

# Observation of low-frequency tremors at Hiburijima Island in the Bungo channel

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There has been no seismic station in the Bungo channel region, where low-frequency tremors occur synchronously with short-term and long-term slow slip events. From a preliminary analysis of short-period seismograms, it has been shown that there may be a fast migration of tremor sources as shown in the east Shikoku region (Suda & Nakata 2004). However it is not convincing since the station distribution in the Bungo channel region is not as dense as in the east Shikoku region. To investigate activities of low-frequency tremors in the Bungo channel region, we have installed a broadband seismometer at Hiburijima Island.

Hiburijima Island locates in the Bungo channel about 25 km away from Uwajima city, Ehime prefecture. It is a long and narrow island with a length of about 7 km along the northwest-southeast direction. We have installed a sensor on the top of a large concrete wall for landslide prevention since there is almost no place suitable for installation of seismic sensors because of steep topography of the island. The sensor installed is Streckeisen STS-2, and the data logger is QUATERRA Q330+PB14. Seismic data is downloaded by way of Internet using the ISDN telephone line.

In our preliminary noise analysis it is shown that the noise level at the Hiburijima station in the tremor frequency band between 2 and 20 Hz is lower than those at seismic stations in Kyushu Island near the Bungo channel. This may result from almost no artificial noise source in the island. Since the installation there occurred two tremor activities in the Bungo channel region. We will report results of analyses of these activities in the presentation.