

Lateral Heterogeneity of 1/Q in Eastern and Southeastern Anatolia

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Abstract : The Coda attenuation and frequency dependency of seismic wave are strongly dependent on the effective stresses structures within the upper crust. In this study, the data of three different stations were used to examine the lateral variation of stress. The tectonic structures of these three areas have been examined comparatively using lateral coda tomography. In the study using the single scatter method, the window length selected to be 20 second. Coda values 80 with 94 and frequency dependency values obtained between 0.69 and 1.21. The 1/QC values for the three regions ranged from 0.0012 to 0.017, highlighting the regional differences in the seismotectonic activity of the crust. The lowest absorption values obtained from Erzurum station when the highest absorption values obtained at the Kemaliye station. The low Qc and high frequency dependency values obtained Kemaliye, which indicates that it has highest tectonic activity than other two regions. The seismodynamics data obtained from the study found to be in agreement with the tectonic structure of the region.

Keywords : regional coda attenuation, tectonic stress, crustal deformation

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