

R & D of ACROSS for monitoring of earthquake field

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ACROSS is a new measurement system to visualize digitally the structures and physical states in the Earth's interiors through the transfer function between an accurately controlled coherent signal source and synchronized receiver. The original concept of ACROSS has been developed to a practical technology theoretically justified for acoustic and electromagnetic methods of the underground exploration and monitoring under the Earthquake Frontier Program. Technical achievements include acoustic transmitter of 20 tonf up to 50 Hz, the signal control method of FM mode synchronized to GPS clock, signal sensors, accurately synchronized stacking data logger etc. The overall potential of the system is demonstrated by test field experiments.

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