Marine environments in the East China Sea during the glacials

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As a part of the Japanese IMAGES activity, a 33.65 m long core (MD982195) with very high sedimentation rate (ca. 80 cm kyr-1) was retrieved from the northern part of the East China Sea, one of the largest marginal seas in the world. Besides the similaliry between the d180 and alkenone SST curve, many light d180 peaks, apparently corresponding to Dansgaard-Oeschger (D-O) cycles as observed in Greenland ice cores, were observed for the last 42 ka. The meandering of the westerlies during the cold and warm D-O cycles would have established an atmospheric tele-connection between East Asia and Greenland. Based upon contents of organic carbon, nitrogen and total amino acids, the estimated primary production was approximately constant during 42-15 ka, increased in 15-14 ka, and remained constant until 7 ka. The environment in the marginal seas in the western Pacific was much affected by sea level change. However, even during the LGM, the Kuroshio current flew into Okinawa Trough with the reduction of5 degree in SST.