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**Participating Laboratories:**
Laboratoire d’Océanographie de Villefranche (UMR 7093)

**Contribution to EUMELI:**
ALMOFRONT
PROSOPE
POMME
DYNAPROC
KEOPS
BOUM
DUNE
KEOPS2
VAHINE
AMOP

**Objectives (2-3 lignes):**
The analytical service « Cellule Pieges » aims to treat and analyses sediment trap samples that have been collected during the oceanographic cruises. The sediment traps are used in oceanography to collect large sinking particles produced in the euphotic zone and exported in the deep waters. They played a key role in the carbon sequestration. During the trap deployment some biases can altered the samples (zooplankton swimmers, strong currents, organic matter degradation, …) and a long and fastidious work has to be done rapidly to treat and preserve the sediment trap samples. The work performed by this service includes: swimmers picking, sample freeze-drying, total and particle organic carbon and nitrogen measurement, inorganic major elements measurements (Al, Fe, Ca) and biogenic silica measurements.
Fig.1: Particulate organic carbon (POC) export over the whole POMME collection period (February 2001–June 2002). Units are mg/m²/d. The black lines represent the bulk data and the grey lines the corrected fluxes from the 230Th calibration (Guieu C. et al. 2005)

Fig.2: Temporal changes of particulate carbon, nitrogen and phosphorus collected in sediment traps during 6 h of collection periods during the DYNAPROC cruise (Marty JC. et al. 2009)

Future of the project:
The service is still on-going and in charge of sediment trap samples analysis for international projects as KEOPS2 (S.Blain), VAHINE (S.Bonnet) and AMOP (A.Paulmier)

Heimbürger, L.-E., Migon, C., Losno, R., Miquel, J.C., Leblond, N. and D. Cossa (2010), Factors controlling the temporal variability of mass and trace metal downward flux at 1000 m depth at the DYFAMED site (Northwestern Mediterranean Sea), Biogeosciences Discuss., 7, 2549-2567.

Wagener, T., Guieu, C. and N. Leblond (2010), Effects of dust deposition on iron cycle in the surface Mediterranean Sea: results from a mesocosm seeding experiment, Biogeosciences Discuss., 7, 2799-2830.


J.C. Marty, M. Goutx, C. Guigue, N. Leblond, and P. Raimbault (2009), Short-term changes in particulate fluxes measured by drifting sediment traps during end summer oligotrophic regime in the NW Mediterranean Sea, Biogeosciences Discuss., 6, 575-606.