Geophysical Research Abstracts
Vol. 14, EGU2012-2018, 2012
EGU General Assembly 2012

Holocene climate variability inferred from geochemical proxies in monsoonal Central India

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We report the results of our investigations into the ca. 10m long core raised from the Lonar lake, central India. This record represents the first complete reconstruction of the Indian monsoon variability from the core of the Indian monsoon in continental India. Lithological and geochemical changes clearly indicate the presence of an arid Younger Dryas event, a relatively wet phase ca. 11.5-6.4 cal ka. The timing of onset of the wet phase is coincident with Arabian Sea core records (Sirocko et al., 1993) but is much earlier than documented in the Oman stalagmites (Fleitmann et al., 2003). We find evidence of two prominent drier phases during the Holocene between 4.7-3.8 and 1.2-0.4 cal ka which are marked by the presence of the evaporitic mineral gaylussite. A clear evidence of an anthropogenic impact on organic producitivity is observed in the past 1200 years.