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T1.2-P17. Vertical and lateral variation of coda wave attenuation in Makran region, South-East of Iran

Abstract Makran region, due to movement of the Arabian plate toward the Eurasia forming a subduction zone in South-East of Iran. We are using recorded data on stations of International Institute of Earthquake Engineering and Seismology. The "Single Back-Scattering Method" is used to estimate Qc. The relations of frequency dependence of coda wave quality factor for events up to 100km epicentral distance is determined. Also, the lateral and depth variation of Qc are computed and discussed. In this study, the Qc values are calculated for 12 laps times (5 to 60s with a step of 5s). The frequency dependent relationships of Qc, for Makran region varies from $Qc = (12 + 1.1)f^{(1.3 + 0.15)}$ at 5s to $Qc = (137 + 1.1)f^{(1.03 + 0.018)}$ at 60s lapse time windows. The value of Q is less than 200 that implies, beside a highly tectonically and seismically behavior, a highly heterogeneous medium. In Makran region at a depth of ~97 km the variation rate of Q suddenly increases. Oceanic crust has higher velocity, so attenuation is less than continental crust. Key words: Coda waves, single back scattering, Quality factor,Attenuation, Makran.

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