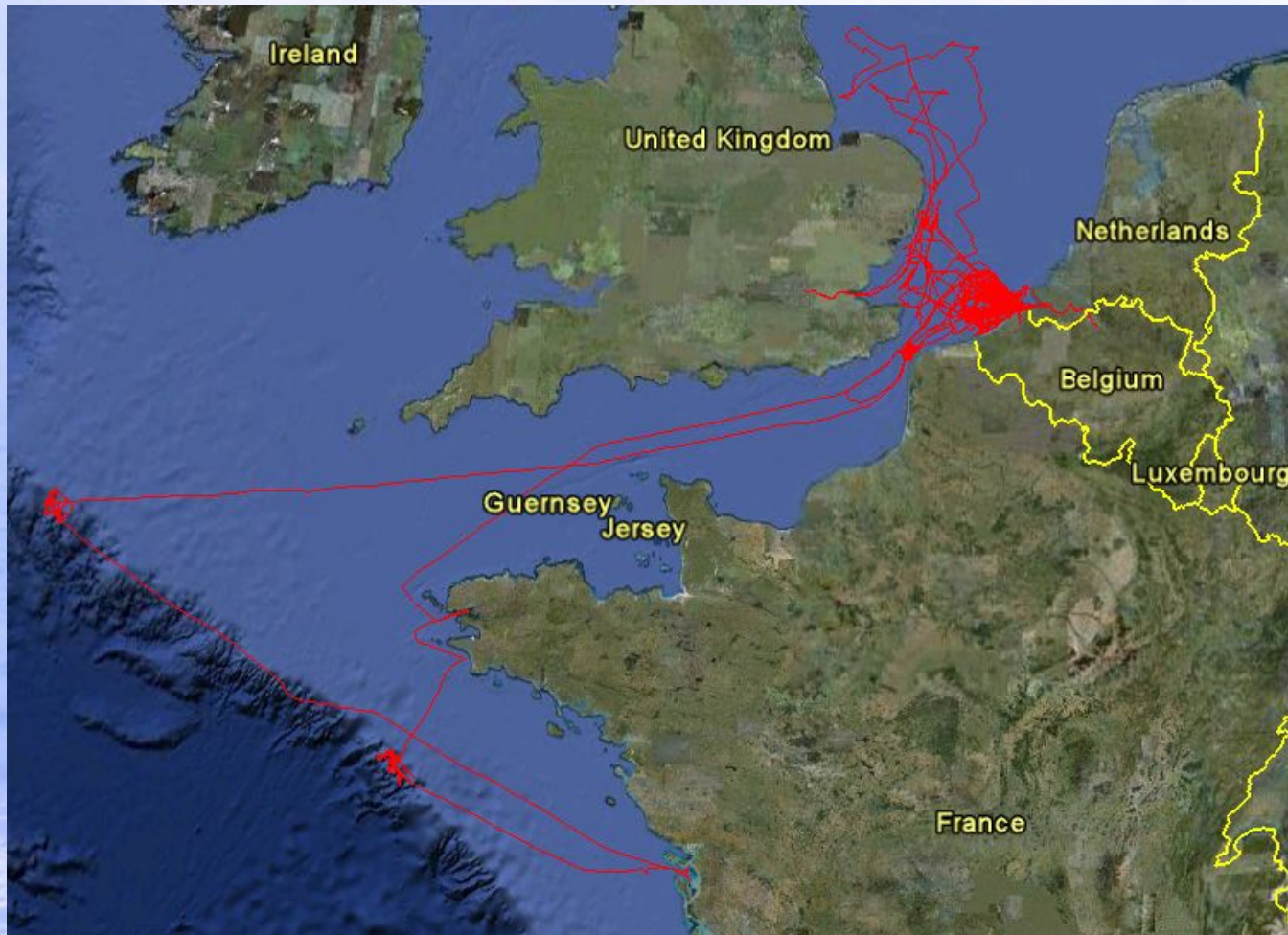


AUMS project RV Belgica

MUMM has installed a autonomous underway measurement system or “Ferrybox” on board the RV Belgica

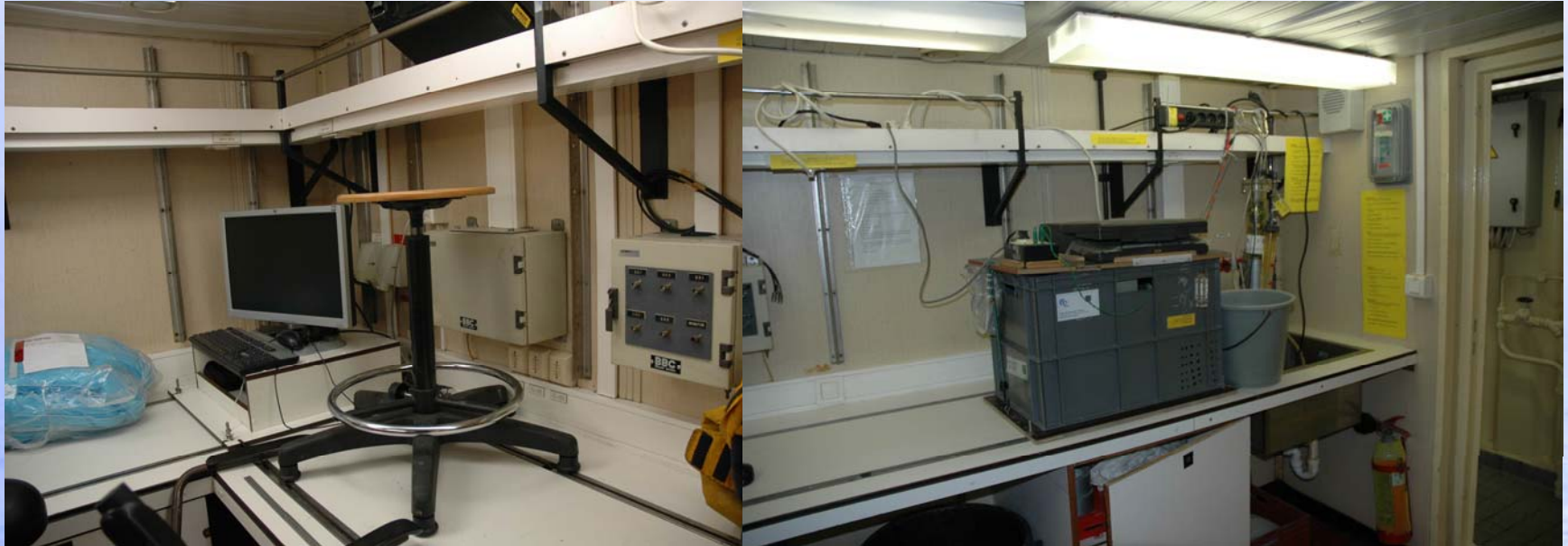


Ship Track in 2010



Aquisition

- Call for tenders 2010
- SubCtech GmbH obtained the contract
- Installation February 2011
- HAT and SAT February-May 2011
- Operational May/June 2011



The biology lab, end last year (2010).



The lab has been prepared for installation of the AUMS (January 2011).



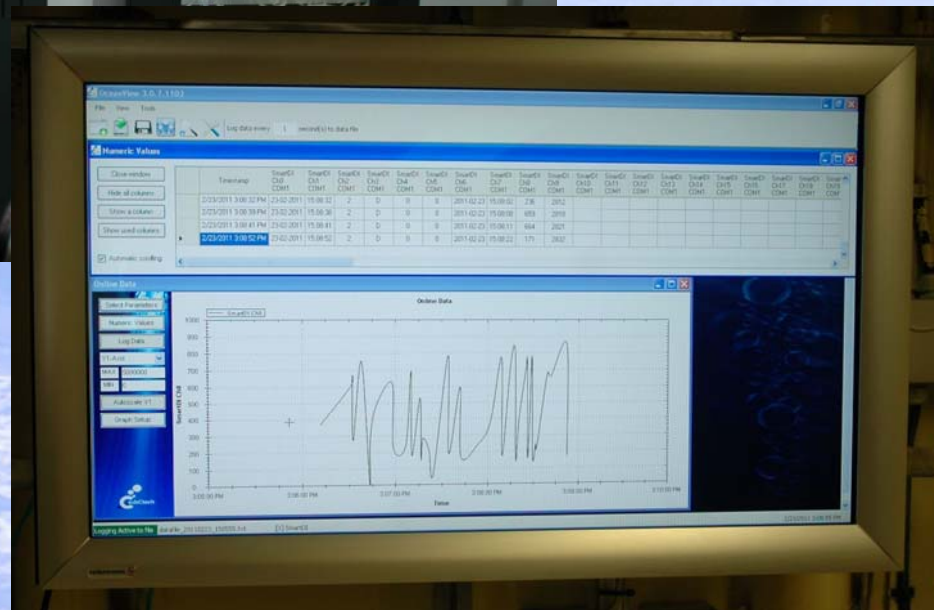
The AUMS hardware arrived on board on 21 February 2011.

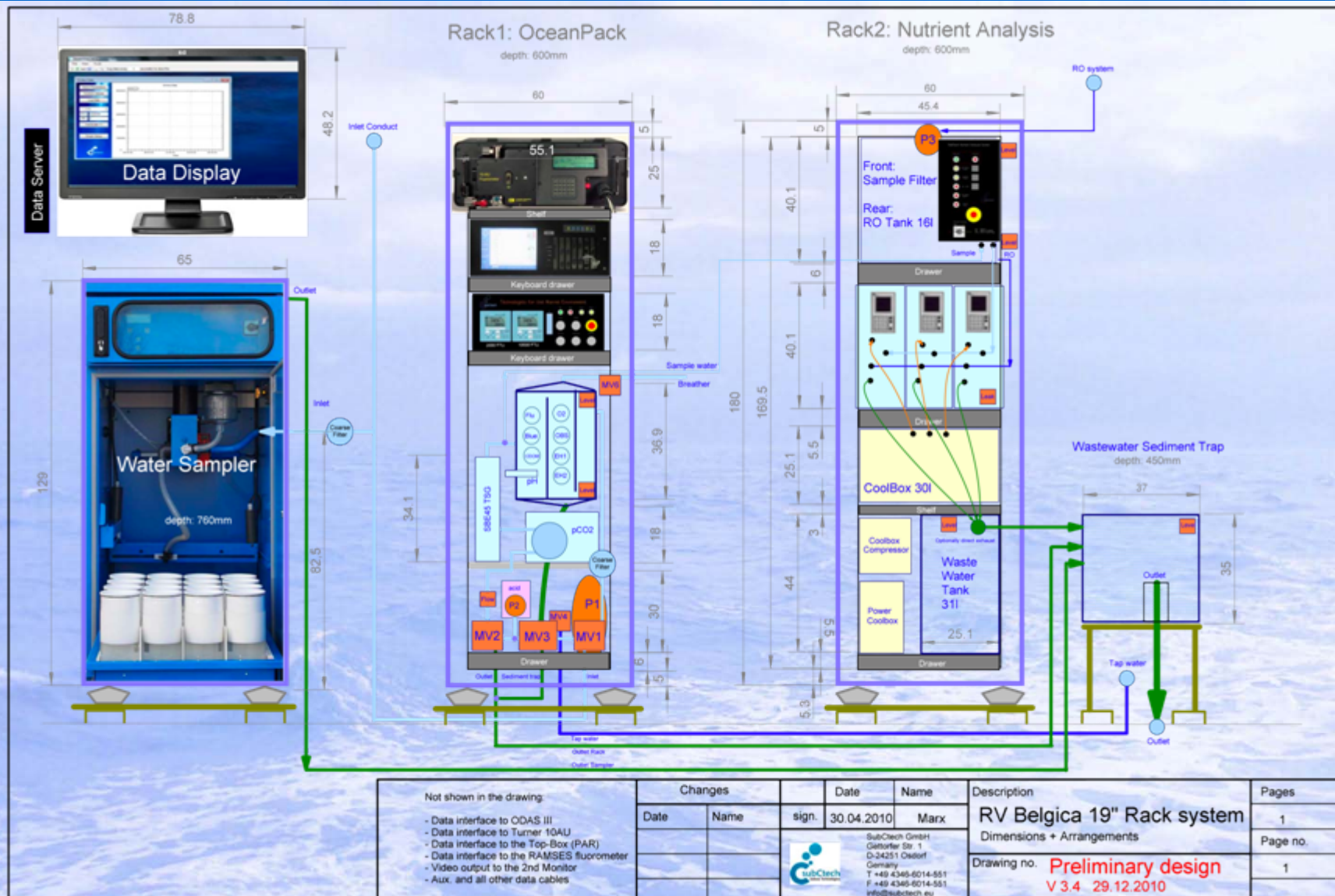


24 hours later



Another 24 hours later.



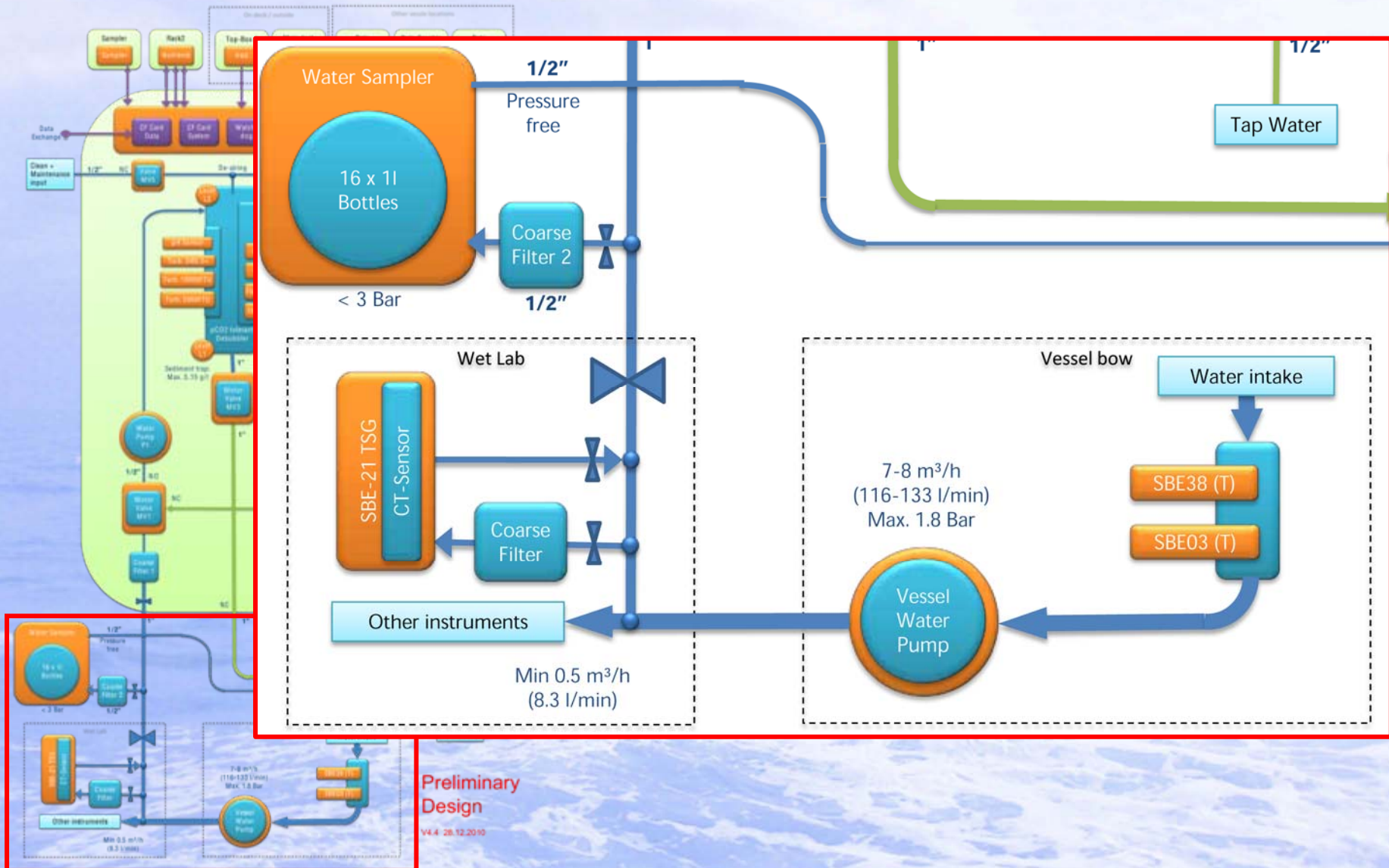


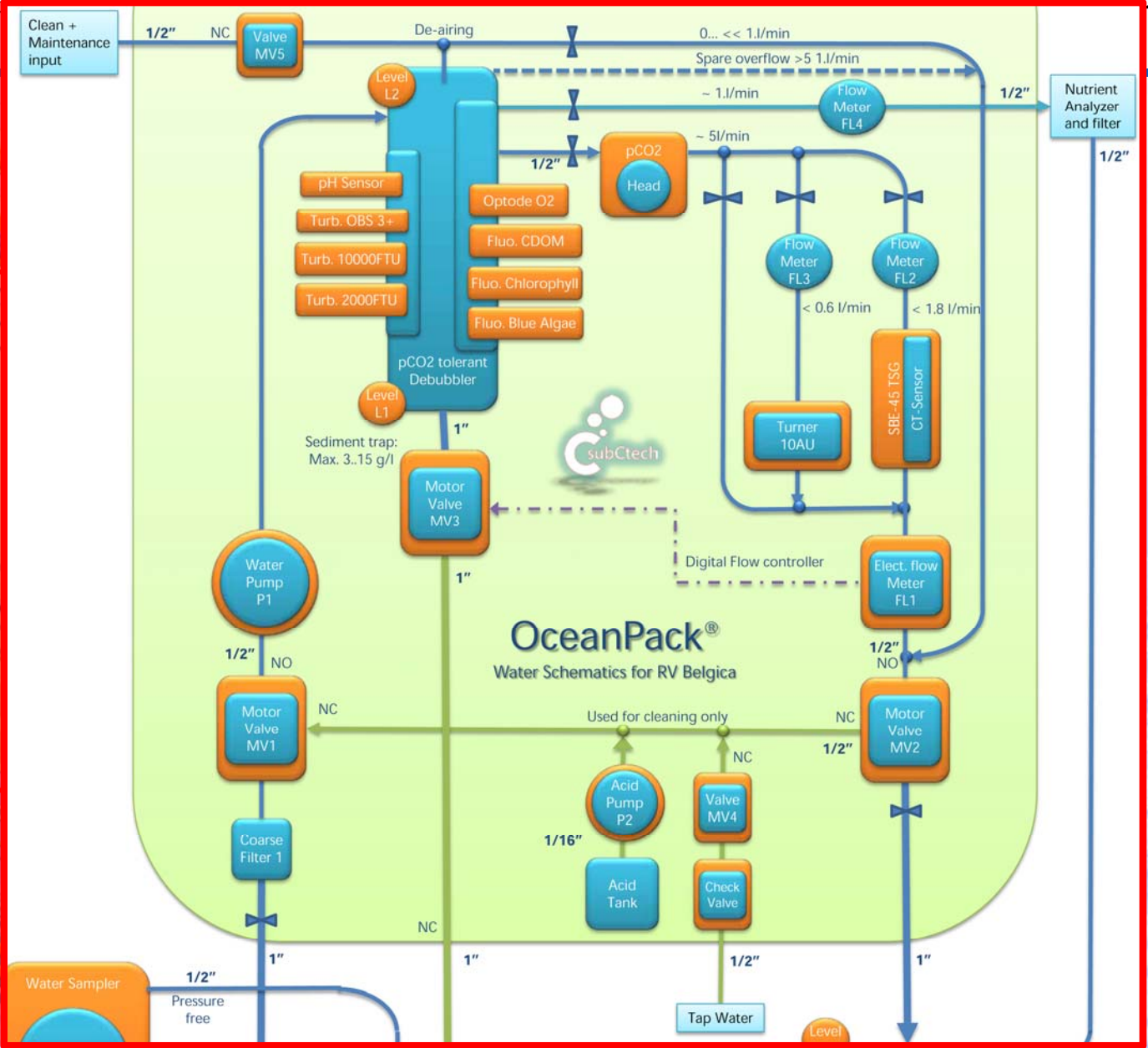
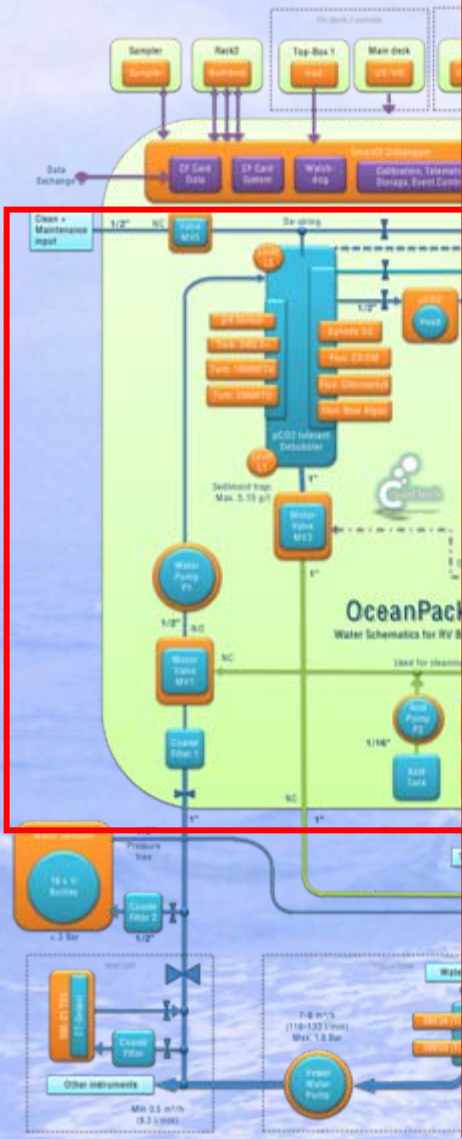
Not shown in the drawing:

- Data interface to ODAS III
- Data interface to Turner 10AU
- Data interface to the Top-Box (PAR)
- Data interface to the RAMSES fluorometer
- Video output to the 2nd Monitor
- Aux. and all other data cables

Changes		Date	Name	Description	Pages
Date	Name	sign.	30.04.2010	Marx	1
 SubTech GmbH Gettorfer Str. 1 D-34251 Osdorf Germany T +49 4346-6014-551 F +49 4346-6014-551 info@subtech.eu					Page no.
Drawing no. Preliminary design V 3.4 29.12.2010					1

Parameter	Brand	Model	Range	Time interval
Turbidity	Endress + Hauser	2 *	0 - 2000 FTU	1 s
		CUS 41	0 - 10000 FTU	1 s
Turbidity	Campbell	OBS3+	0 - 4000 FTU	1 s
Oxygen	Aanderaa	3835 optode	0 - 30 mg/l	2 s
pH	Meinsberg	AGA 140	0 - 12 pH	1 s
Chlorophyll	Trios	MicroFlu-chl	0 - 100 µg/l	1 s
Blue Algae	Trios	MicroFlu-blue	0 - 100 µg/l	1 s
CDOM	Trios	MicroFlu-CDOM	0 - 200 µg/l	1 s
Salinity	Sea-Bird	SBE45	0 - 40 PSU	1 s
pCO2	SubCtech	MK2	0 - 20000 µAtm	1 s
Fluorescence	Turner Designs	10AU	0 - 500	1 s
PAR	Li-Cor	LI-190	0 - 2000 Watt/m2	1 s
Hyperspectral irradiance	Trios	ACC-VIS	320 - 950 nm	8 s
NO3, NH3, PO4, SiO2, NO2	Systea	3 * MicroMac1000	0 - 500 ppb 0 - 8000 ppb 0 - 150 ppb	20 min. *





Some special features of the AUMS:

- Anti-flooding system with leak detection and alarm unit,
- Programmable periodic cleaning cycle,
- Auto shutdown system including full cleaning cycle (harbour approach),
- Position controlled seawater sampling (16 1l bottles),



ODASIII

Navigation



- The oceanographic data acquisition system ODASIII collects, processes, stores navigational, oceanographic, meteorological and hydrographical data.
- The data can be displayed in real-time or off-line at different client stations all over the vessel.

Meteorology



Oceanography



Multibeam



OceanPack sensors



Data collection, processing
and distribution
HP rx2660 UNIX workstation

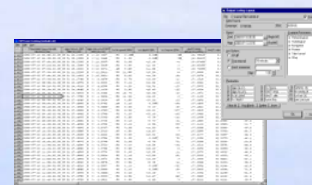
- The R/V BELGICA is equipped with a Kongsberg-Simrad EM1002 and a EM3002D multibeam echo sounder

Multibeam data processing
and storage workstations

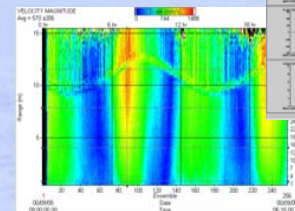
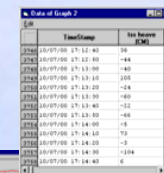
+ OceanPack + watersampler



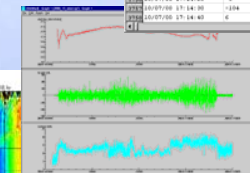
Presentation



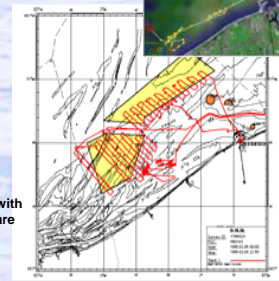
ODASIII listing



ADCP data processed with RDI software

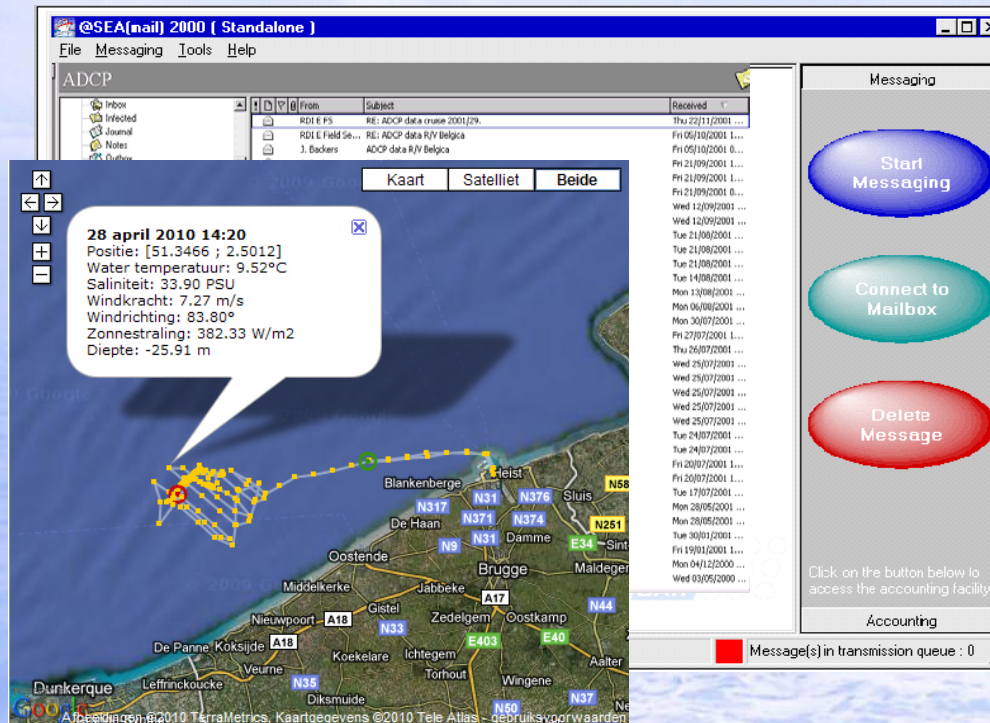


Multibeam data processed with Neptune and C-floor software

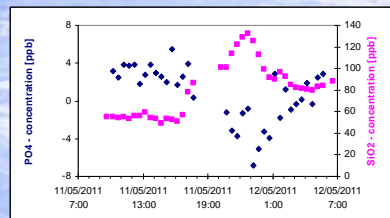
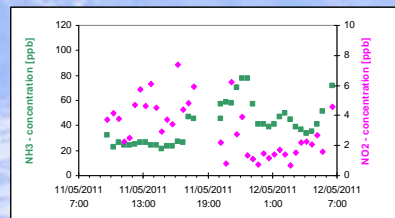
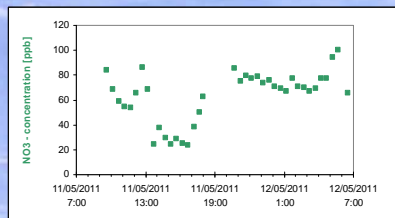
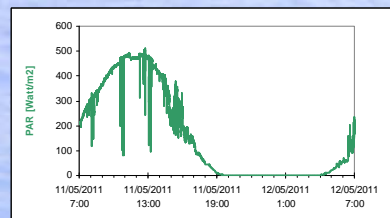
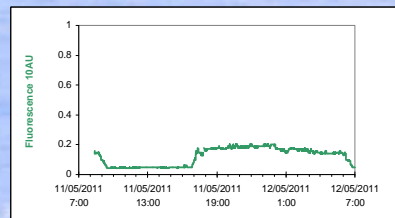
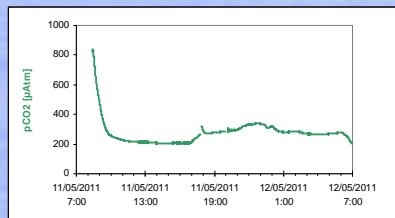
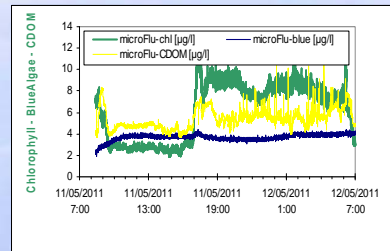
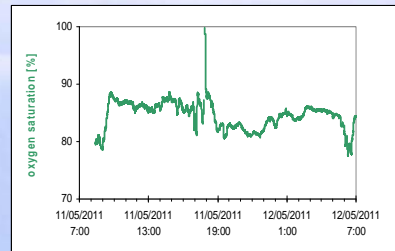
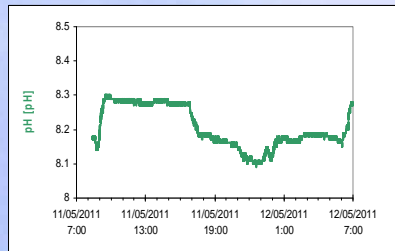
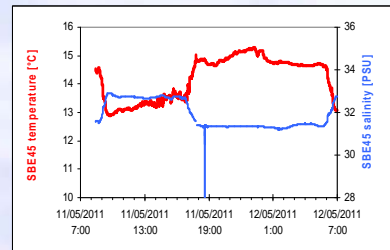
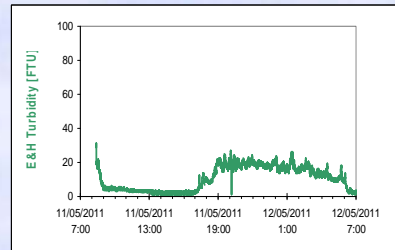
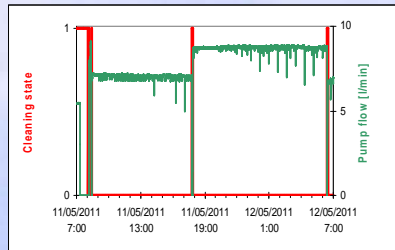


ODASIII track plot

Communication with the world by satellite/GPRS



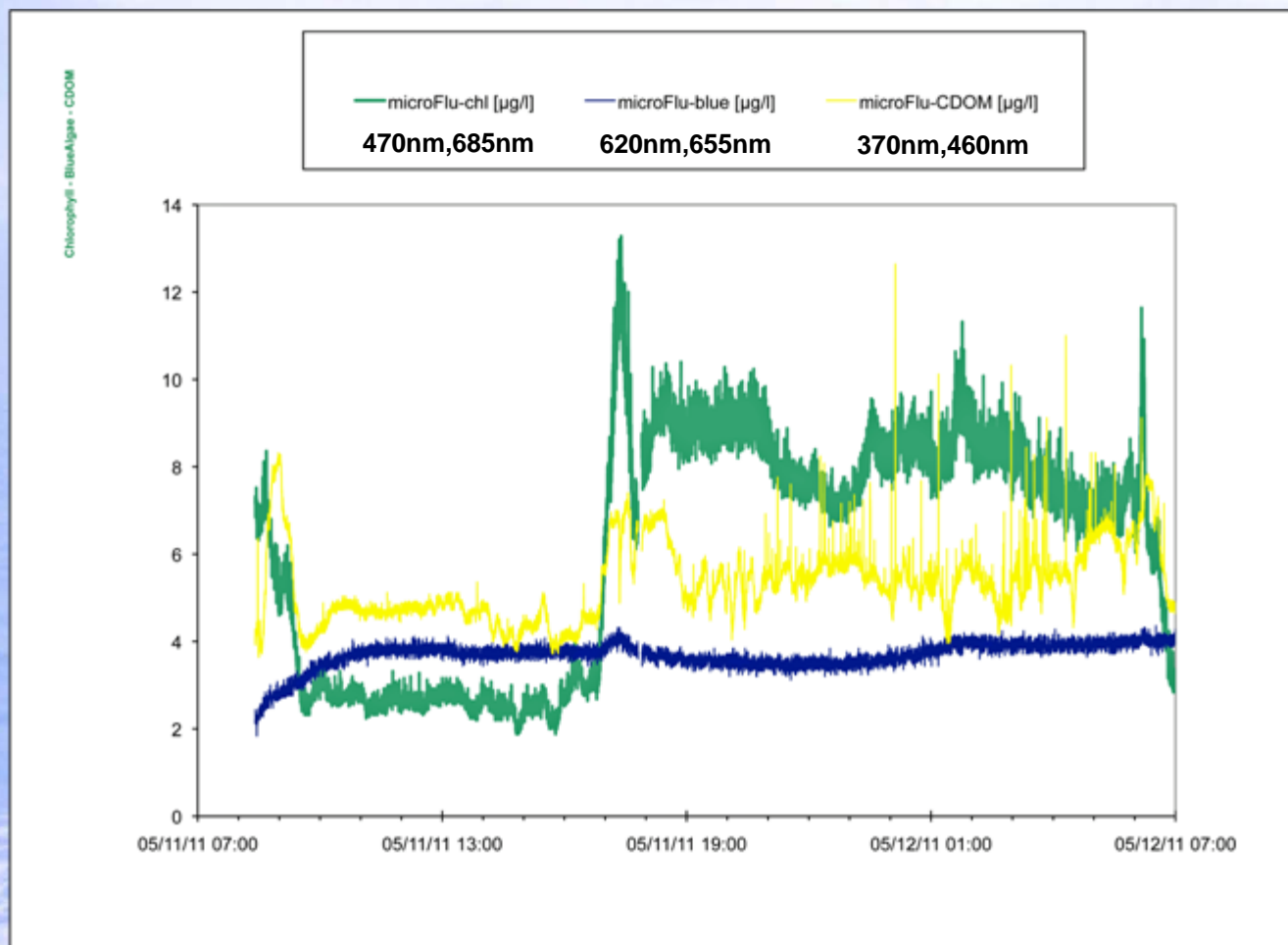
Data are sent daily by e-mail to shore for control . The daily tracks can be found on our website <http://www.mumm.ac.be>



AUMS data

from 11 May 2011
07h00 till 12 May
07h00.

Fluorescence data



Unresolved issues

