Estimate of hydraulic properties of the crust - An example from water discharge by Naganoken-Hokubu earthquake

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On November 28, An M 6.7 earthquake occurred at northern part of Nagano Prefecture, Central Japan. The Kamishiro Fault,which has been well known as to be a part of Itoigawa-Shizuoka Tectonic Line, was activated by the earthquake and surface rupture about 9 km in length was appeared along it’s trace.
Post-seismic fluid discharge was observed from the fracture zone of the Kamishiro Fault. Our team has been observed and monitored the flow amount and chemical characteristics of the fluid for about 5 months from one week after the earthquake.
In this presentation, we describe the occurence of earthquakes and its relation to the hydraulic propertes and discuss about the governing equations of fluid flow in fracture zone ofthe Kamishiro Fault.

Keywords: Naganoken-Hokubu earthquake, Kamishiro Fault, Fluid discharge, Fracture zone, Hydroraulic property

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