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Sequence Stratigraphy of Small Modern Sandy Turbidite Systems Deposited Off the East Corsican Margin (Western Mediterranean)

Modern coarse grained small turbidite systems has received relatively little attention in the literature, compared to large muddy deep-sea fans ((Mississippi, Zaire, Amazon). However, they have a great economic importance as petroleum reservoirs.

Recent detailed bathymetric surveys of the East Corsican margin discover a series of present small fans of varying sizes (5 km to 30 km in length and width), some of them coalescing. Along this margin, the continental slope linked, with an average gradient of 1:30, the coastal area and a N-S trending trough, named " Canal de Corse ". The water depth of the basin varies from 450 m in the North to 900 m in the South and its average width is 40 km.

A close-spaced grid of single-channel high resolution and very high resolution seismic lines were acquired on these fans in 1997, 1998 and 2001, using a small air-gun, a sparker and a boomer.

Most of W-E seismic lines cross the entire " Canal de Corse " from the shelf to the basin. They allow a very accurate correlation between low-stand wedges located at the shelf-break and the distal turbidite deposits in the basin. The seismic profiles display, at the base of the slope, a series of convex upward units that have lobate shape on map. They correspond to a succession of suprafan like bodies that prograde on the basin.

Cycles of progradation and retrogradation of the suprafans on the slope are observed that could be linked to sea-level or sediment input variations.