[EE] Evening Poster | S (Solid Earth Sciences) | S-IT Science of the Earth's Interior & Tectonophysics

## [S-IT23]New perspectives on the geodynamics of East Asia

convener:Timothy B Byrne (University of Connecticut), Asuka Yamaguchi(Atomosphere and Ocean Research Institute, The University of Tokyo), Jonny Wu(共同), Kyoko Okino(Atmosphere and Ocean Research Institute, The University of Tokyo)

Sun. May 20, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe) The Pacific, Indo-Australia and Eurasian plates converge around the Philippine Sea plates in south and East Asia, resulting in one of the most tectonically active regions on earth. The area is also geologically and tectonically complex with numerous active tectonic environments, ranging from subduction to collision, and a long history of plate boundary interactions. The last decade has yielded a wide range of new observations, including detailed geologic data and high resolution crustal to mantle imaging. Here we seek oral and poster presentations that bear on the geologic history and geophysical character of modern and ancient plates in East Asia and their interactions since the Mesozoic. We also invite geodynamic models that integrate these diverse datasets into a more holistic view of this dynamic environment.

## [SIT23-P04]Sinistral sense of shear deformation under prelithification: Mélange in the upper Cretaceous Shimanto Belt, the Kii Peninsula, Southwest Japan.

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Detailed analysis of sedimentary facies and structures in mé lange, the upper Cretaceous, Shimanto Belt, together with regional field mapping, provides to understand the primitive shear deformation during sediments were poorly lithified condition. The Cretaceous to Neogene sediments of the Shimanto Belt is distributed along outer zone of SW Japan. It represents that is preserved earliest deformation of accretion process due to oceanic plate subduction. The three study sites in the Kii Peninsula of Wakayama Pref. are selected: two coastal areas of Shiohuki-iwa, Karakozaki (Miyama accretionary complex) and one inland area of channel of the Hidaka river in the western Ryujin village (Ryujin accretionary complex). Brittle-ductile deformations which were formed by later faulting were also studied.

The mé langes are characterized by sheared argillite matrix which wrap various sizes of tectonic lenses. Tectonic lenses are of intensely disrupted sandstone and varicolored mudstones, which are dominated by asymmetric structure. Based on observation in the investigation outcrops, mé lange is structurally separated into Y-shear zone (YSZ) and P-foliation zone (PFZ). The YSZ comprise thick lenticular sandstone (trends subparallel to a direction of shear), intense shear band (thin layer with concentrated prelithification shear deformation) and mudstone dominant mé lange. The PFZ comprise lenticular sandstone (trends slightly oblique to a direction of the YSZ) and mudstone dominant mé lange (associated with foliations which slightly oblique to a direction of the YSZ). The intense shear band separates the YSZ and the PFZ. Preserved radiolarian fossils in mé lange supports that the deformation was formed under a prelithified state.

A significant fact is that all studied mé langes in the investigation area underwent sinistral sense

of shear during sediments were prelithified. Consequently, sinistral sense of shear under prelithification shear deformation extensively penetrate throughout the upper Cretaceous Shimanto Belt.