Estimation of scattering structure of aftershock region of the earthquake occurred in northwestern part of Kagoshima Prefecture

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Aftershocks of the earthquakes that occurred in Northwestern Part of Kagoshima Prefecture in 1997 are used to study the scattering structure of the crust around the source region.

The hypocenters of the aftershocks are first determined. We found that the lower limit of the hypocenters is around 10 km in depth, and trends to be shallower toward east.

To estimate the scattering and attenuation parameters, we simulate envelopes of seismograms based on a single scattering model. The estimated scatterers are mostly distributed within the lower crust below the source region and the upper boundary of the scatterers trends equally as same as the hypocenter distribution.