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Corresponding Author : Dr. Raja Ganeshram (Raja.Ganeshram@glg.ed.ac.uk)

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Title: Millennial-scale monsoon variability recorded in marine sediment cores from the western Arabian Sea (Somalia) and Mexican margins: the low-latitude climate forcing

Abstract:

'Low-latitude and high-latitude climates and linkages in the Asia Ocean sector in the late Quaternary' (Session OA18) We report rapid very high resolution records of century to millennial scale records of monsoon variability in sediment cores raised from the Somali margin. These oscillations in this area are expressed as changes in organic carbon and aragonite contents, in the presence or absence of laminations, fluctuating $\delta^{15}N$ values of sediments and dust inputs. Radiocarbon dates indicate these oscillations are co-eval with D/O cycles recorded by Greenland cores within the dating accuracy of both records. Interglacial and warm interstadial (of GISP 2) periods are marked by high organic carbon content and poorly-oxygenated/denitrifying upper-intermediate waters which are attributed to the strong summer (southwest) monsoon winds and resulting high upwelling-induced primary production prevalent during these periods. In this study, we will compare productivity and denitrification records from the Somalian margin influenced mainly by the summer monsoon with those from the Mexican margin where Pacific monsoon drives upwelling-induced productivity (Ganeshram et al., 2000). These records will be used to elucidate the role of low-latitudes in amplifying rapid climate oscillations.

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Co-Authors

No.	Title	First Name	Family Name	Organization
1	Mrs.	Tara	Ivanochko	University of Edinburgh, UK
2	Prof.	Dick	Kroon	Free University of Amsterdam
3	Dr.	Raja	Ganeshram	University of Edinburgh, UK
4	Dr.	Arun	Singh	Cochin University of Science and Technology