[EJ] Evening Poster | S (Solid Earth Sciences) | S-SS Seismology

[S-SS08]Active faults and paleoseismology

convener:Mamoru Koarai(Earth Science course, College of Science, Ibaraki University), Hisao Kondo(Geological Survey of Japan, National Institute of Advanced Industrial Science and Technology), Ryosuke Doke(神奈川県温泉地学研究所, 共同), Nobuhisa Matsuta(Okayama University Graduate School of Education)

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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.

[SSS08-P23]Paleoseismological study on surface fault ruptures produced by the 2016 Kumamoto earthquake

*Keiichi Ueta[1], Riichiro Miyawaki[2], Katsutoshi Iemura[2], Toshitaka Yokoyama[2], Akiko Miyawaki[2] (1.Central Research Institute of Electric Power Industry, 2.Hanshin Consultants)

The 2016 Mw 7.0 Kumamoto earthquake produced surface ruptures along the Futagawa and Hinagu fault zones. The surface ruptures consist of ENE-WSW trending right-lateral faults and WNW-ESE trending left-lateral faults on the plain in Mashiki Town. In Minami-Aso Village, ENE-WSW trending right-lateral faults display a left-stepping en-echelon pattern. To reveal the past activity of the fault systems, several trench excavations across these faults have been carried out. The paleoseismic studies on the ENE-WSW trending right-lateral faults suggest that Futagawa fault zone has recurrence intervals of about 2,000 to 3,000 years in the past 10,000 years and the penultimate event occurred 1,700 to 2,000 years ago. On the other hand, the recurrence interval could be about 7,000 years for the WNW-ESE trending left-lateral faults in Mashiki Town in the past 15,000 years. In the transtensional fault zone, the ENE-WSW trending right-lateral faults and the WNW-ESE trending left-lateral faults may correspond to Riedel shear and antithetic Riedel shear respectively.