

OCEAN STATE SENSING

Capability Overview for Science, Engineering & Applied Ocean Research

Ocean State Sensing makes the ocean's hidden structure visible with modular sensing systems for persistent, real-time, high-resolution subsurface observations. Our approach combines rugged, field-proven hardware with flexible deployment options to support scientific research, engineering applications, and operational ocean observing.

MODULAR SYSTEM ARCHITECTURE

A common sensing core. Multiple ways to deploy.



SENSING CORE (PELICAN 1615)
Modular, high-resolution sensing.

SENSING CABLE
Rugged, reusable sensing cable.

DEPLOYMENT PLATFORM
Vessel, autonomous, buoy or existing infrastructure.

THERMOTRAWL WINCH OPTIONS

Three winches for research, working vessels and autonomous platforms.

Standard



Crewed / research vessels

Micro



Smaller / fishing vessels

Nano



Remote operation / small USVs

DEMONSTRATED CAPABILITIES

- **25 cm** spatial resolution
- **~30 sec** sampling
- **Real-time** measurements
- **Reusable** sensing cable

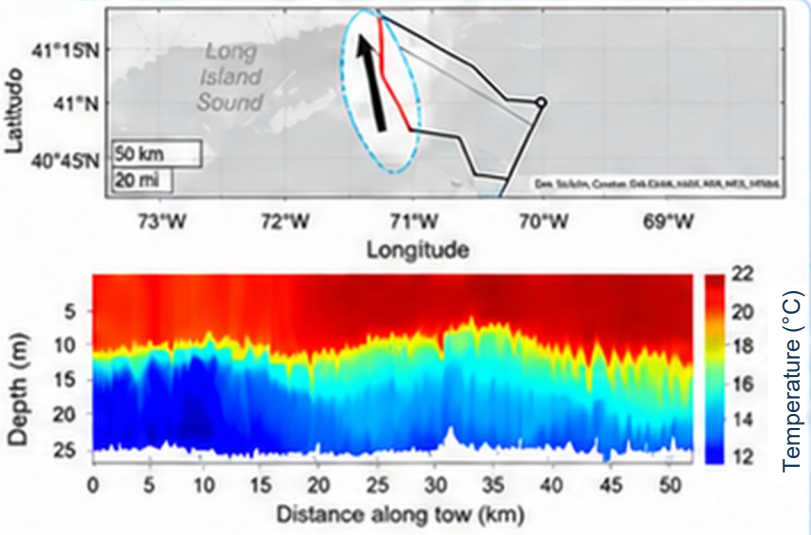
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Measured Data & Research Applications

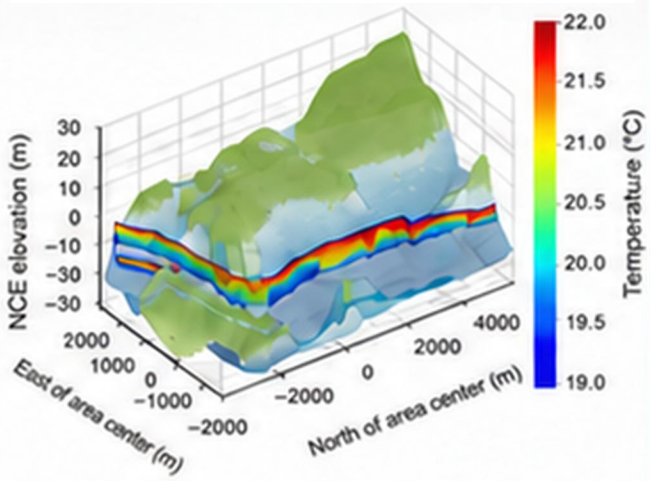
From high-resolution measurements to real-world impact.

EXAMPLE OSS DATA



Narragansett Bay tow example: ship track and full-water-column temperature structure measured continuously along the tow.

3D Curtain Visualization



Temperature measurements can also be visualized in three dimensions with bathymetry and topography for deeper interpretation.

WHAT THE SYSTEM PRODUCES

Vertical temperature profiles

High-resolution profiles through the water column.

Towed temperature sections

Continuous, along-track measurements.

3D curtain visualizations

Temperature in three dimensions with bathymetry to support interpretation.

Bathymetry-linked interpretation

Combine temperature with seafloor topography and context.

Quality-controlled data products

Field-ready data for research, modeling and operations.

RESEARCH & ENGINEERING APPLICATIONS



Subsurface heat structure and coastal ocean context for improved forecasting and model validation.



Temperature-targeted operations and habitat boundaries for sustainable management.



Environmental inputs for tactical oceanography and propagation.



Persistent measurements that complement satellites, CTDs, and models.

INTEGRATION & DEPLOYMENT OPTIONS

System sales & leases

Modular hardware for your missions.

Deployment & integration services

Support for vessel, autonomous and fixed-platform deployments.

Data products & subscriptions

Access to processed data and tailored data products.

Explore our technology and data.

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