Adriatic thermal front Statistics

Mira MOROVIC

Institute of Oceanography and Fisheries, SPLIT (**Croatia**)

The images from bulletin SATMER published as thermal structures for months were the source of the data. Data set extends from September 1980 to January 1987.

There are some typical position for thermal front. They usually occur parallel to the coast but some transversal transects occasionaly show thermal front. The length of the thermal front extends from one hundred km to 1500 km along Italian coast. To be abble to distinguish the length of frontal zone it is imagined that the front consists of small front increments whose positions were named by the nearest point on the coast. The length of front increments ranged from 50 to 150 km. Fig. 1. shows the positions of fronts.

All front events were counted from every monthly image for each position. There are two types of fronts along the coast : there can be either a positive or a negative temperature gradient towards the coast so they are separately counted while transversal fronts are considered negative if there is a negative gradient towards north.

Fig. 1.- Front positions

The frequencies of the occurence of fronts in every season were presented by histograms in fig. 2.

The highest number of fronts recorded within observed period was 18 negative fronts at positions 3, 4, 5 and 6. Fronts were also frequent at positions 1 and 2 so that in winter it usually had long extension along Italian side.

In the spring their occurence was smaller but still much higher than the occurence of other fronts. In spring also more often than in winter occured fronts of positive gradients at the Italian side of coast. The phenomenon of positive fronts is for Italian side especially characteristic for the summer time while in the same time very few negative fronts occur.

Correlation between all fronts was calculated in order to get more informations about silmutaneous occurence of fronts at different positions.

Different seasonal rhythm was found for fronts along Italian and Albanian side of the coast in some seasons.

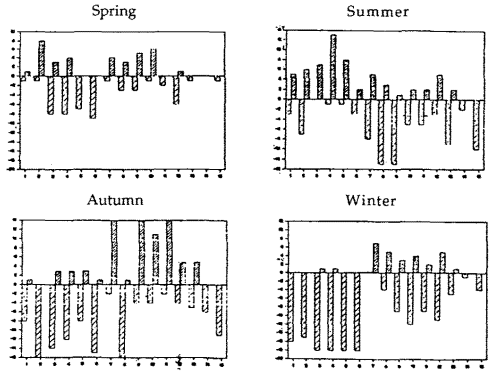

Fig. 2.- Frequencies of fronts