TO THE QUESTION ABOUT THE STRUCTURE OF PHYSICAL VACUUM AND PROBLEMS OF COSMOLOGY

Viktor Kovalenko[1]

[1] Kherson national technique university

Address for Correspondence: Victor Kovalenko, professor, doctor of science

E-mail: v.kovalenko.1309@gmail.com

Abstract. The influence of a water sample location on the character of informational impact aftereffect in relation to the content of the latter as well as to the withdrawal moment of the tested sample from the spot of influence after its cease was studied by method of laser emission scattering.

It is determined that depending on the variant of water sample withdrawal from the spot of influence correlation or anticorrelation of time dependencies of total concentration in test and withdrawn samples took place which is connected to interaction of their own spin cluster configurations through torsional field of physical vacuum (PV).The observed interaction confirms the conclusion drawn earlier that water possesses consciousness i.e. ability to think.

The given results imply that forming of PV torsional field is determined by its polarization by external torsional field (mental influence, torsional field of water). Informational transfer about cluster structure between water samples by means of PV torsional field indicates its spin nature which testifies veracity of PV phyton structure conception.

The ability to memorize the influencing PV information indicates that it is an informational field by which its higher hierarchical levels "manage" the birth of matter out of vacuum, its evolution in a manifested way according to the theory of physical vacuum.

Based on the known PV properties and given experimental findings the inference is made that many unsolved problems and dead ends of modern cosmology are conditioned by false interpretation for the nature of the red shift of galaxies emission spectra and failure to recognize the contribution of torsional interaction of cosmic objects born by their angle moment of spinning.

It is supposed that the red shift is conditioned not by Doppler`s effect but by photon-phyton interaction the contribution of which into the value of the red shift increases with the growth of the distance

overcome by photons. The acceptance of the conclusion about the supposed nature of the red shift and consideration of torsional attraction enable us to build up an integral noncontradictory picture of the Universe free from the current modern perceptions of cosmological dead-ends and delusions – the Big Bang, expansion of the Universe, superlight velocities of galaxies, dark matter and energy etc.

Keywords: cluster, informational influence, torsional field, physical vacuum, phyton, cosmology, the red shift, dark matter.

Introduction. Based on the similarity in dynamics of structural changes of water upon being influenced by information and thinking process of the brain the author of the work [1] determines torsional nature of its consciousness, conditions under which the thinking process of the brain emerges as well as the mechanism itself, and the presence of consciousness in water i.e. the abilities to think.

Moreover, the dependency in dynamics character of the aftereffect of informational influence on water structure on the distance of the tested sample up to the location of influence. The presence of the dependency was connected to decrease of contribution of torsional field of physical vacuum (PV) into further spin restructuring of water while its removing from the place of influence.

However, the role of torsional field of PV in the thinking process of both water and the brain is practically not researched. The further research in this regard seems effective in the context of obtaining additional information about mechanisms of consciousness of water and the brain as well as understanding the nature and structure of PV, its value in forming of thinking process.

In the given work which continues [1] the study is conducted on the influence of the location of water samples on the character of the aftereffect of informational influence depending on the contents of the latter one and from the moment of tested sample withdrawal from the place of influence after its cease by method of laser emission scattering.

Materials and methods.

Experiment Methodology

The essence of the experiment and methodology of measurements are stated in detail in [2]. Under T=300°K the dependencies of I intensity of scattered light on the scattering angle Q – the scattering indicatrix of initial water samples $I(Q)_{int}$ as well as after the influence and the further time exposition (exposition t_{exp}) $I(Q)_{inf}$.

The computational and graphic processing of measured indicatrices lets the investigators determine the set (ensemble) and sizes of clusters, their relative concentrations, degree and character of change of the parameters in water structure after the influence and exposition. The methodology of determining the ensemble and sizes of the clusters are given in [2]. The methodology of determining the degree of change of total concentration of clusters N_{Σ}^{rel} as well as cluster concentrations of separate sizes is given in [1].

The water from artesian water-well with parameters of the initial structure analogous to the ones in [1] was used in the research. The canonic orthodox prayer "Our Father" and neutral phrase "Water possesses consciousness" were used as informational influencing factors.

The methodology for studying the influence of the location of water samples on aftereffect of informational influence consisted in the following. After the preliminary measurements of initial scattering indicatrices I(Q)$_{int}$ the mental influence was carried out on 2 identical samples in a synchronic way 5 minutes long. The samples were placed at the distance of 0,5 m from the operator and 0,3 m between them. After multiple mental repetition of the text for 5 minutes one of the samples (the tested one) was left on the location of influence and the other one was taken from the place at the distance of 10 m horizontally and 2 m vertically downwards.

The experiment was conducted in 2 variants of water sample withdrawal from the location of influence. One variant consisted in taking the water sample from the location immediately after the cease of informational influence before the first measurement I(Q)$_{inf.}$ The measurement I(Q)$_{inf}$ was made for ≈10 minutes later. The time period was used to measure the scattering indicatrix I(Q)$_{inf}$ of the tested sample which was left on the place of influence during the entire exposition period.

Under the other variant the withdrawn sample was left on the place of influence after its cease for ≈ 18 minutes. While the time period the measurements of I(Q)$_{inf}$ was made. At first the test sample was measured and the withdrawn one afterwards, later on the withdrawn sample was taken away.

At all other stages of exposition the withdrawn sample was returned to the place of influence in both variants only for the time of measuring of its subsequent scattering indicatrix I(Q)$_{inf}$ which was implemented only after the preliminary subsequent measurement of I(Q)$_{inf}$ in the tested sample.

Experimental Results

Pic.1 presents time dependencies of $N_{\Sigma}^{rel}(t_{\exp})$ of the test (1) and withdrawn (2) water samples after the influence by neutral information. Sample 2 was taken away from the place of influence according to the first variant, i.e. immediately after it was over. It can be seen in the picture that both curves 1 and 2 had oscillating character during the entire exposition. The peculiarity of the curves is their total correlation after the first measurement I(Q)$_{inf}$ as well as the shift of the curve 2 downwards in relation to curve 1. The shift is due to decrease of average
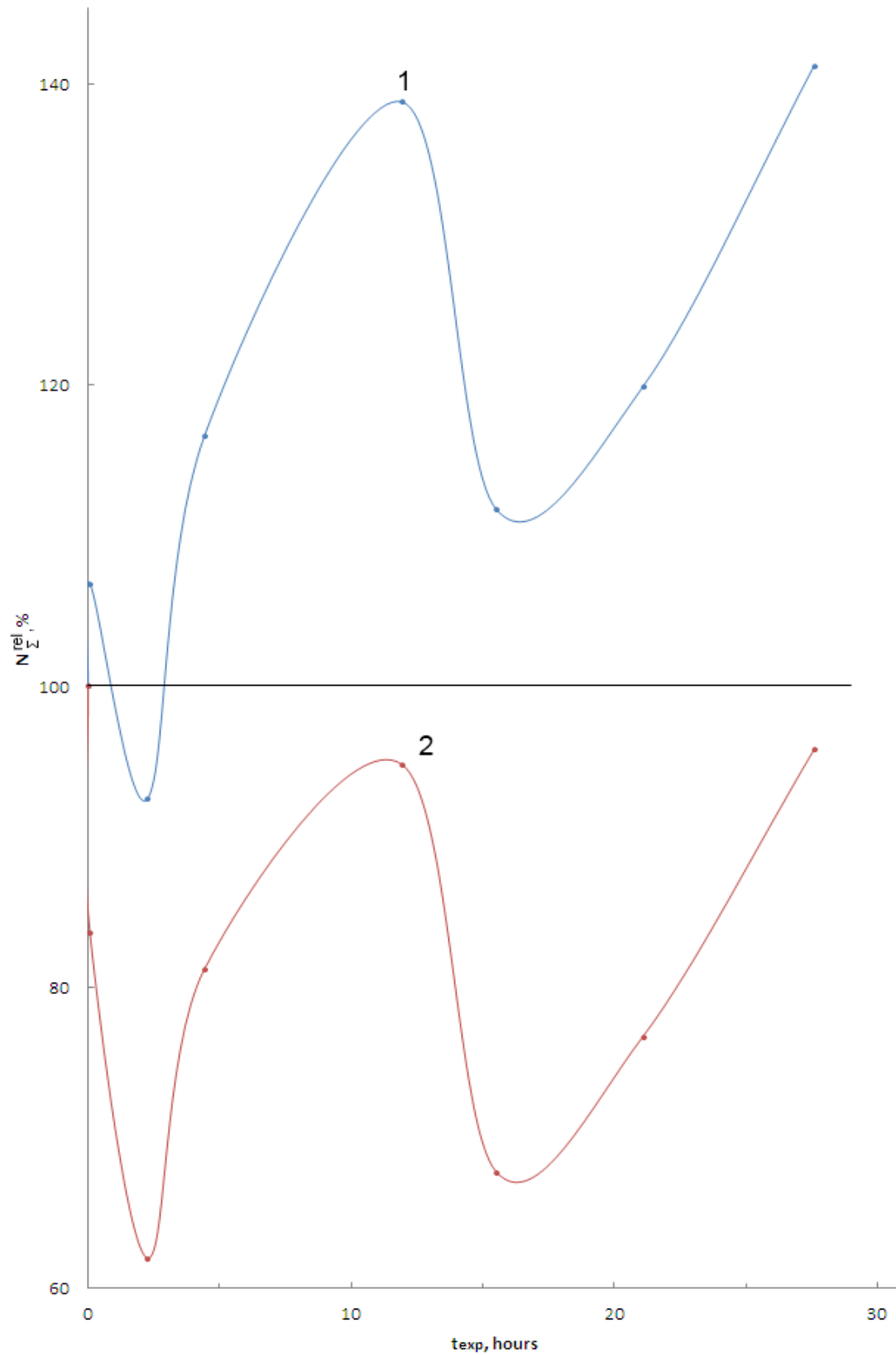
Pic 1. Time dependencies of relative total cluster concentration of the test water sample (1) and water sample withdrawn according to the first variant (2) after the influence by neutral information.

cluster concentration N_Σ^{rel} for the entire period of exposition in the withdrawn sample ≈32% in relation to the test sample.

The similarity in peculiarities of curves 1 and 2 (pic.1) and analogous dependencies given in the work [1] in pic.6 should be noted. Correlation and shift of the curve 2 downwards corresponding to decrease of N_Σ^{rel} on 47 % are also characteristic to the latter ones. The difference in character of curves 1 and 2 pic.6 in the work [1] and curves 1 and 2 pic.1 of the present work is determined by various content of informational influence in both cases.

Pic.2 presents relative scattering indicatrices of the test sample (1;1') and withdrawn one according to the first variant (2;2') measured after the neutral influence (1;2) and the exposition (1';2') were over. Values R≥1 of the curve 1 and present on it interferential component in the angle interval Q>20° speak for the commencement in generation of fine clusters and their binding into the medium ones with r≈0,56мм, large clusters with r≈0,95мм and oversize ones with r≈ 4,5мм – 7,2мм. The character of the curve 1' indicates intensive generation of fine clusters (R>1 in the entire scattering interval), their forming into medium clusters with r≈0,56мм, large clusters with r≈ 1,19мм, oversize clusters with r≈5,2мм-7,2мм in the process of the exposition.

The presence of mild interferential component of the curve 2 in the angle interval Q>40° testifies to forming in the withdrawn water sample insignificant concentration of oversize clusters with r≈2,3-3,2мм due to binding of fine and large clusters of the initial water in the process of informational influence. Values R<1 in angle intervals Q<16° and Q>30°indicate it. In angle sector 16°<Q<32° values R>1 are consequences of forming of largesize fine and medium clusters in size intervals 0,32мм≤r≤0,63мм as the result of binding of finer clusters with r≤0,30мм of the initial water while their generation was absent.

It is followed from the analysis of dependencies R(Q) of the withdrawn sample during the entire exposition (pictures are not given) that the concentration of fine clusters in it remained less than the one in the initial water. Values R changed in the range of 0,4≤R≤0,8 in the angle interval Q>30° which indicates their low concentration. On ascending parts $N_\Sigma^{rel}(t_{exp})$ (pic.1, curve 2) the growth of R values in the mentioned interval took place which is conditioned by their insignificant generation. Forming of oversize clusters with r ≈ 2,75-4,5 мм occurred on descending parts of dependencies $N_\Sigma^{rel}(t_{exp})$ (pic.1, curve2) and in points of minima.

The last ascending part of the curve 2 pic.1 (t_{exp} >16 hours) was characterized by generation of fine clusters which is indicated by the shift of the curve 2' pic.2 upwards in the angle interval Q>36° and forming from them largesize fine clusters with r >0,26 мм, medium and large ones which is indicated by values R>1 in the angle Q<36°. The presence of mild
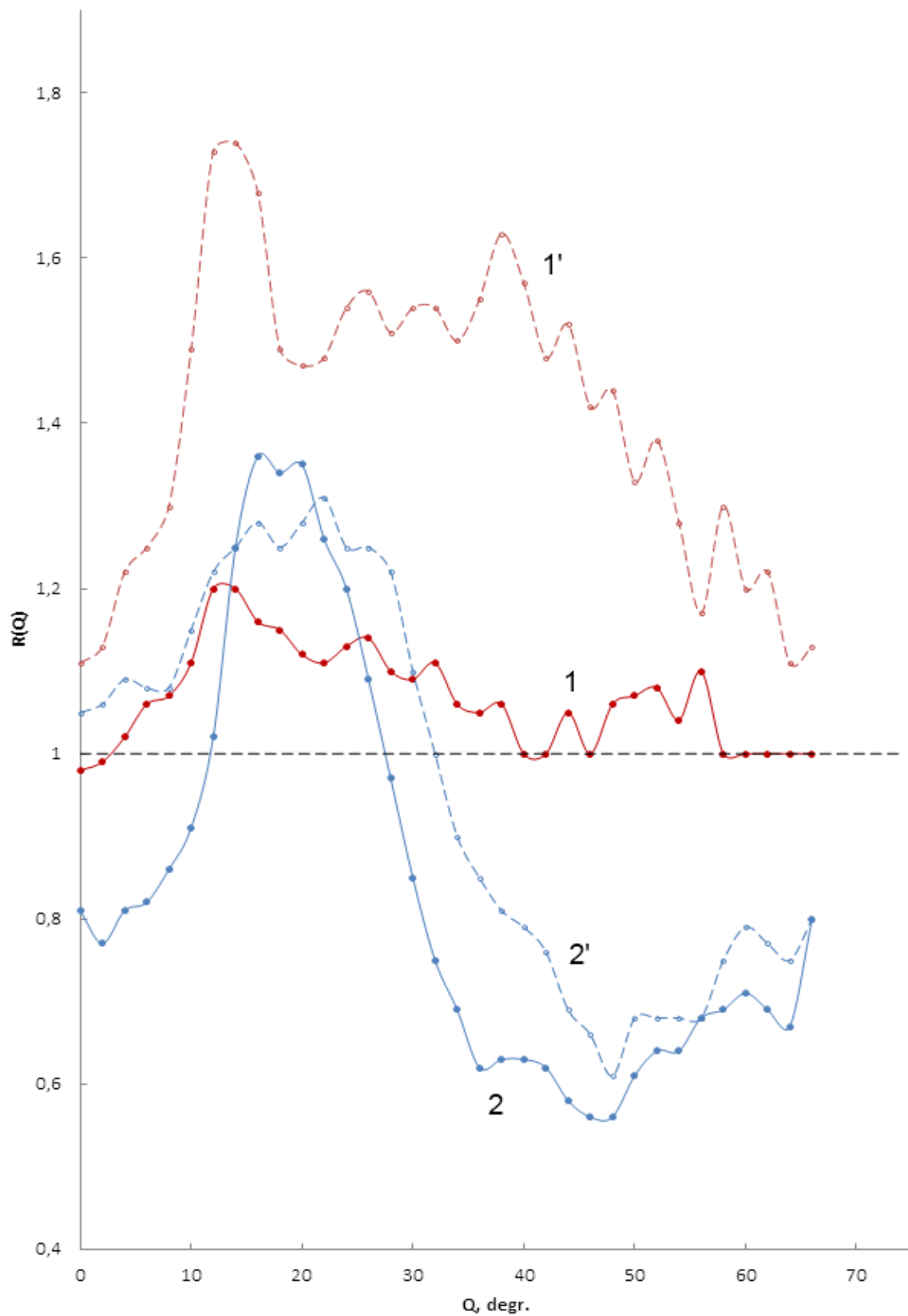
Pic.2. Relative scattering indicatrices of the test water sample (1; 1') and water sample withdrawn according to the first variant (2; 2') after the cease of influence by neutral information (1; 2) and after the end of the exposition (1'; 2').

interferential component on the curve 2' is conditioned by forming by insignificant concentration of oversize clusters with r≈2,75-4,5-6,7Мм.
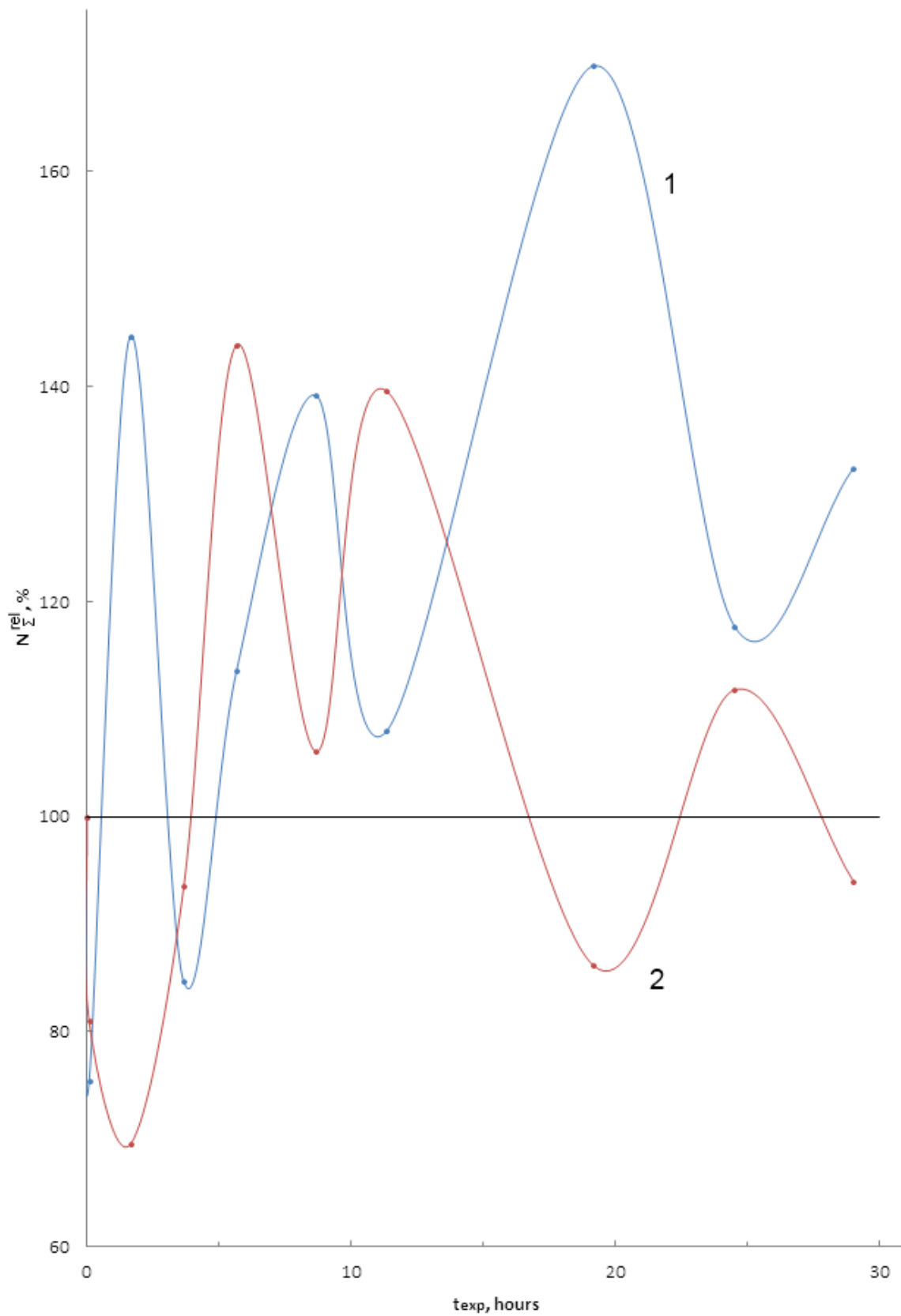
Time dependencies $N_{\Sigma}^{rel}(t_{\exp})$ of the test (1) and withdrawn(2) water samples upon being influenced by the prayer are given in pic.3. Sample 2 was withdrawn from the place of influence according to the second variant. It is evident from the picture that both curves had oscillating character during the entire exposition period. The peculiarities of the curves are practically total anticorrelation as well as approximate congruency of average values N_{Σ}^{rel} of theirs in the first part of the exposition ($t_{\exp} \leq 14$ hours). With the further increase of $t_{\exp}$ there was an increase N_{Σ}^{rel} in the test sample and decrease of N_{Σ}^{rel} in the withdrawn one which led to the decrease of the parameter in the latter one up to 15% compared to the value of N_{Σ}^{rel} in the test sample for the entire exposition period.

Pic.4 shows relative scattering indicatrices of the test (1;1') and withdrawn (2;2') samples measured after informational influence took place (1;2)and in the last maxima of the curves 1 and 2 pic.3 under $t_{\exp1}=19$ hours (curve 1') and $t_{\exp2} =22$ hours(curve 2').

Presence of interferential components on curves 1 and 2 pic.4 indicate forming of oversize clusters with r≈4,5-6,7 Мм in the process of informational influence due to binding of fine clusters of the initial samples which is attested by values R<1 in the angle interval Q>10°.
It is followed from the analysis of R(Q) dependencies forms of both samples (not given in the pictures) that at the exposition period of 4 hours ≤texp≤16 hours their values were R>1 which testifies to the generation of fine clusters and further forming medium, large and oversize clusters from them.

Under the further increase of $t_{\exp}$ in the test sample values R>1 were observed by the cease of the exposition. In minima of the curves 1 and 2 pic.3 where the values $N_{\Sigma}^{rel}(t_{exp})$ were less than 100% the corresponding dependencies R(Q) had values R<1 and contained interferential components in the angle interval Q>40° similar to the ones observed on curves 1 and 2 pic. 4. At these period of exposition both water samples were characterized by increased concentration of oversize clusters with r≈4,5-7,2Мм compared to the parts of curves R(Q) in neighborhood of maxima. In latter ones both water samples contained nigh concentration of fine clusters of various sizes not bound yet into larger ones. It is indicated by the form of dependencies R(Q) on curves 1' and 2' pic.4 with values R>1 in the angle interval 4°<Q≤65°. According to the conditional classification of cluster sizes [1], the angle interval of scattering by fine clusters (r<0,4Мм) is Q>24°. The presence of wide maximum on the curves 1' and2' with Q≈46° corresponds to the highest concentration of generated fine clusters with r≈0,20-0,21Мм.

Pic 3. Time dependencies of relative total cluster concentration of the test water sample (1) and water sample withdrawn according to the second variant (2) after the influence by the prayer.
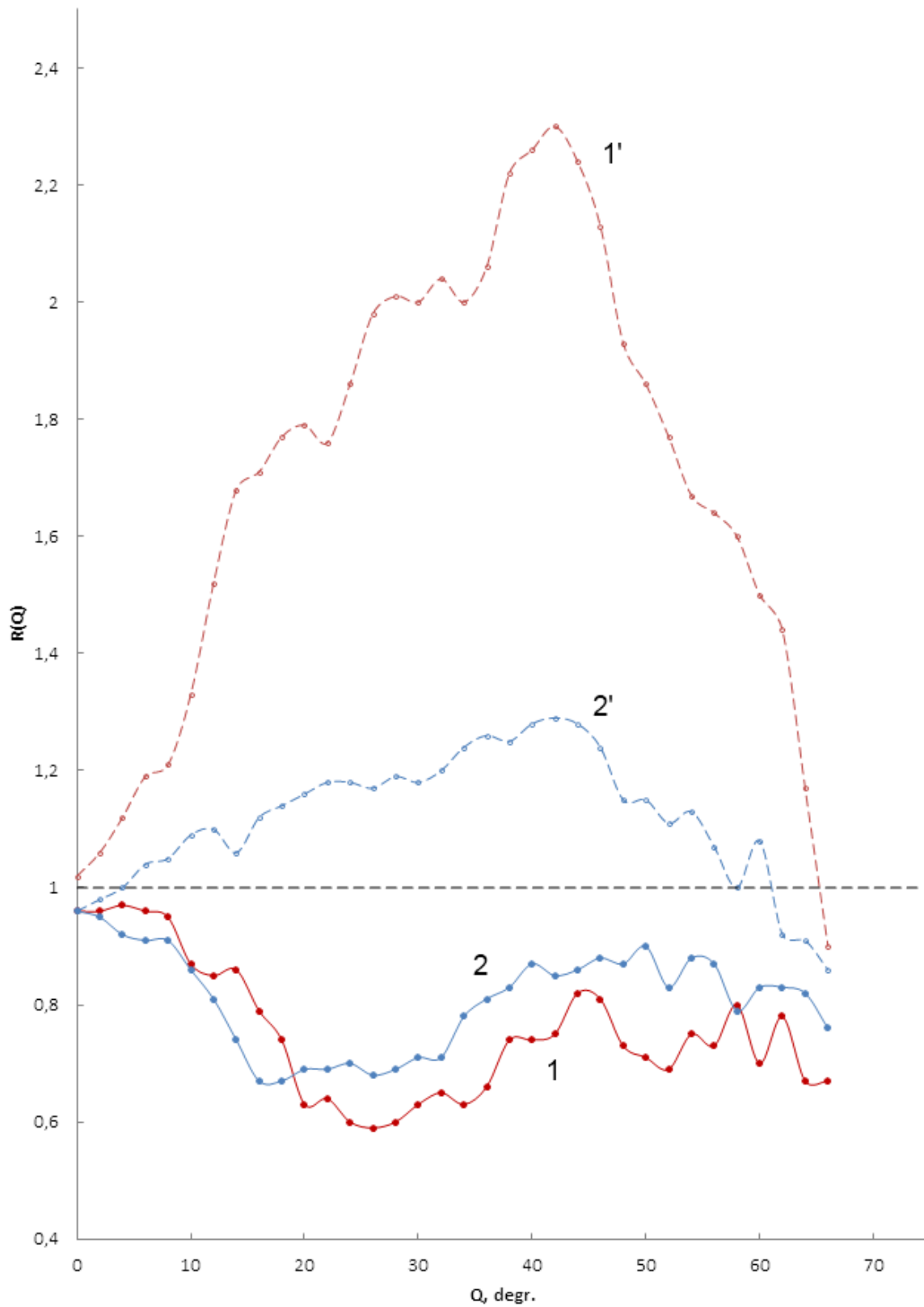
Pic 4. Relative scattering indicatrices of the test water sample (1; 1') and water sample withdrawn according to the second variant (2; 2') measured after the influence by the prayer (1; 2) and after the exposition (1'; 2') in the last maxima of the curves 1 and 2 in pic.3.

Values R>1 in small-angle plain of scattering Q<20° indicates insignificant concentration of formed medium (with r≈0,63ᴍм) and large (with r≈0,95ᴍм) clusters. Mild interferential component of the curves 1' and 2' pic.4 is the consequence of low concentration of oversize clusters formed during the exposition.

Discussion of the Results.
Spin Structure of Physical Vacuum

Oscillating character of dependencies $N_\Sigma^{rel}(t_{exp})$ in test samples is conditioned by peculiarities of the process in spin restructuring under informational influence and after its cease. According to [2] the mechanism of the influence includes spin reordering of cluster atoms of oxygen and in the test water and forming of new clusters with well-ordered spin orientation which is identical to the one of the mental process (torsional soliton). The mechanism was implemented the following way. Mental influence causes spin polarization of physical vacuum (PV) in the closest space surrounding the place of influence. Herewith the spin structure of PV is formed by the one identical to the spin configuration of the torsional soliton and it is preserved in the mentioned space after the influence of the latter stopped [3] which is proved by the presence of informational influence aftereffect on water structure.

The induced torsional field of PV brings about spin reordering of cluster tetravalent atoms of oxygen in water directions of spins of whose do not correlate to spin configuration of PV field. The process can cause partial or total destruction of a certain part of clusters predominantly of fine and medium ones due to rupture of intra-cluster hydrogen bonds.

Forming of new clusters with well-ordered spin orientation is determined by the characteristic of mutual attraction of objects with unidirectional spins [4]. For this reason spin restructuring induces the forming of new spin-oriented clusters, fine ones primarily. The mechanism for generating of the latter ones is considered in [5]. Predominance of speed in generating such clusters over the speed in their binding among themselves with forming of more large-scale structure corresponds to increasing parts of dependencies $N_\Sigma^{rel}(t_{exp})$ (curves 1, pic.1 and pic.3).

At high concentration of spin-oriented fine clusters owing to their mutual attraction the speed of their binding into larger ones grows so that it overshoots the speed of their generation which leads to the increase in concentration of large-scale clusters on one hand and to the decrease in concentration of fine clusters on the other hand. Since the last ones constitute the main share of the total concentration N_Σ, the result of change in speed correlation for processes in binding and generating of fine clusters is significant increase of N_Σ which corresponds to descending parts $N_\Sigma^{rel}(t_{exp})$. As values $N_\Sigma^{rel}(t_{exp})$ descend the speed of binding decreases and in minima of the curve $N_\Sigma^{rel}(t_{exp})$ in speeds of binding and generations

straighten. Under further increase of t_{exp} the correlation of speeds varies in to the inverse one, the successive ascending part of the cure $N_{\Sigma}^{rel}(t_{exp})$ takes place etc.

The observed curves 1 pic.1 and pic.3 are actually formed by permanent influence of torsional soliton not only in the period of immediate influence but also during its aftereffect due to the influence of torsional field of PV. Within the entire period of exposition the process of fine clusters generation occurred which is indicated by the values $R(Q)_1>1$ in full angle interval $Q≥4°$.(pic.2.,curve 1;1').

In withdrawn by the first variant samples the influence of the torsional field of PV was implemented only by recurrent measurement of scattering indicatrices which lasted 8-10 minutes. During the other time of exposition because of remoteness of the samples from the location of influence it was extremely weak and didn`t cause a significant change in water structure. It is indicated by significant decrease of the value N_{Σ}^{rel} of the samples compared to the test ones conditioned by waste of fine clusters of the initial water on forming of large-scale structure (pic.1, curve 2; pic.6, curve2[1]).

However, despite low concentration of fine clusters in the withdrawn samples the observed total correlation in distributions $N_{\Sigma}^{rel}(t_{exp})$ in these samples and the test ones contradicts to the examined before mechanism to form the oscillating character of distribution $N_{\Sigma}^{rel}(t_{exp})$ which takes place at high concentrations of fine clusters in the test samples.

The contradiction was conditioned by the following fact. Due to higher concentration of spin-oriented fine clusters in the test sample its own torsional field polarizes PV of the nearest space surrounding the place of its stay in measuring unit under the recurrent measurement $I(Q)_{inf}$ while forming in its spin configuration PV identical to the spin configuration of the test sample itself. The withdrawn sample measured after the test one is exposed to the influence of torsional field PV in the measuring unit causing formation of the spin configuration in it equivalent to the one in the test sample.

According to [6] the influencing information is perceived first of all by fine clusters due to their light weight and high mobility. In addition to these parameters low concentration of fine clusters in the withdrawn sample provides their high spin reorientation which determines the absent delay in forming of distribution $N_{\Sigma}^{rel}(t_{exp})$ in the withdrawn sample adequate to the one in the test sample.

During the stay on the place of the informational influence the decrease in concentration of fine clusters into large-scale ones due to binding was partially compensated by their generation in the sample withdrawn upon the second variant. It is indicated by the higher position of the curve 2 in relation to the curve 1 in pic.4.

The further anticorrelation of curves 1 and 2 in pic.3 was brought about by the longer spin reorientation of fine clusters in the withdrawn sample as a result of their higher concentration compared to the samples withdrawn upon the first variant.

Thus, oscillating character of distribution $N_\Sigma^{rel}(t_{exp})$ in the test samples in the process of exposition was determined by the change in speed correlation of fine clusters generations and their binding into a large-scale structure. The conditions determining oscillating character of dependencies $N_\Sigma^{rel}(t_{exp})$ is the present intensive generation of fine clusters caused by influence of PV torsional field on the place of the impact.

The analogous character of distribution $N_\Sigma^{rel}(t_{exp})$ in the withdrawn water samples was determined with the information transferred by the test sample about the further character of change in parameter $N_\Sigma^{rel}(t_{exp})$ under conditions of deficit of fine clusters concentration and low intensity of their generation in withdrawn samples. The transfer was implemented by influence of PV torsional field induced in the surrounding space of the measuring unit by its own torsional field of the test water sample while previous measuring of its scattering indicatrix. After the influence the cluster ensemble in the withdrawn samples didn`t change and sizes and concentrations of oversize clusters decreased compared to the observed ones in the test samples. Identity of distributions $N_\Sigma^{rel}(t_{exp})$ and cluster ensembles in withdrawn and test samples testify to undamaged content of the transferred information from the test samples to the withdrawn water samples.

The process of interaction of the two spin configurations – test and withdrawn samples through the PV torsional field in the total extent corresponds to the definitions of consciousness categories given in [1] which confirms once again the conclusion about the water having consciousness i.e. the ability to think.

The examined informational interactions occur with involvement of PV torsional field. The fact of the presence of the field and the mechanism of its forming can be explained only on the basis of the conception for phyton structure of the physical vacuum developed by Akimov A.E.[4,7]. There physical vacuum is considered as vortex field medium isotrop-like filling up the entire environment (both the empty space and substance) and having quantum structure. The quantum (quantum vortex) of the structure is phyton which is the system of enclosed in each other ring wavepackets of electron and positron spinning in opposite directions. Each of the packets is determined as the right and left spin. In calm state of vacuum each phyton is self-compensated in spins, charges, magnetic moment, and in total the environment itself is neutral with zero energy and spin. Physical vacuum is supposed to form a well-ordered structure with the linear dense pack of phytons and doesn't manifest itself.

Disturbing action of PV by the external sources causes its polarization. If electrical charge, mass and spin are used as disturbing factors, emerging charge, longitudinal spin and transverse spin polarizations accordingly take place in the form of electrical and magnetic, gravitational and spin (torsional) fields of PV. The description of various polarized states of PV is given in [7].

In the given work the mental influence on water having torsional nature was used as spin disturbance of PV. Simultaneously this influence was exerted to the PV of the environment of the tested water samples as well. Upon the cease of informational influence, the emerging corresponding spin configuration of PV in the environment didn`t disappear. Induced by mental influence the torsional field of PV influenced both the test water sample during the period of exposition and the withdrawn one during measurement time which manifested itself as the afteraction of informational soliton on water structure.

Forming of the torsional PV field was brought about by spin reorienting of those wavepacks the spins of which didn`t correspond to the spin configuration of the torsional soliton. The role of torsional PV field in the informational exchange between water samples consisted in its memorization and forming of spin configuration of tetravalent oxygen atoms of water corresponding to the mental content of the torsional soliton.

Such information transfer by the torsional field of PV can be possible only if its structure is spin one. The correspondence of experimental findings to the provisions of the conception for phyton structure of PV proves the veracity of the latter one.

The results stated in the given work let us draw one more conclusion about a significant aspect of PV which lies in the following. Since PV possesses memory it is an informational field perceiving thoughts and emotions of people [8], influences of other sources of torsional fields of various origins both ones of the spin structure and determined by angle moment in spinning of massive bodies. [4]

About the Problems of Cosmology

The given before experimental findings that prove veracity of PV phyton structure and conclusion about its informational aspect correspond to provisions and conclusions of physical vacuum theory about its properties developed by Shipov G.I.[9] It enables us to assert about existing perceptions and models of the Universe which were formed on basis of astronomic observations and calculations. According to the author they contain a lot of unsolved problems, contradictions, dead ends, misconceptions that make it impossible to truly picture the noncontroversial integral Universe.

The starting point in history of cosmology one can consider A. Einstein`s special relativity theory at first, later Einstein`s general relativity theory and developed by him stationary model of the Universe where only the gravity force acts. However, the discovered by A. Friedman the presence in GRT solutions of nonstationary Universe as well as observed by V. Slifer and E. Hubble the red shift of galaxies bought about new stage in cosmology development – nonstationary models were created. A. Einstein himself corrected his initial theory where the Universe became an expanding one. Further there were "hot",

"inflational" models and long with that problems came thick and fast. The following problems can be considered the main ones.

1. Detection of the red shift caused perception of the Universe having been determined by the Big Bang of cosmological singularity characterized by endless density and temperature. According to different sources its sizes vary from an atom up to a cosmic egg. It is not stated in which way the singularity was formed and what preceded its explosion. Also, it is not clear how to comprehend endless density and temperature of singularity.

2. The nature of the red shift of emission in galaxies was ascribed to Doppler`s effect. There was no alternative mechanism to explain the cause of the phenomenon for the period of its detection [10]. Since the essence of Doppler`s effect lies in the change of emission wave length which is perceived on the spot of observation when the emission source and the observer move with the relative to each other, the red shift univocally indicated the departure of galaxies from the observation place i.e. expansion of the Universe.

   The expansion was interpreted as the consequence of the Big Bang which supposes heterogeneous space distribution in density of matter that must take place as a result of explosion and the further scattering of the substance.

   However the observed approximate homogeneity and isotrop uniformity of the Universe sustained in the process of supposed expansion contradicts to the fact of its heterogeneity.

3. In spectra of distant galaxies values of the red shift are $Z \geq 1$. The values are interpreted as a proof of superlight velocity galaxies runaway. According to GTR the paradox lies in the following. Light can`t spread with the speed higher than the velocity of light but galaxies can do it (!). Endeavors to explain the contradiction by the fact that optical horizon with superlight velocity has expanding space-time and the galaxies themselves which are present in it do not exceed speed of light relative to it are not convincing. Indeed emitting spectrum of the galaxies is fixed by a measuring set on the spot of observation i.e. on the Earth. If the entire Universe is homogeneous and isotrop-like, does it mean that we, earthlings, also move with superlight velocity? Why is the red shift of closer to us galaxies significantly less than 1? It begs the conclusion about another nature of the observed red shift.

4. In various nonstationary models terms "expansion" or "inflation" of empty space or space-time are used. Absent comprehensible interpretation for the essence of the phenomenon causes many other questions. One of them is speed of expansion that exceeds the lightspeed up to tens of orders. Another lies in the following. If the expansion takes place, then after the Big Bang the space was limited to unbounded surface (imagined one). What is outside of the surface where the space didn`t manage to expand?

5. During the last years new problems arose but for the stated above ones. They are dark matter and dark energy. Based on generally accepted conception about the runaway of galaxies the calculations exhibit inconsistency in the value of expansion speed of the Universe with its visible mass of matter. The inconsistency is connected to the gravitational influence of the dark matter comprising up to 95% of the entire matter quantity according to some estimations. The invisible and elusive dark matter is considered to prevent galaxies from their more accelerated runaway.

    On the other hand, growth of their speed-up with increase in the distance is explained by the influence of the dark energy of rotary character the nature of which as the one of the dark matter is unknown.

The stated list of cosmology problems is not full and affords ground for supposition that they all have been caused due to incorrect interpretation for the phenomenon of the red shift of galaxies emission spectrum which as stated before was connected to manifestation of Doppler`s effect. The arguments in favor of such a conclusion are the following.

1. Relativistic formula of Doppler`s effect used to determine the values of the red shift is valid for velocity of emission source not exceeding the lightspeed. But experimentally obtained values $z = (ʎ_{receiv} - ʎ_{emit}) \times ʎ^{-1}_{emit} \geq 1$ testify to another mechanism. Besides, Doppler`s effect formula doesn`t contain distance but measured red shift increases along with the growth of distance.

2. The present cosmic microwave background radiation with energy of quanta $h\nu \approx (5\text{-}6{,}25) \times 10^{-4}$ eV (which corresponds to $T \approx 3K$) indicates the existing mechanism of true waste of their energy.

3. The observation of "superlight" velocities of the galaxies runaway contradicts to the provisions of GTR about a material object being unable to reach the velocity $v = c$ (especially such as a galaxy) because it is necessary to energize it $E \rightarrow \infty$.

4. The doubts of E. Hubble himself that the red shift is conditioned namely by Doppler`s effect [11].

It is supposed that the nature of the red shift lies if photon-phyton interaction. Photons are an electric and magnetic field. According to [4] an electric and magnetic field is a source of PV torsional field. Such interaction resulted in polarization of PV phytons where some energy of photons is wasted. Presumably, the wastes are extremely small in every act of interaction; however, with the increase of distance they are summarized. The factor might condition the growth of the red shift along with the distance.

The present cosmic microwave background radiation can serve as a proof of the supposed mechanism of the red shift. It is composed by photons with supreme waste of their energy due to interaction with PV phytons determined by their absence for the entire period of their existence absorption by substance, re-emission, combinative scattering.

In case we accept the conclusion that the red emission is not connected to Doppler`s effect but to the true partial waste of energy by photons on the way to the observation spot, we can exclude agglomerate of the listed cosmological problems and probably the other ones not stated before. Some excuse of the current situation can be the absent information about the properties of PV during the formation of the problems.

At the present time considering the level in understanding of the nature and properties of physical vacuum, physics of torsional interactions we can form an integral model for the structure and evolution of the Universe that doesn`t contain a lot of current day problems.

The current idea of ancient masterminds about the primary "promatter" being the fundamental principle of the Universe was scientifically substantiated in works of Shipov G.I. According to [9, 12] the vacuum namely is this primary medium form where Everything is born and where Everything comes back to. In [9] a mathematical model of the Universe structure as a system consisting out of 7 reality levels (forms of matter existence) is presented.

The summary of the model is given in [4] in an intelligible interpretation which lies in the following. The highest 7th level is postulated the programme (matrix) of the possible, will and superconsciousness. The superconsciousness implements the matrix in the form of the primary vacuum- the primary torsional field which is represented in the form of endless aggregate of small vortices –phytons of electron-positron couples (6th level). The level brings about the fifth level – the level of physical vacuum. PV is the field structure containing information about parameters of elementary particles designed on this level by the seventh and sixth ones. As presumed by the author phytons of proton-antiproton couples and the other elementary particles are formed at this level. On this level PV fluctuation is consciously implemented upon that not locally but on the entire endless extent of PV without explosion practically in a simultaneous way. Based on described properties of PV the speed of informational spread in it is 10^9c (c - lightspeed).[3,9]

A PV fluctuation provides energy conditions to reconstitute phytons into real elementary particles which start to construct quantum systems (nuclei, atoms etc.)

Illocality of a PV fluctuation implies synchronism of matter generation in the entire unlimited space of the physical vacuum. The supposition corresponds to the conclusion of physical vacuum theory stating that the birth of some objects from the vacuum is a significantly illocal process because of equality of all the points of the endless space. [9]

On material levels, beginning from the 4th and ending with the 1st, all the forms of the matter in living organisms, including humans, are materialized preconditioned by the vacuum programme.

The absence of "The Big Bang" excludes space expansion, runaway of galaxies, and the search of the dark energy accelerating them up to unthinkable superlight velocities. Practically, considering provisions

and conclusions of PV theory we can suppose that the structure of the Universe quite satisfactorily corresponds to the stationary model of A. Einstein.

The problem of the dark matter is conditioned by failure to consider torsional interaction caused by the angle moment of spining cosmic objects. It is known that objects rotating into one side are attracted to one another and the other ones are repulsed from each other. [4,13]

The failure to consider torsional attraction can be connected to the current viewpoint about smallness of the invariable of spin-torsional interactions compared to the gravitational one. However, theory of the dynamic torsion shows that in case of interaction of rotating objects with radiation the invariable of interaction is 10^{-4}-10^{-3} which is insignificantly smaller that the invariable of electric and magnetic interaction which is less than 10^{-2}.[3,4] Taking into consideration long-range torsional interaction, significantly exceeding both gravitational and electric and magnetic ones [3], lets us to draw conclusion about the torsional attraction compared to or even exceeding the gravitational one and supplementing it especially in densely populated central part of galaxies. This fact makes it useless and senseless to search for the dark matter. The given conclusion confirms the stated in [3] supposition that the problem of the dark mater lies namely in the failure to consider the torsional interaction.

Conclusions.

1. The determined correlation and anticorrelation of time dependencies of total concentration of clusters in test and withdrawn from the spot of informational influence water samples after it cease is conditioned by interaction of their own spin cluster configurations through PV torsional field. It confirms the conclusion given in [1] about water possessing consciousness i.e. ability to think.

2. Forming of torsional field is conditioned by its polarity by the external torsional field (mental influence, torsional water field). The informational transfer about cluster structure between water samples via the PV torsional field testifies to its spin nature which proves veracity of conception of PV phyton structure.

3. Ability of physical vacuum to memorize influencing information implies that it is an informational field by which the primary torsional field (VI level) "manages" the birth of matter from vacuum its development in the manifested way according to [9].

4. Based on known PV properties and the given experimental results the conclusion is drawn that many unsolved problems and dead-ends of modern cosmology are conditioned by false interpreting for nature of the red shift of galaxies emission spectra and failure to consider the contribution of torsional interaction of cosmic objects generated by their angle moment of spinning.

5.   It is supposed the red shift is determined not by Doppler`s effect but a photon-phyton interaction the contribution of which into the value of the red shift increases with the growth of the distance overcome by photons. The acceptance of the conclusion about the supposed nature of the red shift and consideration of torsional attraction enable us to build up an integral noncontradictory picture of the Universe free from the current modern perceptions of cosmological dead-ends and delusions – the Big Bang, expansion of the Universe, superlight velocities of galaxies, dark matter and energy etc.

Conflict of interest statement: The authors state that there are no conflicts of interest regarding the publication of this article.

REFERENCES:

1. KovalenkoVF. The Torsional Nature of Consciousness. J.Biomedical Engineering and Electronics [Internet]. 2019, Janv. [cited 2019 Mar 4]; (1): 25p.

    Available from: biofbe.esrae.ru/pdf/2019/1/1183pdf

2. Kovalenko VF. Spin Nature of Water Memory. Science Journal of Physics. [Internet]. 2013 May (Cited 2019 Janv9); 2013, Article ID sjp-206, 11 p., 2012. doi:10.7237/sjp/206

    Available from: http://www.sjpub.org/sjp.html

3. Akimov AE., Shipov GI. Torsional Fields and Their Experimental Demonstrations.Preprint #4, MITAP RAES,Moscow; 1995, 31p.

4. Akimov AE., Image of Physics and Technologies in the Beginning of XXI c. Moscow; "Shark":1999, 79p.

5. Kovalenko VF. The Forming Mechanism of Cluster Structure of Water. J.Biomedical Engineering and Electronics [Internet]. 2018, Apr. [cited 2019 Feb 3]; (1): 25p.

    Available from: biofbe.esrae.ru/215-1163

6. Kovalenko VF. Analogy of Memory Properties of Water and the Ones of the Brain.//Science Journal of Physics. Volume 2013, Article ID sjp-261, 8 pages,2013.doi: 10.7237/sjp/261

    http:www.sjpub.org/sjp/.html

7. Akimov AE. Heurustic Discussion of Problem in Finding New Long-Range Actions. EGS-conceptions. Preprint ISTS VENT Moscow; 1991.Dec.,(7A), 63p.

8. Kovalenko VF. The Influence of Collective Informational Field on Water Structure J. Biomedical Engineering and Electronics [Internet]. 2016, Oct. [cited 2019 Feb 3]; (2): 16p. Available from: biofbe.esrae.ru/208-1054

9. Shipov GI. The Theory of Physical Vacuum. Moscow; ST-Tsentr: 1993. 362 p.

10. Azimov A. The Universe. From the Flat Earth to a Quazar. Moscow; Tsentropoligraf: 2004.382p.

11. Gromov AN., Malinovsky AM., The Universe. There are More Questions than the Answers. Moscow; EKSMO: 2009. 416p.

12. Conversation with GI.Shipov. Project "The Second Physics" [Internet].2008 Oct [cited 2018 Dec 15]; Available from: http://www.second-physics.ru/node/17

13. Stepanov IK. The Emission of a Form. The State of the Problem. [Internet].2013 Janv.[cited 2019 Mar 6]; 28p. Available from: www.chronos.msu.ru/old/RREPORTS/stepanov_forma.pdf

100% Unique

Total 40549 chars (2000 limit exceeded) , 305 words, 9 unique sentence(s).

Essay Writing Service - *Paper writing service you can trust. Your assignment is our priority! Papers ready in 3 hours! Proficient writing: top academic writers at your service 24/7! Receive a premium level paper!*

Results	Query	Domains (original links)
Unique	LCC To the Question about the Structure of Physical Vacuum and Problems of CosmologyKovalenko	-
Unique	The observed interaction confirms the conclusion drawn earlier that water possesses consciousness	-
Unique	of the tested sample from the spot of influence after its cease was studied by	-
Unique	samples took place which is connected to interaction of their own spin cluster configurations through	-
Unique	The given results imply that forming of PV torsional field is determined by its polarization	-
Unique	Informational transfer about cluster structure between water samples by means of PV torsional field	-
Unique	by which its higher hierarchical levels "manage" the birth of matter out of vacuum, its	-
Unique	the nature of the red shift of galaxies emission spectra and failure to recognize the	-
Unique	It is supposed that the red shift is conditioned not by Doppler`s effect but by	-