



Estimation of Pd y τ c parameters for earthquakes of the SW Iberia (S. Vicente Cape)

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The S. Vicente Cape (SW Iberia) is a region where potential large and damaging earthquakes may occur, such as the 1755 Lisbon (Imax=X) or 1969 S. Vicente Cape (Ms=8,1) events. In order to study the feasibility of an Earthquake Early Warning System (EEWS) for earthquakes on this region (ALERT-ES project), we have estimated the Pd and τ c parameters for a rapid estimation of the magnitude from the first seconds of the beginning of P-waves. We have selected earthquakes occurred on the period 2006-2011 with magnitude larger than 3.8 and recorded at regional distances (less than 500 km) at real time broad-band seismic stations of Instituto Geográfico Nacional, Western Mediterranean and Portuguese National Networks. We have studied time-windows from 2 to 4s and applied different filters. Due to the off-shore focus occurrence and very bad azimuthal coverage, we have corrected the Pd parameter by the radiation pattern obtained from focal mechanisms of the largest earthquakes of this region. We have normalized the Pd value to a reference distance (100 km) and after we have obtained empirical correlation laws Pd and τ c to the magnitude, in order to obtain a rapid estimation of the magnitude.