



## **The long sea level record at Cadiz (Southern Spain) from 1880 to 2010**

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Tide gauge observations from an ancient tide gauge located in Cadiz and spanning the period 1880-1924 have been recovered from old archives. Daily averages, maxima and minima have been digitized and quality controlled. The information regarding the levelling of the instrument with the corresponding benchmark has also been recovered and updated to the modern benchmarks. A modern tide gauge was installed in a nearby location and has been operating since 1949. The two time series can be combined consistently using the vertical levelling of both instruments, despite the long temporal gap. The analysis of the long time series provides information on the secular sea level trend and acceleration, as well as decadal sea level variability, in a region of high interest due to its proximity to the Strait of Gibraltar. Additionally, a proxy sea level reconstruction using salt-marshes foraminiferal assemblages is being undertaken with the aims of extending the record backwards in time and trying to fill the gap between the two independent sea level time series.