

September 22, 2012 from 12.00 to 12.15 – Sala 9 ID n° 83 –

***Earth Magnetic Field (EMF) and Cosmic Radiation (CR) in CNS Functioning, Cause of Mental Disturbances and Diseases***

## **Introduction**

The characteristics of Earth, as a planet, is the existence of EMF and CR. EMF is a medium in which the bioworld lives and it magnetises everything that can be magnetised in biosphere.

Production and moving of electricity happens due to the existence of CR and EMF. Electric fields occur thanks to CR which, by ionisation, produces electrons and ions in magnetosphere, i.e. in biosphere. A part of unabsorbed CR comes to the very Earth's surface and into the Earth crust.

The CR's quantity of electrons production mainly depends upon oxygen concentration.

EMF and CR are the most important factors in the external environment interaction – bioworld's evolution.

Molecules in the bioworld are characterised by susceptibility and electric conductivity and EMF gives them magnetisation.

The natural electric field source and potential differencies in a cell and its surrounding is of periodical character. Fields can be considered as quasi stationary, while electricity is direct. Magnetic fields and temperature have a substantial effect upon movements of electrified particles. In this way «potential differencies occur from around 50 mV to around 70 mV in front of and behind a cell's membrane» (lit.10).

Substances out of cell are transported by magnetic force lines (drift) in the cell. M field of organelles causes convectional movement of content. Separately, molecules enter cytoplasm and, selectively, into organelles. There happen biochemical reactions, temperature, electric voltage and magnetic properties change. Because of the magnetic properties change, movements directions change, too, so we get convectional movement of the substances of the opposite direction. For example, K – Na – ATP pump.

## **THE CENTRAL NERVOUS SYSTEM (CNS)**

Our senses register all our experiences, then the relays of reticulo thalamic tract and, finally, the multi layered cerebral cortex.

Cosmic radiation (CR) produces electrons and ions which move through neuron nets. Brain contains ten times more oxygen than other organs, making its potential high. Therefore, the current flows all the time towards autonomous organs and peripheral nerves (lower potential). In this way brain gets rid of the redundant potential and body has electricity.

Since micro electricity is made wherever there are neurons because they are enriched with oxygen, CR makes clouds of electrons and ions which move by axons, all the regions being connected with nervous fibres. In this way we get movements directions of micro electricity, in all directions, what is manifested in the form of inhibition effect of one neuron upon other and the opposite – micro electricity of the same direction produces excitation. We think that this is the clear explanation of the different behaviour of neurotransmitters, since the same ones behave both as inhibitors in one part of brain and as excitators in another brain region. Therefore, all this is enabled by micro electricity, as well as by excretion of neuro transmitters. This excretion of various neurotransmitters comes from different regions in CNS, i.e. cells,

with axons and synapses being with different electric, magnetic, biochemical etc. properties.

Magnetisation centers are in the nucleus of all cells and the strongest are in the neurons, because they have a very thin cytoplasm, most oftenly none, but only the cell's nucleus.

Proofs that nervous cells magnetic forces are the most important characteristics for CNS functioning are following:

1. Low EMF affect the astronauts in cosmos brains in that way that they cannot remember their past experiences and have to write them down. The reasons are low quantities of EMF on higher altitudes.
2. Effects of high EMF upon CNS are, also, the appearance of «polar lunacy» with people who spend long time in the Earth poles.
3. Blood insufficiency in brain causes some regions to stop functioning normally (after brain stroke). Reducing the brain's temperature of diseased region causes strengthening of inter molecular magnetic properties in neurons and there are no functional brain damages.

«CNS neurons use glucose (G) as energy without insulin (lit. 1), what clearly points that magnetic properties are stronger in neurons comparing to all other cells of an organism which needs insulin as a carrier, because together (glucose and insulin) get stronger magnetic properties and in that way they enter the cells.

G is a significant paramagnetic. The proof for it is that in blood 6% of glucose connects hemoglobin – Fe, in fact, magnetite. With the increase of G in blood this percentage increases proportionally.

## **Brain Amplifiers (BA)**

Neurons in pyramidal tract have been found as gigantic pyramidal cells. There are, as well, giganto cellular neurons in reticular excitational region. These gigantic neurons are amplifiers of the somatosensors and brain micro electric coded currents in the pyramidal motor cortex and in the reticular excitatory pons and mesencephalon region. As their dimensions are big, they have much stronger magnetisation, that is why they work as BA for the nervous impulses.

## **Brain Condenser (BC)**

It is known that we know about cerebral cortex functioning the least, although it is the largest part of the nervous system. «Lamina cortex – a multi layered and columnar vertical cortex structure have six layers of neocortex... and ten on fifth to ten on sixth colonar substructures» (lit. 5). This kind of layered construction of various dielectric constants, enables the cerebral cortex to function as BC which fills and empties the organism representing a rules of CNS functioning. The quantity of electrification in BC changes depending on the brain state, for example, in the awaken state it decreases because micro electric currents decrease and in the slow wave sleep charge quantity in BC increases.

The slow wave sleep occurs because in awaken state BC has got empty, so then occurs deep sleep and all body functions minimize, while CR generates electrons and ions all the time filling BC. When BC if full, brain goes into the REM phase of sleep characterised by fast eyes movements, dreaming and activity of muscles, because the excess potential appears in BC lasting from 5 – 30 minutes and returning every 90 minutes. CR has regenerated the excess of electric potential in BC, so the electricity is spent for the organism's activities in the REM sleeping phase.

«Cycles of sleeping – being awake have not been explained so far» (lit. 1). We hope that the explanation about BC is clear.

## **Brainwaves**

«The question of electroencephalogram (EEG) origin is still opened» (lit. 5). In fact, a clear proof of everything presented is EEG. Electric registration of EEG shows a continual electric activity in brain.

«Brainwaves intensity on the scul's surface range between 0 – 200 micro Volts per second and their frequencies over 50 Hz» (lit. 1). Brain waves are mostly irregular. Clear approximate appearance of brainwaves is a shower of CR, which are also of various intensities and frequencies, being one oscillation in many seconds up to 50 Hz, i.e. irregular.

**Alpha waves** are with frequencies 8 – 13 Hz, and their voltage is usually around 50 micro Volts, than brain is in awaken state and inactive.

**Beta waves** are with frequencies 14 – 80 Hz. This brain activity increases frequencies of breathing, heart activity and impulsive supply of brain with oxygen. In the extensive CNS activity (awaken state) spending electric energy is increased, so the fall of voltage decreases.

**Delta waves** with frequency below 3,5 Hz occur in a very deep sleep, so the BC on this occasion fills up because electricity consumption is minimized. Breathing frequency, heart activity and impulsive oxygen supply decrease, and CR increases voltage to 200 microV.

Detection of alpha waves, when eyes are open, shows that occipital lobe drastically decreases voltage (uses more electric energy) and increases frequency (increased impulsive supply of oxygen to CNS), while closed eyes save electric energy, so waves with higher

voltage and lower f appear. Having said this, we have fully explained EEG.

Transection of nerves fibres from thalamus to cortex does not cause blocking of delta waves in cortex, therefore, delta waves continue to be produced in cortical neurons, what points that the dominant generators of micro electric potentials are in the six layered brain cortex.

## **Psychic Functions**

CNS consists of complex electric and magnetic activities. All these activities in neurons have bioelectrical and biochemical basis, being perception, thinking, emotions, learning and remembering (lit.9).

Thinking, consciousness, memory and remembering are still unexplained (lit.1).

**Memory** (learning and remembering) is a dynamic property of brain as whole, it is everywhere in brain, in fact, it is a coded magnetisation of neurons.

**Learning** by senses puts into movement a wave of electrons and ions, causing the synthesis of proteins in brain. There are two phases. Memory, which is created within a short time after learning occurs by electrons. Electric currents, originated from the senses, stimulate neurons in brain to magnetise weakly and it quickly disappears (lit. 9).

For long lasting memories creation another wave is necessary after repetitions. In this phase, the dominant carriers of movements are ions which stimulate protein synthesis, and these are molecules in the form of magnetic dipoles which hook one to another and change the organisation of synapses in brain, representing a long

lasting memory created by electronic and ionic currents in the cerebrum cortex (lit. 9). External effects – sight, hearing get into the cortex by microelectric currents created by electromagnetic fields which magnetise neurons.

Because of the additive magnetisation property, by repeating impulses of sensory currents, the magnetisation intensity is increased by magnetic induction in neurons and synapses, representing long lasting memory. As external sensory input via periphery receptors give coded (natural) electric impulses, it is normal that neurons magnetisation is also coded.

**Recall** – by external action on peripheral receptors or by association, a coded electric impulse is produced again what, resonantly, in neurons increases the coded magnetic induction (magnetic flux is changed) what creates micro currents in brain which are going into the senses (sight, speaking and motoric), and that is recall.

**Spontaneous activity.** Spontaneous brain activity characterises a high neuronal magnetisation, because reactions are automatic. Currents from brain produced by potential of 10 – 100 micro Volts, with frequency ranging from 0 – 50 Hz and intensities of several micro Ampers, what depends on the brain conditions (lit. 5). Therefore, after long time of learning and exercising we have created the recognisable individual «styles» and behaviour.

With the wrong learning there can occur wrong understandnig and attitude manifested in the form of paranoid behaviour of people.

**The induced activity** of brain is aroused by newly received information, what induces potentials in cortex neurons from 2 – 3 microV (lit. 5), producing very weak currents which, also, give a weak induced magnetisation in neutron nets, representing weakly memorised information.

All this is manifested in the form of our consciousness which we define as follows:

Consciousness is a micro coding electromagnetic wave created by electronic and ionic ultra low frequency (ULF) brainwaves, nets and aroused by methods of association, then by external affections from senses and internal interneuronal magnetic fields created by induction in the process of memorising and inherited instincts in the brain neuron nets (lit. 9). Thoughts created in this way for reproduction are BA. Electromagnetic component being created by brain ULF electronic and ionic currents from brain neuron nets is strengthened.

In CNS there are centers for all functions as well as inherited ones, like for example, motherhood, hunger, thirst, sex etc. Neurons of these centers are codedly magnetised by EMF during their creation (forming) yet in uterus. Specific senses (sensors for stimulation) after birth produce micro electric impulses which in neurons of certain centers create, through resonant electric fields, returning micro currents which are the response of CNS to external stimuli (what is completely the same as with the memorised information which automatically return to our senses). This micro currents stimulate motor functions, which satisfy the inherited necessities of an organism.

Even before a child's birth we can develop love for a certain kind of work which the person will perform in his or her life, what means that the person can be formed with inherited talent for various fields of work.

## **ENORMOUS VARIABLE MAGNETIC-MAGNETIC, ANOMALOUS ZONES (VM-M, Az) FIELD AS MENTAL DISEASES CAUSE**

Mental disturbances and diseases appear in the places with high intensity Az, being a product of our lack of care while organising life in our living spaces.

**Measurement Results.** The instrument used for presence of Az measurement is «protonic magnetometer». The resulting vector intensity of the total magnetic field was measured. While the variable magnetic field, as perturbation field of EMF was detected as: very little present or very noticeable, i.e. they are relative values.

The main aim of these measurements is finding the correlation between Az and the location of the disease appeared, i.e. the person's head. The presented figures show states of Az on the beds used for day and night rest by mentally ill people. Appropriate hatching on the figures separate Az with very notable variable magnetic field.

**Fig. 1 and 2: Correlation (C) head – Az is clear**

**Fig. 3 and 4: C head – Az is conformed. Fig. 4: shows a patient with Parkinson's disease.**

**Fig.. 5: C head – Az is clear. Fig. 6 and 7: Limited time does not allow explanations**

**Fig. 8 and 9: C head – Az confirmed**

Each figure has its specific explanation, but because of our limited presentation time we are not able to present them all.

We have four examples of measurement of VM-M field of people with epilepsy (diagnosed given by professional health

institutions in Belgrade). With each one of them an increased VM-M field was detected (unnatural). They were all moved away from the Az into the natural EMF for their night and day rest. With none of them the signs of epilepsy returned after that.

The examples presented in this work points that this pathological state is caused by Az with very notable VM. After a long time spent in Az, disease appears. It is also clear that moving the diseased person away from this Az is very helpful both to the doctor and his patient in the later's recovery.

Authors of this work perform measurements of VM-M fields at homes and working places of people more than 23 years. On the basis of our observations and followings, we have noticed the following: in the places where Az are very notable, CNS of the people who use them are badly affected, so very oftenly quarrels, misunderstanding and even divorces occur. It has also been noted that students who spend time in the relatively healthy environments, or spaces with natural values of M field are very nice and diligent, less nervous than those who spend most of their time in Az places. We have also noted that, probably, there are optimal intensities for intellectual work, being of around 44000 nanoTeslas (what we have found in a great number of examples as a rather impressive proof).

THANK YOU FOR YOUR ATTENTION

**Figures 1–9.** The state of increased EM-M fields in beds used by people with mental disturbances.

**Fig. 1** presents the Az with significant EM, from where an ill woman was moved away in 1988. Until 1988, each year she used to have psychic crisis and she had to undergo a hospital treatment. However, from 1988 she has been using a bed with no Az, i.e. spend her night and day rest in the natural field having no recidives until today, i.e. the person has completely recovered.

**Fig. 2** shows the Az where there was a significant EM, from where an ill woman was moved away in 1989. Until 1989 she had mental problems until and was, from time to time, treated in hospital. After moving away from the very significant EM fields, she has not had any psychical problems.

**Fig. 3** presents the EM-M field condition in a single bed of a mental patient from Pančevo. The head area is encompassed by Az with a very significant EM field. My explicit suggestion was to move the room furniture and place a new bed into a new location where space would be with no enormous increases of EM-M field. This was done, but what is the health condition of this woman, now, I do not know.

**Fig. 4** This patient was treated because of Parkinson's disease for over 15 years. It is characteristical that, from time to time, he used to change the place of his night rest (3 times) and every time he was placing his head into an extreme Az.

**Figs. 5, 6 and 7** belong to a three-membered family (mother and two sons) from Lazarevac. In 1992 I performed measurement of the mother's bed (Fig. 5) and found very high increase of EM-M field over the entire bed. A significant, remarkable Az with a very notable EM field was registered in the bed user's head area. This person was very depressive and nervous with frequent and strong headaches, and had been treated for many years by psychiatrists. After moving furniture and placing bed into the space with no Az, all disturbances disappeared, she stops with all the therapy and today is a completely healthy person. In the same year, I explicitly said where and how to put her children's beds, who were 9 and 10 years of age. However, from to me unknown reasons, the younger son places his bed by the opposite wall from the one I suggested to be the location of both sons' beds, and uses the space with significant Az in his bed (Fig. 6), while the older son uses the space with no Az (Fig. 7). I performed these measurements in November 2002. The younger son is 18 now, and has developed, as a young man, a very bad kind of characteristics regarding his moral side, way of thinking and temper, what has been noticed as an unpleasant picture by his surrounding, i.e. his behavior has been marked as a delinquent character. The older son uses a bed in the same room, but by the opposite wall where the space is with no Az (Fig. 7). This natural field has contributed that the young man forms into a person with very diligent and nice character. He is an excellent pupil, caring towards his family members and neighbors, he won the first place in

former Yugoslavia dancing competition, and wins medals at European contests. Among his own generation friends and companions, he is treated as a very respectable and admirable person. From these three examples it is not difficult to draw a conclusion.

**Fig. 8** shows the Az with a very significant EM field encompassing the space in which the bed user's head is placed. This person was treated at a psychiatric clinic in Belgrade in 1944, when measurement of EM-M field in the bed he had been using until that time took place. The correlation connection of Az and the disease location is obvious. We immediately moved furniture and placed a new bed into a space with no Az. The person, until today, has not had any kinds of mental problems, and 17 years have passed.

**Fig. 9** shows the Az encompassing the space in which the bed user is placed. This bed's user is a woman who used to have psychical problems each year, and several times she was treated at hospital. All this was happening until 1995, when I performed measurements and placed the bed into a space with no Az. For four years there were no recidives. The correlation connection of Az with a very significant EM field and the head location – brain, was obvious. In 2000, considering herself to had recovered, without our agreement, she went to her cottage out of town and to seaside, paying no attention in what kind of EM-M field she slept, her mental disturbances returned.

