

Strong-Motion Observation System on Rock Outcrops (2nd Step)

Purpose:

Strong-motion observation network is constructed on rock outcrops (some stations are in rock layer) where high-quality waveform data implying seismic source characteristics are obtained. Observed strong-motion data are utilized for study on the source process of severely damaged earthquakes and the estimation of site response on the basement where design ground motions for important facilities such as nuclear power plants are defined.

Outlines:

Based on the present observation network on the rock outcrops, distribution of stations is changed partially according to the long-term research plan for engineering seismology. The latest observation system is introduced and it leads to the improvement of data quality and acquisition rate. The costs for station maintenance and building database are also reduced. The backup server site is set up at Akagi Testing Center for the business continuity plan that makes it possible to keep on research and send information when Abiko area suffers severe damage from a large earthquake.

Specifications:

- (1) Observation stations (33 points in total) including accelerometers, recording system, and other peripherals
- (2) Data-control server and software, tools for basic analysis, database system, mirror server system (at Akagi area)
- (3) Vertical array observation system in bedrock site (3 places)

Location and Date of Installation:

Abiko Area and out of CRIEPI, March 2008



Strong-motion sensor installed on rock outcrop



Observation station



Backup server site at Akagi Testing Center