



The Ambient Noise Tomography of Turkey: Crust to Upper Mantle

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We use over 250 3 component broadband stations from permanent and temporary networks in Turkey and surrounding regions to image structure in Turkey with ambient noise tomography from crust to upper-mantle. Rayleigh and Love wave phase and group velocities are used in a nonlinear iterative tomographic inversion. Then the velocity models from the tomographic inversions are used in a joint inversion to create the Moho depth map of the region. The results mark the complex structure of the region. The seismic images from western Turkey show low velocities possibly linked to the elevated temperatures or fluid content. The images for central Turkey show low velocities for shallow depths but seismic velocity increases with depth; this also coincides with the geothermal potential of the region. The complex wavespeed images for eastern Turkey marks the effects of the ongoing geological processes such as the active collision of Anatolian block and Arabian plate.