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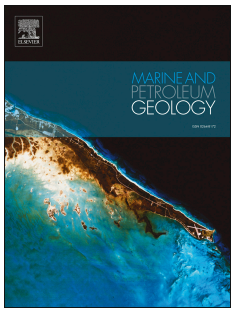

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THE LATE PLEISTOCENE PO RIVER LOWSTAND WEDGE IN THE ADRIATIC SEA: CONTROLS ON ARCHITECTURE VARIABILITY AND SEDIMENT PARTITIONING

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ABSTRACT

Although facies and stratal geometries of continental margin successions can be defined in detail based on subsurface and outcrop studies, most documentations lack the high-resolution age control needed to constrain the time scale of formation of such successions and infer their external forcing mechanisms. Our work on the Po River Lowstand Wedge (PRLW) indicates that deposition rates are surprisingly high with the entire 350-m-thick succession being deposited in less than 17,000 years, and with individual clinothems record time period ranging from 400 to 4,700 years. The PRLW preserves a high-resolution record of stacked deltaic shelf-edge clinothems deposited during the Last Glacial Maximum (31.8-14.4 ky BP) in the Adriatic basin (Mediterranean Sea). We investigated clinothem internal geometry, stacking patterns, and facies distributions to infer the main controls on their growth by integrating seismic reflection data with seismic facies attributes and paleoenvironmental proxies. The stratigraphic framework of the shelf-edge clinothems was then related to major paleoenvironmental shifts during the last glacial cycle and driven by eustatic and climatic changes.