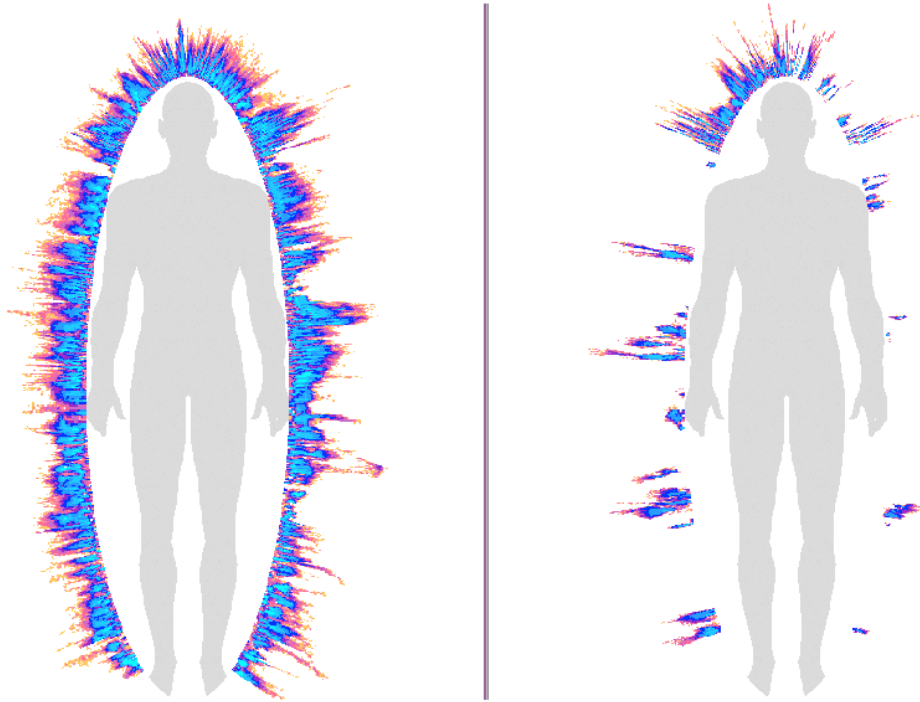




As you see, the difference between Energy Fields of apparently healthy people and people with chronic health problems is very faint. Only a trained specialist can provide health analysis based on the Energy Field images. For this, he or she needs to use a lot of information from other programs. The aim of the Bio-Well instrument is to provide an impression of your Energy Field and follow up with its development in the course of different exercises and treatment.

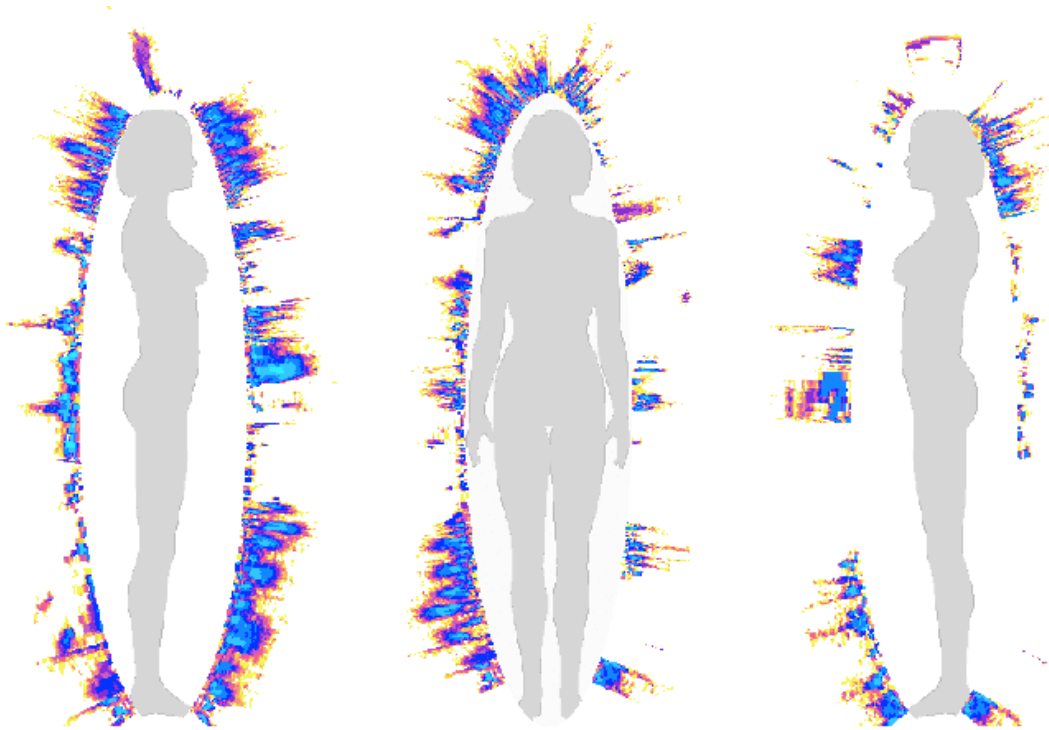
For example, you may take your image before and after sport exercise, meditation, pray, musical performance and see the effect of this process to your condition.

Below you may see transformation of the Energy Field of an orchestra conductor before and after symphony performance. As you see, the artist spent a lot of energy for the performance.

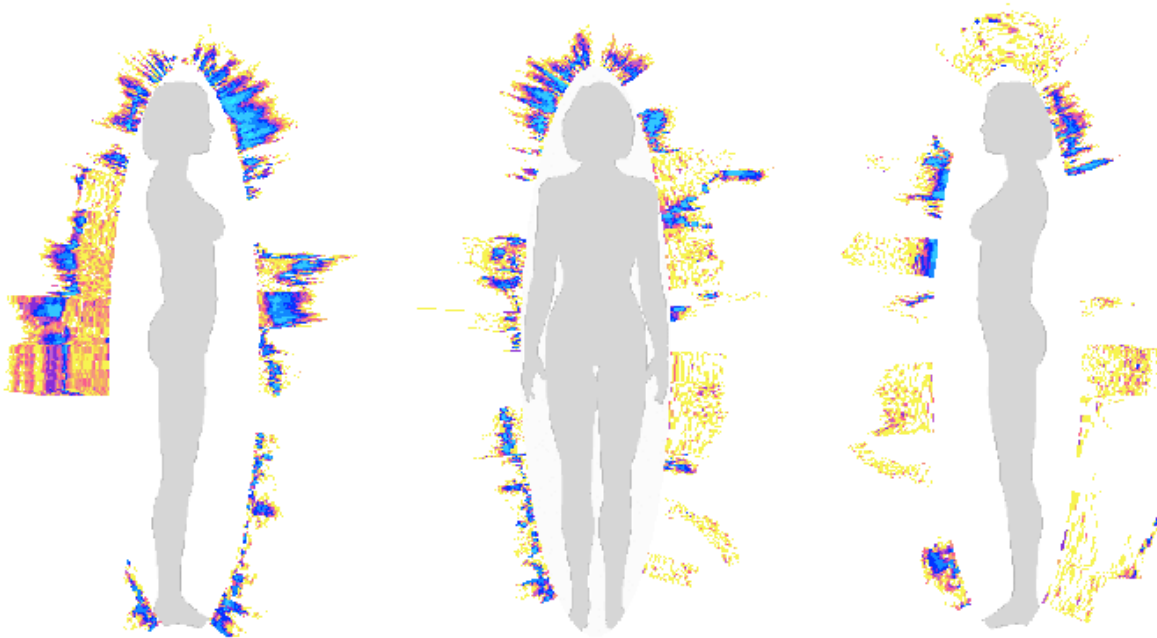


Stress Level evaluation

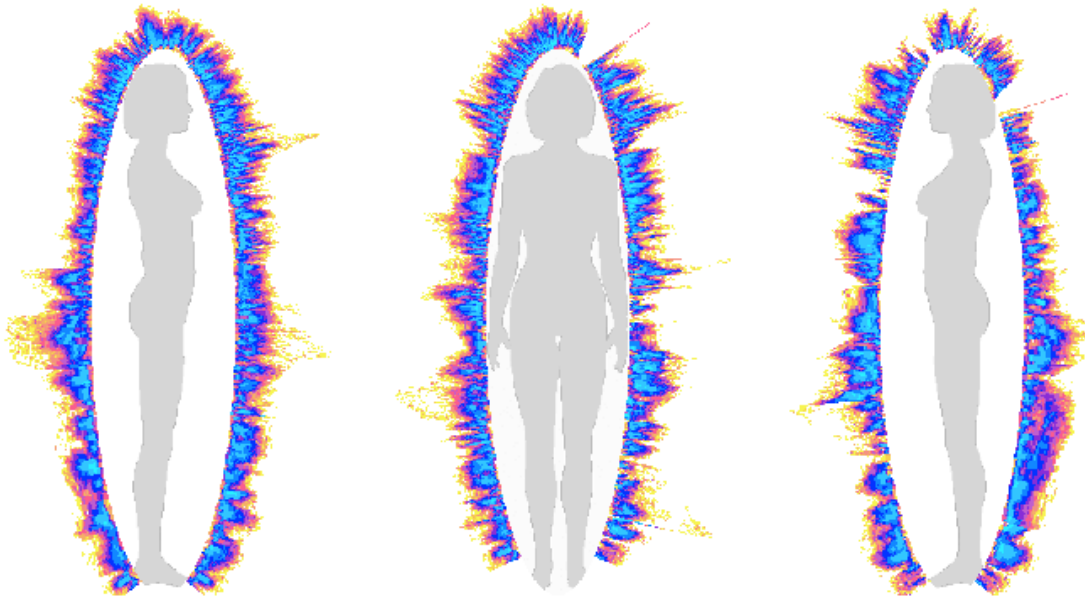
Stress is a complex factor that has both an emotional component (anxiety) and a somatic component that results from prolonged exposure to permanent anxiety. Stress has a very strong impact on the Energy Field. Images look very specific. Let's look at several examples.



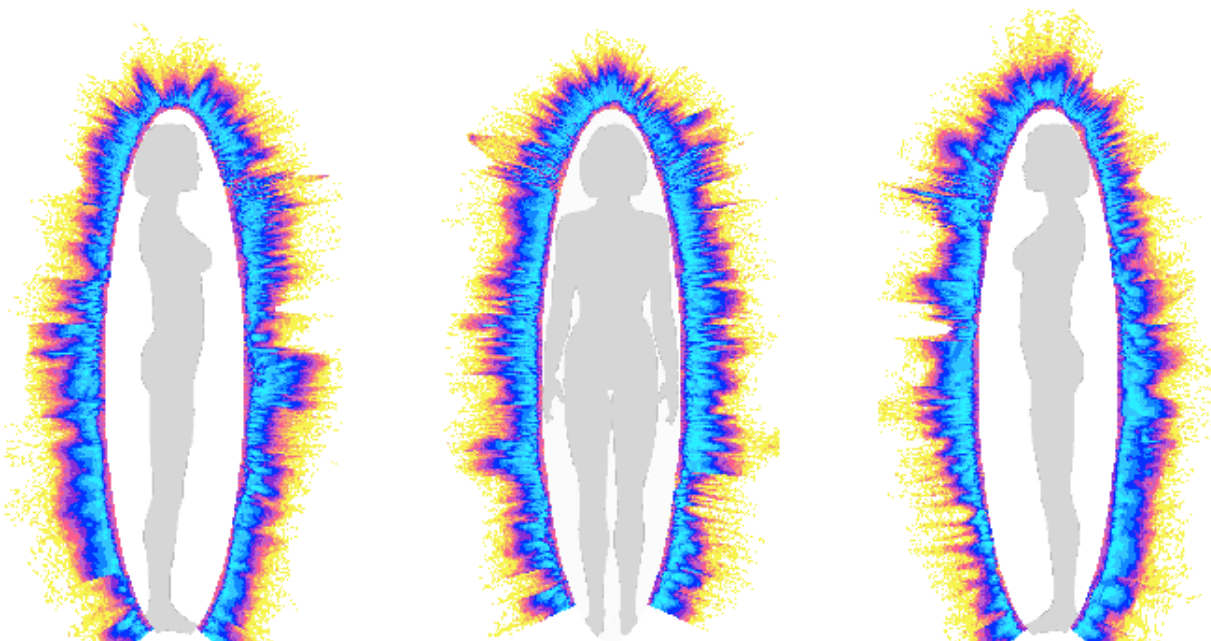
As you see the image is very disordered and hollow. This has nothing to do with health conditions, but rather, permanent stress and anxiety, which may have very negative implications to health.



Here is another example of an incredibly stressed person. After seeing this image, she understood that this condition might have very negative effects. She began a meditation course and special anti-stress therapy. In half a year, the situation changed dramatically (see below).

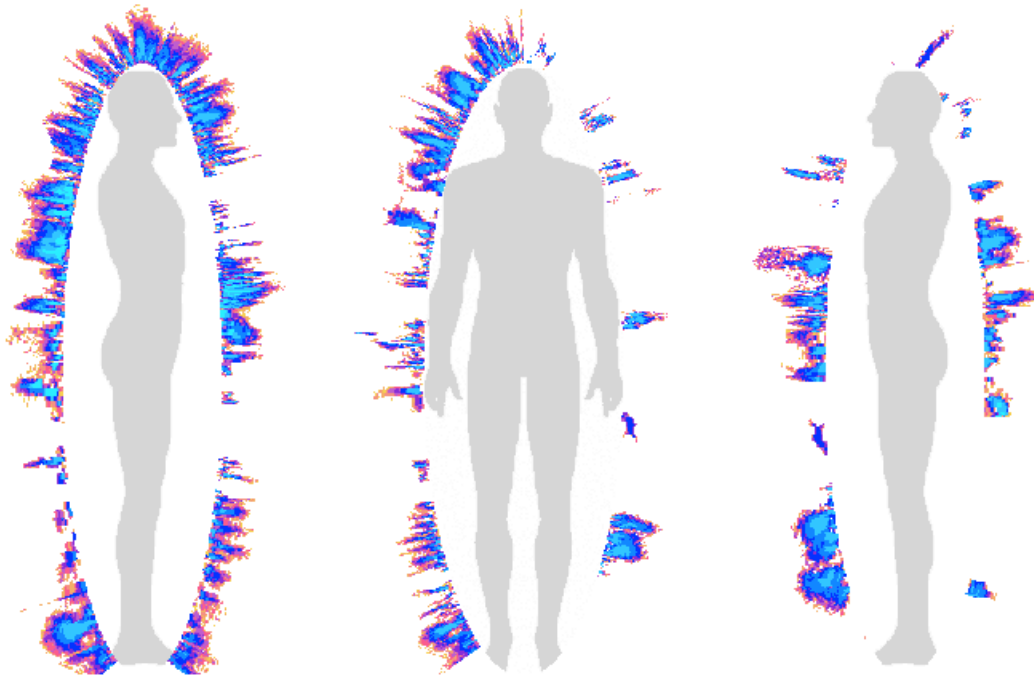


Being relieved by the effect she proceeded with therapy and half a year later improvement became even more clear (see below).

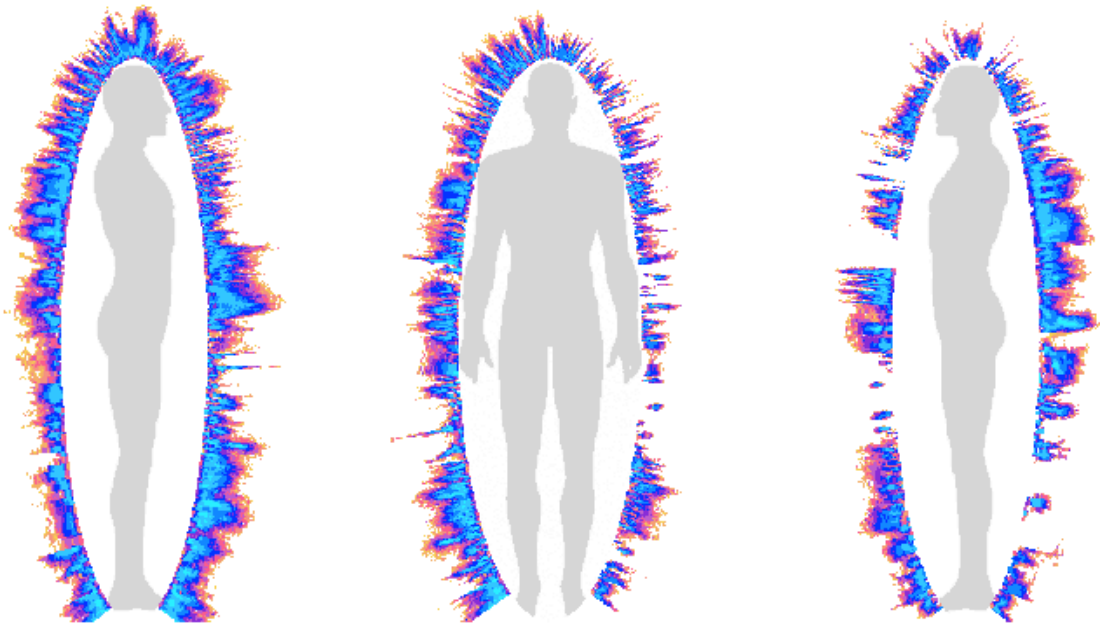


This is a good example how you may enhance the transformation of your condition under the influence of different treatment by following up with Bio-Well.

Another example of a stress endured Energy Field; a yang man who had serious problems with his business in the moment of analysis.



When he saw this image, he decided to change his attitude toward the business situation and establish self-care into his lifestyle through participating in sports. In three months, the results became clear.



From many years of experience in using Energy Field analysis, we may conclude that the aim of any therapy, exercise or treatment should be improvement of the Energy Field image. This is a clear indication of the positive effect of a therapy modality. This may take some time – we should not always expect immediate effects, but in the long run, one's Energy Field should become uniform and balanced.

At the same time, a large Energy Field is not always an indication of good health. As any health related parameter, the Energy Field should be in a healthy range. This situation may be tricky – only specially trained professionals may detect serious health conditions like cancer, cardio-vascular problems and the like. A system of Internet-based health analysis is under development.

Through the utilization of special software, it is possible to make a quantitative assessment of the anxiety and health index on a 10-point scale.

0-2 - very calm, relaxed people that may be due to several factors: deep meditation, full of inner peace, the influence of psychedelics, and a deep sleep in a quiet phase, chronic depression or in some cases inflammation.

2-4 - normal quiescent state.

4-6 - the excited state characteristic of active work, excitement, intense activity.

6-8 - at least four possible situations:

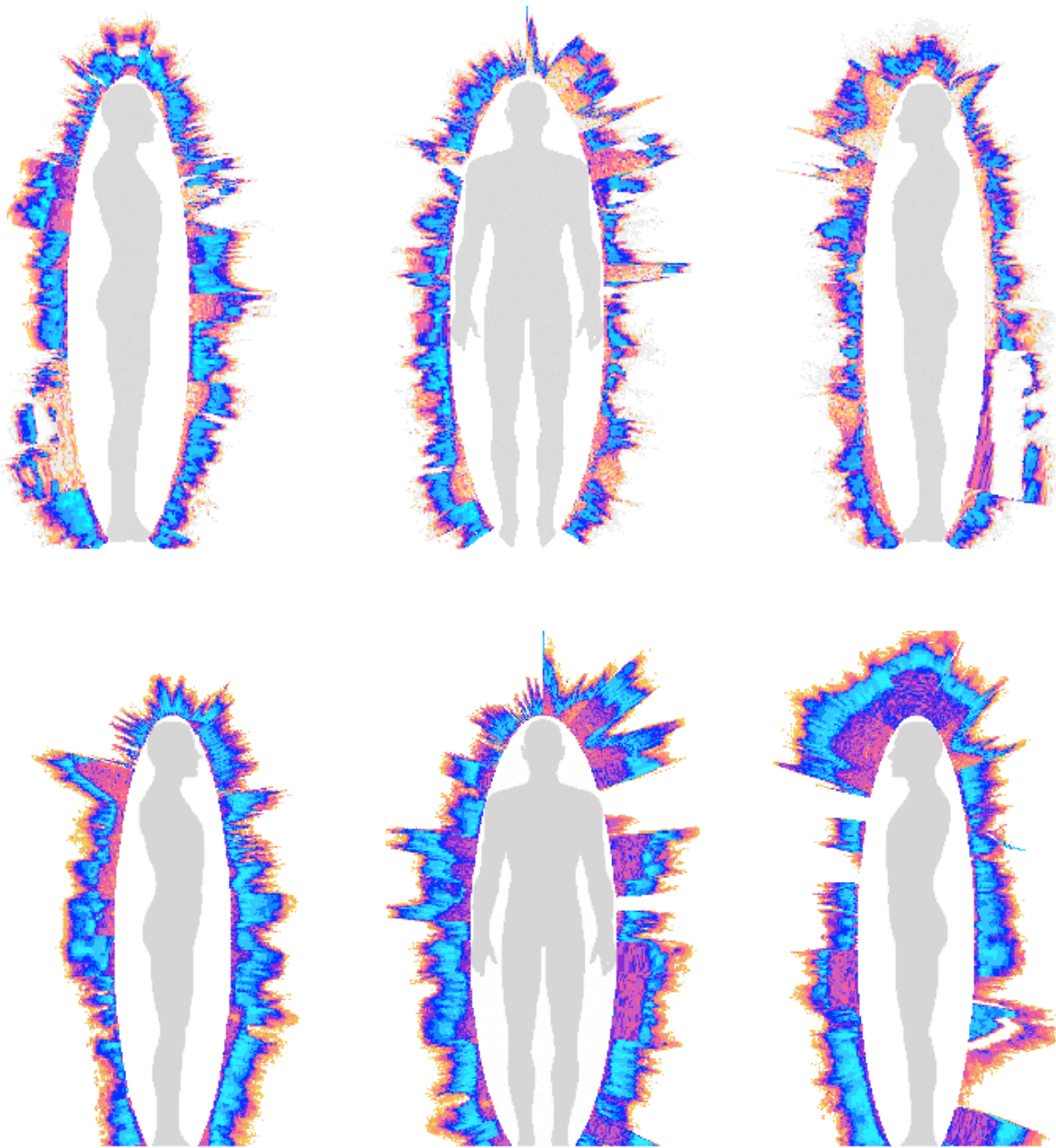
- The reaction to a previous stressful situation (an unpleasant conversation, illness, failure in the training process, driving in stressful conditions, etc.).
- Increased nervousness, accumulated over long periods of time stress, emotional stress, autonomic dysfunction.
- People with a special type of mentality that can quickly switch from a state of extreme excitement, nervousness, in the quiescent state.
- The state of overtraining, fatigue, risk of injury.

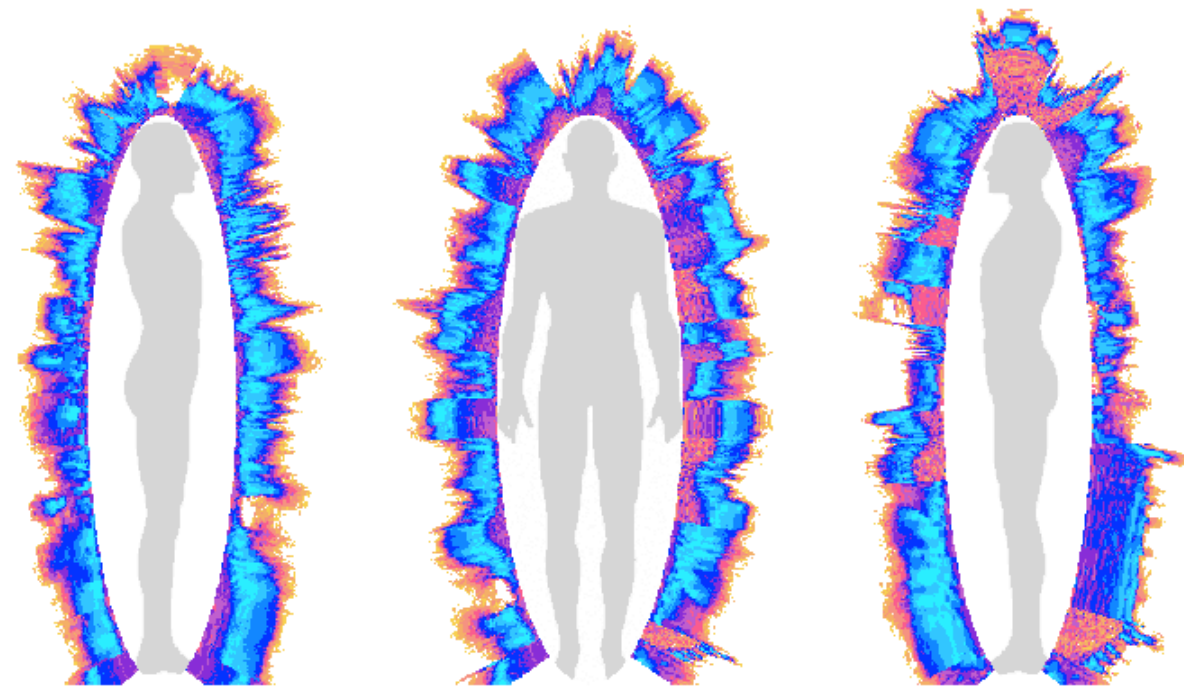
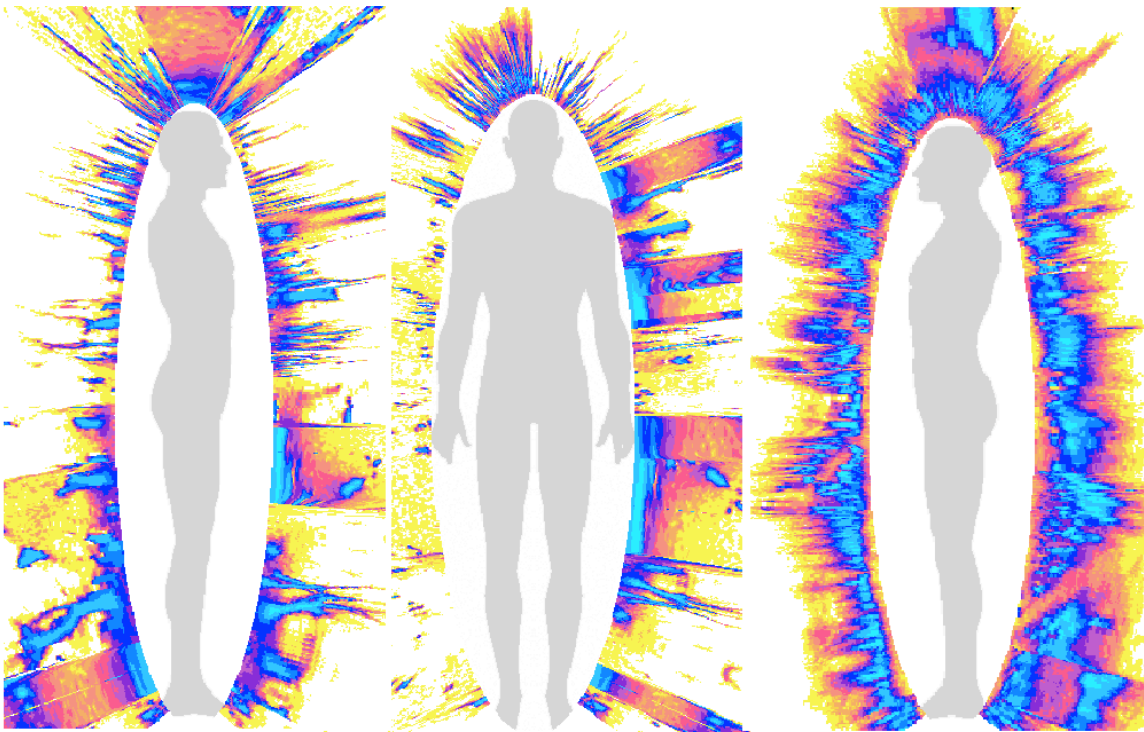
8-10 - a very high level of stress, the peak of excitement.

Stress level evaluation with Bio-Well instrument gives you an indication of a stress level. This evaluation is not for designed for medical evaluation.

Altered State of Consciousness

This is a very specific condition of a person which originates from various situations; on one hand from deep meditation, prayer, high level creativity, and then on the other hand, from influence of psychedelic drugs, narcosis, hypnosis, external mental influence and possession. In most cases, altered states of consciousness (ASC) are specifically represented on the Energy Field. Let us look at some examples.



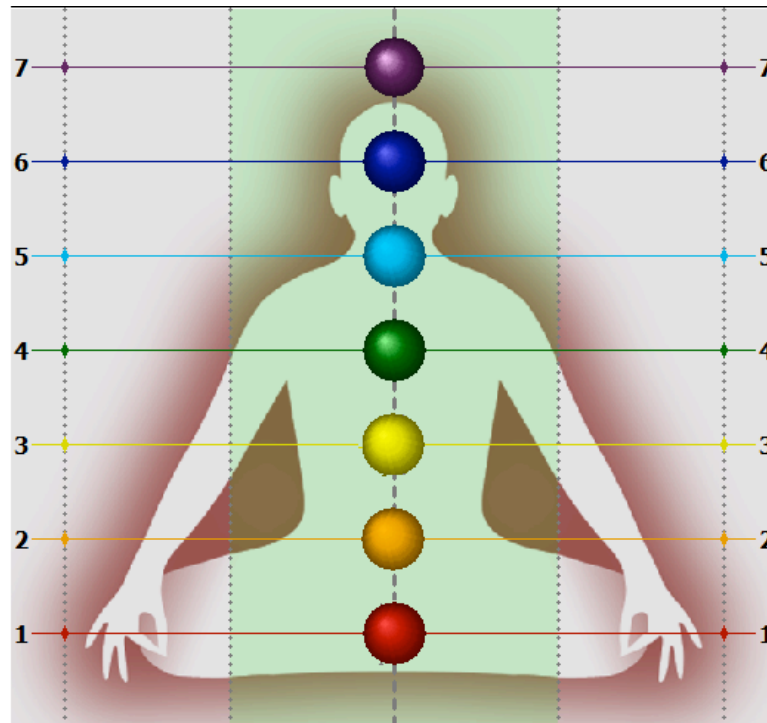


As we see from these examples, the ASC images are strongly distorted, left and right side are not balanced, and the overall appearance is clearly different from normal conditions. Altered states of consciousness are a topic of special consideration amongst neurologists and psychiatrists.

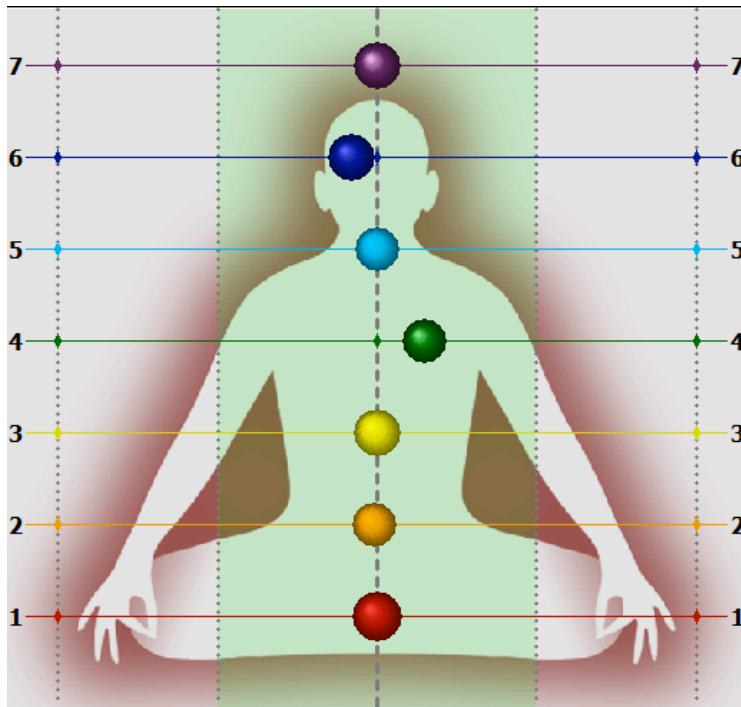
Chakra Measurement

According to Eastern metaphysical theories and principles of Ayurvedic Indian medicine, there are seven “Chakras” or integrated energy centers that are considered to affect physical, mental, emotional, and spiritual well-being. These energy “disks” are positioned or embedded into the spinal column at various locations starting at the coccyx and rising to the crown of the head. Each Chakra is considered to resonate at a different frequency level. With new Bio-Well software, it is now possible to quantitatively measure the energy of chakras and graphically display their level of activation, and indicate whether this level of activation is above or below the level found from large numbers of subjects.

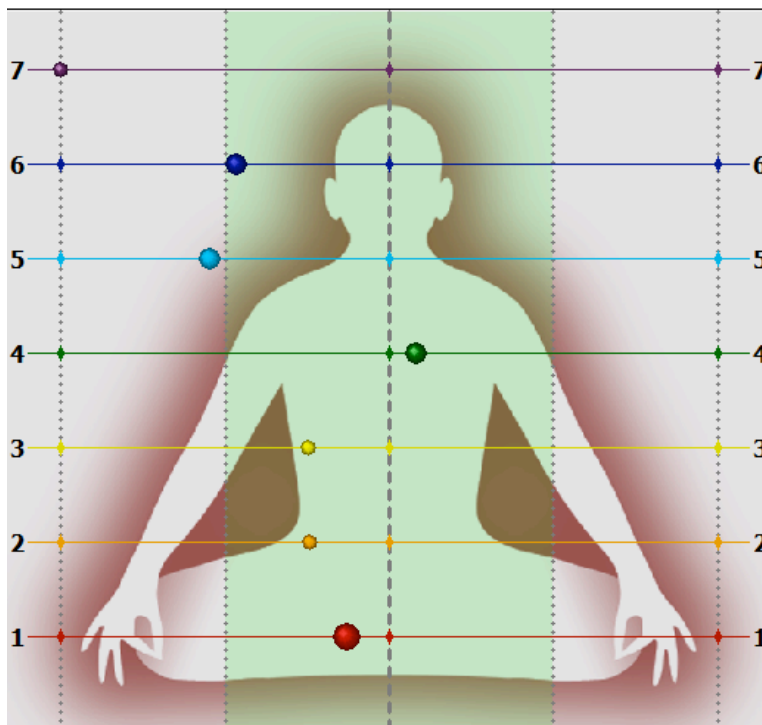
The most important evaluation aspect of Chakras is distribution. Ideally, they should be aligned along the Sushumna – the central line of a spinal cord.



Although it is not easy to find situation like this – typically chakras are shifted from the central position.

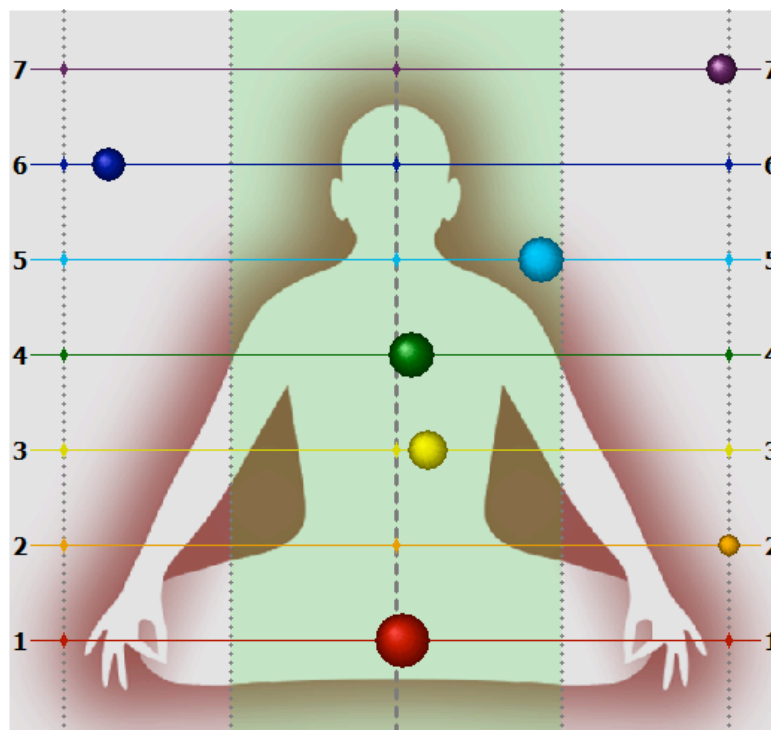


In this case, several Chakras are mis-aligned and their size is much less than an ideal case. When people have strong stress or depression, chakras may be out of order.



Chakra circles are small and situated far away from the central line.

Both position and size are significant during Chakra evaluation. Chakra analysis is usually related to psychological and spiritual conditions of a person, rather than physical issues. For example, in the image below, we can identify how well grounded that person is (Chakra N1 is strong and centered), their active emotional life (heart Chakra N4 is strong), with a noticeably chaotic spiritual development (upper Chakras N 6 and 7 are small and out of order). There also appears to be some problems with the reproductive system (Chakra N2). As you can see, the Energy Field analysis can provide a good evaluation of a person's condition.



Pressing the **Create Music** button allows specific generation of a particular Bio-gram music file. It may be saved in the computer and played using both from the computer and any music player. This is utilized for the Energy correction together with the special **BioCorr** device.

In Ayurvedic texts you may find descriptions of different properties associated with Chakras. Some materials are presented in the Report, generated by the Bio-Well program.

Health Status

The **Health Status** window is designed for analysis of the functional state of the human body, by calculating the integral parameters of energy distribution in the body and organs and for their comparison with reference parameters of a practically healthy person formed according to the database. The obtained data is displayed in a graphic as circle diagrams.

The typical energy level corresponds to the green ring in the middle. The inner circle is the area of **energy deficiency (hypo-energy state)**. The outer ring is the area of **energy excess (hyper-energy state)**. The diagrams are divided into the sectors related to a certain part of the human body. When you move the mouse cursor over the graph the program will highlight the current sector. Click the left mouse and the screen corresponding to the particular finger will appear.

IMPORTANT!

*To have the correct processing in the **Health Status** program, images should have the appropriate calibration, i.e. the camera should be calibrated in an appropriate way. Without calibration interpretation of diagrams *S* may be incorrect.*

Energy Status

The **Energy Status** program is designed for analysis of the functional state of the human body, by calculating the **Energy** parameter of the particular organ.

The obtained data is displayed in a graphic form as circle diagrams.

The typical energy level corresponds to the green ring in the middle. The inner circle is the area of **energy deficiency (hypo-energy state)**. The outer ring is the area of **energy excess (hyper-energy state)**. The diagrams are divided into sectors related to a certain part of the human body. When you move the mouse cursor over the graph the program will highlight the current sector. Click the left mouse and the screen corresponding to the particular finger will appear.

In most cases, both **Health Status** and **Energy Status** diagrams look similar, but in some cases they may be different.

Balance

This program presents same information as **Diagram J**, but in a different way. It shows energy parameters for different organs and systems for both right and left hand. This allows seeing not only the level of energy, but right-left **Balance** as well.

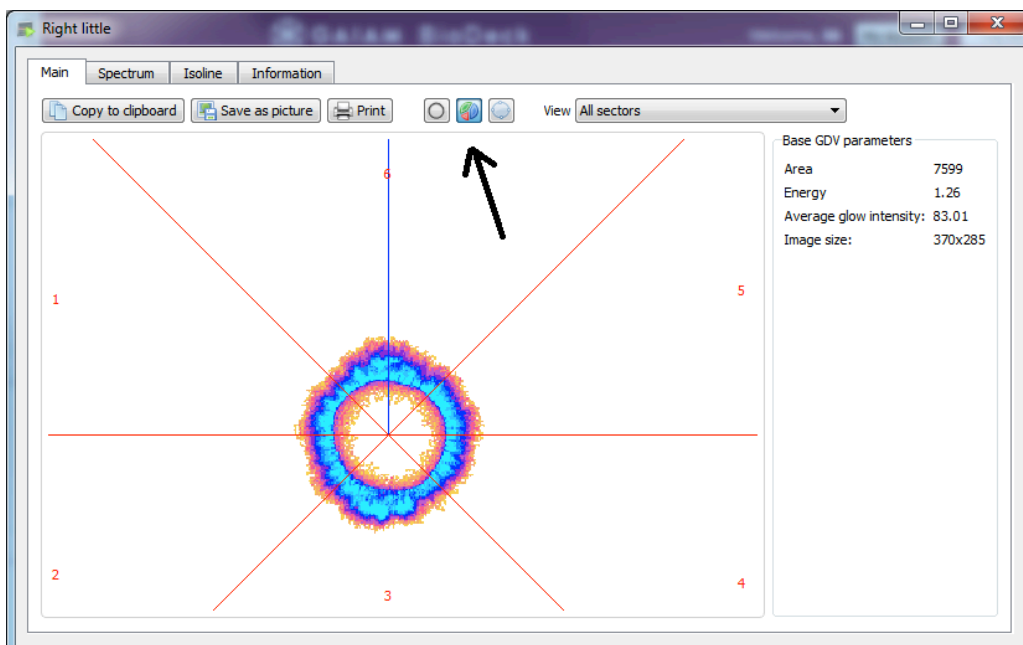
Screening

This program demonstrates particular sectors of different fingers related to body systems as well as to different organs. Numbers indicate the level of energy (in Joules). Colors have the following indication:

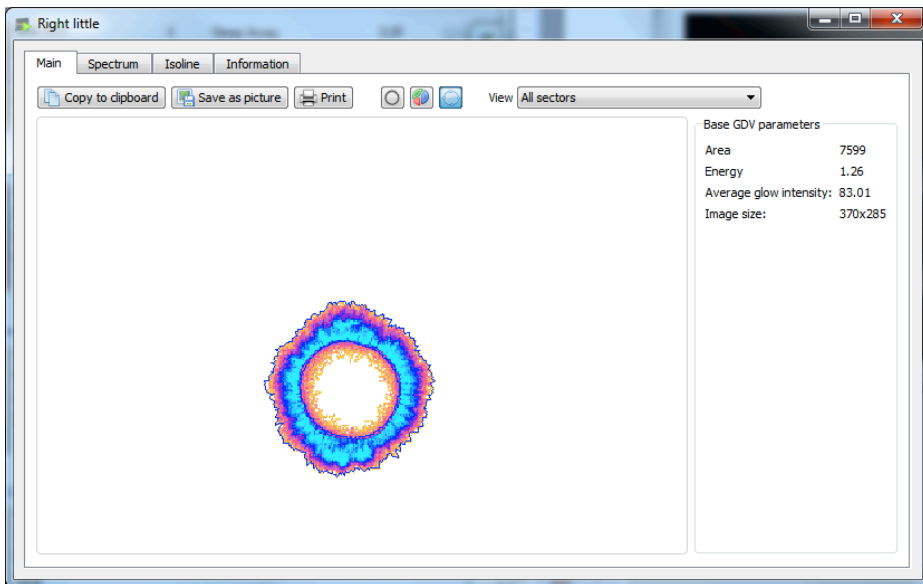
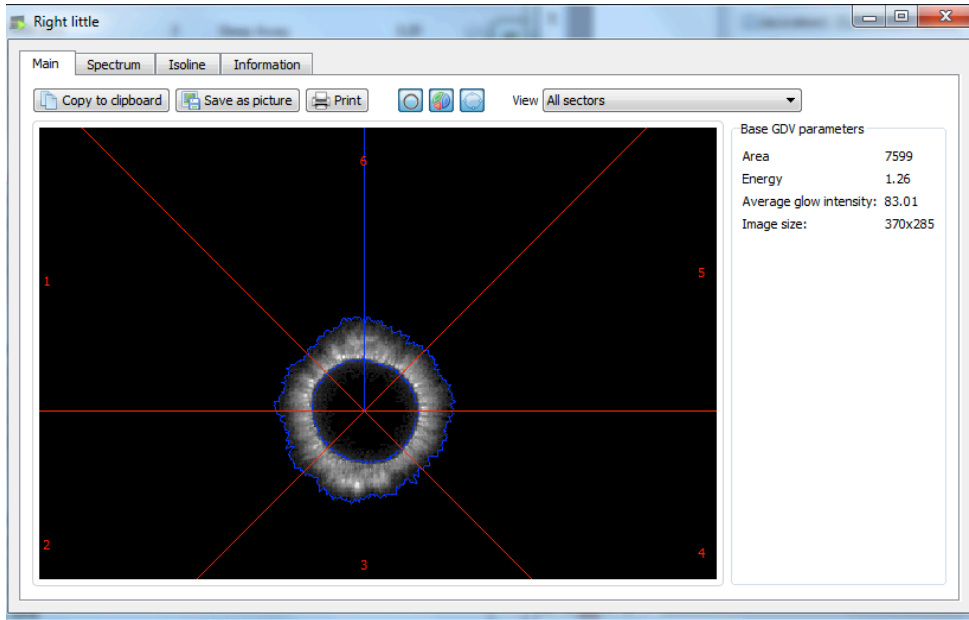
 Optimal condition  Energy deficiency  Energy blockage  Hyper Energy

Fingers

This screen demonstrates Bio-grams of all 10 fingers divided to sectors. Click with left mouse button on the particular finger to see informational screen.

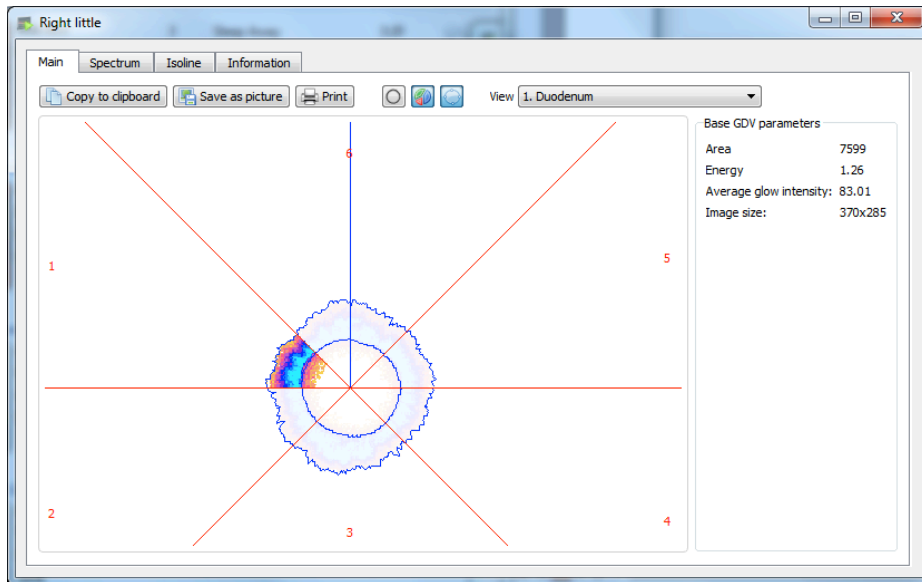


Buttons at the top (indicated by arrow) allow change in image presentation.



You may see the entire image or just a particular sector

The **Spectrum** screen presents the spectral distribution of the Bio-gram and related parameters. Intensity of light is measured in relative computer units from 0 to 255. This corresponds to the wavelengths from 480 nm to 800 nm (depending on the CCD camera used in the instrument).



Isoline screen presents sweep by degrees of Bio-gram inner and outer contours (see image above) as well as inner glow width.

The **Information** screen presents quantitative parameters for the whole Bio-gram and different sectors. Energy (corr) is calculated as follows:

$$E(\text{corr}) = E \times 360/a,$$

where E is energy of a sector, a – width of this sector in degrees.

Specific interpretation may be attributed to every Bio-gram as well as to every sector:

Smooth and homogeneous
Smooth and wavy
Bright and homogeneous
Blocks
Several lines (beard-like)
Tree-like structure
Porous and cloud-like
Separated dots
Space from the bottom line
Complete block

passive state
active state
energy excess
lack of energy
acute problems
acute problems
energy deregulation
hidden infections
old chronic problems
ASC (external influence)

Analysis

Stress Level

Stress level characterizes the *Activation coefficient*, which has the following interpretation:

Activation coefficient in range 0-2: absolutely calm and totally relaxed person, it could be for several reasons: deep meditation, complete inner peace; the effects of psychedelics; deep sleep in the peaceful phase; at the same time it may be the case of chronic depression or severe disease; we'll discuss this in the next part of the book.

Activation coefficient in range 2-4: normal, calm condition.

Activation coefficient in range 4-6: excited state, characteristic of active work, emotional excitement and tense activity. This state is typical in high-level managers, militaries and people with responsible jobs. It may be related as well to the high anxiety level. The state of permanent anxiety without relaxations may be the reason for serious problems.

Activation coefficient in range 6-7: there are at least four possible situations:

- Reaction to a previous stressful situation (unpleasant conversation, illness, car driving under stressful conditions, etc.). In this case, it is necessary to calm the patient and repeat the measurement after half an hour.
- Heightened nervousness, accumulated during long-term stress, emotional tension and autonomic disorder.
- People with special type of psyche, capable of switching rapidly from high excitement and nervousness to a calm state.
- Athletes in the moment of competition, actors at the performance, students at exams, etc.
- Children in a state of nervous excitement.

Activation coefficient in range 7-10: very high stress level, peak of emotional excitement.

Pay close attention to perspiration on the hands: wipe every finger with a tissue and repeat the EPI images taken for each finger separately. In any case, perspiration on the hands is a sign of autonomic imbalance.

If a patient with activation level 8-10 appears calm, this could indicate a dangerous situation: the person is on the verge of a nervous breakdown, so be aware and exercise caution.

Energy

Demonstrate the level of energy for the particular person both in Joules and in percentage related to the Database of apparently healthy people, measured from 0 to 100%.

0 – 20% - low energy (may be related to energy deficiency, as well as to meditative state);
20% - 60% - typical energy; 60% - 100% - high energy.

Balance

Characteristic of left – right balance of the body. These are important characteristics in evaluation of physical and mental conditions.

0 – 50%	- very low balance – indication of significant dysfunction;
50% - 70%	- low balance – indication of functional disorder;
70% - 100%	- typical.

Report

Preparation of printout for the customer. All information may be corrected. Pressing **Save** button allows to save document as PDF file.

Export to CSV

Allows saving all parameters for the processing in Excel, Math Lab or any other program.

Monitoring Energy Reactions

As we have demonstrated above with Bio-Well instrument, it is possible to track the transformation of one's Energy Field in the process of treatment with various modalities such as; exercise, meditation or any other activity. You may also test efficiency of different substances – food, medications, etc.

We have a special for you to do this – by using the “Bioclip” mode. The procedure should be as follows.

1. Insert Ti cylinder holder into Bio-Well window.
2. Connect Wrist Strap to the Ti cylinder holder.
3. Put Wrist Strap on your left wrist.
4. Press “Start” button. Wait until the line of the graph stabilizes at some level.

Now you may check the influence of different subjects to your Energy Field, for example, different products or medications. For this, you should take tested product (food, medication or potential allergen) in the right hand and see the reaction on the graph. If the line goes down – reaction of your Energy Field is negative; if the line goes up – this is a product for you!

This way you may select gemstones or jewelry, which are most beneficial for you, or for other people, select appropriate medication, food, water and avoid products, which do not serve your health and well being. Just by selecting appropriate food and water, you may greatly improve your health. Many people react to hidden weak allergens, which may be in ordinary products, smells or subjects in the environment. It is possible to find these allergens with a special blood test, but this may be done only in a special laboratory. With Bio-Well instrument, you may do it for yourself, your friends and relatives at home.

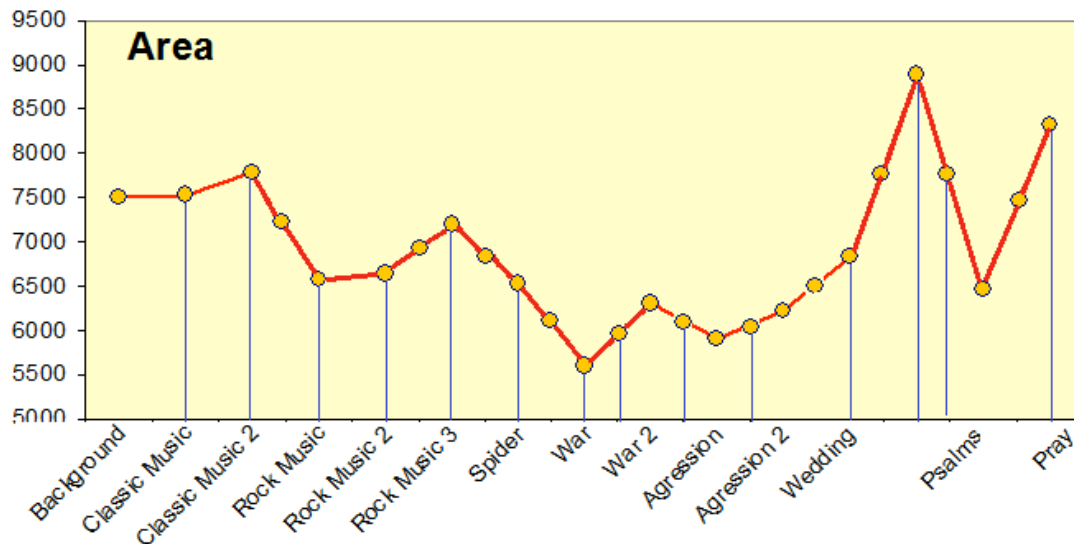
Important!!! Before you will be able to get real results, you need to train using neutral subjects, like a stone or empty glass; to be sure, you have no reaction. The

level of reactivity depends on the type of nervous system. For people with very high level of stress this type of testing may not be applicable.

Below you see an example of such testing (picture from the Bio-Well Data Viewer). From the beginning to the moment 1 is the time of setting: signal has reached a stable state. It took about two minutes. At the moment 2 a person got tested subject (a pack of cigarettes) in right hand. You may see clear reaction. After a person dropped a subject, signal came back to initial position.



In another test, a person was sitting before the computer screen, finger on the Bio-Well instrument electrode, while different sounds and images were presented on the screen. Between two images of different content, it was a neutral blue color screen. At the graph below you will see a clear reaction of a person being tested. With rock music, the signal dropped down – it was a negative reaction after classical music – but then slowly increased. With negative images, the signal dropped down even more, and the lowest response was to the image of war horrors; the highest reaction was to holy songs and prayer.



This way you may test the influence of any external stimulus to your Energy Field.

ENVIRONMENT SCAN

Environment scan is designed to record time dynamic of different processes using Bio-Well with connected supplements:

Sputnik sensor;
Water electrode;

Bio-Well instrument with “Sputnik” antenna allows you to monitor energetic time dynamics of the environment. These results may be significant for many variable reasons:

1. Testing different places, calm and turbulent energy.
2. Testing energetics of different places during particular astrological alignments and cosmological events.
3. Measuring energy in places of power – both natural and man made –temples, sacred sites, ancient cities, etc.
4. Testing geoactive zones, in particular, geopathic stress zones.
5. Detecting influence of emotions and focused attention to the environment.

To conduct a Dynamics scan, you will use the following items:

- Bio-Well Device
- USB Cable
- Bio-Well Software
- Sputnik Sensor
- Titanium Cylinder

The procedure should be as follows.

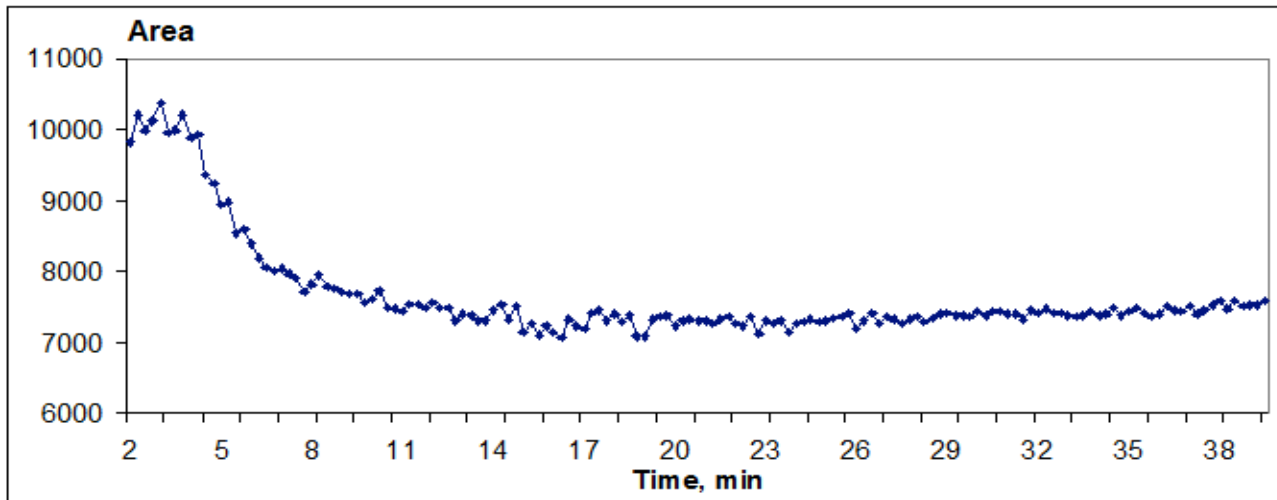
5. Insert Ti cylinder holder into Bio-Well window.
6. Connect Sputnik to the Ti cylinder holder.
7. Test the image in the Full Scan mode. It should look like a ring. In case of distorted images, check the Ti cylinder holder position and touch Sputnik with your hand.
8. Press “Start” button. It takes 3 minutes until the line of the graph stabilizes at some level.

It is well known that people feel differently depending upon environmental situations. In some places you sleep as a baby and wake up full of energy; in other places you have wonderful dreams and travel to beautiful places while you sleep. However, for thousands of years it has been known that the existence of specific locations where people do not sleep well, get sick more easily, or where performance is lower has been empirically demonstrated. What is the difference between all these places? Very little is known in Western science. It is clear that combinations of different causes compose the phenomenon. This is a combination of the influence from the Earth – underground anomalies, hollows, water streams; gases in the atmosphere, both natural and industrial; electromagnetic background; and the influence from the our galaxy- Sun, Moon and Cosmic rays. Now it is practically impossible to distinguish between all these factors, so we need a common denominator to evaluate the overall situation in the particular place. Only rudimentary evidence is available today, if such zones could be measured using an accepted physical apparatus.

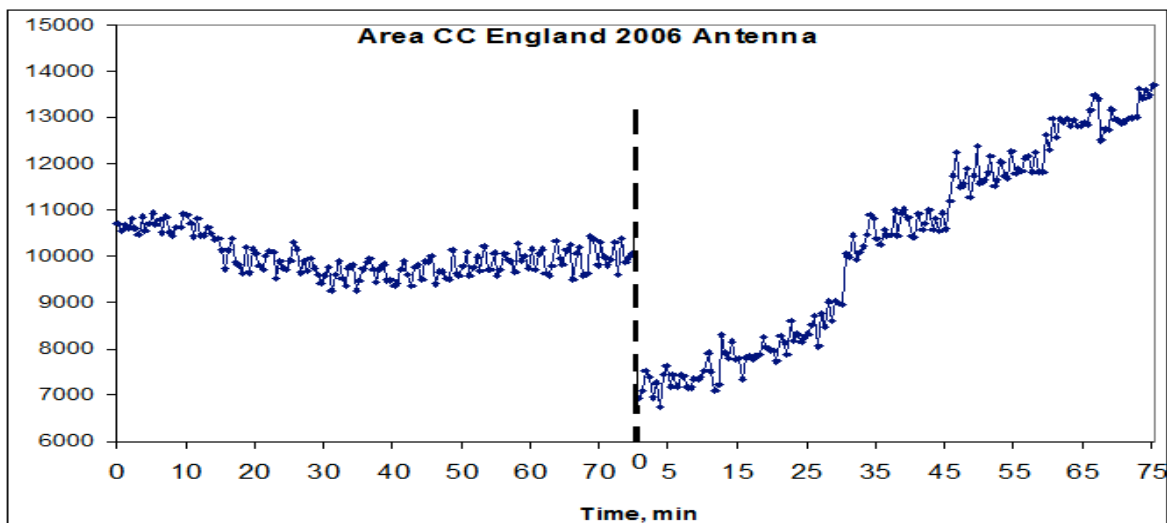
Bio-Well instrument provides this opportunity. Several years of research has confirmed the validity to evaluate the energetic dynamics of a situation in the environment. Expeditions to different parts of the world, such as: Peru, Colombia, India, Myanmar, Siberia, and many others demonstrated sensitivity of the instrument for evaluating environment. Scientific background has been developed and published in peer-review journals, patents

have been granted in several countries, and now this instrument has become available for public use.

The measurement must be taken for at least 30 min; maximum time is not limited. In a calm, peaceful environment, after initial setting for about 5-15 minutes, the signal becomes quite stable (please see the graph below).

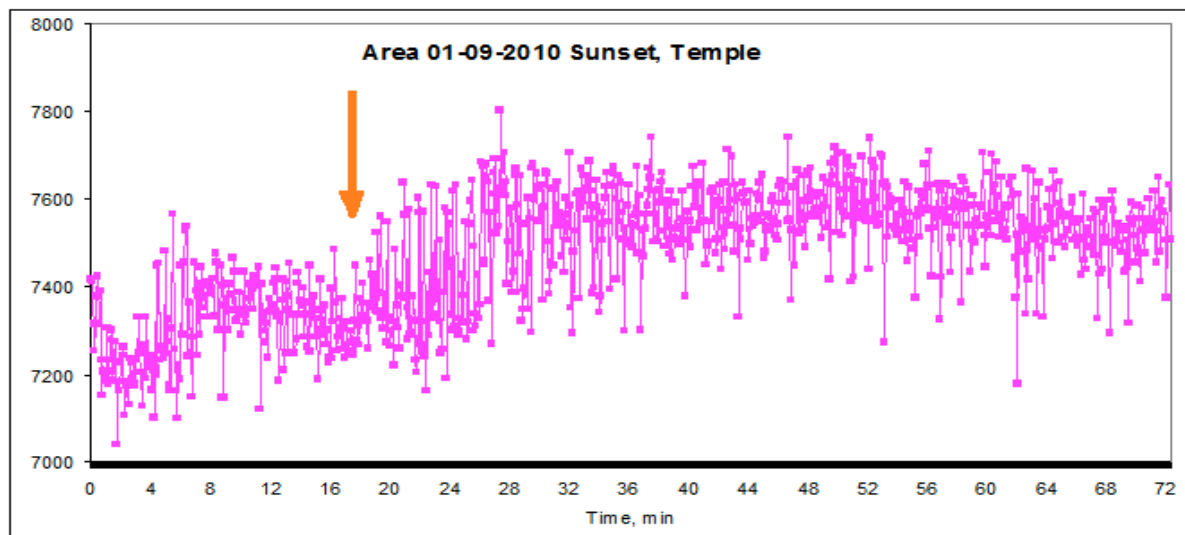


In the geoactive zones, variations of the energy may be very high. The graph below demonstrates the energy variation outside and inside the crop circle in England in the summer of 2006. As you see, outside the crop circle energy was quite stable, while inside it was increasing throughout duration of measurement.

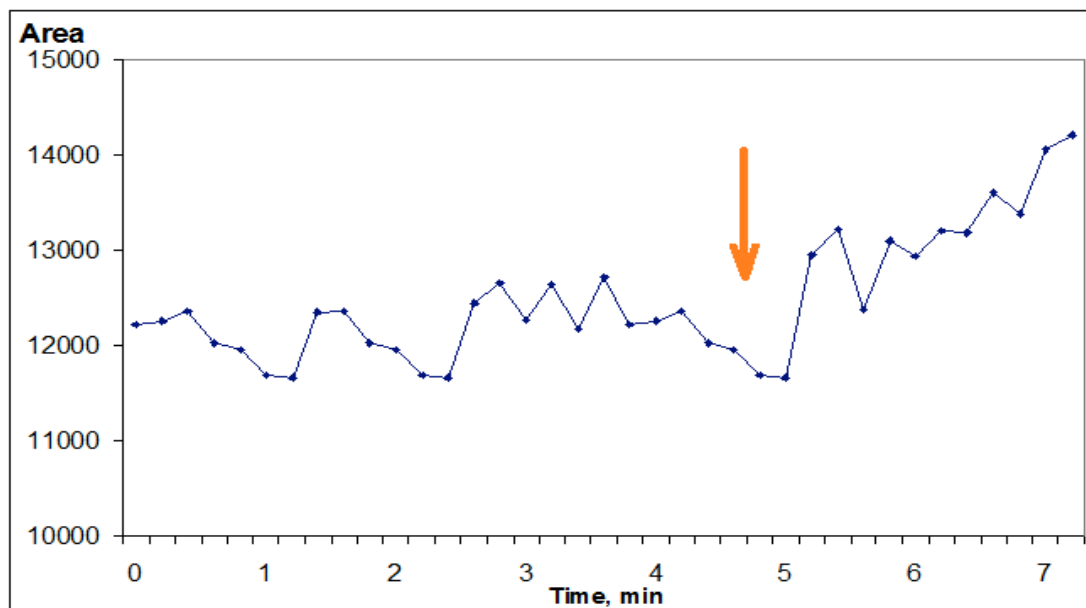


The same way one may detect the change of energy during sunrise and sunset (see graph below), or a coming thunderstorm. In parallel, you can measure and graph the progressive

transformation of the human energy field – of yourself and other people. This way you will see your own reaction to the changes in environment.

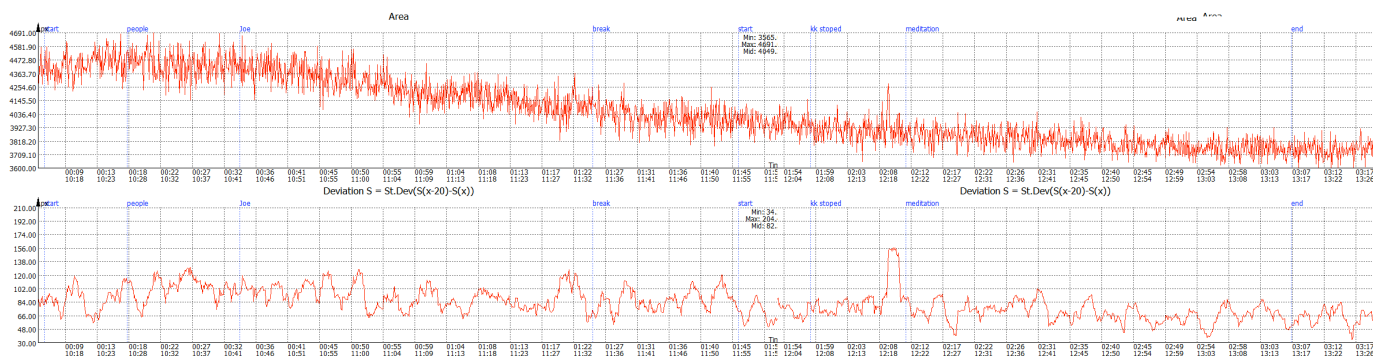


Another example demonstrates the profound influence of concentrated human attention to the signal of the “Sputnik” sensor. On the graph below, the arrow denotes the moment when a person concentrated his/her intention on the sensor to send love to humanity. As you see, this reflected a significant increase in the graph. This experiment was repeated many times and in most cases (in the case of deep concentration), the effect was significant.

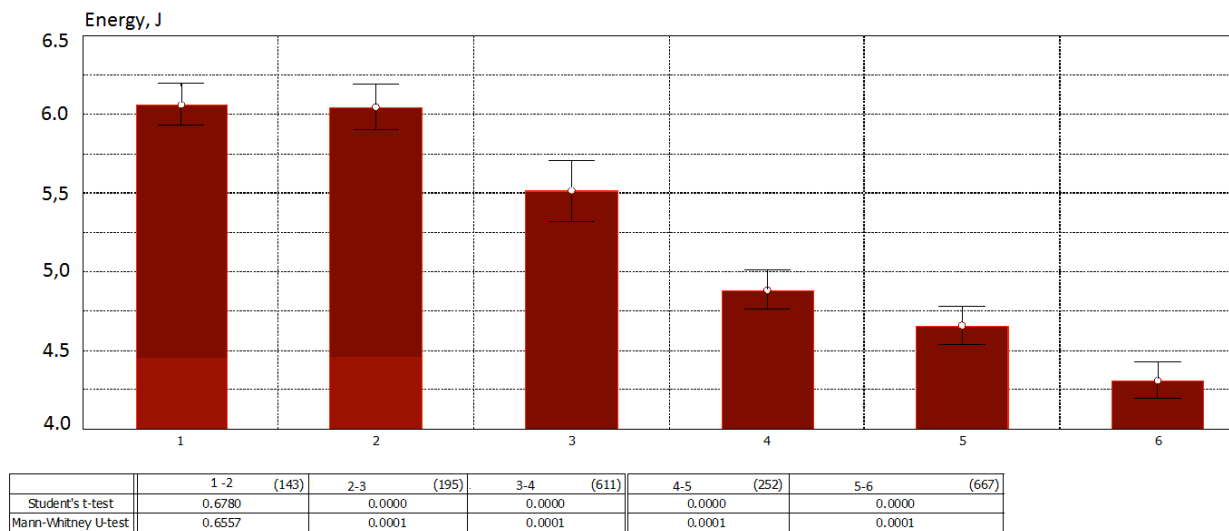


Measurements conducted during religious ceremonies, yoga meditations, public lectures, and musical performances statistically demonstrate the signal of the Sensor to significantly change during measurements and these changes are correlated with the course of an event.

Every 5 seconds the Sensor measures the time-line of several parameters and their standard deviation. To evaluate these changes you need to process data. Once the recording is finished, press “Statistics” button and place benchmarks for each the significant moment of the session (beginning of presentation, breaks, beginning and end of meditation, etc). The program calculates parameters for every marked interval and evaluates statistical difference between intervals. Data is presented as an Energy of light in Joules.



An example of time dynamics of sensor parameters:



Statistical processing of data 02-21 morning session 3 h 30 min. Intervals: 1 – beginning; 2 – Joe starts; 3 – Joe presents; 4 - break; 5.6 – meditation. Results of statistical processing are presented under the graph. Two intervals are different if $p < 0.05$. Numbers in brackets

indicate the number of experimental points in the particular interval (readings are taken every 5 seconds).

Testing Water

Insert standard Pt water electrode into water or other liquid and connect it to the Ti cylinder.

Take dynamic readings of water as described above.

Analyze time dynamic process of water and see its intercommunication with environment.

When water dynamics become stable, you may check the influence to water from different devices and human intention. See example below.



Fig. Example of water dynamics with the influence from imprinted device (marked by arrows).

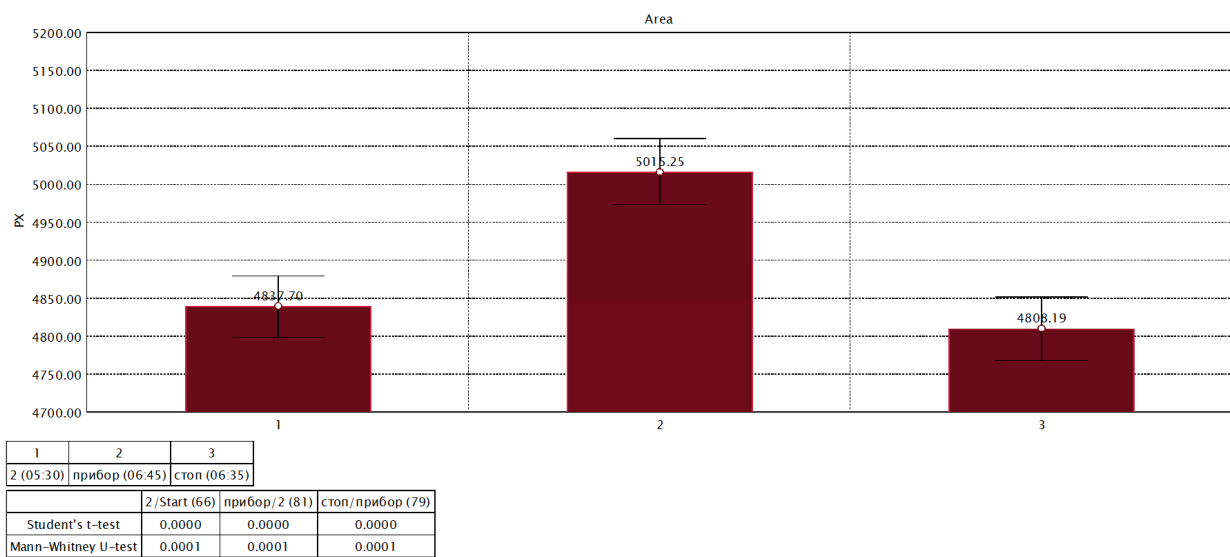


Fig. Statistical processing of the above graphs.

Conclusions

Presented above are descriptions which demonstrate the basic principles in using the Bio-Well instrument. Practical experience and different experiments will give you full confidence in using the Bio-Well instrument and you will find many interesting and practical applications for your well being, the well-being of your family and your friends.

The interdisciplinary applications to Bio-Well are under investigation and we need your feedback and advice for how we may improve this device and software.

Parameters of BIO-grams Used for the Analysis

The common image processing application packages cannot be used for processing BIO-grams, because the tasks are specific. Therefore, a software environment was developed for processing and analyzing BIO-grams, oriented towards the work in different problem domains. Adaptation for particular assessment is performed through a combination of optimal operations from the library for the given problem domain, selection of corresponding procedures, and (or) selection of optimal threshold values.

The following main algorithms are included in the library:

Pseudo-coloring. For visual estimation of the image, there are several algorithms of pseudo-coloring, oriented towards marking out several peculiarities of BIO - grams. The following types of pseudo-coloring are provided in the programs

Intensity palette – image points are colored in one of eight colors. The brightest glow points are colored in the shades of blue, less bright points are colored in the shades of red. Points are colored in yellow when the intensity is higher than the noise level, but lower than the base noise level for the given frame. All image points removed by noise filtration are shown as white background.

This palette is used for Energy Fields and Fingers.
For the particular finger, we use one more palette:

Original image – image as it was obtained from the video camera and saved in an AVI-file. A gray color palette containing 256 shades of gray (from black to white) is used.

Special programs are designed for calculation of the following BIO-gram parameters.

Total image area: the number of pixels in the image having brightness above the threshold.

Average Intensity is an evaluation of the Intensity spectrum for the particular BIO-gram.

Energy of the light is evaluated in accordance with the following principles:

Sensitivity of a CCD element was evaluated in [<http://ellphi.lebedev.ru/20/pdf18.pdf>]

as follows:

$$\frac{1}{S} = \frac{W}{I} = \frac{E}{s \times I} = \frac{4P \times t \times T}{\pi \times d^2 \times I},$$

where W – relative energy of a light source [J/cm²]; I – amplitude of a signal; E – energy of a light source [J]; s – illuminated area of a CCD element [cm²]; P – power of a light source [Wt]; t – exposure time [sec]; T – filter coefficient; d – diameter of illuminated area of a CCD element [cm]; $s = \pi d^2$; $W = E / s = P \times t \times T / s$.

For $\lambda = 424$ nm sensitivity of CCD element was experimentally evaluated as 4×10^{-10} J/cm² and it was increasing with decreasing of wavelength. It is clear that this parameter depends on the type of CCD and optical system being used. So we have made an experimental evaluation of the GDV instrument using a standard lamp with tungsten filament having power $P = 10$ W with relatively uniform field of illumination. For this lamp the area of illumination in GDV programs was $S = 61000$ pxl with intensity specter (J) from 55 to 255 with max at 160 and average 220.

From this the equivalent power of the light source may be evaluated as follows:

$$P(W) = S \times I^* / 61000 \times 200 \times 10 = S \times I^* \times 8 \times 10^{-9}$$

GDV image of a healthy person may have parameters $S = 10000$ pxl, $I^{aver} = 80 \Rightarrow P = 64$ mW. BIO-gram of a un-healthy person may have parameters $S = 4000$ pxl, $I^{aver} = 60 \Rightarrow P = 1.9$ mW.

Energy
$$E(J) = P(W) / t(s)$$

GDV impulses with $t = 10^{-4}$ s follow with frequency 1000 Hz for 0.5 s. So the time of signal accumulation at the CCD element is equal to 5×10^{-2} s, from this $E = 20 P$. For abovementioned cases it will be 1.28 J and 0.38 J accordingly. Equation for the Energy of Illumination in Bio-Well case may be presented as follows:

$$E(J) = S \times I^* \times 1,6 \times 10^{-6}$$

For simplicity we may accept:

$$E(J) = S \times I^* \times 2 \times 10^{-6}$$

Using this equation we may present both results of BIO-grams processing and the dynamic data in the units of the Energy of Illumination.

Scientific Background

Bio-Well instrument is based on the achievements of the Quantum Electrophotomics Imaging (EPI) GDV technique (www.korotkov.org, www.ktispb.ru) – innovative Russian technology developed in 1995 by Professor Korotkov group. The Electrophotonic Camera (EPC) instrument based on Gas Discharge Visualisation analysis is a state-of-the-art computerised system to study human energy fields. Using the Kirlian effect, this technique goes far beyond traditional Kirlian photography in many ways. The EPC system allows for direct, real-time viewing and analysis of changes in the energy field of humans and other organisms. The information gathered is quantified and analyzed by sophisticated software. This technology has extraordinary implications for all health related fields, including conventional and complementary medicine. Research with the EPC device is currently being carried out at universities and research institutes worldwide, in such areas as medicine, "energy medicine", athletic training, biophysics, parapsychology, and other areas. Recently a new application of EPC for Remote Detection of Human Emotions named “EPC Sputnik” has been developed. EPI has been used as the basis for significant research and in each instance, the reliability and value of the entire system has been confirmed.

- The EPI system has been presented at the USA National Institutes of Health to an audience of 27 world-class scientific investigators participating with Dr. Wisneski and Dr. Korotkov. This represented a diverse group of recognized experts from the US government and academic institutions.
- A Penn State study was conducted by scientists from the National Institutes on Aging, which validated that EPI could be used in high volume venues and accurately offer a consumer-friendly assessment of health status.
- EPI has also been the basis of graduate doctoral dissertations in various countries, which included research both in medical and technical fields.
- Dr. Korotkov has hosted a series of annual international scientific congresses in Russia during the last 15 years, at which scientists from 46 countries have participated in and presented their research outcomes in a variety of research areas, utilizing EPI protocols, including some significant studies involving early cancer diagnosis.

- The meta-analysis of papers published in English or Russian language from 2003 to 2007 was presented in “The Journal of Alternative and Complementary Medicine”. January 2010, 16(1): 13-25. *Korotkov K.G., Matravers P, Orlov D.V., Williams B.O. Application of Electrophoton Capture (EPC) Analysis Based on Gas Discharge Visualization (GDV) Technique in Medicine: A Systematic Review.*

Randomized controlled studies and systematic research reports were evaluated using Scottish Intercollegiate Guidelines Network and Jadad checklists. The search yielded 136 articles addressing four different fields of medical and psychophysiological applications of EPC (GDV). Among them 78 were rated “high” on the two conventional checklists. **5303 patients** with different problems were compared to more than 1000 healthy individuals. Conclusions: (1) The software and equipment EPC/DV-complex is a convenient and easy-to-use device, easily allows examining patients with various pathologies and, therefore, offers a wide range of applications. (2) The GDV method has shown itself to be very fast (i.e., it is an “express-method” for studying states of the human organism). (3) Our review has revealed that GDV method can be implemented as an express method for assessment of treatment procedure effectiveness, evaluating emotional and physical conditions of people, and in many other fields.”

- In 2008-2010 twenty three (23) papers were published in per-review Russian and international journals and 97 papers in the Proceedings of different conferences.

What is Energy?

Energy (from the Greek *énéргеia* – action, activity), is a general quantitative measure of any type of movement, activity and the interaction of all types of matter. Energy in nature does not come from nothing and does not disappear; it can only be transferred from one form to another. The concept of energy binds together all natural phenomena. The possibility of accomplishing work is also called energy.

Just as there are different forms of the movement of matter, there are different forms of energy: kinetic and potential, mechanic, electromagnetic, nuclear and so on. These divisions are generally well known. So chemical energy is made up of the kinetic energy of the movement of electrons and the electrical energy of the interaction of electrons amongst themselves and with atomic nuclei. Internal energy is equal to the sum of the kinetic

energy of molecular movement around the centre of body mass and the potential energies of the interaction of molecules amongst themselves.

The theory of relativity shows that the energy E of the body is inextricably linked to its mass m as in the equation $E = mc^2$, where c is the velocity of light in a vacuum. This means that in any amount of mass we have huge energy potential. The best evidence is an atomic or nuclear bomb where from little mass we directly extract energy.

Any body possesses energy, and this energy can transform from one type to another. The human body has a tremendous resource of energy, which may be used for physical, emotional or mental activity. We accept this energy from food, water and light. These are the main resources of life.

Biological life depends on using the energy of photons from the sun. This energy is converted into electron energy by photosynthesis in plants. Through a series of transformations in complex chains of albuminous molecules, this light energy is converted into our physical energy. Thus, biological life is based on light energy, and organic compounds serve as the working material for the conversion of this energy. The basic ingredients for all conversions are water and air.

Consequently, we are all children of the Sun, living on the light of the world, and we ourselves emit light!

According to classical physics, the energy of any system is constantly changing and can assume any value. According to quantum theory, the energy of micro particles, whose movement occurs in a limited area in space (for example, electrons in atoms), adopts a discrete series of values. Atoms radiate electromagnetic energy in the form of discrete portions – light quanta, or photons.

The Bio-Well instrument measures electron densities in human systems and organs, as well as the character of the stimulated electron currents. These electron densities are the fundamental basis of the physiological energy, so we can say with confidence that **the Bio-Well instrument makes it possible to measure the body's potential energy reserve.**

What is Human Energy?

Research converging from many fields of investigation indicates that the body is a complex energy system, rather than mere clockwork machine of biological gears and parts that is often espoused in conventional medicine. Examples of energy transmission within the body are *metabolic energy* conversions of fats and sugars into ATP (adenosine-tri-phosphate), *bioelectrical energy* triggered by charged ions, which influence the heart, nerves and brain, and *biophotonic energy* from ultraviolet biophotons, which are located in the nucleus of cells.

A precise definition of what we understand as "Energy" in relation to biological systems is a critical requirement if we want to successfully incorporate into a Western scientific paradigm, for those complementary medical approaches based on the Oriental notion of "energy transfer." Misuse of the term "energy" leads to misunderstanding and subconscious rejection of useful, practical applications. The latest biophysical quantum concepts can provide a conceptual understanding of the "energy transfer" mechanisms in biological systems at the level of the organism. These concepts create a basis for the biophysical explanation of Oriental notions of energy meridians, channels and acupuncture points.

The circulation and transformation of energy in biological systems provides the basis of life on Earth. Electron-excited states in complex molecular systems are the main reservoir of free energy in biological processes. These excited states are continuously supported at the expense of electron circulation in the biosphere. The main "working substance" is water and the energy source is the sun. A part of these electron-excited states is expended for the support of current energy resources in the organism. A part can also be reserved for the future, as it happens in lasers after the absorption of the pump pulse.

In other words, the notion of "energy" transfer, characteristic of the ideas of Eastern medicine and alien to most people with a European education, might be associated with the transport of electron-excited states through molecular protein complexes.

The Concept of a Biological Field

After the first experiments of Gustav Fechner, it became obvious that psychology is inextricably linked with physiology, where body and soul form a continuous and inseparable entity, a unified system that defines this particular human being as an individual in his/her social interactions, psychological and physical realities. When we accept the idea of a multilevel structure of a human being, we come to understand the inseparability of the psychological and the physical and the physiological parts. We may represent this connection by means of a simple diagram:

Soul => Brain => Nervous system => Physiology

or, in other words:

Spirit => Consciousness => Soma

Only when a person lives for his/her soul, enjoying the company of friends and relatives, enjoying his/her occupation, he or she can truly appreciate life, in all its fullness and perfection. That is why the concepts of spirituality and metaphysics inevitably penetrated the contemporary Occidental science and stimulated profound discussions at professional scientific forums.

“Psychophysicists should not try to avoid the concept of a soul. Soul incorporates intellect and mind, as well as the most important thing – the experience obtained from phenomena of the world around us... In other words, the difference between a professional and a specialist lies in the ethical core of the individual.”

This quotation is from a lecture by V.A. Ponomarenko, M.D., Professor, and Member of the Russian Academy of Education.

The accumulated experience of the past years supports a conclusion where the concepts of spirituality and physiology can be usefully reflected by studying of the biological field. The theory of biological fields developed by Alexander Gurvich in 1944 soon will have the seventieth birthday. Following the use of this term after by A.G. Gurvich, we use the concept of biological field not as a metaphysical abstraction, but as a measurable psychophysical object. The Bio-Well instrument is one of the several possible ways of studying a biological field.

The biofield of the organism has a holographic structure, but it does not represent a constant, rigid formation – rather, it is a living, fluctuating, breathing cloud, concentrated

in a particular area of space, but not limited by any rigid borders. The glowing halo around the body of an individual or his/her particular organs; for example, an image taken from a finger, remains constant and stable for a certain period of time and, therefore, two images taken with only a small delay will look almost the same. Now the individual starts thinking about how an upcoming meeting is going to take place – and the glowing image changes, it shivers and a gentle wave passes throughout the structure, touching its every section. They are like clouds – on a gloomy day clouds are stable, but we can detect changes even within this stability. Therefore, the biological energy of humans reacts to mental and emotional activity, and it can be useful for psychophysiological diagnostics of an individual's state.

Numerous publications by scientists from different countries have shown that the analysis of the Energy Field images allows registering the radiation activity from the biofield of any organism. Bio-Well imaging provides a convenient means for observing the dynamics of changes of an individual's state during his/her life, or under the influence of a therapy. These dynamics reflect the 'breathing' of the organism's biological field, in both physiological and psychological aspects. The natural character of the Bio-Well imaging changes reflects thoughts and emotions of a person. To date, the Bio-Well method is currently utilized for sensitive and precise methods for monitoring the state of human health.

In quantum physics, the energy field can be represented by a stress-energy tensor, which is not in Einstein-Minkowsky spacetime; it is to form structures in physical reality but only partly in physical spacetime. Modern quantum dynamics approach to understanding Energy Fields may be found in [Korotkov K., Levichev A. The 3-fold Way and Consciousness Studies, http://www.chronos.msu.ru/EREPORTS/korotkov_3-fold.pdf]. It is too complicated to present these ideas here, so we refer all interested readers to that paper.

Energy Fields, Meridians and Chakras

For thousands of years, health and longevity has been the subject of extensive research in all of the world's civilizations. Doctors, practitioners and astrologers tried to penetrate the mysteries of life and death. They developed concepts trying to explain illness and aging, temperament and character. The majority of these have been lost in the sands of time, and only faint echoes have reached us through scraps of manuscripts. These are the principles of the Earth, the energy of trees, grass and people. During the expedition to the land of the Sierra Nevada Indians in Columbia, we spoke to them in the language of energy, and they accepted us, opened their soul and sanctuary to us. Therefore, when we speak about energy fields, about meridians and chakras, we are using a language created by other civilizations – a language that, on an intuitive level, hands down ideas, which have been proved by the practice of thousands of years.

The Bio-Well instrument bridges the gap between logical Western science and the intuitive science of the Orient. It makes it possible to present the same phenomenon in different languages, in different systems, and to look at the same phenomenon from different points of view.

If you are familiar with the principles of Traditional Chinese Medicine, if you accept the ideas of meridians, energy channels and energy fields, then the Bio-Well instrument is for you – particularly since the concept of electropuncture is already well integrated into modern Western medicine. In addition, in any language it is possible to speak of energy measurements and of the energy potential of organs and systems. We hope that the data obtained through the Bio-Well instrument broadens that paradigm, giving it new content and a new language.

The Influence of Mental, Emotional and Spiritual Processes on the Energy Field

With physical instruments we measure physical processes, i.e. processes of the material world. That is why we can only measure the **influence of consciousness on physiological or physical processes**. This influence is conveyed along several channels, primarily through the cerebrum, which takes an active part in thought and emotion processes. The brain produces a cascade of chemical substances, which influence physiological processes, and influences activity of the central and autonomic nervous systems.

Any mental, emotional and spiritual processes immediately reflect on the Human Energy Field. This is one of the most sensitive methods for evaluating subtle processes of human consciousness.

For many years researchers in different countries using Quantum Bioelectrography approach have been measuring healers in Russia, Germany, the USA, and Slovenia, Candamblier priests in Brazil, shamans in Peru and Siberia, and Chinese Qi-gong masters. All these people transform in **altered states of consciousness (ASC)** in the process of practice and this condition is clearly presented on the images of Human Energy Field. ASC are the particular states, which a person enters during meditation, mental training, religious ecstasy, or when under the influence of drugs, psychedelics or anesthesia.

We support the idea that consciousness is a category of a different spacetime continuum, which does not belong to the material world. These principles of working on consciousness are largely modelled on the quantum mechanics paradigm, but clearly, this is only a superficial analogy. We are still a long way from understanding the working mechanisms of consciousness, taking into account not only its individual manifestation in each person, but also its collective processes. Human consciousness is a process of interaction between a person and a collective field, through which new ideas are formed, and the field is the place to which they return, contributing to the collective mind of humanity.

We have already left behind the idea that the brain produces consciousness like the liver produces bile. The brain is better presented as a receptacle, which reacts to the signals of the surrounding space, including signals from the collective field. Hairs can act as the

antenna of these signals, as they react to the external field and transmit these signals to the cutaneous covering, possibly with some intensification.

The heart is another organ, which takes part in the processes of consciousness. This is not merely a pump for blood, but an organ, which regulates the blood flow and, accordingly, oxygen, in all areas of the human body. There is data showing that after a heart transplant, a person takes on many behavioral characteristics of the donor. So we can conclude that the heart, at least, has a memory, i.e. it takes part in consciousness processes.

Modern science has only just begun to research consciousness. Following the remarkable insights of Fechner, Helmholtz, Jung and Freud, a significant process was set in motion to study the brain's neuron mechanisms, especially using modern methods of computer mapping. Yet we are still only in the early stages of the process of researching consciousness, and the most important thing now is the set of experimental data. Their meta-analysis at a specific stage will provide an awareness of new concepts and lead us toward a new understanding.

What does the Bio-Well Instrument Measure in Physical Terms?

The Bio-Well instrument is based on the stimulation of photon and electron emissions from the surface of the object. The stimulation is provided by transmitting short electrical pulses. In other words, when the object is placed in an electromagnetic field, it is primarily electrons, and to a certain degree photons, which are 'extracted' from the surface of the object. This process is called 'photo-electron emissions' and it has been thoroughly studied with physical electronic methods. The emitted particles accelerate in the electromagnetic field, generating electronic avalanches on the surface of the dielectric (glass) plate. This process is called 'sliding gas discharge.' The discharge causes glow from the excitement of molecules in the surrounding gas, and this glow is what is being measured by the Bio-Well instrument. Voltage pulses stimulate optoelectronic emission, while intensifying this emission in the gas discharge, amplified by the electric field created.

IMPORTANT NOTE

The EPI analysis and Bio-Well instrument is currently not certified as a method of medical diagnosis of specific disease. It is intended to provide guidelines to qualified healthcare professionals with full knowledge of patient history and concerns to assist in their design of an appropriate healthcare program. EPI makes it possible to analyze the energy state of a person and his/her autonomic status, i.e. to assess the condition of the body from the point of view of the functioning of the autonomic nervous system. In case of any health issues please consult your doctor.

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