Timing and characteristics of eolian-sand turbidites collected from the northeastern Arabian Sea

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The relationship of sea-level changes and climatic changes in late Quaternary with turbidite deposition is reported. We found two ungraded and massive sand layers which were intercalated in calcareous clay in a sediment core (ER-4; W.D. 3,550 m) collected from the northeastern Arabian Sea. The characteristics of these contained dominantly the gray colored, pellet shaped marble grains which were consist of well-sorted and well-rounded of fine to medium sands. According to these features, these sand layers could be described as redistributed eolian sand, so-called "eolian-sand turbidites" (Sarnthein and Diester-Haass, 1977), derived from Thar Desert. The timing of these turbidite occurrences were determined after Heinrich event 5 and L.G.M., respectively, in response to major glacial to interglacial sea-level shifts and variability in the NE-Indian monsoon climate change. Thus, the frequency of eolian-sand turbidites must be influenced by sea-level variations, by cyclic processes of climatic origin and by variations in the subbottom morphology.

Keywords: eolian-sand turbidite, northeastern Arabian Sea, sea-level change, marine core