

## EXPEDITIONSRAPPORT FRÅN U/F ARGOS

## CRUISE REPORT FROM R/V ARGOS

Expeditionens varaktighet: 970602-970611  
Survey period:

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

Uppdragsgivare: SMHI and NSEPA  
Principal:

### SUMMARY

**Skagerrak:** The surface temperatures varied between 10-14 °C. The nutrient concentrations above the halocline showed low but, for the season, normal values. A strong bloom of *Emiliana Huxleyi* was observed in the area.

**Kattegat and the Sound:** The surface temperatures varied between 12-13 °C in the very surface. The nutrients concentrations showed, for the season, normal values, even though the silicate concentrations were on the high side of the expected range. All bottom waters were well oxygenated. The plankton flora was relatively poor and dominated by dinoflagellates.

**The Baltic Proper:** The surface temperature was 8-10 °C in the south, east and north, slightly higher in the west. All nutrients showed for the season normal concentrations. The oxygen conditions in the bottom water are displayed in a figure. In the Bornholm Basin at BY4 and BY5 bottom oxygen concentration was about 1 ml/l, a decrease since the last measurements in april. Hydrogen sulphide was found in the Gotland Deep from 200 metres and downwards (low concentrations) and below 100 metres at the stations sampled east-southeast of Gotland as part of the DIAMIX-project. The cyanobacteria *Aphanizomenon "baltica"* was found in most parts of the Baltic proper. East of Gotland a strong bloom was visibly observed, dominated by the same cyanobacteria. In the north more than 10 million cells per litre of a yet unidentified spherical, 8 µm in diameter, organism was observed in a subsurface maximum otherwise dominated by dinoflagellates.

## PRELIMINÄRA RESULTAT

Expeditionen, som utgick från och avslutades i Göteborg med helguppehåll i Visby, ingick i SMHIs ordinarie havsövervakningsprogram. Dessutom utfördes provtagning enligt HELCOMs "Baltic Monitoring Programme" på uppdrag av Naturvårdsverket. I ett område östsydost om Gotland utfördes CTD-profilering för DIAMIX-projektet på ett 40-tal stationer (summa 52 profiler). I samband med detta togs även bottenvattenprover för kemisk undersökning.

Vädret under expeditionen var mycket bra, med ytterst lätta vindar och mestadels klar himmel.

### Skagerrak

Ytvattentemperaturerna i området varierade mellan 10-14°C. Närsalthalterna i ytlagret var mycket låga, vilket är helt normalt för årstiden. En kraftig blomning av kalkalgen *Emiliania huxleyi* gav en grönaktig färgning av ytvattnet i stora delar av utsjön i regionen. I övrigt förekom små mängder av dinoflagellater, som kan orsaka musselförgiftning. Av diatoméerna påträffades framför allt släktena *Skeletonema* och *Leptocylindrus*.

### Kattegatt och Öresund

Sprängskiktet i området låg på cirka 8-12 m djup. Temperaturen i den absoluta ytan låg på 12-13°C. Närsalthalterna i ytlagret var låga och för årstiden normala, även om silikat visade på en viss förhöjning. Syreförhållandena i bottenvattnet var alltså mycket goda. Planktonfloran var fattig med dominans av dinoflagellater.

### Östersjön

Ytvattentemperaturen var 8-10°C i söder och öster, någon grad högre väster om Gotland. Samtliga närsalter hade för årstiden normala koncentrationer i hela området. Syreförhållandena i bottenvattnet under haloklinen framgår av bilagd figur. I Arkonabassängen var syrehalterna goda i hela vattenmassan. Syrehalten vid botten på station BY4 (Christiansö) och BY5 (Bornholmsdjupet) låg på cirka 1 ml/l, en försämring sedan mätningarna under expeditionen i mitten av april. I östra, norra och västra Gotlandsbassängen låg gränsen för 2 ml O<sub>2</sub>/l vid 90 till 100 meter. Låga halter av svavelväte återfanns på BY15 (Gotlandsdjupet) under 200 meters djup samt under cirka 100 meters djup på de stationer som togs som en del av DIAMIX-projektet östsydost om Gotland.

I västra och södra Östersjön samt västra gotlandsbassängen var cyanobakterien *Aphanizomenon "baltica"* relativt vanlig. Även *Chrysochromulina* spp. och *Pyraminomas* spp. påträffades i relativt höga koncentrationer.

I östra gotlandsbassängen påträffades en kraftig blomning som var synlig för blotta ögat. Denna blomning dominerades helt av *Aphanizomenon "baltica"*, men enstaka filament av *Nodularia spumigena* fanns också, liksom relativt stora mängder av Pinus-pollen.

I norra Östersjön observerades markanta fluorescensmaxima strax under ytan. Detta maximum dominerades av dinoflagellaterna *Scrippsiella hangoei*, *Protoperidinium brevipes*, *Dinophysis acuminata* samt *Dinophysis norwegica*. Här påträffades även en massförekomst av en ännu oidentifierad 8 µm kulformig organism i en koncentration av 10.6 miljoner celler per liter.

## DELTAGARE

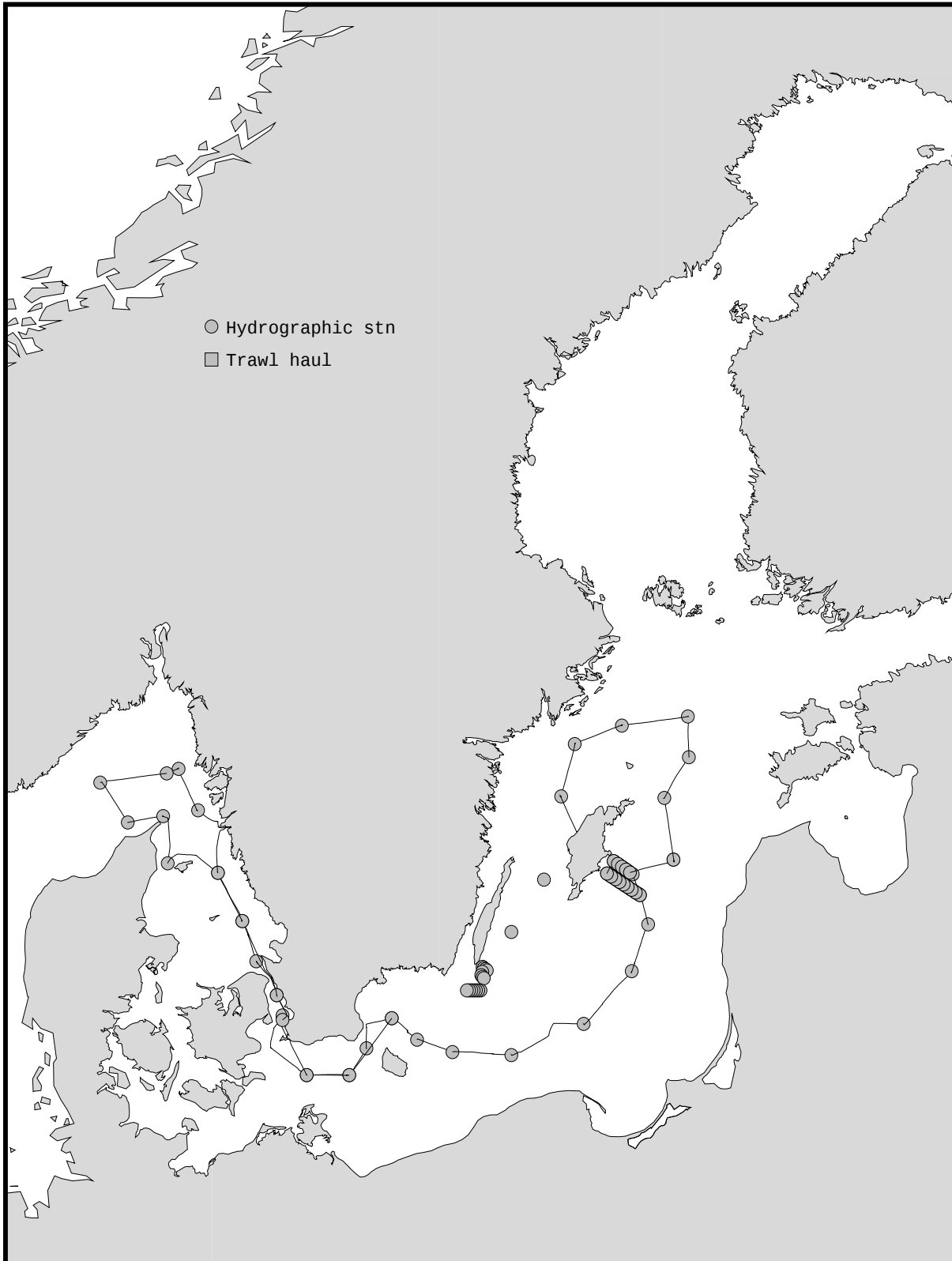
| Namn                                                       | Från  |
|------------------------------------------------------------|-------|
| Björn Sjöberg, expeditionsledare, SMHI Oceanografiska lab. |       |
| Mikael Krysell                                             | - " - |
| Mats Ohlson                                                | - " - |
| Marie Larsson                                              | - " - |
| Eva Nyberg                                                 | - " - |

## BILAGOR

- Färdkarta
- Tabell över provtagningsprogrammet + meteorologiska förhållanden
- Karta över syrehalter i bottenvattnet i Östersjön
- Profilplottar för vissa basstationer
- Månadsmedelvärdesplottar för vissa basstationer

# TRACK CHART

Country: Sweden  
Ship: Argos  
Date: 970602-970611  
Series: 0329-0436



|           |       |              |                |       |                  |
|-----------|-------|--------------|----------------|-------|------------------|
| SMHI      | ***** | Hydrographic | Ship: 14-Argos | ***** | Date: 1997-06-19 |
| Ocean lab | ***** | series       | Year: 1997     | ***** | Time: 07:47      |

| Ser no | Stat code | P r o j           | Station----- | Lat----- | Lon----- | Date<br>yymmdd | Time<br>hhmm<br>utc | Bott<br>deph<br>m | Mld<br>m | Secc<br>deph<br>m | Wind<br>di ve | Air<br>temp<br>C | Air<br>pres<br>hPa | WCSI<br>elec<br>aoae | C<br>t<br>d | PPCPZZT<br>Hrhh<br>oor | No<br>de | T<br>e | S<br>a | P<br>h | O<br>x | H<br>2 | P<br>o | T<br>o | N<br>o | N<br>o | T<br>h | A<br>o | S<br>l | H<br>i | L<br>u | P<br>i | P<br>o | T<br>o | C<br>o |   |   |
|--------|-----------|-------------------|--------------|----------|----------|----------------|---------------------|-------------------|----------|-------------------|---------------|------------------|--------------------|----------------------|-------------|------------------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|---|
|        |           |                   |              |          |          |                |                     |                   |          |                   |               |                  |                    |                      |             |                        |          |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |   |
| 0329   | SKEX23BAS | P2                |              | N5752    | E1118    | 970602         | 1100                | 97                |          | 7                 | 36            | 1                | 8.0                | 1022                 | 1420        | x                      | --x----  | 11     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | - | x |
| 0330   | SKEX15BAS | Å14               |              | N5819    | E1056.5  | 970602         | 1415                | 112               |          | 5                 | 34            | 4                | 16.8               | 1021                 | 1330        | x                      | -----    | 10     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0331   | SKEX17BAS | Å16               |              | N5816    | E1043.5  | 970602         | 1525                | 202               |          | 4.5               | 34            | 3                | 17.0               | 1021                 | 1120        | x                      | --x----  | 15     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0332   | SKNX21BAS | M6                |              | N5810    | E0930    | 970602         | 2005                | 637               |          |                   | 00            | 0                | 15                 | 1020                 | 1120        | x                      | xxx---   | 18     | x      | x      | x      | x      | -      | x      | x      | x      | x      | x      | x      | x      | -      | -      | -      | -      | -      | x |   |
| 0333   | SKEX69BAS | HS5               |              | N5744.15 | E1000.46 | 970602         | 2325                | 88                |          |                   | 25            | 1                | 14.4               | 1018                 | 9990        | x                      | --x----  | 10     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0334   | SKEX71BAS | HS7               |              | N5748.2  | E1039.6  | 970603         | 0155                | 90                |          |                   | 36            | 1                | 13.7               | 1017                 | 9990        | x                      | -----    | 9      | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0335   | KANX09BAS | LÄSÖ RÄNNA        |              | N5717.6  | E1044.5  | 970603         | 0520                | 43                |          | 8                 | 99            | 1                | 14.3               | 1016                 | 1510        | x                      | --x----  | 8      | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0336   | KANX25BMP | FLADEN            |              | N5711.5  | E1140    | 970603         | 0845                | 88                |          | 8                 | 32            | 5                | 15.0               | 1015                 | 1120        | x                      | xx----   | 13     | x      | x      | x      | x      | -      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | -      | -      | - |   |
| 0337   | KAEX29BMP | ANHOLT E          |              | N5640.0  | E1207.0  | 970603         | 1225                | 55                |          | 10                | 32            | 4                | 16                 | 1013                 | 1430        | x                      | xxx---   | 10     | x      | x      | x      | x      | -      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | -      | -      | - | x |
| 0338   | KAEX33BAS | KULLEN            |              | N5614    | E1222.2  | 970603         | 1510                | 23                |          | 7                 | 32            | 5                | 18                 | 1013                 | 1430        | x                      | -----    | 5      | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0339   | SOCX39BAS | W LANDSKRONA      |              | N5552.0  | E1245.0  | 970603         | 1805                | 49                |          |                   | 36            | 3                | 18                 | 1012                 | 2720        | x                      | --x----  | 8      | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0340   | SOCX00BAS | ÖRESUND S         |              | N5538.8  | E1251.4  | 970603         | 2000                | 10                |          |                   | 36            | 3                | 17                 | 1012                 | 9920        | x                      | -----    | 2      | -      | x      | -      | -      | -      | x      | -      | xx     | -      | -      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0341   | BPSA02BAS | BY1               |              | N5500    | E1318    | 970604         | 0025                | 48                |          |                   | 00            | 0                | 13                 | 1013                 | 9920        | x                      | -----    | 7      | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0342   | BPSA03BMP | BY2 ARKONA        |              | N5500    | E1405    | 970604         | 0325                | 48                |          | 8                 | 27            | 1                | 13.2               | 1013                 | 1420        | x                      | xxx---   | 8      | x      | x      | x      | -      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | -      | -      | -      | - |   |
| 0343   | BPSA04BAS | BY3 HAMRARNE SUND |              | N5517.5  | E1424    | 970604         | 0600                | 48                |          | 8                 | 27            | 1                | 14.5               | 1013                 | 1310        | x                      | -----    | 8      | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0344   | BPSH05BAS | HANÖBUKTEN        |              | N5537    | E1452    | 970604         | 0940                | 82                |          | 8                 | 14            | 1                | 15.1               | 1013                 | 1220        | x                      | -----    | 11     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0345   | BPSB06BAS | BY4 CHRISTIANSÖ   |              | N5523    | E1520    | 970604         | 1220                | 94                |          | 10                | 18            | 5                | 14.3               | 1015                 | 1320        | x                      | -----    | 12     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0346   | BPSB07BMP | BY5 BORNHOLMSDJ   |              | N5515    | E1559    | 970604         | 1445                | 91                |          | 12                | 99            | 2                | 14.4               | 1015                 | 1310        | x                      | xxx---   | 13     | x      | x      | x      | x      | -      | x      | x      | x      | x      | x      | x      | x      | x      | x      | -      | -      | -      | - |   |
| 0347   | BPSE09BAS | BY7 STOLPE RÄNNA  |              | N5513    | E1704    | 970604         | 1850                | 93                |          |                   | 14            | 2                | 11.5               | 1015                 | 1330        | x                      | -----    | 12     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0348   | BPSE11BMP | BCS III-10        |              | N5533.3  | E1824    | 970605         | 0200                | 94                |          | 7                 | 16            | 6                | 9.6                | 1017                 | 1330        | x                      | xxx---   | 13     | x      | x      | x      | -      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | -      | -      | -      | x |   |
| 0349   | BPSE12BAS | BY9 KLAIPEDA      |              | N5607.5  | E1917    | 970605         | 0650                | 127               |          | 9                 | 18            | 5                | 12.4               | 1018                 | 1120        | x                      | -----    | 14     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0350   | BPEX13BAS | BY10              |              | N5638    | E1935    | 970605         | 1005                | 147               |          | 11                | 14            | 6                | 15.2               | 1019                 | 1120        | x                      | --x----  | 16     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0351   | BPEX00BAS | D1:1              |              | N5657.0  | E1926.0  | 970605         | 1225                | 177               |          |                   | 18            | 5                | 13.6               | 1020                 | 1320        | x                      | -----    | 18     | -      | x      | -      | xx     | x      | -      | x      | -      | -      | -      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0352   | BPEX00BAS | D1:2              |              | N5657.6  | E1924.5  | 970605         | 1240                | 174               |          |                   | 18            | 5                | 14                 | 1020                 | 1320        | x                      | -----    | 18     | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - |   |
| 0353   | BPEX00BAS | D1:3              |              | N5658.1  | E1923.0  | 970605         | 1305                | 174               |          |                   | 18            | 5                | 14                 | 1020                 | 1220        | x                      | -----    | 18     | -      | x      | -      | xx     | x      | -      | x      | -      | -      | -      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0354   | BPEX00BAS | D1:4              |              | N5658.7  | E1921.5  | 970605         | 1325                | 180               |          |                   | 18            | 5                | 15.0               | 1020                 | 1220        | x                      | -----    | 18     | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - |   |
| 0355   | BPEX00BAS | D1:5              |              | N5659.3  | E1920.0  | 970605         | 1350                | 181               |          |                   | 18            | 5                | 15                 | 1020                 | 1220        | x                      | -----    | 18     | -      | x      | -      | xx     | x      | -      | x      | -      | -      | -      | -      | x      | -      | -      | -      | -      | -      | - |   |

Date: 1997-06-19  
Time: 07:47

| Ser no | Stat code | P r o j | Station----- | Lat----- | Lon----- | Date<br>yymmdd | Time<br>hhmm<br>utc | Bott<br>deph<br>m | Mld | Secc<br>deph<br>m | Wind<br>di ve | Air<br>temp<br>C | Air<br>pres<br>hPa | WCSI<br>elec<br>aoae | C<br>t | PPCPZZT<br>Hrhhoo<br>Cilyooa | No<br>de | T<br>e | S<br>a | P<br>h | O<br>x | H<br>2 | P<br>0 | T<br>0 | N<br>0 | N<br>0 | N<br>0 | T<br>0 | A<br>h | S<br>h | L<br>i | P<br>u | P<br>i | T<br>o | C<br>o |   |
|--------|-----------|---------|--------------|----------|----------|----------------|---------------------|-------------------|-----|-------------------|---------------|------------------|--------------------|----------------------|--------|------------------------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|
| 0356   | BPEX00BAS | D1:6    |              | N5659.9  | E1918.5  | 970605         | 1410                | 177               |     |                   | 18 5          | 15               | 1020               | 1220                 | x      | -----                        | 18       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - |
| 0357   | BPEX00BAS | D1:7    |              | N5700.4  | E1917.0  | 970605         | 1440                | 176               |     |                   | 18 5          | 15               | 1020               | 1220                 | x      | -----                        | 18       | -      | x      | -      | -      | xx     | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |
| 0358   | BPEX00BAS | D1:8    |              | N5701.0  | E1915.5  | 970605         | 1500                | 184               |     |                   | 18 5          | 15               | 1020               | 1220                 | x      | -----                        | 19       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - |
| 0359   | BPEX00BAS | D1:9    |              | N5701.6  | E1914.0  | 970605         | 1520                | 168               |     |                   | 18 5          | 15               | 1020               | 1220                 | x      | -----                        | 16       | -      | x      | -      | xx     | x      | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |
| 0360   | BPEX00BAS | D1:10   |              | N5702.2  | E1912.5  | 970605         | 1545                | 174               |     |                   | 18 2          | 15.0             | 1019               | 1220                 | x      | -----                        | 17       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - |
| 0361   | BPEX00BAS | D1:11   |              | N5702.8  | E1911.0  | 970605         | 1600                | 163               |     |                   | 18 2          | 15.0             | 1019               | 1220                 | x      | -----                        | 17       | -      | x      | -      | -      | xx     | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |
| 0362   | BPEX00BAS | D1:12   |              | N5703.3  | E1909.5  | 970605         | 1620                | 159               |     |                   | 18 2          | 15.0             | 1019               | 1220                 | x      | -----                        | 16       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - |
| 0363   | BPEX00BAS | D1:13   |              | N5703.9  | E1908.0  | 970605         | 1640                | 152               |     |                   | 18 2          | 15.0             | 1019               | 1220                 | x      | -----                        | 15       | -      | x      | -      | -      | xx     | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |
| 0364   | BPEX00BAS | D1:14   |              | N5704.5  | E1906.5  | 970605         | 1650                | 146               |     |                   | 18 2          | 15.0             | 1019               | 1220                 | x      | -----                        | 14       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - |
| 0365   | BPEX00BAS | D1:15   |              | N5705.1  | E1905.0  | 970605         | 1705                | 133               |     |                   | 18 2          | 15.0             | 1019               | 1220                 | x      | -----                        | 14       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - |
| 0366   | BPEX00BAS | D1:16   |              | N5705.6  | E1903.5  | 970605         | 1720                | 118               |     |                   | 18 2          | 15.0             | 1019               | 1220                 | x      | -----                        | 12       | -      | x      | -      | xx     | x      | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |
| 0367   | BPEX00BAS | D1:17   |              | N5706.2  | E1902.0  | 970605         | 1740                | 109               |     |                   | 18 2          | 15.0             | 1019               | 1220                 | x      | -----                        | 11       | -      | x      | -      | xx     | x      | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |
| 0368   | BPEX00BAS | D1:18   |              | N5706.8  | E1900.5  | 970605         | 1750                | 98                |     |                   | 18 2          | 15.0             | 1019               | 1220                 | x      | -----                        | 11       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - |
| 0369   | BPEX00BAS | D1:19   |              | N5707.4  | E1859.0  | 970605         | 1810                | 90                |     |                   | 18 2          | 15.0             | 1019               | 1220                 | x      | -----                        | 10       | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |
| 0370   | BPEX00BAS | D1:20   |              | N5708.0  | E1857.4  | 970605         | 1820                | 81                |     |                   | 18 2          | 15.0             | 1019               | 1220                 | x      | -----                        | 9        | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - |
| 0371   | BPEX00BAS | D1:21   |              | N5708.6  | E1855.8  | 970605         | 1835                | 72                |     |                   | 18 2          | 15.0             | 1019               | 1210</               |        |                              |          |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |   |

SMHI  
Ocean lab

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Hydrographic  
series

Ship: 14-Argos  
Year: 1997

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Date: 1997-06-19  
Time: 07:47

| Ser no | Stat code | P r o j | Station----- | Lat----- | Lon----- | Date<br>yymmdd | Time<br>hhmm<br>utc | Bott<br>deph<br>m | Mld<br>m | Secc<br>deph<br>m | Wind<br>di ve | Air<br>temp<br>C | Air<br>pres<br>hPa | WCSI<br>elec<br>aoae | C<br>t<br>Cilyooa<br>mot<br>PrP | PPCPZZT<br>Hrhhoo<br>rP l | No<br>de | T<br>e | S<br>a | P<br>h | O<br>x | H<br>2 | P<br>o | T<br>o | N<br>n | N<br>h | N<br>t | A<br>t | S<br>k | H<br>o | L<br>m | P<br>g | P<br>N | T<br>N | N<br>a | A<br>3 | S<br>u | H<br>n | L<br>s | P<br>i | P<br>t | T<br>m | C<br>m |   |   |   |   |   |   |
|--------|-----------|---------|--------------|----------|----------|----------------|---------------------|-------------------|----------|-------------------|---------------|------------------|--------------------|----------------------|---------------------------------|---------------------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|---|---|---|---|---|
| 0384   | BPEX00BAS | D2:9    |              | N5714.1  | E1909.0  | 970605         | 2225                | 117               |          |                   | 14 1          | 9.4              | 1019               | 1120                 | x                               | -----                     | 11       | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0385   | BPEX00BAS | D2:10   |              | N5713.5  | E1910.5  | 970605         | 2240                | 117               |          |                   | 14 1          | 9.4              | 1019               | 1120                 | x                               | -----                     | 12       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0386   | BPEX00BAS | D2:11   |              | N5712.9  | E1912.0  | 970605         | 2300                | 121               |          |                   | 14 1          | 9.4              | 1019               | 1120                 | x                               | -----                     | 12       | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0387   | BPEX00BAS | D2:12   |              | N5712.2  | E1913.5  | 970605         | 2315                | 119               |          |                   | 14 1          | 10.6             | 1020               | 1120                 | x                               | -----                     | 12       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0388   | BPEX00BAS | D2:13   |              | N5711.6  | E1915.0  | 970605         | 2335                | 137               |          |                   | 14 1          | 10.6             | 1020               | 1120                 | x                               | -----                     | 14       | -      | x      | -      | -      | xx     | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0389   | BPEX00BAS | D2:14   |              | N5711.0  | E1916.5  | 970605         | 2350                | 148               |          |                   | 14 1          | 10.6             | 1020               | 1120                 | x                               | -----                     | 15       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0390   | BPEX00BAS | D2:15   |              | N5710.4  | E1918.0  | 970606         | 0015                | 154               |          |                   | 14 1          | 9.7              | 1020               | 9920                 | x                               | -----                     | 16       | -      | x      | -      | -      | xx     | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0391   | BPEX00BAS | D1:1    |              | N5657.0  | E1926.0  | 970606         | 0145                | 177               |          |                   | 14 1          | 10.7             | 1020               | 1120                 | x                               | -----                     | 18       | -      | x      | -      | -      | xx     | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0392   | BPEX00BAS | D1:4    |              | N5658.7  | E1921.5  | 970606         | 0210                | 181               |          |                   | 14 1          | 10.7             | 1020               | 1120                 | x                               | -----                     | 18       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0393   | BPEX00BAS | D1:7    |              | N5700.4  | E1917.0  | 970606         | 0245                | 177               |          |                   | 14 1          | 10.0             | 1020               | 1110                 | x                               | -----                     | 17       | -      | x      | -      | -      | xx     | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0394   | BPEX00BAS | D1:10   |              | N5702.2  | E1912.5  | 970606         | 0310                | 167               |          |                   | 14 1          | 10.0             | 1020               | 1110                 | x                               | -----                     | 17       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0395   | BPEX00BAS | D1:13   |              | N5703.9  | E1908.0  | 970606         | 0340                | 152               |          |                   | 16 2          | 11.1             | 1020               | 1110                 | x                               | -----                     | 15       | -      | x      | -      | -      | xx     | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0396   | BPEX00BAS | D1:16   |              | N5705.6  | E1903.5  | 970606         | 0405                | 118               |          |                   | 16 2          | 11.1             | 1020               | 1110                 | x                               | -----                     | 13       | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0397   | BPEX00BAS | D1:19   |              | N5707.4  | E1859.0  | 970606         | 0430                | 90                |          |                   | 16 1          | 11.2             | 1020               | 1110                 | x                               | -----                     | 9        | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0398   | BPEX00BAS | D1:22   |              | N5709.2  | E1854.3  | 970606         | 0500                | 62                |          |                   | 16 1          | 11.2             | 1020               | 1110                 | x                               | -----                     | 7        | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0399   | BPEX00BAS | D1:25   |              | N5711.0  | E1849.5  | 970606         | 0530                | 42                |          |                   | 16 1          | 11.2             | 1020               | 1110                 | x                               | -----                     | 5        | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0400   | BPEX00BAS | D2:1    |              | N5719.0  | E1857.0  | 970606         | 0625                | 43                |          |                   | 16 1          | 11.2             | 1020               | 1110                 | x                               | -----                     | 5        | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0401   | BPEX00BAS | D2:4    |              | N5717.2  | E1901.5  | 970606         | 0650                | 62                |          |                   | 16 1          | 11.2             | 1020               | 1220                 | x                               | -----                     | 7        | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0402   | BPEX00BAS | D2:7    |              | N5715.3  | E1906.0  | 970606         | 0715                | 90                |          |                   | 16 1          | 11.2             | 1020               | 1220                 | x                               | -----                     | 10       | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0403   | BPEX00BAS | D2:10   |              | N5713.5  | E1910.5  | 970606         | 0740                | 117               |          |                   | 16 1          | 11.2             | 1020               | 1220                 | x                               | -----                     | 12       | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0404   | BPEX00BAS | D2:13   |              | N5711.6  | E1915.0  | 970606         | 0815                | 136               |          |                   | 16 2          | 12.4             | 1022               | 1220                 | x                               | -----                     | 14       | -      | x      | -      | xx     | x      | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - |   |   |   |
| 0405   | BPEX21BMP | BY15    | GOTLANDSDJ   | N5720    | E2003    | 970606         | 1055                | 247               |          | 7                 | 00 0          | 18.0             | 1022               | 1100                 | x                               | -xxx---                   | 20       | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x | - | - | - | - |   |
| 0406   | BPEX21BAS | BY15    | GOTLANDSDJ   | N5720    | E2003    | 970606         | 1145                | 247               |          | 7                 | 00 0          | 18.0             | 1022               | 1100                 | -                               | -----                     | 8        | xx     | -      | x      | x      | x      | -      | x      | x      | -      | -      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - | - |   |   |
| 0407   | BPEX26BAS | BY20    | FÄRÖDJ       | N5800    | E1953    | 970606         | 1600                | 205               |          | 8                 | 00 0          | 16.5             | 1022               | 1100                 | x                               | --x----                   | 18       | xx     | -      | x      | -      | x      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - | x |   |   |
| 0408   | BPNX27BAS | BY21    |              | N5826.5  | E2020    | 970606         | 1920                | 123               |          | 8                 | 00 0          | 12.5             | 1022               | 1100                 | x                               | -----                     | 14       | xx     | -      | x      | -      | x      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - | - |   |   |
| 0409   | BPNX35BAS | BY29    |              | N5853    | E2019    | 970606         | 2240                | 179               |          |                   | 99 2          | 12.0             | 1023               | 9900                 | x                               | --x----                   | 17       | xx     | -      | x      | -      | x      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - | - |   |   |
| 0410   | BPNX36BAS | BY30    |              | N5847    | E1906    | 970607         | 0235                | 190               |          |                   | 00 0          | 11.6             | 1024               | 1100                 | x                               | ---x---                   | 17       | xx     | -      | x      | -      | x      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - | - | - | - |   |   |
| 0411   | BPNX37BMP | BY31    | LANDSORTSDJ  | N5835    | E1814    | 970607         | 0615                | 450               |          | 6.0               | 09 1          | 15.5             | 1025               | 0010                 | x                               | -xxx---                   | 24       | x      | x      | x      | x      | -      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x | - | - | - | - | x |

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Hydrographic  
series

Ship: 14-Argos  
Year: 1997

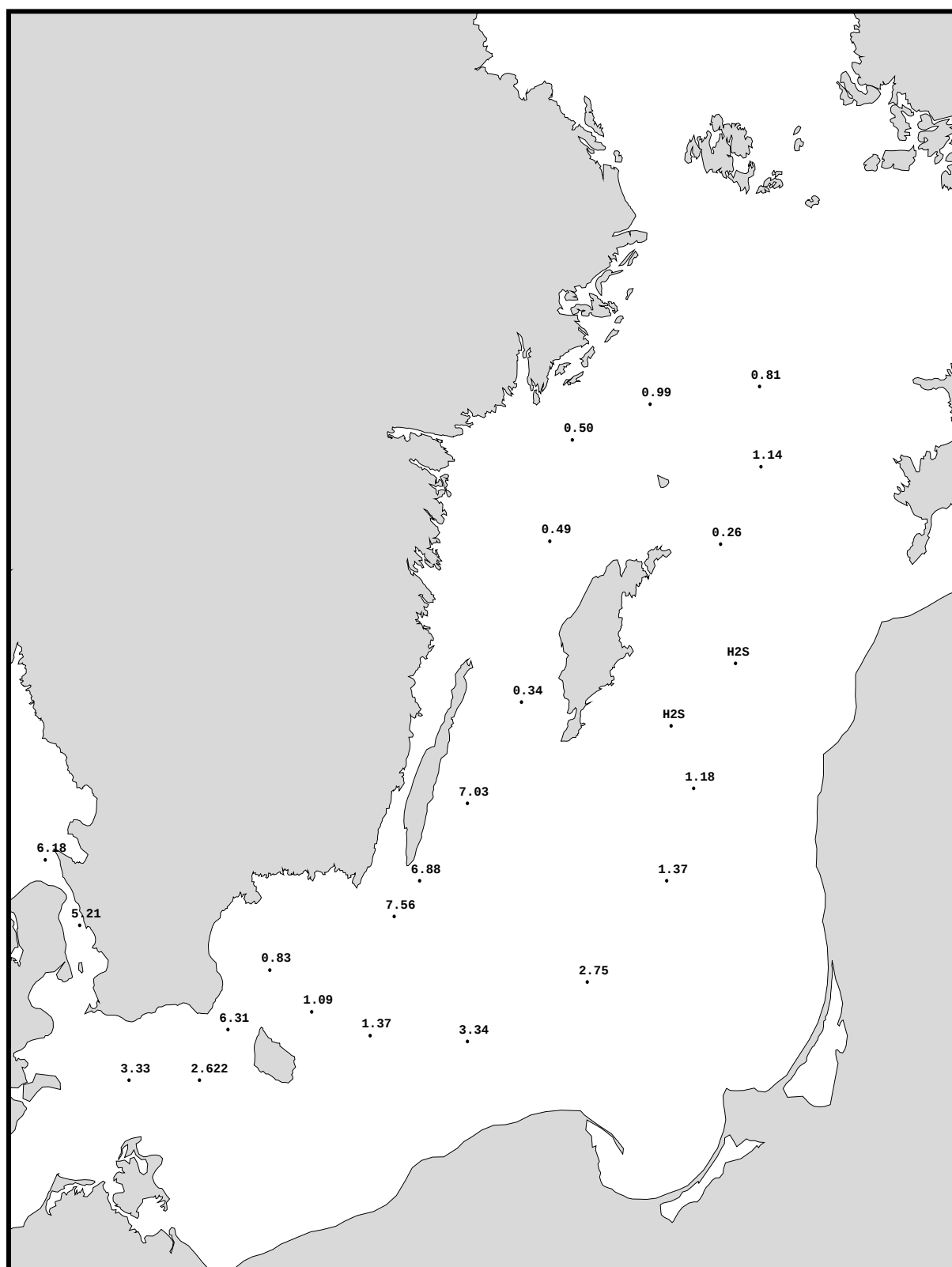
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Date: 1997-06-19  
Time: 07:47

| Ser no | Stat code | P r o j      | Station-----  | Lat----- | Lon----- | Date<br>yymmdd | Time<br>hhmm<br>utc | Bott<br>deph<br>m | Mld<br>m | Secc<br>deph<br>m | Wind<br>di ve | Air<br>temp<br>C | Air<br>pres<br>hPa | WCSI<br>elec<br>aoae<br>tu | C<br>Cilyooa<br>mot<br>PrP | PPCPZZT<br>Hrhhooa<br>l | No<br>de | T<br>e | S<br>a | P<br>h | O<br>x | H<br>2 | P<br>o | T<br>o | N<br>o | N<br>o | T<br>h | A<br>o | S<br>l | H<br>i | L<br>u | P<br>i | P<br>0 | T<br>0 | C<br>o |   |   |
|--------|-----------|--------------|---------------|----------|----------|----------------|---------------------|-------------------|----------|-------------------|---------------|------------------|--------------------|----------------------------|----------------------------|-------------------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|---|
| 0412   | BPWX38BAS | BY32         | NORRKÖPINGSDJ | N5801    | E1759    | 970607         | 1015                | 208               |          | 5.5               | 14            | 1                | 15.4               | 1020                       | 1110                       | x                       | -----    | 17     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | x |   |
| 0413   | BPWX45BMP | BY38         | KARLSÖDJ      | N5707    | E1740    | 970609         | 1405                | 114               |          | 8                 | 16            | 3                | 16.0               | 1019                       | 1520                       | x                       | xxx---   | 16     | x      | x      | x      | x      | -      | x      | x      | x      | x      | x      | x      | x      | x      | x      | x      | -      | -      | - | - |
| 0414   | BPWX46BAS | SEGERSTAD-I  |               | N5633    | E1704    | 970609         | 1810                | 75                |          | 7                 | 18            | 1                | 15.2               | 1020                       | 1320                       | x                       | -----    | 11     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0415   | BPSE00BAS | ÖSJ-W1       |               | N5610.3  | E1632.3  | 970609         | 2105                | 32                |          |                   | 23            | 2                | 13.1               | 1020                       | 1520                       | x                       | -----    | 2      | x      | x      | -      | x      | -      | x      | -      | x      | x      | -      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0416   | BPSE00BAS | ÖSJ-W2       |               | N5609.5  | E1633.7  | 970609         | 2125                | 34                |          |                   | 23            | 2                | 13.1               | 1020                       | 9920                       | x                       | -----    | 2      | x      | x      | -      | x      | -      | x      | -      | x      | x      | -      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0417   | BPSE00BAS | ÖSJ-W3       |               | N5608.8  | E1635.4  | 970609         | 2140                | 53                |          |                   | 23            | 2                | 13.1               | 1020                       | 9920                       | x                       | -----    | 2      | x      | x      | -      | x      | -      | x      | -      | x      | x      | -      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0418   | BPSE00BAS | ÖSJ-W4       |               | N5608.1  | E1637.0  | 970609         | 2200                | 56                |          |                   | 23            | 2                | 13.1               | 1020                       | 9920                       | x                       | -----    | 2      | x      | x      | -      | x      | -      | x      | -      | x      | x      | -      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0419   | BPSE49BAS | BY39         | ÖLANDS S UDDE | N5607    | E1632    | 970609         | 2220                | 50                |          |                   | 23            | 2                | 13.2               | 1020                       | 9920                       | x                       | -----    | 3      | x      | x      | -      | x      | -      | x      | -      | x      | x      | -      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0420   | BPSE00BAS | ÖSJ-S1       |               | N5604.9  | E1630.8  | 970609         | 2245                | 53                |          |                   | 23            | 2                | 13.2               | 1020                       | 9920                       | x                       | -----    | 2      | x      | x      | -      | x      | -      | x      | -      | x      | x      | -      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0421   | BPSE00BAS | ÖSJ-S2       |               | N5603.7  | E1632.15 | 970609         | 2305                | 53                |          |                   | 23            | 2                | 13.2               | 1020                       | 9920                       | x                       | -----    | 2      | x      | x      | -      | x      | -      | x      | -      | x      | x      | -      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0422   | BPSE00BAS | ÖSJ-S3       |               | N5602.9  | E1633.5  | 970609         | 2315                | 50                |          |                   | 23            | 2                | 13.2               | 1020                       | 9920                       | x                       | -----    | 2      | x      | x      | -      | x      | -      | x      | -      | x      | x      | -      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0423   | BPSB00BAS | ÖSJ-SB1      |               | N5555.0  | E1630.0  | 970610         | 0015                | 52                |          |                   | 23            | 3                | 12.7               | 1020                       | 9920                       | x                       | -----    | 6      | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |   |
| 0424   | BPSB00BAS | ÖSJ-SB2      |               | N5555.0  | E1627.5  | 970610         | 0030                | 50                |          |                   | 23            | 3                | 12.7               | 1020                       | 9920                       | x                       | -----    | 6      | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |   |
| 0425   | BPSB00BAS | ÖSJ-SB3      |               | N5555.0  | E1625.0  | 970610         | 0051                | 49                |          |                   | 23            | 3                | 12.7               | 1020                       | 9920                       | x                       | -----    | 6      | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |   |
| 0426   | BPSB00BAS | ÖSJ-SB4      |               | N5555.0  | E1622.5  | 970610         | 0109                | 52                |          |                   | 23            | 3                | 12.7               | 1020                       | 9920                       | x                       | -----    | 6      | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |   |
| 0427   | BPSB00BAS | ÖSJ-SB5      |               | N5555.0  | E1620.0  | 970610         | 0126                | 49                |          |                   | 23            | 3                | 12.7               | 1020                       | 9920                       | x                       | -----    | 6      | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | x      | -      | -      | -      | -      | -      | -      | - |   |
| 0428   | BPSB00BAS | ÖSJ-SB6      |               | N5555.0  | E1617.5  | 970610         | 0148                | 49                |          |                   | 23            | 3                | 12.7               | 1020                       | 9920                       | x                       | -----    | 6      | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | x      | -      | -      | -      | -      | -      | -      | x |   |
| 0429   | BPSB00BAS | ÖSJ-SB7      |               | N5555.0  | E1615.0  | 970610         | 0205                | 52                |          |                   | 23            | 4                | 13.1               | 1020                       | 2730                       | x                       | -----    | 6      | -      | x      | -      | x      | -      | x      | -      | xx     | -      | -      | x      | -      | -      | -      | -      | -      | -      | x |   |
| 0430   | BPSH05BAS | HANÖBUKTEN   |               | N5537    | E1452    | 970610         | 0640                | 81                |          | 7.5               | 25            | 4                | 15                 | 1021                       | 2830                       | x                       | -----    | 11     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | x |   |
| 0431   | BPSA03BAS | BY2          | ARKONA        | N5500    | E1405    | 970610         | 1110                | 48                |          | 7                 | 27            | 4                | 15.4               | 1023                       | 2830                       | x                       | -----    | 8      | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0432   | BPSA02BAS | BY1          |               | N5500    | E1318    | 970610         | 1400                | 47                |          | 6                 | 27            | 5                | 15                 | 1022                       | 1130                       | x                       | -----    | 9      | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0433   | SOSX00BAS | OSKARSGR NO  |               | N5535.8  | E1251.4  | 970610         | 1820                | 8                 |          |                   | 27            | 5                | 15                 | 1022                       | 1110                       | x                       | -----    | 1      | -      | x      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | -      | - |   |
| 0434   | SOCX39BAS | W LANDSKRONA |               | N5552.0  | E1245.0  | 970610         | 2010                | 49                |          |                   | 99            | 1                | 16.2               | 1020                       | 1110                       | x                       | --x----  | 10     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0435   | KAEX29BAS | ANHOLT E     |               | N5640.0  | E1207.0  | 970611         | 0145                | 54                |          |                   | 32            | 4                | 15.0               | 1020                       | 1120                       | x                       | -xx---   | 11     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | - |   |
| 0436   | KANX25BAS | FLADEN       |               | N5711.5  | E1140    | 970611         | 0610                | 82                |          | 7                 | 00            | 0                | 16.5               | 1019                       | 1110                       | x                       | -----    | 11     | x      | x      | -      | x      | -      | x      | x      | x      | x      | x      | -      | x      | -      | -      | -      | -      | -      | x |   |

# Bottom water oxygen concentration (ml/l)

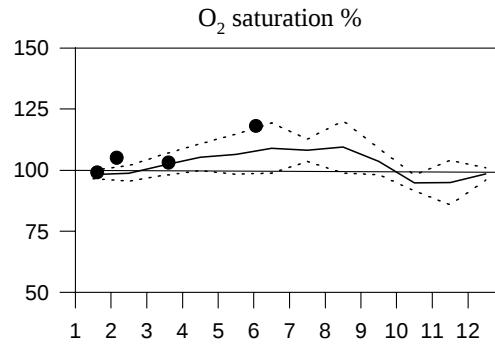
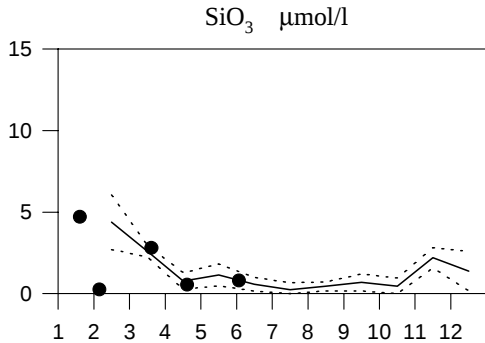
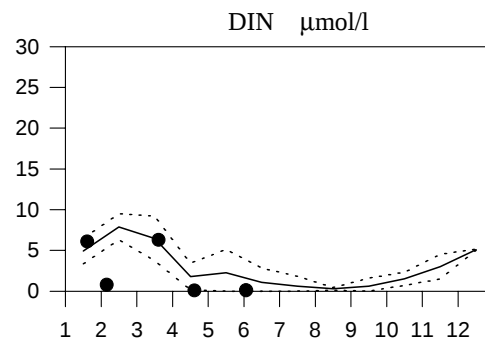
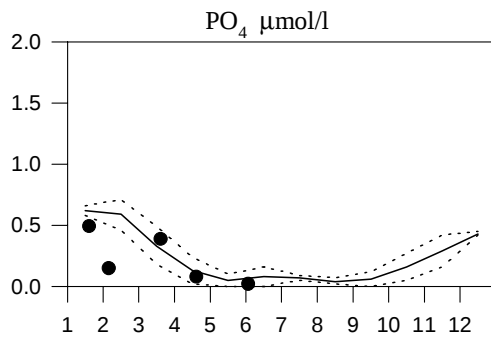
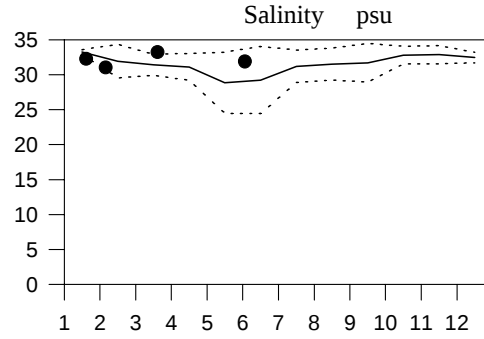
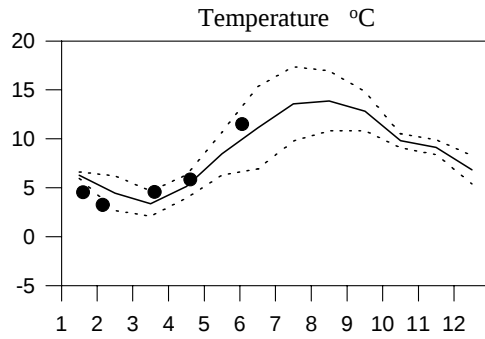
Country: Sweden  
Ship: Argos  
Date: 970602-970611  
Series: 0329-0436



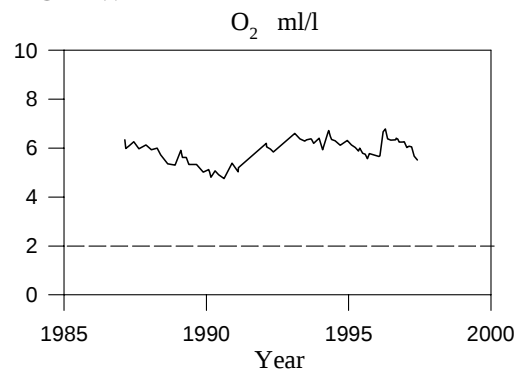
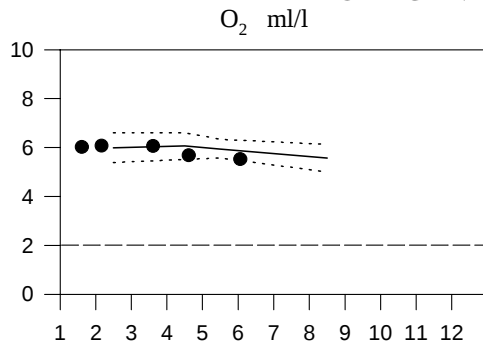
## STATION M6 SURFACE WATER ( 0-15 m )

### Annual Cycles

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



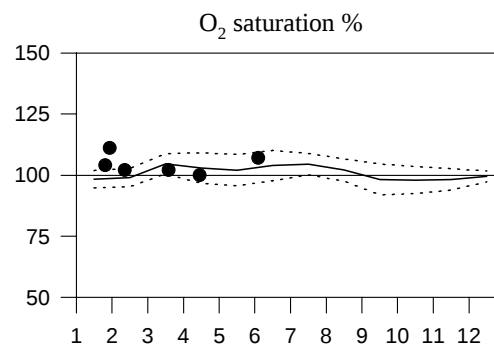
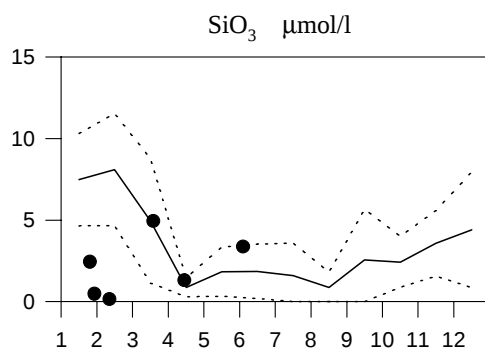
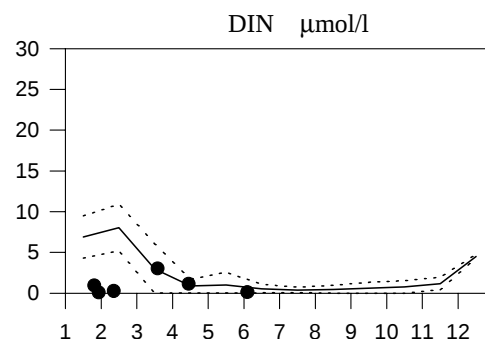
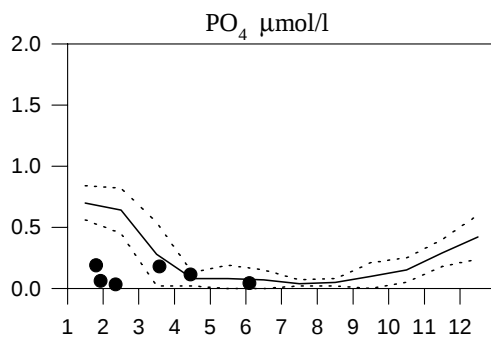
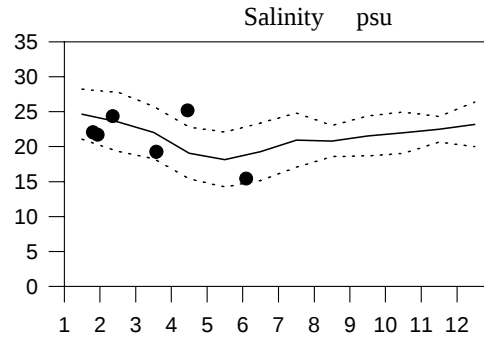
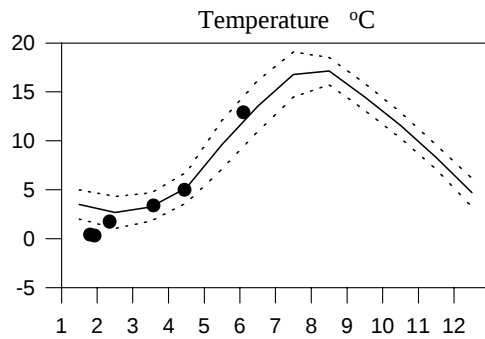
### OXYGEN IN BOTTOM WATER



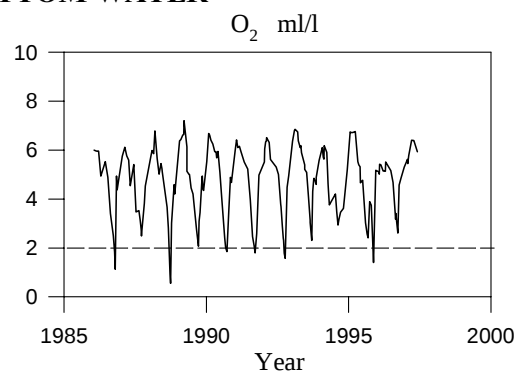
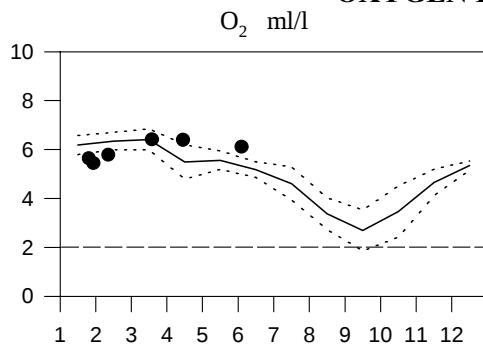
# STATION ANHOLT E SURFACE WATER (above halocline)

## Annual Cycles

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



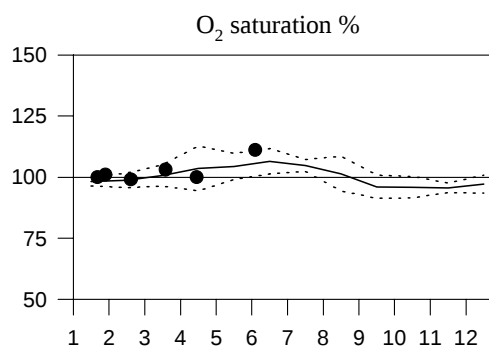
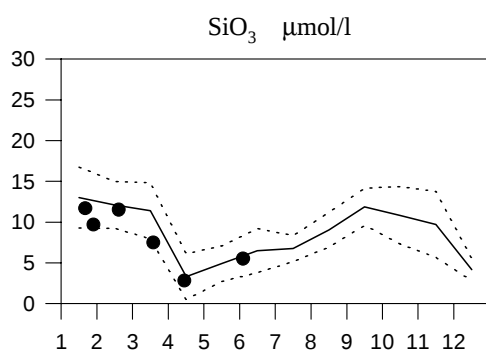
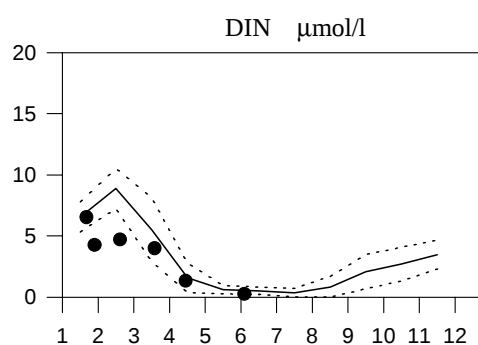
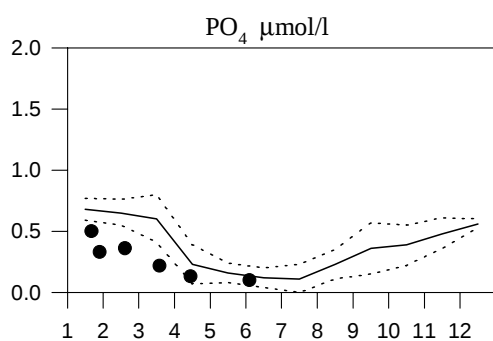
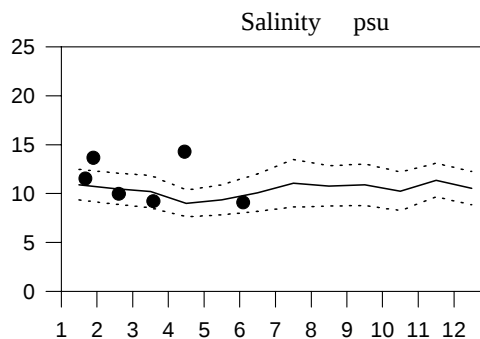
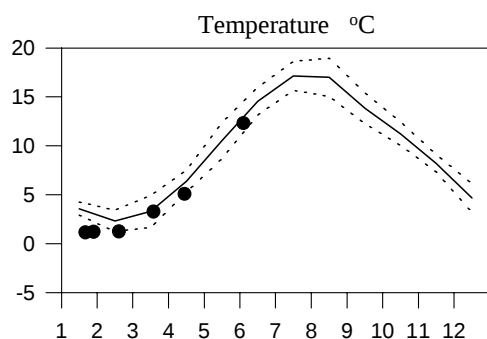
## OXYGEN IN BOTTOM WATER



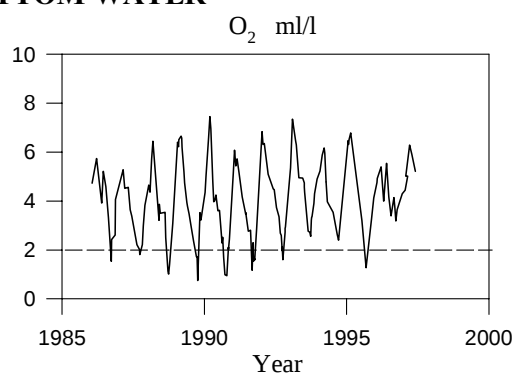
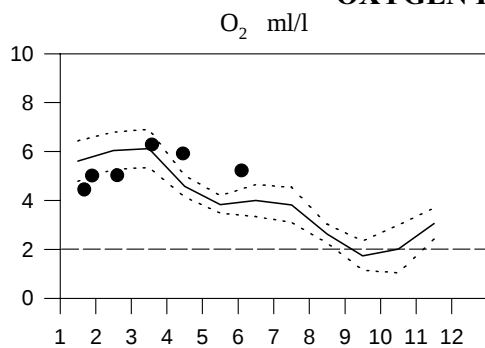
## STATION W LANDSKRONA SURFACE WATER (0-15 m)

### Annual Cycles

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



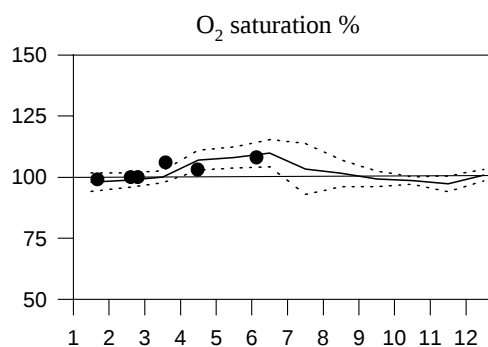
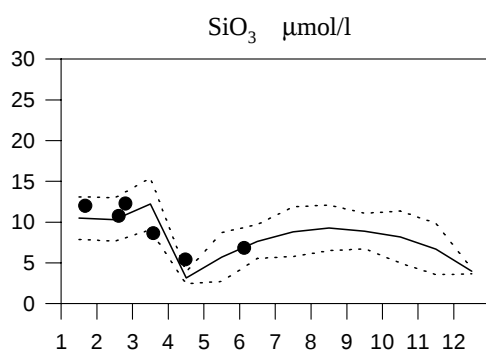
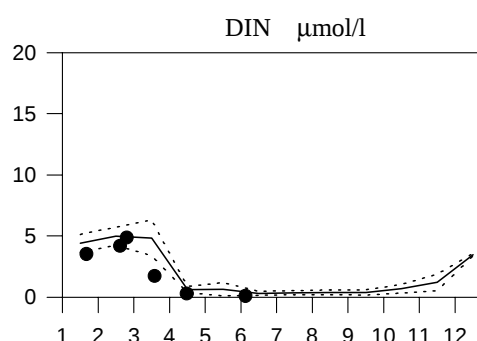
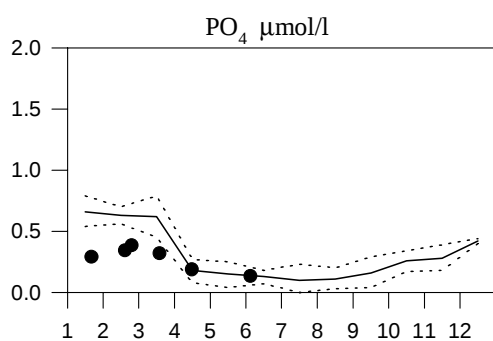
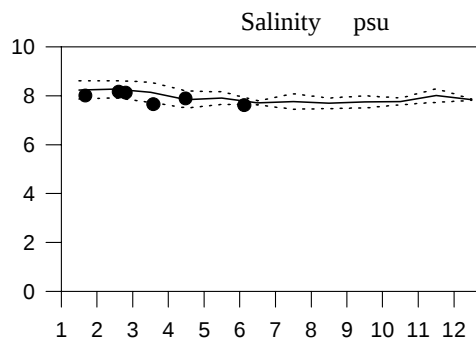
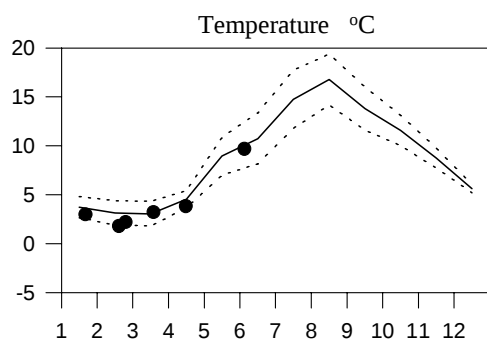
### OXYGEN IN BOTTOM WATER



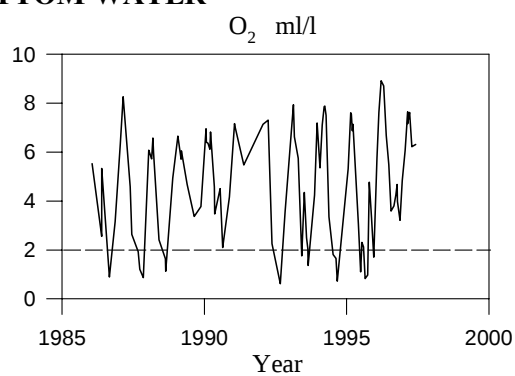
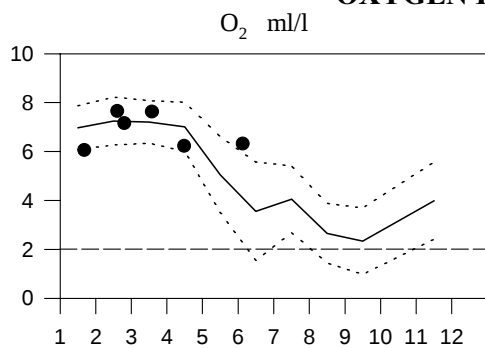
## STATION BY2 SURFACE WATER (0-15 m)

### Annual Cycles

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



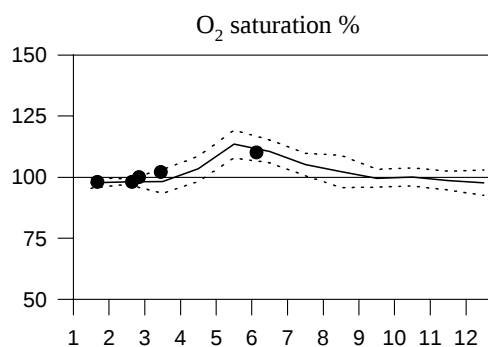
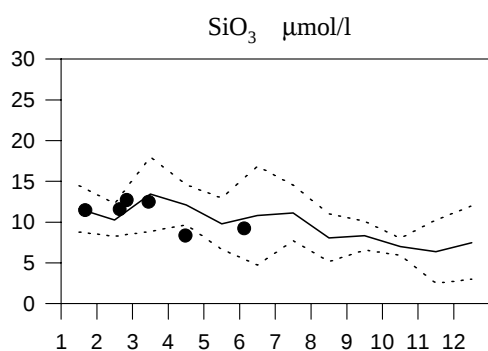
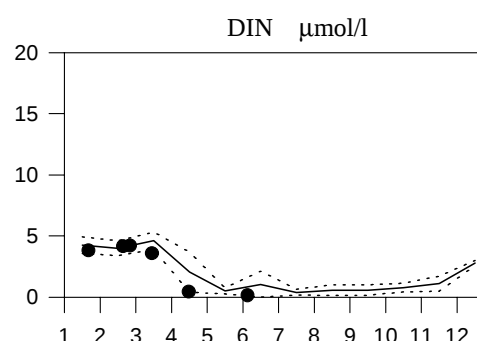
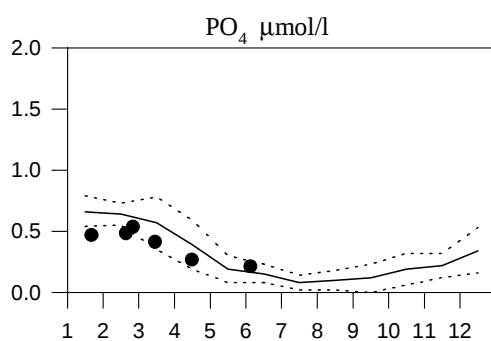
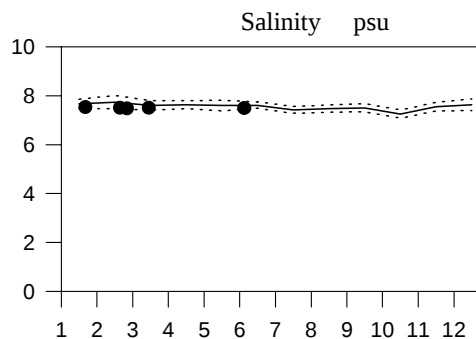
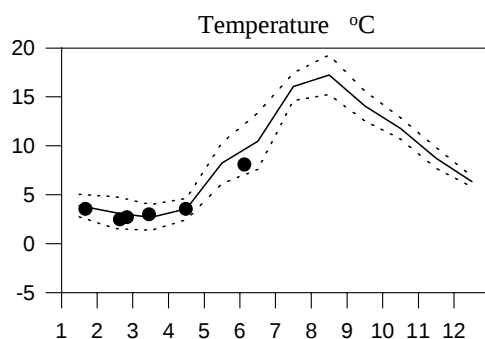
### OXYGEN IN BOTTOM WATER



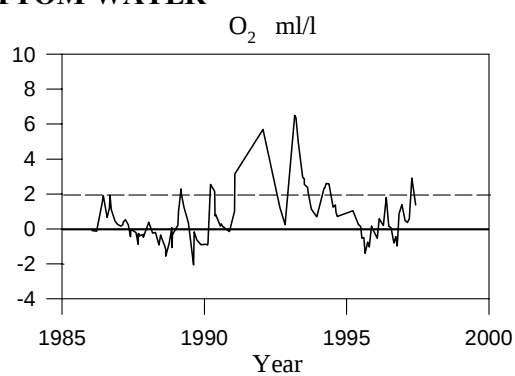
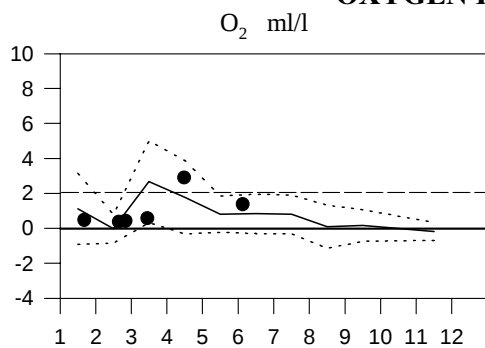
## STATION BY5 SURFACE WATER ( 0-15 m )

### Annual Cycles

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



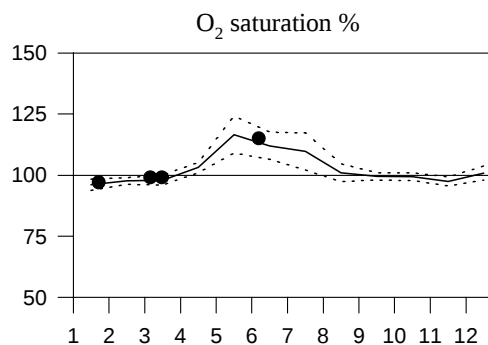
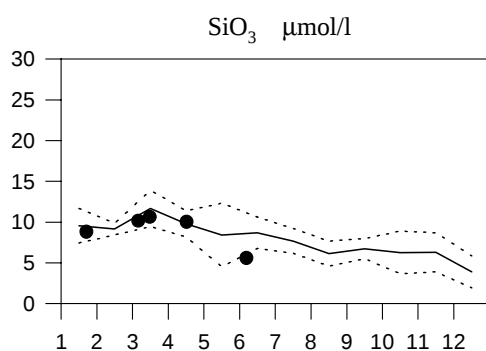
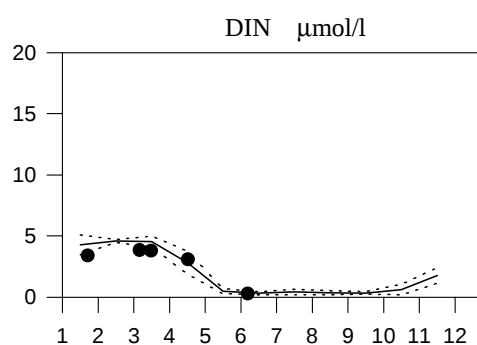
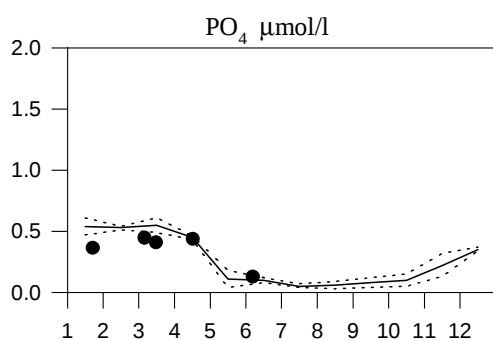
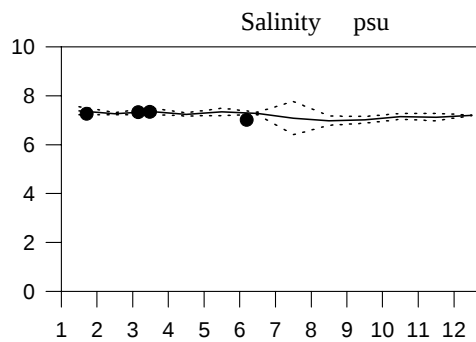
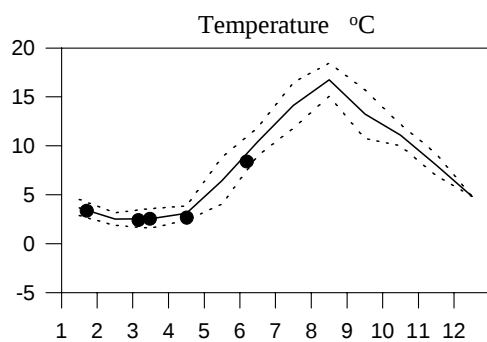
### OXYGEN IN BOTTOM WATER



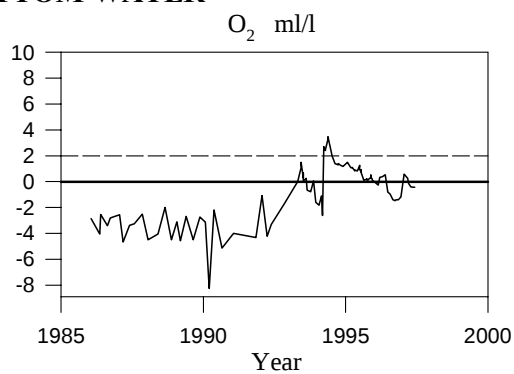
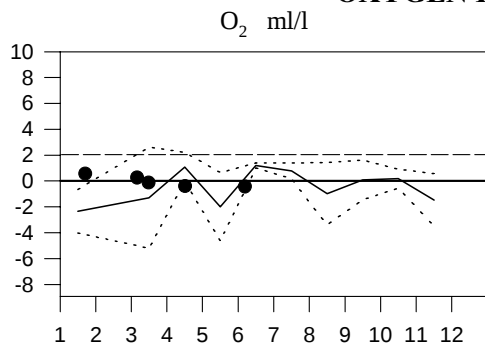
## STATION BY15 SURFACE WATER (0-15 m)

### Annual Cycles

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



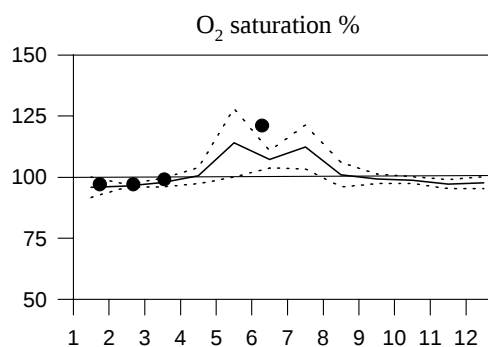
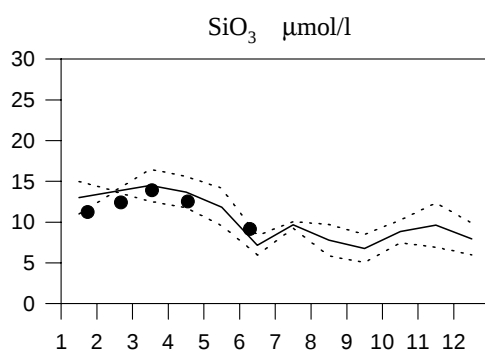
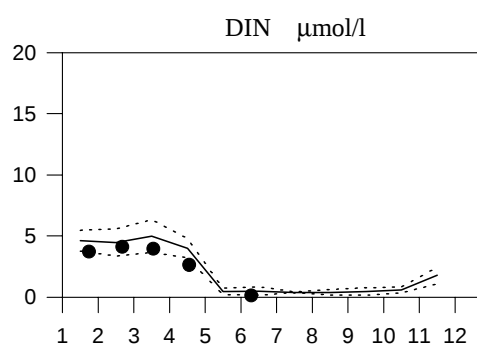
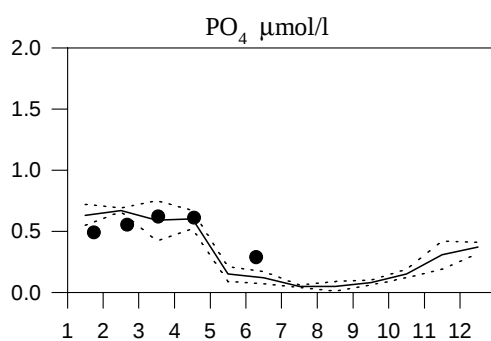
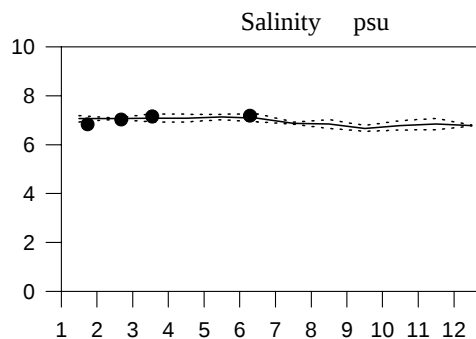
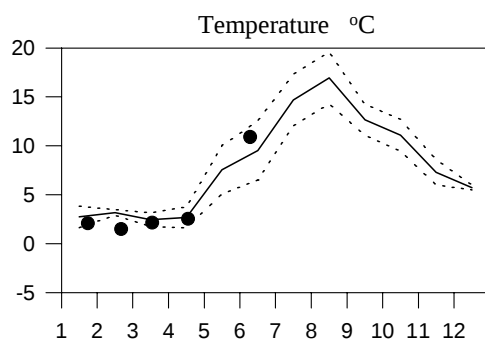
### OXYGEN IN BOTTOM WATER



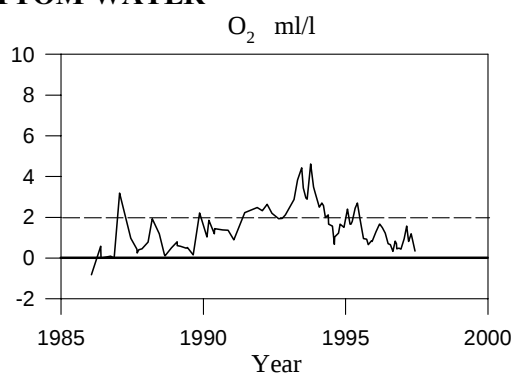
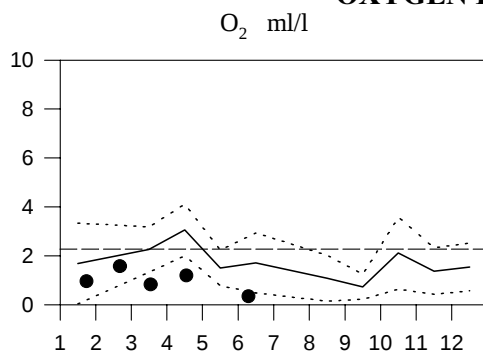
## STATION BY38 SURFACE WATER (0-15 m)

### Annual Cycles

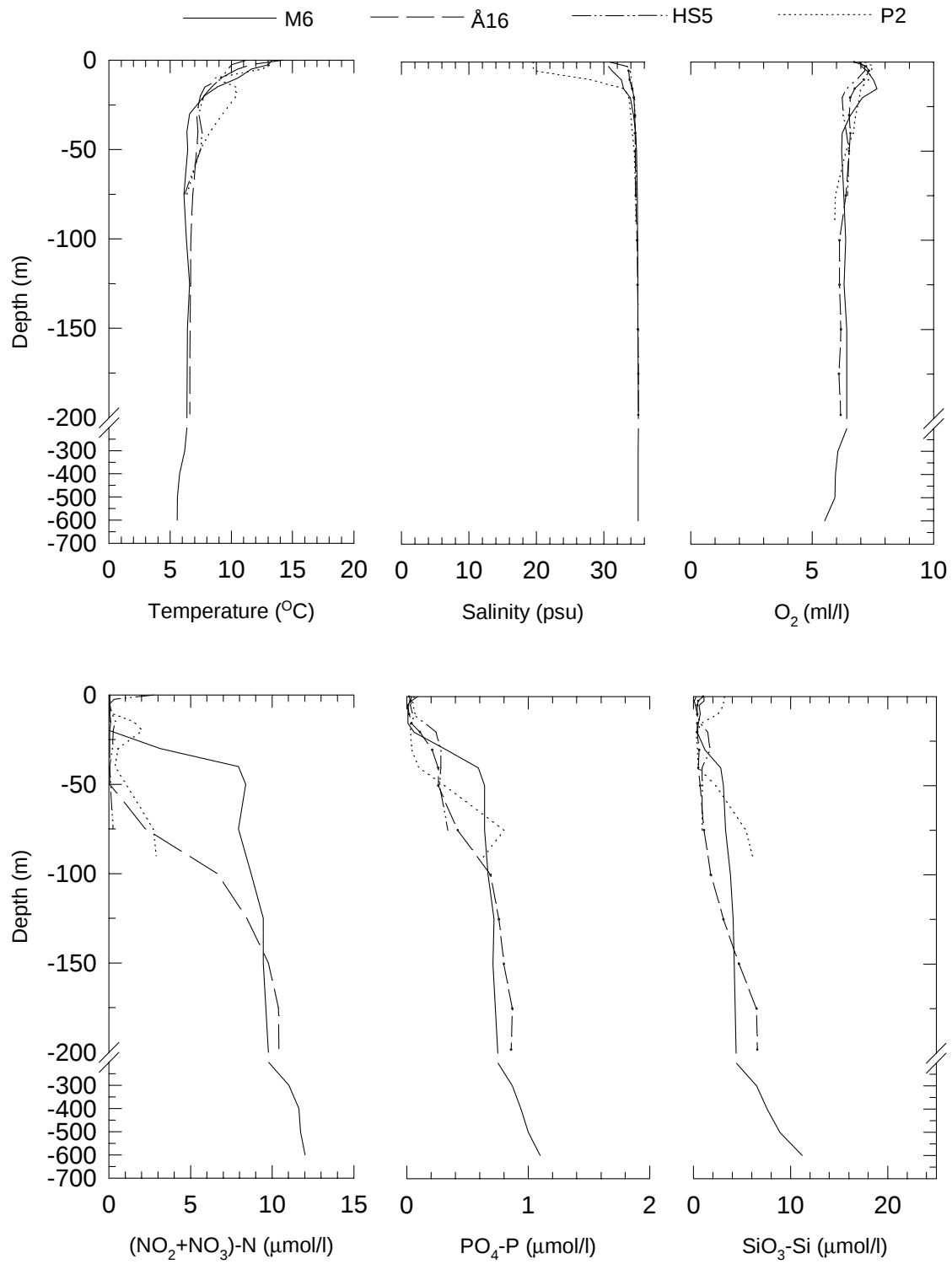
— Mean 1986-1995    - - - St.Dev.    ● 1997



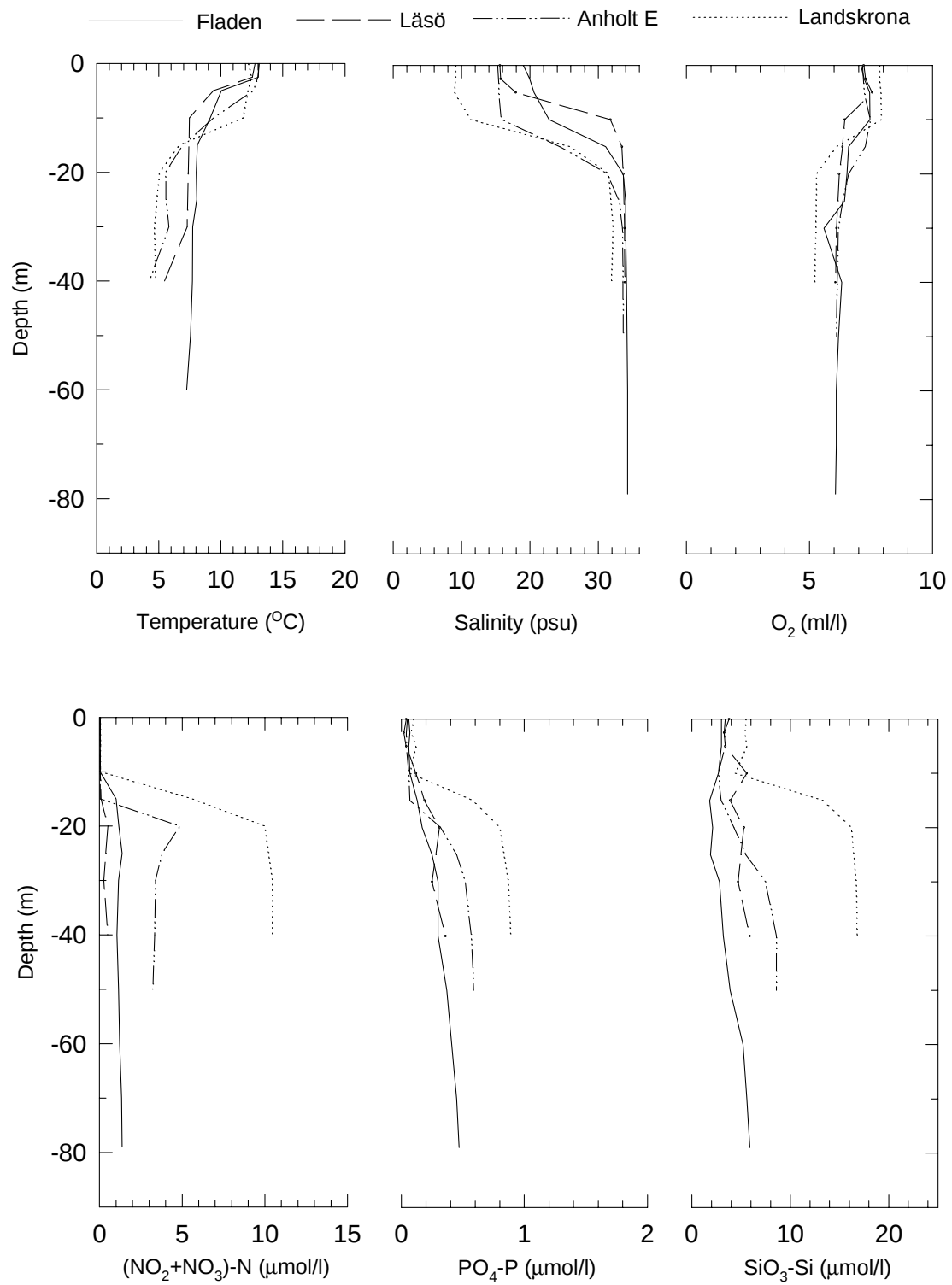
### OXYGEN IN BOTTOM WATER



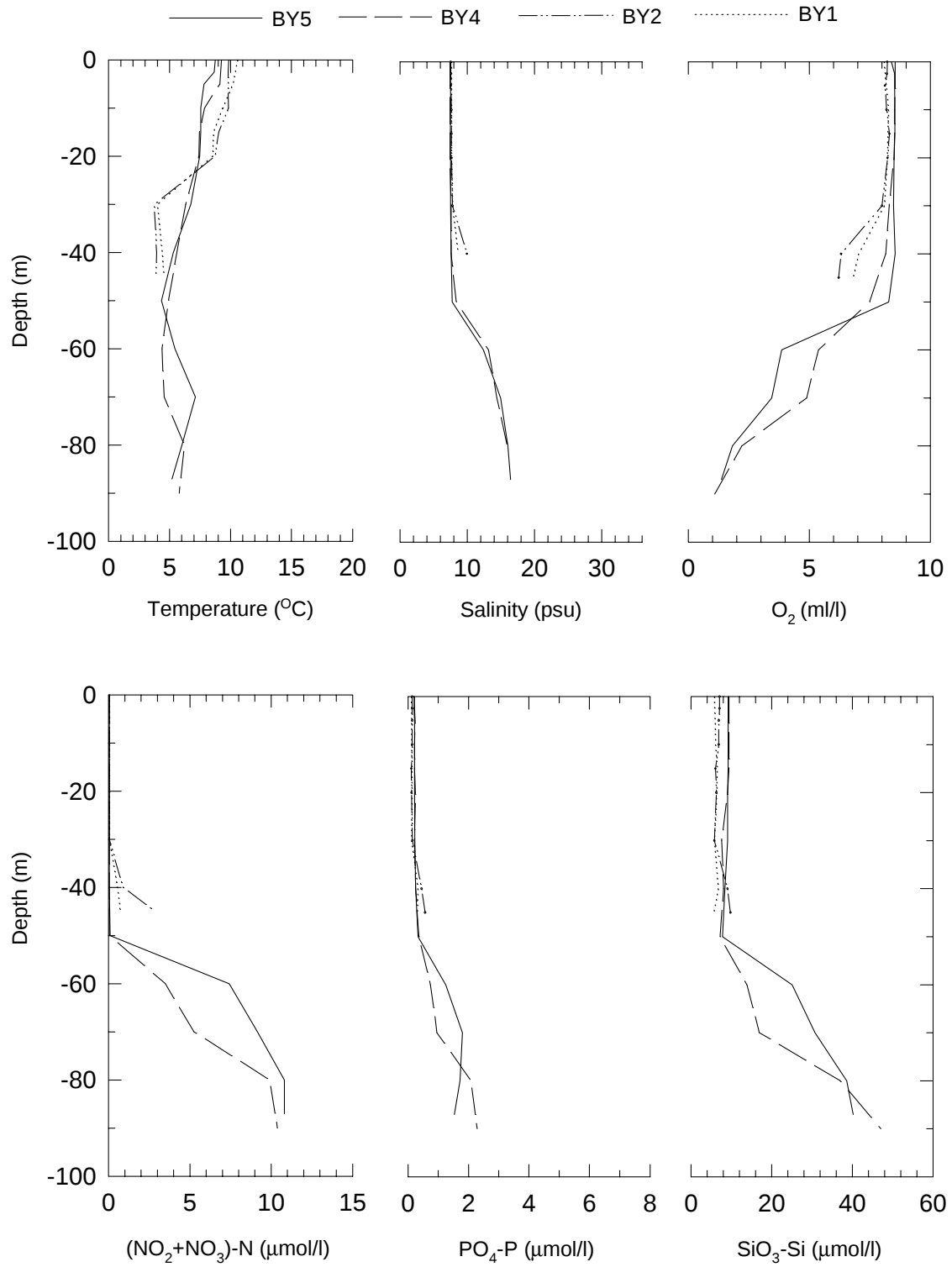
# SKAGERRAK week 23-24 -97



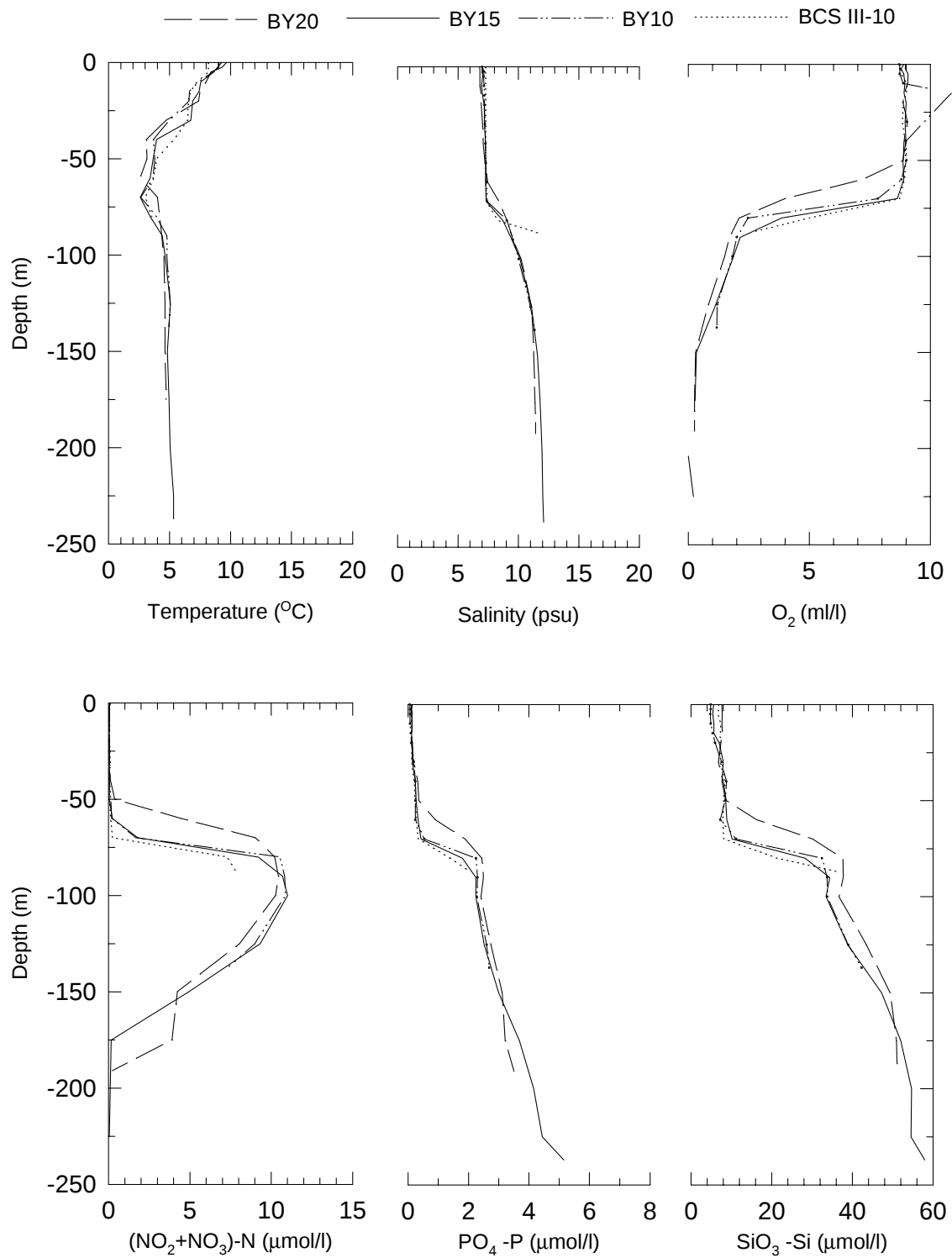
# KATTEGAT and THE SOUND week 23-24 -97



# SOUTH BALTIC week 23-24 -97



# EAST BALTIC week 23-24 -97



# WEST BALTIC week 23-24 -97

