Seabed Characterization Experiment
09-11 December 2014 Workshop ARL-UT

Survey Planning

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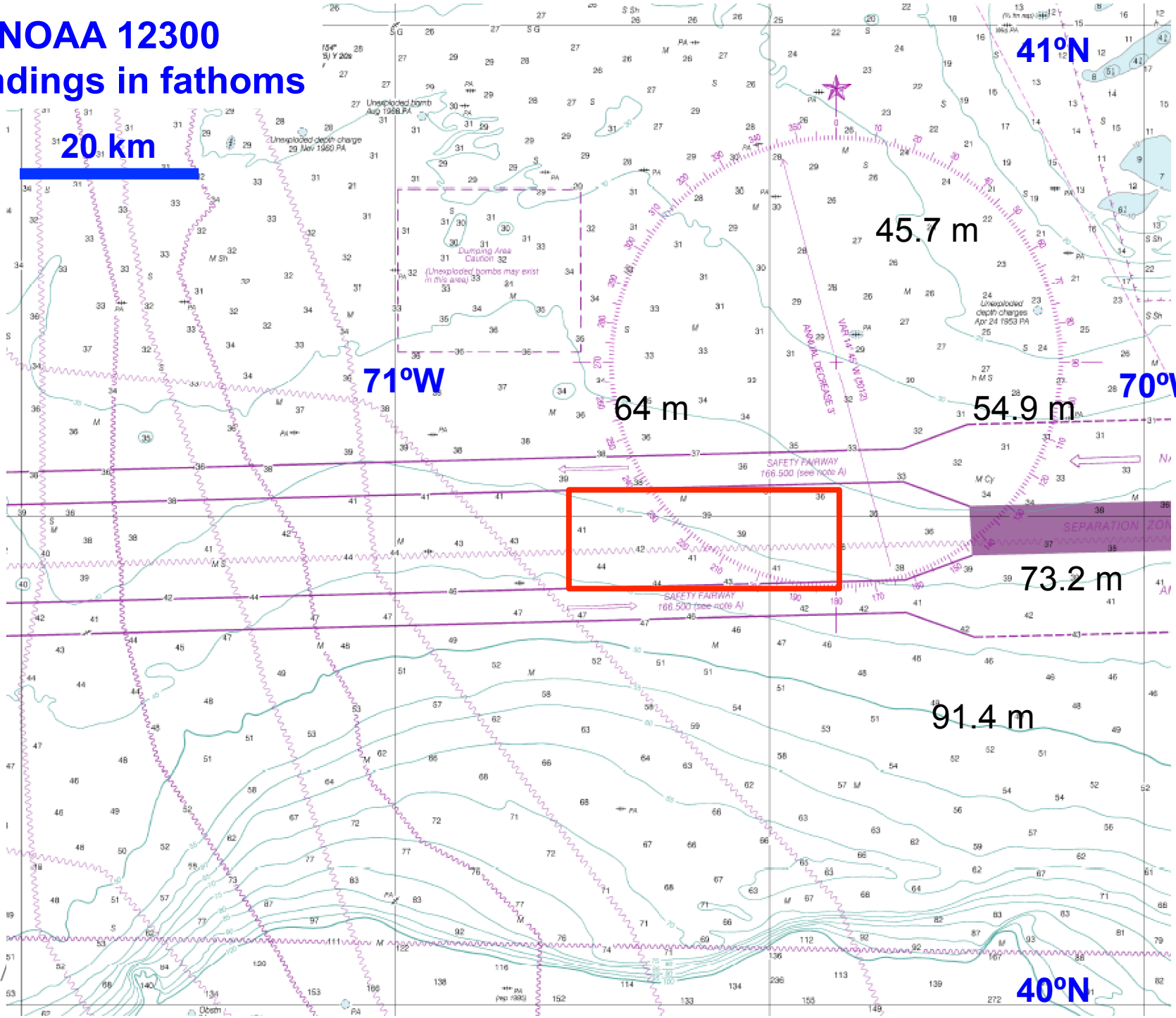
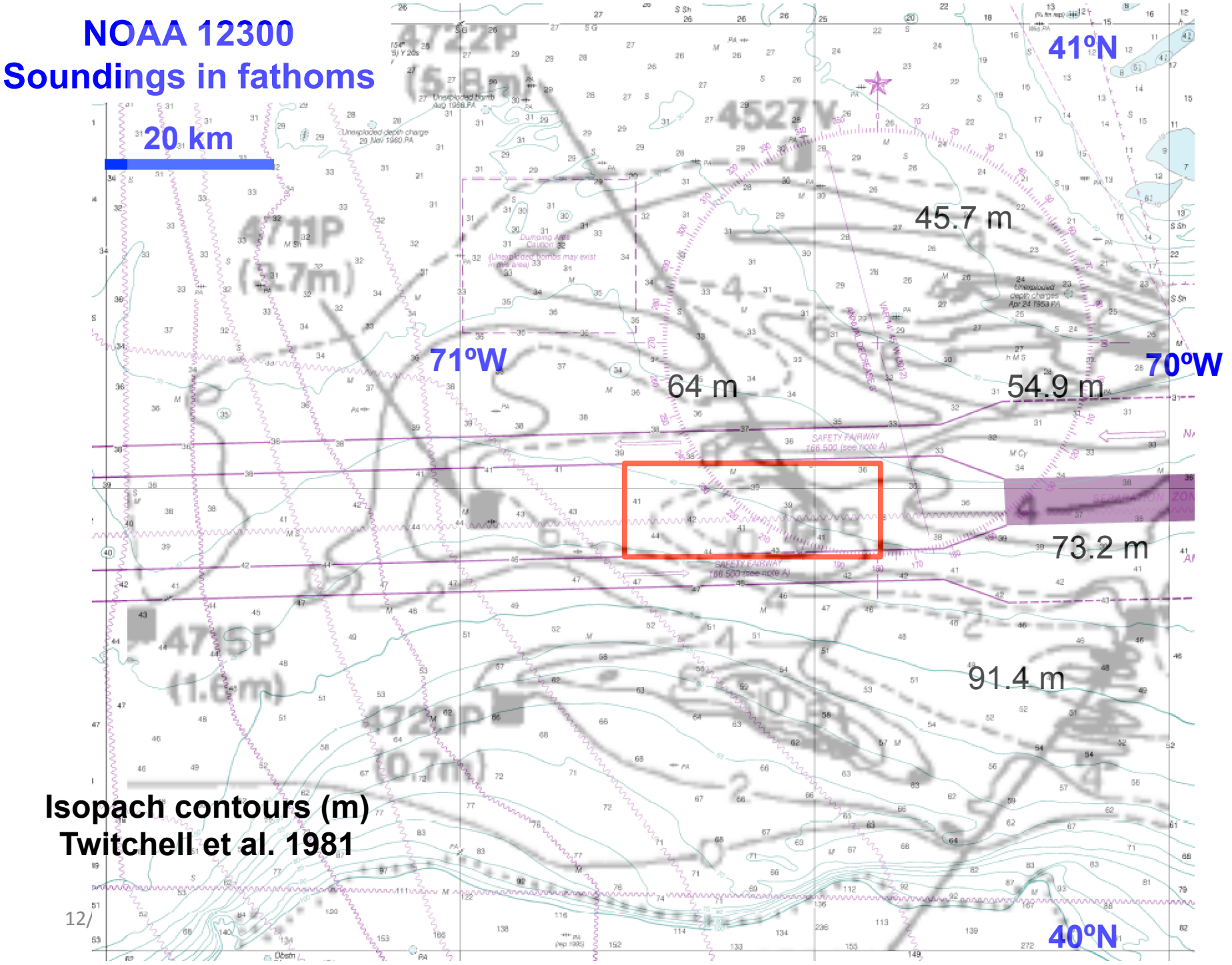
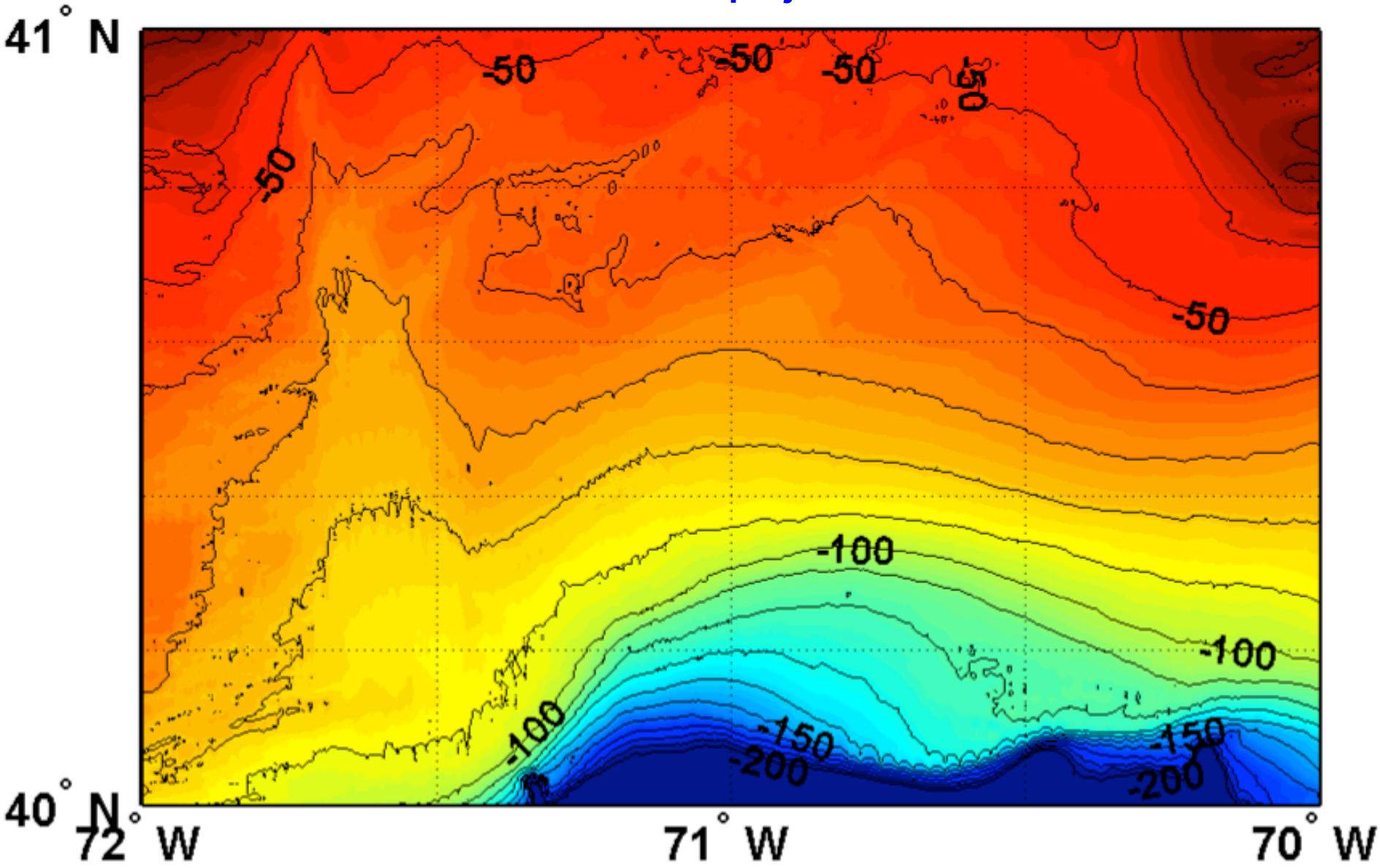
NOAA 12300
Soundings in fathoms

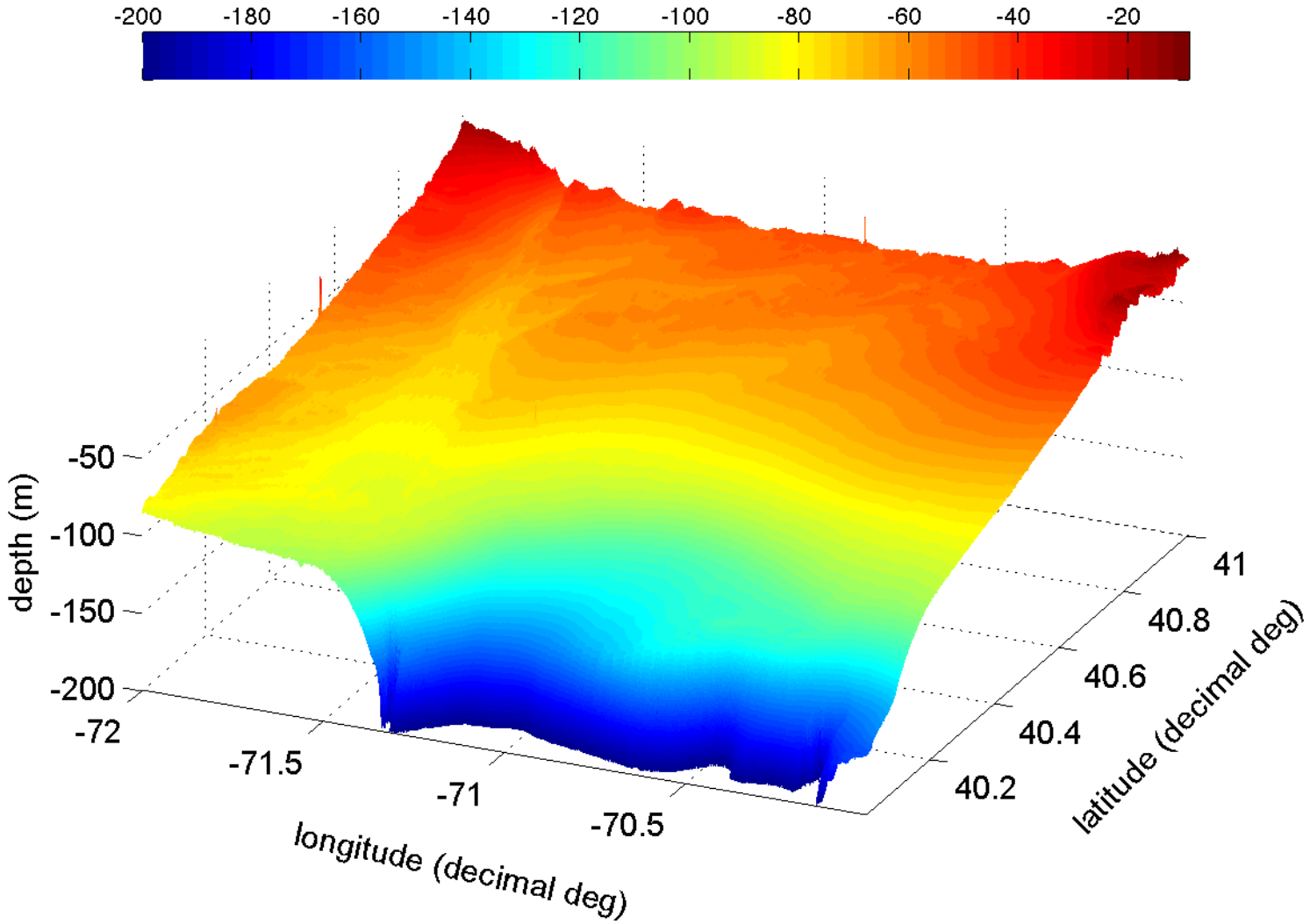



NOAA 12300
Soundings in fathoms
20 km
41ºN
71ºW
70ºW
40ºN
45.7 m
64 m
54.9 m
73.2 m
91.4 m
Isopach contours (m)
Twitchell et al. 1981

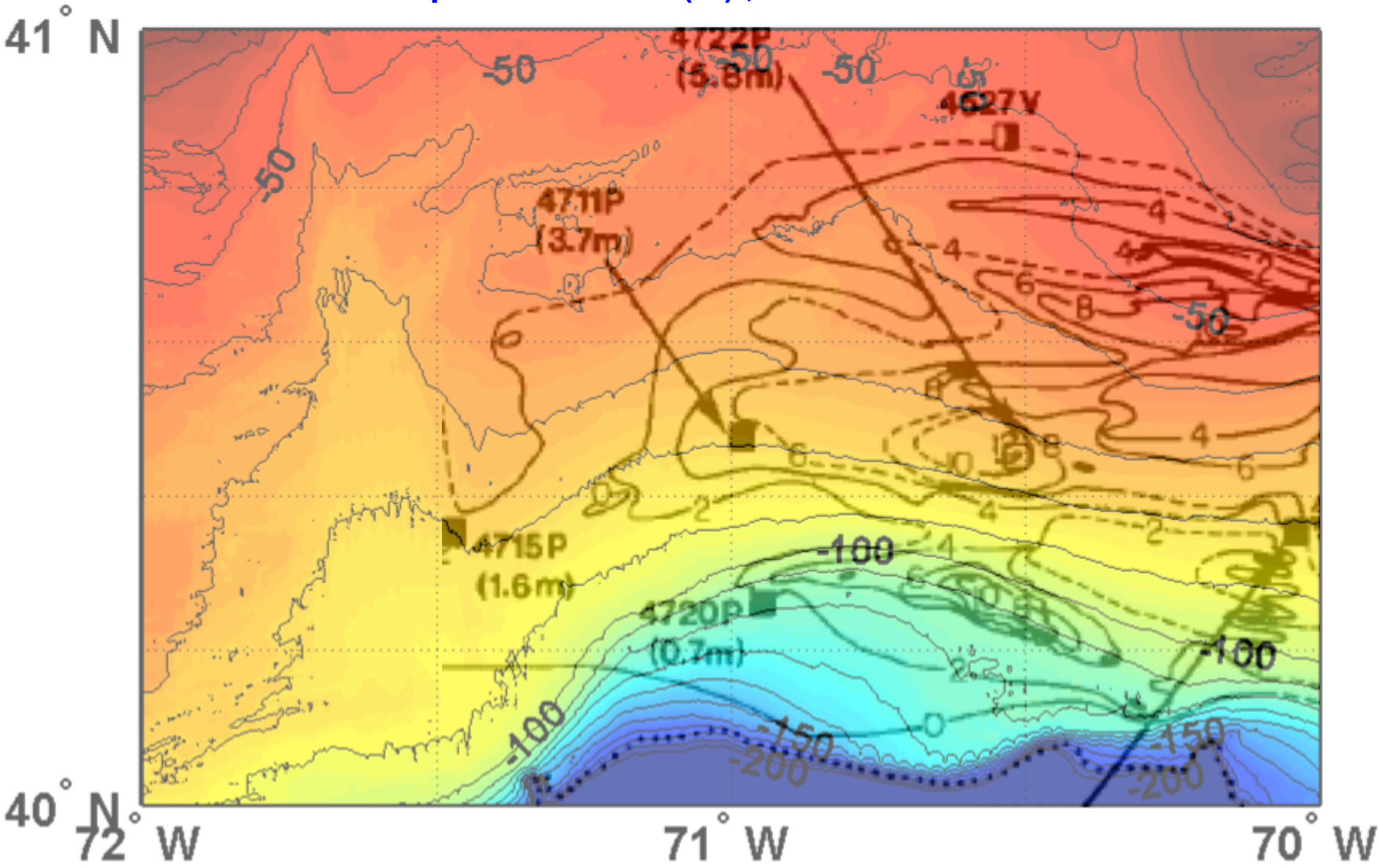
NOAA Coastal Relief Model (3-second resolution, depths in meters)
Mercator projection



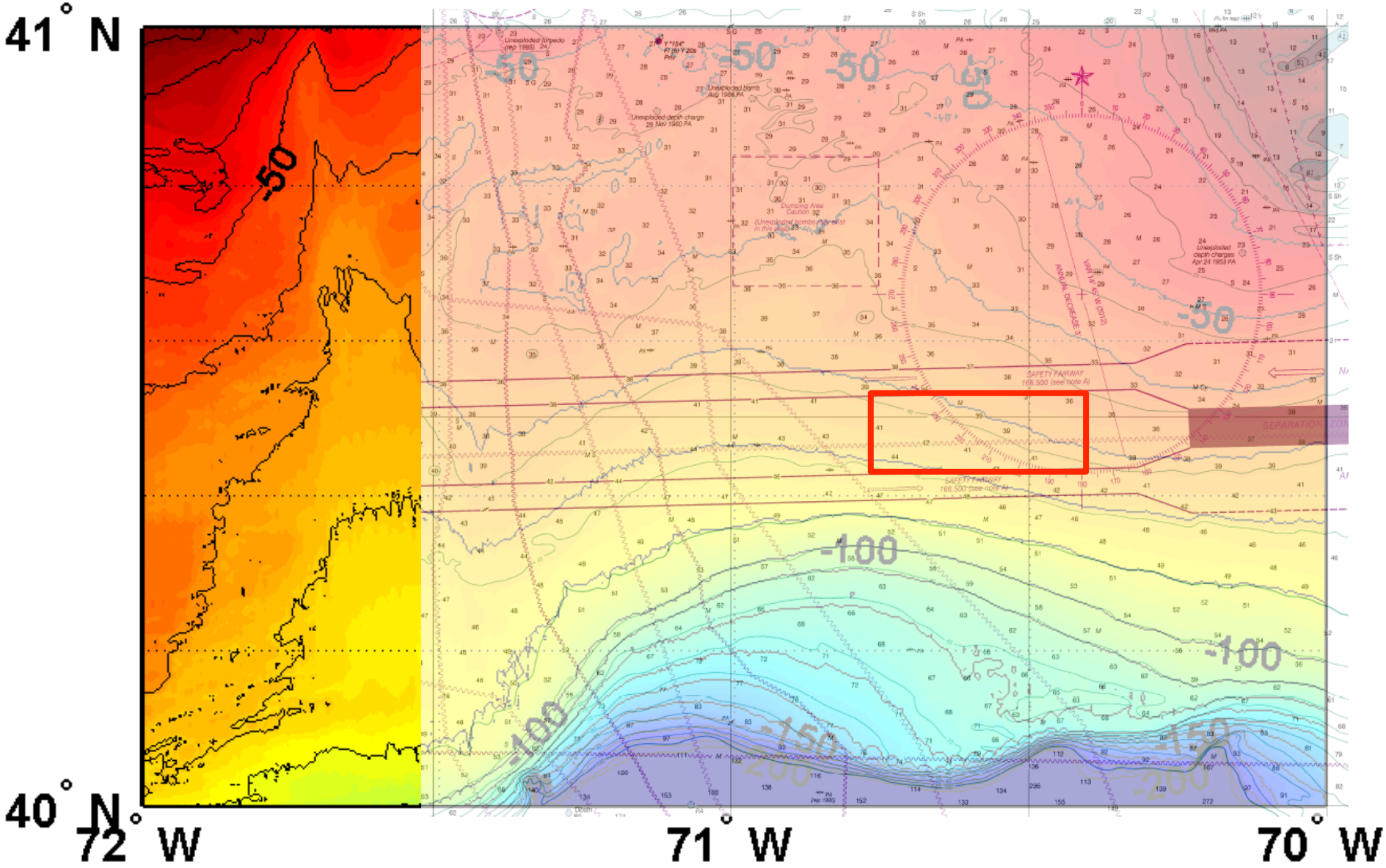
NOAA Coastal Relief Model (3-second resolution, depths in meters)



NOAA Coastal Relief Model (3-second resolution, depths in meters)
Isopach contours (m) , Twitchell et al. 1981



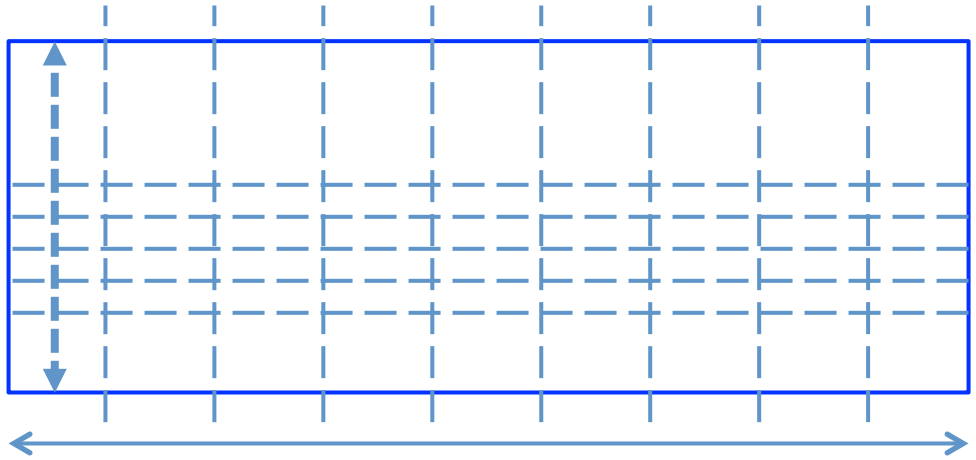
NOAA Chart 12300 (depths in fathoms)
NOAA Coastal Relief Model (3-second resolution, depths in meters)



Notional Seafloor Survey Pattern
Combined CHIRP & Multibeam Echosounder

8 NS track lines 13 km long, 3 km spacing

42 EW track lines
30 km long
260 m spacing



11 km

30 km

Survey Planning

- For full swath bathymetry coverage concurrent with CHIRP profiling of a 30 km × 11 km area (SW corner at 40º 25.5'N, 70º 46.5' W)
- Average depth 75 m (multibeam sonar altitude ~70 m)
- Survey speed ~ 8 km/h (4.5 kn)
- About 9 days of ship time are required to cover the area:
  - 42 EW lines, each (30 km => 3.75 h + turn = 4.25 h)
  - 8 NS lines, each (13 km + 3 km spacing => 2 h + turn = 2.5 h)