

CURRENTS REGIME OFF CAPE OTRANTO IN DECEMBER '76-JANUARY '77

R. FRASSETTO and A. TOMASIN

CNR - Laboratorio per lo Studio della Dinamica delle Grandi Masse
1364 San Polo, Venezia, Italy

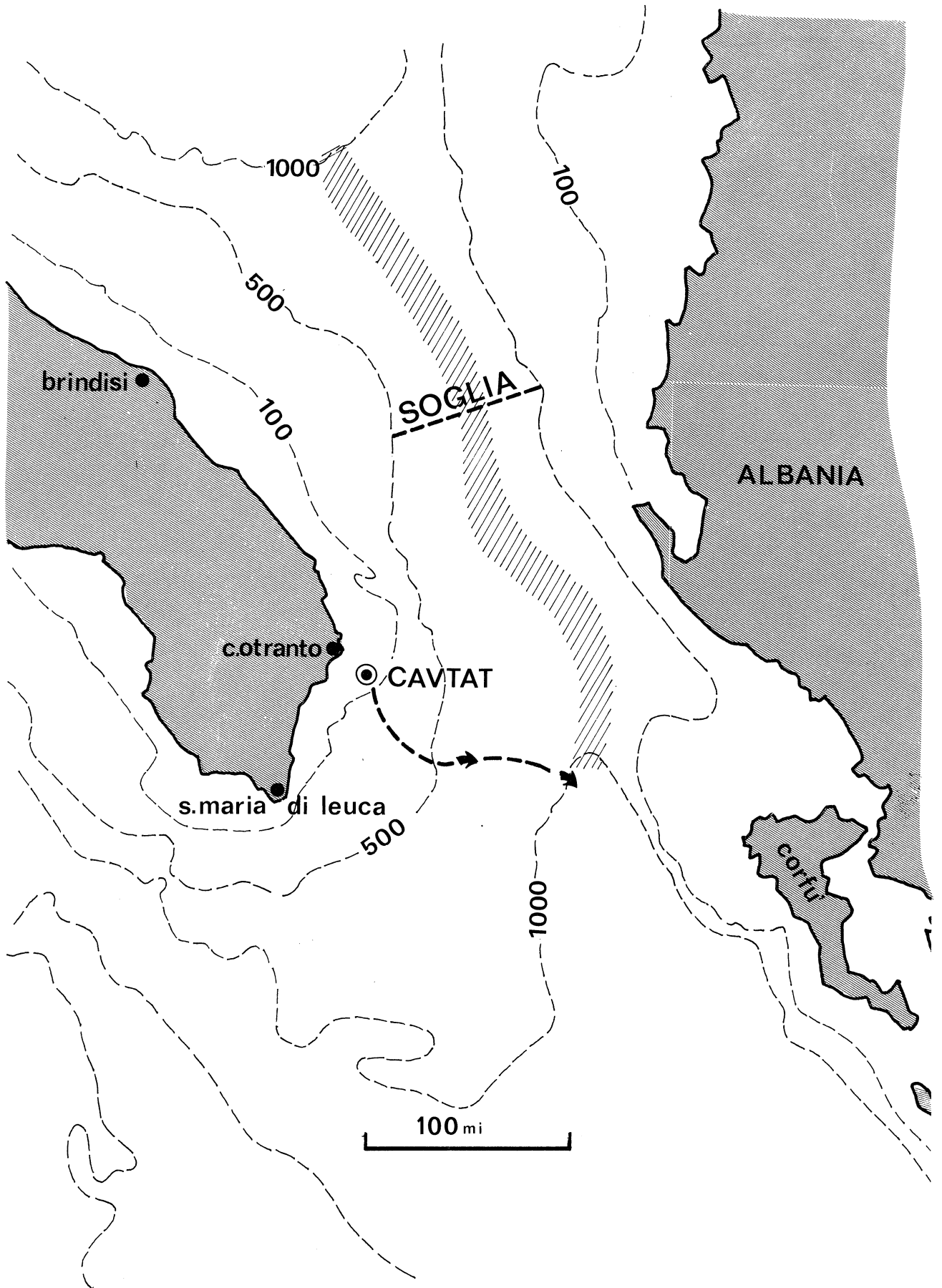
Forty days of current measurements from 3 moored current meters placed near the bottom (-94 m) and above the thermocline (-36 m) 10 miles offshore from Capo d'Otranto near the sunken ship Cavtat from 21 December '76 to 31 January '77 have given an opportunity to verify some aspects of the currents regime across the Otranto Strait.

Since many decades, recommendations have been made to study the transitional areas of the Mediterranean such as the straits of Gibraltar, of Sicily, of Otranto and Dardanelles but Otranto, because of difficulties to work near the Albanian coast, has been rather neglected.

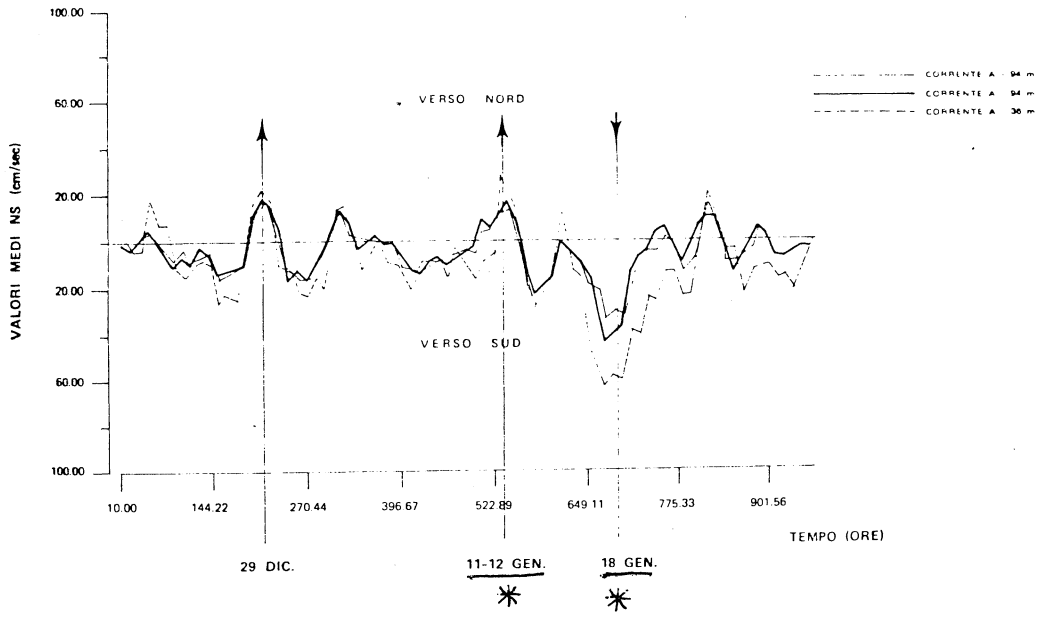
In order to understand better the exchange of water masses between the Adriatic and the Ionian Seas a careful oceanographic survey is needed from coast to coast, across the Otranto Channel.

The measurements made next to Capo Otranto (fig. 1) have a particular interest however because they give new information on the connection between the current regime and the meteorological conditions.

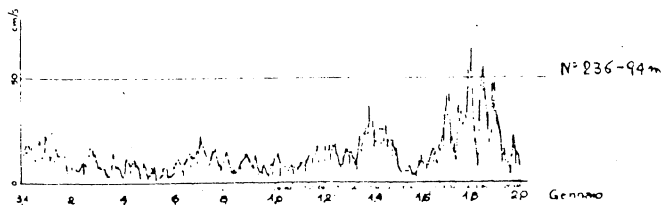
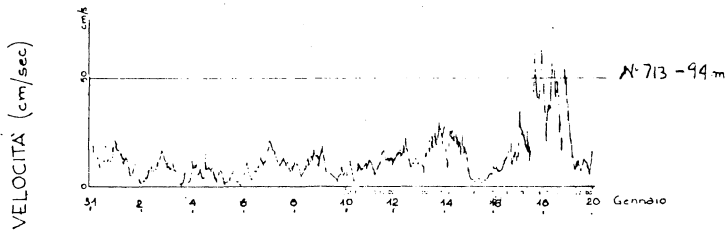
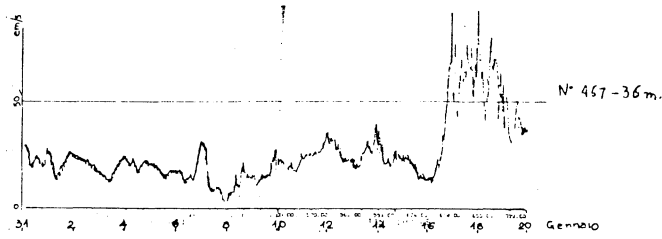
The entire water mass from bottom to surface in Dec. - Jan. showed to move in the same southward direction with average velocities of the order of 10 cm/sec 2 m from the bottom and of 20 cm/sec at 36 m depth.

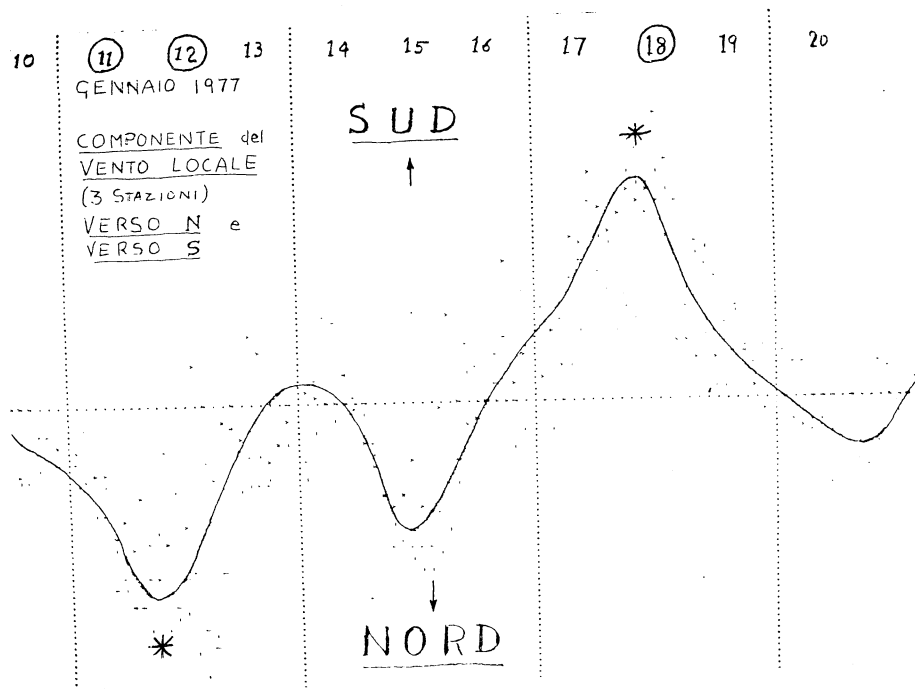
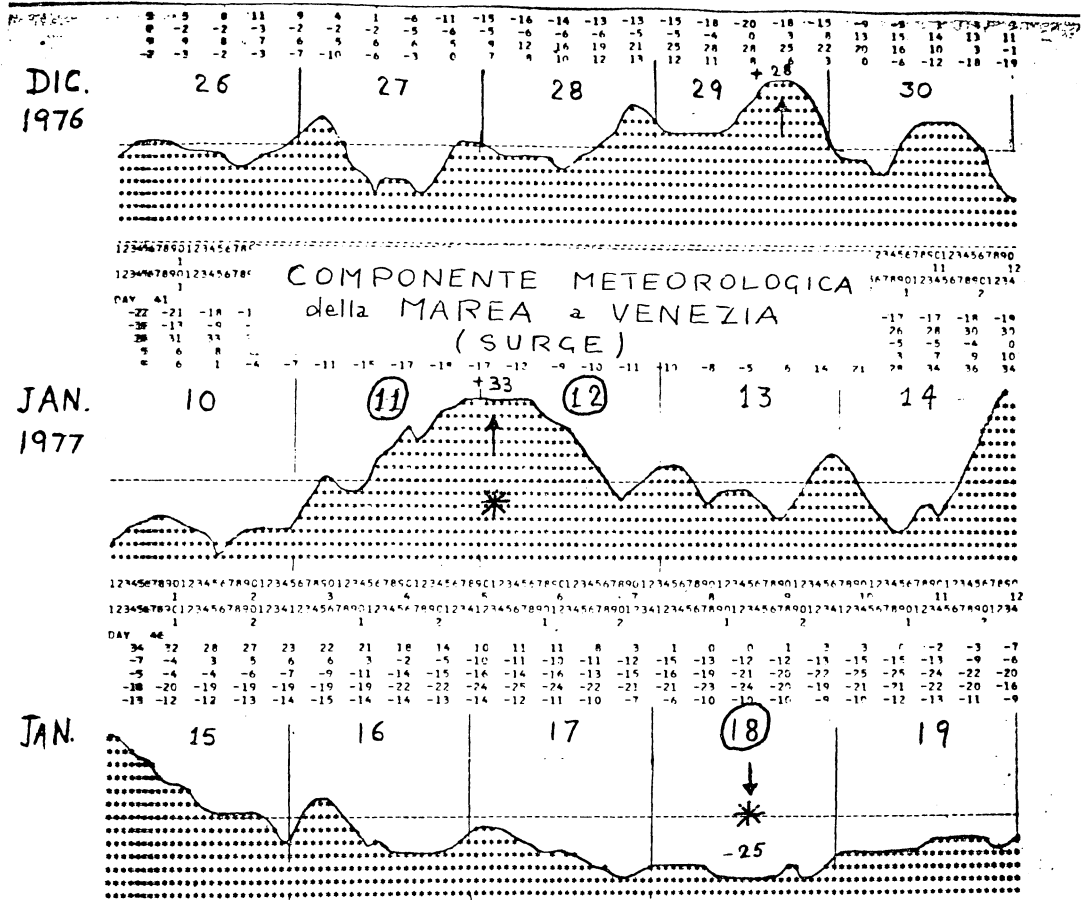


COMPONENTI NORD-SUD DELLE CORRENTI



PROFILI DI VELOCITÀ DI TRE CORRENTOMETRI NEL PERIODO DAL 31 DIC 1976 AL 20 GEN 1977





Peak velocities of 60 and 90 cm/sec respectively have been reached when winds were blowing southward and when high pressure gradients were occurring.

The currents are reduced in velocity and at times invert their direction to the north when winds are blowing from the S-SE and when low pressure fields occur in the Northern Adriatic Sea and high pressure fields occur in the southern Mediterranean.

As a consequence the regime of currents in the Otranto Strait seems directly connected, as one expects it to be, with the high water conditions in Venice.

