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Palynological implication of late Pliocene environments in the Ulleung Basin, East Sea

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Palynological assemblages of pelagic sediment piston cores (GH-9, GH-10, and UGBH2-1-1) taken from the Ulleung Basin, East Sea indicate the paleoenvironmental changes since the late Pliocene. Palynological assemblages consist of pollen, dinoflagellates and reworked forms. Plio.-Pleistocene boundary at 120 mbsf in GH-9, 170 mbsf in GH-10, 140 mbsf in UBGH2-1-1 respectively, are suggested by late Pliocene index taxa, such as pollen of Alnipollenites trina, Ulmipollenites trina, Fagus verus and Fupingopollenites sp., and dinocyst of Capillicysta fusca and Filisphaera filifera. Late Pliocene pollen assemblages are closely compared to those of northeast Asia. Palynological eco-assemblages reflect that paleoclimate changes have changed about 4 times during the late Pliocene to Holocene. Also eco-assemblages of dinoflagellate indicate that paleoceanography of the Ulleung Basin has changed from warm inner neritic during the late Pliocene to outer neritic-oceanic during the Pleistocene to Holocene, and finally became oceanic environmental setting like modern East Sea.