

Site selection for seismic Broadband station installation (CGS seismic BB National Network)

As part of its monitoring activities, the CGS Algeria includes a National strong motion accelerometers network and a National Broadband seismic network (five stations) located in northern part of the country. In the effort to install the Broadband stations a methodology was adopted, inspired from the international standard and adopted with local needs. As first step administrative contacts was made with the local authorities in concerned Wilaya, then in sites visit and primary site selection, followed by geophysical field studies, then shelter building and final installation. Biskra, located south east of Algeria is the first studied site; we installed two broad band seismological stations for continuous recording during four weeks, enabled us to calculate daily Power spectral density (PSD) for each station and signal to noise ratio (SNR) using local and regional seismic event recorded by the stations. For under ground recognition at selected site we applied geophysical methods (seismic, electric, gravimetry and H/V technique). The results allowed us to establish an underground profile below the site planned for future station installation. The seismic shelter was built under four meters deep, divided in two levels and the external reinforced concrete walls are surrounded with a stone wall to improve thermal isolation.

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