



# Campagne PROTEVS 2010

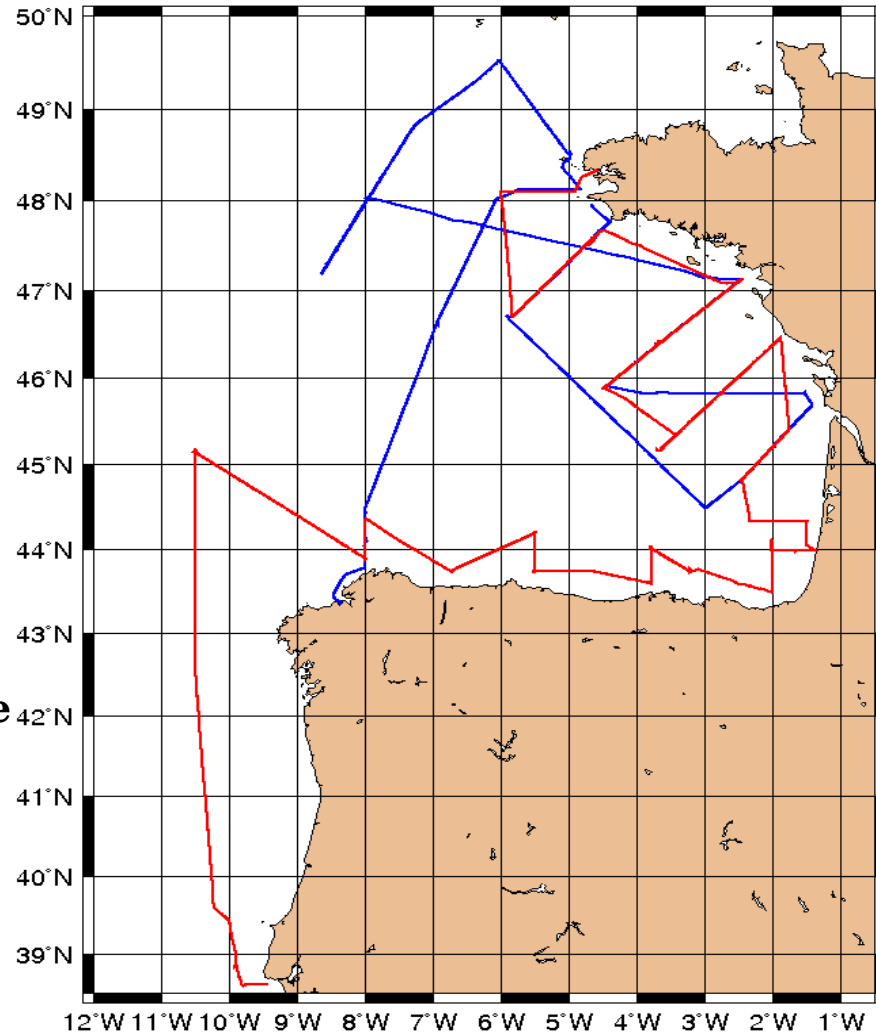
## Mesures réalisées

# Plan

- ✓ **Introduction**
- ✓ **Leg 1: biogéochimie**
- ✓ **Leg 3: physique**
- ✓ **Evolution des couches de surface**

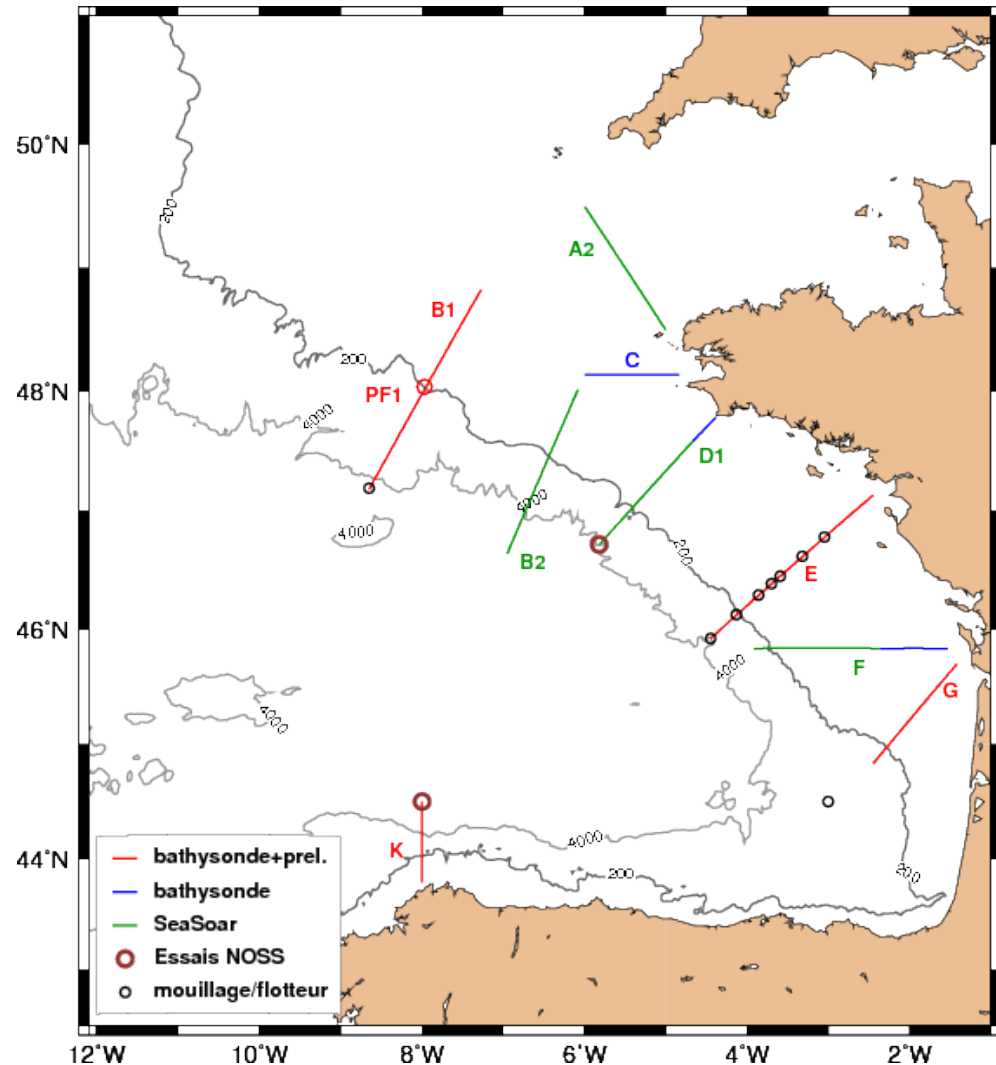
## 2 legs d'océanographie

- ✓ 460 bathysondes,
- ✓ 1100 milles de seasoar,
- ✓ 23 flotteurs,
- ✓ 135 tirs XBT,
  
- ✓ Acquérir des données in situ pour la validation du modèle de circulation océanique.
- ✓ Acquérir des données de biochimie pour la construction d'un modèle de biochimie sur la zone Manche-Gascogne (période du bloom de printemps)
- ✓ Accent mis sur la restratification au sortir de l'hiver



# Leg 1 : Travaux effectués

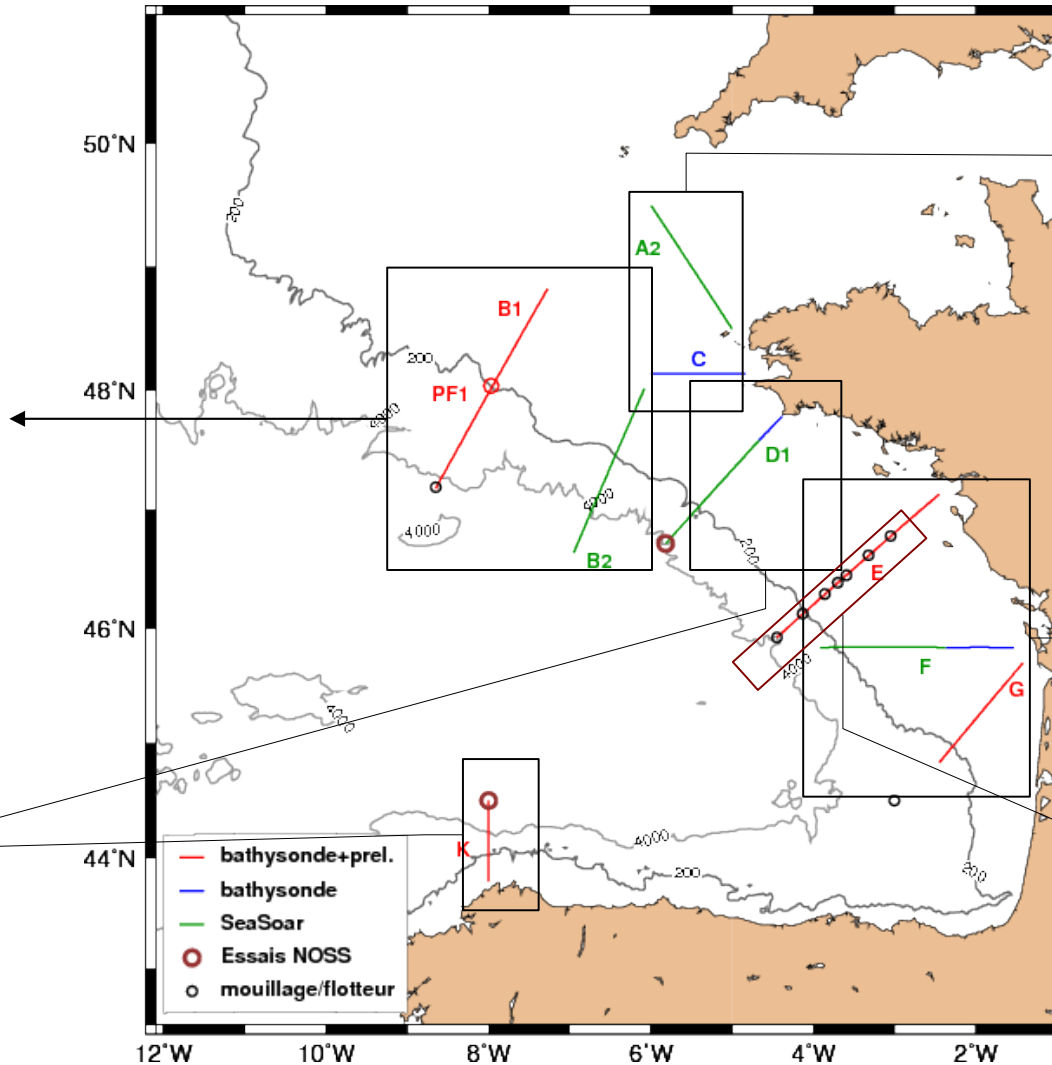
- 300 Nq de SeaSoar
- 200 bathysondes
- 500 prélèvements de sels nutritifs
- 150 prélèvements de pigments
- 100 prélèvements de Matières en suspension
- 30 prélèvements de salinité et CO<sub>2</sub> pour les essais NOSS



# Leg 1 : Travaux effectués

Marée interne  
Transition  
plateau/large

Circulation  
générale



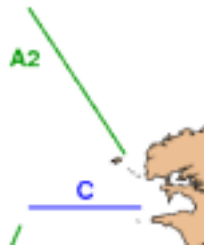
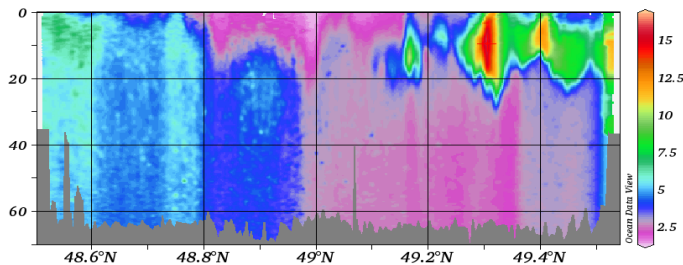
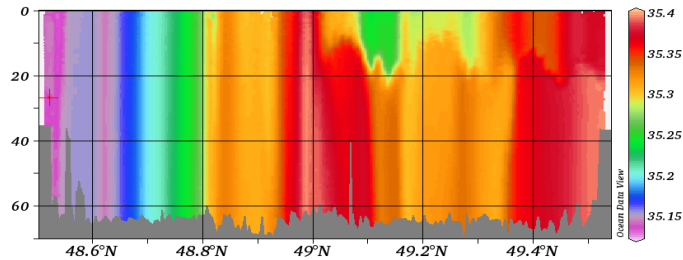
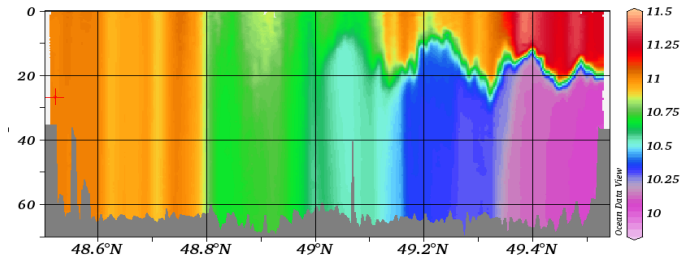
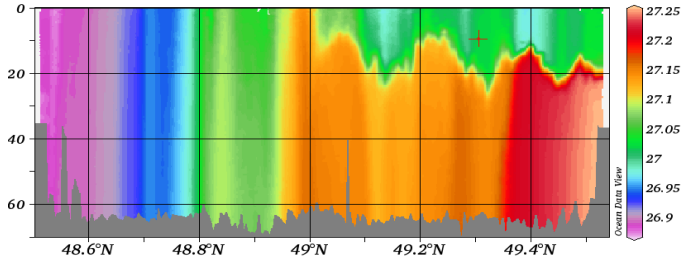
Fronts tidaux

Panaches  
fluviaux

Flotteur WOCE  
(de-tide?)

# Fronts tidaux

A2



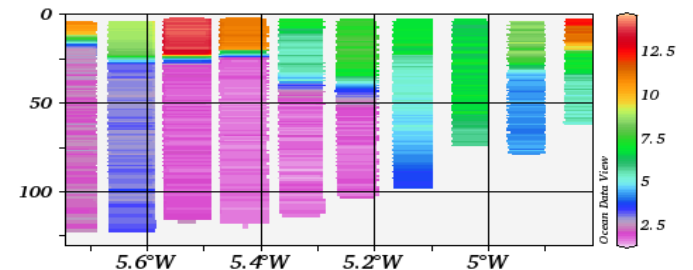
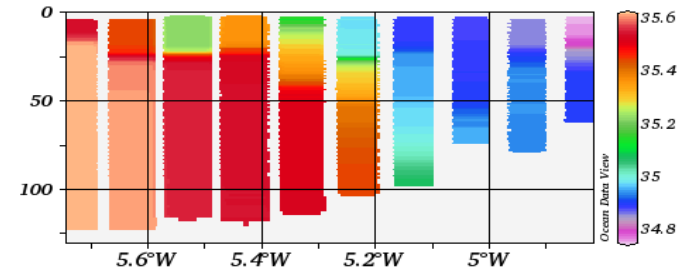
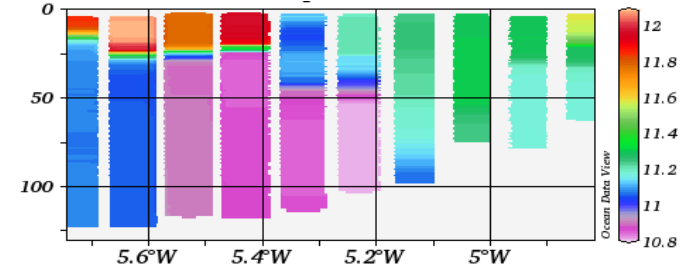
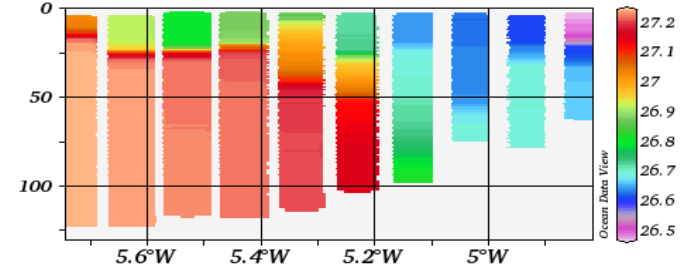
densité

température

Salinité

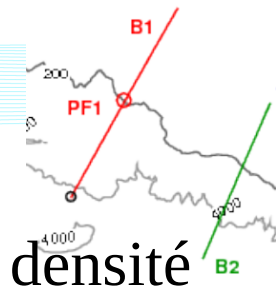
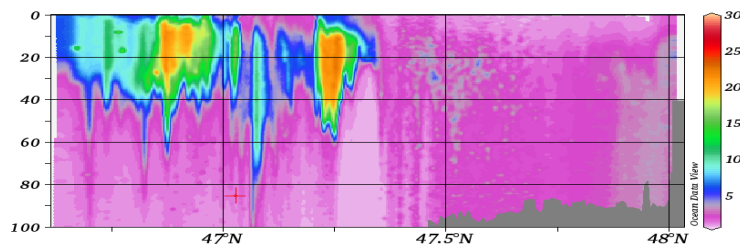
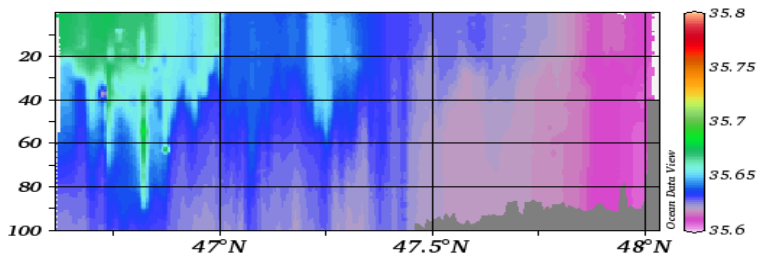
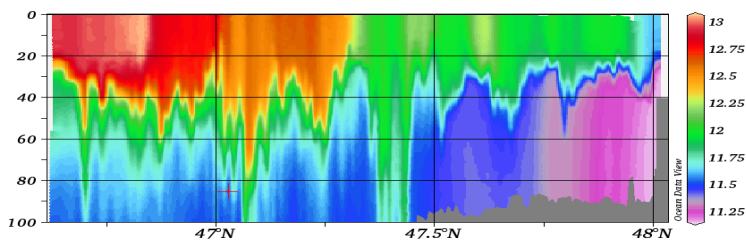
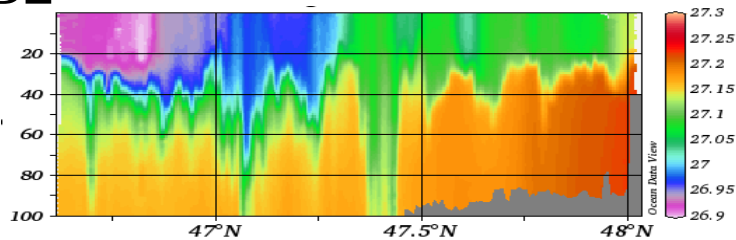
chlorophylle

C



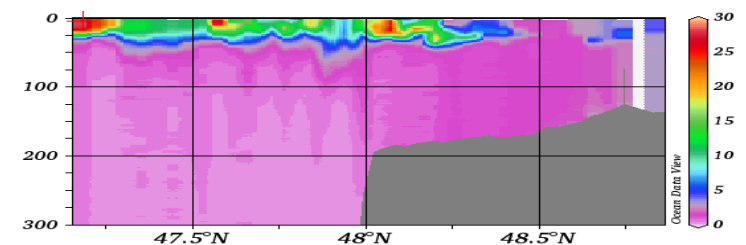
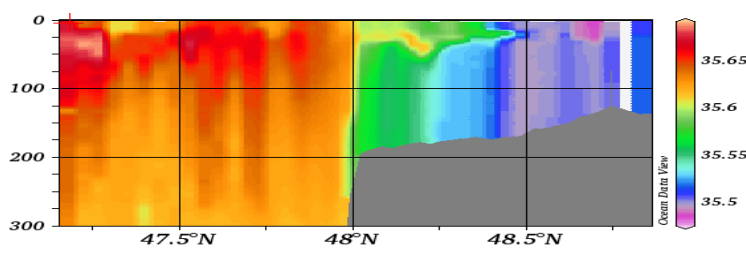
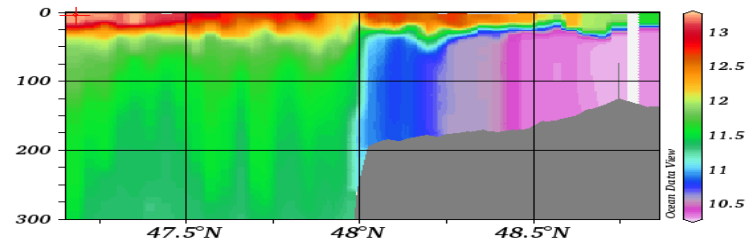
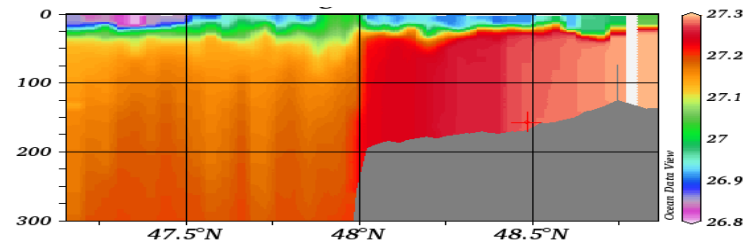
# Talus continental

B2



densité

B1



température

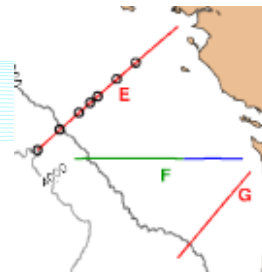
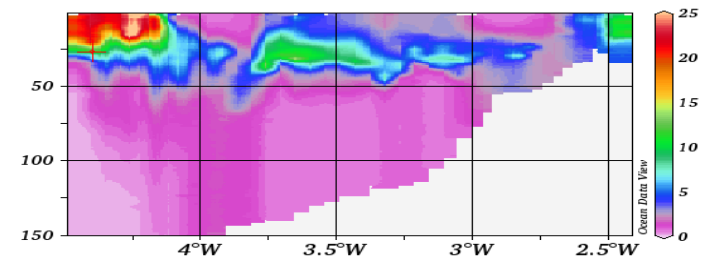
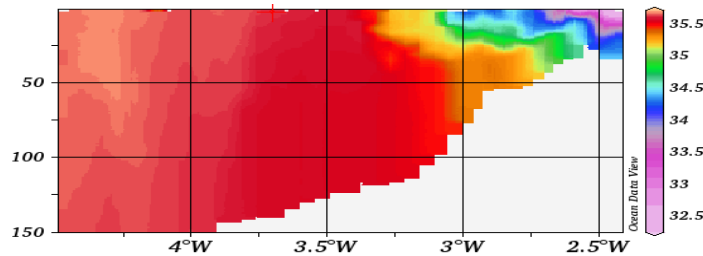
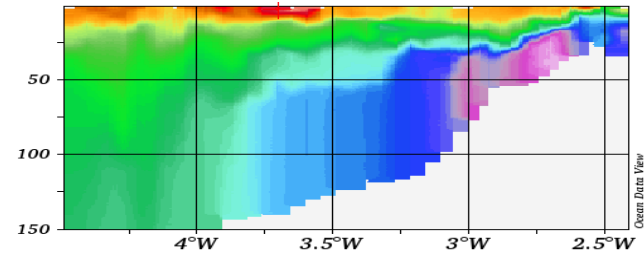
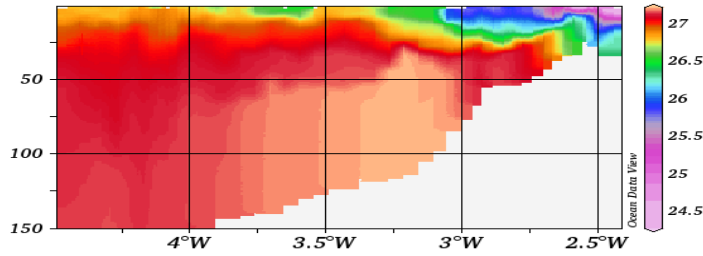
Salinité

chlorophylle



# Panaches fluviaux

## E (Loire)



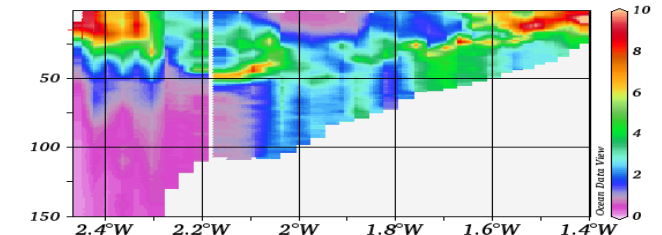
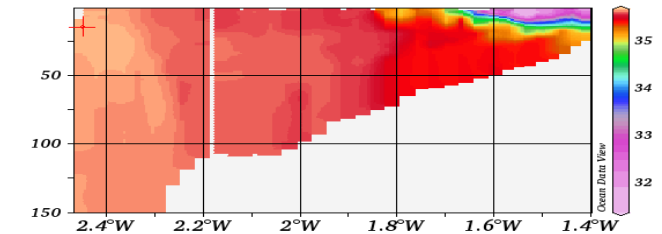
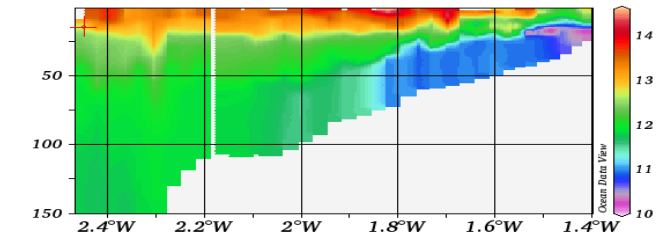
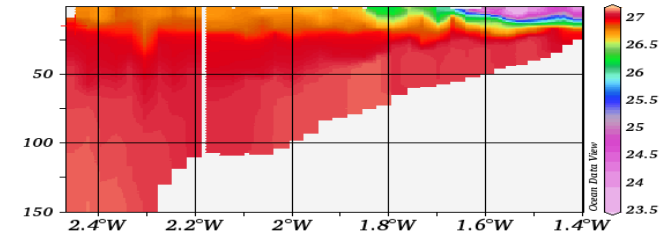
densité

température

Salinité

chlorophylle

## G (Gironde)





# Radiale D1 (Penmac'h)



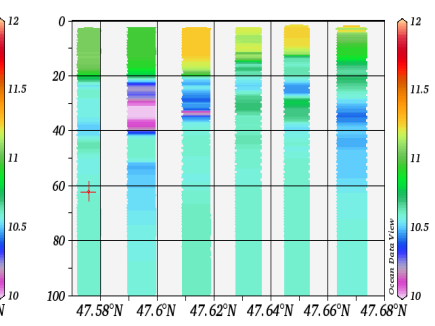
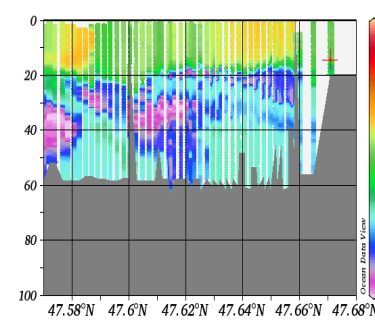
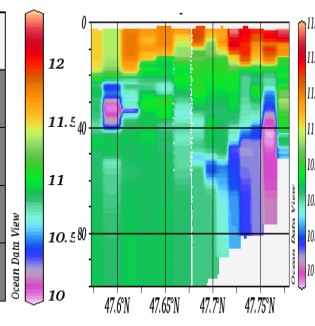
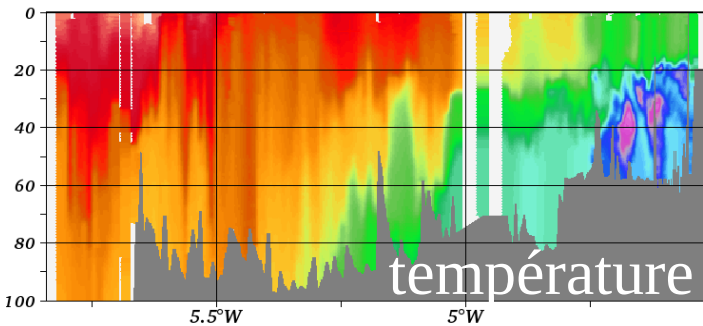
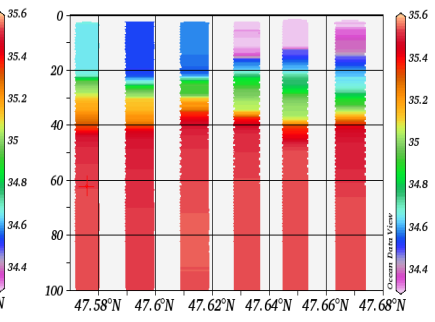
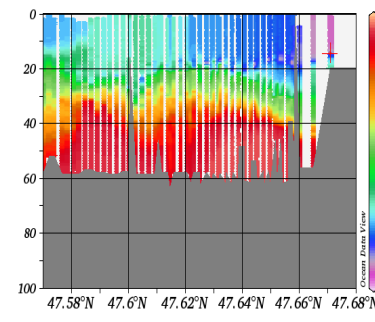
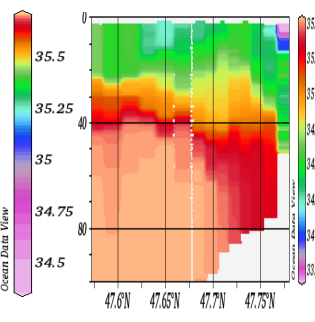
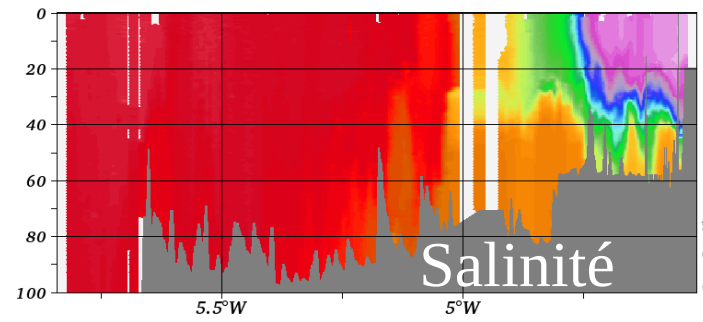
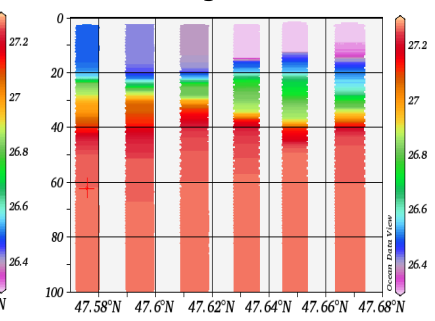
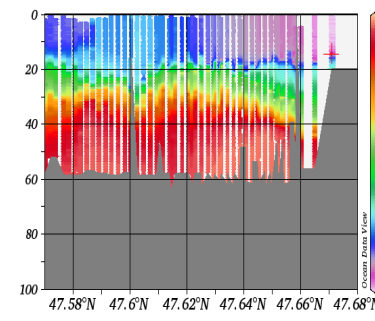
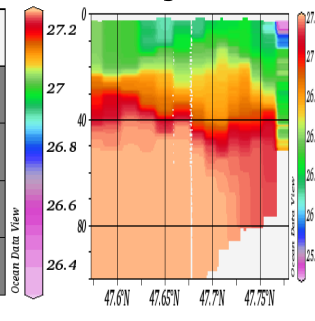
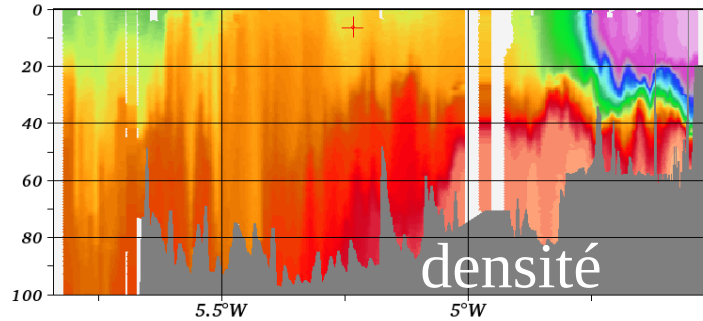
(partie commune)

SeaSoar

Bathysonde

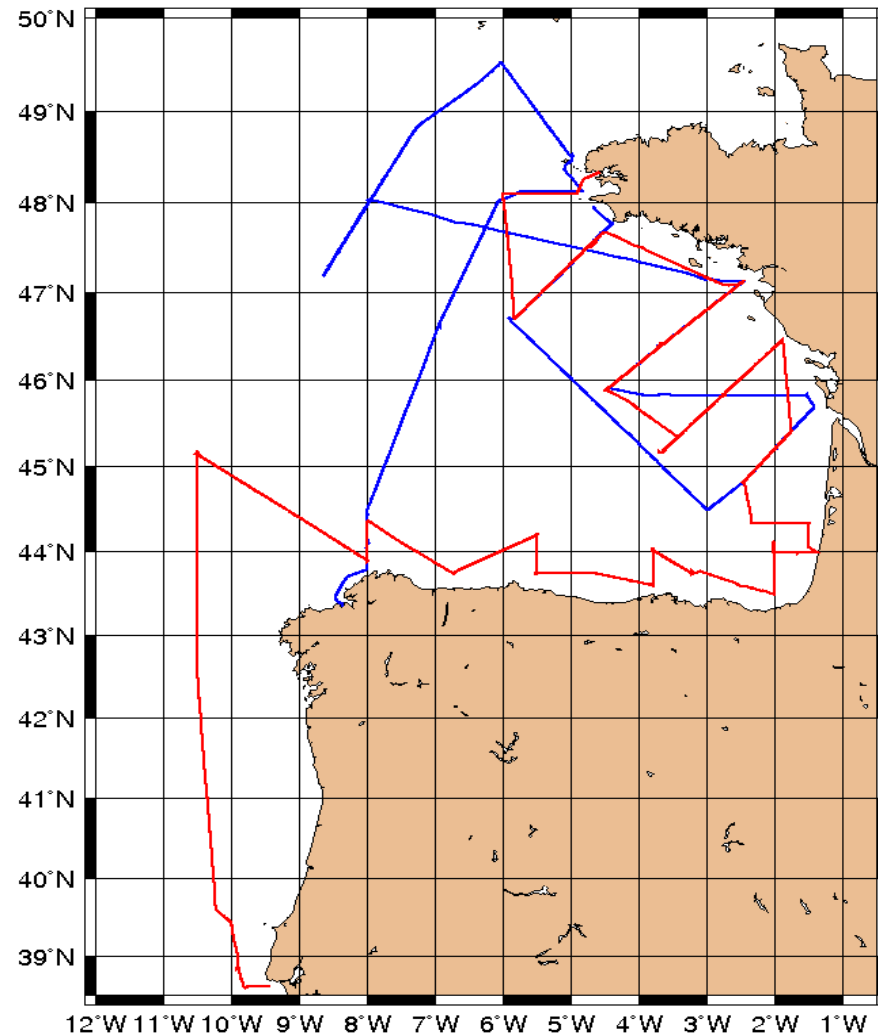
SeaSoar

Bathysonde



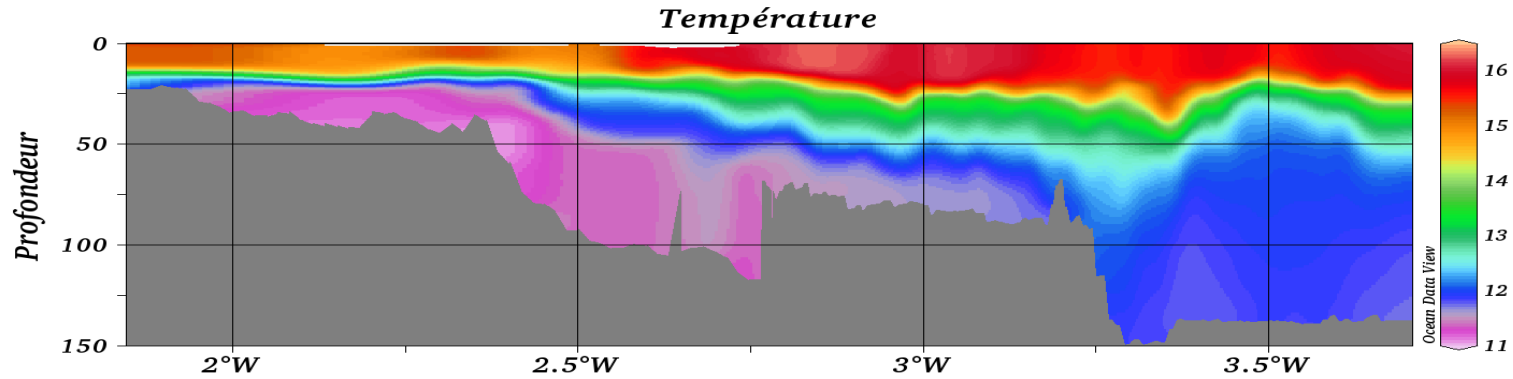
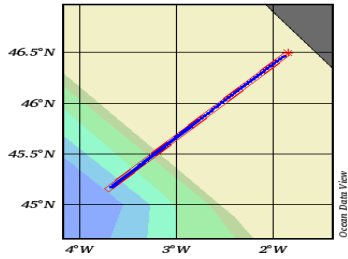
# Leg 3 : physique

PROTEVS-2010, trajectoires leg1 (bleu) et leg3 (rouge)

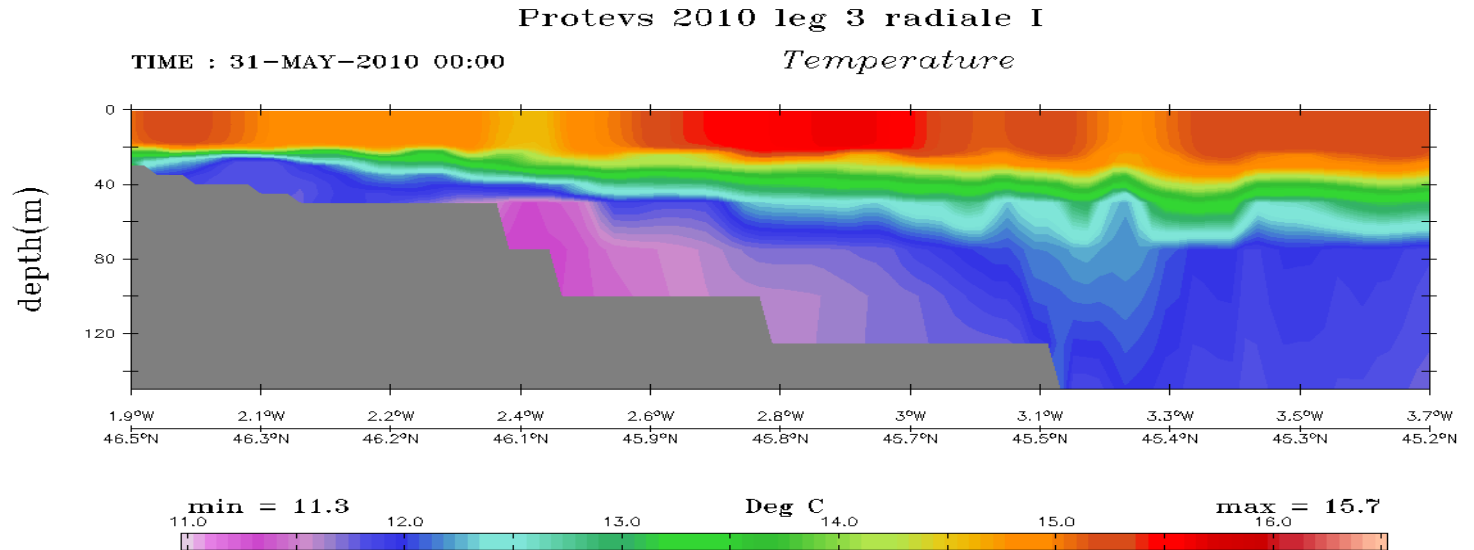


# Leg 3 comparaison modèle données

Radiale I mixte seasoar-bathysondes 30 et 31 mai

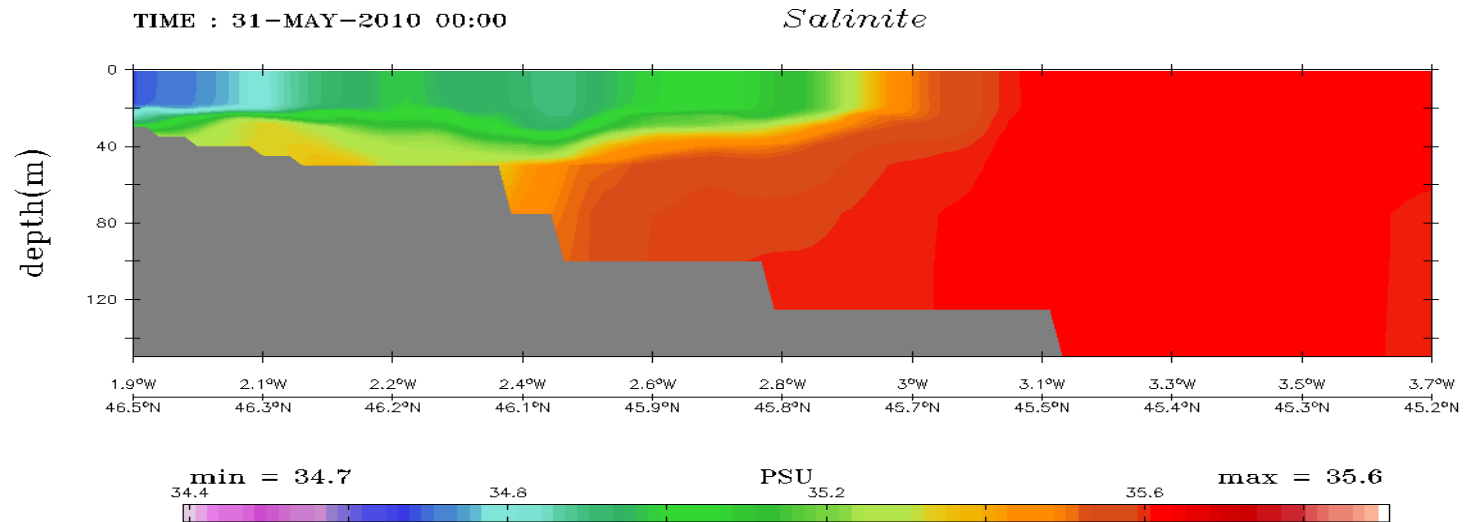
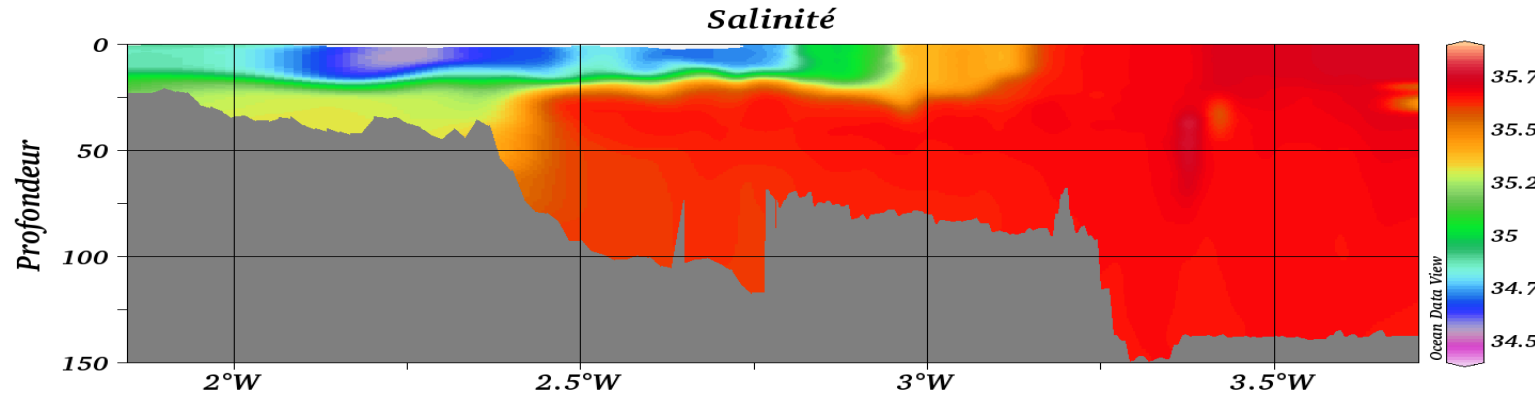
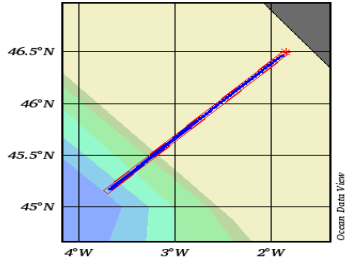


Sortie de  
modèle du  
SHOM



# Leg 3 comparaison modèle données

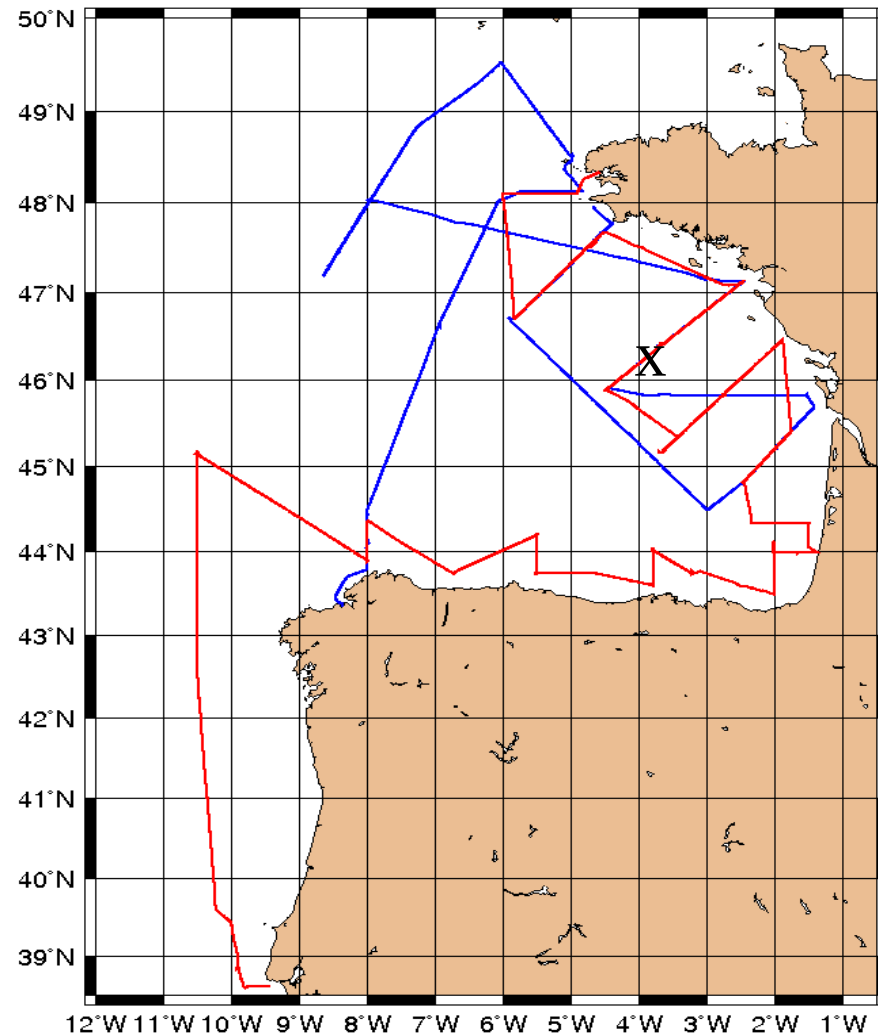
*Radiale I mixte seasoar-bathysondes 30 et 31 mai*



**Sortie de  
modèle du  
SHOM**

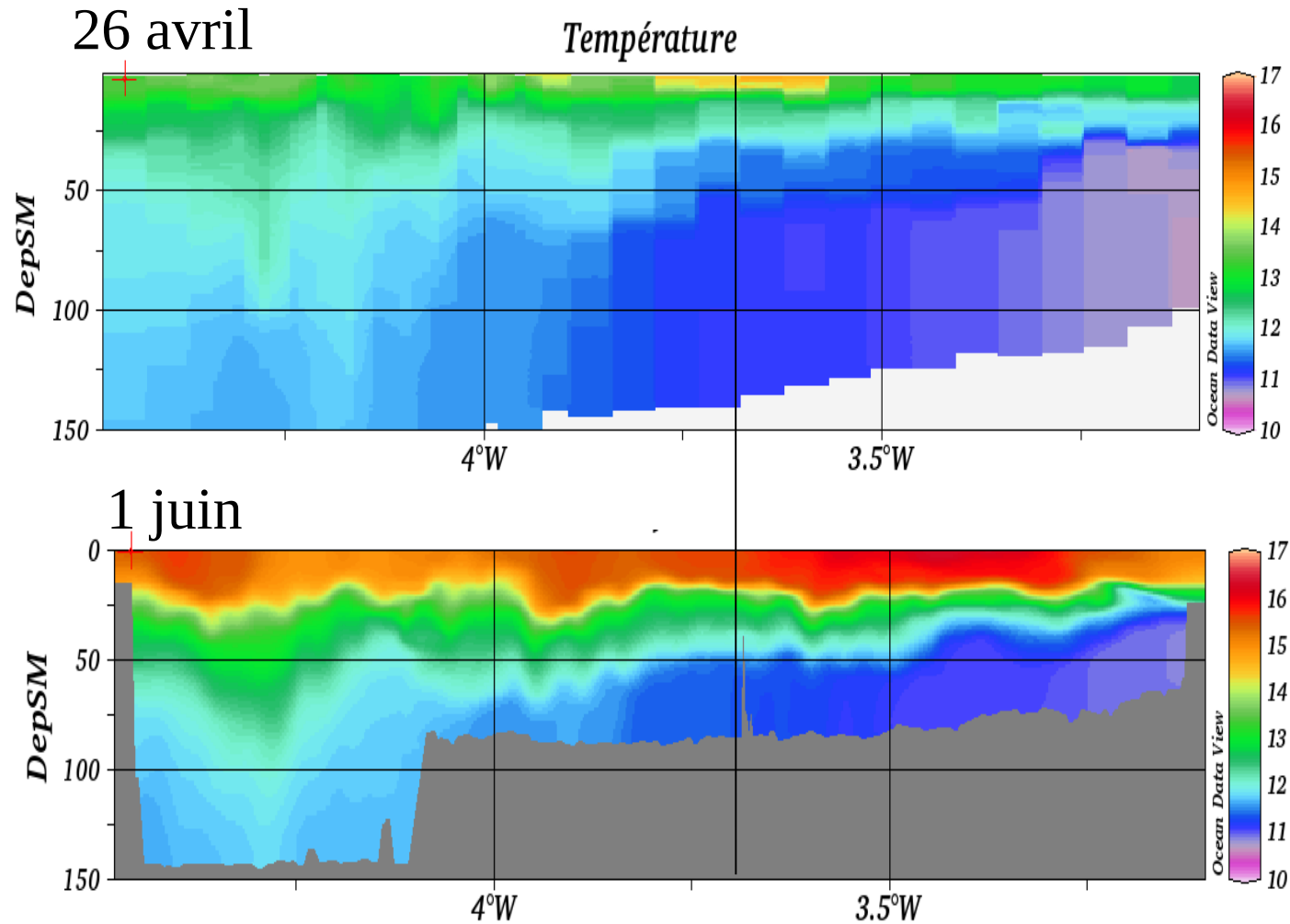
# Evolution des couches de surface

PROTEVS-2010, trajectoires leg1 (bleu) et leg3 (rouge)



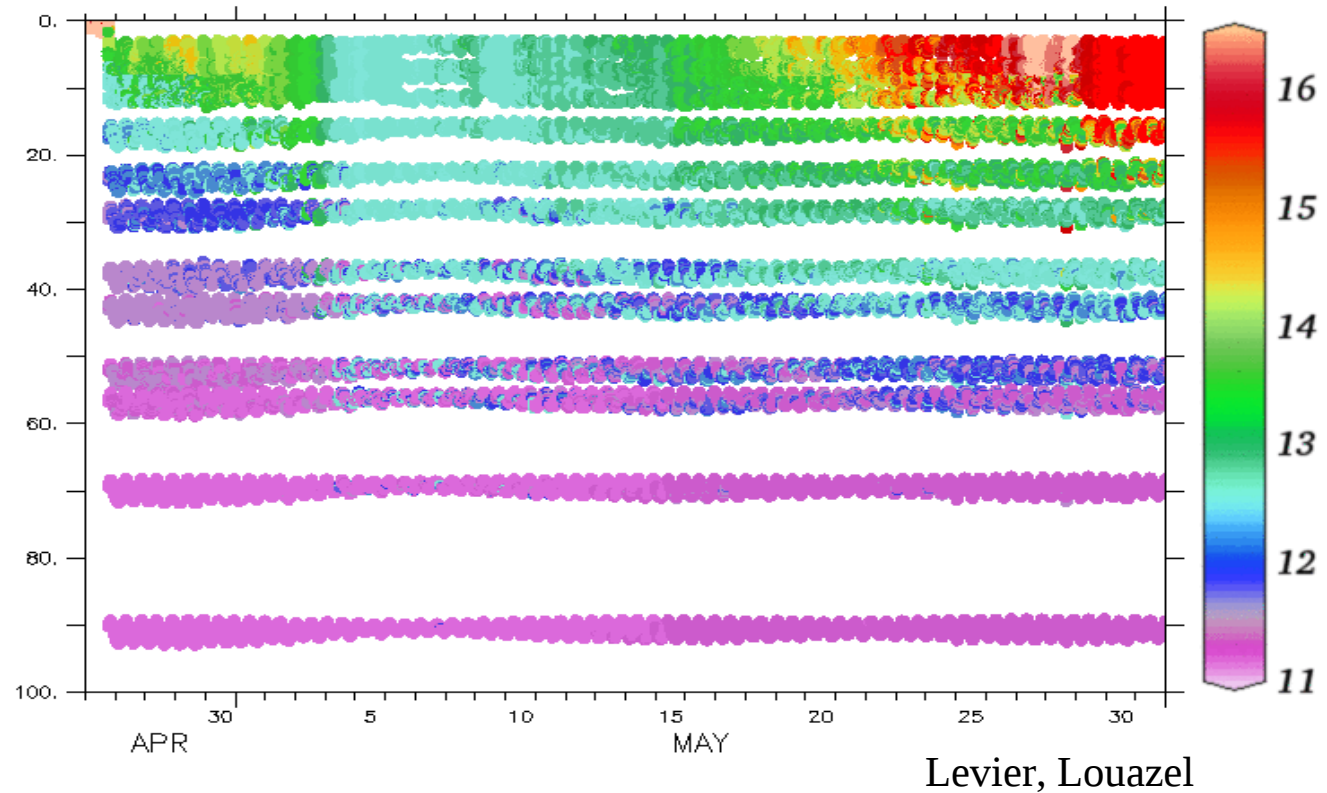
# Evolution de la température sur le plateau

✓ Zone choisie pour être relativement 1D



# Evolution de la température au mouillage « plateau »

- ✓ Zone choisie pour être relativement 1D
- ✓ Jeu de données fait pour tester le schéma de fermeture vertical
- ✓ Plusieurs cycles stratification/approfondissement de la ML
- ✓ Résolution temporelle suffisante pour la marée interne

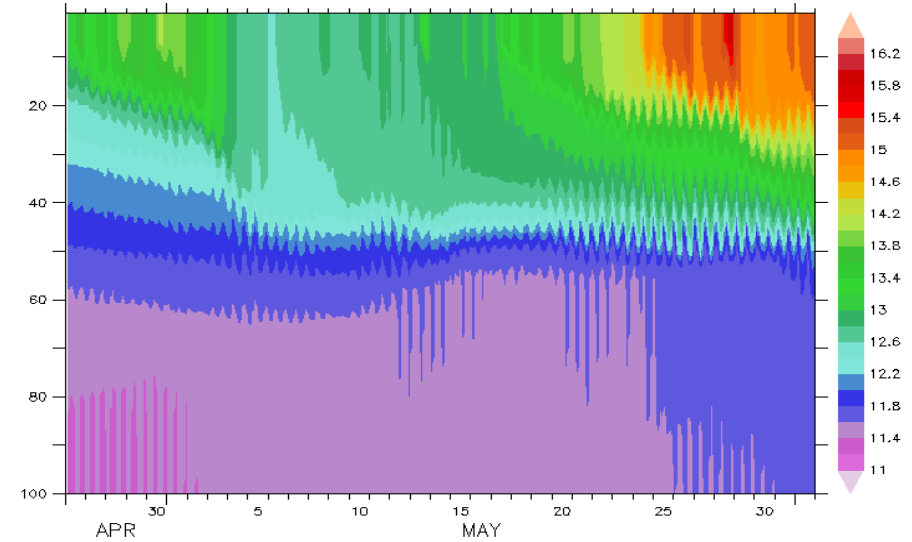
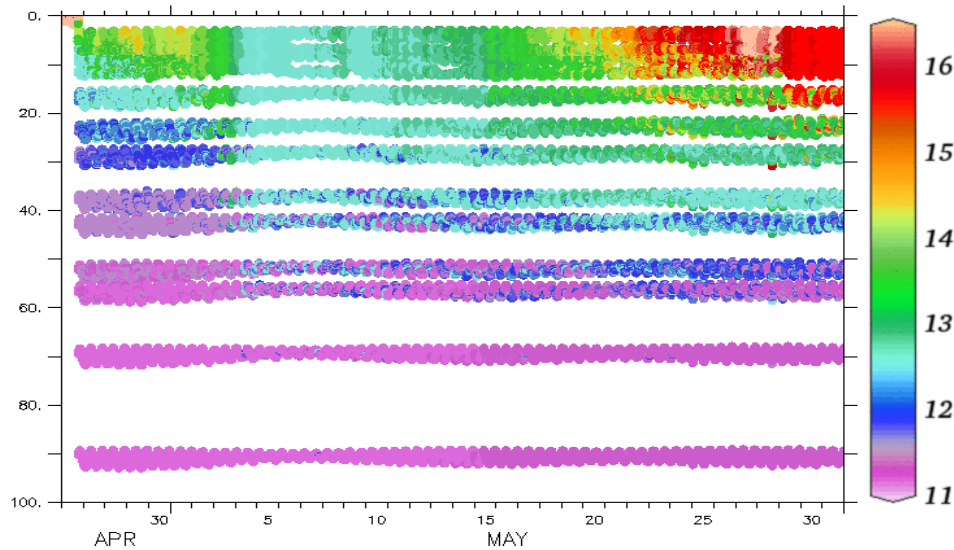




# Evolution de la température au mouillage « plateau »

## Modèle (1,7km, Arpege)

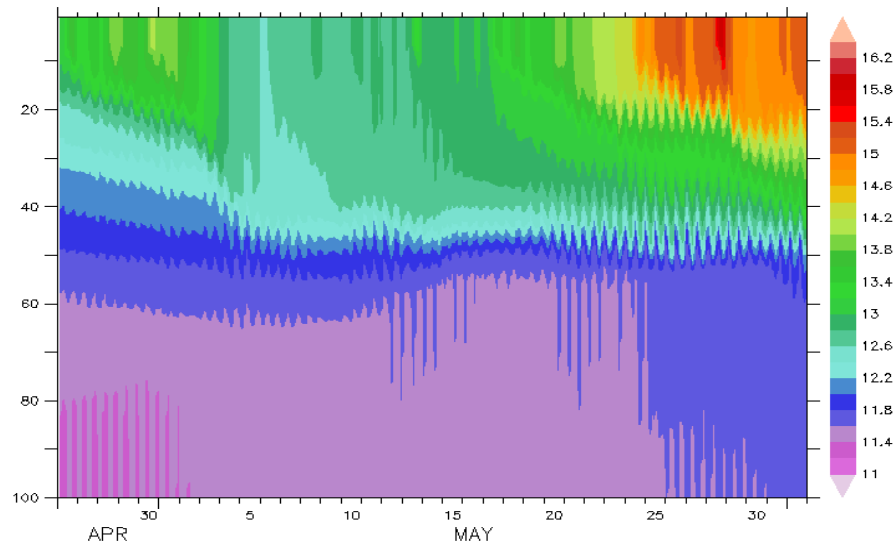
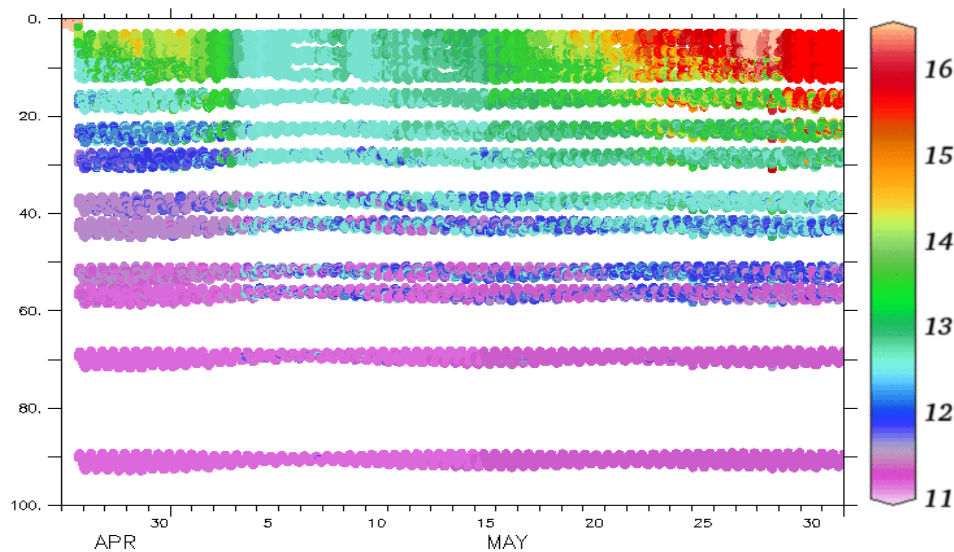
données



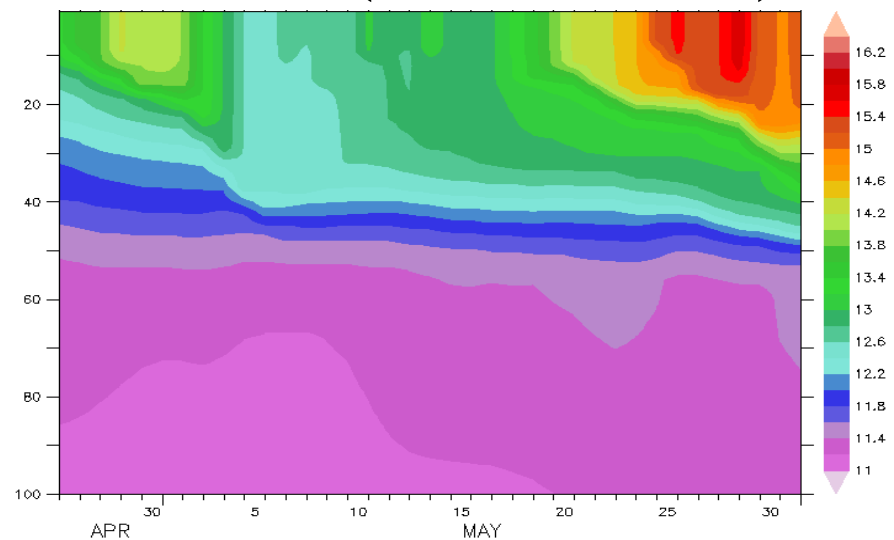
# Evolution de la température au mouillage « plateau »

Modèle (1,7km, Arpege)

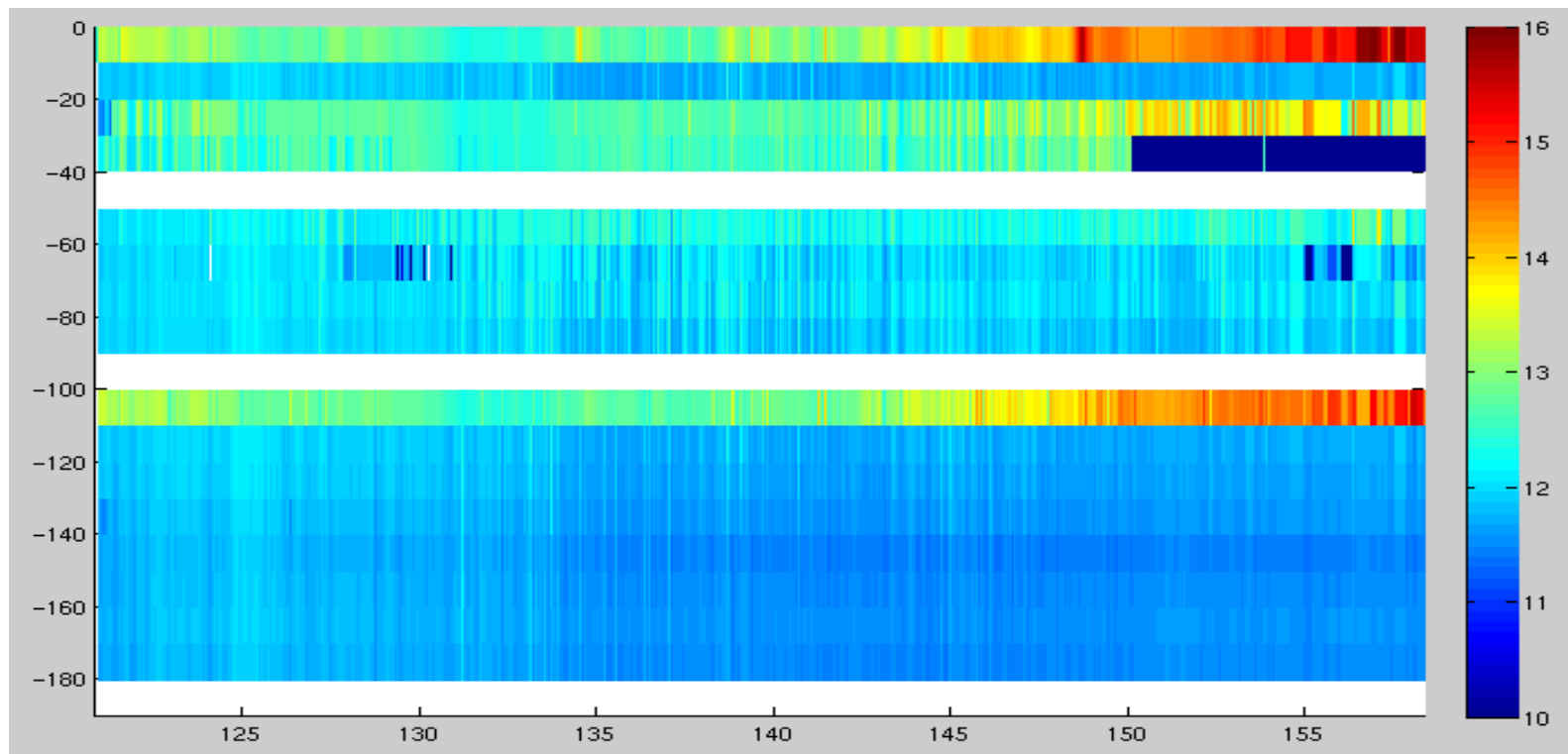
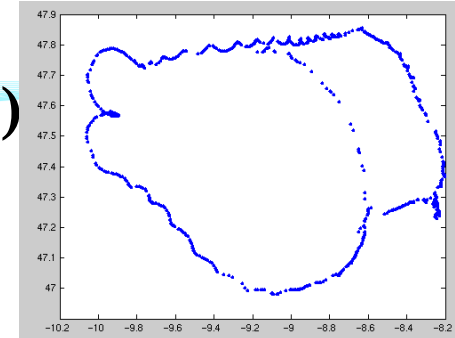
données



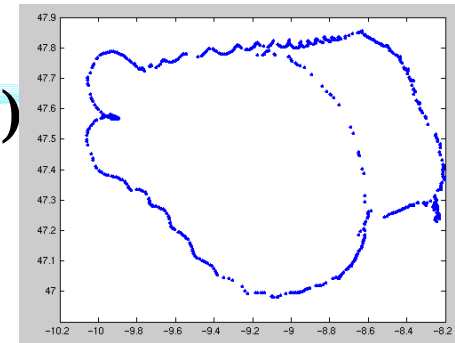
Modèle (3,0 km, ecmwf)



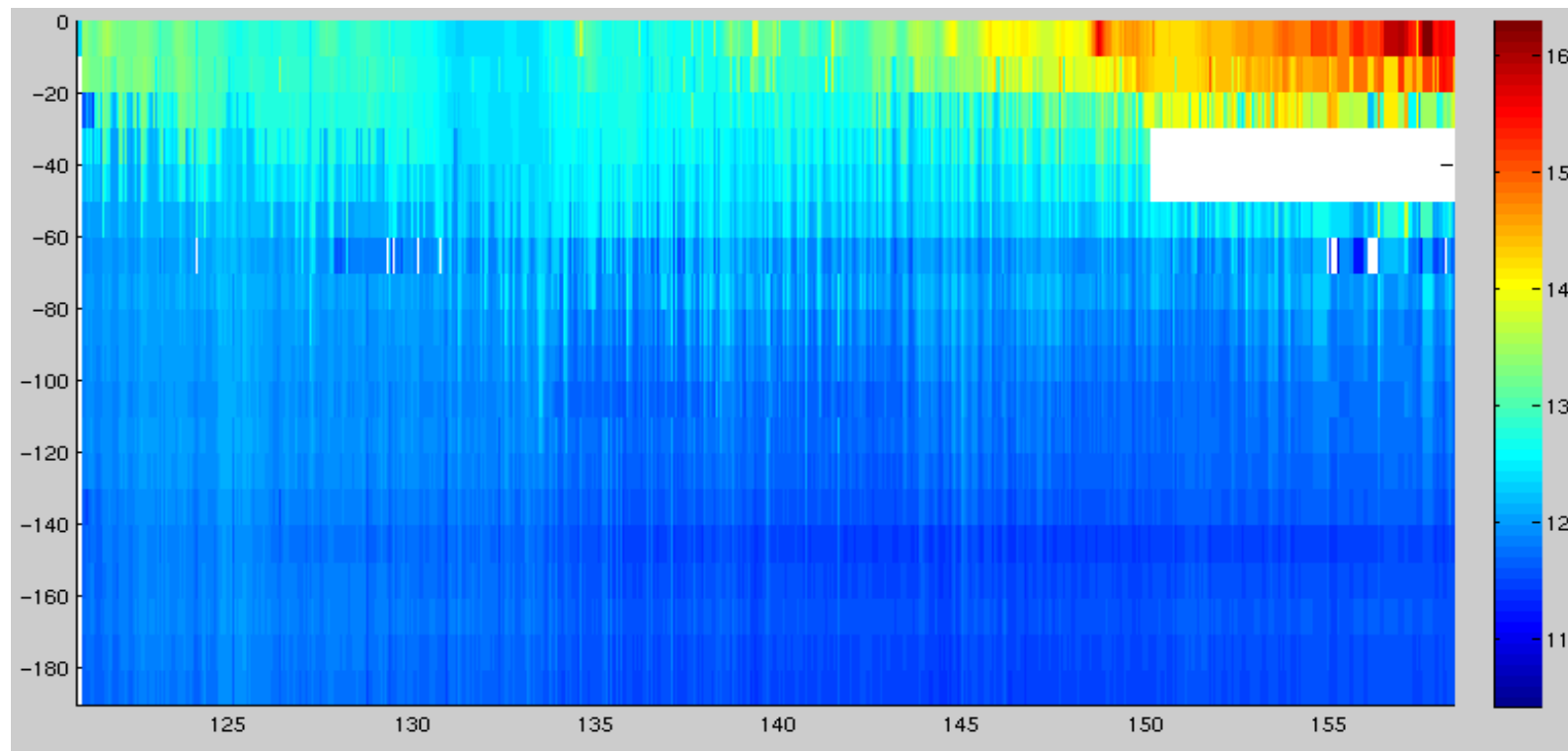
# Evolution de la température (bouée ADOS)



# Evolution de la température (bouée ADOS)

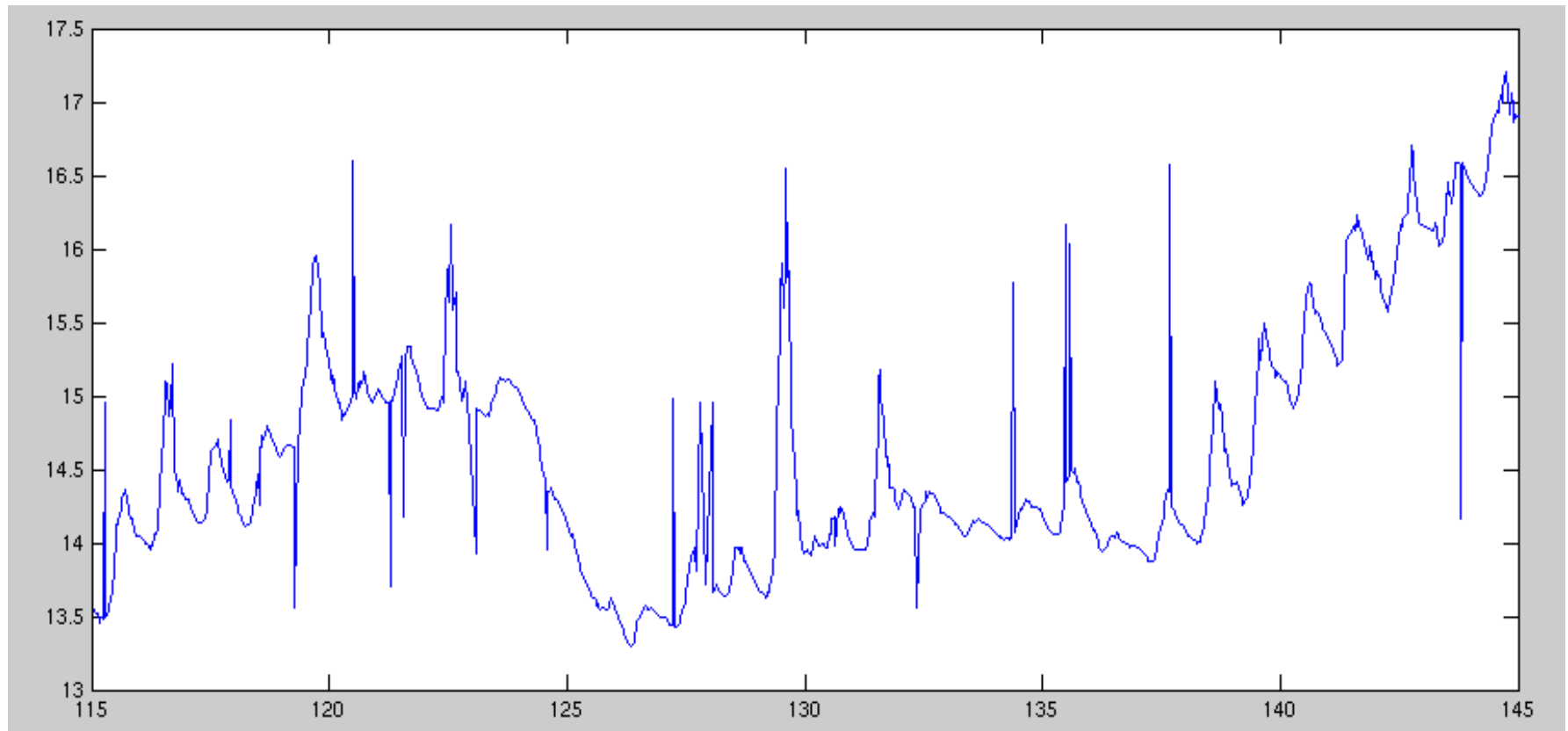
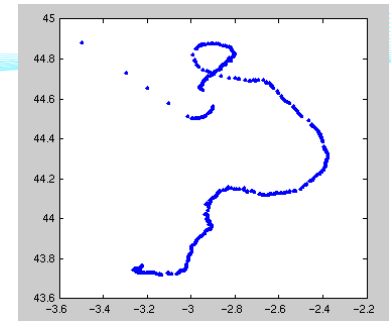


Après retraitement...



# Evolution de la température (bouée ADOS)

Température en surface



# Conclusions

- ✓ **Nouvelles données à ajouter au pool des données existantes**
- ✓ **Jeu de données permettant une étude de la mise en place de la thermocline saisonnière**
- ✓ **Étude des couches compensées / inversion des gradients de température à proximité des côtes**
- ✓ **Présence d'un panache prononcé, lien avec les conditions anticycloniques durables**
- ✓ **Exploitation des données biogéochimiques (après analyses des prélèvements)**