



## **Seasonal asymmetry of the Global Warming as seen from Southern Europe**

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The city of Cádiz (Southern Spain) occupies a narrow peninsula almost totally surrounded by the sea. Cádiz was already urbanized by the beginning of the 19th century. This unique configuration tends to minimize the masking effect of the urban thermal island when analyzing trends in long meteorological series. In addition, Cádiz was one of the most prosperous cities of the 19th century in Spain, which led to the establishment of several meteorological observatories from an early date. In this work we present the comparison of recently abstracted temperature and sea level pressure instrumental series for Cadiz during the period 1825-1852 with instrumental records of the second half of the 20th century. The analysis shows a general and significant warming of more than 2°C during the winter months, while summer temperatures have remained essentially unchanged. The tendency to lower amplitudes of the seasonal cycle in temperature, with milder winters and relatively unchanged summers now found in this location of Southern Europe, had been already documented for a few instrumental and documentary series in Central Europe and Asia. The finding of more evidences in this sense could be crucial to evaluate the performance of some paleoclimatic reconstructions based on summer-sensitive proxies in the Mediterranean area.