

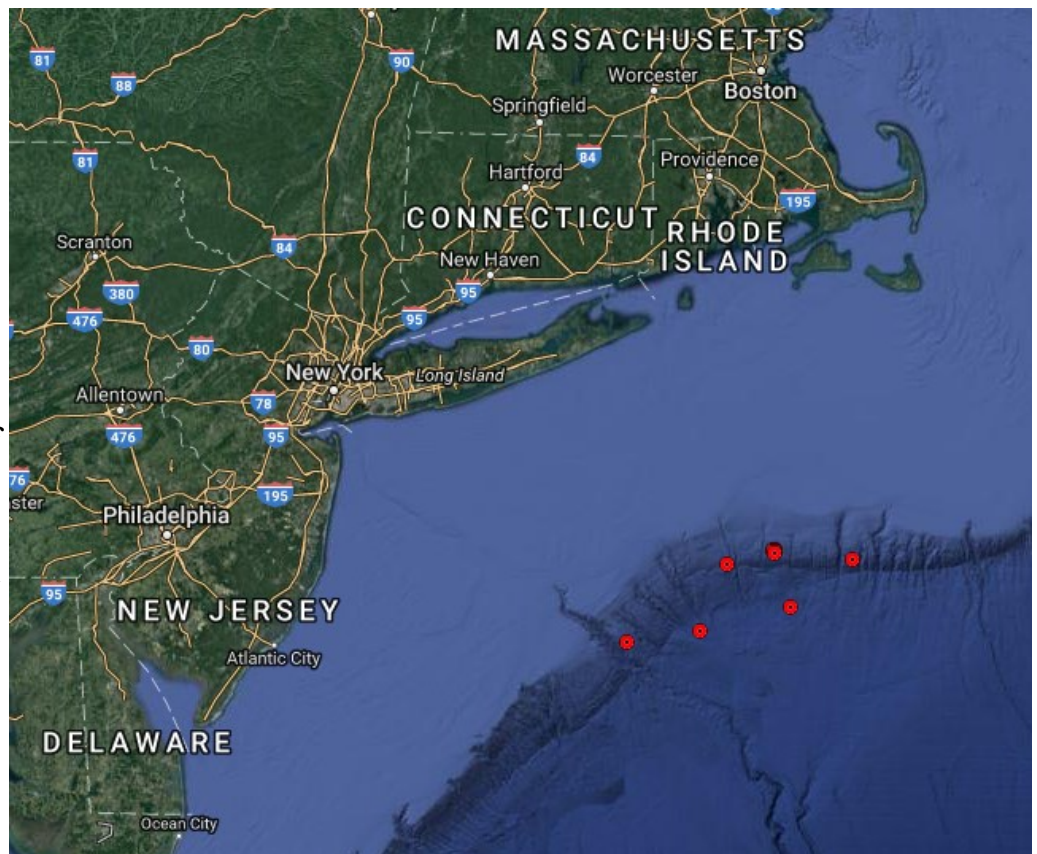
OBSIP Experiment Archive

Year:	2012
Experiment Name:	Mechanical Properties and Seismicity of East Coast Submarine Landslides
Principal Investigator(s):	Uri ten Brink (WHOI)

Experiment Summary: (Taken from experiment website): The Atlantic continental margin is an area with relatively few earthquakes, but there is still the possibility of significant damages. For instance, the M7.2 1929 earthquake along the continental slope of Nova Scotia, caused a large-area landslide (22,700 km²), which generated a devastating tsunami (up to 8 m in amplitude and 13 m of runup). The Atlantic coast is vulnerable to tsunamis because of the large infrastructure and population concentrations along the coast, including on barrier islands and estuaries. The primary potential tsunami sources for the U.S. Atlantic coast are likely submarine landslides. ~90% of landslide-generated tsunamis worldwide are associated with earthquakes. Recently we have shown that the observed size distributions of landslides along the Atlantic margin can be generated if we assume that the landslides were generated by earthquakes with magnitudes 4.5-7.5 (ten Brink et al., EPSL, 2010). In 2012, the USGS Woods Hole group led by ten Brink will conduct an ocean bottom seismometer experiment using WHOI instruments to study the microseismicity of the slope and upper rise in a region of mapped landslides south of Martha's Vineyard and downslope of the Pioneer Array.

This project will aim to characterize the physical properties of the landslide material via the innovative use of ambient noise recorded on the OBS and to locate microseisms from active faulting that may trigger slides.

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Cruises:

7/6/2012:

16 WHOI short period ocean bottom seismographs were deployed.

12/6/2012:

16 WHOI short period ocean bottom seismographs were recovered.

Data:

Data from all instruments deployed are archived under temporary network code [ZS](#) at the IRIS DMC.

Downloads/Links:

[Experiment Website](#)