

## **Strong-Motion Observation System on Rock Outcrop (1st Step)**

### **Purpose:**

Strong-motion observation network is constructed on rock outcrop 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. In 2007, a backup server site will be set up at Akagi Testing Center for the business continuity plan that makes it possible to keep on research and send information in the event when Abiko Campus suffers severe damage from a large earthquake.

### **Specifications:**

- (1) Observation stations (33 points in total, 13 points were renewed in 2006) 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)

### **Locations and date of installation:**

Abiko Campus and out of CRIEPI, March 2007



Strong-motion sensor installed on rock outcrop



Vertical array station



Data acquisition and database server