



Suspended particulate matter tidal variation in the Minho estuary in low runoff conditions (NW Portugal)

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Up to the 20th century, fluvial discharge has been the main mechanism of sediment input to the west Portuguese coastal zone. However, the most important fluvial systems have been subject to human intervention. Little is known about the Minho river dynamics and most authors recognize the Douro as the main source of sediments onto the Iberian NW continental shelf (Dias *et al*, 2002 & Araújo, *et al*, 2002). Project ECOIS (Estuarine Contributions to Inner Shelf Dynamics) aims to evaluate in which way the variability of the Douro and Minho runoff induces changes in estuarine and inner shelf dynamics. This paper aims to disclose some preliminary results of this project in what concerns estuarine sediment dynamics during neap and spring tidal cycles, during a low river runoff surveys (September 2005).

Suspended Particulate Matter (SPM) samples collected hourly during neap and spring tide conditions were analysed using X-ray diffraction (mineralogy) and laser scattering (grain size). Suspended particulate matter signature (granulometric and mineralogical) variations between neap and spring tidal cycles will allow the inference of sources and sinks of lower estuarine sediments, and the understanding of potential sediment export onto the inner continental shelf.