

## **of Noise Level at CTBTO Facilities**

The seismometers can detect not only the seismic events but also other natural vibrations such as cultural activities, wind and ocean waves which referred to seismic noise. Seismic noise exists everywhere on the Earth surface so it can mask seismic signals completely. In this study, we analyzed seismic background noise of BRTR array (PS-43) which is one of International Monitoring System primary seismic station under Belbasi Nuclear Monitoring Center for the verification of compliance with the Comprehensive Nuclear-Test-Ban Treaty since February 2000. PS-43 is composed of two sub arrays which deliver data online to the International Data Center. The advantage of a seismic array is to provide high quality data for earthquake-monitoring and detection purposes but noise levels affect the quality of data, thus it is needed to know the seismic noise levels of a seismic station. Background noise levels of BRTR array for the period of 2005 -2011 have been analyzed and the results indicate a little change in noise conditions in terms of time and location. Noise level changes were observed at 3-5 Hz in diurnal variations at Keskin array, and noise levels of medium period array are high in 1-2 Hz frequency range. The seasonal background noise variation at both sites also shows very similar properties to each other.

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