Argo National Data Management Report for Canada – 2004

1. Status

Data acquired from floats: Currently, we are tracking 98 active floats. Of these, 14 may be in trouble or may have failed.

Data issued on GTS: All of the data are issued to the GTS. On average 85% of data are issued to the GTS within 24 hours of the float reporting. Longer delays are usually caused by incomplete sets of messages received from the floats, or the message transmitted failed the CRC check. However, all of the delayed data are issued to the GTS.

Data issued to GDACs after real-time QC: We are routinely sending files to the GDACs on the same schedule as they are issued to the GTS.

Data issued for delayed QC: MEDS routinely sends data to the PI on the same schedule as the data are issued to the GTS.

Delayed data sent to GDACs: The PI is routinely using the Wong et al software. He regularly returns the data which pass with no problems and those with corrected salinity. The data are sent to MEDS on a monthly basic. MEDS has the software that transforms the data into the latest format version of netCDF, updates our database and sends the data to the GDACs. We have sent 3740 delayed mode netCDF profiles to the GDACs.

Web pages: MEDS maintains pages that show float tracks, and all of the data collected for all of the Canadian floats. Both real-time and delayed mode data are also available to download, but we alert viewers that the official version resides at the GDACs. Pages are updated daily.

We also show some information about the global programme including the positions of floats over the previous month, the success rate of meeting the 24 hour target for getting data to the GTS, the number of messages transmitted, and statistics of float performance.

Readers may go to:

http://www.meds-sdmm.dfo-po.gc.ca/meds/Prog_Int/Argo/ArgoHome_e.html

to see the page

We have deployed three Apex floats with the Aanderaa Oxygen sensor in May 2004. They were deployed at 44.43 N 55.84 W, 59.76 N 49.11 W, and 49.99 N 147.01 W. The WMO numbers of these floats are: 4900497, 4900494 and 4900524. 4900497 is doing well since deployment. 4900494 has experienced

some looping instability in the T/S curve, and the oxygen sensor of 4900524 is not working properly. The data has not been sent to the GDACs because the current NetCDF format can't store the additional temperature measurement.

2. Delayed Mode QC

Howard Freeland has designated Ron Perkin at IOS to handle the delayed mode quality control processing for all of the Canadian floats. Every month he downloads any new files from MEDS. He brings the data into the Wong et. al. software as "source" matrices and graphically views the profiles from each float to flag any additional outliers before they get into the fitting process. The Wong routine takes about 6 hours to run on his PC. He applies the criterion that each float is working well until its data exceeds 2 standard deviations from the mapped climatological data. These data pass to delayed mode unchanged. He uses 0.008 as the minimum salinity error in the event that the fit-to-climatology standard deviation falls below this value. For profiles known to be bad, he forces the QC flag to 4 and leaves fill values in the PSAL_ADJUSTED array.

For floats where visual inspection of the plots leads him to believe that the salinities are showing a real deviation from climatology, he allows the minimum salinity error to be 0.040. Typically, these are where the float salinities are stable but the climatology is jumping around or in the Labrador Sea where the salinities seem to have changed. If fouling occurred, correction is applied to those floats. Once he finishes, he puts the data on his ftp site and notifies MEDS of updates. As long as nothing goes wrong, half a day is plenty of time.

3. GDAC Function

Canada has no GDAC function

4. Regional Centre Functions

Canada has no regional centre functions. However, Canada provides a view of the state of the Argo array in the Gulf of Alaska, and some appreciation of changing conditions there as seen by Argo. These are available at the web page: