

APPLICATION FOR A RESEARCH CRUISE IN UK (AND IRISH) WATERS

Proposing organization:

Istituto Nazionale di Oceanografia e di Geofisica Sperimentale – OGS, Trieste, Italy

OGS is an Italian national research institute of oceanography and geophysics (<http://www.ogs.trieste.it>). The campaign is being organized by the OGS Department RIMA (Department for the Development of Marine Technology and Research).

OGS contacts:

Director of RIMA:

Dr Riccardo Ramella
email: rramella@ogs.trieste.it
tel.: +39 040 214 0337
fax: +39 040 214 0438

Vice-Director of RIMA:

Dr Giorgio Gelsi
email: ggelsi@ogs.trieste.it
tel: +39 040 214 0310
fax: +39 040 214 0438

Scientist Responsible for the research cruise:

Dr Daniel Praeg (OGS/RIMA)
email: dpraeg@ogs.trieste.it
tel.: +39 040 214 0395
fax: +39 040 327307

Title of research cruise:

GLAMAR - GLacial Meltwater and the Sedimentary ARchitecture of High-Latitude Continental Margins

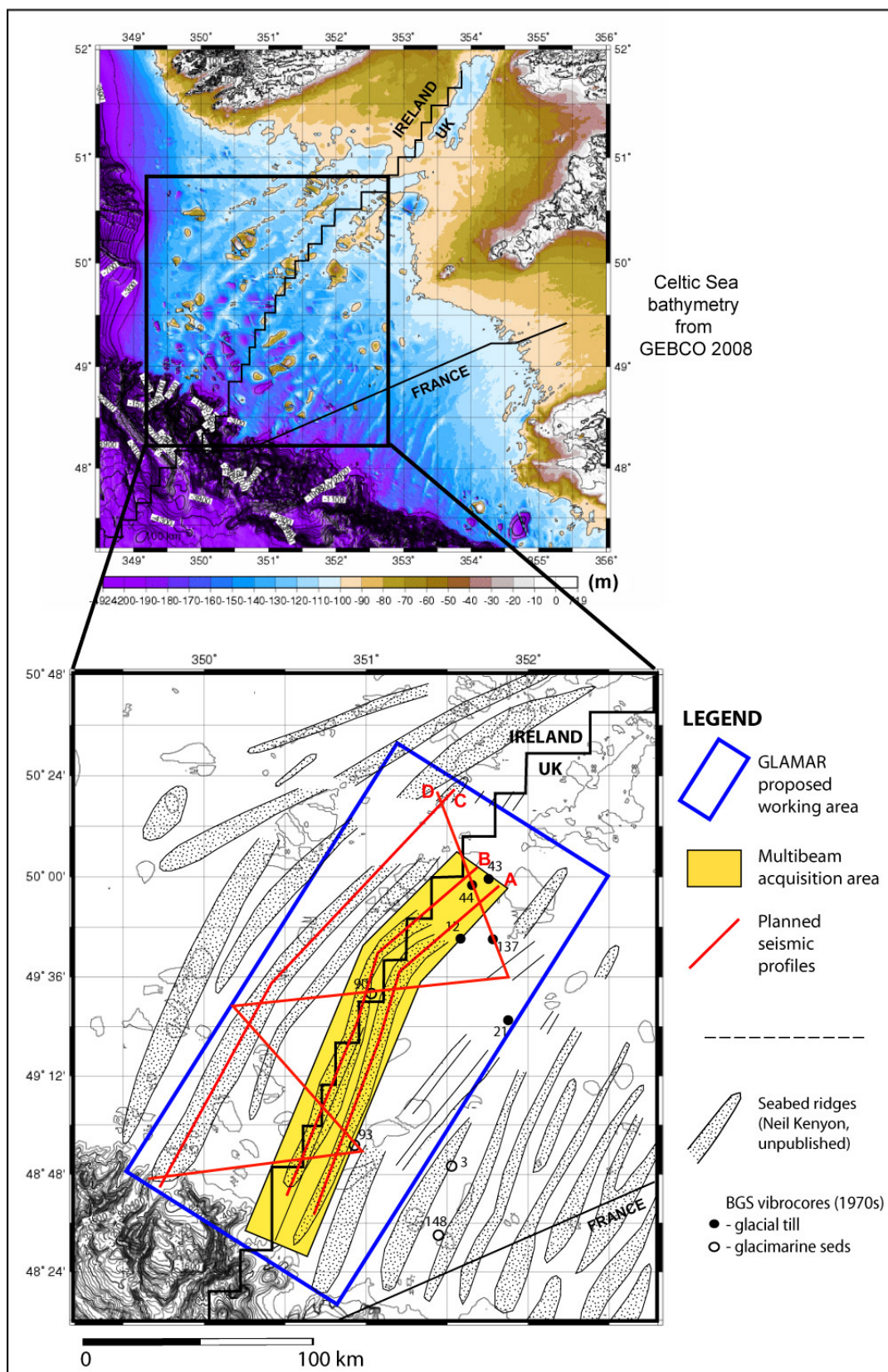
GLAMAR and the IPY:

GLAMAR is an Italian-led contribution to the International Polar Year (see Expression of Intent 529, <http://classic.ipy.org/>). GLAMAR is the second OGS-funded IPY international research cruise to the NW European margin, following the EGLACOM campaign to the Svalbard margin in 2008 (<http://www2.ogs.trieste.it/eglacom2008/>). The IPY officially ended in March 2009, but several countries have extended their activities. Results from GLAMAR will be presented at the first IPY Open Science Meeting in Oslo in 2010.

Cruise objectives:

The GLAMAR project seeks to examine the impact of subglacial meltwater drainage on the morpho-stratigraphic development of continental margins, with focus on known latitudinal variability in meltwater discharge from former ice sheets along the North Atlantic margins. The objective of the GLAMAR research cruise is to investigate a system of seabed sand ridges on the continental in the Celtic Sea, in order to test the hypothesis that they record a subglacial drainage system on the shelf, linked to canyons on the slope (see figure). The specific objectives are:

- to acquire multibeam swath bathymetric data along several ridges
- to acquire shallow seismic reflection profiles along and across the ridges
- to identify sites for the acquisition of vibrocores from the ridges during a follow-on Irish campaign



Area and Type of Operations

The area of interest lies in the Celtic Sea, on the outer continental shelf in water depths between 100-200 m; the proposed area of operations includes both the UK and Irish sectors (see figure).

Data types to be acquired:

- multibeam swath bathymetry (within a 190 x 30 km area)
- Water column CTDs (in support of multibeam survey)
- Chirp subbottom profiles (along multibeam acquisition tracks)
- Seismic reflection profiles (up to 900 line-km)

Coordinates of the working area and different data types:

Working area	<i>Latitude</i>	<i>Longitude</i>
corners clockwise from top-most:	50.53°N	-08.81°W
	50.00°N	-07.50°W
	48.28°N	-09.18°W
	48.81°N	-10.48°W
Multibeam area		
corners clockwise from top-most:	50.10°N	-08.48°W
	49.95°N	-08.13°W
	49.57°N	-08.67°W
	48.47°N	-09.36°W
	48.57°N	-09.75°W
	49.72°N	-09.02°W
Seismic lines		
(start/end points + course changes)		-
Line A:	49.95°N	08.19°W
	49.61°N	-08.79°W
	48.64°N	-09.32°W
Line B:	50.03°N	-08.32°W
	49.69°N	-08.93°W
	48.72°N	-09.49°W
Line C:	50.35°N	-08.45°W
	49.57°N	-09.58°W
	48.75°N	-10.27°W
Line D:	50.33°N	-08.56°W
	49.59°N	-08.13°W
	49.47°N	-09.82°W
	48.89°N	-09.03°W
	48.78°N	-10.34°W

Collaboration with organizations in the UK and Ireland:

The GLAMAR project includes partners from several research organizations in the UK and Ireland, and berths will be available for at least one scientist from each country. The following scientists have agreed to give their names as contacts:

UK: Dr Robert Gatliff, Head of Marine Geoscience, British Geological Survey,
Murchison House, Edinburgh, Scotland
Email: rwga@bgs.ac.uk
Tel: +44 (0)131 667 1000, Fax: +44 (0)131 668 2683

Dr Neil Kenyon, National Oceanography Centre, Southampton
Email: kenyon@marinegeo.demon.co.uk

Ireland: Prof. Patrick Shannon, School of Geological Sciences, University College
Dublin, Belfield, Dublin 4
Email: p.shannon@ucd.ie
tel: +353 1 716 2328, fax: +353 1 283 7733

Xavier Monteys, Geological Survey of Ireland, Dublin
Email: xavier.monteys@gsi.ie

Tel: +353 1 678 2807, Fax: + 353 1 678 2579

Dr Steven McCarron, Dept of Geography, National University of Ireland
Maynooth, Dublin

Email: stephen.mccarron@nuim.ie, Tel.: + 353 1 708 6147

Cruise timing and ports of call:

The research cruise is expected to take place in early September, the exact date depending on the completion of prior operations offshore Canada. The cruise is expected to last for 2-3 weeks.

The cruise will involve no ports of call in the UK.

Description of the research vesselGeneral

Name of the vessel:	OGS EXPLORA
Built by:	Elsflether Werft A.G., Germany, 1973
Owner:	Istituto Nazionale di Oceanografia e di Geofisica Sperimentale
Flag:	Italy
IMO Number:	7310868
Call sign:	IXWQ
Port / No.	Registry: TRIESTE – 764
Characteristic of service:	Scientific or technological research – Unrestricted navigation
Scientific crew	n° 12
Vessel crew	n° 18
Characteristic of class:	RINa 100 – A – 1.1; IAQ-1; Ice Class IB
Material:	steel(hull)/aluminium(superstructure)
Bunker type:	MGO

Dimensions

Gross Tonnage: 1408 GT
Net Tonnage: 422 NT
Overall length: 72.62 m
Moulded breadth: 11.80 m
Moulded depth: 6.55 m
Freeboard: 2154 mm
Displacement: 845 t
Max speed: 15 kn
Cruise speed: 12 kn

Machinery and Marine Equipment

Propulsion: 2 RBV8M545 DEUTZ Diesel; 4S 8cyl-line 320 x 450 Trp DR
Installed power: 2 x 1294,5 Kw (1780 HP)
Propellers: 1 Variable Pitch Propeller
Bow Thruster: 1 x 260 Kw
Oil/Fuel separator: 2 lube oil sep. Wesfalia type OSD6; 1 fuel sep. Wesfalia type OSD6
Aux: 5 Volvo Penta TAMD 103A
Electrical plant: 5 x 200 kVA 440 220 V 50 Hz Ac
UPS: Saft Nife 110/220
Fresh water: FW generator Sondex SFD13/20
Watermaker Tecnicomar MD2000 (5760 l/day)
Heater/boiler: 1 Heater FROHLING FSM650; 1 Boiler WERMERT (500 l)
Derricks/cranes: 1 Derrick 47.48 Kn / 1 Crane HEILA Type HLRM 19/12 – 3SL
Davit: 1 davit for life/rescue boat; 1 davit for serviceboat
Serviceboat: Zodiac Ribo 600 (6 m 70 Hp)