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Sedimentary Record and Environmental Implications since the Late Pliocene from the Core CSDP-1 in South Yellow Sea

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As the linkage between continent and ocean, sediments from the continental shelf bear abundant geological signals of sea-level fluctuations, environmental-climatic variations as well as local tectonic movements. A series of compositive investigations including sedimentology, micropalaeontology, systematic rock magnetism and paleomagnetism were carried out on the 300.1-m long core CDSP-1 that has been the longest core so far in the South Yellow Sea.

Some predominant conclusions were obtained. (1) The Matuyama-Brunhes boundary (B/M: 0.78 Ma) of the core was determined at depth of 73.68 m, and the ages of the sediments at 122 m and 155 m is about 1.0 Ma and 1.8 Ma respectively. The bottom of Quaternary system in the Yellow Sea is firstly uncovered, and the corresponding depth in the core is 227.16 m. The bottom age of the core was inferred to be about 3.5 Ma. (2) Sea water firstly reached the core site in the time about 1.6 Ma B.P.. Subsequently, two shorted-lived transgressions occurred to the position in about 1.44 Ma B.P. and 1.02 Ma B.P. respectively, and then it had been exposed until ~0.84 Ma B.P. when a transgression lasting about 60 thousand years occurred again. The evolution of sedimentary environment in the South Yellow Sea should be controlled by both climatic variations and regional tectonic movements.

