

Multidisciplinary cabled observation off Hatsushima Island, Sagami Bay-scientific and engineering test field-

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Western part of the Sagami Bay is one of the active tectonic areas in Japan. In this area, Teishi Knoll, volcanic seamount, erupted in 1989 and the earthquake swarms occurs repeatedly every few years in the eastern coast of the Izu Peninsula. The real-time deep sea floor observatory was deployed about 7 km off Hatsushima Island, Sagami Bay, at a depth of 1174 m in 1993 to monitor seismic activities, underwater pressure, water temperature and deep currents. The video camera and lights were also mounted in the observatory to monitor the relations among biological activities associated with the tectonic activities. The observation system including submarine electro-optical cable with a length of 8 km was completely renewed in 2000. The several underwater-mateable connectors are installed in the new observatory for additional observation instruments.

A precise pressure sensor, ocean bottom gravity meter and ocean bottom electro-magnetic meter were installed using ROV Hyper-Dolphin in the cruise of R/V Natsushima from January 9 to 14, 2005. We start to operate them at February 10, 2005 after checking those of data qualities.

We also installed an underwater internet interface, which is called Linux Box, as a prototype of underwater network system which was operated by Linux operating system. The Linux Box is a key network system for multidisciplinary observation network. It will be able to connect much kind of observation instruments as using internet connection. We put the precise pressure sensor as a sensor of the Linux Box in this experiment.