

## A System Effect of Human Touch. Physical Aspects.

M. Krinker, G. Pana

[sevatronics@gmail.com](mailto:sevatronics@gmail.com)

[bioref@aol.com](mailto:bioref@aol.com)

Human personality is a complex multilayer system represented at all levels, from organic to emotional. Contacting 2 people contains a hidden combined interaction between all the levels of each the person.

This new virtual multilevel system, originated at the contact of 2 people, can be described both in terms of energy and information.

Considering  $n$ -levels system of each the person for  $m$  component interaction between the levels, we have to write down a total number  $N$  of combinations/selections as

$$N = \frac{n!}{m!(n-m)!} \quad (1)$$

If the total number  $n$  of human organs is, by some data, 613, one can imagine what the huge number is  $N$ . The minimal  $m$  can be not less than 2. Let's say, the component can form some subsystems of 2,3 ... elements.

There are studies of the joint phenomena in term of coherency of its participants [2]  
This approach is of a great interest and can be developed wider in its physical aspects.

Speaking of the physical component, we can suppose that the newborn virtual system of two people will be obeying the universal principal of minimizing the free energy –the Le Chatelier –Braun principle: *When a constraint is applied to a dynamic system in equilibrium, a change takes place within the system, opposing the constrain and tending to restore equilibrium* [1]. Contact of 2 people is always a stress and we can suppose that the newborn system of 2 people will be obeying this principle.

On the other hand, the informational component of the human contact obeys the universal principle of energy-information interaction expressed by V. Volchenko's diagram, Fig.1, [3].

The diagram shows a vital - non vital trend in terms of energy and information of any system. Systems having less energy but more information have more chances to survive. We have a lot of examples of that. While massive dinosaurs have died out, the microbes and primitive insects of that period survived. First computers was pretty massive and unreliable, occupying halls and were very unproductive if compared to modern computer means having much higher productivity, while fit a human palm.

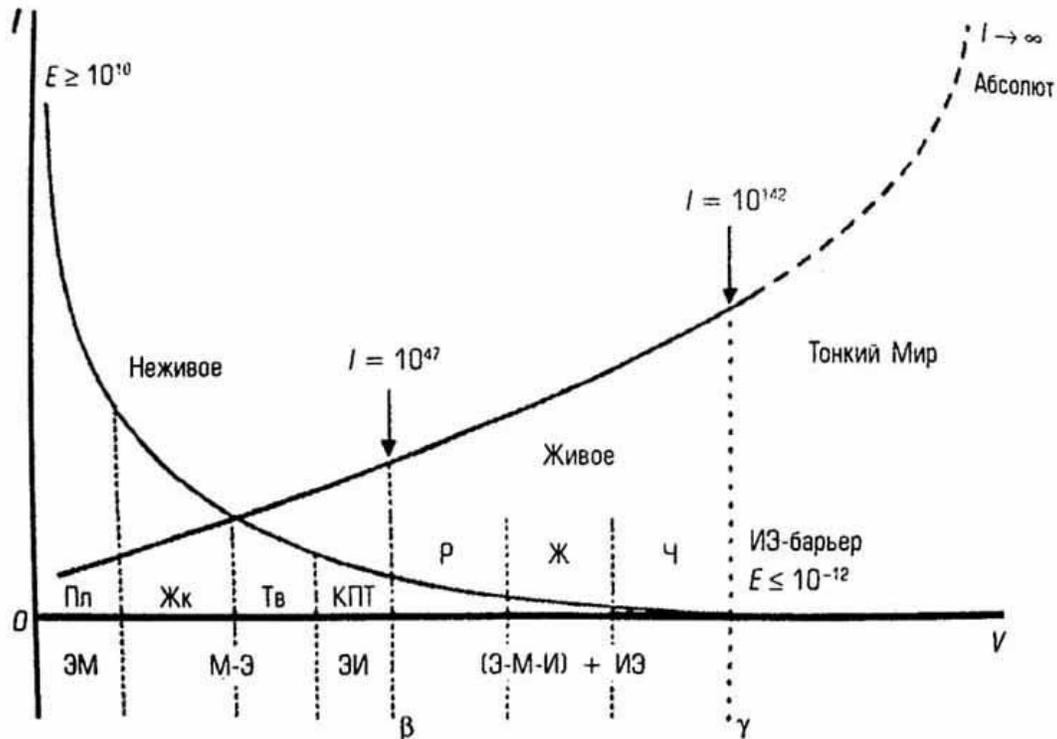


Рис. 9. Диаграмма-модель информационно-энергетического пространства витальности (IEV) Вселенной

Fig.1. V. Volchenko's Diagram. E -Energy, V-Vitality, I -Information.  
 Here: Неживое- Unanimated; Живое - Animated; Тонкий Мир -Subtle World  
 Пл -Plasma; Жк -Fluid; Тв- Solid State; КПТ - Computer Technology, P - Plants;  
 Ж - Animals; Ч -Human; ИЭ- барьер - Informational-Energetic barrier.

he system information of 2 people has its energetic equivalent, which can be measured as originating additional electric potential exceeding that of separated people.

### In-Vivo or In-Vitro?

Since the very initial development of this systematic approach, the authors raised a question regarding the possible principle difference between ways of the touch: a skin-to-skin touch or an electrically connected touch. The skin-to-skin touch has to be considered as an *In-Vivo* one, while the electrical connection of the participants with switches and conductors has to be considered as an *In-Vitro* one.

Speaking of the human contact, we have to stress that this is a multilevel phenomenon, as it was mentioned above. The emotional component plays a tremendous role in that, beside the electrochemical processes on human skin. The higher levels of this system hierarchy include such a phenomenon like a *sight beam*- electromagnetic radiation from

human eyes, discovered by Soviet scientists back in 30th of 20<sup>th</sup> Century. Human eyes irradiate 1.8 mm -2.1 mm wavelength electromagnetic rays, which can carry the emotional information [4].

Moreover, it was recently studied that a phenomenon of a mental tracing on landscape to reach the planned destination has a solid scientific base, called Psi Lines, which extend for many thousand kilometers [5]. We can suppose that *The Sight Beam* and *Psi-Lines* phenomena are interrelated.

By this reason, the experiments on the human contact have to be subdivided for the arms contacts related only and that including the eye-to-eye contact, in addition to the arm contact.

In this series of the experiments, the participants have to practice the arm-to-arm contact only.

### **The Experiment.**

For studying synergistic processes related to developing a new system due to the arm contact, the experimental installation was developed, Figs. 2,3. It includes a commutating unit. The unit allows separate records of the participants and their combined record, when they are connected in series, forming an electric circuit. The commutating unit connects the circuits to DATAQ DI-149/145 converter, which converts analog signals into USB format for working with computer. The input impedance of DATAQ DI-149 is as order of  $1-2 \cdot 10^6$  Ohms, which is important for the further experiments. Beside the commutating unit, there is an integrator, which allows estimating a qualitative component of the synergistic phenomenon.

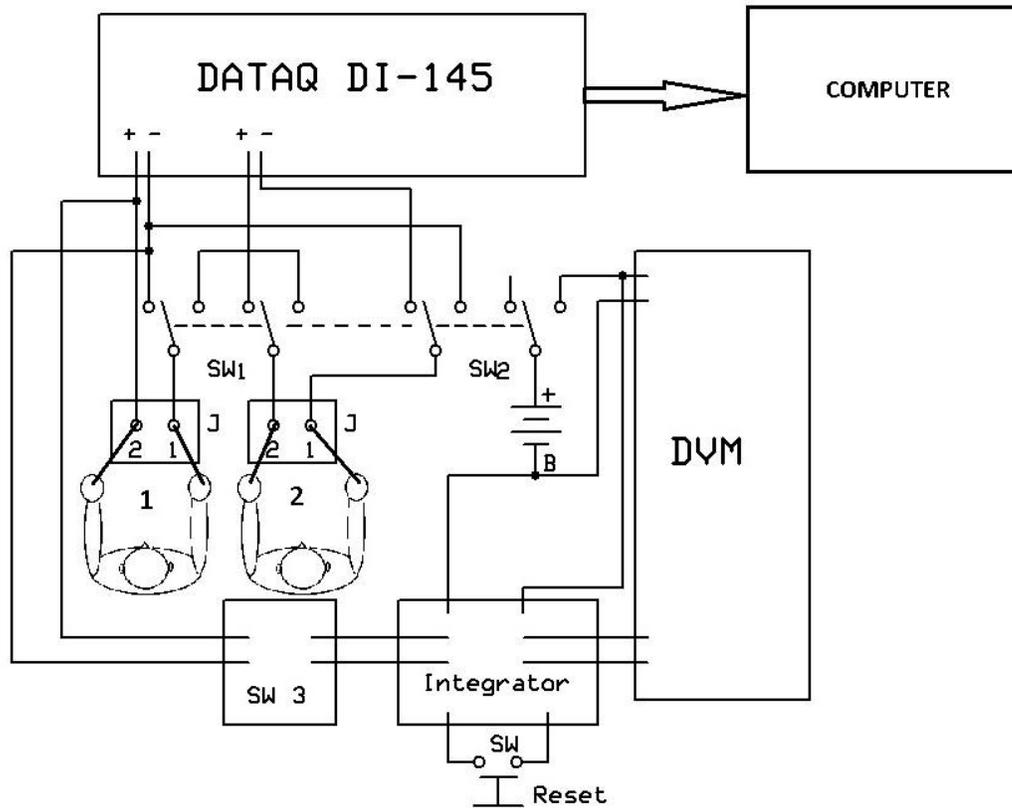


Fig.2. Unit diagram of the In-Vitro experiment of 2 touching persons, which are connected to the input of the switch unit. Switches SW<sub>1</sub> and SW<sub>2</sub> allow a separate record of the arm potentials at the shown left position, while switching to right connect the persons in series. Additional integrator circuit allows estimating the touching effect quantitatively with indication on a digital voltmeter, DVM.

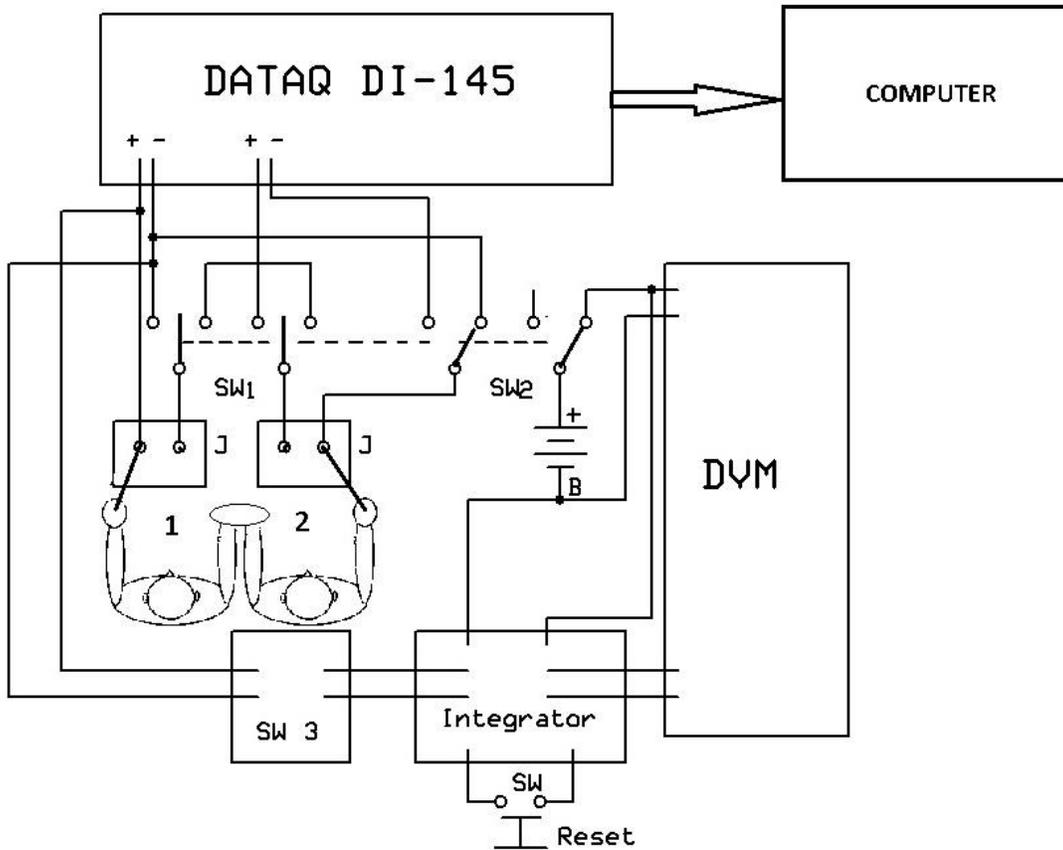


Fig.3. In-Vivo Touching Experiment. The participants 1 and 2 form a serial electric circuit due to a direct arm contact, unlike that of the In-Vitro experiment, where the serial connection was formed in a pure galvanic way. The SW<sub>1</sub> is deactivated in this experiment.

Figs. 4-6 show results of the In-Vivo experiments with 2 persons marked as G (female) and M (male). While Figs.4 and 5 show separated records of electric potentials between arms of the participants, Fig.6 shows a record of their arm-to-arm touching.

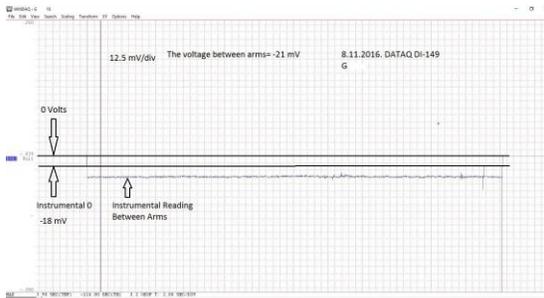


Fig.4. Separate record of the participant G.

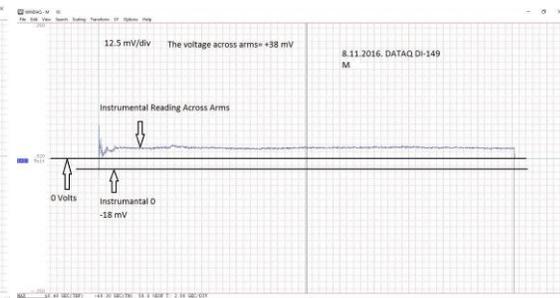


Fig.5. Separate record of the participant M.

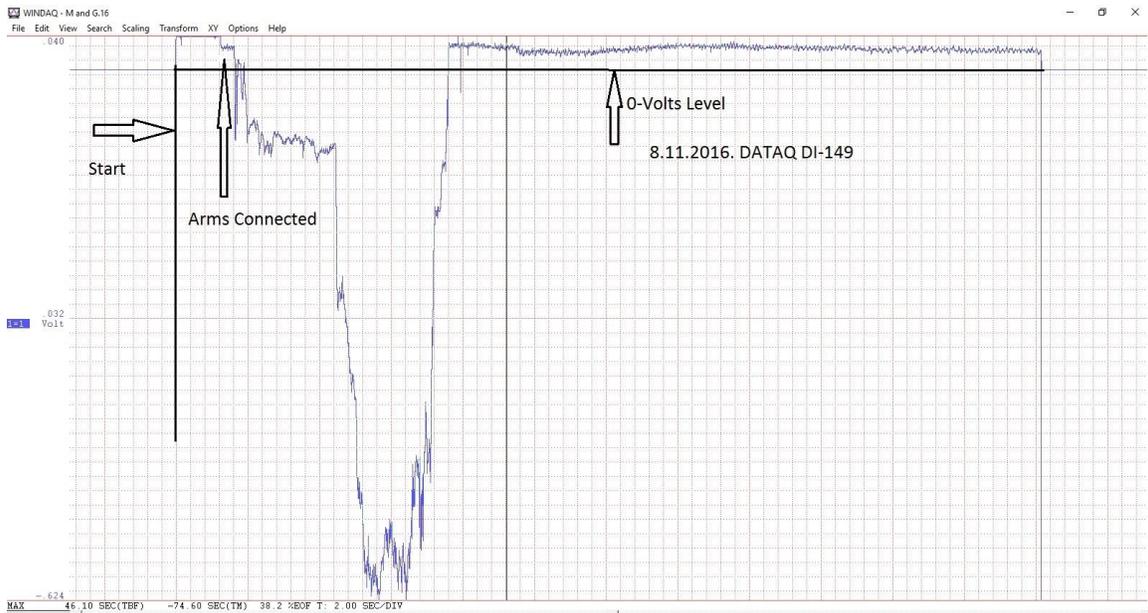


Fig.6. In-Vivo Experiment. Record of an arm-to-arm contacting participants G and M. The record shows generating considerable pulse at the moment of the touch. Its magnitude is 650 mV.

Figs. 7-8 show records for the same participants on other date in In-Vitro experiment. This record reveals some oscillations of the potential for both participants.

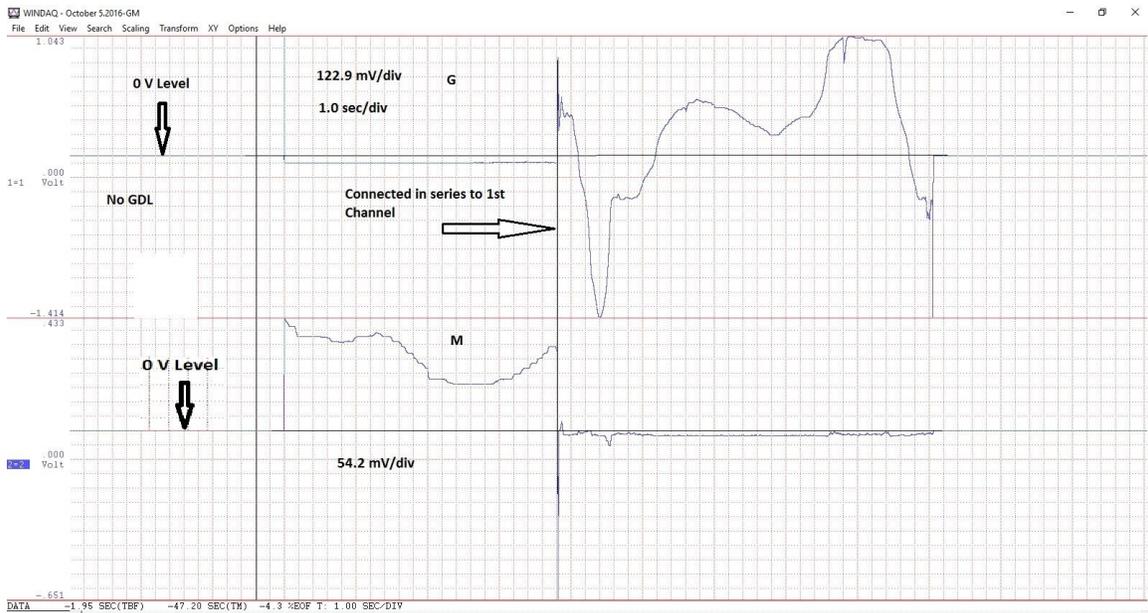


Fig.7. In-Vitro G-M Record for October 5<sup>th</sup> 2016.

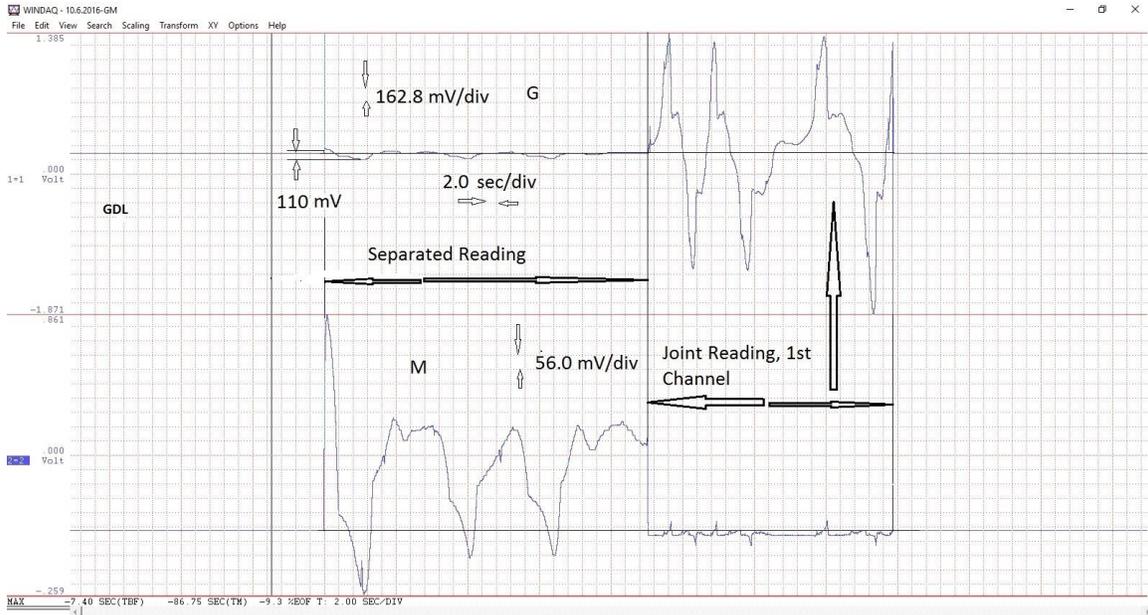


Fig.8. Another In-Vitro G-M record for October 5<sup>th</sup> 2016.

Figs. 9-10 show In-Vitro G-M record for October 30<sup>th</sup> 2016. In this experiment, the input impedance was reduced inconsiderably due to connected additional unit having  $3.3 \text{ E}+7$  Ohms impedance.

Fig.10 shows this process as a non-compressed form.

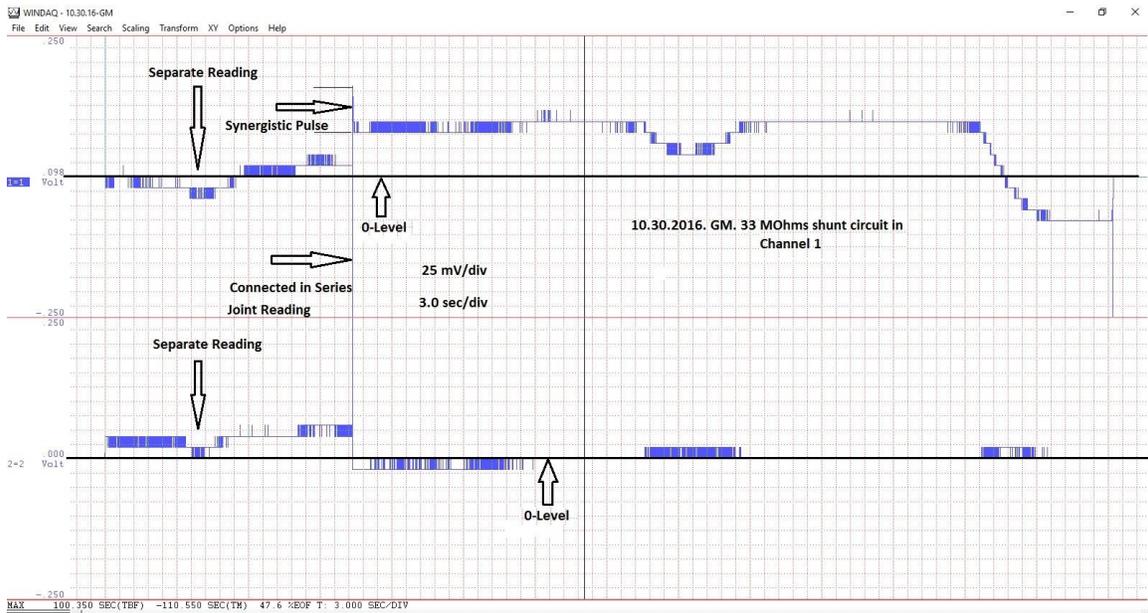


Fig.9.. G-M record for October 30<sup>th</sup>, 2016. The input impedance of the registering circuit reduced to  $3.3 \text{ E}+7$  Ohms.

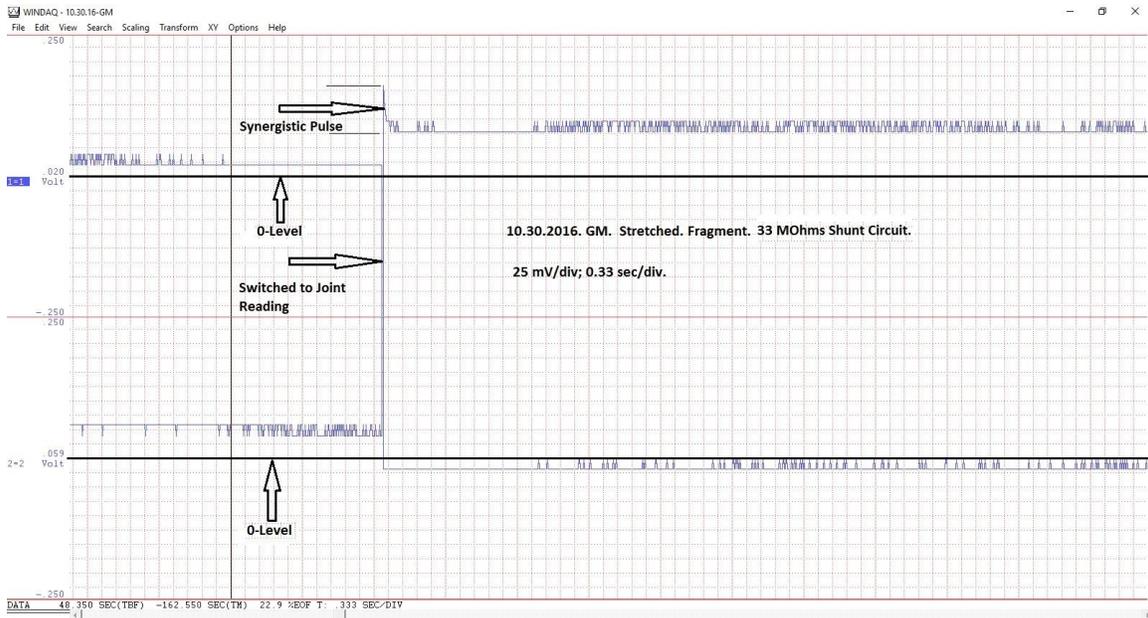


Fig.10. Non-compressed record of the experiment of Fig.9. The synergetic pulse is better seen at the moment of serial connection of the participants.

Fig.11 shows another In-Vitro record for other human system, where participant R is a female, while M remains like in the previous experiments.

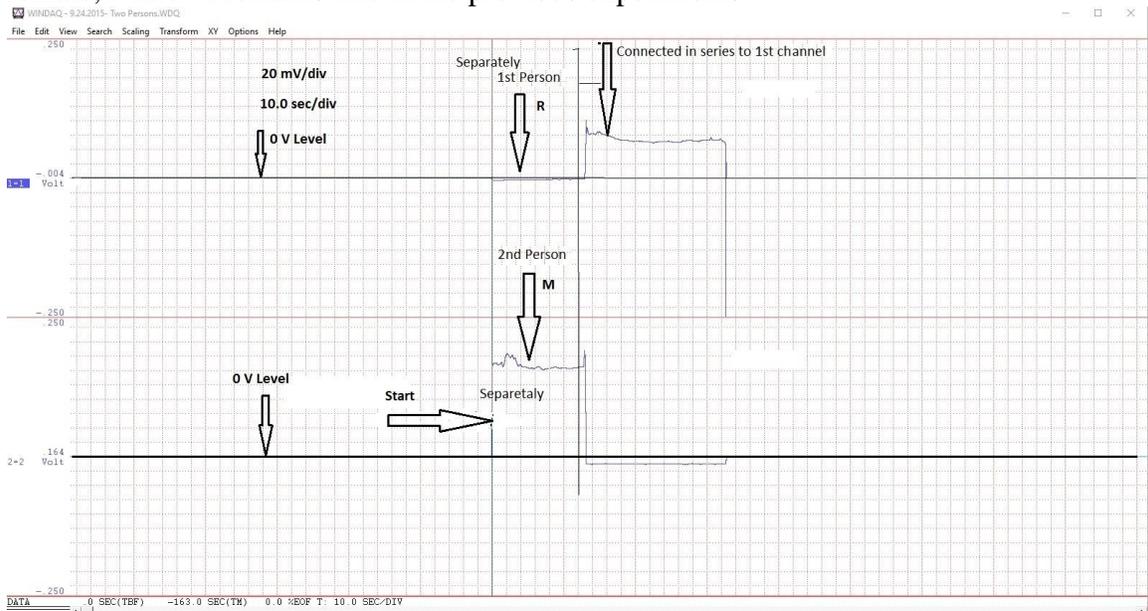


Fig.11 shows another record for other human system, where participant R is a female, while M remains like in the previous experiments.

### Discussion of the Experiments

All the experiments have revealed origination of the synergetic pulse at the moment when participants are connected in series to the measuring instrument. The character of the observed discharge of the pulse says about its capacitive nature, Fig.12. We see a considerable difference between Fig.6 for the GM arm-to-arm mode (In-Vivo) and their

electrical circuit touches/connections (In-Vitro). The emotional component of the In-Vivo (skin-to-skin) touch brings the additional energy to the process.

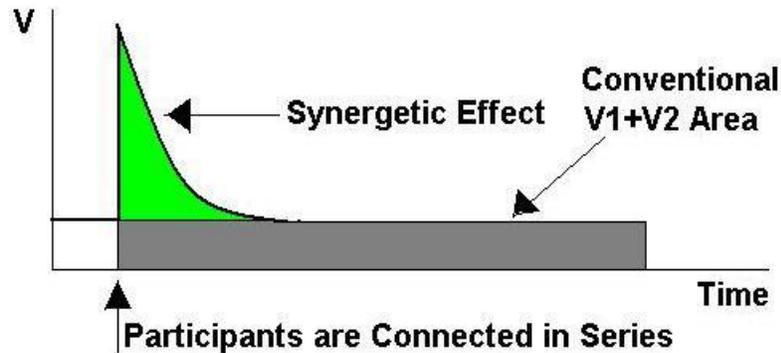


Fig.12. A generalized manifestation of synergetic (synergistic) phenomenon. When the participants get connected in series, the pulse of the excessive energy originates, while the conventional portion remains as a sum of their original voltages  $V_1$  and  $V_2$ .

The energy of the originated virtual capacitor,  $0.5 CV^2$ , is nothing but a system energy of the joint information.

Basing on the discharge processes of the synergistic capacitors, originated at moments of the touches, the following estimation of the capacity  $C$  of newborn systems and their energy can be done. Calculation of  $C$  is based on a time constant  $\tau = CR_{\text{discharge}}$ , which corresponds to  $0.37 V_{\text{peak}}$ , where  $V_{\text{peak}}$  is a peak voltage at the discharge of the capacitor. The  $R_{\text{discharge}}$  is accepted  $1.0 E+6$  Ohms, which exceeds the total series resistance of the participants. By this reason, this calculation has an approximate nature. Moreover, we can estimate the effective mass  $m$  of this virtual object as  $m = \text{Energy}/c^2$ , basing on the possible relation between the information and mass [6].

Fig.6 – In-Vivo GM:  $C=2.0E-6$  F; Energy=  $0.43E-6$  J.  $m=4.8E-24$  kg.

Fig.8 – In-Vitro GM:  $C=6.6E-8$  F; Energy=  $2.4E-9$  J.  $m=2.7E-26$  kg.

Fig.11–In-Vitro RM:  $C=15.0E-6$  F; Energy=  $1.7E-9$  J.  $m=1.9E-26$  kg.

It corresponds to conception of the Volchenko's diagram where subtle levels of energy are related to the considerable hidden information.

All the calculated masses correspond to atomic and molecular level.

**This pulse can be considered as a reaction of the system to minimize the total system energy at the stress (when the new virtual system of two people originates) according to Le Chatelier-Braun principle.**

**It has to be stressed that, unlike inanimate electric circuits of 2 series RC sources, the first voltage spike, originated at the contact of 2 people, can exceed a**

**sum voltage of 2 separated participants. This is a manifestation of synergetic effect.**

Speaking formally, this relates this synergetic phenomenon to the excessive spike of electromotive force (voltage) originated as inductor is being connected to a source of the voltage.

We can suppose that the oscillations, observed in Figs.7 and 8 are nothing but a difference of heart pulses. Indeed, if one person has a heart pulse rate 72/min, and other person has 75 /min, then their difference will be 3/min, that is a period of superimposed pulses is 20 sec. We see the values of this order in Figs.7 and 8.

### **Triboelectric or System Effect?**

The triboelectric effect is generating electric charges due to frictional contact of different materials. People experience some the triboelectric effect due to friction between the skin and close.

However, the accumulated charge experiences the discharge due to a natural leakage through  $1 \text{ E}+6$  Ohms instrumental impedance even before contacting the participants and, by this reason, can't affect outcome of the experiment.

### **Literature**

1. *Dictionary of Physics*. Edited by Valerie Illingworth, Penguin Books, 1991.
2. Rollin McCraty, Mike Atkinson, Dana Tomasino and William A. Tiller. *The Electricity of Touch: Detection and measurement of cardiac energy exchange between people*. Heart and Math Institute
3. <http://biohacker.narod.ru/diagramma.html>
4. B.B. Kazhinsky. *Biological Radio Communication*, p.63 (in Russian)
5. Jeffrey Stuart Keen. *Psi-Lines, Chaos, Spirals, Magnetism, and Entanglement*. NeuroQuantology, September 2012, Volume 10, Issue 3, pp.416-427.
6. Laszlo B. Kish, Claes-Goran Granqvist. *Does Information Have Mass?*  
[www.arxiv.org/abs/1309/7889v1](http://www.arxiv.org/abs/1309/7889v1)