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Quality check assessment of RSN-INGV seismic network

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n our poster we display the preliminary outcome of quality data analysis of INGV seismic network and some use case.
INGV seismic network makes use of different models of seismic sensor (VBB, BB or SP) and different digitizers (Quanterra,Nanometrics, home made digitizer GAIA). We have any possible installation's typology (inside tunnel, borehole, next to city or open) and geology.
First of all we show an overall analisys of seismic background noise in order to define the prevalent behavior to permit to obtain some models that could establish the station functionality soon fast as possible.
We have used probabilistic power spectral densities (PPSDs) to characterize the seismic ambient noise with the methodology proposed by McNamara and Buland (2004) . We established to make use of SQLX software which has analyzed continuous streams of more than 300 INGV seismic station. Thanks to scripts that are available by SQLX we have extracted one or more of the stored statistics from SQLX PDF database as mode, median etc. In this preliminary fase we have choiced to show the mode even if it includes some outliers.
We have found that noise levels are homogeneous enough across the network in the microseismic band (3–20 s) but it is vary outside this range due to different instruments at low frequency and due to geology and human activity in high frequency.
We have estabilished to produce three INGV minimum noise (VBB, BB and SP) to have three reference usefull for characterizing a single stations performance and to detect operational problems.The noise seasonality and daily variations are considered, too. This should be relevant to the future siting of INGV stations.We analizing both theoretic and effective detection level single station to improve the automatic detection INGV sistem Earthworm, and the data continuity in our archive in order to permit a quality classification of every station.