

***LETTERS TO PROGRESS IN PHYSICS*****Reply to the Letter by Gary C. Vezzoli**

Simon E. Shnoll

*Institute of Theor. and Experim. Biophysics, Russian Acad. of Sciences, Pushchino, Moscow Region, 142290, Russia  
and Department of Physics, Moscow State University, Moscow 119992, Russia*

E-mail: shnoll@mail.ru; shnoll@iteb.ru

In a letter published by Dr. Vezzoli in the current issue of your journal, he claims priority back to 2001 for an explanation to certain gravitational phenomena, which were first recorded by me and my co-workers at my laboratory. He claims priority to me on the basis of the fact that he shared his results and plans with me in 2001 in private communication. However, I and my co-workers understood the phenomena in the same terms as much as 20 years before that, in the 1980's, and discussed by us in numerous publications during the 1980's, in the Soviet (now Russian) scientific journals. I provide a list of my early publications, refuting Dr. Vezzoli's claim to priority.

Dear Sir,

I refer a letter published by Dr. Vezzoli in the current issue of your journal he claims priority back to 2001 for an explanation to certain gravitational phenomena, which were first recorded by me and my co-workers at my laboratory. Clearly, Dr. Vezzoli is mistaken to think that he was the first person to propose, in 2001, an explanation of the gravitational phenomena recorded by me and my co-workers, at my laboratory. We in fact understood the phenomena in the same terms as much as 20 years before that, in the 1980's, as numerous publications [1–17] testify. For instance, an explanation of the experiments was given by me in 1989 at the International Congress on Geo-Cosmic Relations, in Amsterdam [4, 5]. This explanation was repeated in the other papers, published by us in 1989, 1995, and 2001. Our data, obtained during solar eclipses, began with the eclipse of July 31, 1981, when a large series of measurements was processed by 30 experimentalists connected to my laboratory, located at 10 geographical points stretching from the Atlantic to the Pacific (Sakhalin Island) along the corridor of the eclipse. We got more than 100,000 single measurements of the speed of chemical reactions during that eclipse. Our results were published in 1985 and 1987 [2, 3]. Since 1981 we processed measurements obtained during many solar and lunar eclipses, and also Full Moon and New Moon phases. The results were published in part only because a detailed analysis was required. In 1989 I published a paper wherein I claimed an observed change in the form of histograms obtained from a radioactive decay which was dependent upon the position of the Moon over the horizon [6]. This effect was observed at different geographical points. In the same paper [6] I suggested a gravitational origin of the observed effects.

I was pleased by the fact that a suggestion similar to that of mine was given by our American colleagues (Dr. Vezzoli, Dr. Lucatelli, and others), 20 years subsequent to me. This is despite that fact that their conclusions were made on the basis of scanty experimental data, in contrast to our own.

Dr. Vezzoli's claim to priority in this research, and hence his intellectual property, is I feel due to the following circumstance: the absence of information in the West about most publications made by us during the 1980's in the Soviet (now Russian) scientific journals.

My belief is that I, being a purely experimental physicist, should represent neither theoretical interpretations of the observed phenomena nor hypotheses on the subject given by the other authors. They may do that in their own papers; such a policy would be most reasonable from any standpoint.

Unfortunately, no definite theoretical explanation of the phenomenon we observed [1–16] was published in the scientific press until now. The authors of a series of papers, published in 2001 in *Biophysics*, v. 46, no. 5, presented different hypotheses on the subject. Not one of those hypotheses resulted in a calculation which could be verified by experiment.

I am responsible for a huge volume of experimental data, resulting from decades of continuous experimental research carried out by myself and dozens of my co-workers. I wouldn't like to dilute the data with a survey on hypotheses and theoretical propositions given by the theoretical physicists. Frankly speaking, I have no obligation to give such a survey. I am prepared to provide references to published papers on the subject, if it is suitable according to contents. However I feel that it is wrong to refer any information obtained in private communications before they publish their views on their own account.

I give below a list of my early publications, which refute the claim made by Dr. Vezzoli. Even a cursory inspection of the publications reveals the fact that the information provided to me by Dr. Vezzoli and Dr. Lucatelli wasn't news to me. I do not wish to be embroiled in any quarrel with them. However, having the list of my early publications, it would be strange to raise the issue of priority.

Submitted on January 25, 2008  
Accepted on January 29, 2008

## References

1. Perevertun T.V., Udaltzova N.V., Kolombet V.A., Ivanova N.P., Britsina T.Ya., and Shnol S.E. Macroscopic fluctuations in aqueous solutions of proteins and other substances as a possible consequence of cosmo-geophysical factors. *Biophysics*, publ. by MAIK Nauka/Interperiodica, distributed by Springer, 1981, v. 26, no. 4, 613–624.
2. Shnoll S.E. Macroscopic fluctuations bearing discrete distribution of the amplitudes, registered in processes of different nature. *News of Science and Technics. Molecular Biology*, VINITI Publishers, 1985, v. 5, 130–200 (in Russian).
3. Shnoll S.E., Udaltsova N.V., and Kolombet V.A. A possible cosmophysical origin of the macroscopic fluctuations registered in processes of different nature. A monograph published by Scientific Centre for Biological Research, Pushino (Moscow Region), 1987 (in Russian).
4. Udaltzova N.V., Kolombet V.A., and Shnol S.E. A possible gravitational nature of the factor influencing discrete macroscopic fluctuations. In: *Geo-Cosmic Relations: The Earth and Its Macro-Environment: Proceedings of the First International Congress on Geo-Cosmic Relations*, Amsterdam, 1989, ed. by G. J. M. Tomassen, W. De Graaff, A. A. Knoop, R. Hengeveld, Pudoc Scientific Publishers, Wageningen, Netherlands, 1990, 174–180.
5. Shnol S.E., Udaltzova N.V., and Bodrova N.B. Macroscopic fluctuations bearing discrete structure distributions as a result of universal causes including cosmophysical factors. In: *Geo-Cosmic Relations: The Earth and Its Macro-Environment: Proceedings of the First International Congress on Geo-Cosmic Relations*, Amsterdam, 1989, ed. by G. J. M. Tomassen, W. De Graaff, A. A. Knoop, R. Hengeveld, Pudoc Scientific Publishers, Wageningen, Netherlands, 1990, 181–188.
6. Shnoll S.E. A correlation between the shape of macroscopic fluctuations in amplitude spectra and the position of the Moon relative to the horizon. *Biophysics*, publ. by MAIK Nauka/Interperiodica, distributed by Springer, 1989, v. 34, no. 5, 911–912.
7. Shnoll S.E., Udaltsova N.V., Colombet V.A., Namiot V.A., and Bodrova N.B. On regularities in discrete distributions of measurement results (the cosmophysical aspects). *Biophysics*, publ. by MAIK Nauka/Interperiodica, distributed by Springer, 1992, v. 37, no. 3, 467–488.
8. Shnoll S.E. The form of the spectra of the states of macroscopic fluctuations depends on the rotation of the Earth about its axis. *Biophysics*, publ. by MAIK Nauka/Interperiodica, distributed by Springer, 1995, v. 40, no. 4, 857–866.
9. Shnoll S.E., Kolombet V.A., Peterson T.F. *Theses of the 4th International Conference "Space, Time, Gravitation"*, St. Petersburg, September 16–21, 1996.
10. Shnoll S.E., Kolombet V.A. Udaltsova N.V., Konradov A.A., Zvereva I.M., Desherevskaya E.V., and Peterson T.F. In: *Theses of the 4th International Symposium on Correlations between Biological, Physical Chemical Processes and Cosmic, Geliophysical, Geophysical Factors*, Pushino (Moscow Region), September 23–28, 1996.
11. Shnoll S.E. Pozharski E.V., Kolombet V.A., Zvereva I.M., Zenchenko T.A., and Konradov A.A. Possible cosmophysical origin of the discrete results obtained in the measurement of the time flow on the processes of different nature (the phenomena of "macroscopic quantization" and "macroscopic fluctuations"). *Russian Chemical Journal*, 1997, v. 41, no. 3, 30–36.
12. Scientific program of the "4th International Symposium on Correlations between Biological, Physical Chemical Processes and Cosmic, Geliophysical, Geophysical Factors". *Biophysics*, publ. by MAIK Nauka/Interperiodica, distributed by Springer, 1998, v. 43, no. 4, 565.
13. Shnoll S.E., Kolombet V.A., Zenchenko T.A., Pozharski E.V., Zvereva I.M., and Konradov A.A. A cosmophysical origin of the macroscopic fluctuations. *Biophysics*, publ. by MAIK Nauka/Interperiodica, distributed by Springer, 1998, v. 43, no. 5, 909–915.
14. Shnoll S.E., Pozharski E.V., Zenchenko T.A., Kolombet V.A., Zvereva I.M., and Konradov A.A. Fine structure of the distributions in the measurements of different processes as a result of action from the side of geophysical and cosmophysical factors. *Phys. Chem. Earth (A)*, 1999, v. 24, no. 8, 711–714.
15. Zenchenko T.A., Pozharski E.V., Zvereva I.M., Kolombet V.A., Konradov A.A., and Shnoll S.E. Fine structure of the distributions in the measurements of different processes as a result of cosmophysical effects. *Russian Chemical Journal*, 1999, v. 43, no. 2, 3–6.
16. Shnoll S.E. Discrete distribution patterns: arithmetic and cosmophysical origins of their macroscopic fluctuations. *Biophysics*, publ. by MAIK Nauka/Interperiodica, distributed by Springer, 2001, v. 46, no. 5, 733–741.
17. Shnoll S.E., Zenchenko T.A., Zenchenko K.I., Fedorov M.V., and Konradov A.A. The non-random character of fine structure of various measurement result distributions as a possible consequence of cosmophysical and arithmetical causes. *Gravitation & Cosmology*, 2002, v. 8, Supplement, 231–232.