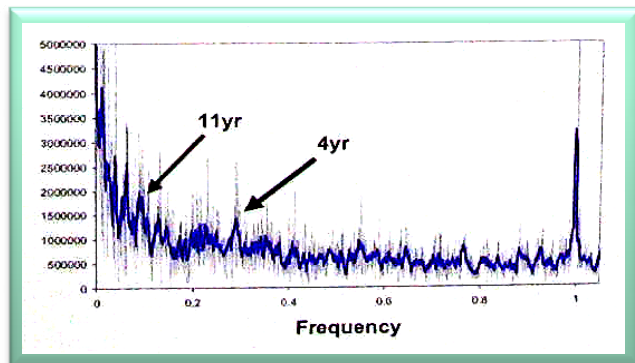
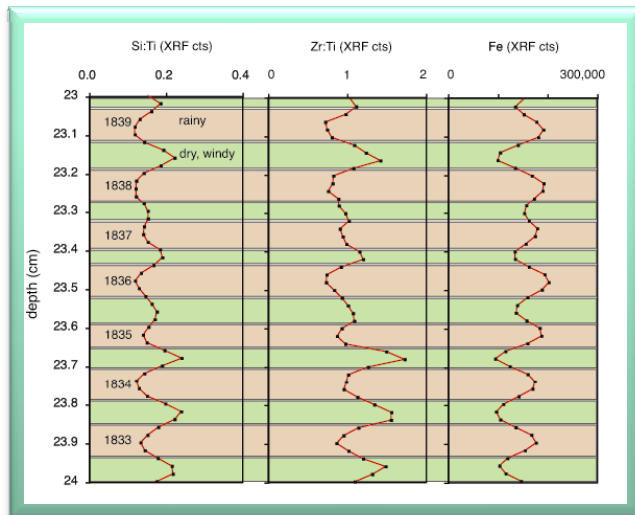


Lake Malawi

Sub-annual resolution reveals seasonal variation



By doing high resolution XRF scanning of sediment cores from Lake Malawi (East Africa), prof. E.T. Brown et. al. were able to demonstrate sub annual elemental profiles showing the magnitude of rainy and dry seasons year by year for ~1200 years back. These regular annual variations shows distinct frequency peaks at 4 and 11 year periods, which suggest possible association with the ENSO and solar forcing, respectively. The “year AD” diagram profile shows the Fe profile over a period of years, the brown bars represent terrigenous layers, while the white bars represent diatom rich layers.

A total of more than 600 meters of cores from seven holes at two sites have been scanned for a suite of elements including Fe, Ti, Si, K, Mn and more. With a lateral resolution of 0.2 millimeters, speedy as well as accurate analyses are required.



Read more:

Abrupt changes in tropical African climate linked to bipolar seesaw over the past 55,000 years. E.T. Brown, T.C. Johnson, C.A. Scholz, A.S. Cohen, and J. W. King. GEOPHYSICAL RESEARCH LETTERS, Vol. 34, doi: 10.1029/GL031240, 2007

East African megadroughts between 135 and 75 thousand years ago and bearing on early-modern humans origin

Christopher A. Scholz et. Al. PNAS October 16 2007 vol 104. pp. 16416-16421.