Aegean Sea Ferry Box System

Kriti II

In the framework of MFSPP and MFSTEP projects a Ferry Box System I (-4H- JENA engineering GmbH) was installed onboard _Kriti II_, an 192 m ferry covering the 150 n.m route between Piraeus – Heraklion daily . The measured parameters were temperature, salinity, chlorophyll-a and turbidity and were used both for the setup and validation of models as well as for the assimilation in the operational POSEIDON forecasting system. Currently the system has been offline as the ship was directed to different routes before being moved to a shipyard for maintenance and reconstruction work.

Pireaus- Heraklion 150 n.m

ALBANIA · GREECE · TURKEY · Istanbul · Kavala · Thessaloniki · Sea of Marmara · Limnos · Volos · Lesvos · Izmir · Ionian Sea · Aegean Sea · Chios · Patra · Athens · Naxos · Kos · Rhodes · Sea of Crete · Heraklion · Crete · Mediterranean Sea

NORTH
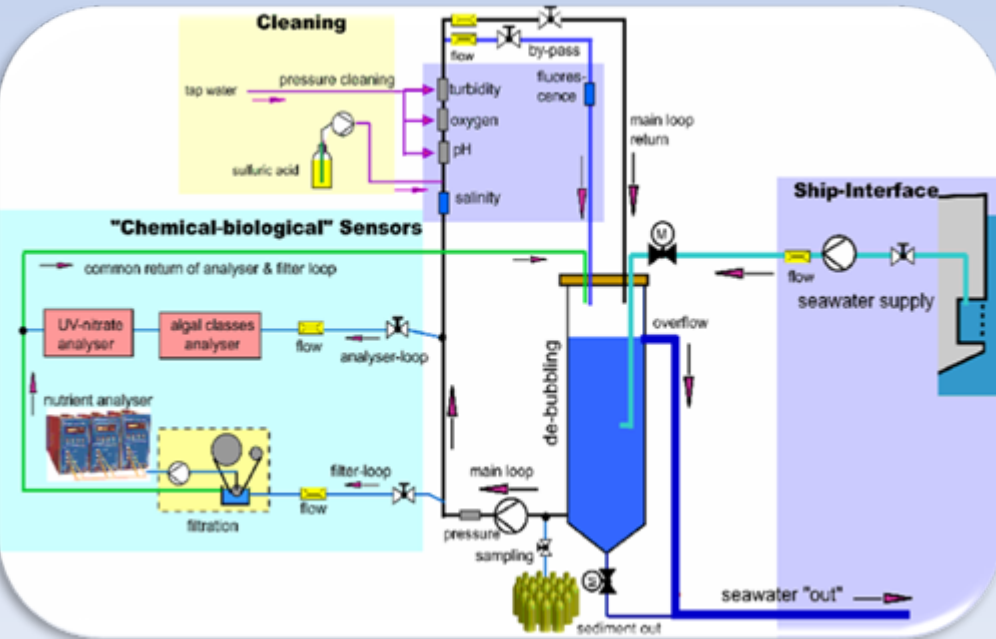0   50   100   200
Kilometres

Ferry Box I (-4H- JENA engineering GmbH) main unit.

Positioning : GARMIN "Mouse" GPS-35
Communication: GSM Modem Siemens MC35.
Installed on ships mast.

Ferry Box System schematic diagram with installed and optional sensors.

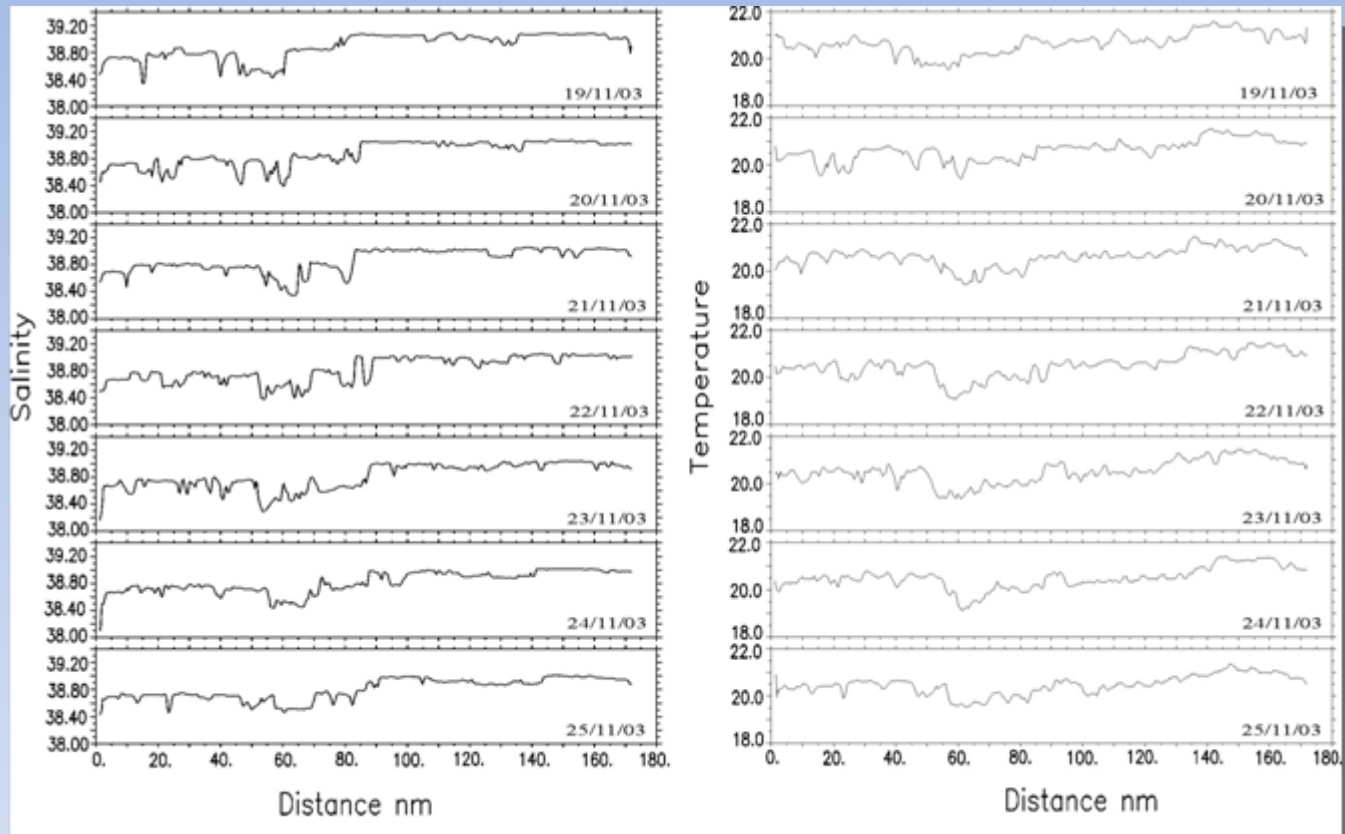# Sensors and Measured Parameters.

Thermo Salinometer FSI (USA)

Scufa II Turner Design (USA)

	Temperature (C)	Salinity (psu)		Turbidity (NTU)	Chlorophyll-a (µg/l)
Range:	-3 to 45	2 to 42	Range:	0 to 50	0 to 200
Accuracy:	0.01	0.02	Resolution:	0.05	0.02
Resolution:	0.0001	0.0001			

Salinity and temperature space-series records from 19/11/2003 through 25/11/2003.

CHLOROPHYL-A FLUORESCENCE (mikro grams / l)

Time (Yeardays)
Nov/2003 to Oct/2004
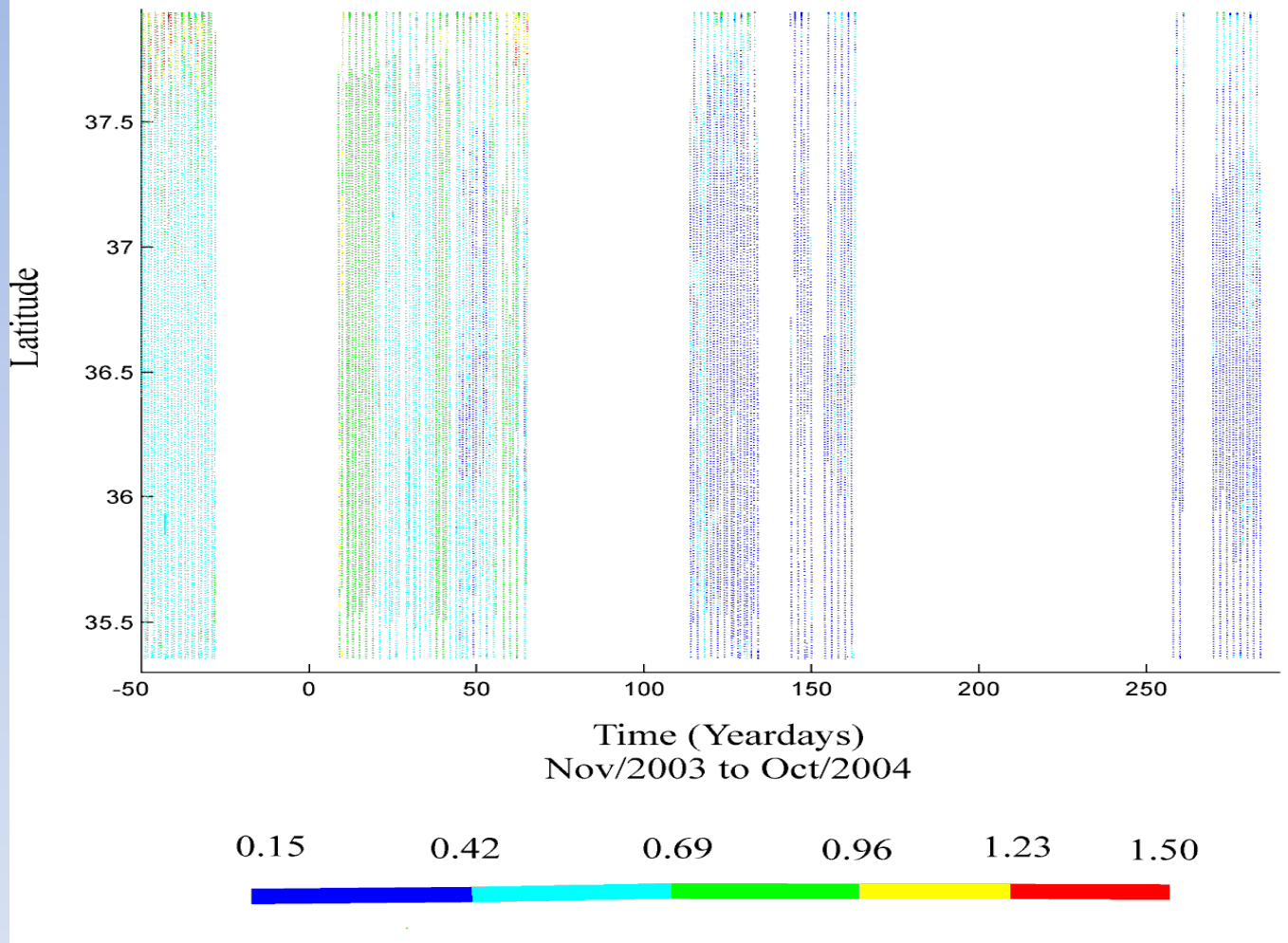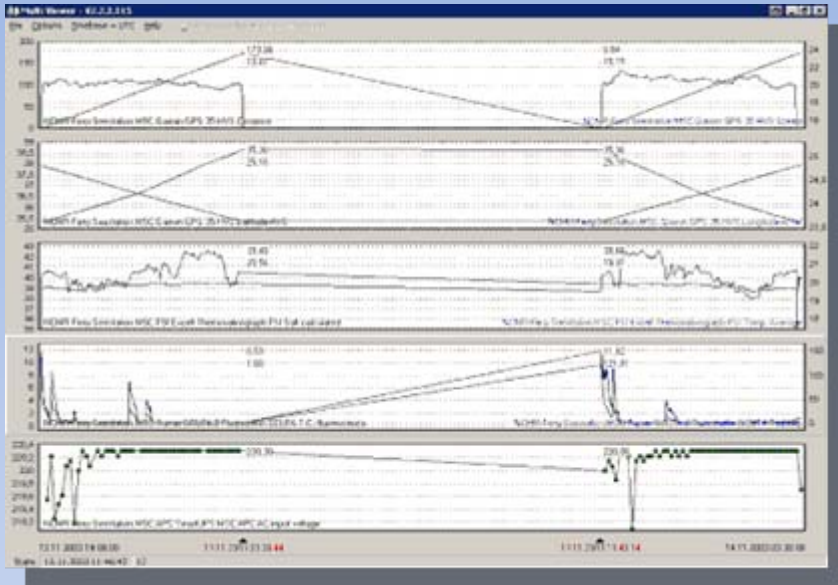
Screenshot of Ferry Box data interface.

Data Management

The POSEIDON operational center receives, processes and analyzes all the data on an operational basis. These data, which are archived and utilized for forecast and research purposes need management, which means efficient storage, cleaning (pre-data mining process), and availability in-source for the production of forecasts and other scientific issues and outsource (other institutes, web generally).

The Future

After discussions with the ferry boat company operating the particular route the existing Ferry Box will be installed in the *Olympic Champion*, a modern 203 m High Speed Ferry. Furthermore there will be a significant upgrade on the existing parts (pc and software, telemetry) and sensors (dissolved oxygen, ph, CO_2).

Olympic Champion