

Summer Upwelling Variability Off Vietnam From Satellite Data

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Satellite-sensed advanced very high resolution radiometer (AVHRR) sea surface temperature (SST) data over summers (1997-2000) were used to analyze the variability of the summer upwelling off the Vietnam coast. Empirical orthogonal function (EOF) analysis of the spatial variance for 35 nearly cloud-free composite images was performed. The first gradient EOF mode shows the alongshore structure of the cold upwelled water. The second mode reveals the variation of the cross-shore SST gradient. The EOF analysis also displays the impact of the 1997 El Niño and 1998 La Niña events on the summer upwelling off Vietnam coast. The stronger monsoon wind caused the stronger upwelling but the weaker horizontal SST gradient during 1997 El Niño summer. The opposite situation occurred during the 1998 La Niña summer.

Keywords: South China Sea, Upwelling, Sea surface temperature, El Niño, Empirical orthogonal function.

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