Geosciences Division

Physical Research Laboratory

Seminar (online)

Deep sea foraminifera Abundance in Central Equatorial Indian Ocean since last glacial maxima: Effect of Productivity and Bottom Water Oxygenation

Abstract

Benthic foraminifera are widespread and diversified organism in the marine environment and they have a significant role in the deep-sea food web and ocean carbon cycle. They play a pivotal role in the study of paleoclimate, because of the potential capacity of fossilization of their shells. To understand the dependency of benthic foraminifers on overhead productivity, a regional process and deep-water oxygenation, a global process, during the past ~19 ka, a sediment core from the central equatorial Indian Ocean was investigated. Towards this, foraminifera from six-time intervals were separated for benthic foraminiferal abundances and dominant assemblages. The study revealed changing bottom water conditions, especially in terms of change in input of organic carbon to the deep sea and bottom water dissolved oxygen concentration during time period of the analysed samples. Variations in geochemical parameters showed good correlation with the dominant foraminiferal assemblage. This also supports the findings that the dominant assemblages are not only responding to regional processes like organic productivity but also to the global climatic changes controlling the deep-sea oxygenation. This study concludes well oxygenated bottom water throughout Holocene (2.1-12.9 ka BP) and poorly oxygenated bottom water during deglaciation(12.0-17.0 ka BP) and Last glacial maxiam.(17.0-19.3 ka BP).

Speaker: **Ms. Nisha Bharti**
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Date	Time	Platform
17-July-2020	14:00 Hrs	Google Meet (web based portal)

All are invited to attend and participate in discussion

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