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MESO-SCALE CIRCULATION FEATURES  
IN THE NORTHEASTERN MEDITERRANEAN - NOVEMBER 1985

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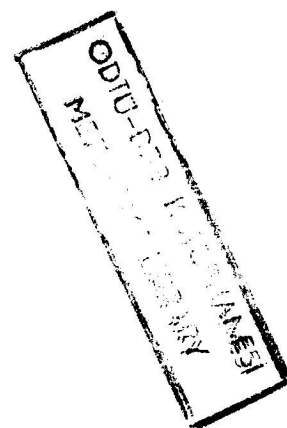
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Density profiles at 54 deep stations in the northeastern Mediterranean (north of  $34^{\circ}\text{N}$  and of  $28^{\circ}\text{E}$ ) have been analysed. The original data were obtained with a Seabird Model SBE9 CTD profiler on board the R/V BİLİM. The maximum depth of the casts was 1000 m, with vertical resolution of less than 1 m, 24 Hz Sampling rate, 1 second averaging and 1 m/s raising/lowering speed. Only upcasts were used in the analyses since only upcasts were available at a majority of the stations.

The original data were edited such that data failing consistency checks were eliminated, and the valid profile data were despiked and filtered. The density profiles were then used to calculate geostrophic streamfunction at standard depths assuming a level of no motion at 900m. Objective analysis techniques (Bretherton et. al., 1976) were used to construct maps of optimally interpolated streamfunction estimates and relative estimation error.

At the surface, an intense cyclonic eddy is found SE of the Island of Rhodes in the general area that has been reported earlier by Özturgut (1975), Anati (1984) and Ovchinnikov (1984). Breakup eddies from this main circulation extend towards the Gulf of Antalya and further to the south. Another cyclonic eddy is detected at the NE tip of the Island of Cyprus. On the other hand, anticyclonic eddies are found in the Cilician channel and its exit to the Gulf of Antalya. Considerable vertical structure is displayed by the analyses made at different depths. Jet-like features at the surface coincide with frontal zones W of Cyprus and near the shelf edge at the Gulf of Iskenderun.

At the westernmost cyclonic eddy centers, upwelling is observed. Intermediate depth salinity maximum (LIW) is found at the center of the anticyclonic eddy located to the NW of Cyprus. The advection of the subsurface salinity is strongly correlated with the circulation patterns.



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