

# New Obs. Scotian Shelf

New CODAR Deployment. Offshore Halifax  
Partnership with DRDC Atlantic

Future partnership with IOOS

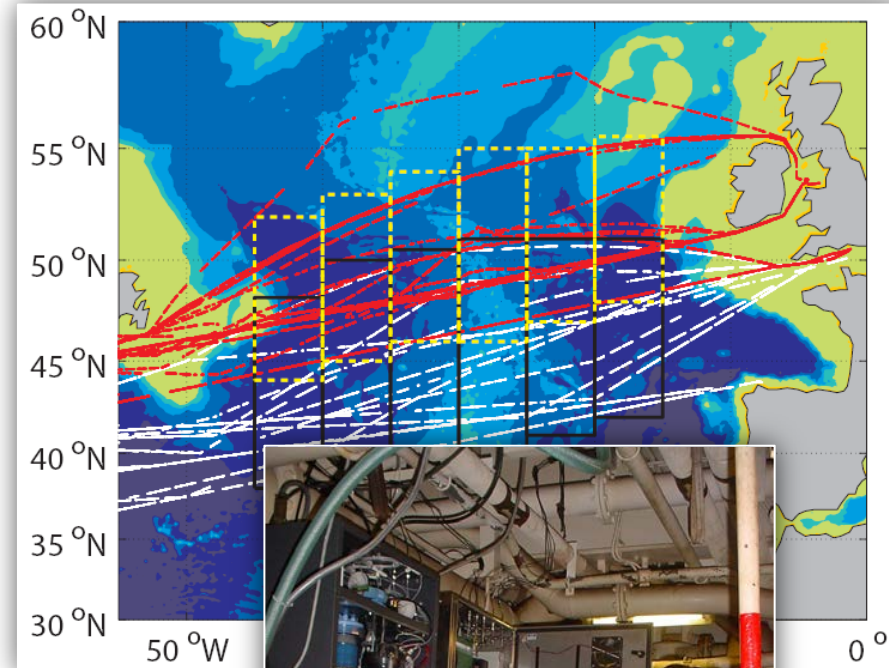
# Commercial “Voluntary Observing Ships”

For Sustained, Frequent Observations of the Surface Ocean

Halifax



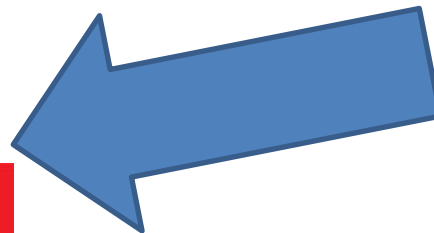
Hamburg



e.g. For measuring air-to-sea CO<sub>2</sub> transfer

Implement unobtrusive, technologies that do not impact vessel operations.

Pro-Oceanus  
Bridgewater, NS



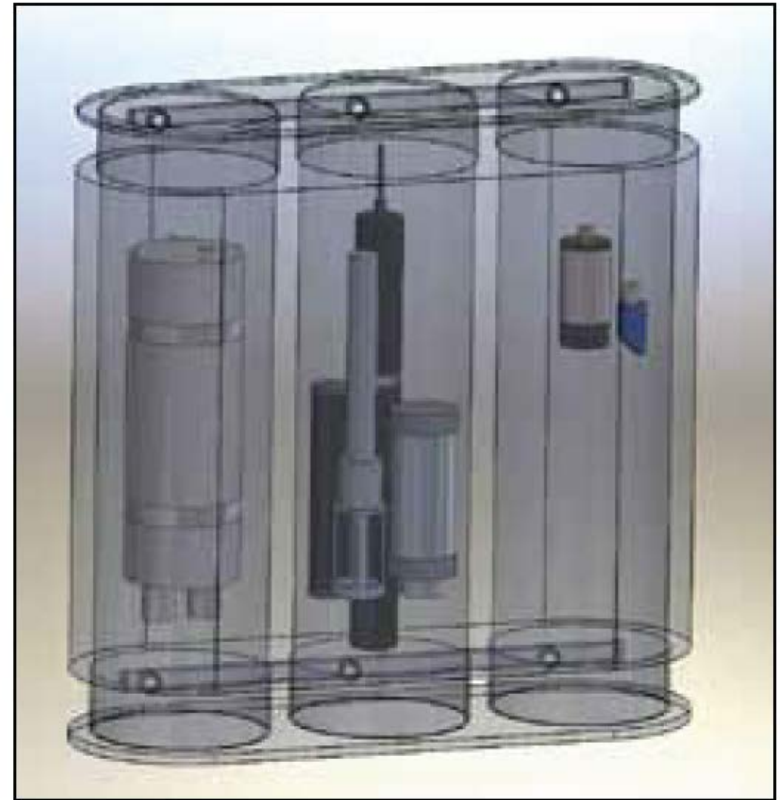
## Development of installations...

On board ACL's Atlantic Companion... with student.  
Measures T, S, CO<sub>2</sub>, chlorophyll, O<sub>2</sub>



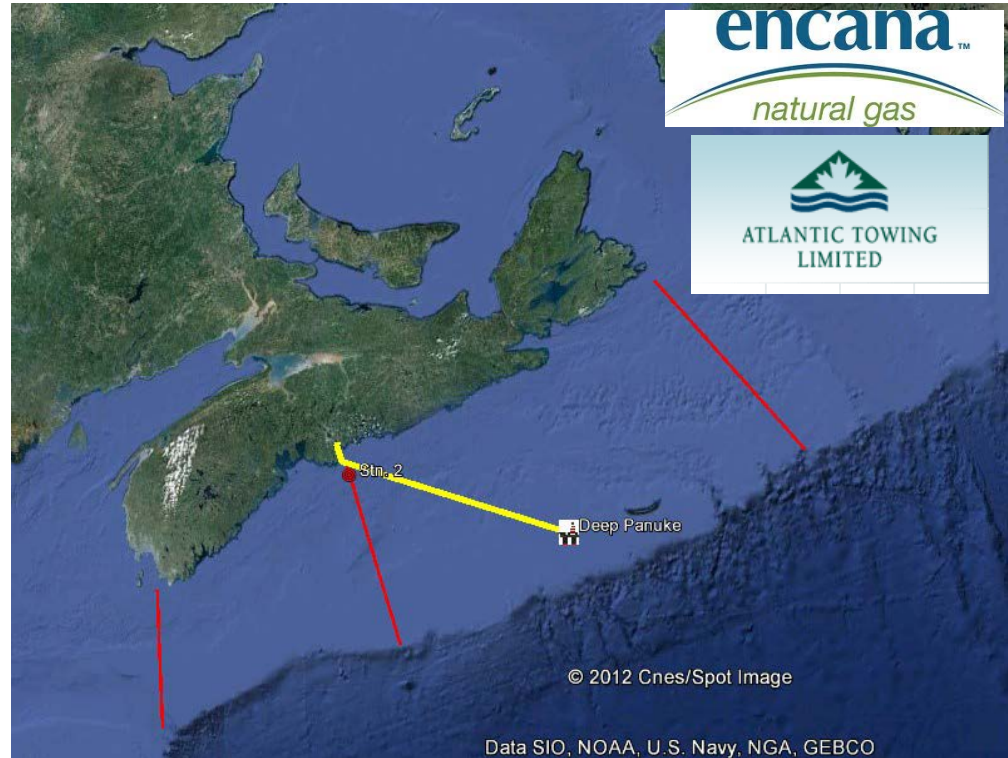
Installations are often complex...  
→ New ship constructions with  
standardized “room for science”?

New sensor-based system under  
development: maybe for Atlantic  
Towing's Atlantic Condor?



Sensors made in Nova Scotia

# Atlantic Condor: A Unique Science Platform?



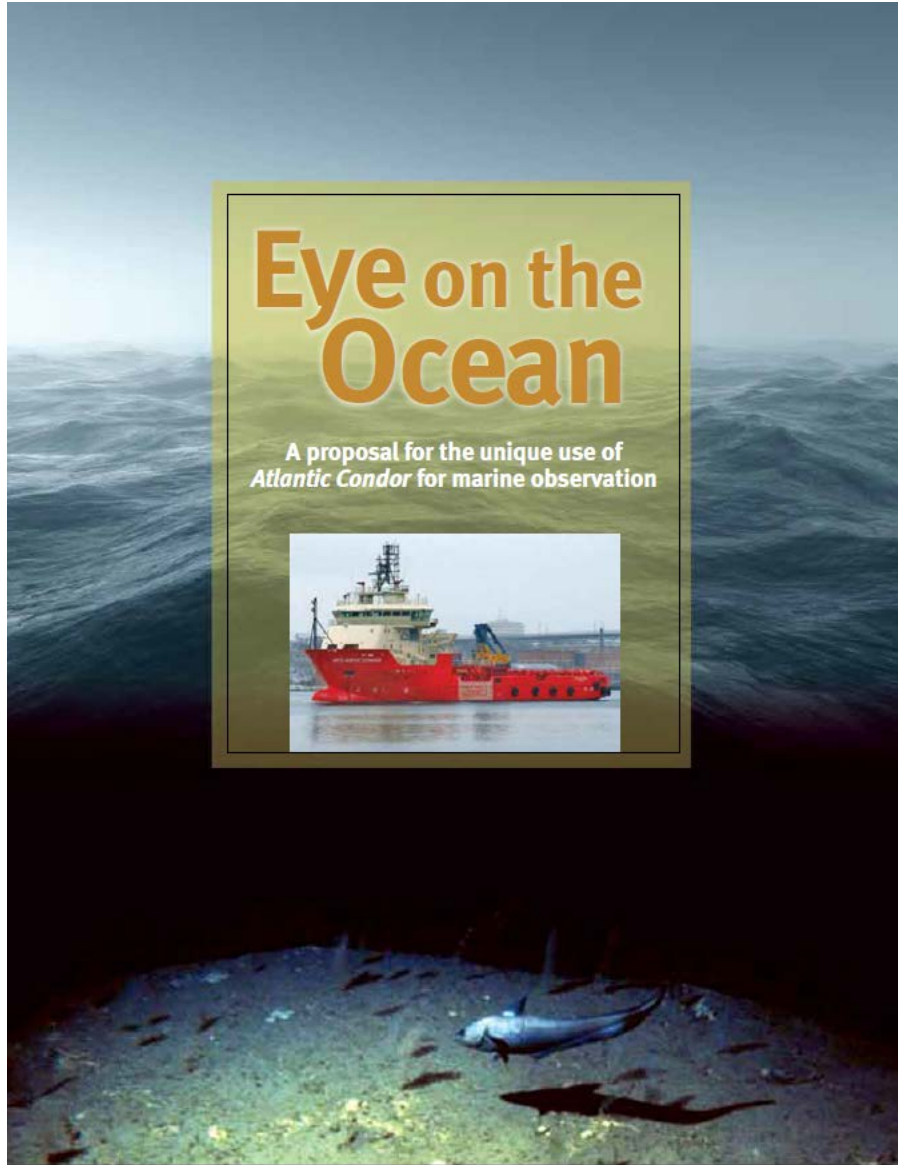
Transit frequency of 1-2 x per week for next 10 years.

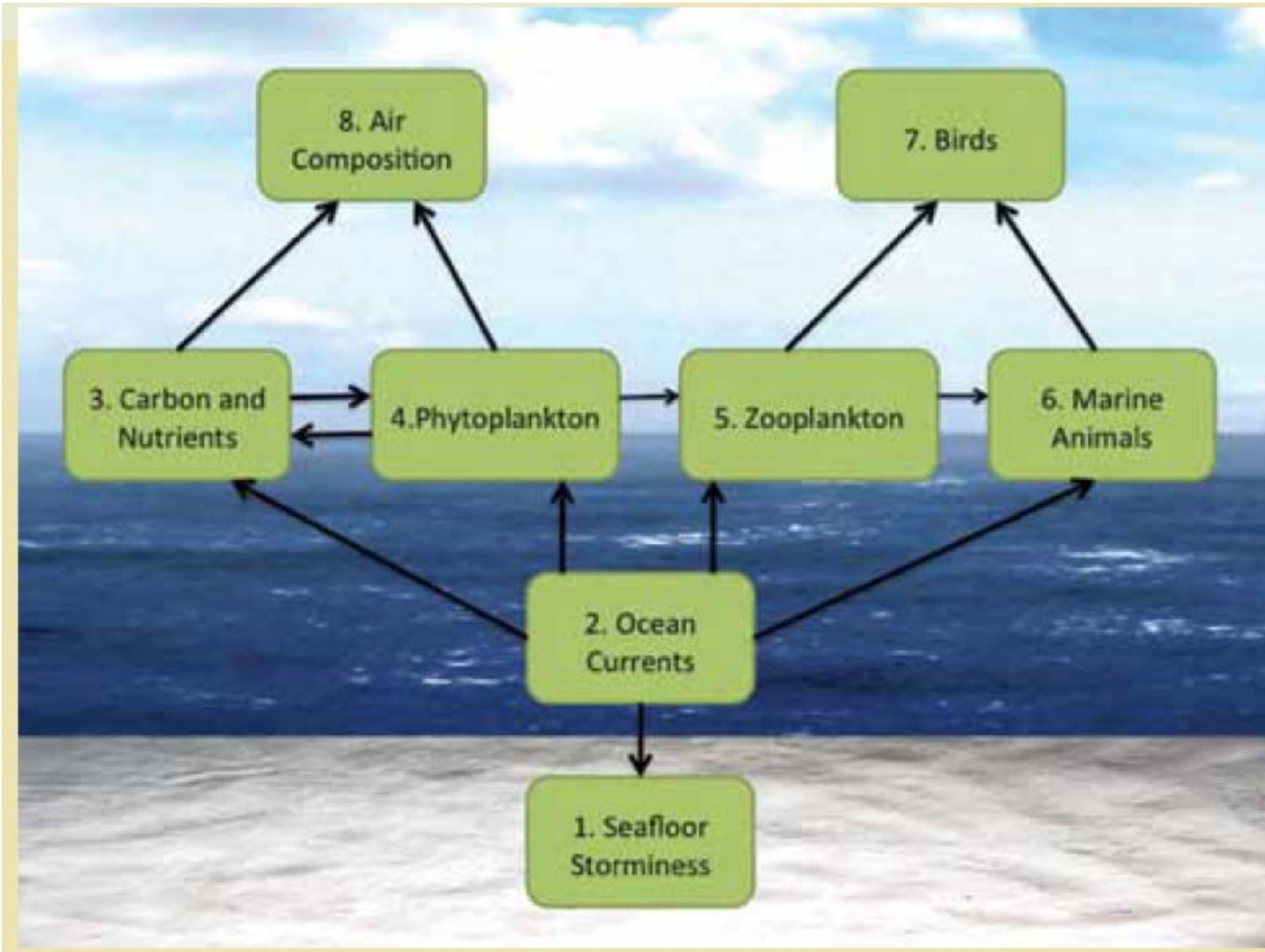
Multi-investigator proposal to install autonomous instrumentation to examine:

Marine ecosystem; Ocean currents; Carbon cycle; Distribution of birds and animals;  
Response of the sea floor to storms; Air quality; equipment testing and development.

# Eye on the Ocean

A proposal for the unique use of  
*Atlantic Condor* for marine observation





## **New met / wave buoy in Halifax Harbour (off Herring Cove)**

Coordinated by Atlantic Pilotage Authority and HMRI

Possible partnership with MEOPAR

Options to upgrade planned AXYS buoy (c. 300K cost)

AXYS Technologies Inc. that could include the following item:

"Sensor, Complete, Nortek Aquadopp Profiler, 600kHz 3D" at a cost of \$19,682.04 (+ taxes of up to 14%).

DO WE WANT IT?

Options for new buoy of St. John, NB (via Partnership Program?)

Links to SmartBay (data serving, etc)

## Potential “Validation” of Relocatable Model

A novel tracer release experiment....

# Autonomous *Surface* Vehicles

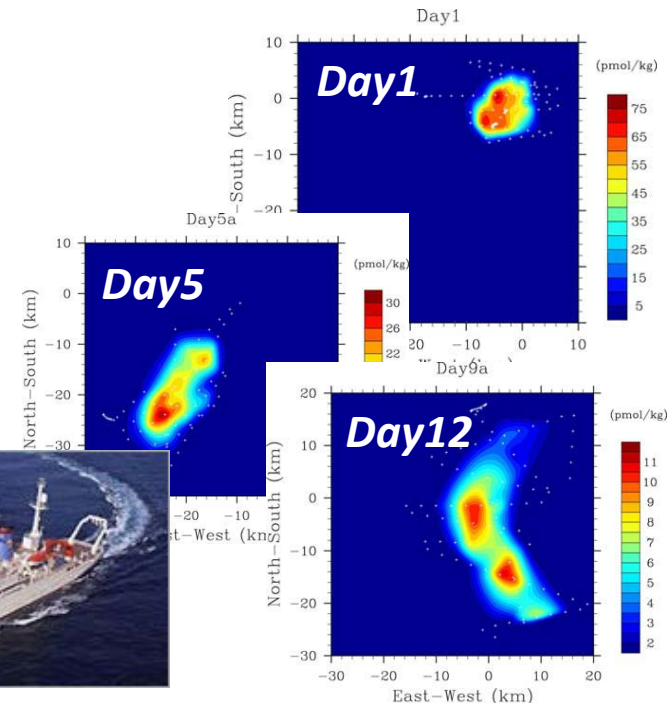
## New Tools for Performing Ocean Experiments



Rapid Environmental Assessments  
Oil Dispersion Experiments  
Models for Search and Rescue

Open-Ocean  
Tracer Experiments

„Fast-GC“ to  
measure  
tracers (e.g.  
 $SF_6$ ) in-situ



# Autonomous *Surface* Vehicles

e.g. for Mine Counter Measures

DEFENCE



DÉFENSE

