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Abrupt Temperature Changes in the Western Mediterranean over the Past 250,000 Years: a biomarker approach.

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The sediments from site 977A, leg 161 of the Ocean Drilling Program (ODP), examined in this study at a time resolution of 386 $\pm$ 131 years for the past 250,000 years may help provide better understand of millennial-scale variability in the Northern Hemisphere. This continuous high-resolution Western Mediterranean sea surface temperature (SST) alkenone record shows that abrupt changes were more common at warming than at cooling, both over the glacial and interglacial stages. During marine isotope stage (MIS) 6, SST oscillated following a stadial-interstadial pattern but at lower intensities and rates of change than in the Dansgaard/Oeschger events of MIS 3. Some of the most prominent events occurred over MISs 5 and 7, after prolonged warm periods of high stability. If duration may be taken as a reference for stability, the ODP-977A record shows that climate during the whole period was predominantly maintained in interglacial-interstadial conditions, whereas the duration of stadials was much shorter. In addition, the total organic carbon profile and data for some marine and terrestrial biomarkers which document the history of the organic matter inputs at this site are presented and discussed in the context of the sapropel occurrence in the Mediterranean basin during this geological past of interest.