Abstract View

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Satellite Determination of the Mesoscale Variability of the Sea Surface Temperature

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ABSTRACT

Satellite infrared data have been used to investigate the mesoscale variability of the SST (sea surface temperature) field. A statistical analysis of the SST field has been performed by means of the structure function. Results give the equivalent power-law exponent n of the spatial variance density spectrum $E(k) \sim k^{-h}$. The exponent n was found to vary from 1.5 to 2,3 with a mean value of 1.8 in the]range of scales 3–100 km which is in agreement with previous one-dimensional analysis from shipborne and airborne measurements. These observed values of n are discussed and compared with the values predicted by turbulence theories.