

Long-term observation of GPS/Acoustic seafloor positioning in Kumano trough

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In order to realize the observation of sea-floor crustal deformations, we have started a long-term test of the repeated survey of ocean bottom geodetic stations. In our method, we combine sea surface precise positioning data using Global Positioning System (GPS) carrier phase measurements (Kinematic GPS technique), with acoustic ranging between sea-surface and ocean bottom station. In February 2000, we installed an ocean bottom geodetic station, which consists from 4 precise acoustic transponders, at N33-40, E137-00 in Kumano trough, the land side of Nankai trough subduction boundary, with the water depth of 2,020 meters.

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