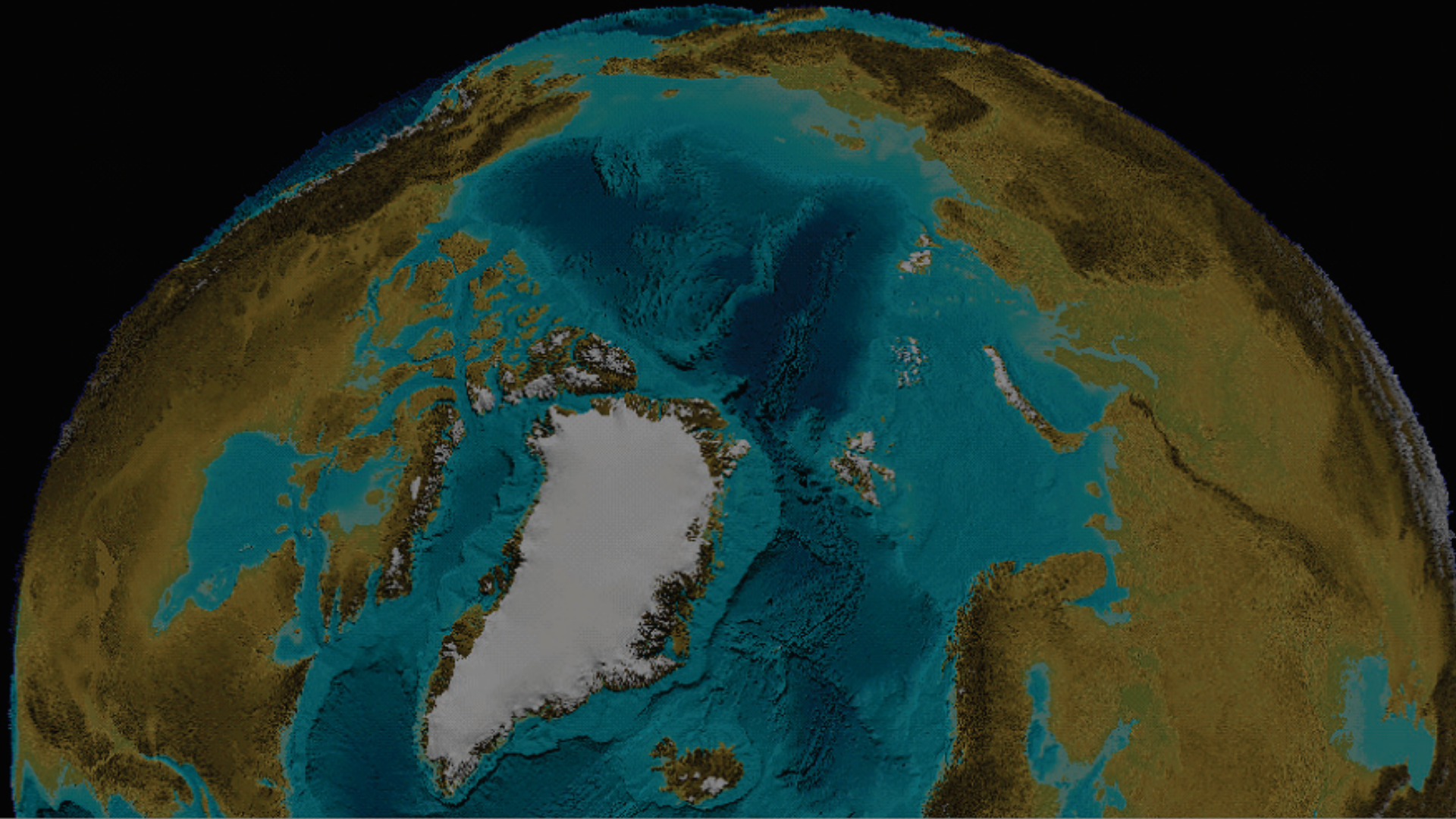
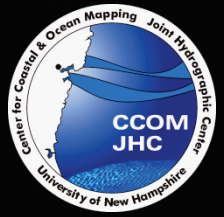
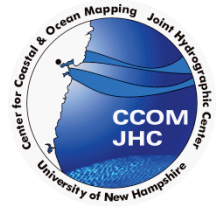




SCICEX SAM BATHYMETRY DATA



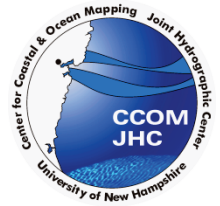


UNH CCOM received 3 SAM datasets:

1- USS Connecticut 2011

2- USS New Hampshire 2011

3- USS Topeka 2012



Received spread sheets with:

Time vs Depth

	A	B	C	D
1	Date	Time Z	Sounding (fms)	
2	29-Mar	20:00	1872	
3	29-Mar	20:30	1885	
4	29-Mar	21:00	1896	
5	29-Mar	21:32	1907	
6	29-Mar	22:00	1919	
7	29-Mar	22:31	1928	
8	29-Mar	23:00	1936	
9	29-Mar	23:30	1941	
10	30-Mar	00:03	1943	
11	30-Mar	00:30	1946	
12	30-Mar	01:01	1950	
13	30-Mar	01:30	1952	
14	30-Mar	02:00	1952	

Position vs Depth

CONNECTICUT SCICEX Navigation Data						
Date	Time (Z)	Latitude	Longitude	Heading (True)	Depth (ft)	Speed (kts)
29-Mar-11	19:45	73 01.67' N	146 49.36' W	325.1	508.3	15.9
29-Mar-11	20:00	73 04.75' N	146 57.67' W	321.0	510.2	16.2
29-Mar-11	20:15	73 07.75' N	147 06.13' W	321.0	509.7	16.2
29-Mar-11	20:30	73 10.71' N	147 14.46' W	322.1	510.2	16.2
29-Mar-11	20:45	73 13.67' N	147 22.71' W	321.9	509.9	16.2
29-Mar-11	21:00	73 16.73' N	147 31.24' W	321.0	510.1	16.9
29-Mar-11	21:15	73 19.89' N	147 39.93' W	320.0	510.4	16.5
29-Mar-11	21:30	73 23.04' N	147 48.80' W	320.0	509.3	16.3
29-Mar-11	21:45	73 26.13' N	147 57.44' W	322.0	509.7	16.2
29-Mar-11	22:00	73 29.21' N	148 06.11' W	322.0	509.7	16.6

CONNECTICUT AND NEW HAMPSHIRE

CON Navigation.xlsx

CON Sounding Data.xlsx

Extract date, time,
latitude, longitude, and
depth

Extract date, time, and
sounding

Convert latitude/
longitude into polar
stereographic x/y

Convert date/time to
unix time (seconds)

Convert date/time to
unix time (seconds)

Merge files based on
unix time

Interpolate time,
position, and keel
depth from 15 minutes
to 1 Second

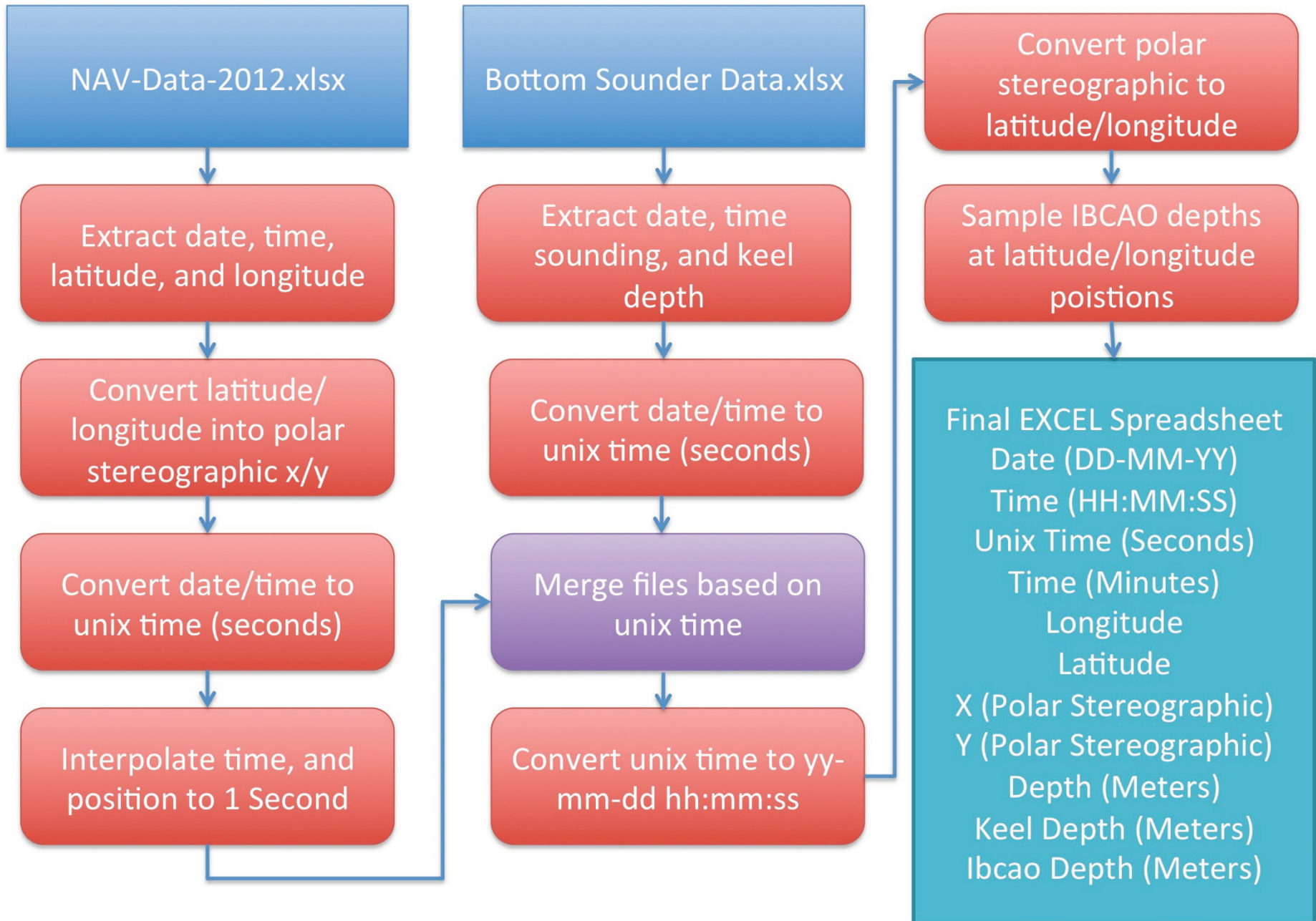
Convert unix time to yy-
mm-dd hh:mm:ss

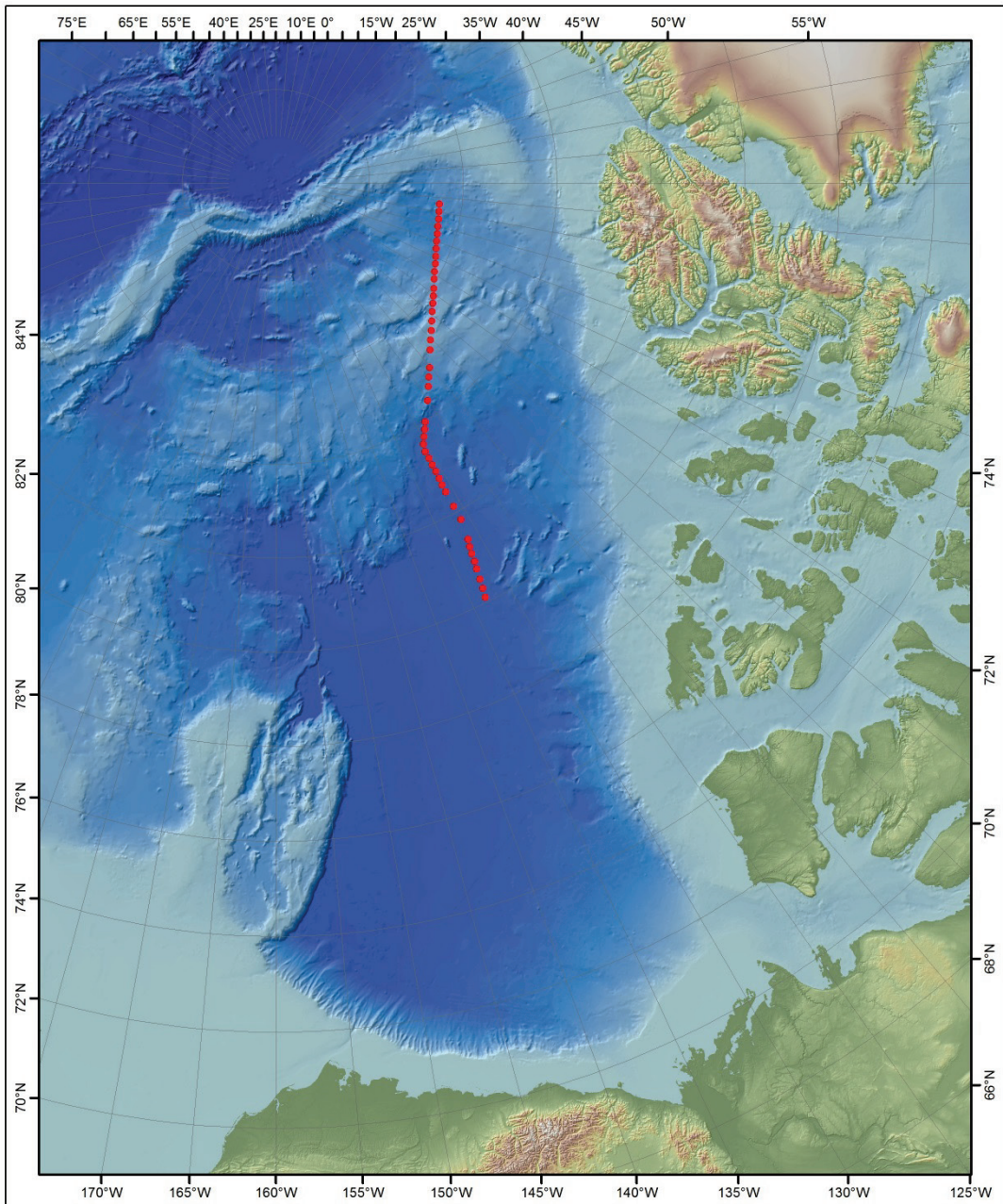
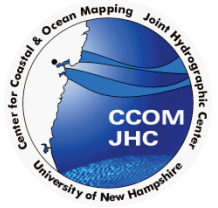
Convert polar
stereographic to
latitude/longitude

Sample IBCAO depths
at latitude/longitude
positions

Final EXCEL Spreadsheet
Date (DD-MM-YY)
Time (HH:MM:SS)
Unix Time (Seconds)
Time (Minutes)
Longitude
Latitude
X (Polar Stereographic)
Y (Polar Stereographic)
Keel Depth (Meters)
Sound (Meters)
Depth (Meters)
Ibcao Depth (Meters)

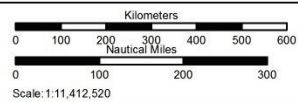
TOPEKA





SCICEX 2011
USS New Hampshire
Sounding Verification

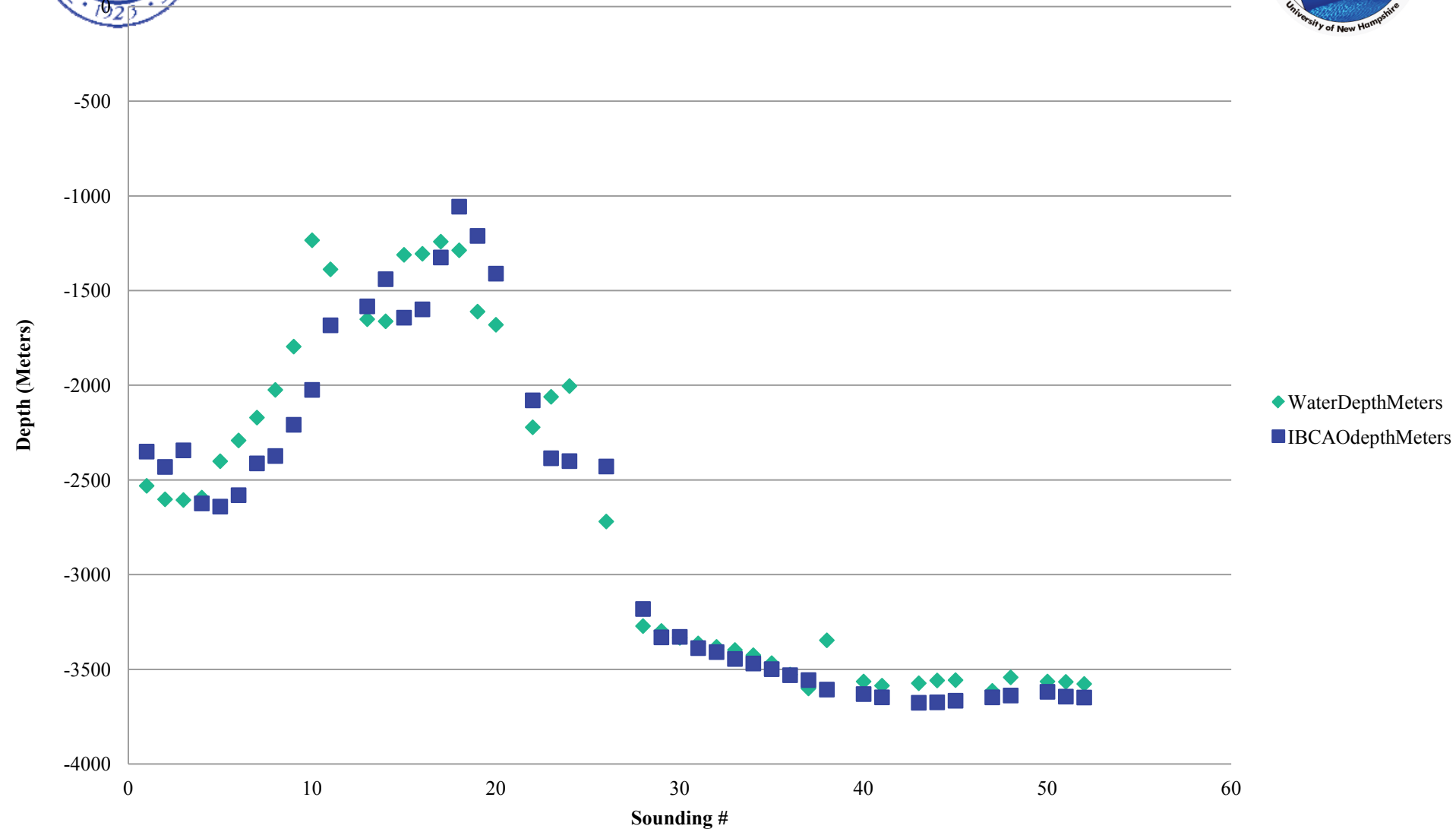
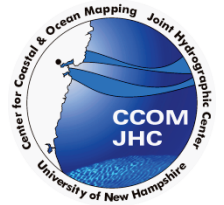
Chart Creation: 3/10/2014 12:03:05 PM

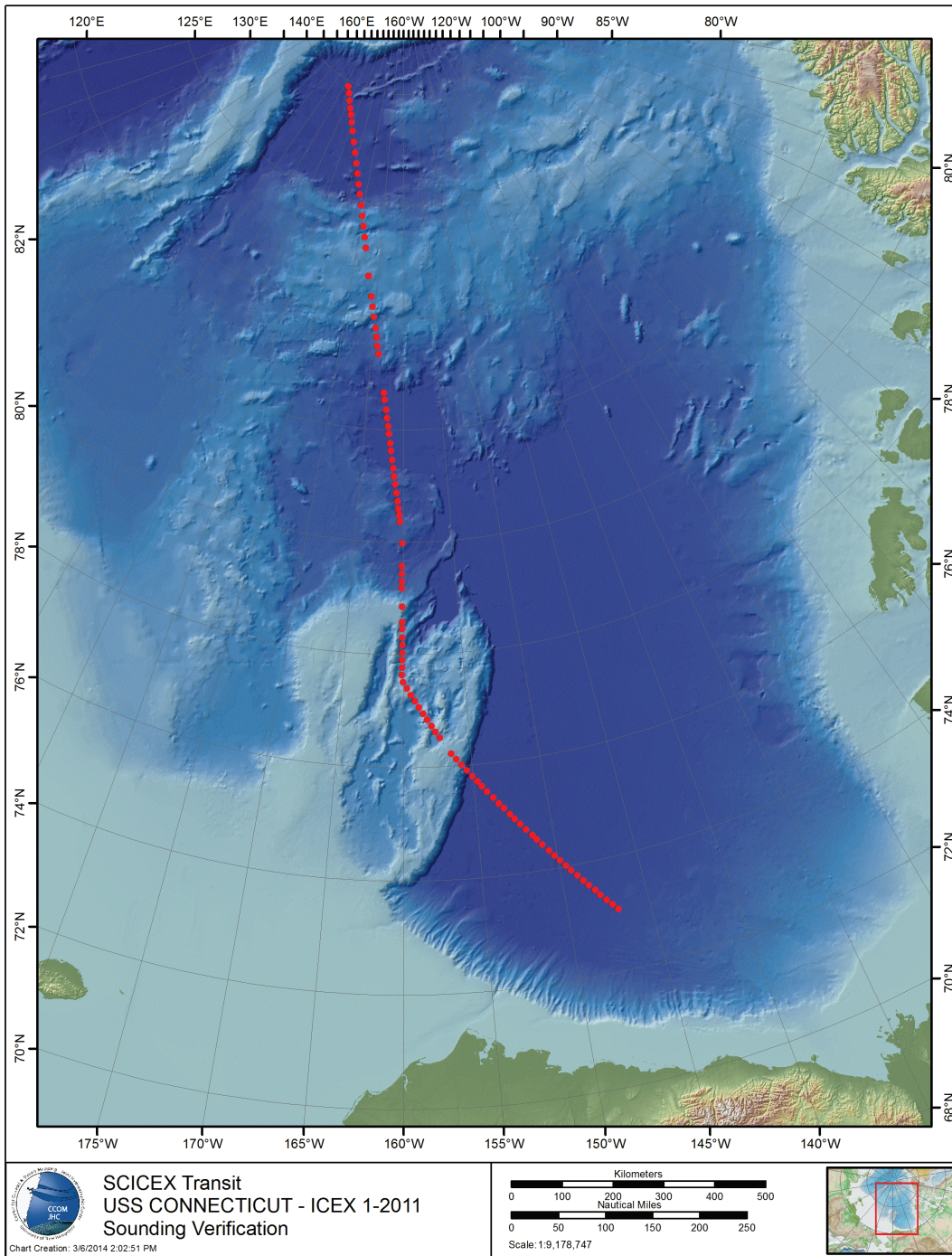




NEW HAMPSHIRE

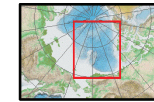
SCICEX 2011 - USS New Hampshire - Transit 1





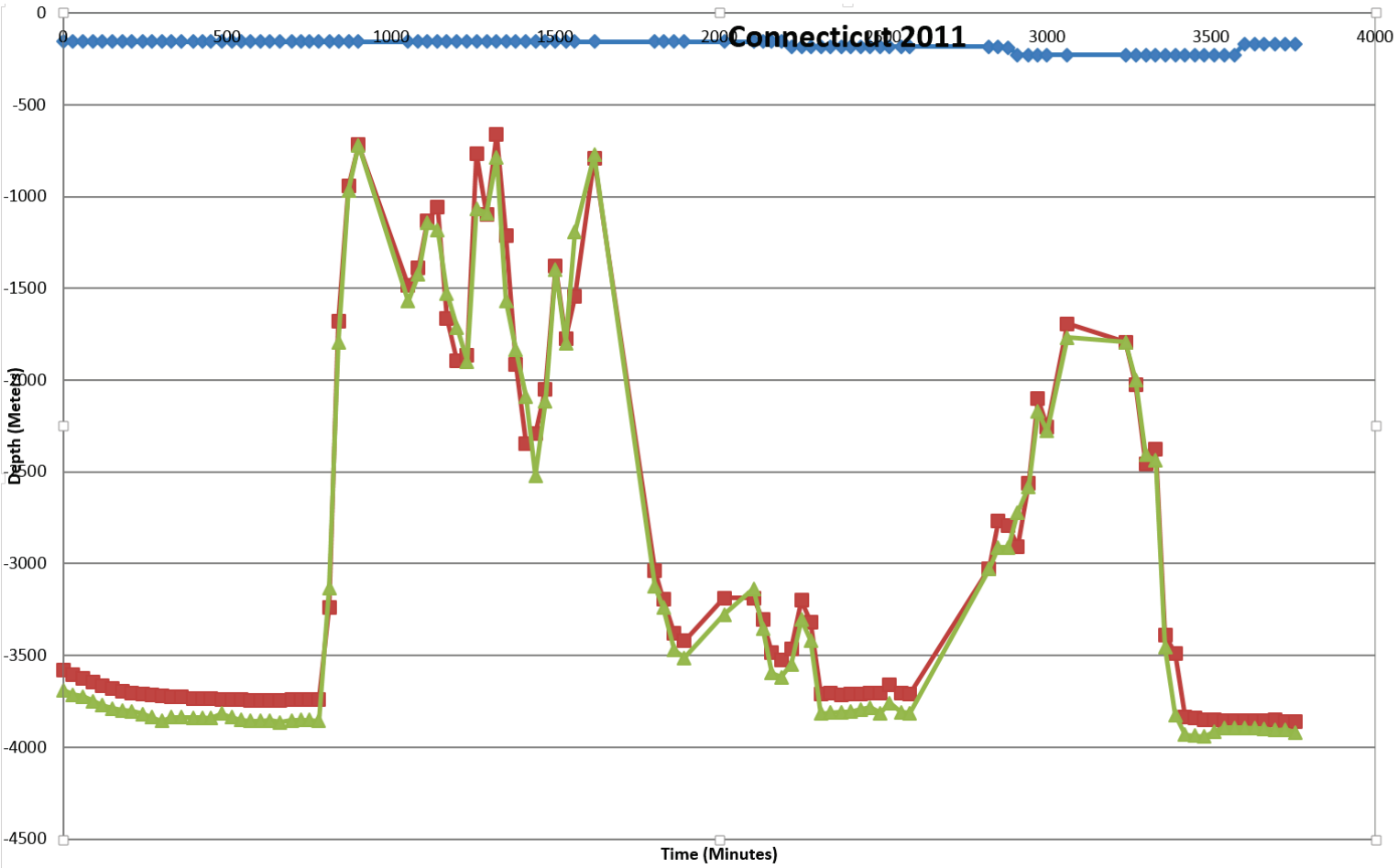
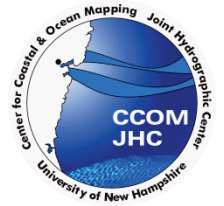
SCICEX Transit
USS CONNECTICUT - ICEX 1-2011
Sounding Verification

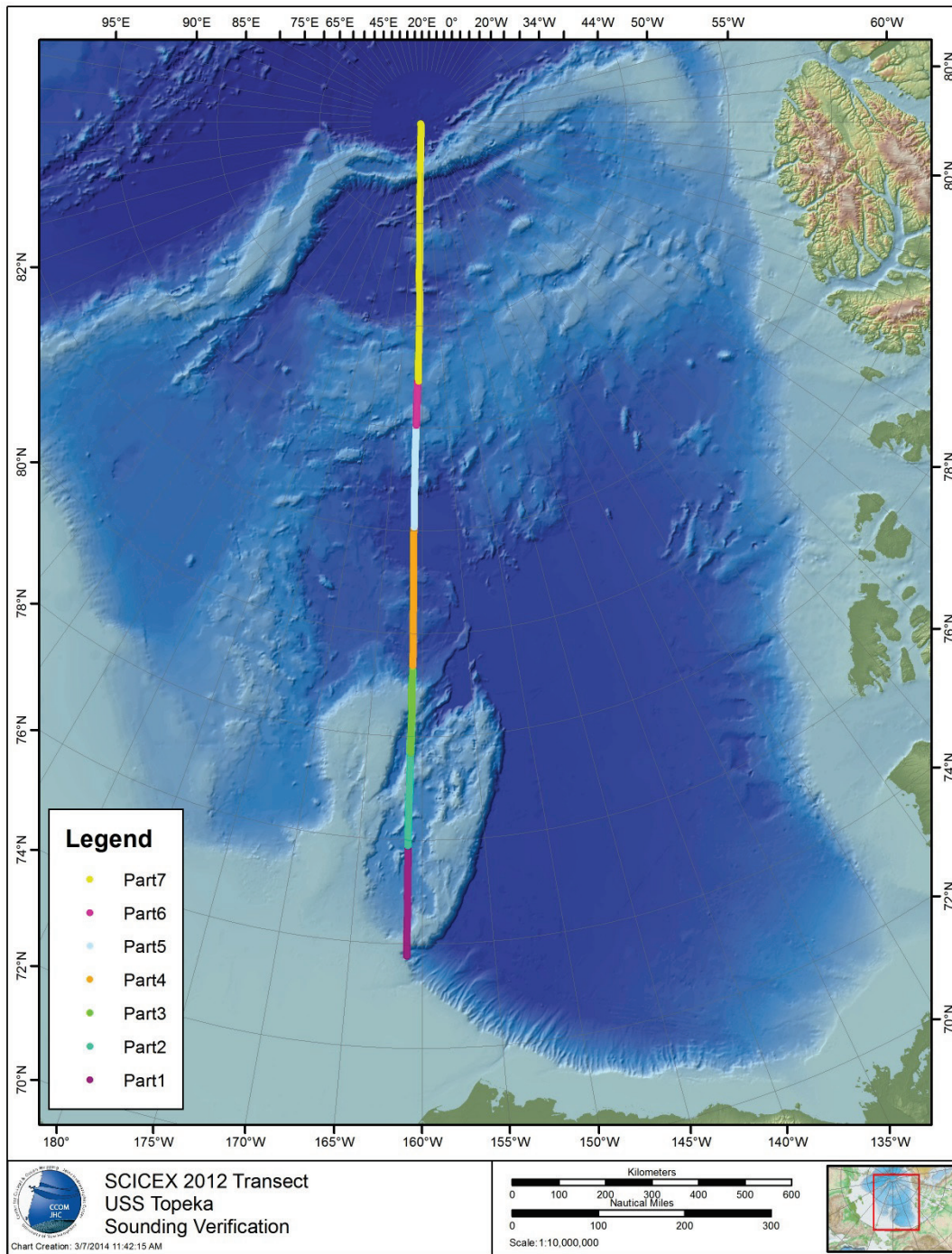
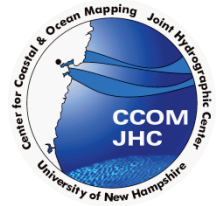
Chart Creation: 3/6/2014 2:02:51 PM



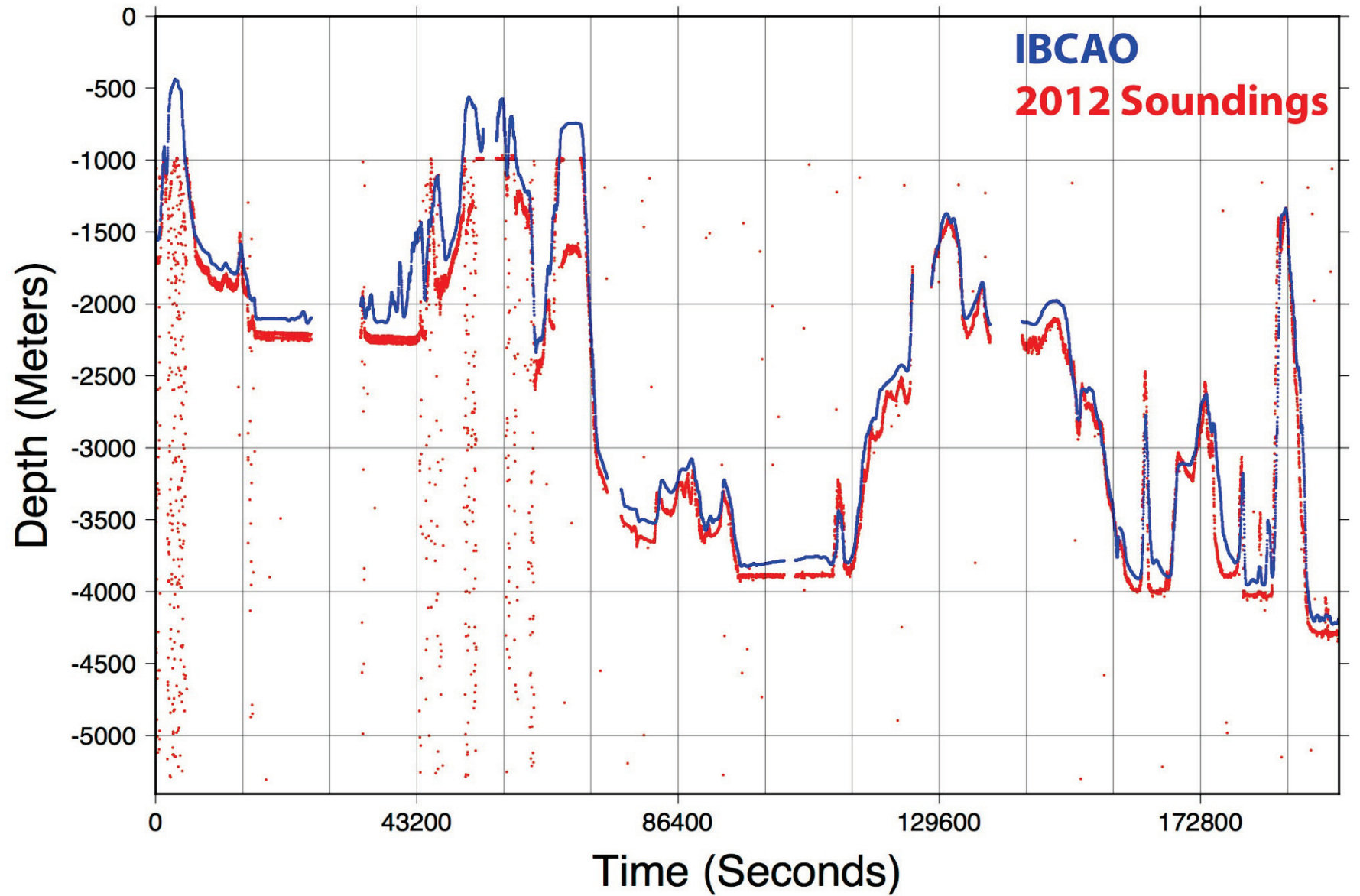


CONNECTICUT



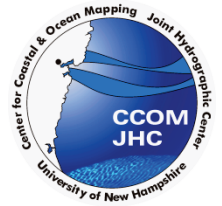


SCIXEX 2012





IMPROVEMENTS?



- 1- position at time of sounding
- 2- harmonic mean sound speed (or CTD data and we calculate)
- 3- Calibration locations
- 4- 1000 m cutoff in 2012 data?