

FerryBox on Cefas Endeavour



Cefas

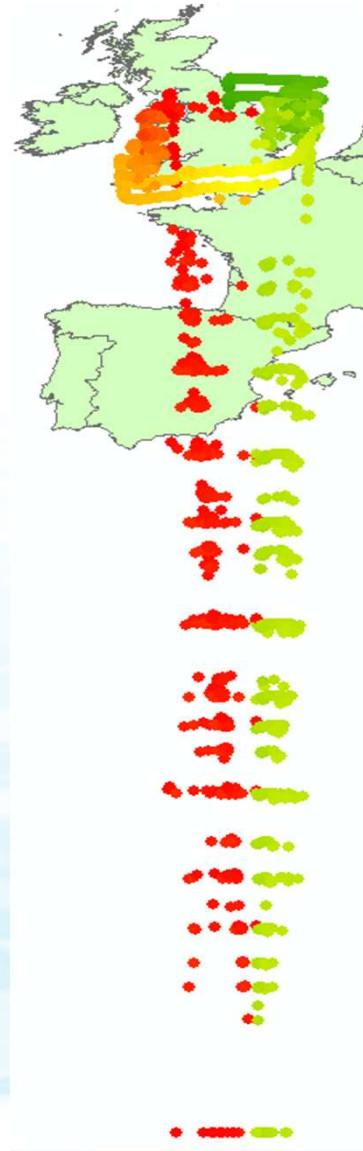
FerryBox on Cefas Endeavour



Ferrybox Data QA

The QA process:

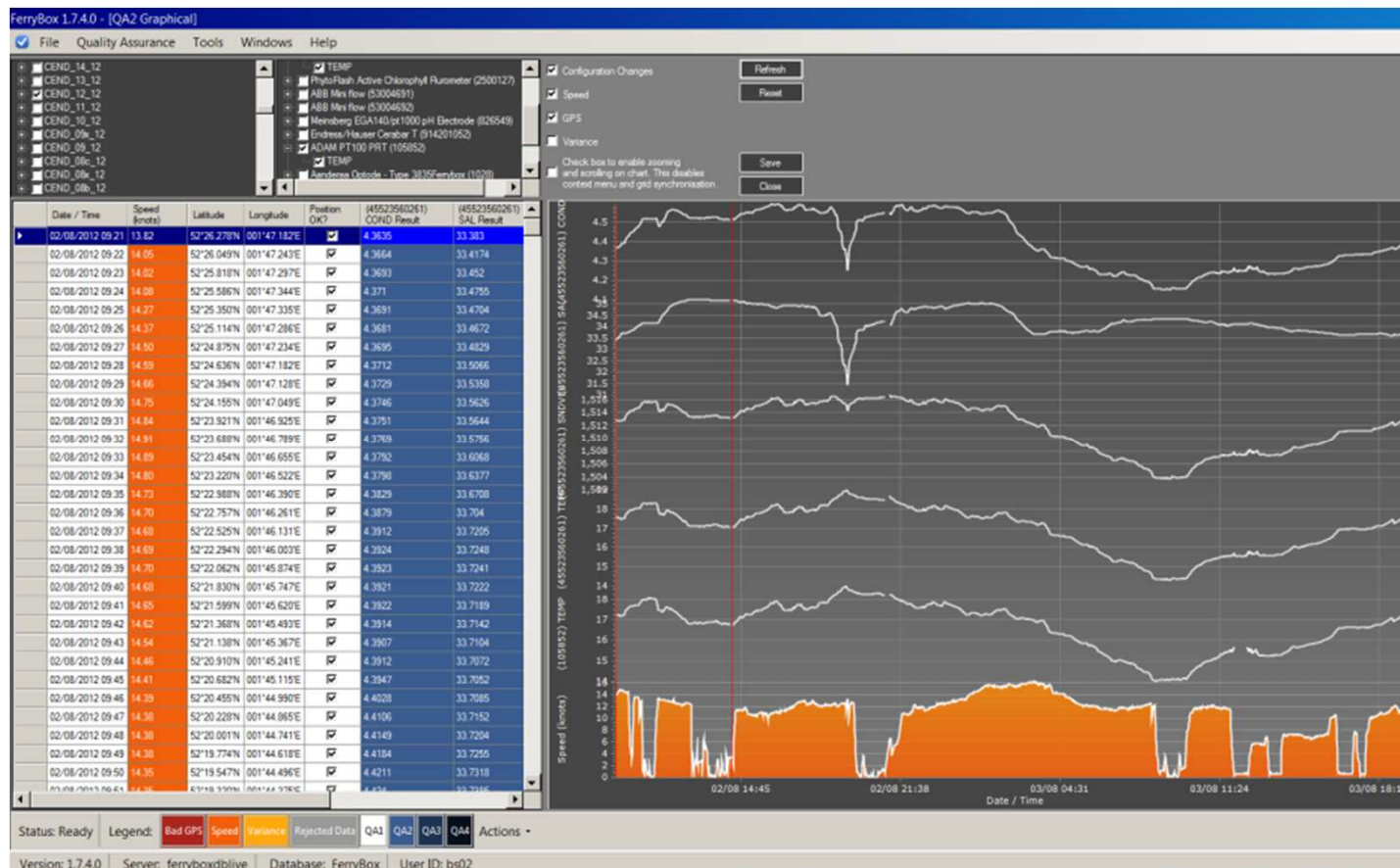
- Positions are loaded into GIS where suspicious points are identified.



Ferrybox Data QA

The QA process:

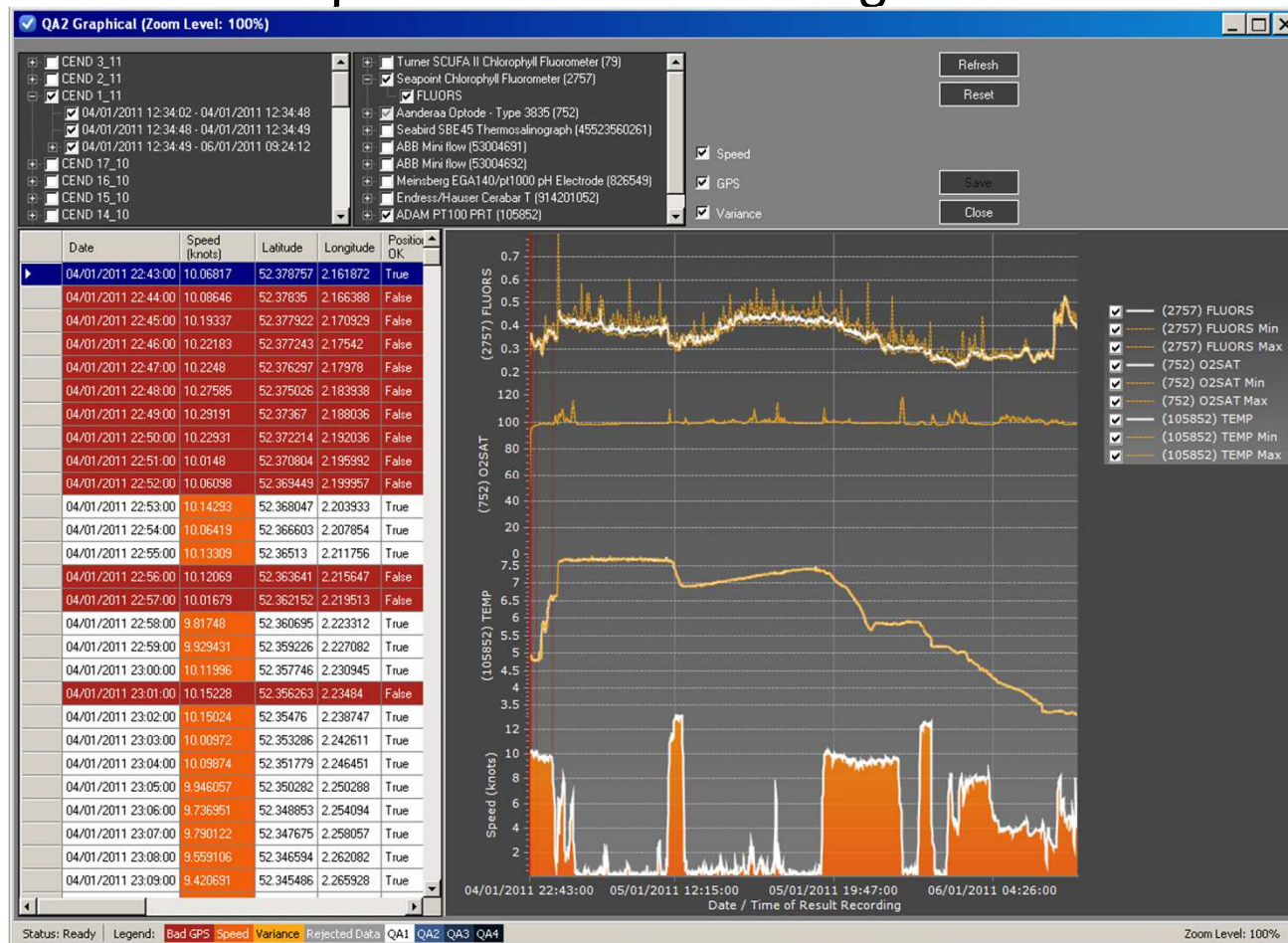
- The bespoke Ferrybox software allows for flagging of data by GPS or sensor parameters within a given cruise.



Ferrybox Data QA

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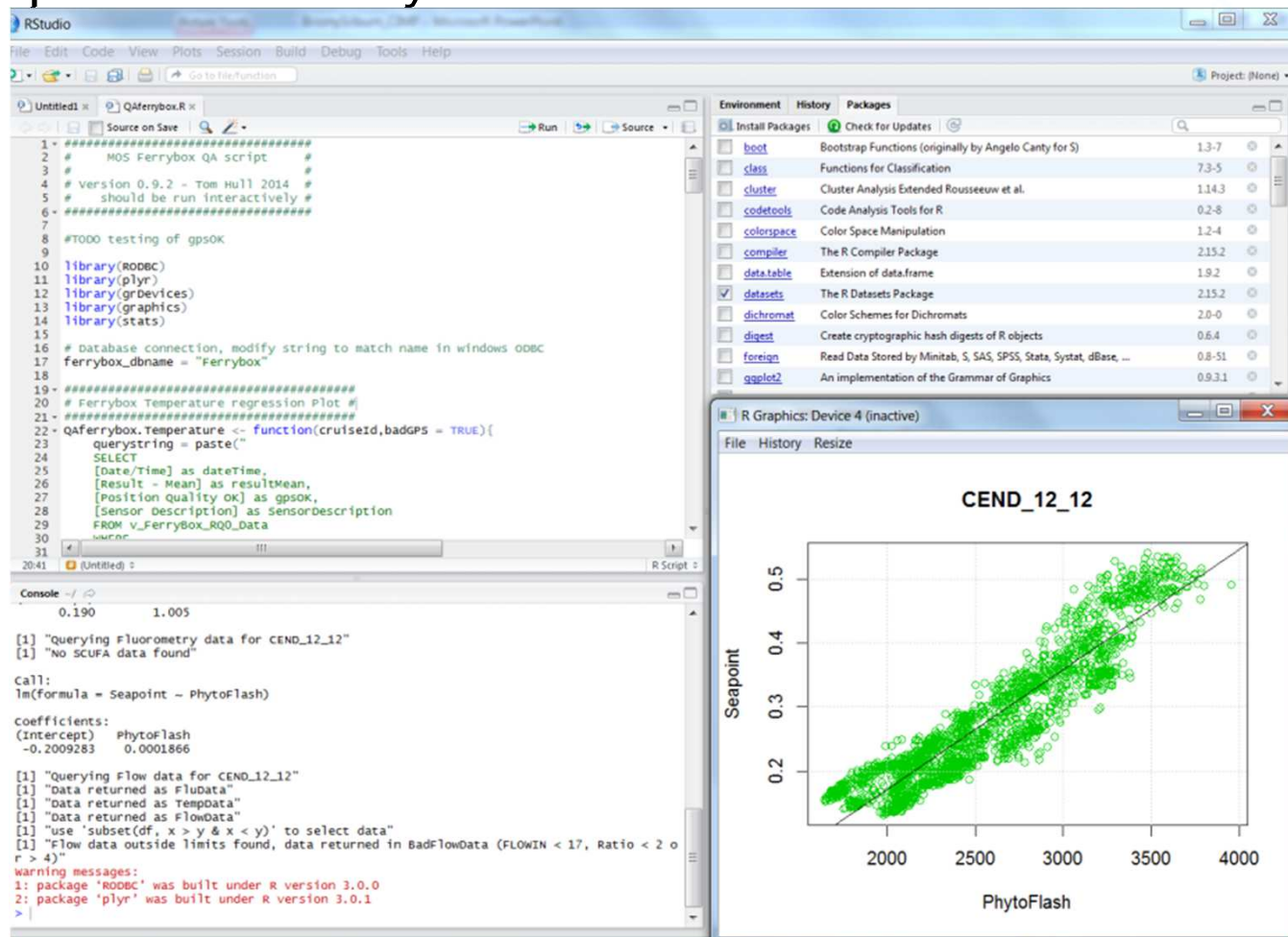
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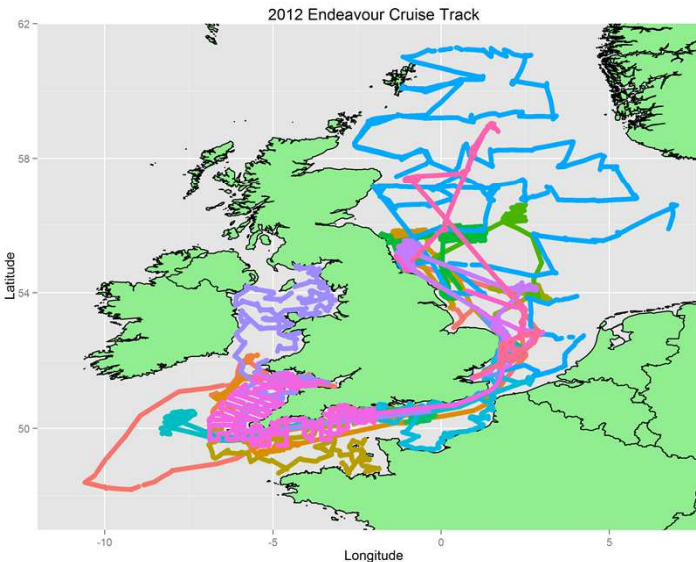
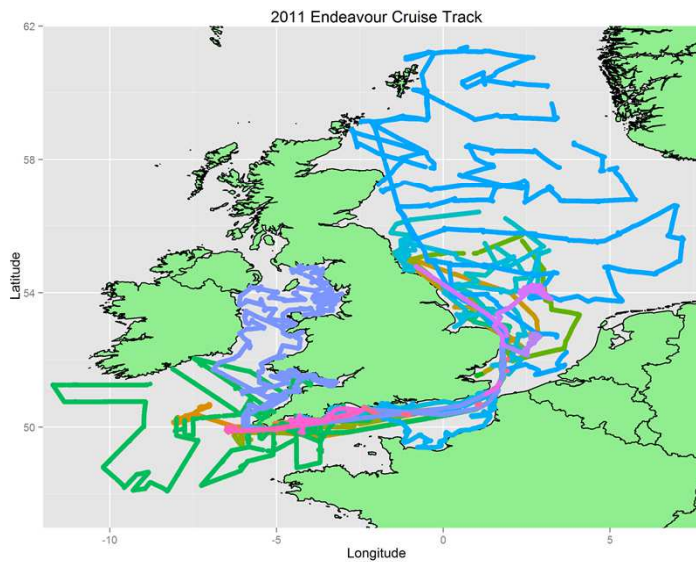
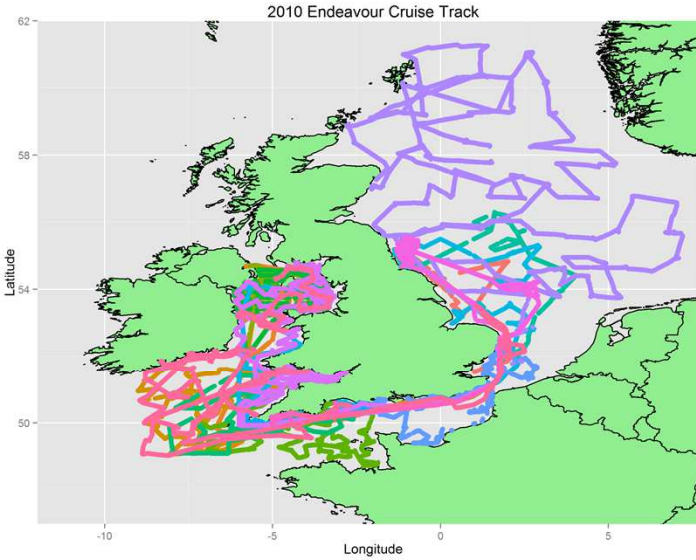
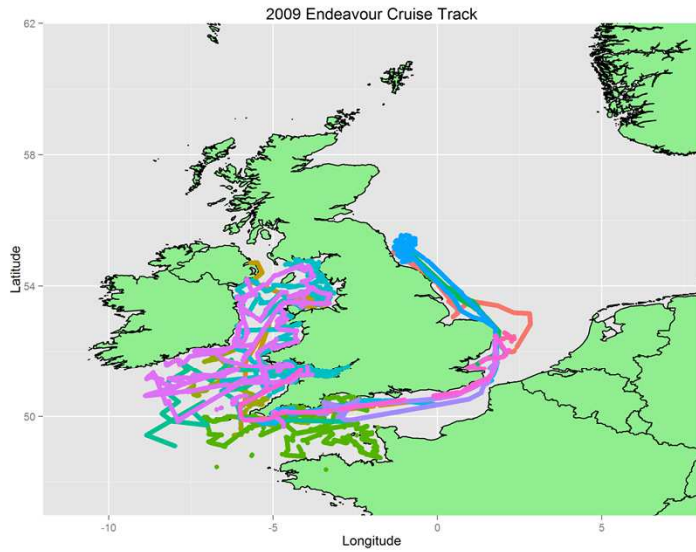
Ferrybox Data QA

The QA process:

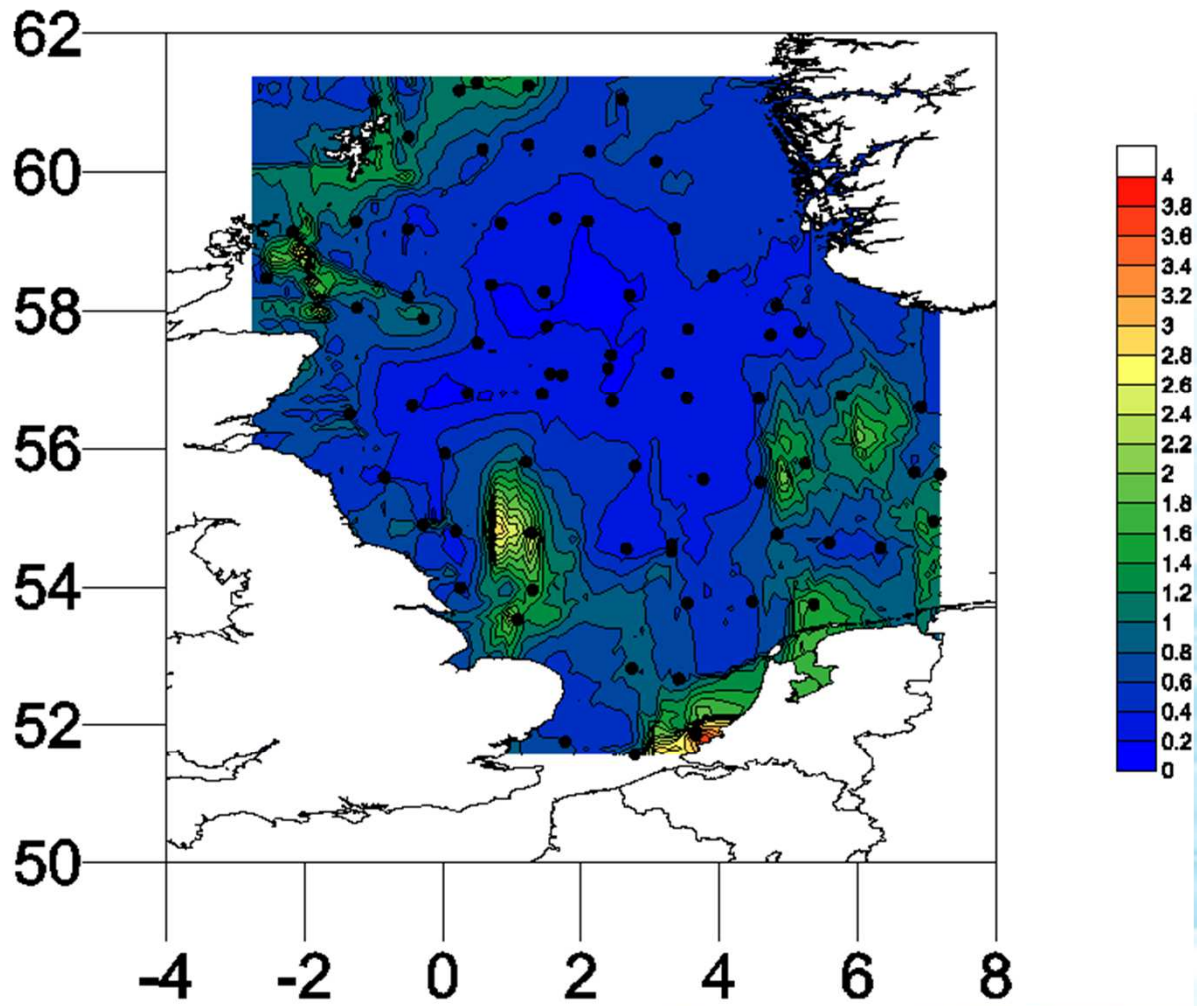
- Using an R script Flow, Fluorometry and Temperature data are compared to identify inconsistencies.



Endeavour Cruise Tracks 2009-2012



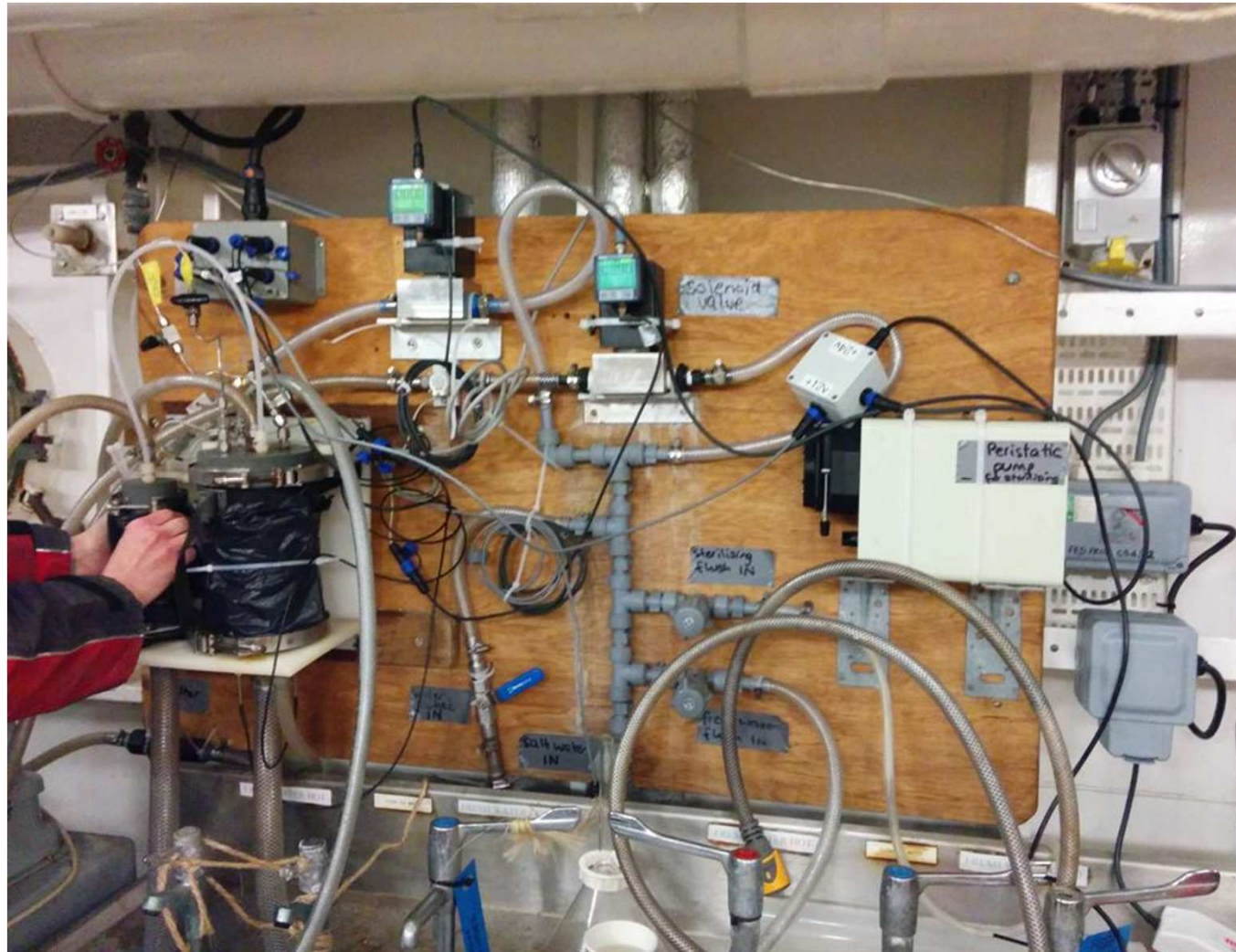
Chl Flu from August 2011



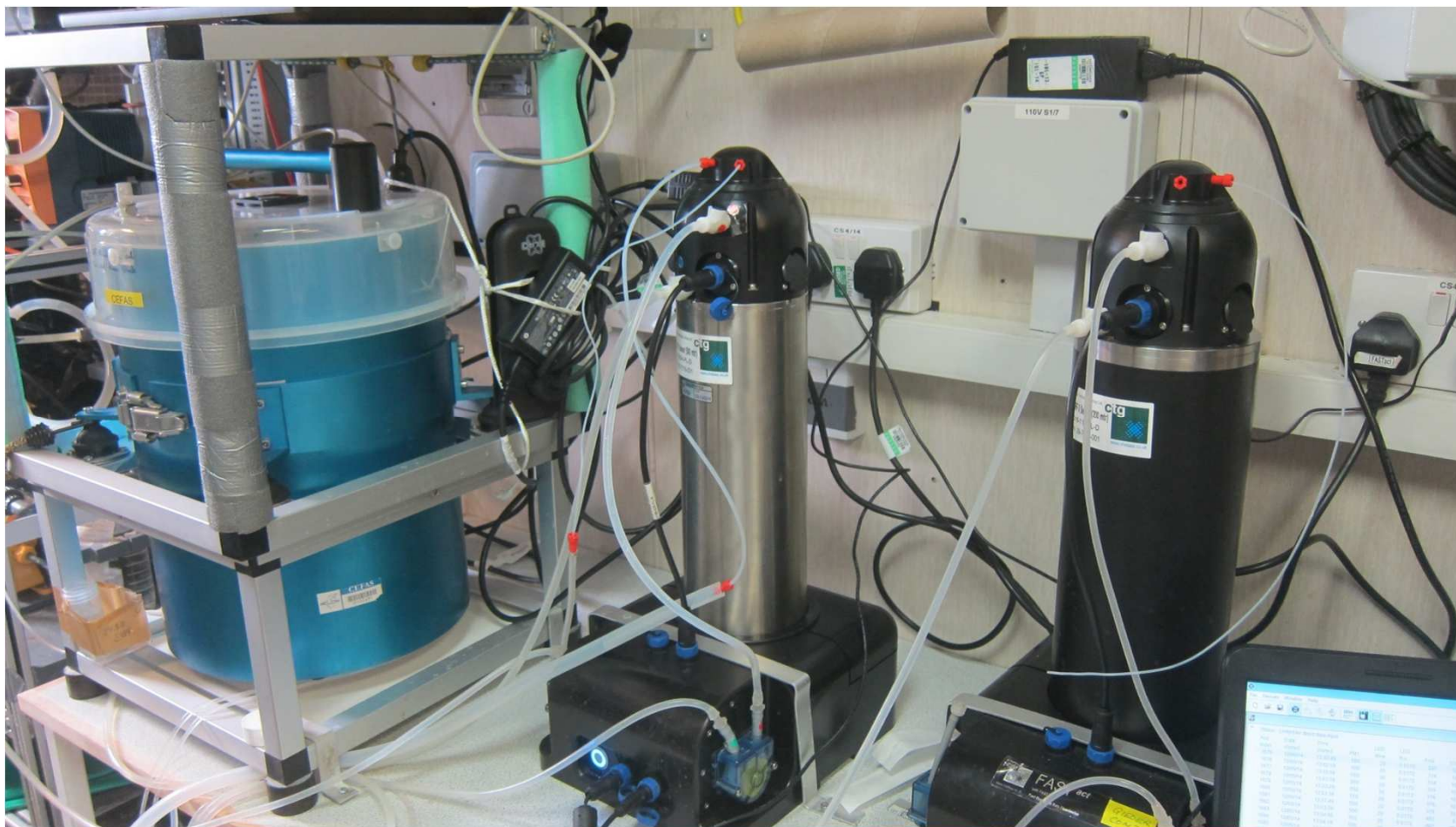
$p\text{CO}_2$

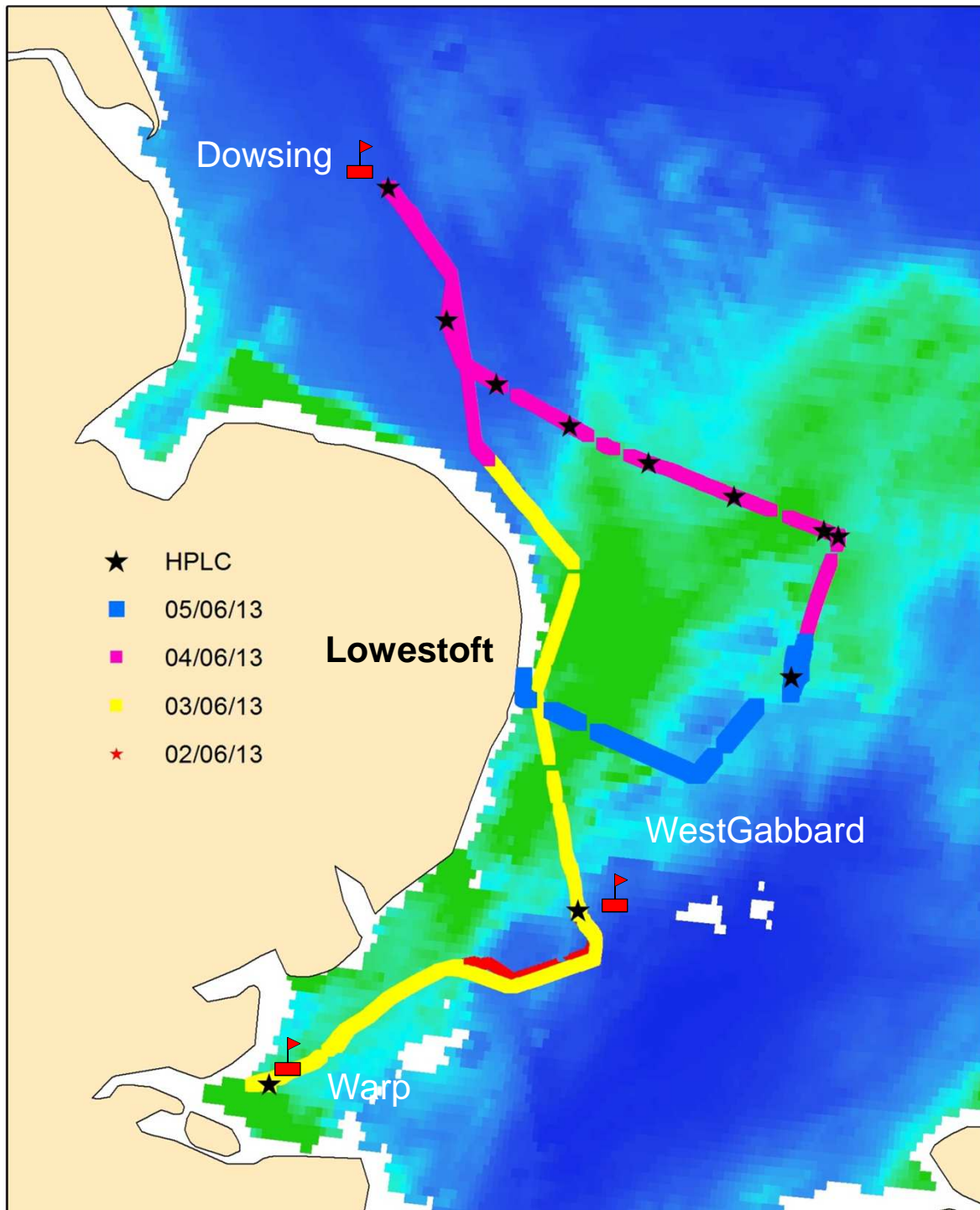


$p\text{CO}_2$



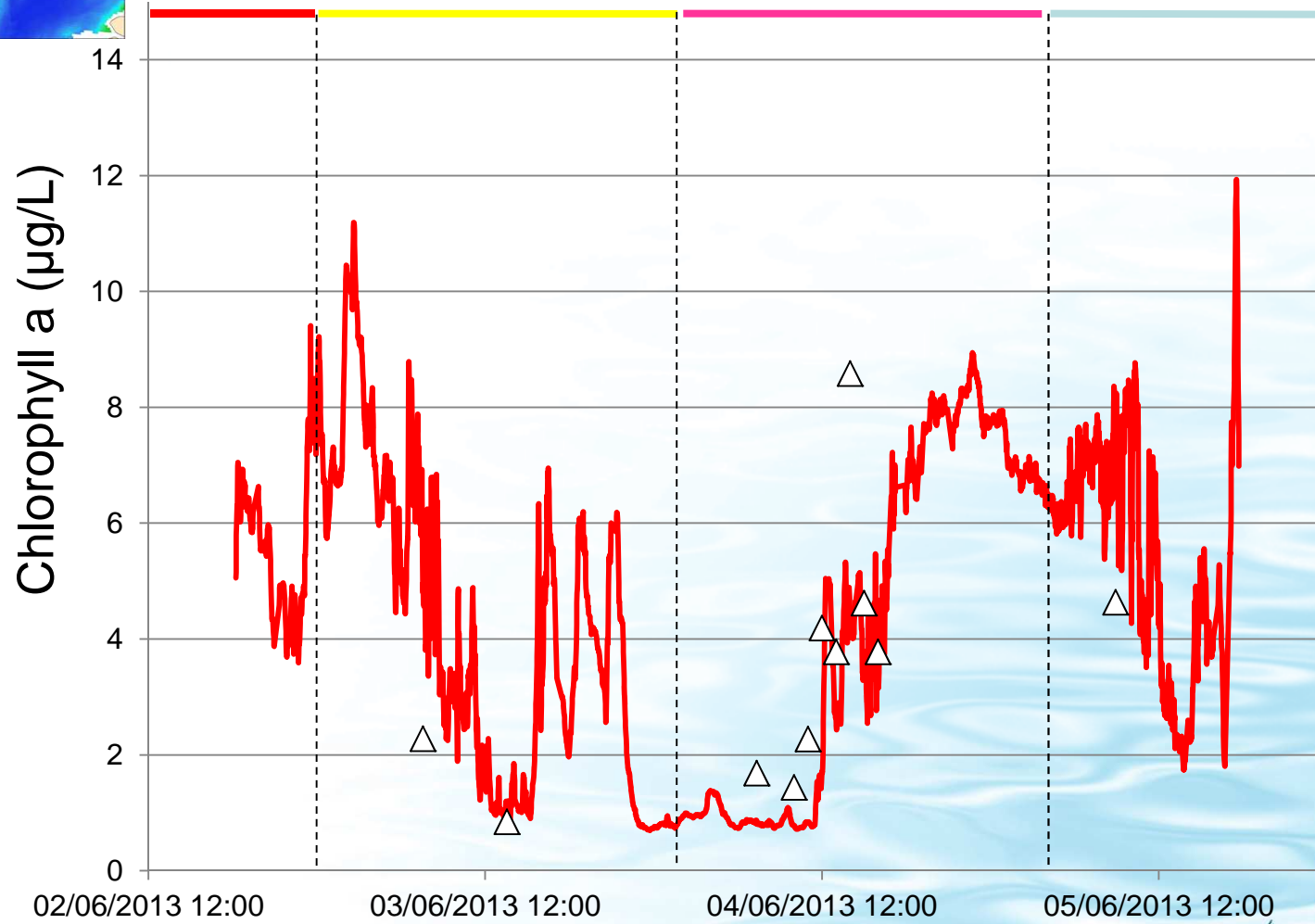
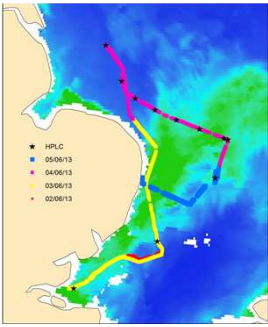
Flow Cytometer and Fastrakas





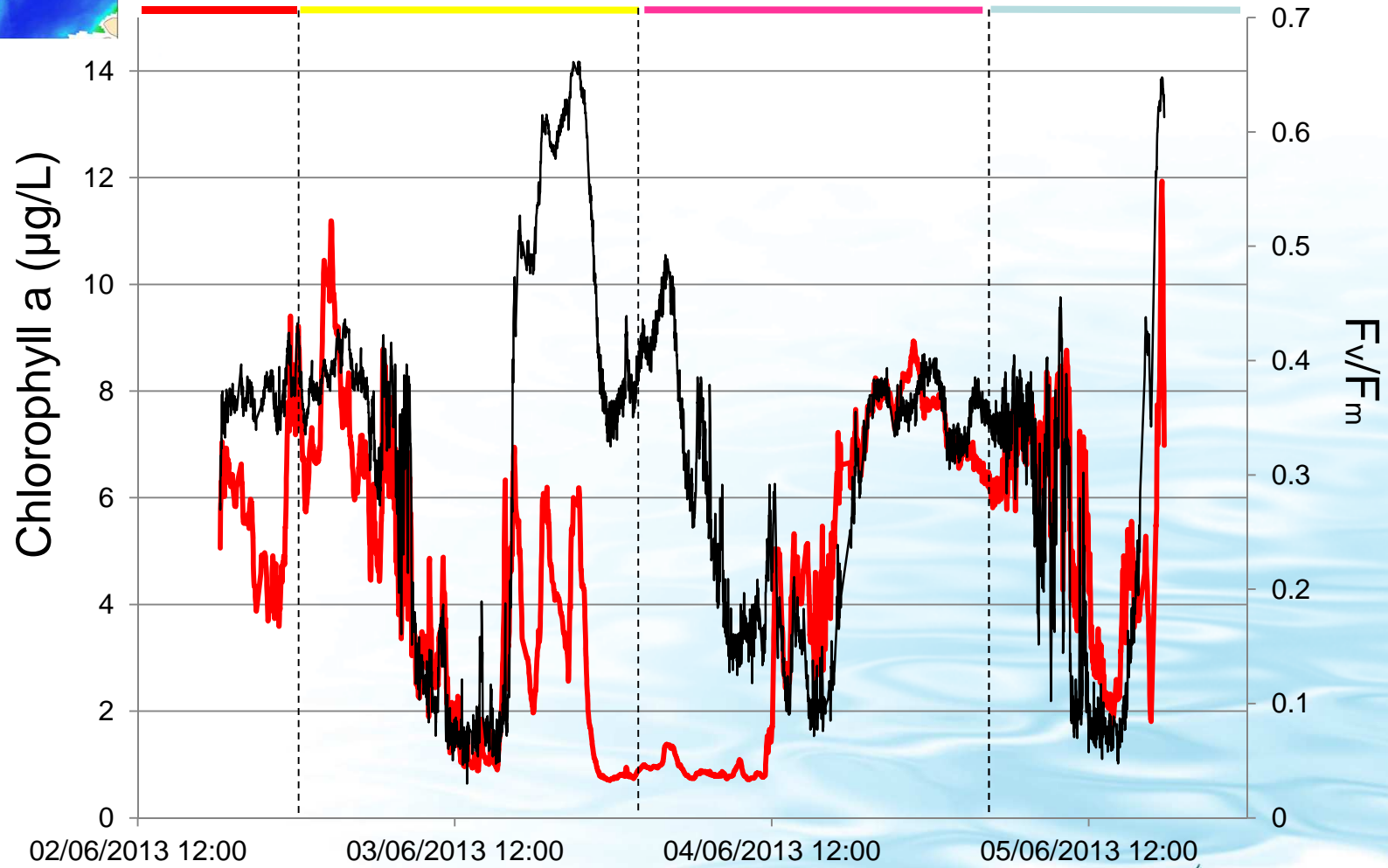
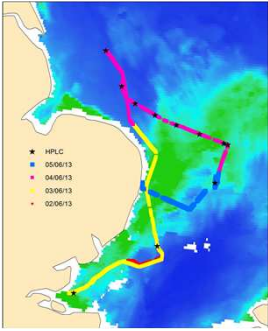
★ Discrete samples for HPLC analysis

On-line measurements



— FerryBox Δ discrete HPLC

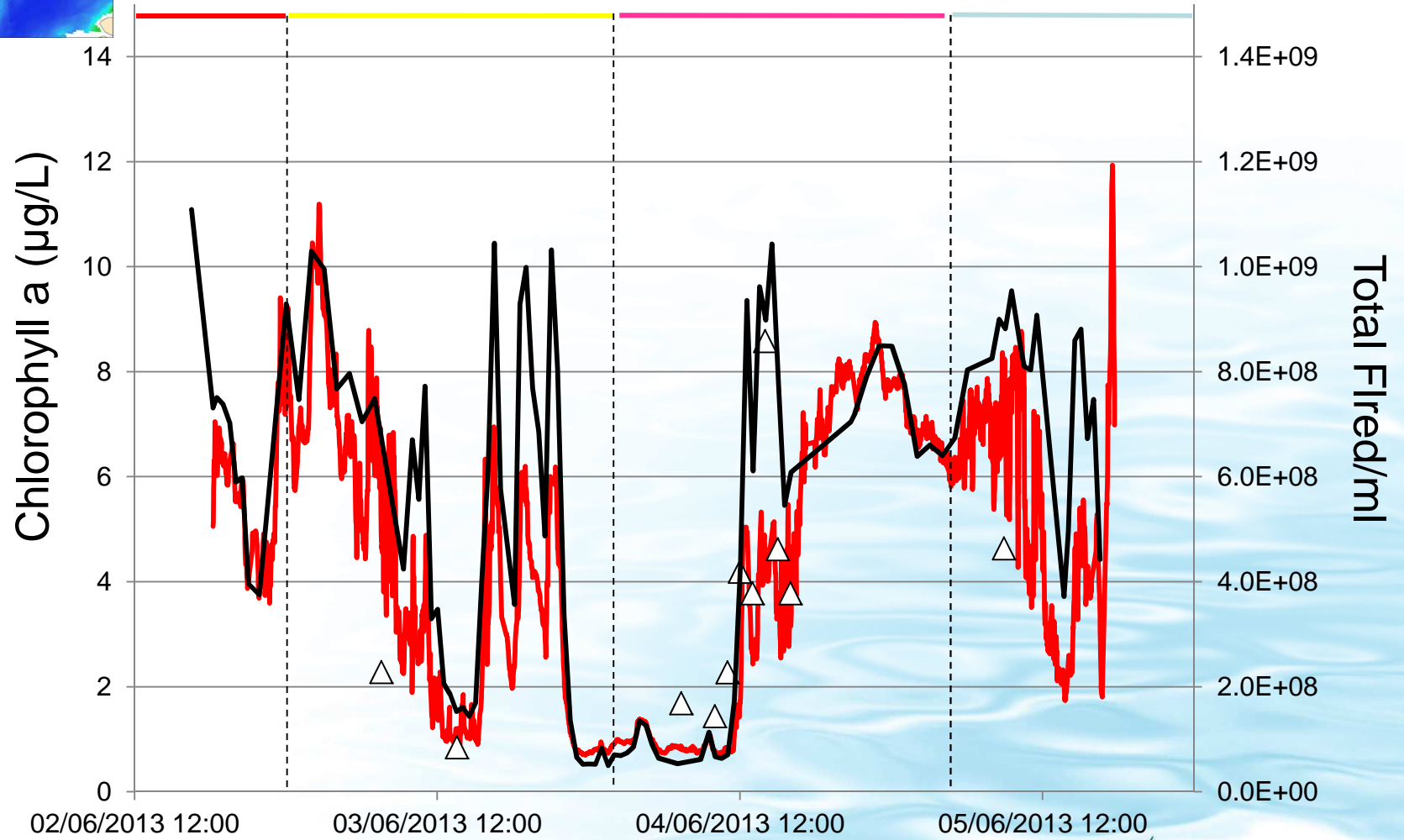
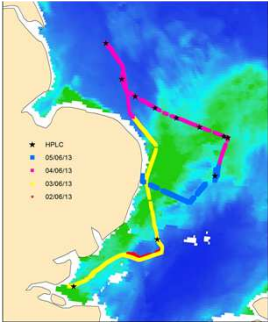




— FerryBox — Quantum Yield



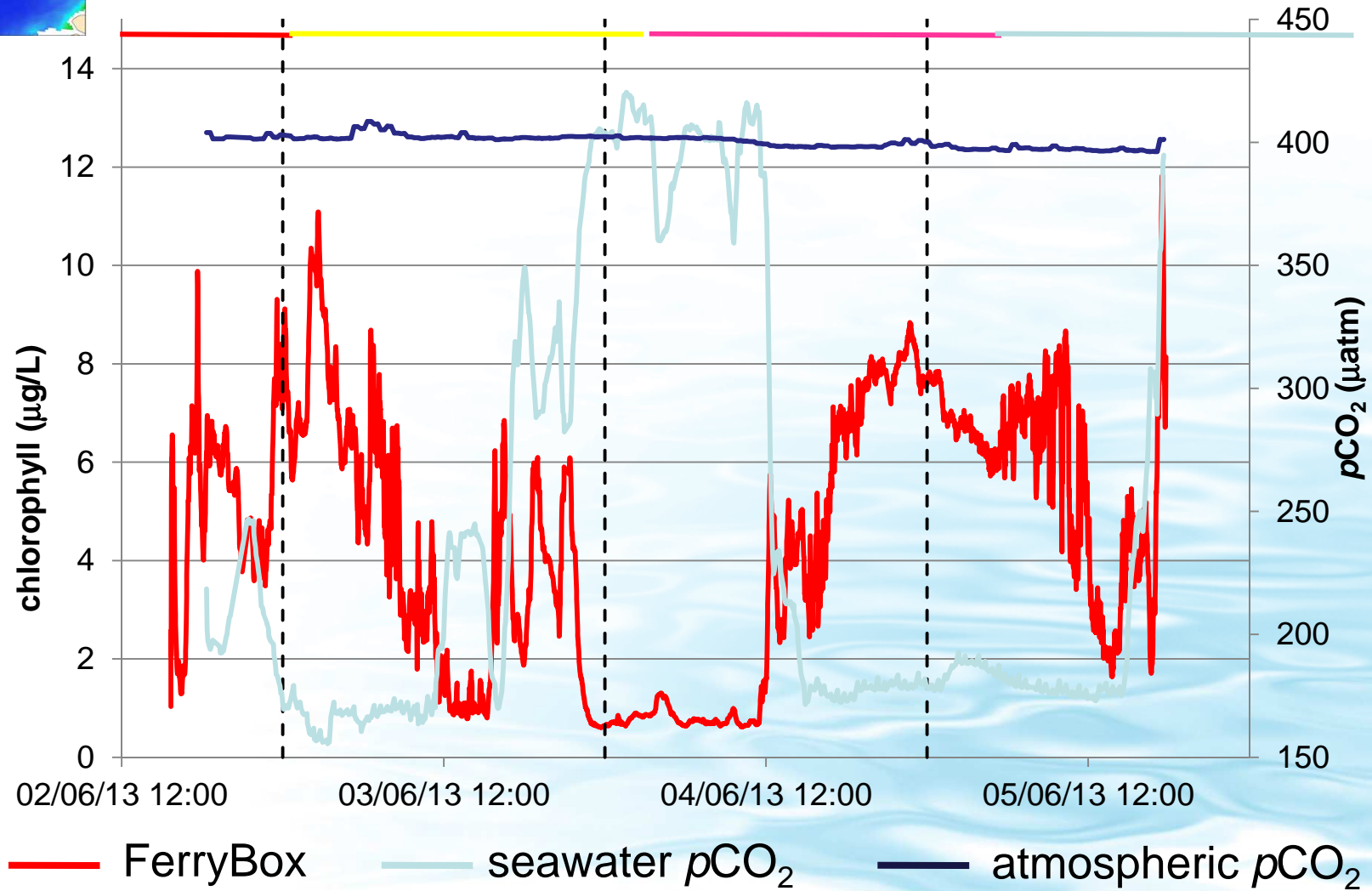
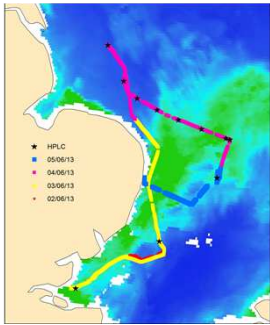
Cefas



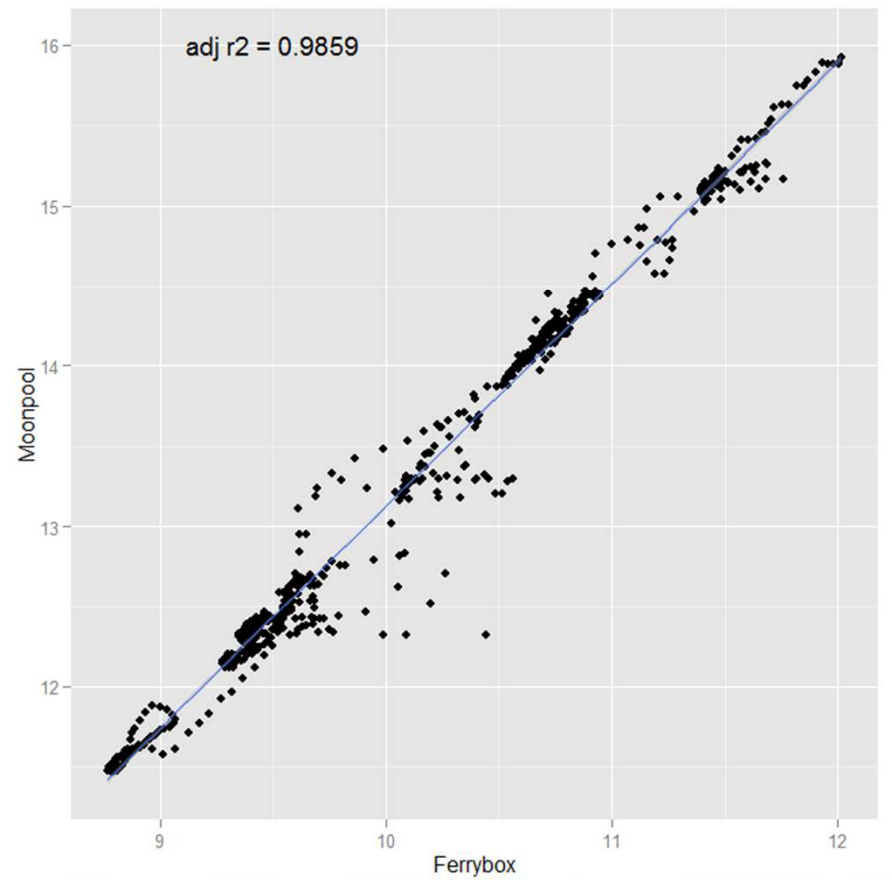
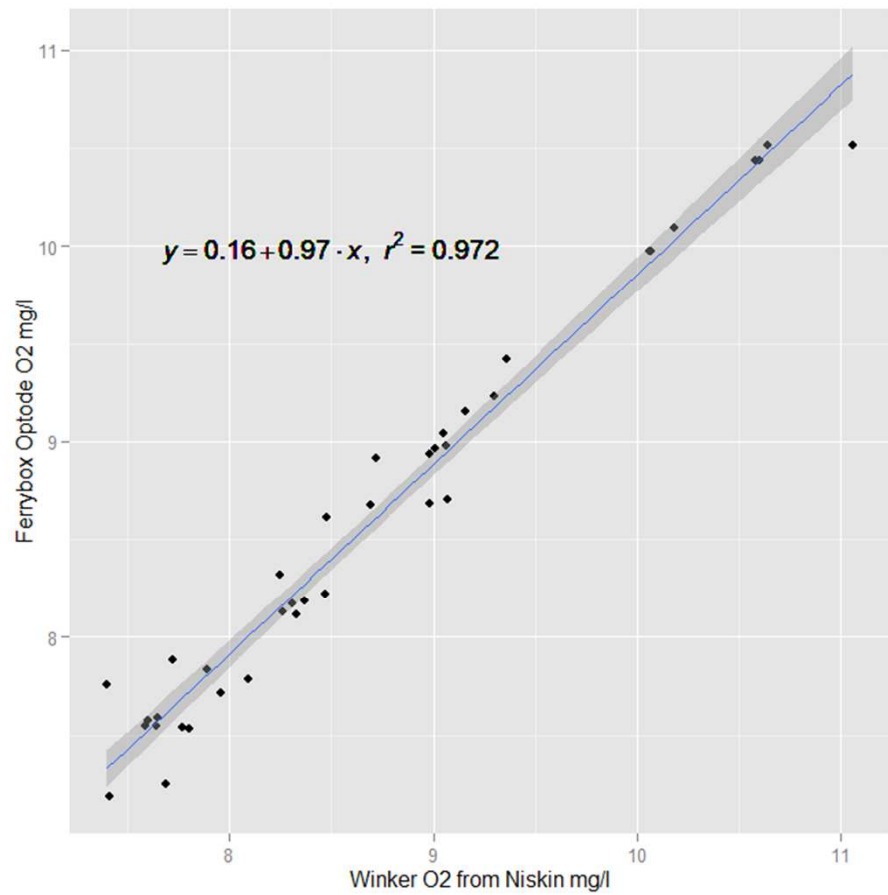
— FCM — FerryBox

△ HPLC

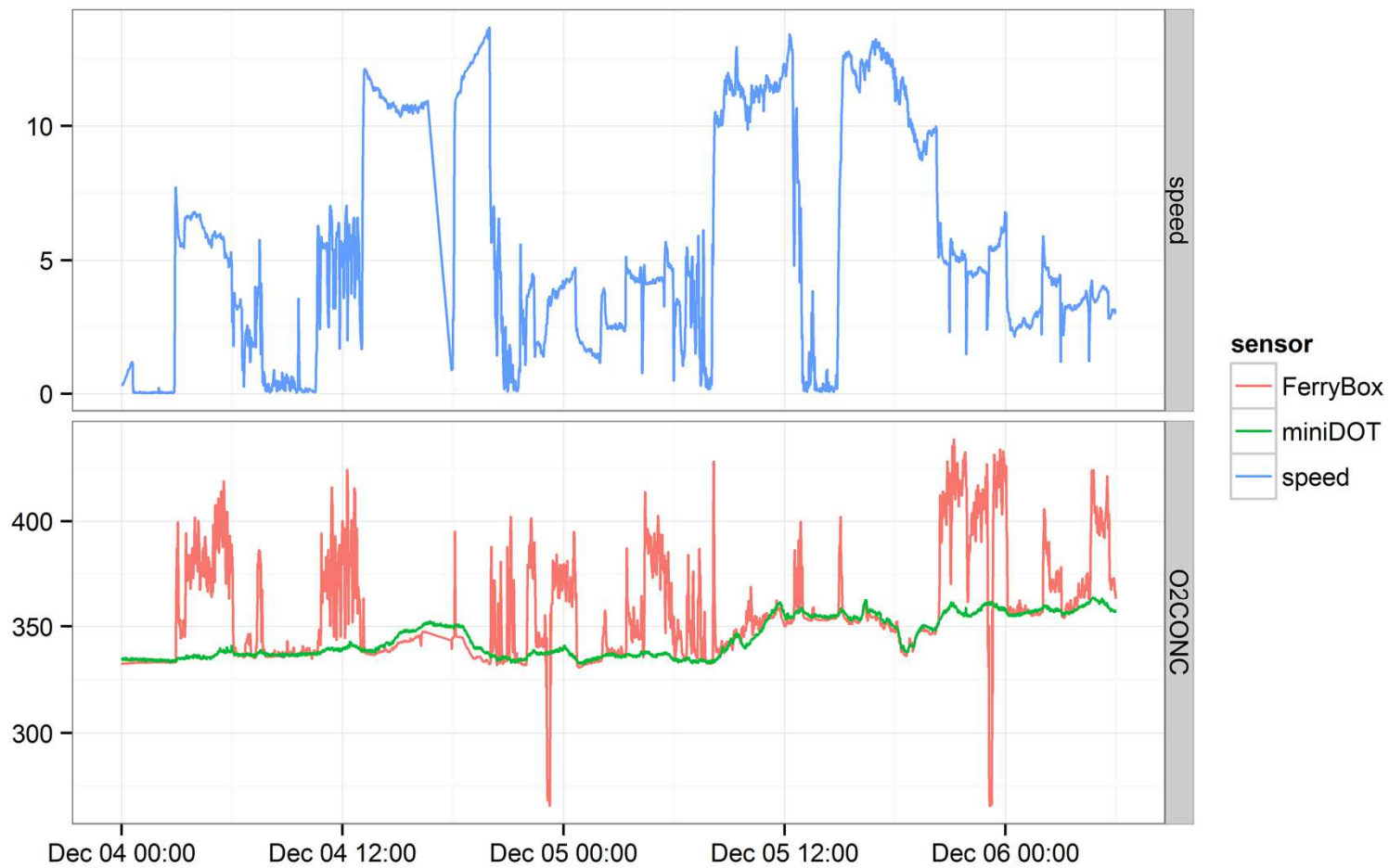




Noisy Oxygen



Noisy Oxygen



Passive sampler



Passive Sampler



Fully automated system

- Traps can be filled separately or trap 6 can be filled at same time as any others
- Sampling can be based on geographical region or time

Passive Sampler



- Trap 1: 1 day
- Trap 2: 4 days
- Trap 3: 8 days
- Trap 4: 2 days
- Trap 5: 1 days
- Trap 6: all the time any of the other traps was exposed (16 days)

Passive Sampler

	Trap1	Trap2	Trap3	Trap4	Trap5	Trap6
Start date	23/10/12	24/10/12	29/10/12	6/11/12	8/11/12	23/10/12
End date	24/10/12	28/10/12	06/11/12	08/11/12	09/11/12	09/11/12
Total Vol (l)	13398	54589	112798	24952	12669	218414
Average flow rate (l/min)	9.33	9.48	9.79	9.81	9.81	9.69
Duration (days)	1	4	8	1.75	0.9	15.6

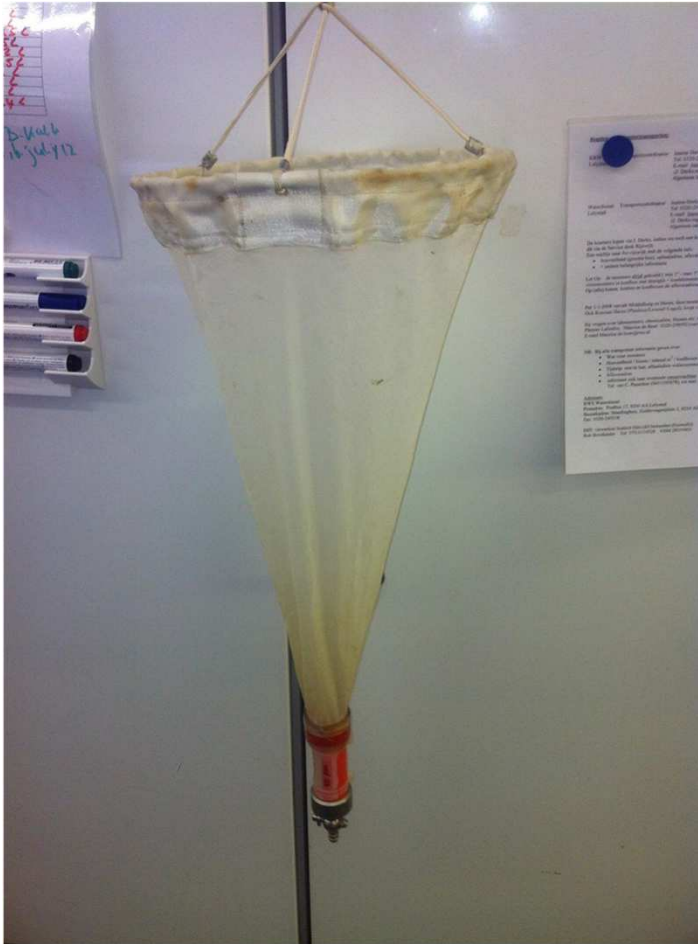
Exposure length (days)	8	16
	Water concentration in pg/L	
HCB	6.9	6.9
ΣCBs	85	88
ΣBDEs	64	31
ΣPAHs	12829	10733
Phenanthrene	604	594
Benzo[a]pyrene	39	29

Plankton/Litter Sampler



Cefas

Plankton/Litter Sampler



Thank you

Cefas