

Some circulation features in the Adriatic Sea - a satellite View

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Surface general circulation in the Adriatic Sea is characterized by the inflow in a wide area along the Albanian and Yugoslav coasts. Along the Italian coast narrow coastal jet of outflowing current prevails during the entire year. Within the Adriatic Sea basin the cyclonic circulation pattern is perturbed by very prominent bottom features such as Palagruža Sill, and by strong transient wind events. Also, the water exchange between the Ionian and Adriatic Sea and the circulation pattern change on the seasonal time scale.

The temperature contrast between the inflowing and outflowing waters is very strong and during the summer the outflowing waters are warmer than the inflowing ones. On the other hand, during the winter the surface coastal jet along the Italian coast consists of very cold and fresh water coming from Po and other Italian rivers. Due to these temperature contrasts number of quasi-permanent thermal fronts are evident. Their positions depend on the transient wind forcing, freshwater inflow and on the intensity of water exchange through the Strait of Otranto.

Superimposed on this general circulation pattern, number of mesoscale features (eddies, gyres, filaments) have also been evidenced. Their typical length scales are of the order of ten kilometers and they are not easily evidenced by the classical hydrographic surveys. Here we present some satellite IR images of the Northern and Southern Adriatic and discuss mesoscale features which are superimposed on the general circulation.