



## **The May 2003 Western Mediterranean Tsunami: analysis of sea level records and comparison with numerical simulations**

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On May 21st 2003, an earthquake of around 6 Richter magnitude stroke the coast of Algeria, causing around 2200 dead and more than 10,000 injured in this country. As a consequence of the earthquake a small tsunami propagated around the Spanish Mediterranean coast causing important material damaging and economic losses in several harbours of the Balearic Islands, where the largest amplitude was over 1 m. The wave was detected by all the tide gauges of the area and in other countries of the Mediterranean such as France and Italy. In this presentation a detailed analysis of the different sea level records available is made, to determine the amplitude and time of propagation of the wave and, due to the small amplitude in some of the stations, to test preliminary algorithms of tsunami detection. Different numerical simulations were performed by the Cantabria University and comparison of results with the recorded data are shown. A simulation was also made with the HAMSOM model, the 2D circulation model used in Puertos del Estado for the storm surge warning system (Nivmar). This work is done in the frame of European Commission funded project TRANSFER (Tsunami Risk ANd Strategies for the European Region).