



## Technological advances in fluorimetric measure: TFLAP upgrade

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A detailed knowledge of the phytoplankton biomass and productivity is fundamental to have a deep view of global carbon cycle and trophic state of marine ecosystem.

During the last years a big effort was dedicated to improve quality and efficiency of oceanographic real time data collecting.

For this purpose since 2002, through MFS-TEP and ADRICOSM-STAR projects, our work was dedicated to the design, development and realization of a system which allowed to carry out fluorescence measures by means of expendable probes on board of VOS (Voluntary Observing Ship) platforms.

The development led up to the TFLAP (Temperature Fluorescence Launchable Probe) that is a new expendable probe, which can be launched by moving ship to perform vertical temperature and fluorescence profiles along the water column. Since the end of the ADRICOSM-STAR project a continuous upgrade of the system was performed in order to improve the sensitivity of the probe.

This work introduces the last upgrade results and improvements of TFLAP sensors and delves into the temperature and fluorescence pre-calibration processes.