

VERTICAL VELOCITIES AND SEA LEVEL MONITORING

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In the past decade the study of the global mean sea level has become a valuable issue of oceanography. Continuous measurements of global sea level changes are therefore of primary importance. Tide gauges have provided historical records but are inadequately distributed and measure sea level relative to the Earth crust. High precision satellite altimetry have provided since the beginning of the 90s a well distributed absolute sea level measurements in a geocentric reference frame, but suffers of instrumental drifts. It emphasizes the need to calibrate the onboard altimeters with tide gauges data. While satellite altimetry measure absolute sea level change, and tide gauges provide sea level data relative to the land, it is needed to correct these latest data from vertical crustal movements. The space geodetic techniques allow to consider now direct determination of these land movements, which would give the possibility to determine their contribution to the sea level variations recorded at coastal tide gauges, and deduce the oceanic signal. DORIS is now a mature space geodetic technique which has the potential to contribute to this effort. The aim of this presentation is to give first the status of the DORIS network located near tide gauges stations, and its expected evolution in terms of densification of collocations with tide gauges stations.