

## Temporal variation of elastic wave velocity due to the pumping experiments at Nojima Fault detected with ACROSS system.

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From Jan to March 2000, a pumping experiment has been made near Nojima fault, Awaji Island.

Water was pumped into a borehole that reaches about 1700 meters depth. On the wall of the borehole from 1596 to 1671 meters, a number of small holes through which the water can leak out. The part under about 1500 meters depth of the borehole is in fracture zone of Nojima Fault.

Two ACROSS seismic sources deployed on the site have been being driven all over the period of the experiment to monitor the temporal variation of elastic wave velocity around the site.

After the second pumping operation, arrival time of the S waves which were measured at a geophone on the bottom of the borehole changed about 0.1 percent. And the change has not been recovered until now though 20days have passed.