

EXPEDITIONSRAPPORT FRÅN U/F ARGOS

CRUISE REPORT FROM R/V ARGOS

Survey period: 980216-980222

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

Principal: SMHI

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.

PRELIMINARY RESULTS

The expedition, which was a part of the ordinary monitoring programme of SMHI, and began in Göteborg on the 16th of February and ended in Karlskrona on the 22nd of February. The weather was mostly cloudy and hazy, and was dominated by moderate westerly wind.

The Skagerrak

The sea surface temperature varied between 4.5 and 5.5°C. Nutrient concentrations were typical for the season. A minor algae bloom occurred in the upper 10 to 20 meters along the Swedish coast.

The Kattegatt and the Sound

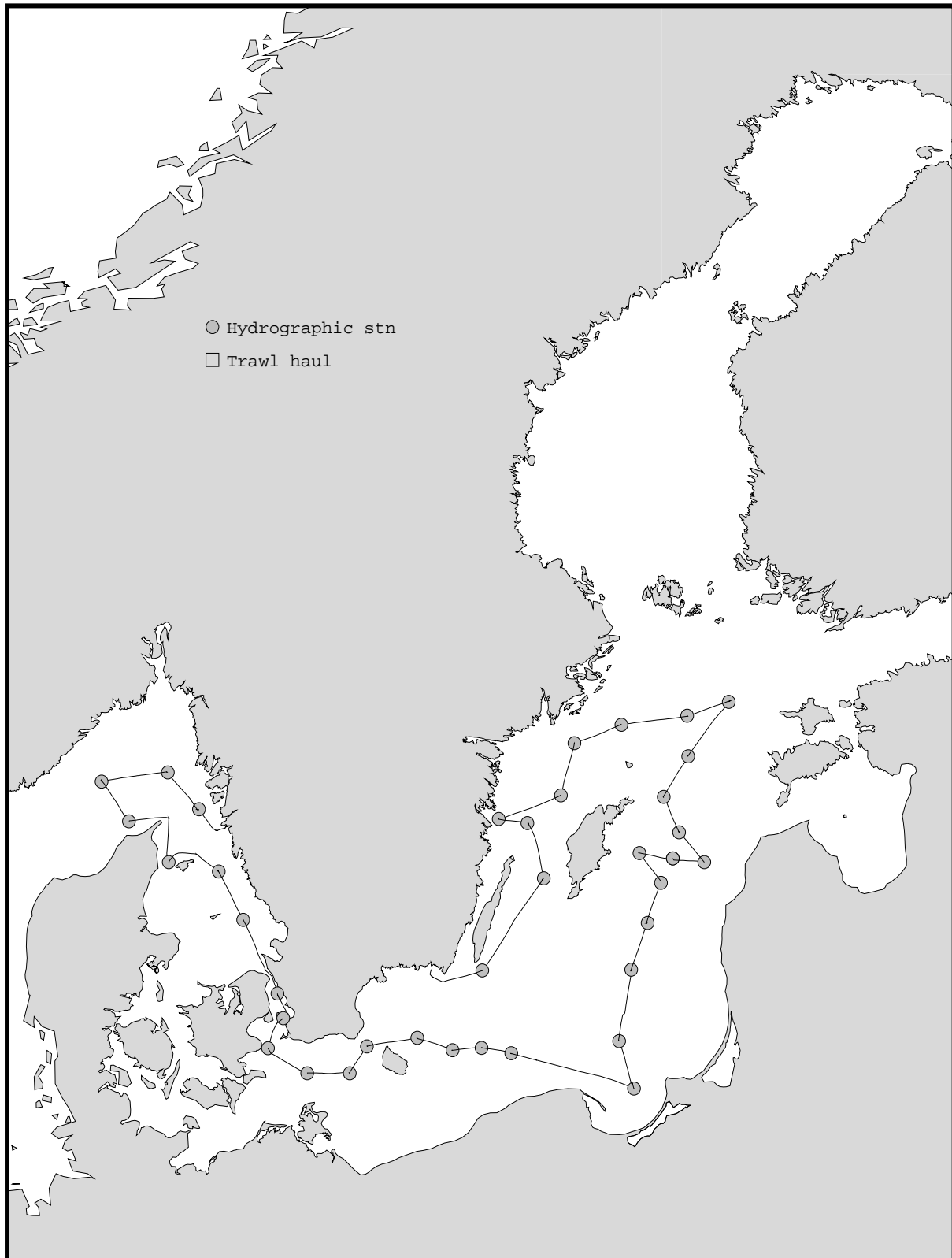
A considerable algae bloom occurred mainly in the southern Kattegatt. The surface layer was depleted of silicate and inorganic nitrogen, and the phosphate concentrations were low. The sea surface temperature was about 3°C in the whole area. The bottom oxygen concentrations were normal for the season. Lowest oxygen saturation (70%) was measured in the bottom water near Landskrona in the Sound.

The Baltic Sea

The sea surface temperature varied between 2 and 4°C. No visible algae bloom occurred. Typical winter conditions prevailed in the whole area with secchi depths of about 10-15 m and high and rising (cf. January) nutrient concentrations. Oxygen concentrations below 2 ml/l were measured from about 80 m depth in Gotland Basin and from about 70 m in the Bornholm Basin. No hydrogen sulphide was found in the Baltic Sea.

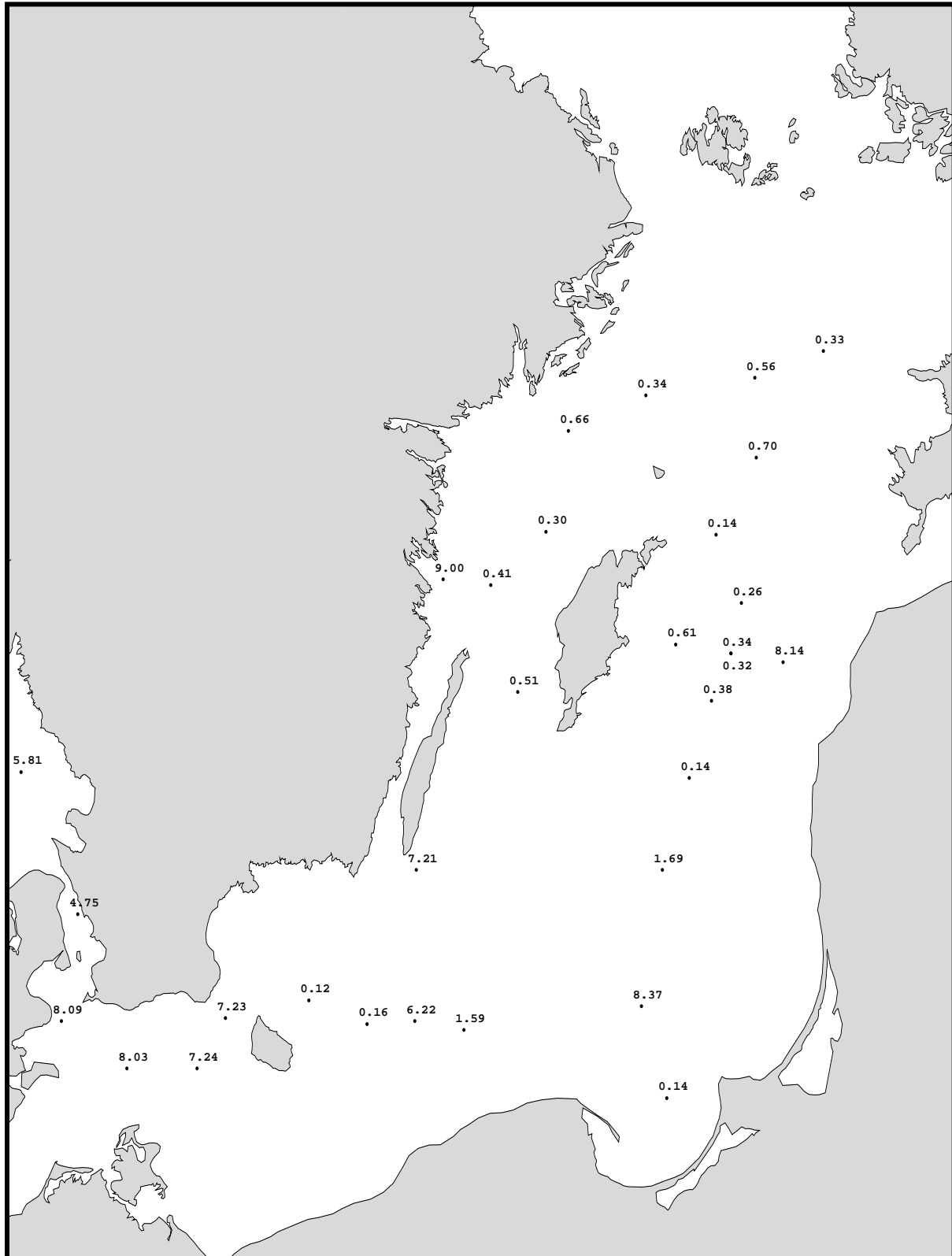
TRACK CHART

Country: Sweden
Ship : Argos
Date : 980216-980222
Series : 0151-0188



Bottom water oxygen concentration (ml/l)

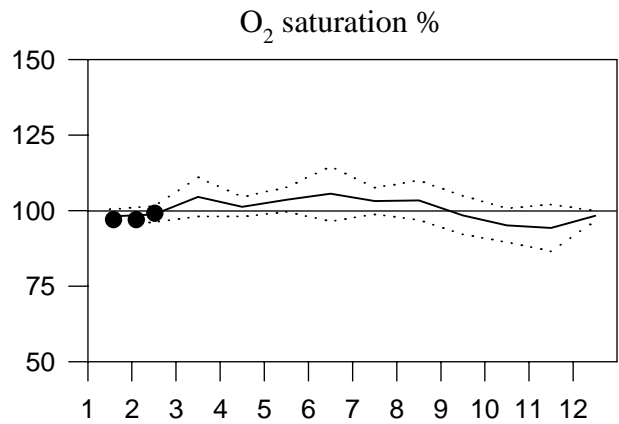
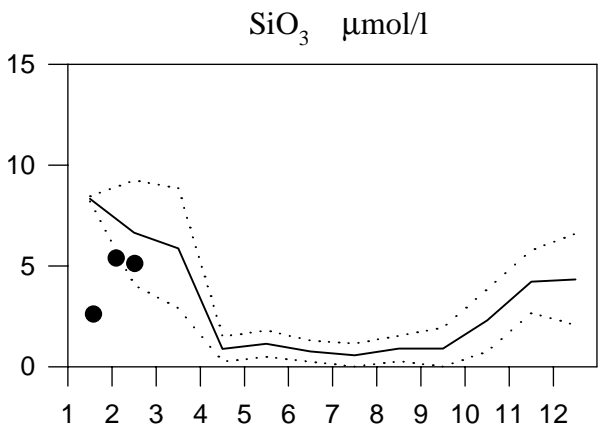
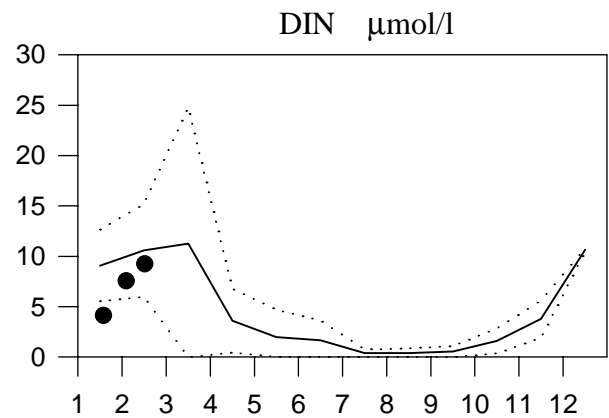
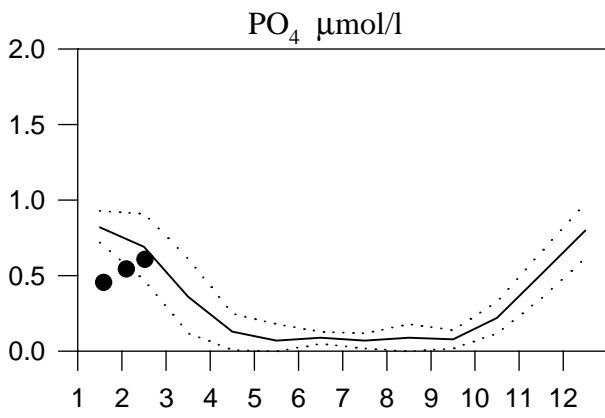
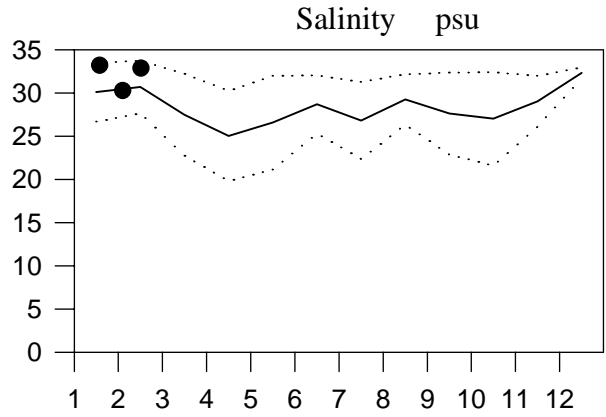
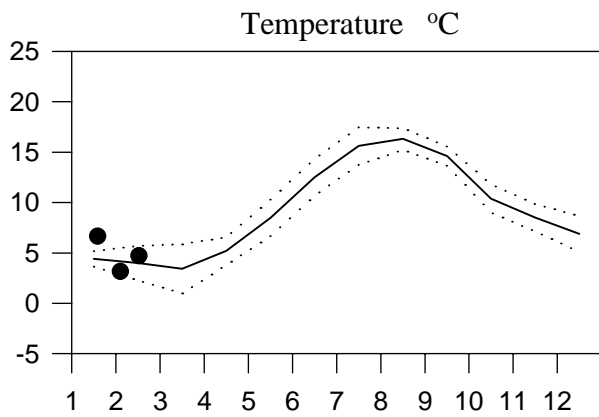
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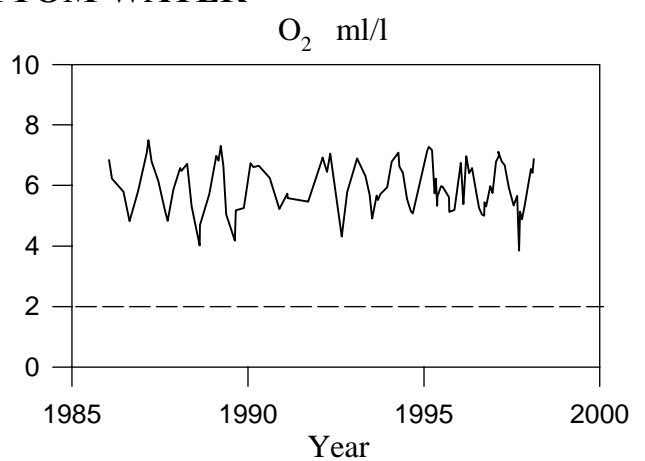
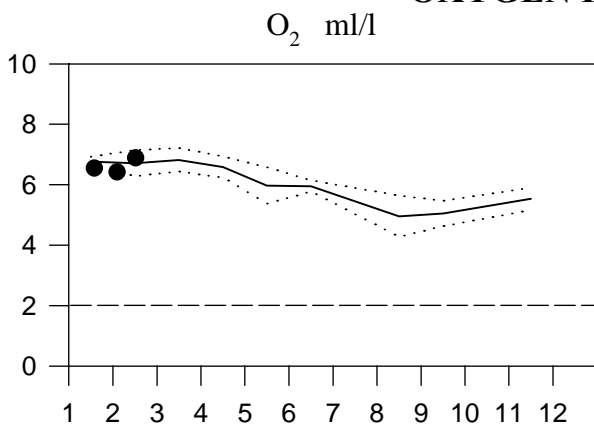
STATION P2 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 ····· St.Dev. ● 1998



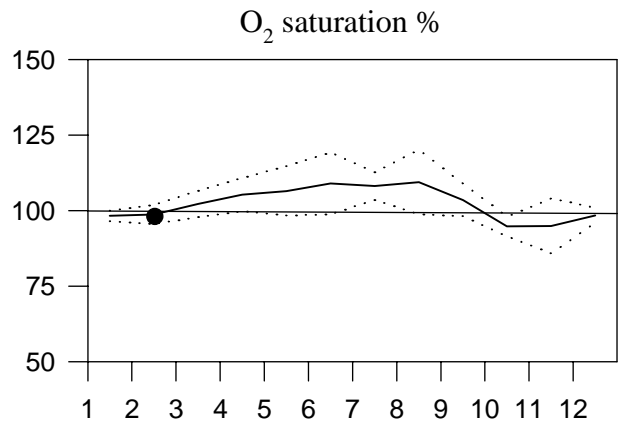
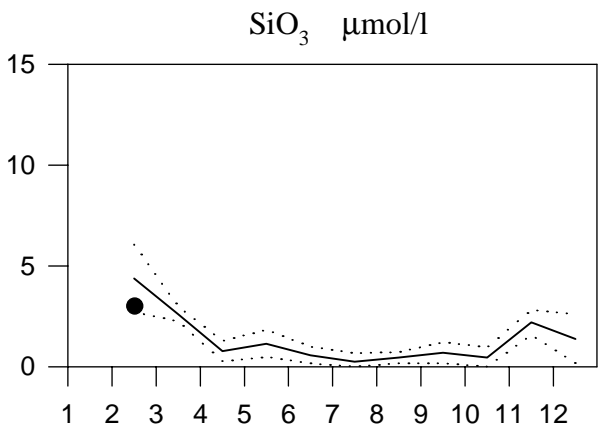
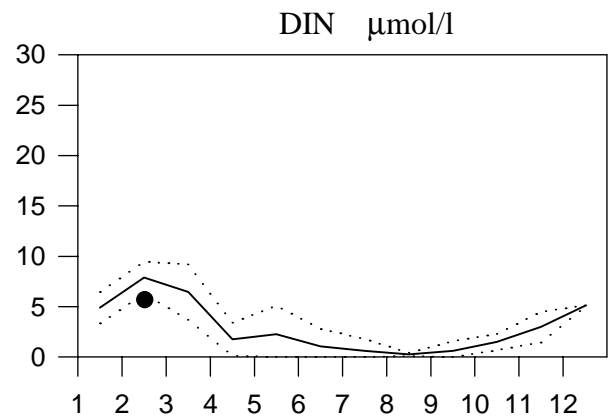
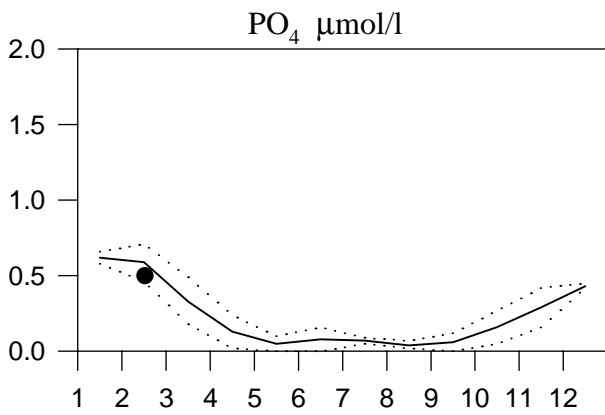
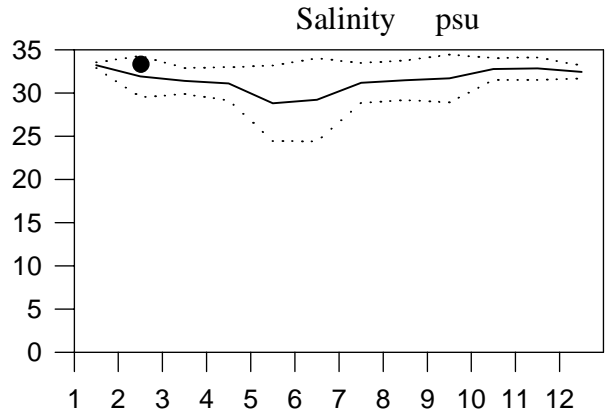
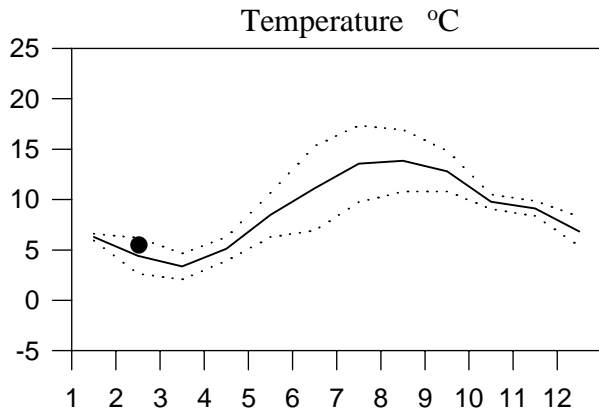
OXYGEN IN BOTTOM WATER



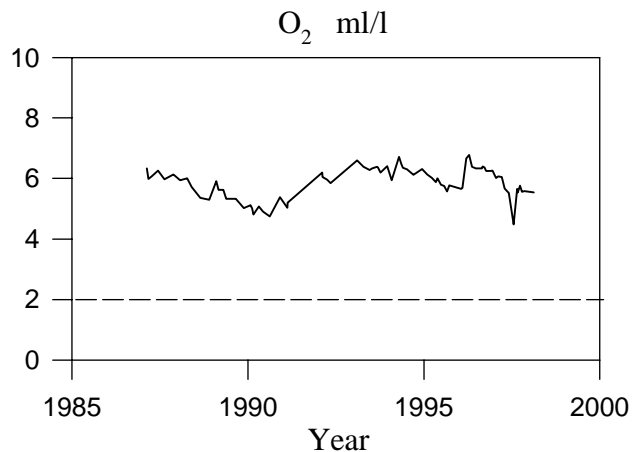
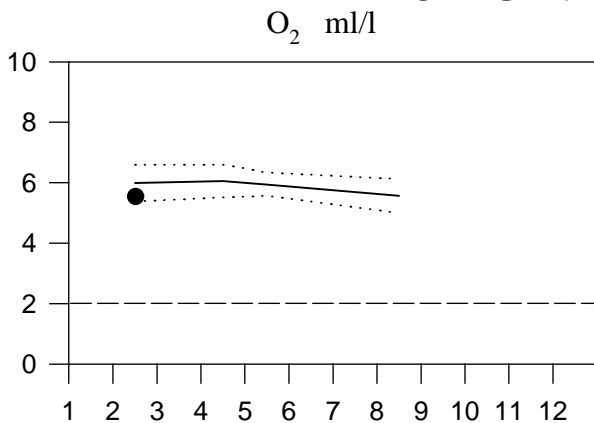
STATION M6 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 ····· St.Dev. ● 1998



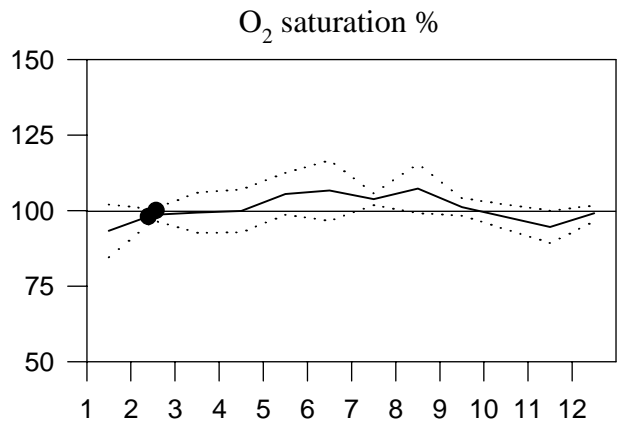
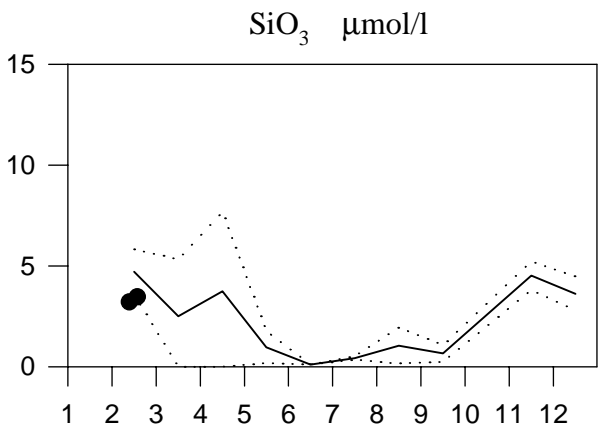
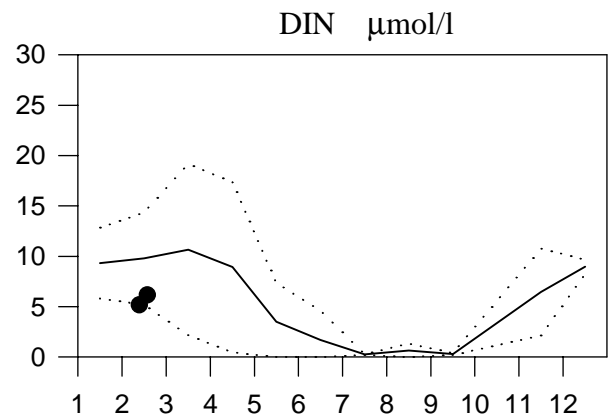
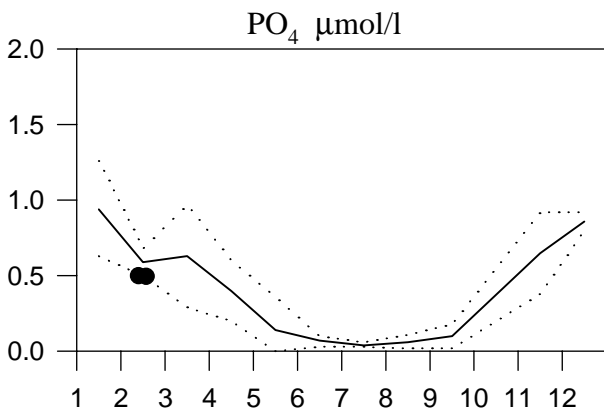
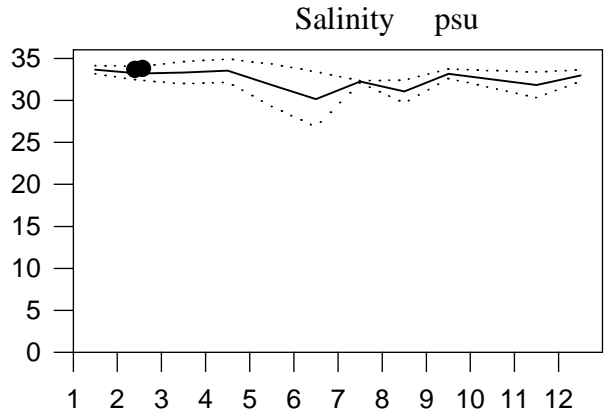
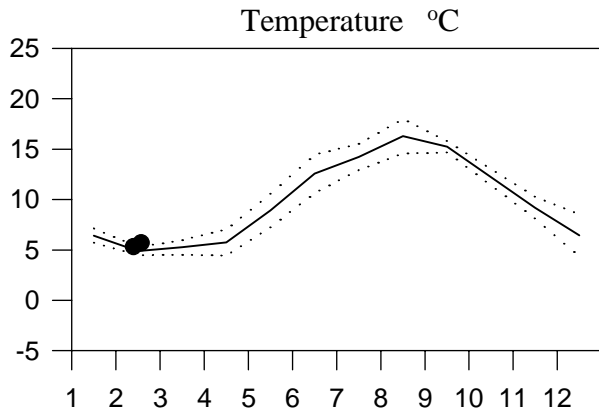
OXYGEN IN BOTTOM WATER



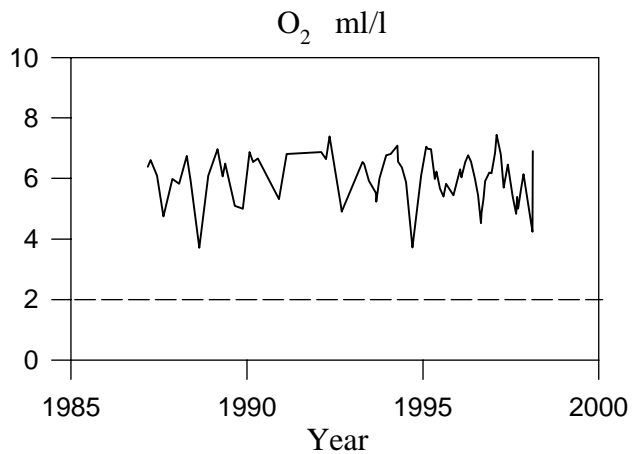
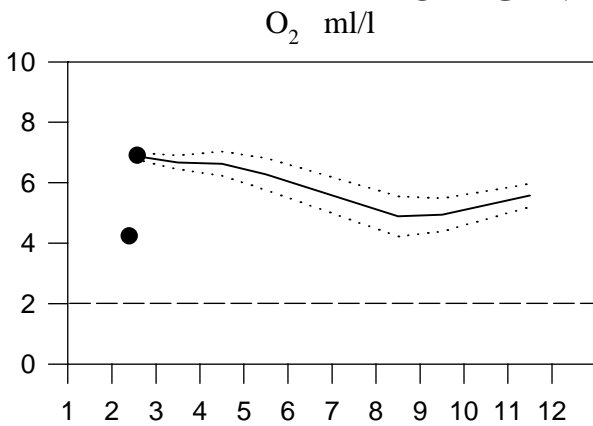
STATION HS5 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 ····· St.Dev. ● 1998



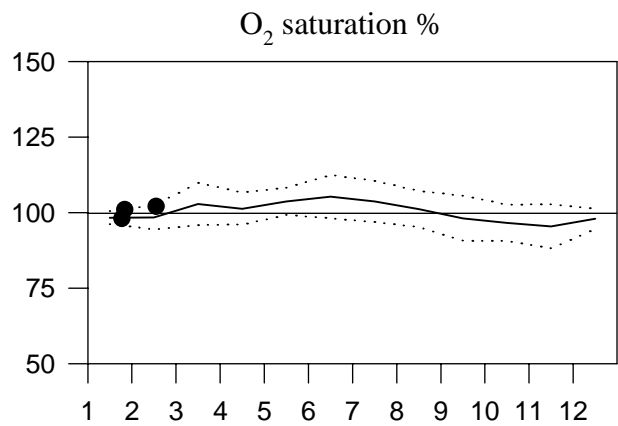
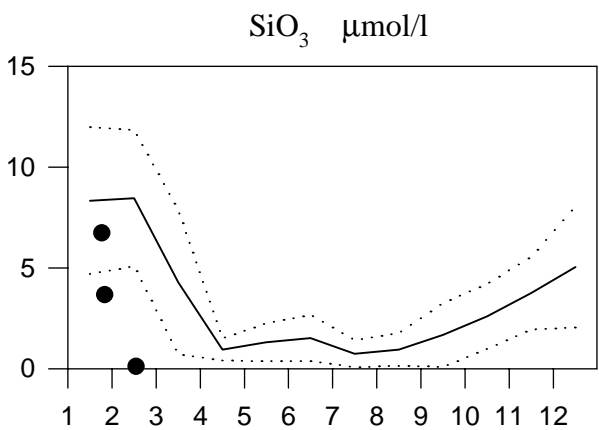
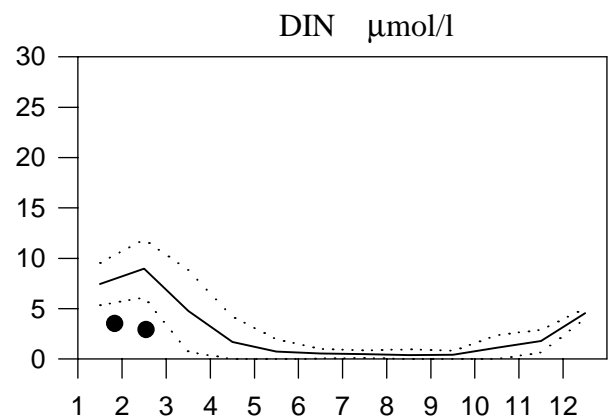
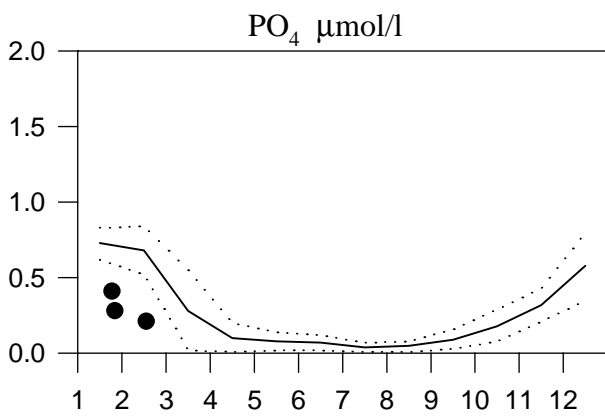
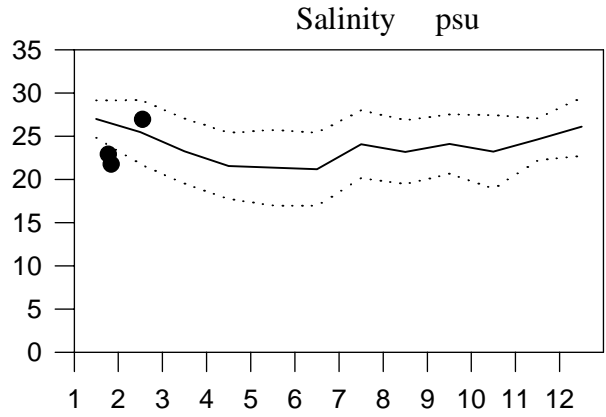
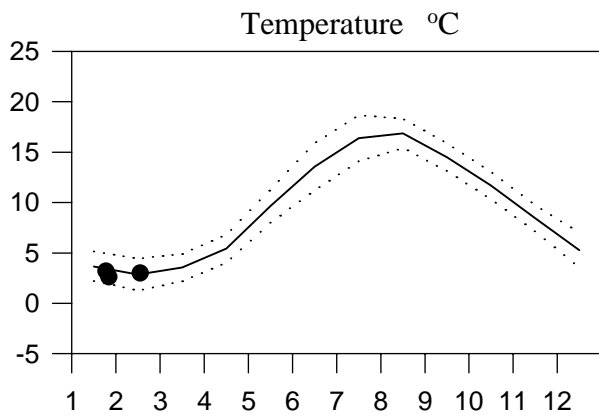
OXYGEN IN BOTTOM WATER



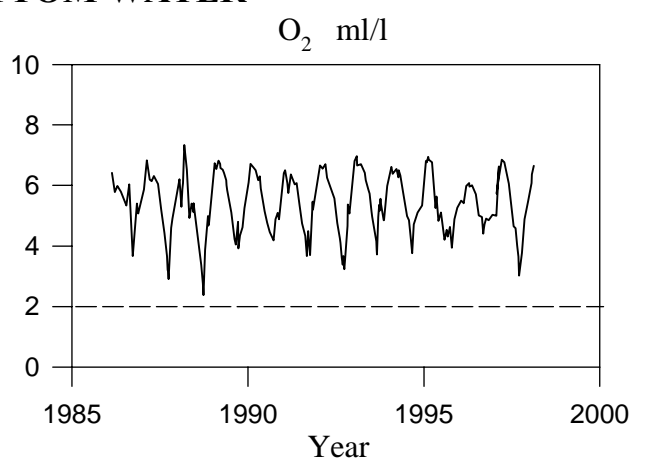
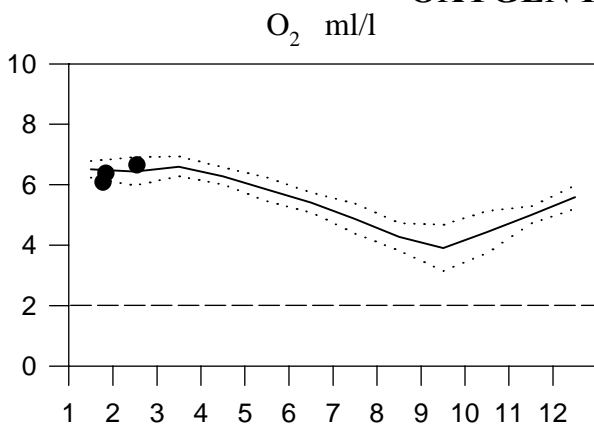
STATION FLADEN SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 ····· St.Dev. ● 1998



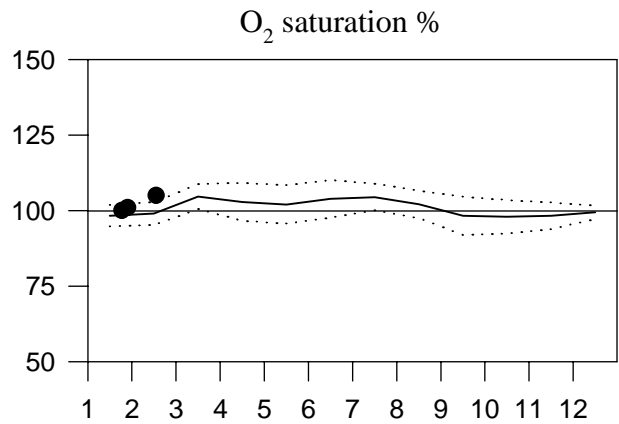
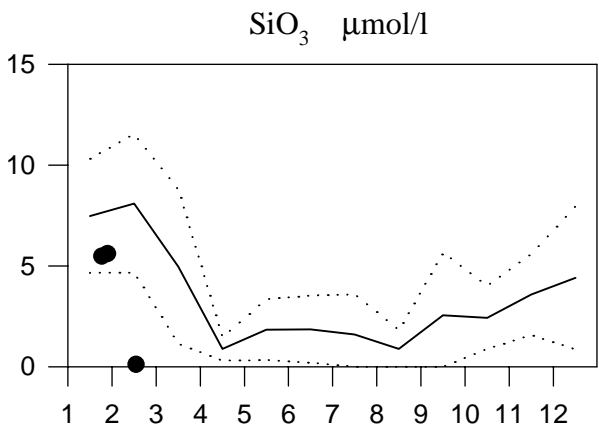
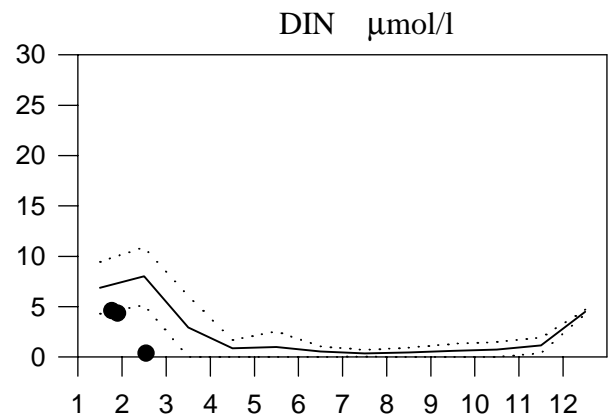
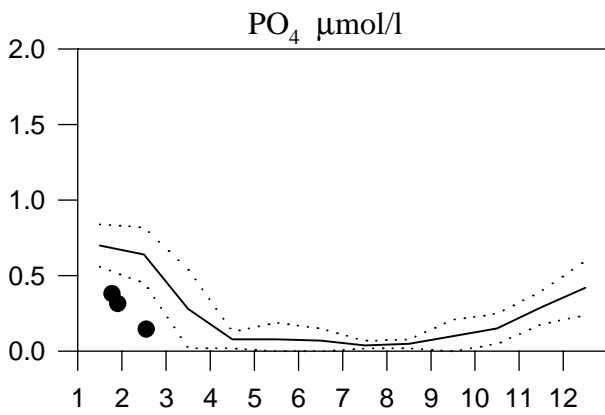
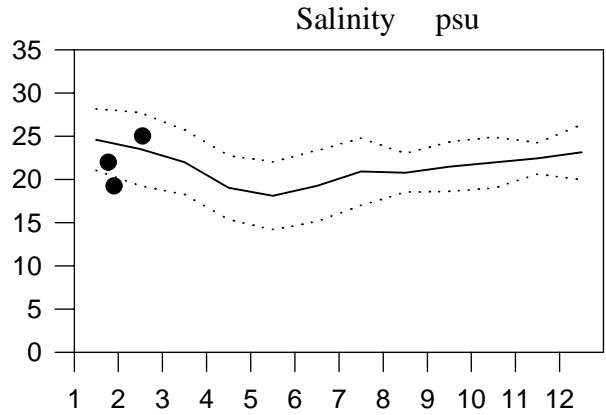
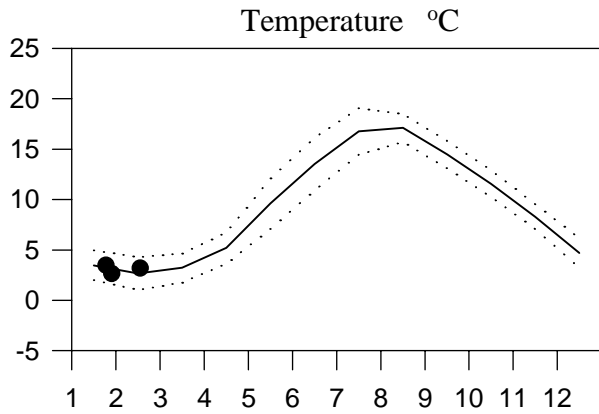
OXYGEN IN BOTTOM WATER



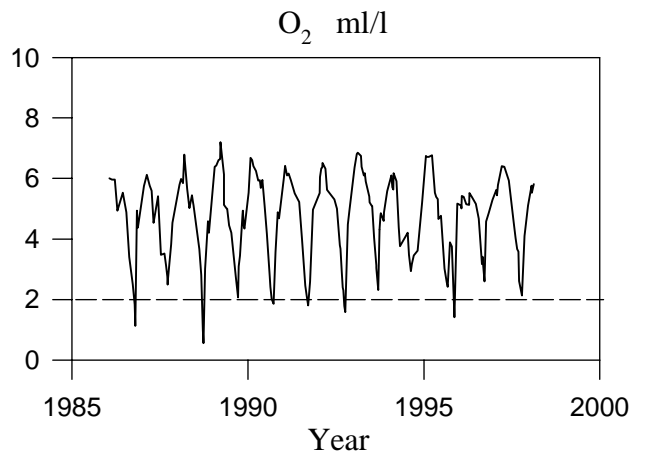
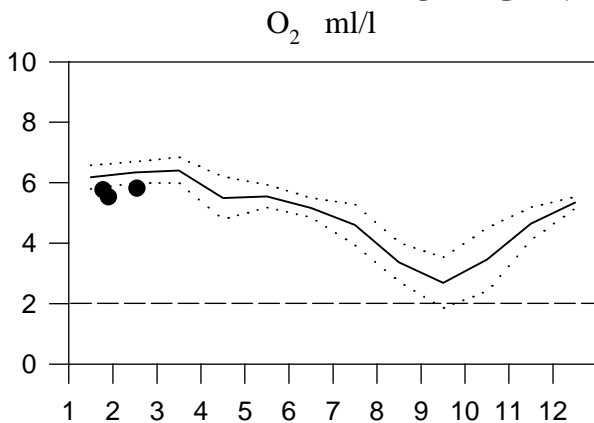
STATION ANHOLT E SURFACE WATER (above halocline)

Annual Cycles

— Mean 1986-1995 ····· St.Dev. ● 1998



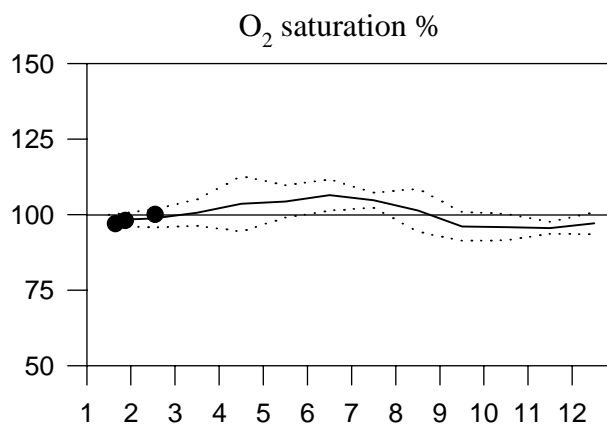
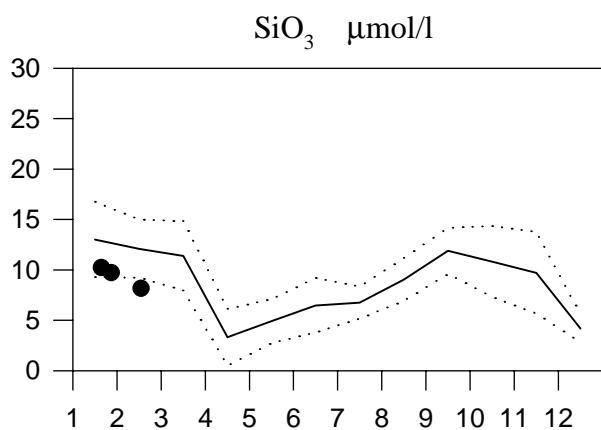
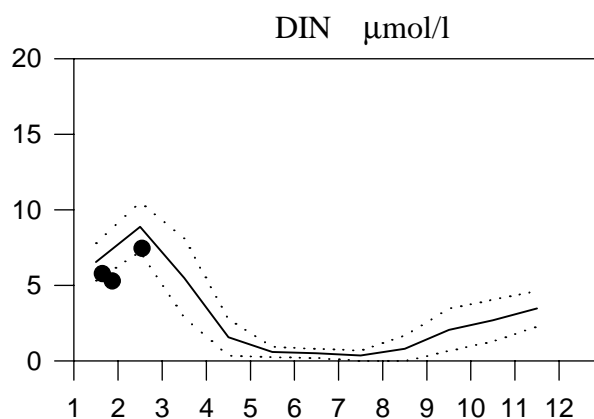
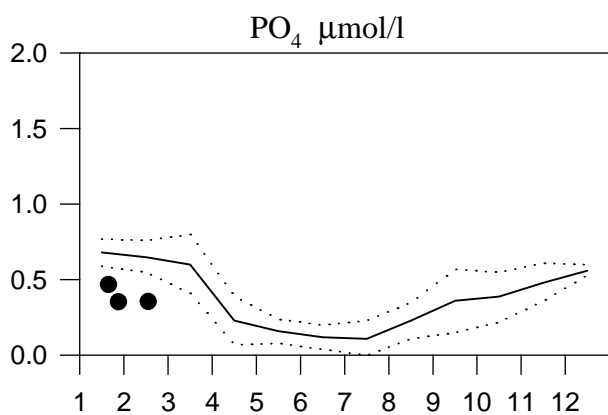
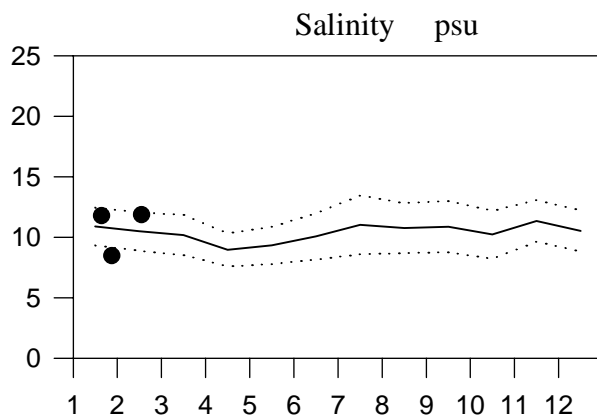
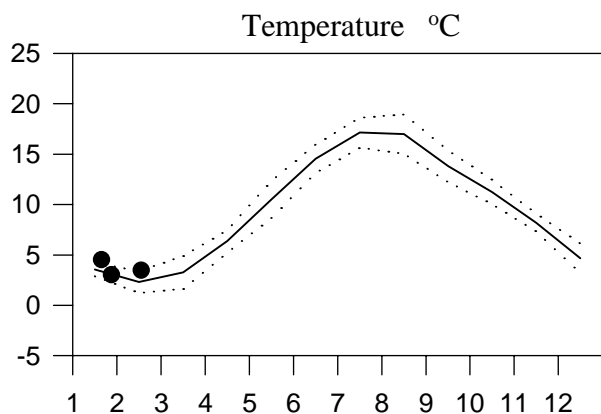
OXYGEN IN BOTTOM WATER



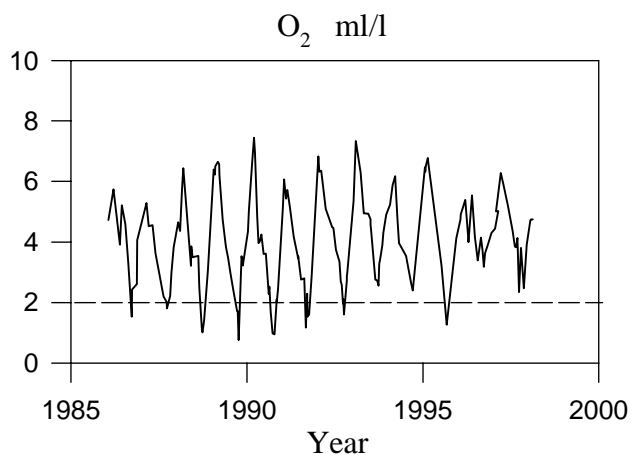
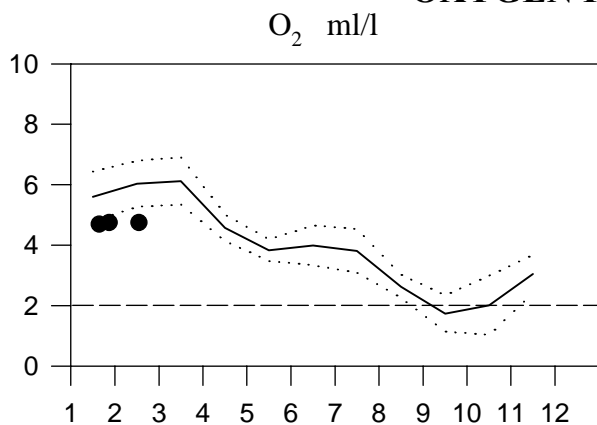
STATION W LANDSKRONA SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 ····· St.Dev. ● 1997



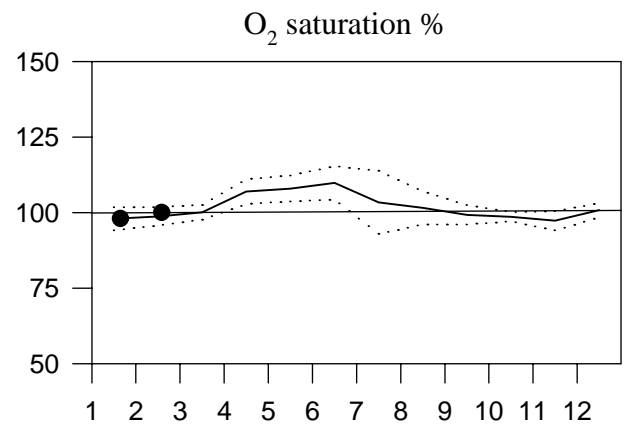
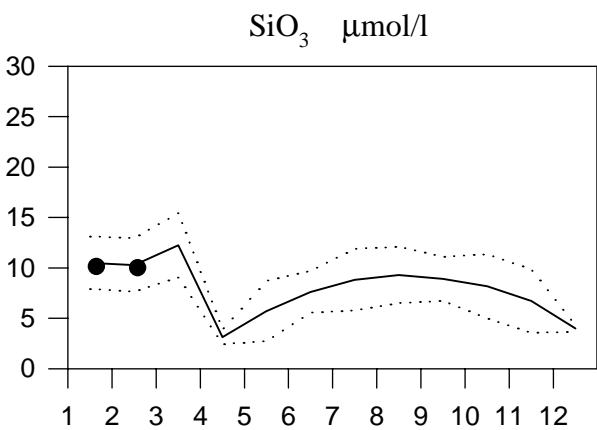
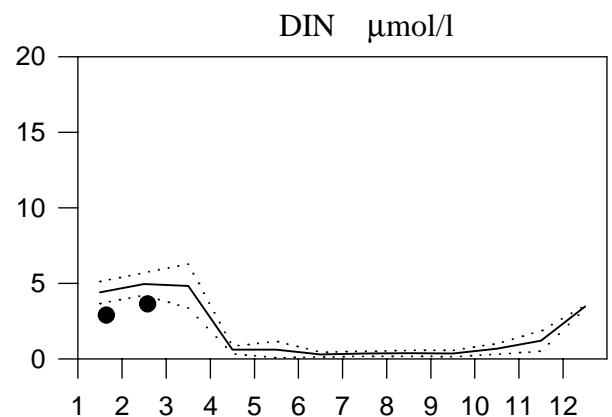
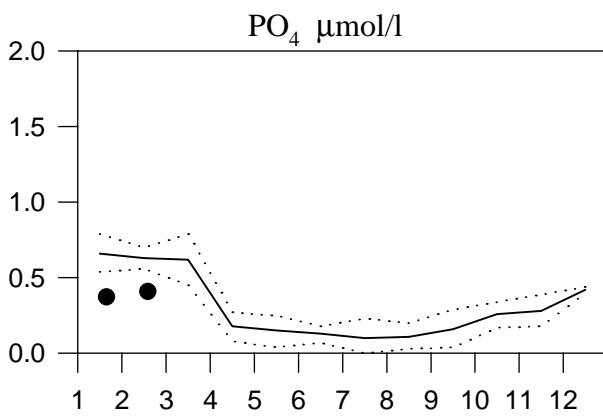
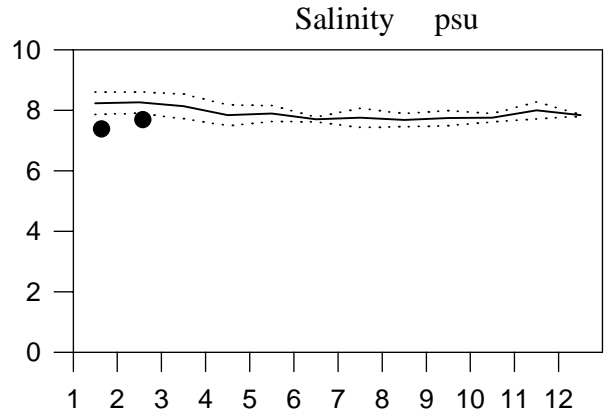
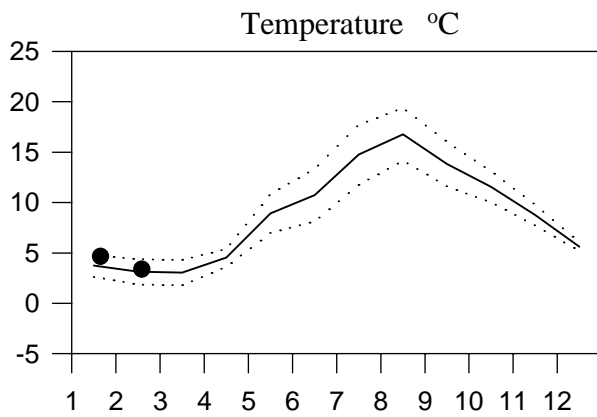
OXYGEN IN BOTTOM WATER



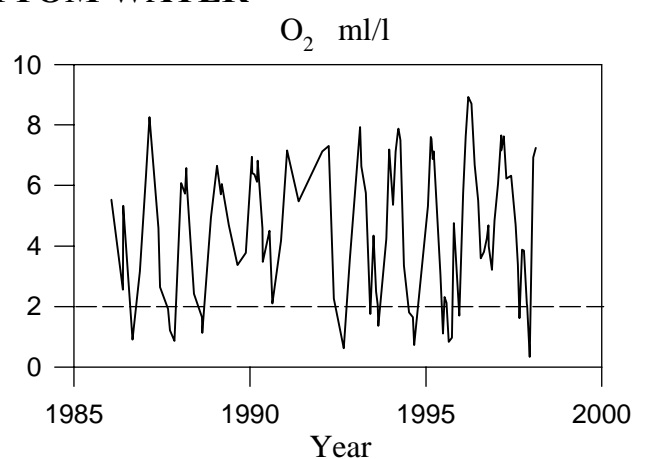
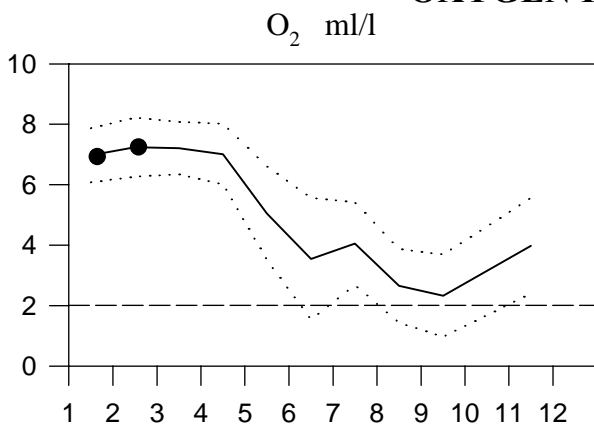
STATION BY2 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 ····· St.Dev. ● 1998



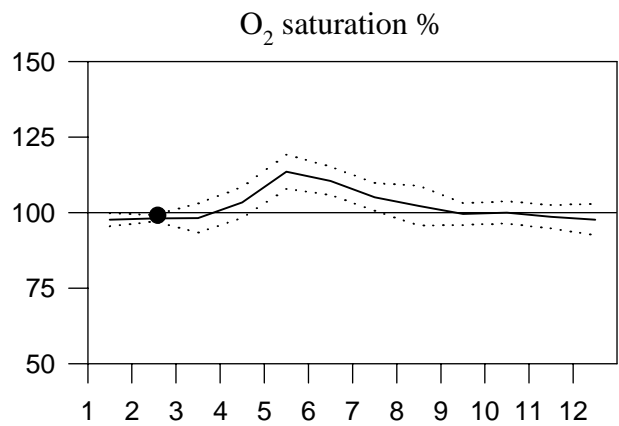
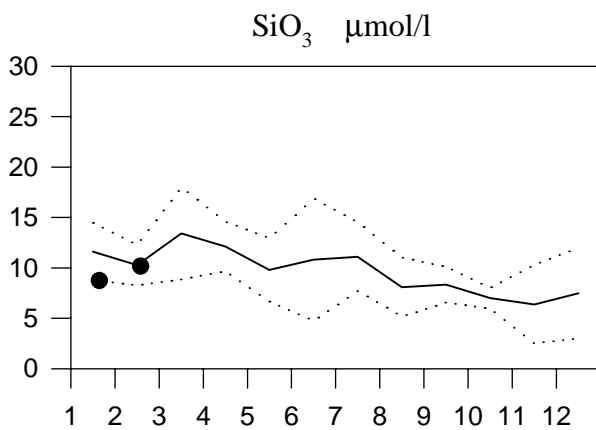
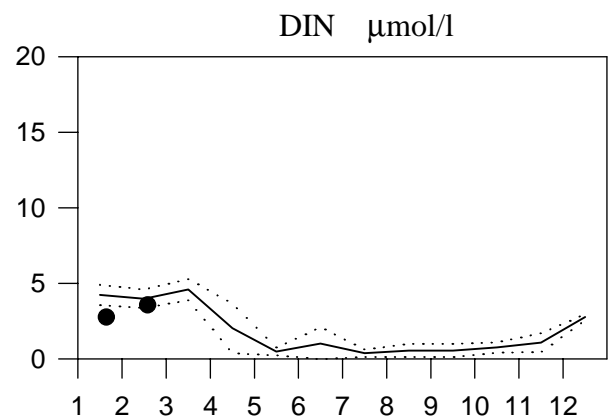
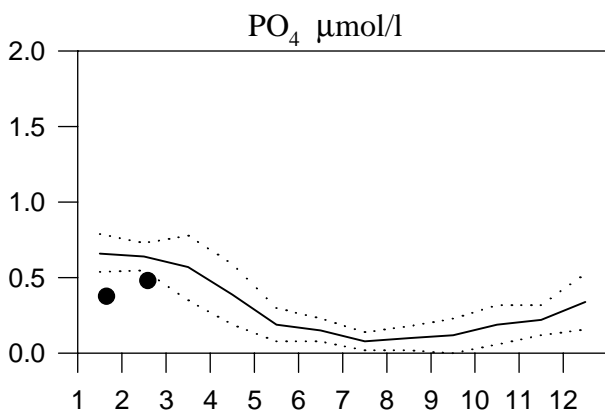
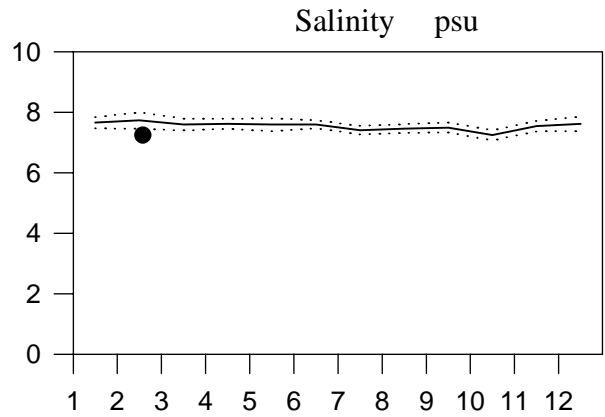
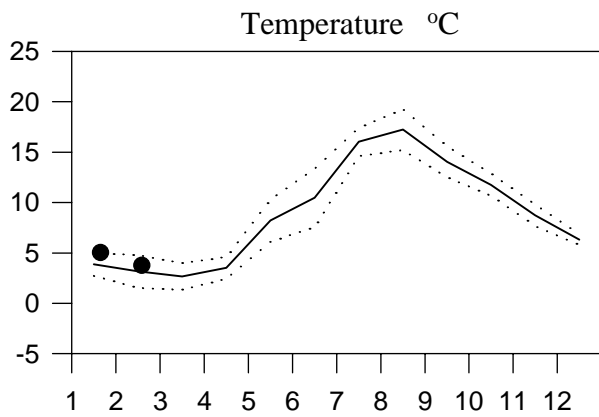
OXYGEN IN BOTTOM WATER



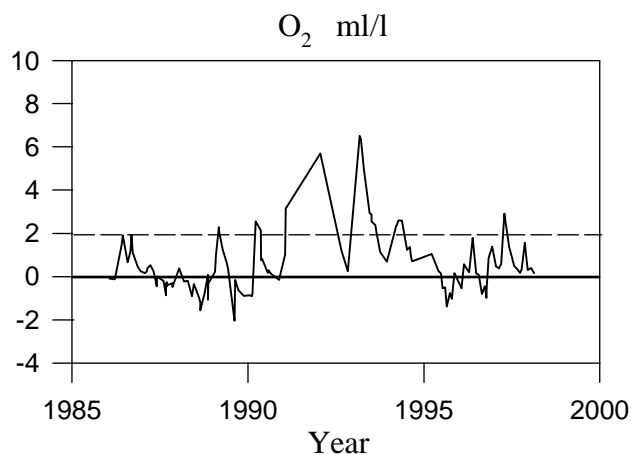
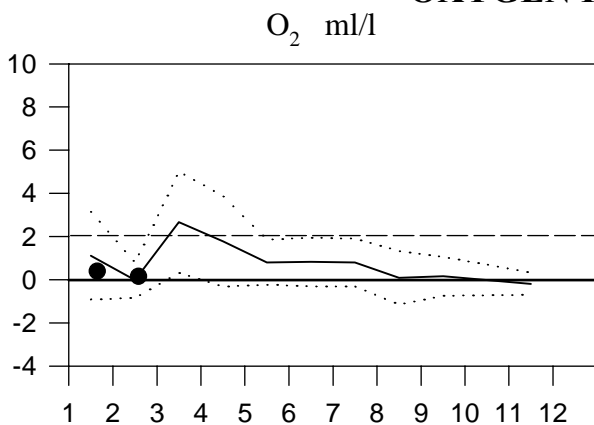
STATION BY5 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 ····· St.Dev. ● 1998



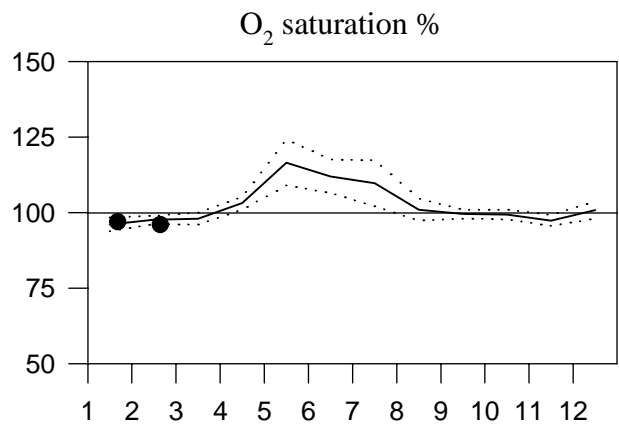
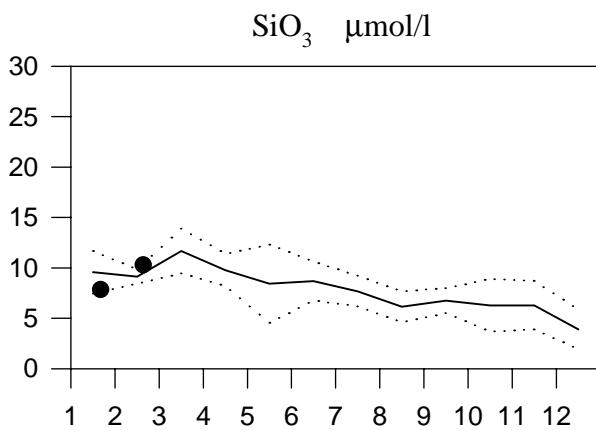
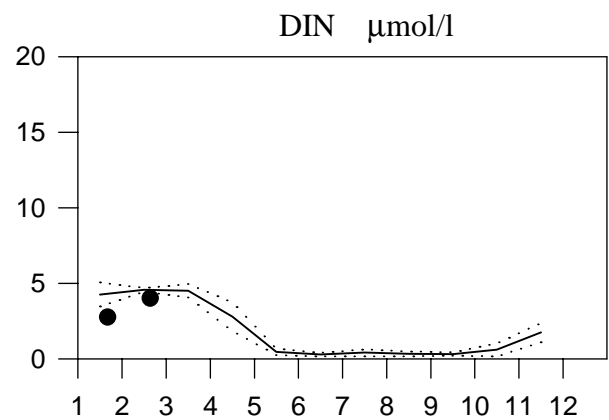
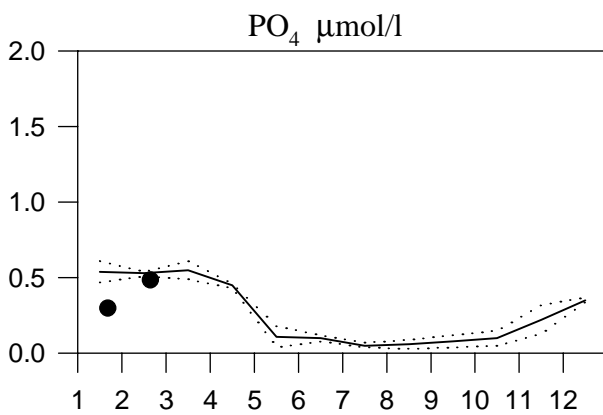
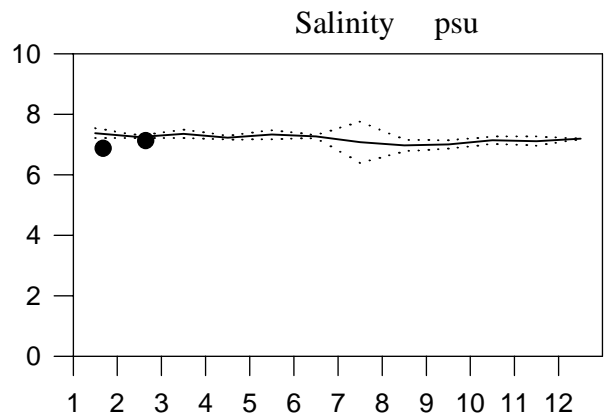
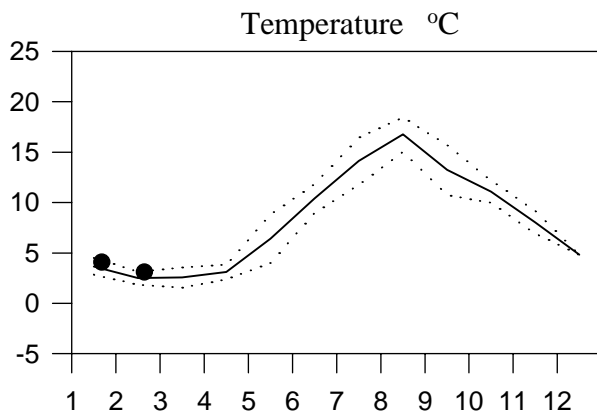
OXYGEN IN BOTTOM WATER



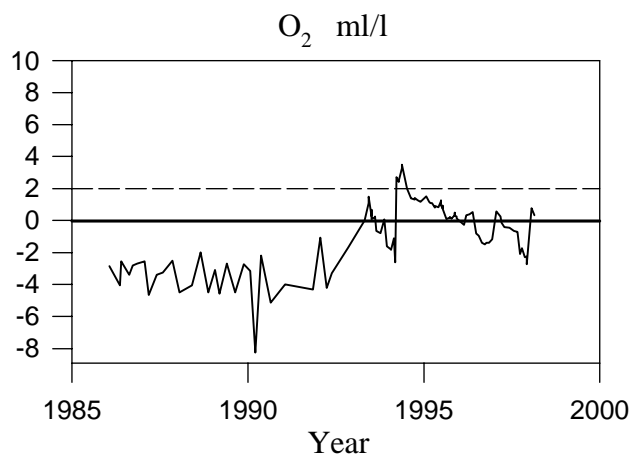
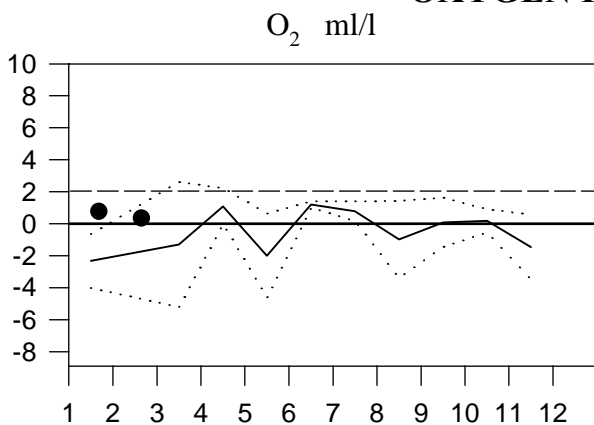
STATION BY15 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 ····· St.Dev. ● 1998



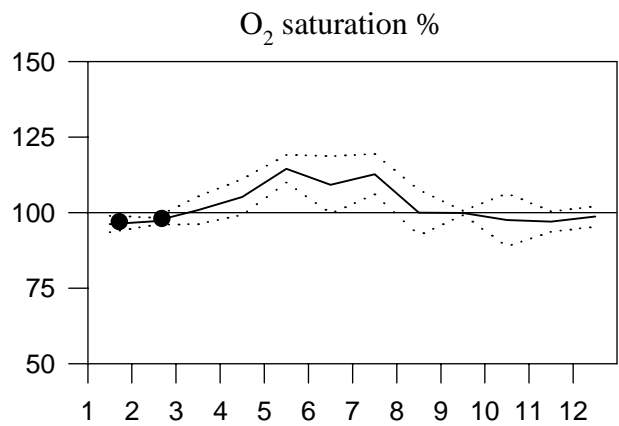
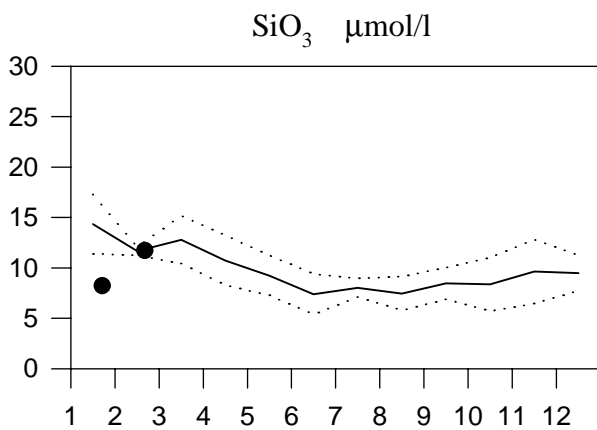
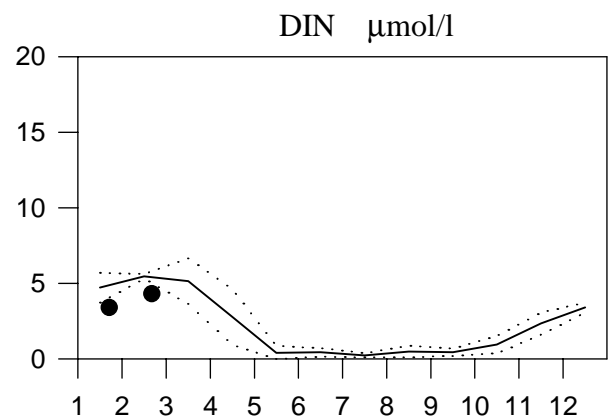
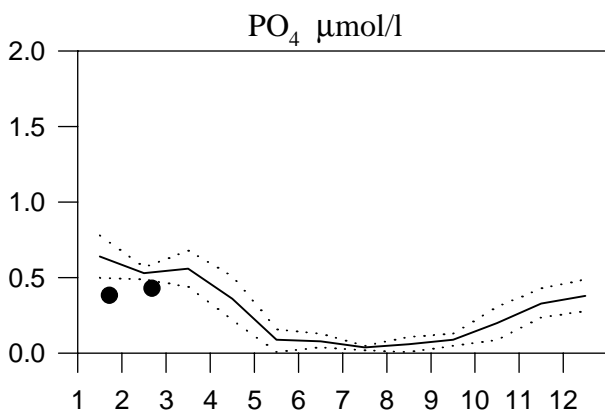
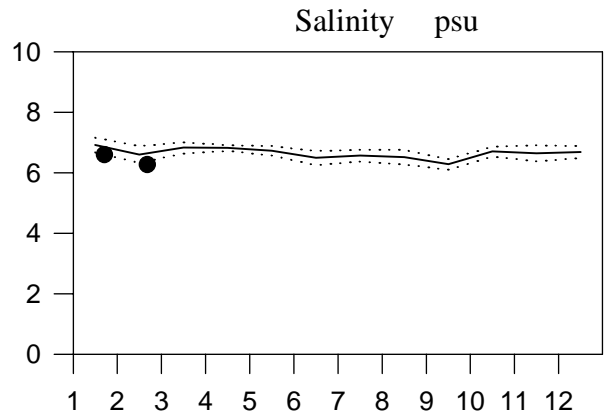
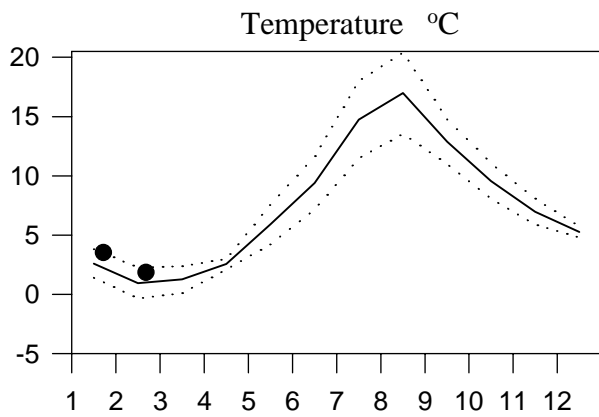
OXYGEN IN BOTTOM WATER



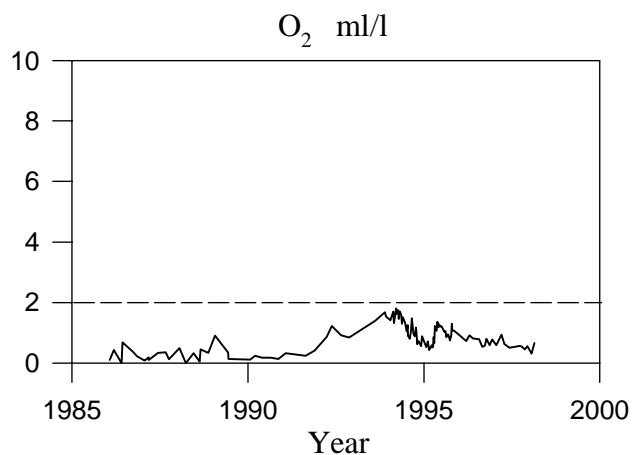
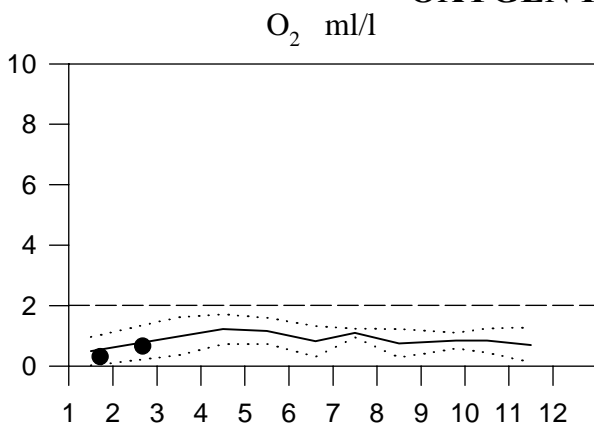
STATION BY31 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 ····· St.Dev. ● 1998



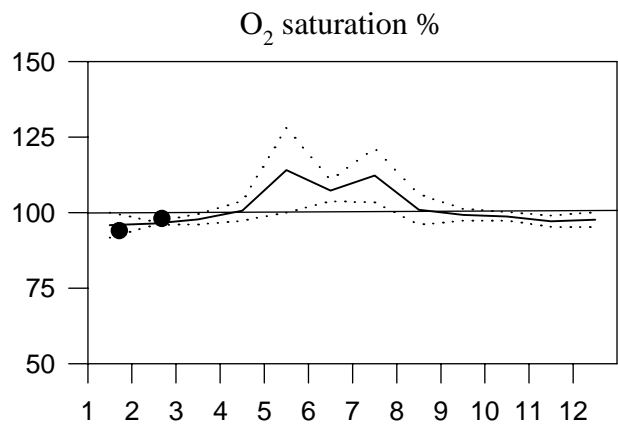
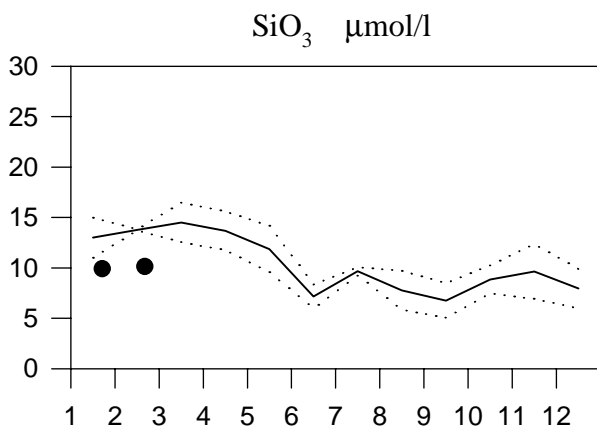
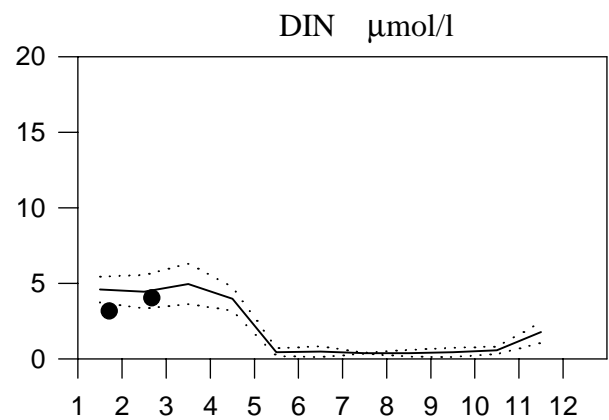
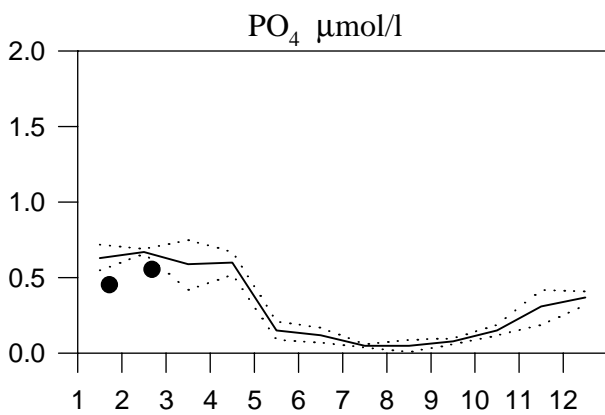
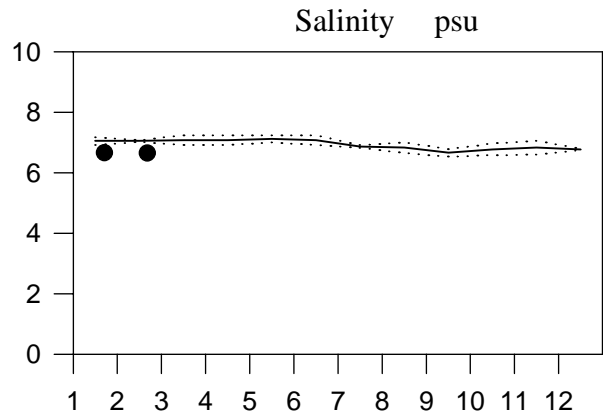
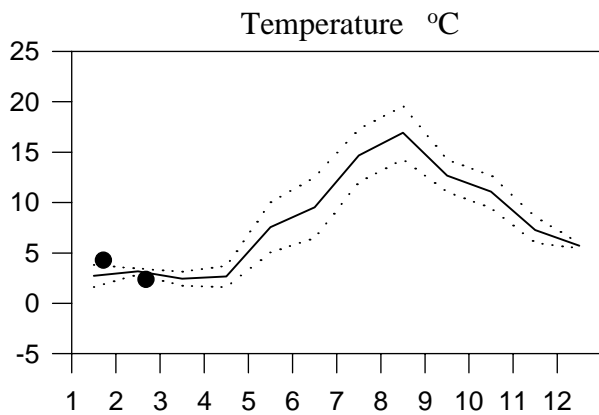
OXYGEN IN BOTTOM WATER



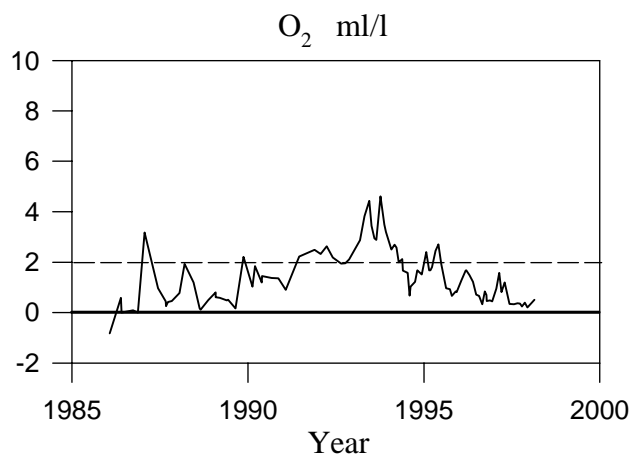
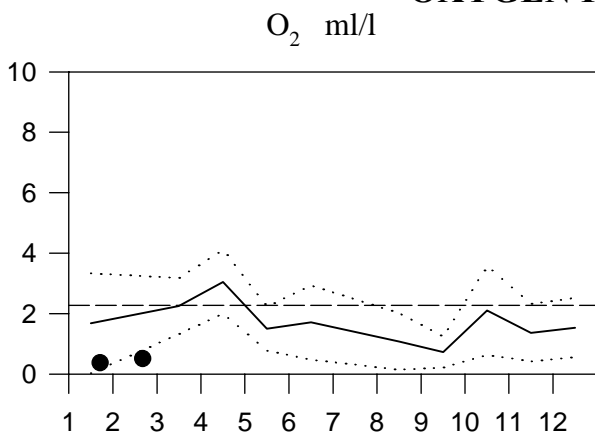
STATION BY38 SURFACE WATER (0-15 m)

Annual Cycles

— Mean 1986-1995 ····· St.Dev. ● 1998

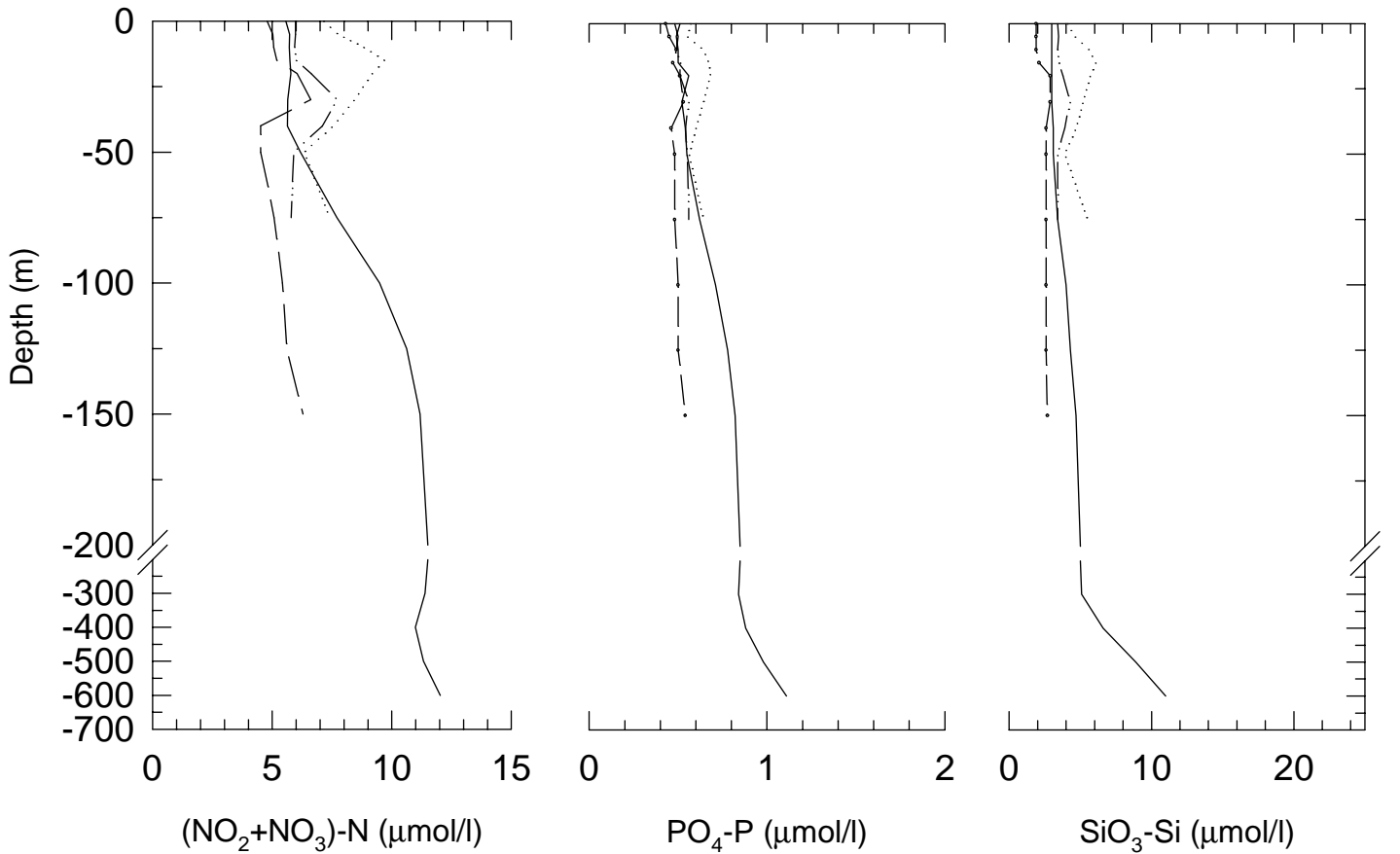
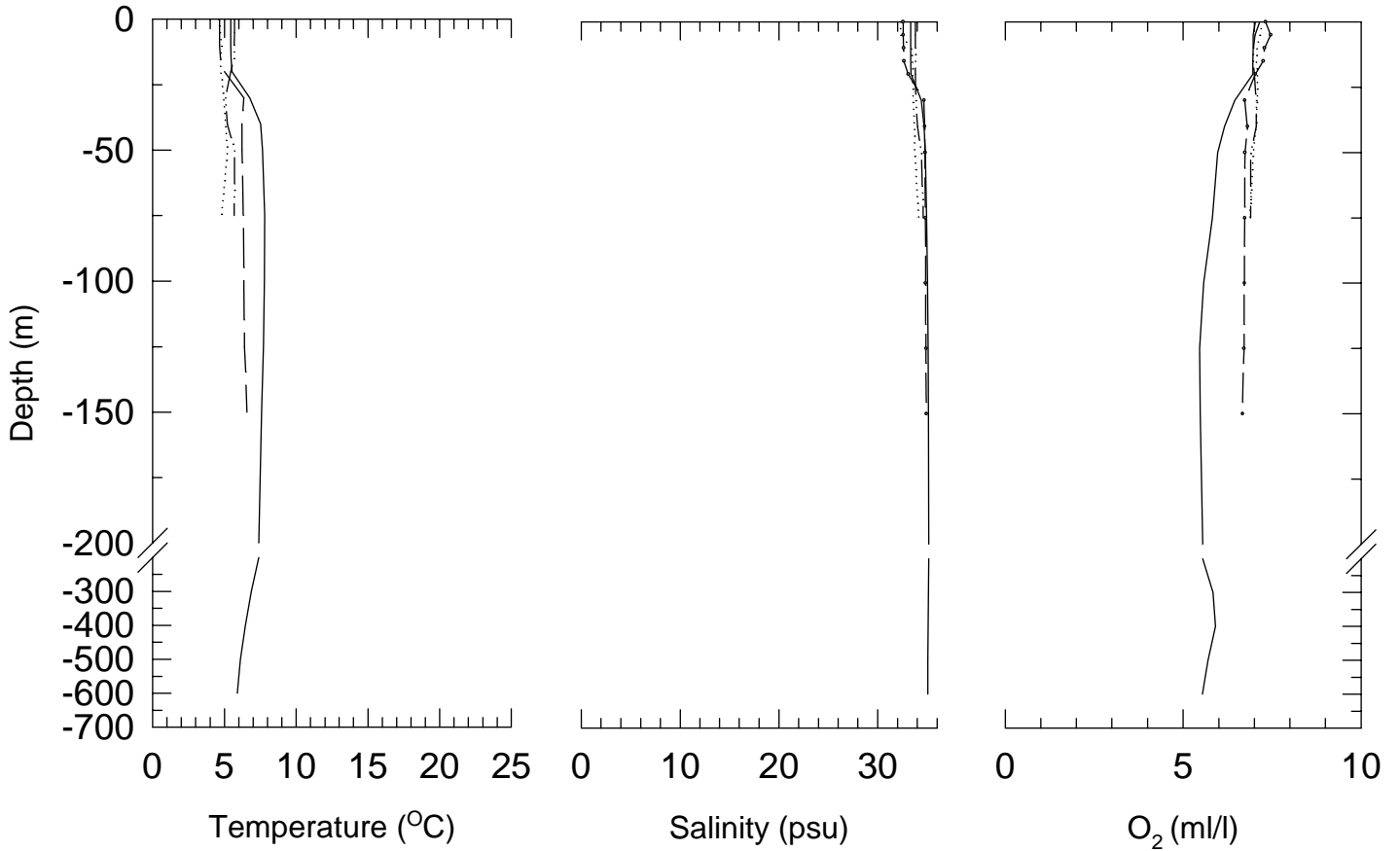


OXYGEN IN BOTTOM WATER

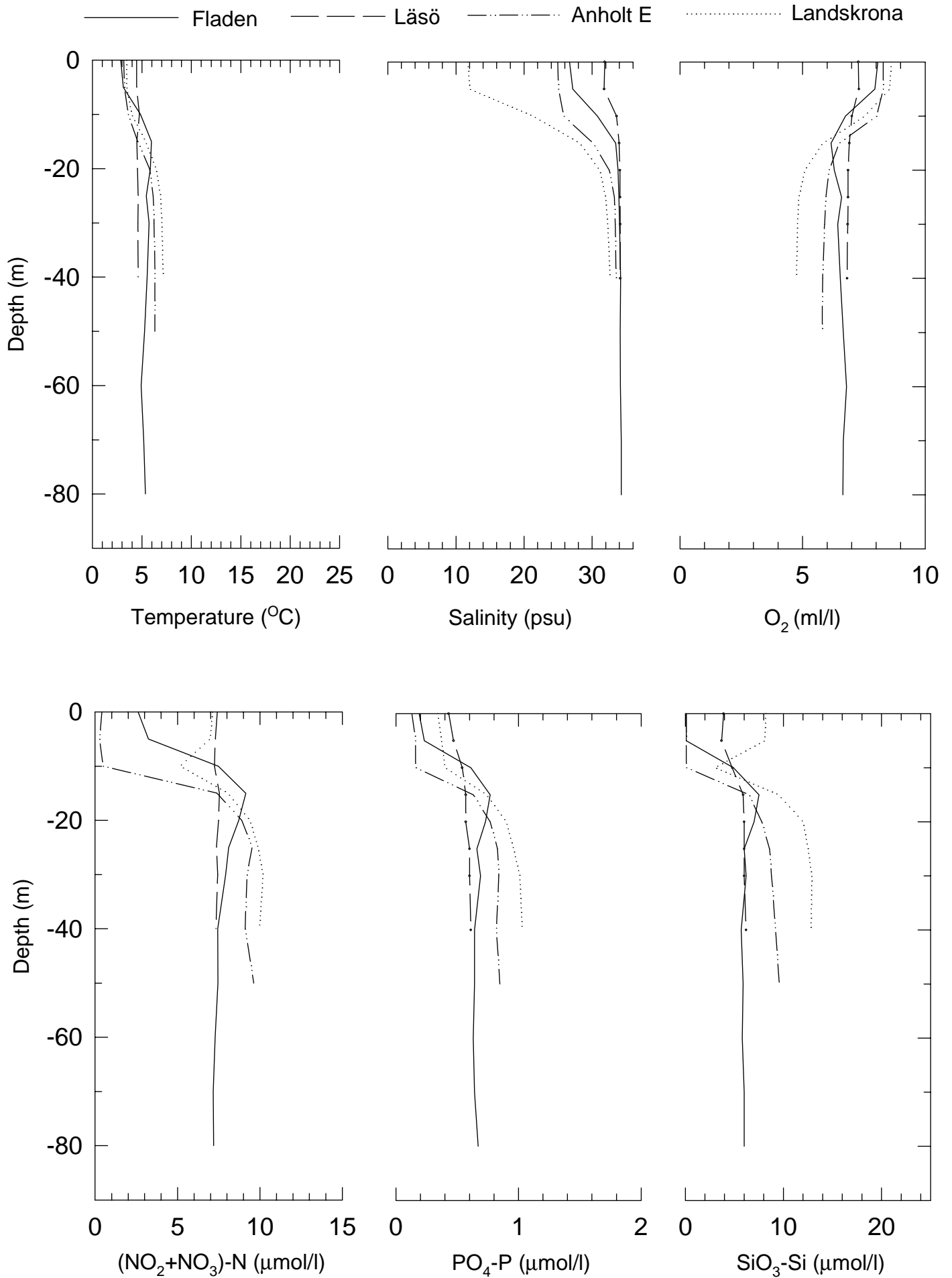


SKAGERRAK Feb 16-22 -98

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

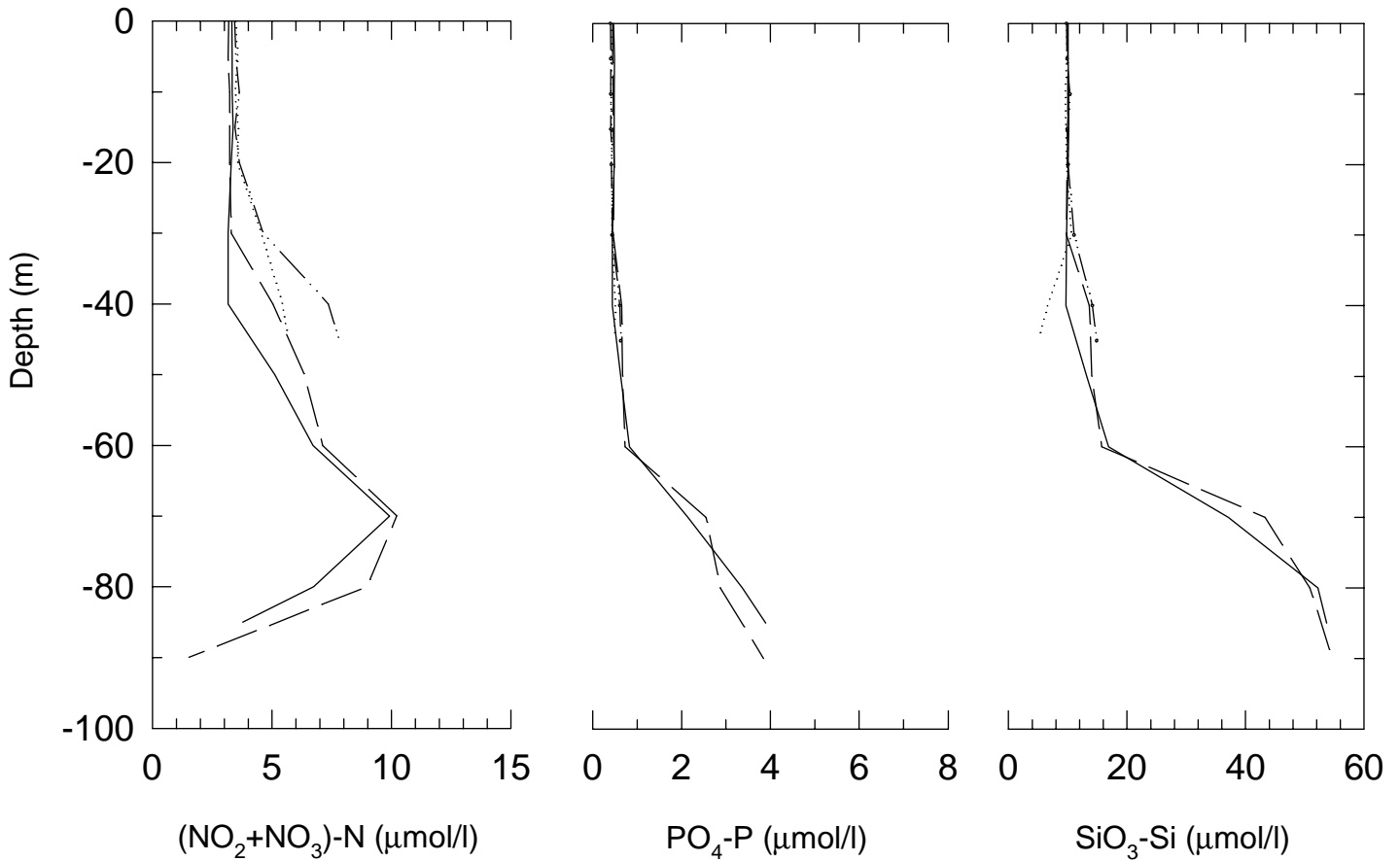
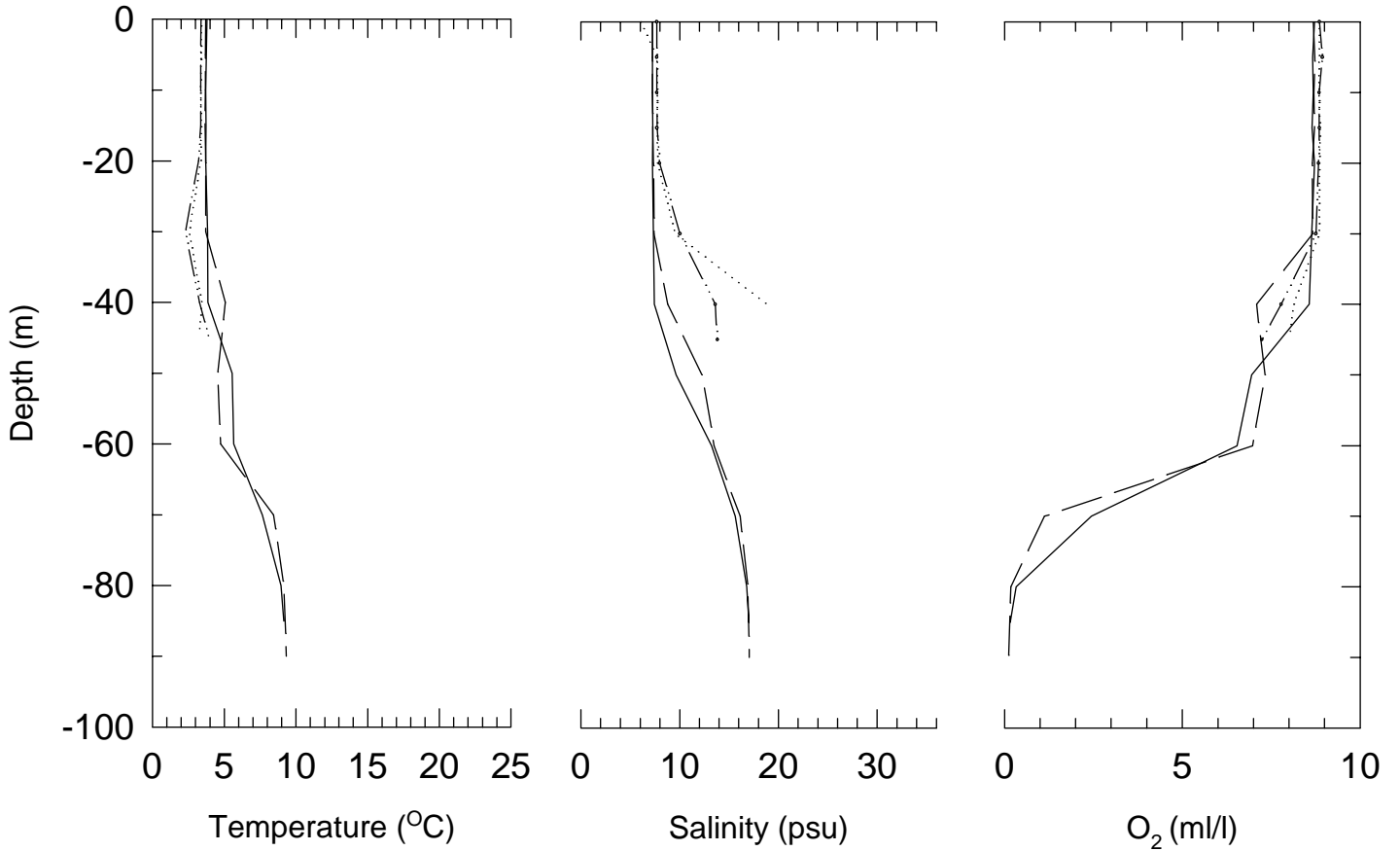


KATTEGAT and THE SOUND Feb 16-22 -98



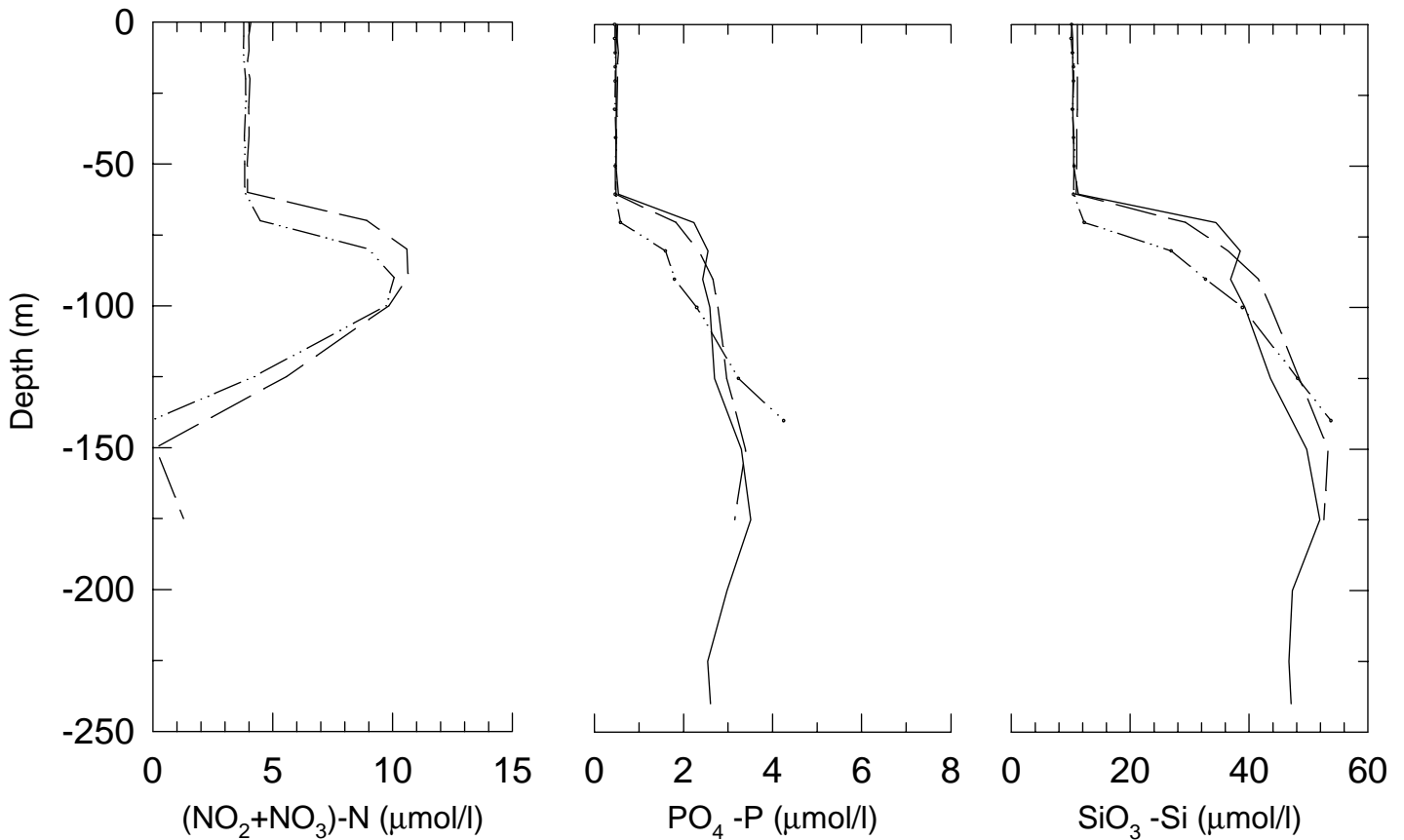
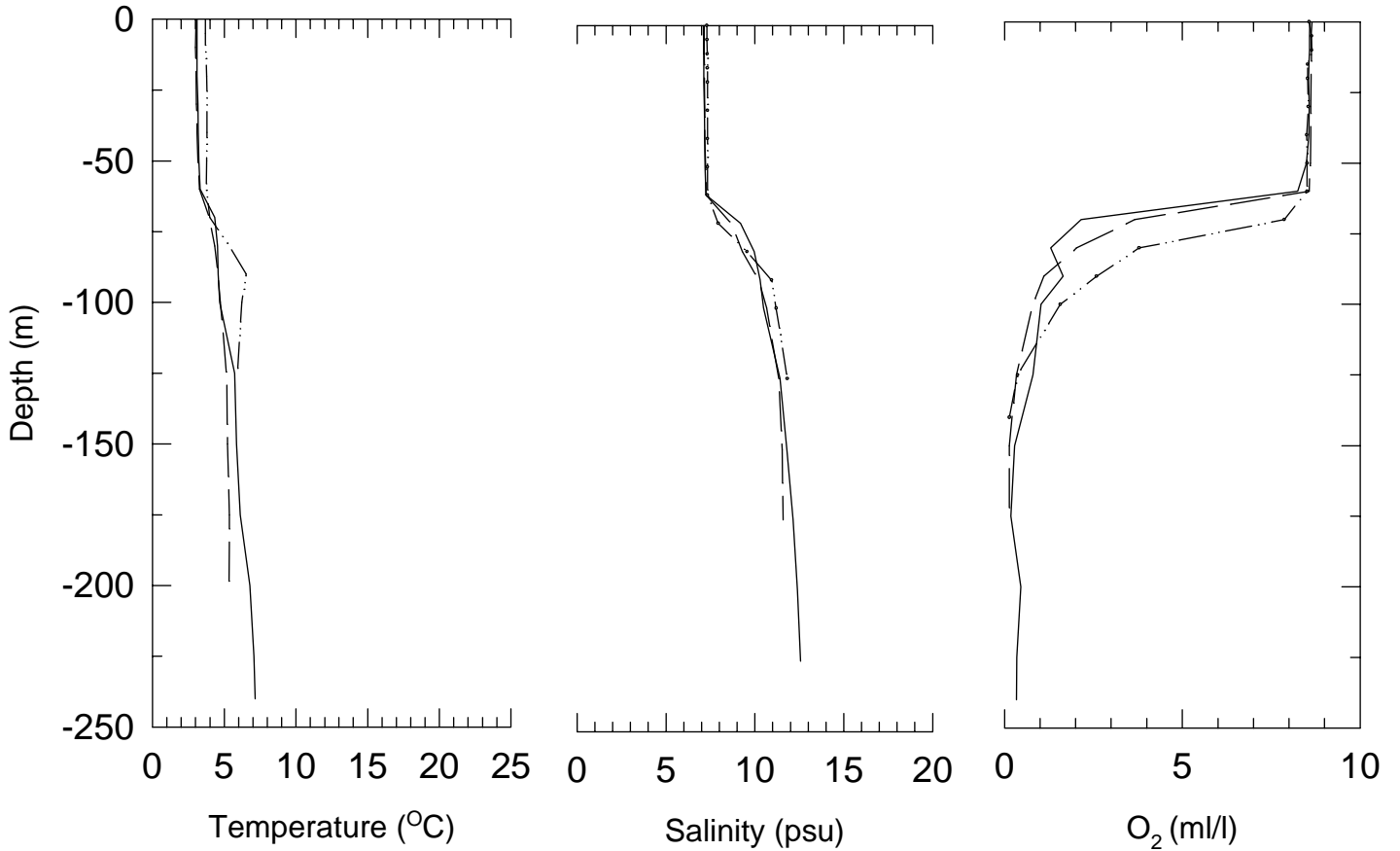
SOUTH BALTIC Feb 16-22 -98

— 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

