

Attenuation Structure around Kumamoto Region.

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Introduction

The seismic attenuation implies inelasticity or scattering of the structure. In this study, we estimate the 3-D attenuation structure beneath the Japanese islands by tomographic method. And we show the Kumamoto Region.

Data and Method

Vertical amplitude data of the JMA Catalog from January 1994 to December 2014. The data is represented by the indices Q_p and Q_s , which are dependent on the frequencies of ground motion. We estimate each earthquake mechanism, and the effect of the radiation pattern is also applied. The study area of the inversion is whole Japanese island, a grid with interval of 0.25 degree in horizontal is applied to this region at depth of every 5km to 50 km, and then 10km to 100km.

Result

The target area of the Kumamoto Earthquake region, is shallow, so the resolution of the checker board test is almost good. Most of earthquakes are occurred in the high-Q region. Between Kuju region to Yufu, the low-Q area is laid, and earthquakes don't occur in this series of the earthquakes.

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Reference

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130.76481 32.75389 224

