Geosystems of Transition Zones, 2017, vol. 1, N 3, p. 64–70
Геосистемы переходных зон, 2017, т. 1, № 3, с. 64–70
http://dx.doi.org/10.30730/2541-8912.2017.1.3.064-070

Full text RUS
https://elibrary.ru/item.asp?id=29982420

Estimation of parameters of hydroacoustic signals of high frequency geoacoustic emission within Central Sakhalin Fault area

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Amplitude and spectral characteristics of high frequency (1 Hz – 4 kHz) geoacoustic emission signals registered by hydrophone seismic recorder have been considered in the paper. The peculiar property of analyzed emission signals is the presence of two dynamically interacting components: high frequency component that characterizes the process of crack formation and low frequency component that is the response of the medium. It has been shown that distribution of number of pulses vs. their peak amplitude fits power-law distribution. Herewith the observing deviation from power-law distribution can be probably caused by existence of two spatial groups of emission sources.

Keywords

Hydrophone observations, Geoacoustic emission, Seismic monitoring, Signal structure, Polyspectral analysis

References

Cite as: Borisov A.S., Borisov S.A. Estimation of parameters of hydroacoustic signals of high frequency geoacoustic emission within Central Sakhalin Fault area. *Geosystems of Transition Zones*, 2017, vol. 1, N 3, p. 64–70. doi:10.30730/2541-8912.2017.1.3.064-070