



Late Quaternary seismic stratigraphy and depositional history at the mid-eastern Yellow Sea

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Analysis of high-resolution seismic profiles associated with sediment cores shows that the shelf sequence consists of five sedimentary units formed since the LGM: incised-channel fill (SU1), estuarine deposit (SU2), thin sand veneer (SU3), tidal sand ridge (SU4), and central deltaic mud (SU5). The lowermost unit (SU1) above the sequence boundary is interpreted as channel fill deposits mainly formed during the LGM, which belongs to the lowstand systems tract. Three units (SU2, SU3, and SU4), regarded as transgressive systems tract, can be grouped into paralic and marine components separated by a ravinement surface. SU2 lying below the ravinement surface represents a paralic unit that consists of estuarine sediments left behind from shoreface erosion. The top surface of SU2 is truncated by an erosional surface and is overlain by two marine units (SU3 and SU4), which were produced by shoreface erosion that shifted landward during the transgression. SU3, mainly distributed over a wide area of the central part, is very thin, whereas SU4 on the eastern part off the Korean Peninsula forms serial sand ridges, partly modified by modern tidal currents. The uppermost unit (SU5) above the maximum flooding surface, regarded as the highstand systems tract, formed the thin deltaic mud patch derived from the Huanghe River developed after the highstand sea level approximately 7 ka BP.