

EVOLUTION OF THE FOCAL AND NUCLEATION AREAS OF CRUSTAL EARTHQUAKES: A SIMPLIFIED PHENOMENOLOGICAL DESCRIPTION

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Abstract. An oversimplified phenomenological description of the temporal development of the focal (from the scale of “grain” to its limit size) and preparation areas of crustal earthquakes depending on the magnitude is done. The required parameters (typical dimensions and e-folding times) are extracted from the available empirical relationships and measurement data. The obtained analytical formulas can be used in the analysis of geophysical data for the study of anomalies in the behavior of different geophysical parameters that may be precursors of earthquakes.

Keywords: crustal earthquake, nucleation zone, seismic source, seismic source evolution, phenomenological model.