

EXPEDITIONSRAPPORT FRÅN U/F ARGOS

CRUISE REPORT FROM R/V ARGOS

Expeditionens varaktighet: 980118-980124
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 program and covered the Skagerrak, the Kattegat, the Sound and the Baltic Proper. Mapping in the Kattegat was also performed. The weather was in the beginning of the cruise dominated by strong northerly to north-easterly winds and by the end the winds shifted to south and decreased. The temperatures were slightly higher than normal for the season. The nutrient concentrations were lower than normal for the season for all areas.

Hydrogen sulphide was observed below 150 m depth in the Fårö Deep (BY20). No hydrogen sulphide was observed in the Gotland Deep (BY15), however, the oxygen concentrations were still low (< 1 ml/l) below 125 m depth.

No visible algae blooms were observed, except in the eastern Kattegat where a bloom is taking place.

PRELIMINÄRA RESULTAT

Expeditionen, som ingick SMHIs ordinarie övervakningsprogram, utgick och avslutades i Göteborg. Vädret under expedition var i början dominerat av friska till hårda nordliga till nord-ostliga vindar som i byarna nådda stormstyrka. Mot slutet vred vinden mot syd och avtog kraftigt.

Skagerrak

Ytvattentemperaturerna var omkring 6.5°C i den östra delen vilket är något högre än normalt. Närsalthalterna i ytlagret var lägre än normalt för årstiden, och för silikat var det mycket lägre än normalt (< 3.0 µmol/l).

Kattegatt och Öresund

Ytvattentemperaturerna varierade mellan 5°C i sydvästra Kattegatt och 3°C i östra Kattegatt. I Öresund var temperaturen omkring 4.3°C, något varmare i norra delen. Närsaltkoncentrationerna var lägre än normalt för årstiden både i Kattegatt och i Öresund. Fosfatkoncentrationerna varierade mellan 0.4 och 0.8 µmol/l med lägsta koncentrationer i den sydöstra delen av Kattegatt och Öresund. Nitritkoncentrationerna varierade mellan 0.2 och 0.8 µmol/l, med lägsta koncentrationer i sydvästra delen av Kattegatt. Variationen i ammoniumkoncentrationer var stor och på några stationer var koncentrationerna under detektionsgränsen. Högsta koncentrationerna uppmättes i den norra delen av Kattegatt och de lägsta i den sydöstra delen. Lägsta nitratkoncentrationer uppmättes i den sydöstra delen av Kattegatt (3.8 µmol/l) och i Öresund (3.6 µmol/l). Variationerna var även här stora med högsta koncentrationer i norr (11 µmol/l). Silikatkoncentrationerna varierade mellan 5.2 och 12.7 µmol/l, med lägsta koncentrationer i den sydöstra delen, och högsta i norr. I östra Kattegatt påträffades en pågående algblomning. Hög flourecsens uppmättes i ytvattnet vilket tyder på det. Artbestämning har ännu inte kunnat göras.

Östersjön

Ytvattentemperaturerna varierade mellan 4.5°C i södra delen till under 4°C i norra delen. Närsalthalterna var lägre än normalt för årstiden, för fosfat 0.3-0.4 µmol/l, nitrit 0.02-0.10 µmol/l, nitrat 2.5-3.1 µmol/l och silikat 7.5-10 µmol/l. Syrgaskoncentrationer under 2 ml/l återfanns på djup under 70 m i Bornholmsbassängen och koncentrationer ned till 0.3 ml/l uppmättes. Detta är något lägre koncentrationer än väntat. I Gotlandsdjupet (BY15) uppmättes denna gång inget svavelväte, men i Fårödjupet under 150 m djup.. Syrgaskoncentrationen i bottenvattnet var dock lågt med ett minima vid 150 m djup på BY15. Koncentrationer under på 2 ml/l återfanns på djup större än 80 m.

DELTAGARE

Namn	Från
Bodil Thorstensson, expeditionsledare	SMHI Oceanografiska lab.
Tuulikki Jaako	- " -
Nils Kajrup	- " -
Jan Szaron	- " -
Jorge Valderrama	- " -

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

Date: 1998-01-26
Time: 14:24

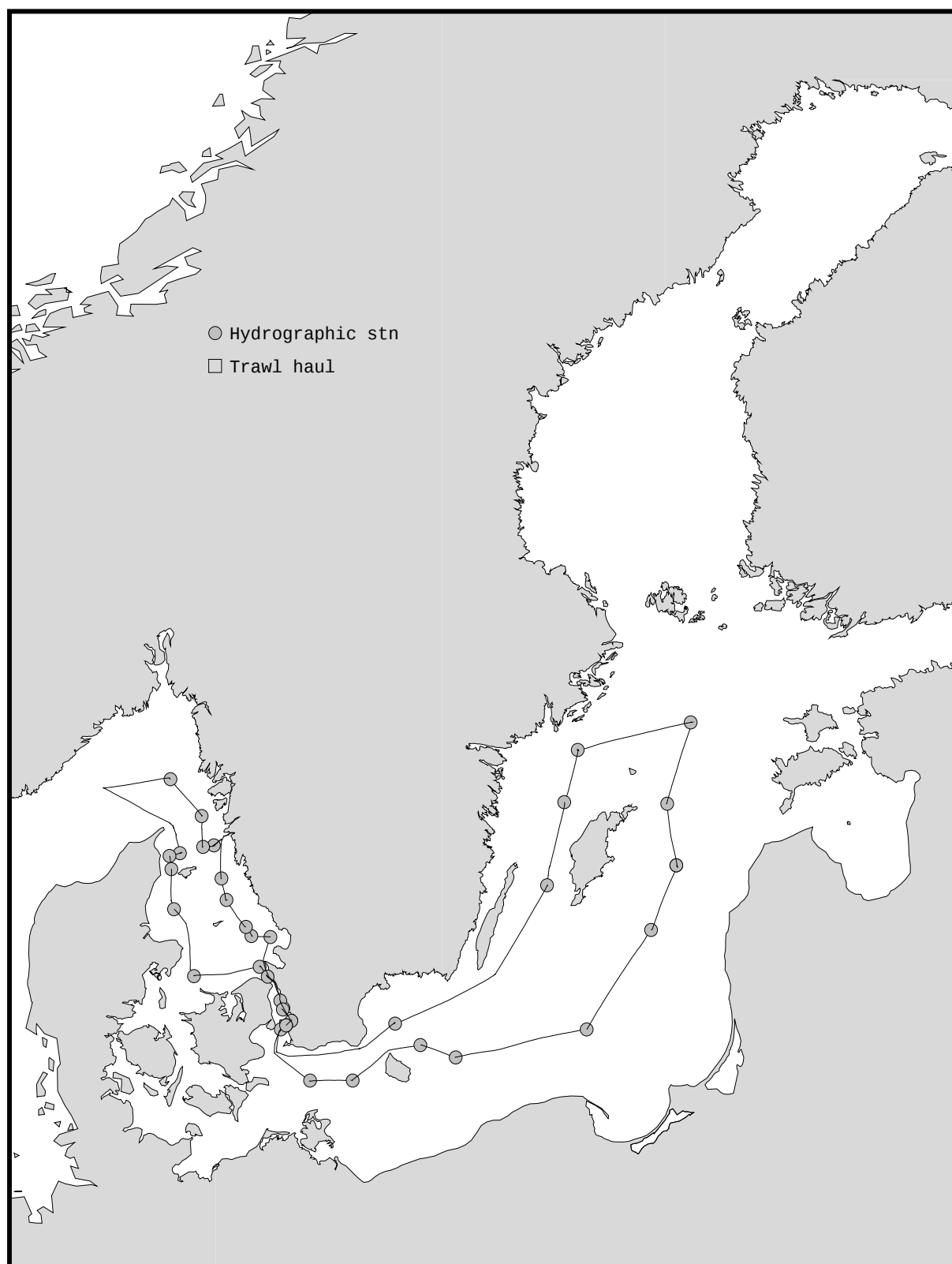
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Time: 14:24

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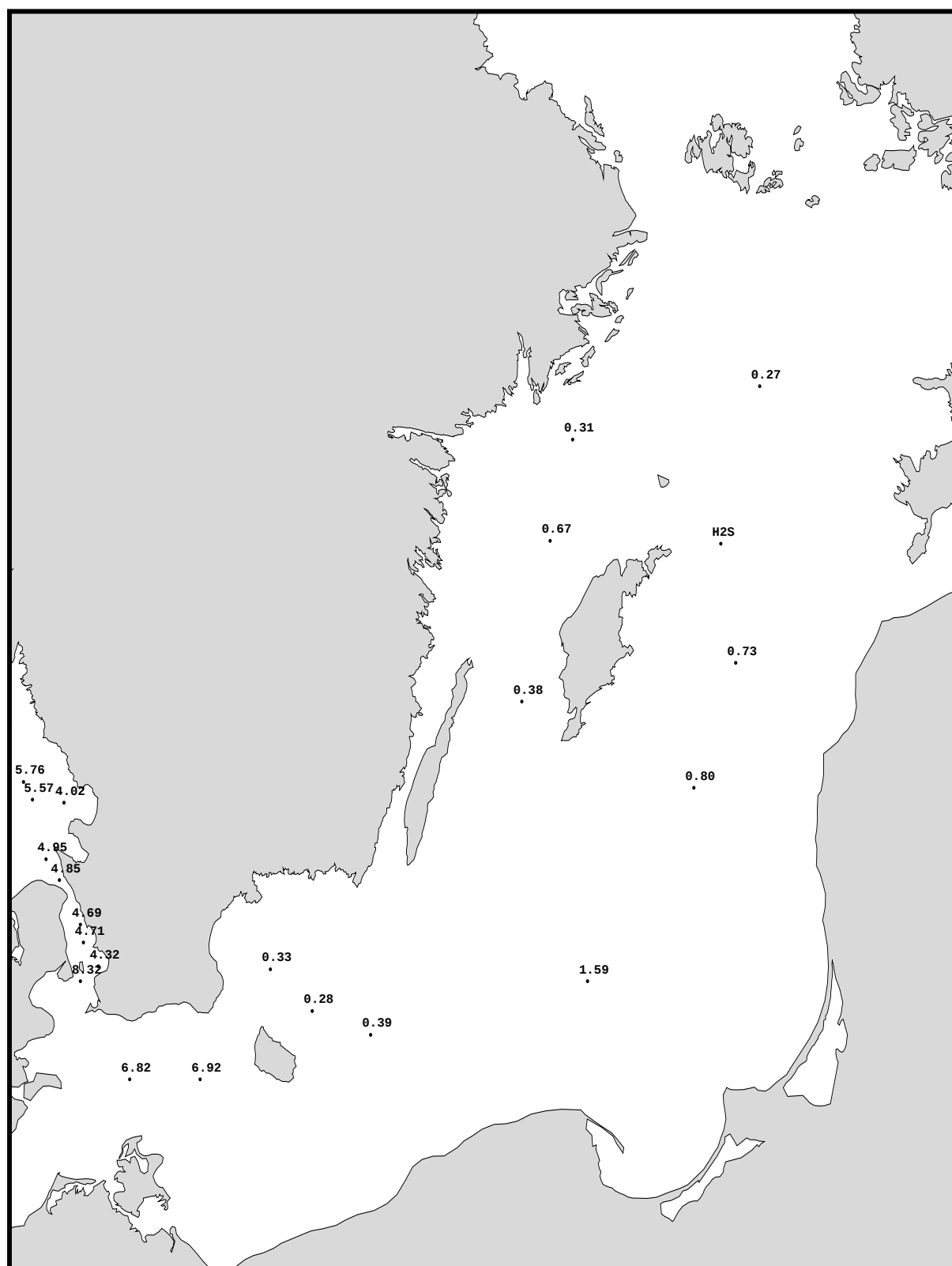
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Date : 980118-980124
Series : 0001-0036



Bottom water oxygen concentration (ml/l)

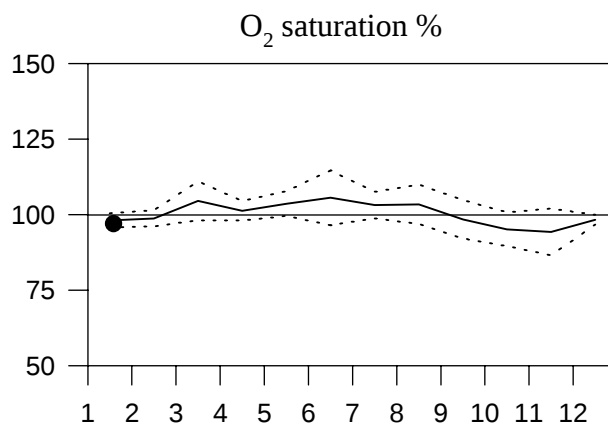
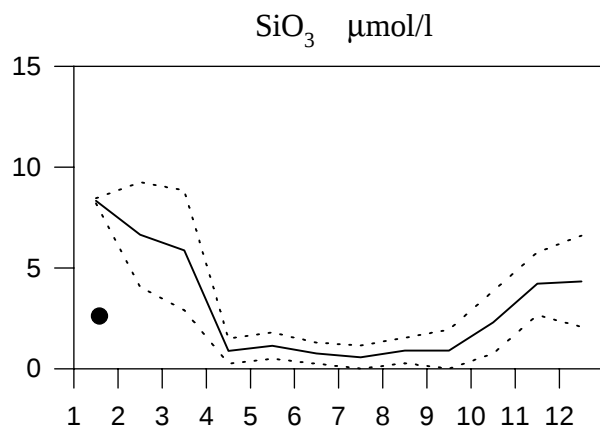
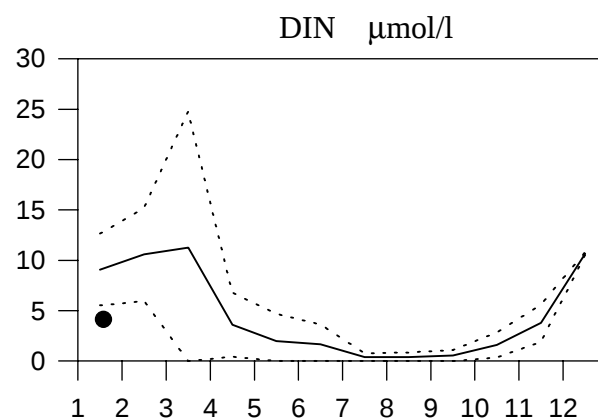
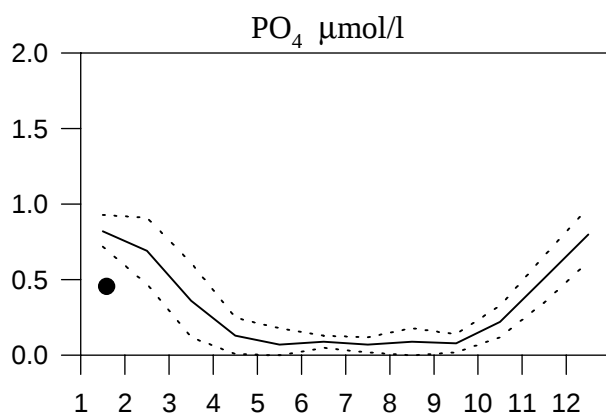
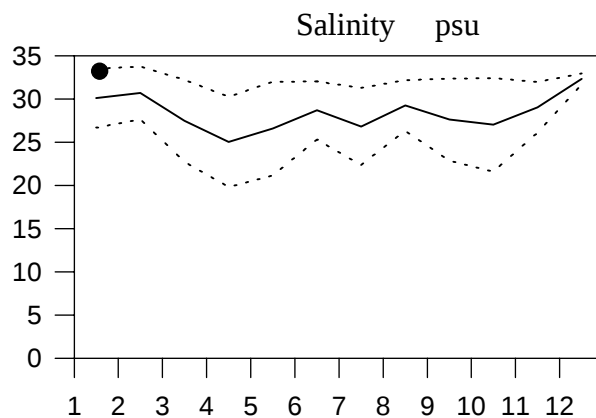
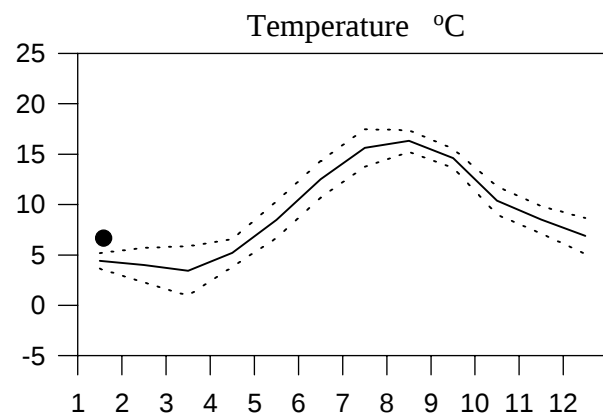
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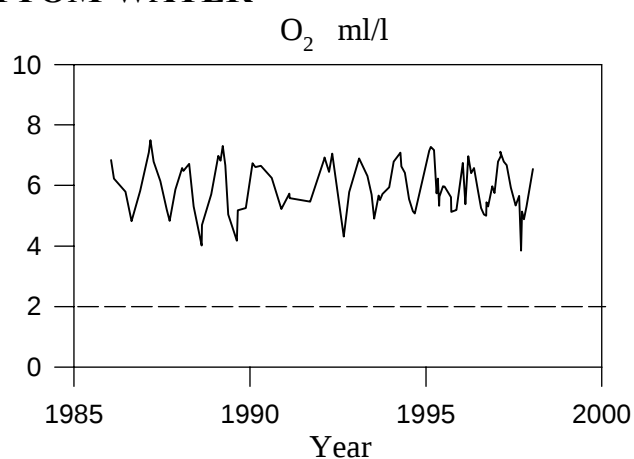
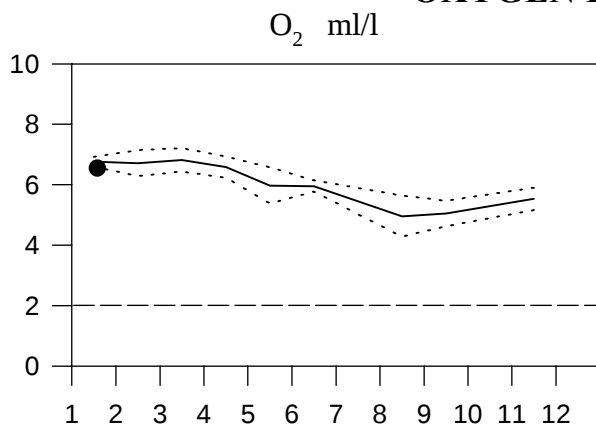
STATION P2 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 - - - St.Dev. ● 1997



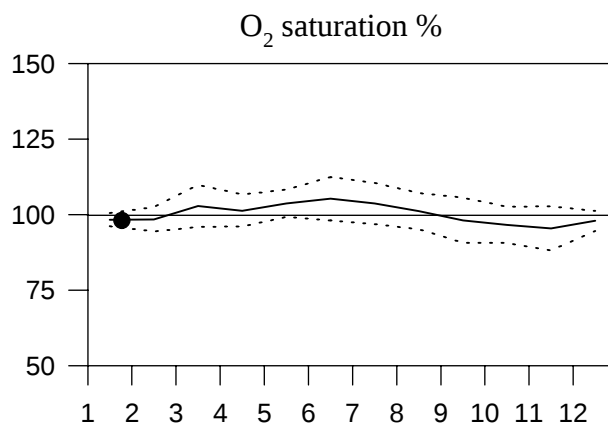
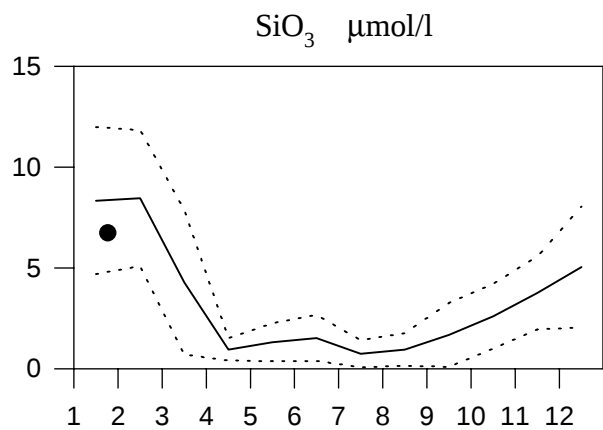
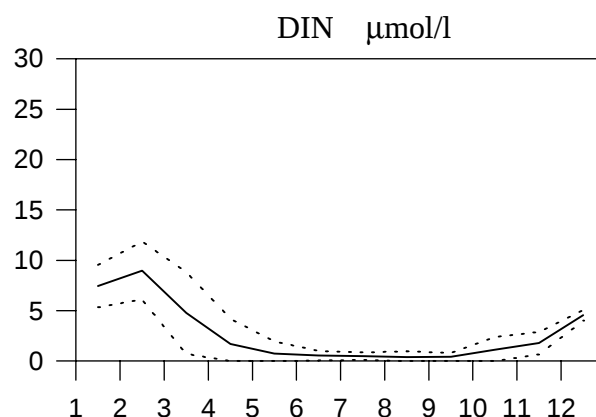
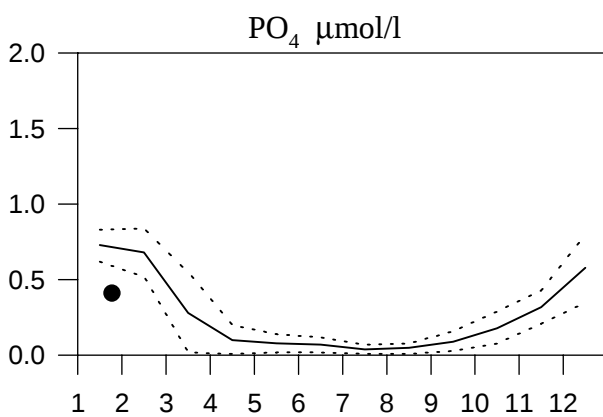
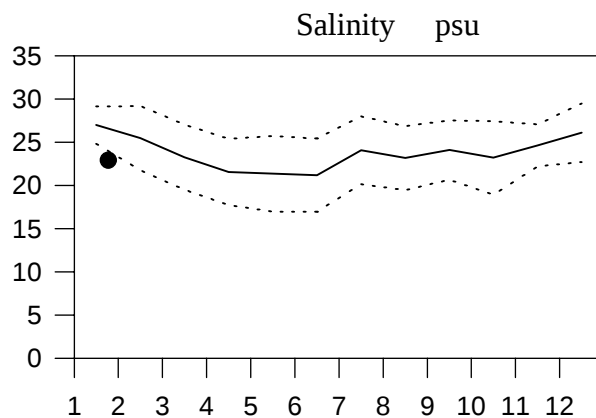
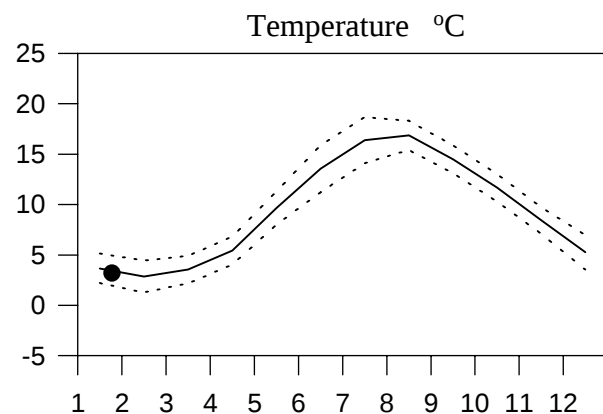
OXYGEN IN BOTTOM WATER



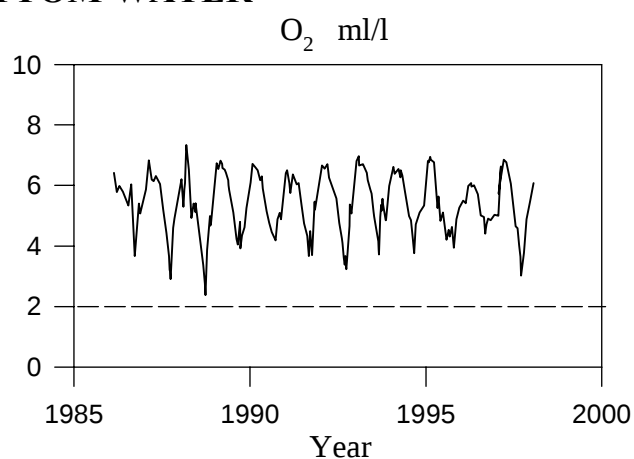
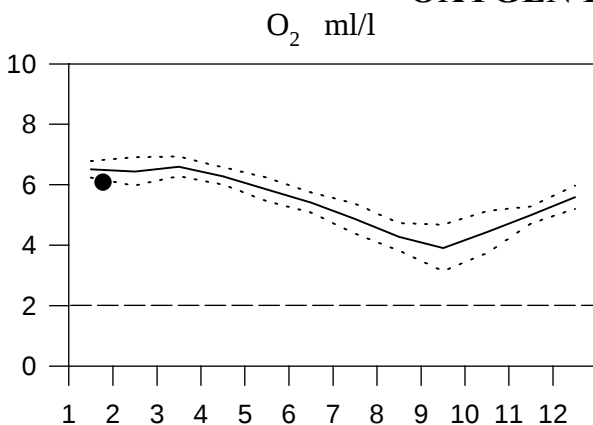
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Annual Cycles

— Mean 1986-1995 - - - St.Dev. ● 1997



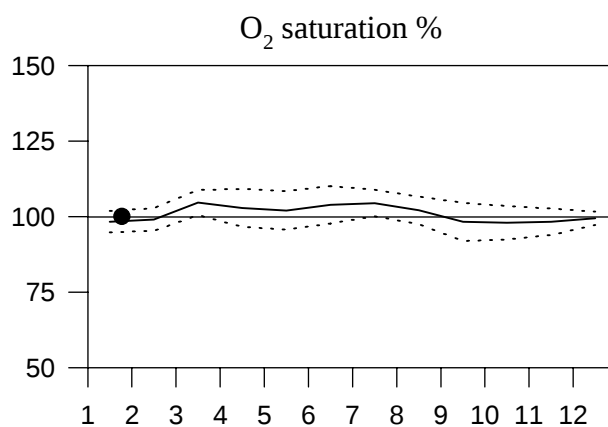
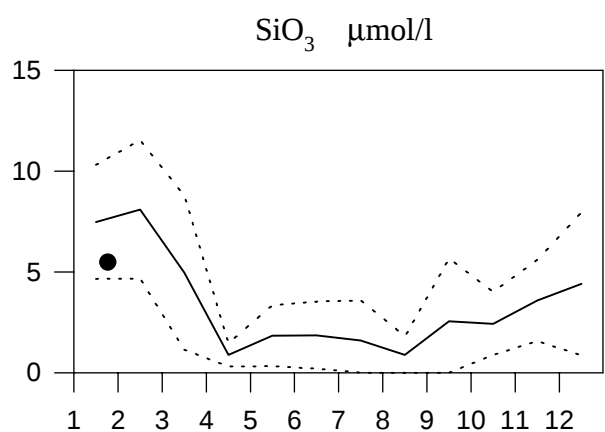
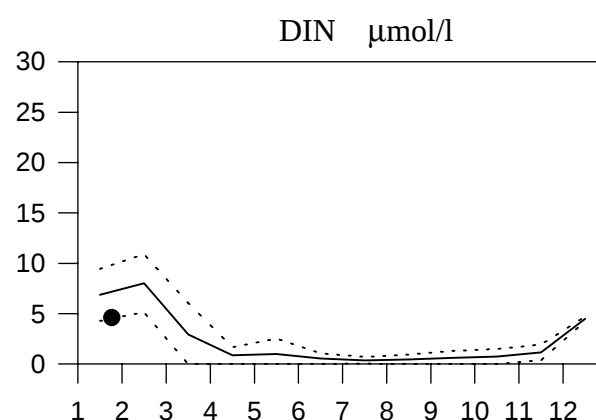
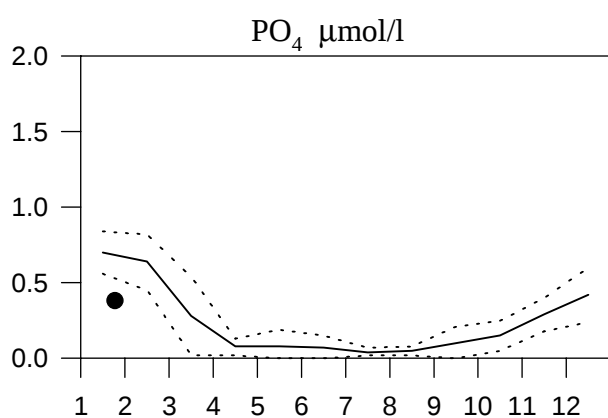
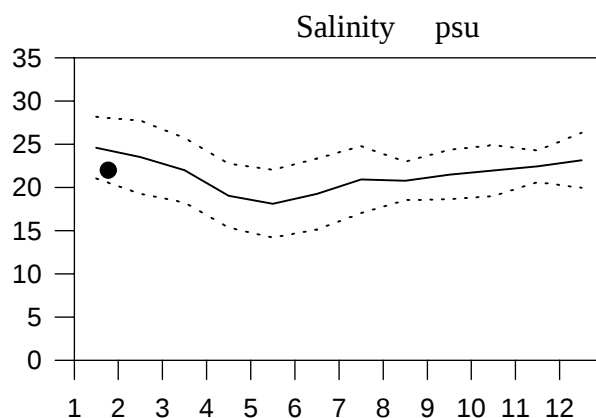
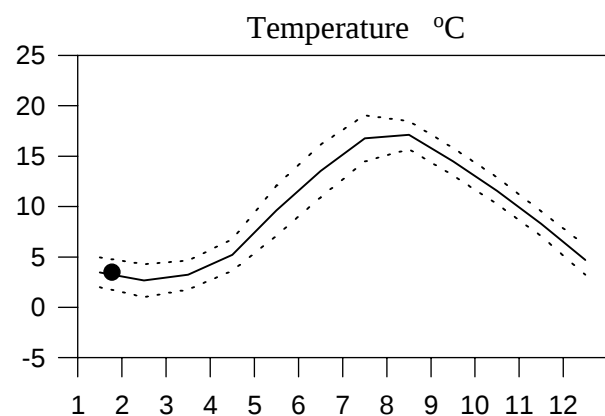
OXYGEN IN BOTTOM WATER



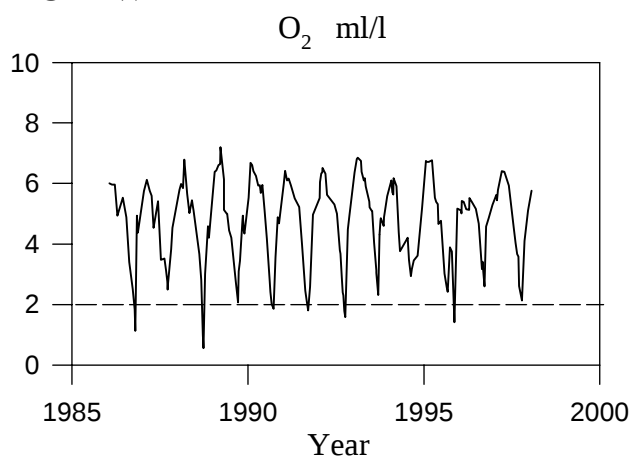
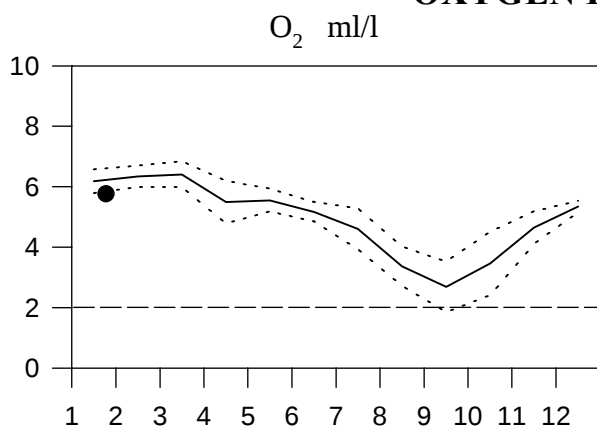
STATION ANHOLT E SURFACE WATER (above halocline)

Annual Cycles

— Mean 1986-1995 - - - St.Dev. ● 1997



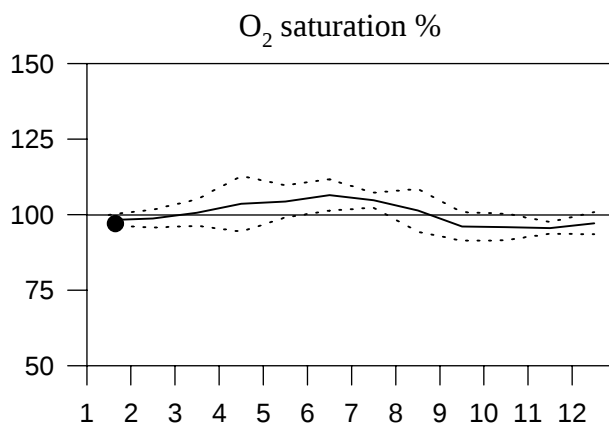
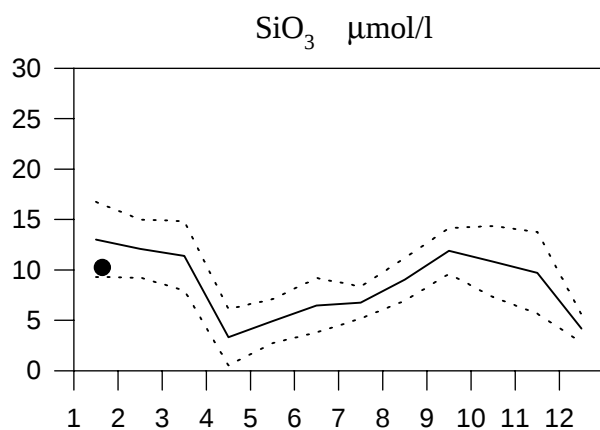
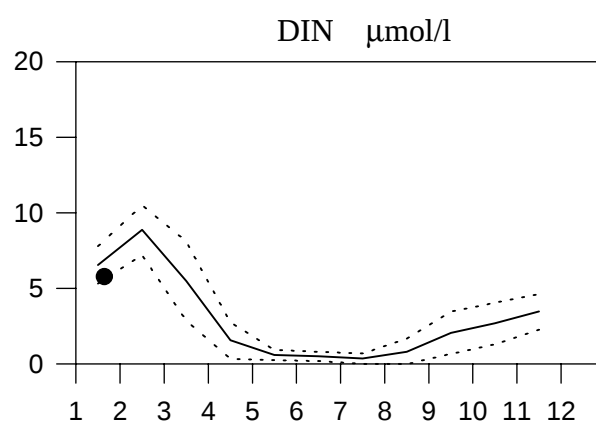
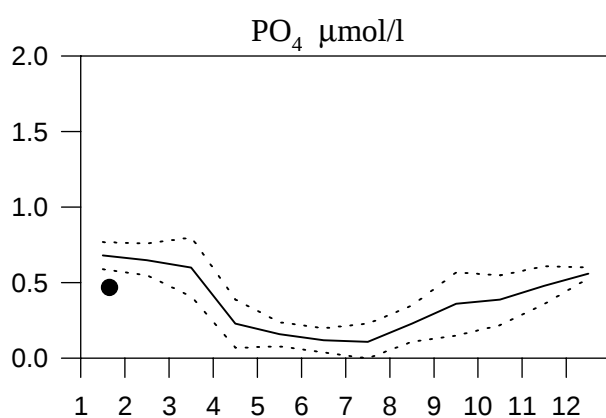
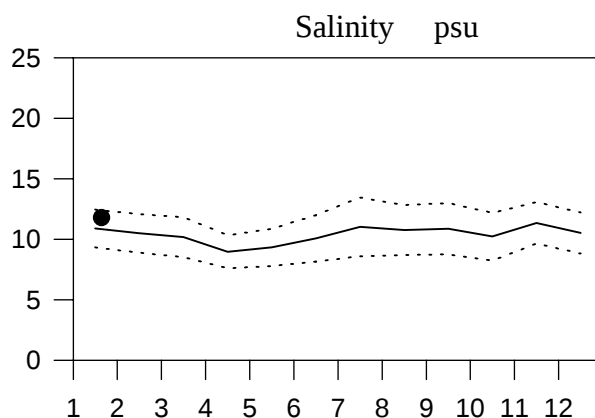
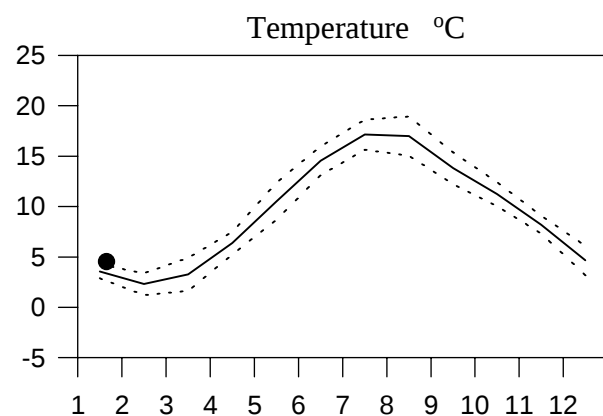
OXYGEN IN BOTTOM WATER



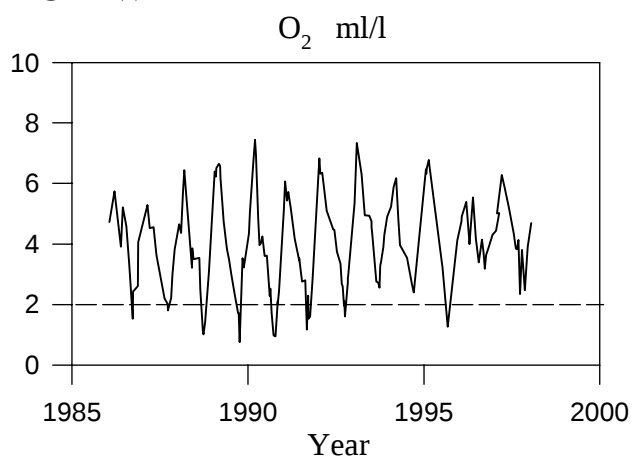
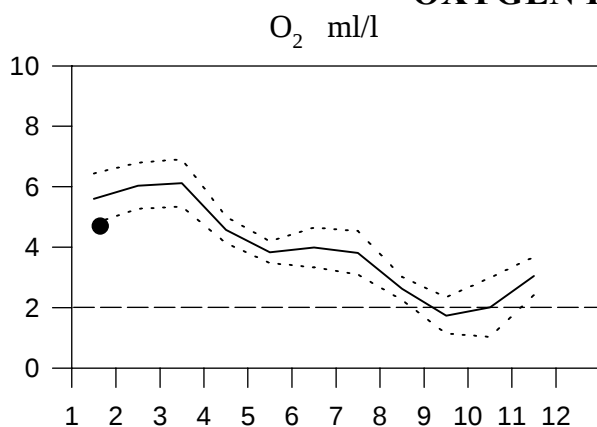
STATION W LANDSKRONA SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 - - - St.Dev. ● 1997



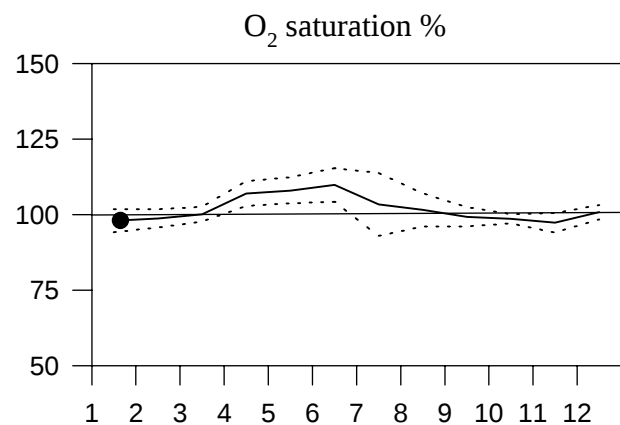
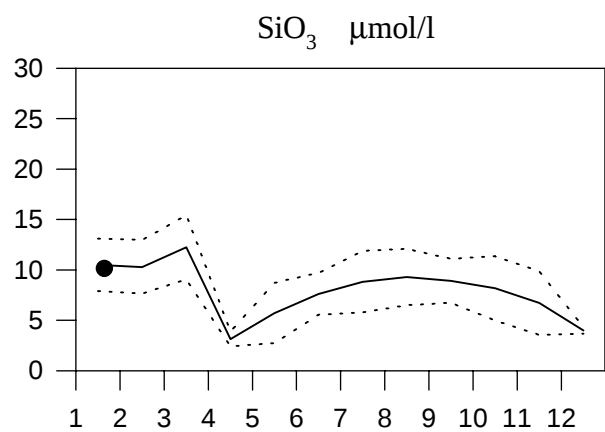
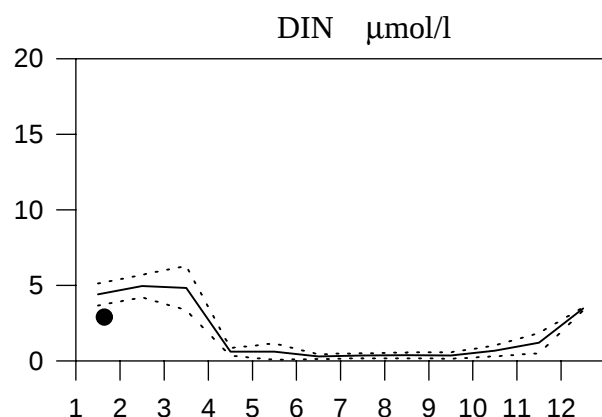
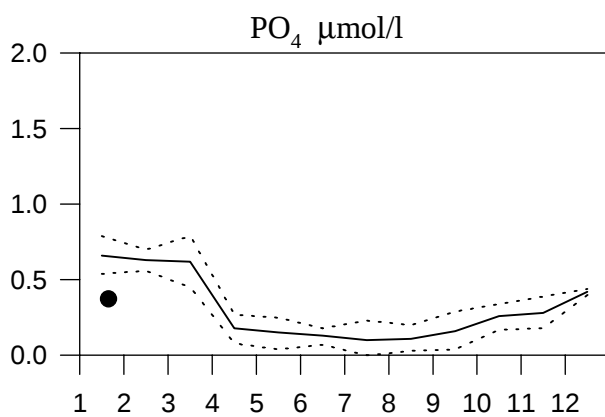
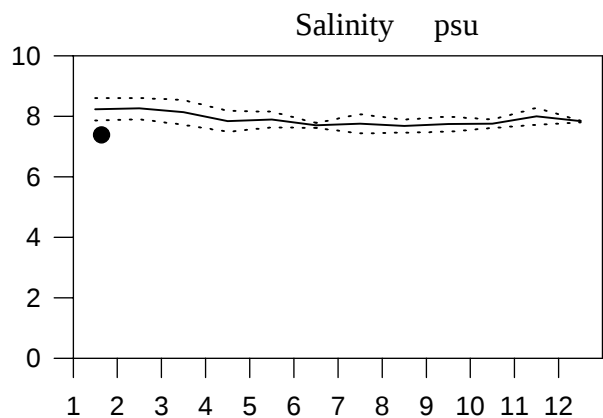
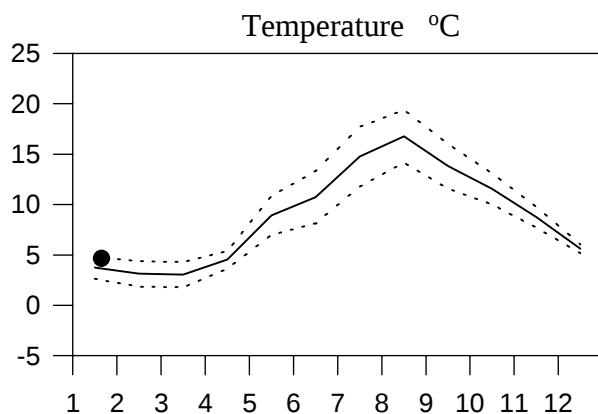
OXYGEN IN BOTTOM WATER



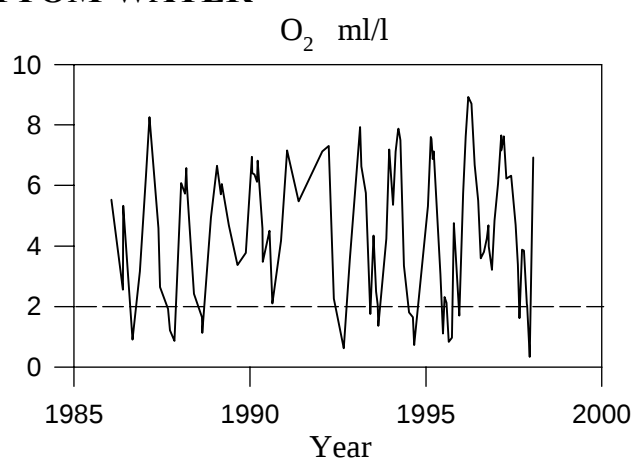
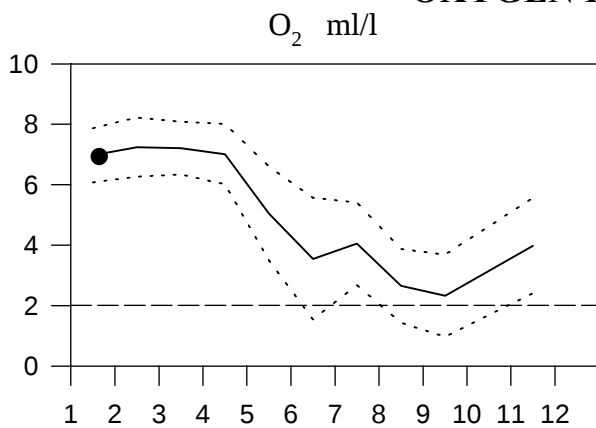
STATION BY2 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 - - - St.Dev. ● 1997



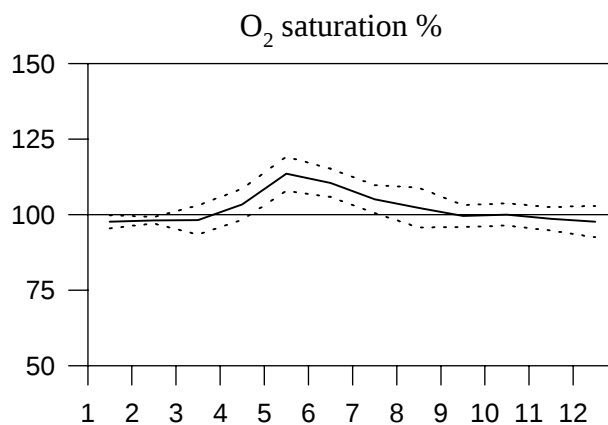
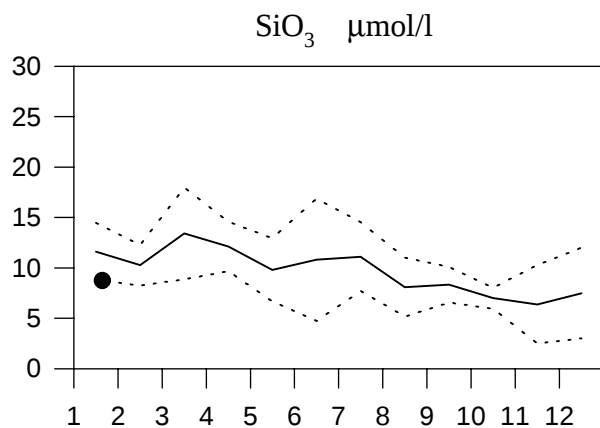
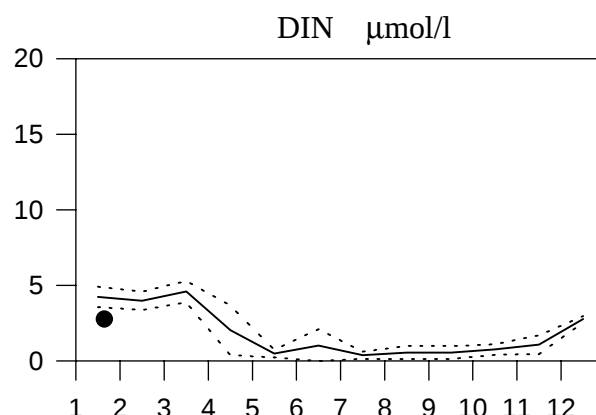
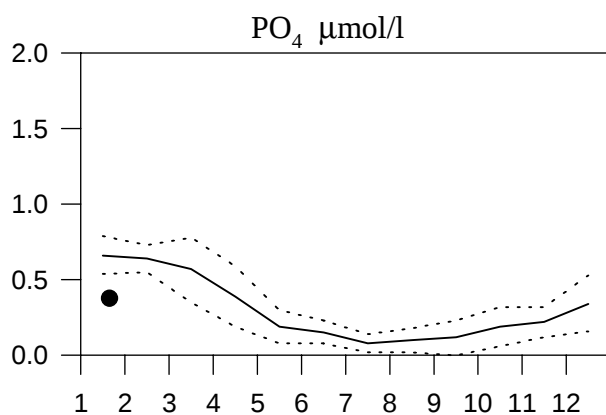
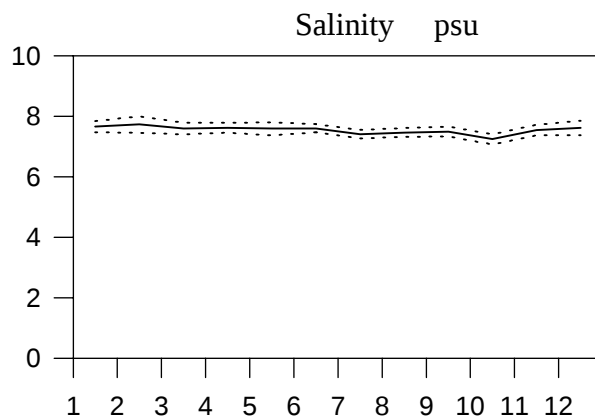
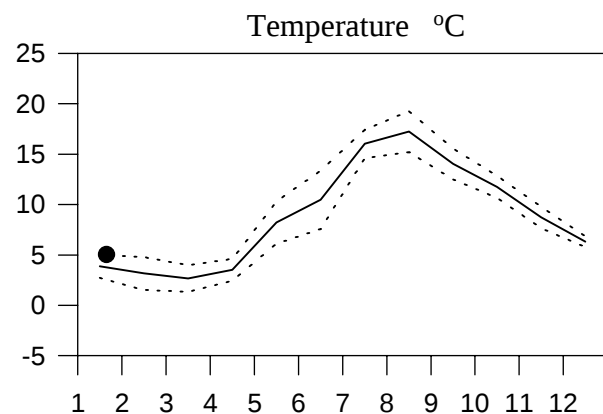
OXYGEN IN BOTTOM WATER



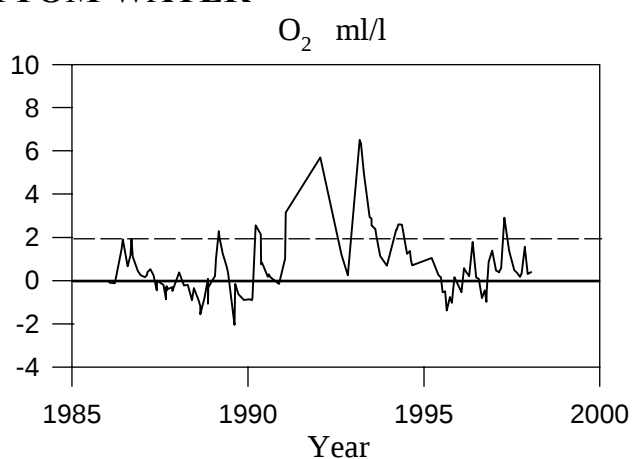
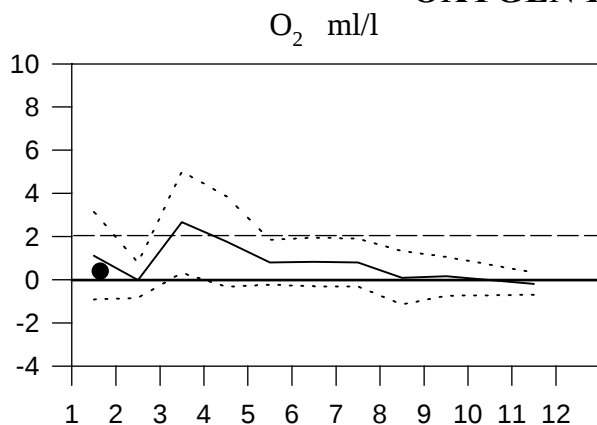
STATION BY5 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 - - - St.Dev. ● 1997



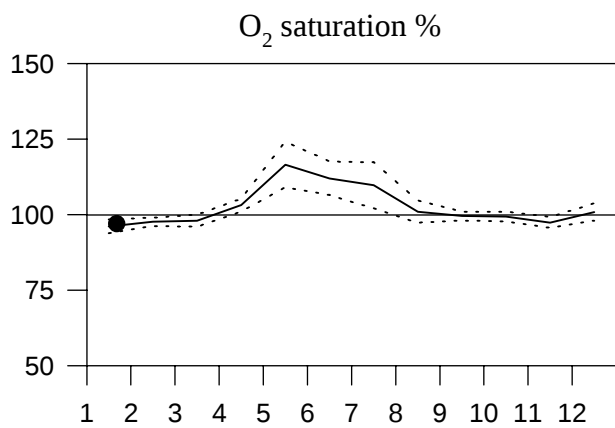
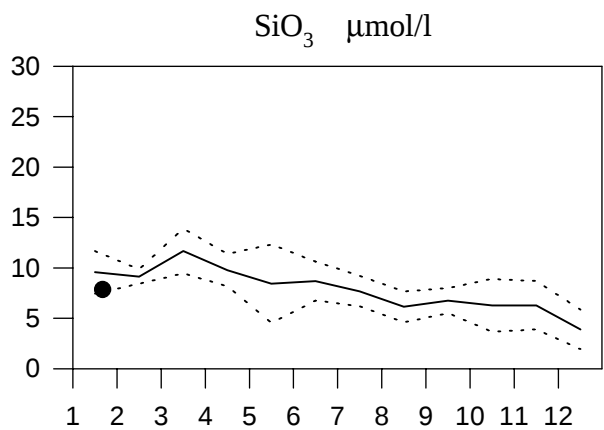
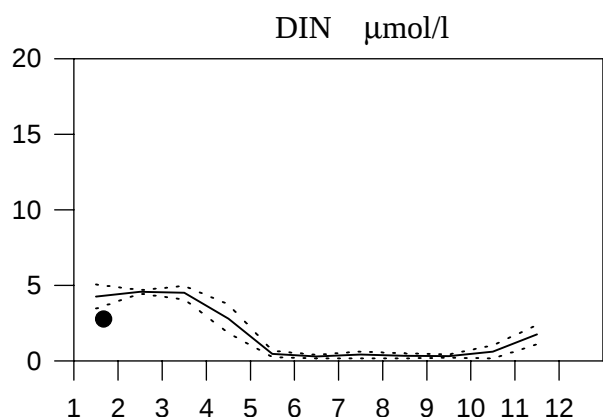
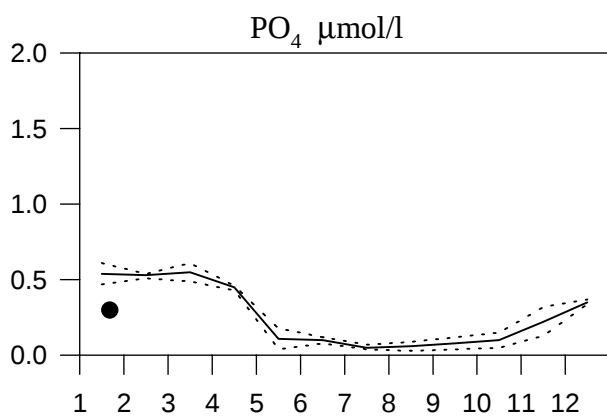
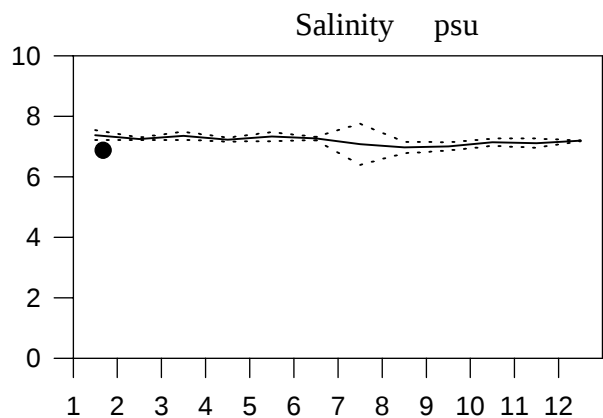
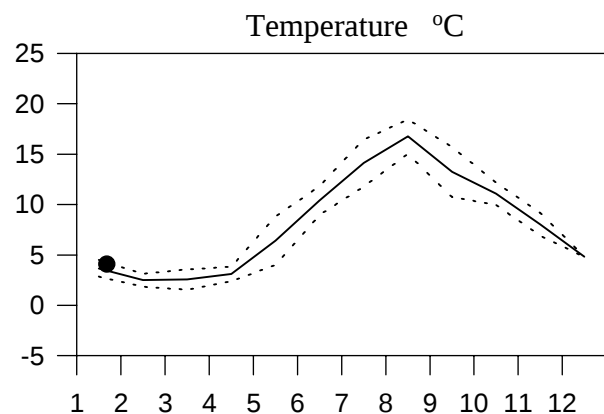
OXYGEN IN BOTTOM WATER



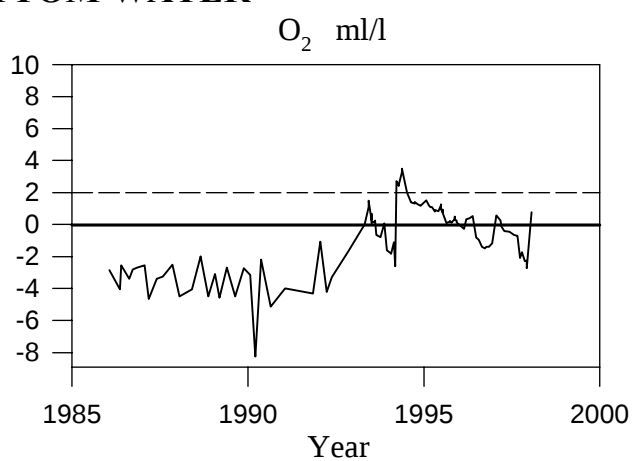
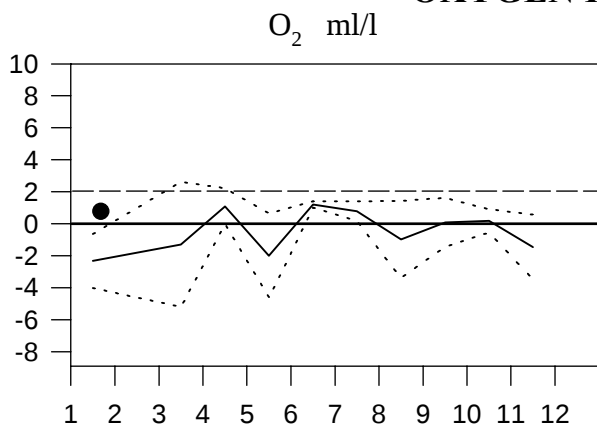
STATION BY15 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 - - - St.Dev. ● 1997



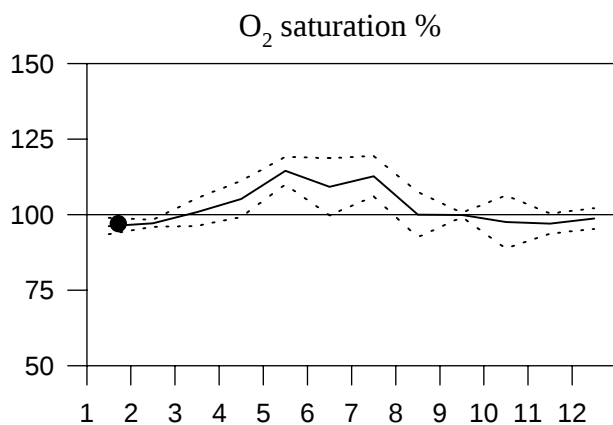
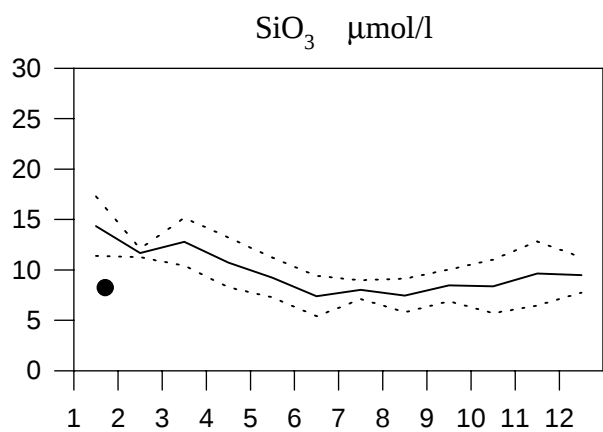
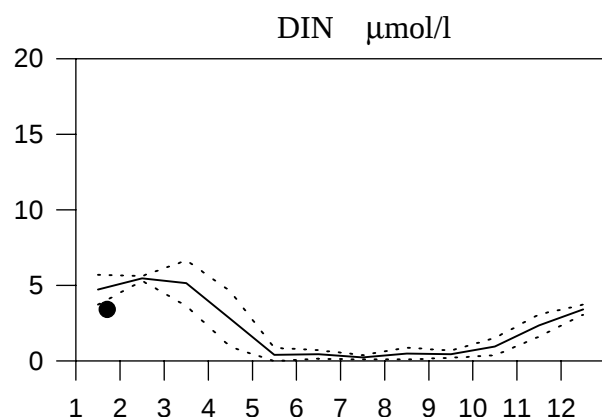
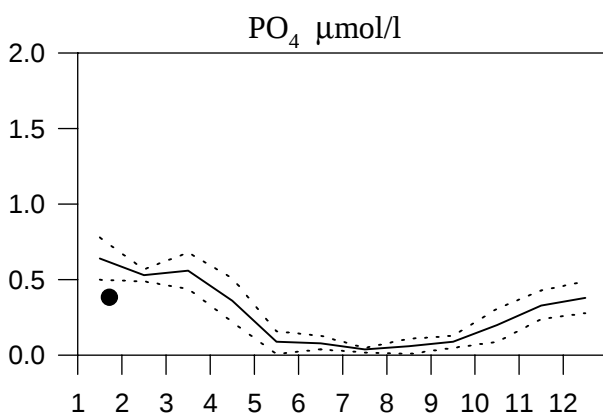
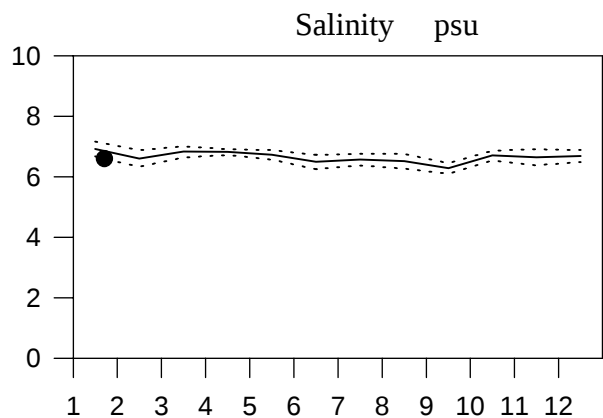
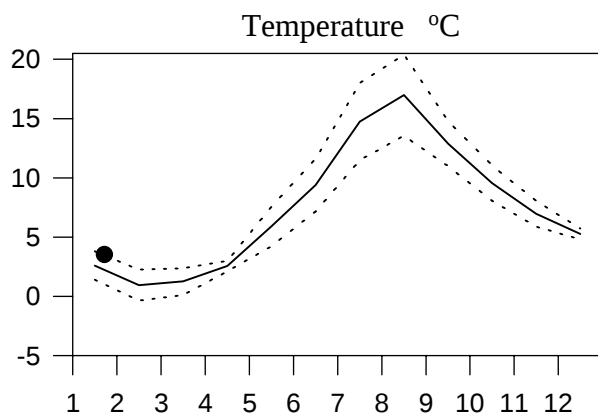
OXYGEN IN BOTTOM WATER



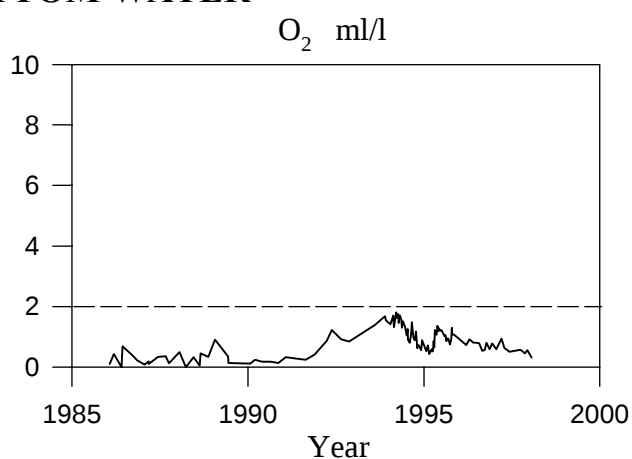
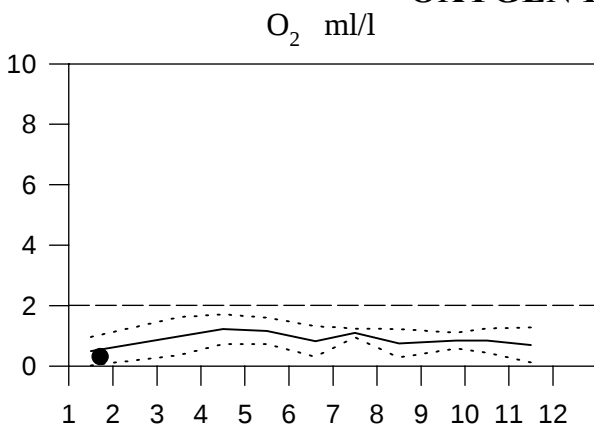
STATION BY31 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 - - - St.Dev. ● 1997



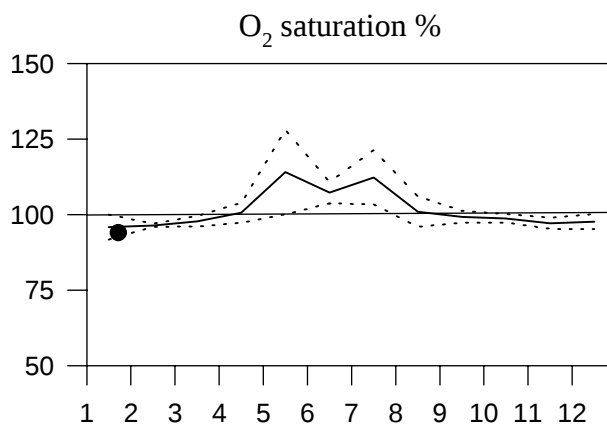
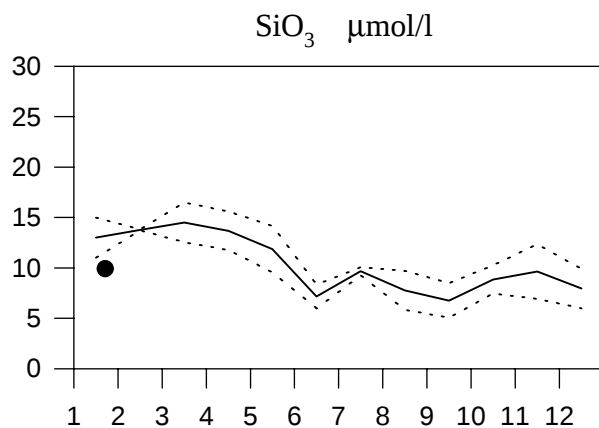
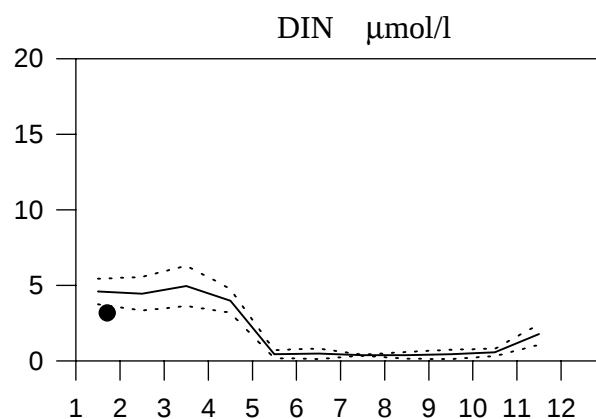
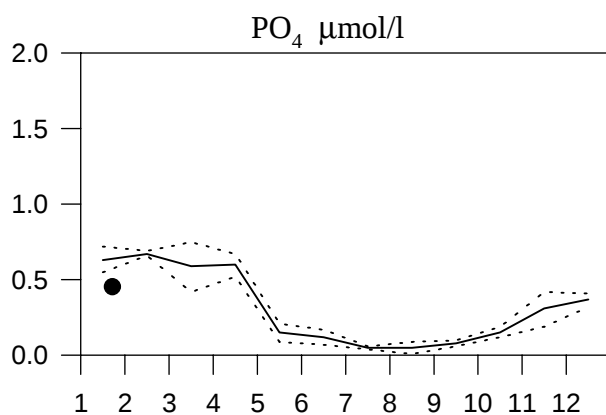
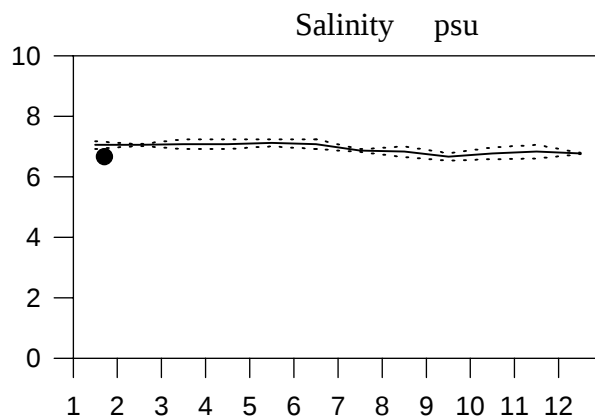
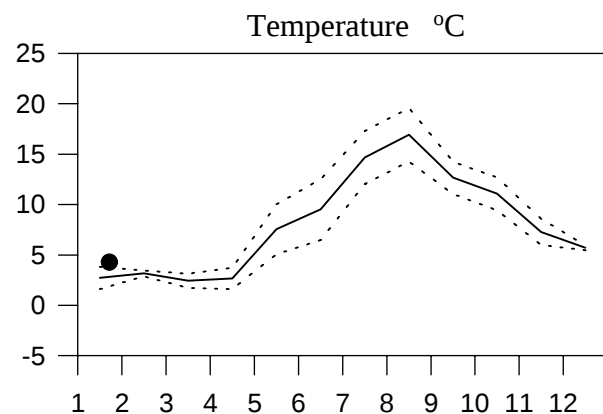
OXYGEN IN BOTTOM WATER



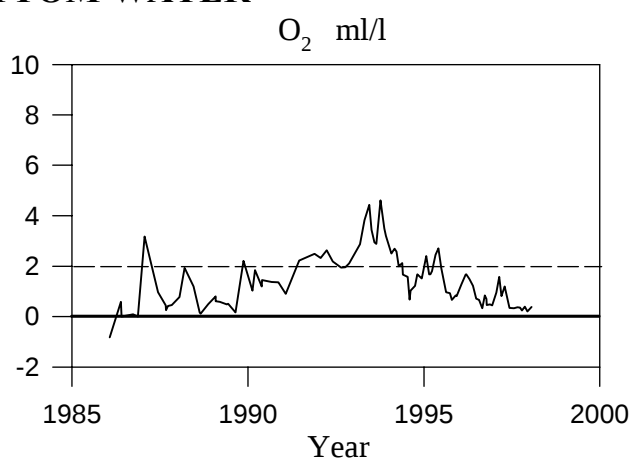
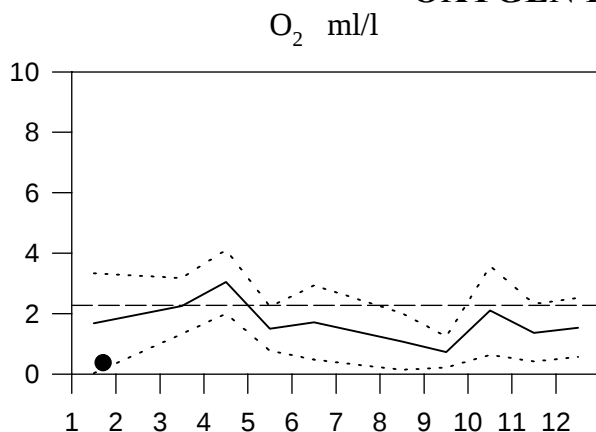
STATION BY38 SURFACE WATER (0-15 m)

Annual Cycles

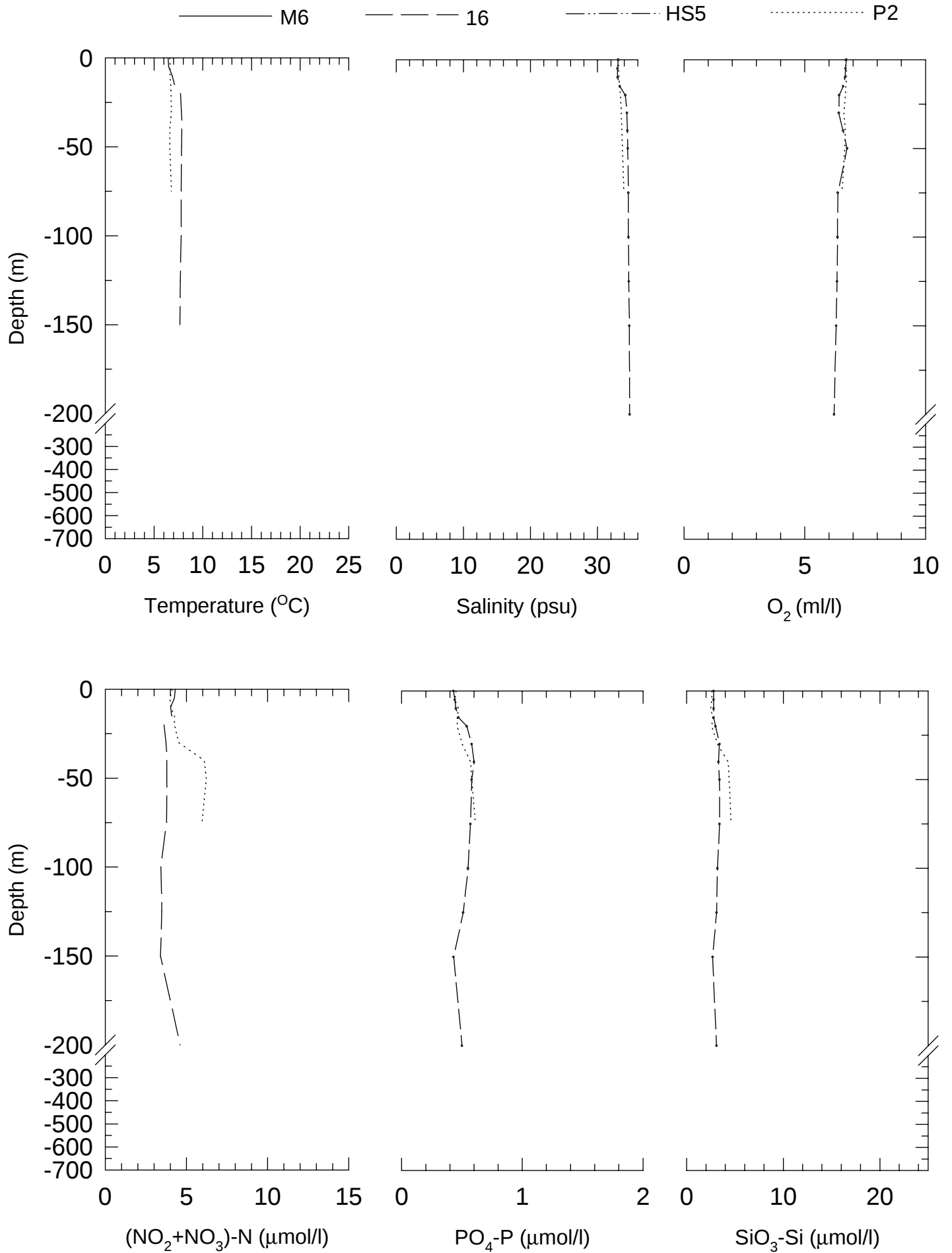
— Mean 1986-1995 - - - St.Dev. ● 1997



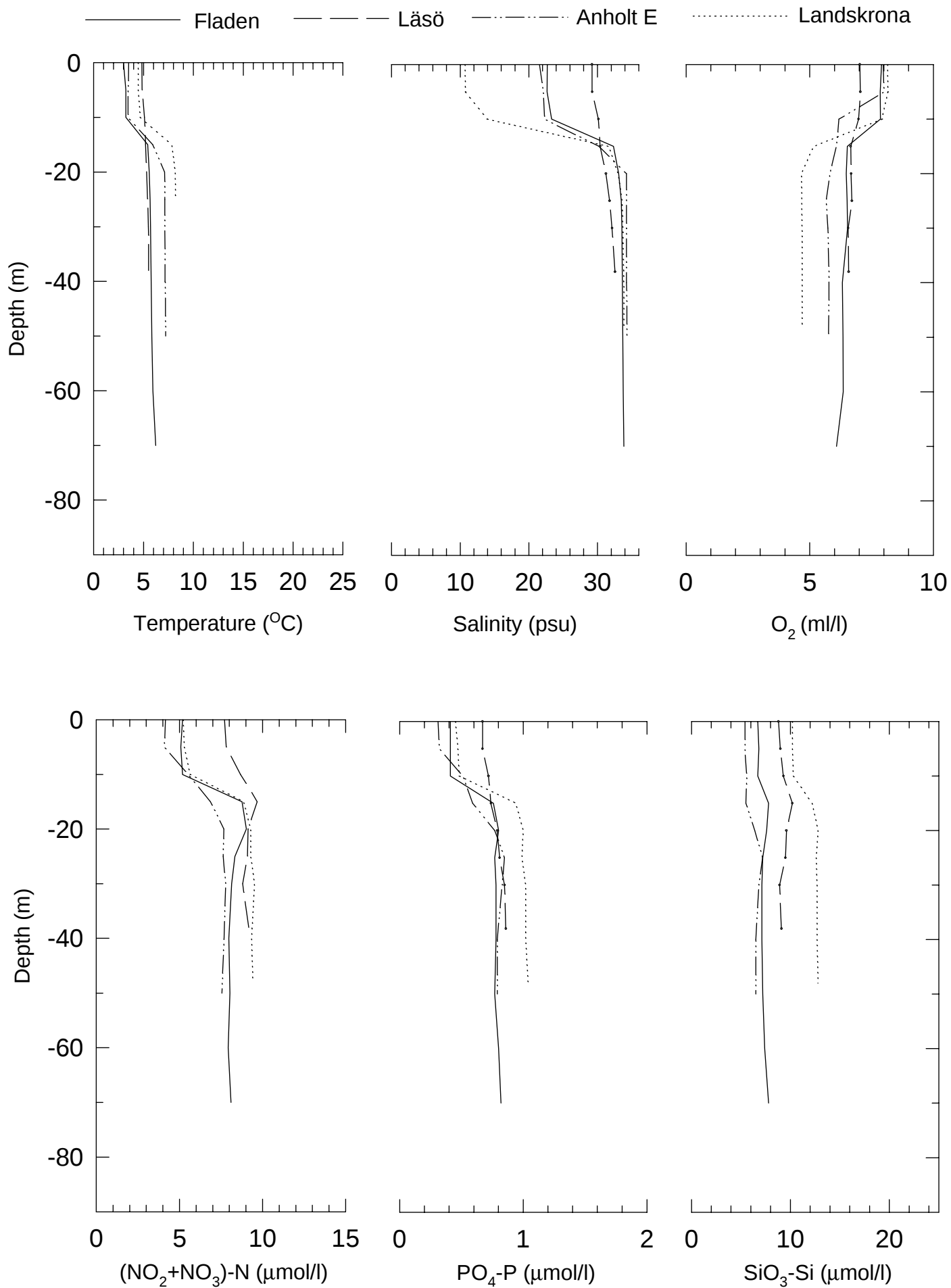
OXYGEN IN BOTTOM WATER



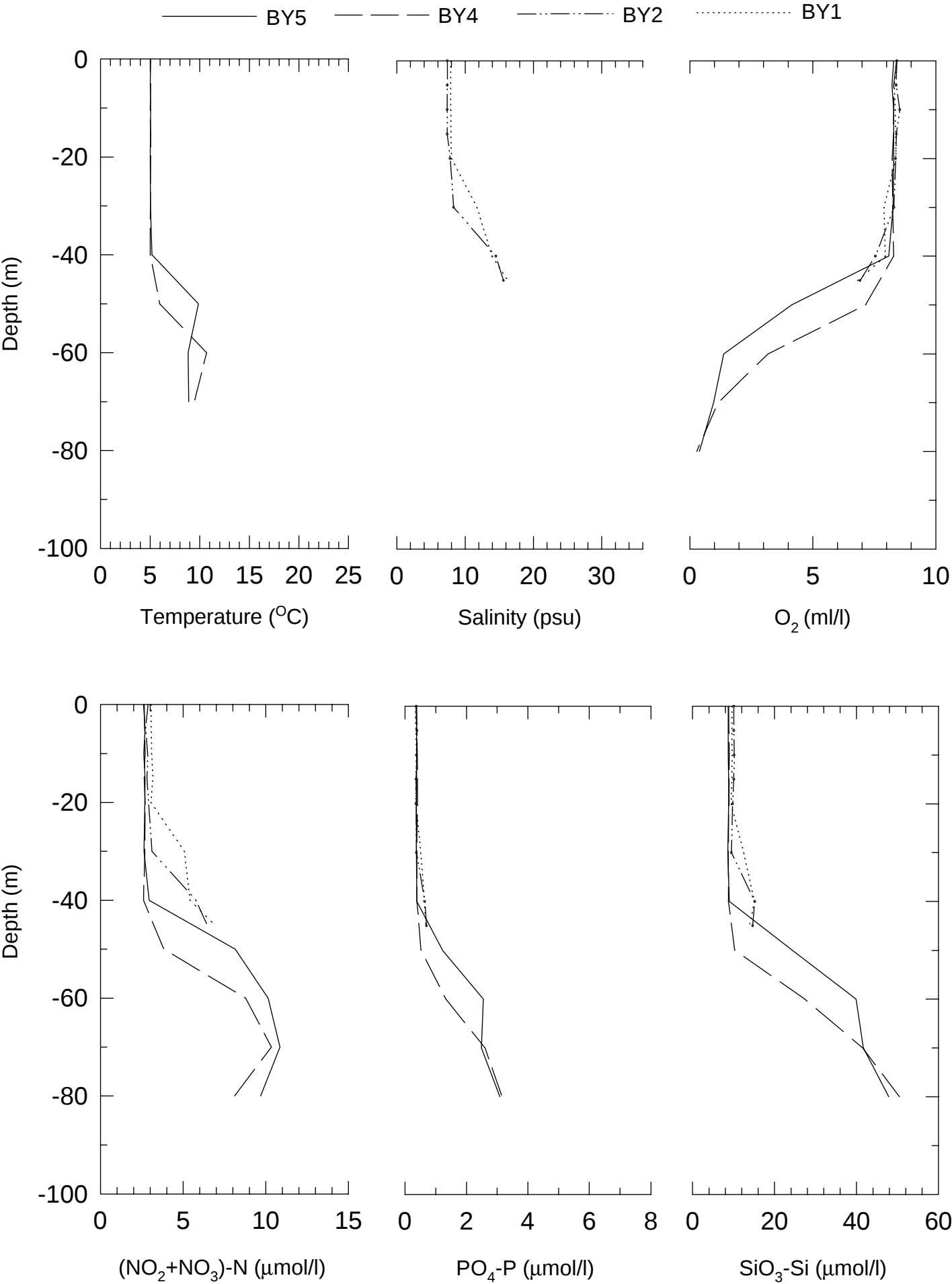
SKAGERRAK week 4 -98



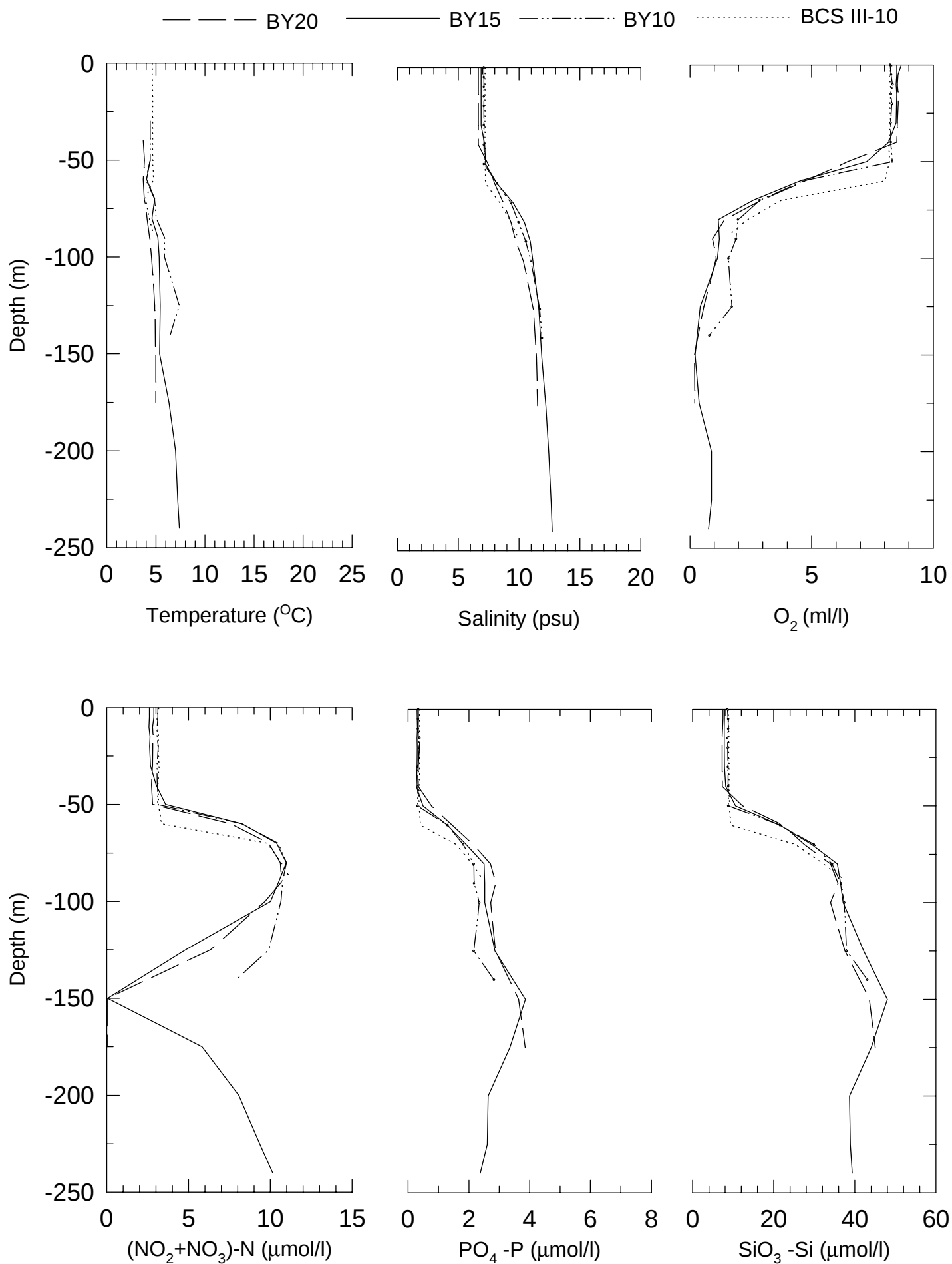
KATTEGAT and THE SOUND week 4 -98



SOUTH BALTIC week 4 -98



EAST BALTIC week 4 -98



WEST BALTIC week 4 -98

— BY31 - - - BY32 BY38

