01 March 1994 Skip Kovacs U.S. Naval Research Lab Marine Physics Branch

These files are the band-pass filtered, shifted US Navy Arctic aeromag data created in November 1993 by Skip Kovacs for processing at the Atlantic Geoscience Centre (AGC) with Volodja Glebovsky in Dartmouth, Nova Scotia.

Anomaly data was calculated using the DGRF-1980 reference field.
Data in the original files were then splined to 1 km data point spacing.
Then data were band-pass filtered using a simple boxcar filter to contain only data of between 30 to 220 km wavelength. Data track files were then combined into survey groups, and gridded (to 2km X 2km grid spacing) using
a Transverse Mercator projection, reference longitude = 85 West.
Since the Thule_92 data was collected with differential GPS navigation, (navigation error about 10m rms), groups of data were then cross-correlated
to the Thule_92 data in the order of their geographic closeness to that data set. The cross-correlation maxima for each group was then used to shift the navigation of the band-passed data files to provide maximum agreement with the reference data. Each shifted group was then merged with the reference group to extend the reference group into further areas.
These data were then re-gridded and used as the reference group for the next group cross-correlation and shift.

For shifting, the following groups were used and results obtained:

Reference Group	Cross-Cor & Shift Group	Amount shifted (grid cells)
Thule-92	Lincoln-75	x= 0, y=-1
Thule-92, Lincoln-75	Alpha R 75 & 76	x= 0, y=+2
Th-92, L-75, AR-75-76	Nansen R 75	x=-1, y=+1
Th-92, L-75, AR-75-76, NR-75	Thule-83	x= 0, y=+1
Nansen R-75	Thule-83	x=+5, y= 0
Th-92, L-75, AR-75-76	Thule-83, Nansen R-75	x=+5, y=+1
T-92, L-75, AR-75-76, NR-75, Th-83	Alpha R 77 & 78, Fletch-78	x=+1, y=+1