



Extreme sea levels in the Mediterranean Sea from observations and storm surge models

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Knowledge of sea level extremes and changes in them are crucial for coastal planning and protection. Sea level extremes can be caused by several processes. However the easiest to model are extremes caused by the interaction between tides and storm surges. We present the results of the analysis of several tide gauge stations around the Mediterranean Sea and the coasts of the Iberian Peninsula spanning several decades. We also analyse the output of one 2d model of the area forced by atmospheric pressure and wind. The spatial and the temporal distribution of the extremes in the Mediterranean and the Iberian coasts are presented. Statistically significant trends in the extremes are identified in several locations. The changes in the extremes are consistent with the changes in mean sea level and are caused by changes in the atmospheric forcing.