Participation of SYKE/Alg@line in European projects

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Alg@line Highlights

1991: the first recordings on-route Helsinki-Tallinn with Georg Ots

1992: the system installed on-board Finnjet

1993: the "official" launch of Alg@line

1997: Finnish-Estonian operative monitoring system of the state of the Gulf of Finland

> Finnish Institute of Marine Research

> Estonian Marine Institute

> Uusimaa Regional Environment Centre

> City of Helsinki Environment Centre

2003-2005 : Ferrybox EU project

2005- current: ESA/MarCoast baseline service

2008: Cooperation with SMHI for Oulu-Göteborg route

2009: MyOcean In Situ Tematic Center

2011: Aquamar, CoBiOS, JERICO

http://BalticSeaPortal.fi -> Algaline

Print: 🖳 Text size: ⊕ ⊖

The Baltic Sea Portal

Sear

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| Frontpage | Baltic Sea Now | **Baltic Sea Information** | Research | Services | Publications | New and current |

Portal » Baltic Sea Information » Algaline

These pages will be updated with the renewal of the service in 2009.

» General information
» Water movements
» Ice conditions
» Open sea
» Sea bottom
» Eutrophication
» Harmful substances
» Invasive species
» Reports on the state of the Baltic Sea
» Helcom monitoring +
» Algaline -
  » Newest measurements
  » Time series
  » Species reports
  » Data archive
» State of the Baltic Sea News
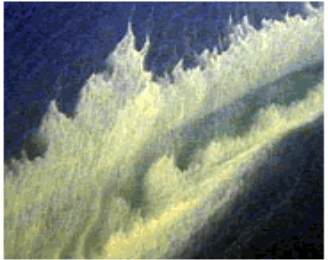
Tämä sivu suomeksi
Denna sida på svenska

Alg@line is a forerunner in the field of monitoring research

Algaline monitors the fluctuations in the Baltic Sea ecosystem in real-time using several approaches. It combines studies onboard research vessels with high-frequency automated sampling onboard several merchant ships, satellite imagery, buoy recordings and traditional sampling in coastal waters.

Results of the Algaline project

- Newest measurements
- Time series
- Species reports
- Data archive

updated 7.5.2008

Related topics

» Algaline method description
» Algae information

See also

» Eutrophication at the Baltic Sea
» Studies of eutrophication
» State of the Baltic Sea

Baltic Sea Now

» Cyanobacterial biomass forecast

Portal information   Contact information   Feedback

YMPÄRISTÖMINISTERIÖ
MILJÖMINISTERIET
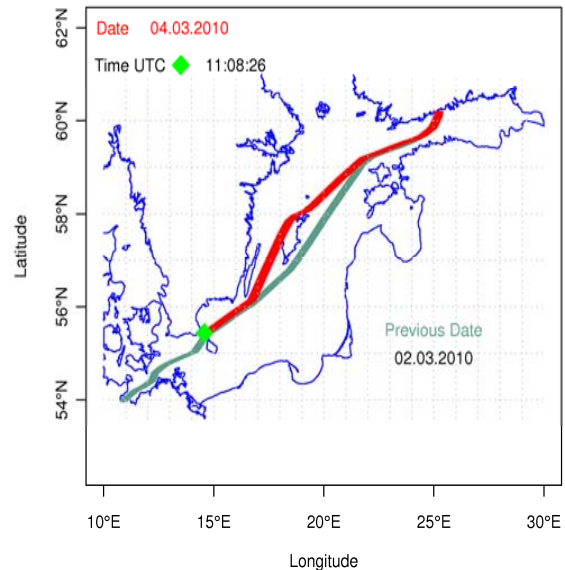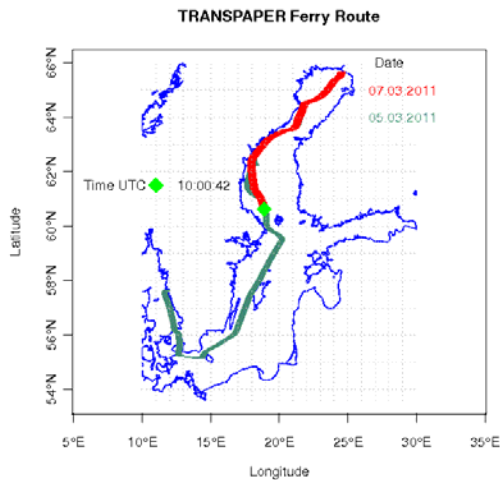MINISTRY OF THE ENVIRONMENT

SYKE

FINNISH METEOROLOGICAL INSTITUTE
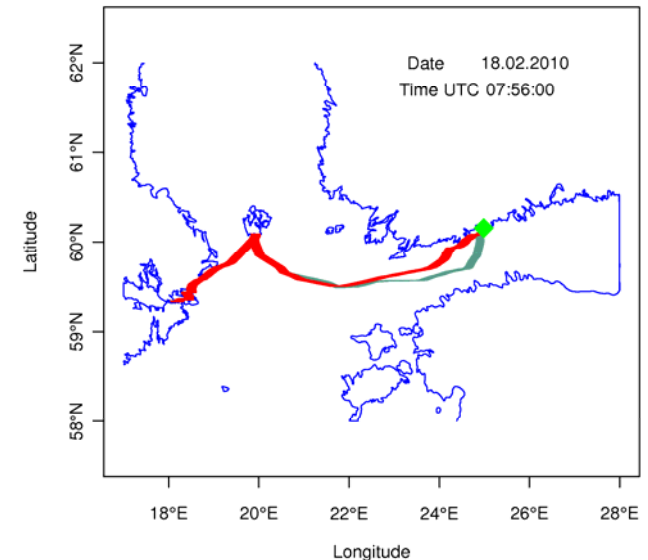
Near real time observations on commercial ferries

Time, location, from GPS
Salinity
Temperature
Chlorophyll
Phycocyanin
Turbidity
Water samples for CHLA, inorganic nutrients and phytolankton species analysis

Traspaper in cooperation with SMHI
Finnmaid in coopertion with IOW
Silja Serenade in cooperation with Uusimaan ELY center and Helsinki Environment Center
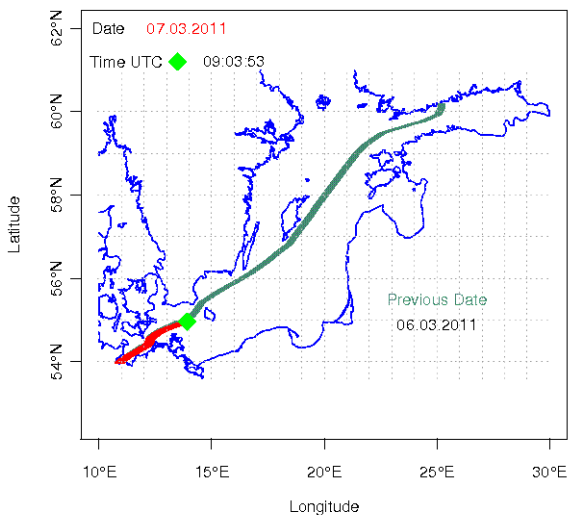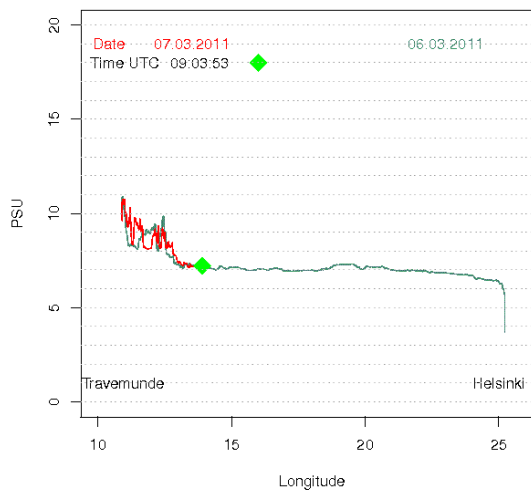

TRANSPAPER Ferry Route

Date
07.03.2011
05.03.2011

Time UTC ◆ 10:00:42

FINNMAID Ferry Route

Date   04.03.2010

Time UTC ◆   11:08:26

Previous Date
02.03.2010

Silja Serenade Ferry Route

Date   18.02.2010
Time UTC 07:56:00

Current observations on FINNMAID (7.3.2011)
www.baltiseaportal.fi
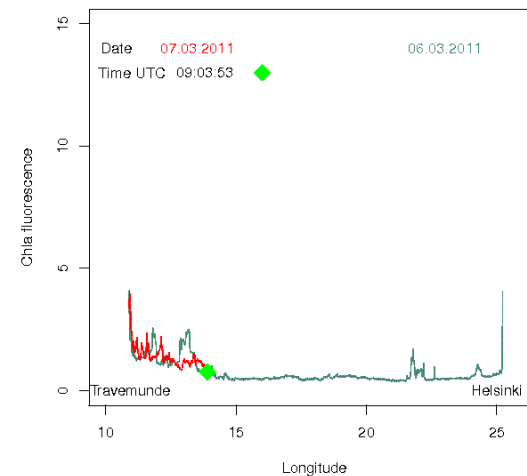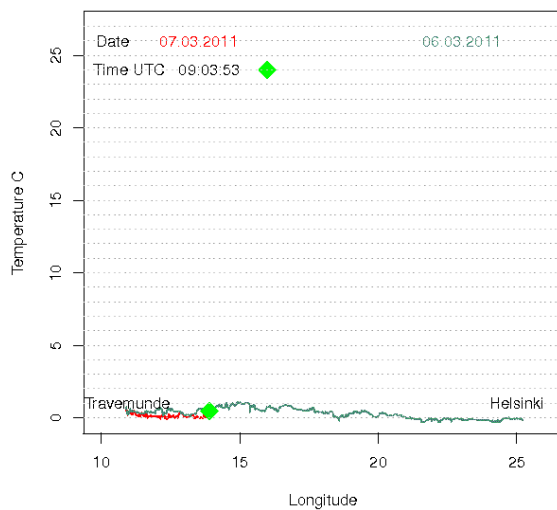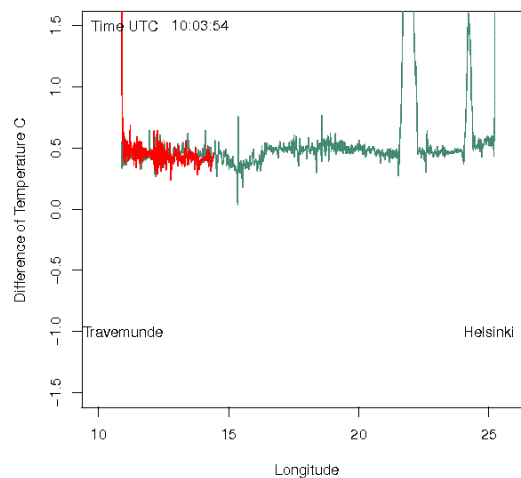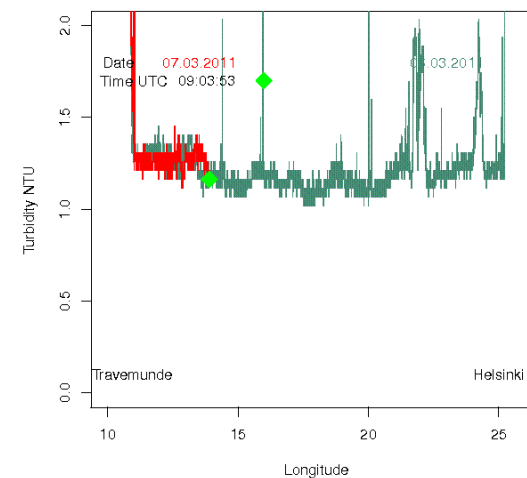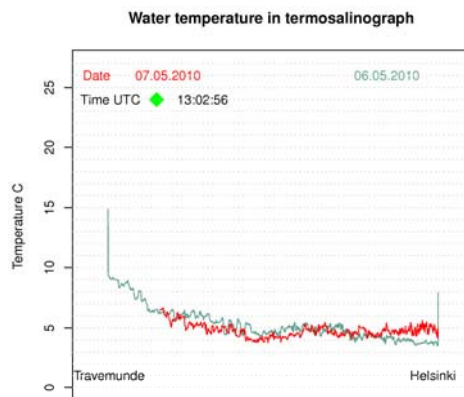
One of the tasks is to ensure the routine validation of real-time production
In Algaline monitoring this is partly carried out with the difference of 2 parallel
observations of temperature; termometer by the water inlet and the
termosalinograph. Red is current observations, gray is previous cruise data.
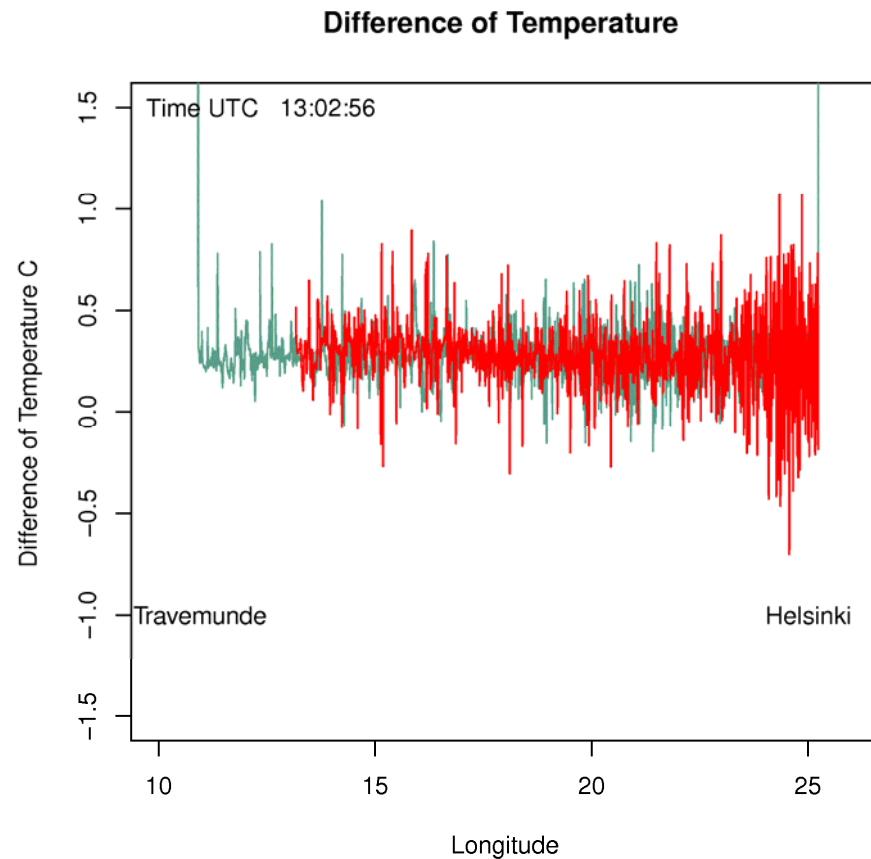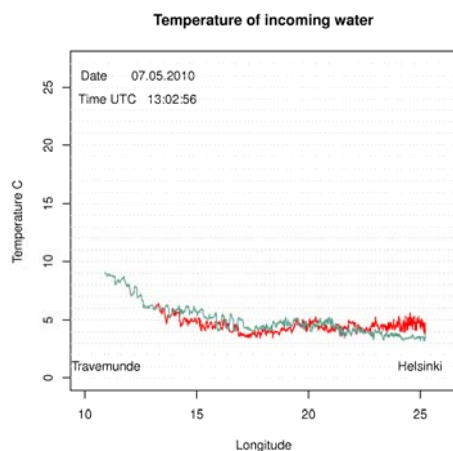
Real Time Quality Control of biogeochemical measurements

Table 1: Quality flag scale. Codes marked in red are mandatory following the RTQC procedure **Code**	Meaning
0	No QC was performed
1	Good data
2	Probably good data
3	Bad data that are potentially correctable
4	Bad data
5	Value changed
6	Below detection limit
7	In excess of quoted value
8	Interpolated value
9	Missing value
A	Incomplete information

Flaged data to database

Salinity, Spring 2011

FINNMAID 2010: Extent and quality

FINNMAID Chlorophyll 2010
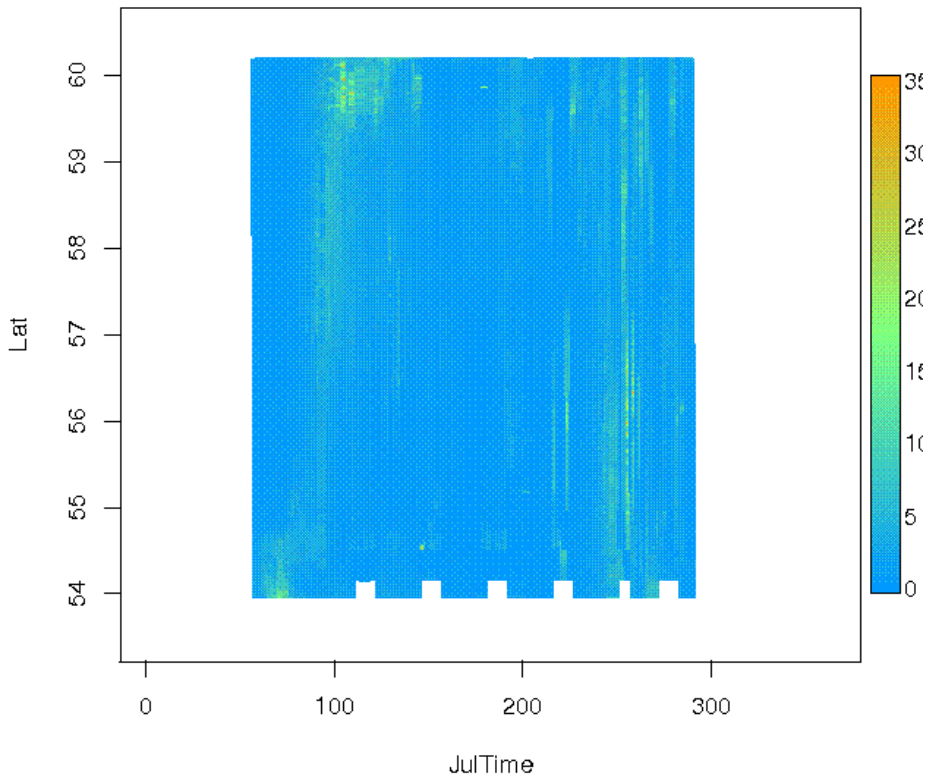
FINNMAID Temperature 2010

Comparison of TRANSPAPER and FINNMAID on 23.8.2010, time diff 16 h

New sensors in FerryBox systems – experiences in SYKE

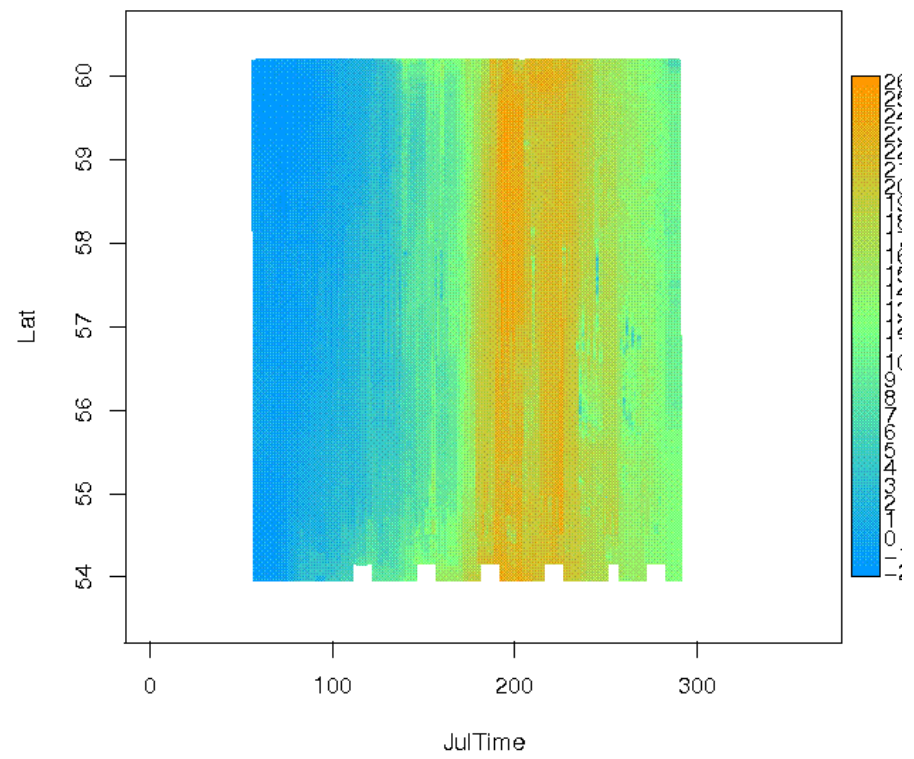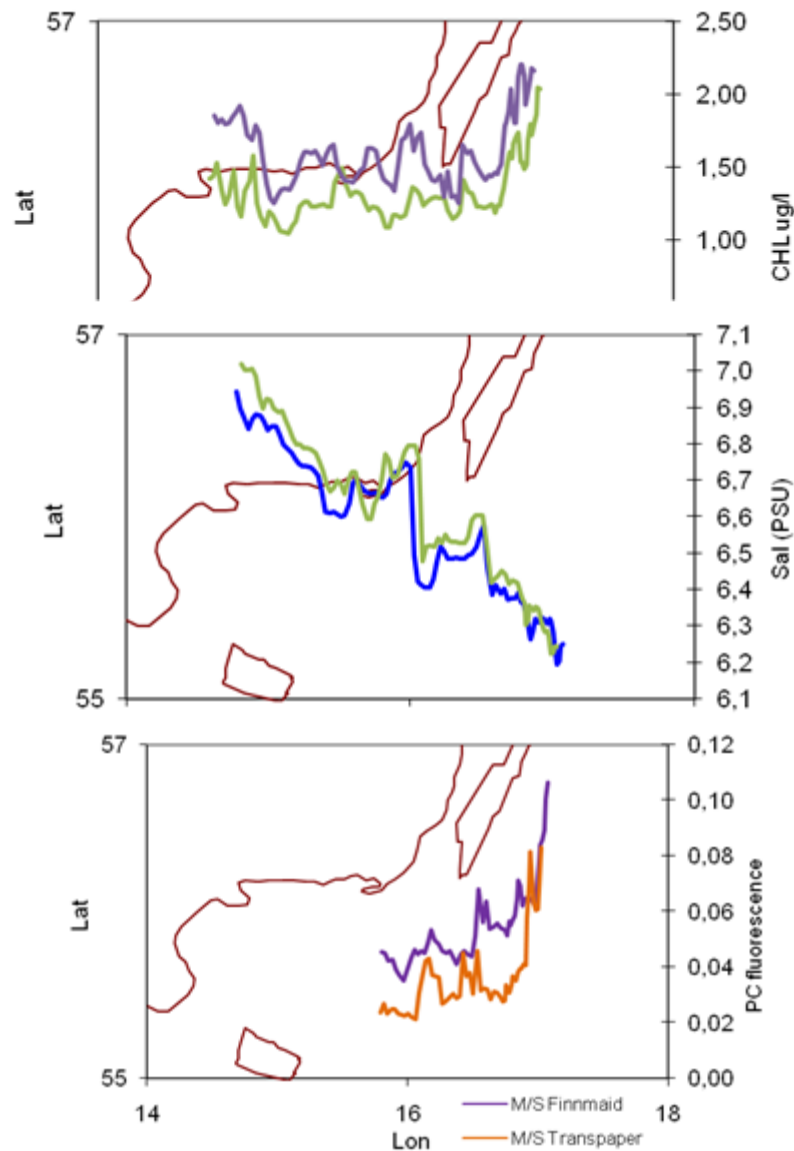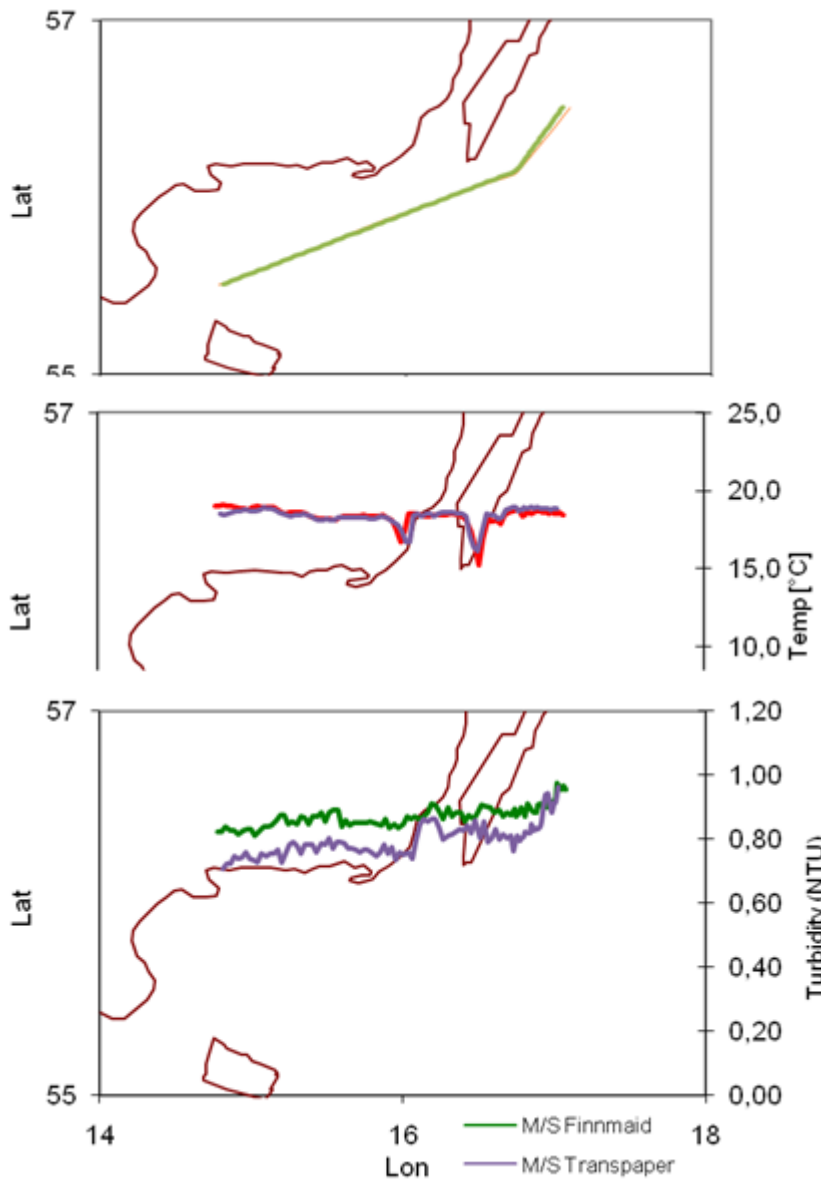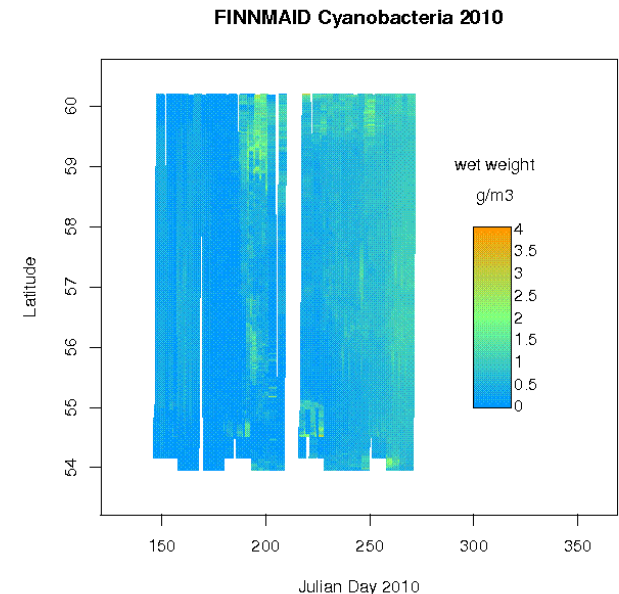| Sensor:	Phycocyanin fluorometer
Aim:	Detection of harmful blooms of filamentous cyanobacteria
Status:	Operational since 2005, installed in 4 ferries
Challenges:	Maintenance and calibration more difficult than for Chl*a* fluorometers Selection of wavelengths
Actions:	Development of calibration protocols Derivation of ecological information

Filamentous cyano, PC   Picocyano, PE   Green algae

excitation (nm)   emission (nm)

FINNMAID Cyanobacteria 2010

wet weight g/m3

Latitude

Julian Day 2010
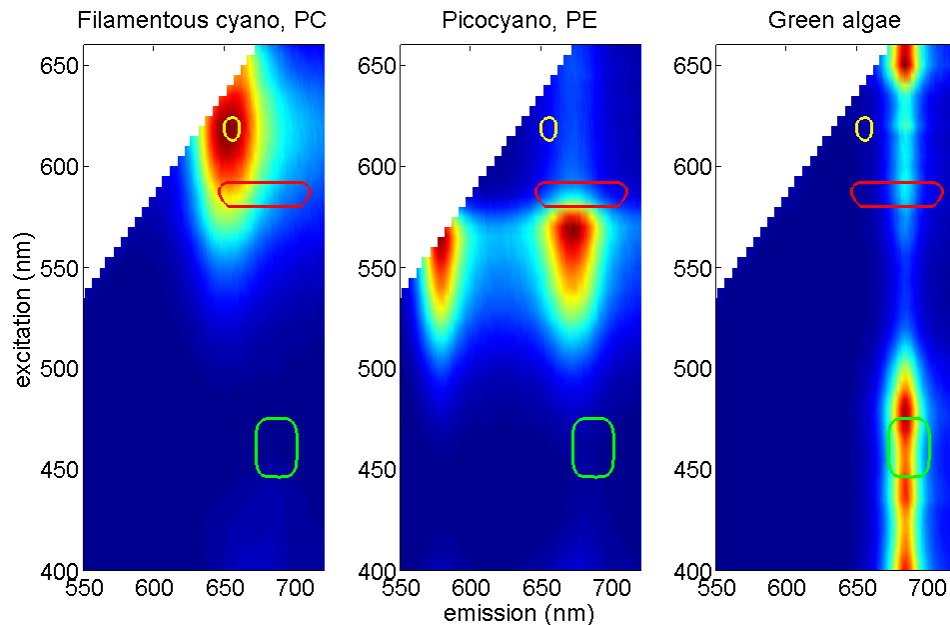
New sensors in FerryBox systems – experiences in SYKE

Sensor:	CDOM fluorometer
Aim:	Detection dissolved organic matter, humic material
Status:	Operational since 2011
Challenges:	Selection of wavelengths Dynamic fluorescence – absorption – DOC relationship
Actions:	Collection of calibration data-set

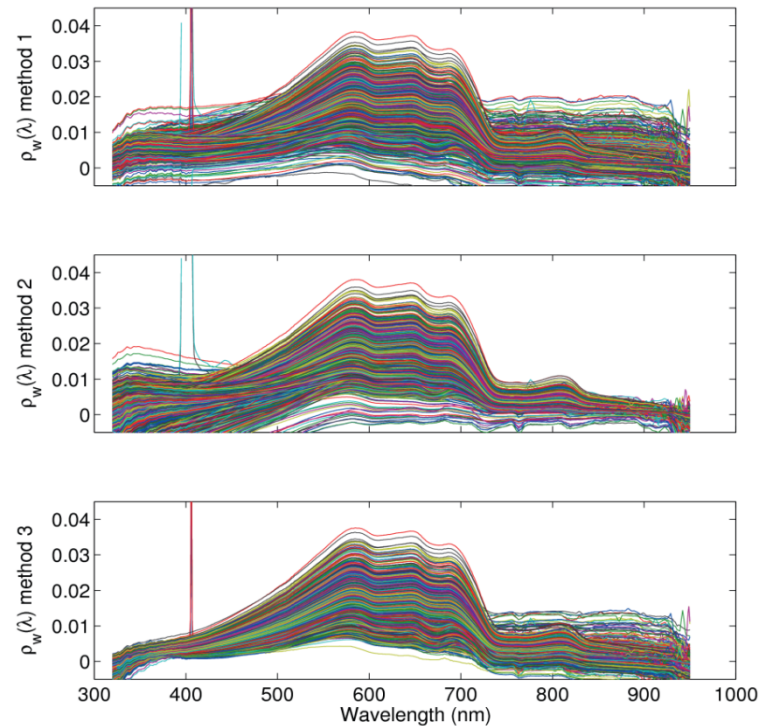Fluoreszenz und Gelbstoff im Bottnischen und Finnischen Meerbusen*

Von Kurt Kalle

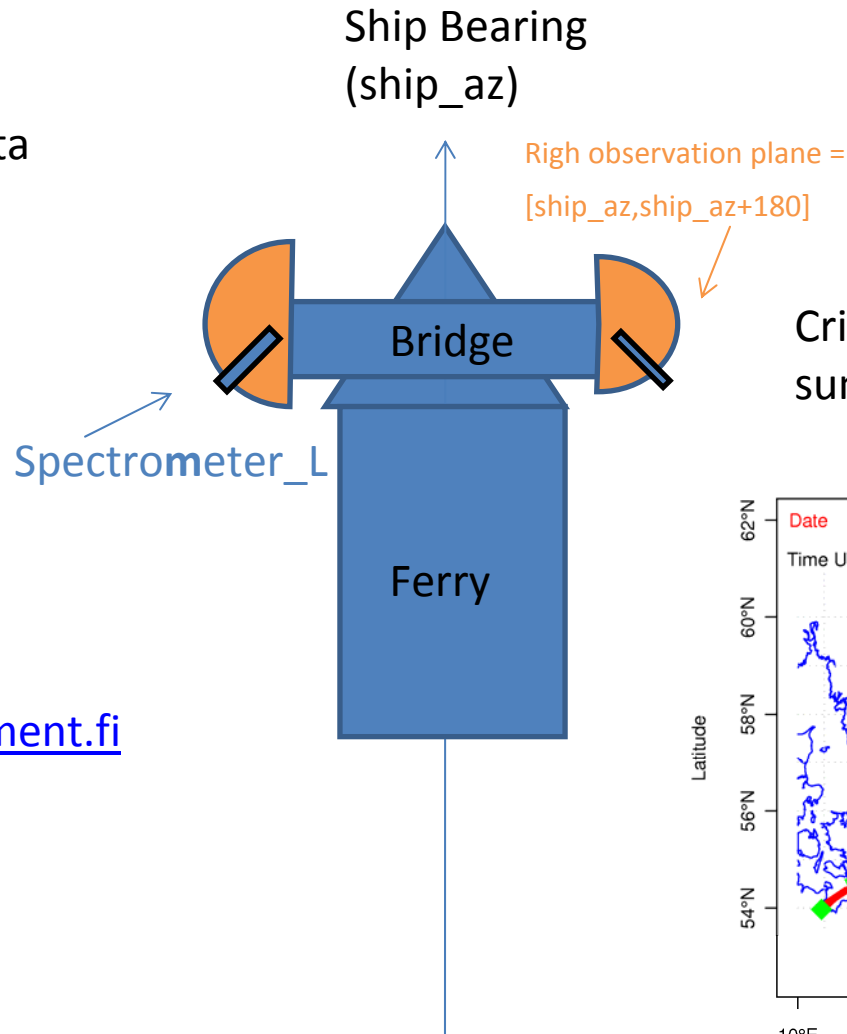Deutsche Hydrographische Zeitschrift. Band 2, Heft 4. 1949
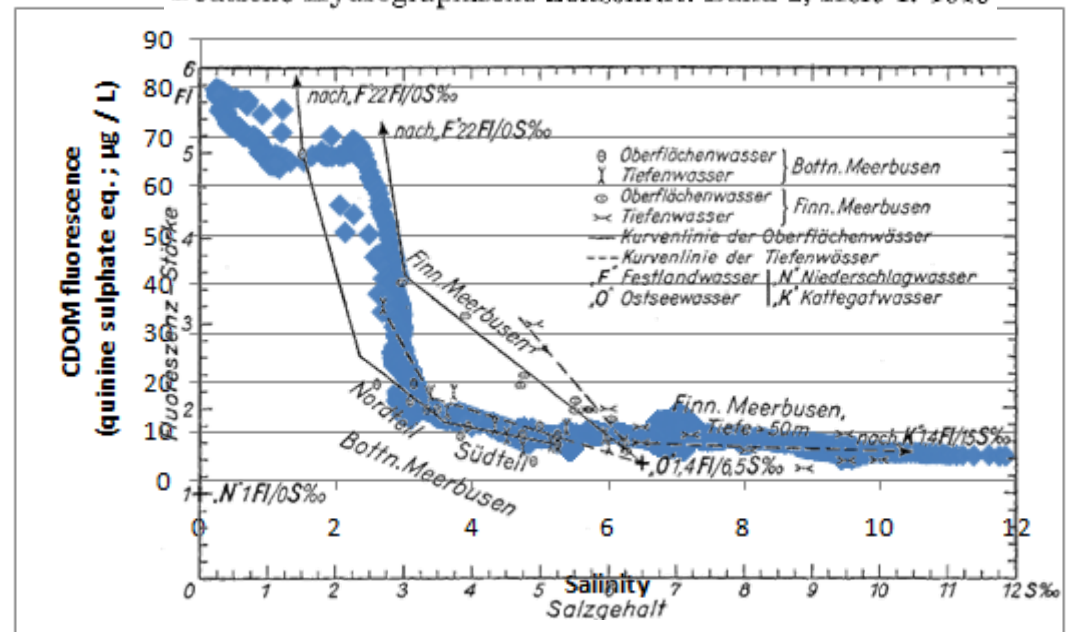
New sensors in FerryBox systems – experiences in SYKE

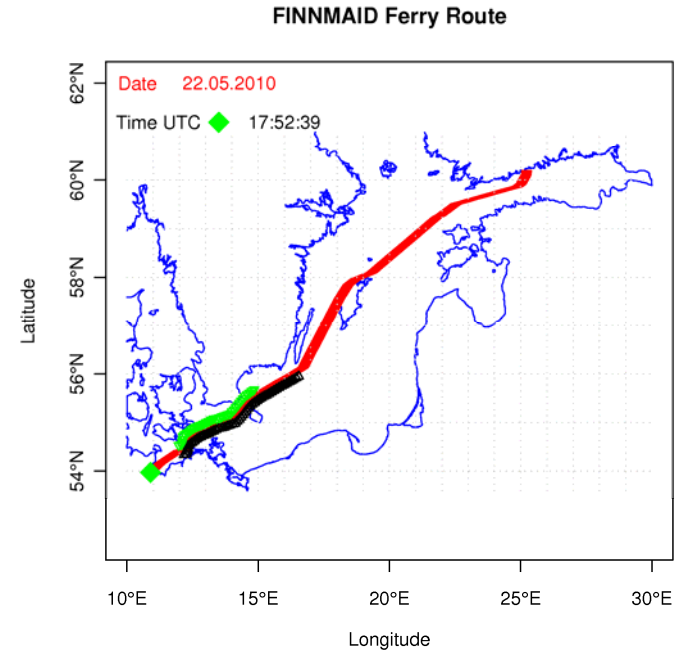|	
Sensor:	Reflectance
Aim:	WQ products derived from reflectance data
Status:	Tests carried out in research vessel and ferry 2009-11
Challenges:	Data analysis Interfacing with FB data
Actions:	Software tests, demonstration campaigns 2012

Spectrometers on the ferry

Ship Bearing
(ship_az)

Collect spectral data
every 15 seconds

Righ observation plane =
[ship_az,ship_az+180]

Bridge

Criteria:
sun elevation $> 30^0$

Spectrometer_L

Ferry

PROTOOL FP7 Project
Stefan.Simis@environment.fi

John Olsson Poster

FINNMAID Ferry Route
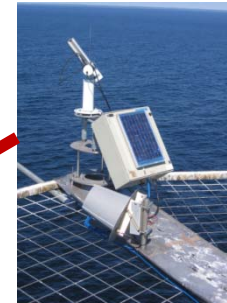
Date   22.05.2010

Time UTC ◆ 17:52:39

Latitude

Longitude

Combination of different sources are used for Ocean Colour validation

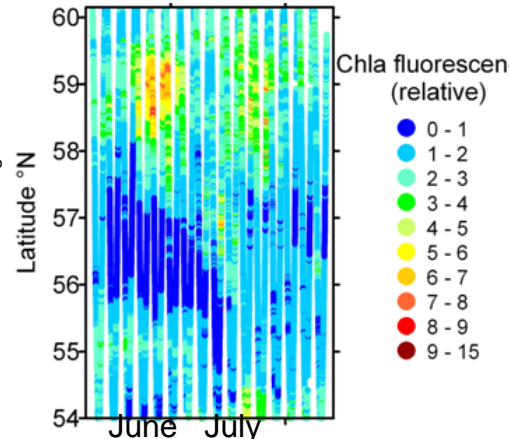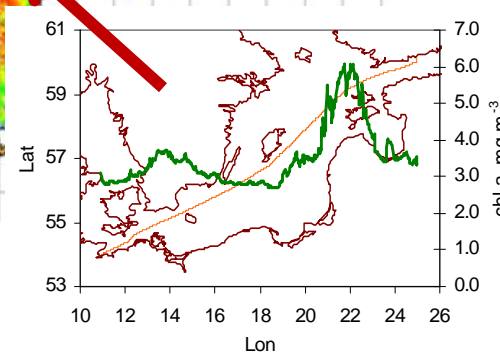
Chlorophyll-a mg/m3

Modis Terra July 2005 Average

Helsinki

Travemünde
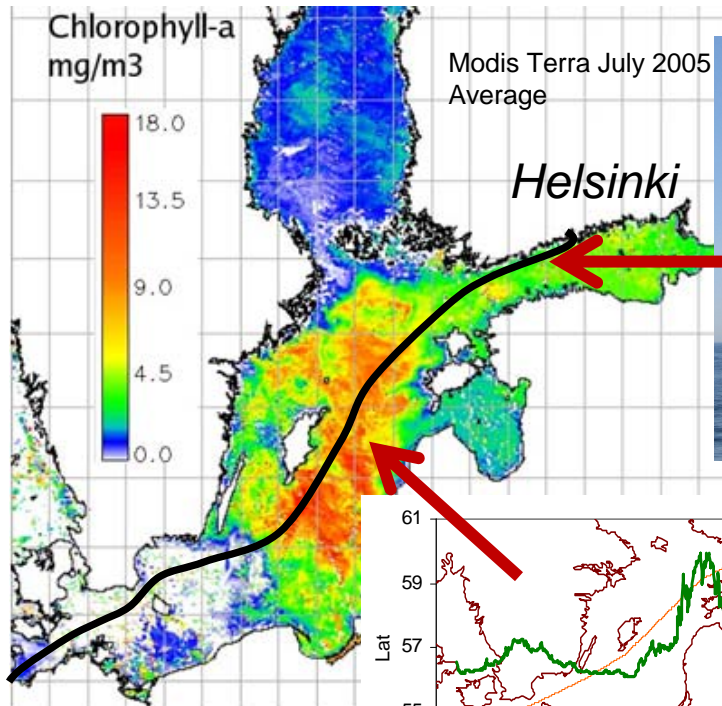
Helsinki Lighthouse

SeaPrism/Aeronet with EU-JRC
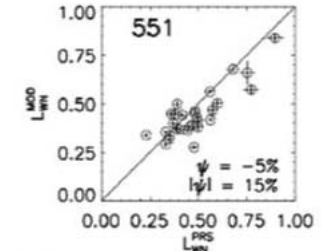
Algaline monitoring on FINNMAID biweekly

Chla fluorescence (relative)

Chlorophyll-a, Gulf of Finland