

Characterization of the resuspension events in a micro-tidal and shallow bay

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Suspended matter near the bed have been recorded through Optical Backscatter Sensors (OBS), jointly with water current and sea-level measurements, in Alfacs Bay (NW Mediterranean Sea). This bay (16 km length and 4 km width) is characterized by a micro-tidal environment, relative shallow depth (max. 6.5 m) and freshwater discharges from the drainage channels of the surrounding rice fields. OBS voltage gain show an evident relation with energetic hydrodynamic processes, which included strong wind events and seiche episodes. The periodic traffic vessel is also a mechanism responsible of the resuspension of fine bed sediment. Still most of the OBS signal have been well characterized with physical conditions, some peaks remains unexplained. This work is a first step of a complete investigation of fine sediment dynamics in Alfacs Bay, which also include a wave-current numerical model implementation.