Objectives

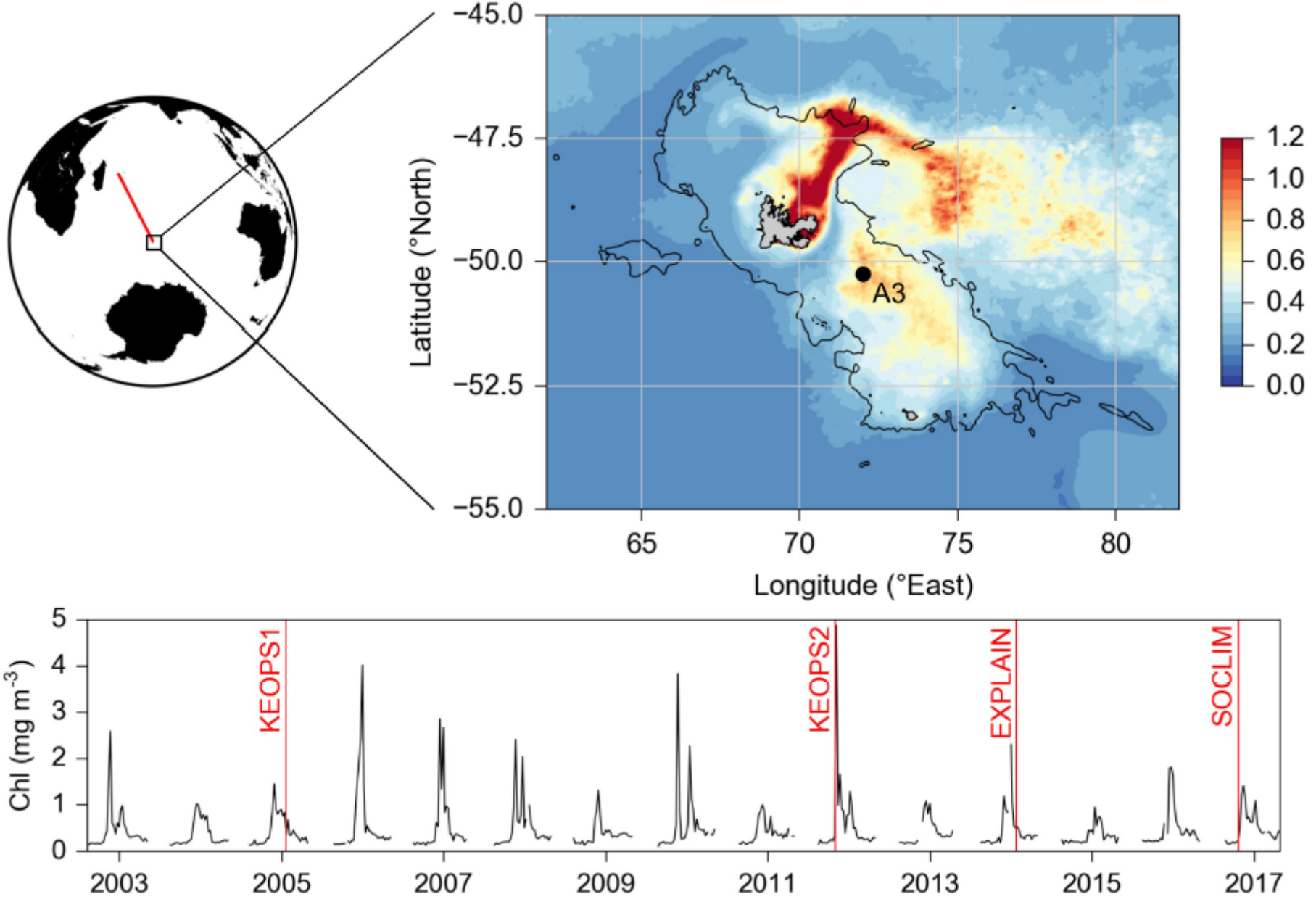
Intra Seasonal variability of carbon fluxes

Temporal Dynamics

Coupling between fluxes from air –sea interface to mesopelagic zone

Control fluxes by environmental factors

Role of ecological vectors


−45.0
−47.5
−50.0
−52.5
−55.0
Latitude (°North)
65
70
75
80
Longitude (°East)
A3
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Chl (mg m-3)
5
4
3
2
1
0
KEOPS1
KEOPS2
EXPLAIN
SOCLIM
2003
2005
2007
2009
2011
2013
2015
2017

Strategy

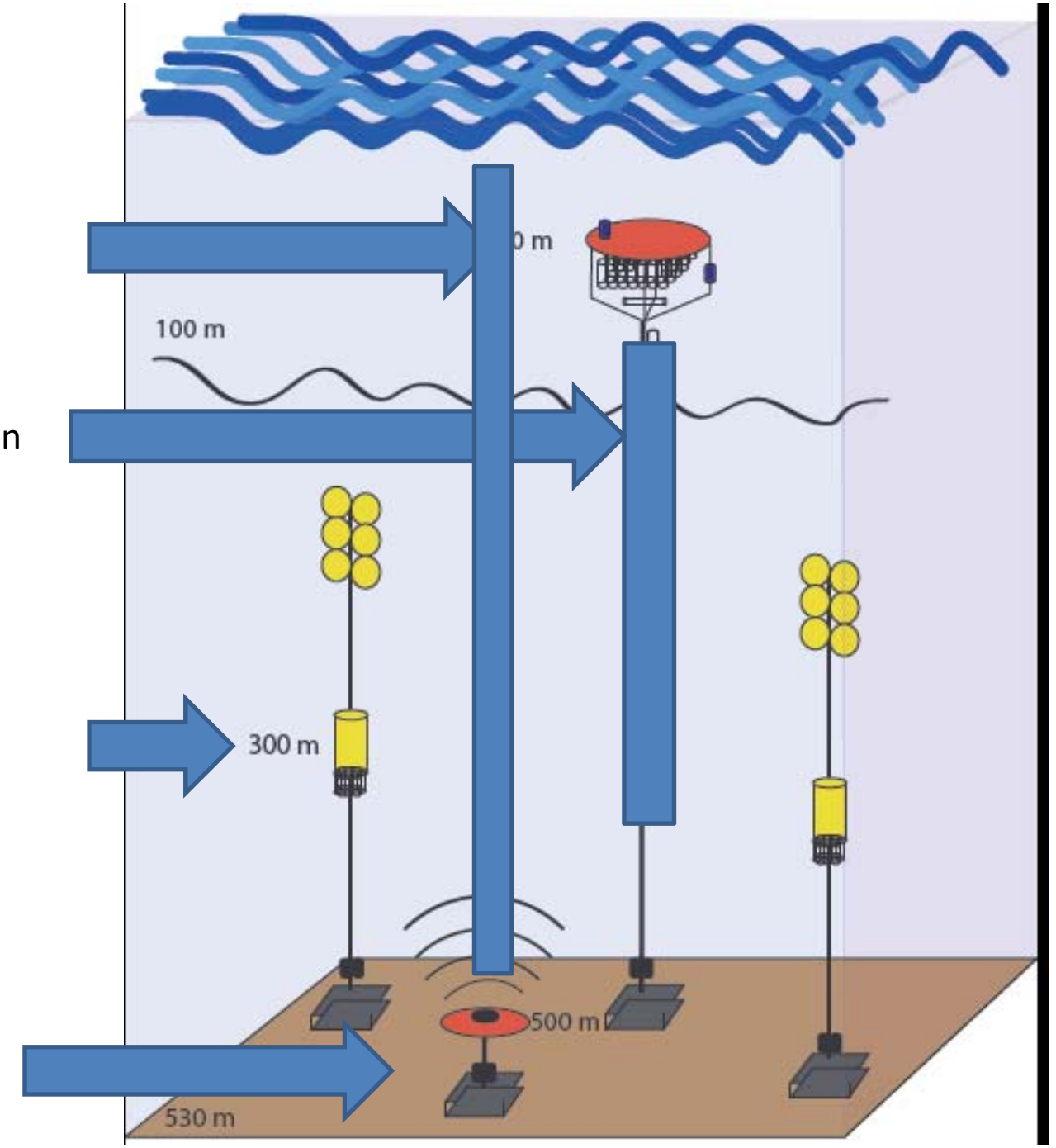
4 Moorings

40 m Mixed layer

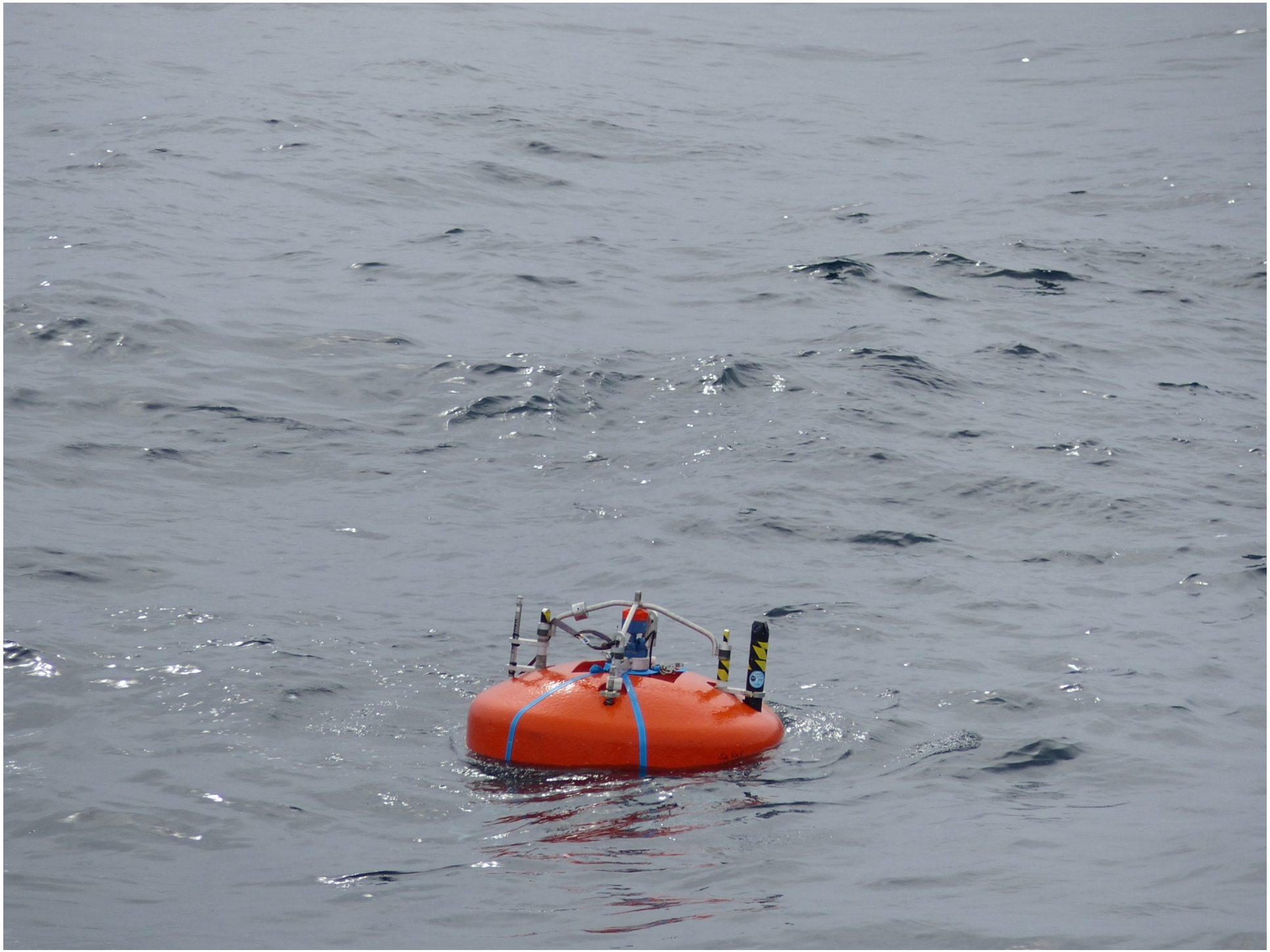
Water column

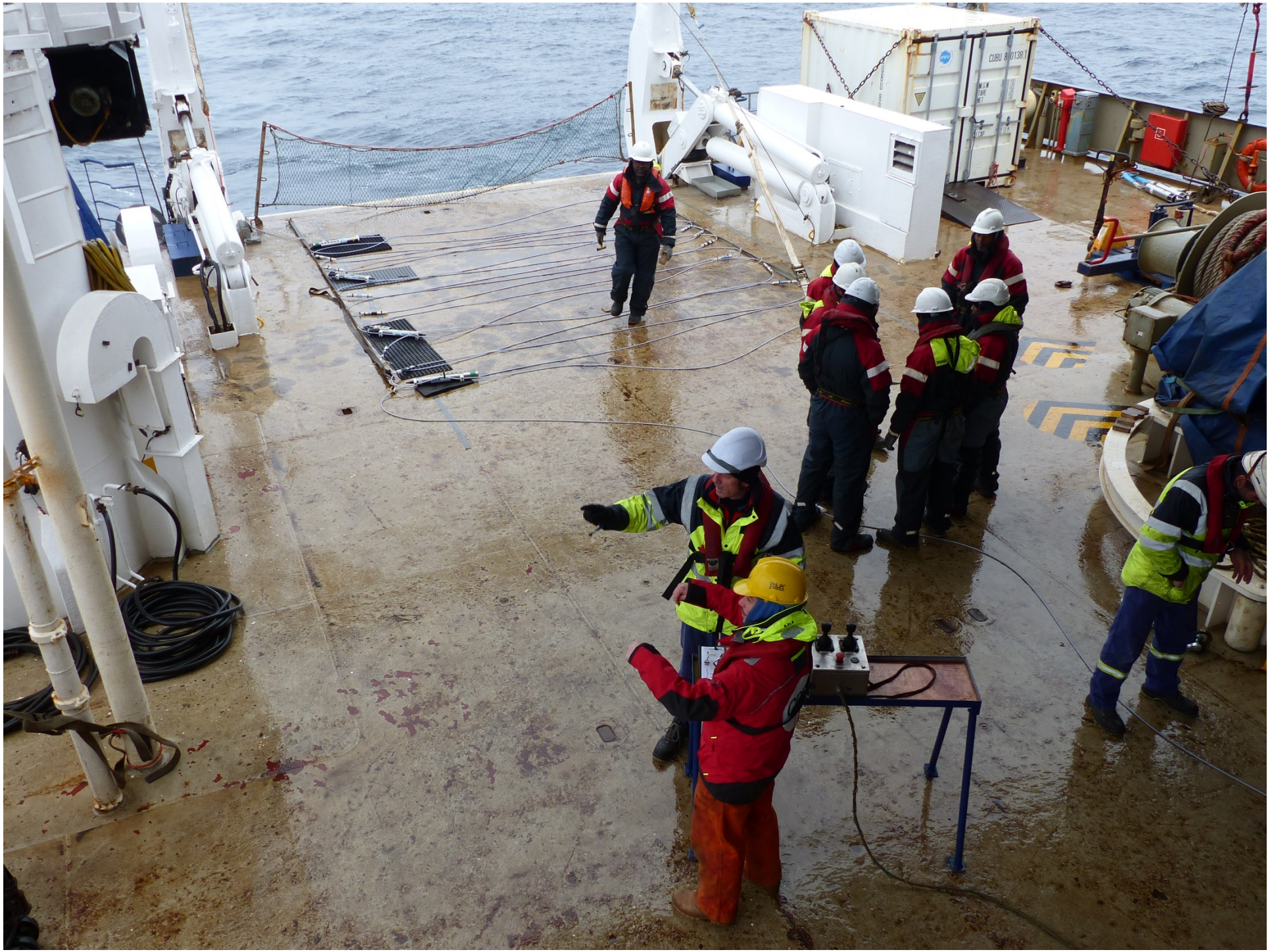
300 m

Water column ADCP

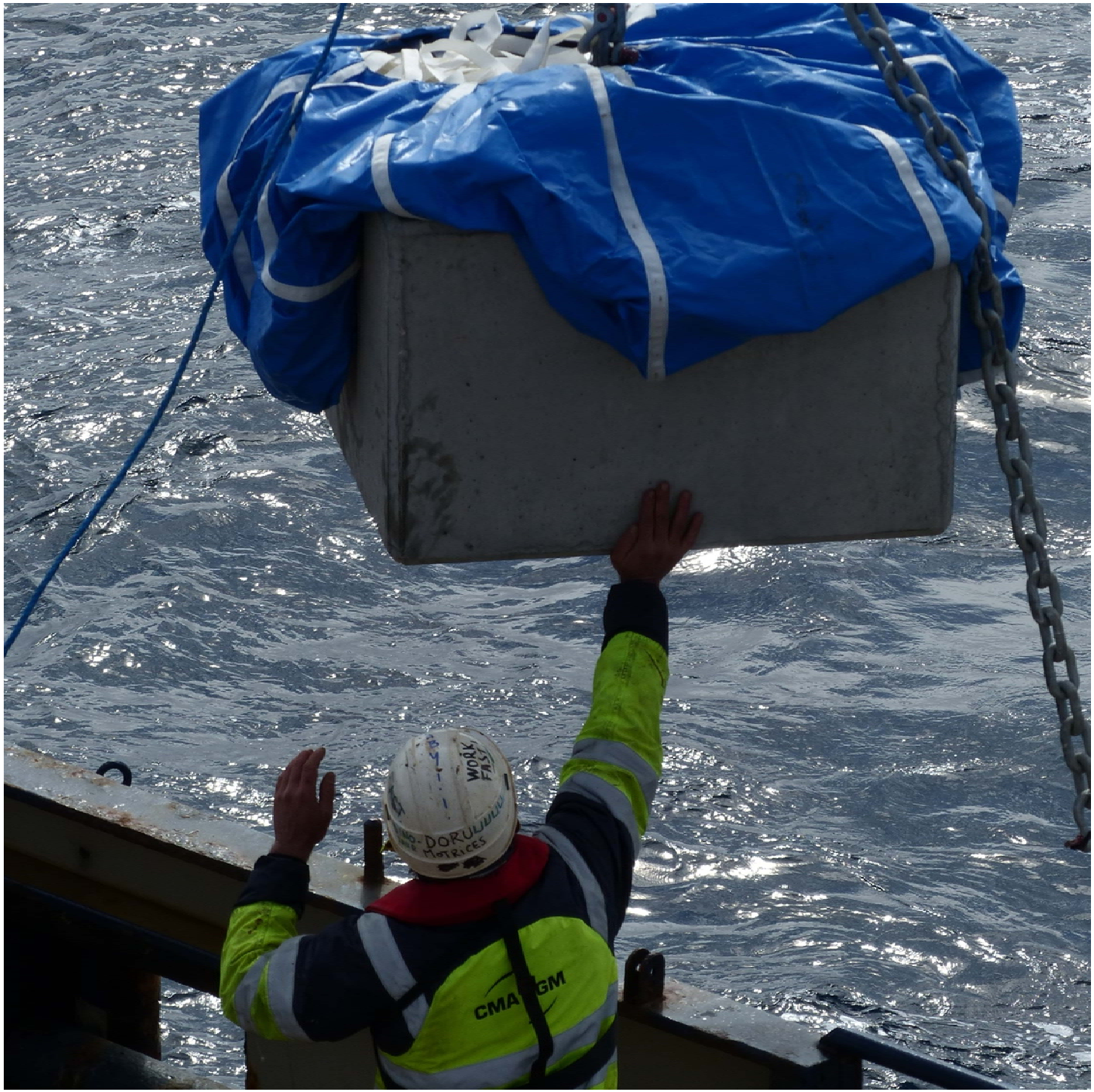


OCTOBER 2016



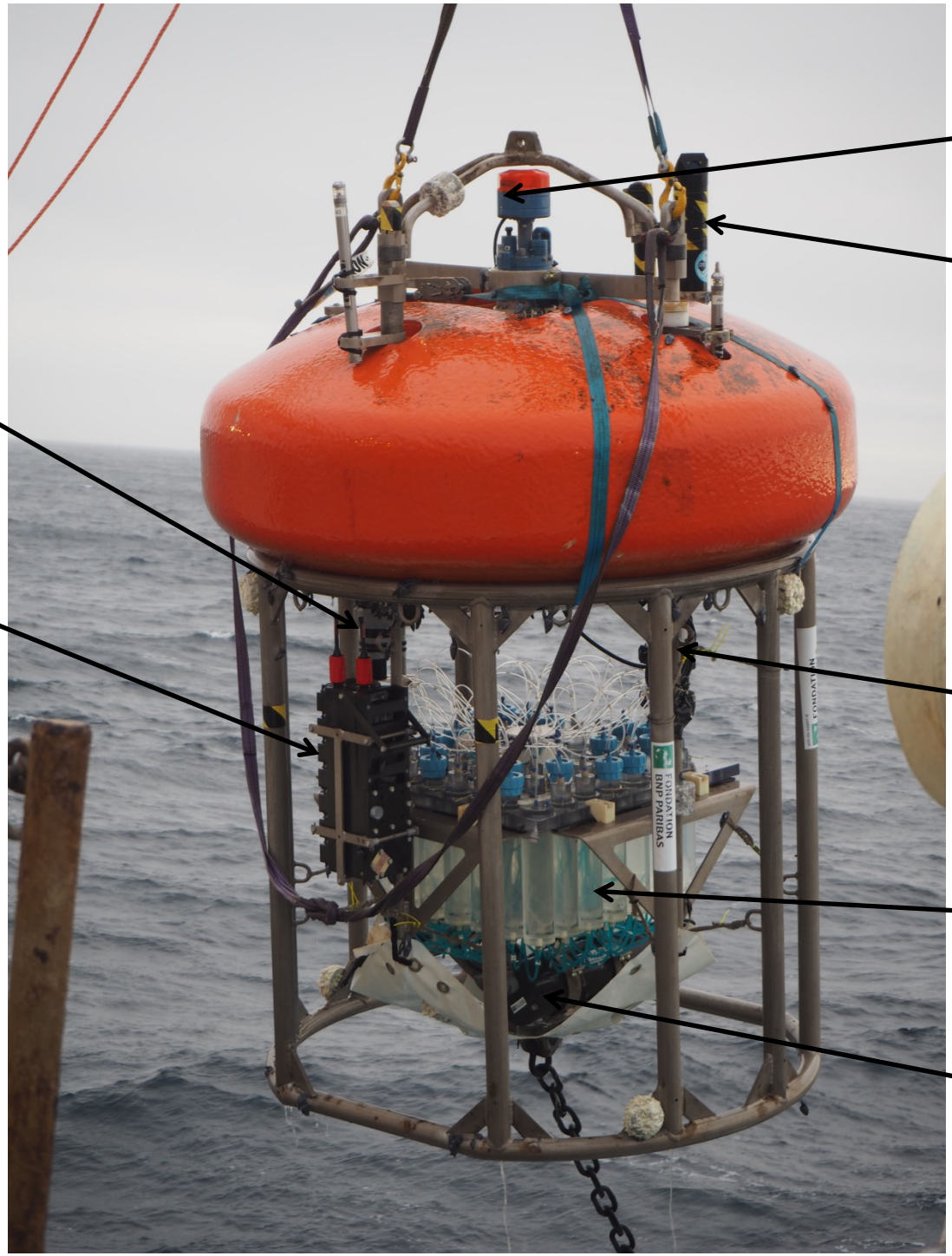



CMA CGM
CMA CGM

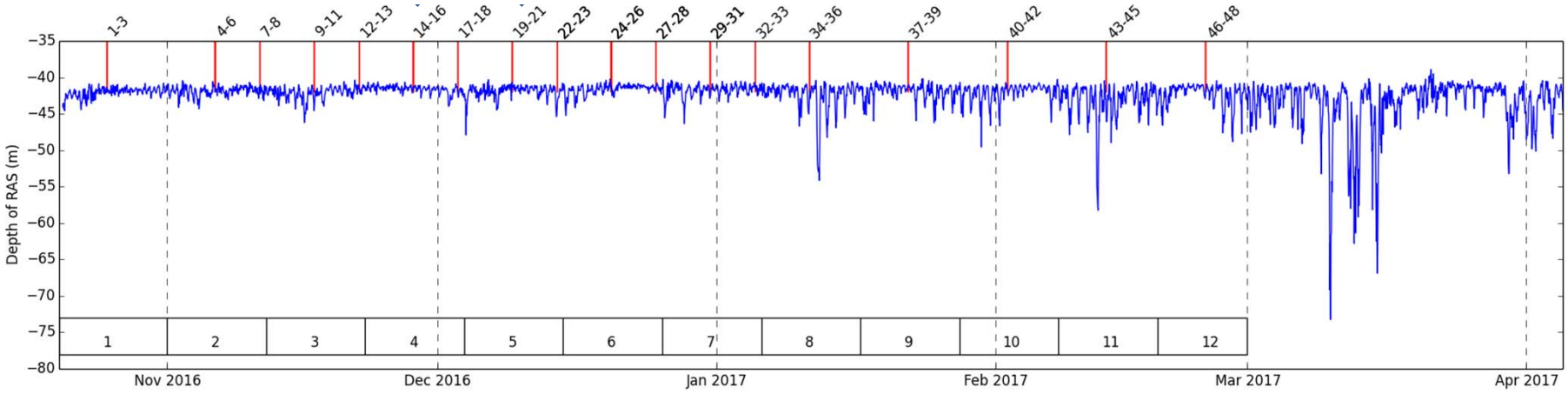

WORK
FAST
CMA CGM


SOCLIM

4 April 2017

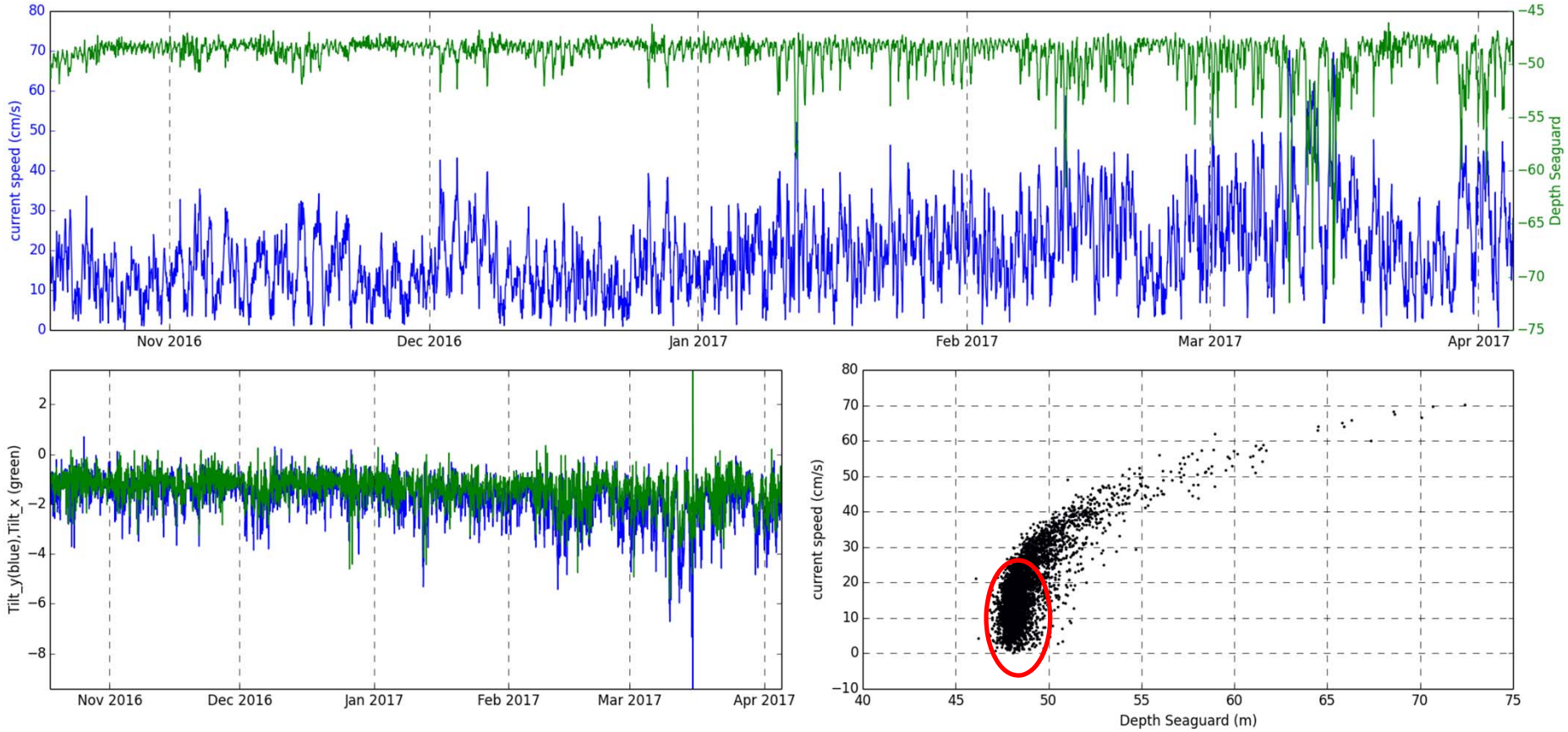

U,V
U,V
Turbidity, fluo
T, pCO_2
T, O_2
RAS
T,S,P,fluo

Depth of RAS



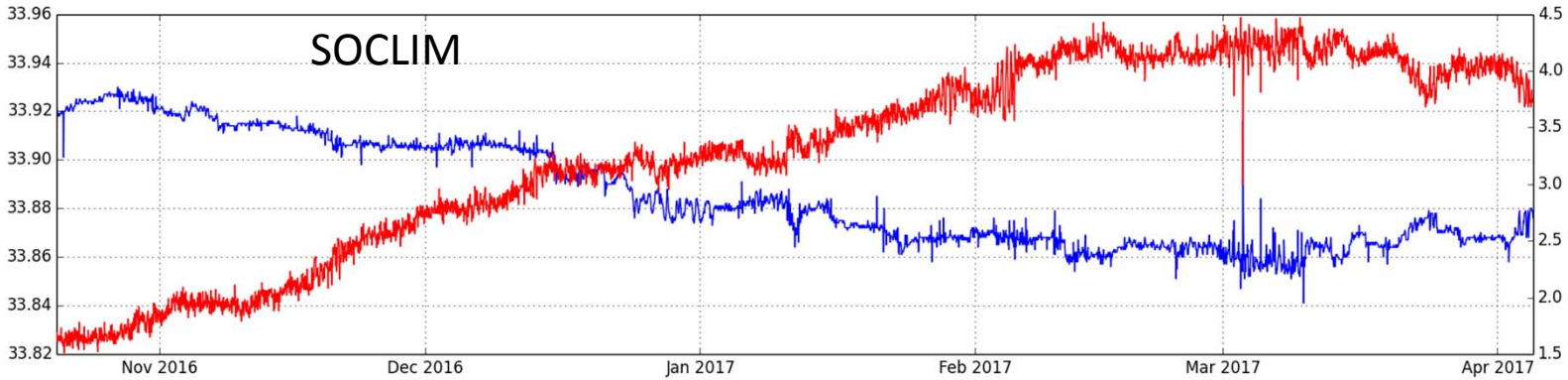
Oscillations are mainly due to tides

Current speed & direction and behavior of the RAS mooring



The causes of the increase in current speed need to be elucidated (storms?)

Temperature and salinity

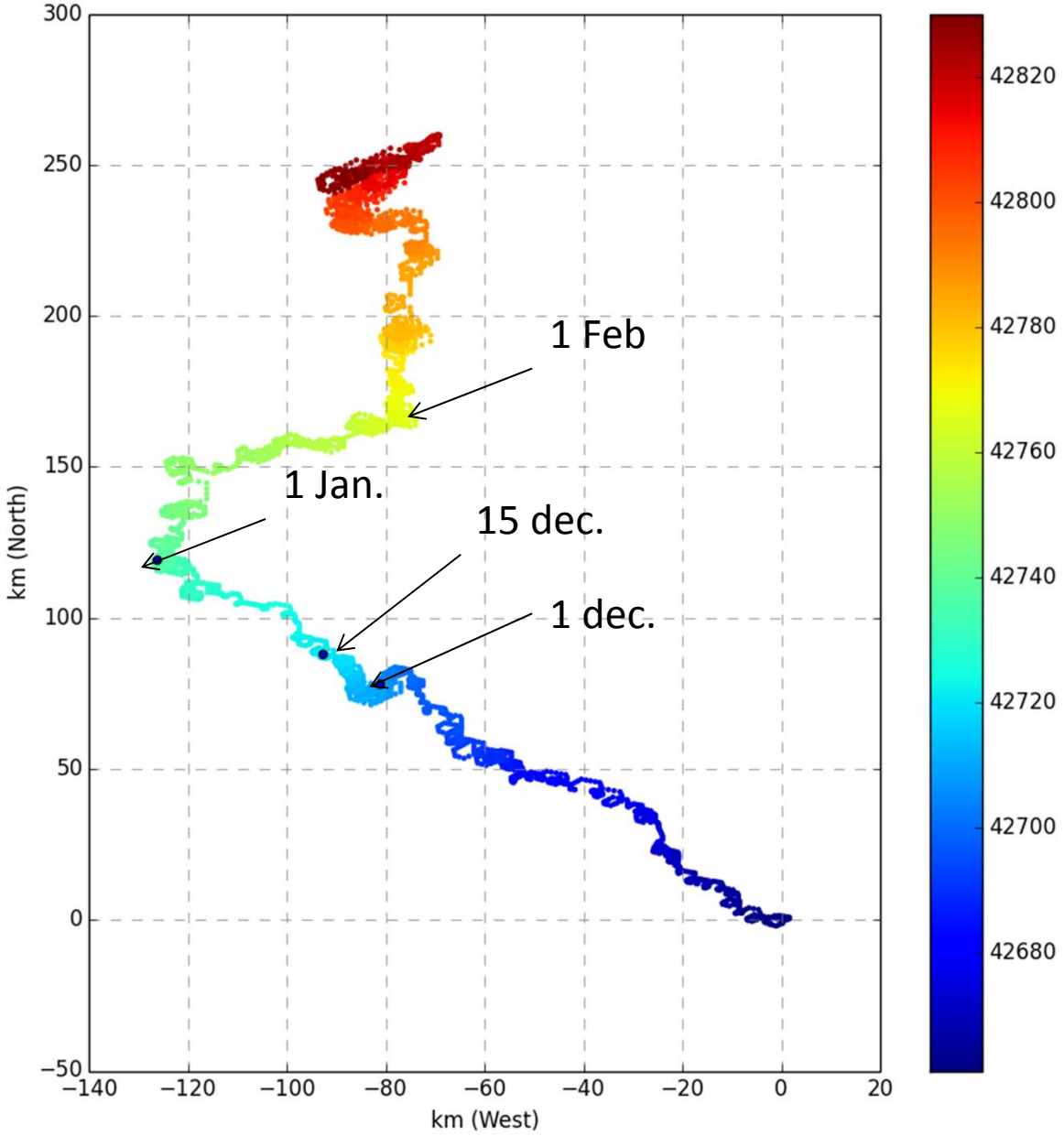


!!!
Calib
-0.4°C

Decrease of salinity : why?

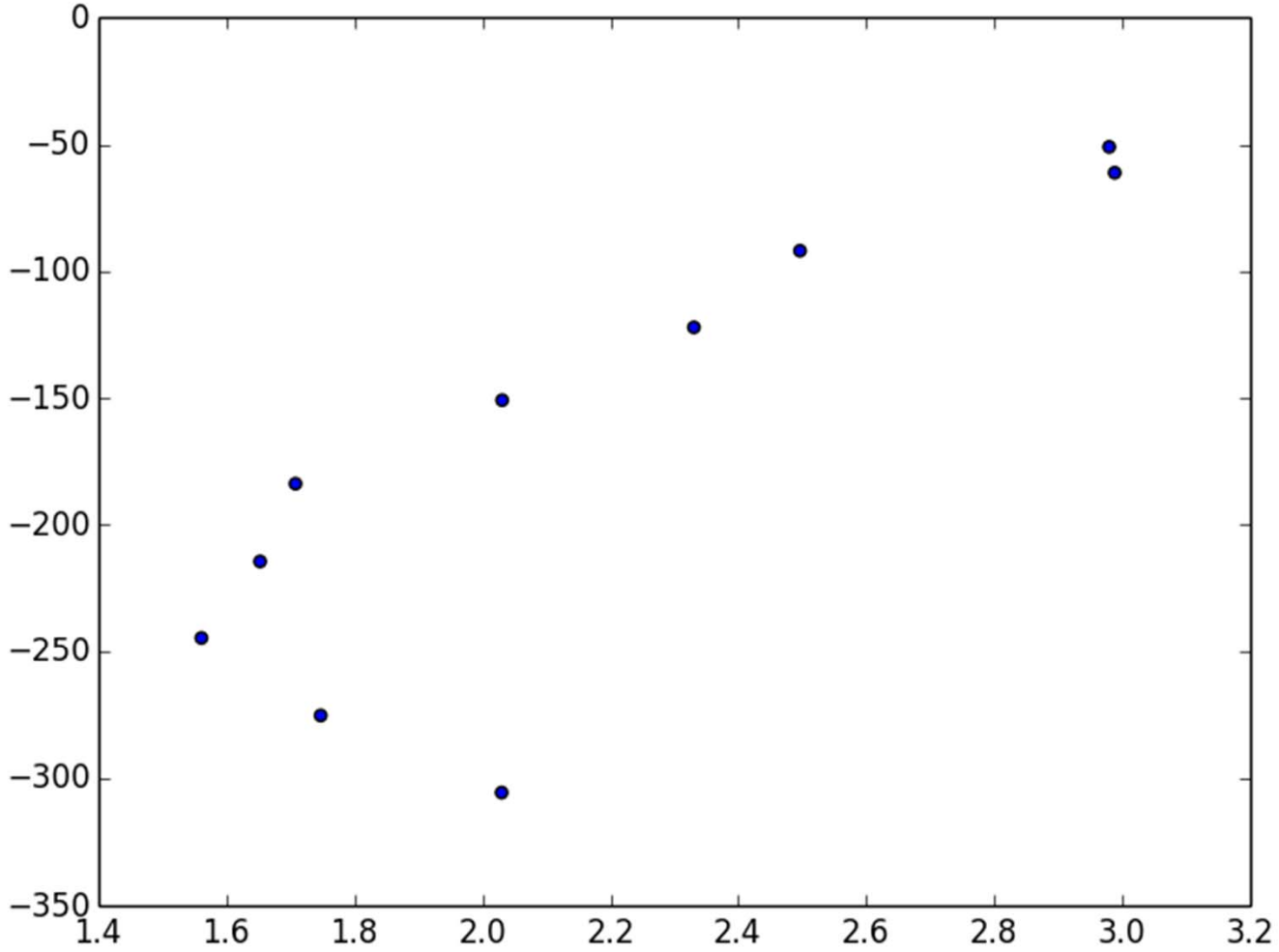
Direction of currents

Progressive vector at A3 (42 m)

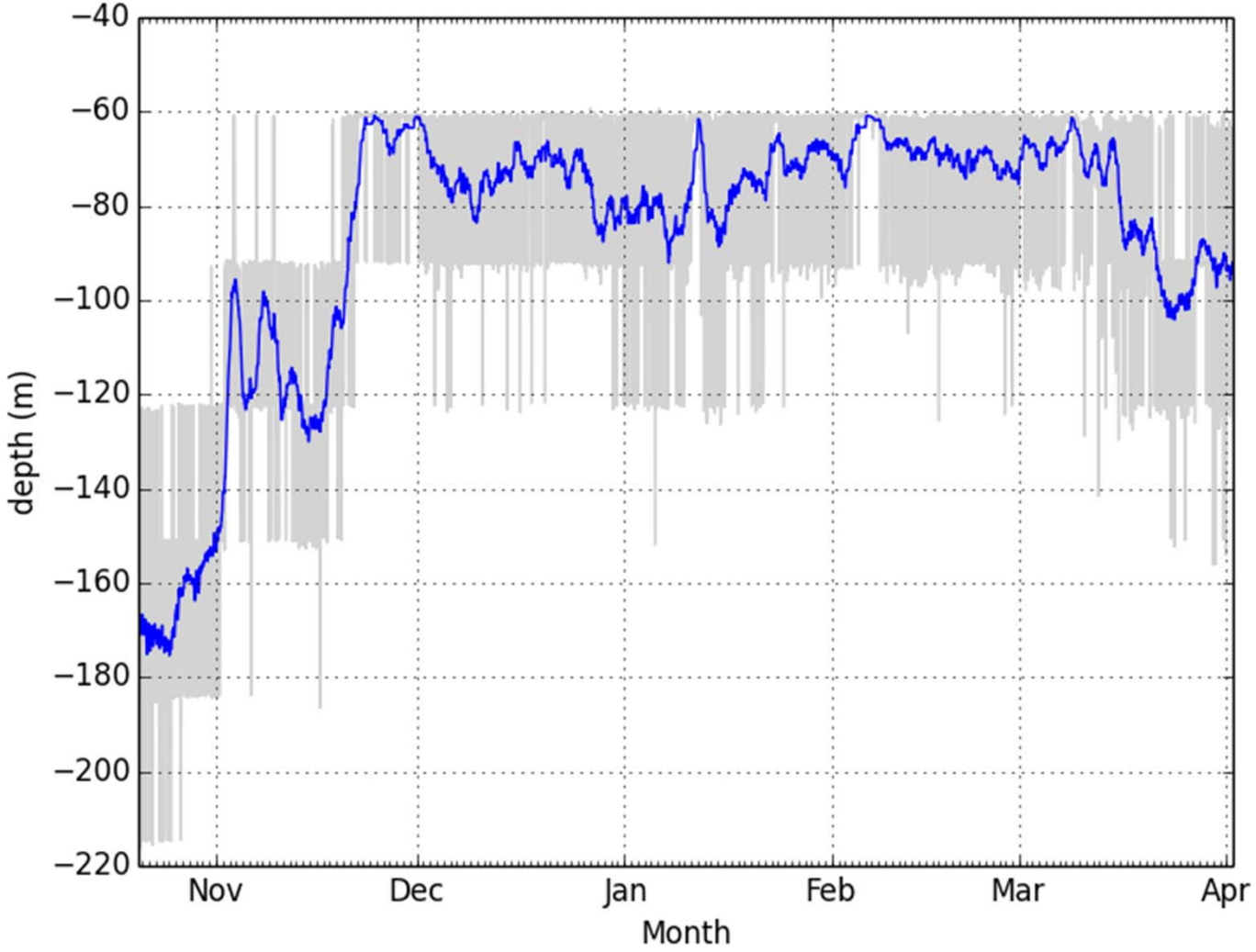


Dynamics of mixed layer depth

7850 profiles with a temporal resolution of 30 min
between 2016-10-20 10:00:00 et 2017-04-01 22:30:00



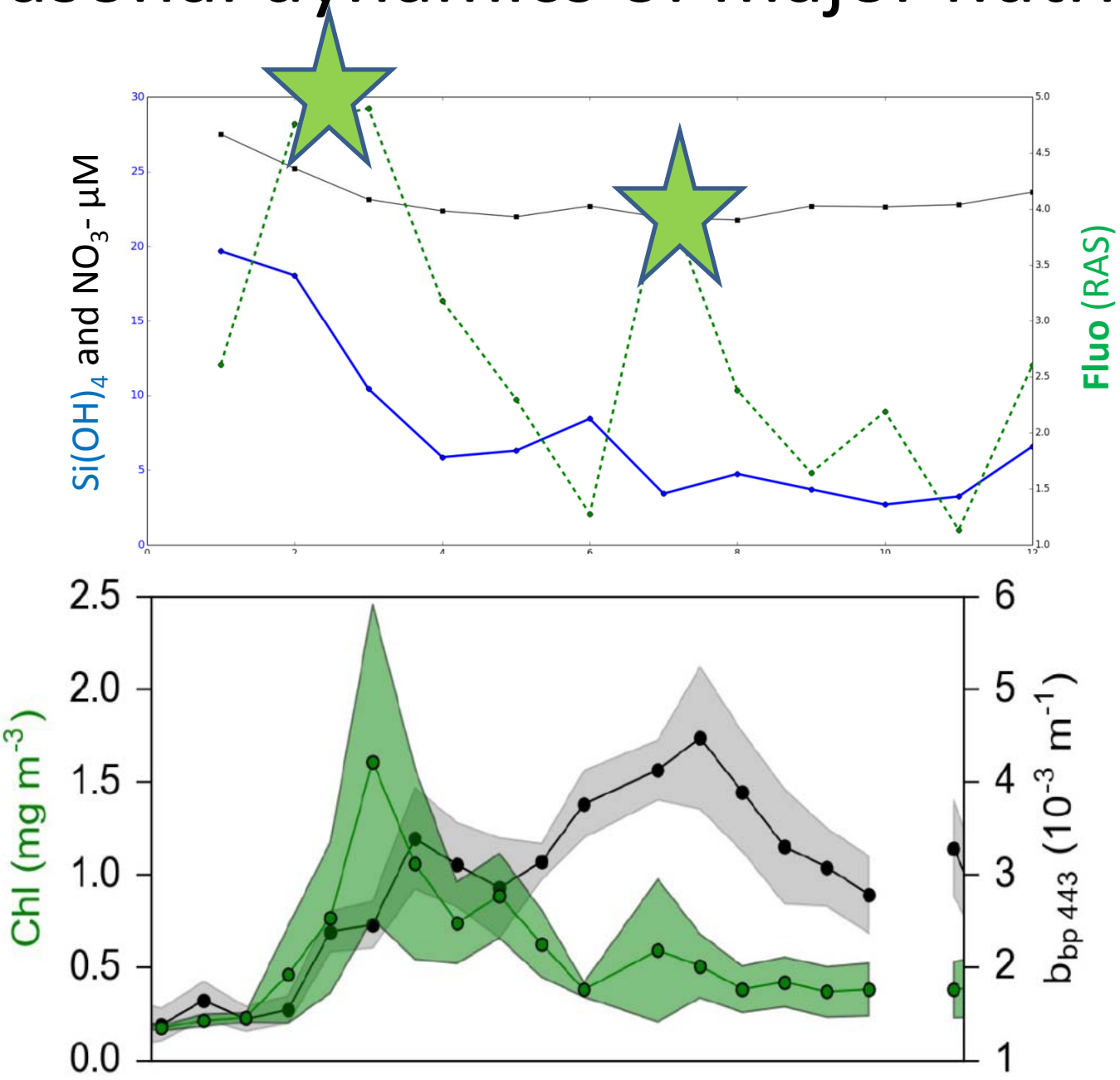
Dynamics of mixed layer depth



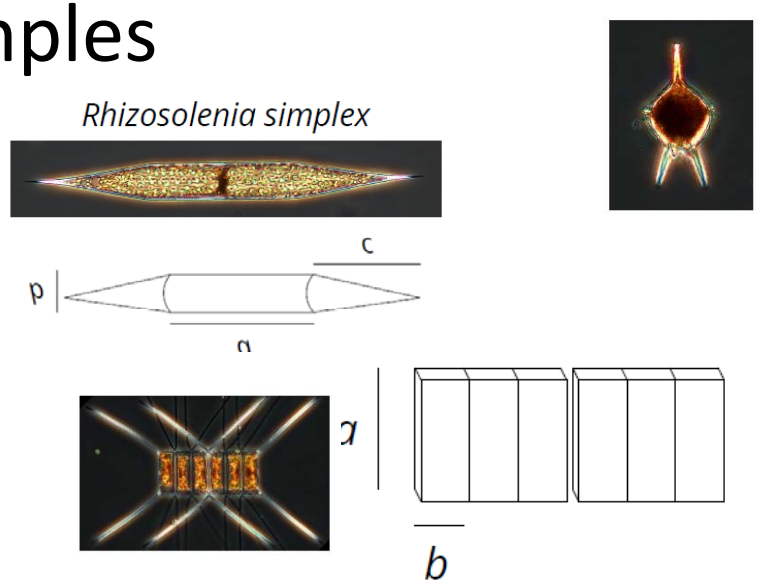
Mixed layer depth (0.03 kg/m3 criteria).

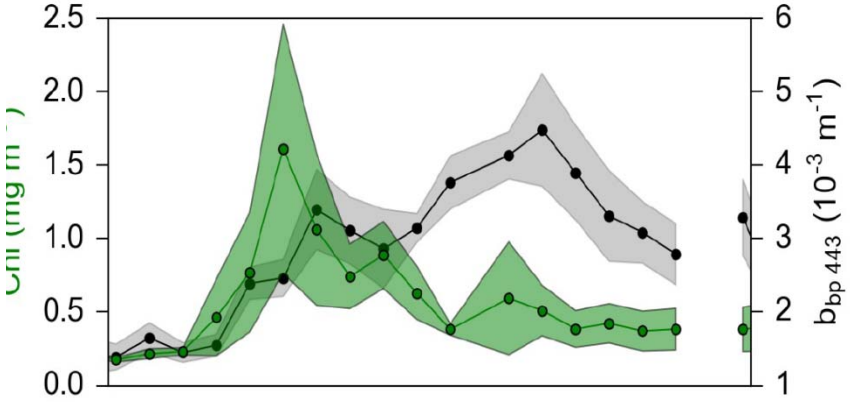
In blue : moving average with a window of 26 h (removing of tidal signal)

Intra-seasonal dynamics of major nutrients

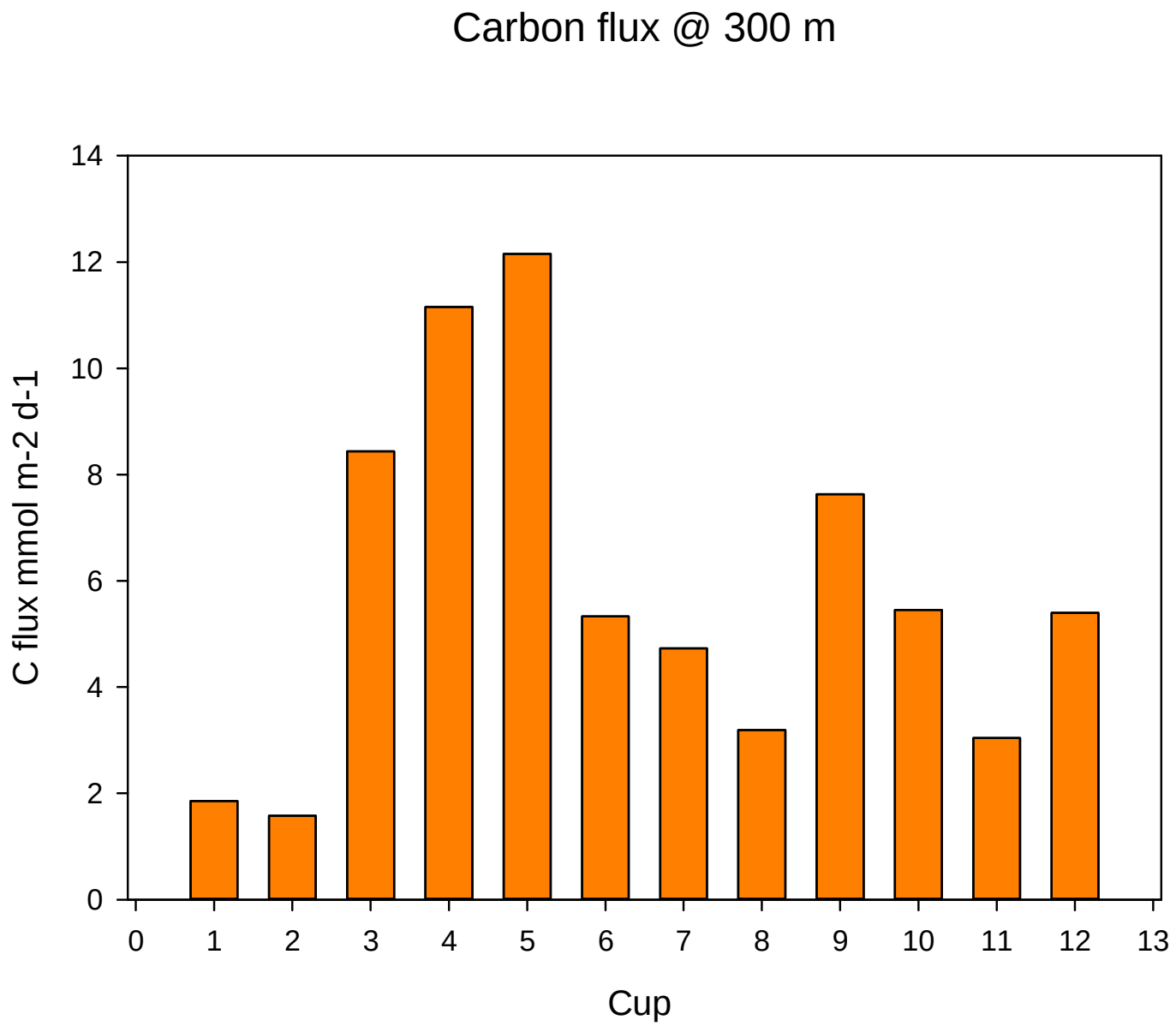


Diversity of diatoms in RAS samples

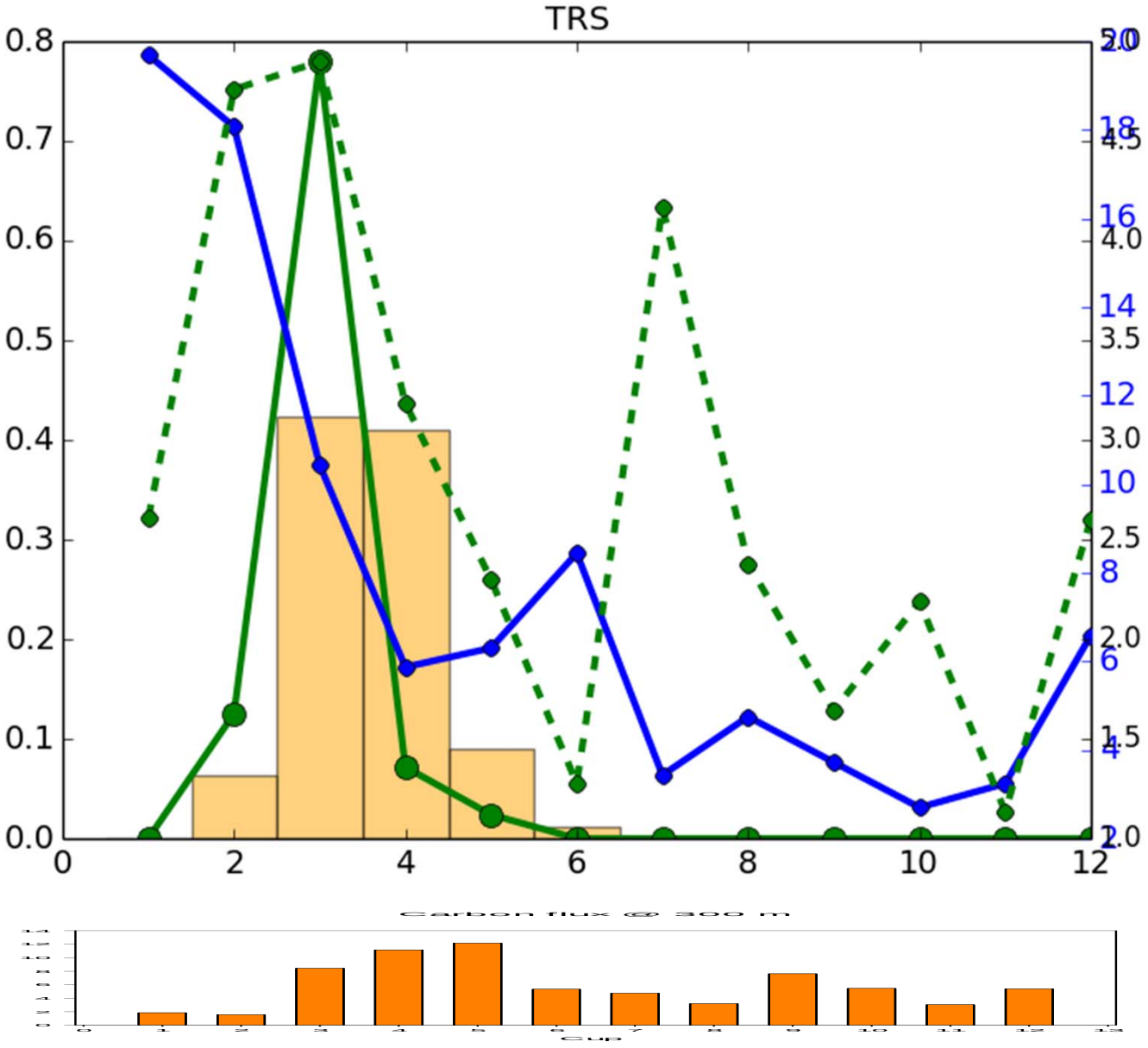




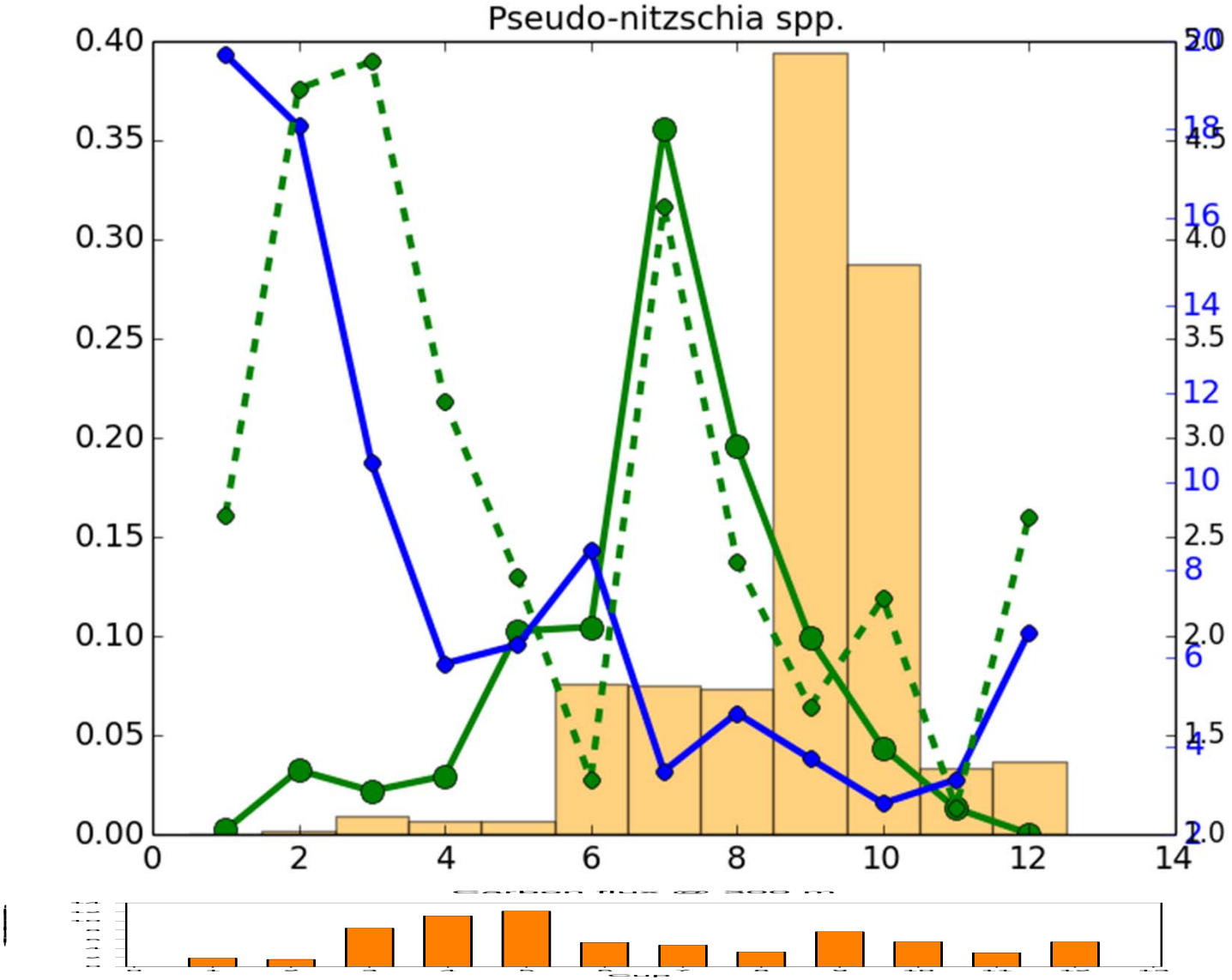
Export of carbon



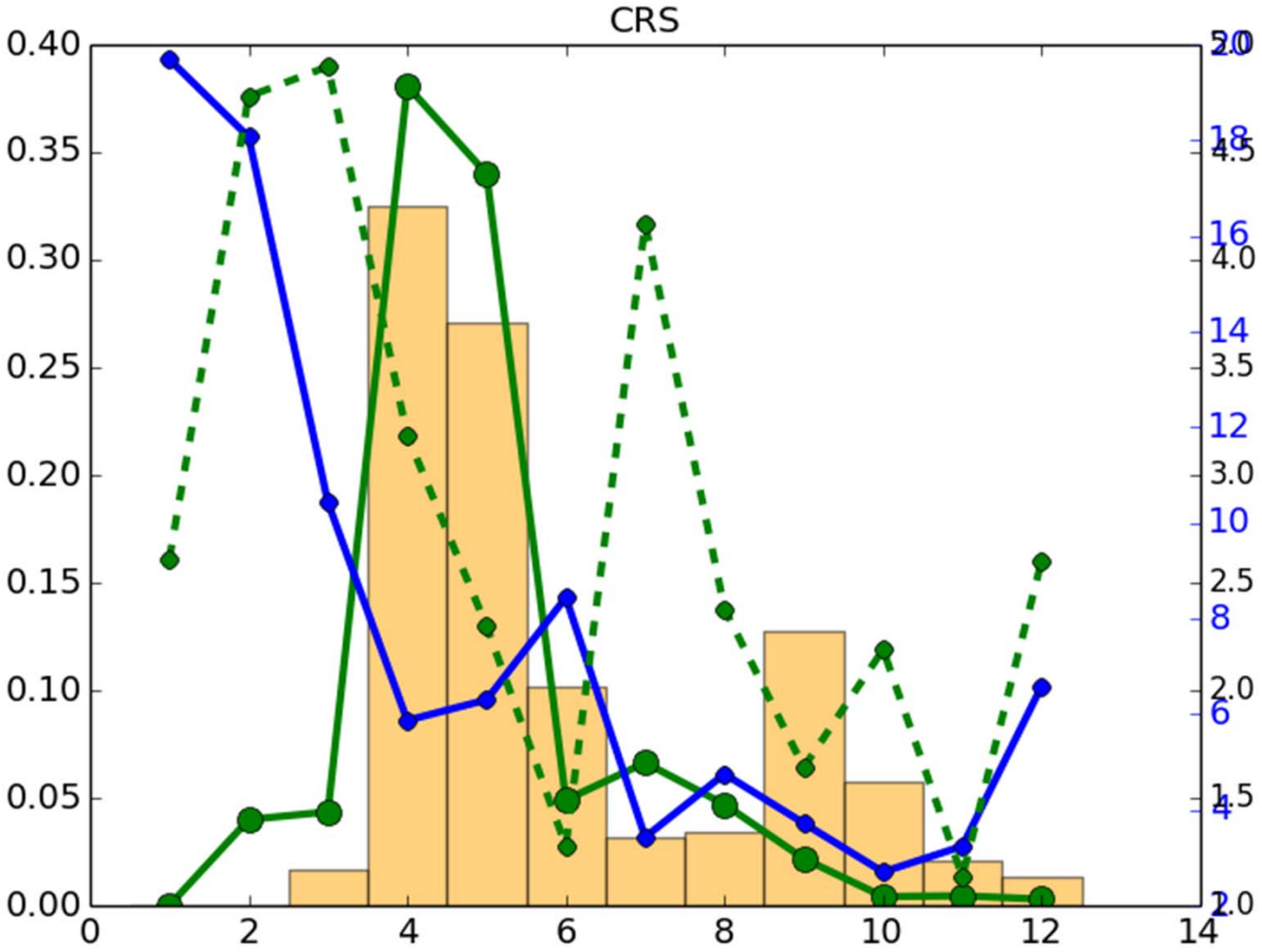
Intra-seasonnal variablity of diatoms stock and export flux



Intra-seasonnal variablity of diatoms stock and export flux



Intra-seasonnal variablity of diatoms stock and export flux



That’s it for today