

## Crustal structure obtained by receiver function method using the data of the Joint Seismic Observations at NKTZ

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### 1. Introduction

Japanese university joint seismic observations are conducted at the Niigata-Kobe Tectonic Zone (NKTZ). The NKTZ will be important to the accumulation mechanism of the stress and strain in Japan. It is very important to know the mechanism of the area. Many models have been proposed to explain the cause of the high strain rate at the NKTZ. The causes of the high strain rate are interpreted to be located in the upper crust, lower crust and upper mantle. It is very important to obtain the seismic structure at the area. In this study, we analyze the observed data of the Japanese university joint seismic observations and Hi-net data using receiver function method.

### 2. Data

The seismic stations operated by the Japanese university joint seismic observations and Hi-net are used. The earthquakes which occurred in 2005 with magnitudes are larger than 6 are used. The source parameters of the earthquakes obtained by USGS are used.

### 3. Analysis and Results

We research the seismic structure on the line from Shizuoka prefecture to Noto peninsula. The profile line is extended in the north-south direction to traverse the island arc of Japan from the south coast to the north coast. The profile line also traverses NKTZ. The area which is from Tokai to Chubu regions had been already researched by Iidaka et al., (2003, 2004). They surveyed the seismic structure along the profile line from Iwata, Shizuoka prefecture to Hakui, Ishikawa prefecture. The Moho boundary was located at the depth of about 30 km with small distortion. In the crust, a boundary with depth from 13 km to 18 km was detected. The boundary is distorted at the area of NKTZ. The results of our study suggested that a boundary with 3 sec after the first arrival was detected. The boundary seems to be distorted at the area of NKTZ. The further analysis with many data will reveal fine structure of the area.