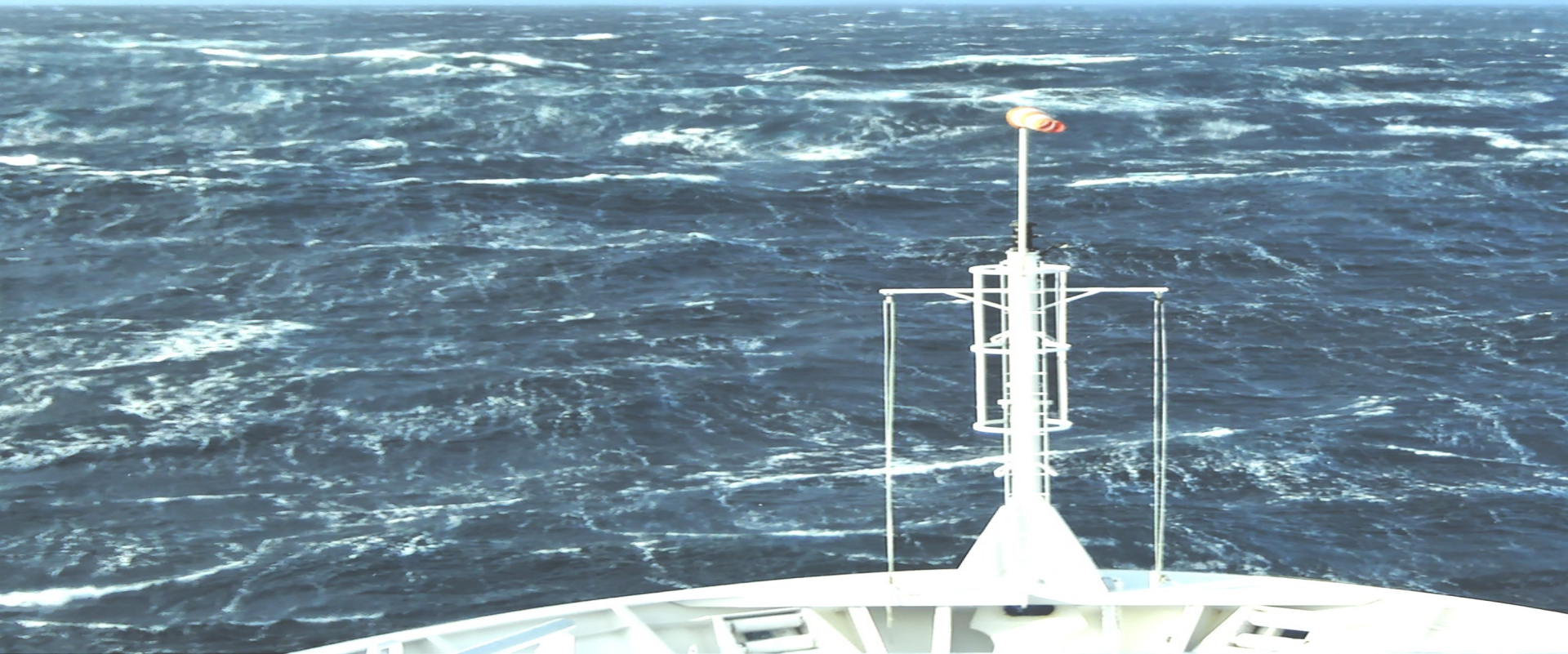


Anomalies Chaudes et Salées dans le Sud du Golfe de Gascogne en Automne-Hiver 2006-2007

B. Le Cann (CNRS/Brest) et A. Serpette (SHOM/Brest)



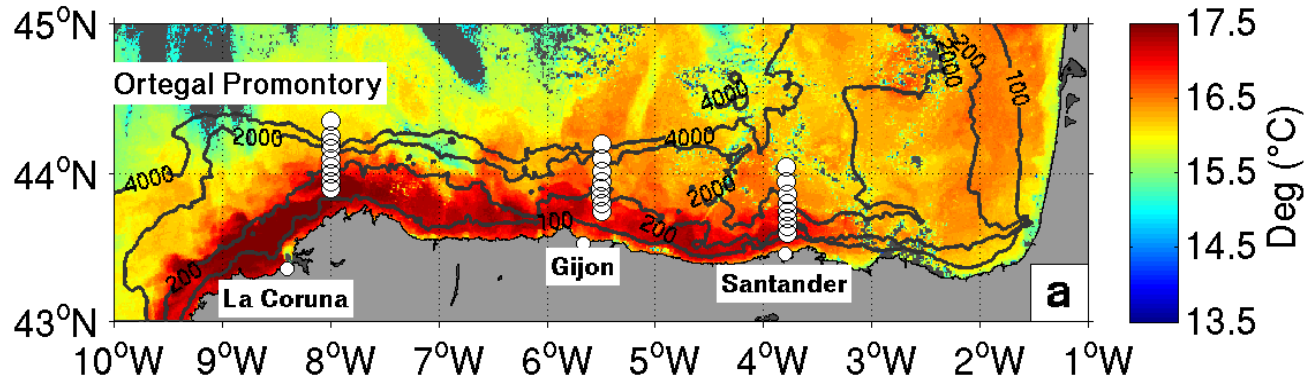
Anomalies Chaudes et Salées dans le Sud du Golfe de Gascogne en automne-hiver 2006-2007

B. Le Cann (CNRS/France) and A. Serpette (SHOM/France)

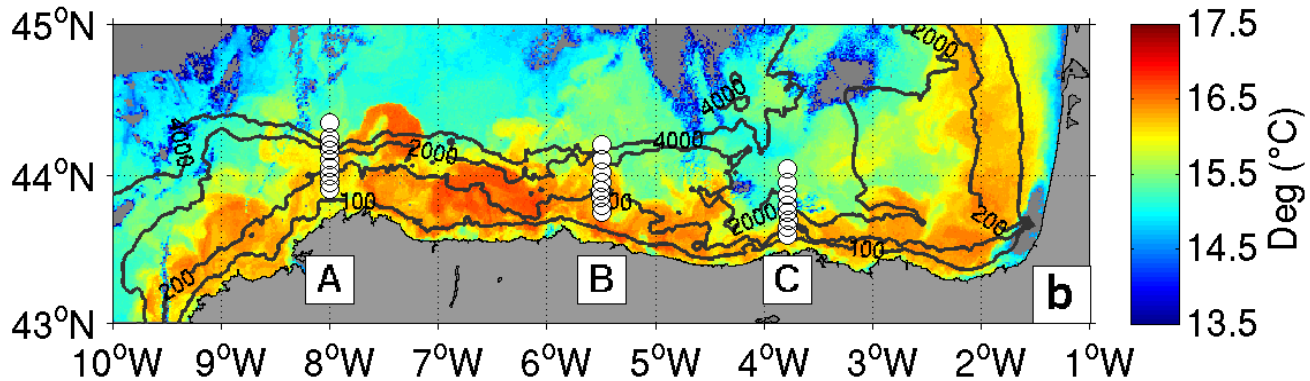
- Automne-Hiver 2006-2007 exceptionnellement doux en Europe de l'Ouest (e.g. Luterbacher et al.)**
- Entrées d'eaux chaudes de Surface (IPC (« Iberian Poleward Current ») ou « Navidad ») sur le Plateau Nord Espagne (e. g. Frouin et al., Barton, Haynes, Torres et al., Pingree et Le Cann, Garcia-Soto et al., ...)**
- Eaux salées sur la Pente (e.g. Llope et al., Gonzalez-Pola et al., ...)**
- Campagne « CONGAS » en Décembre 2006 :
CTD – Lagrangien – Observations VM-ADCP**
- Discussion et conclusions**

SST Satellite AVHRR images

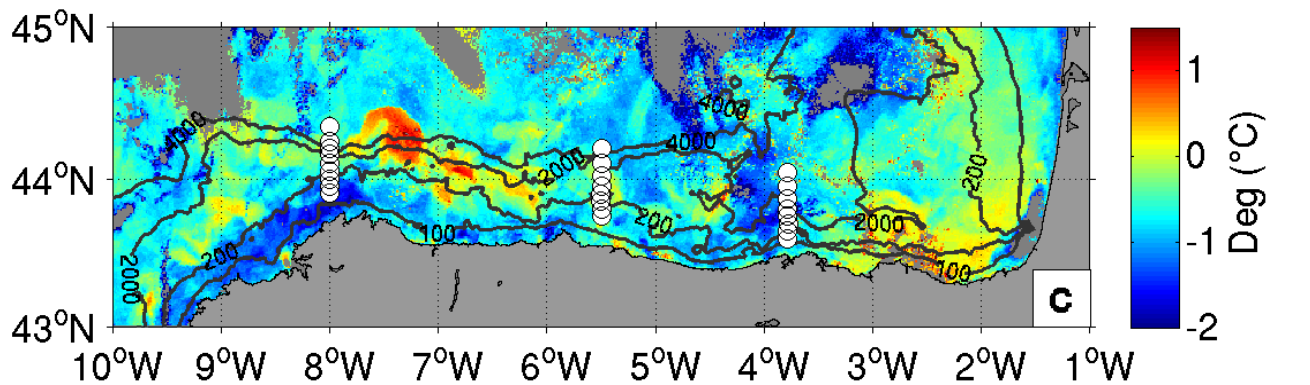
2006/11/29



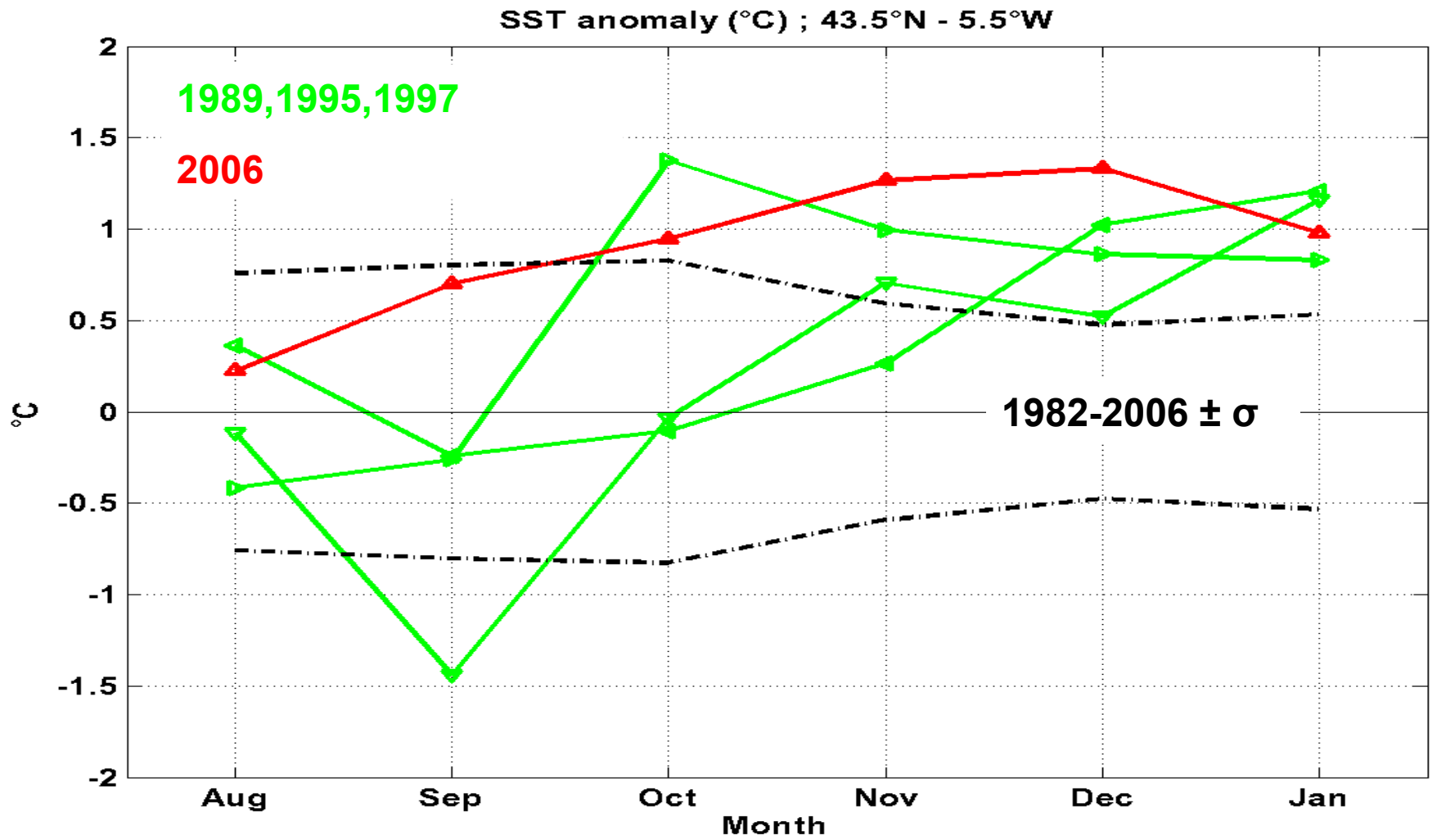
2006/12/14



Différence



O : CTD Sections A,B,C



Anomalie SST au nord de Gijon (5.5°W)

(source: NOAA/CDC)

Trajectoires Lagrangiennes en 2006-2007

Jaune : 75m

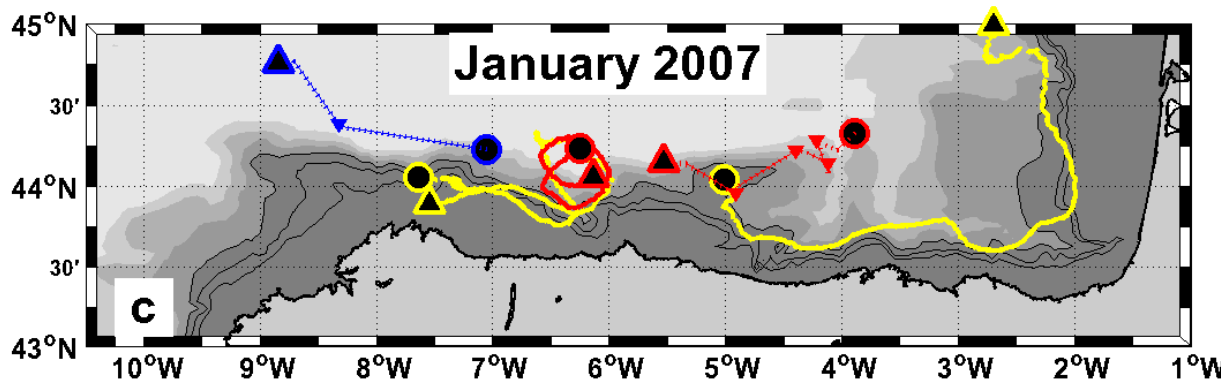
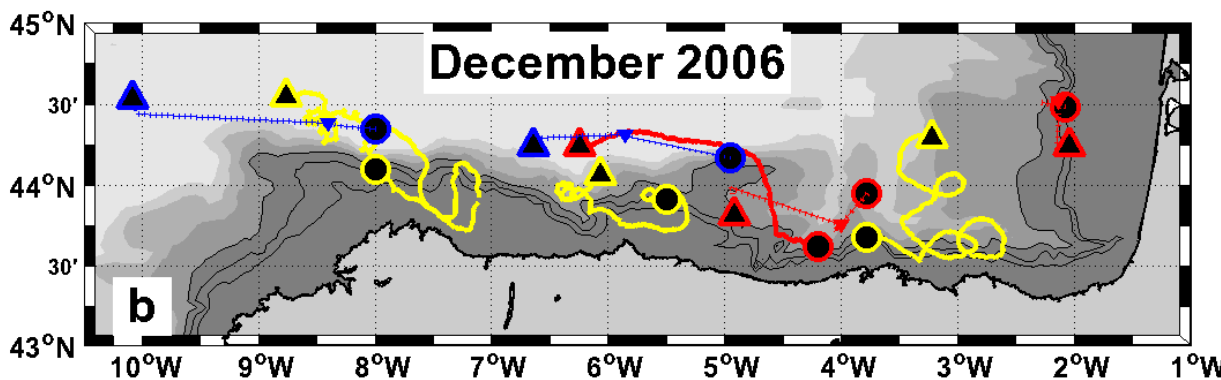
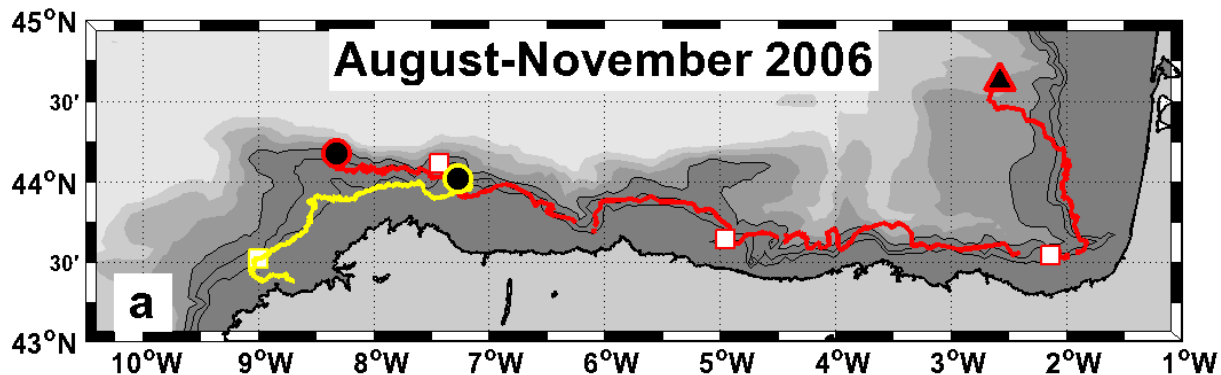
Rouge : 200m

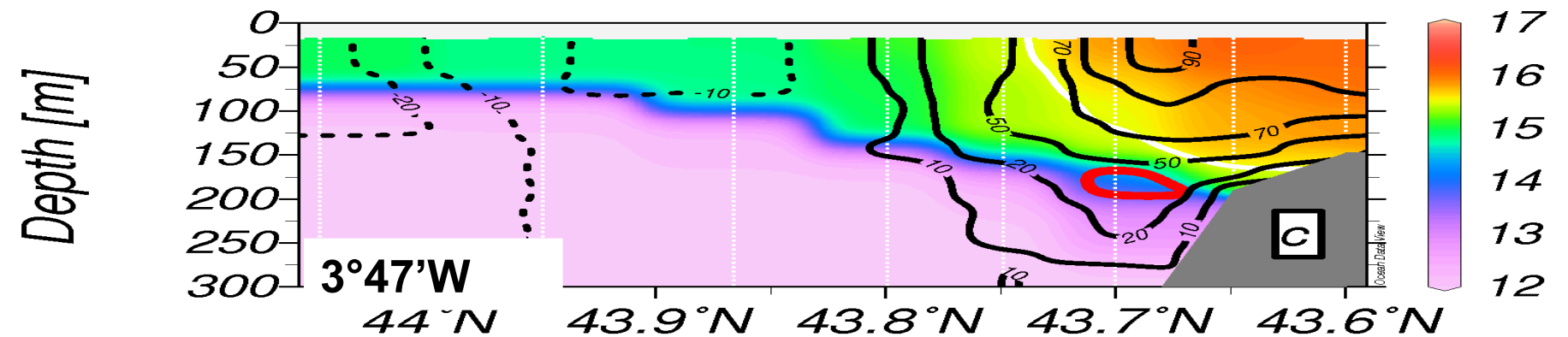
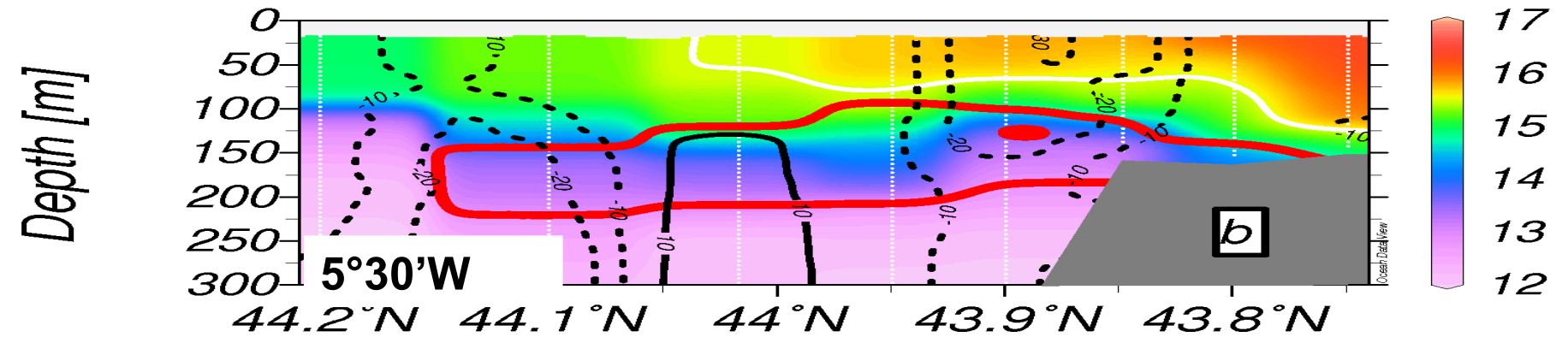
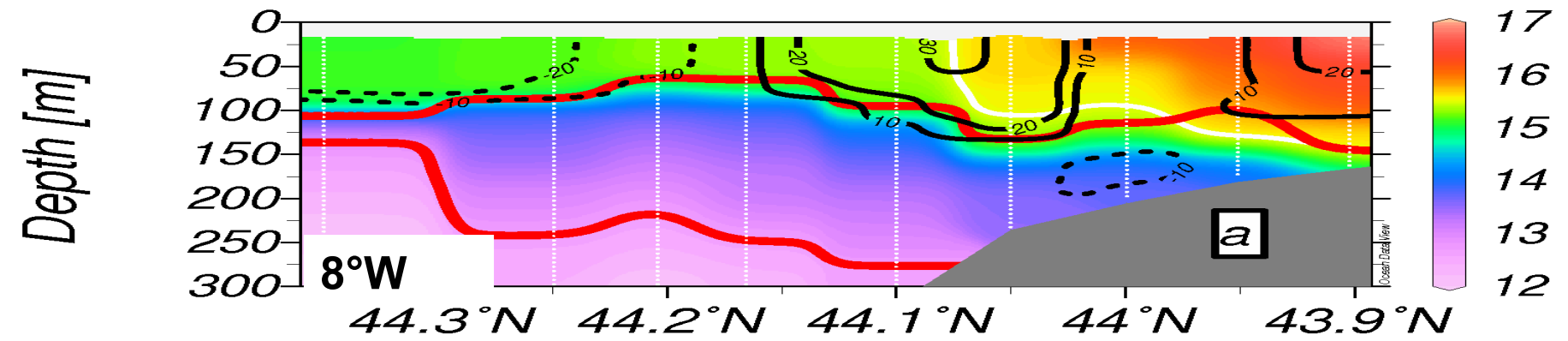
Bleu : 400m

O : début

Δ : fin

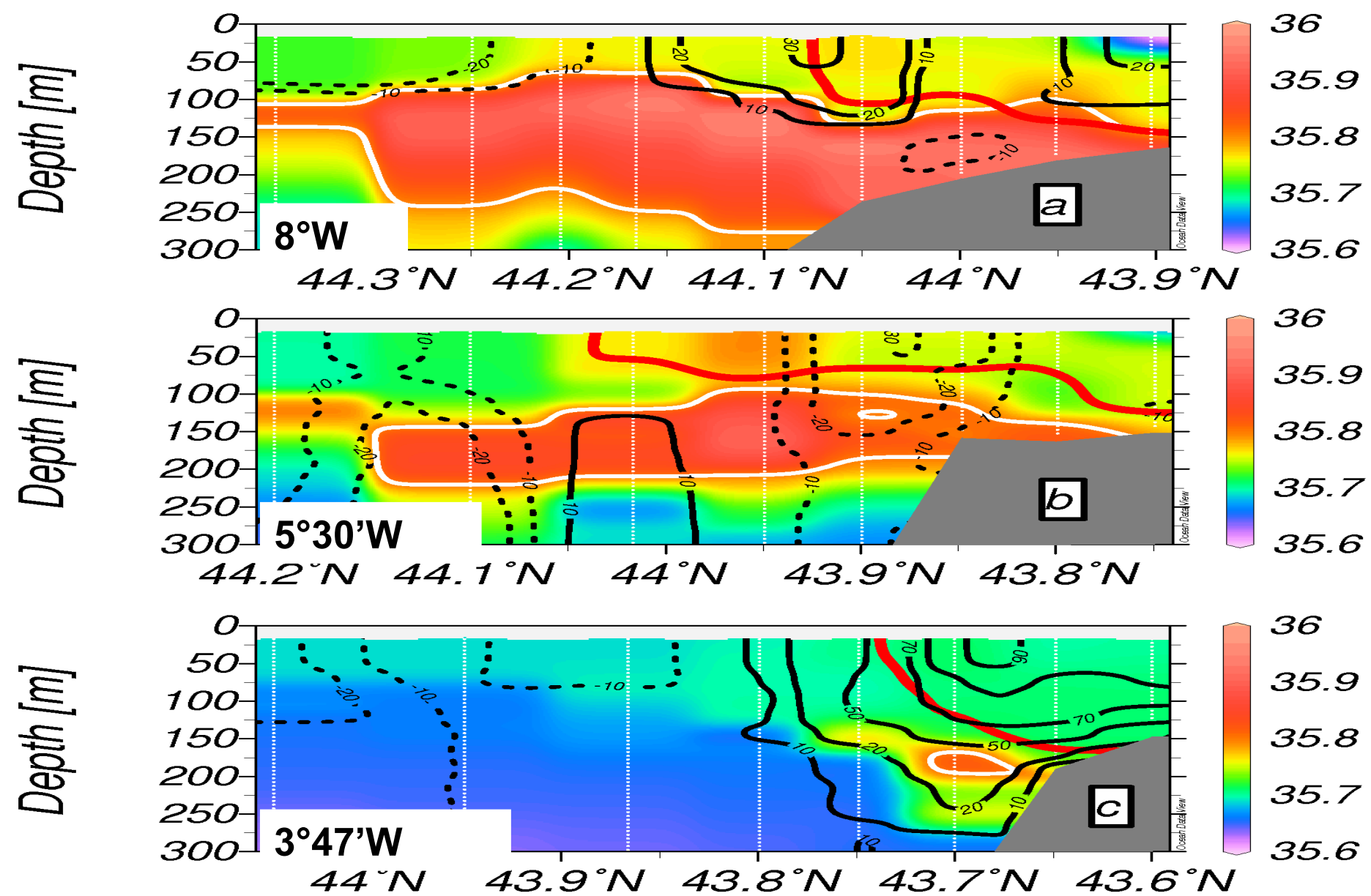
□ : mois





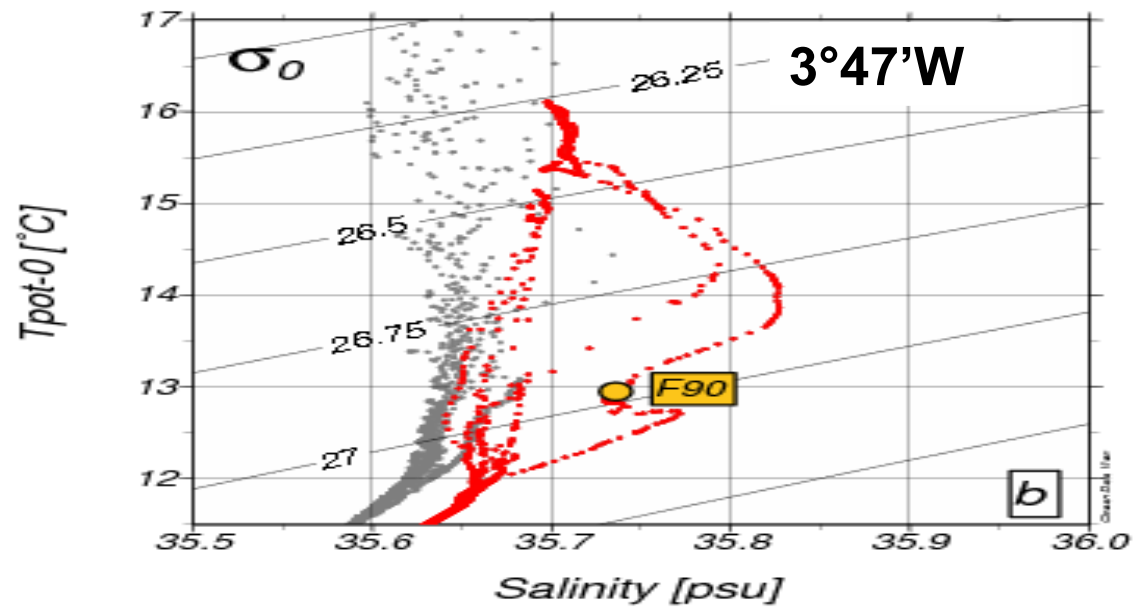
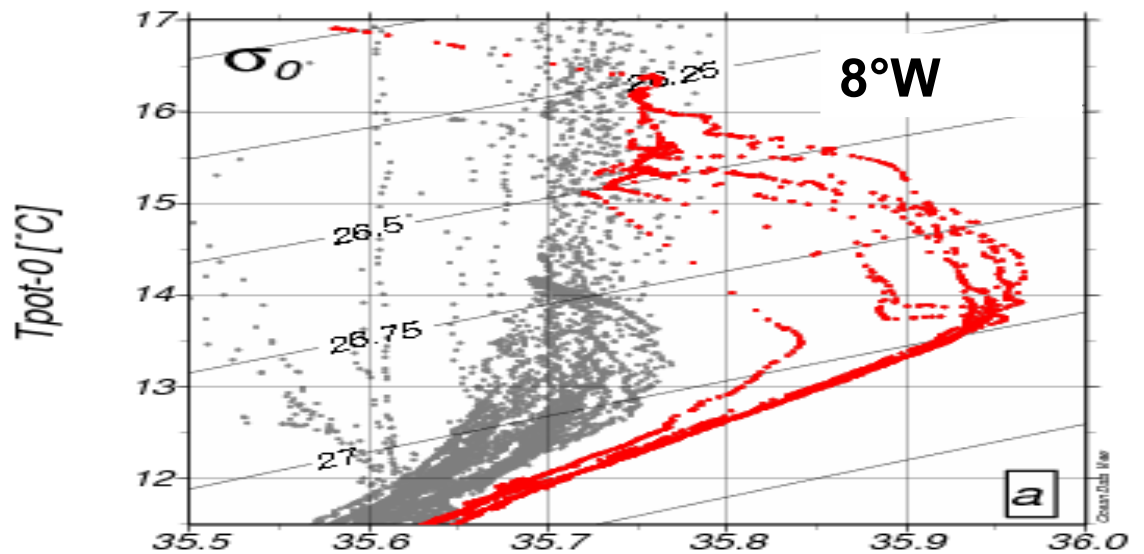
Sections de Température et de Vitesses vers l'Est

Lignes - noir: vitesse vers l'Est; rouge : 35.8 psu; blanc: 15.5°C



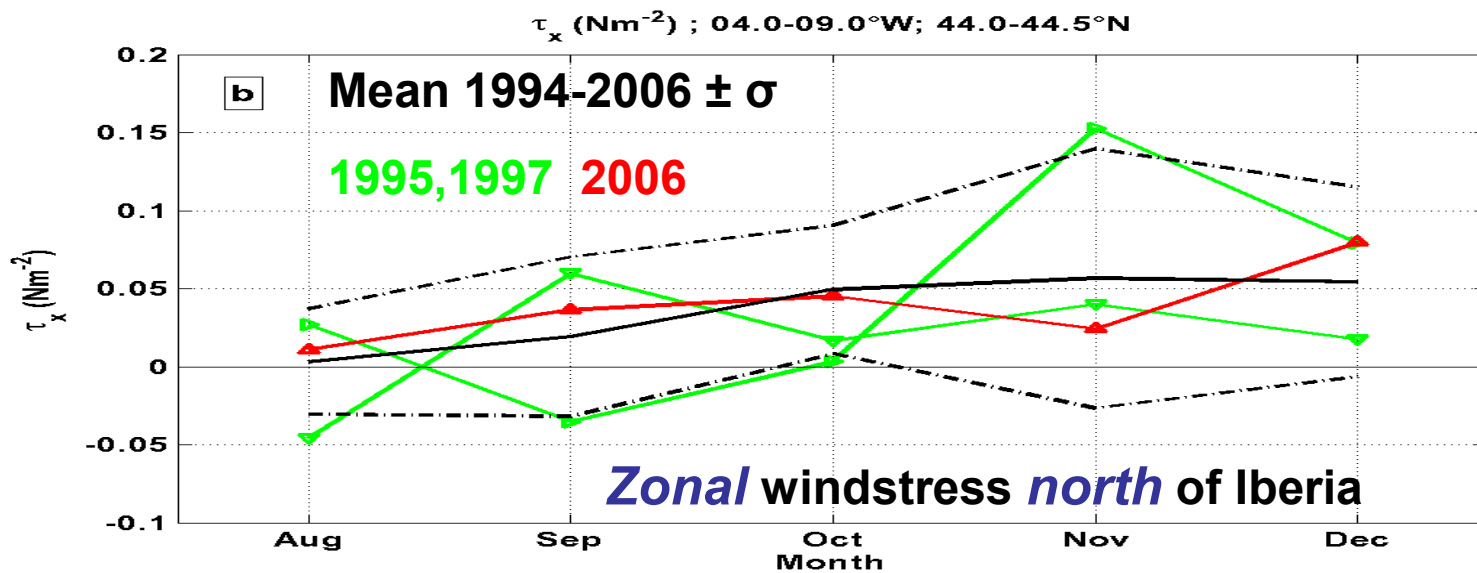
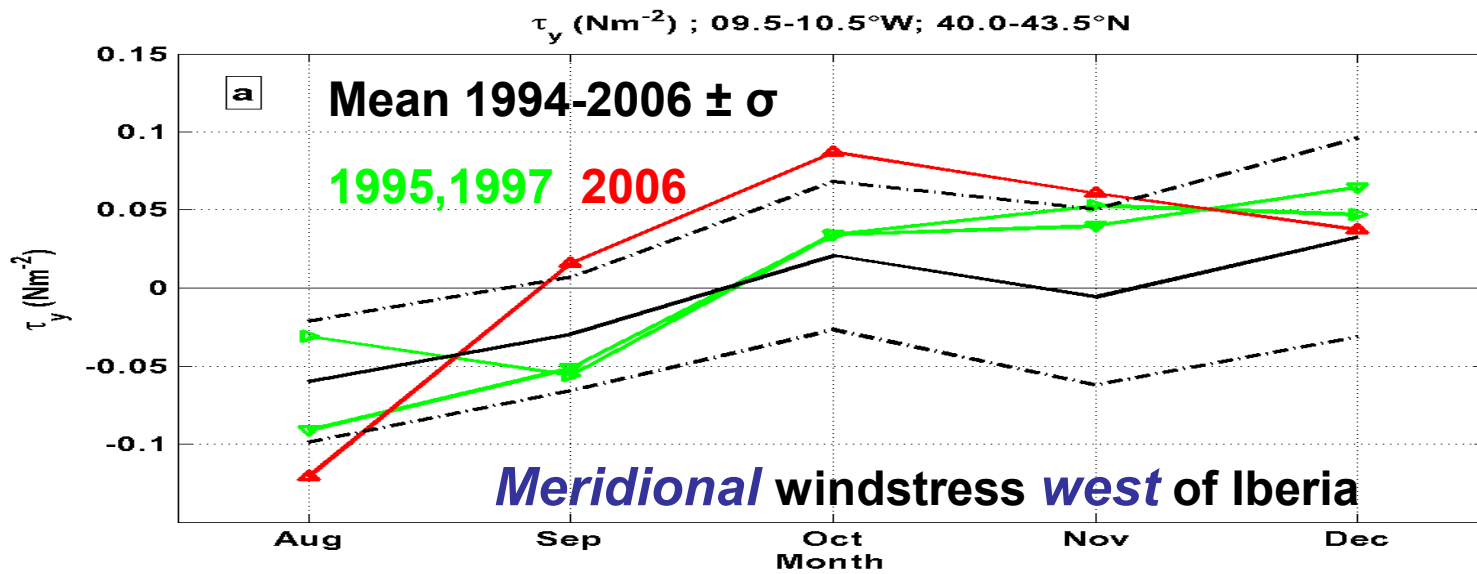
Sections de Salinité et de Vitesses vers l'Est

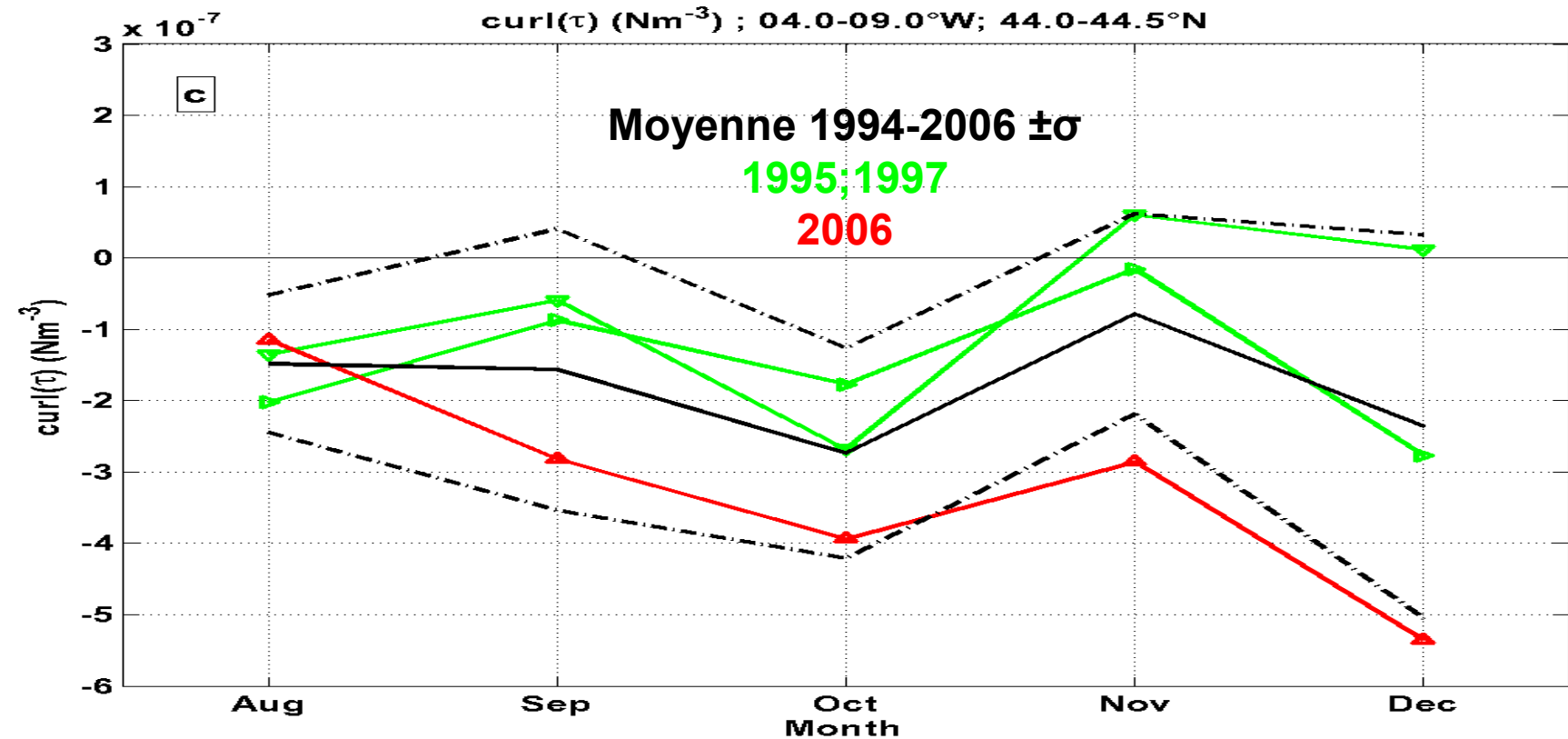
Lignes - noir: vitesses vers l'Est; rouge: 15.5°C; blanc: 35.8 psu



Diagrammes $\Theta - S$

Rouge: 2006 ; Gris: Historique





Rotationnel de la tension de vent Nord Espagne (données MétéoFrance)

Hypothèse (Schopp, comm. pers., 1993): Sverdrup Transport

$$\beta V = \text{curl}(\tau / \rho_0)$$

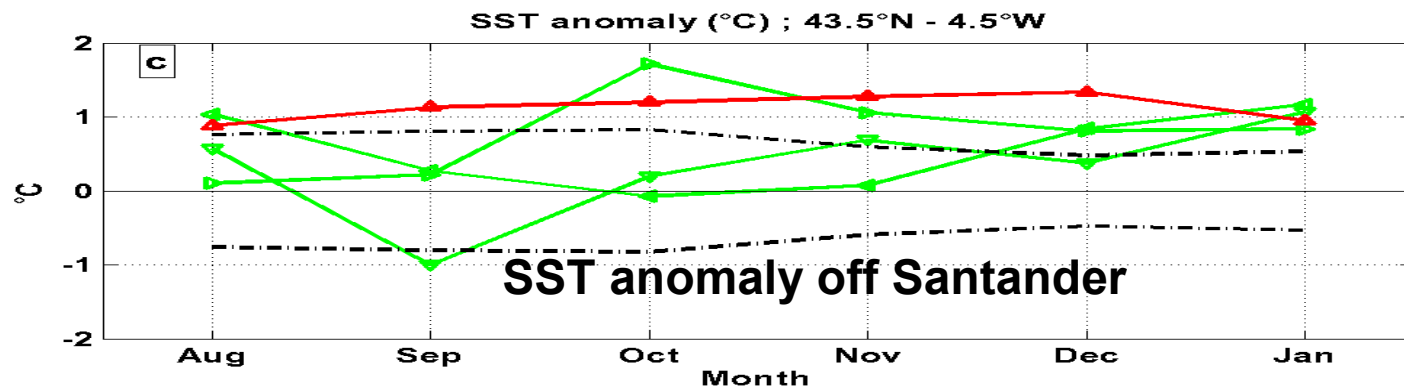
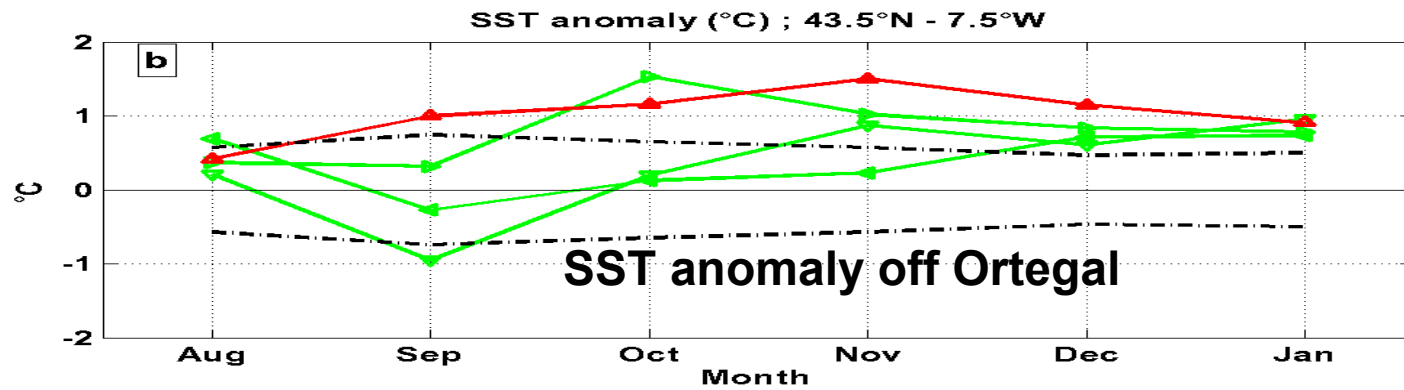
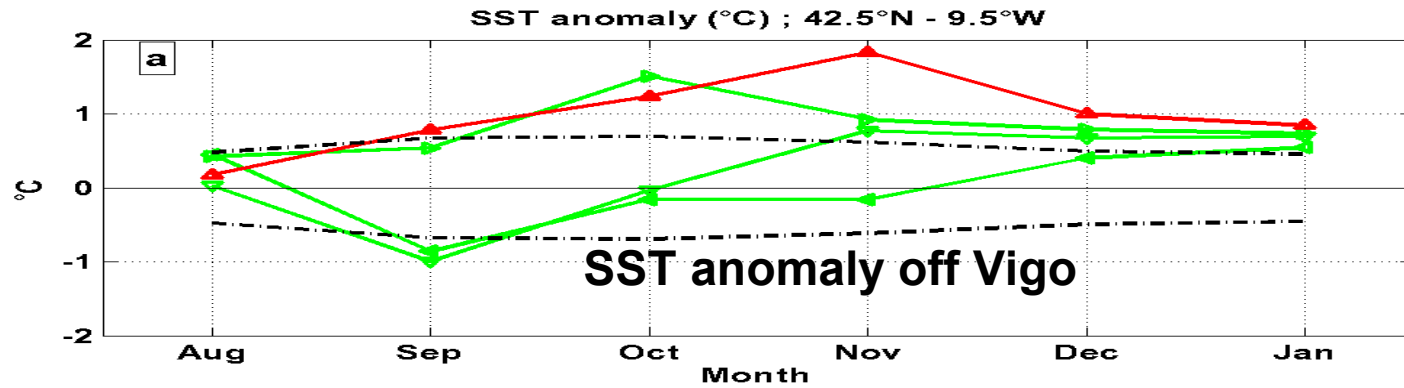
⇒ Transport méridien vers le Sud, collecté Pente externe

⇒ Induit un transport zonal vers l'Ouest

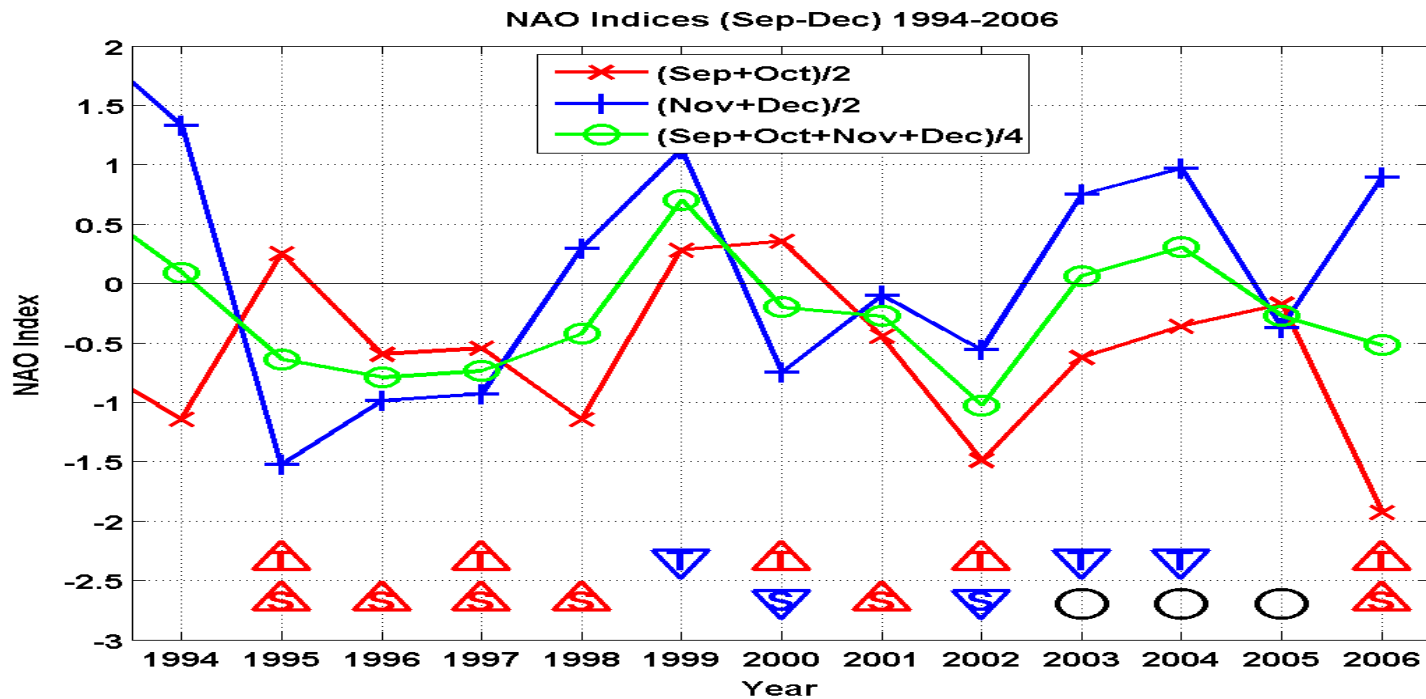
⇒ (+ Effet local du rotationnel sur la Pente (Pedlosky, 1974))

Conclusions

- + **Observations du Système de Courants Nord Espagne en 2006-2007, pendant un événement chaud et salé**
- + **Système à 3 composantes (Plateau / Pente Supérieure / Pente Externe)**
- + **Forçages:**
 - **IPC: Tension de Vent Méridienne Ouest Espagne (JEBAR; WIBP (« West Iberia Buoyant Plume »), ...)**
 - **Courant vers l'Ouest Pente Externe: Transport de Sverdrup**



(source: NOAA/CDC)



Monthly mean NAO indices 1994-2006

Red: September-October

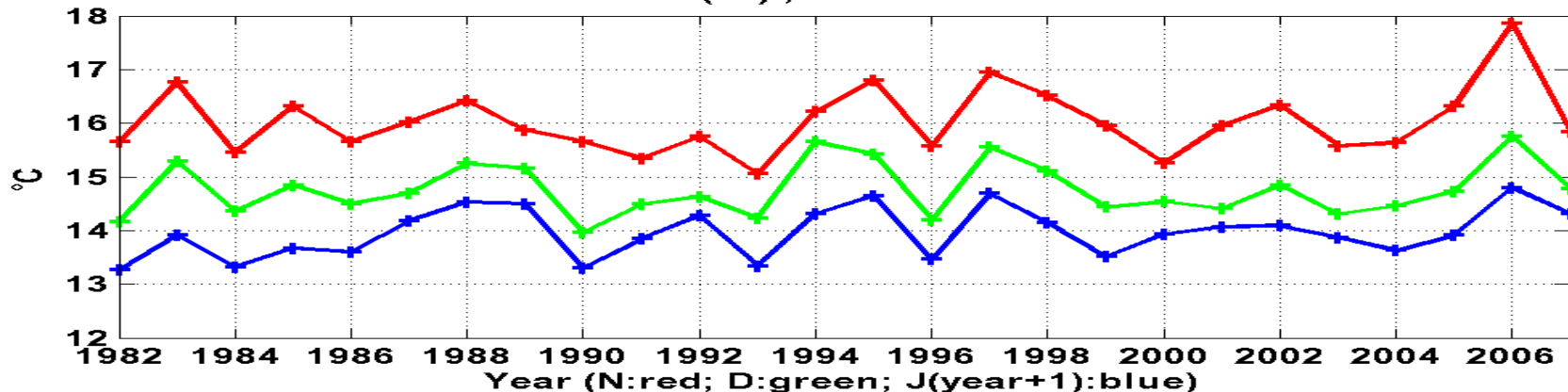
Blue: November-December

Green: September-December

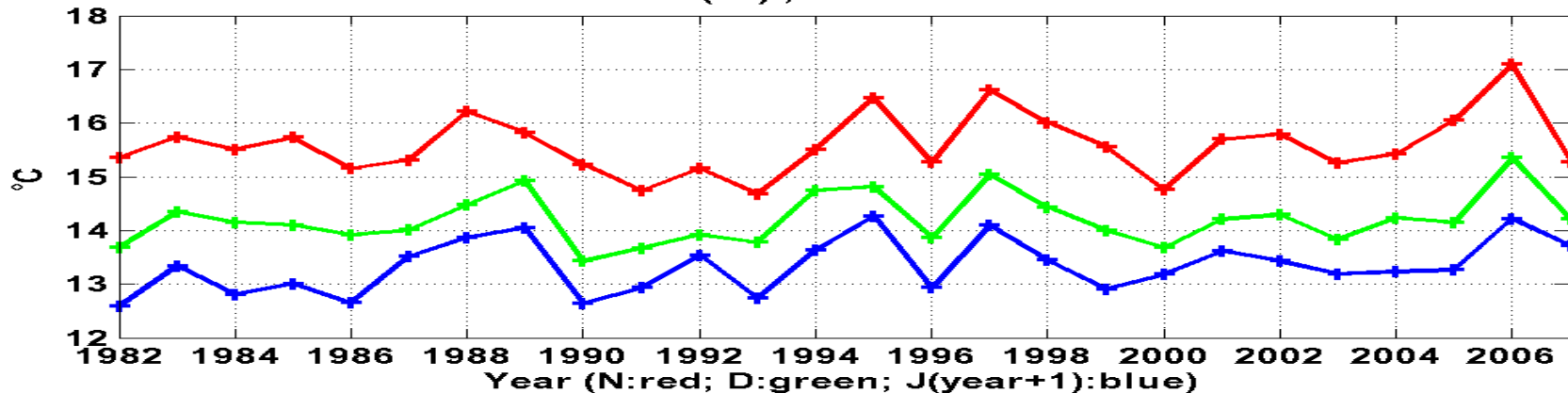
T circled : « Navidad » events (Pingree/Garcia-Soto)

S circled : Salinity events (Llope et al)(source: NOAA/NCEP)

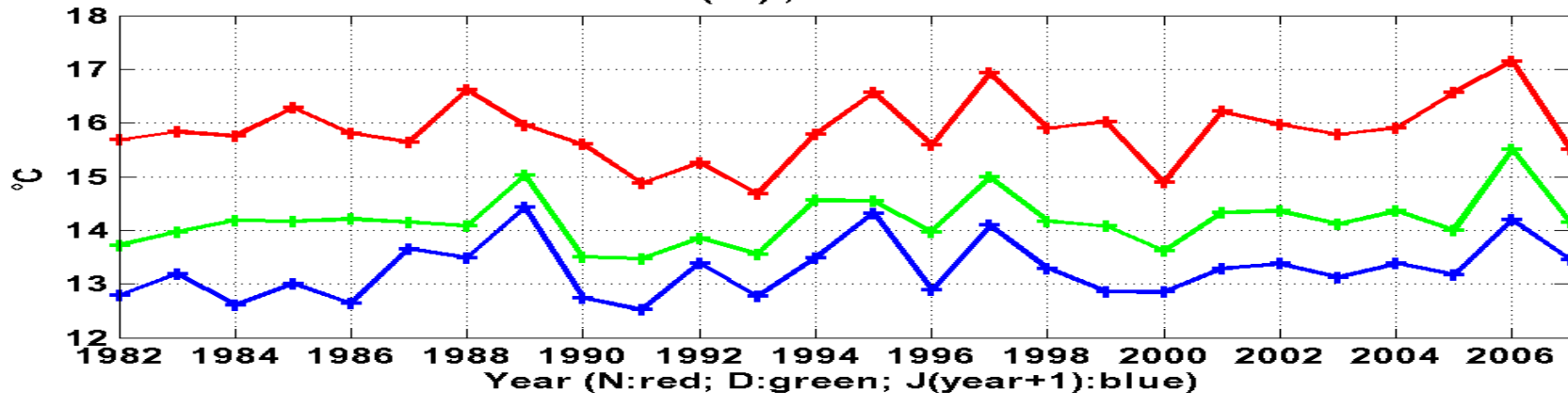
SST (°C) ; 42.5°N - 9.5°W



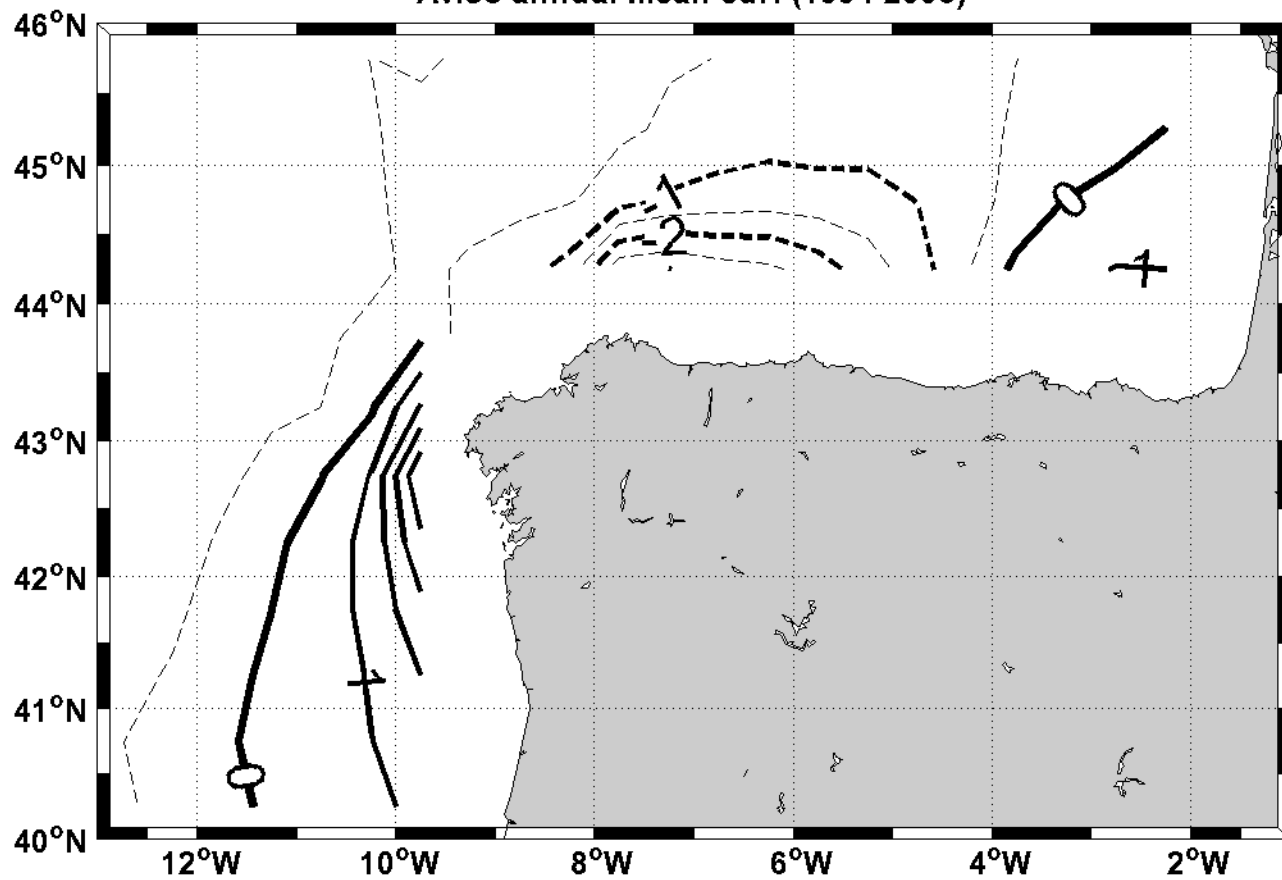
SST (°C) ; 43.5°N - 7.5°W



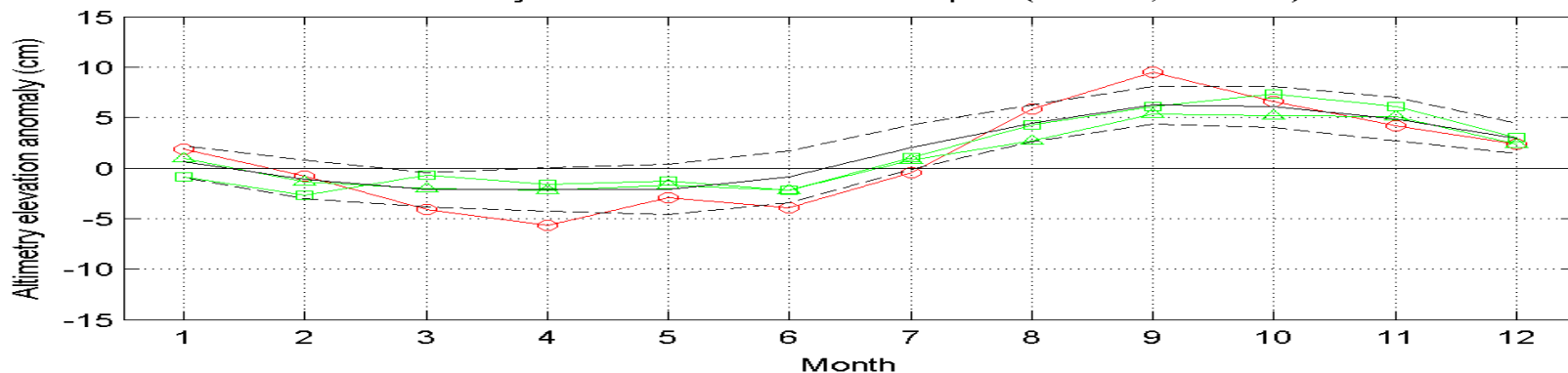
SST (°C) ; 43.5°N - 4.5°W



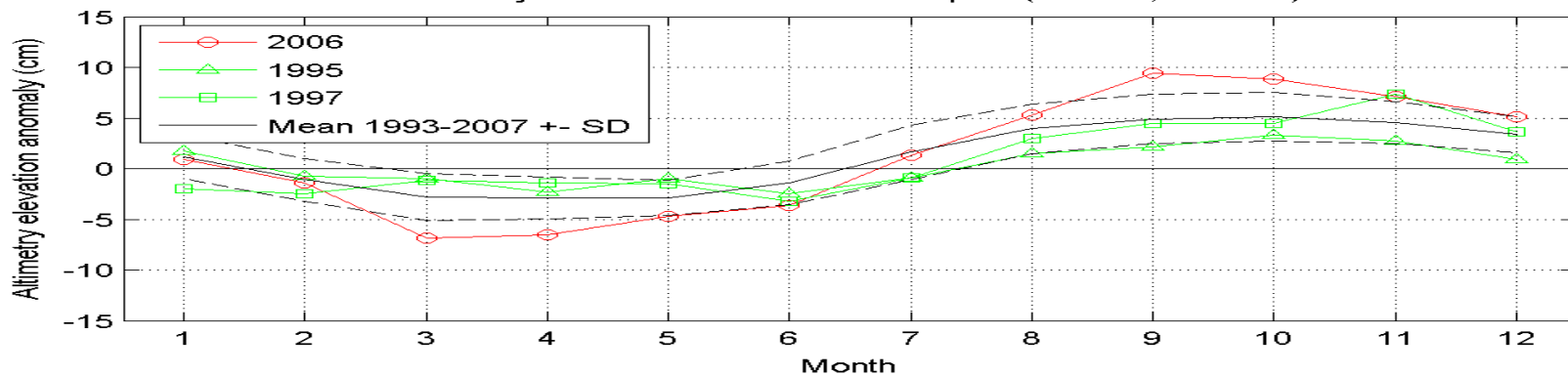
Aviso annual mean curl (1994-2006)



Altimetry elevation anomalies NW Spain (42-44N; 12-14W)



Altimetry elevation anomalies SW Spain (37-39N; 12-14W)



Altimetry elevation anomalies near Madeira (32-34N; 12-14W)

