

Earth resistivity monitoring for detecting stress changes close to an active fault

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It is important to monitor the stress state of the rock surrounding active fault for understanding the earthquake phenomenon. Then, we are monitoring earth resistivity, because the change in stress state on rock gives rise to amplified change in resistivity. For monitoring resistivity, we are using the measurement system, which has been developed by us for continuous, precise and stable measurement of resistivity even under severe noise environment. A site of resistivity monitoring is in the investigation tunnel for the Mozumi fault that is one of the Atotsugawa fault systems. Although we cannot observe the apparent change in resistivity caused by change in stress state in the original data, the result of spectral analysis shows the evidence of change in resistivity due to tidal loading.