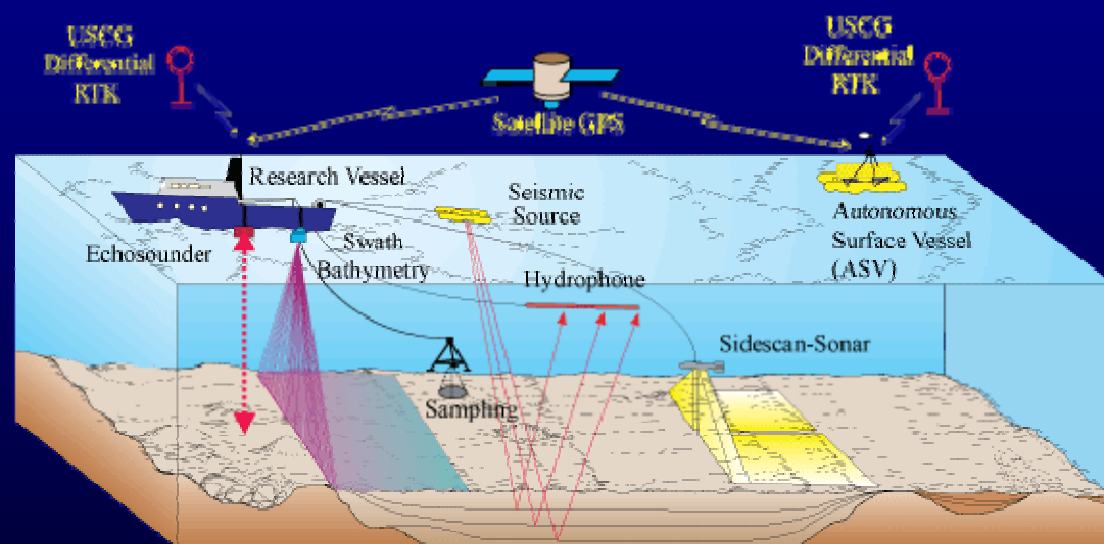


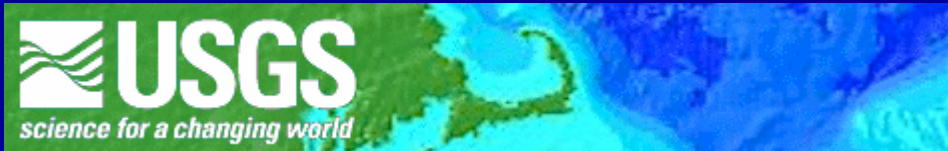
Turbidity Required a Geophysical Mapping Approach

Sea Floor Mapping Systems:

- *Sidescan-Sonar*
- *Swath Bathymetry*
- **Seismic-Reflection**
- Ground-Truth
(core/grab/video/photographs)



Integrate a suite of surficial & sub-bottom mapping & sampling systems to map the seafloor

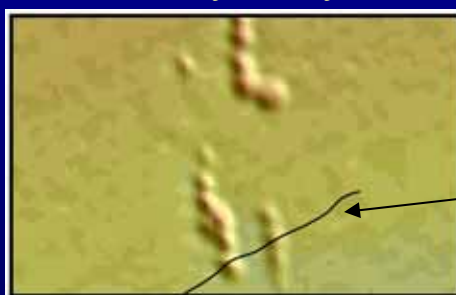


Integration of a variety of geophysical data and seafloor observations

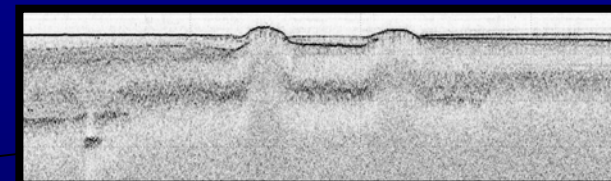
Sidescan Sonar



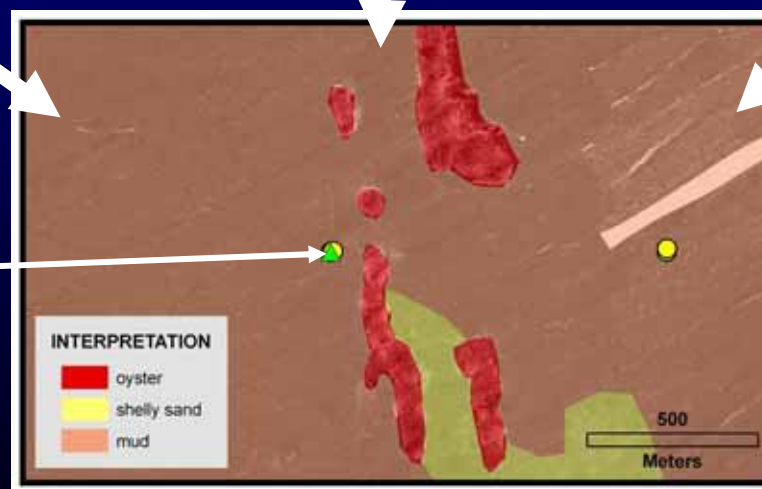
Bathymetry



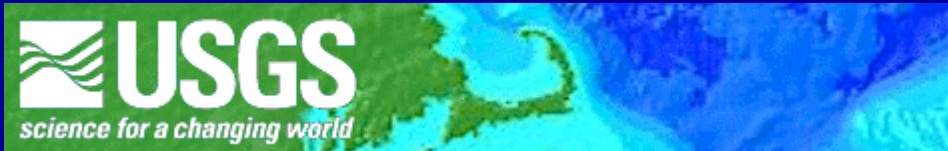
Seismic-reflection



Sediment samples, bottom observations, and Sediment Profile Imagery (SPI) used for verification



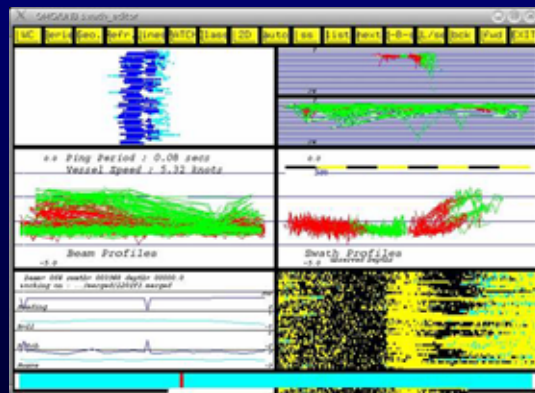
Seafloor geology



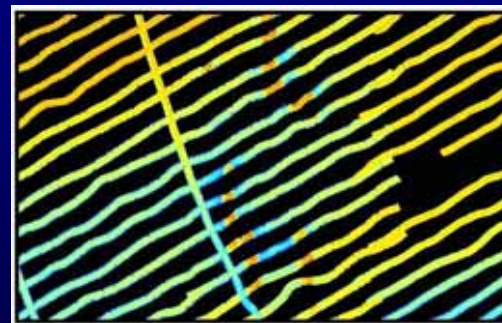
Bathymetry - Interferometric system



Swath bathymetric system



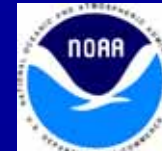
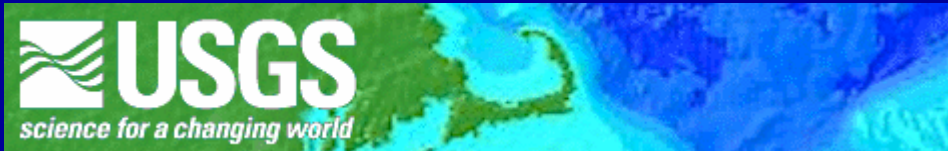
Editing of field data



Edited data with gaps between tracklines



Interpolation to generate final bathymetry grid



Autonomous Surface Vehicle (ASV)

Bathymetry, sidescan sonar, and subbottom systems

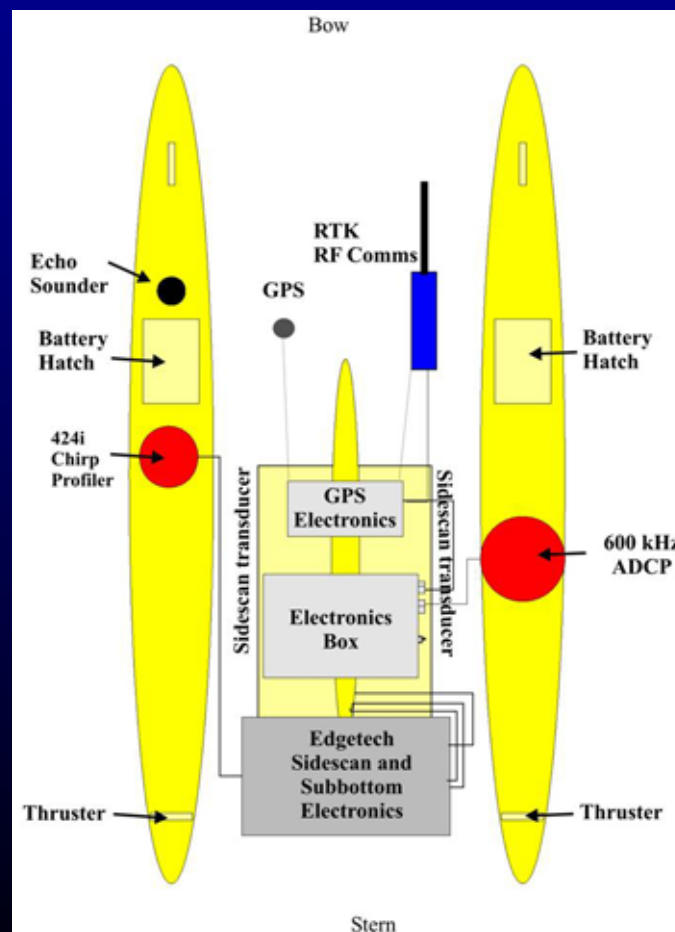
NERR support vessel



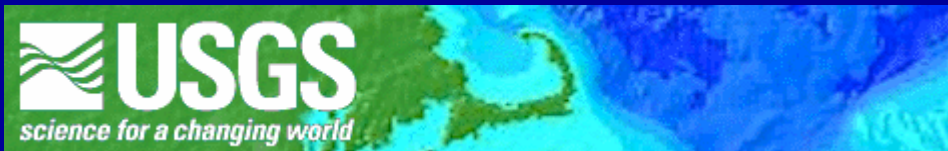
ASV in operation



Schematic showing ASV components



O'Brien et al., in press, Sea Technology



Data Coverage



Taken from: Twichell and others, in review, USGS Open-File Report 2007-1381

Modern Oyster Distribution

