

Pleistocene Sea Level Change and Climate Change by Rock-Magnetic Methods from Continental Margin (Off New Jersey: ODP Leg 174A)

Hirokuni Oda [1]

[1] Marine Geol. Dept., Geol. Surv. Japan

ODP Leg 174A was conducted off New Jersey and 2 sites were drilled on the continental shelf and one site on the slope. Rock magnetic measurements were conducted on the Pleistocene sediments from the slope site and get detailed records showing sea level change and climate change.

ODP Leg 174A was conducted off New Jersey and 2 sites were drilled on the continental shelf and one site on the slope. Rock magnetic measurements were conducted on the Pleistocene sediments from the slope site and get detailed records showing sea level change and climate change. Saturation isothermal remanent magnetization (SIRM) and magnetic susceptibility (K) were measured and SIRM/K was calculated, which is an indicator of magnetic grain size. There are several minimas of SIRM/K which means coarse grain size and corresponds to glacial period. Natural gamma-ray by logging tool also showed the maximas at the same position. Interstitial water analysis showed several maximas of alkalinity, which is an indicator of organic input and hence interglacial period, just above the minima of SIRM/K. The sudden change from glacial to interglacial can be correlated to the sudden change in oxygen isotope record from deep-sea sediments. There are also 20kyr and 40kyr cycles instead of 100kyr cycles in SIRM/K record. The relationship between rock magnetic parameters and other parameters will be discussed in detail.