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Lithosphere - Atmosphere - Ionosphere Circuit Model

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There are offered possibilities of original LAI circuit model. The problem concerns of existence of self-generated electromagnetic oscillations in the segment of LAI system, which are results of tectonic stress developing in the focus area of expected earthquake.

By this model the main (lowest) frequency of these electromagnetic oscillations frequency spectrum is expressed analytically by following formula:

$$\omega = \beta \frac{c}{l}$$

where $\beta(\omega)$ is the coefficient depended on the frequency and geological characteristics of the medium and approximate to one, c-is the speed of light, and l- the length of the fault in the focus of the expected earthquake.

On the base of relevant diagnosis of experimental data, the model gives us possibility to discuss the problem about location, time of occurrence and intensity of an expected earthquake with certain accuracy.

In addition to it, considered model does not block the fall-unstable model of earthquake preparing and electromagnetic phenomena accompanied earthquake preparing process. On the contrary, the imagination of physical picture may be simplified in the separate stage of earthquakes preparing. Namely, it is possible to reliably separate series of foreshocks and aftershocks.

By this point of view, the certain optimism about using of EM emission as earthquake precursor of full value may be expressed. The base of such optimism is developing of various phenomena connected to VLF emission many times fixed in the surroundings of epicentral area and cosmic space (changing of intensity of electro-telluric current, perturbations of geomagnetic field in forms of irregular pulsations or regular short-period pulsations, perturbations of atmospheric electric field, perturbations of ionosphere critical frequency and TEC, variations of height of lower ionosphere, parameters of ionospheric medium: changing of specific dielectric conductivity and spectrum of MGD waves in it, atmospheric-ionospheric discharging and etc.).