

**Remotely-sensed sea surface temperatures :
cheap, adequate, convenient and significant information for all disciplines**

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The physical oceanographers who have been processing infrared satellite data for about 20 years integrate more and more the resulting information to put forward working hypotheses, prepare and conduct experiments at sea and analyse *in situ* measurements. This should account for the interest to be given to a signal emitted by a few-micron superficial layer.

Nevertheless, some field physicists remain unattracted by this information as well as many biologists, chemists, sedimentologists and other scientists working on marine pollutants or coastal engineering. A major reason might be that the importance of the mesoscale phenomena (10 to 100 km, days to months), which are relatively intense and have generally a strong signature on the sea surface temperature (SST), is often underestimated. The aim of this presentation is to bring more evidence about the interest every scientist should find in analysing remotely-sensed SST images.

Practically, while in the office, one can purchase (sometimes with less than a dozen ecus a 1000km x 2000km scene with a ≈ 1 km² pixel) either numerical data or printed images at several places where these data have been archived for years. While at sea one can receive data in real time on board. It is possible to process the data and get coloured SST images with a simple micro computer in few tens of minutes. Provided the signal is oceanographically relevant, which is easily checked with basic knowledge and a bit of practice, one can infer information on the distribution of the surface water masses, the direction of the surface currents and, with a minimum background in physical oceanography, have indications on the dynamical structure at depth. Several examples will be given about the relationships between SST and parameters relevant to disciplines other than physical oceanography.

An atlas covering the whole Mediterranean Sea, and dealing with the analysis of representative images, monthly maps of thermal fronts and statistics collected during a 9-year period (LE VOURCH *et al.*, 1992) will be presented and made available during the congress.

REFERENCES

LE VOURCH J., MILLOT C., CASTAGNE N., LE BORGNE P., and OLRY J.P., 1992. - Atlas of thermal fronts of the Mediterranean Sea derived from satellite imagery. *Mémoires de l'Institut Océanographique*.

