

Editorial

Reflected Light Modulated by Bio-Fields

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In this issue of JACM is a paper by Sargsyan, Karmyan and Avagyan (JACM-2010-0108-R2) describing an experimental technique leading to a simple device for the non-invasive assessment of physiological states of living systems in general. But, there is much more to it than that. To cover the underlying fundamentals, the authors cite one of their publications¹ on the physics of quantum-mechanical interactions between living macroscopic systems. This in turn draws on Bohm's interpretation of the Schrödinger equation in terms of "Hidden" variables² and extends its applicability from nuclear particles to macroscopic systems thereby in principle offering the possibility that the properties of living systems can be determined precisely given information, in effect by-passing the "Uncertainty Principle".

Referring to their paper in this issue, the reader will see that the device shown in their Figure 1 is based on the modulation of light reflected from a glass plate by the aura or field of a biological object placed 10-15 mm behind it. The result is a statistically significant change in the reflected light. They have developed a practical device from this which they name the BIOSCOPE.

In this Editorial I shall attempt to explain the underlying physics as simply as I can. The authors give me an opening for this by citing my work³ on coherent frequencies in macroscopic quantum systems such as water and living systems by suggesting that, ".....it would be interesting to compare frequencies measured by Smith with those obtained by means of the BIOSCOPE".

In their Figure 12, there is a recording of the BIOSCOPE signal obtained from a hand when *Arsenicum alb.* 30C had been placed on the palm of the other hand. In it, there is a periodicity of 14 cycles in 10 seconds (1.4 Hz) with a modulation of about half a cycle (0.05 Hz). My specimen of *Arsenicum alb.* 30C had five frequencies two of which were 1.371 Hz and 0.04125 Hz. So, it looks as though we are both measuring the same physical quantity.

Before I could start writing this Editorial I had to do some experiments to understand in simple terms what physics which might be involved in the BIOSCOPE. The authors investigated the BIOSCOPE response to various objects. These included a metal plate, fruits, an anaesthetized rat, a human presence at 2-3 m, a person's conscious intention transmitted from another room and a human hand placed a few cm from the detector on which acupuncture meridians could be detected. A common feature is the possibility that the BIOSCOPE detects endogenous frequencies in the aura of living systems.

In physics, any 'action at a distance' effect is very important since one can determine what will transmit and what will block an interaction. I set up the basic arrangement as shown in the authors' Figure 1. I used an LED torch as the light source and an

