

PRE-LAUNCH EXPERIMENTS FOR COASTAL POLLUTION
STUDIES WITH THE SATELLITE NIMBUS G

Roberto FRASSETTO

Laboratorio per lo Studio della Dinamica delle Grandi Masse
Consiglio Nazionale delle Ricerche, Venezia, Italy

An OCS was flown 11000 meters high on a Mistere 20 Falcon jet over the coastal area from Venice to Rimini, following the same exercise made in the North Sea following the Eurasep program.

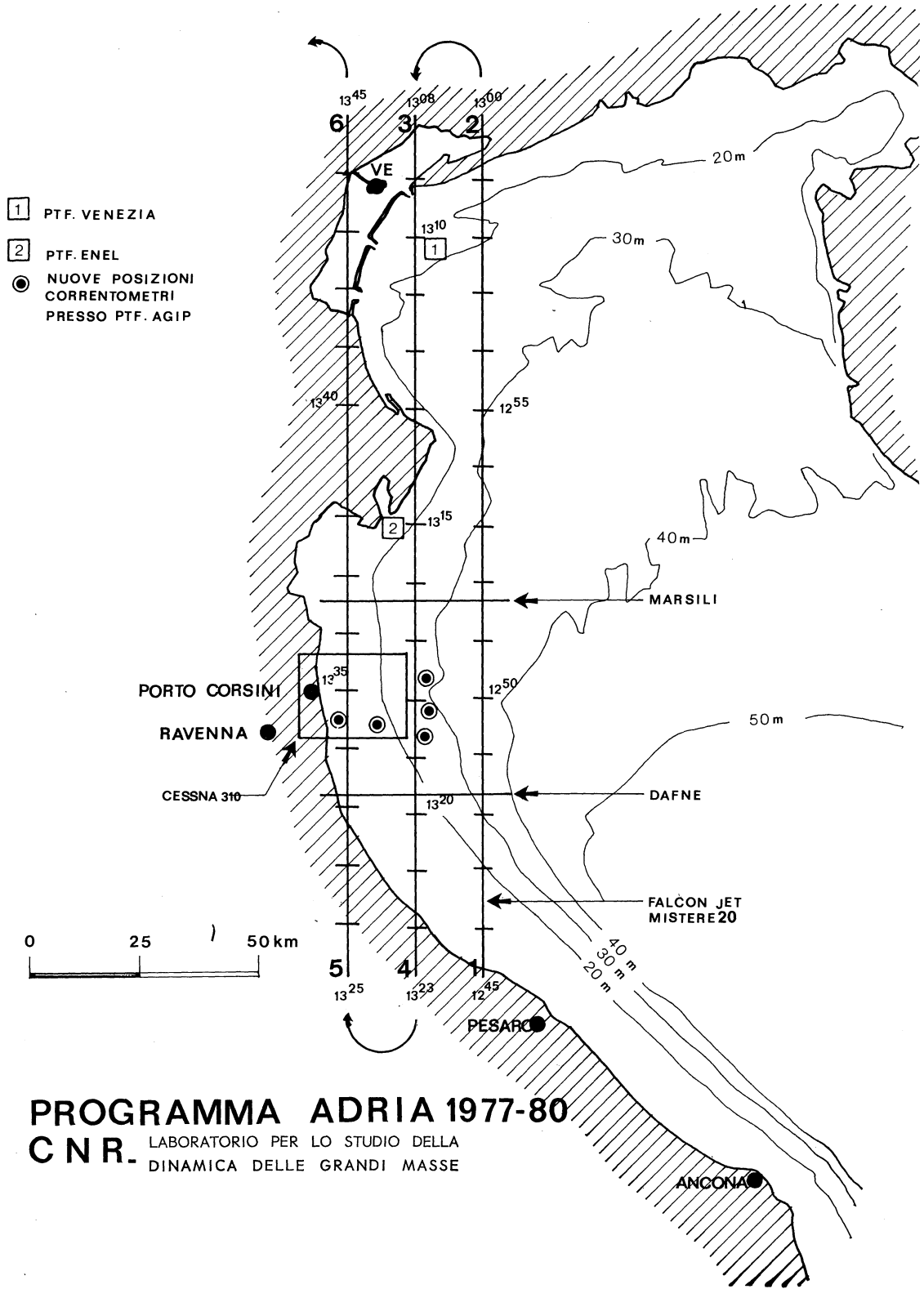
Two ships, 3 offshore platforms and a Cessna 310 aeroplane flown over a small area at 4000 meters altitude with an IR scanner were used for in situ measurements of chlorophyll, suspended matter, yellow substance, plankton and various physical-chemical parameters, and for current measurements.

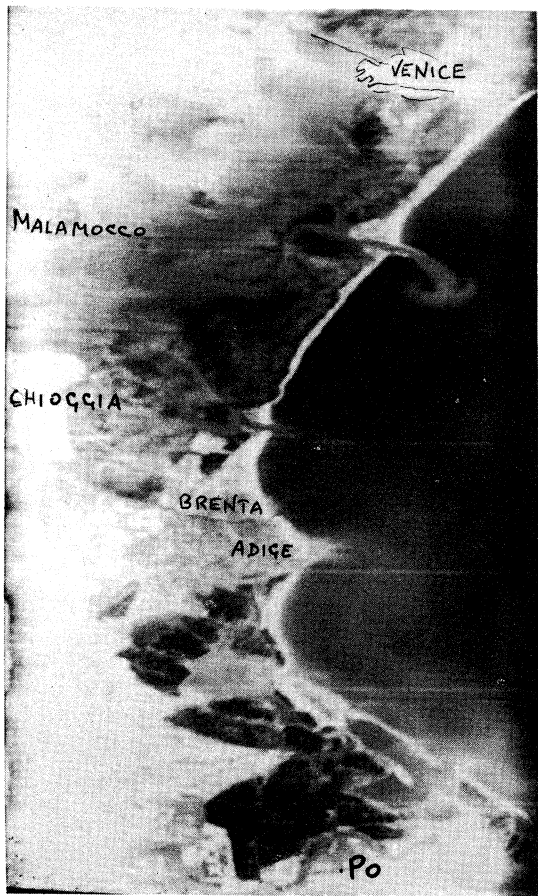
The exercise was made on the 25 September 1977 after the occurrence of an eutrophic bloom.

Eutrophism has in fact been increasing in frequency in the area of the Venice Lagoon and of Ravenna-Rimini, south of the Po River, during the last decade, due to an increase of industrial, agricultural and recreational activity in the area. The population increases about 20 times in the summer in the Rimini area, as compared to the winter season.

The calibration exercise and further measurements planned on a routine basis for several years of tests in the area may lead to possible use of Remote Sensing for monitoring the onset of such phenomena as the eutrophism.

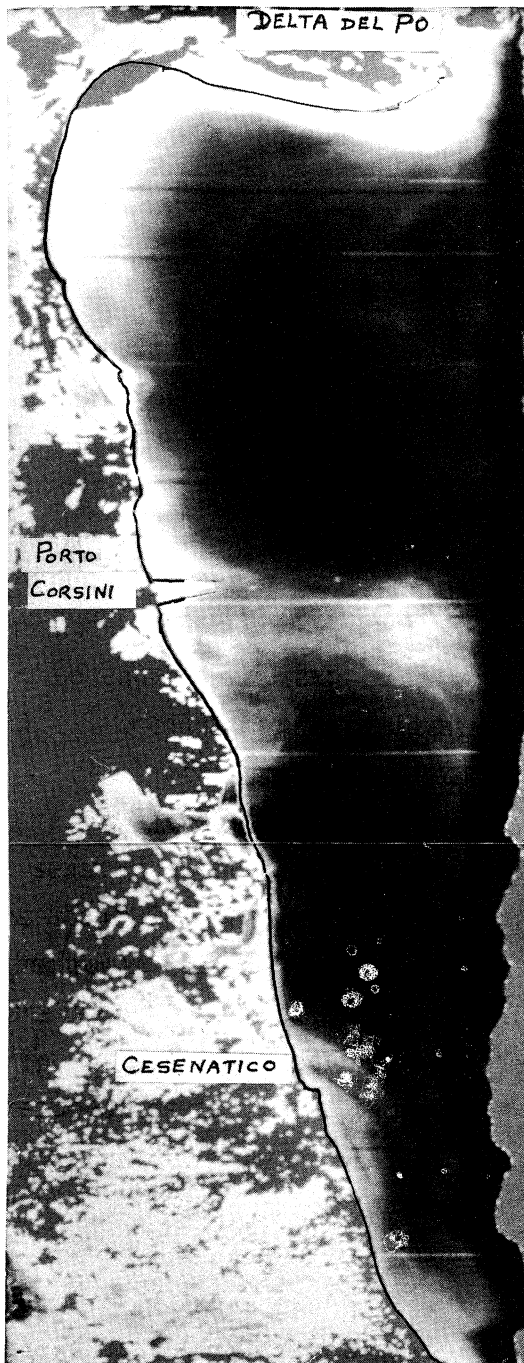
The CZCS (Coastal Zone Colour Scanner) of the satellite





Plumes from
the Venice lagoon
the Brenta
the Adige
the Po

3 channels of
O.C.S. Superimposed
574nm (blue)
583nm (green)
662nm (red)



O.C.S.
3 Bands image *
of the
Emilia-Romagna
Coastal area
South of the Po
River

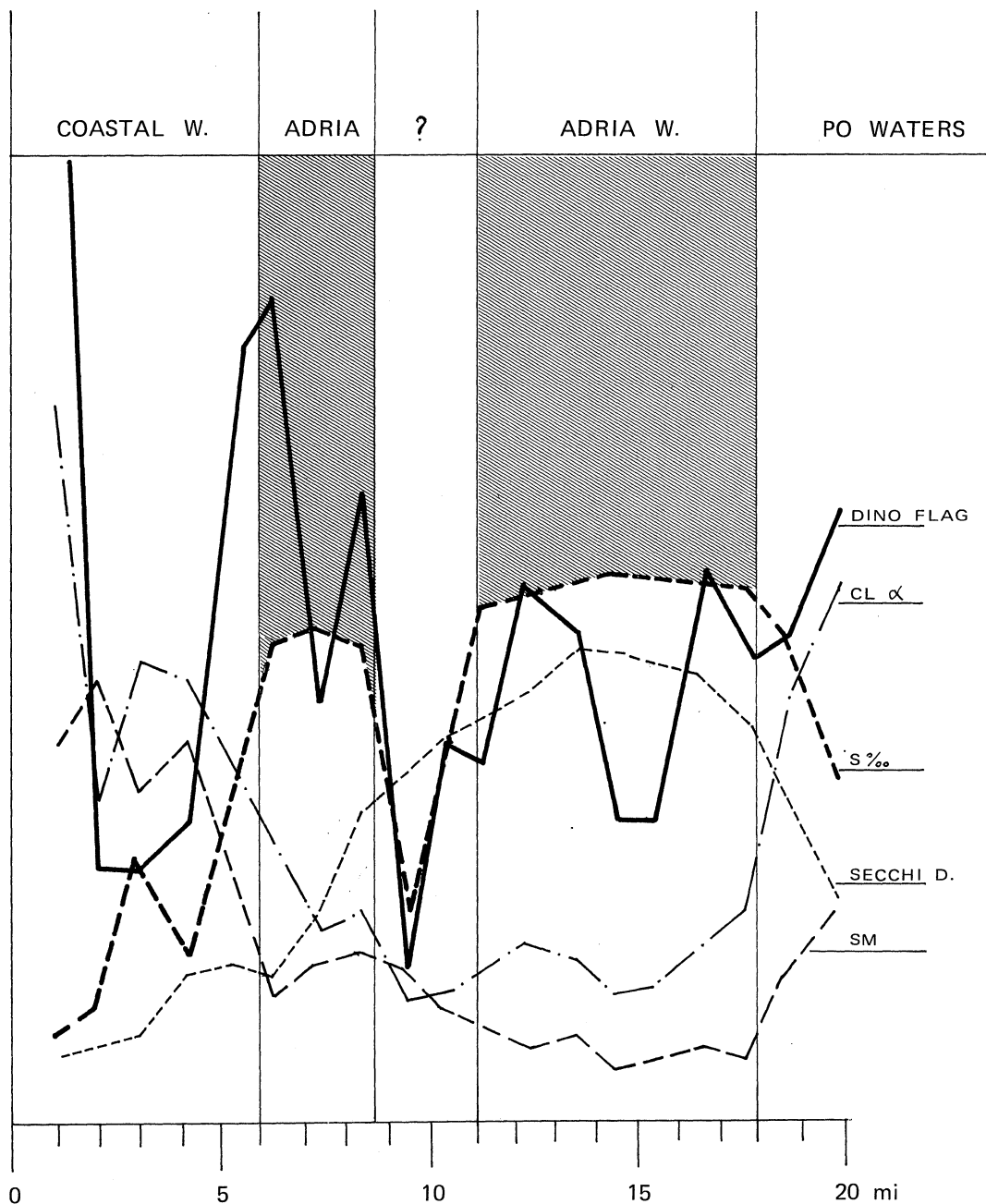
Scale
Omi 5 10

25 Sept. 1977
noon

* Before geometric
correction

OCS EXPERIMENT - ADRIA 1977

SEA TRUTH - MARSILI DATA



Nimbus G with its 4 narrow band channels in the visible spectrum will be operating in the fall of 1978 and during 1979 on an experimental basis.

Results of the experiments are shown as well as preliminary surveys of the Ligurian Sea, in preparation for the launching of Nimbus G and as a post launch program, in collaboration with several national institutes and with the Laboratoire d'Océanographie Physique of Paris and Villefranche.