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Mediterranean sea level variations.

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In this work we report an updated study of the sea level variations for the Mediterranean sea for the period from October 1992 to January 2008. The study addresses two mayor issues:
(i)The analysis of the spatial and temporal variability of sea surface height (SSH) from radar altimetry measurements (from TOPEX/Poseidon (T/P) + Jason-1, etc.). We use EOF analysis to explain most of its interannual variation, and how the different basins interact.
(ii) The analysis of dynamics and balance of water mass transport for the whole period. We estimate the steric SSH by combining the steric SSH estimated from temperature and salt profiles simulated by the ECCO model with time-variable gravity (TVG) data (from GRACE) for the Mediterranean Sea. The estimated steric SSH together with the SSH obtained from altimetry allow for a more realistic estimation of the water mass variations in the Mediterranean for the whole period.