AOGS 2006

Synchronous d18O Changes in Bay of Bengal Sediment Core and Greenland Ice Core

P. GOVIL[1], P. DIVAKAR NAIDU[1], STEFAN MULITZA[2]

[1] **National Institute of Oceanography, Dona Paula 403 004, Goa, India*

[2] *Universitate Bremen, Forschungszentrum Ozeanrader/Marum Postfach 330 440, Germany*

Monsoon proxies based on upwelling indices, isotopes and total organic matter from the Arabian Sea have shown a strong link between the north Atlantic climate and summer monsoon variability. To understand the general relationship between monsoon climate variability and the rapid temperature fluctuations that are recorded in the Greenland Ice Core records we have studied a high sedimentation core from the Bay of Bengal. The location of the core site is highly influenced by the fresh water discharge is strongly coupled with the monsoon precipitation in the Indian subcontinent. Therefore, the variability of the d18O record of the surface water is thought to be caused by variations of the intensity of monsoon. The d18O record of Globigerinoides ruber show an abrupt fluctuations from 12 to 45 kyr which mimics the Dansgaard-Oescher interstadial events (1-13) documented in the Greenland Ice Core. These synchronous d18O variations in the sediment core of Bay of Bengal and Greenland Ice Core lends a strong support to suggest teleconnections between high latitude temperatures and low latitude monsoon climate. The possible mechanisms to explain the link between high and low latitude climate will be discussed.