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[JJ] Evening Poster | S (Solid Earth Sciences) | S-TT Technology & Techniques

## [S-TT50] seismic monitoring and processing system

convener: Masayuki Yoshimi (Geological Survey of Japan, AIST)

Wed. May 23, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

This session covers scientific and technical issues in seismic monitoring or data processing systems for earthquakes or explosions observation. This includes, development or improvement of seismic observation networks, innovative techniques in observation and monitoring, cutting edge data acquisition and processing techniques in geophysical explorations. Other topics related to geophysical observation are also welcome.

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## [STT50-P01] High quality 4-D active monitoring of an ocean bottom structure by using accurately-controlled signal system and a mobile active seismic system

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Keywords: active monitoring under sea floor, 4D active monitoring, seismic

A real time high-quality monitoring of the various environmental perturbations of underwater is very difficult but we expect that high-density high-quality accurate data in both 3-D space and 1-D time will be very effective and useful particularly.

We have been developing new method and technology to monitor the geophysical and/or geochemical changes in time and space of an ocean bottom structure such as resource reservoirs by accurately-controlled continuous signal system and using an autonomous underwater vehicle (AUV) (e.g., Tsuruga *et al.*, 2010; Tachibana and Tsuruga, 2015; Mogi and Tsuruga, 2016). We have been developed portable seismic source system which consists of an active seismic source system and receiver array system with a small atomic clock IC chips in each system and they can synchronize / know the clock time by GPS system as an accurate clock in water.

In this meeting we show the result of sea trial using these active systems.