

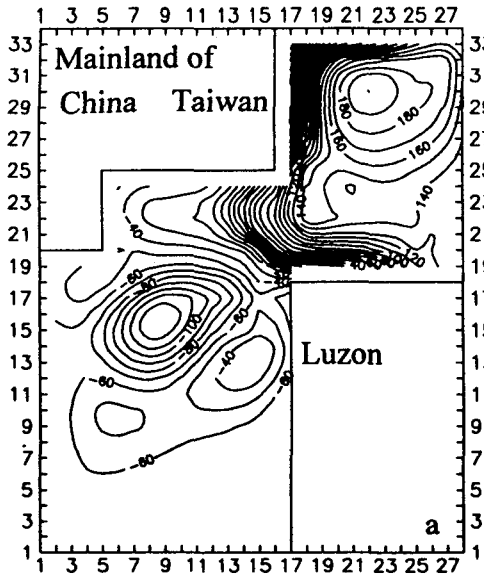
A Two-and -a -half -layer Model of the Circulation of South China Sea

WANG Ou*

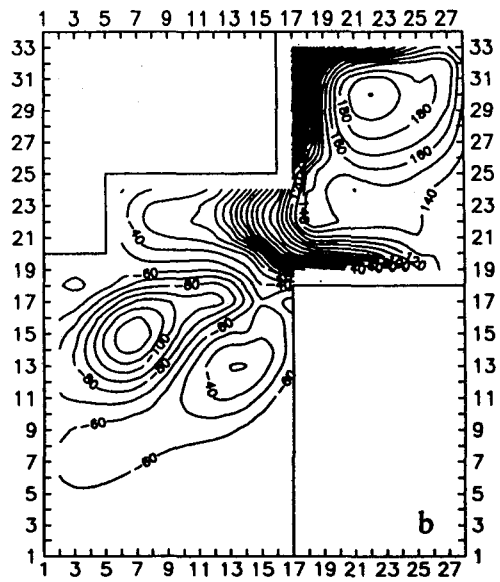
A simple two-and -half-layer model is used to study the circulation of South China Sea(SCS). The model is coming from the reduced gravity model of Hurlburt and Thompson, with the assumption of rigid surface. It shows there is no distinct branch of the Kuroshio into the SCS. Both the upper and lower pycnocline height anomaly show that the main feature of the circulation of SCS is a cyclone, which is generated by the transportation of the vorticity from the Kuroshio. After generated, the cyclone moves westward due to the beta effect, then dissipates near the west boundary due to the viscosity. After an old one dissipates, a new one appears again. The life cycle of the cyclone is about 160 days.

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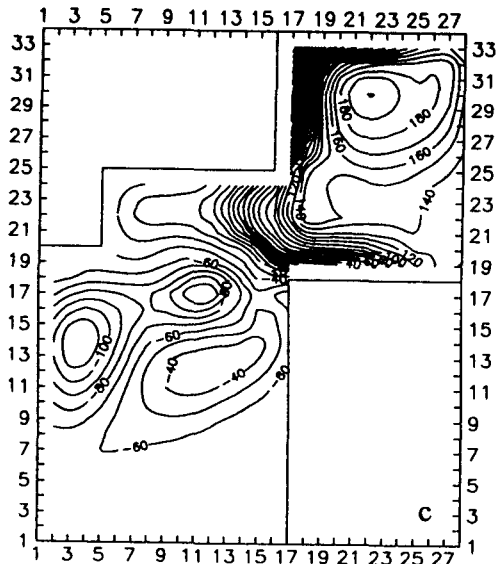
UPPER LAYER (DAY: 2500)



UPPER LAYER (DAY: 2533)



UPPER LAYER (DAY: 2575)



UPPER LAYER (DAY: 2617)

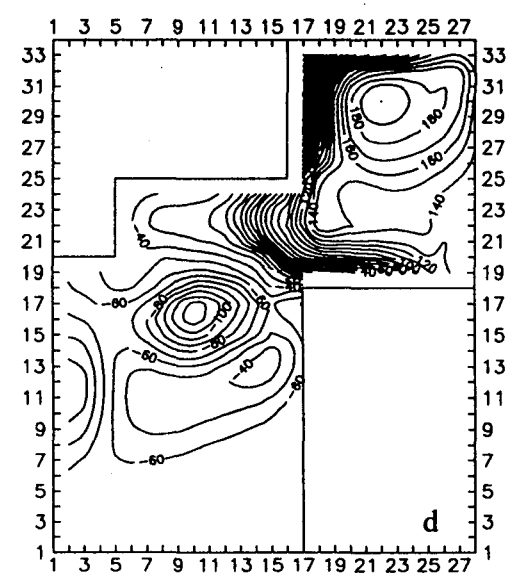


Figure 1: Upper Pycnocline Height Anomaly

UPPER LAYER (DAY: 2658)

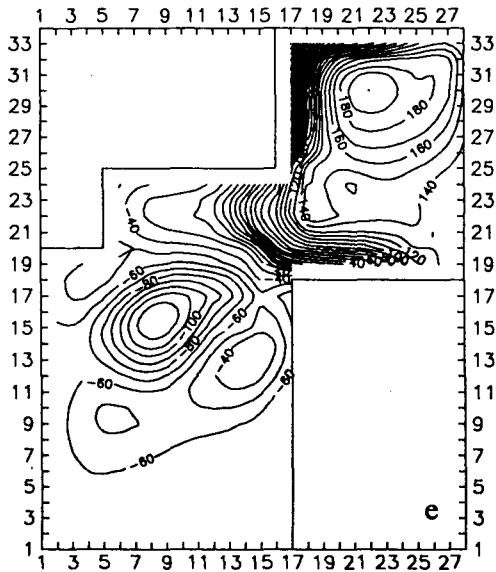
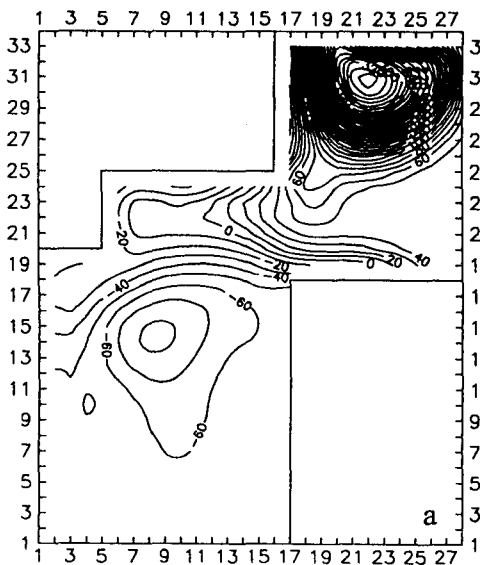


Figure 1: Upper Pycnocline Height Anomaly

LOWER LAYER (DAY: 2500)



LOWER LAYER (DAY: 2533)

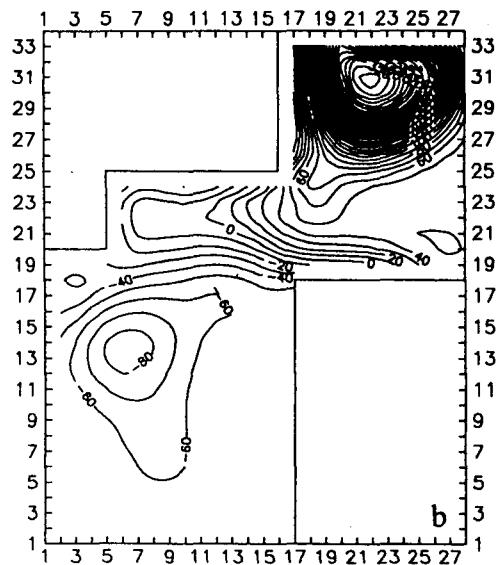


Figure 2: Lower Pycnocline Height Anomaly