



Temporal variability of ocean temperature and salinity in the Mediterranean Sea.

J.M. Sánchez Reales, I. Vigo, and D. García

Universidad de Alicante, Applied Mathematics, EPSA, Alicante, Spain (vigo@ua.es, 0034-96-5909707)

Steric Sea Level Variations (SLV), that is SLV produced by density changes of the column of water, are one of the two main factors producing SLV. The second factor produces SLV via water mass changes. The net SLV can be observed from altimetric satellites such as Jason-1/2, but the contribution of each factor depends on both space and time. In this study the steric SLV and its influence in the observed SLV are analyzed in the Mediterranean Sea for a period of 16 years, 1993-2008. The steric SLV are estimated from the integration of salinity and temperature profiles from the ECCO model. Steric SLV are not uniform in time, space nor depth, as can be inferred from the applied Empirical Orthogonal Function (EOF) analysis. Understanding the behavior of the steric SLV in the Mediterranean is of paramount importance to understand the dynamics of the basin.