

Experimental investigation of frictional behavior of volcanoclastic sediments

*Fuke Akari¹, Tetsuro Hirono¹, Shunya Kaneki¹

1. Osaka University

Many events of earthquakes were reported to occur at the Sagami Trough and the Japan Trench off Boso Peninsula, but the fault slip behavior during earthquakes has not been understood. Here we investigated ancient plate-boundary fault outcropped at the Boso peninsula together with mineralogical analysis and rock friction experiment.

We found that the friction coefficients at high slip rate of 1.0×10^{-1} m/s decrease at wet condition whereas such decrease is not observed at dry condition. This inconsistency might cause from the high amount (40 wt.%) of volcanic glass because the glass is generally subject to hydration at wet condition, probably leading to low strength. In this presentation, we will show the preliminary result related not only to the experiment but also to the characteristics of friction of tuffaceous sediment.

Keywords: earthquake, fault slip behavior, friction experiment, volcanoclastic sediments