

POSSIBLE TRIGGERING INFLUENCE OF THE DIURNAL VARIATIONS IN MICROSEISMS ON SEISMIC PROCESS

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Abstract. A hypothetical mechanism is considered of genesis of the diurnal periodicity in earthquakes resulted from triggering influence of microseisms on seismic process. Examples of correlated changes in earthquake flows and microseismic noise are given, possible causality of weak seismicity by the step-like origin of seismotectonic strain is discussed. The trigger effect is considered as temporal changes in the process of step-like creep strain of a stressed seismogenic volume under influence of microseismic vibrations in unstable equilibrium of the deformable rock volume structured by a hierarchic fracture system. The analysis performed demonstrates a possibility in principle to consider the diurnal periodicity of earthquake as resulted from triggering influence of microseismic vibrations with the well-defined diurnal periodicity on the crust.

Keywords: microseismic vibrations, seismic noise, strain step, diurnal periodicity; trigger effect.