

Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

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MIS001-02

Room:304

Time:May 25 14:30-14:45

Along strike migration of intermittent submarine landslides at subduction margins: a geologic evidence

Yuzuru Yamamoto^{1*}, Shunsuke Kawakami²

¹IFREE, JAMSTEC, ²Earth-Appraisal Company, Ltd.

Ancient examples of submarine landslides exposed in the Pleistocene Chikura Group represents the lateral migration style of intermittent submarine landslide. The submarine landslide in the Pleistocene Chikura Group was triggered by earthquake induced liquefaction occurred approximately 2 Ma. Although the deposit can be traceable over 5 km based on the key-tephra (HF) tracing, we identified the evidence of lateral variation of sliding ages. In the central part, coherent layers and the key tephra, HF, overlay the slide deposit (HF overlays about 4 meters above the top of the slide sediment). In the westernmost part, however, the HF was included inside the slide deposits as blocks. The HF overlays about 2 meters above the slide deposit in the intermediate part. This is the geologic evidence indicative of the lateral migration of intermittent submarine landslides, which can be correlated to the migration style identified in the physical models (Yamada et al., 2010).

Keywords: submarine landslide, liquefaction, earthquake, accretion