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Magnetomineralogical features presented by Heinrich events detected on sediments from the Upper Pleistocene and Holocene at the Galicia Bank (NW Iberian Margin)

R. Coimbra (1), D. Rey (1), K. Mohamed (1) F. Vilas (1), T. Frederichs (2)

(1) Departamento de Geociencias Marinas, Universidad de Vigo, 36200 Vigo, España, (2) Fachbereich Geowissenschaften, Universität Bremen, D-28334 Bremen, Germany (rcoimbra@uvigo.es)

The Iberian Margin is a geographical key location for the study of Pleistocene and Holocene climate dynamics, favored by high sedimentation rates and because the latitude considered coincides with the location of the Polar Front during the Last Glacial Maximum. The study area is located on the southwestern flank of the Galicia Bank (NW Spain), at depths between 3363 and 4171 meters. We have studied three gravity cores, representing the main sedimentary environments that morphologically characterizes this part of the Galician Bank (namely fault scarp, sedimentary wedges and lobes and inter-lobe channels). Magnetomineralogical data, in particular magnetic susceptibility, ARM and low temperature (SIRM and susceptibility) measurements, have been used to characterize the mineralogycal components of Heinrich layers previously identified on gravity cores extracted at the Galicia Bank. The formation of loops on the ARM *vs.* κ plot shows an increasing grain size trend at these horizons. The identification of coarser stoichiometric magnetite grains by low temperature techniques, suggests that ice rafting was responsible for the transport of such material. Furthermore, these samples show characteristic features unrecognizable in any other sample along the cores, confirming a distinct (distal) source for this material.

The use of low temperature techniques proved to be a fast and simple way to identify the magnetomineralogy of Heinrich events and allowed the recognition of the events H_1 to H_3 at the Galician Margin.