

## EXPEDITIONSRAPPORT FRÅN U/F ARGOS

### CRUISE REPORT FROM R/V ARGOS

**Expeditionens varaktighet:** 980216-980222  
**Survey period:**

**Undersökningsområde:** The Skagerrak, the Kattegat,  
**Survey area:** the Sound and the Baltic Proper

**Uppdragsgivare:** SMHI  
**Principal:**

#### SUMMARY

*The expedition was performed within SMHI's regular marine monitoring programme and covered the Skagerrak, the Kattegat, the Sound and the Baltic Proper. Mapping was performed in the Baltic. The weather was mostly cloudy and hazy. Moderate to strong winds from the west dominated. The surface water temperatures were normal for the season in the whole area i.e. about 5°C in the Skagerrak, 3°C in the Kattegat and between 2 and 4°C in the Baltic. The spring bloom in the Kattegat continued; both inorganic nitrogen and silica were depleted and the phosphate concentration was low. In the Baltic no production occurred and typical winter concentrations of the nutrients were measured. The oxygen concentrations in the Baltic were below 2 ml/l from about 80 m depth in the Gotland Basin and about 70 m in the Bornholm Basin. No hydrogen sulphide was detected in the Baltic Sea.*

## **PRELIMINÄRA RESULTAT**

Expeditionen utgjorde en ordinarie expedition inom SMHIs integrerade havsövervakning. Expeditionen startade i Göteborg den 16/2 och avslutades i Karlskrona den 22/2. Vädret var mestadels molnigt och disigt. Under hela expeditionen rådde det uppehållsväder. Vindarna var oftast friska och främst västliga.

### **Skagerrak**

Temperaturerna i ytvattnet varierade mellan 4.5 och 5.5°C. Närsaltshalterna var typiska för årstiden. En begränsad växtplanktonproduktion förekom i ett 10 till 20 m tjockt ytlager längs med svenska kusten.

### **Kattegatt och Öresund**

En kraftig växtplanktonblomning förekom i framförallt södra Kattegatt. Ytlagret var tömt på både silikat och oorganiskt kväve och innehöll endast låga halter av fosfat. Ytvattentemperaturen varierade kring 3°C i hela området. Syrgashalterna i bottenvattnet var för årstiden normala. Lägst syrgasmättnad, 70%, uppmättes i bottenvattnet vid Landskrona, i Öresund.

### **Östersjön**

Ytvattentemperaturerna varierade mellan 2 och 4°C. Ingen växtplanktonproduktion förekom. Typiska vinterförhållanden rådde i hela området med stora siktdjup (ca 10-15 m) och höga samt ökande (jmf med januari) närsaltshalter. Syrgashalter under 2 ml/l uppmättes från c:a 80 m och djupare i Gotlandsbassängen samt från c:a 70 m i Bornholmsbassängen. Inget svavelväte uppmättes i Östersjön.

## **DELTAGARE**

Namn	Från
Bengt Yhlen, expeditionsledare	SMHI Oceanografiska lab.
Nils Kajrup	- " -
Mats Ohlson	- " -
Björn Sjöberg	- " -
Bodil Thorstensson	- " -

## **BILAGOR**

- Färdkarta
- Tabell över stationer, antal parametrar och provtagningsdjup
- Karta över syrehalter i bottenvattnet
- Profilplottar för basstationer
- Månadsmedelvärdesplottar för vissa basstationer



SMHI  
Ocean lab

\*\*\*\*\*  
\*\*\*\*\* Hydrographic series

Ship: 14-Argos  
Year: 1998

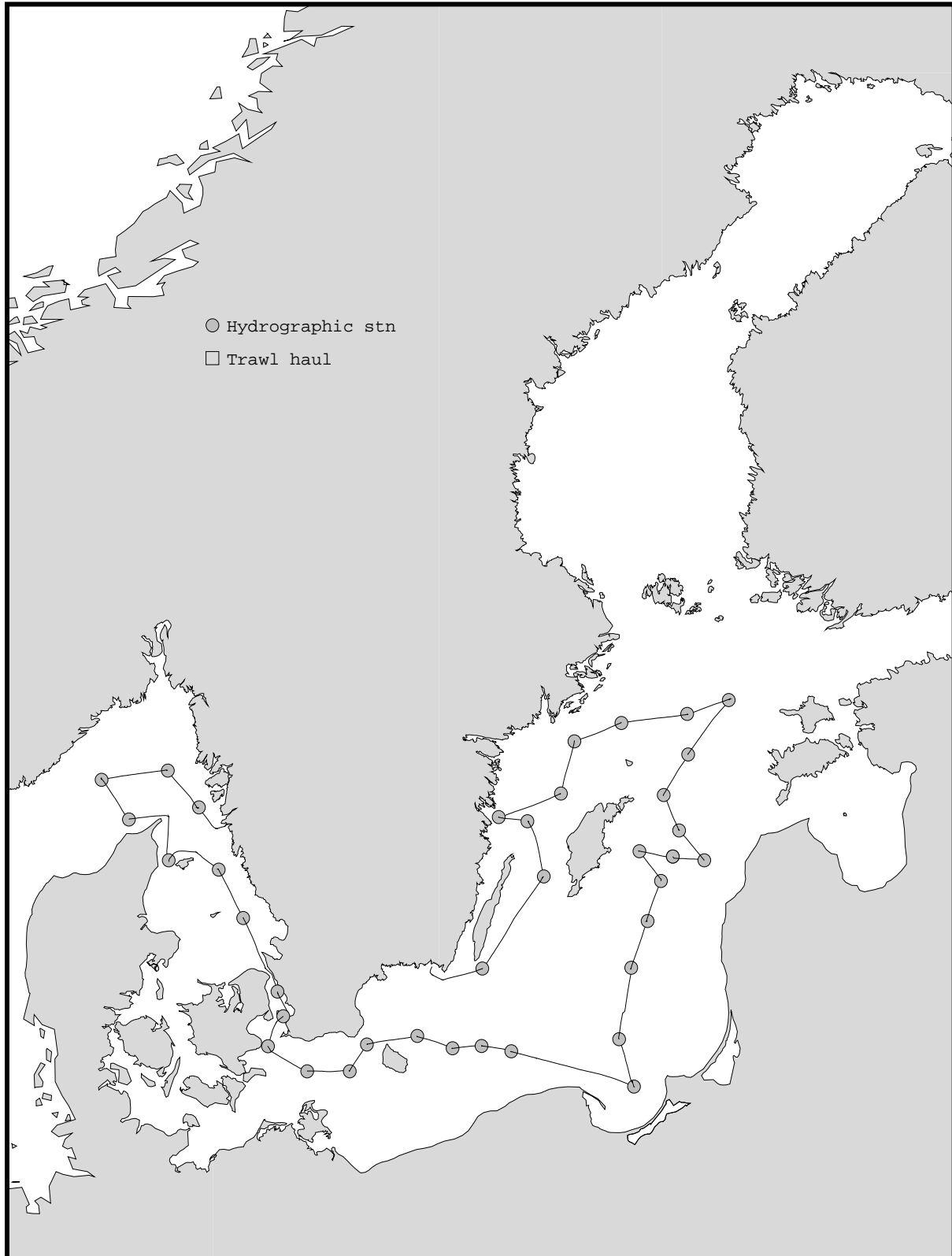
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Time: 12:50

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0178	BPEX26BAS	BY20	FÅRÖDJ	N5800	E1953	980220	1030	205		12	27	9	5.1	1012	2730	x	--x----	17	xx	-	x	-	x	x	x	x	x	x	-	x	-	-	-	-	-	-	x
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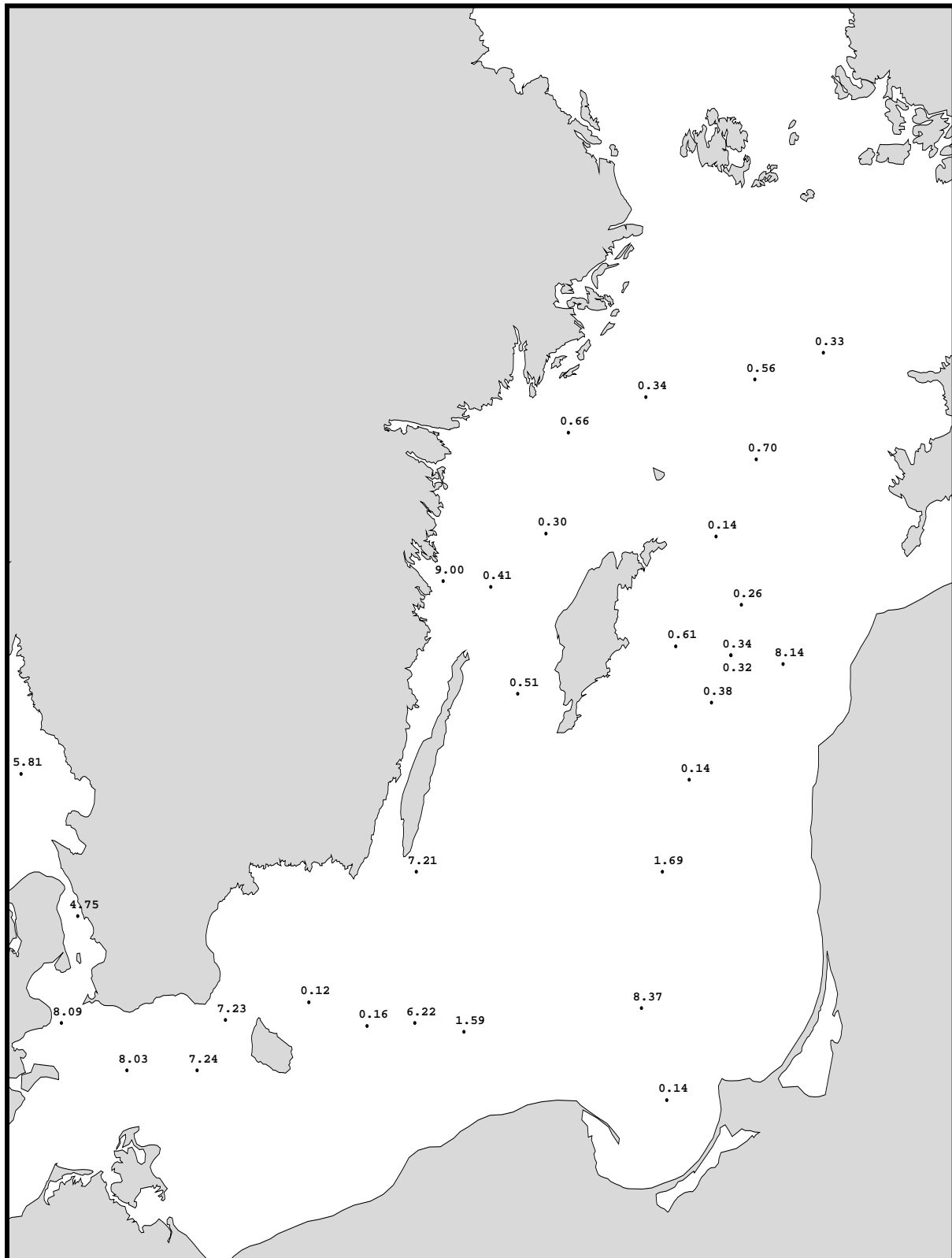
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Date : 980216-980222  
Series : 0151-0188



# Bottom water oxygen concentration (ml/l)

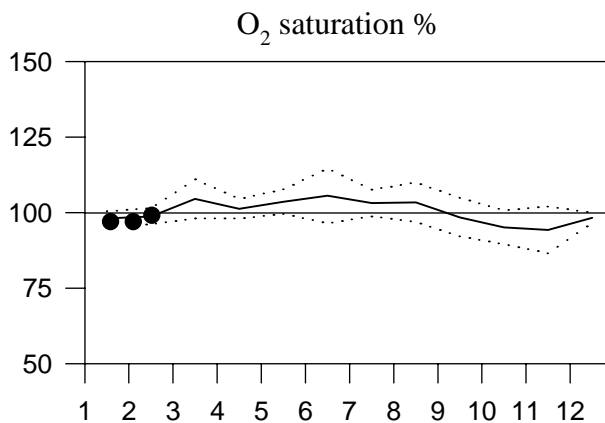
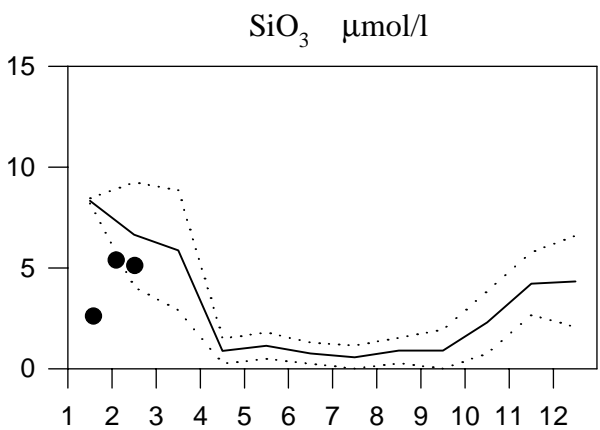
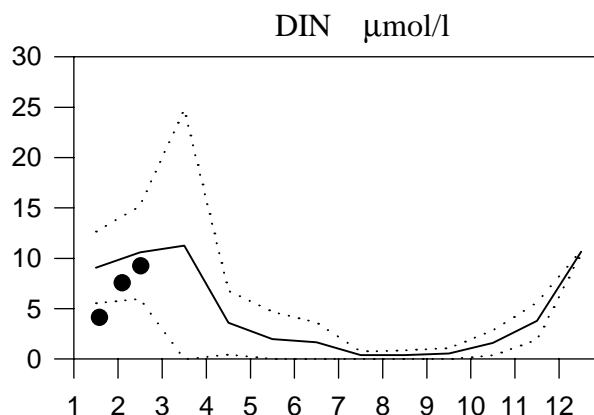
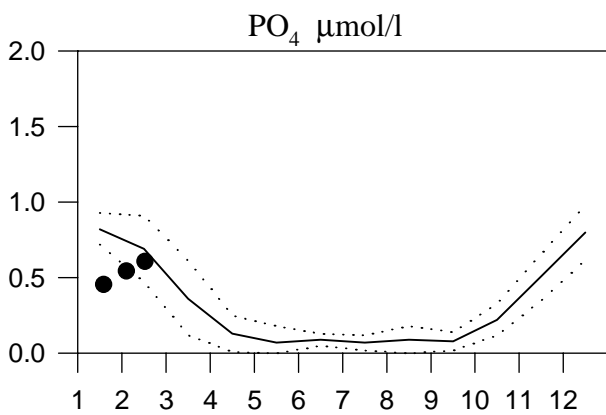
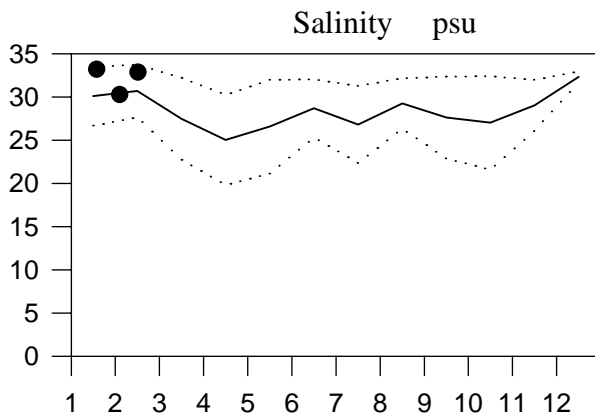
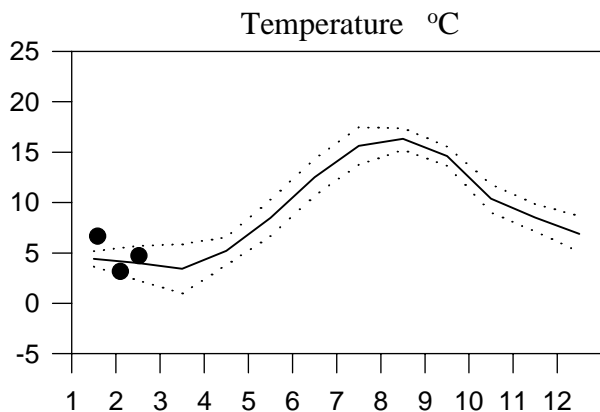
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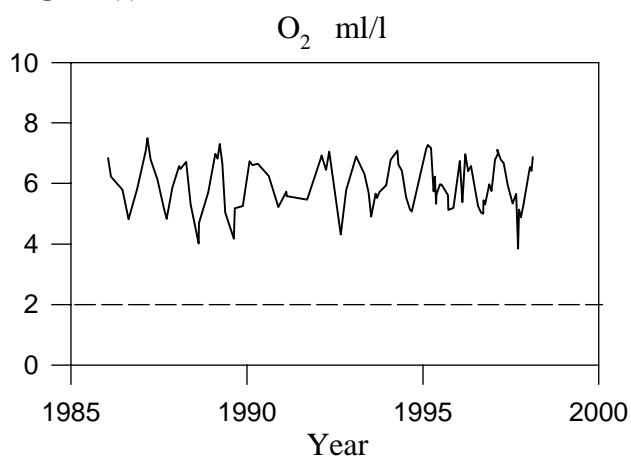
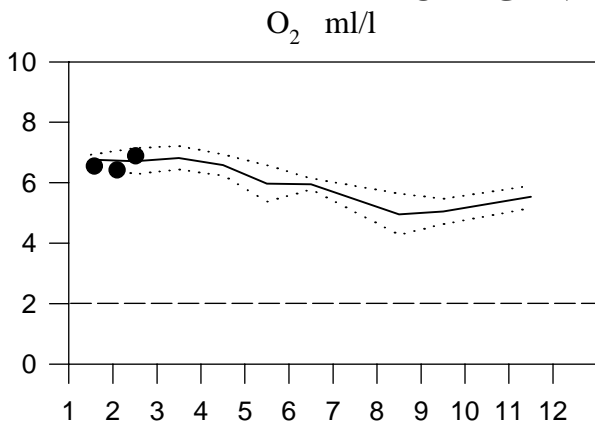
# STATION P2 SURFACE WATER (0-15 m)

## Annual Cycles

— Mean 1986-1995      ····· St.Dev.      ● 1998



## OXYGEN IN BOTTOM WATER

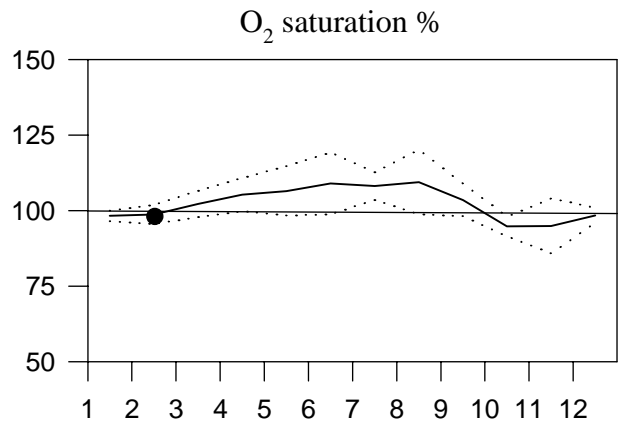
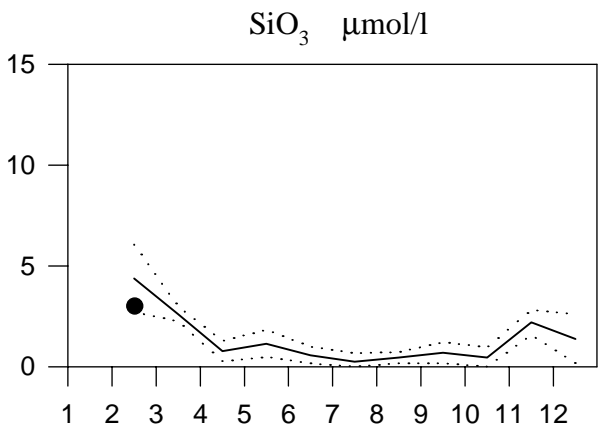
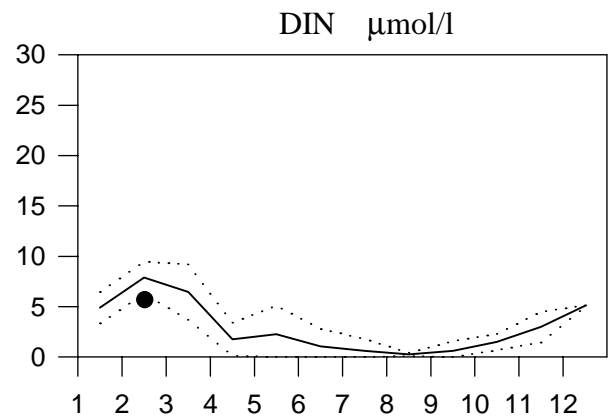
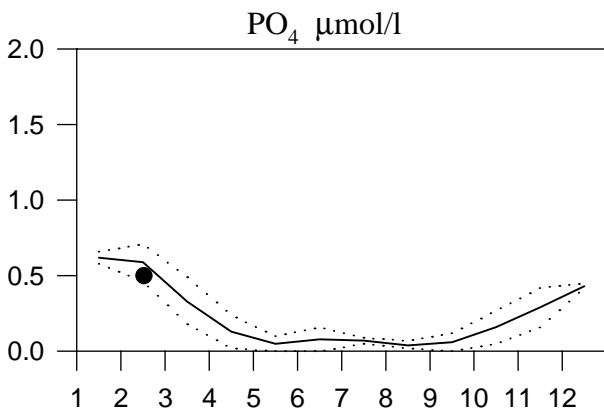
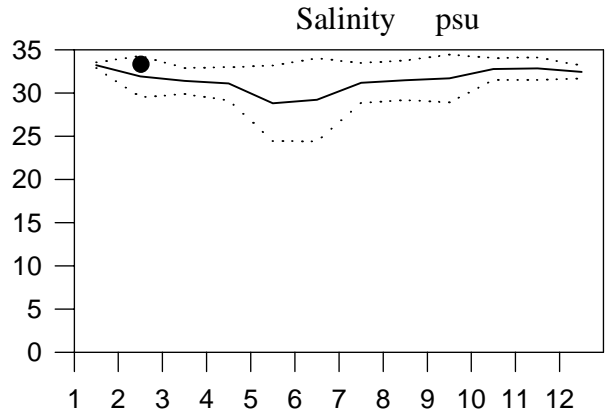
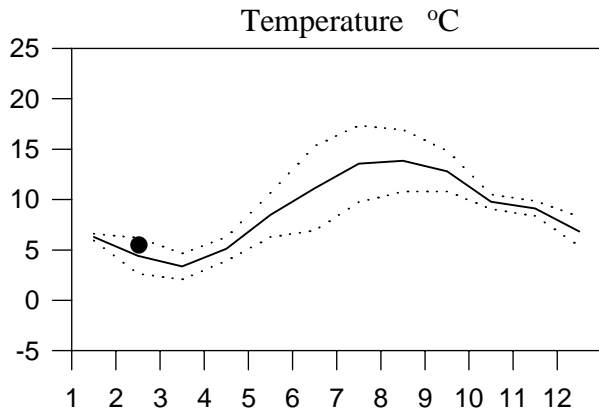




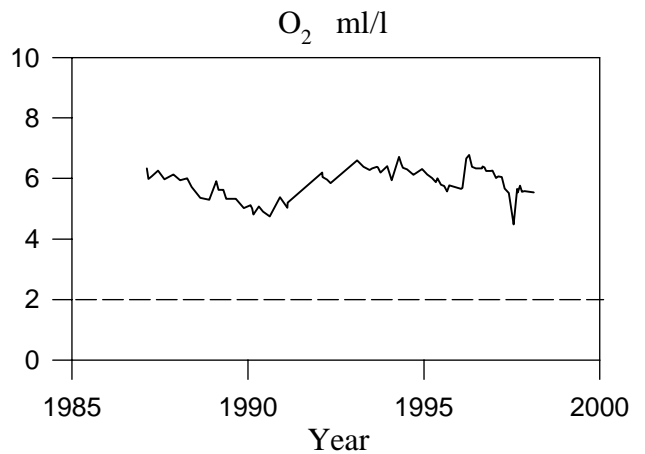
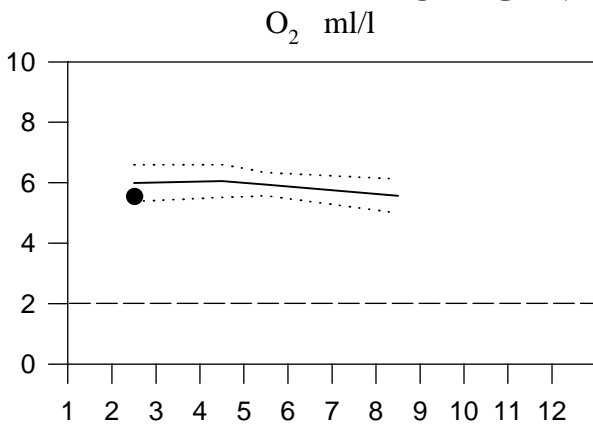
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## Annual Cycles

— Mean 1986-1995      ····· St.Dev.      ● 1998



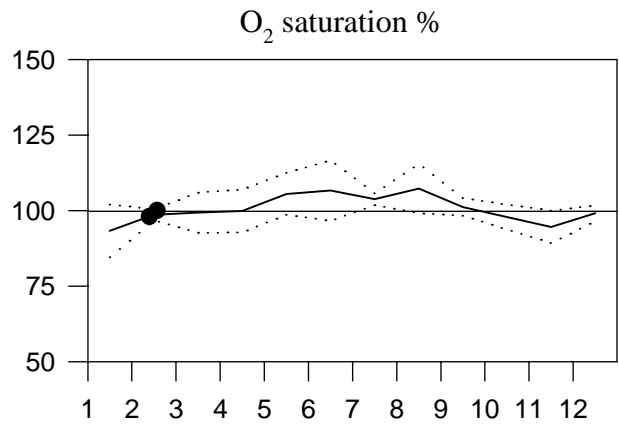
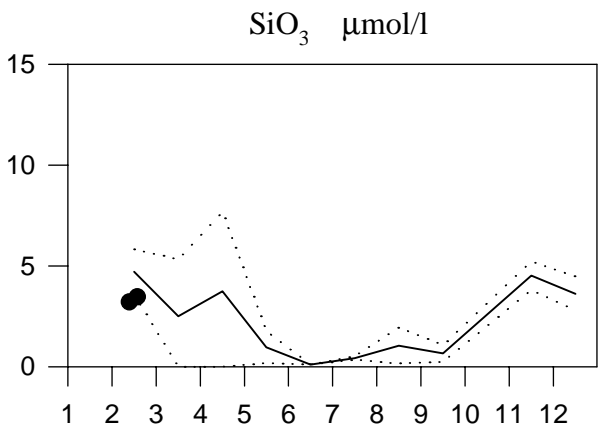
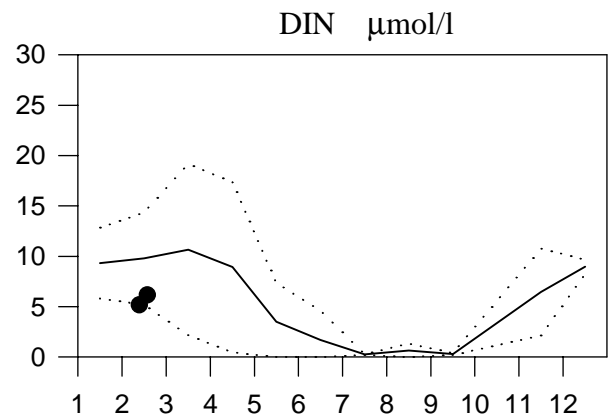
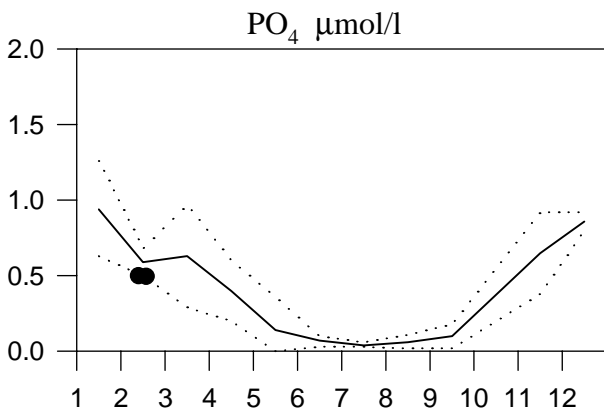
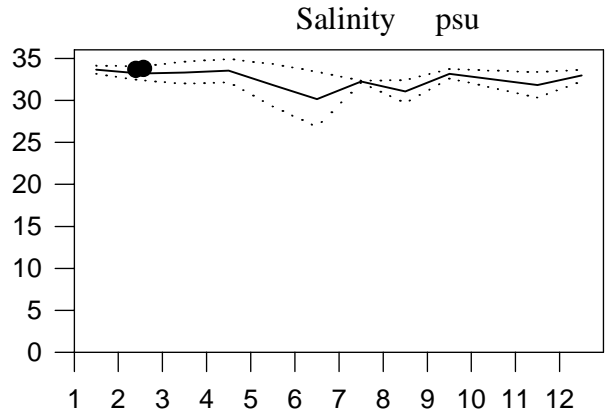
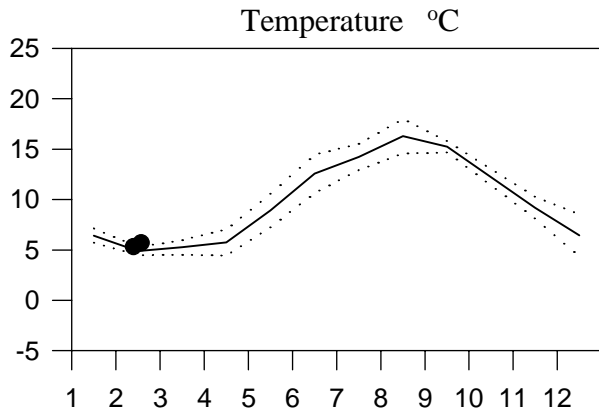
## OXYGEN IN BOTTOM WATER



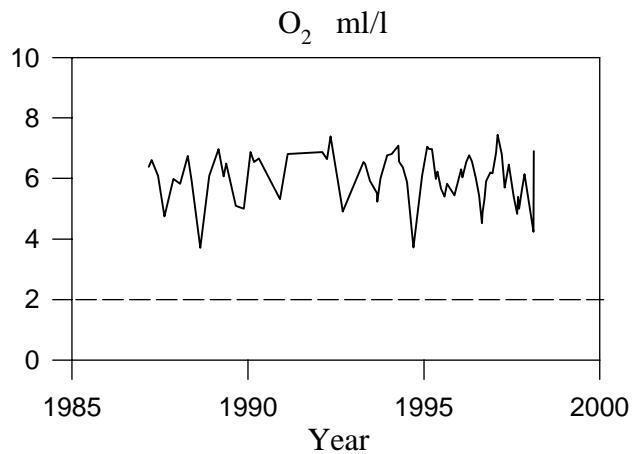
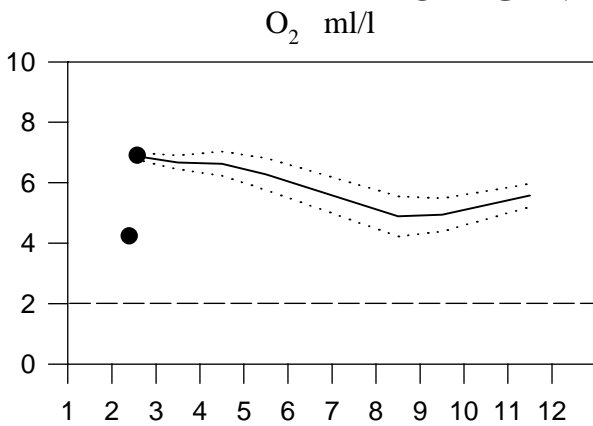
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## Annual Cycles

— Mean 1986-1995      ····· St.Dev.      ● 1998



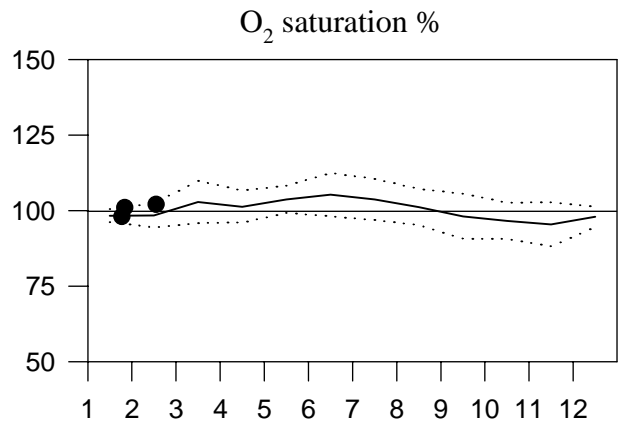
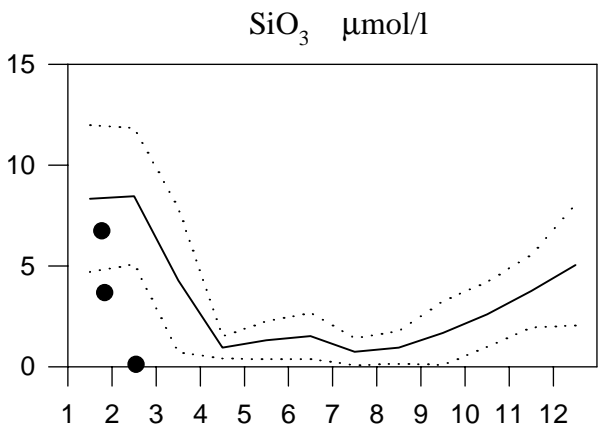
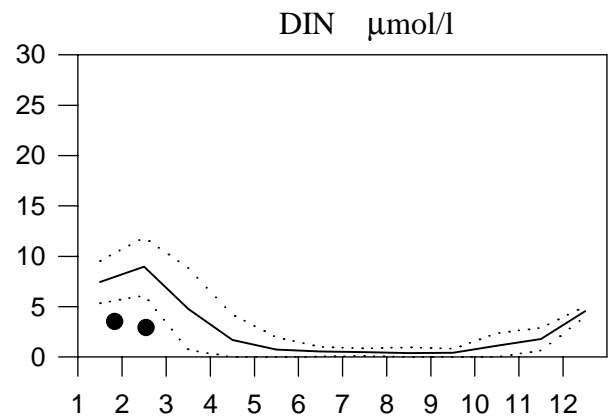
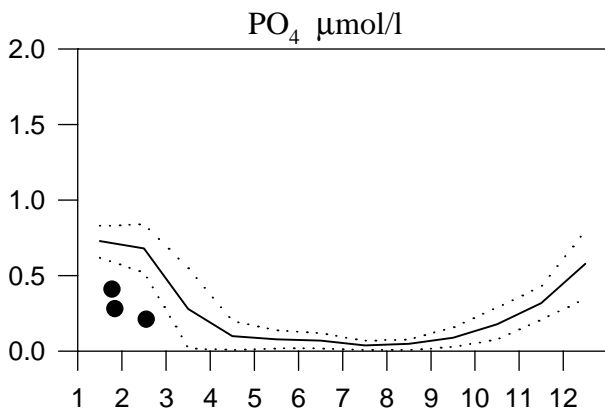
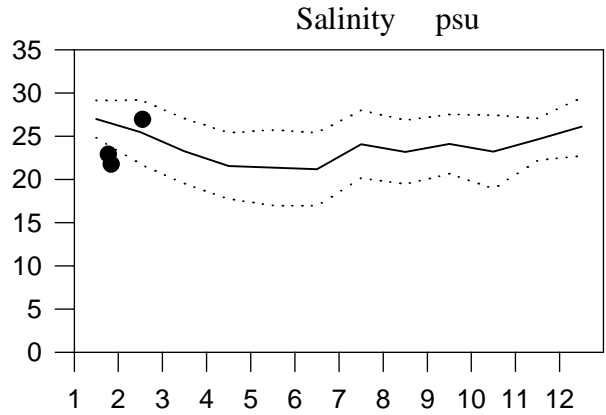
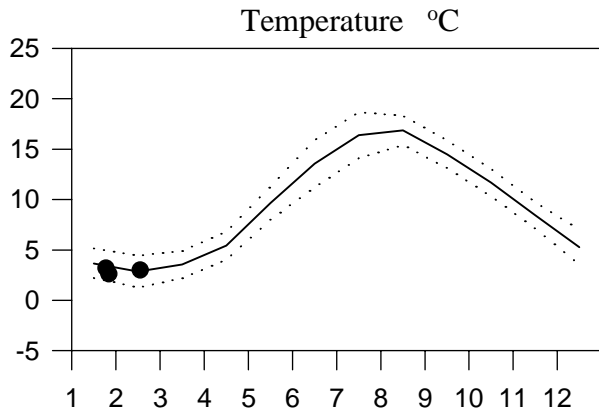
## OXYGEN IN BOTTOM WATER



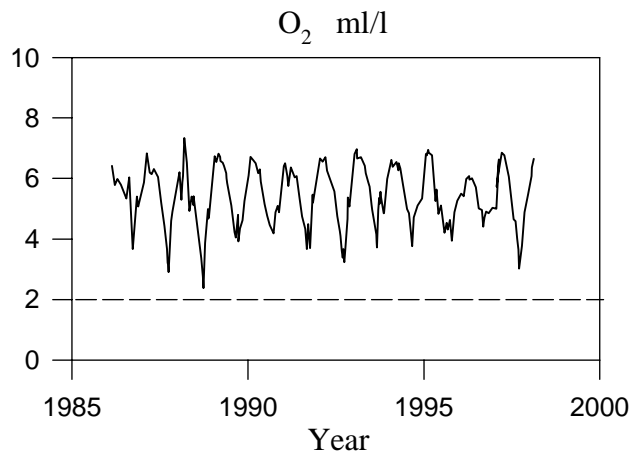
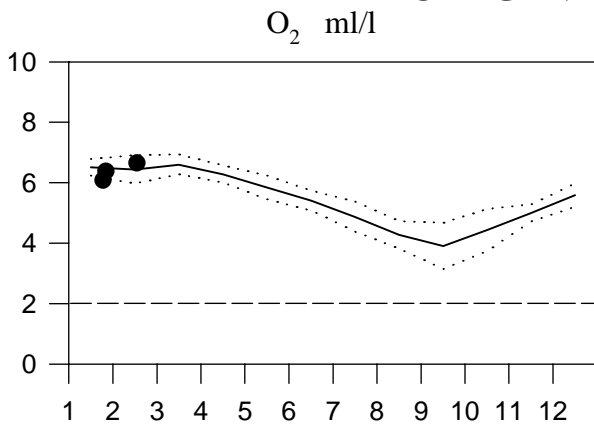
# STATION FLADEN SURFACE WATER (0-15 m)

## Annual Cycles

— Mean 1986-1995      ····· St.Dev.      ● 1998



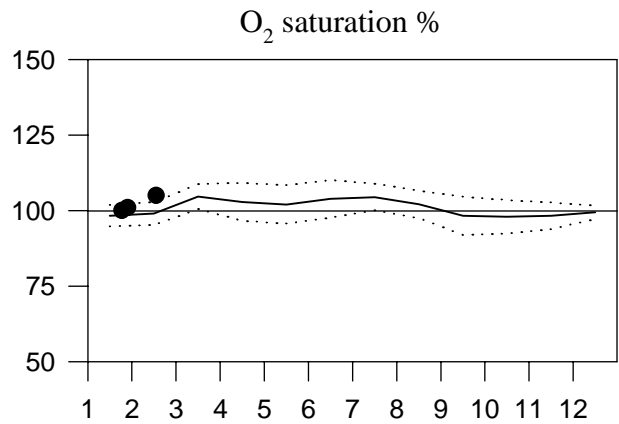
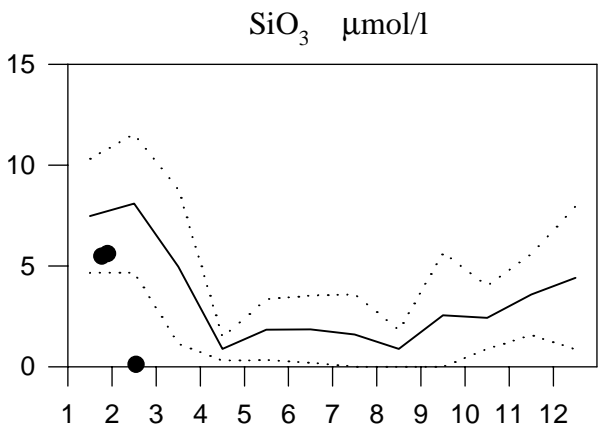
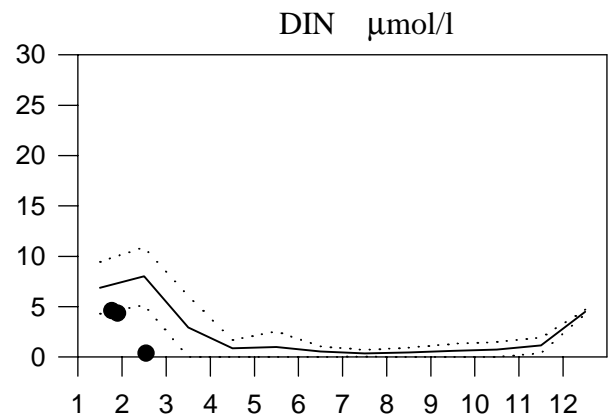
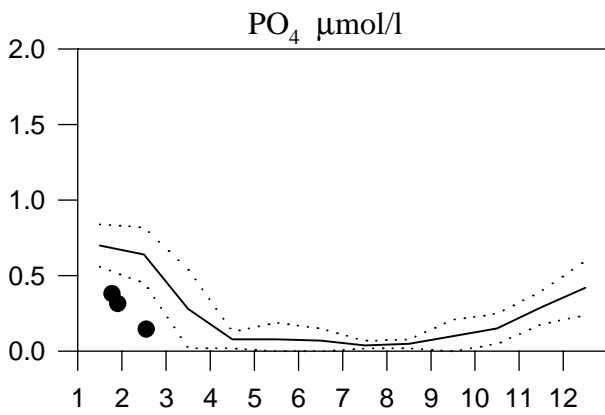
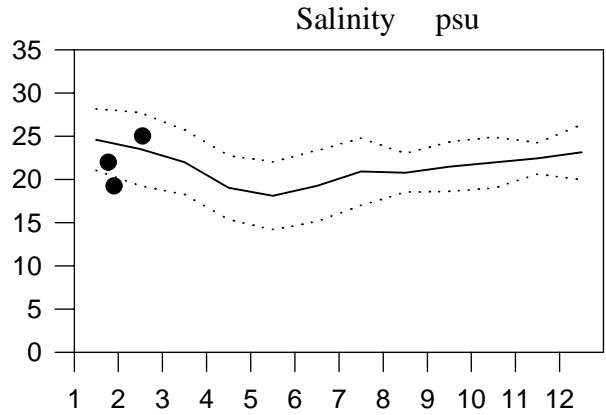
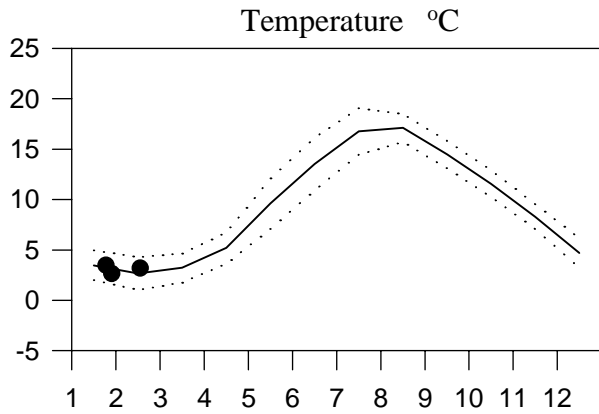
## OXYGEN IN BOTTOM WATER



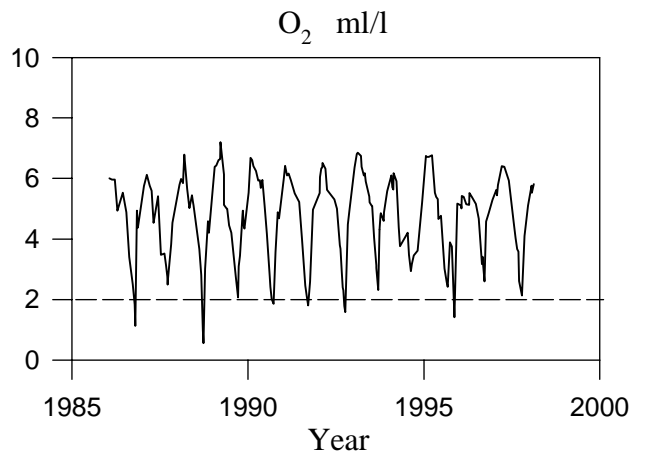
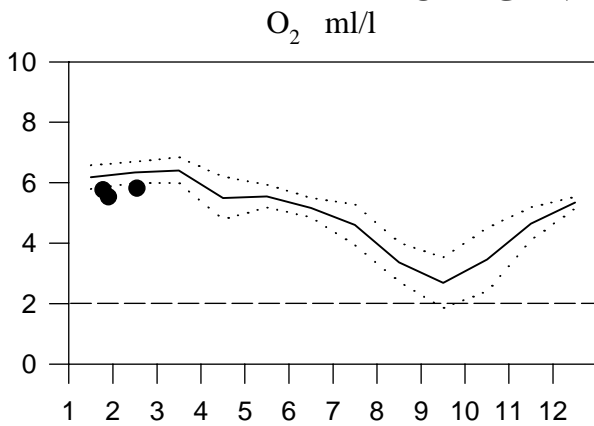
# STATION ANHOLT E SURFACE WATER (above halocline)

## Annual Cycles

— Mean 1986-1995    ····· St.Dev.    ● 1998



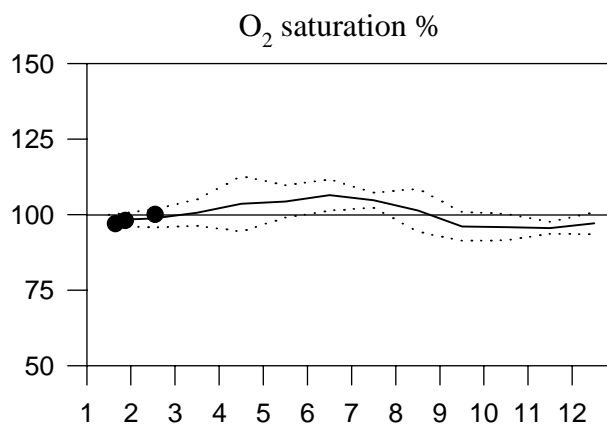
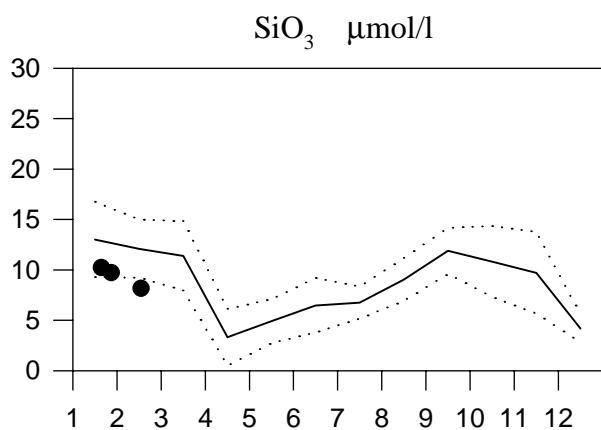
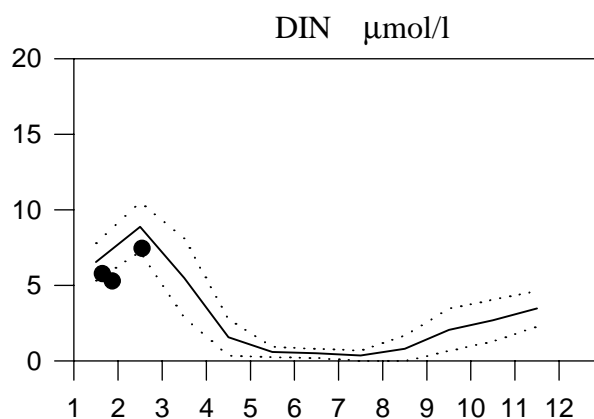
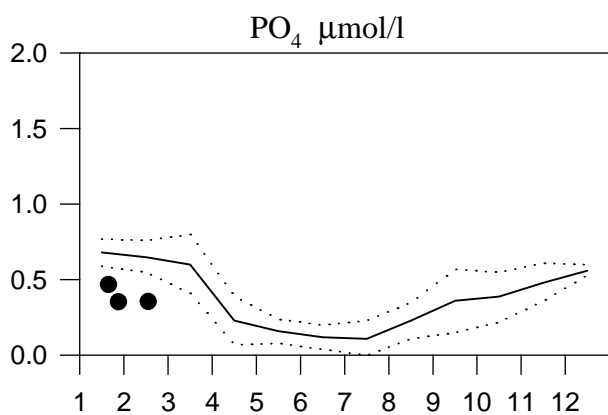
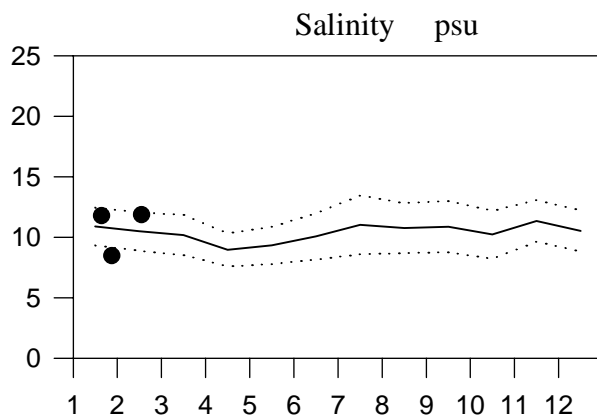
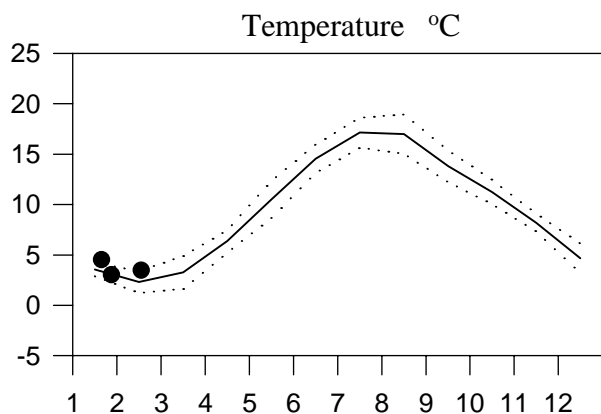
## OXYGEN IN BOTTOM WATER



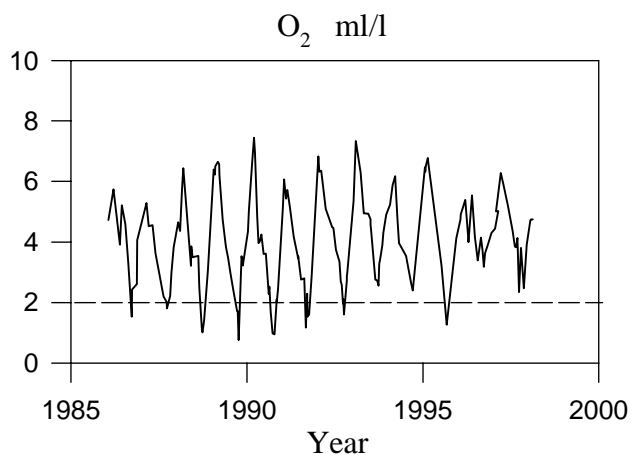
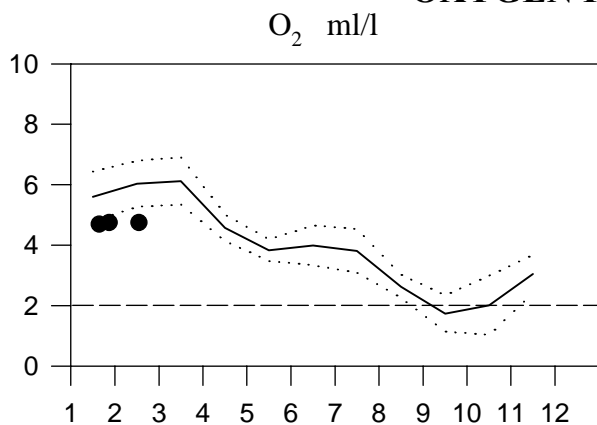
# STATION W LANDSKRONA SURFACE WATER (0-15 m)

## Annual Cycles

— Mean 1986-1995    ····· St.Dev.    ● 1997



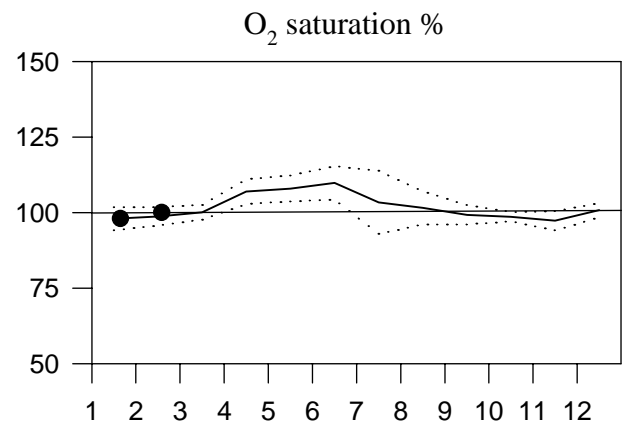
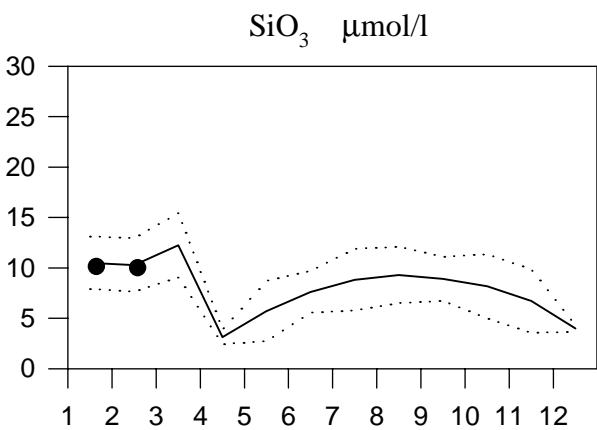
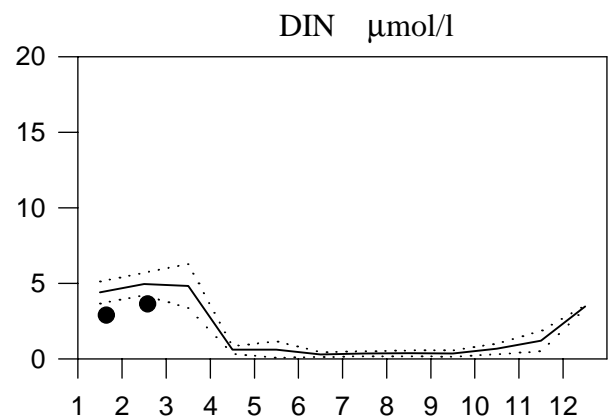
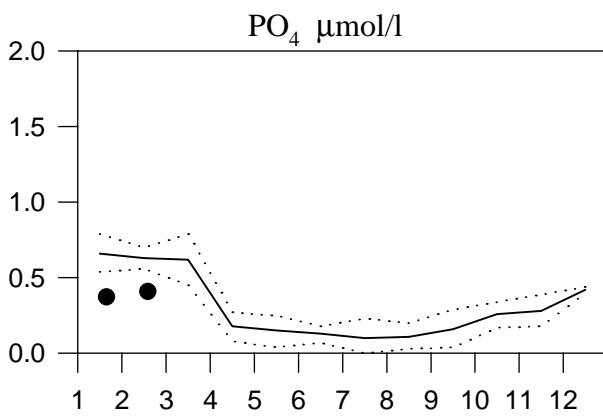
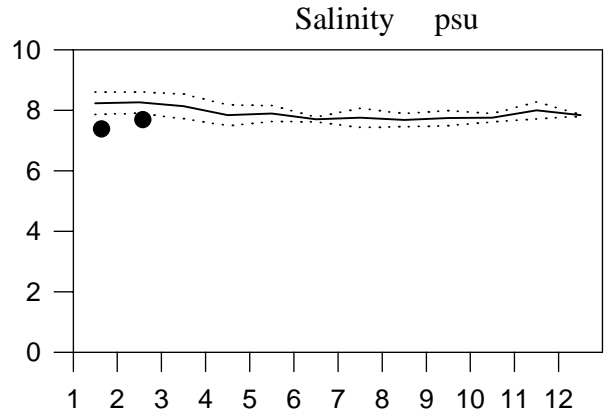
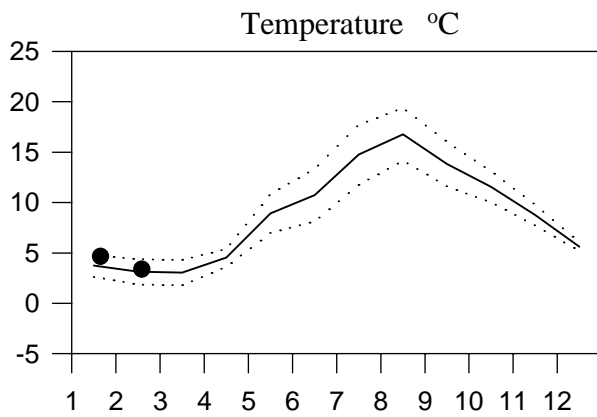
## OXYGEN IN BOTTOM WATER



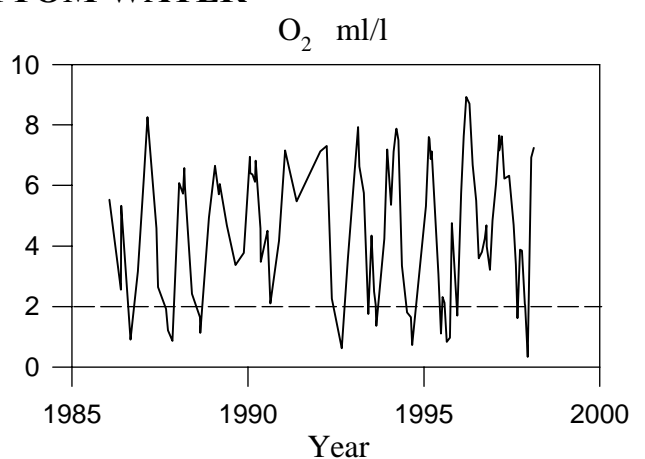
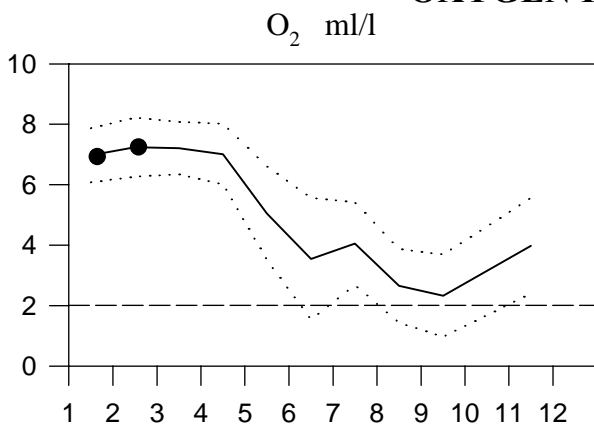
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## Annual Cycles

— Mean 1986-1995    ····· St.Dev.    ● 1998



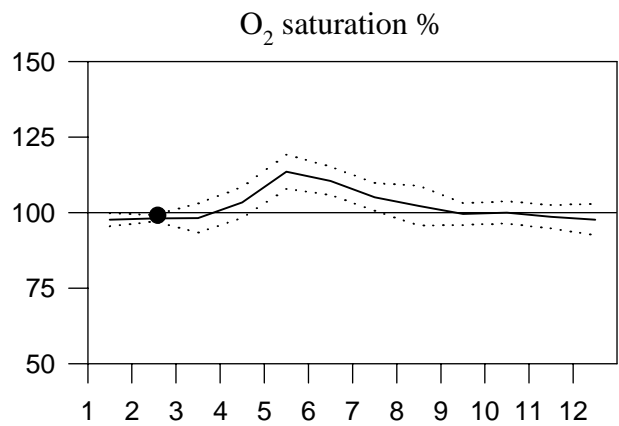
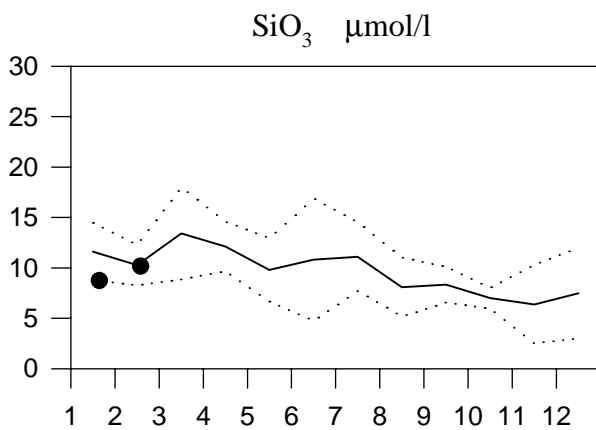
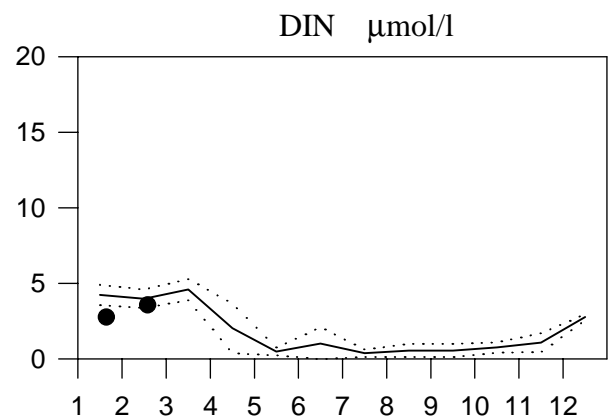
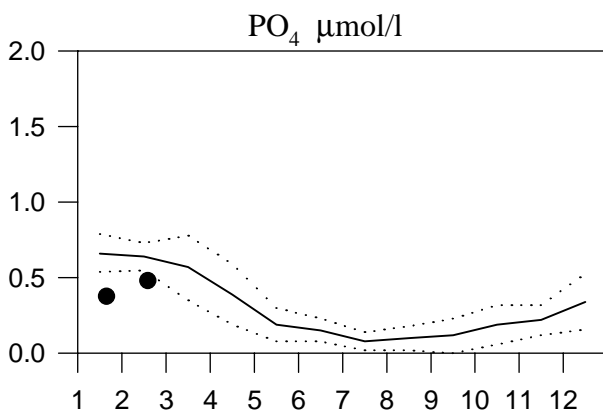
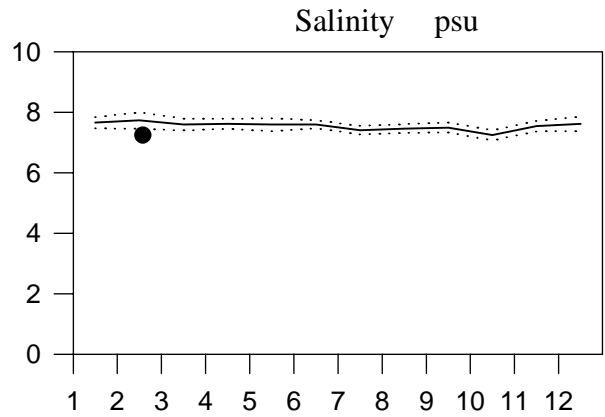
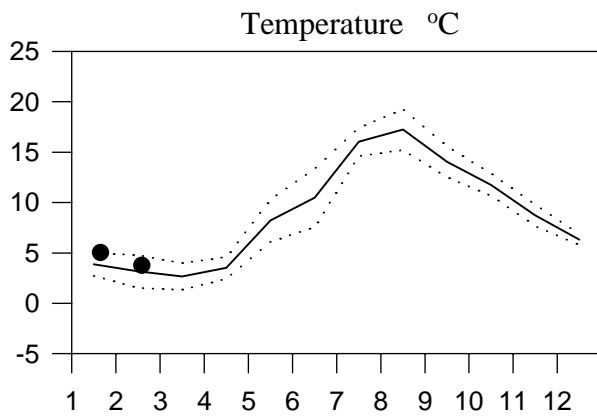
## OXYGEN IN BOTTOM WATER



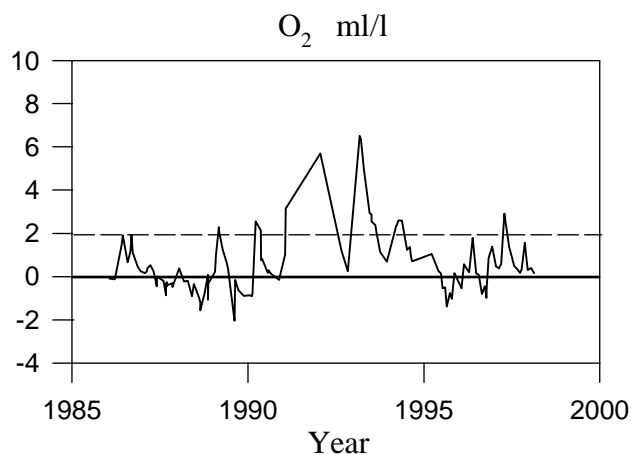
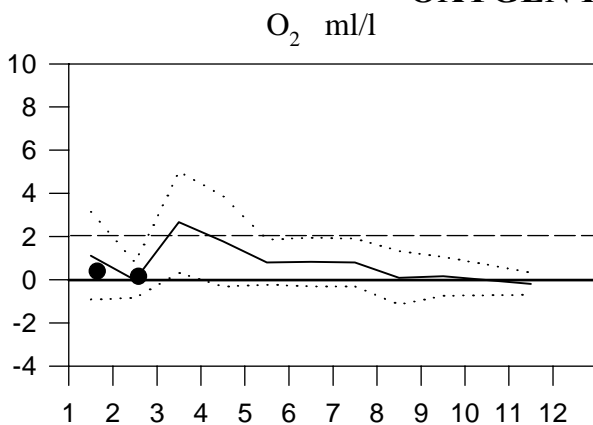
# STATION BY5 SURFACE WATER (0-15 m)

## Annual Cycles

— Mean 1986-1995      ····· St.Dev.      ● 1998



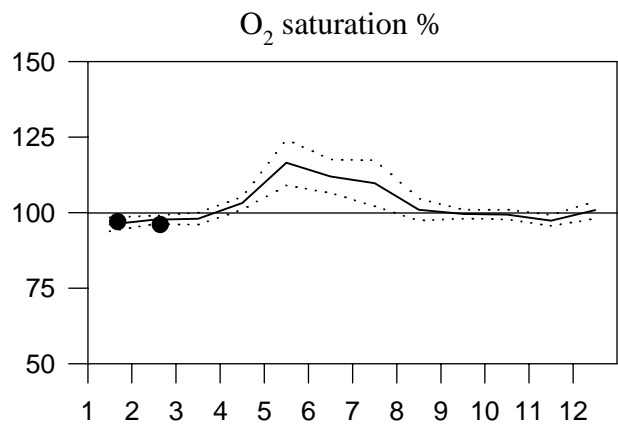
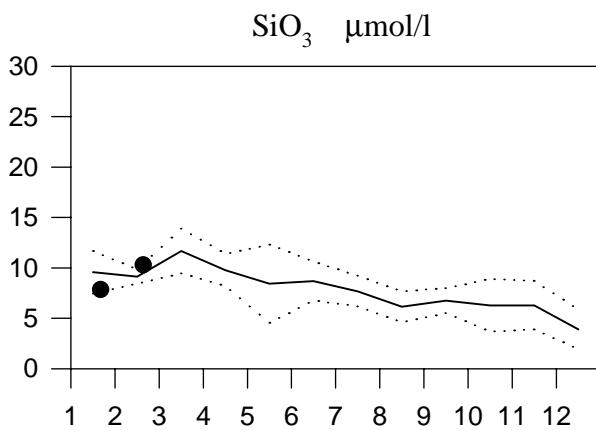
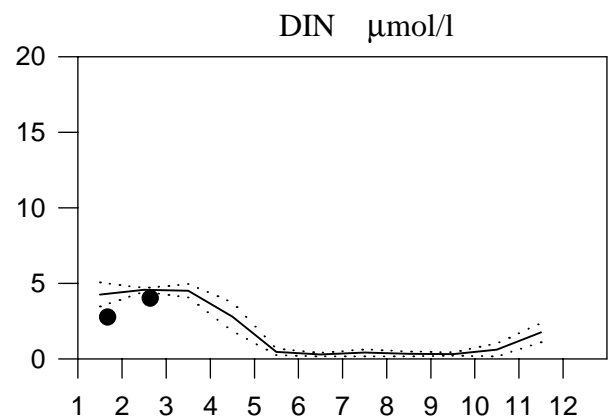
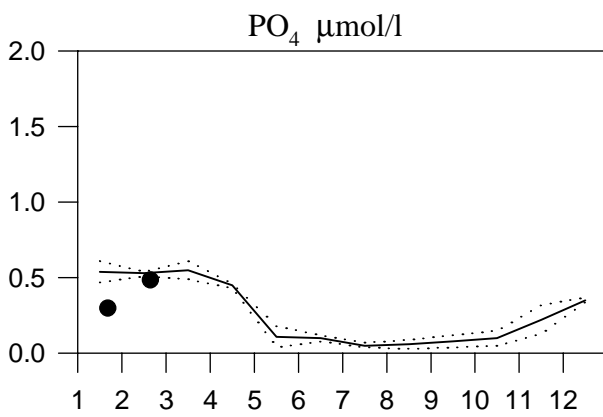
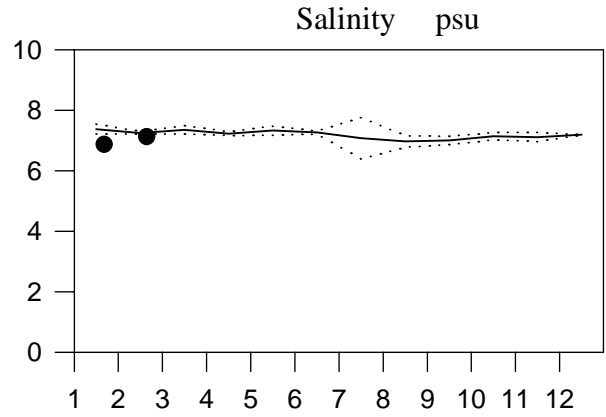
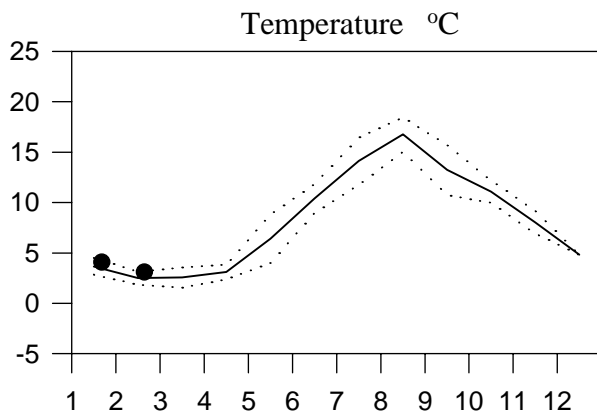
## OXYGEN IN BOTTOM WATER



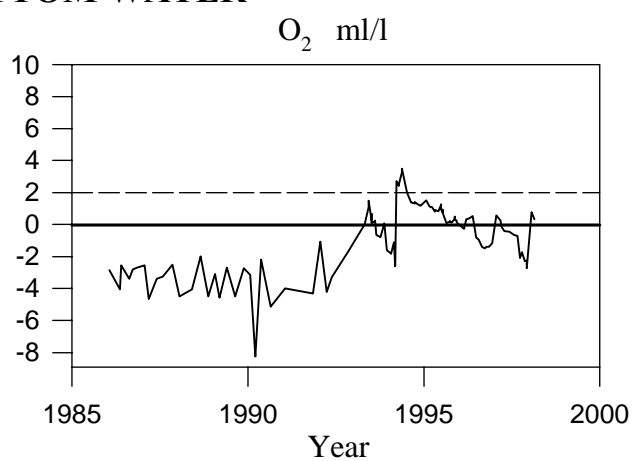
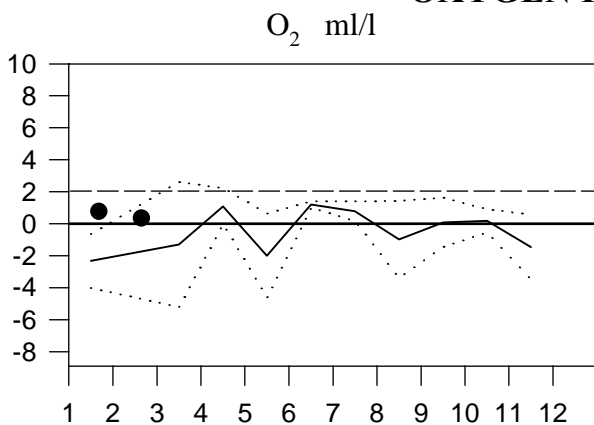
# STATION BY15 SURFACE WATER (0-15 m)

## Annual Cycles

— Mean 1986-1995    ····· St.Dev.    ● 1998



## OXYGEN IN BOTTOM WATER

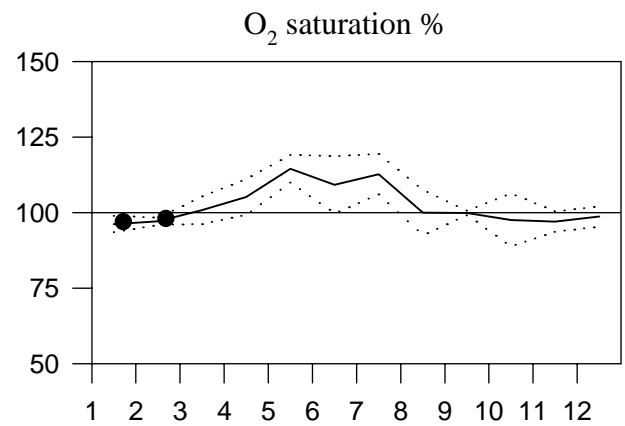
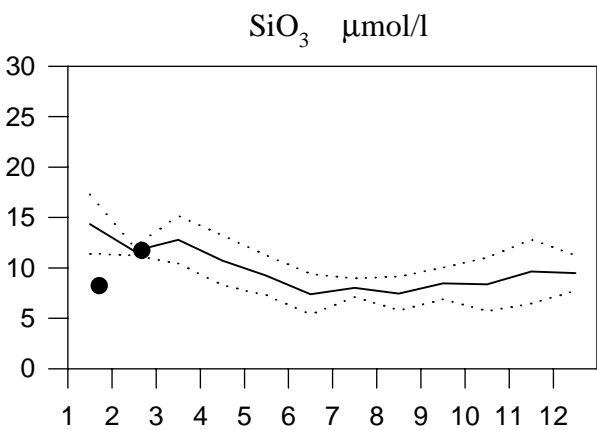
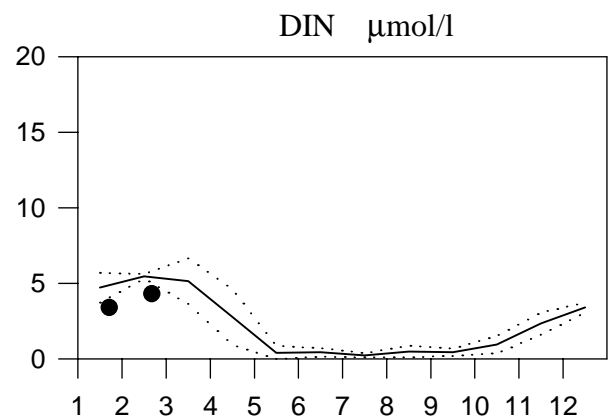
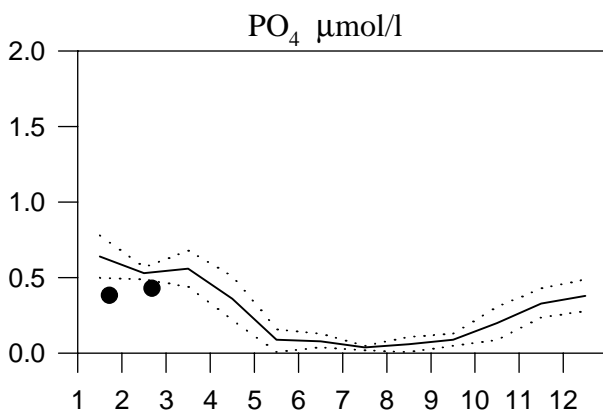
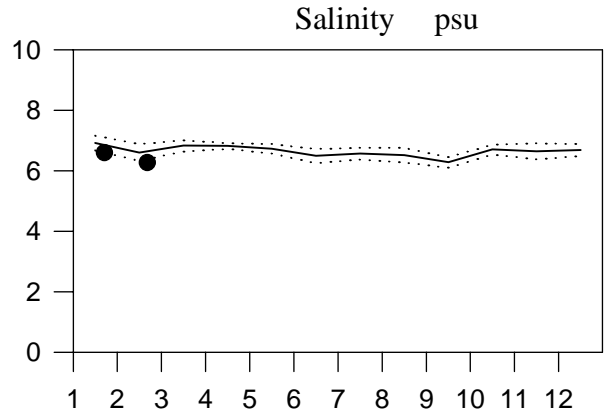
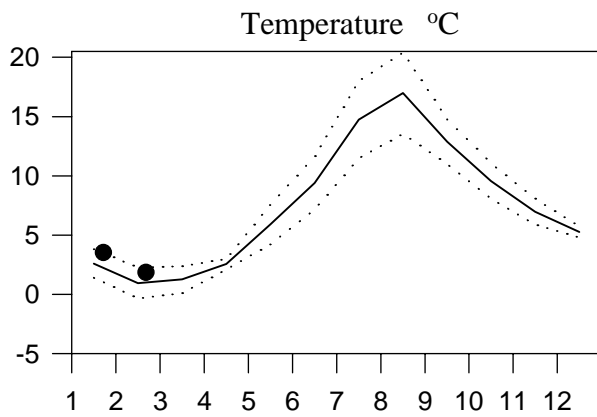




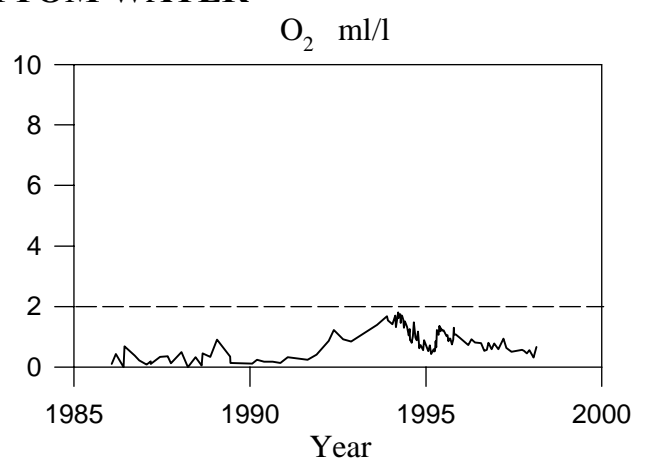
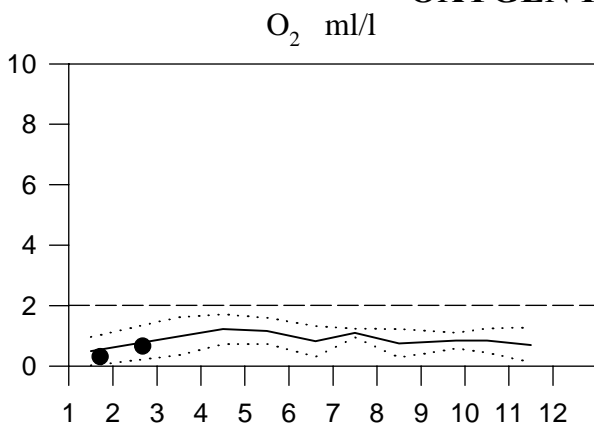
# STATION BY31 SURFACE WATER (0-15 m)

## Annual Cycles

— Mean 1986-1995    ····· St.Dev.    ● 1998



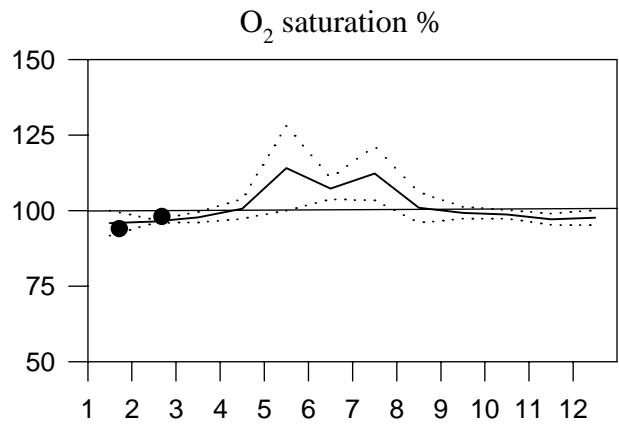
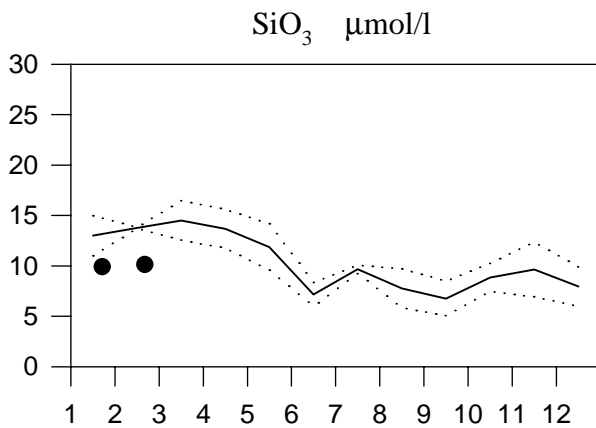
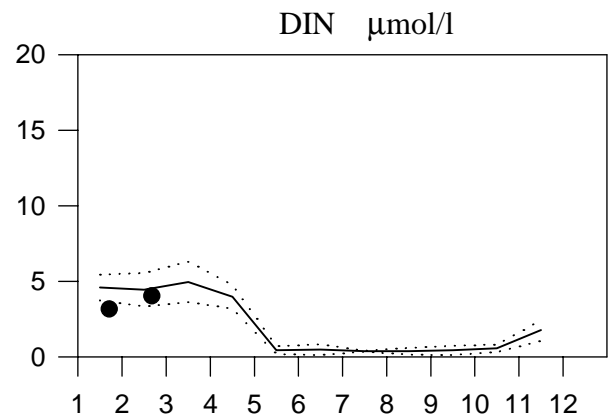
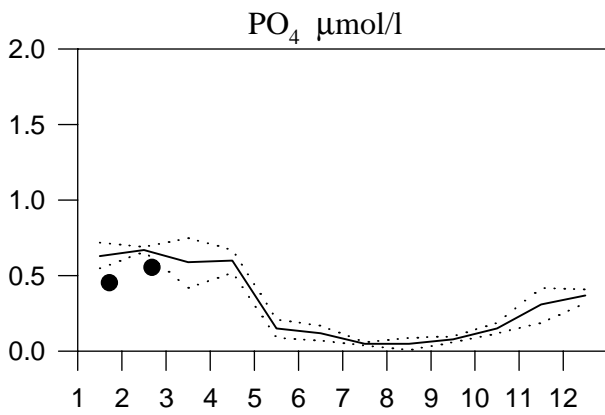
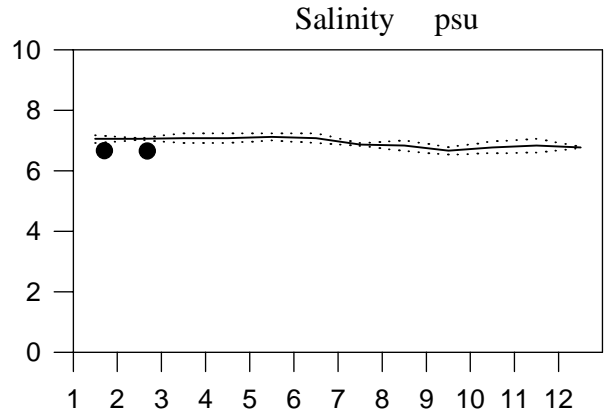
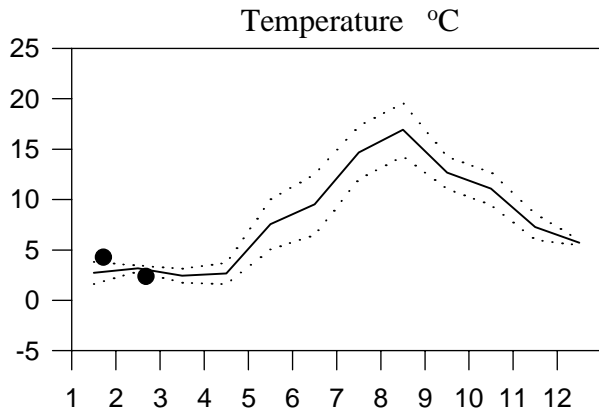
## OXYGEN IN BOTTOM WATER



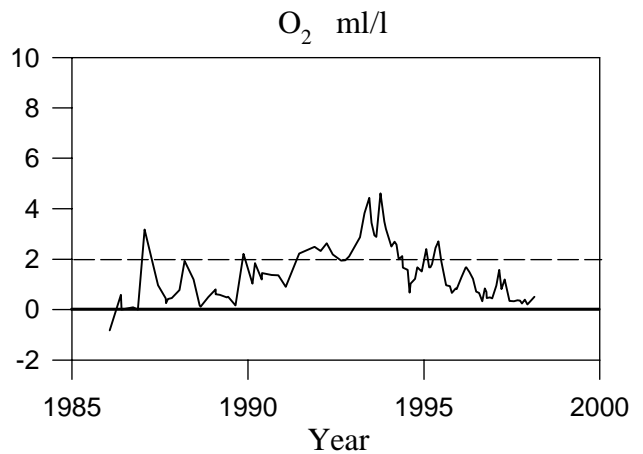
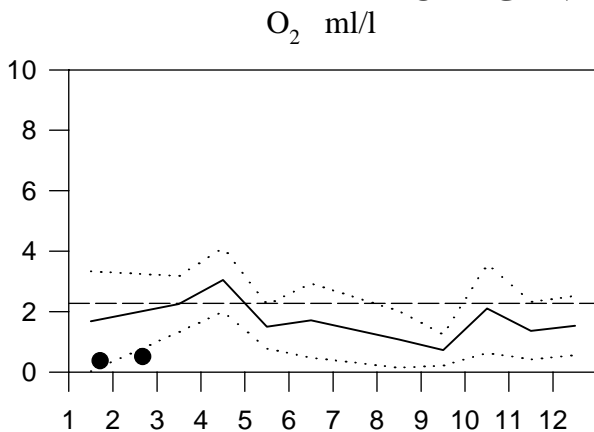
# STATION BY38 SURFACE WATER (0-15 m)

## Annual Cycles

— Mean 1986-1995    ····· St.Dev.    ● 1998

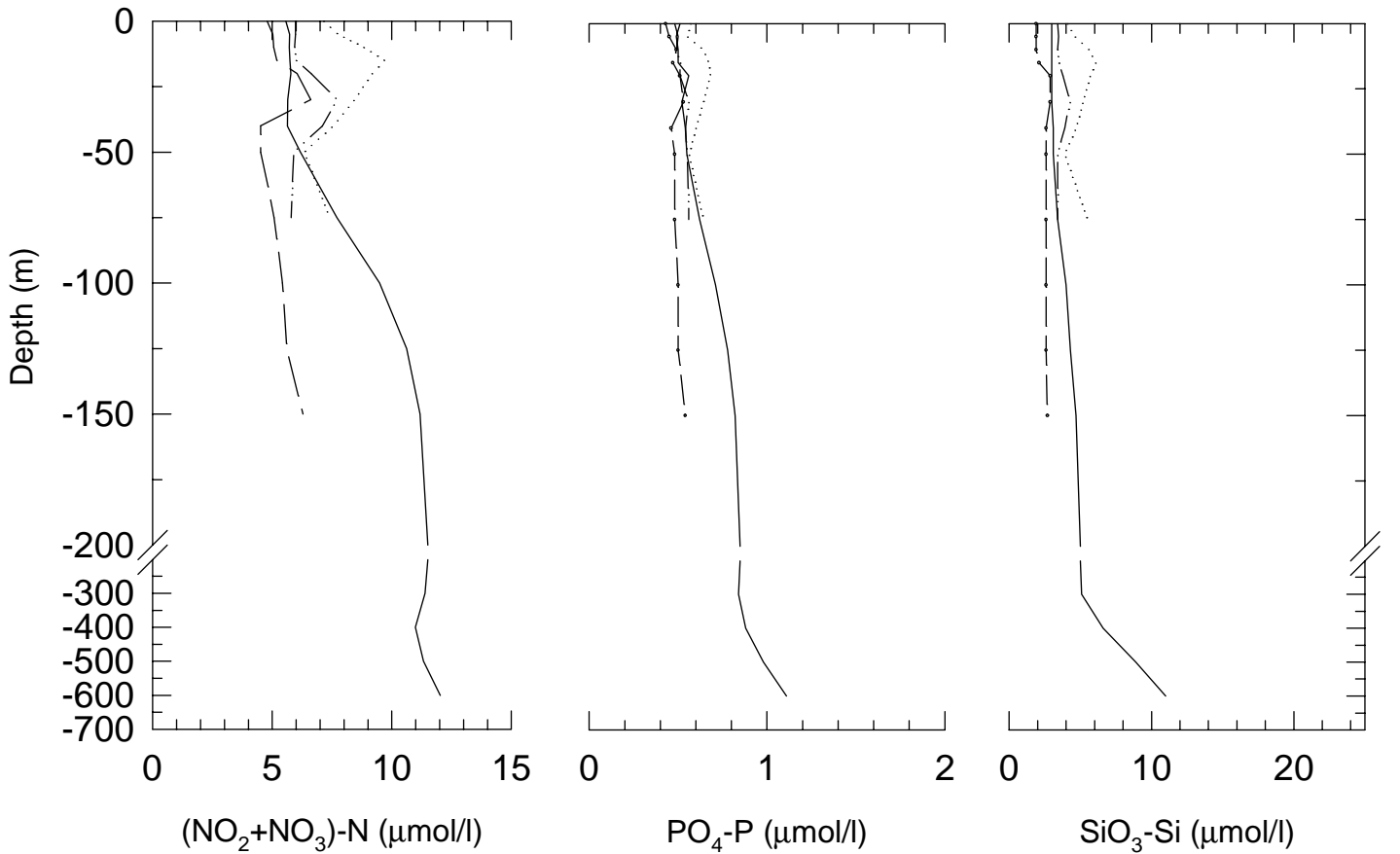
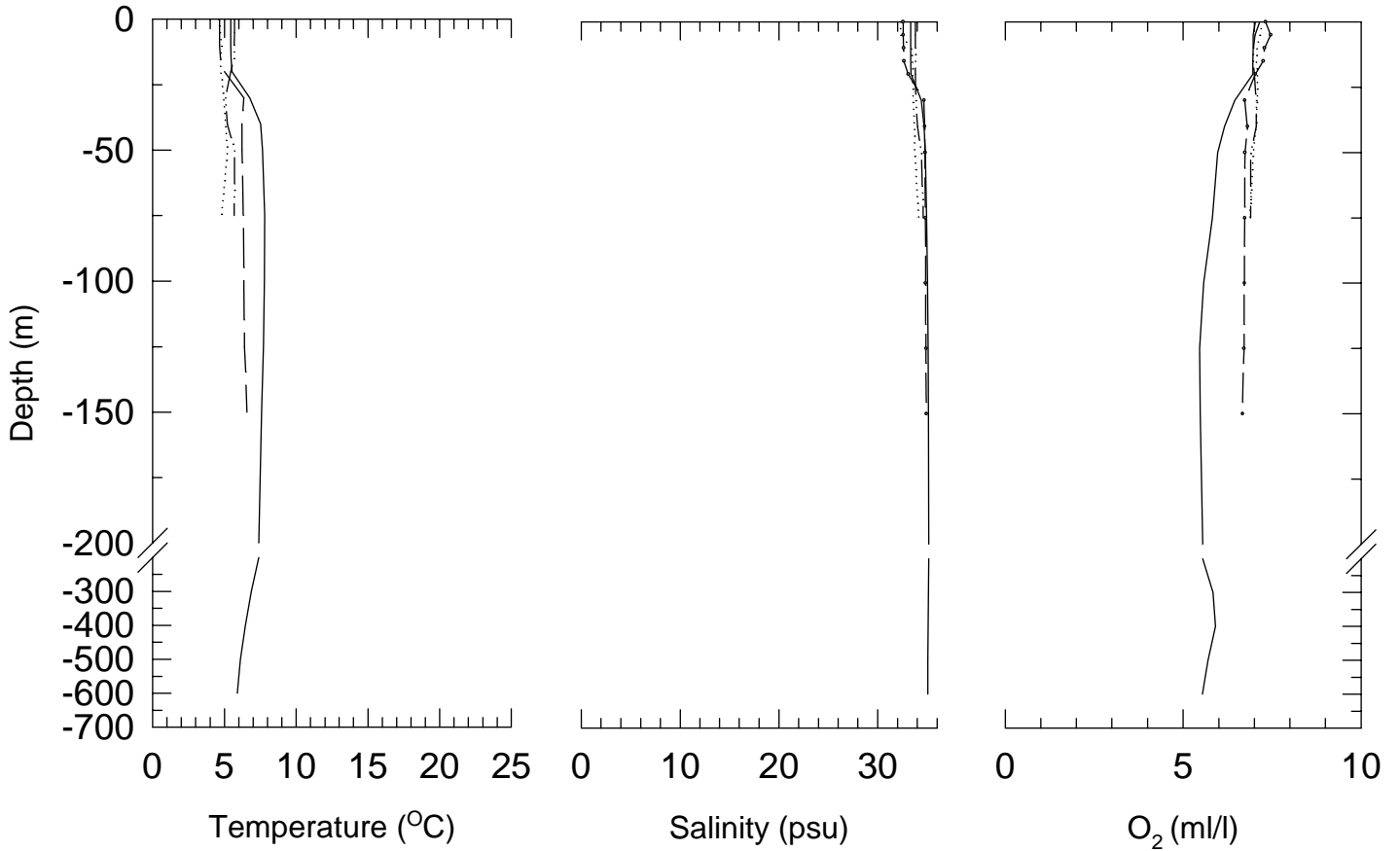


## OXYGEN IN BOTTOM WATER

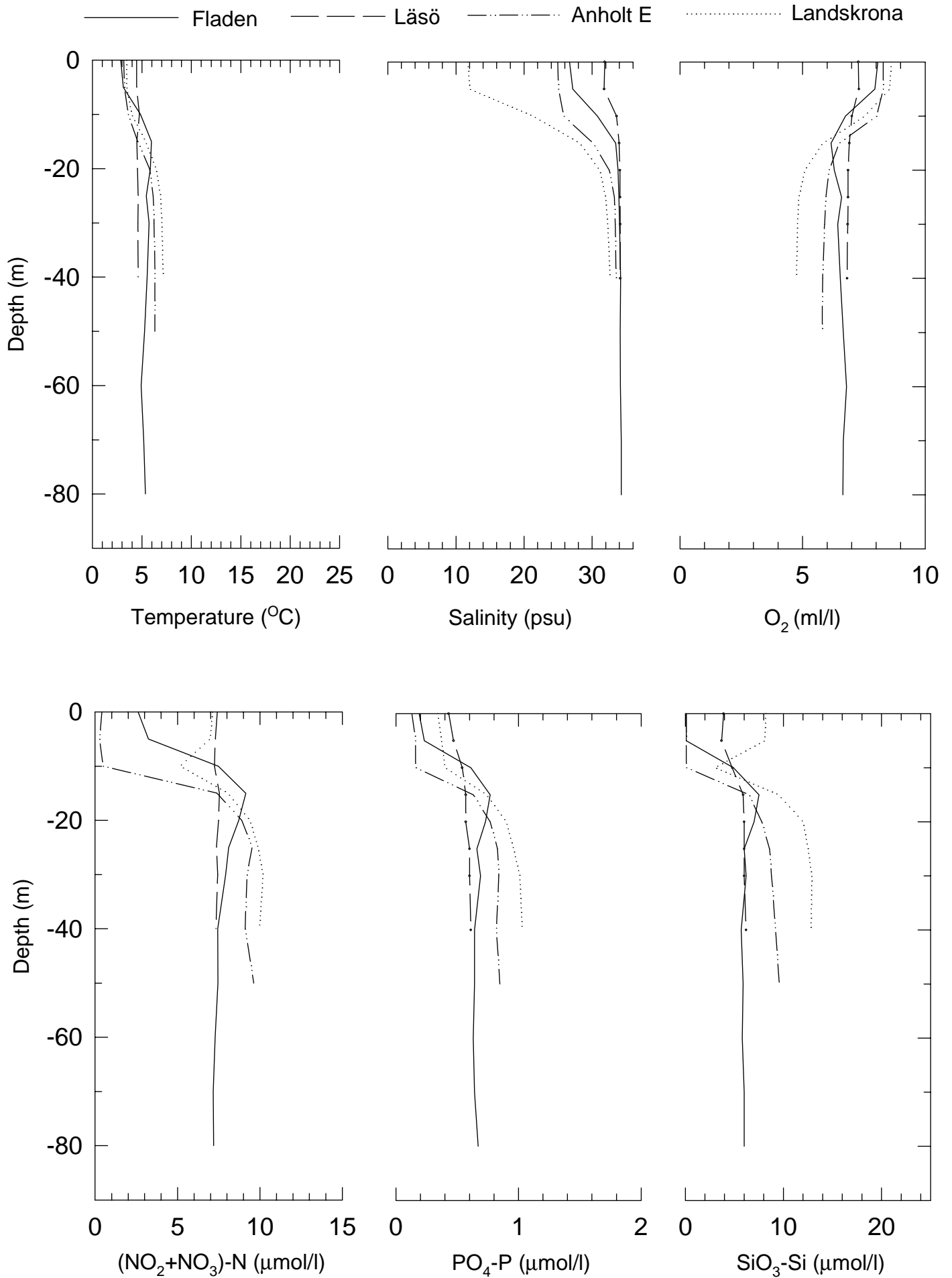


# SKAGERRAK Feb 16-22 -98

————— M6      - - - - - 16      - · - · - · HS5      ······· P2

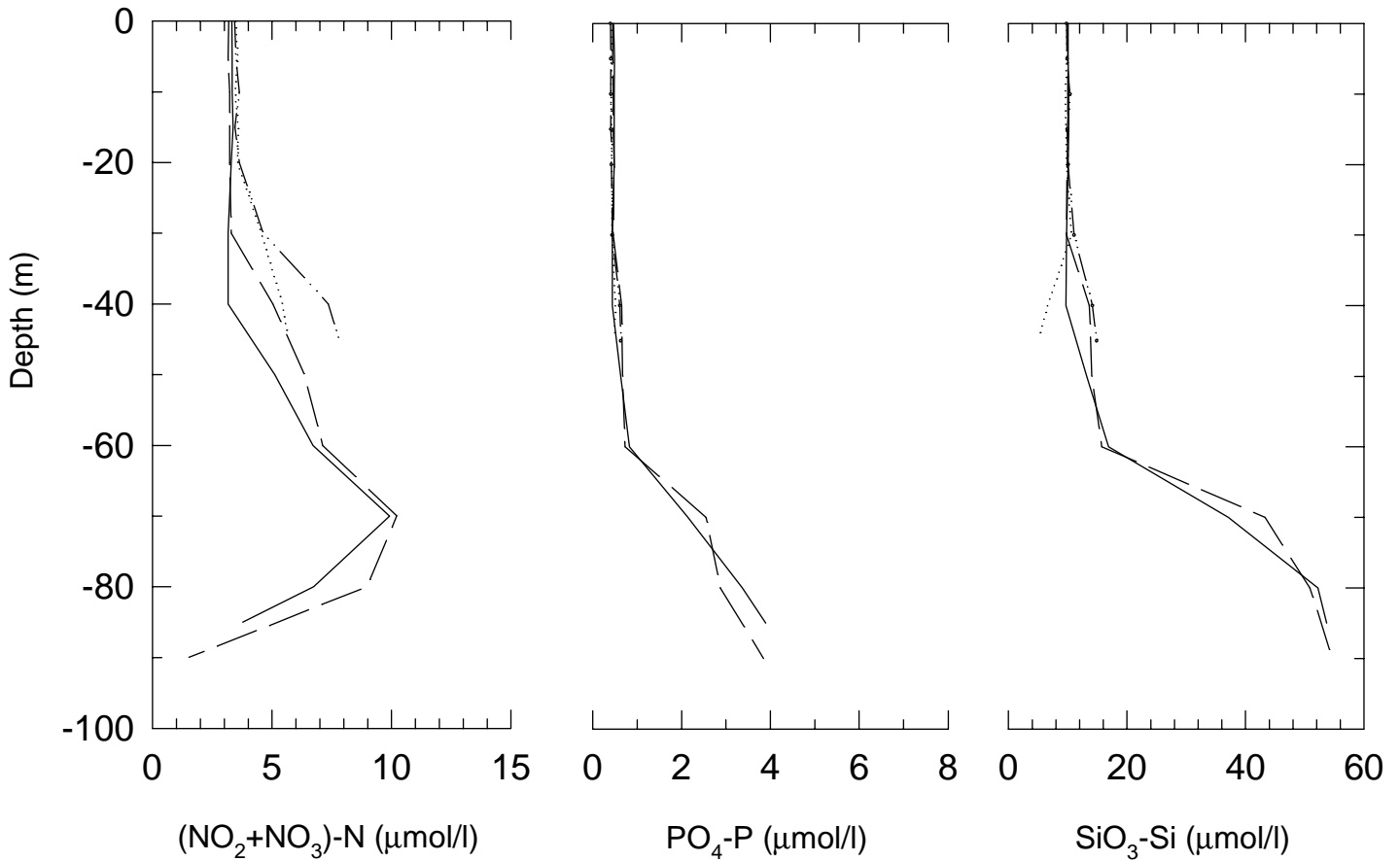
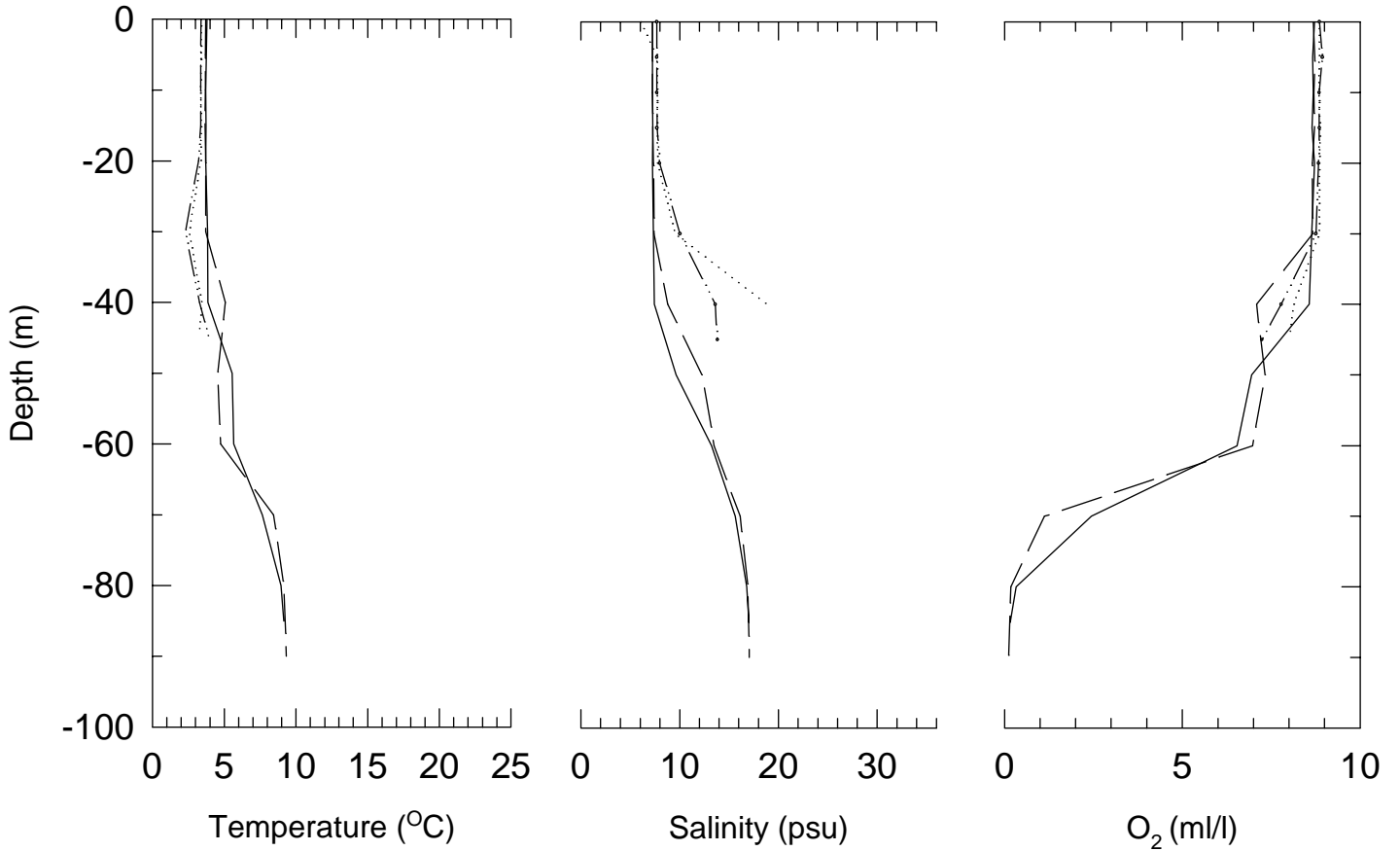


# KATTEGAT and THE SOUND Feb 16-22 -98



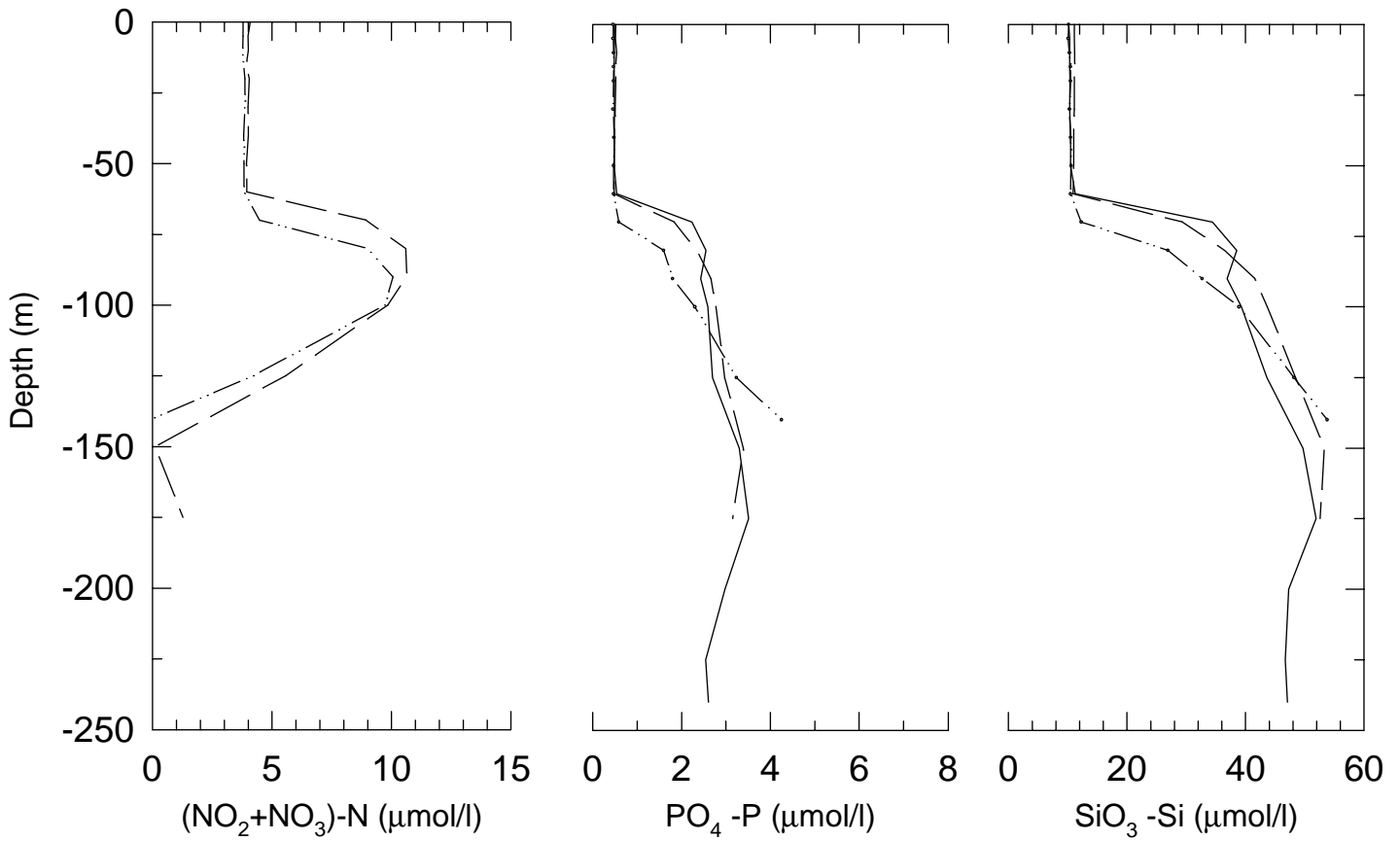
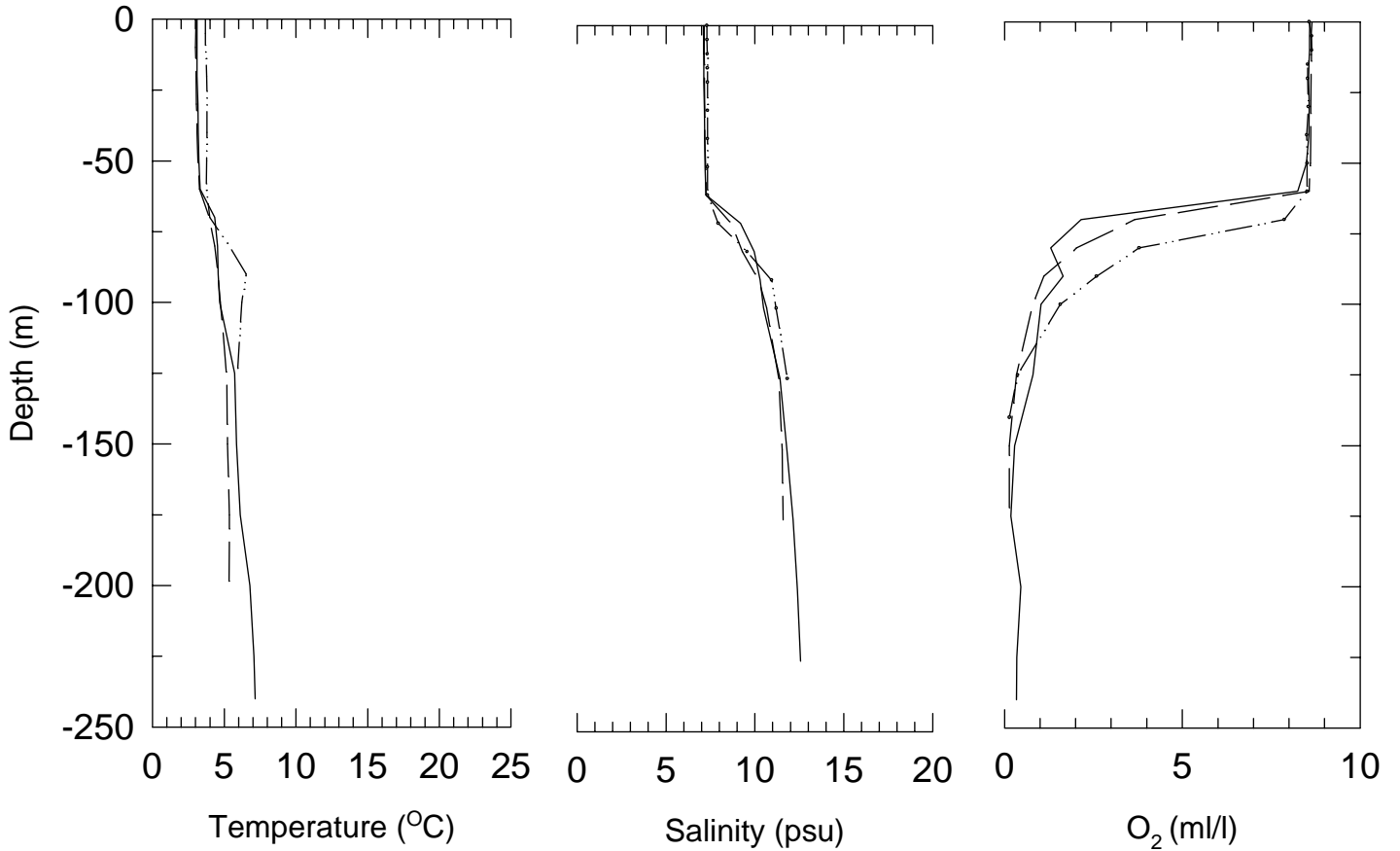
# SOUTH BALTIC Feb 16-22 -98

— BY5    - - - BY4    ····· BY2    ····· BY1



# EAST BALTIC Feb 16-22 -98

— — — BY20    ————— BY15    - · - · - · BY10    ······ BCS III-10



# WEST BALTIC Feb 16-22 -98

— BY31

- - - BY32

⋯ BY38

