

## DATA SET SUMMARY (EDMED)

Project : **FRONTAL**

Data set name : **ALMOFRONT 1**

CRUISE OR MOORING : **CRUISE**

LABORATORY in charge of : **Laboratoire d'Océanographie Biologique et Ecologie du Plancton marin**  
**LOBEPM BP 28 06234 Villefranche/mer FRANCE**

### DOMAINS/KEYWORDS :

PHYSICAL OCEANOGRAPHY ex :  
SUBSURFACE HYDROGRAPHY (T,S)  
CURRENTS, DRIFT, DISPERSION  
SURFACE HYDROGRAPHY (EG T,S)  
OPTICAL PROPERTIES OF SEA WATER

INORGANIC CHEMISTRY  
DISSOLVED GASES  
NUTRIENTS  
RADIO-ISOTOPES

### **MARINE BIOLOGY**

BENTHOS  
ORGANIC/BIO-CHEMISTRY  
**MARINE BIOLOGY**  
BULK CHEMISTRY (EG PH, TCO<sub>2</sub>)  
PRODUCTIVITY, BIOMASS  
PIGMENTS (EG CHLOROPHYLL), LIGHT  
**PLANKTON**  
FISHES  
**DEEP SEA ECOLOGY/FAUNA**  
MICROBIOLOGY

### **OTHER DATA**

**MARINE SNOW**  
Particles

### TIME-PERIOD :

May 1991

### GEOGRAPHIC-COVERAGE :

Alboran Sea

### MEASUREMENT TYPE : (W P F S O B) \_\_\_\_\_

**W**: sea water    **P** : water column particles    **F** : settling particles    **S** : sediment    **O** : pore water  
near the sediment

### OBSERVED PARAMETERS :

*(units have to be consistent with the International System of Units described in the project Data Manual)*

Files \*.Re1 :

**Particles > 202 µm ESD**

NAME	UNIT	FORMAT
pressure	Decibars	Scientific
# particules / liter		
Mean Length	mm	
Mean Surface	mm <sup>2</sup>	
Mean ESD *	mm	
Total Volume *	Ppm	
Total Dry Weight *	microg/l	
Median ESD *	mm	
DSE S.D.*	S.D.	
Spherical Surface *	mm <sup>2</sup>	
Ratio (Length/ESD)*		

\* calculated values

Files \*.His :

NAME	UNIT	FORMAT
Volume of analysed sea water	liter	Scientific
Depth of sample	Dbars	
# particles 3 pixels surface (92 µm ESD)		
# particles 4 pixels surface		
# particles 5 pixels surface		
.....		
# particles 150 pixels surface		

Usefull equations :

$Y = 0.00139 x^{1.430}$        $x = \text{Surface (pixels)}$        $Y = \text{Surface (mm}^2\text{)}$   
See Lars Stemmann thesis for values limitation.

$L = 0.835 I^{0.123}$        $I = \text{Lengh (pixels)}$        $L = \text{Lengh (mm)}$

**INSTRUMENTS** (separate forms to describe the instruments) :

Underwater Video Profiler ( U.V.P. 2a)

**DESCRIPTION & OBJECTIVES** :

**VOLUME/NUMBER OF PROFILES** : 54 (Total) 36(marine snow) 18(Zooplankton)

**AVAILABILITY** :

**RESPONSIBLE SCIENTIST** : GORSKY Gabriel

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**Fax** : 04 93 76 38 34

**Email** : gorsky@ccrv.obs-vlfr.fr

**BIBLIOGRAPHICAL REFERENCES** (METHODOLOGY) :

Allredge, A. L. (1979) The chemical composition of macroscopic aggregates in two neritic seas. Limnology Oceanography, 24(5) : 855-866.

Allredge, A. L. and M. W. Silver (1988) Characteristics, Dynamics and significance of marine snow. Progress in Oceanography, 20 : 41-82.

Chester, R. and H. Stoner (1974) The distribution of particulate organic carbon and nitrogen in some surface waters of the world ocean. Marine chemistry, 2 : 263-275.

Gorsky, G., Aldorf, C., Picheral, M., Kage, M., Garcia, Y. and J. Favole (1992) Vertical distribution of suspended aggregates determined by a new Underwater Video Profiler. Ann. Inst. oceanogr., Paris, 68 (1-2): 275-280.

Gorsky, G., Picheral, M. and L. Stemmann (in press) Use of the Underwater Video Profiler for the Study of Aggregate Dynamics in the North Mediterranean. Estuarine, Coastal and Shelf Science.

Picheral, M., Grisoni, J-M., Stemmann, L. and G. Gorsky (1998) Underwater Video Profiler for the "in situ" study of suspended particulate matter. OCEANS 98, 28 September- 1 October, IEEE/OES conference, Nice, p. 171-174.

Picheral, M., Stemmann, L. et G. Gorsky (1995) Système multiparamétrique pour la mesure et la quantification de la matière particulaire en suspension dans la colonne d'eau. 3e Colloque Européen Des Capteurs pour l'Environnement, Grenoble, 30-31 Mars 1995. pp. 162-165.

Stemmann, L. (1998) Analyse spatio-temporelle de la matière particulaire. Thèse Doctorale, Université Paris 6, pp 178.

Stemmann, L., Picheral, M. and G. Gorsky. (in press) Diel changes in the vertical distribution of suspended particulate matter in the NW Mediterranean Sea investigated with the Underwater Video Profiler. Deep-Sea Research.

**INSTRUMENT/METHOD** .....Optical sensor.. **IDENTIFIER** : (given by the data center)  
**NAME** : Underwater Video Profiler (U.V.P.2a) .....

**Description of the main instruments/methods used at sea and in the laboratory during the project.**

**Examples** : CTD, Current meter, salinometer, sediment trap, spectrometer ...

**LABORATORY** (Owner of the instrument or who performs the method ):

Laboratoire d'Océanographie Biologique et Ecologie du Plancton Marin (LOBEPM) .....

**Address** :

Station Zoologique

BP 28

06234 Villefranche sur mer.....

Tel : **0493763816**..... Fax : **0493763834**.....

Email : **Gorsky@ccrv.obs-vlfr.fr**.

**CONTACT SCIENTIST** :

**Gabriel GORSKY**

**INSTRUMENT NAME** (60) : Underwater Video Profiler 2a (U.V.P.2a) commonly called PVM2 .....

**MANUFACTURER** (60) : **LOBEPM** .....

**MANUFACTURING DATE** (10) : **1989** .....

**SERIAL NUMBER** (20) : **2a** .....

**DESCRIPTION** (240) :

Version 2a of the UVP. Built for the study of MARINE SNOW and ZOOPLANKTON.

**TECHNICAL CHARACTERISTICS** (240) :

1000 m operational depth

In situ recordings at 25 Hz

1 CCD V700E Sony camera (adjustable lens)

Marine snow mode with structured lights.

92 µm ESD lower limit detection.

> 202 µm ESD lower limit of size measurements.

Zooplankton mode with 150 W, 300 W or 400 W spots

**COMMENTS** (120)

**INSTRUMENT TYPE** (circle the main type) :

**In situ Sensor (default)**

Transmitter/Receiver

On board recorder

Drifter

Towed platform

Expendable sensor



**OTHER ATTACHED EQUIPEMENT** (in case of complex multi sensor:Platform equipment) (10) :SBE19 – SBE911 (according to the cruise)

**DATE** (of updating this form) : 07-01-04

<b>MEASURED PARAMETER 1</b>	<b>CALIBRATION DATE</b>	<b>CRUISES</b>	<b>COMMENTS</b>
Zoom mode for particles > 92 ESD µm		Dynaproc Almofront1 Antares3 Eumeli5 Picnic Pauline Euromarge MbpFront Miquel	LOBEPM

**BIBLIOGRAPHICAL REFERENCES (METHODOLOGY) :** .....

Gorsky, G., Aldorf, C., Picheral, M., Kage, M., Garcia, Y. and J. Favole (1992) Vertical distribution of suspended aggregates determined by a new Underwater Video Profiler. Ann. Inst. oceanogr., Paris, 68 (1-2): 275-280.

Gorsky, G., Picheral, M. and L. Stemann (in press) Use of the Underwater Video Profiler for the Study of Aggregate Dynamics in the North Mediterranean. Estuarine, Coastal and Shelf Science.

Picheral, M., Grisoni, J-M., Stemann, L. and G. Gorsky (1998) Underwater Video Profiler for the "in situ" study of suspended particulate matter. OCEANS 98, 28 September- 1 October, IEEE/OES conference, Nice, p. 171-174.

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