

**APPLICATION FOR CONSENT TO CONDUCT MARINE SCIENTIFIC RESEARCH  
IN AREAS UNDER NATIONAL JURISDICTION OF  
UNITED KINGDOM**

**Date : 2007, March 29<sup>th</sup>**

**1 - GENERAL INFORMATION**

**1.1. Cruise name and/or number :**

**MOUTON 2007/2**

**1.2. Sponsoring institution :**

Name : Ifremer  
Address : 155, rue Jean-Jacques Rousseau  
92138 Issy les Moulineaux  
Phone : 33 (0)1.46.48.21.00 Fax : 33 (0)1.46.48.21.21  
Director : Jean-Yves Perrot

**1.3. Scientist in charge of the project :**

Name : Yves Morel  
Address : Centre Militaire d'Océanographie (site de METEO-FRANCE),  
42 av Gaspard Coriolis, 31057 Toulouse, France  
Phone : 33 5 61 43 35 25 Fax : 33 5 62 14 06 10  
Email : [yves.morel@shom.fr](mailto:yves.morel@shom.fr)

**1.4. Scientist from United Kingdom involved in the planning of the project :**

None

**1.5. Submitting officer:**

Name : Jean-Xavier Castrec  
Address : Ifremer Centre de Brest - Secteur Programmation de la Flotte  
B.P. 70 - 29280 Plouzané  
Phone : 33 (0)2.98.22.44.53 Fax : 33 (0)2.98.22.44.55  
Email : [jean.xavier.castrec@ifremer.fr](mailto:jean.xavier.castrec@ifremer.fr)

## **2 - DESCRIPTION OF THE PROJECT**

### **2.1. Nature and objectives of the project :**

The MOUTON research program (naval operations environment modeling), lead by SHOM, intends to extend the ability of operational oceanic models from deep ocean to coastal waters areas to assess the environment associated to naval operations.

The program validation requires the acquisition of data (in situ or by satellite) in order to establish comparisons between models and measurements.

In situ measurements being an essential part of the model validation process, several surveys were realized in 2004, 2005 and 2006. For 2007, the acquisition of new data is planned, in order to complete existing data bases, and to validate model results.

In 2004, 2005, surveys were mainly dedicated to measurements on the french continental shelf (Celtic sea and Landes shelf) and on the Portuguese continental slope.

In 2006, measurements were done to improve internal tide propagation models between French and Spanish continental shelves.

In 2007, the following themes will be covered :

- Tidal currents and tidal fronts in the Celtic sea and the channel. The measurements in this area will make use of seasoar, VMADCP, drifting floats, CTDs, XBTs.
- Upwelling dynamics along the portuguese slopes. The measurements in this area will make use of seasoar, VMADCP, drifting floats, CTDs, XBTs.
- Dynamics of the internal tide near a canyon along the Portuguese slope (a priori the Nazare canyon). The measurements in this area will make use of seasoar, VMADCP, drifting floats, CTDs, XBTs.

### **2.2. Relevant previous or future research cruises :**

MOUTON 2004 and 2005 : measurements on the french continental shelf (Celtic sea and Landes shelf) and on the Portuguese continental slope.

MOUTON 2006 : internal tide propagation study between French and Spanish continental shelves in july 2006.

### **2.3. Previously published research date relating to the project :**

Internal SHOM reports have been published.

### 3 - METHODS AND MEANS TO BE USED

#### 3.1. Particular of vessel

Name : *Pourquoi pas ?*

Nationality: French

Owner : Ifremer

Opérateur : Genavir

Overall length : 107.6 m

Gross tonnage : 7854 UMS

Propulsion : Diesel electric, together with DPII dynamic positioning allowing position holding and lane following.

Cruise speed : 11 Nds

Call sign : FMCY

Method and capability of communication (including telex, frequencies) :

- *Inmarsat Fleet 77 : 00-870-7-643-367-38 - Fax : 00-870-7-643367-50*

- *Portable : 06-85-7663-78 - ou 06-82-84-11-60*

- *Telex Inmarsat C : 058x-4-228-207-61 ou 058x-228-207-62*

*(Codes: Atlantic Est : 0581 - Atlantic West : 0584 - Pacific : 0582 - Indian Ocean: 0581)*

- *Email : [PP.Commandant@pourquoipas.ifremer.fr](mailto:PP.Commandant@pourquoipas.ifremer.fr)*

Name of master : Gilles Ferrand

Number of crew : 5 officers – 25 crew.

Number of scientists on board : approximately 10 engineers and scientists, 10 petty officers and sailors – civilian and military.

#### 3.2. Aircraft or other craft to be used in the project :

For information (not part of the present application) : two networks in the bay of Biscay using AXBTs (launched by aircrafts) are part of the MOUTON2007 project. SHOM will redact a separate request for the airborne survey.

#### 3.3. Particulars of methods and scientific instruments :

Types of samples and data	Methods to be used	Instruments to be used
Bathymetry	Acoustical sounding	Multibeam echo sounder
Backscatter	Acoustical sounding	Multibeam echo sounder
Currents	In situ measurements	Vessel mounted ADCP, Lowered ADCP, currentmeters moorings. Drifting buoys and floaters.
conductivity, temperature	In situ measurements	CTD stations, Sea soar CTD tow fish, XBT – XCTD expandable probes.
Meteorological measurements	On board the ship	Wind and temperature sensors. Sea state observation.
Sunlight measurements	On board the ship	PAR sensor
Lighting measurements	Station measurements	Water reflectance sensor.

**3.4. Indicates whether harmful substances will be used :**

NO

**3.5. Indicate whether drilling will be carried out :**

NO

**3.6. Indicate whether explosives will be used :**

NO

#### **4 - INSTALLATIONS AND EQUIPMENTS**

**Details of installations and equipments (dates of laying, servicing, recovery, exact locations and depth)**

The survey will be divided in 2 legs.

As a reminder, the 1<sup>st</sup> leg (20 days approximately) will occur in may / june 2007. A separate request has been redacted.

Second leg :

Date of start : 2007, july 31<sup>st</sup>

Date of end : 2007 september 07<sup>th</sup>

It is not planned to settle low frequency acoustical moorings during the cruise. Nevertheless, in case of emergency (pre-existant moorings line breaks or acoustical source failures), pre-existant moorings may be replaced.

#### **5 - GEOGRAPHICAL AERAS**

**5.1. Indicate geographical areas in which the project is to be conducted (with reference in latitude and longitude) :**

Celtic sea / Channel	47°N to 50°30'N and 9°W à 1°W
Spanish+Portuguese continental shelf	36°N to 44°30'N and 12°W à 8°W

**5.2. Attach chart(s) at an appropriate scale showing the geographical areas of the intended work and, as far as practicable, the positions of intended stations, the tracks of survey lines, and the locations od installations and equipment :**

(see attached chart)

## 6 - DATES

### 6.1 Expected dates of first entry into and final departure from the research area of the research vessel :

entry date : 2007/07/31  
departure date : 2007/09/07

### 6.2 Indicate if multiple entry is expected :

Yes.

## 7 - PORTS CALLS

### 7.1. Dates and names of intended ports of call in United Kingdom .

Dates and places of stopover are not defined yet and will be communicated later.

### 7.2. Any special logistical requirements at ports of call :

Water and fuel replenishment, telephone, food supply.  
Requirements letters defining the accurate needs will be written later before the cruise.

### 7.3. Name/Address/Telephone of shipping agent (if available)

## 8 - PARTICIPATION

### 8.1. Extent of which United Kingdom will be enabled to participate or to be represented in the research project :

An official representative will be allowed to come onboard during the cruise.

### 8.2. Proposed dates and ports for embarkation/disembarkation :

According to places and dates of stopover to be defined later.

## **9 - ACCESS TO DATA, SAMPLES AND RESEARCH RESULTS**

### **9.1. Expected dates of submission to United Kingdom of preliminary reports which should include the expected dates of submission of the final results :**

Cruise reports will be written in a 3 months period following the end of the survey and will be transmitted as soon as possible to the English authorities concerned by the project, by the survey unit in charge of the cruise.

### **9.2. Proposed means for access by United Kingdom to data and samples :**

Data and samples collected into the areas under national jurisdiction of United Kingdom will be made available not after 1 year after the end of the cruise, with the associated reports, on demand of the UK authorities.

### **9.3. Proposed means of making research internationally available :**

Papers in international scientific reviews and conferences.

## ANNEX

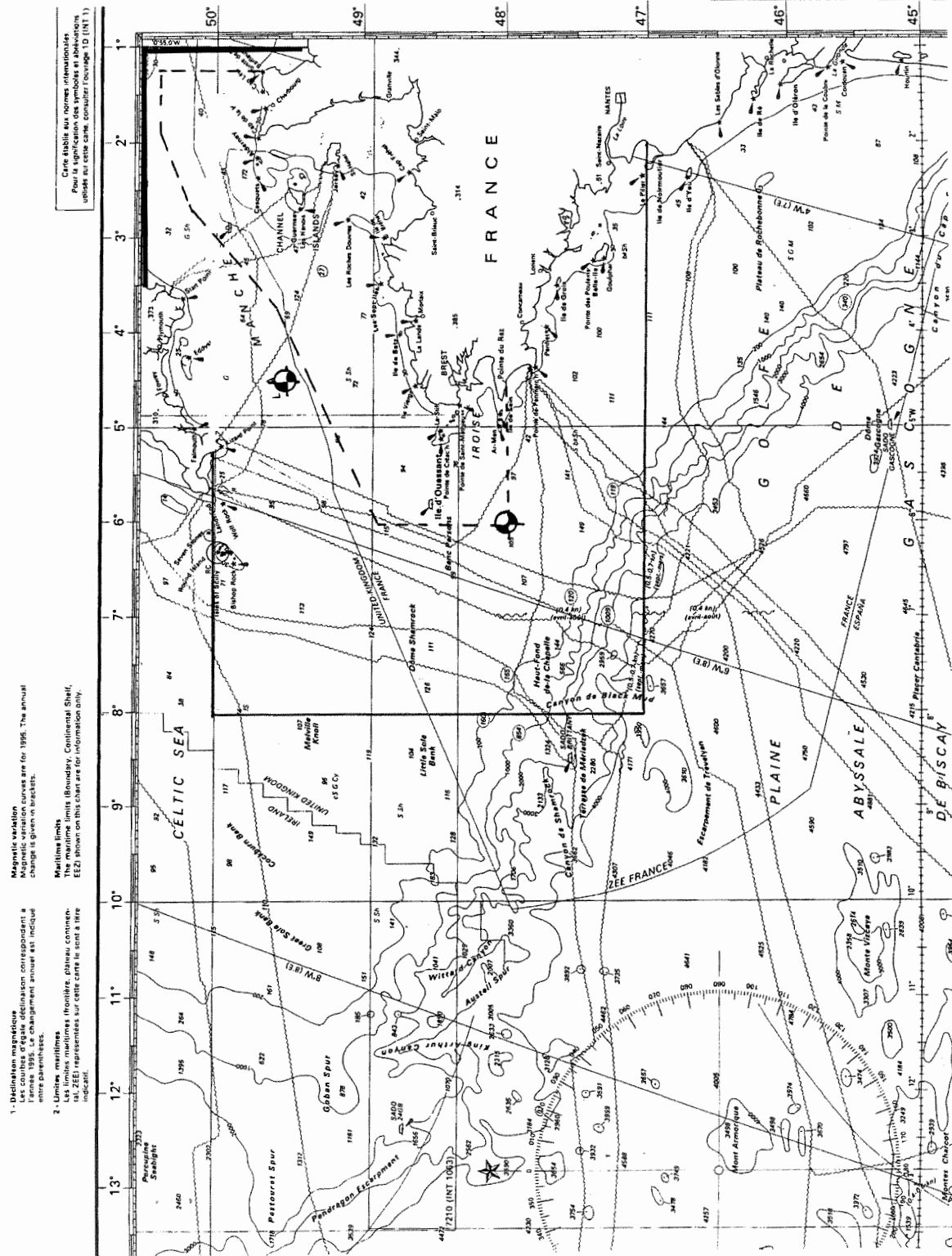
### **List of the scientific team**

The scientific team will be constituted of –at most- 20 scientists from SHOM and french public laboratories, whose name will be communicated later.

In complement to SHOM staff, Scientists from French or European laboratories may participate to the cruise, in the scope of partenerships between SHOM and these laboratories.

**Survey area : Channel and Iroise sea area.**  
 Positions are measurement are given as a prevision

Plain lines : full survey area in Channel and Iroise Sea  
 Dashed lines : provisional Sea Soar survey  
 Circles : provisional CTD long CTD stations.



1. Déclinaison magnétique  
 Les courbes d'égalité déclinaison correspondent à l'année 1995. Le changement annuel est indiqué entre parenthèses.
2. Limites maritimes  
 Les limites maritimes (frontières, détroits, canaux, etc.) sont représentées sur cette carte le sont à titre indicatif.
- Magnetic declination  
 Magnetic variation curves are for 1995. The annual change is given in brackets.
- Maritime limits  
 Maritime limits (boundary, Continental Shelf, EEZ) shown on this chart are for information only.

Carte établie aux normes internationales.  
 Pour la signification des symboles et abréviations  
 utilisés sur cette carte, consulter l'échelle 10 (INT 1)