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High resolution micropaleontological evidences (dinoflagellate cysts and fresh algae *Pediastrum*) for the deglacial seasonal events occurring during MIS2 and MIS6 on the NW European Margin

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A multidisciplinary (micropaleontological, sedimentological, and geochemical) approach has been undertaken on a northeastern Atlantic core so as to infer deglacial transitions patterns, namely Terminations, and more precisely Terminations I and II respectively associated with the last and penultimate glacial-interglacial transitions. The studied core MD03-2692 (46˚50'N, 9˚31'W, 4064 m depth) is located more precisely in the northern part of the Bay of Biscay along the Celtic Margin and provides a high resolution paleoceanographic record until MIS10 corresponding then to approximately 350 Ka and covering one of the longest temporal intervals documented in this area.

The investigation highlights the relationships between the regional hydrography of the North-Western European Margin and the glacial/deglacial history of the proximal ice cap centred on the British Isles: the British Irish Ice Sheet (BIIS). During MIS2 and MIS6, the recurrence of a peculiar facies with laminated deposits is linked with major intervals of ice-sheet decay leading to freshwater inputs via the Paleo-Manche river system into the open ocean. A conceptual model for the formation of laminated deposits has been previously proposed (Zaragosi et al., 2001, 2006; Mojtahid et al., 2005).

We have completed the pool of data available on core MD03-2692 and discuss here

the paleoenvironmental history of the Bay of Biscay at the light of additional micropaleontological data. Indeed, the comparison of the laminated events of MIS2 and MIS6 on the same core evidenced genetic similarities concerning the fluvial discharges: they were shown coeval with large fluxes of reworked tracers (pre-quaternary dinoflagellate cysts, fresh algae *Pediastrum*) and very low concentrations of quaternary dinoflagellate cysts. MIS6 laminae were then observed for the first time with a high resolution. However, contrary to the laminae of MIS2 directly associated with Termination I, the laminae of MIS6 appeared 20 000 years earlier than Termination II. Furthermore, we discuss the Heinrich Event 1 (HE1) boundaries as evidenced by the study of other cores from the Bay of Biscay, since our data show that the MIS2 laminated deposits must be considered as the first part of HE1 and not as a precursor signal that would have preceded this drastic episode as recently suggested by Ménot et al. (2006).

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