Oral | Symbol S (Solid Earth Sciences) | S-SS Seismology

# [S-SS34_29AM1]Active faults and paleoseismology

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Geologic and historic information on seismic cycles and on the magnitude and source faults of past earthquakes is essential information to understand future large earthquakes. The study of past faulting and seismicity is an important issue for an interdisciplinary community of seismologists, geologists, geomorphologists, archaeologists, and historians.

10:30 AM - 10:45 AM

# [SSS34-P26_PG]Fault activity of the Kokura-higashi fault and the Fukuchiyama fault zone in northern Kyushu Island, Japan

3-min talk in an oral session

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Keywords:Kokura-higashi fault, Fukuchiyama fault, Tonda fault, Fukuoka Prefecture, Kyushu Island, active fault

The Kokura-higashi fault is an active fault extending in NNE-SSW direction with west-side-up vertical displacement. The Fukuchiyama fault zone consists of the Tonda and Fukuchiyama faults extending in NNW-SSE direction with also west-side-up vertical displacement. Both are located in the northern Kyushu Island. The Earthquake Research Committee evaluated that the probability of the earthquake occurrence in the future on the Kokura-higashi fault and the Fukuchiyama fault zone are unknown or ambiguous because of the luck of paleoseismological data. We carried out a trench excavation study and boring surveys in four sites with total 20 cores on these faults.A trench is excavated across a reverse scarplet along the estimated fault trace of the Tonda fault in the Fukuchiyama fault zone. On the trench wall, steeply inclined sandstone and mudstone of the Paleogene Ashiya Group and overlaid gravel and silt layers are cropped out. However, no clear fault is observed in between bedrocks and sediments.Based on arrayed boring surveys at the Shii and Shindoji site on the Kokura-higashi fault, a few meters differences in depth of the bedrocks are recognized.Faults are observed in the cores from the arrayed boring surveys at the Ikeda and Horita sites on the Fukuchiyama fault zone.