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Title: Youger Dryas and Heinrich events recorded by magnetic susceptibilit geochemistry of sediments from the central temperature area of Wes Pacific Warm Pool

Abstract:

Three short geomagnetic excursions,the Gothenburg,Mono Lake and (or Maelifell) in the Brunhes Positive Polarity period,were revealed ba the studies of magnetostratigraphy, susceptibility(c) and δ18O of sedi in core WP 92-5 from the central temperature area of Western Pacific Pool (WPWP), and the ages of them are 12.1-11.3 kaBP,25.0-24.0 ka 31.0-28.0 kaBP respectively. Studies of the magnetic stratigraphy of WP92-5 showed that the magnetic properties of sediments from the c temperature area of WPWP, near the equator in southern hemisphere 02.59° S) ,can also record the geomagnetic excursion of Gothenburg Lake and Mungo (or Maelifell) like the sediments of land,lake and sea and middle latitude areas. The ages of the three excursion events rec by core WP92-5 are in accordance with those determined by sedimen other areas,indicating that the three short excursion events of the geomagnetic polarity occurred in last 35 kaBP are global,even simultaneous.In addition,core WP92-5 is located at southern hemisph its magnetic inclination exhibits the magnetization property of northe hemisphere, with the negative inclination reflecting reversal polarity a positive inclination reflecting positive polarity. This special magnetizat property remains to be confirmed by further deep study. The suscepti core WP92-5 from the central temperature area of WPWP recorded th and H1,H2,H3 cold events since last 35 kaBP.The Heinrich events rec by the susceptibility of core WP92-5 well correspond to that of core S in middle Atlantic,and also well match the ages of these cold events c by the marine sediments from other areas. It is preliminarily consider the YD and Heinrich cold events is the main factor leading to sudden of susceptibility and there are certain correlations between them. The that the content of Fe2O3 in layers of cold events is much higher than other layers indicates that the magnetic minerals enriched easily duri temperature periods. Under this condition, the density of magnetic pa will increase and the original magnetic domain structure will be chang Therefore, the sudden change of susceptibility can be used to indicate climatic variation between warm and cold.

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