

## **ARGO Atlantic deployments**

Summary of the discussions held at the International ARGO Science Team Meeting in Sidney, BC, Canada, March 21st, 2001.

Present : Desaubies, King, Molinari, Owens, Parrilla, Send, Turton.

(For the full report, see <http://www.argo.ucsd.edu> )

There is considerable interest in the Atlantic, particularly in the northern regions ; as one progresses southwards, it will be more difficult to achieve the needed coverage. The aim of the discussions was to coordinate the deployments to avoid redundancy and to fill in gaps. To a large extent that was achieved. What is given here draws attention to possible lack of balance. I suggest that we consider this an iterative process, and that we re-evaluate the strategy in 2002, in the light of the floats active at that time. (There is an apparent over-commitment in the Subpolar gyre: it depends on whether one counts the German floats at 50 or 48°N).

### ***Subpolar Gyre (North of 48°N) : Target 71***

#### **1. Norwegian - Greenland Sea :**

Greenland sea : D.Quadfasel has just released 5 floats in the Greenland Sea.

Norwegian sea : UK is interested in deploying 5 floats; Turton will check with Norwegian plans, if any.

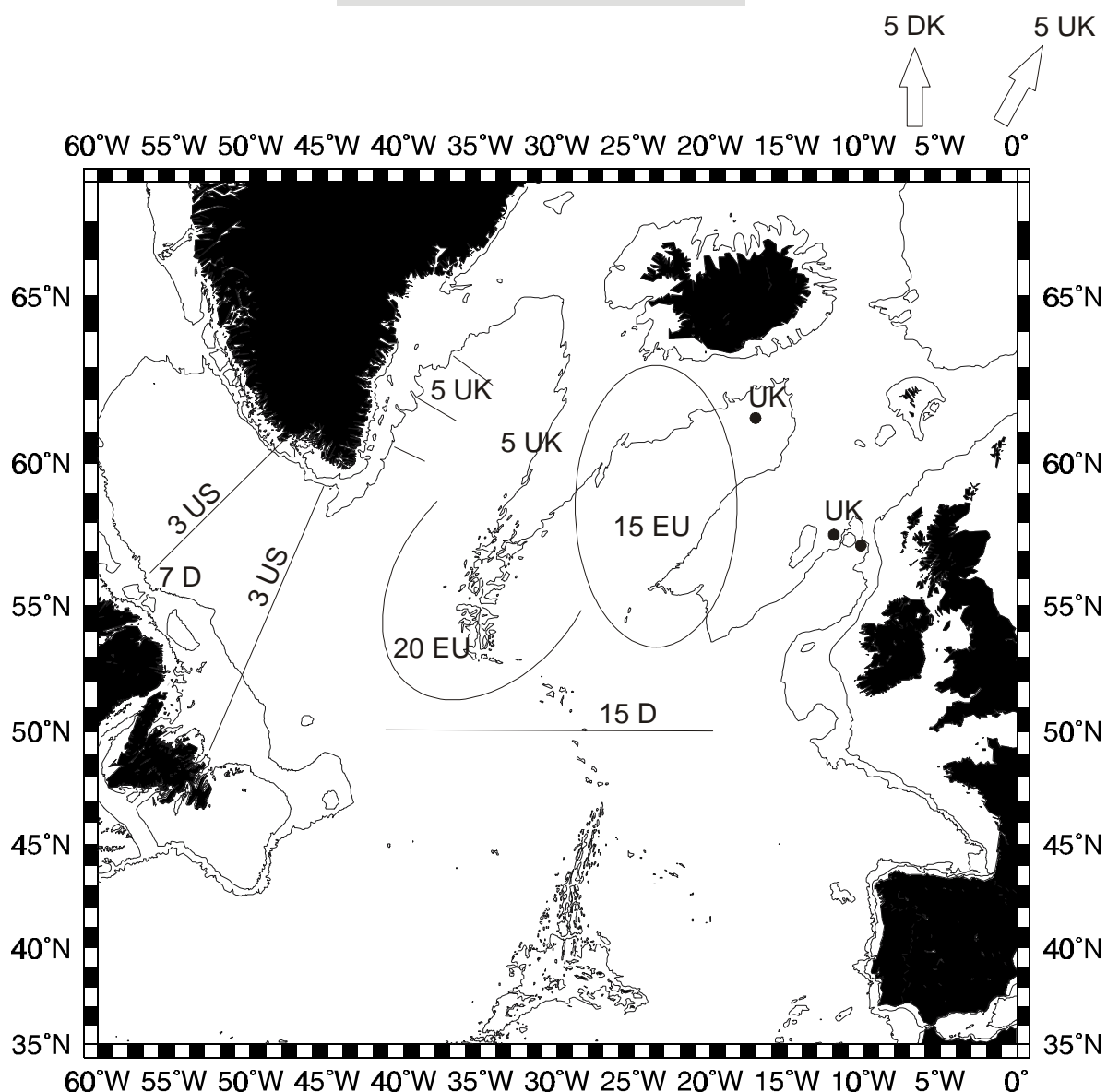
#### **2. 50 to 65 °N : Target 63**

Several German research cruises were identified, which afford opportunities for float deployments in the subpolar gyre during the summer 2001.

Meteor M50/2	02.06.2001 18.06.2001	St. Johns -St. Johns	Labrador See	F. Schott
Meteor M50/3	21.06.2001 15.07.2001	St. Johns - Reykjavik	S/E Grönland	Meinke
Meteor M50/4	17.07.2001 12.08.2001	Reykjavik- Hamburg	East Basin	W. Zenk
Poseidon 275	02.06.2001 19.06.2001	Lisbon - Reykjavik	Intergyre to Subpolar	T. Müller

The proposed deployments are summarized in the figure.

## Subpolar Gyre



Legend : ARGO planning for the Subpolar Gyre of the North Atlantic, as of March 2001. All deployments planned for 2001, except the 20 EU around Reykjanes Ridge. US in Labrador Sea (6 fl.) on Meteor 50/2 and 50/3; UK : 5 fl. already in Irminger Sea, 5 more from Meteor 50/3 (June-July), 3 more floats in Icelandic Basin and Rockall trough; EU floats (GyroScope): 15 from Poseidon 275 (June) and Meteor 50/4 (July - August), 20 in 2002 from French Ovide cruise and German cruises, TBD. German floats, marked D in Labrador Sea and along 50°N, are research floats useful for ARGO (some are operating, some to be deployed in 2001).

US Floats : 6 to be deployed in Labrador Sea during M50/2 – 3. To be coordinated with Schott and Meinke.

German floats : those are not ARGO floats *stricto sensu* , but are research float with data to be made available. This is welcome contribution. Seven in Labrador current will drift downstream; a number of floats released by Koltermann (BSH) along 50°N are active, more to be deployed in 2001 (it is suggested that those be somewhat spread to increase spatial coverage).

UK floats : 5 active in eastern Irminger ; 5 more to be deployed from M50/3, inside the basin if possible. Additional floats in Icelandic Basin (1), and Rockall trough (2).

EU- GyroScope floats : 10, if possible 15 (depending delivery by WRC) in broad area, as indicated, from Poseidon 275, and M50/4 ; by IFM team (Send and Zenk). An additional 20 in summer 2002, as needed to fill in gaps and complete coverage, French Ovide cruise, and German research vessels.

**Total floats identified : 76**

### ***Subtropical Gyre : 20°N to 48° N : Target 155***

#### **1. Western : Target 87**

The contributions will be mostly from the US (20 floats in 2001, and 20 in 2002), with additional participation from Canada (6 in 2001 and 8 in 2002); France is encouraged to go west of the ridge, with about 10 floats (possibly more) in 2002. Opportunities are on SOOP (AX3, 7, and 8). Contacts with Carke in Canada to coordinate operations in Gulf Stream region (60 to 50°W). **Total floats identified : 64**

#### **2. Eastern : Target 68**

The eastern basin of the North Atlantic will be covered by France (5 in 2001, and 30 in 2002), and the EU GyroScope project (40 in 2002). Cruises : Poseidon 275 in 2001, in 2002 one cruise by IEO in April, and by SHOM in March. **Total identified : 75**

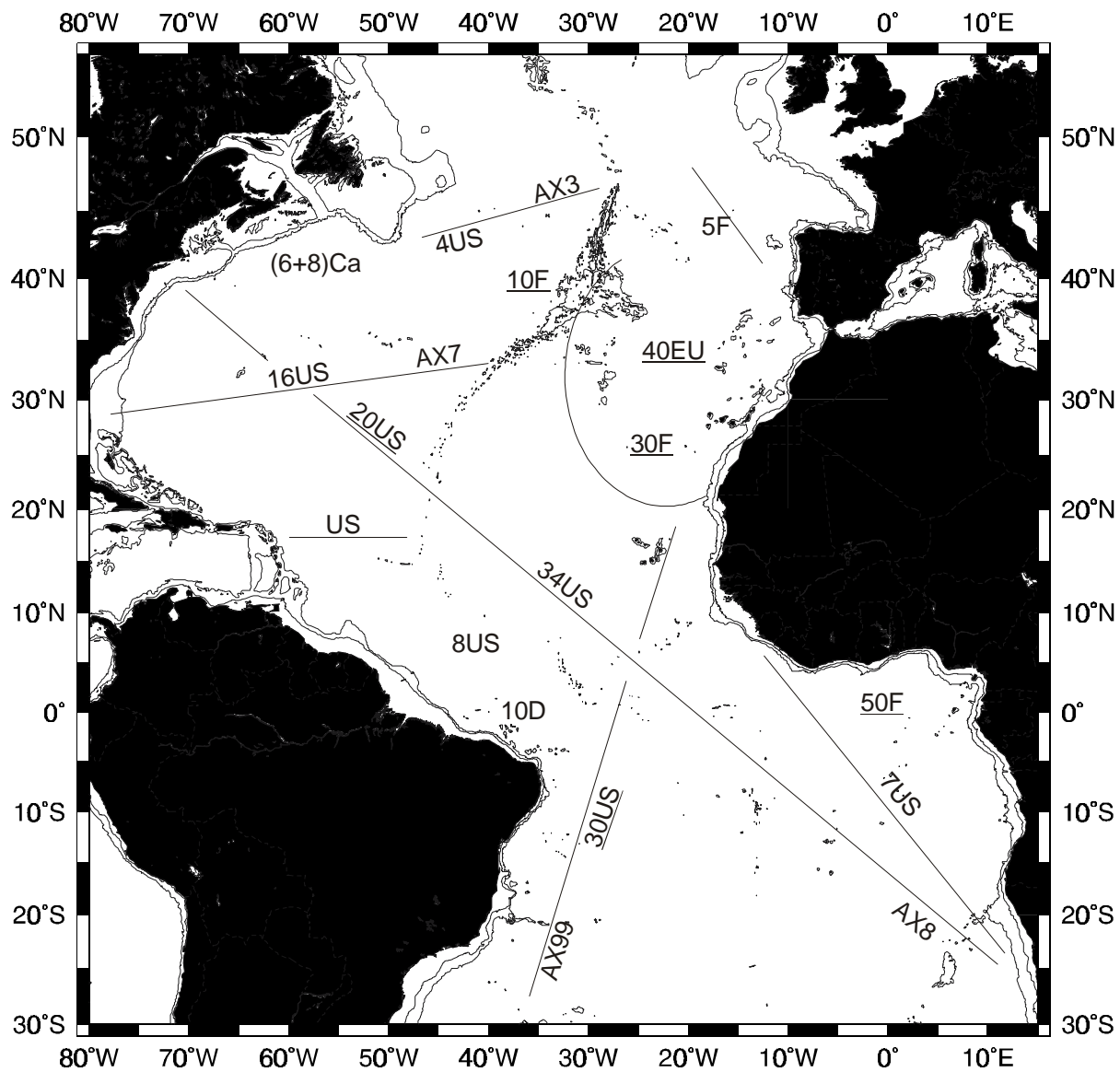
### ***Tropical – Equatorial : 20° S to 20°N : Target 192***

France and the US will contribute, with useful German research floats (10) in the western equatorial region. French interest mostly in eastern basin (50 floats at the end of 2002 and beginning of 2003). Suggested cruises are German activities along 17°N, and Meteor 53/2 in May 2002 (Mindelo – Recife, Schott) and M53/3 in June (Recife – Guadelupe, Rhein); PIRATA cruises, and AX8, and AX99(Polarstern to Punta Arenas in Nov. 2001). **Total floats identified : 139**

### ***Southern Subtropical : 40°S to 20°S : Target 133***

Deployments in the Atlantic south of 20°S will start in 2002 (10 UK and 20 US floats), with France and the UK anticipating 50 and 10 more, respectively, in 2003. US plans for 2003 were not considered. Thus, **90 floats have been identified** in that later time frame, with possibly more to be decided later. Cruise schedules and opportunities were not discussed.

*ARGO deployments in Northern and Tropical Atlantic Ocean, 2001 - 2002*



*In the figure, the 2002 deployments are underlined.*