

Submarine landslide on the hanging wall of mega-splay fault, Kumano-nada, Nankai Trough  
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\*金松 敏也<sup>1</sup>、芦 寿一郎<sup>2</sup>、池原 研<sup>3</sup>、KH-15-2 Leg3 乗船者一同

\*Toshiya Kanamatsu<sup>1</sup>, Juichiro Ashi<sup>2</sup>, Ken Ikehara<sup>3</sup>, KH-15-2 Leg3 scientific party

1.海洋研究開発機構、2.東京大学大学院新領域創成科学研究科/大気海洋研究所、3.産業技術総合研究所地質情報研究部門

1.Japan Agency for Marine-Earth Science and Technology, 2.Atmosphere and Ocean Research Institute, The University of Tokyo, 3.Institute of Geology and Geoinformation, National Institute of Advanced Industrial Science and Technology

Submarine landslide in the Kumanonada splay fault, Nankai Trough, southwest Japan were explored by Navigable Sampling System (NSS), Atmosphere and Ocean Research Institute, the University of Tokyo. A sedimentary sequence in the area was cored by IODP Expedition 333 in advance as the "Nankai Trough Submarine Landslides History". The Pleistocene to Holocene sequence of stacked mass-transport deposits was recovered at Site C0018, located within a slope basin on the footwall of the mega-splay fault. Six mass-transport deposit (MTD) units intercalated with coherent intervals were recovered within 1Ma. Although the MTD occurrences were regarded to have been induced by the past Nankai earthquake events, the found frequency of MTDs is absolutely lower than that of To-nankai and Nankai earthquake as every 100-200 year intervals during the historical times. This discrepancy indicates that our understanding on the collapsing induced by the mega-splay faulting is not enough. In order to have well documentations on the relationship between the mega-splay fault and MTDs, we implemented a sub-bottom imaging around the mega-splay fault using NSS. We recovered the image which shows that a 20-m thick sediment layer slid down about 50-m high on the hanging wall of mega-splay fault. Also the image shows that the small depression formed by this sliding was aggraded by fill deposits after the event. If those events were corresponding to a mega-splay faulting in a time, the record will be a proxy to shows the timing of mega-splay faulting in past. And the dimension interpreted from obtained image is useful to assess the risk of hazard induced by mega-splay faulting. We will discuss the scenario of this collapse using data acquired during the cruise.

キーワード: Submarine landslide、meag-splay fault、Nanki Trough、Navigable Sampling System

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