

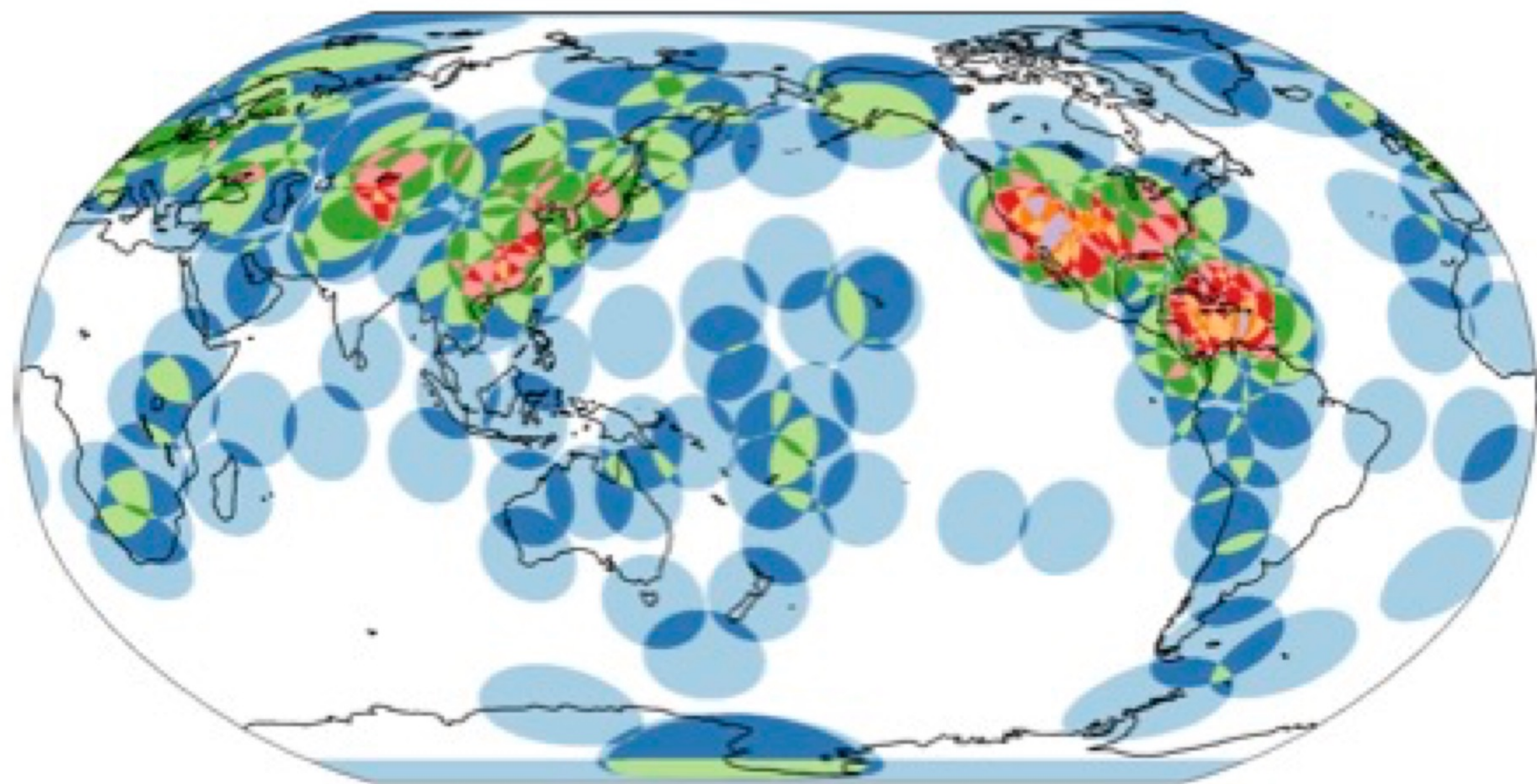
# Autonomy and OBS Development

---

John Orcutt - Chair, MSROC

---

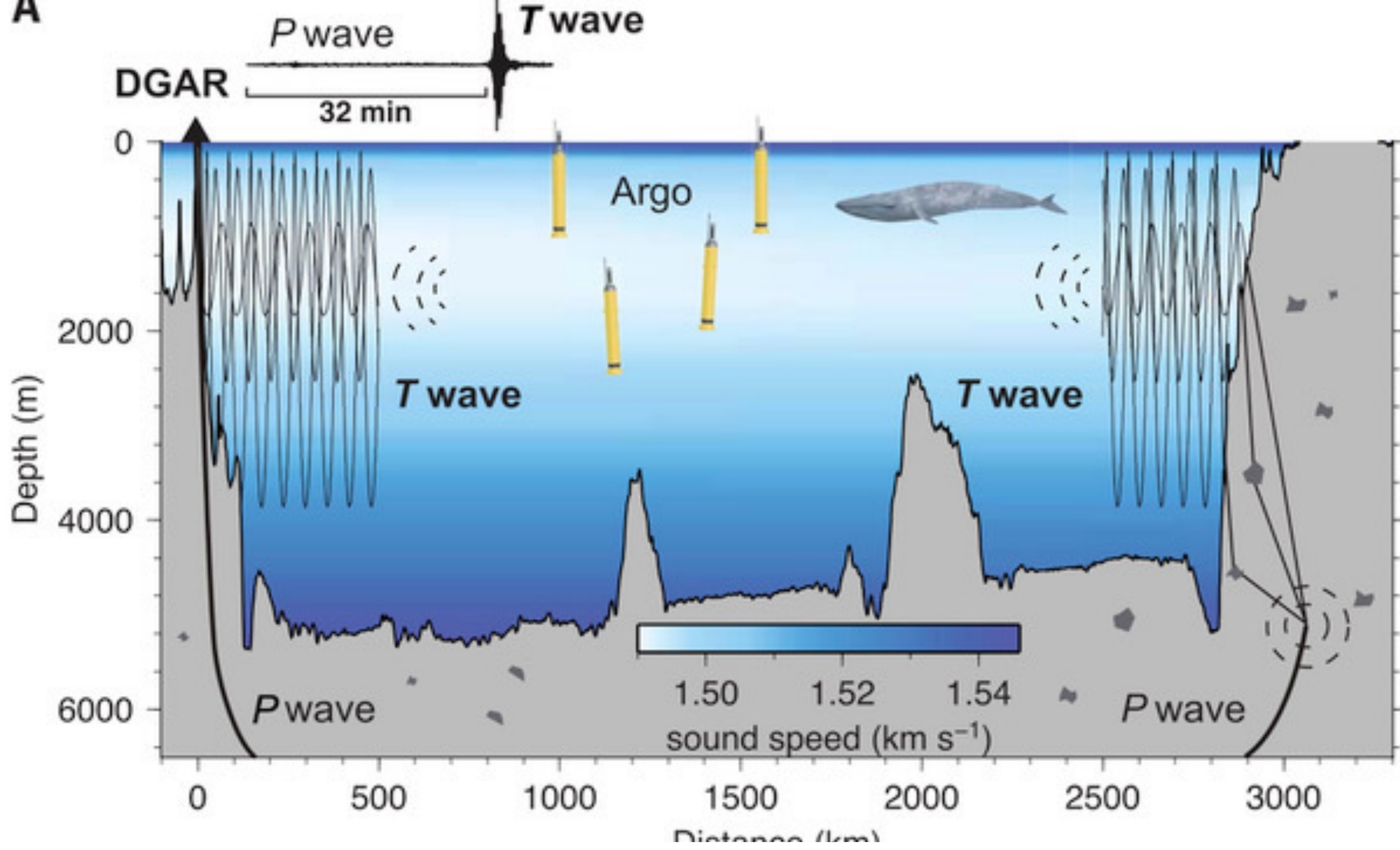




0 1 2 3 4 5 6 7 8 9 10

Number of Stations within  $10^\circ$





Seismic ocean thermometry - Wenbo Wu, et. al.

Repeating earthquakes caused by subduction of the Australian plate and the Sunda Plate to the NE.

---

# US Navy investment in autonomy

- Mariner is the latest autonomous ship - Medium Unmanned Surface Ship (MUSV)
  - Strategic Capabilities Office's Ghost Fleet Overlord
  - Christened on 23 August 2022
  - Will be assigned to Unmanned Surface Vessel Division 1 in San Diego in early 2022











MR 0271820

WMO 9516058







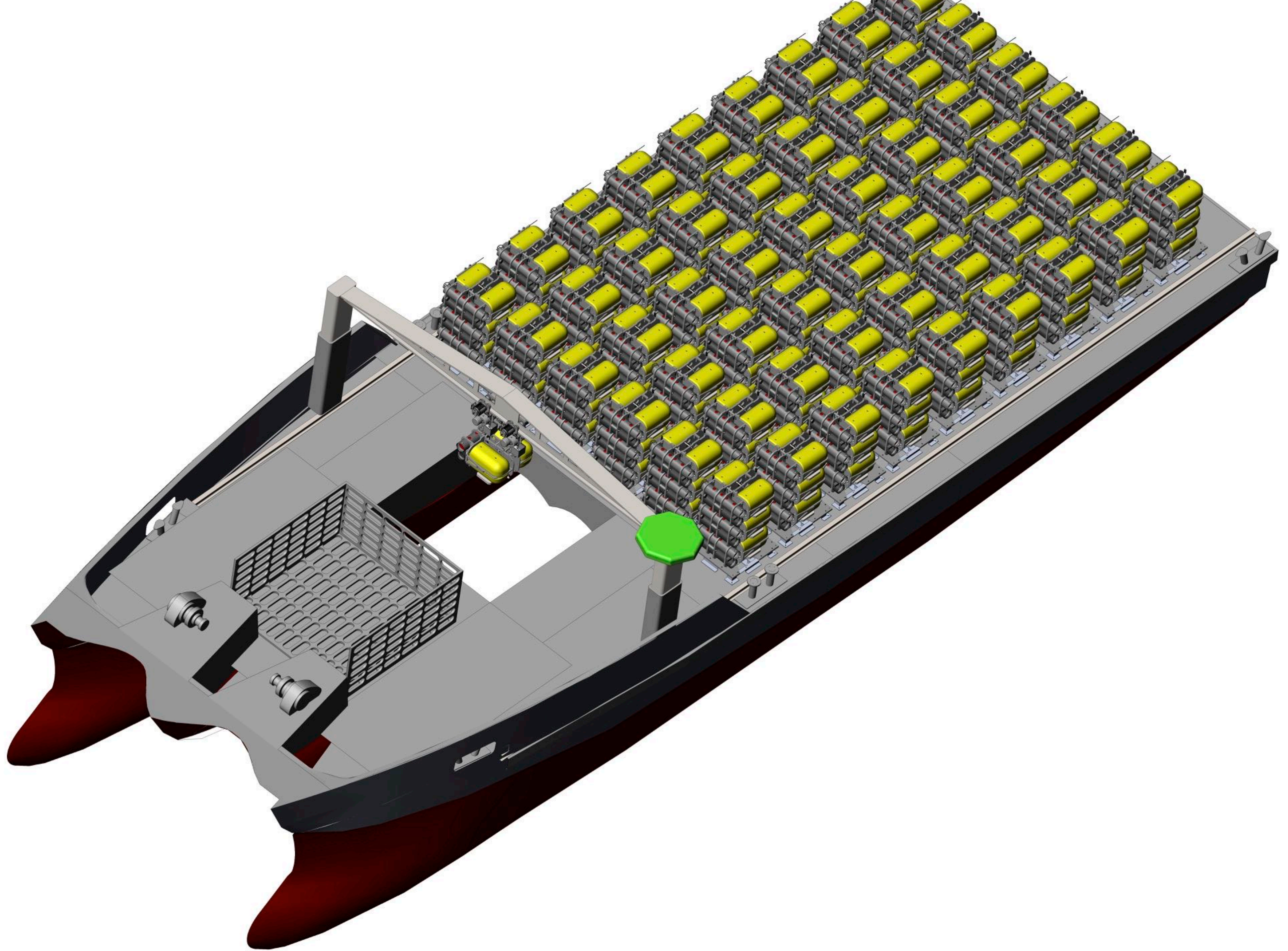


SEA  
HUNTER

MUC1601

40m 1601



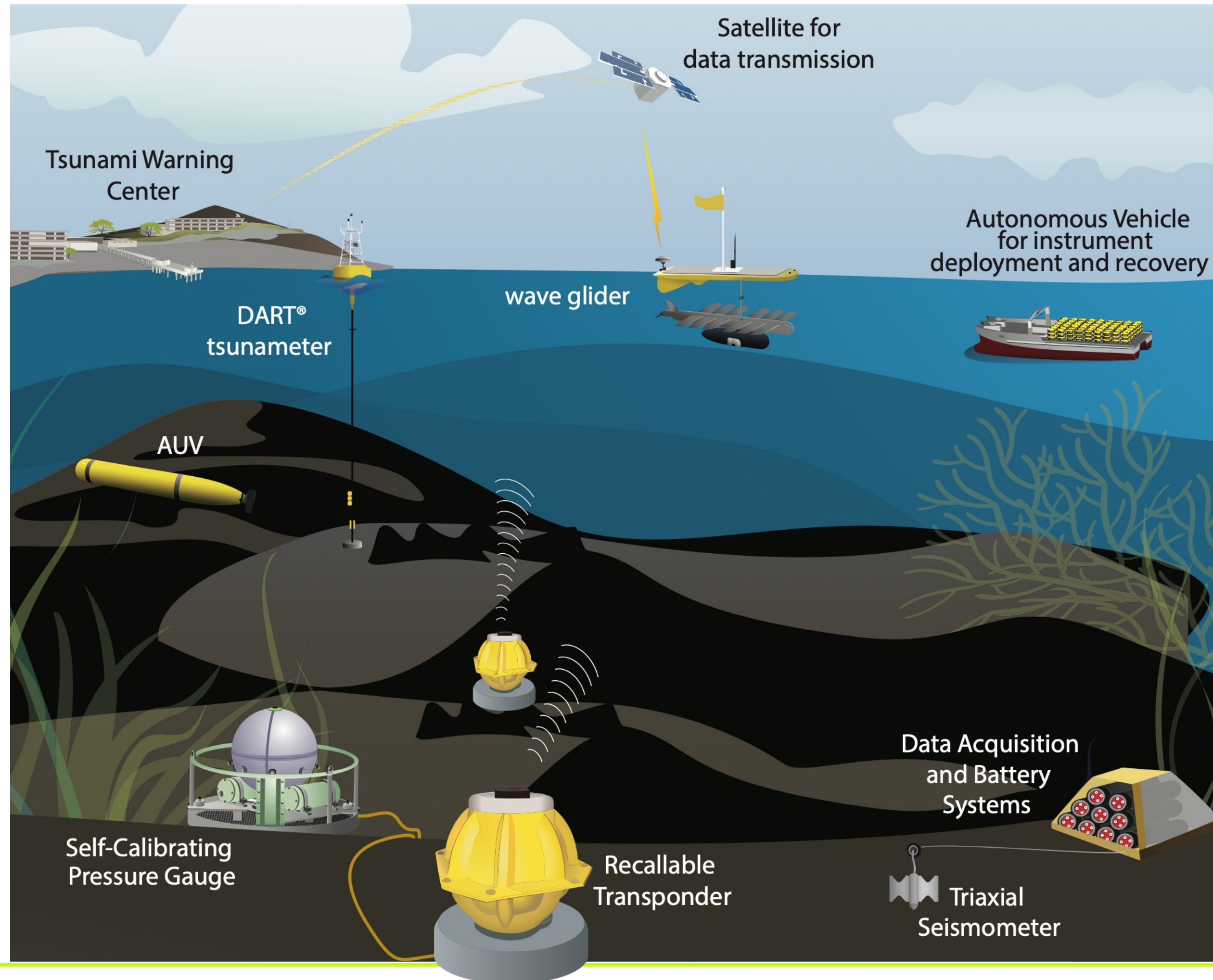






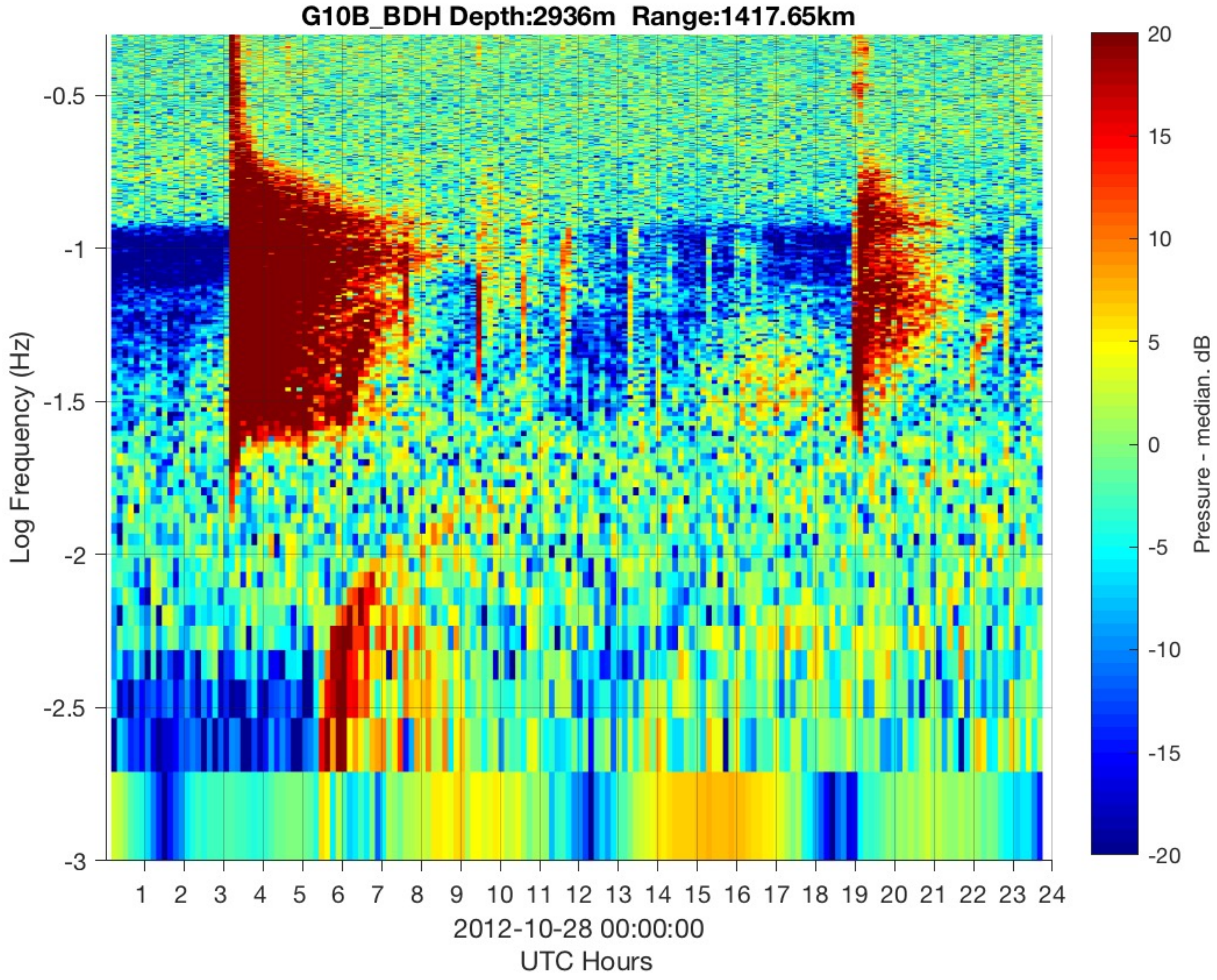


# Multipurpose Seafloor Observatory





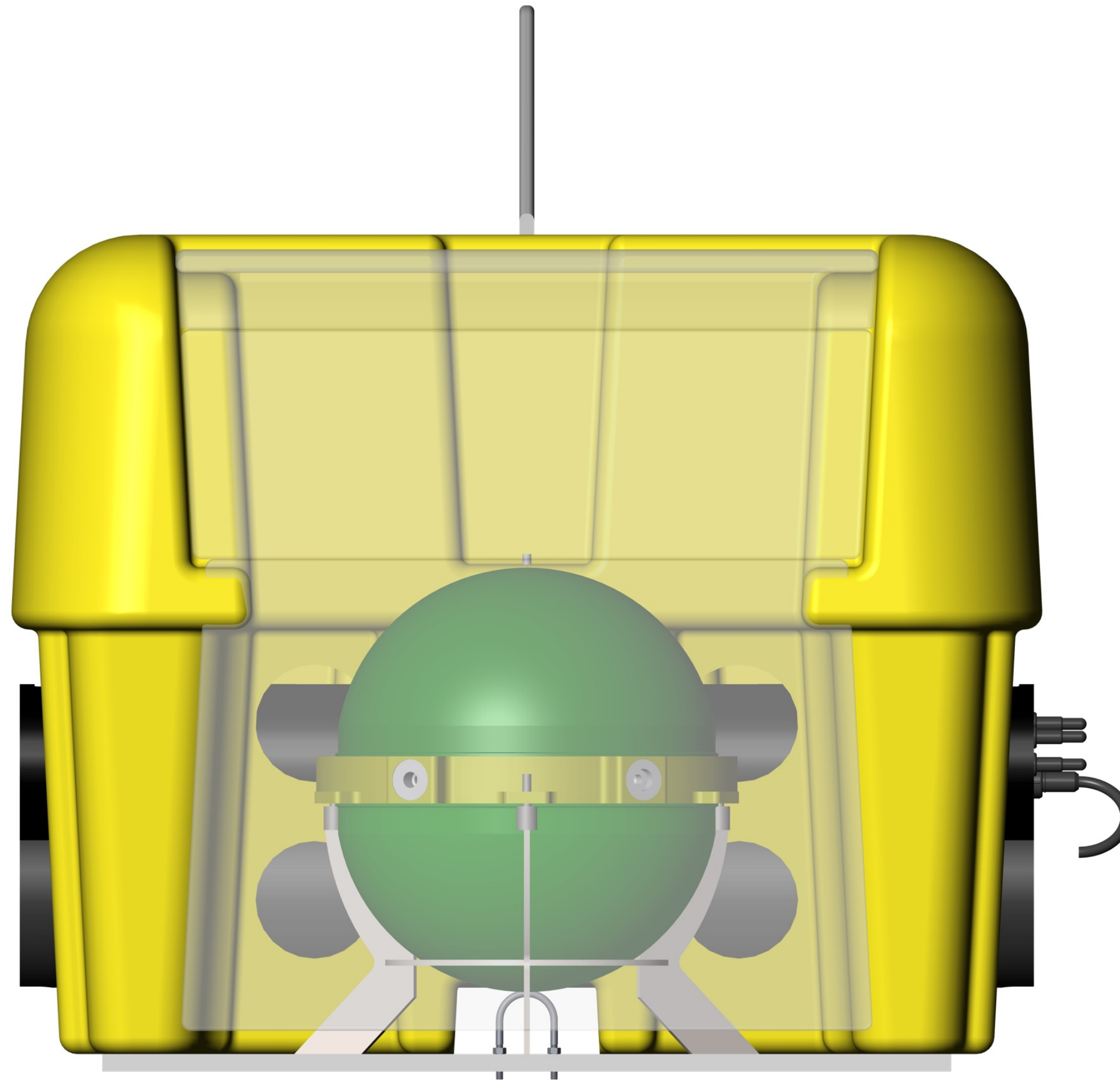
# The Tsunami 'Chirp' - DPG





# OBS Concept Drawing

---













## VBB 360s gimbaled seismometer





---

## An Acoustic GPS system

Deep ocean long range underwater navigation  
Peter Mikhalevsky , et. al., 2020

With a distribution of acoustic sources in the Philippine Sea, UUV's, gliders and floats could be located with an accuracy of 32m.

---



# Nanometrics Marine Seismology

