ID: Type: **Oral**

the infrasound ambient noise in two hemispheres using the dense seismo-acoustic Kazakh network

Kazakh national Data Center operates three infrasound and five seismic arrays. Detection of the microbarom and microseism has been done in the arrays records for the years 2014 - 2017. On the basis of the search and also the source and propagation modelling for microbaroms, two basic conclusions were made concerning the nature of microseism and microbarom recorded within Kazakhstan. It was proved that major portion of energy arriving to Kazakhstan in winter months which falls within the frequency band of microseisms and was recorded by seismic arrays originates in the North Atlantic Ocean.Virtually always it is true for the infrasound arrays. The only exception is the periods when SSW events occur. At these time, infrasound stations record microbaroms originated in the North Pacific. Predicted changes in the signal amplitudes match well with the variations in observations for the microbaroms. However, the picture is not so simple for summer months. Some stations apparently record microseisms and microbaroms from the regions surrounding Antarctica, and this idea matches well with our prediction for microbaroms. Nevertheless, other stations record signals which could be hardly explained with the described simulation method.

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Track Classification: Data Processing and Station Performance