



Monitoring ocean ambient noise using several infrasound arrays in Kazakhstan

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Microbarom signals detected by infrasound arrays are being studied considering both observational and modeling perspectives [e.g Hupe et al., 2018, De Carlo et al. 2018, Smirnov et al. 2018]. Developing wave action models using two-dimensional ocean wave energy spectrum aims at predicting directional microbarom amplitudes at stations worldwide distributed. Kazakhstani infrasound network consists of three arrays: I31KZ, Kurchatov and Makanchy. The Kazakh National Data Center also routinely processes data from the Russian station I46RU. Microbarom parameters have been characterized using PMCC between 0.1 and 0.5 Hz by considering 4 years of continuous recordings at I31KZ, I46RU and Kurchatov arrays, and one year at Makanchy. The simulation of microbarom signals are carried using operational ocean wave interaction model [Ardhuin et al., 2011]. Comparisons between observations and predictions are performed at the different stations. While the observations at I31KZ are in good agreement with the predictions, other stations show significant discrepancies in back-azimuths likely related to instrumental issues. This study suggests that monitoring well-identified persistent natural sources of infrasound provides means for continuously evaluating the station state-of-health and detection capability.