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## Preliminary report on the sedimentary record of SCORE Site C9035 of Tokai, Nankai Trough, southwest Japan

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Chikyu Shallow Core Program (SCORE) is a short and shallow ocean drilling program arranged by Japan Drilling Earth Science Consortium (J-DESC), Japan. SCORE provides opportunities for scientific ocean drilling test and project which can complete in a short period of time by using the ocean drilling vessel D/V Chikyu except for IODP expedition period. The title of this project is “Enigmatic recurrence pattern of Tokai earthquake in Nankai Trough, southwest Japan: the link between great earthquakes and ridge subduction”. The objective of our program is to investigate the past earthquake occurrence from a continuous sedimentary sequence at a local tectonic basin (i.e., Kanasunose Trough) in Nankai Trough. The target of this drilling program is to find an enigmatic recurrence pattern of Tokai earthquake in Nankai Trough, southwest Japan. Hydraulic Piston Coring System (HPCS) of the ocean drilling vessel (D/V) Chikyu can provide an opportunity to obtain an excellent long and continuous sedimentary record to unravel the earthquake recurrence pattern of this study area.

Expedition 912 was conducted by D/V Chikyu sailing from Shimizu to Sasebo, Japan from 4 January - 15 January 2020. The Leg 1 of Expedition 912 was cored Hole A and B in Site C9035 which are located in 34°05.7'N, 138°08.03'E with 2442 meters of water depth in the Kanasunose Trough, Tokai, Nankai Trough. The Penetration depth at site C9035 is 80.19 meters with HPCS drilled from 5 January to 8 January 2020. The thickness of Hole C9035A sediments was 9.5 m with a recovery of 105%. The thickness of cored sediments was 80.19 meters at Hole C9035B, with a recovery of 104.7%. The shipboard measurements of whole-round core samples involved X-ray CT scan and Physical properties. After splitting, the visual core description (VCD), smear slides, split surface image, Natural Remanent Magnetisation (NRM), penetration strength, and moisture and density (MAD) measurements, and Vane shear test were conducted.

The sedimentary succession is dominated by silty sediments with numerous coarse-grained (coarse silt-very fine sand) layers and some volcanic ash layers and spots. Two lithological units

(Unit I and II) can be distinguished on the basis of sedimentary facies. Unit I consists of bioturbated silt and layered coarse silt-very fine sand with massive silt. Three ashes can be founded in Unit I and will provide good age control. Unit II is characterized by matrix-supported gravelly mud-muddy gravel and angular mudstone gravel. After measurements, the extended work of the recurrence intervals of seismo-turbidite in geological time will be built to stimulate the link between great earthquakes and ridge subduction.