

NOTIFICATION OF PROPOSED RESEARCH CRUISE

1. PART B: DETAILS

1. NAME OF RESEARCH SHIP **RRS James Clark Ross** CRUISE NO. **JR271**

2. DATES OF CRUISE From 2/6/2012 To 5/7/2012

3. a) PURPOSE OF RESEARCH

Investigation of the effects of ocean acidification on sea-surface biology. Aim of project is to investigate links between changes in ocean carbonate system (acidification) and plankton biodiversity and community structure, organism physiology and morphology, biogeochemical rates, food webs and climate-relevant processes. Science involves physical, chemical and biological measurements of water column to be undertaken in North, Norwegian, Barents, Greenland and Icelandic Seas, including water and plankton collections for on-deck manipulation experiments investigating of in situ plankton community to elevated carbon dioxide.

b) GENERAL OPERATIONAL METHODS (including full description of any fish gear, trawl type, mesh size, etc.)

Types of samples and data	Methods to be used	Instruments to be used
Water column samples and measurements	Lowered packages	CTD rosette (conductivity, temperature, depth sensors and Niskin water sampling bottles), SAPS (stand alone pumps), Snow catcher (~100 litre water sampling bottle), Zooplankton nets (<500 micron size).
Underway atmospheric and water column sampling and measurements	Towed packages and underway pumped-water sampling.	Metrological instruments, thermistor, salinometer, fluorometers, flowcytometer, continuous plankton recorder.
Physical oceanographic measurements	Floating robotic instruments	ARGO floats to measure conductivity and temperature

4. ATTACH CHART showing (on an appropriate scale) the geographical area of intended work, positions of intended stations, tracks of survey lines, positions of moored/seabed equipment, areas to be fished

