Canadian National Report on Argo-2007

1. Status of implementation (Major achievements and problems encountered in 2007)

1.1 Floats deployed and their performance

During 2007, Canada deployed 18 floats: all were APEX floats and of these 10 were deployed in the Atlantic and 8 in the Pacific. As of writing in February 2008 only one float has failed with the rest continuing to supply good data. The Atlantic effort focussed on the Slope Water and Labrador Sea. The Pacific effort included deployments in the Gulf of Alaska and the Bering Sea. We are grateful to JAMSTEC for allowing us to deploy 5 floats from the R/V Mirai. Deployment plans for 2008 have remained uncertain as our inventory of floats declined almost to zero. By the beginning of March 2008 we will have 1 float in inventory and 12 floats on order, but may be able to order floats shortly. When we know what resources are available we will develop a deployment plan. We welcome deployment opportunities of Canadian floats from other nations.

A year ago we were pleased about an offer from METOCEAN Data Systems, Dartmouth, NS to replace two aged PROVOR floats in our inventory with 2 of the PNG (PROVOR New Generation) floats. We are anxious to test these in the field but progress on this exchange does not appear to be taking place. All of our remaining operating PROVOR floats are showing rapid declines in voltage (as expected of lithium cells after a long period of steady voltage) and we expect none to be operating by the March 2008 AST meeting.

1.2 Status of contributions to Argo data management

ISDM (formerly MEDS) continues to acquire data from 107 active Argo floats (100 APEX including 11 equipped with Aanderaa oxygen optode sensors, 7 Provor of which 8 floats appear likely to fail soon. Data are issued to the GTS and GDACs every 6 hours. We increased the frequency of acquiring data from the Argos server to hourly if we failed to access the system at every 6 hour interval. On average 75% of data are issued to the GTS within 24 hours of the float reporting for year 2007. We have sent approximately 3870 delayed mode quality control profiles to GDACs at the end of October 2007. We have roughly 4 month's worth of profiles ready for delayed mode quality control at this time. Our website is updated daily automatically. The website displays float tracks, temperature, salinity and oxygen contour plots and technical information for each float. The website is located at:-
http://www.meds-sdmm.dfo-mpo.gc.ca/meds/Prog_Int/Argo/ArgoHome_e.html

For this year, we will continue to monitor Argo data on the GTS and report back any problems we see. We will update the technical and trajectory NetCDF format according to guidelines. We will need to set up the process to transmit and receive Argo data in BUFR format. Furthermore, we will need to rewrite and test some of our programs that

create NetCDF files in Java for the new server, because our UNIX server will be retired within 6 months.

2. Present level of, and future prospects for, national funding for Argo including a summary of the level of human resources devoted to Argo.

During 2007 the Canadian Argo program was primarily funded as a research program. It has been our early intention to move funding to a more routine or operational basis but that has not yet occurred. We are continuing to pursue this. The funding in 2007 was adequate to maintain and slightly enhance the Canadian contribution to the international effort.

Funding appears to be becoming available late in our fiscal year (April 1st to March 31st) that would allow us to purchase floats for future launch and an order for 21 units has recently been placed with a possibility of being able to lodge an order for a few more units. The financial resources arrived too late in the fiscal year to allow us to order floats with sensors for dissolved oxygen and the lateness and uncertainty of financial resources does not permit forward planning of deployments.

3. Summary of deployment plans (levels of commitment, areas of float deployment) and other commitments to Argo (data management) for the coming year (and beyond where possible).

Detailed deployment plans cannot be known until we know how many floats we can purchase. However, it is expected that the floats on hand will be deployed roughly 50% in the Atlantic and the Pacific. Atlantic deployments are likely to be biased towards the Labrador Sea and Pacific deployments biased towards the far northern regions of the Pacific, including the Bering Sea.

4. Issues that Canada wishes to be considered and resolved by AST regarding the international operation of Argo.

The delivery of delayed mode, quality controlled Argo data to GDACs has improved significantly in the past 12 months. Despite this, we believe that there is still some room for improvement in the timely delivery of delayed mode data.

We are very keen to see a permanent Argo program office established and wish to encourage the Argo Executive and IAST to make this happen. We believe that the ATC and AD positions should be co-located. We note that JCOMM is working to provide an Observing Programme Support Centre. This may be a suitable location as operations will be run in concert with other ocean observation programs.

As noted above, our current funding is still without long-term stability. We feel that it may be useful to us to hold an Argo Steering Team meeting some time in the foreseeable future in Canada, preferably in Ottawa.

Appendix – summary of Canadian float launches during calendar 2007.

	Launch Date	WMO-ID	Oxygen sensors?	Ocean Basin	Launching Vessel	Still Operating?
1	06/05/2007	4900875	N	A	Hudson	Yes
2	26/10/2007	4901066	N	P	Mirai	Yes
3	27/10/2007	4901067	N	P	Mirai	Yes
4	25/06/2007	4901068	N	P	Tully	No
5	22/06/2007	4901069	N	P	Tully	Yes
6	24/10/2007	4901070	N	P	Mirai	Yes
7	25/10/2007	4901071	N	P	Mirai	Yes
8	12/06/2007	4901073	N	P	Tully	Yes
9	24/10/2007	4901074	N	P	Mirai	Yes
10	14/05/2007	4901075	N	A	Hudson	Yes
11	15/05/2007	4901076	N	A	Hudson	Yes
12	17/05/2007	4901077	N	A	Hudson	Yes
13	25/05/2007	4901079	N	A	Hudson	Yes
14	25/05/2007	4901080	N	A	Hudson	Yes
15	08/10/2007	4901081	N	A	Hudson	Yes
16	12/10/2007	4901082	N	A	Hudson	Yes
17	14/10/2007	4901083	N	A	Hudson	Yes
18	07/10/2007	4901084	N	A	Hudson	Yes