NEW THEORY OF THE EARTHQUAKE PREDICTION USING ANOMALOUS BEHAVIOR OF MICROSEISMS

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ABSTRACT

A discovery of characteristic precursory anomalous changes of weak high frequency seismic waves enables more reliable earthquake forecasting and correct determination of focal coordinates and intensities. This previously unknown behavior of microseisms has been accorded the status of Scientific Discovery of a new physical phenomenon by the USSR State Committee for Discoveries and Inventions in March 1988, with priority from May 1979.

This discovery explains the origin of many other natural processes associated with earthquakes, and serves as the basis for a nonlinear theory of the relation of weak seismic signals with the medium in which they occur. The latter theory has many beneficial applications: earthquake forecasting, specifying the stress state of a medium, modeling the effects of induced seismicity, ecological control of large industrial activity, and enabling the creation of unified seismological and geophysical monitoring systems.