有明海の赤潮の大規模化

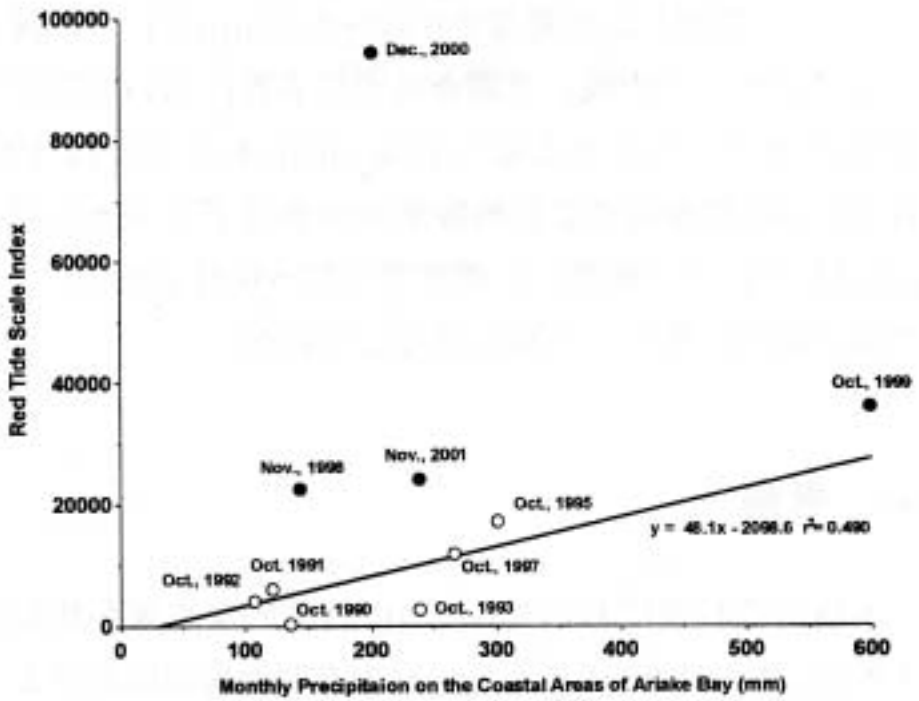
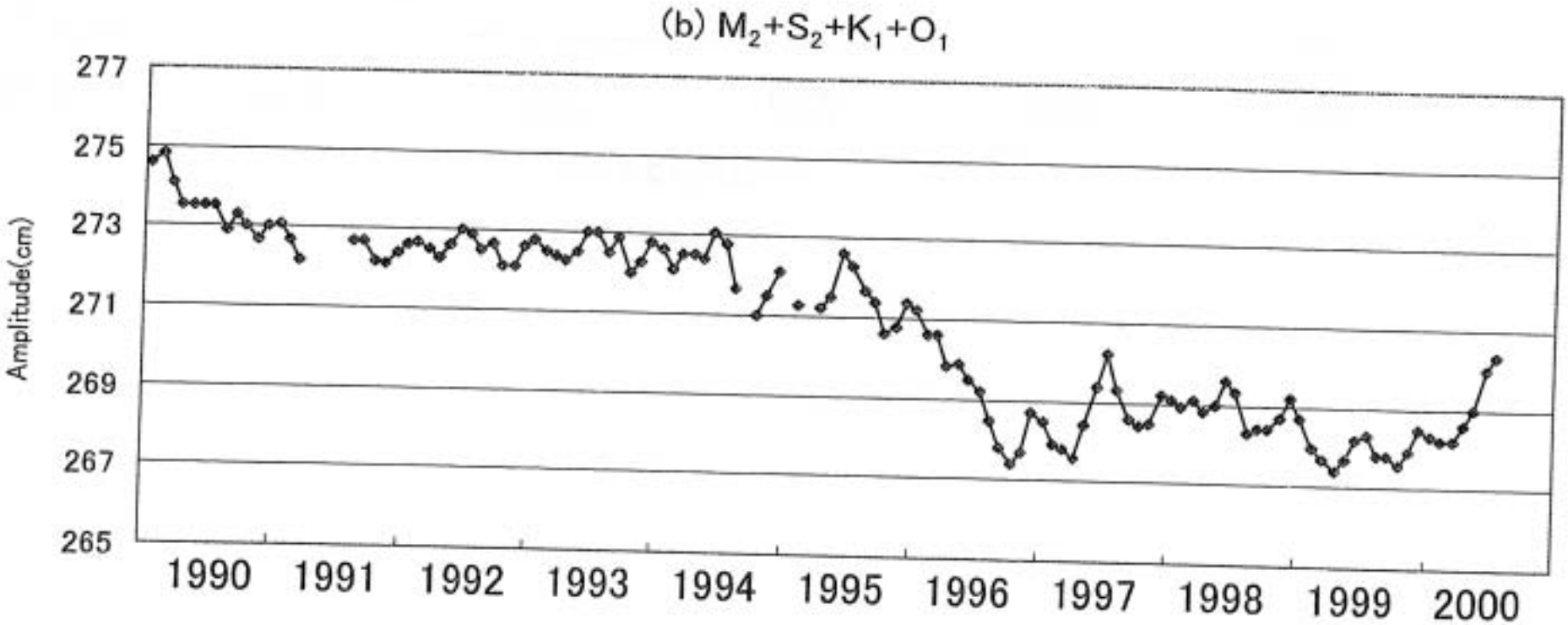


Fig. 10. The relationship between mean precipitation within thirty days before red tide blooming at four different places in the coast of the innermost areas of Ariake Bay and red tide scale index.

堤ら (2003)

潮汐・潮流振幅の減少



柳・塚本（2004）

透明度の増加

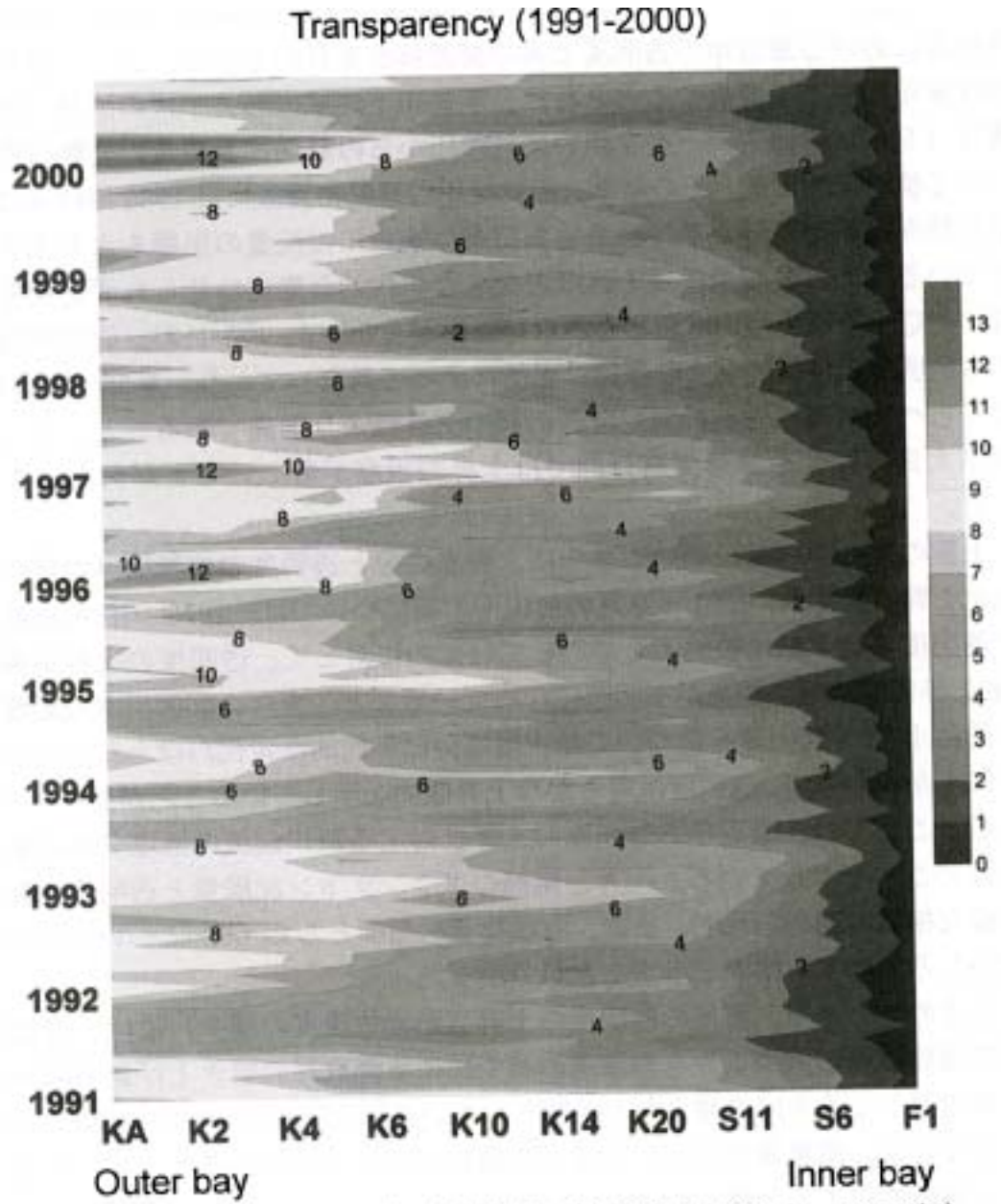


図 1-1　有明海縦断面における透明度の経年変化（1991 年～2000 年）

中田･野中（2003）

水柱全体の成層度の減少

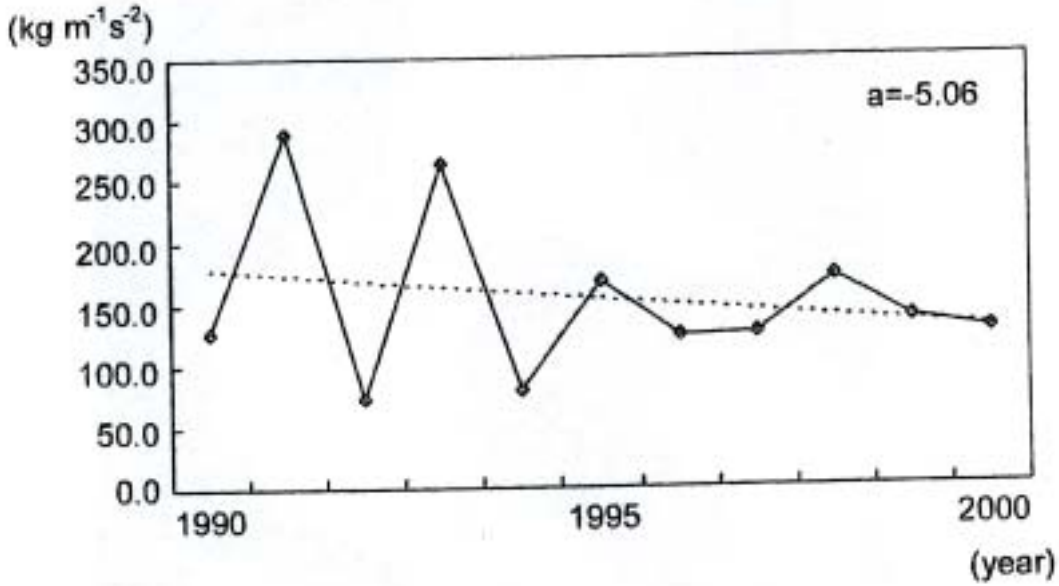
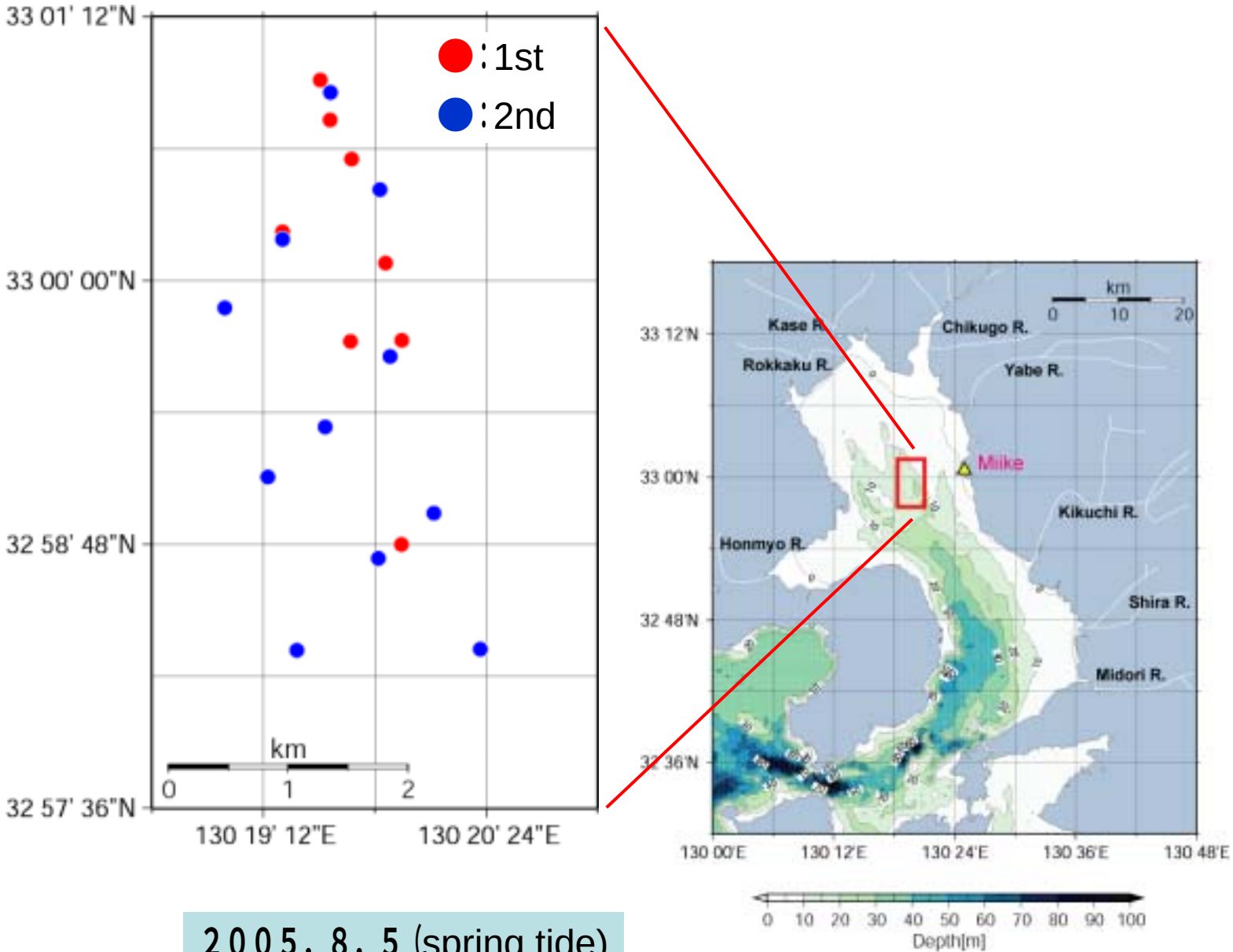


Fig. 5. Year-to-year variation in the averaged stratification parameter during June, July and August from 1990 to 2000 in Ariake Bay.

夏季の河川流量減少･風速大による蒸発量の増大

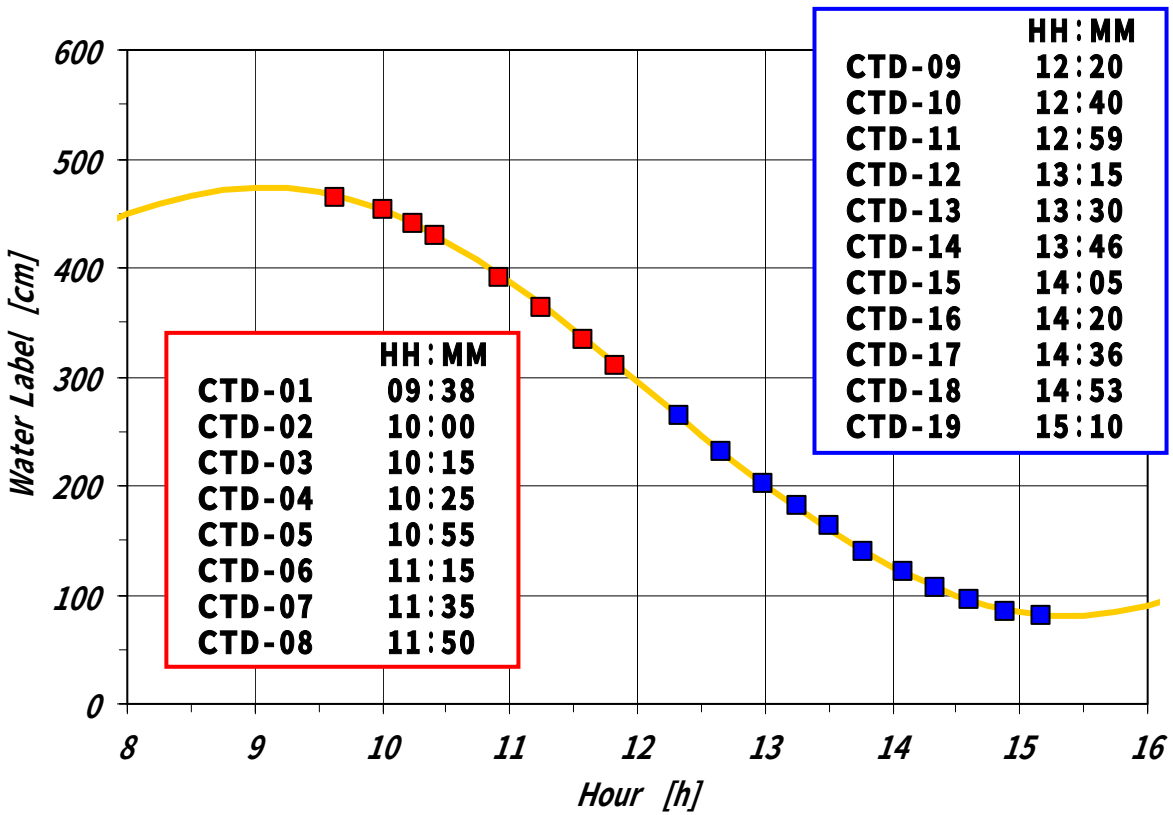
柳･下村 (2004)

筑後川河口域における
表層低塩分水塊の挙動

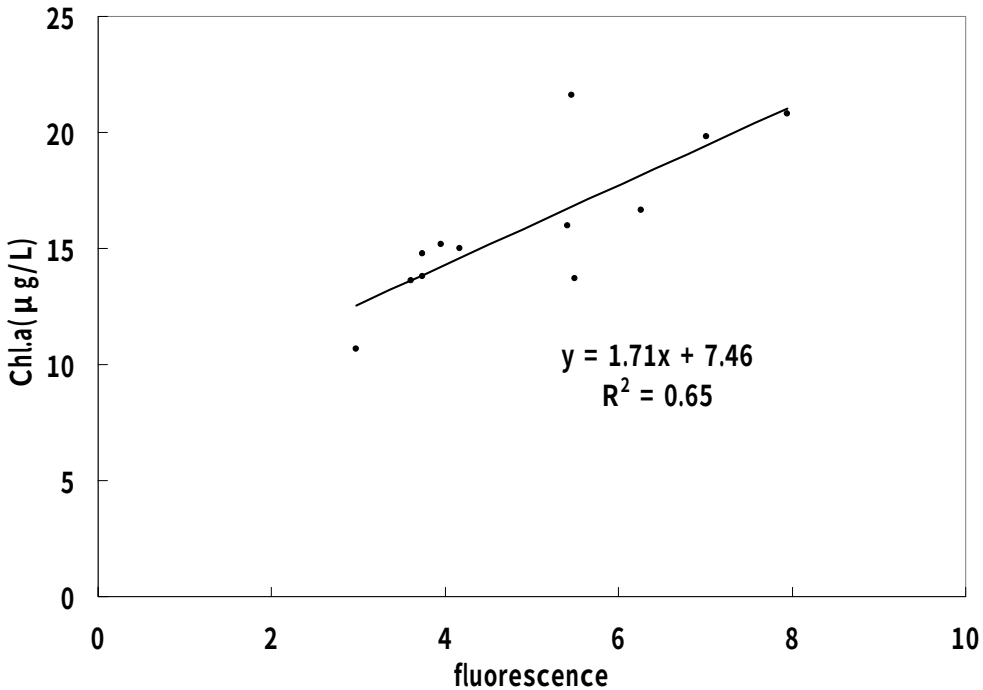


2005. 8. 5 (spring tide)

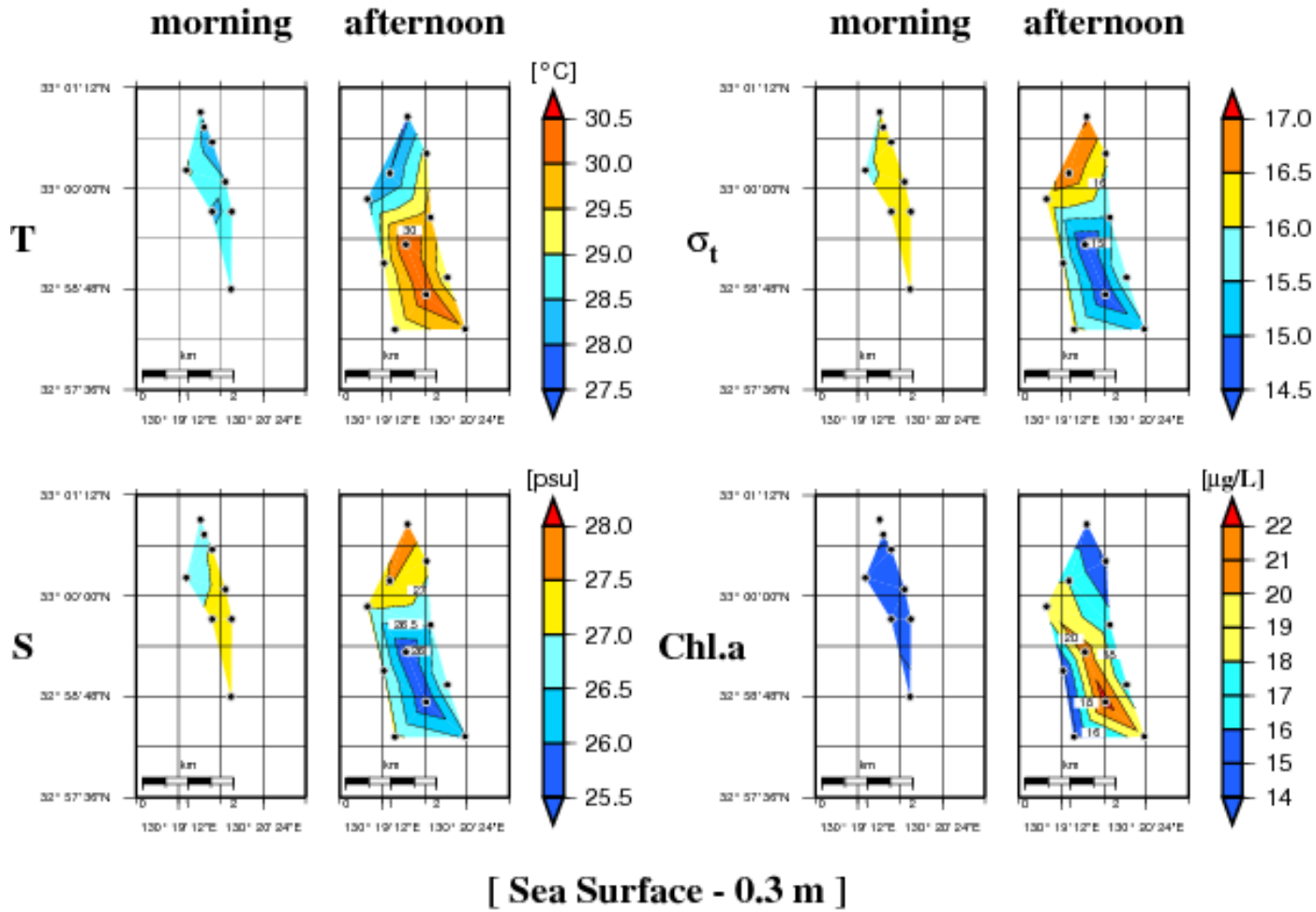
2005/08/05　**三池** (Miike)　**大潮**



蛍光ーchl.a

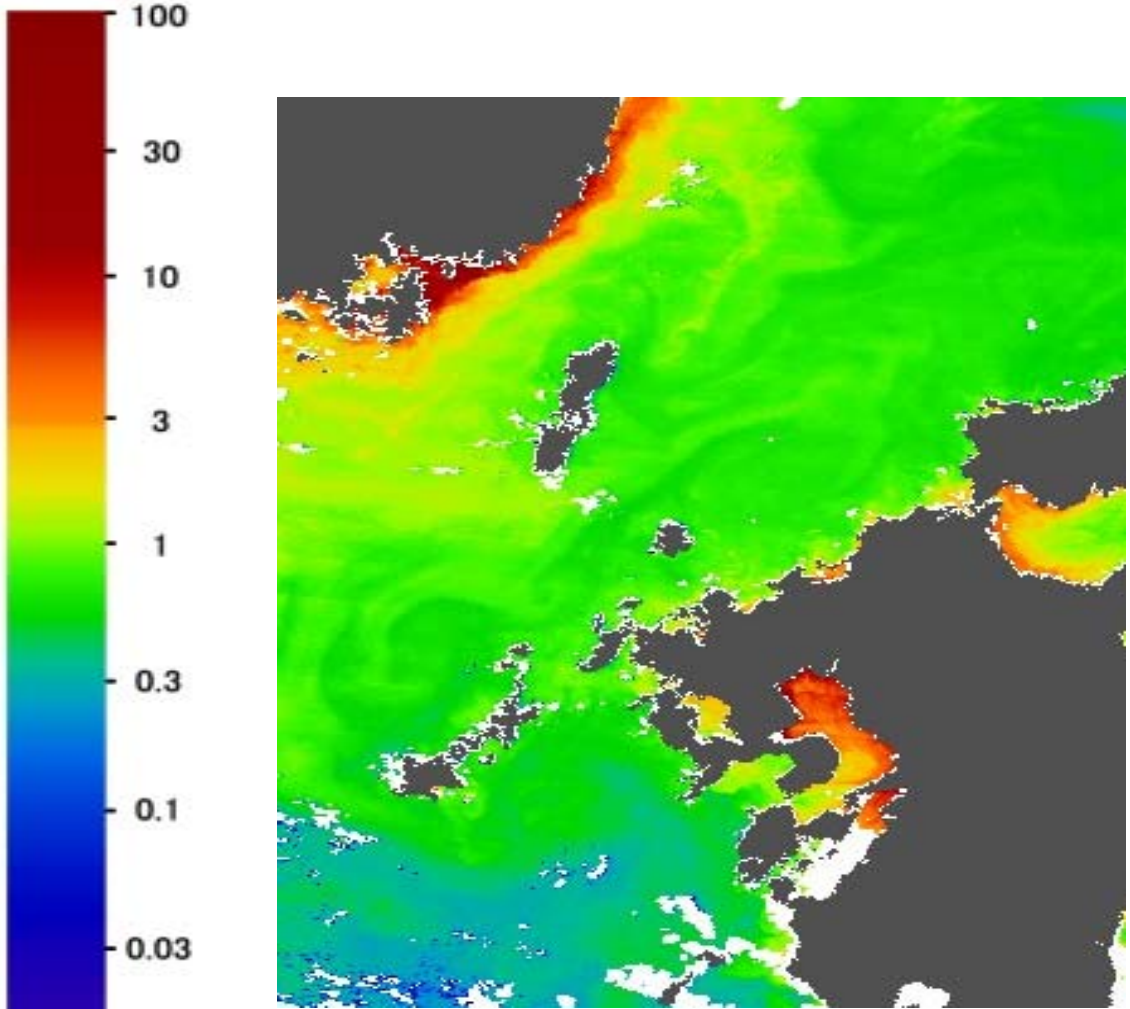


Horizontal distributions



[Sea Surface - 0.3 m]

TERRA/ **MODIS**

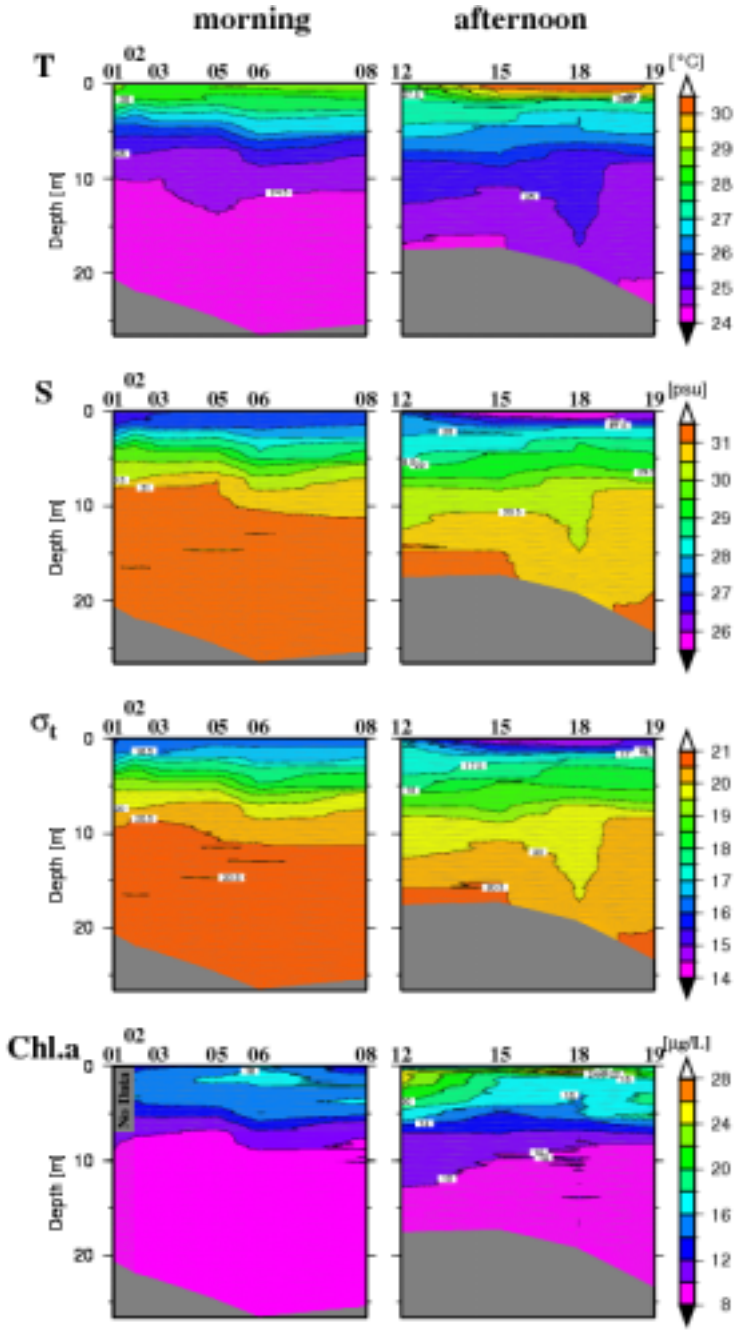


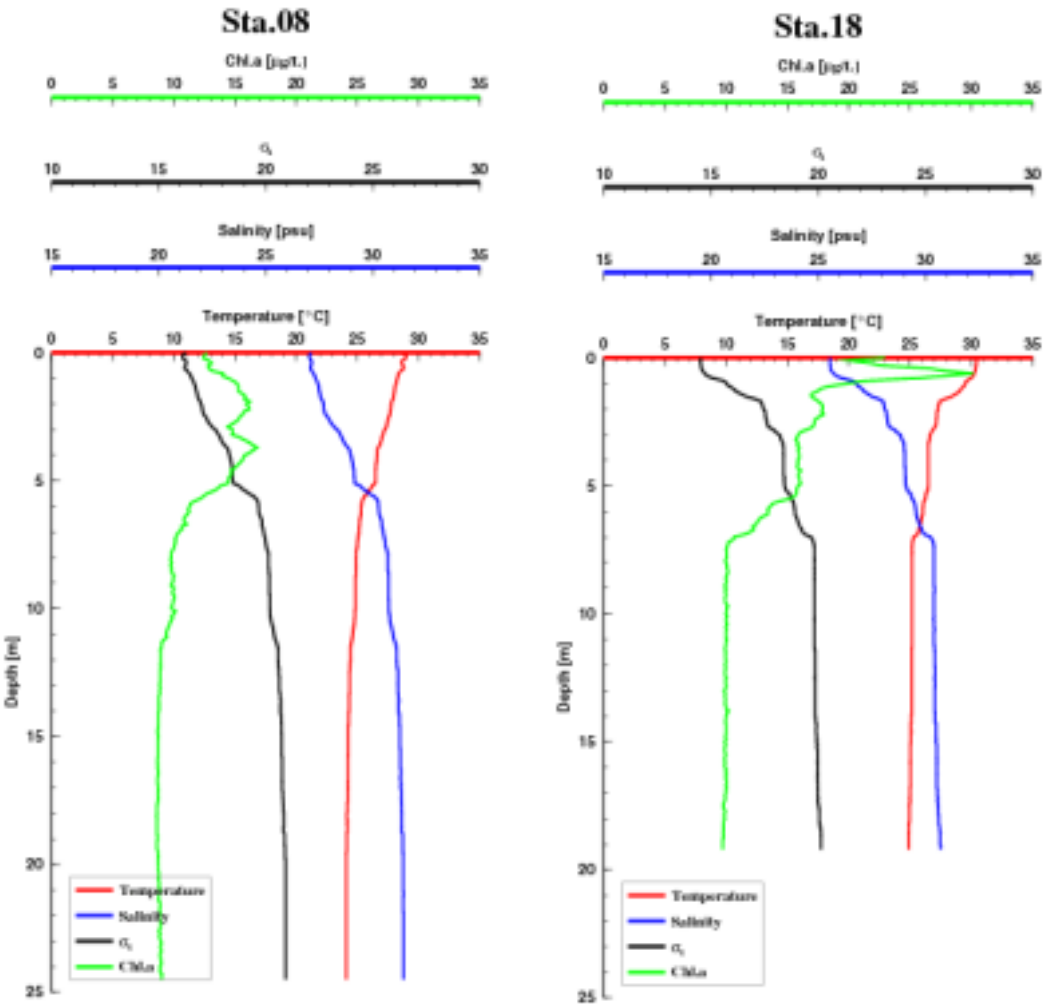
Processed by JAXA

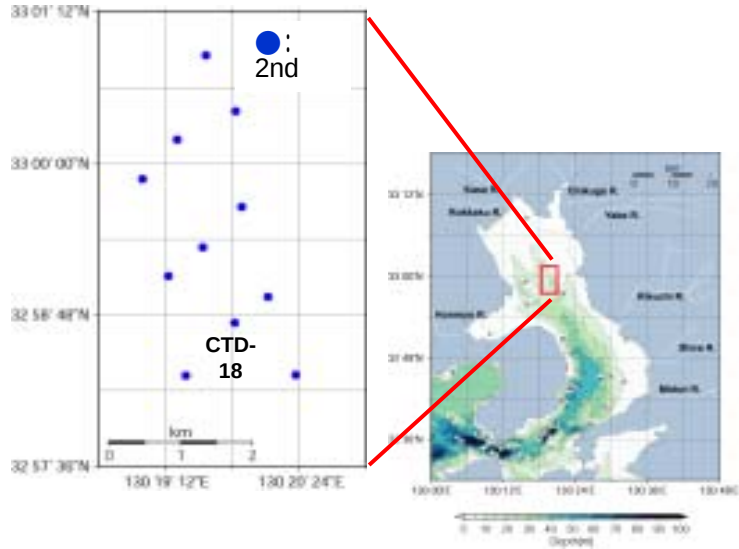
10:59am 5 Aug.2005

1 km resolution

Vertical distributions



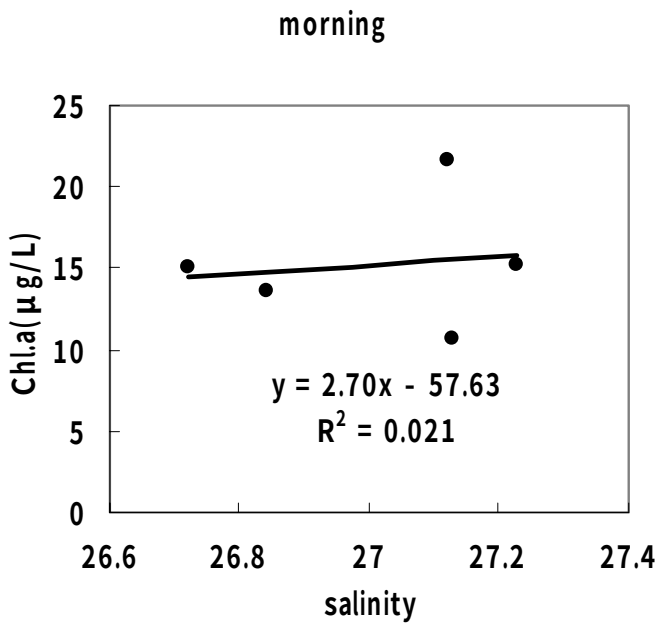


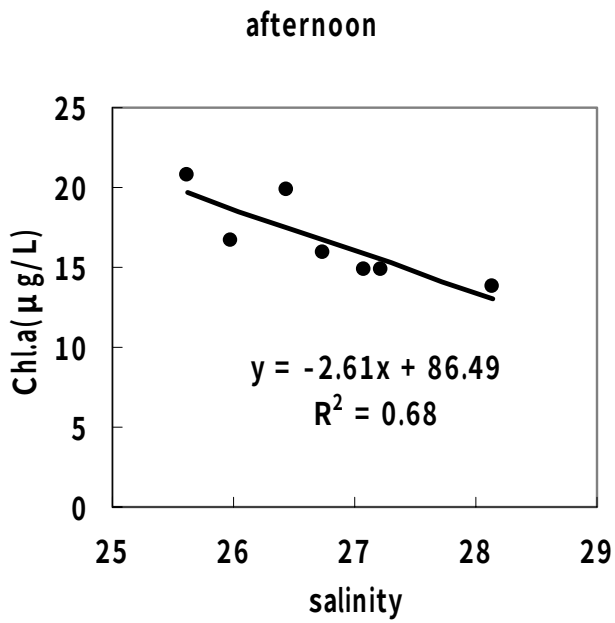


AM：chl.a; double peaks

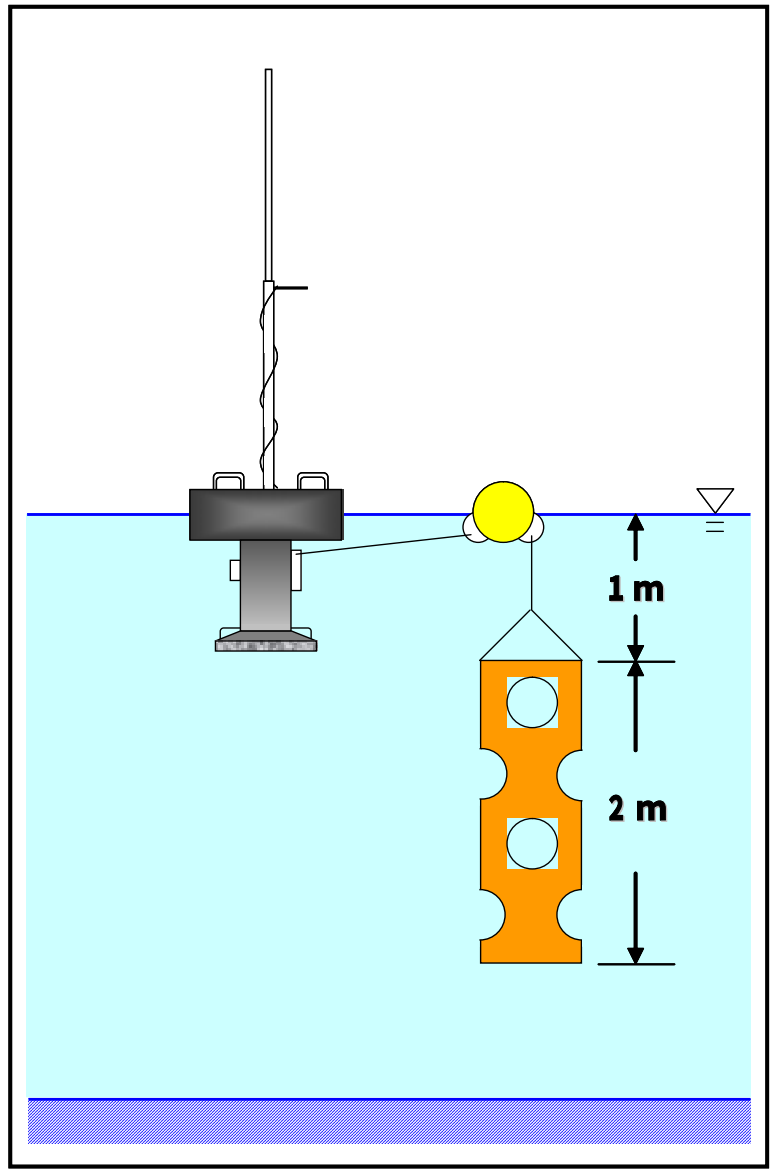
PM: chl.a;very high
single peak

S-Chl.a (−0.5m)

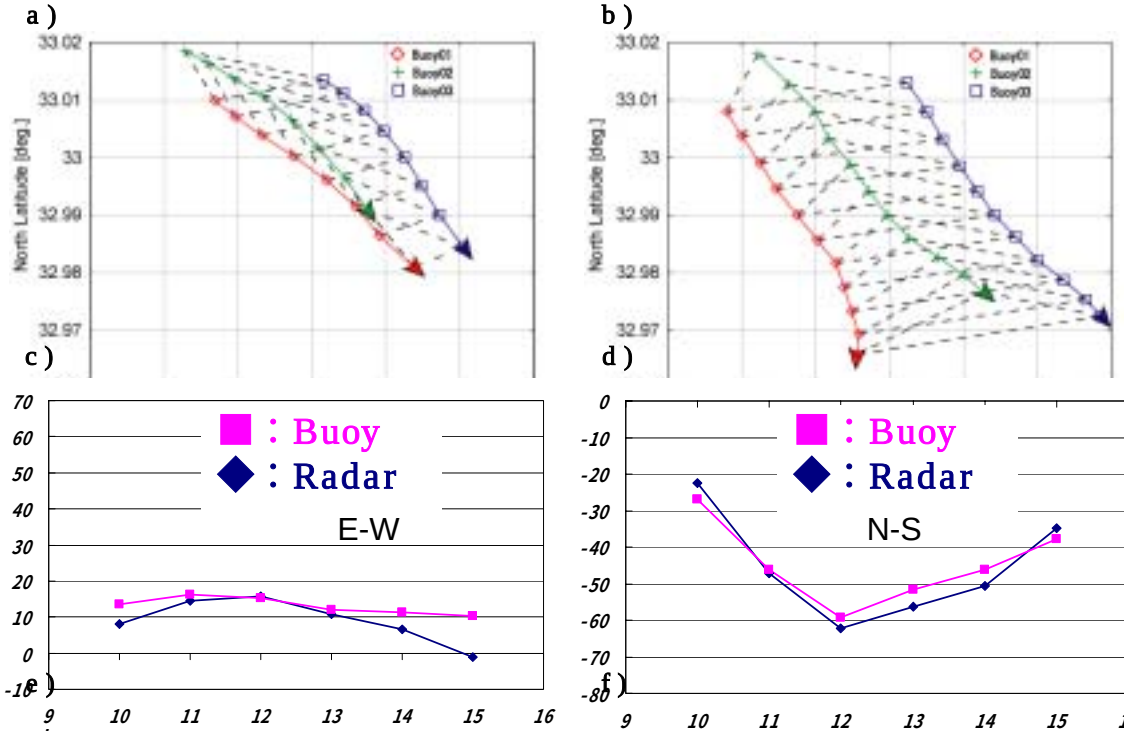

morning
Chl.a(μg/L)
25
20
15
10
5
0
y = 2.70x - 57.63
R2 = 0.021
26.6
26.8
27
27.2
27.4
salinity

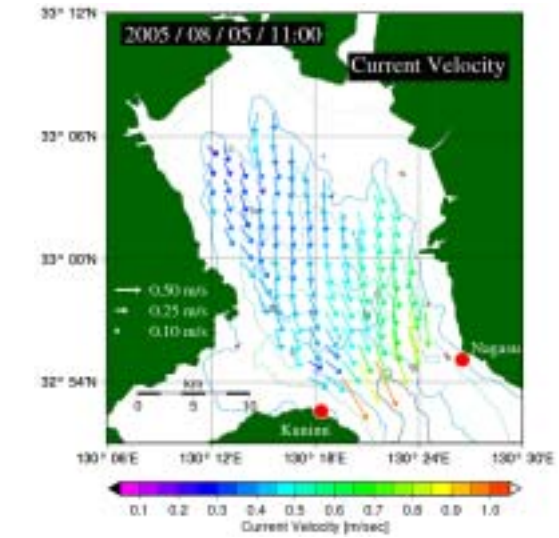

afternoon
Chl.a(μg/L)
25
20
15
10
5
0
y = -2.61x + 86.49
R2 = 0.68
25
26
27
28
29
salinity

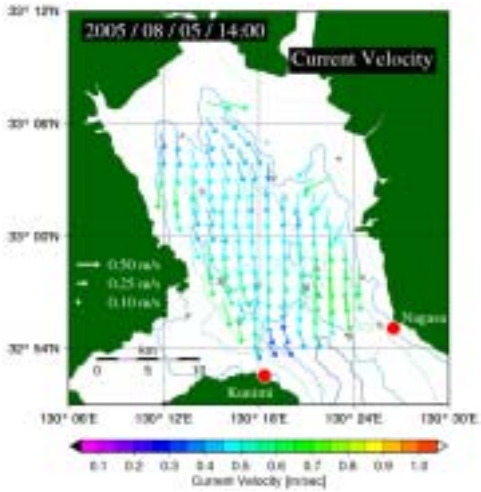
GPS ブイ



Buoys and HF radar





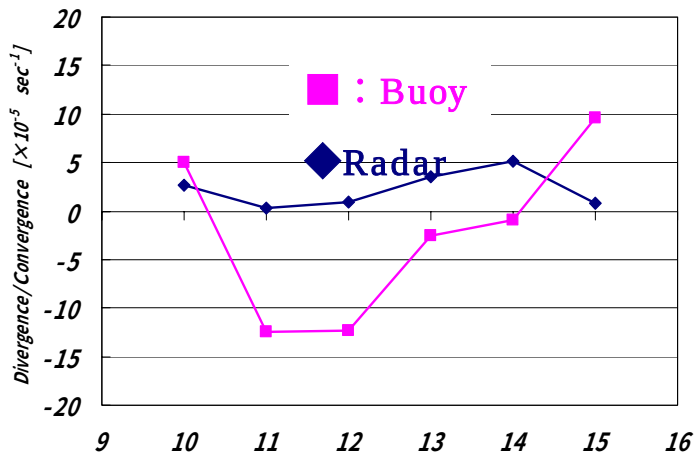


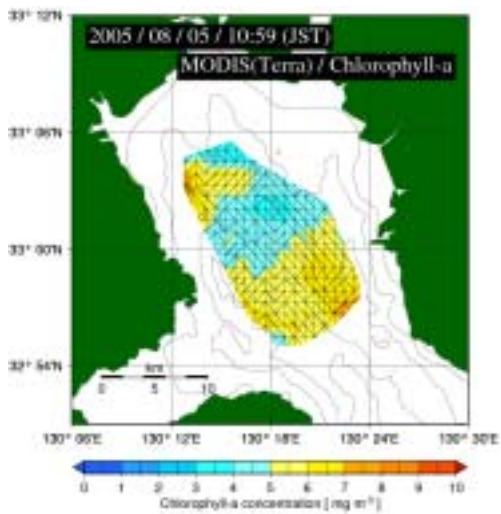
Convergence /divergence

Accuracy＝1．3x10^{-5} s^{-1}

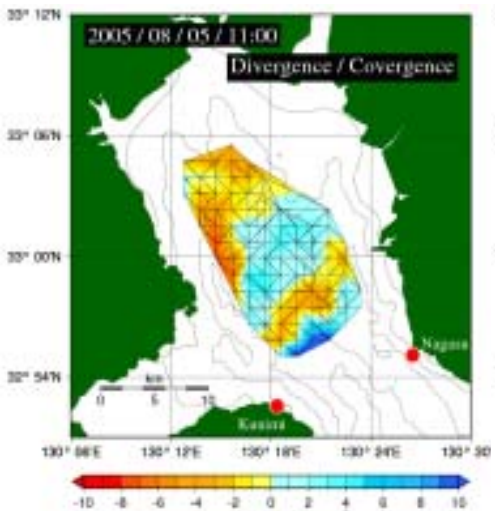
Barotropic divergence
4m/25m/6h.=
7.4 x 10^{-6} s^{-1}

a)

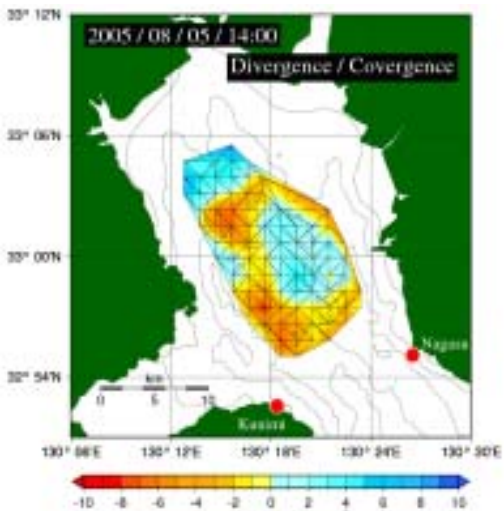




b)



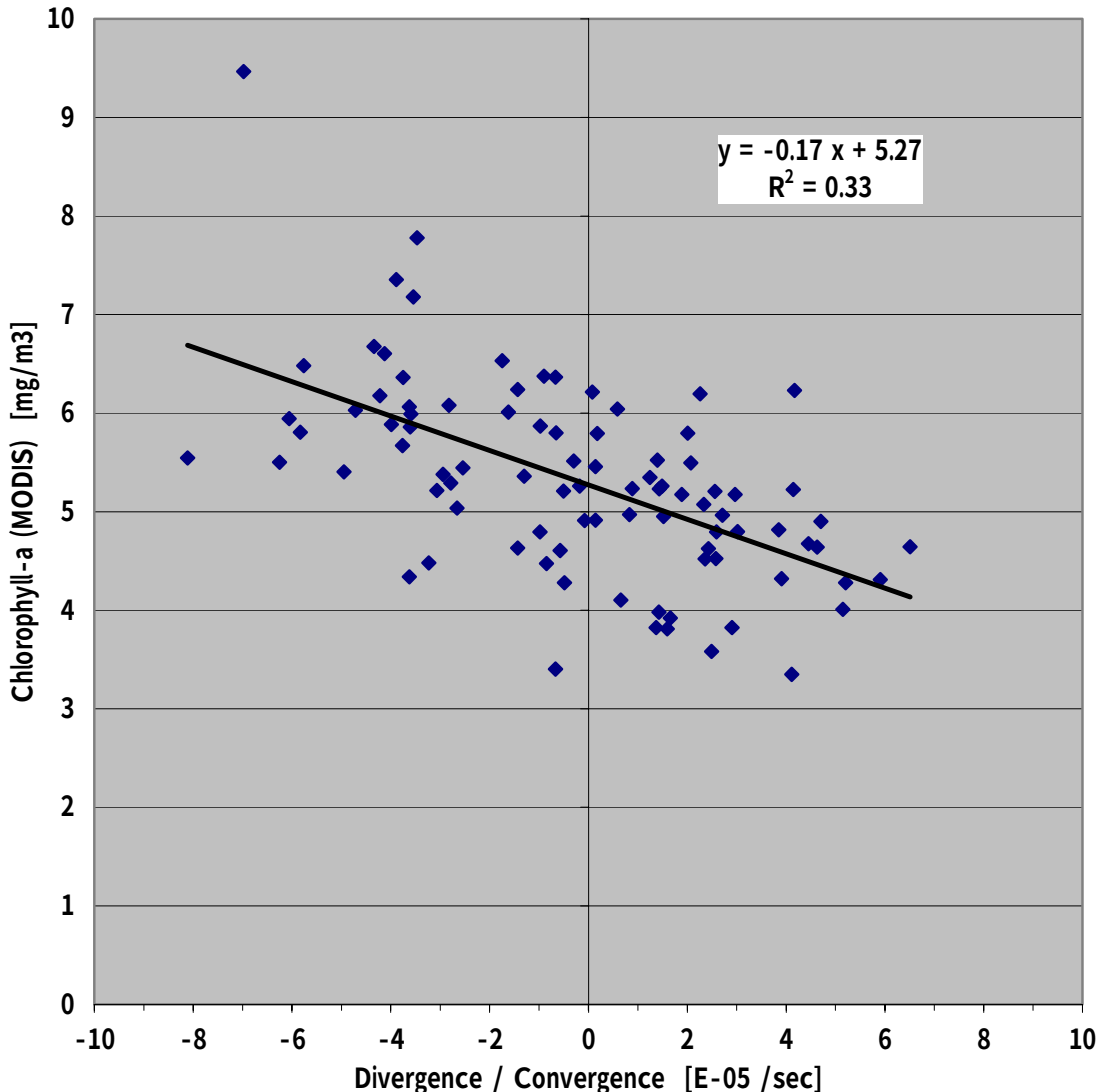
c)



Div(7:00-10:00) versus Chl.a(11:00)

Average
Current speed
=10 cm/s

Length=1 km

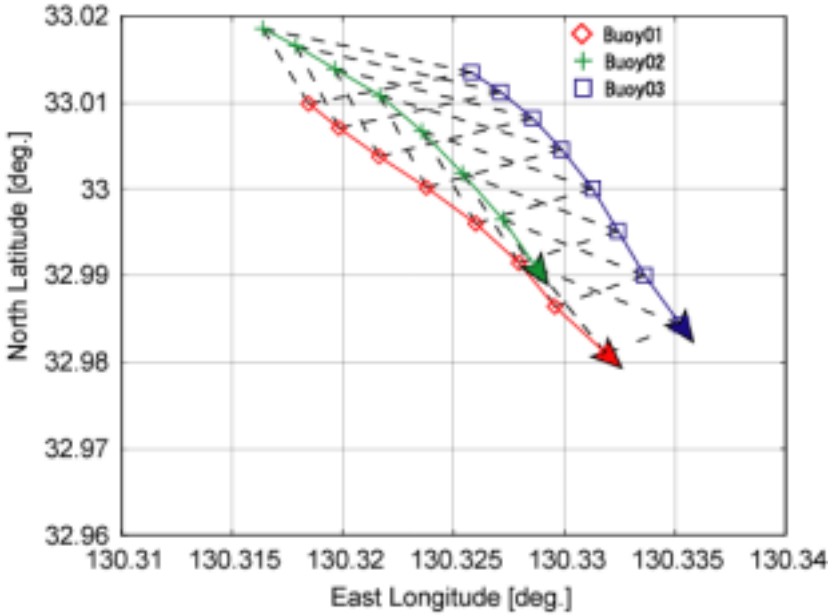


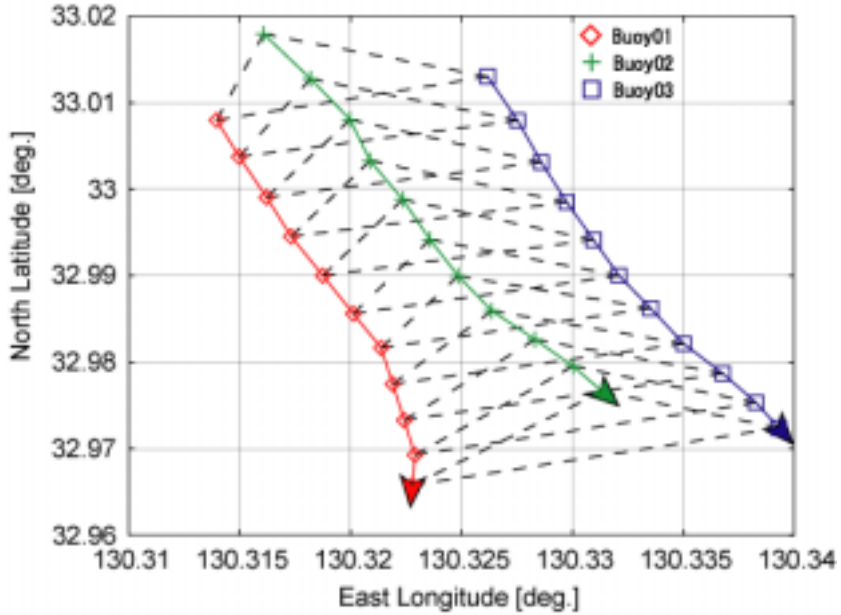
P＜0.01

1st（午前）

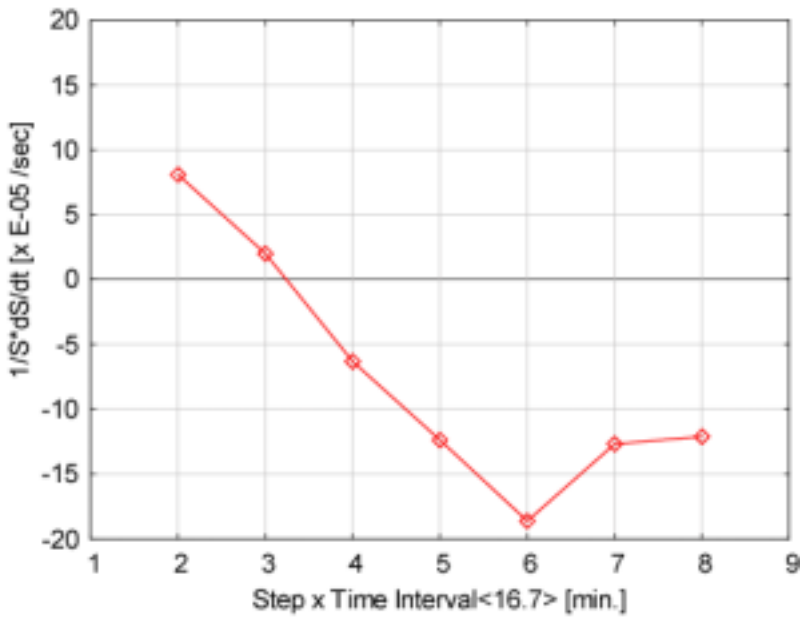
2nd（午後）

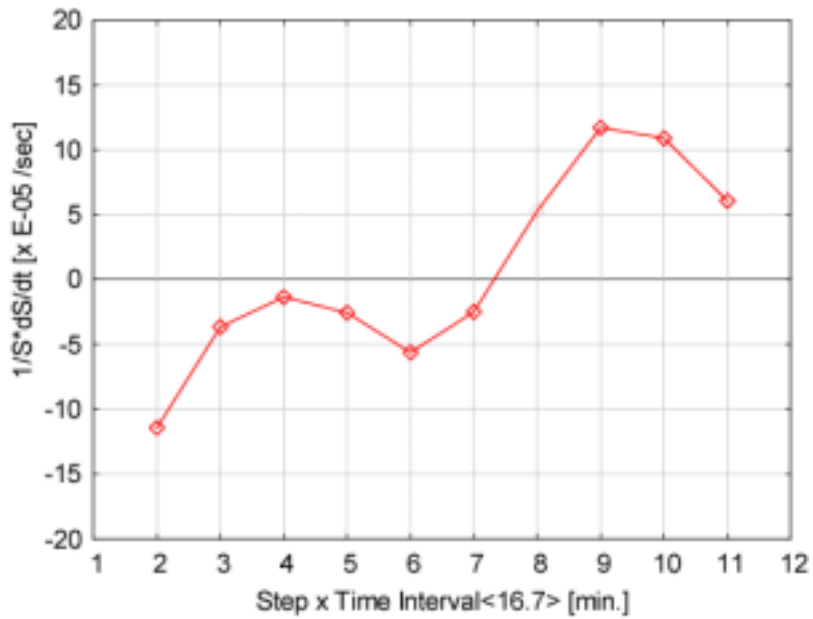
軌跡





収束・発散値

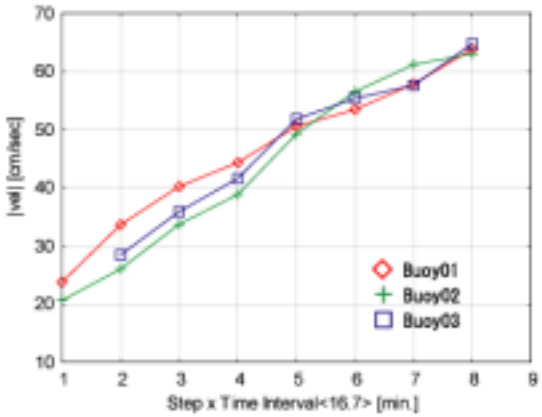


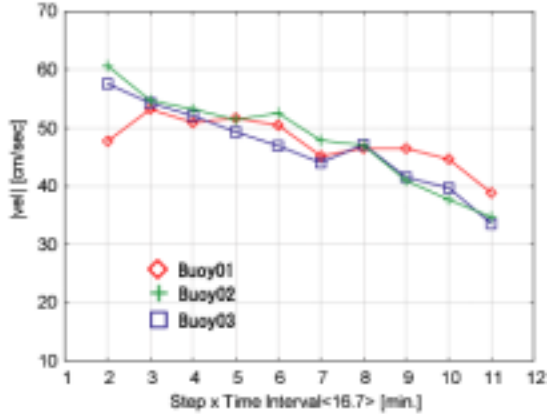


1st（午前）

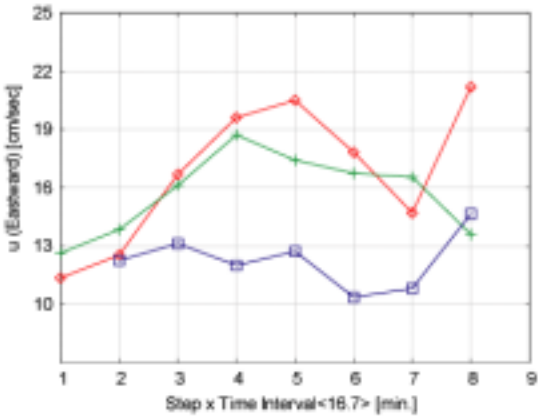
2nd（午後）

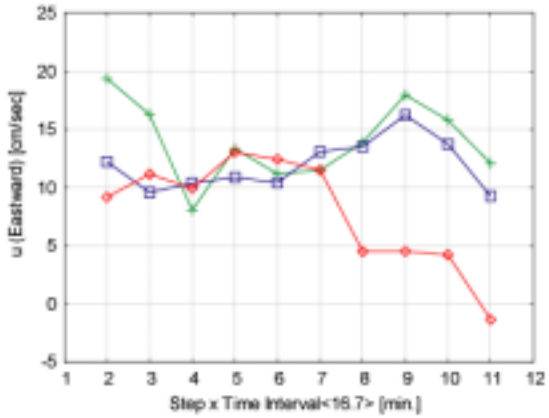
|vel|





U
(Eastward)





V
(Northward)