



Patterns of Sea Level Variability in the North Atlantic

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Typical spatio-temporal modes of sea level and its steric and mass related components are studied for the period 2002 to 2011 in the North Atlantic. Therefore, monthly gridded sea levels from the Jason-1/Jason-2 satellite altimeters as well as gridded steric sea levels from Argo floats (Metoffice) and mass related sea level from the GRACE mission (GFZ) are analyzed using Empirical Orthogonal Functions (EOFs). Common EOF modes for total and steric as well as for total and mass related sea level can be identified. A sea level pattern which comprises notable steric and mass components is a basin wide dipole with centres at about 45°N and about 15°N. The temporal scales are investigated by analysing the leading principal components.