

## **A New Late Holocene Progradational Sedimentary Body on the Onshore-Offshore Transition Domain: the Infralittoral Prograding Wedge**

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Numerous studies of the sedimentological and geomorphological aspects of coastal and continental shelf sedimentary environments have been carried out during this century. However, research on beach deposits has mostly been carried out from an excessively “terrestrial” point of view and has been concerned with coastal defense, while studies of continental shelves have been dominated by a “marine” point of view, addressing geological issues. Additionally, marine studies focus mainly on the connection between the continental shelf, slope and basin. Therefore, literature on the sedimentary characteristics of the nearshore-to-offshore transition on wave-dominated coasts is limited. The reasons for this include methodological limitations, such as the presence of short-period multiples and reverberation of the seismic signal, and the navigational limits of research vessels. The present paper features new insights into a progradational sedimentary body, the *Infralittoral Prograding Wedge* (IPW), has been developing below the storm wave base between the onshore (beach) and the offshore (inner continental shelf) depositional zones during the Late Holocene. The main lithosome is composed of large-scale cross-beds, prograding seaward and paralleling the shoreline, which are formed by avalanches of sediments swept by waves from shallower littoral environments. Cross-beds downlap onto finer-grained offshore sediments, and in turn, are overlaid by shoreface deposits. Sediment transport which produce the IPW is generated by downwelling storm currents and their associated seaward bottom

flow. The IPW represents a new depositional model for clastic, wave-dominated coasts. These findings are the result of research carried out on sedimentary deposits from the Mediterranean spanish coastal zone and Atlantic ocean.

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