

Seismology
Instrumentation


Similarities and differences of microseism and microbarom source regions reconstructed from the seismo-acoustic Kazakhstani network

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The monitoring network of the Kazakhstani Institute of Geophysical Researches includes seismic and infrasound arrays. The PMCC method helps identifying microseisms in seismic records and microbaroms in infrasound records effectively. Simulation of the microbarom strength, propagation path and signal attenuation are well developed for the moment, and for microseisms as well. However, the bathymetry effect on the source intensity shall be taken into account to model microseisms.

Results of the source parameter simulations and microbaroms and microseisms detections are compared at 7 Kazakhstani seismic and infrasound arrays. These comparisons are also carried out between collocated seismic and infrasound arrays. Similarities and differences between the reconstructed source regions of microseisms and microbaroms are discussed. Beside this study, the advantages of integrating the infrasound and seismic methods have been shown for studying seismoacoustic signals from severe storms.