

# Configuration of the Philippines sea plate around Kii peninsula

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## Introduction

Shape of Philippines sea plate in Kii peninsula outskirts was estimated to about 70km depth by seismic center distribution of semideep-focus earthquake in past studies ex. Mizoue (1977). But they supplied many models, because seismic center distribution and mechanism solution were very complicated in this area.

On the other hand high quality data are accumulated by high-density and high-sensitivity seismometry network and we can see shape of the Philippines sea plate from imaging of three dimensions tomographic velocity structure.

In addition, earthquakes more than M 3.5 are generated frequently in this area for these past several years.

We use their seismicity map resolved with NIED Hi-net data, and CMT mechanism solution from F-net data.

In this study, we will watch a result of demanded velocity structure tomography generally and reexamined it about shape of Philippines sea plate in the Kii peninsula outskirts.

## Results

It is an earthquake of typical reverse fault model thought that an earthquake of October 31, 2000 that occurred near of a shoreline of Nada, Kumano (Mj5.5) occurs in a plate boundary, but an earthquake to have the mechanism how it seems to be represented by an earthquake of M j 5.4 that occurred in the Ise Bay neighborhood of the northeast direction on January 6, 2004, and strike slip component excelled in it is observed.

An earthquake of such strike slip type occurs to the back of Ise Bay, and activity of tremor is low.

In this area, we can suppose that these earthquakes occurred on Philippines sea plate than seismic center distribution existing in the best part of a plate according to the result demanded with three-dimensional velocity structure by Matsubara et al. (2004) in existing low velocity area in a certain oceanic climate earth crust.

In addition, the distribution spreads toward northwest from Shima-hanto Peninsula. In this way we class information of detailed seismic center distribution and mechanism solution and, by what I repeat with information of 3-D velocity structure, consider shape of Philippines sea plate.