

A Model Experiment of Bio-Antenna Simulating Nervous System to Elucidate Unusual Animal Behavior before Earthquakes

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Seismic Electromagnetic signals (SEMS) before earthquakes have recently been studied by various investigators. The electromagnetic (EM) pulses were suggested to cause unusual animal behavior. However, it has not been cleared how animals detect electromagnetic waves. We propose a Bio-Antenna model to explain the sensor of animals for EM signals. It is a model regarding animal's nervous system was made of conductive wire, which act as an antenna to EM signals.

[Model Assumption] Animals control their bodies and sense information by the propagation of electric signals in nervous system connecting all over their bodies. We simulate the body of animal by nerve network as a conductive antenna and muscle and born as dielectric materials.

[Experiment] Metal wire was formed to simulate a nervous system of a mouse and covered with a material that had same conductivity as animal body. Electromagnetic wave from outside was applied to the model mouse. Computer simulation on this model was also performed to know the characteristic frequency, gain, impedance and directivity.

It was proved in the early 1990s that some kind of aquatic animals communicate each other by electric signals. This model has a possibility to elucidate a lot of popular version on animal's 'super-sensitivity' and human '6th sense.'