



Estimation of P_d 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 ($M_{max}=X$) or 1969 S. Vicente Cape ($M_s=8.1$) 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 P_d 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 P_d parameter by the radiation pattern obtained from focal mechanisms of the largest earthquakes of this region. We have normalized the P_d value to a reference distance (100 km) and after we have obtained empirical correlation laws P_d and τ_c to the magnitude, in order to obtain a rapid estimation of the magnitude.