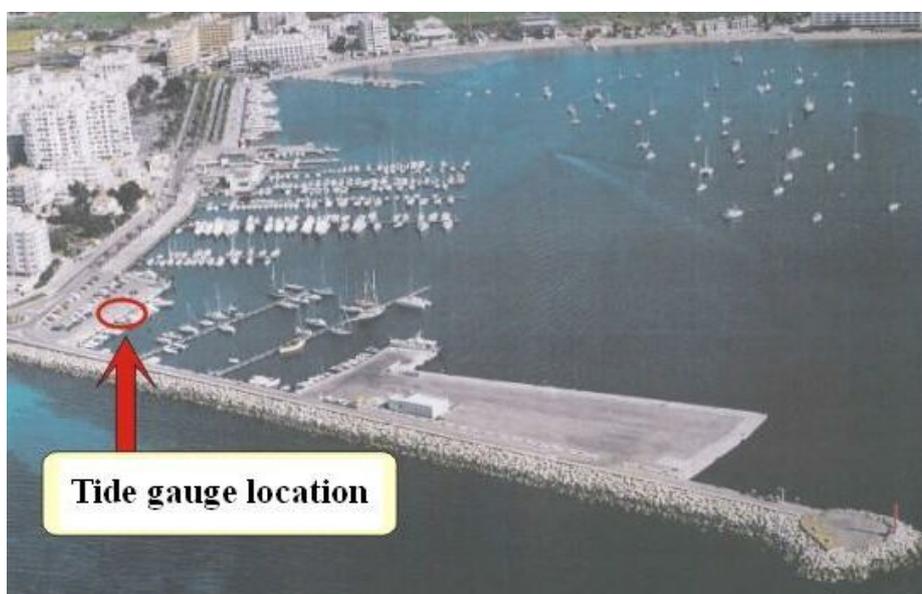
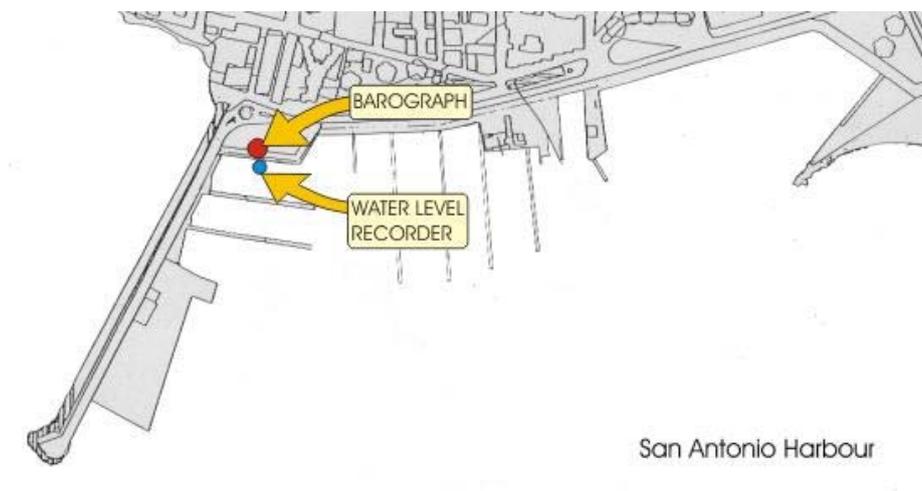


San Antonio site history



History summary

Station name	San Antonio
Country	Spain
Latitude of measuring point	38.9792
Longitude of measuring point	1.3014
Datum reference	The data refer to the Bilbao harbour datum
Time reference	Unknown
Contributor	University of the Balearic Islands
Instrument type	The system consists of a bottom pressure sensor and an atmospheric pressure sensor. Additionally, the tide gauge has a temperature sensor and a

	conductivity cell from which the water salinity can be inferred. The combined use of the bottom and atmospheric pressure measurements, together with the knowledge of the density of the water column above the tide gauge, allows to infer the height of the water column above the tide gauge pressure sensor.
Site of measuring point	The tide gauge system is deployed at the recreational harbour of Sant Antoni, a town located in the western coast of Eivissa/Ibiza, Balearic Islands.
Observational periods	Unknown

Benchmark descriptions

The tide gauge is mounted on an iron frame attached to the wall of the docks. At that point of the harbour the depth is about 3.5 m and the tide gauge sensor is at about 2 m depth with respect to mean sea level. The iron frame consists of two overlapped bars. The longest one extends from the tide gauge to almost the top of the docks. The shortest bar extends from the tide gauge up to a few cm above mean sea level. The top of the short bar was taken as the tide gauge benchmark (TGB). The distance between the tide gauge sensor and the TGB was directly measured. The absolute height of the TGB above the GRS80 ellipsoid was determined by several days of CGPS measurements (see the levelling section). The atmospheric pressure sensor is located a few meters away from the tide gauge and about 2 m above sea level (sea level pressure reduction is therefore neglected).

Sant Antoni tide gauge data have been compared with data from the Ibiza city tide gauge. The Ibiza city tide gauge is located on the eastern side of Eivissa island and is part of the operational tide gauge network (RedMar) of Puertos del Estado. The inter-comparison revealed a good agreement between both series, the main differences being due to the highest frequencies recorded by Sant Antoni station (2 min sampling interval) in front of the Ibiza station (5 min sampling interval).

Data quality

Sea level data have been quality controlled. Sant Antoni tide gauge station was deployed by IMEDEA on January 2002, as part of the activities undertaken during the Calibration phase of the ENVISAT. The instrument and its maintenance during 2002 were funded by the European Space Agency. The location was selected because ground tracks of the two new satellite altimeters (ENVISAT and JASON) run just offshore Sant Antoni bay, making this site especially useful for the calibration of the altimeters. Several activities aimed to altimetry calibration have so far used data from Sant Antoni tide gauge.