



The hydrologic signal of plant waxes in African soils and lakes

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To further our understanding of relationships between changes in atmospheric and oceanic circulation and continental climatology, investigations of marine sedimentary archives can be used to unravel changes in past continental climate conditions in direct comparison with ocean circulation and sea surface temperature changes. For this purpose, molecular-isotopic analyses of plant lipids supply a powerful tool to assess changes in continental vegetation types and hydrologic conditions. Due to the novelty of the applied parameters, especially those based on D/H compositions of plant lipids, however, questions persist on their significance for large-scale continental hydrologic reconstructions. Towards a better understanding of their relevance, compound-specific isotope data of plant lipids in African soils and lake surface sediments covering large hydrologic gradients have been analysed to characterize source signals on an ecosystem scale and make inferences on their interpretation for (paleo-) hydrologic reconstructions.