

Effective Elastic Thickness beneath the Japanese Islands deduced from Coherence between Gravity Anomalies and Topography, Part III

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The topography and gravity anomalies over the Japanese Islands can be modeled as the sum of the effects of surface and subsurface loading of an elastic plate. Assuming surface and subsurface loading are independent processes, the observed coherence between the 2-D Fourier transforms of Bouguer gravity and topography provides a constraint on the effective elastic thickness of the plate (Forsyth,1985). In this study, this theory is applied to actual data sets of the Japanese Islands. We will report about variations in effective elastic thickness beneath the Japanese Islands.