



Sea surface temperatures in the central southern Indian Ocean over the period 1790 to 2007 inferred from two monthly resolved Sr/Ca and oxygen isotope records

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We obtained two monthly resolved Sr/Ca records from Rodrigues island (Mauritius) located in the trade wind belt of the central southern Indian Ocean. The longest core was obtained at a nearshore fringing reef and covers the period 1790-2005. This coral records surface air temperatures from the local weather station available from 1950 to the present. The most remarkable signal is a slight cooling after the 1950's. The second core was obtained from the open ocean and records a long-term warming trend between 1947 to 2007. The warming accelerated after the late 1970's in agreement with instrumental data. The oxygen isotope record is affected by salinity variations and shows a strong freshening trend after the late 1970's. The freshening trend is probably related to advection of low salinity waters with the South Equatorial Current and/or increased cyclonicity. We will discuss our results in light of interannual and decadal variability and present long-term seawater monitoring data.