



Variation of water mass and net water flux in the Mediterranean Sea

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The mass-induced sea level variability and the net mass transport between Mediterranean Sea and the Atlantic Ocean are derived for the interval 2002-2014 from satellite-based observations and from model data.

Long-term variability of sea level, mass change and the net water flux into the Mediterranean Sea at the Gibraltar Strait over the period 1960-2014 is explored combining multiple observational datasets and results from a regional climate model simulation..

The decadal variations in net evaporation at the sea-surface, such as the increase since 1970, appears to drive the changes in net in flow at Gibraltar. The decadal variation in mass is related to changes in the Atlantic.

The improved sea level data from ESA Climate Change Initiative (CCI) , steric data and , GRACE release R5 data show better agreement in the final budget as data used in previous analysis.