



## Data quality control of ADSN Broadband stations

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In this work we present the analysis of continuous waveform of the Algerian digital seismic network recorded during five years from 2008 to 2013 for twenty broadband stations using the power spectral densities (PSDs) and their corresponding probability density functions (PDFs) algorithm of McNamara, and Buland (2004).

ADSN Broadband stations data quality is one main concern and interest of ADSN technical team. Indeed, the quality of the data from broadband stations is continuously controlled in quasi-realtime using “PQLX” (Pascal Quick Look eXtended) software to compute the PDFs and PSDs during the operation of the stations at different frequency range. At each station the level of noise is shown, which we can see diurnal and seasonal variation.

From the data analysis, most of the ADSN Broadband stations display good records in the several frequency domains in relation with their site installation. However some of stations near the urban areas could present some noisy disturbances. This led sometimes to generate some ghost events. In the low frequency, some stations could be still influenced by the temperature variations.

This long period of records from 2008 to 2013, led us to analyze and control the several stations year by year taking into account the seasons and to know about their work during five years. This analysis is also very important to improve in the future quality of station installation and choose the optimal station design in aim to reduce cultural noise and large fluctuation of temperature and pressure.

Key words: PQLX, PDFs, PSDs, Broad Band