

An Airborne Expandable Bathythermograph (AXBt) Survey for SCSMEX

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An extensive airborne expendable bathythermograph survey of the South China Sea (SCS) was conducted during the international South China Sea Monsoon Experiment (SCSMEX) intensive observation period (IOP) in 1998. The primary thermal feature observed was a multi-eddy structure. A three-dimensional estimate of the absolute velocity field was obtained from the observed temperature field and a climatological salinity field using the P-vector method. Striking circulation features were the existence of anticyclonic and cyclonic eddies. In the upper layer the tangential velocity of the anticyclonic warm-core eddies is around 30-40 cm/s and that of the cyclonic cool-core eddies varies from 10 cm/s to 40 cm/s. The tangential velocity of all the eddies decreased with depth. At 300 m depth, it became less than 5 cm/s for all the eddies. The effect of SCS multi-eddy structure on southwest monsoon onset is also discussed.

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