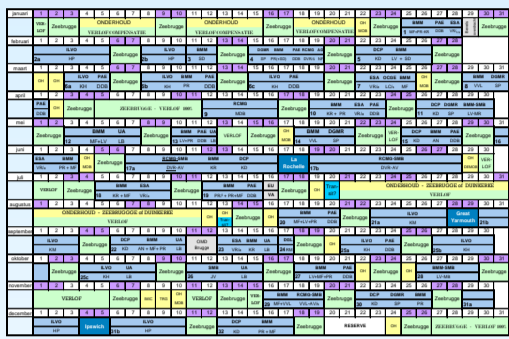
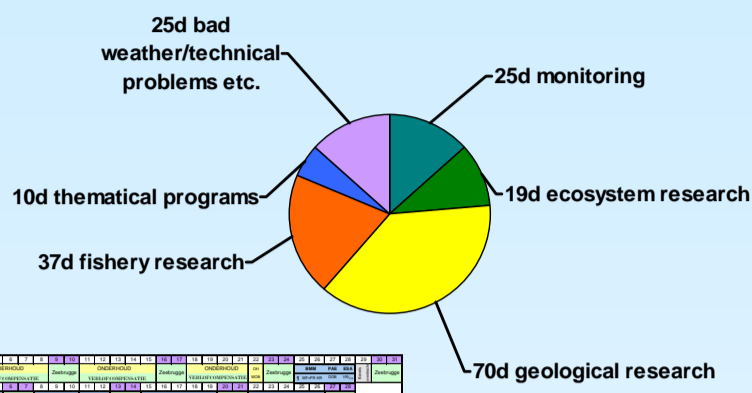


RV BELGICA ACTIVITY 2010

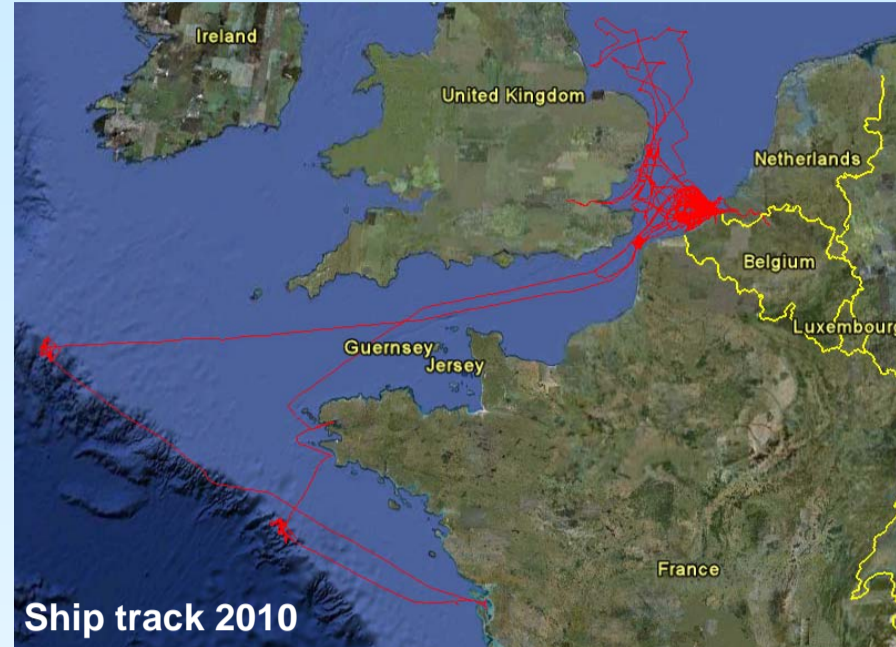


1. General

Belgica 2010: Evaluation 186 planned days



Program 2010



Ship track 2010

sailed distance 2010: 14 700 nm



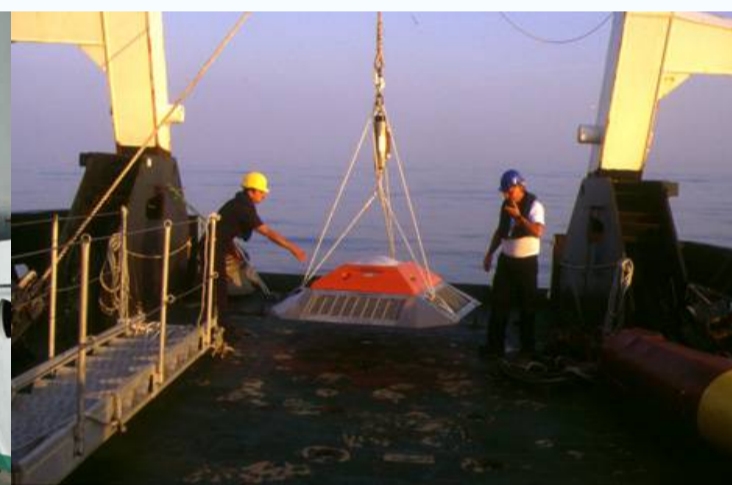
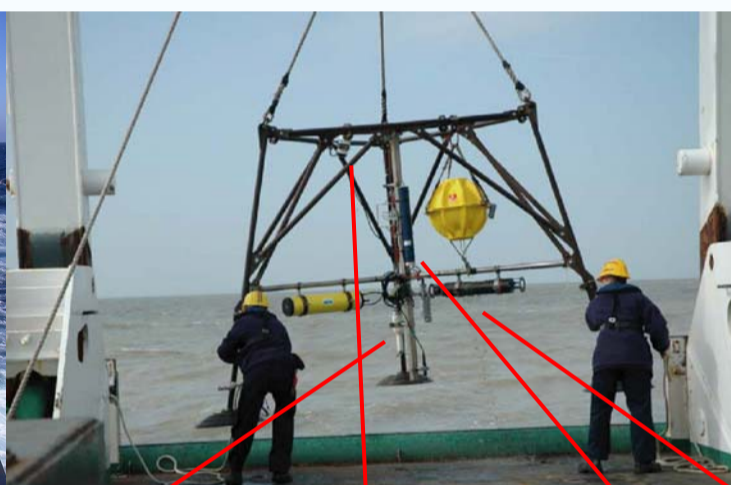
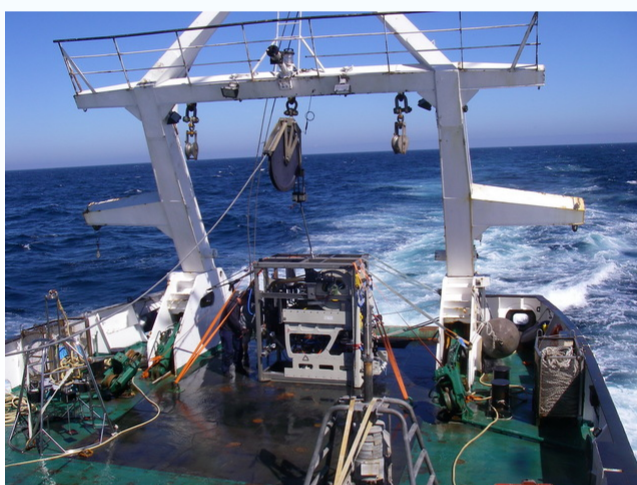
length: 50.9 m beam: 10.0 m draught: 4.6 m
operated since 1984

2. Special instrumentation

Seafloor ecosystems
sub-Atlantic ROV "Genesis"
Ghent University

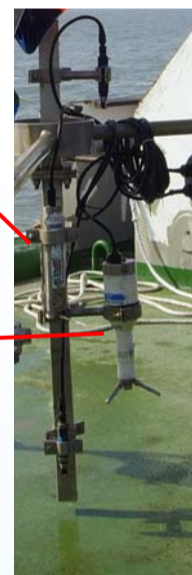
Monitoring of sediment transport
Multi-sensor tripod
Current profiler (ADCP)
MUMM

Object detection and classification
IXSEA shadows Sonar (SASS)
Belgian Navy



MOBILE SYSTEM

Physical parameters
conductivity, temperature, depth
(SBE CTD)



3D current velocity measurements
(Sontek ADV)



current velocity profiling
(Sontek ADP)



Passive acoustic monitoring
sea mammal detection
(Chelonia C-PoD)



Suspended sediment distribution
Laser particle sensing
(Sequoia LISST)



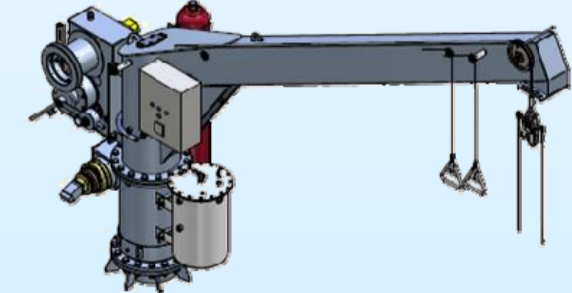
Object detection and classification
Underwater navigation (IXSEA GAPS)
Multibeam bathymetry (SIMRAD EM 3002D)
Belgian Navy

3. Ship: maintenance & innovation

New paint system:
antifouling hydrogel technology

new hydraulic slewing davit & RHIB

Hempasil X3



PROBLEMS:

- water intrusion (propeller nozzle to hull)
- heavy fouling on hull-mounted sensors

4. Actual and future challenges

Underway measurement system

Automatic position-controlled water sampler

Ocean Pack data acquisition system & Physical, biological and chemical properties
Temperature, conductivity, salinity, dissolved oxygen, pH, turbidity, chlorophyll, algae classes, fluorescence, dissolved organic matter, pCO2



RV Belgica II

Nutrient analyzers (Systea): nitrate, nitric oxide, ammonia, phosphate, silica

Waste water and sediment tank

<http://www.mumm.ac.be/>