The 1993 Northeast Water Expedition
Data Report on CTD Measurements of RV "Polarstern" Cruises ARKTIS IX/2 and 3

Die Nordostwasser-Polynia Expedition 1993
Datenband über die CTD-Messungen während der Expeditionen ARKTIS IX/2 und 3 mit FS „Polarstern"

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Contents

Introduction

This data report includes all recorded downcast CTD-profiles of Polarstern cruise ARKTIS IX, leg 2 and 3. It corresponds to two other volumes of Berichte für Polarforschung, i.e.

The 1993 Northeast Water Expedition
Scientific cruise report of RV "Polarstern" Arctic cruises ARK IX/2 and 3, USCG "Polar Sea" cruise NEWP and the NEWLand expedition.
Edited by H.J. Hirche and G. Kattner, Ber. Polarforsch. 142 (1994)

and

The 1993 Northeast Water Expedition
Data Report of RV "Polarstern" Arctic Cruises ARK IX/2 and 3.
Edited by G. Kattner and H.J. Hirche, Ber. Polarforsch. 145 (1994).

This report adds a graphical listing of parameters measured with the CTD-system. In addition, a short summary of main results is given as a first orientation to water masses in the area. Bottle sample data can be found in Kattner and Hirche (1994).

The two legs of RV "Polarstern" cruise ARKTIS IX were part of the International Arctic Polynya Programme (IAPP) and lasted from May 16 to June 24 (leg 2), 1993, and June 26 to August 4, 1993 (leg 3).

Instrumentation and data processing

CTD casts have been performed with a Seabird 911+ system, equipped with a standard sensor set and a number of additional optical sensors. The standard set consists of a pumped temperature-conductivity-system to optimize time alignment and time constants of the respective sensors. Optical sensors include measurements of chlorophyll flourescence, backscattering, yellow substance fluorescence (all three Dr. Haardt instruments), light intensity relative to the surface (LICOR with AWI interface) and transmission (Seatech instrument). Yellow substance measurements have not been recorded on stations 105 to 123.

Four calibration checks have been performed in the central Greenland Sea (75°N, 3°W) at about 3000 m depth on May 23, June 22 and 27, and August 2, since owing to the high spatial gradients the NEW area is not suited to calibrate CTD sensors by comparative temperature measurements and water sampling.

Evaluation of the calibration casts yields an accuracy of better than 5 mK for temperature and 0.006 for salinity during the entire duration of the cruise. The data have been processed by standard methods using mainly Seabird software. This includes optimizing time alignment between conductivity and temperature measurements, optimizing their time response, correcting for the thermal mass of the conductivity cell, suppressing of possible upward CTD movements during downcasts, and application of a median filter over 5 scans for the fluorescence sensors.

Summary of main results

In this summary the water masses on the northeast Greenland shelf are described with respect to their relationship to the surrounding waters in Fram Strait, Greenland Sea and Polar Arctic Ocean in order to give an introduction to the hydrography of the area. More detailed information can be found in the papers listed as references at the end of this text.

The bathymetry of the northeast Greenland shelf is dominated by a trough system - consisting of Belgica Trough, Norske Trough and Westwind Trough - around the shallow area of Belgica Bank (Fig. 1). The troughs are 300 to 500 m deep, Belgica Bank is partly shallower than 40 m. A persistent fast ice feature (Norske Ø Ice Barrier) bridges over Norske Trough at about 79°N and the combined effect of this mechanical barrier together with a northward coastal current gives rise to a summer polynya - the Northeast Water (NEW) - downstream of the ice barrier (Schneider and Budéus, 1994; Schneider and Budéus, 1995). A second shallow area, Ob Bank, is found at the northern boundary of the northeast Greenland Shelf.

Earlier researchers already observed a generally two-layered structure in the area (Aagaard and Coachman, 1968; Bourke et al., 1987). The top layer is occupied by fresh (S about 32.5) and cold (T close to freezing temperature) waters categorized as Polar Water (PW) and assumed to be imported by the East Greenland Current (EGC), while the the fact that deeper waters in the troughs are warmer (up to 1°C) and more saline (up to 34.9) has been attributed to the influence of Return Atlantic Water (RAW). In contrast to these ideas the NEW expedition revealed that deeper waters on the shelf are clearly different from RAW, and that the fresher water on the shelf is formed locally and should be distinguished from PW.

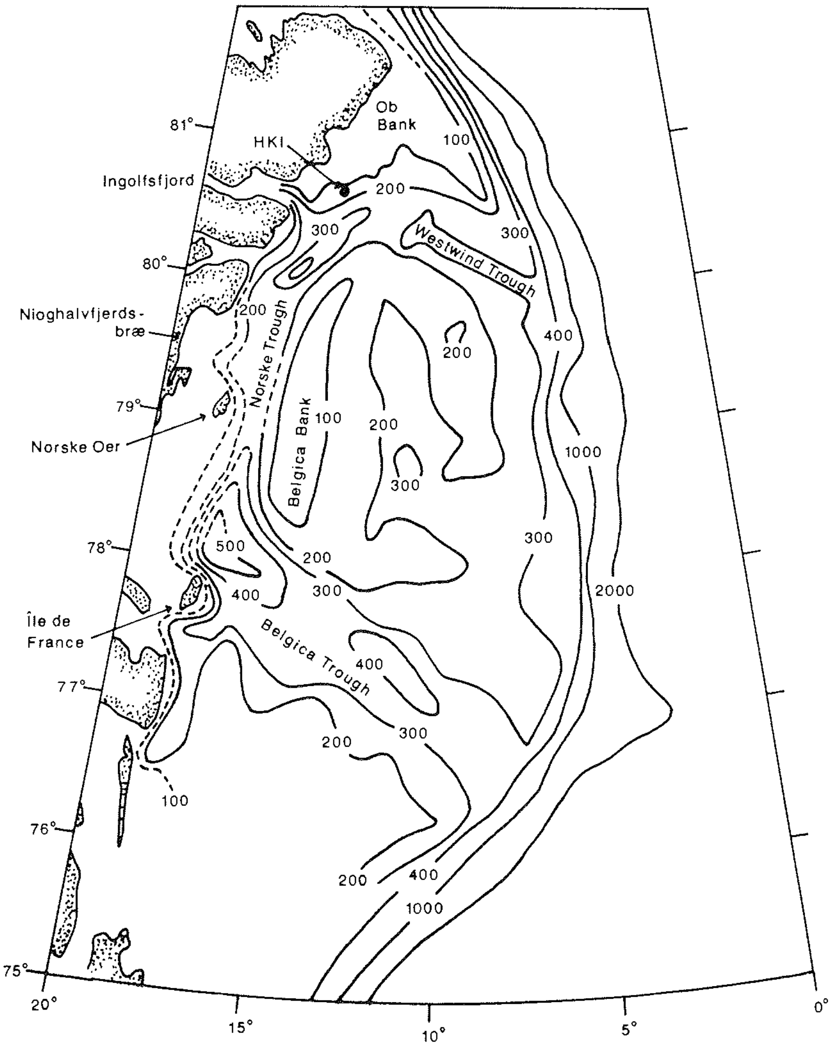

Fig. 1. Bathymetry and topographic features of the Northeast Water area (from Bourke et al., 1987). Henrik-Krøyer-Islands are abbreviated HKI. In the area covered by fast ice, depth contours are dashed.

Polar Water / East Greenland Shelf Water

The import of PW from the north into the NEW area can be excluded due to three main arguments. First, the northward flowing coastal current (North East Greenland Coastal Current) inhibits a direct inflow. This northward current has been observed by a number of researchers (Kiilerich, 1945; Bourke et al., 1987; Schneider and Budéus, 1994; Schneider and Budéus, 1995) and shows geostrophic speeds of about 0.1 m/s. It turns to the east over Westwind Trough and is confined to the upper water column. It gives rise to an anticyclonic surface circulation north of 79°N.

Secondly, the temperature structures of the upper water column are different in the NEW area and north of Ob Bank. In the NEW a layer which stays close to freezing temperature is maintained throughout the summer. This layer is found in about 70 m depth at salinities of roughly 32.5. At this salinity waters north of Ob Bank show their maximum deviation from freezing temperature. Even if this water would be imported into the NEW, it would have to be cooled in the NEW area during a winter season, and thus be formed by a local formation process.

A further argument can be found when regarding nutrient concentrations, in particular silicate. The very high silicate values from north of Ob Bank do not enter the NEW area (Budéus et al., 1996).

Consequently, this water body should be distinguished from PW stemming from the Arctic Polar Ocean, and it is termed East Greenland Shelf Water due to its local origin.

Intermediate Waters

Paquette et al. (1985) introduced a third water body, which is named Knee Water (KW) after its shape in a TS-diagram. This water seems to be of Atlantic origin, cooled and freshened in the Arctic under the contact of ice (Moore and Wallace, 1988). This water can serve excellently as a tracer for the circulation on the shelf.

From a mixing triangle in the TS-space the maximum concentrations of KW observed in 1 m bins of each CTD profile can be calculated (Budéus and Schneider, 1995). It can be seen that this water spreads diagonally over the shelf but does not enter the NEW with the NEGCC. This observation is further supported by the distribution of nutrient concentrations and yellow substance fluorescence and corroborates the local character of the shelf system.

Deeper Waters

As indicated by their temperatures, deeper waters in the trough system around Belgica Bank cannot be formed locally by convection. There is much evidence that vertical mixing during winter - whether convection or wind mixing - includes only the uppermost 100 to 150 m. The high temperatures of the deeper waters indicate an ultimate origin from Atlantic waters, but a direct inflow of RAW can be excluded. There is an abrupt change from the high temperatures of RAW to lower maximum temperatures in the troughs, and the temperature maximum there shows virtually no horizontal gradient (Budéus and Schneider, 1995). This opposes the idea of a continuous supply and dilution of RAW. Further evidence is given to this by nutrient data, which show much higher silicate concentrations in the troughs (8 to 12 μMol/l) than in RAW (about 6 μMol/l) (Budéus et al., 1996). From a transect along the troughs' axes it can further be seen that there is no one-directional flushing of the trough system but deeper waters do enter from the mouths of both Belgica Trough and Westwind Trough. This indicates a long residence time of these waters, what is confirmed by Helium/Titium ages of 14 to 20 years (R. Bayer, pers. comm.).

Conclusion

The northeast Greenland shelf seems to be occupied by waters of mainly local character. The properties of the upper water column are determined mainly during winter by cooling and vertical mixing. To maintain roughly similar salinities in the East Greenland Shelf Water, the fresh water input from local land runoff in summer has to be balanced on longer terms by salt input from brine release or entrainment of saltier waters from below.

The deeper waters in the troughs show some resemblance to waters observed north of Ob Bank and in the Polar Arctic Ocean, but presently there is no evidence for a clear relation to these waters. Deep water formation by vertical convection and brine release can be excluded with respect to the Greenland Sea.

References

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Data

The locations of stationwork during the two legs of ARKTIS IX are shown in Fig. 2 and 3. A station list with exact positions can be found in Hirche and Kattner (1994), Ber. Polarforsch. 142, p. 167 ff.

Naming convention

The naming convention for stations and casts is as follows: The profile is described by 8 characters; the first 4 characters indicate the cruise (ark9), the next 3 characters indicate the station; the last character stands for the cast number, starting with zero for the first cast of a station. Thus ark91230 is the first profile at station 123.

Comments on profiles

The profiles are depicted for the upper 500 m since most participants are interested in the uppermost few hundred metres only. Deeper casts are cut off to resolve the upper 500 m adequately. The first 10 to 20 m may contain apparent instabilities due to the ship's manouvers on stations (see e.g. ark90470). No attempt has been made to correct for this. Optical parameters, in particular chlorophyll, occasionally show profiles with spikes in spatial scales of true variabilities. These can be identified by observing simultaneously the transmission signal, which has also to decrease at locations of high chlorophyll concentrations. The entire data set has been plotted with the same scales to allow an easy comparison between different profiles. As a consequence some extreme salinity and density values are out of range. Although we agree that the resulting plots do not look exactly perfect, clipping has been suppressed for those instances to still provide some information then.

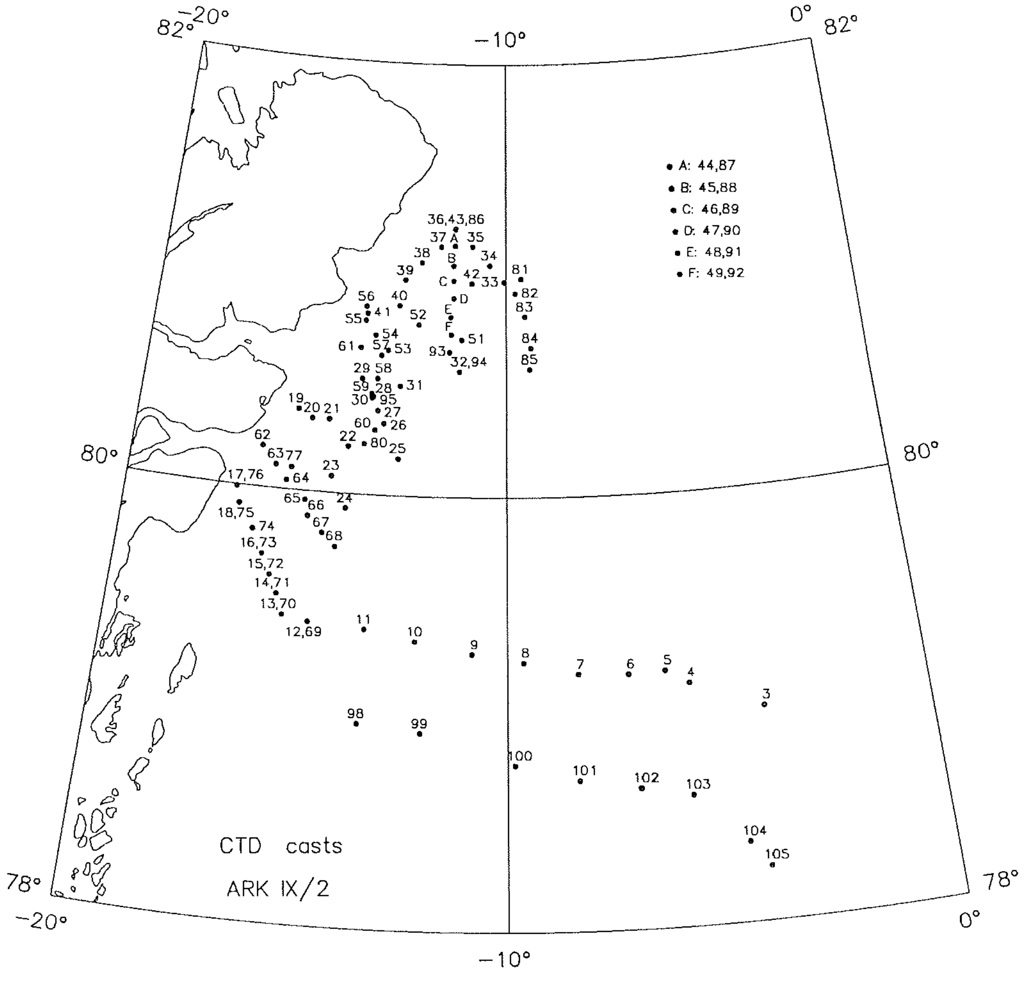

Fig. 2. Stations during ARKTIS IX/2

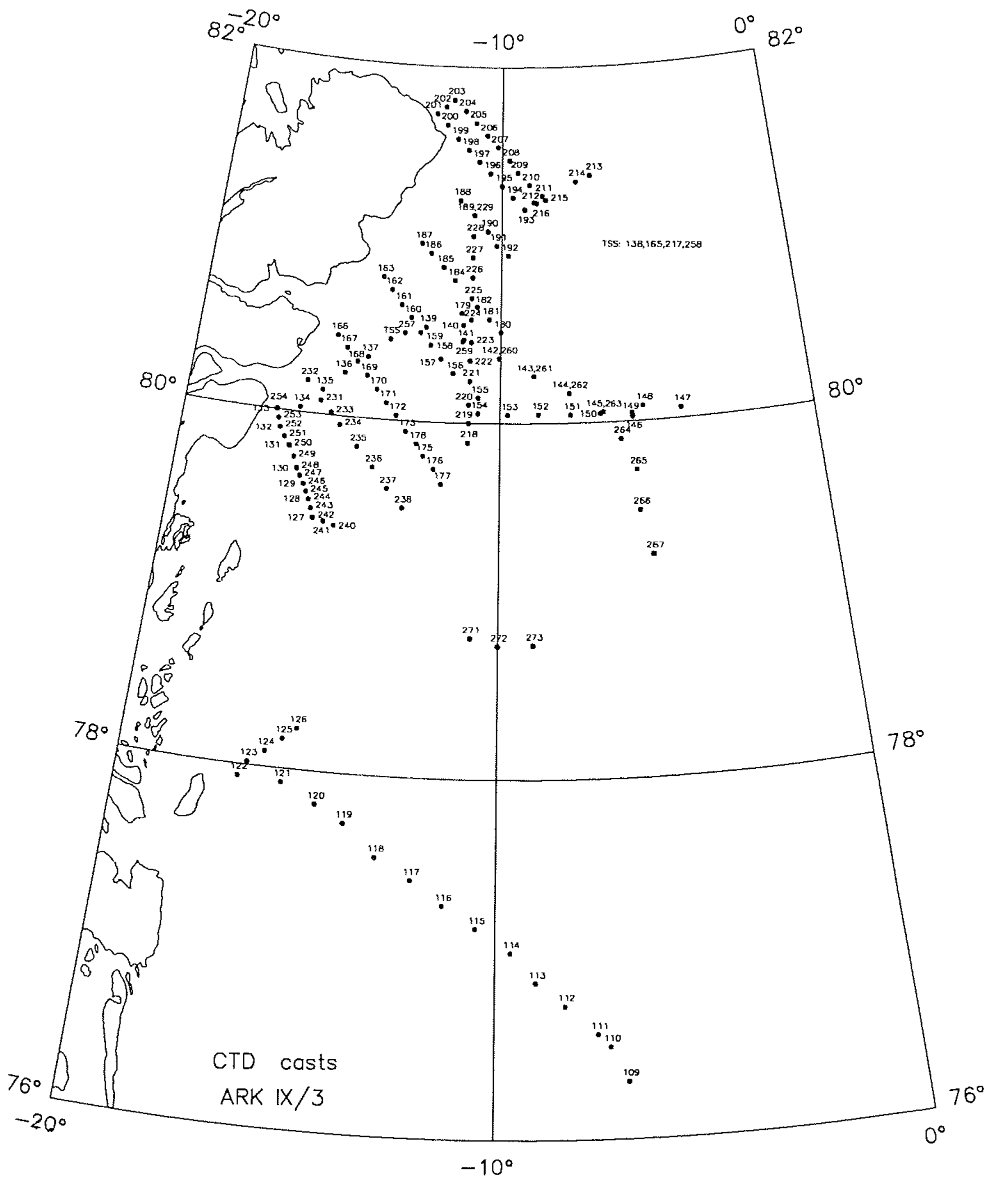

Fig. 3. Stations during ARKTIS IX/3

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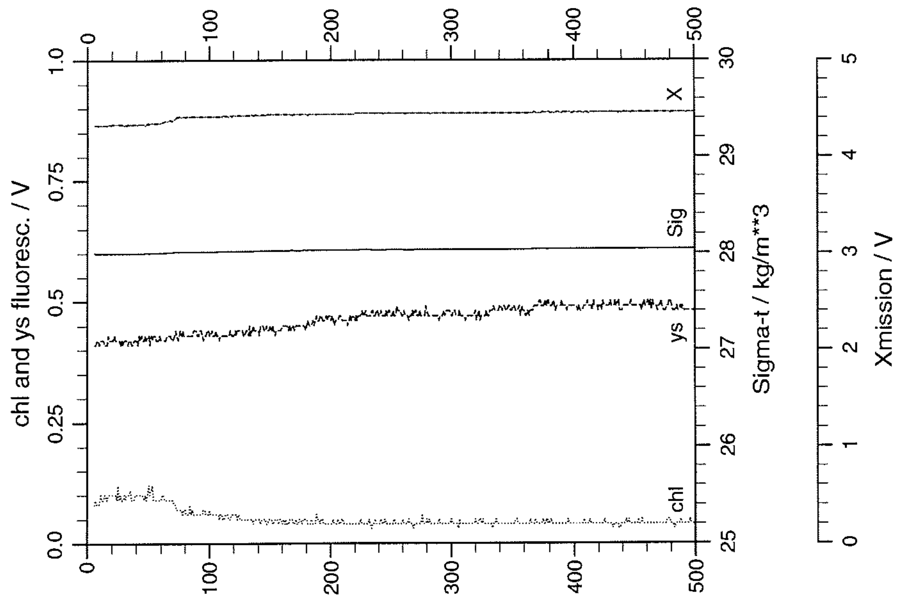

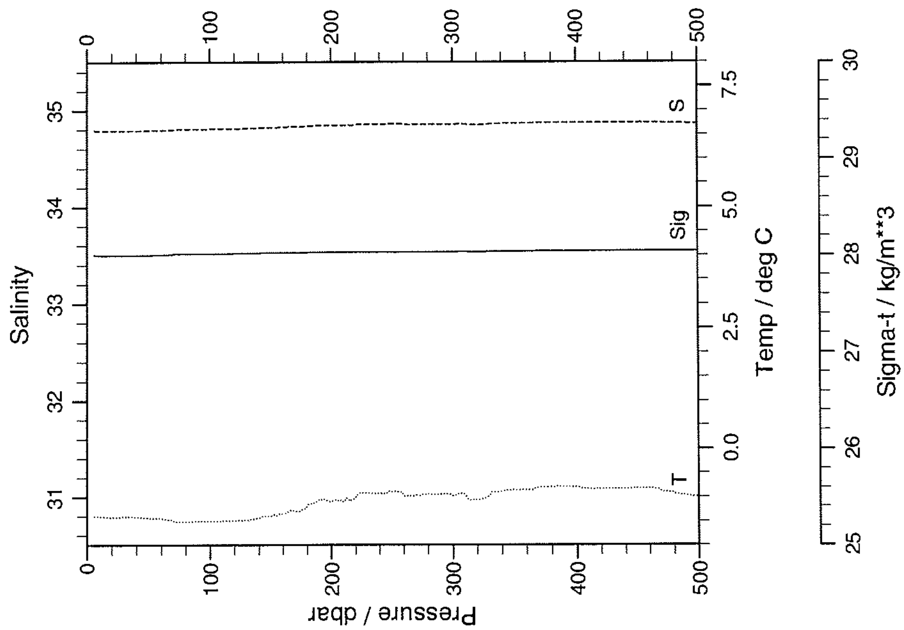

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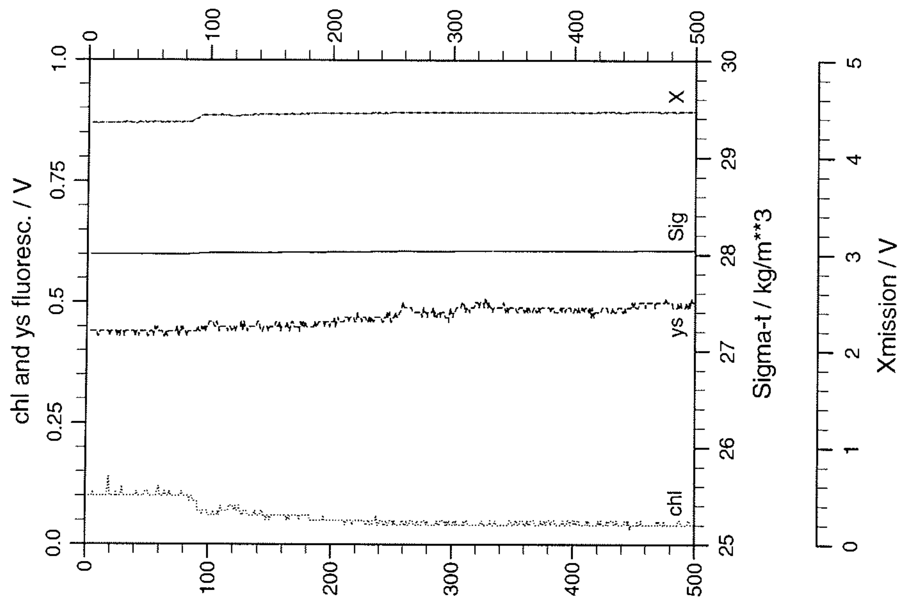

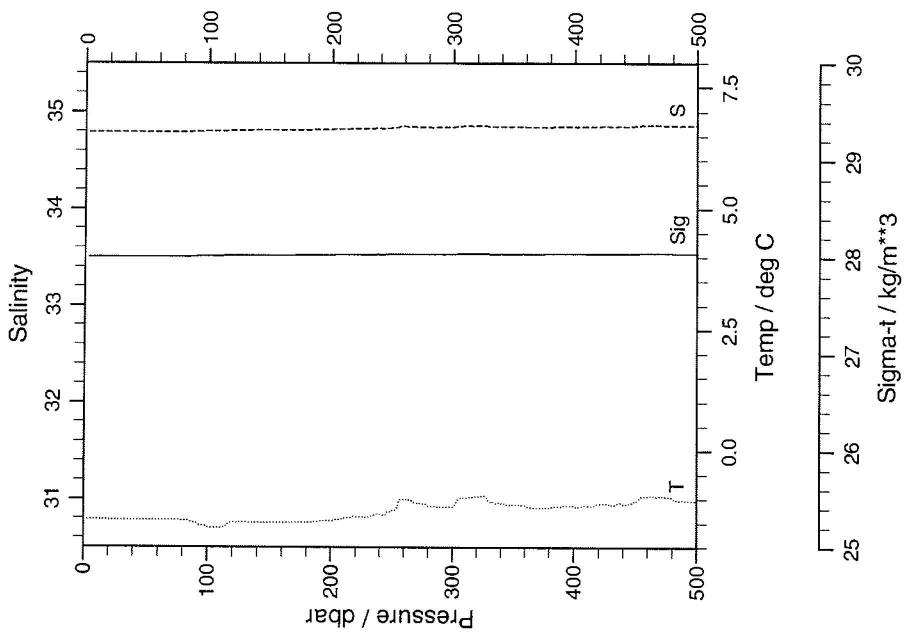

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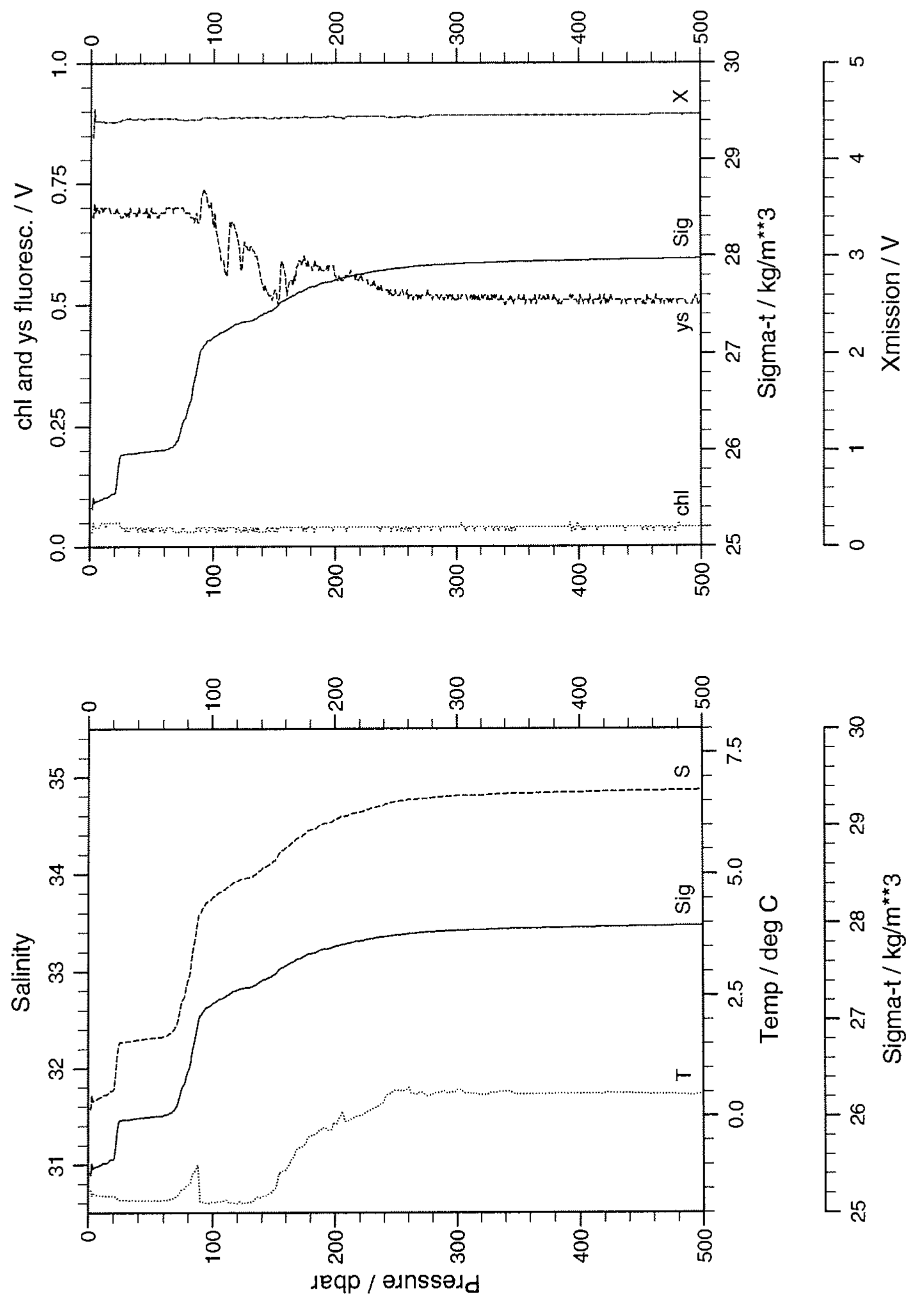
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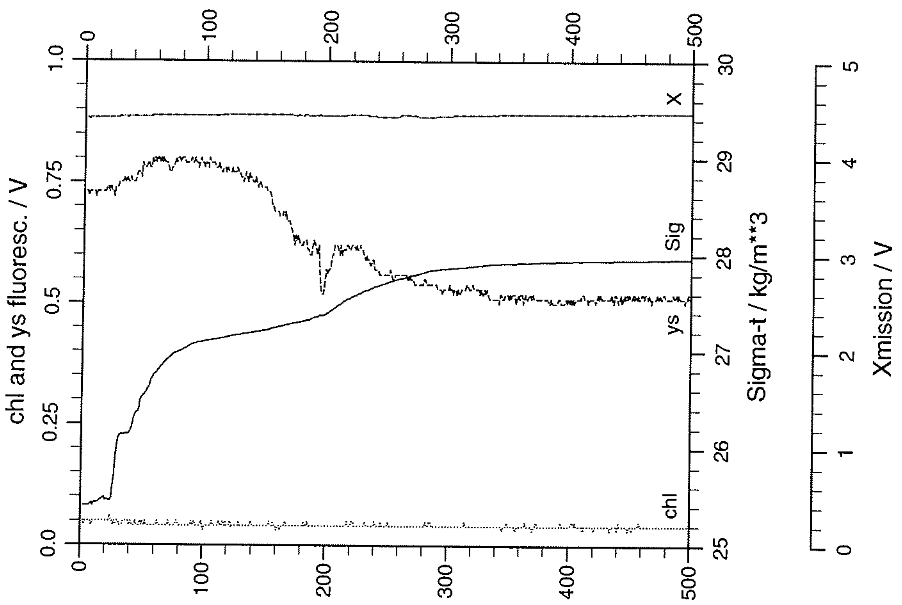

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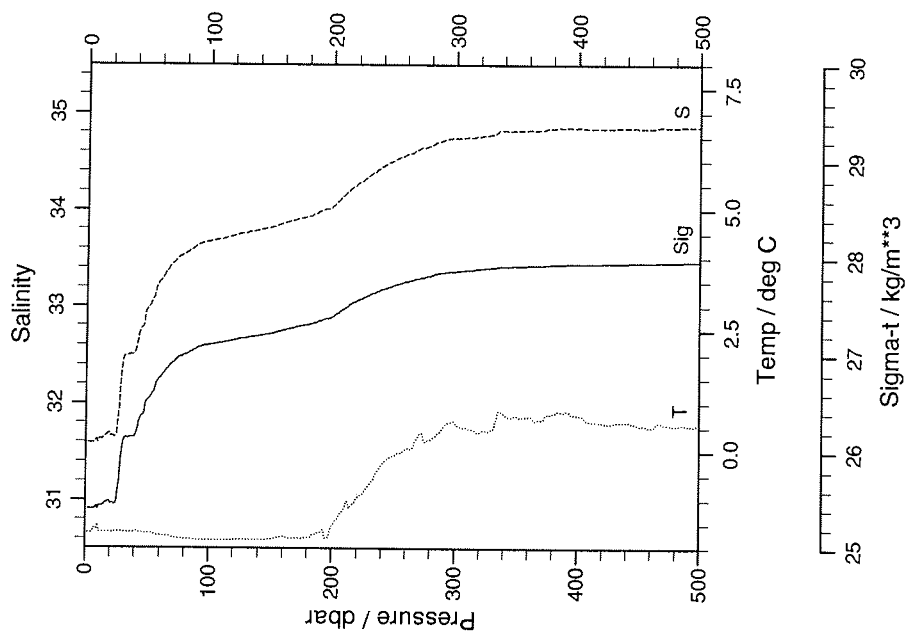

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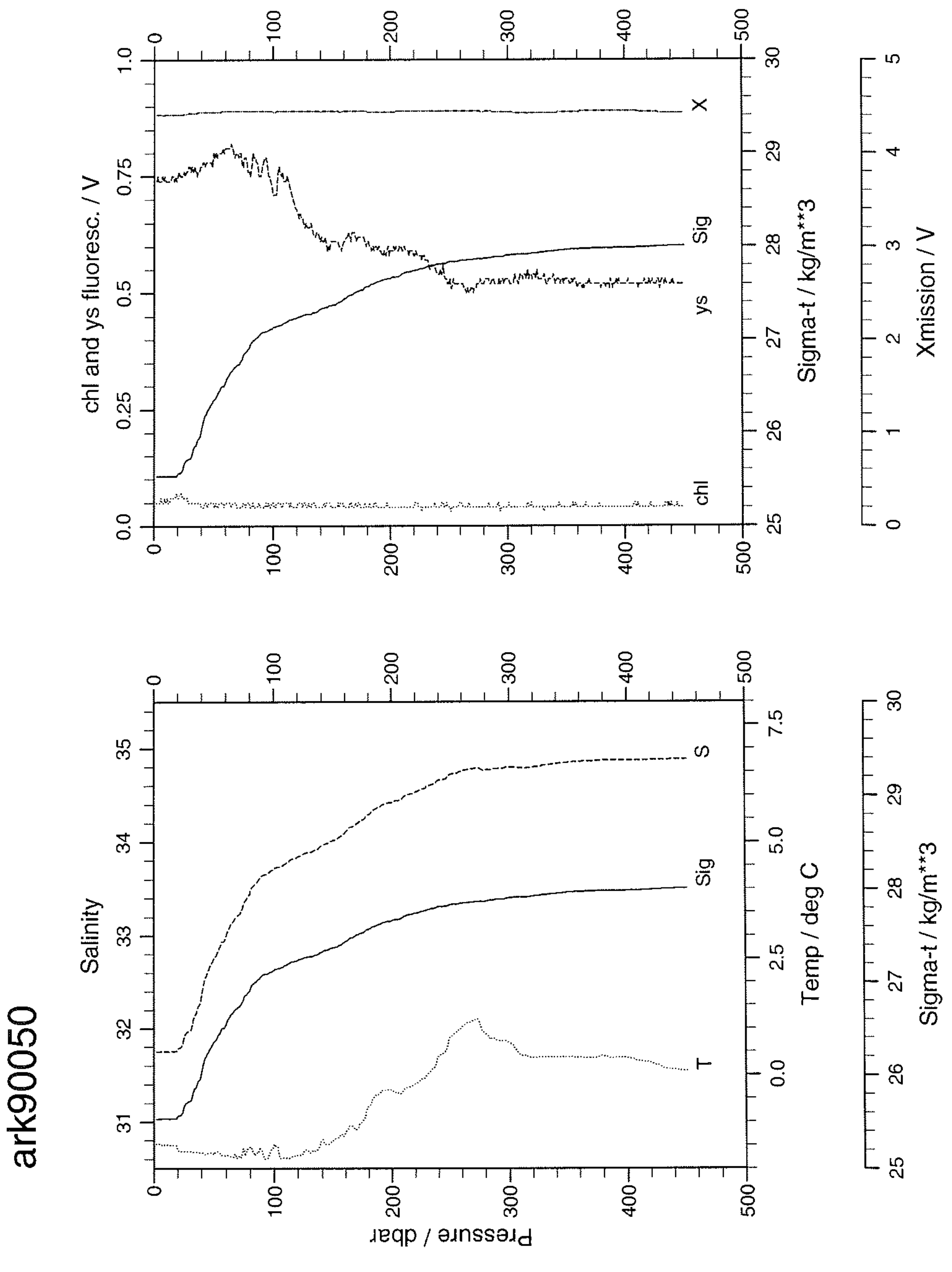
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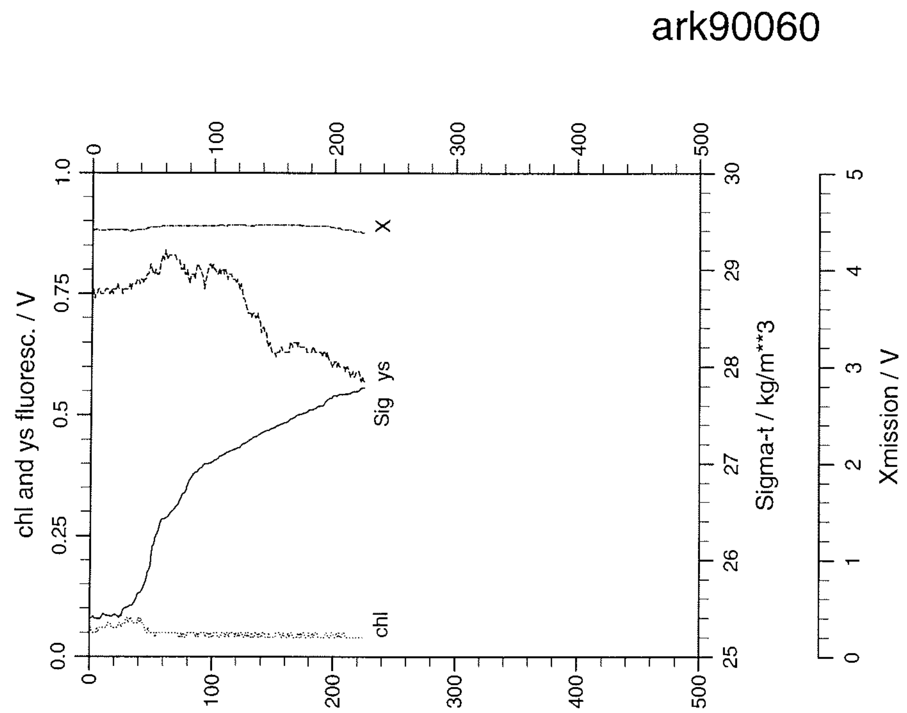
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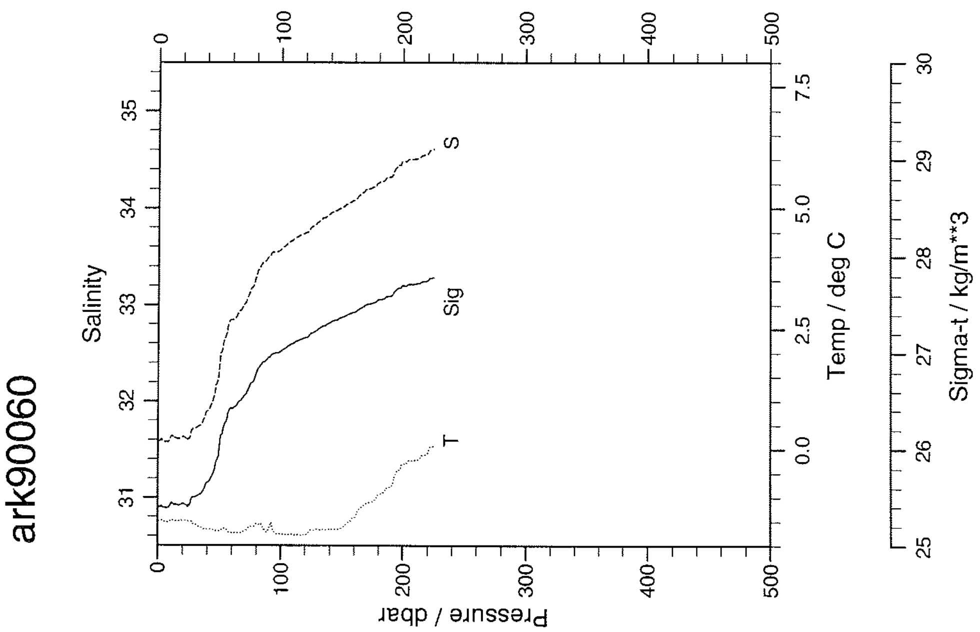
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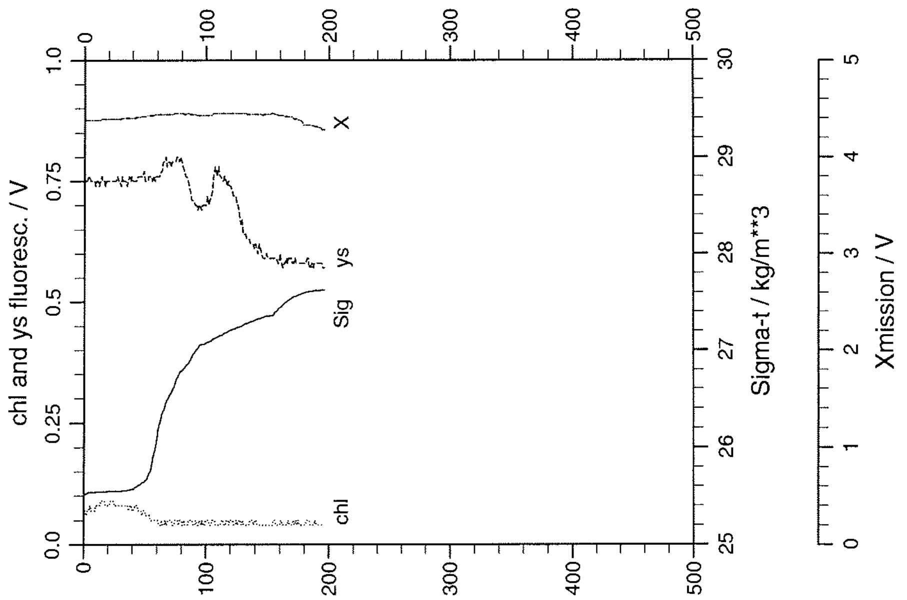

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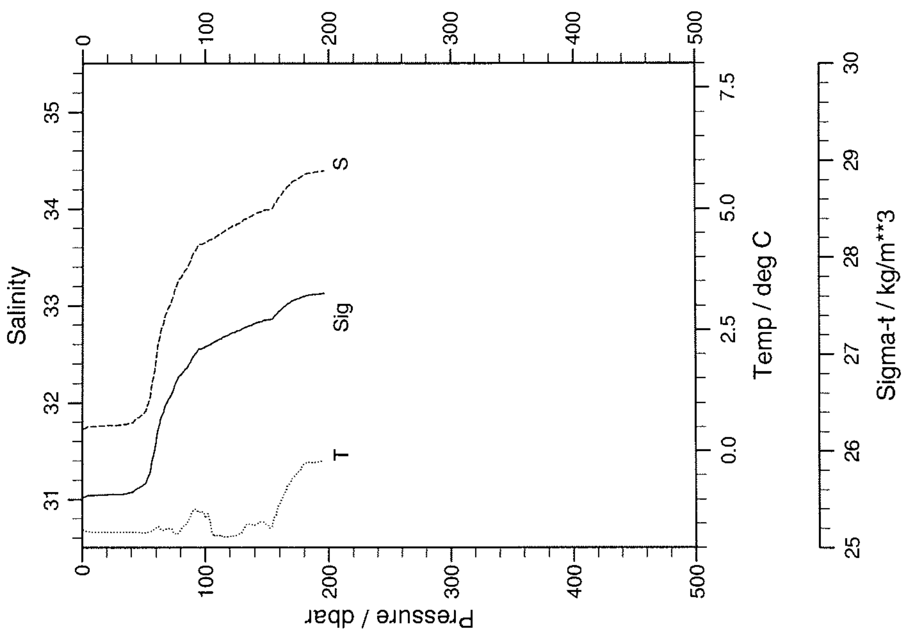

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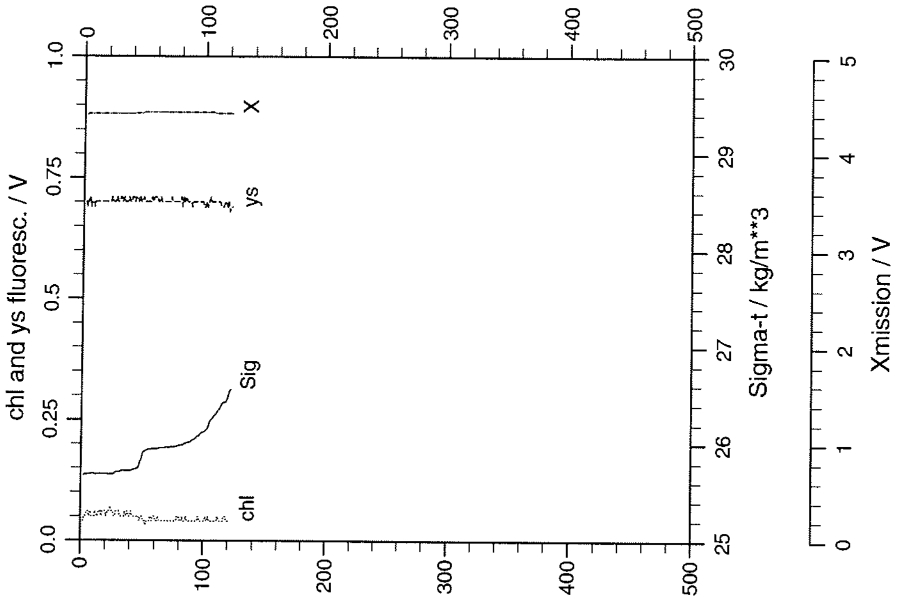

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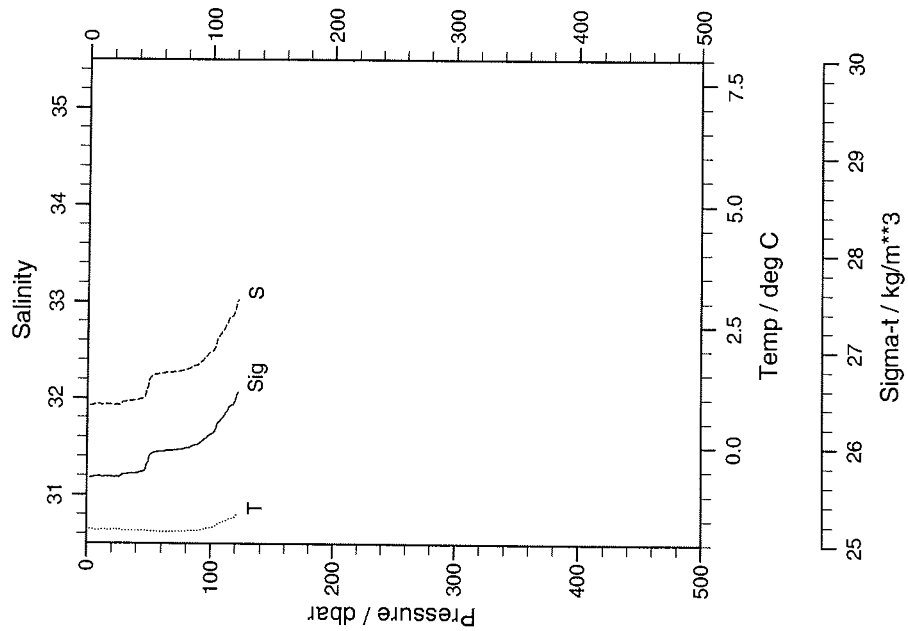

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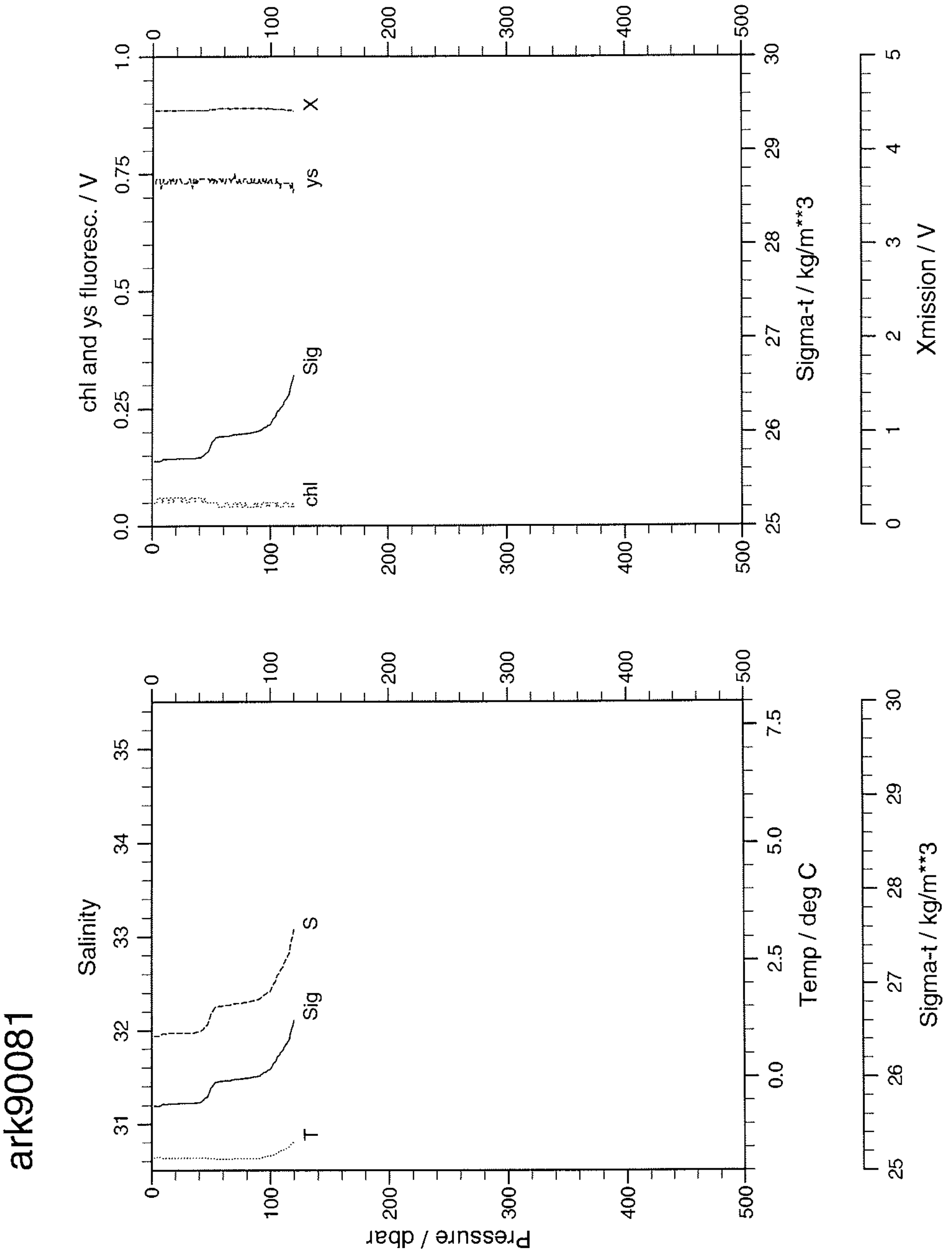

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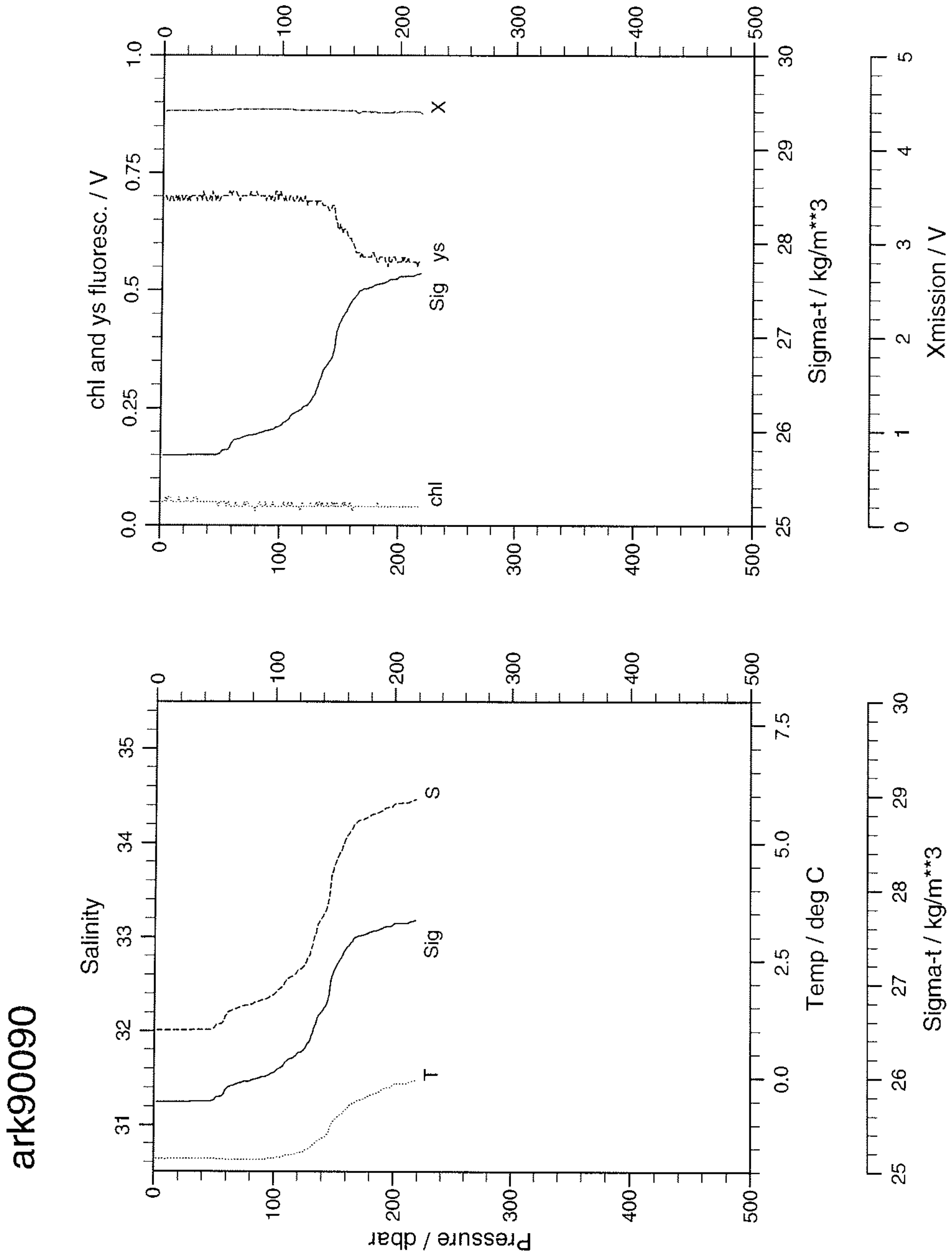
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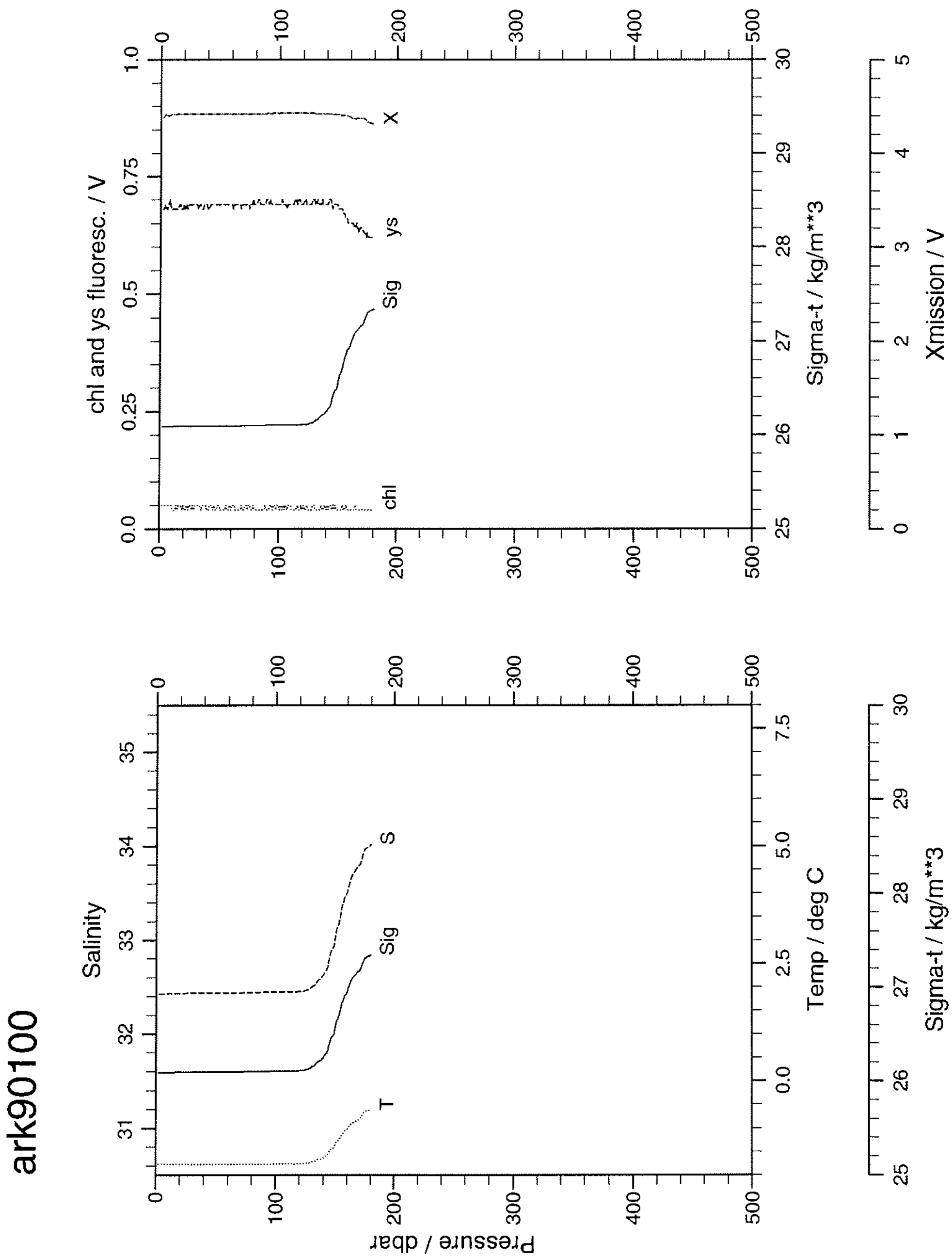
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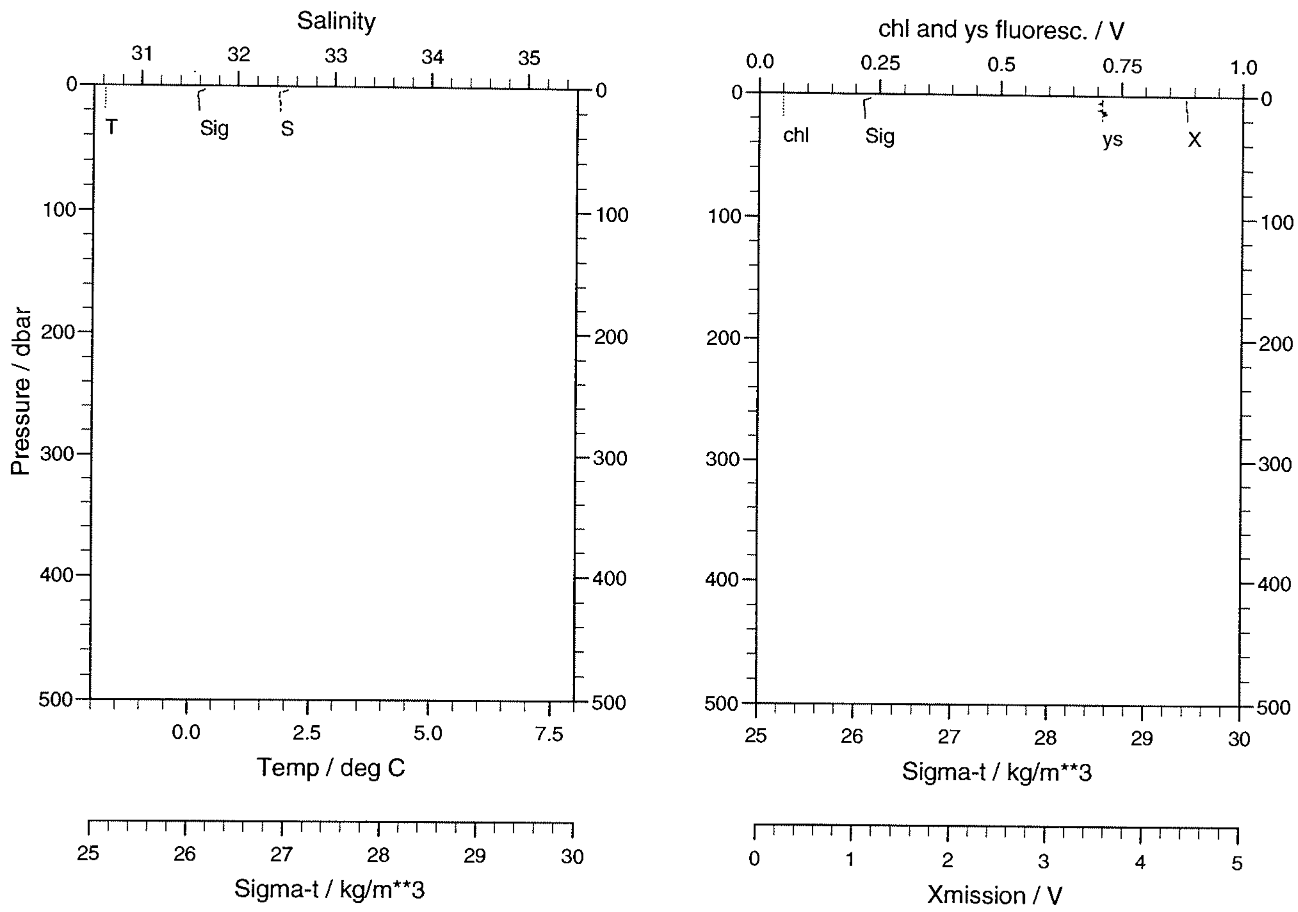

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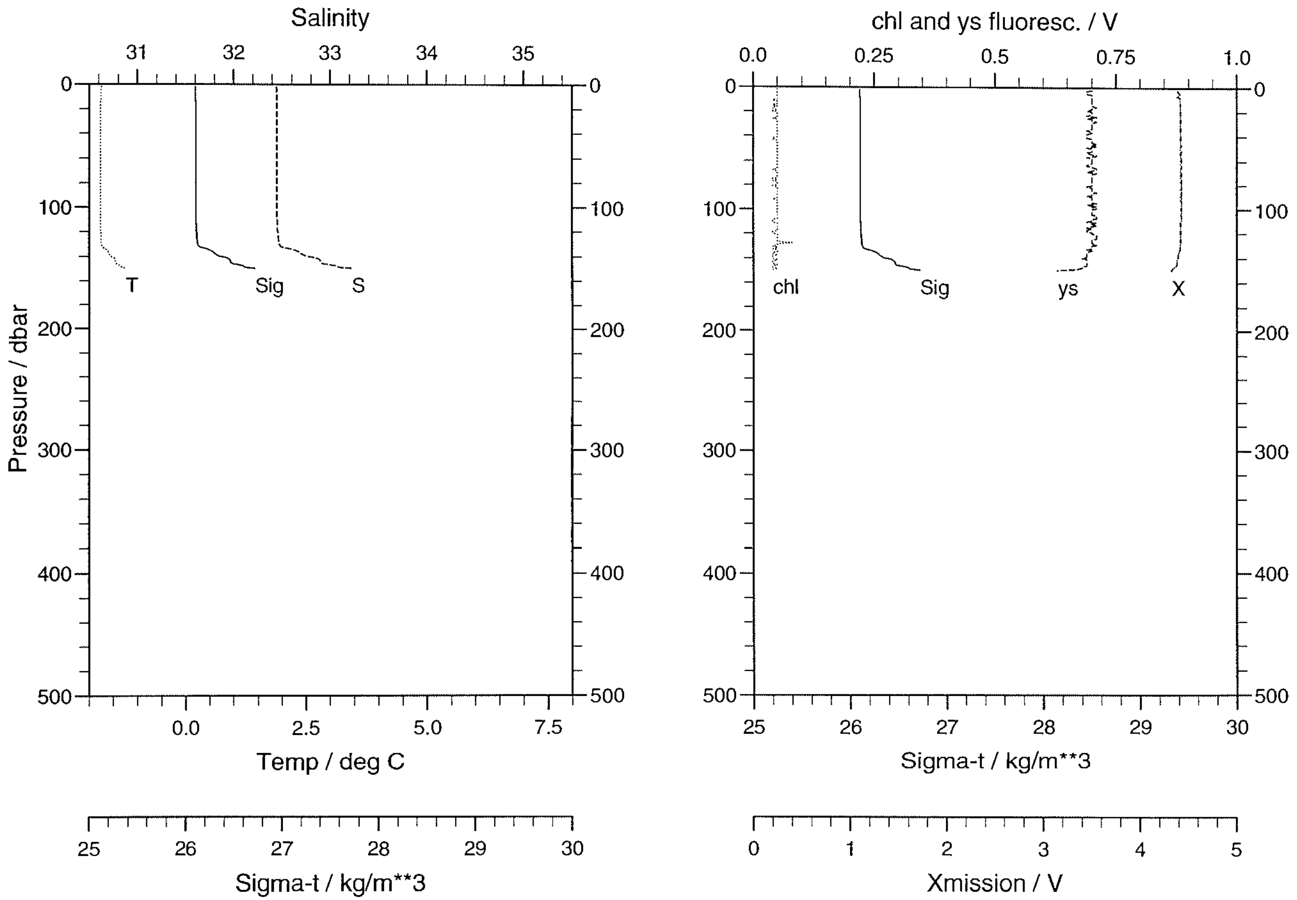

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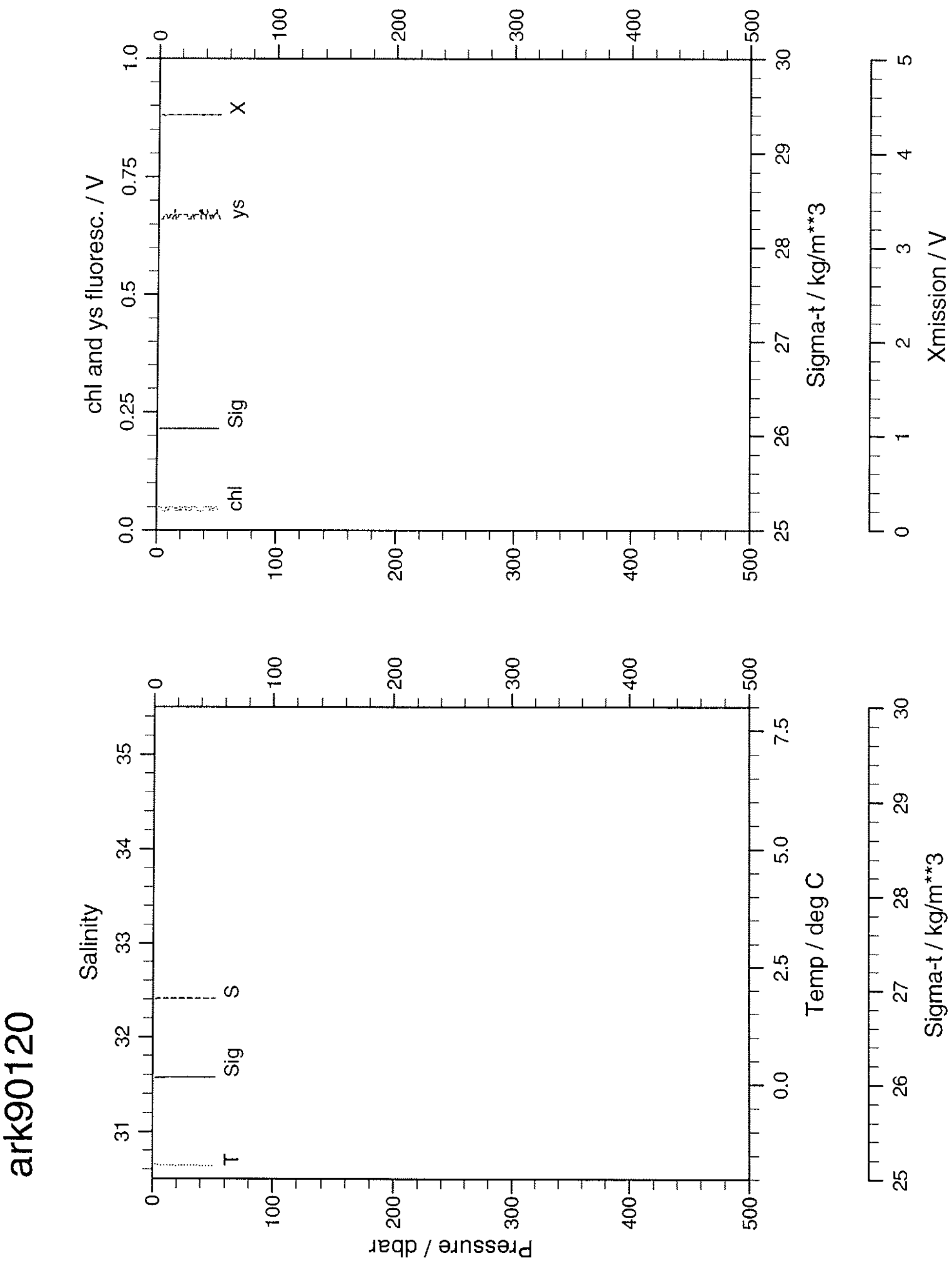
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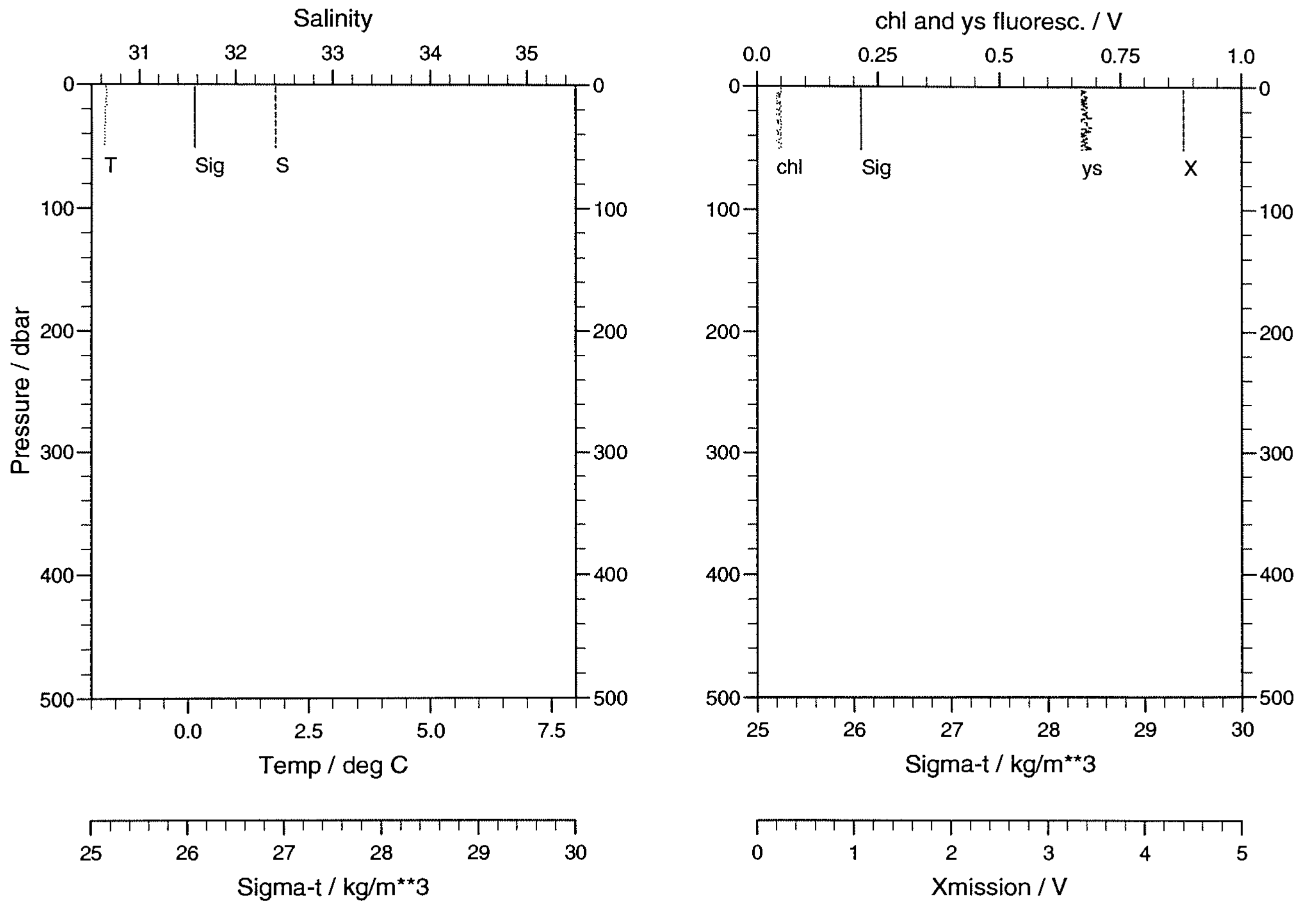

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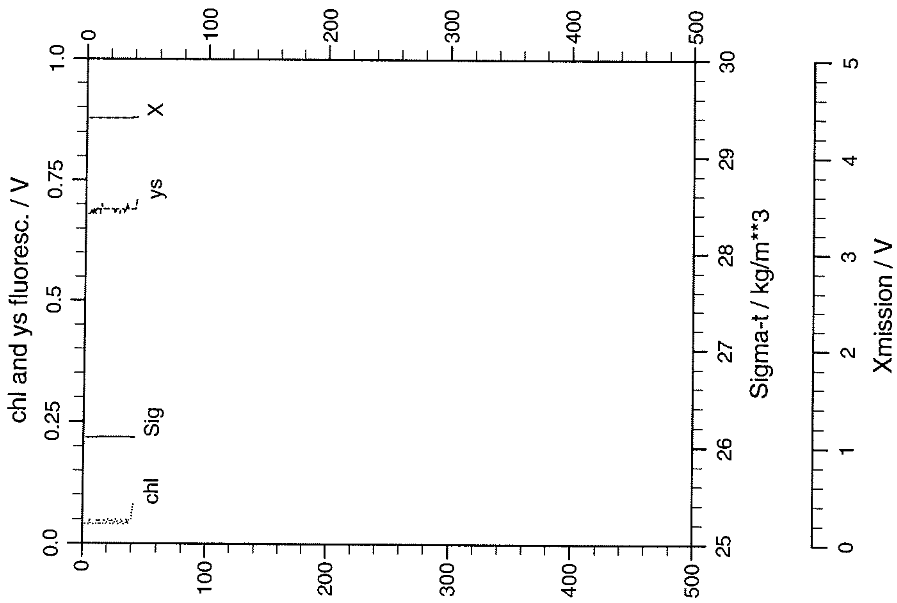

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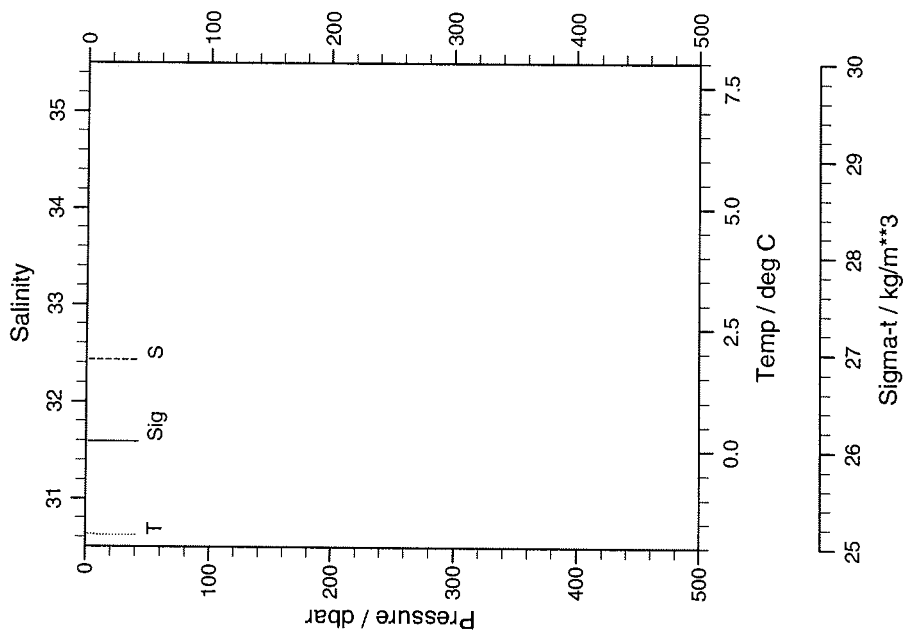

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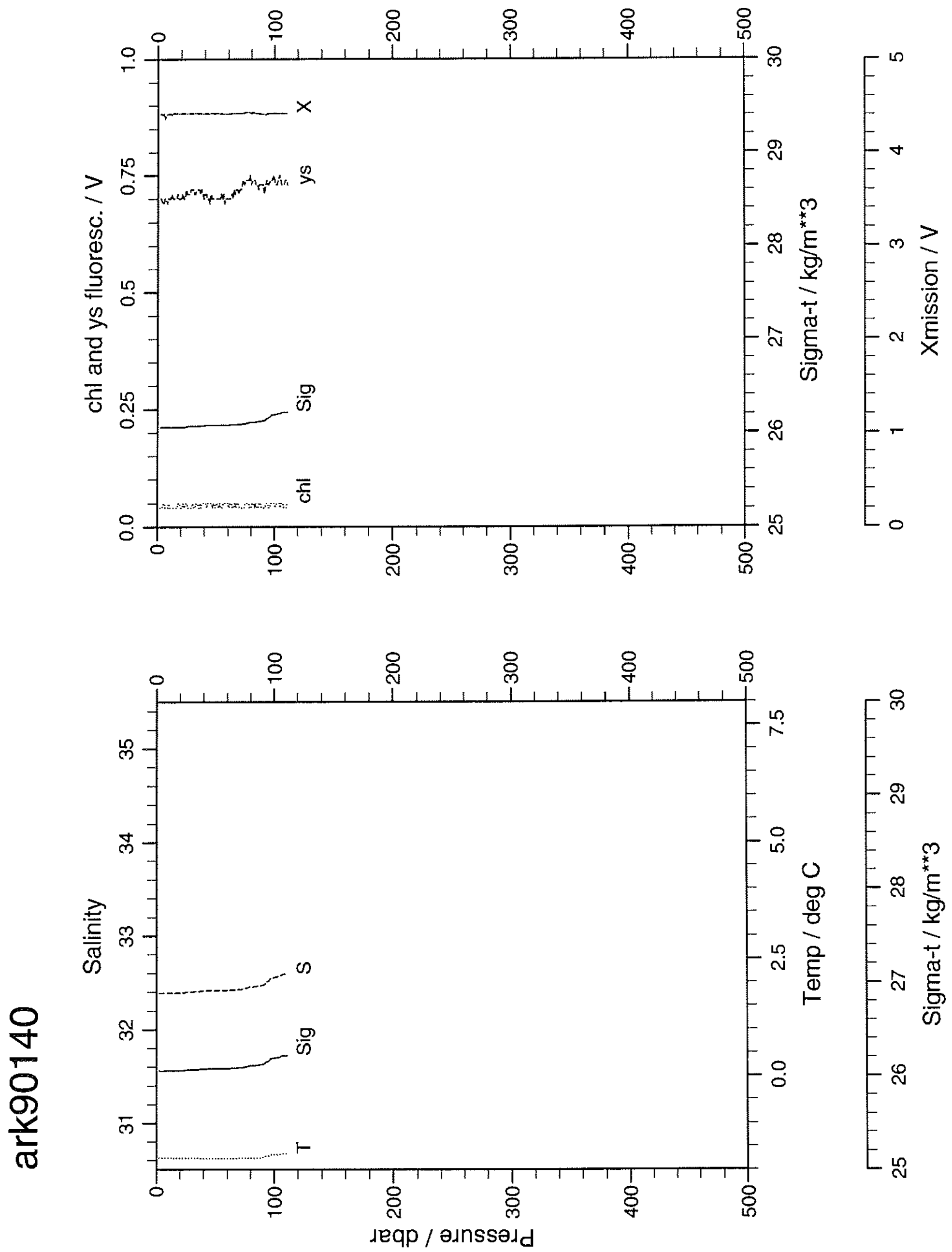

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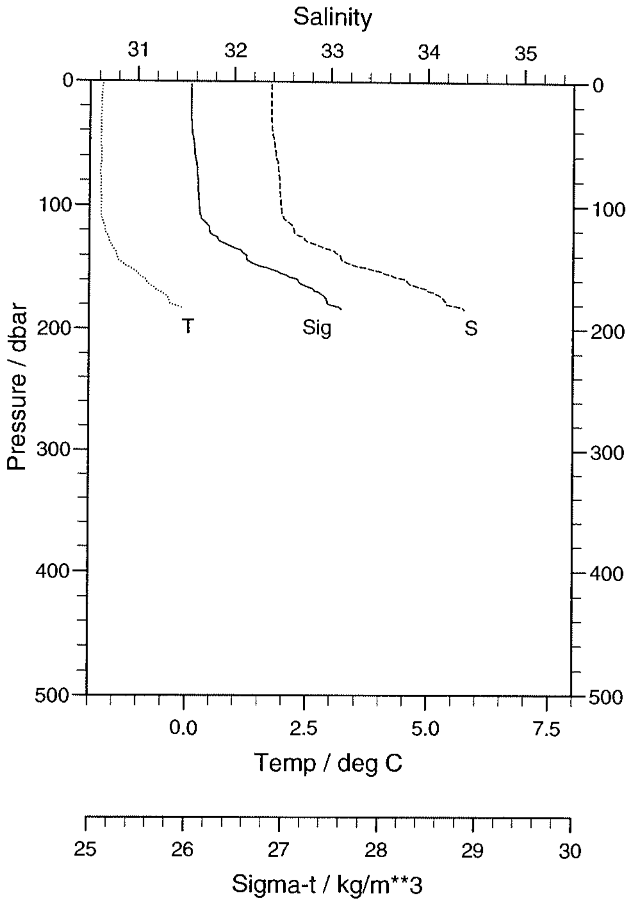

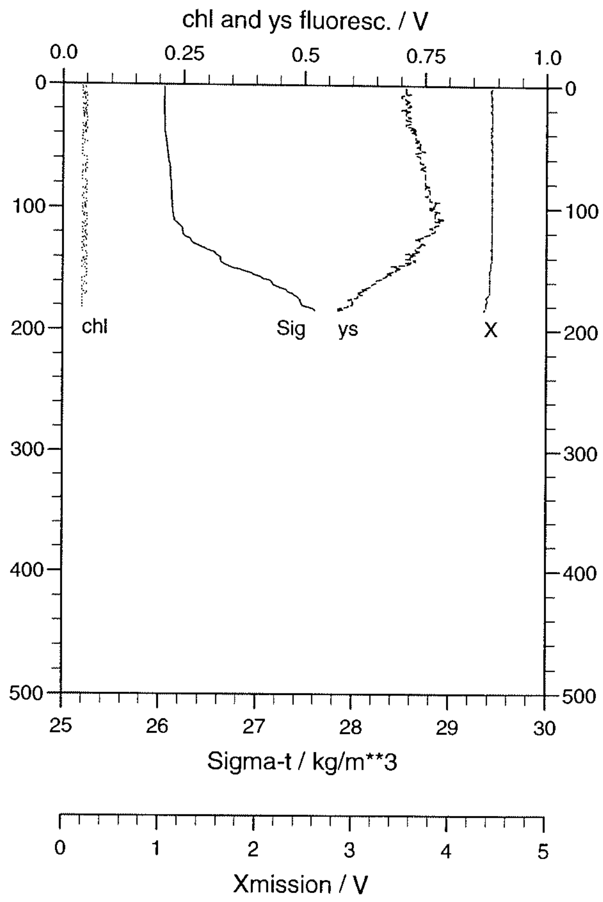

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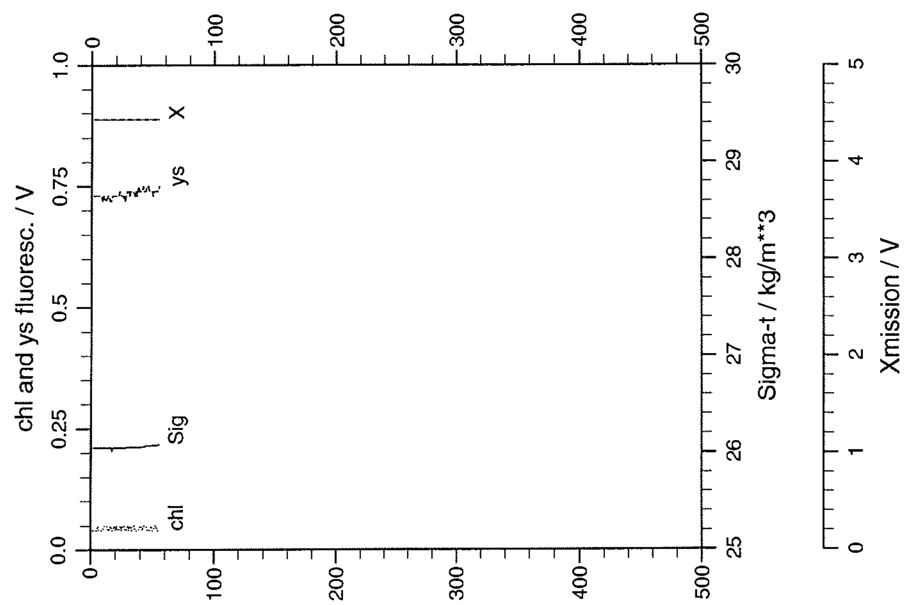

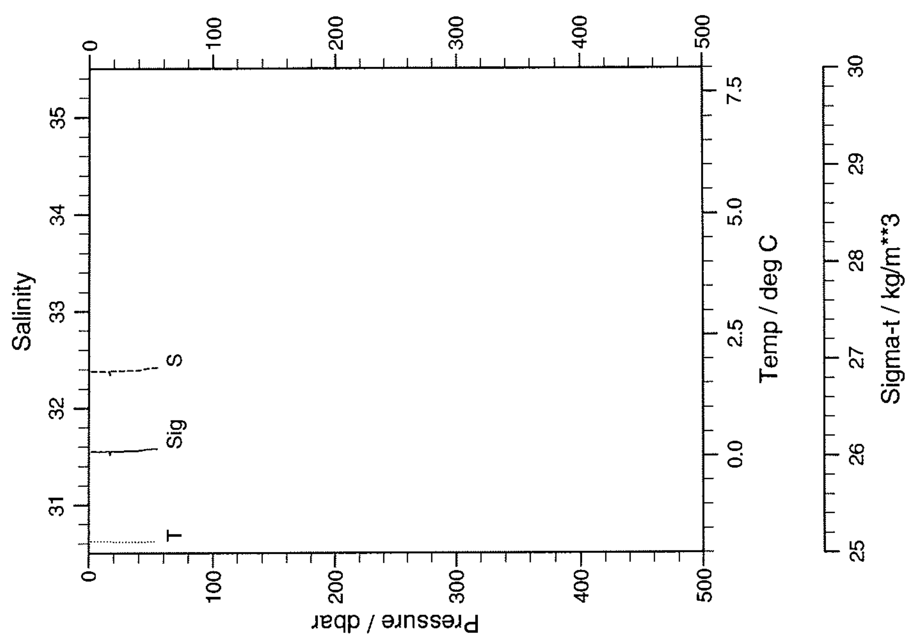

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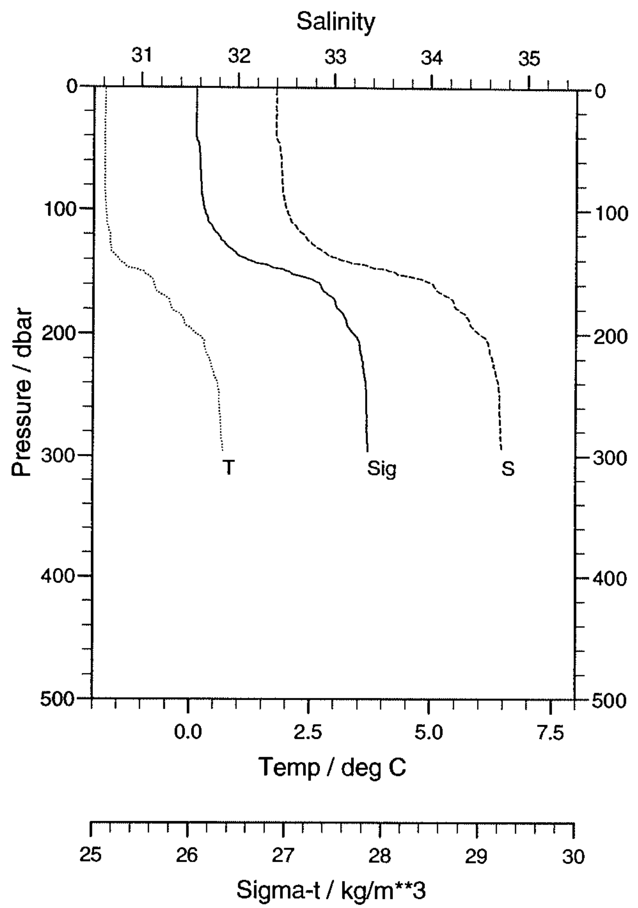

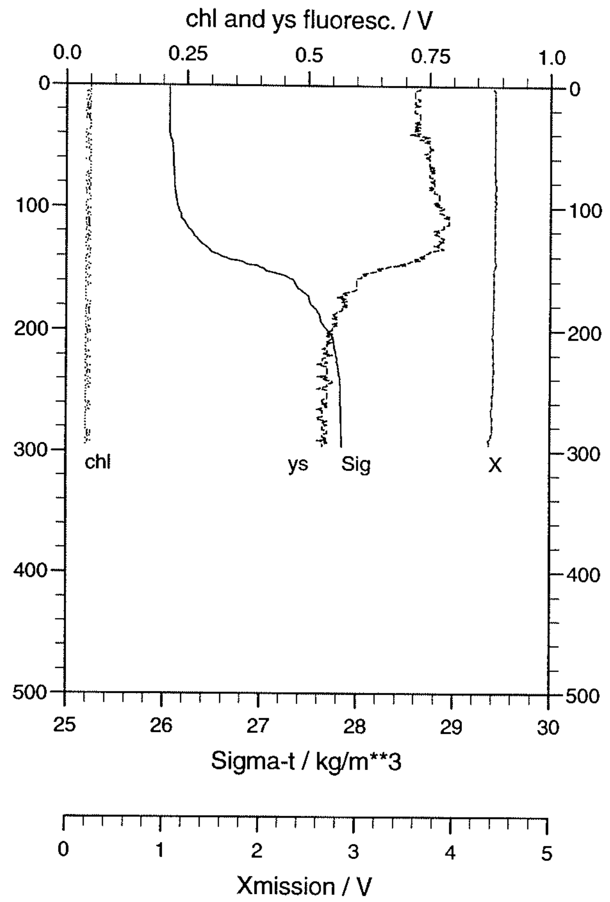

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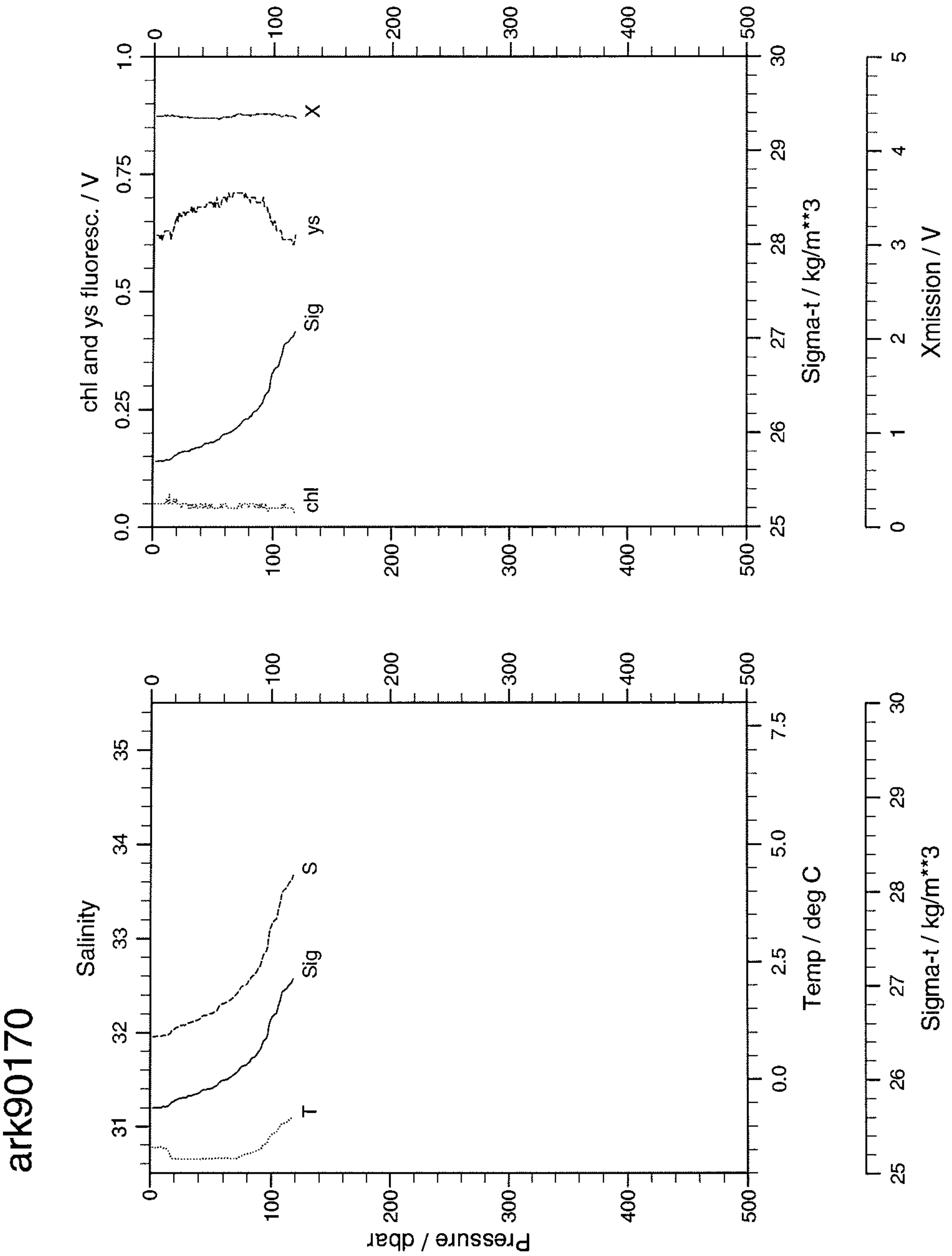
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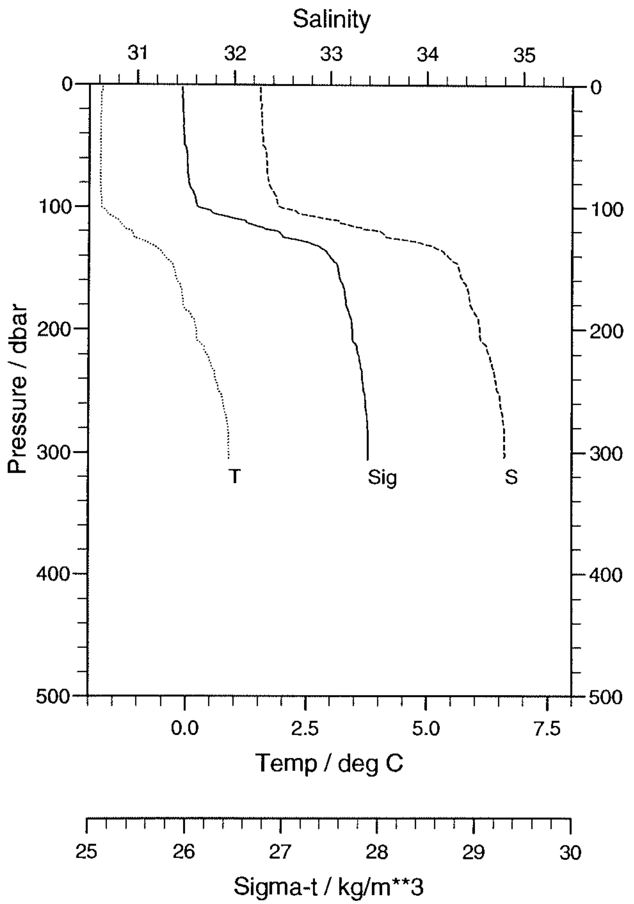

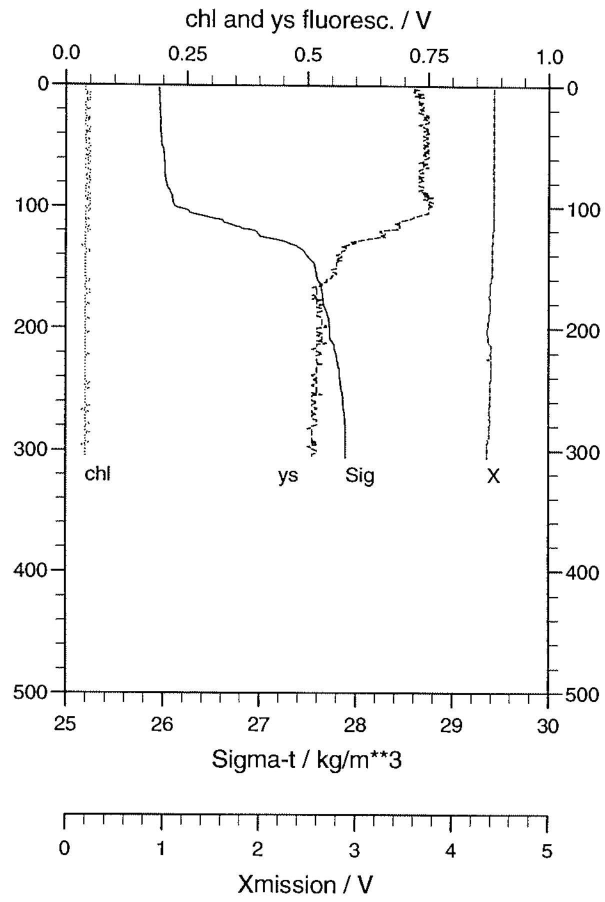

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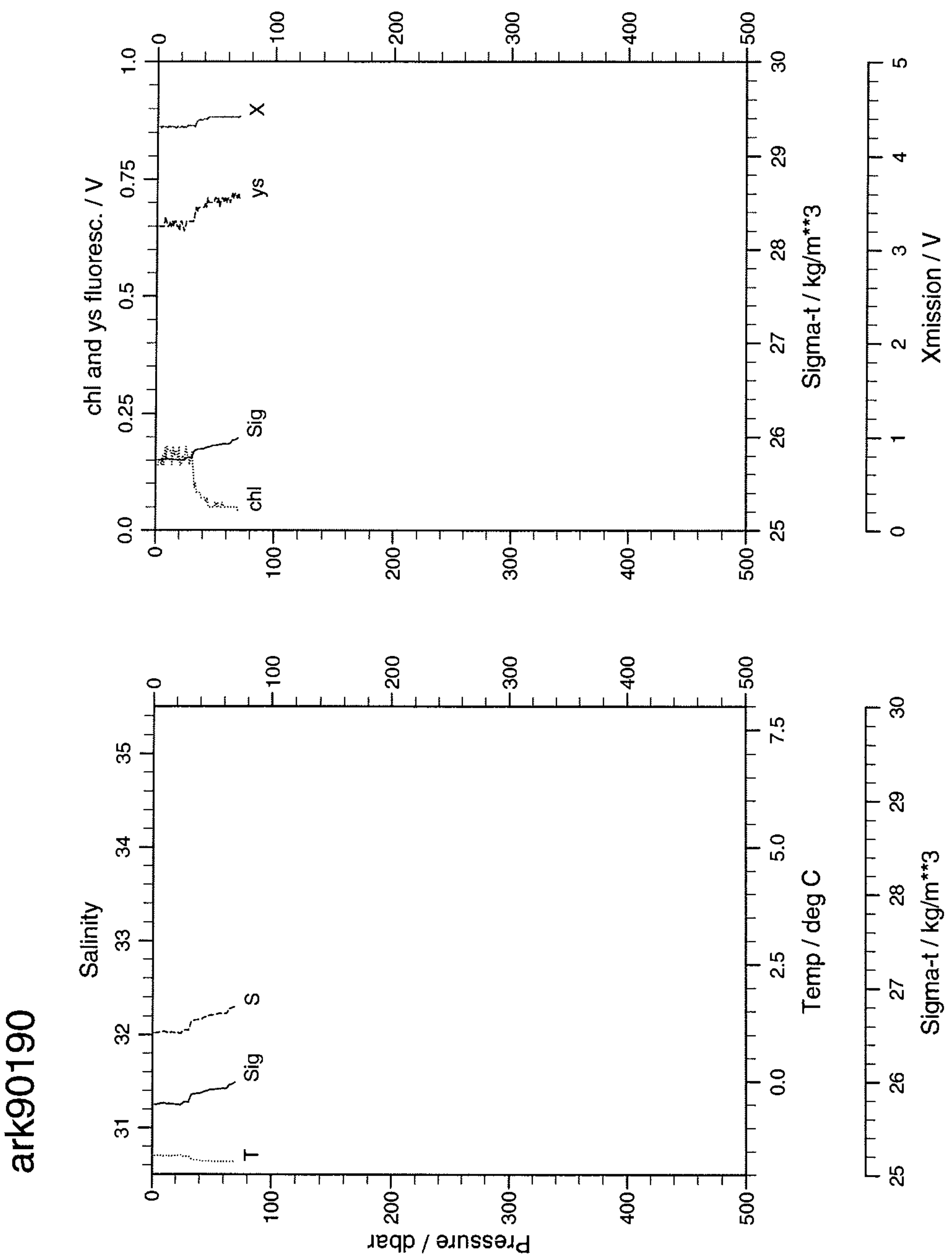
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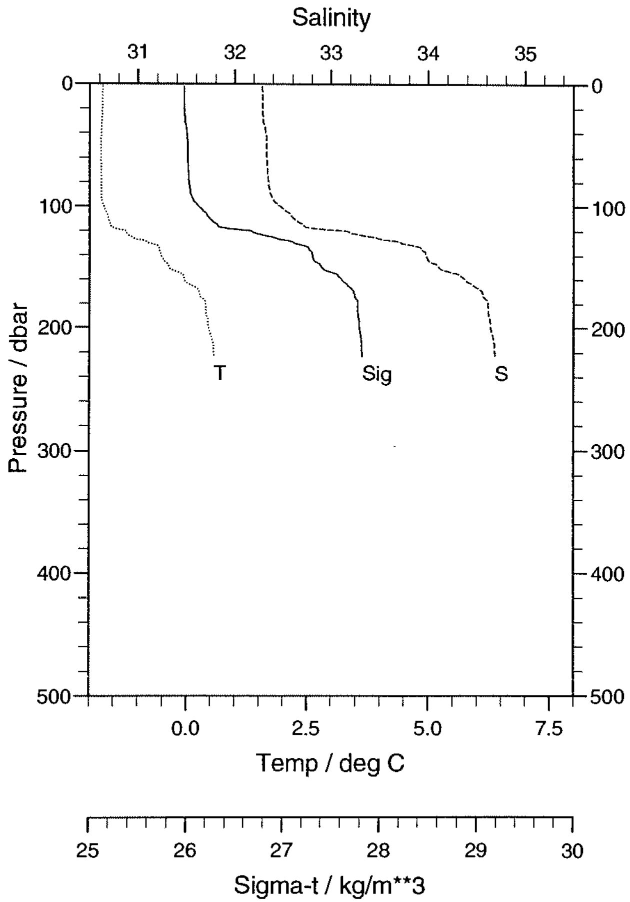
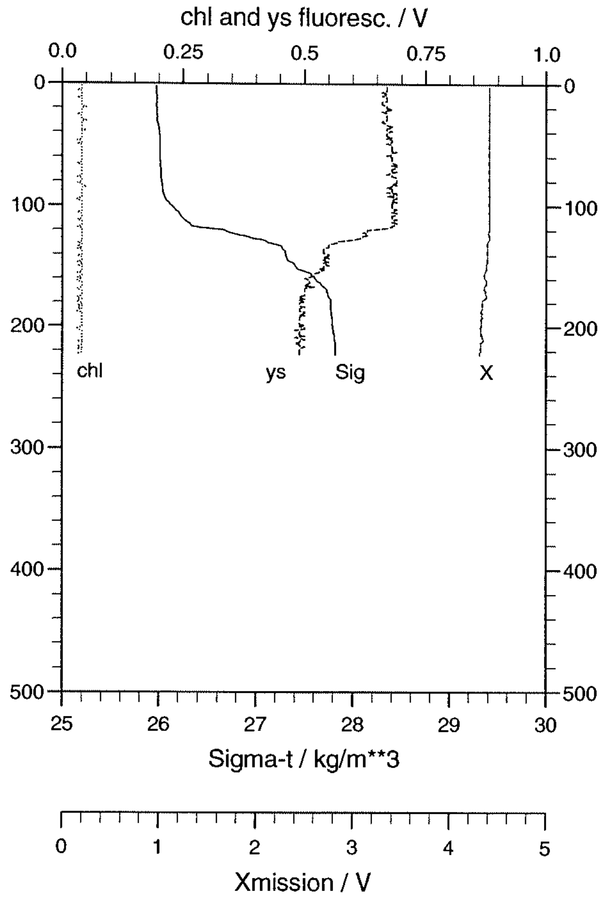
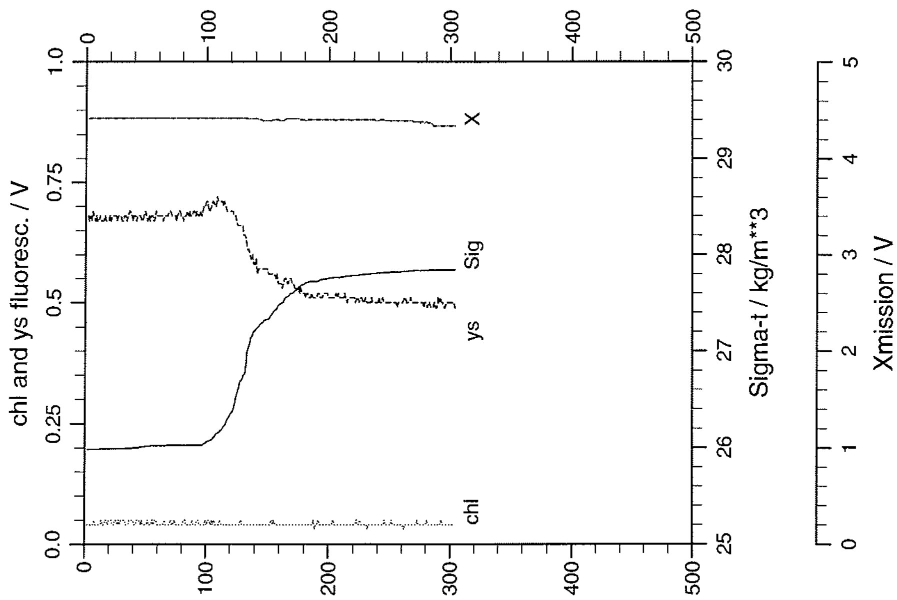


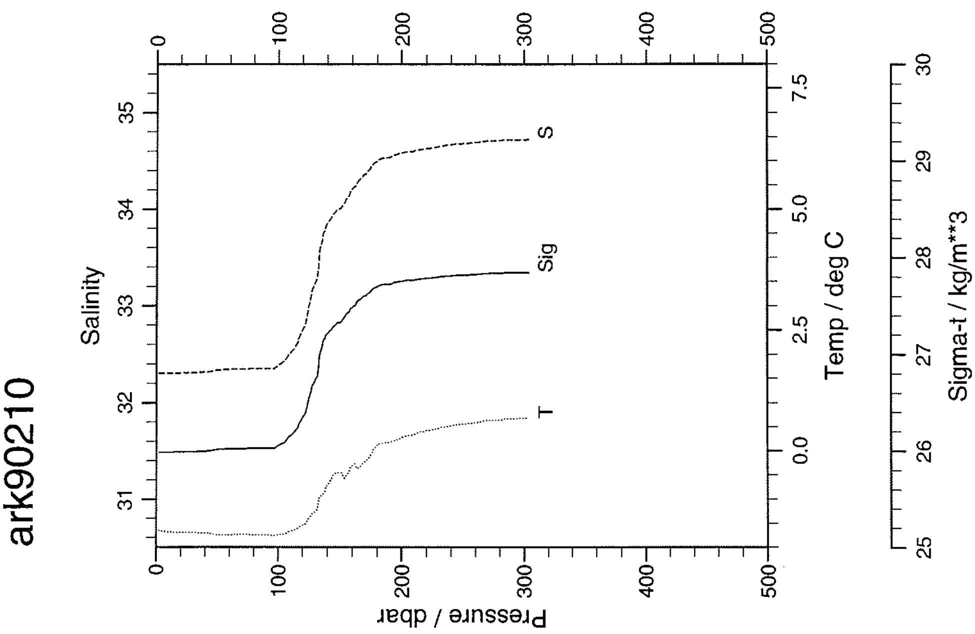


ark90200

ark90210

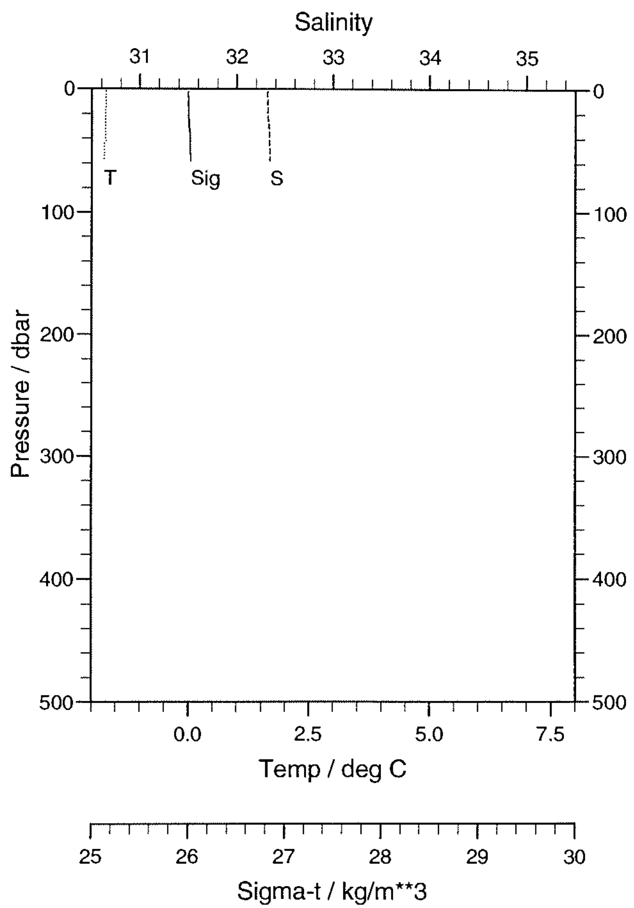


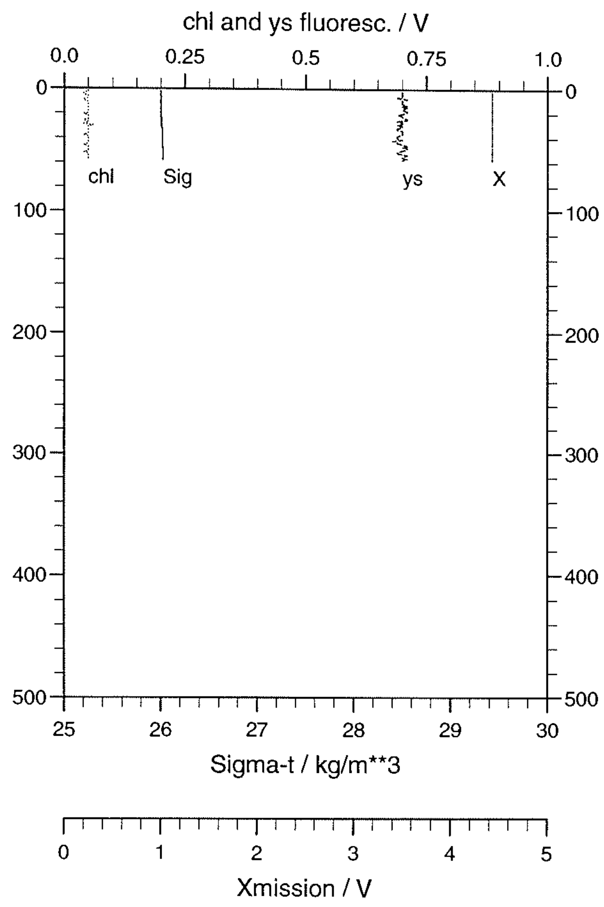
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl



ark90210
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

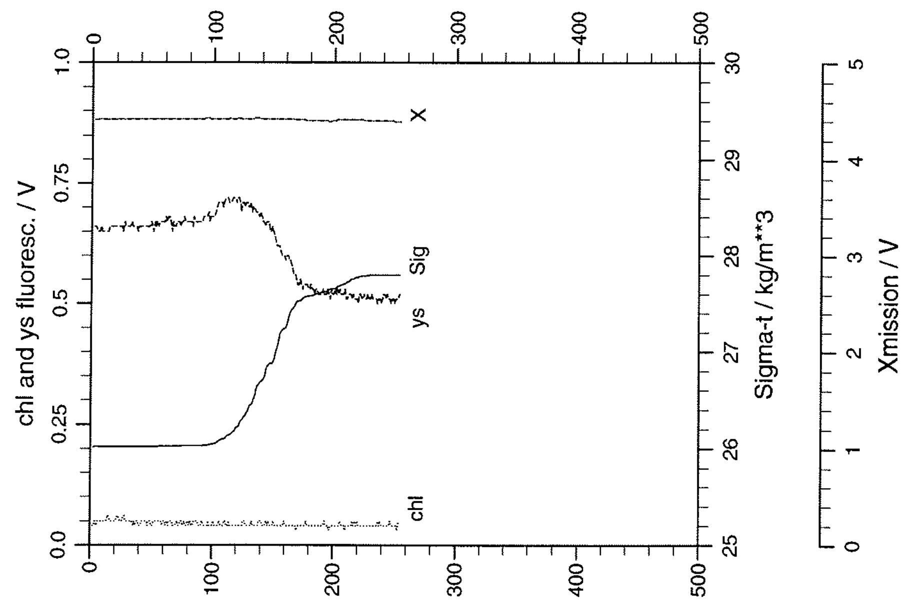
ark90211





ark90211

ark90220



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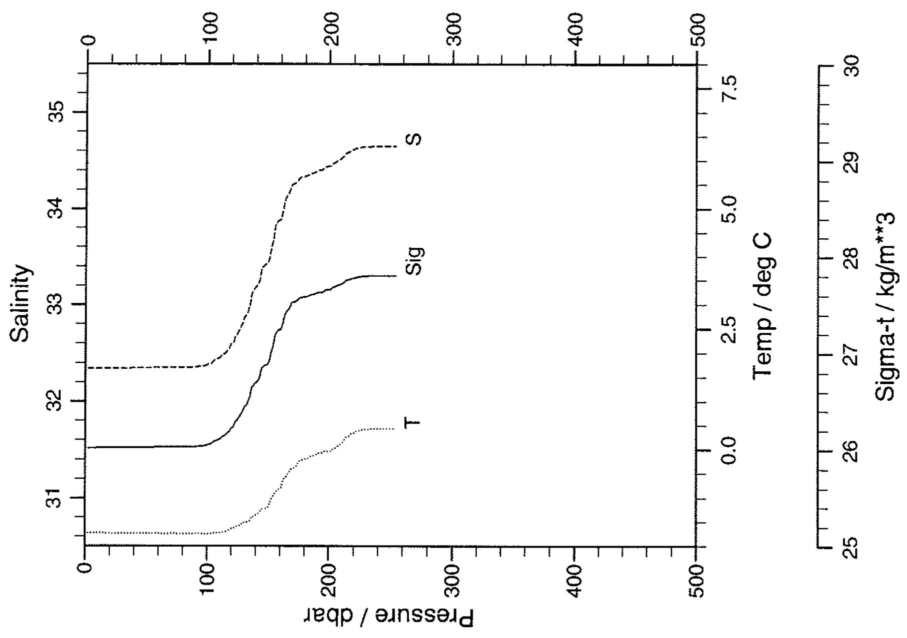
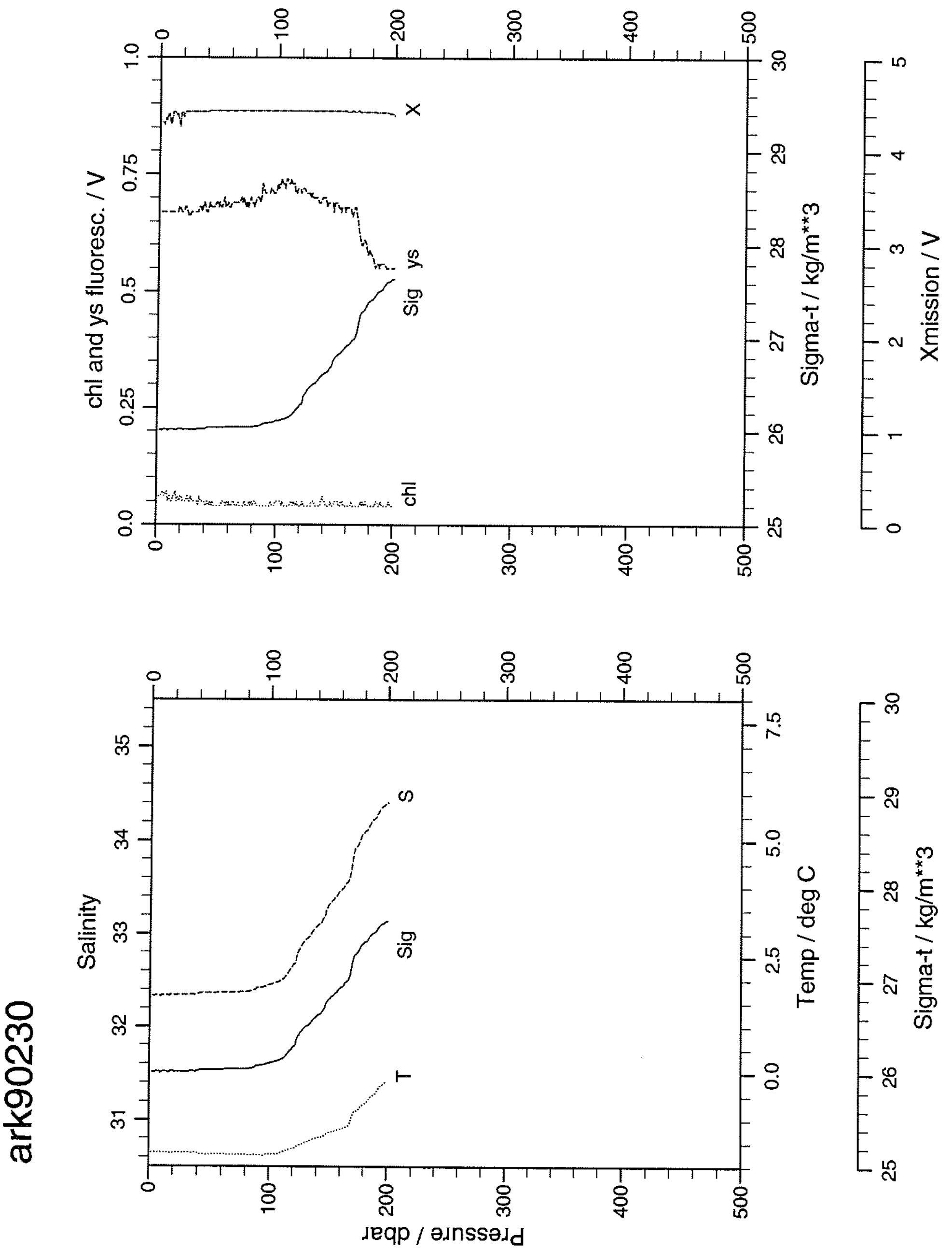
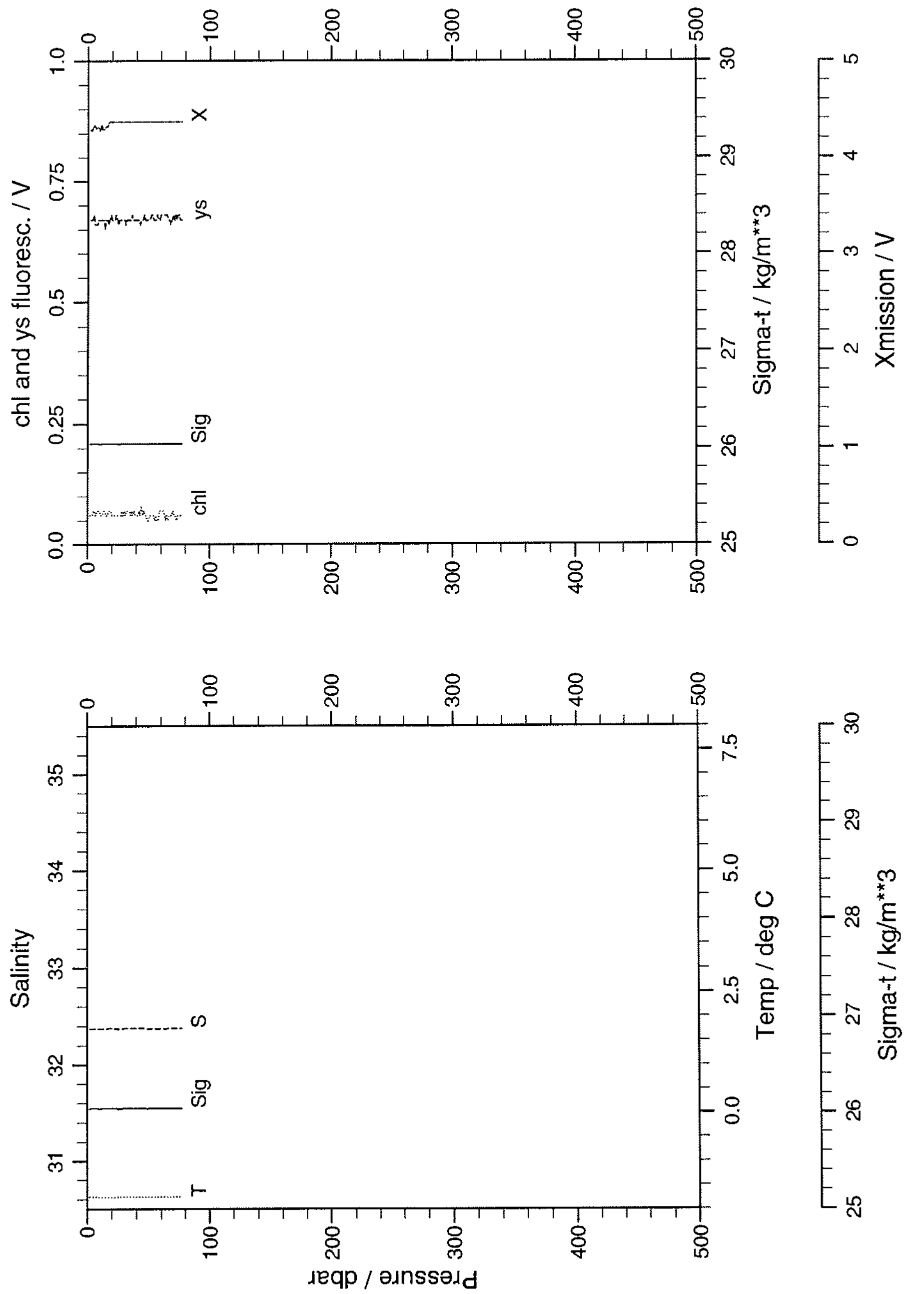


ark90230

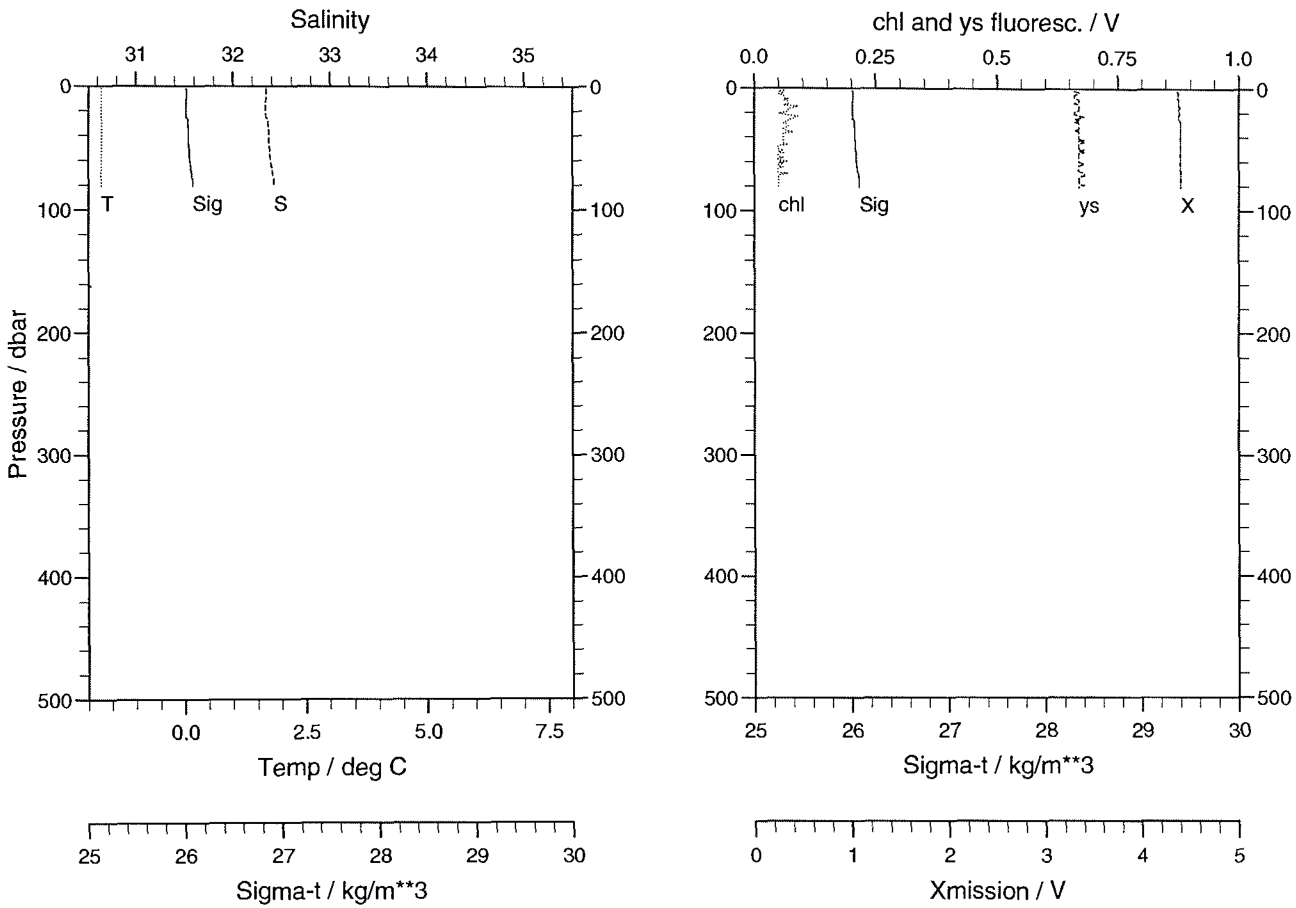

ark90230
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90240



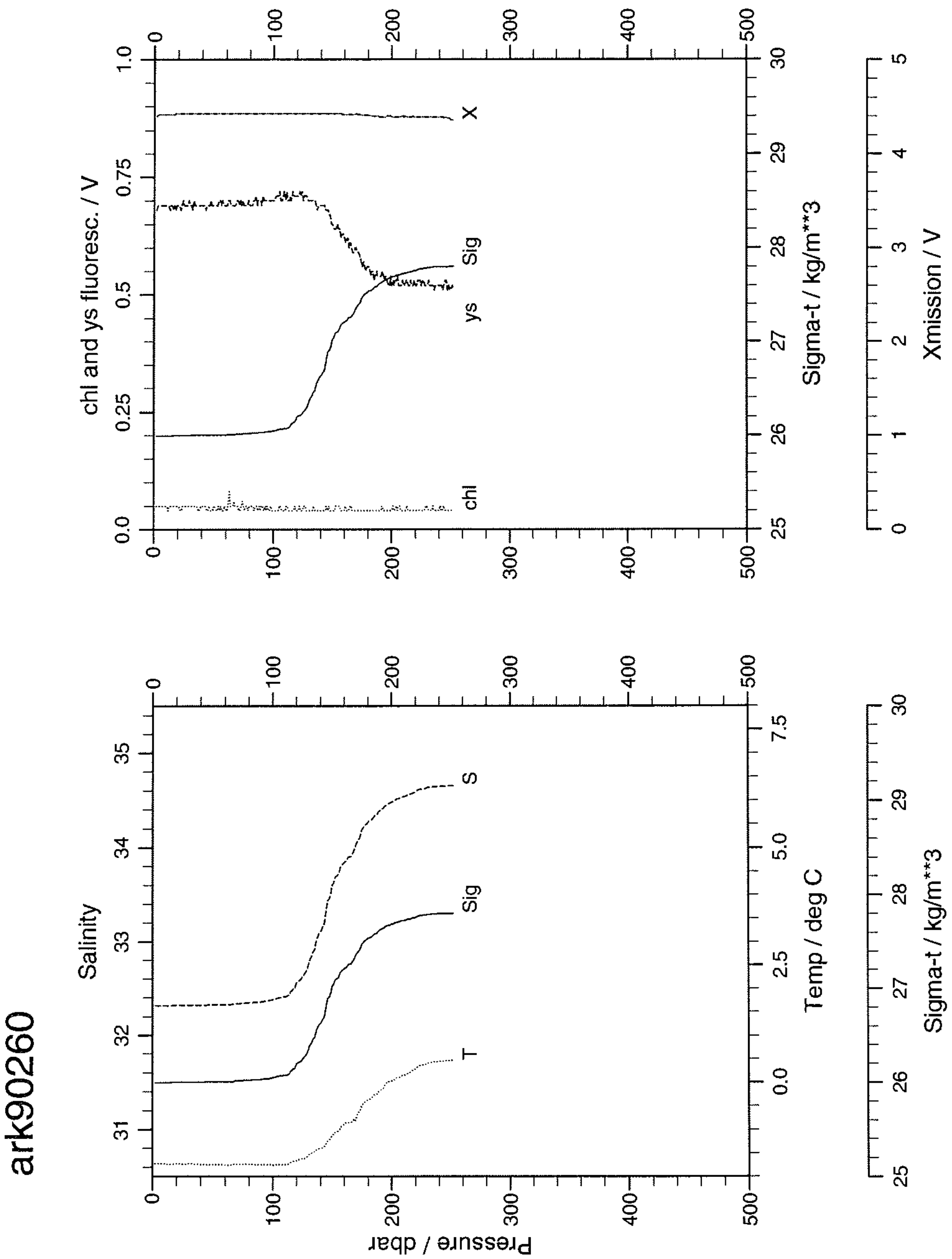
ark90240

ark90250

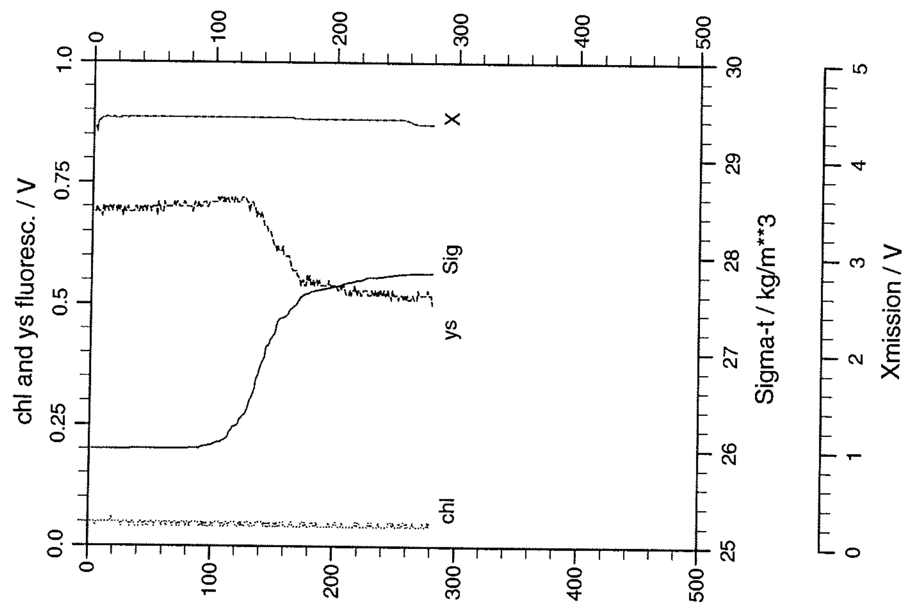


ark90250

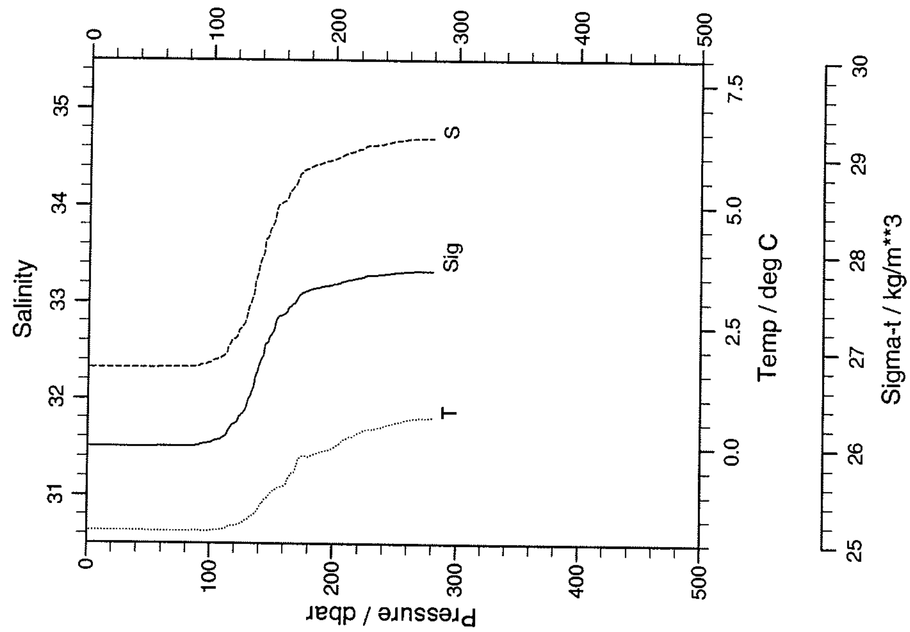
ark90260


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
ark90260
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

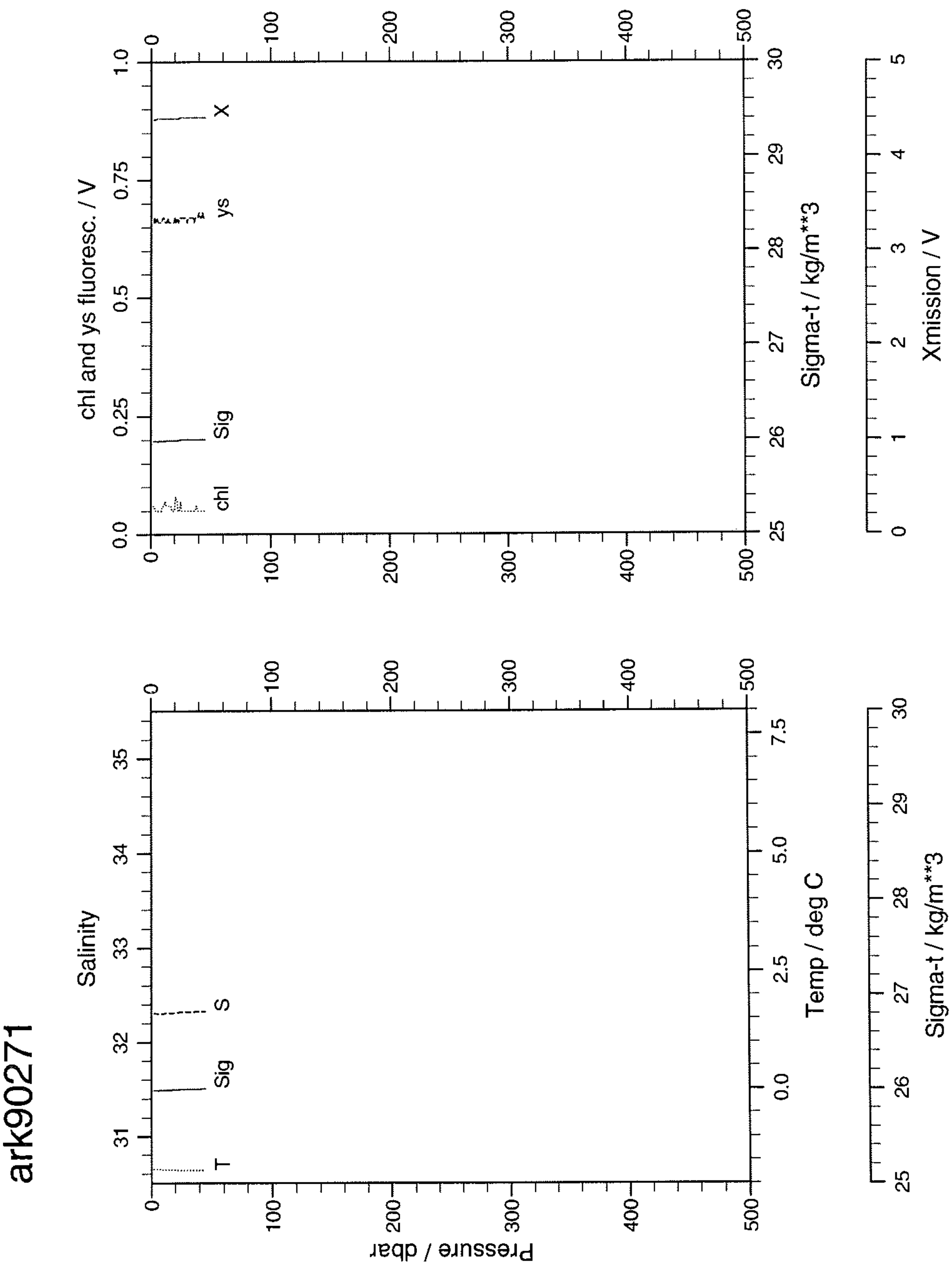
ark90270



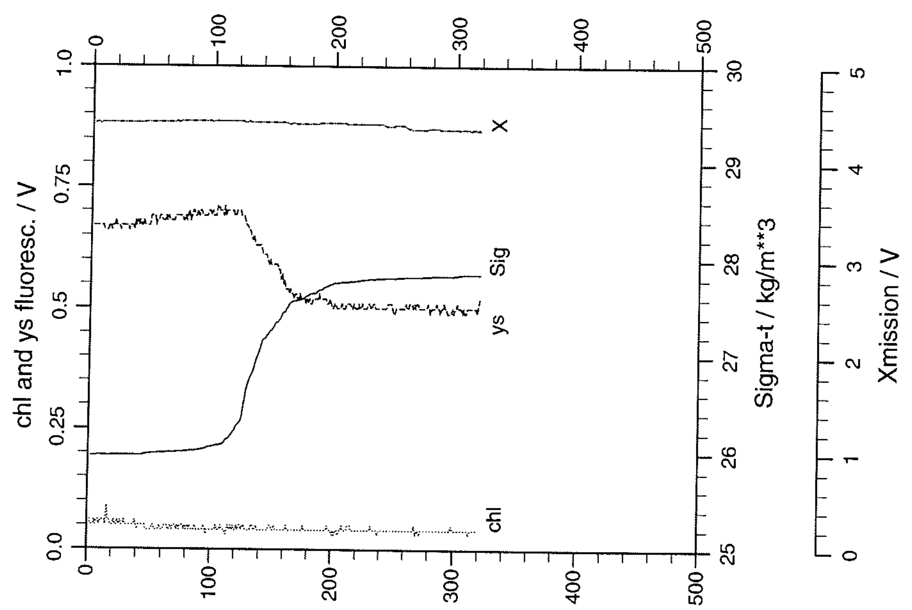
ark90270

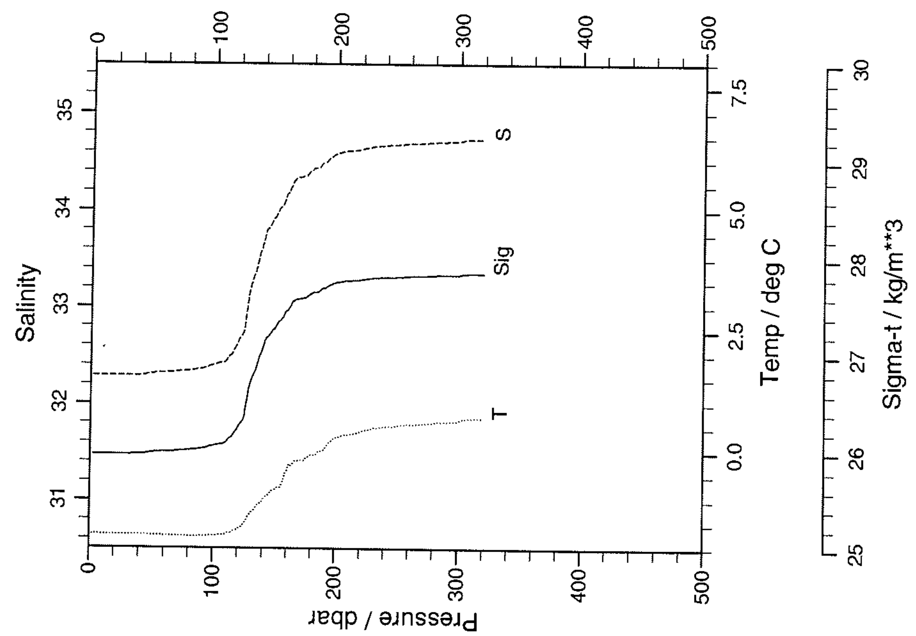


ark90271


ark90271
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

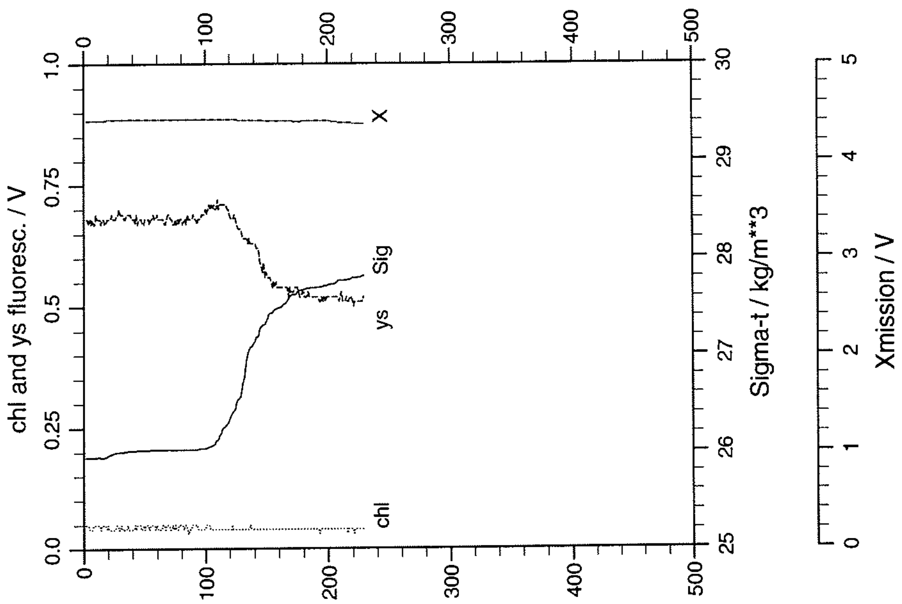
ark90280

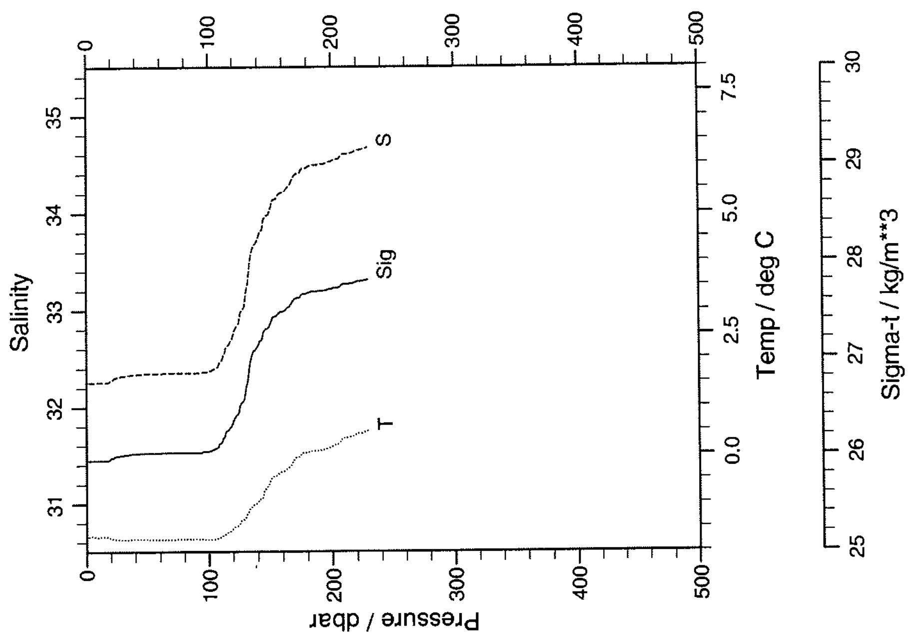




ark90280

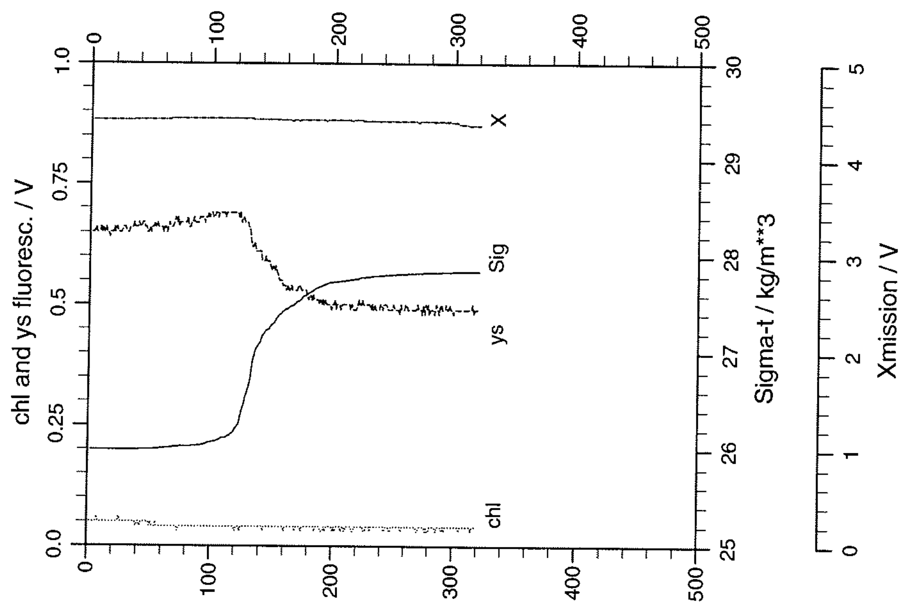
ark90290



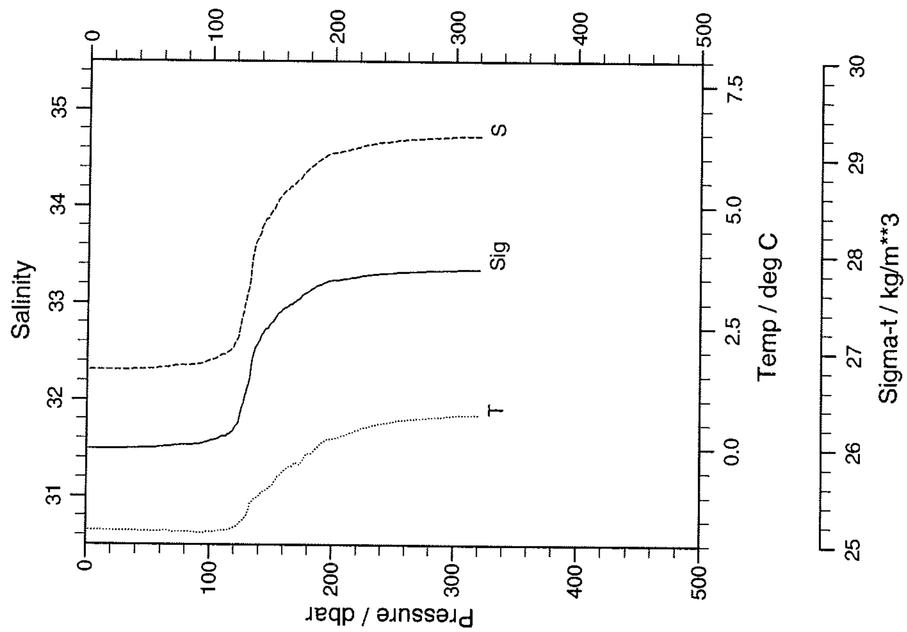


ark90290

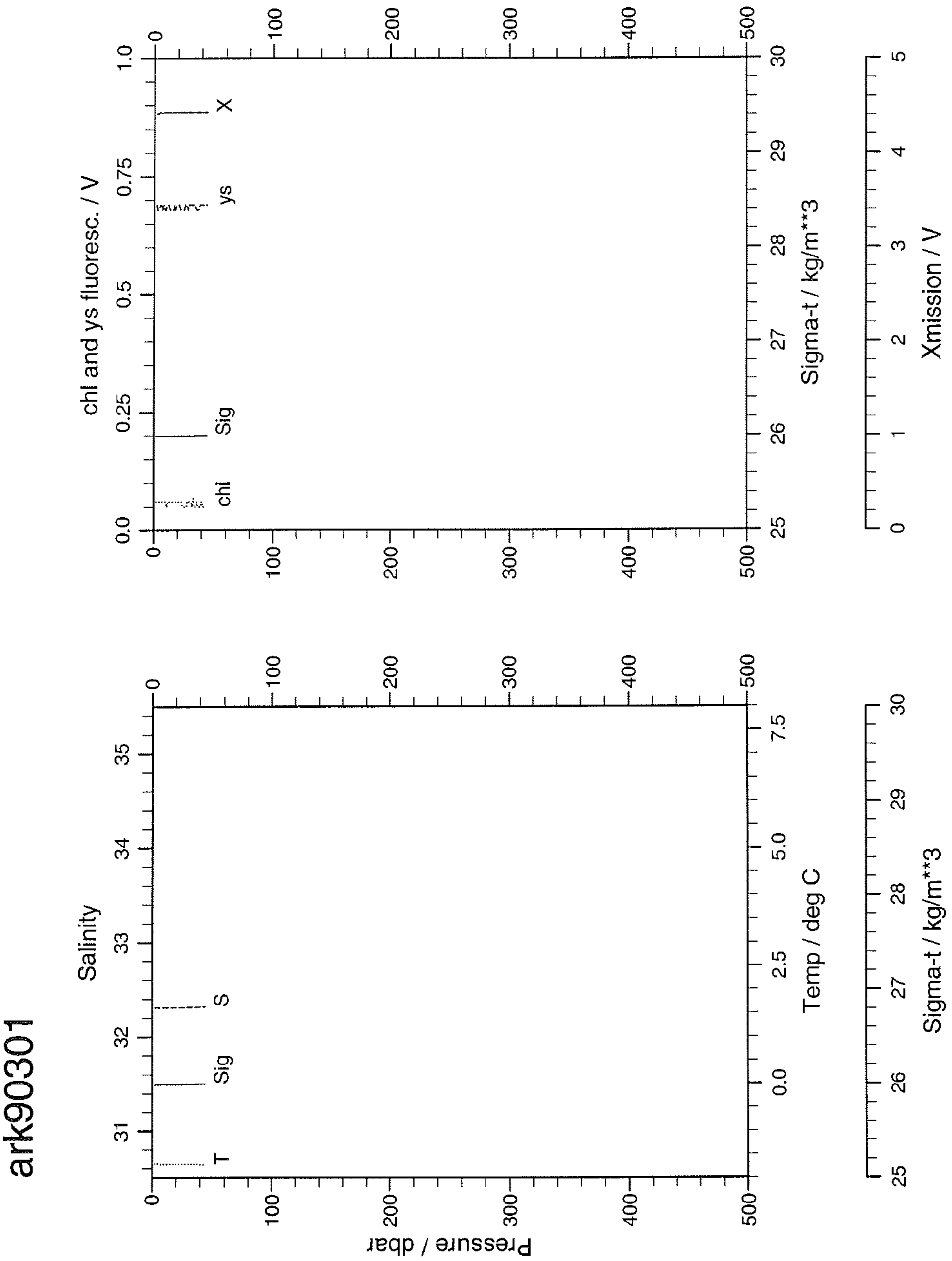
ark90300



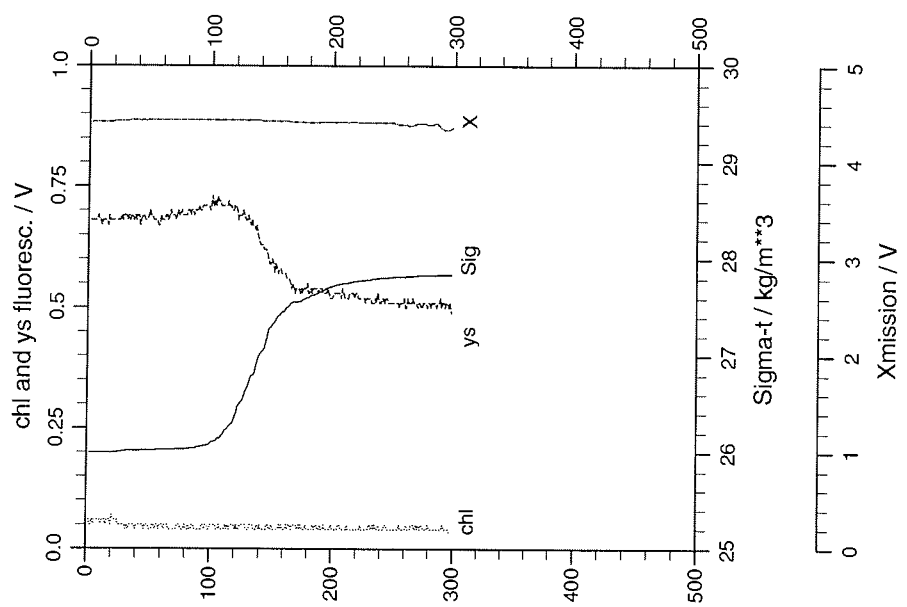
ark90300



ark90301


ark90301
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90302



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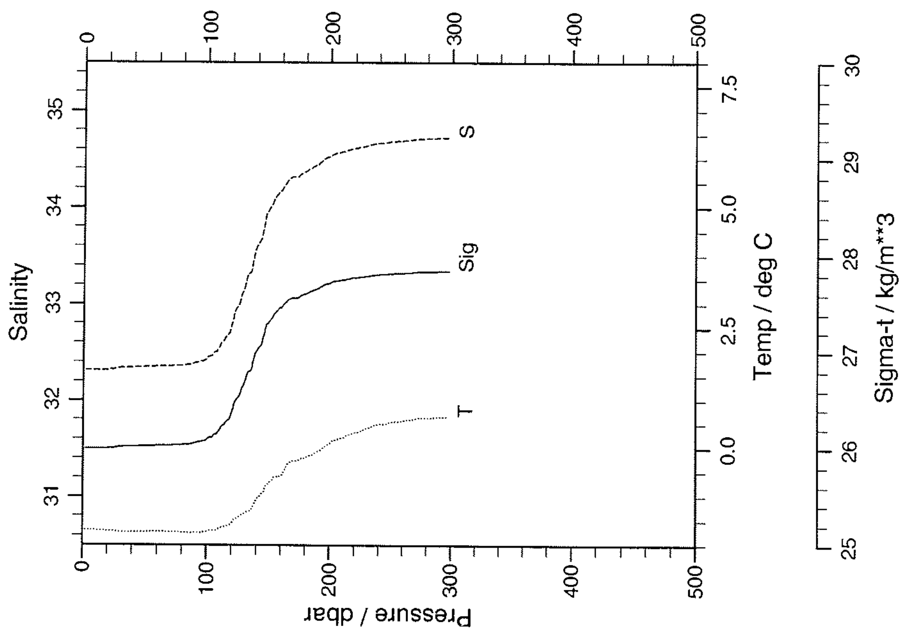
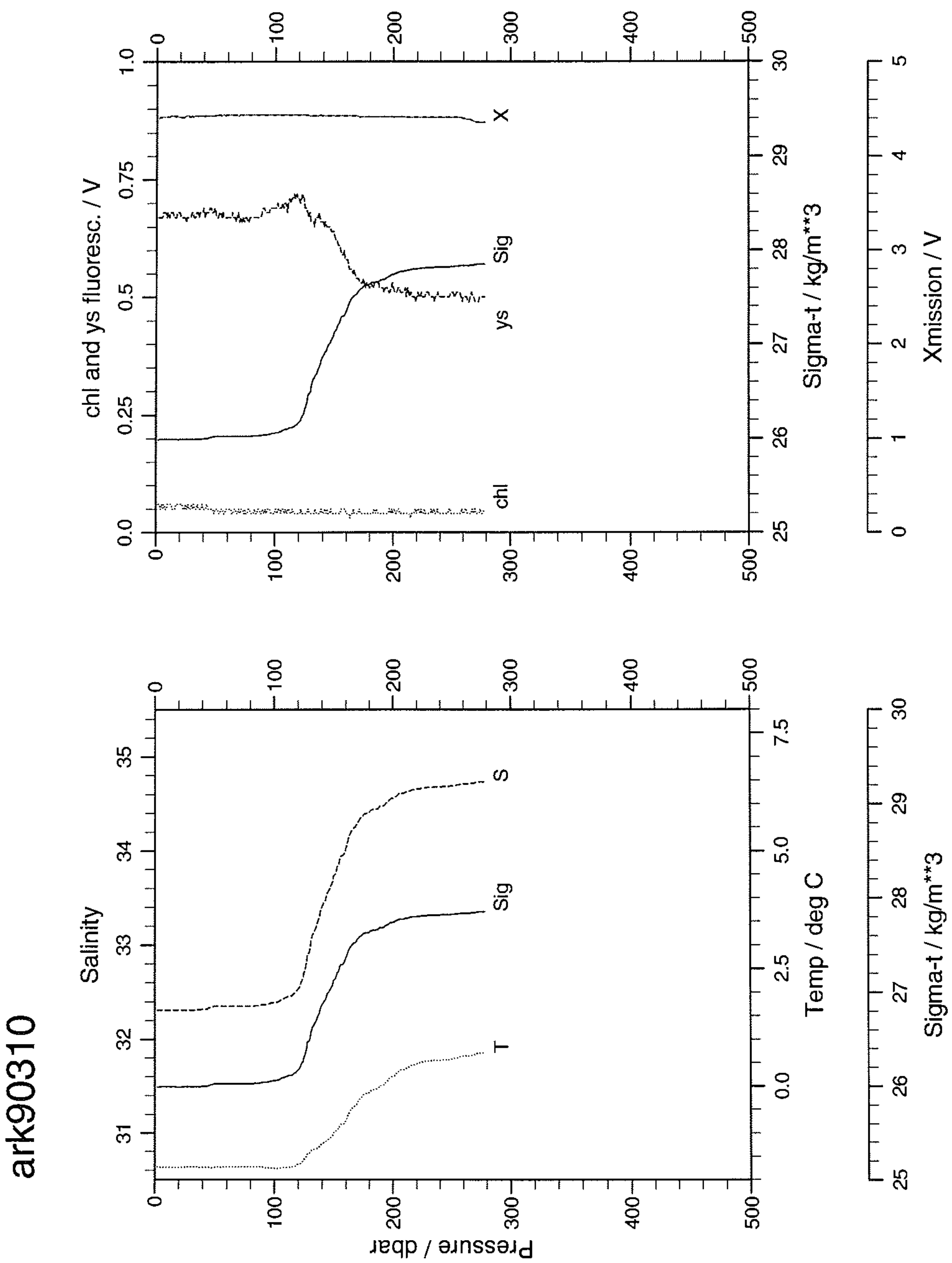
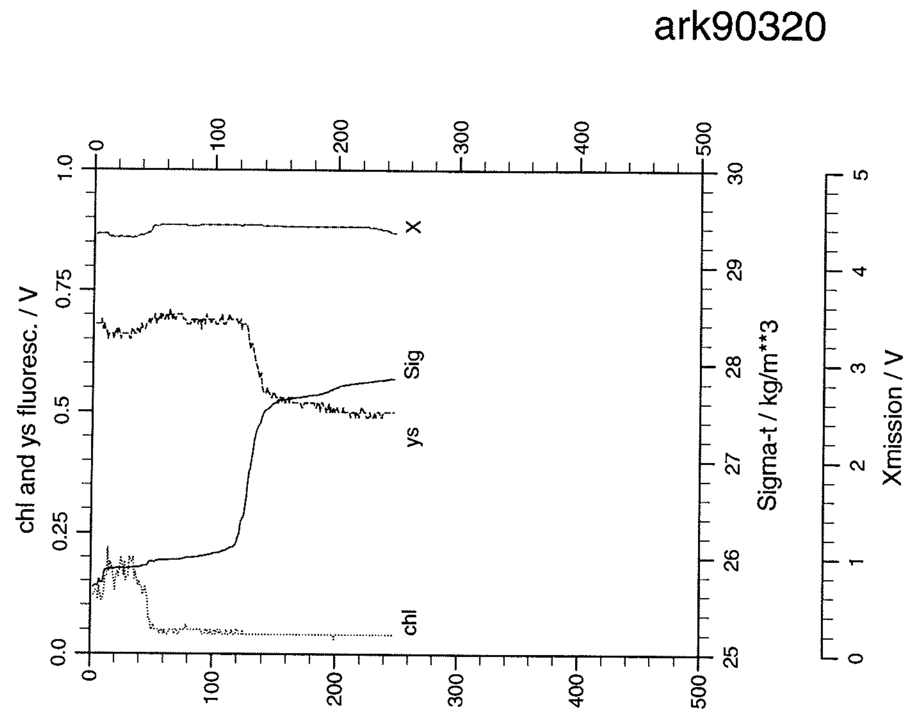
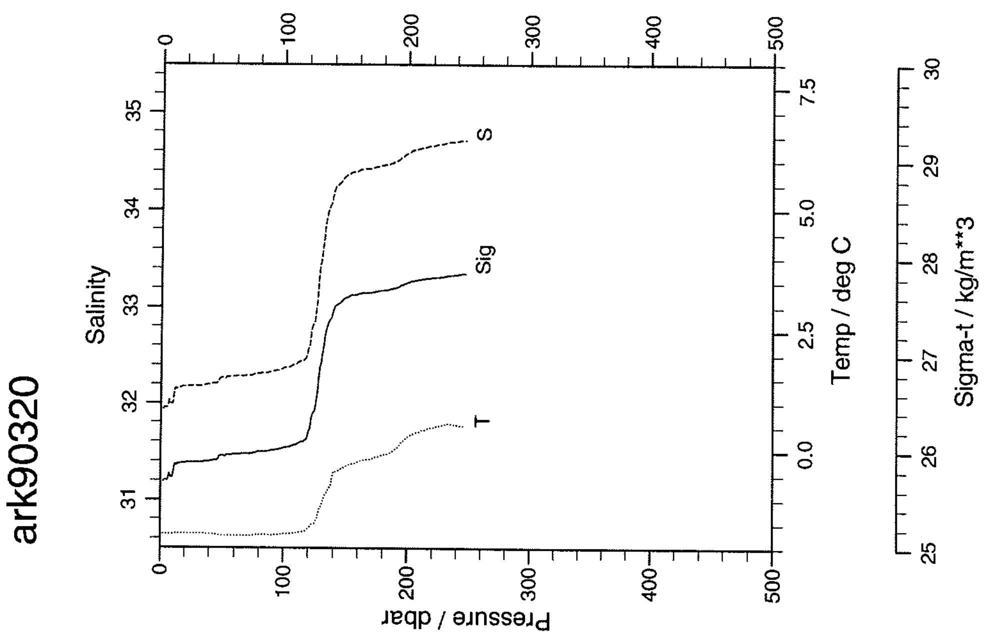


ark90310

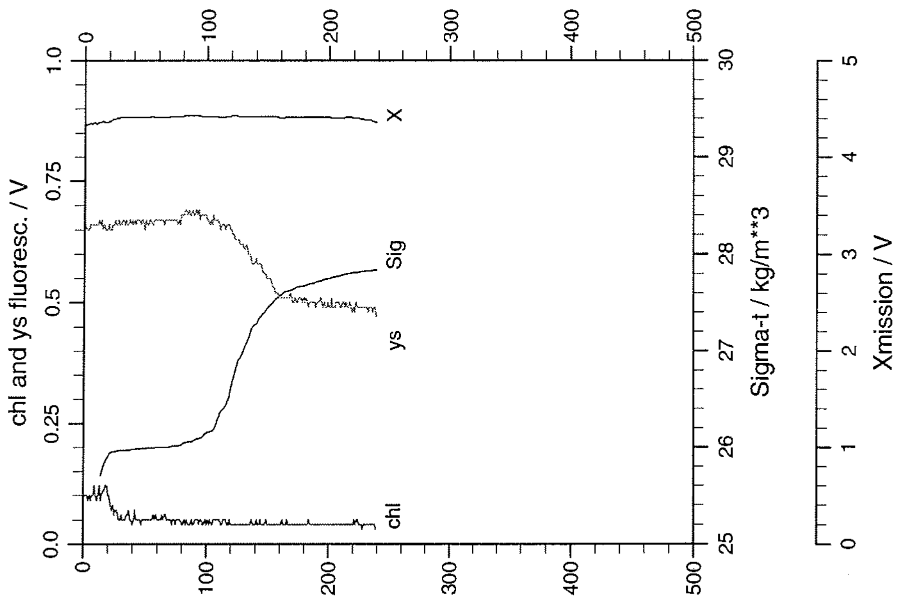


ark90310
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

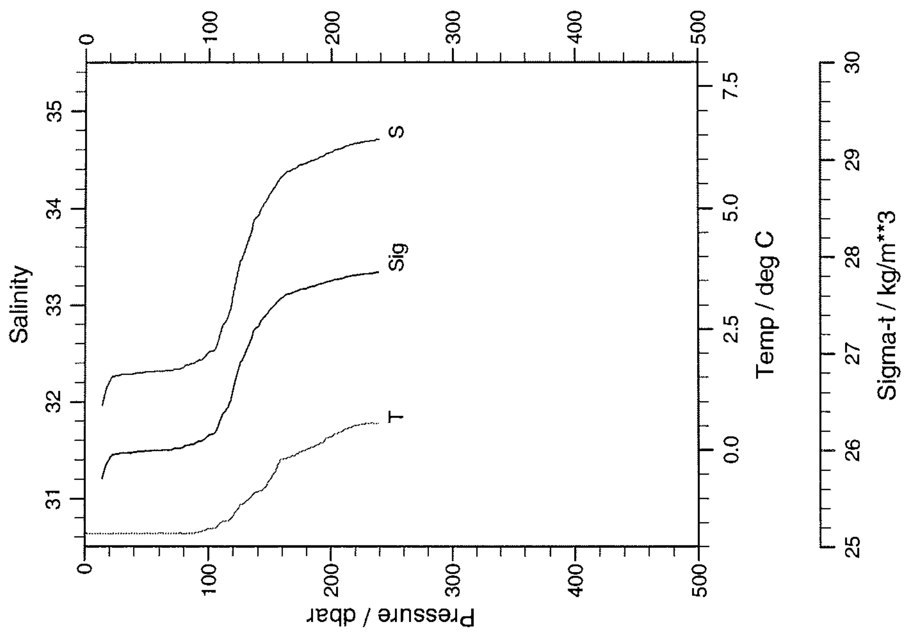

ark90320
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl


ark90320
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90321



ark90321



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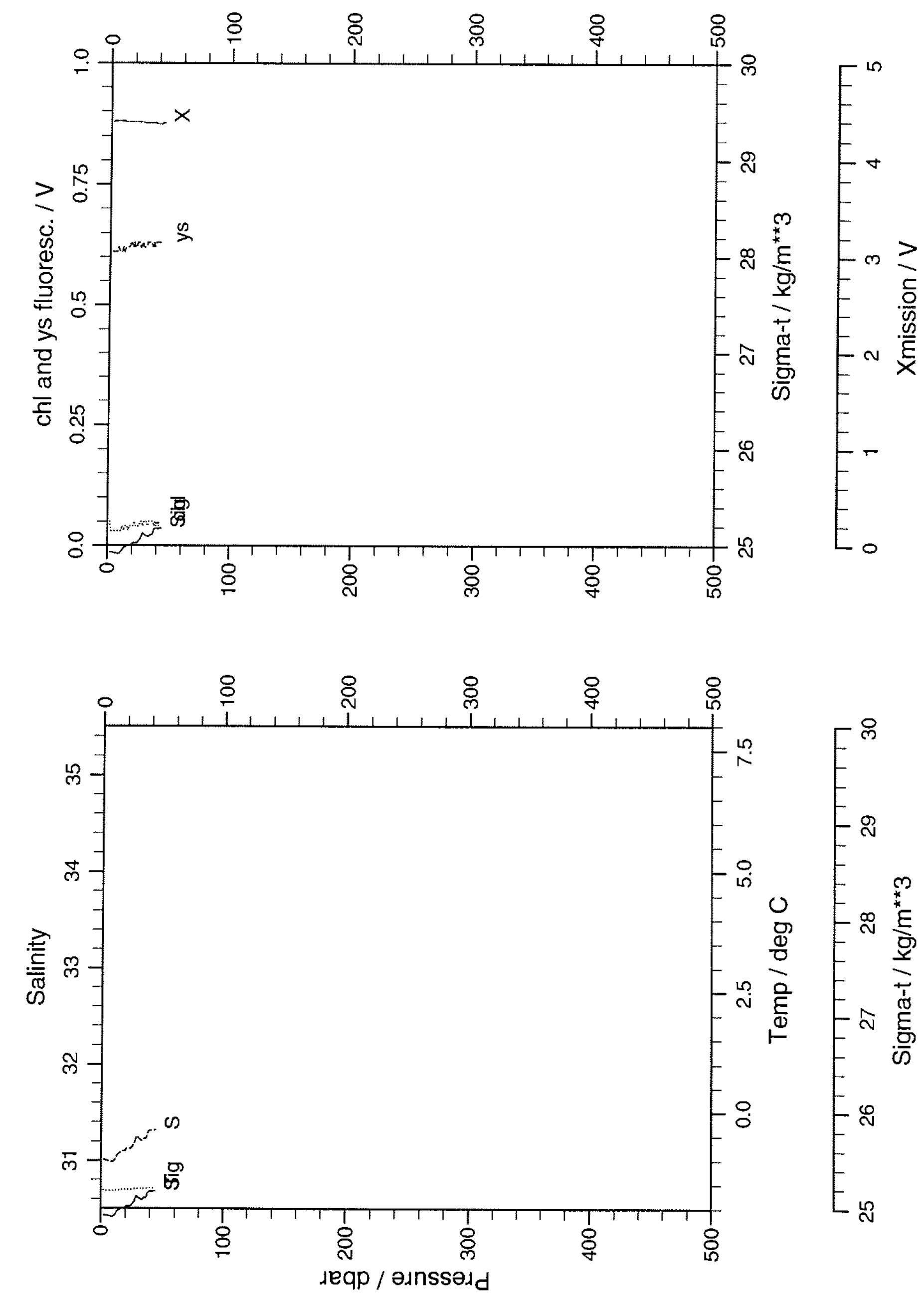
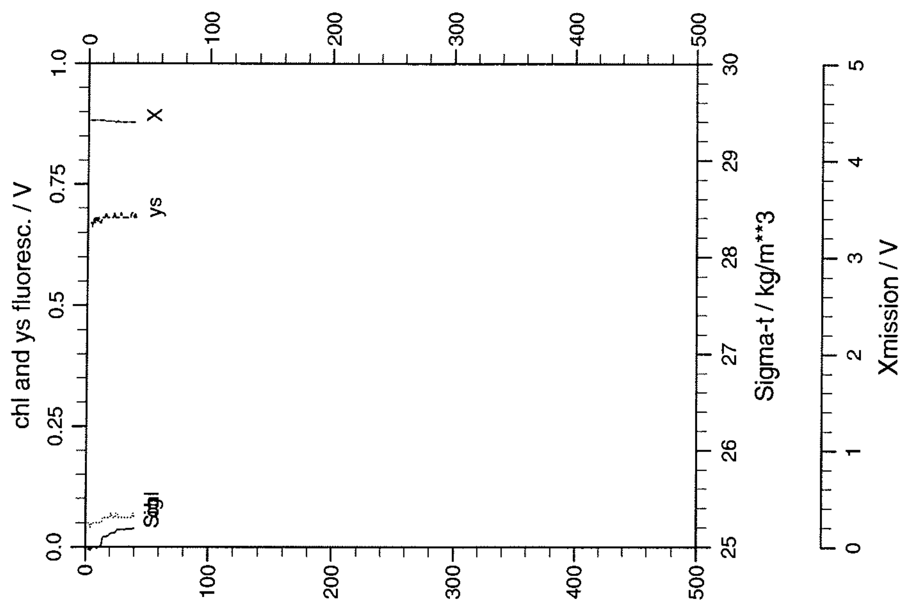
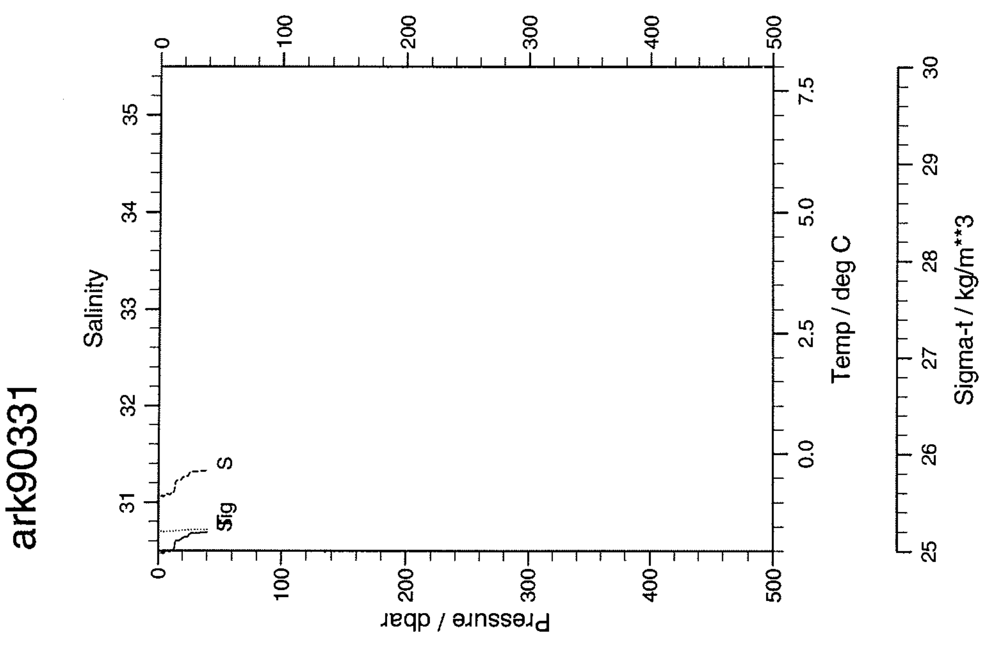


ark90330

ark90331

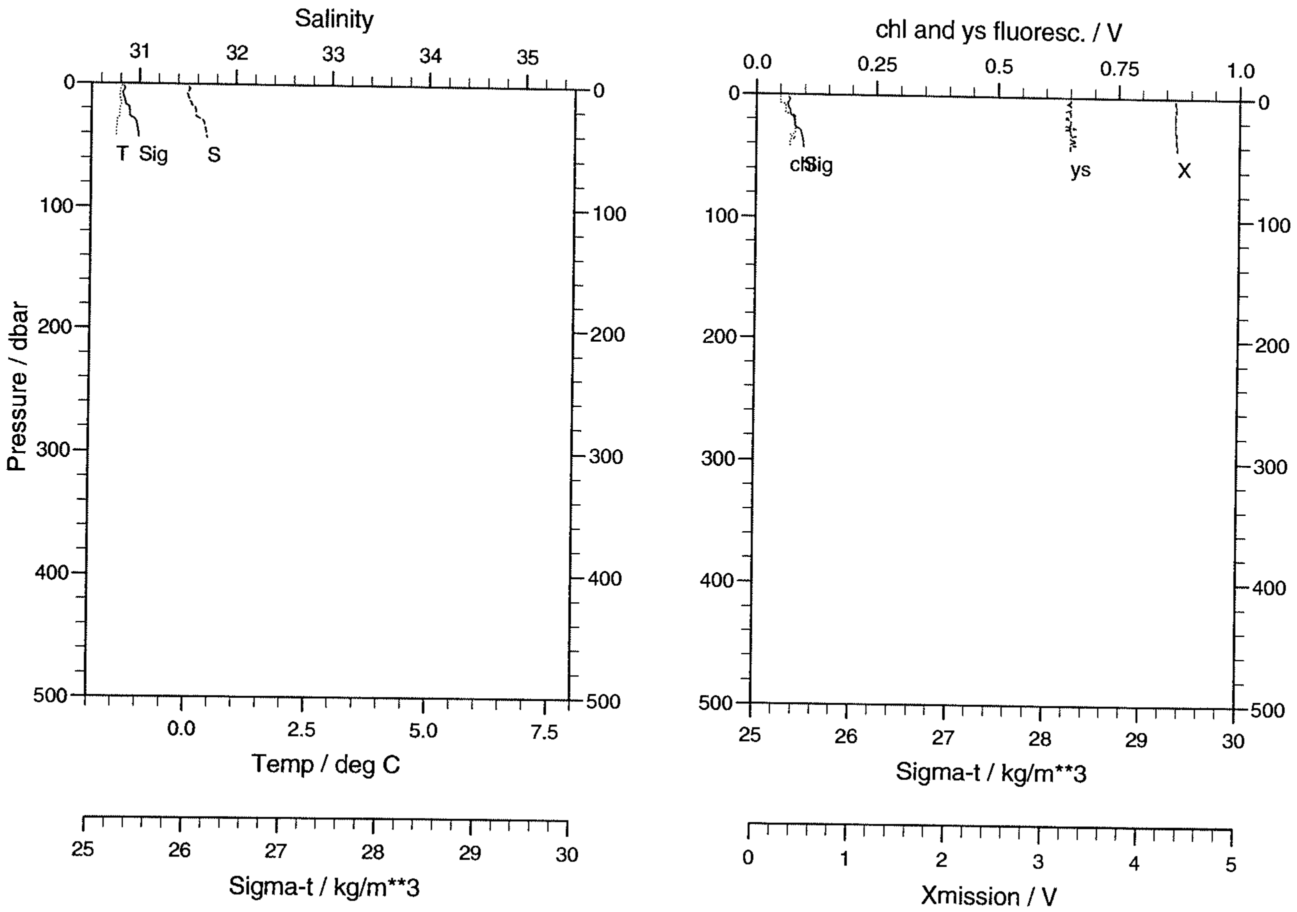


chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
X
ys
Sigchl
0
100
200
300
400
500
25
26
27
28
29
30
Sigma-t / kg/m**3
0
1
2
3
4
5
Xmission / V



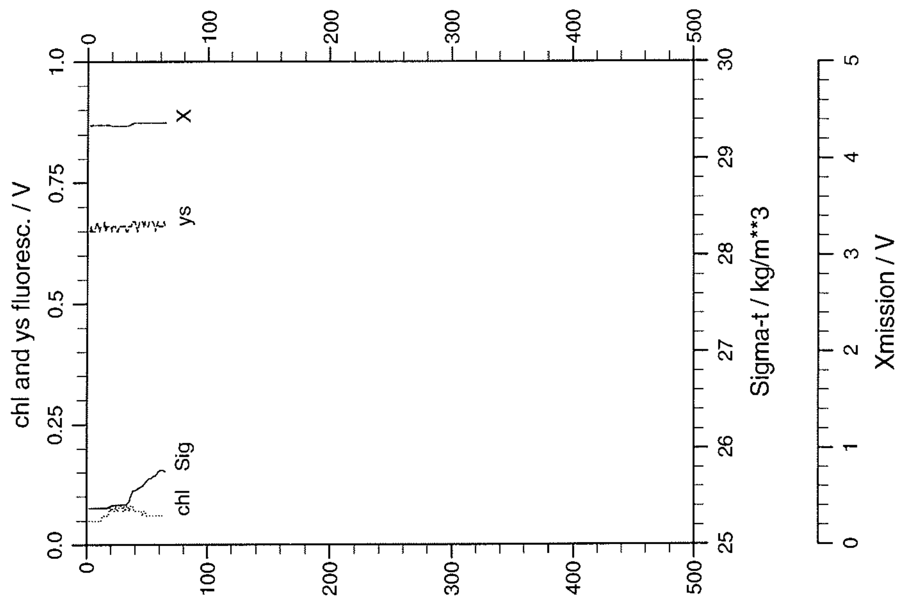
ark90331
Salinity
31
32
33
34
35
S
Sig
T
0
100
200
300
400
500
Pressure / dbar
0.0
2.5
5.0
7.5
Temp / deg C
25
26
27
28
29
30
Sigma-t / kg/m**3

ark90340

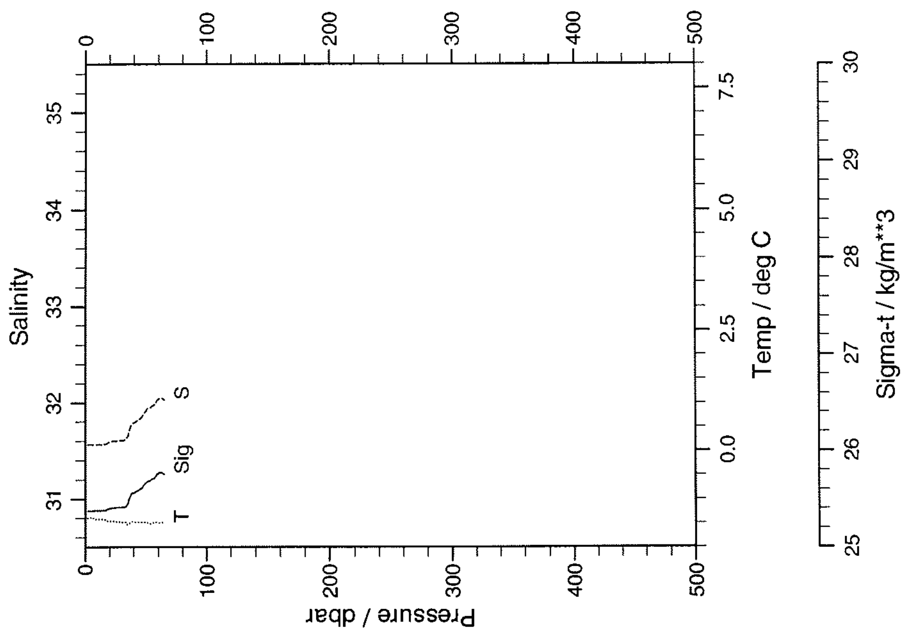


ark90340

ark90350



ark90350



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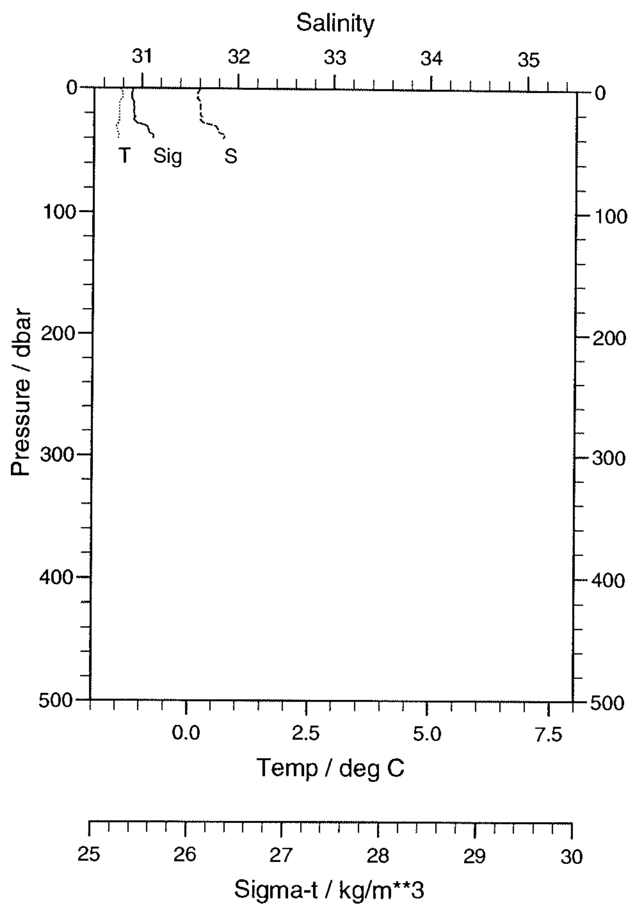
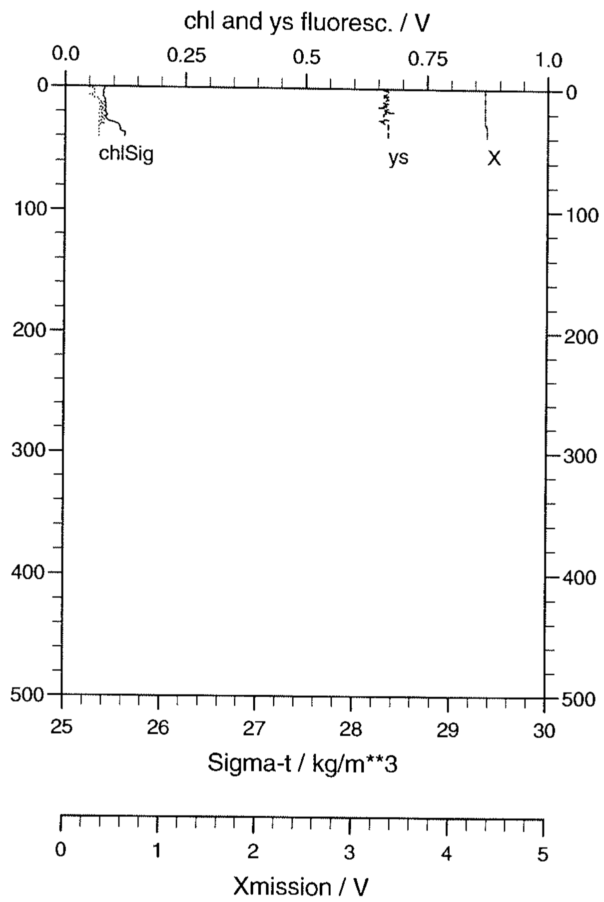
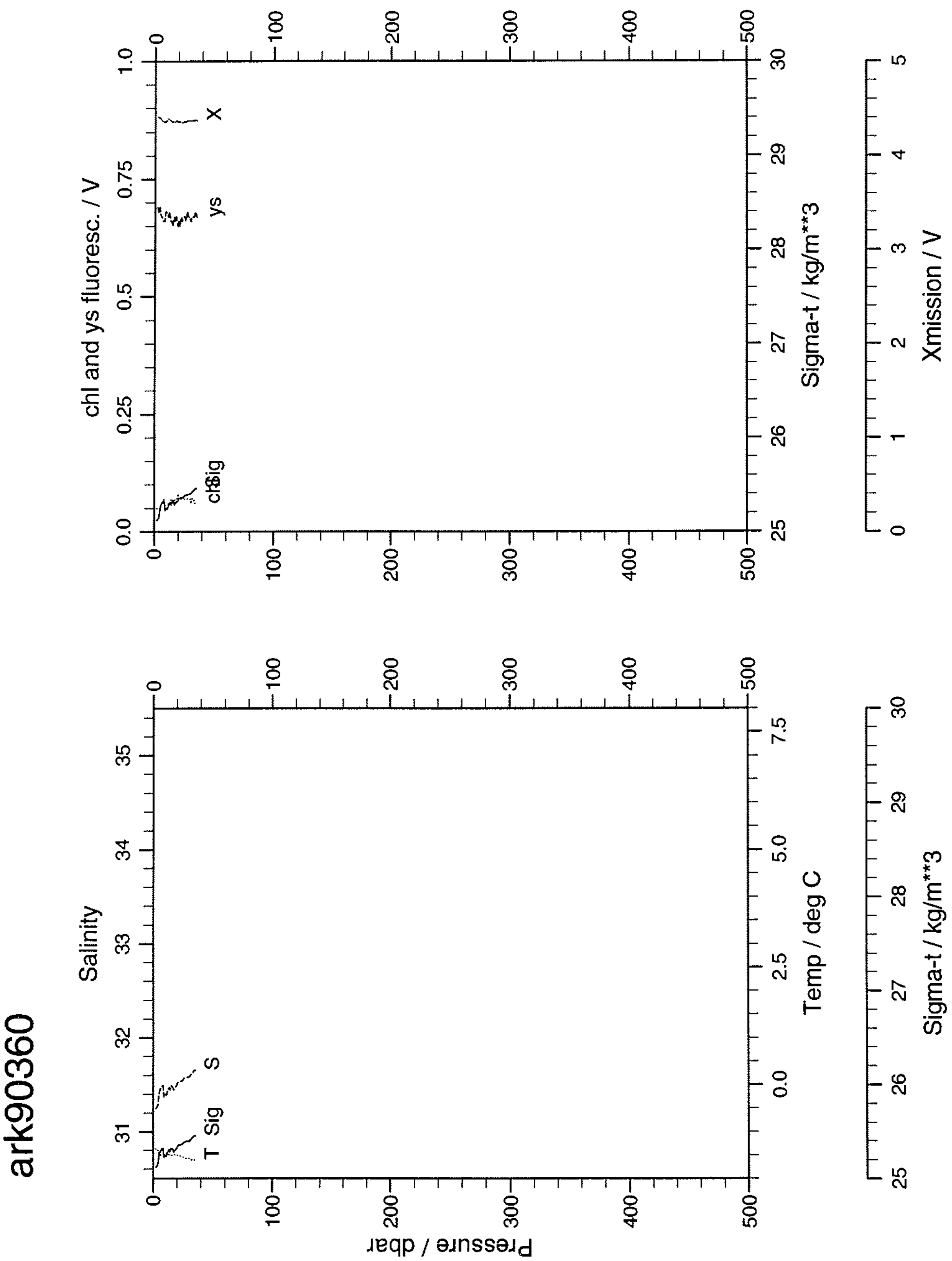


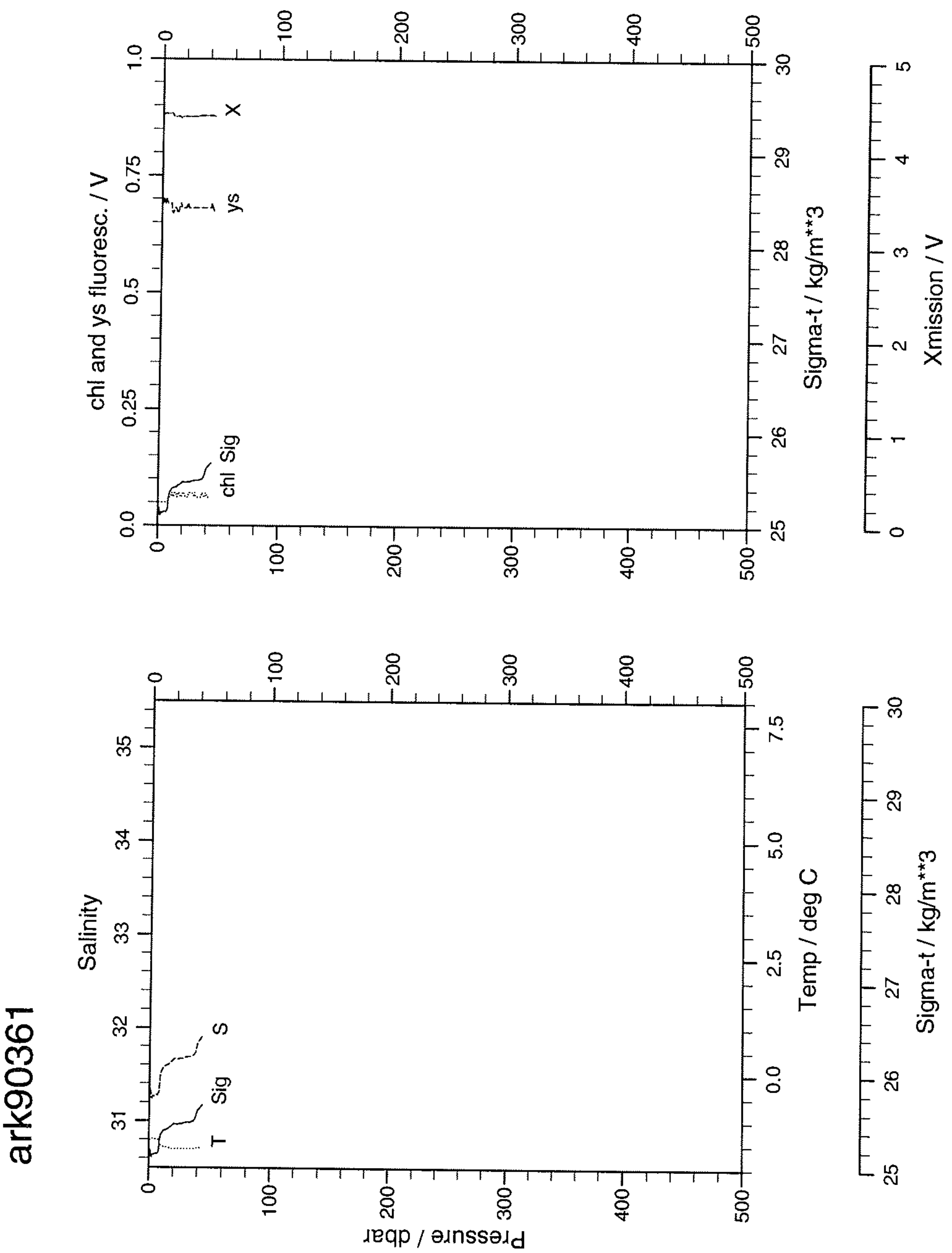


ark90351

ark90360

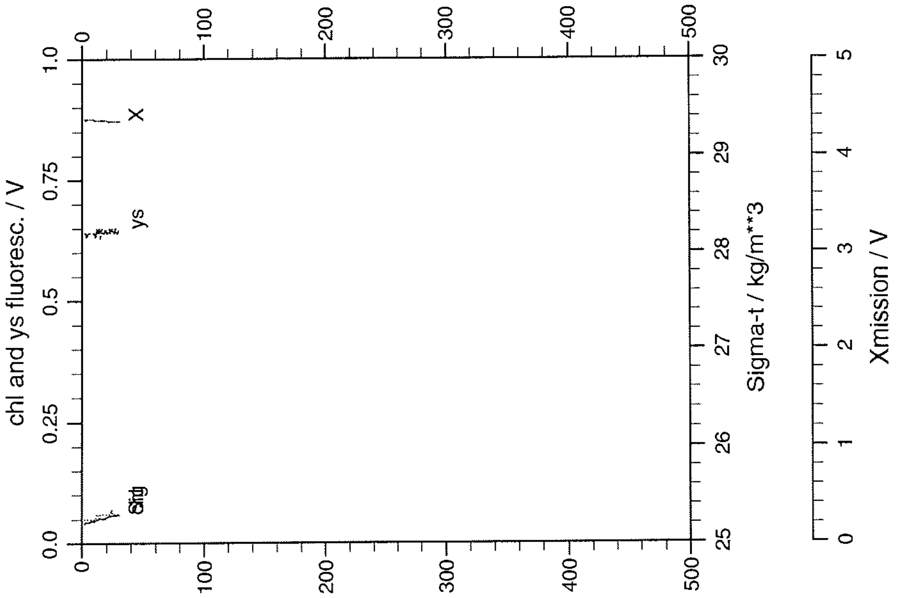

ark90360
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
chl
Sig
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
T
Sig

ark90361

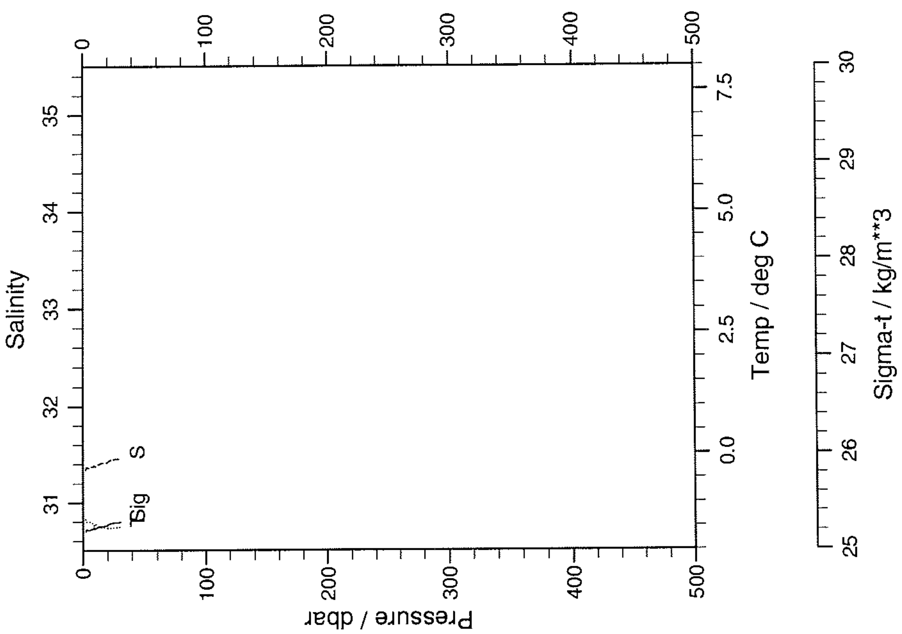


ark90361
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
chl
Sig
Salinity
Temp / deg C
Pressure / dbar
S
T

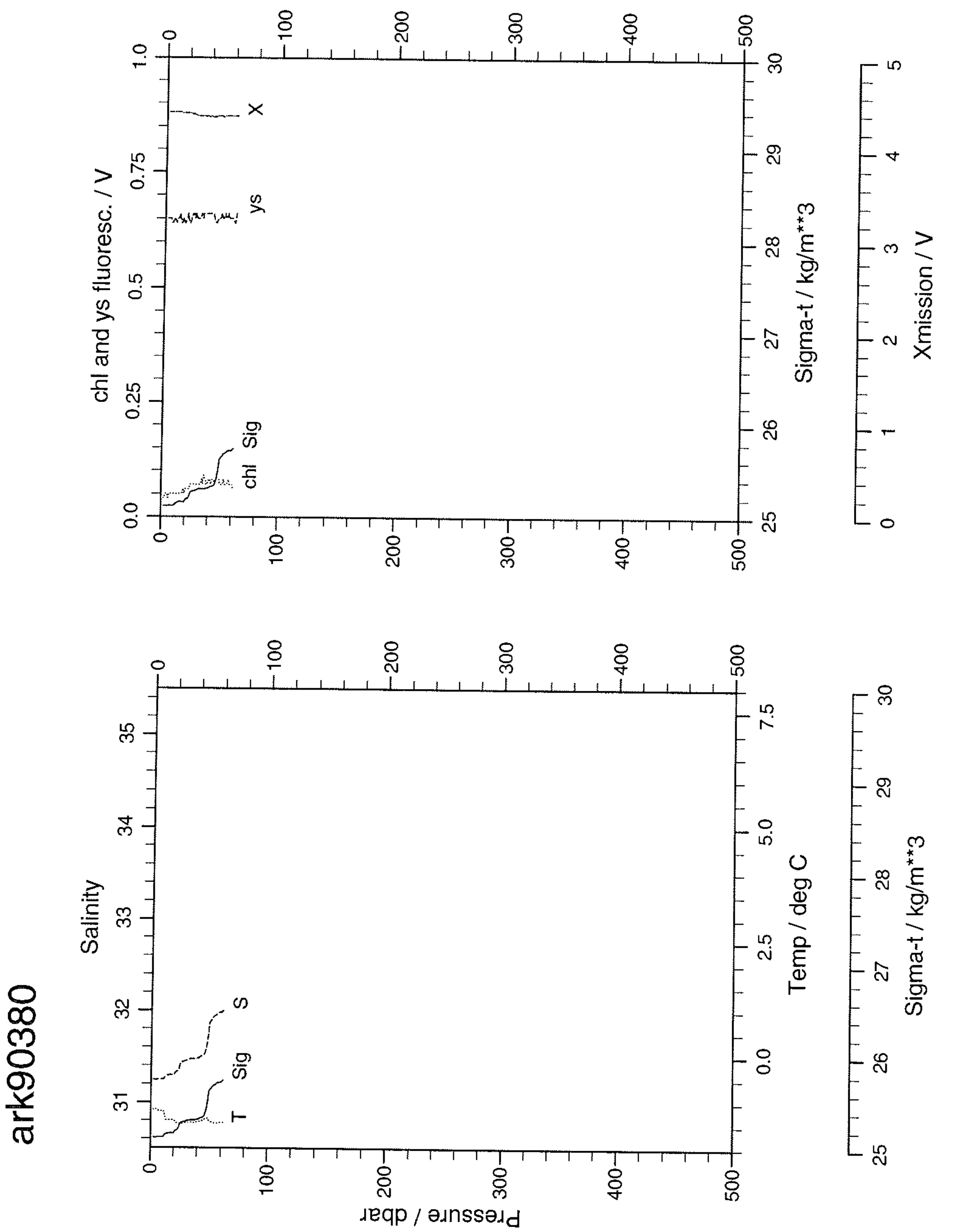
ark90370



ark90370

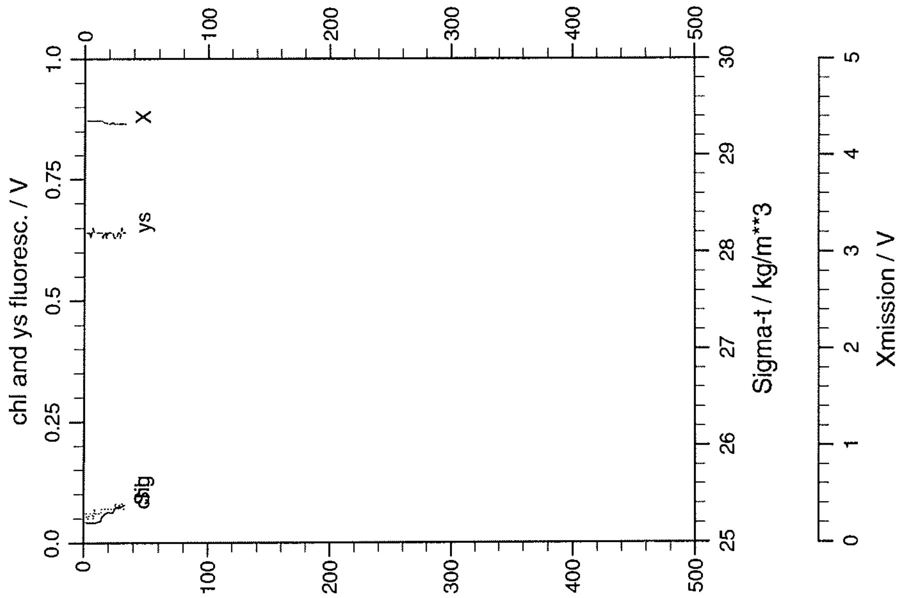


ark90380

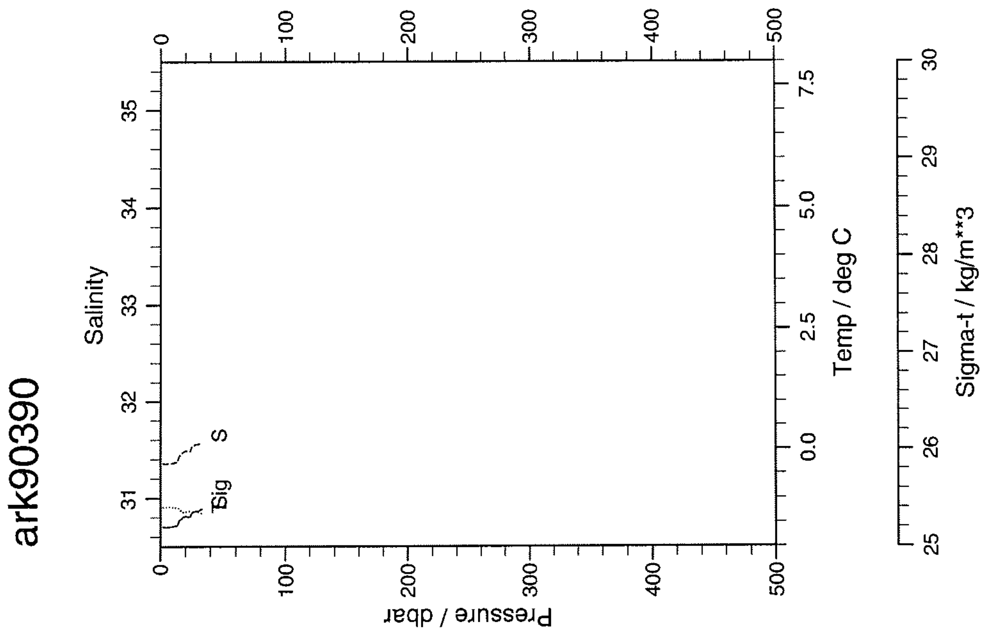


ark90380
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
chl
Sig
Salinity
Temp / deg C
Pressure / dbar
S
T

ark90390

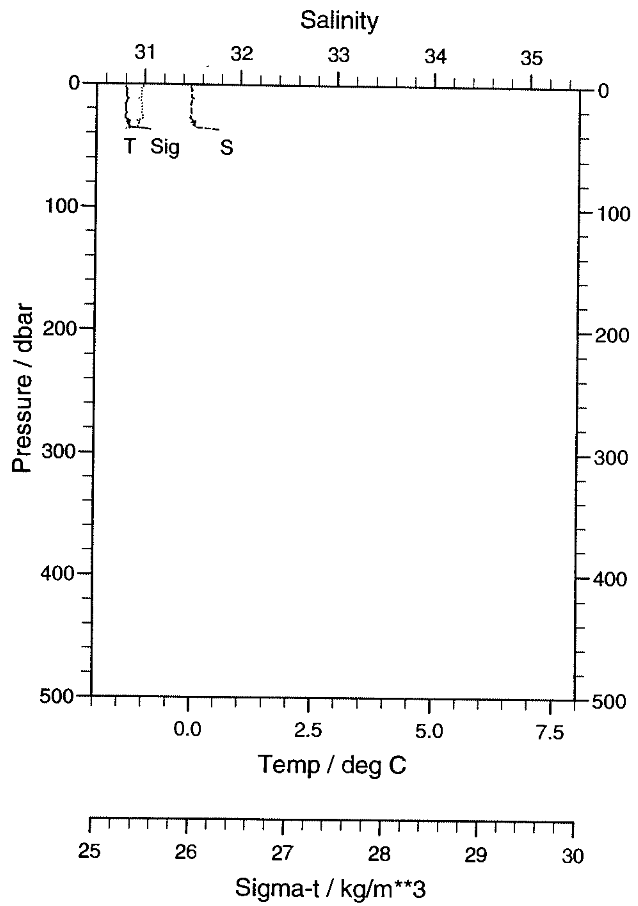


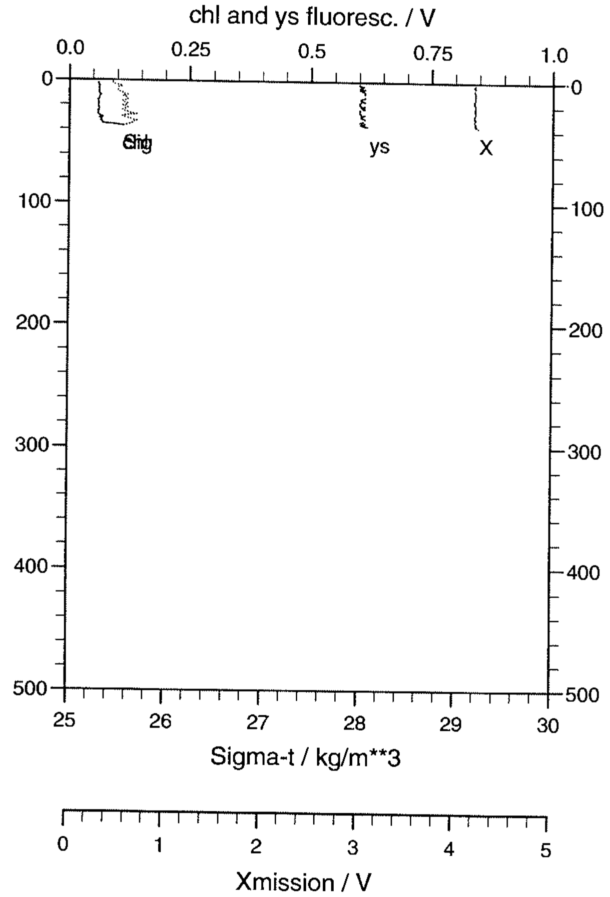
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig



ark90390
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

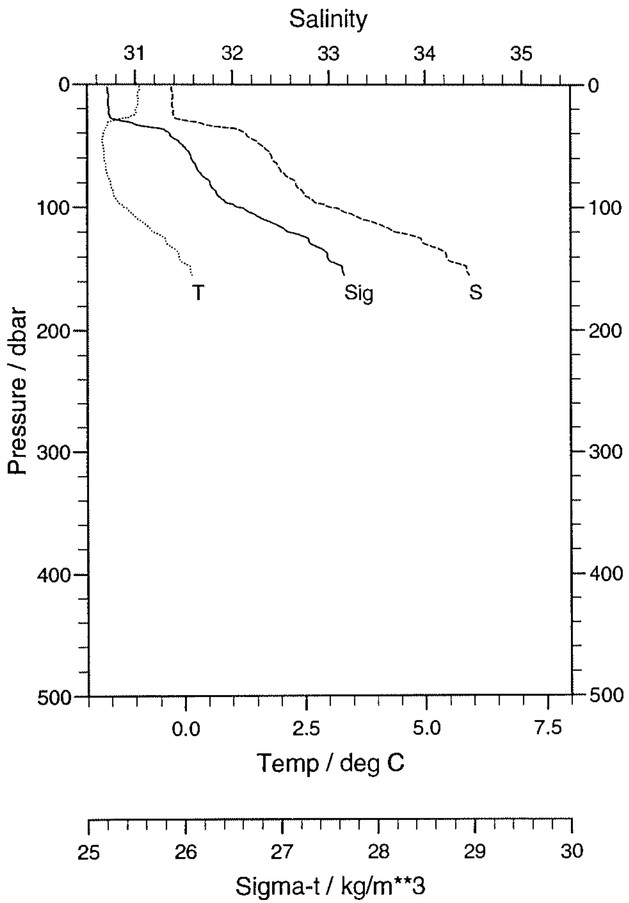
ark90400

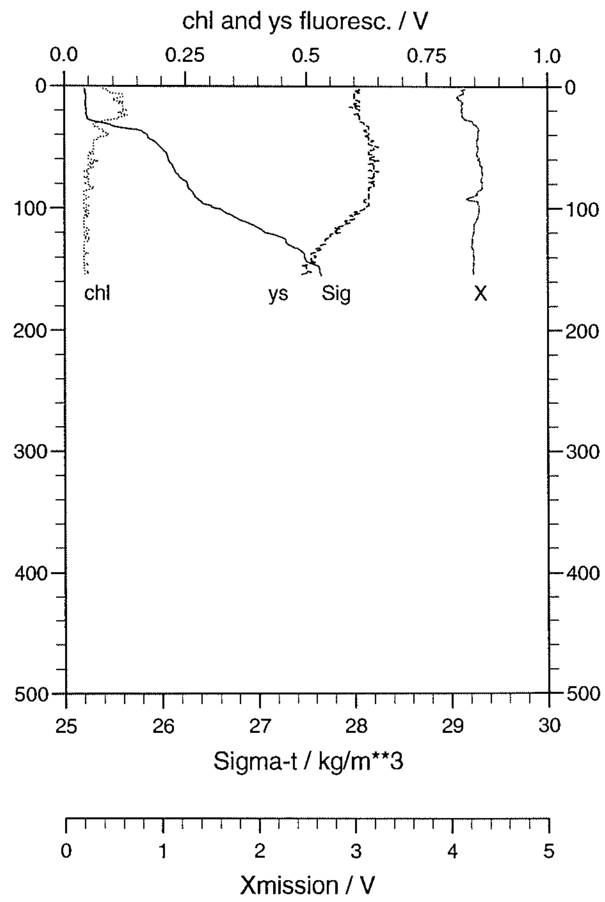




ark90400

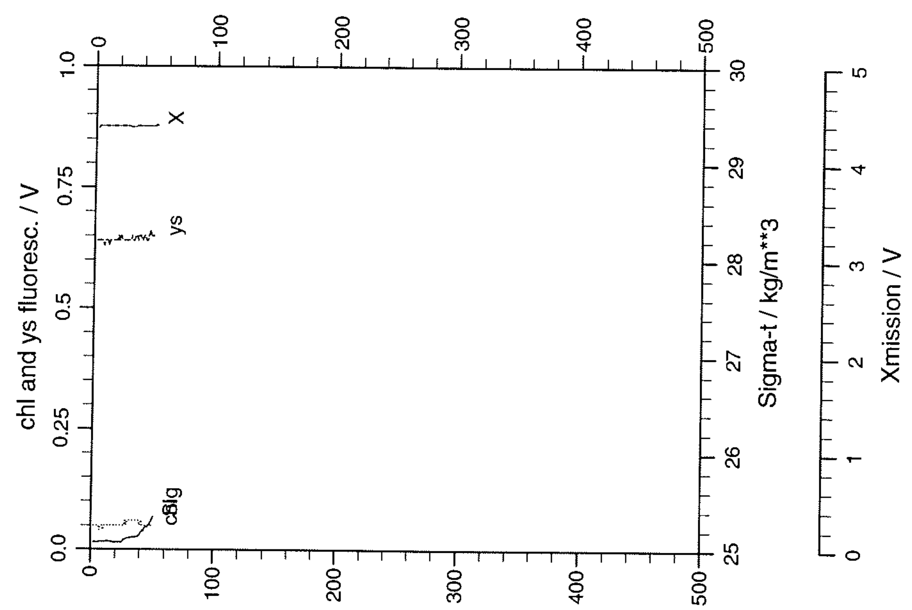
ark90410



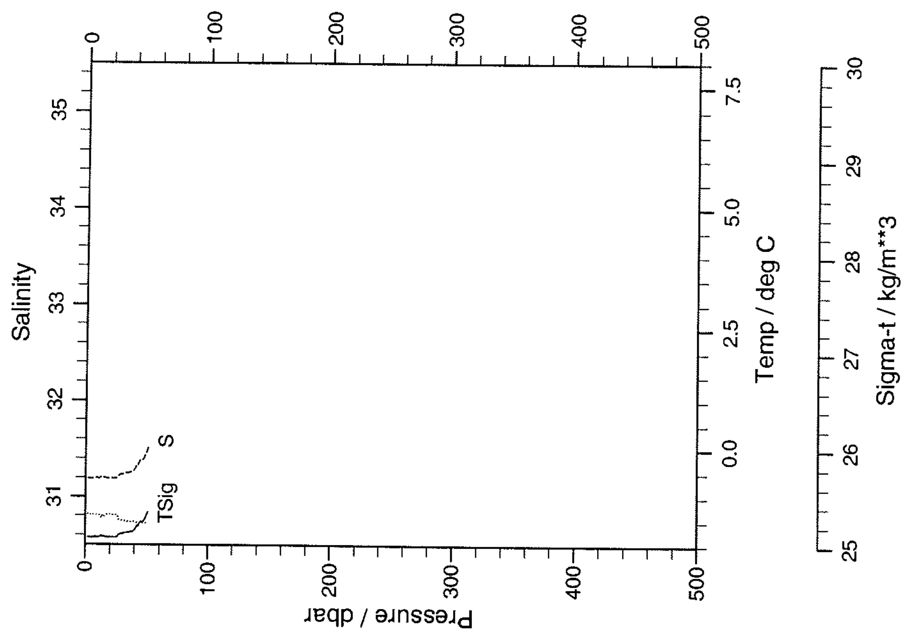


ark90410

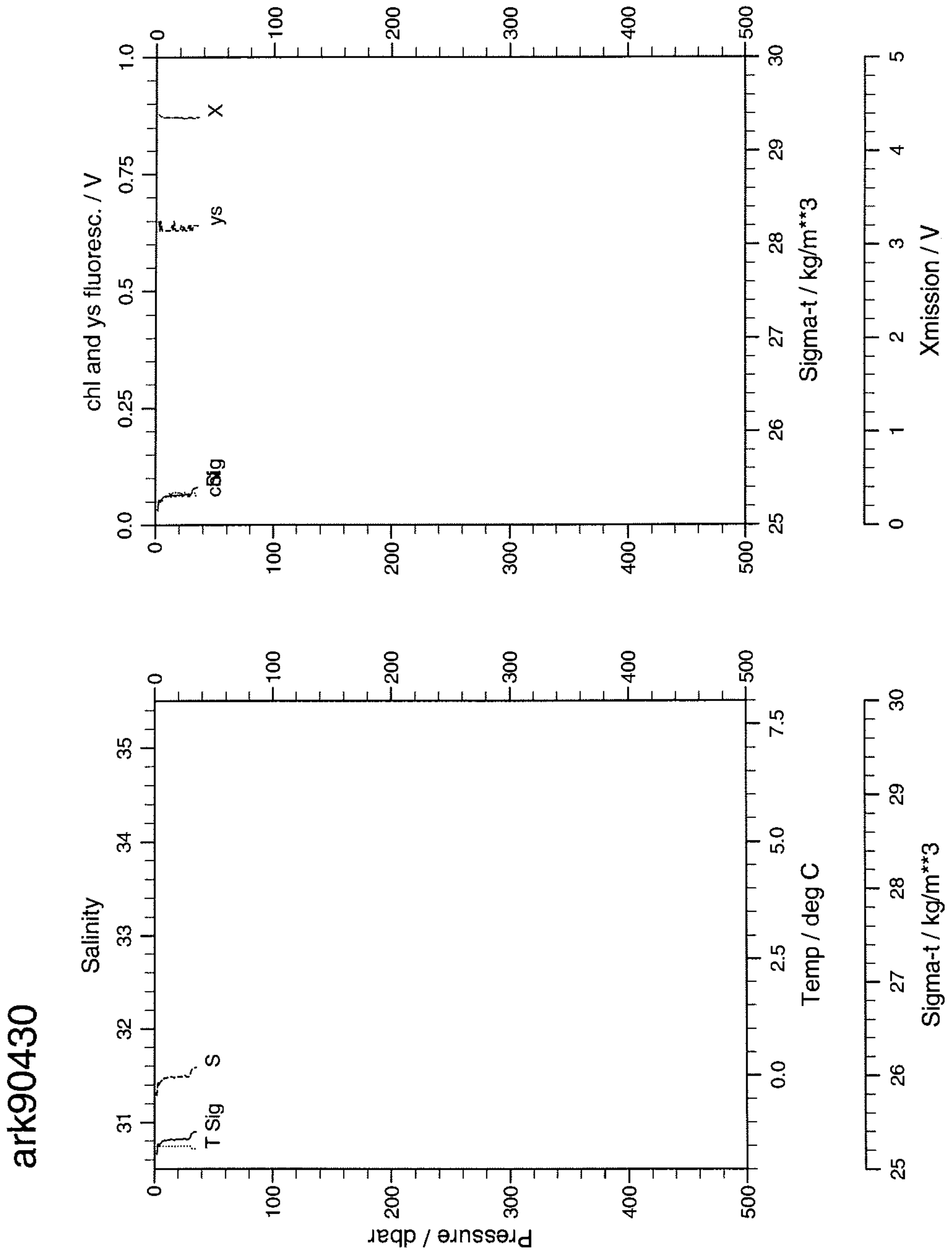
ark90420



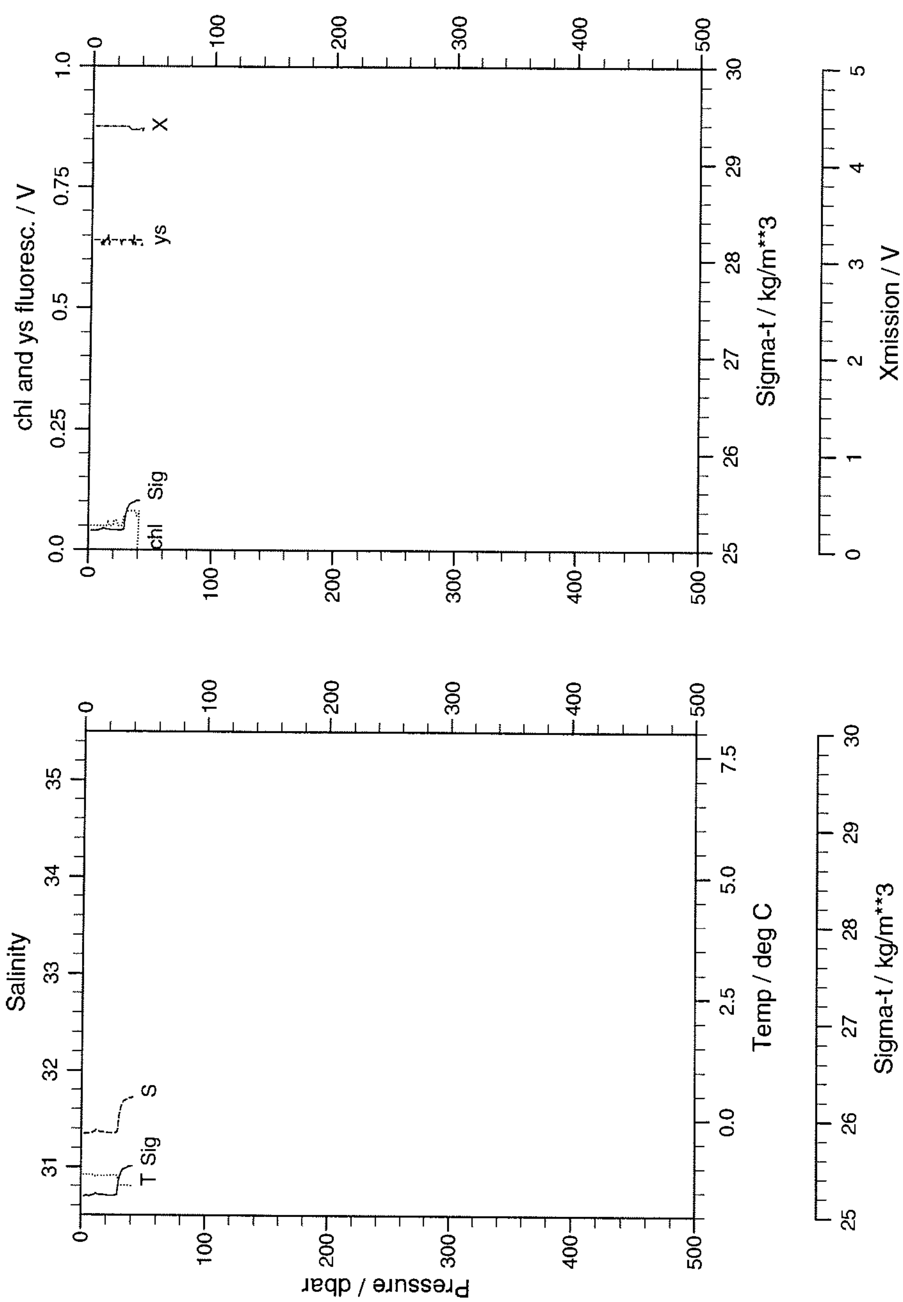
ark90420



ark90430

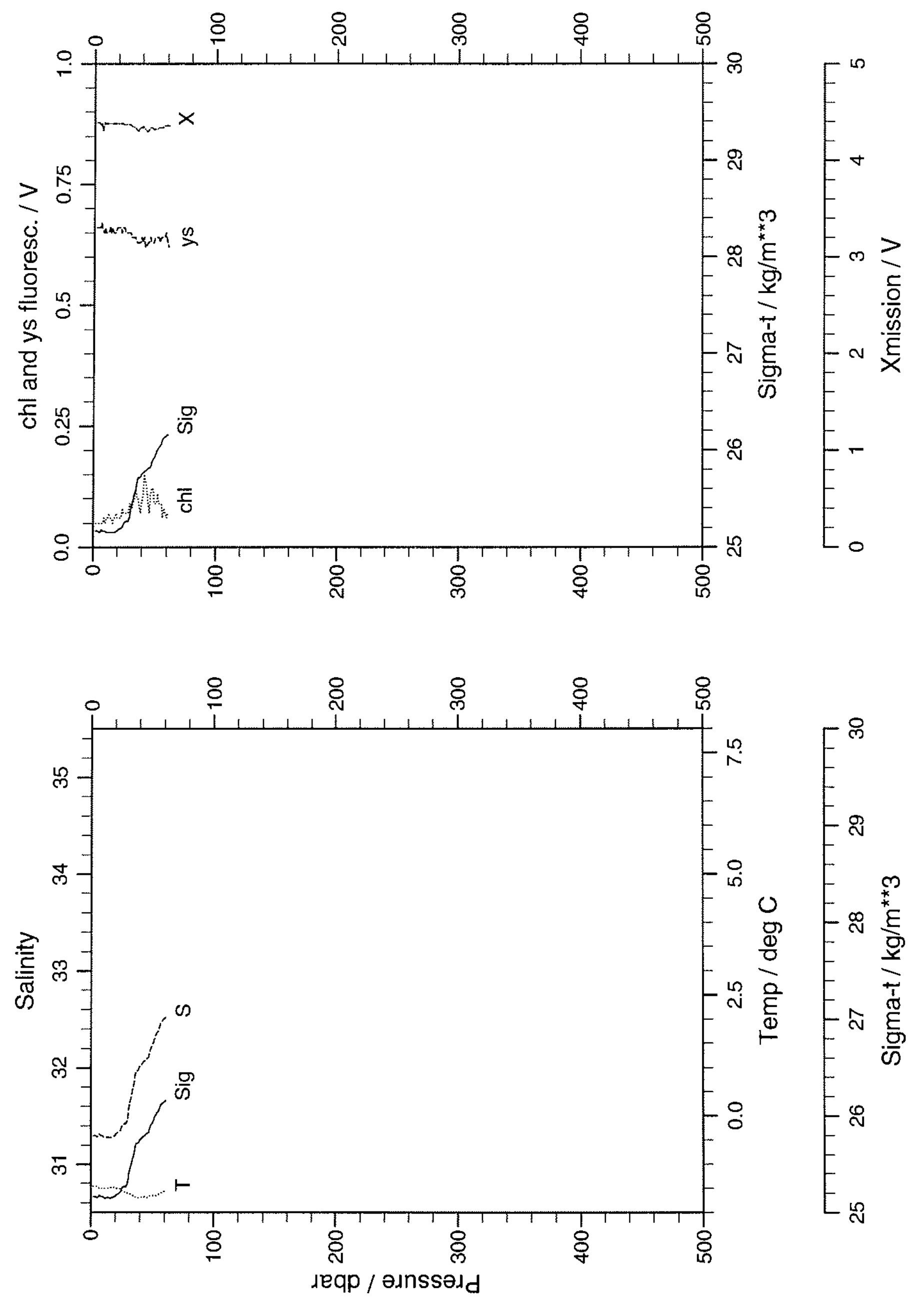

ark90430
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
T Sig
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
chl
Sig

ark90440



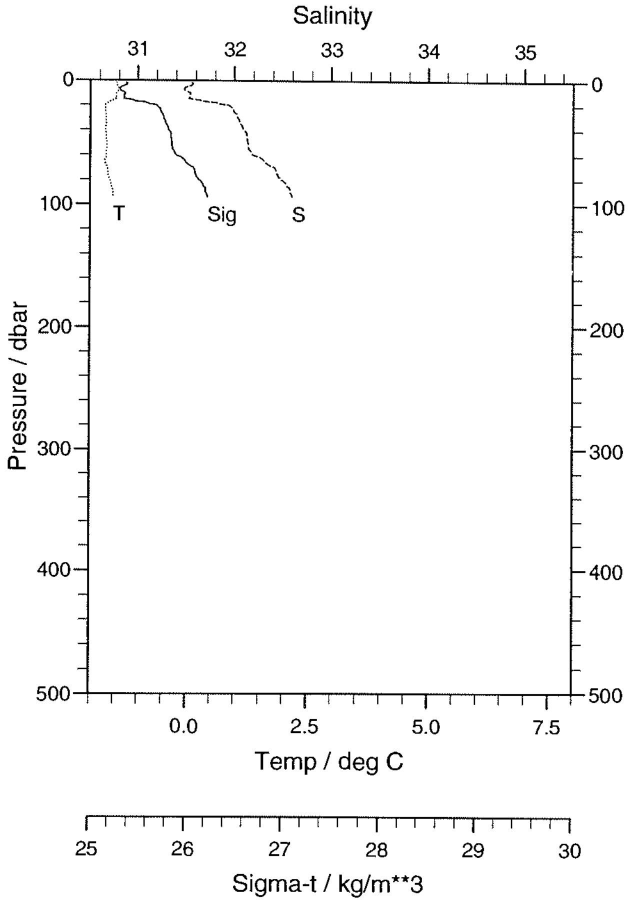
ark90440

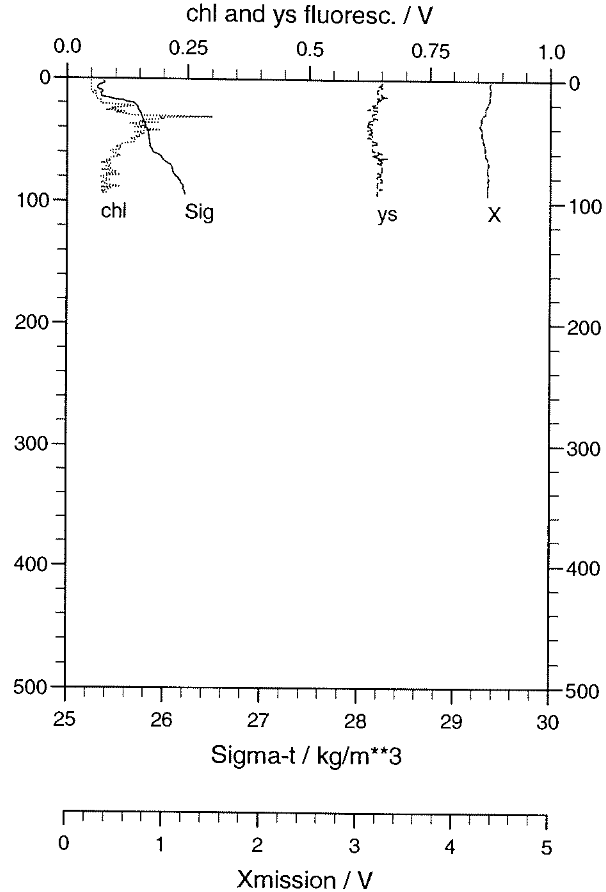
ark90450



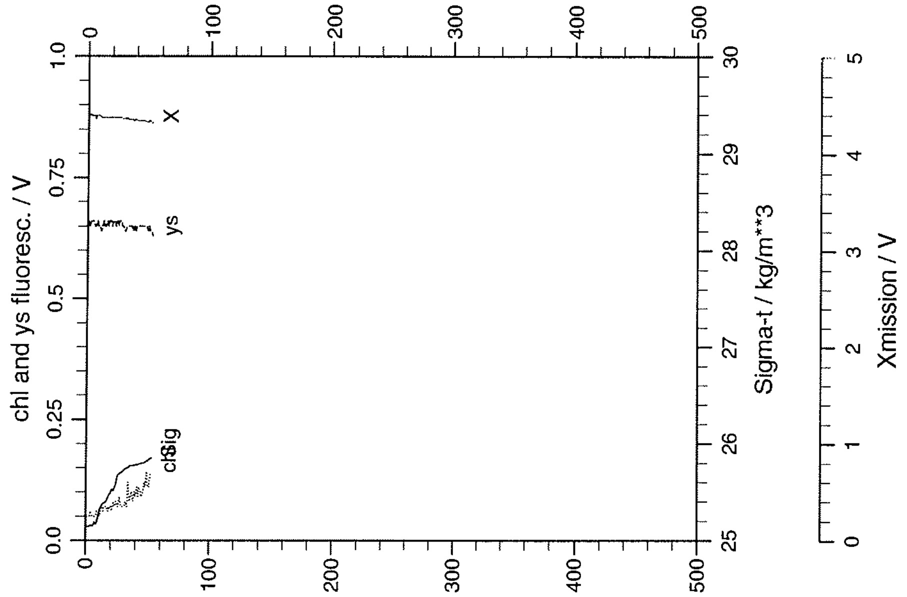
ark90450

ark90460

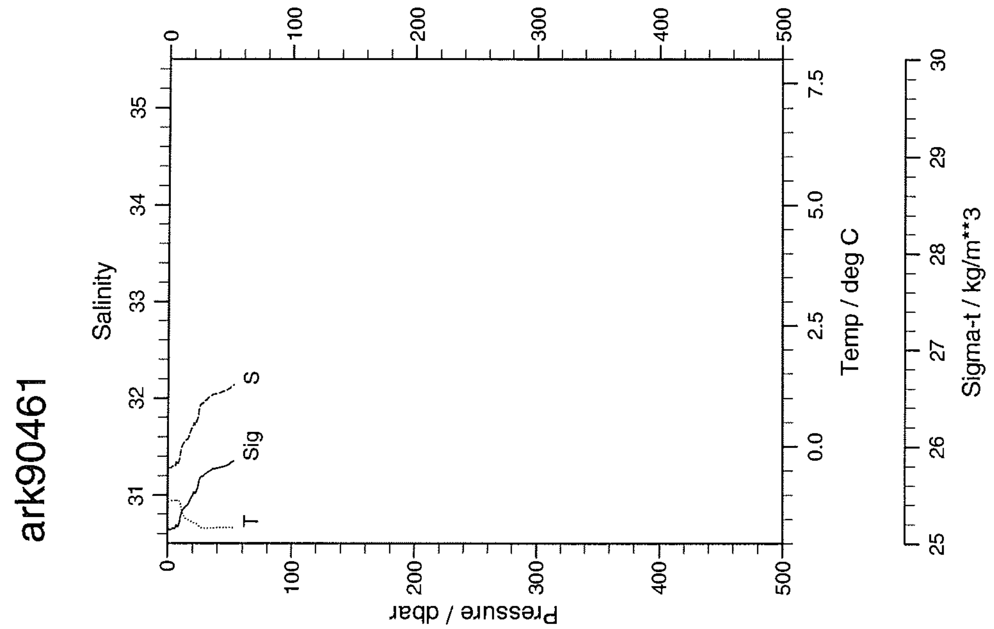




ark90460

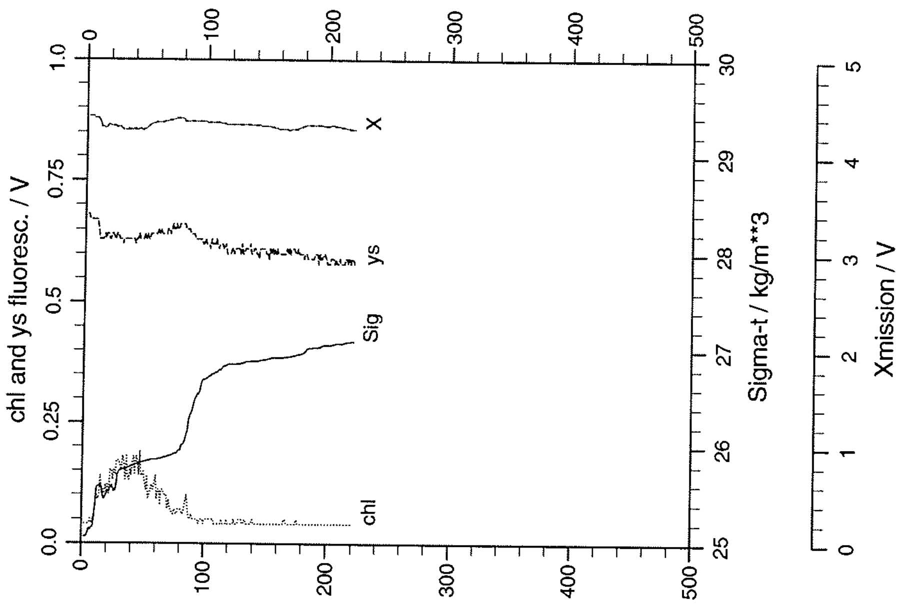


chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
X
ys
chl
Sig
0
100
200
300
400
500
Sigma-t / kg/m**3
25
26
27
28
29
30
Xmission / V
0
1
2
3
4
5

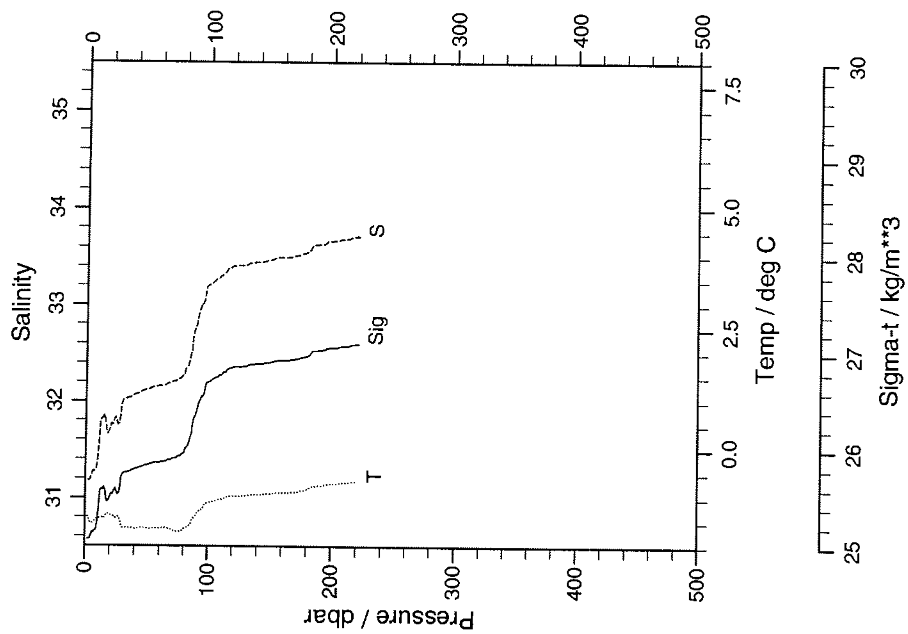


ark90461
Salinity
31
32
33
34
35
S
Sig
T
Pressure / dbar
0
100
200
300
400
500
Temp / deg C
0.0
2.5
5.0
7.5
Sigma-t / kg/m**3
25
26
27
28
29
30

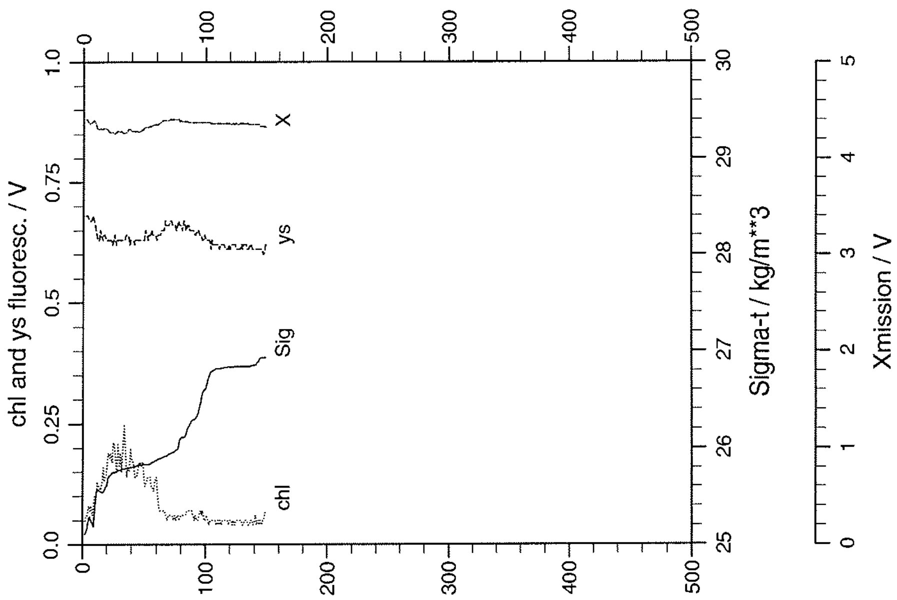
ark90470

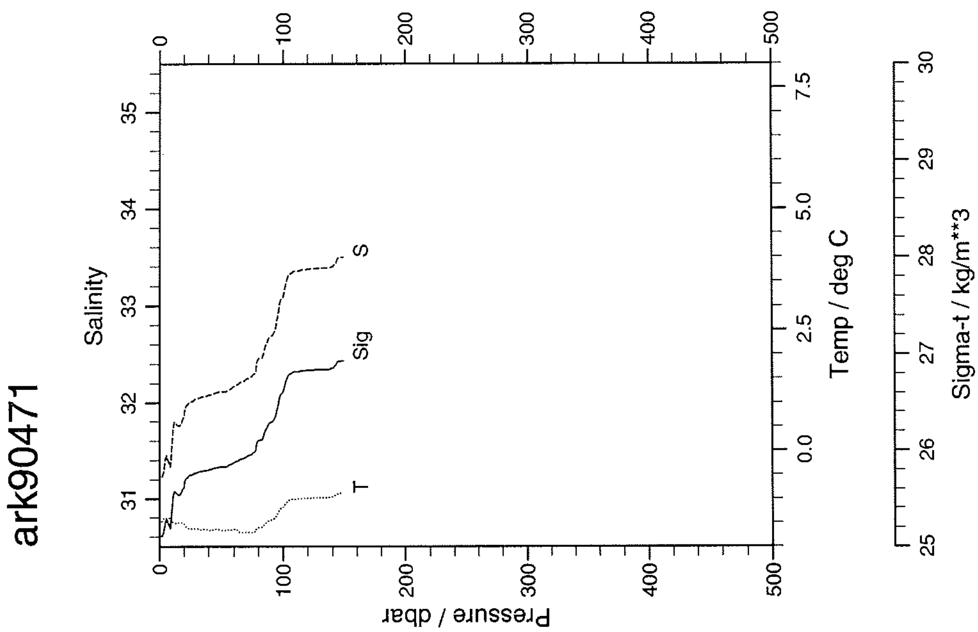


ark90470

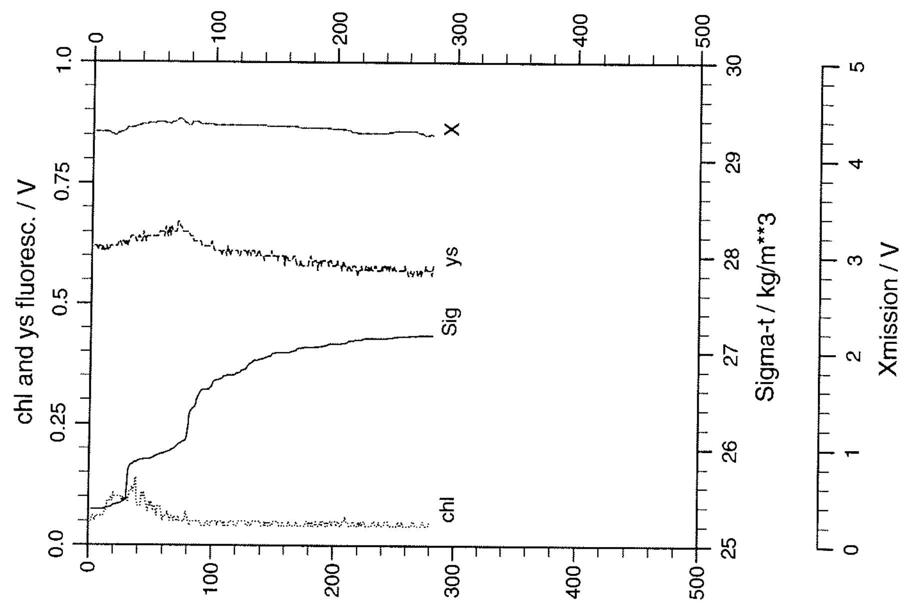


ark90471


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl


ark90471
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90480



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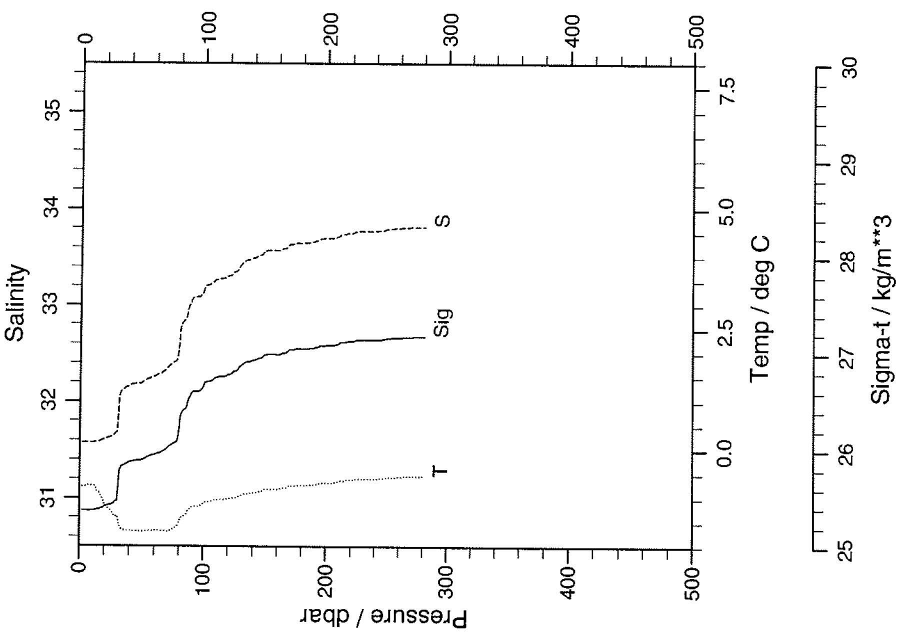

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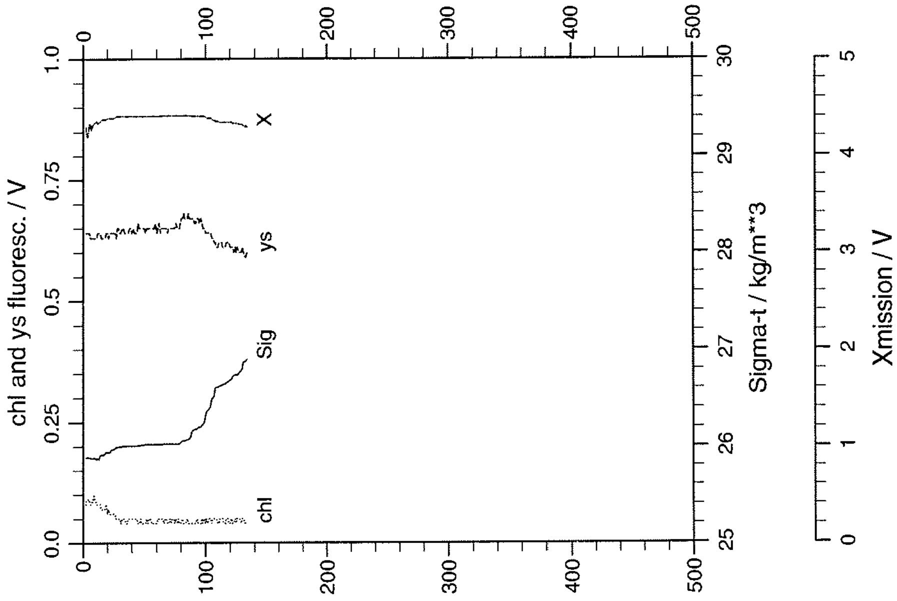

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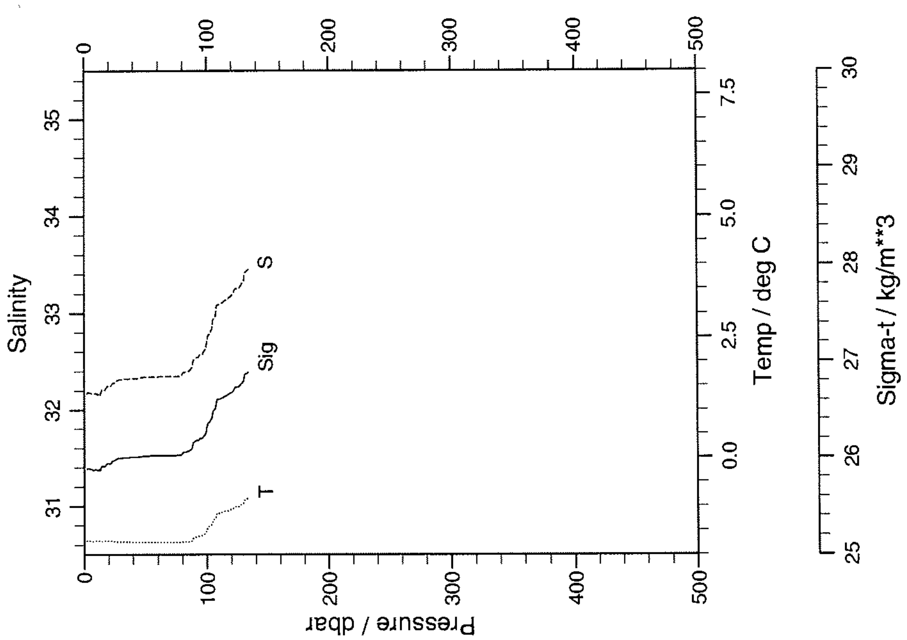

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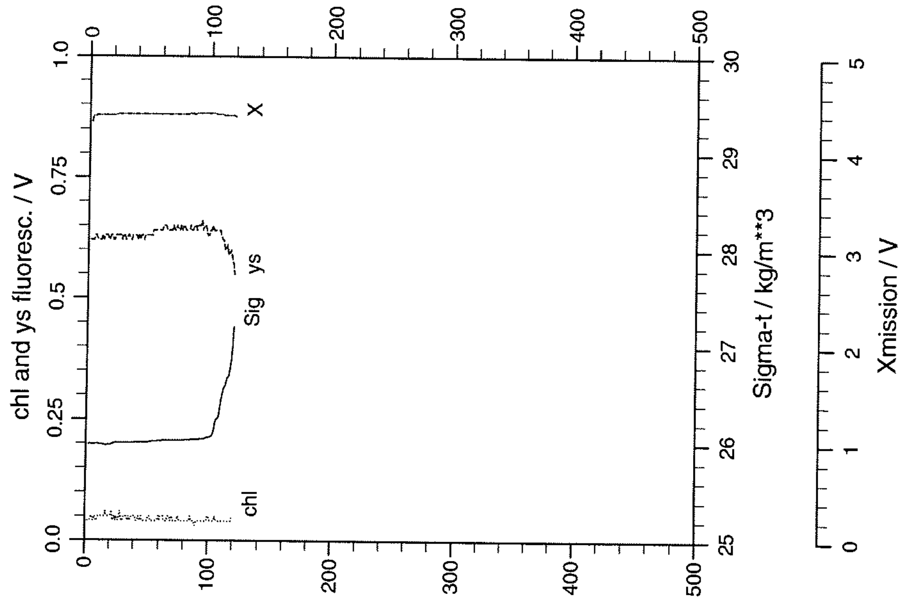
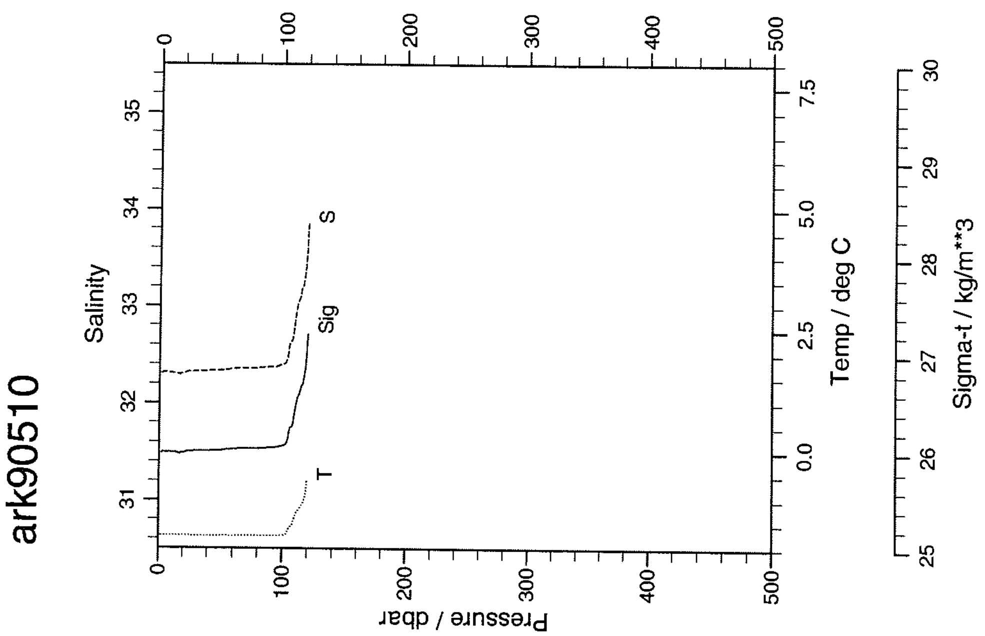
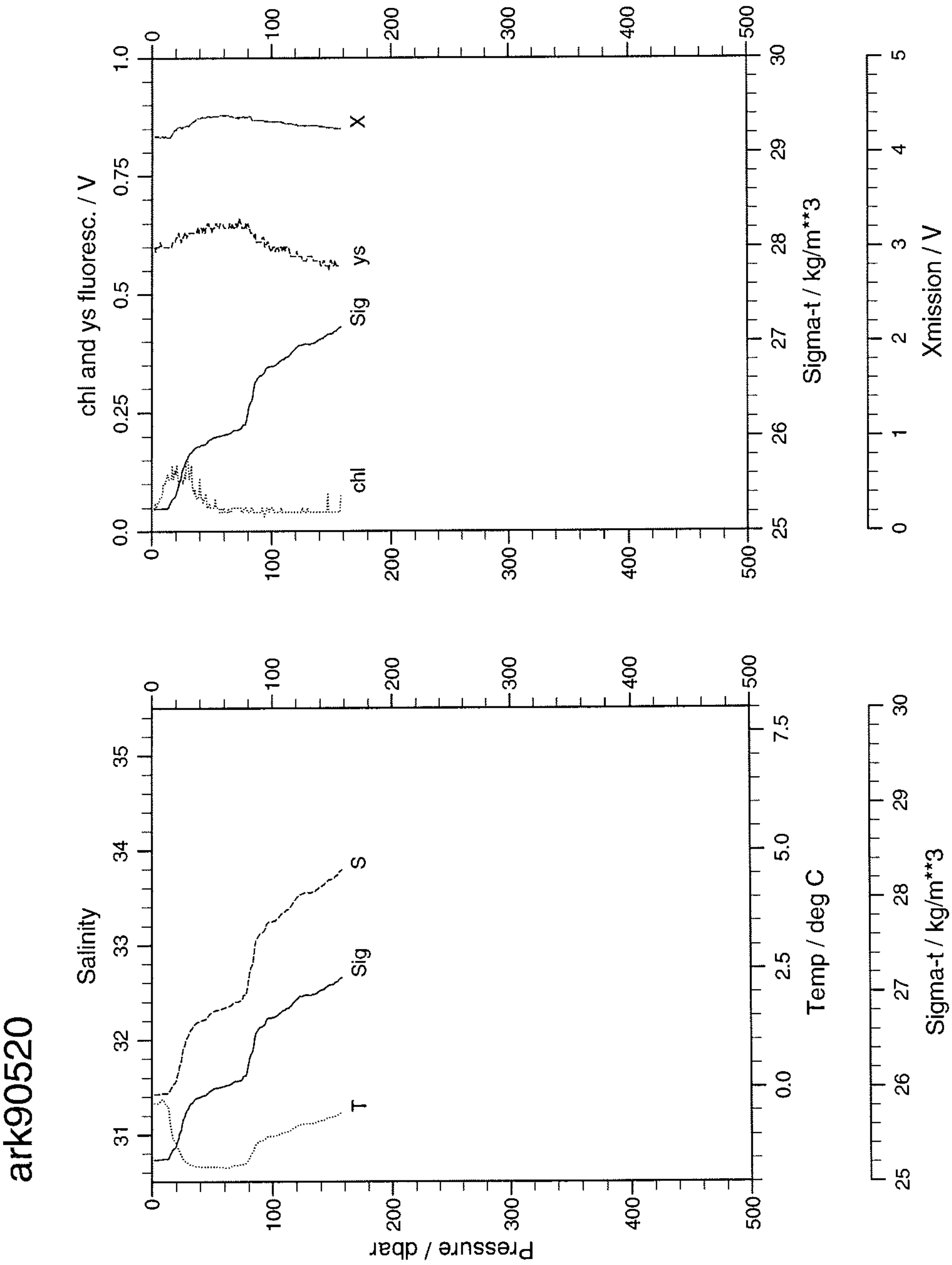

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl


ark90510
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90520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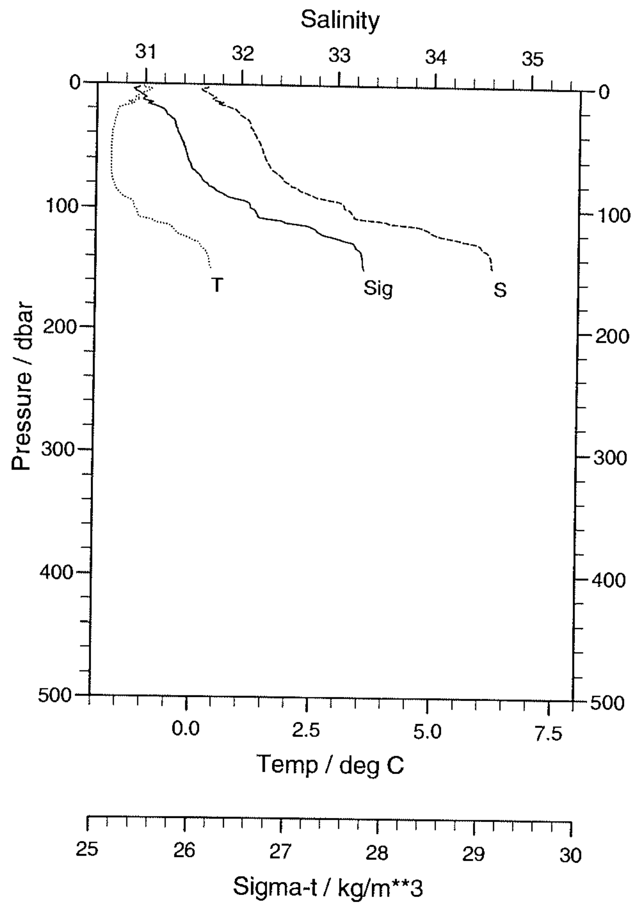
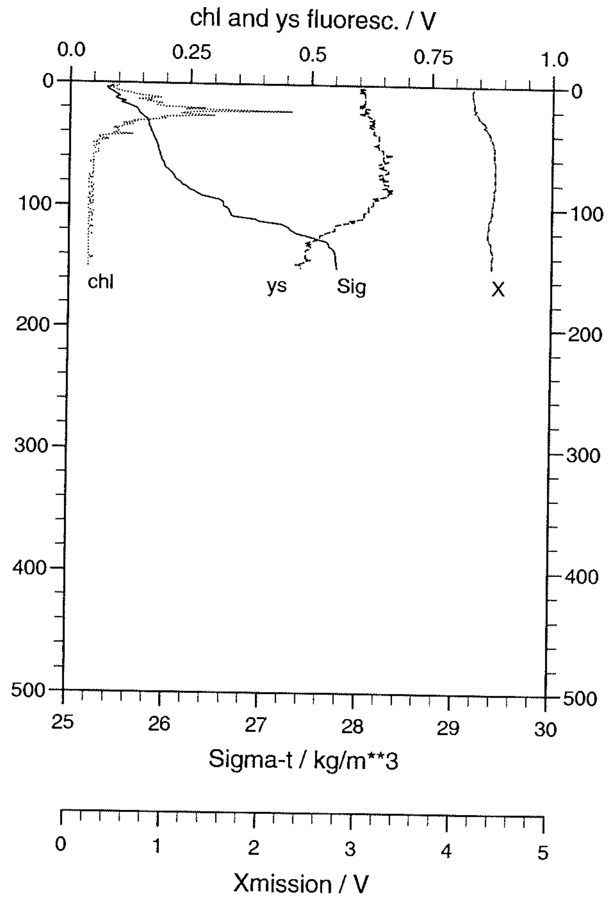
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T
chl and ys fluoresc. / V
Xmission / V
X
ys
chl

ark90530





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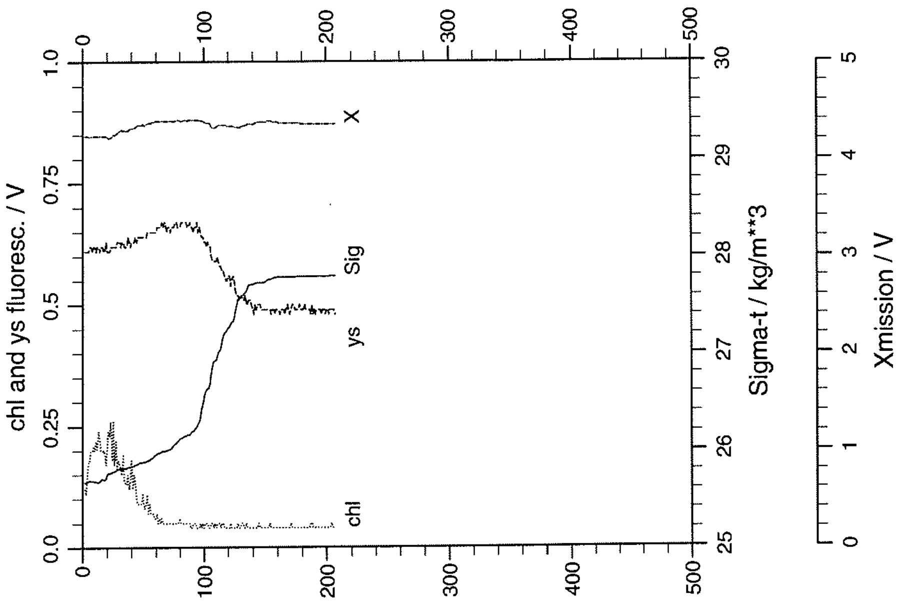
ark90540



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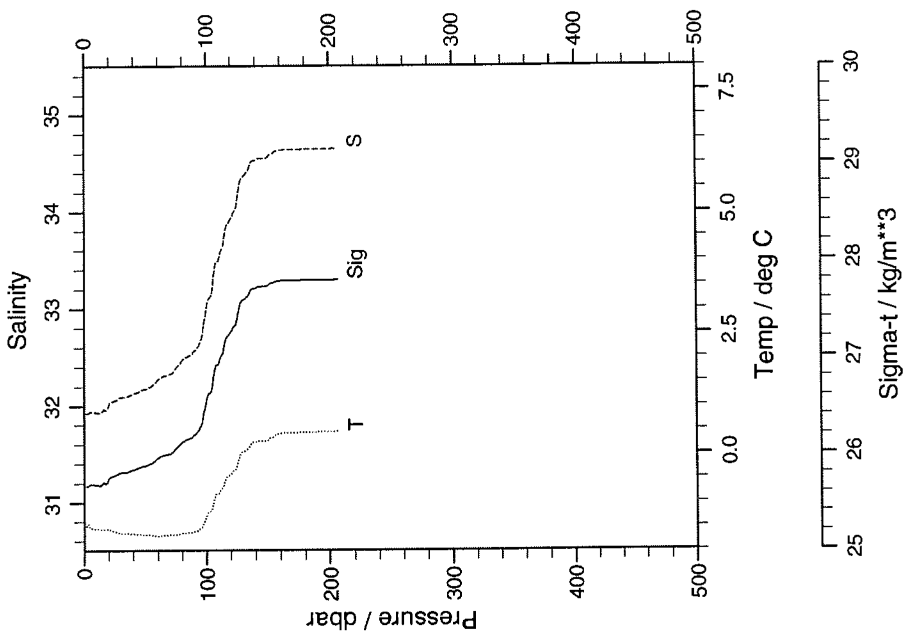

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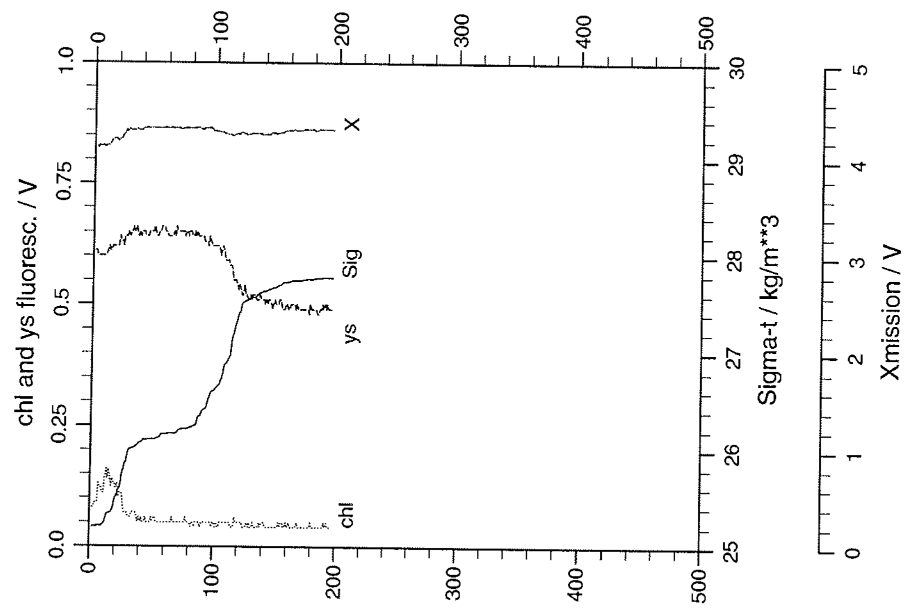

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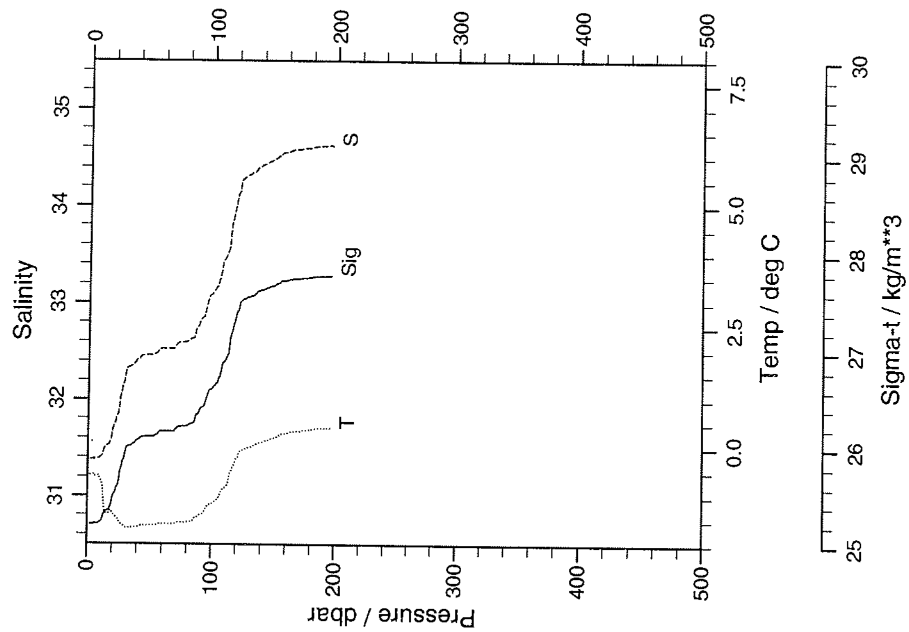

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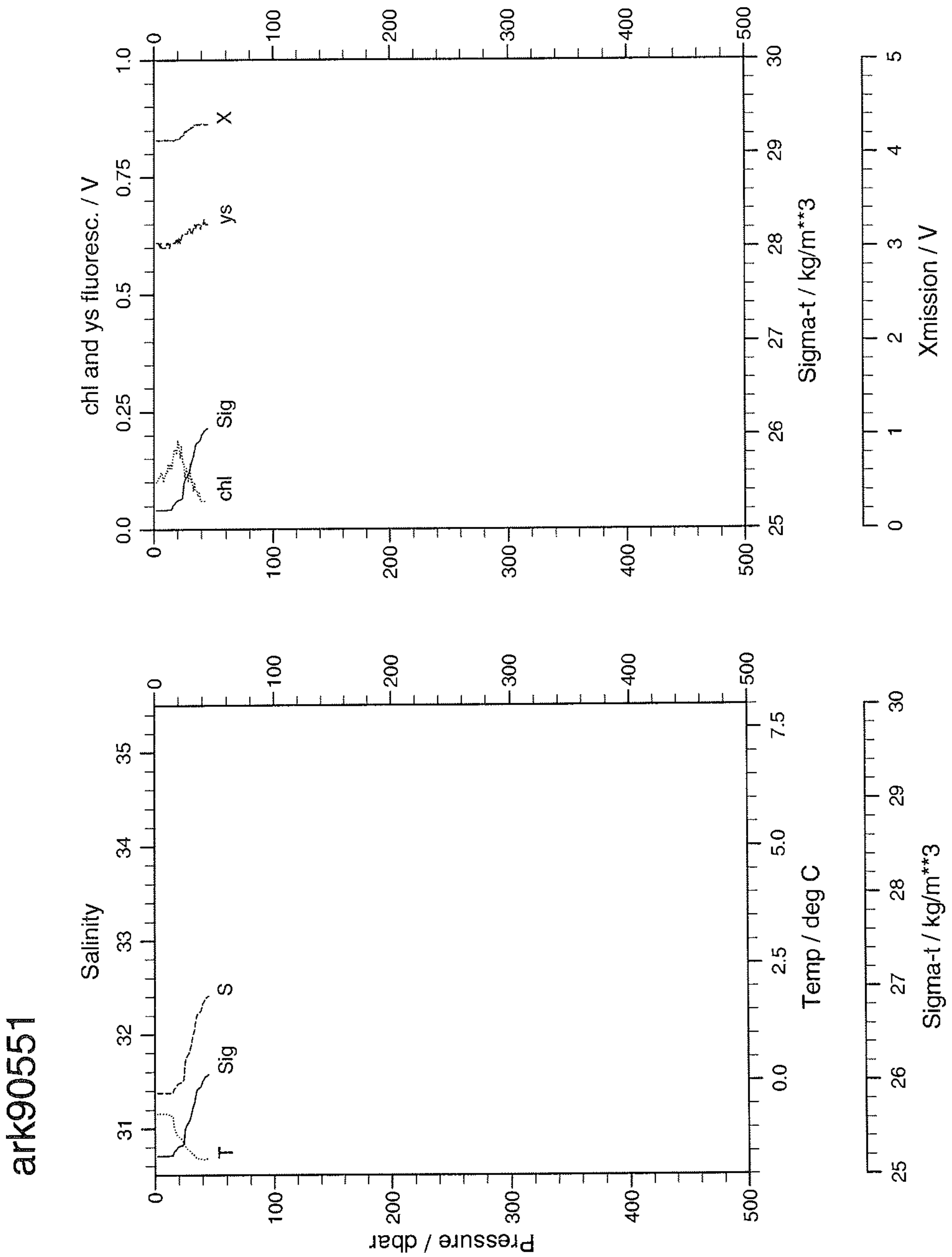
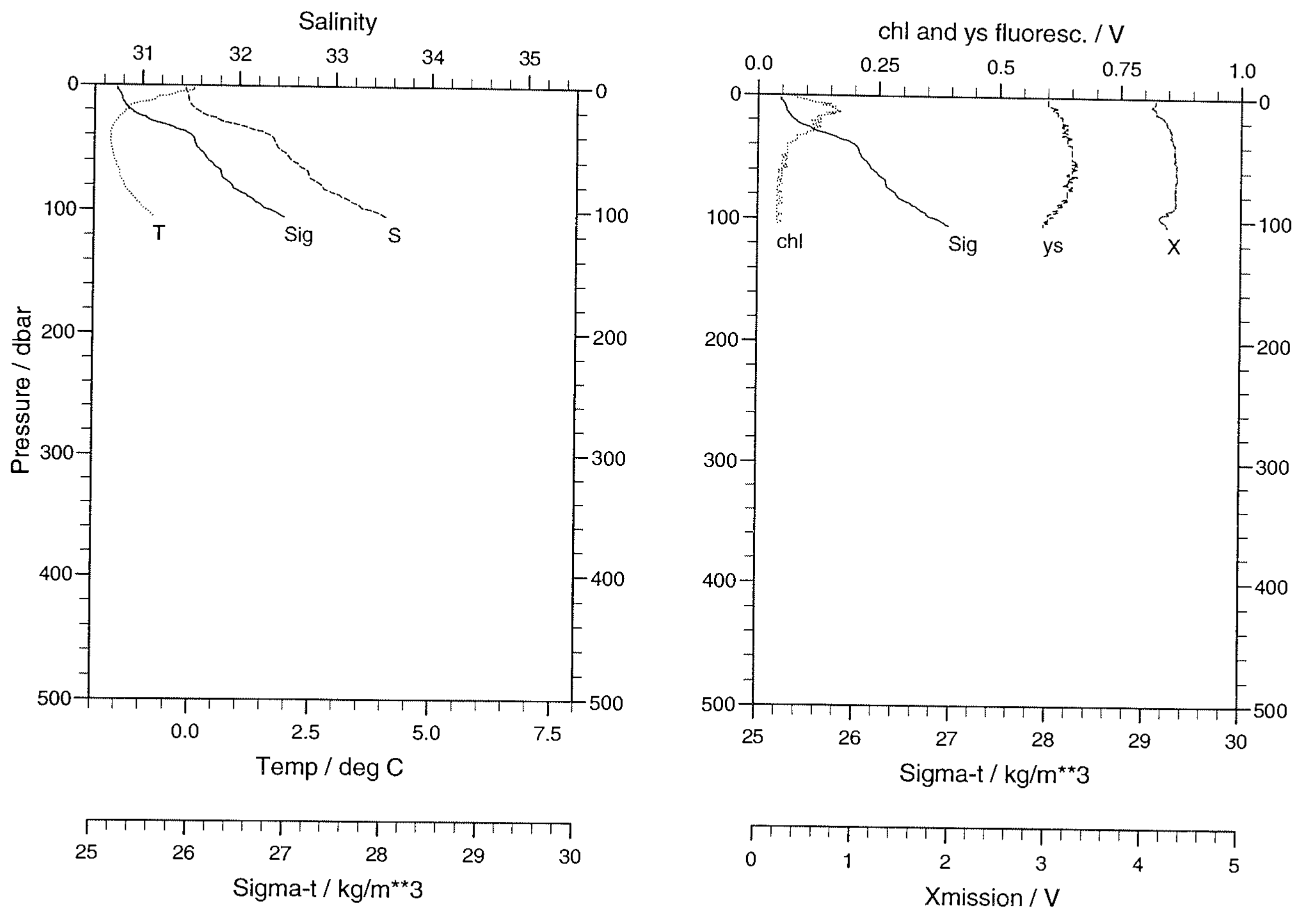

ark90551
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90560



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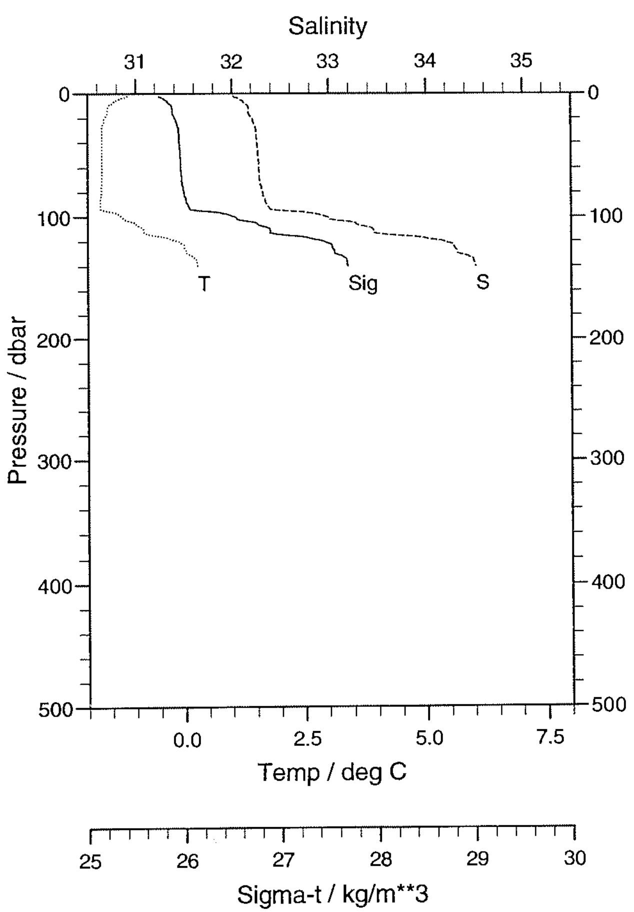
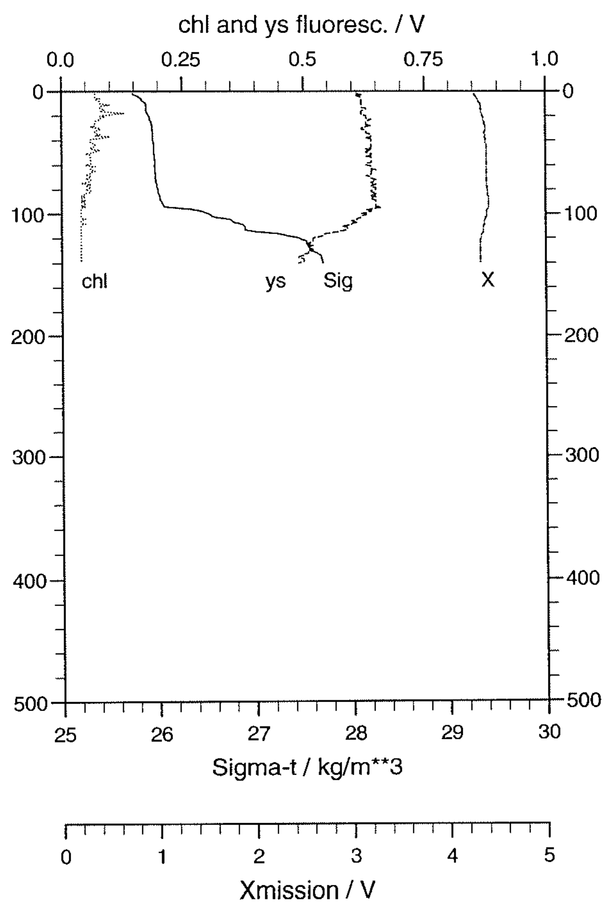
ark90570





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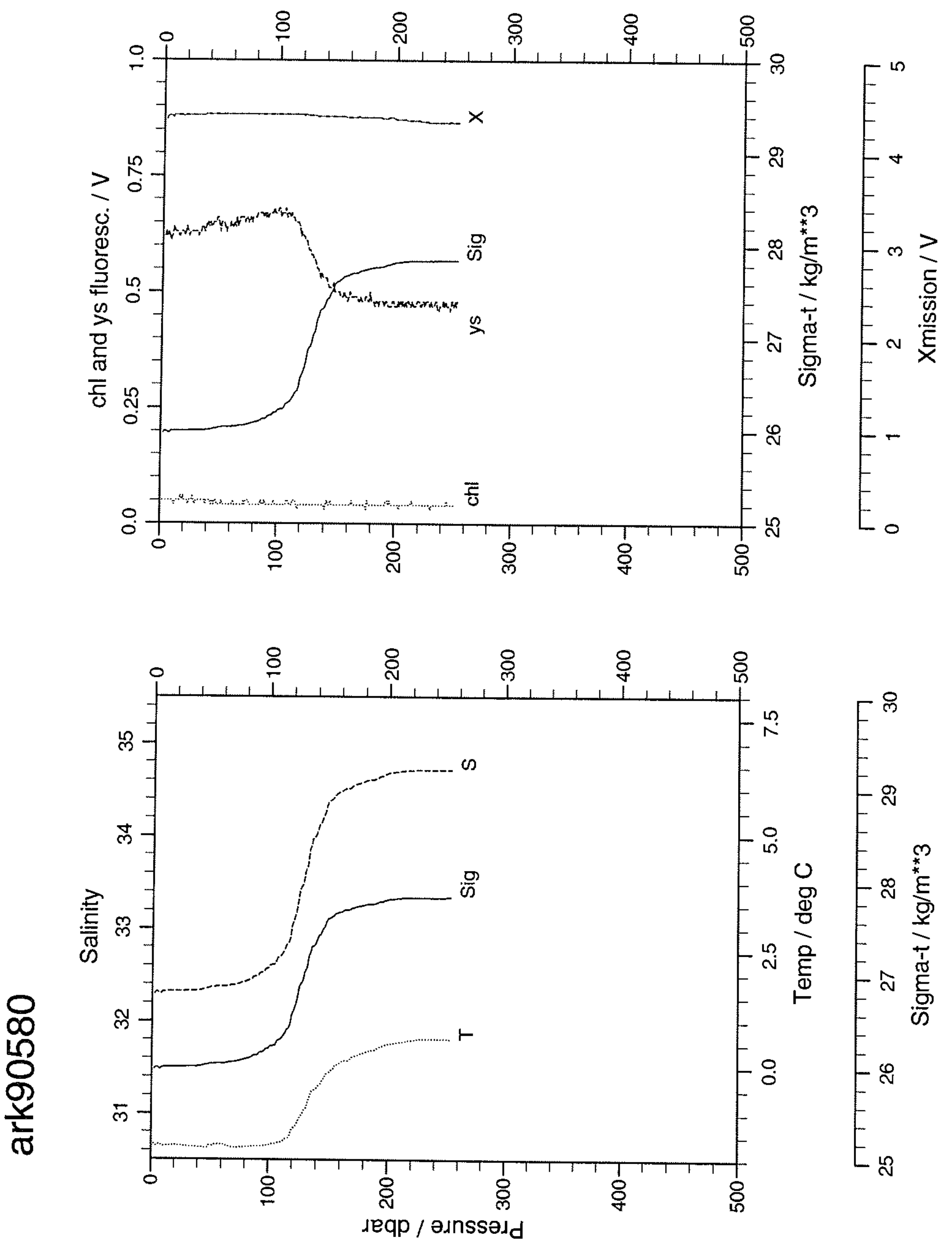
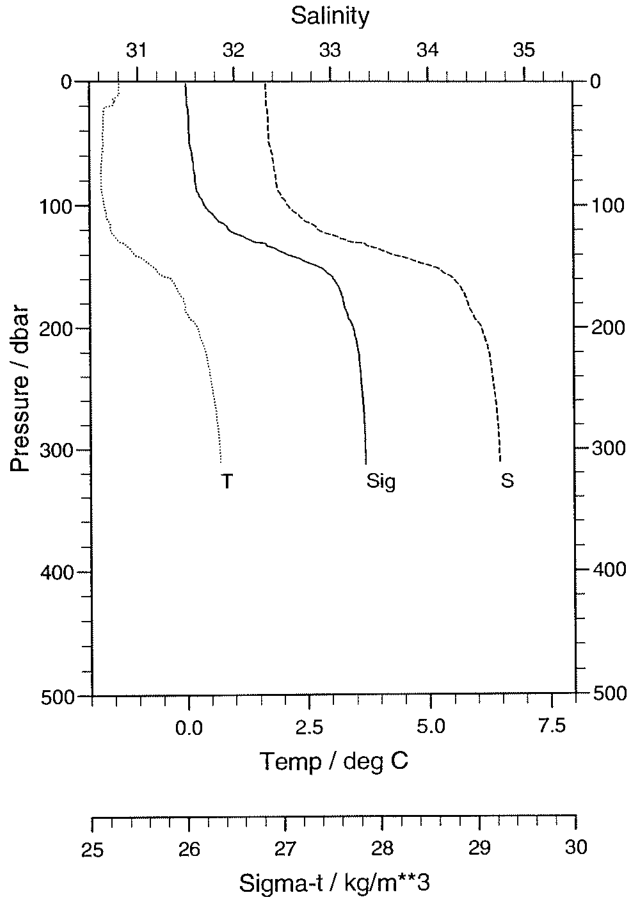
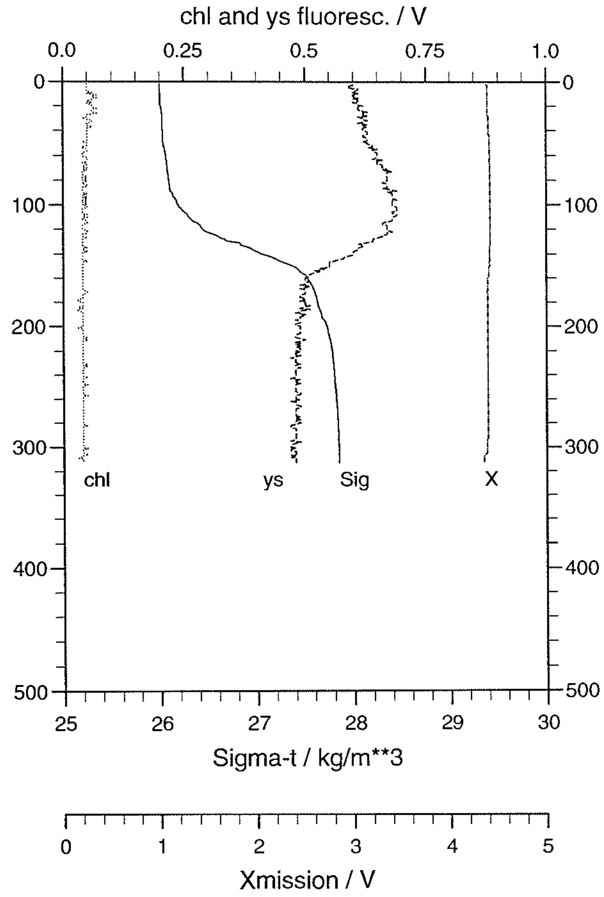
ark90580



chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
0
100
200
300
400
500
X
Sig
ys
chl
Sigma-t / kg/m**3
25
26
27
28
29
30
Xmission / V
0
1
2
3
4
5
ark90580
Salinity
31
32
33
34
35
S
Sig
T
Temp / deg C
0.0
2.5
5.0
7.5
Sigma-t / kg/m**3
Pressure / dbar

ark90590





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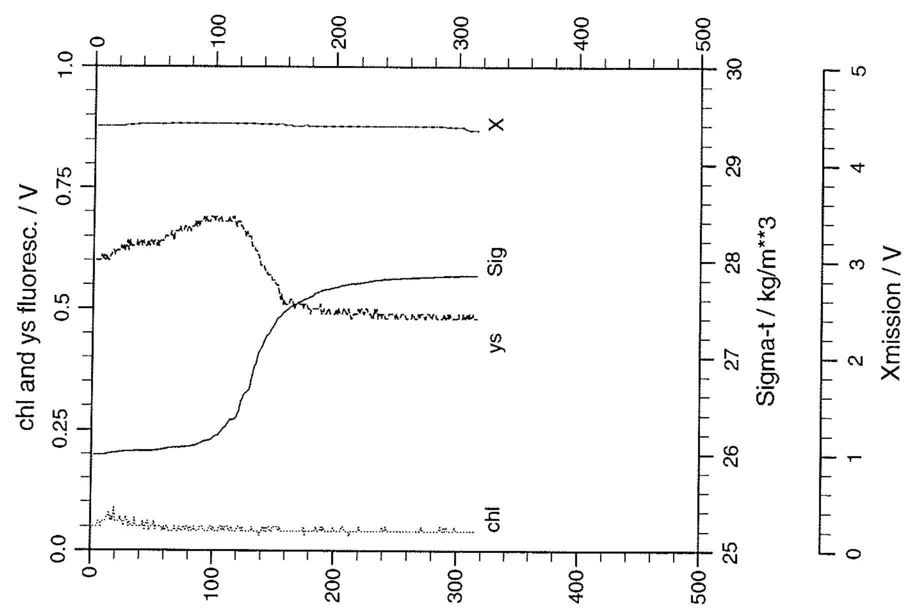

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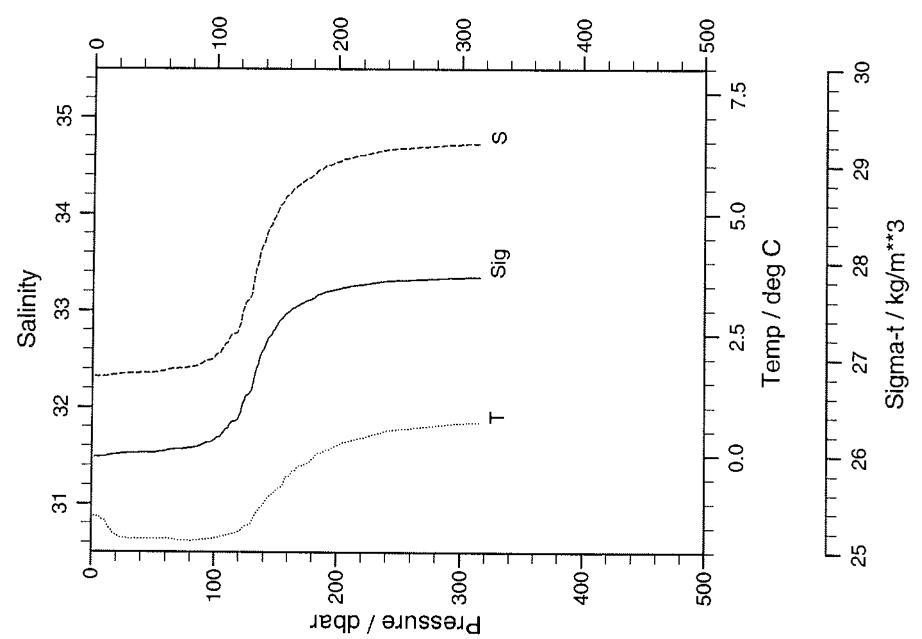

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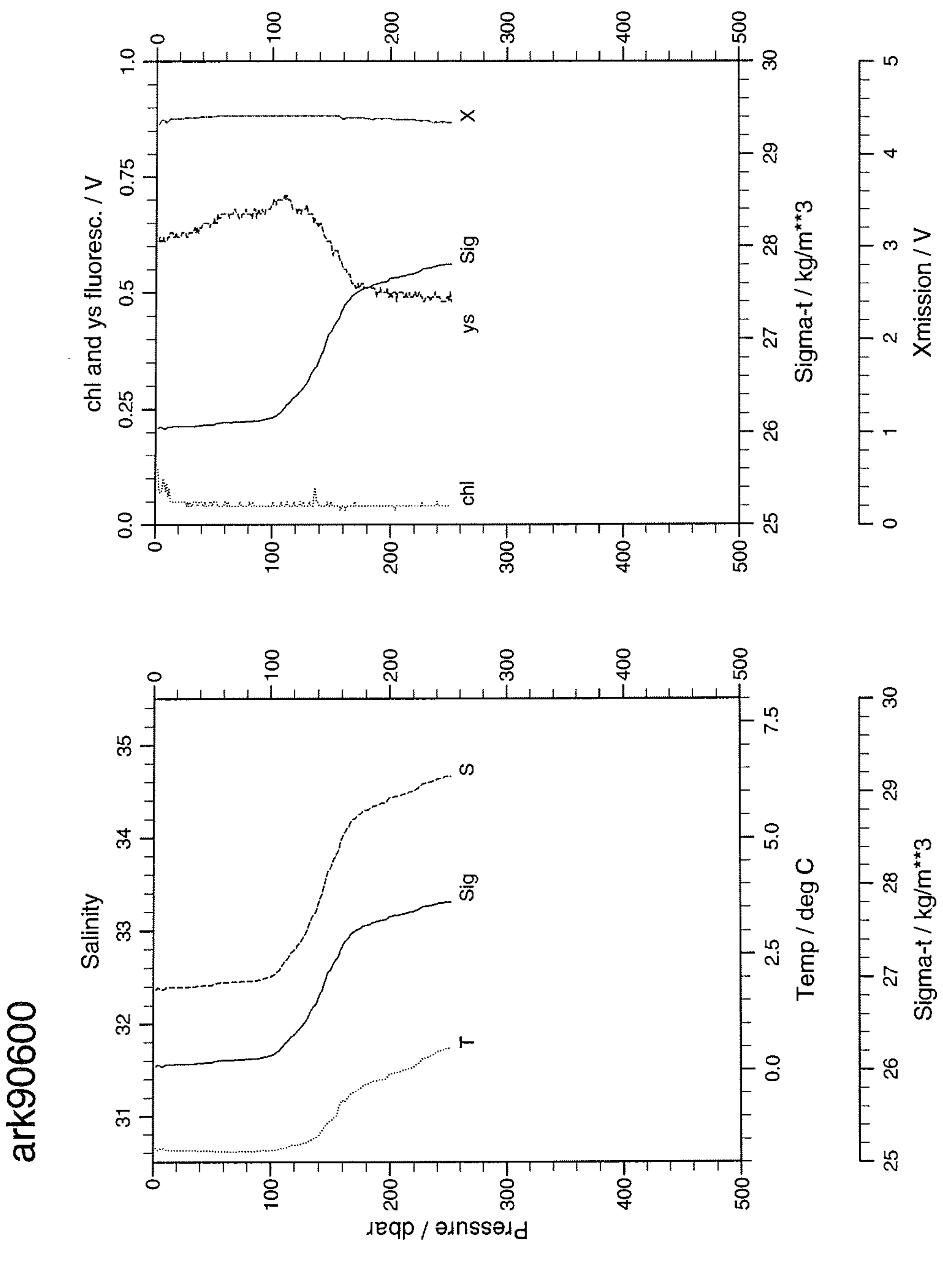
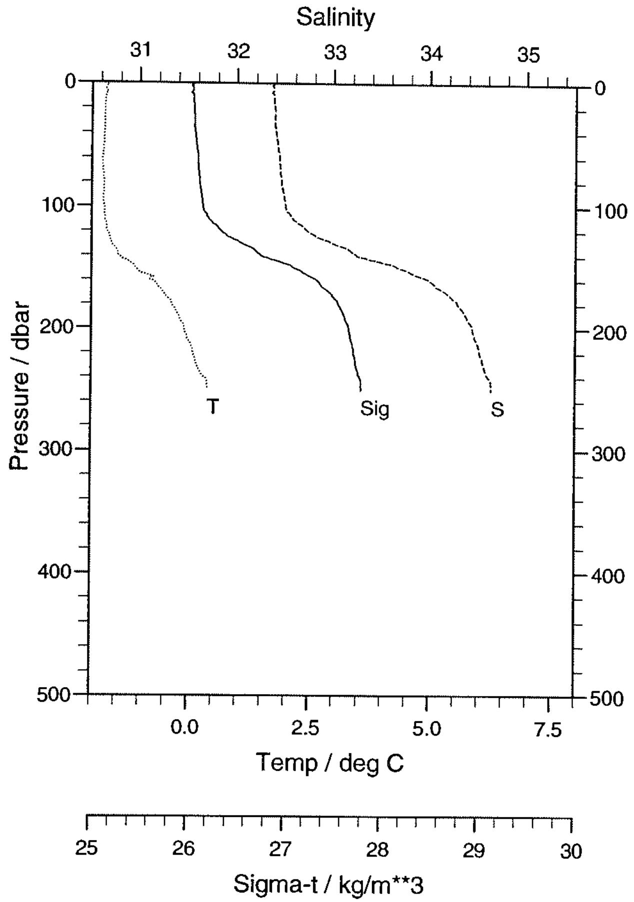
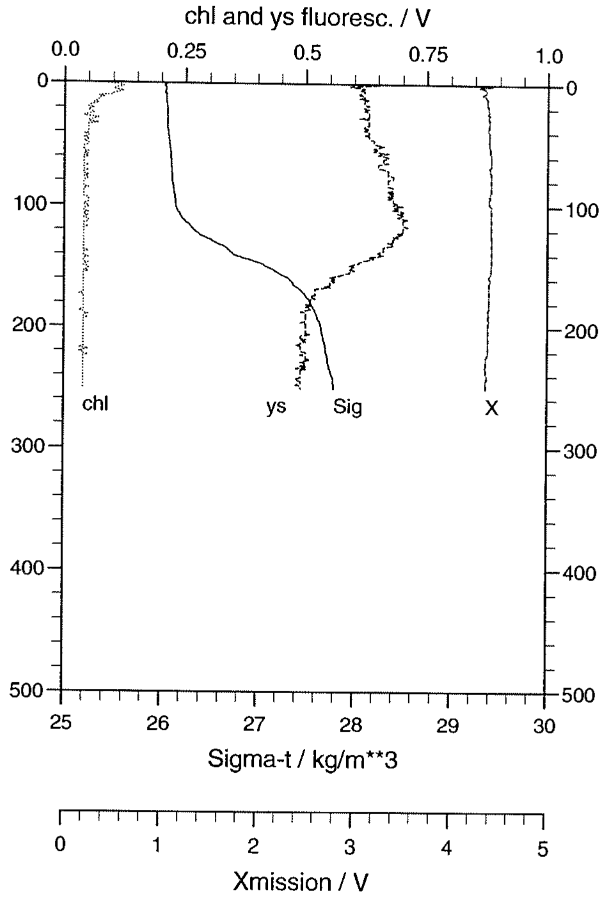


ark90600
chl and ys fluoresc. / V
X
Sig
ys
chl
Sigma-t / kg/m**3
Xmission / V
Salinity
S
Sig
T
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar

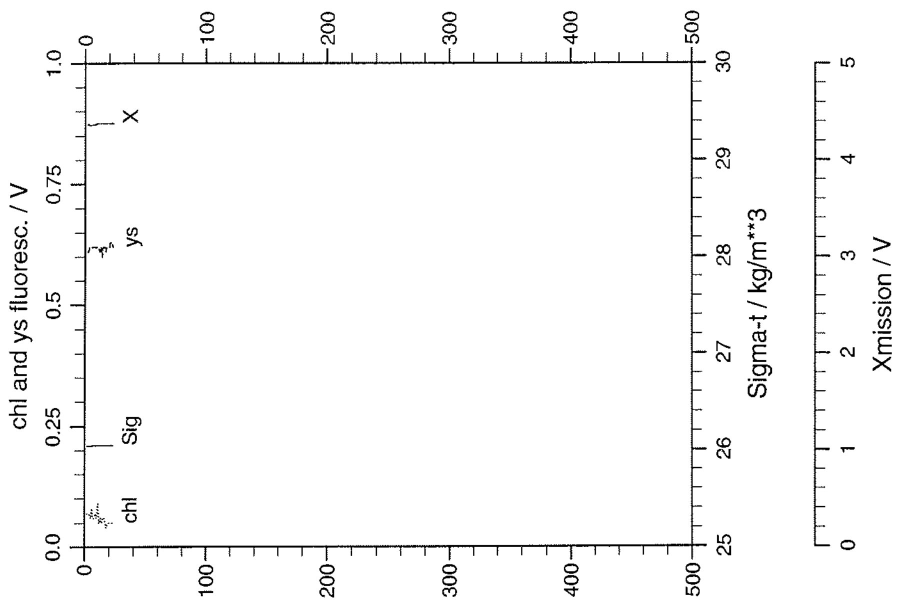
ark90601

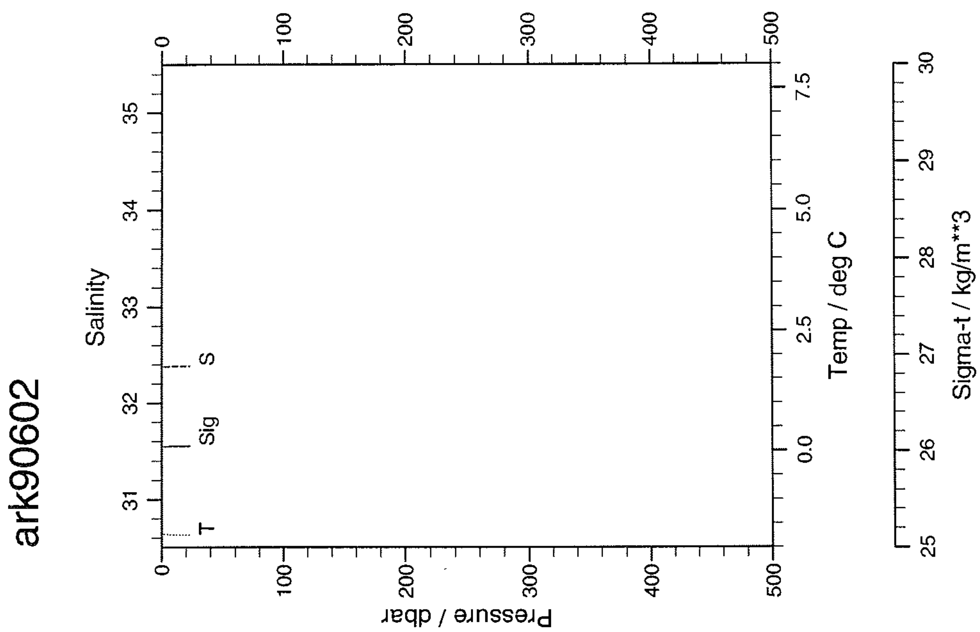




ark90601

ark90602


chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
0
100
200
300
400
500
X
ys
Sig
chl
25
26
27
28
29
30
Sigma-t / kg/m**3
0
1
2
3
4
5
Xmission / V


ark90602
Salinity
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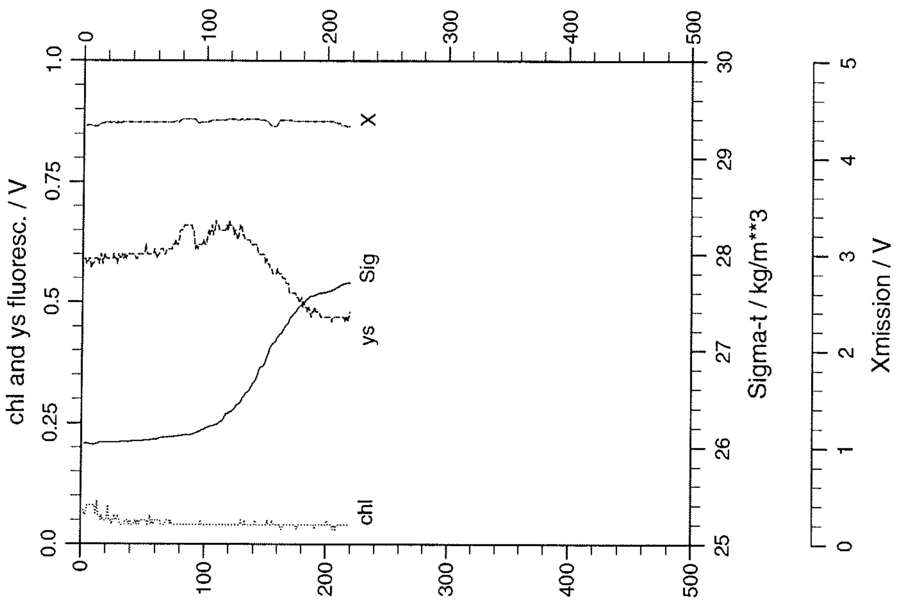
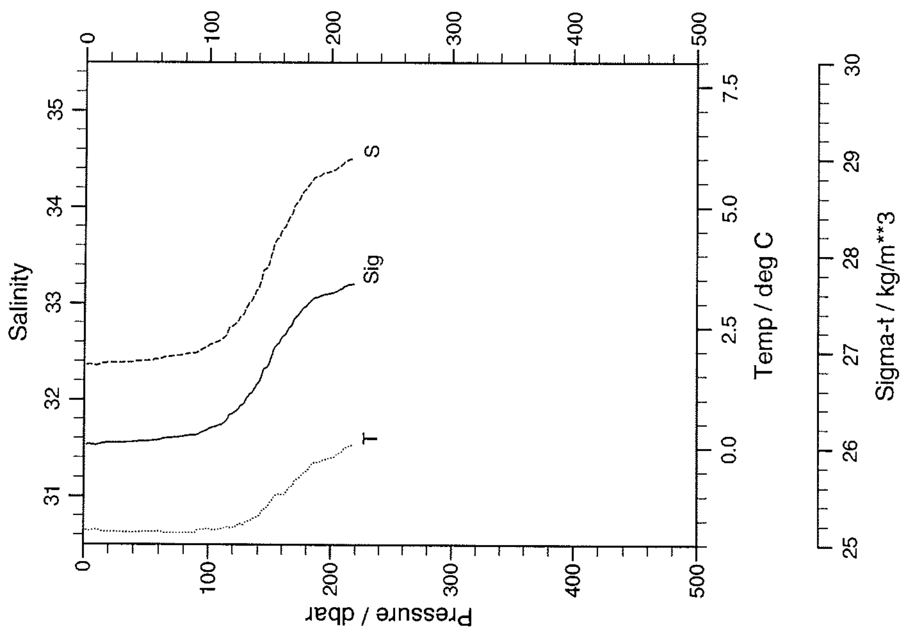
32
33
34
35
0
100
200
300
400
500
Pressure / dbar
S
Sig
T
0.0
2.5
5.0
7.5
Temp / deg C
25
26
27
28
29
30
Sigma-t / kg/m**3

ark90603





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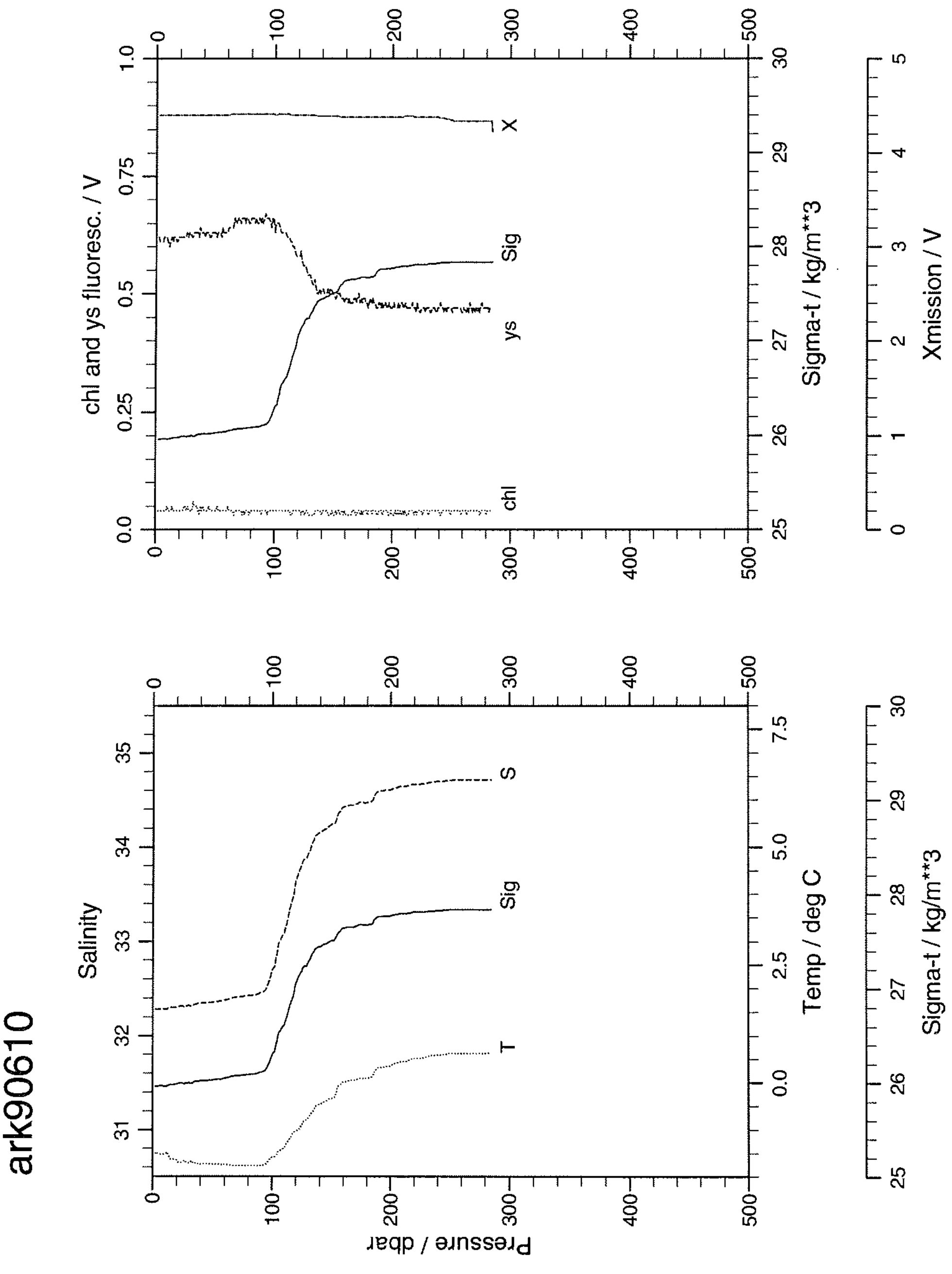
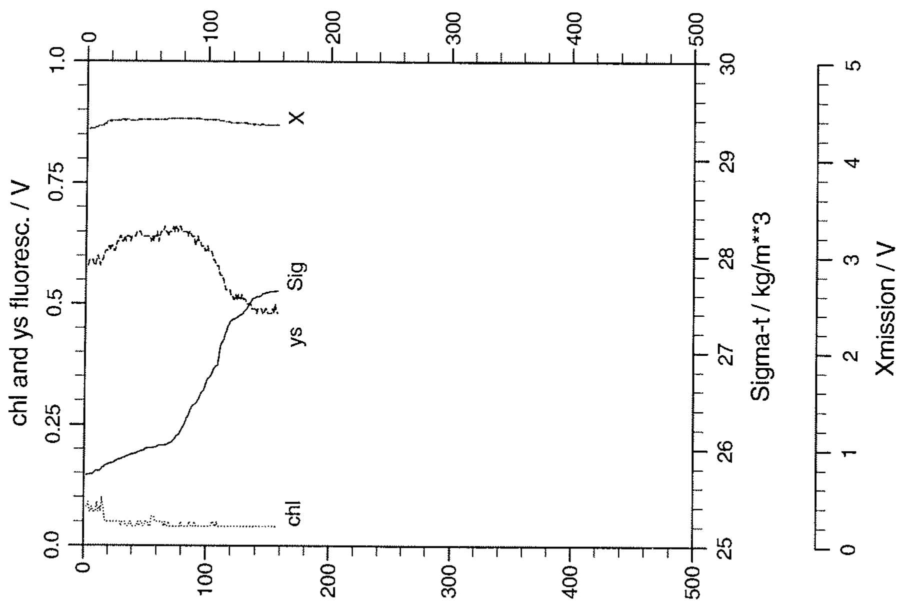


ark90610
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl

ark90620


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
0.0
0.25
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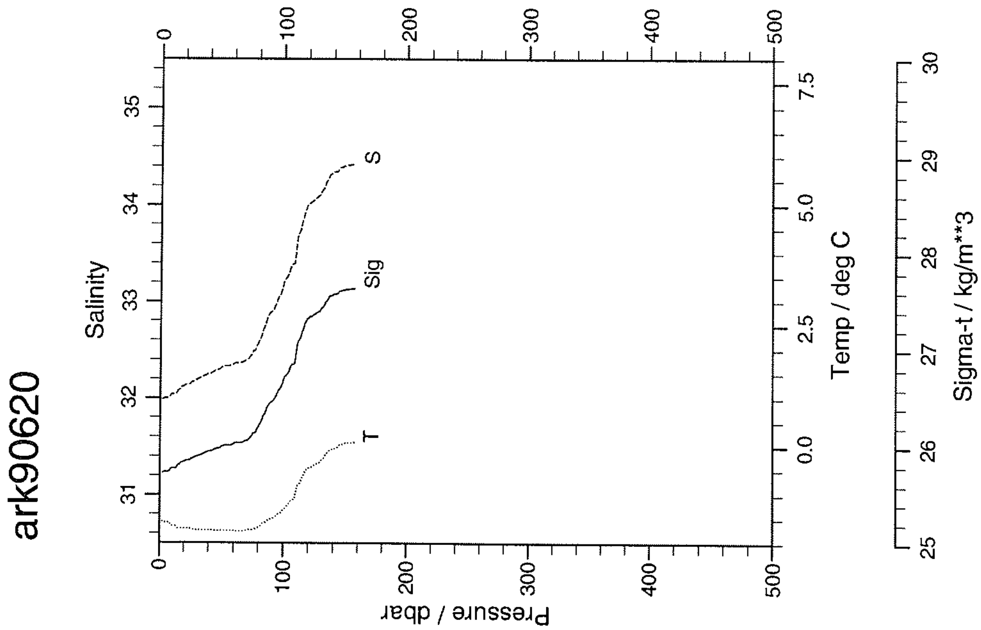
4
5


ark90620
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T
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7.5
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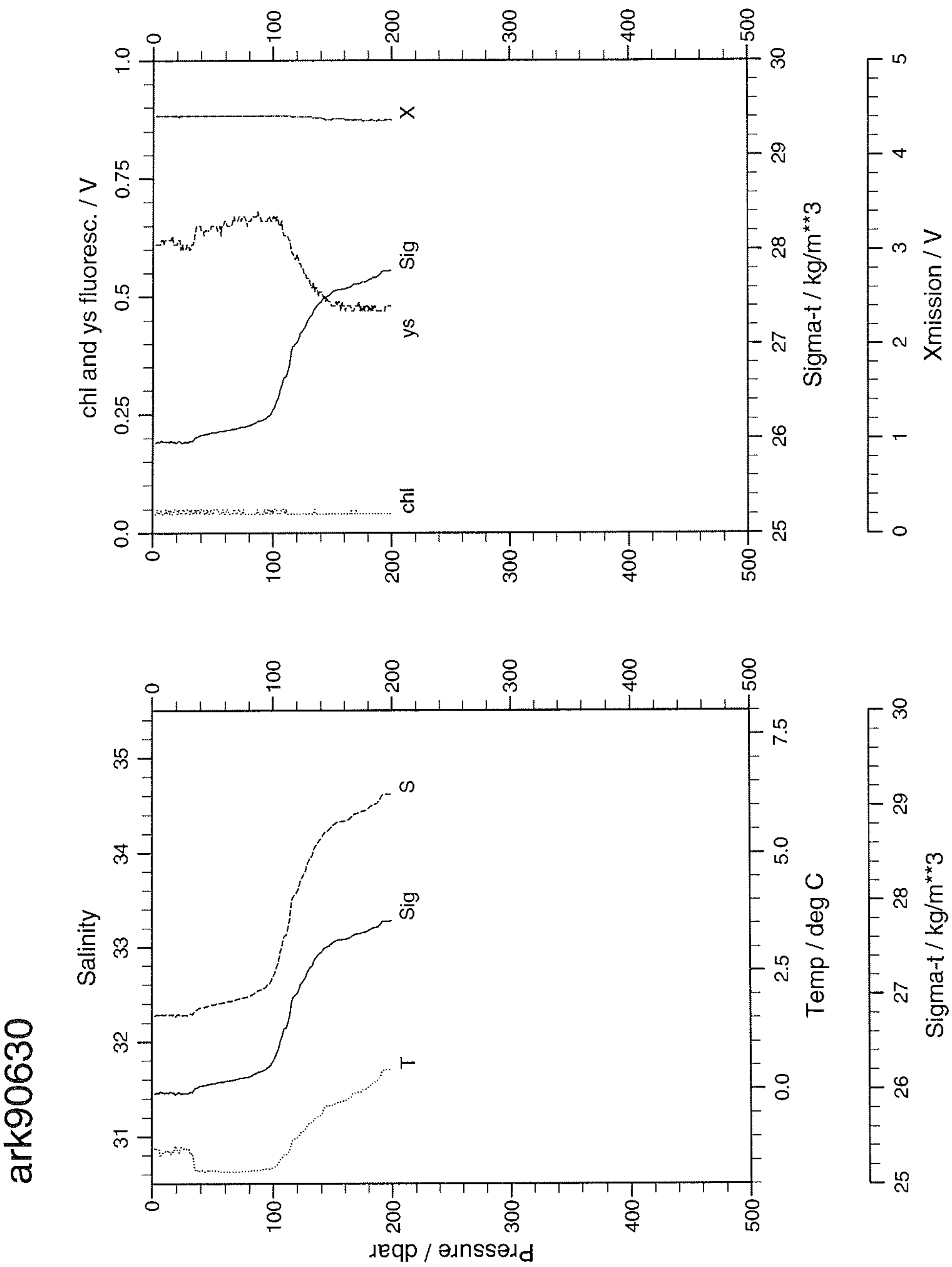
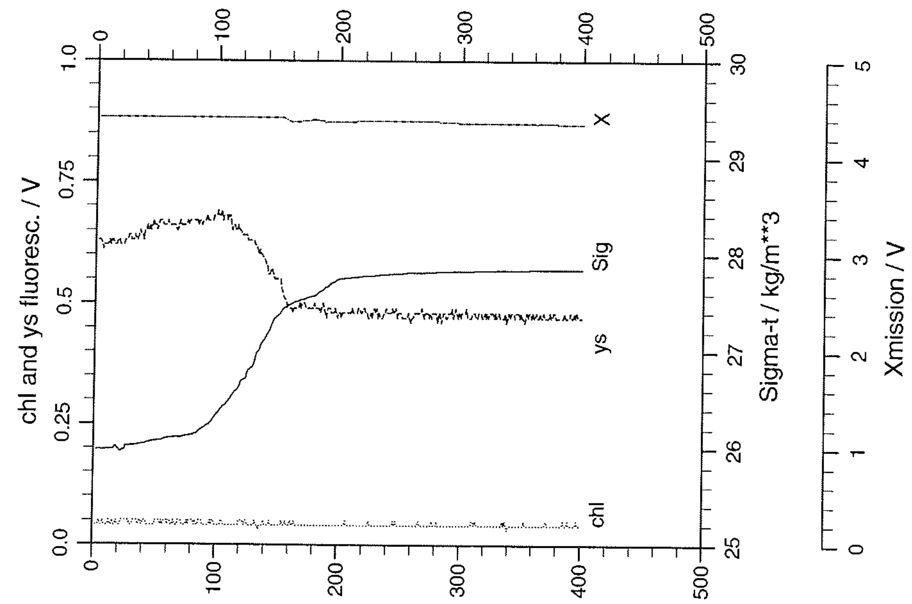
30
0
100
200
300
400
500

ark90630


ark90630
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90640



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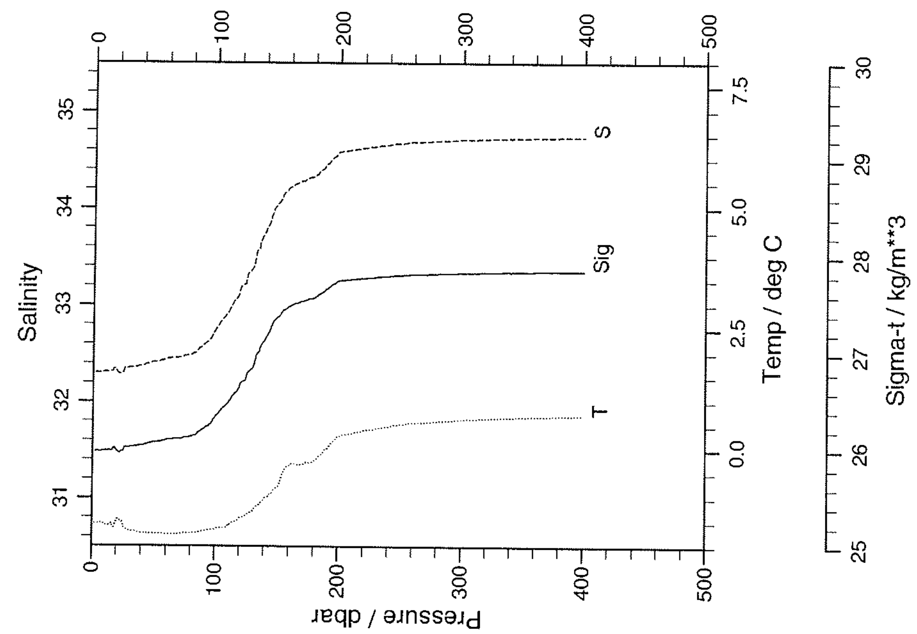

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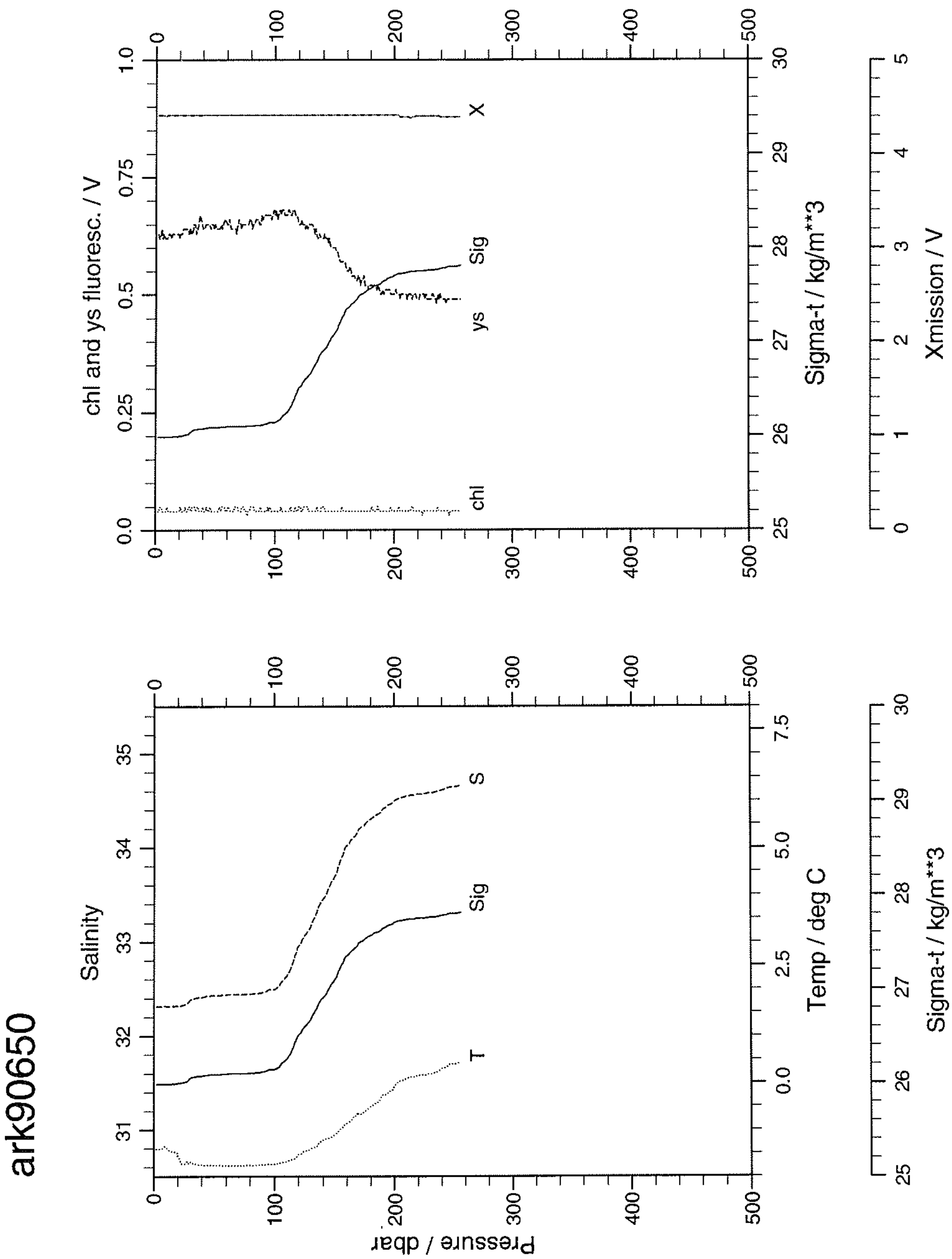
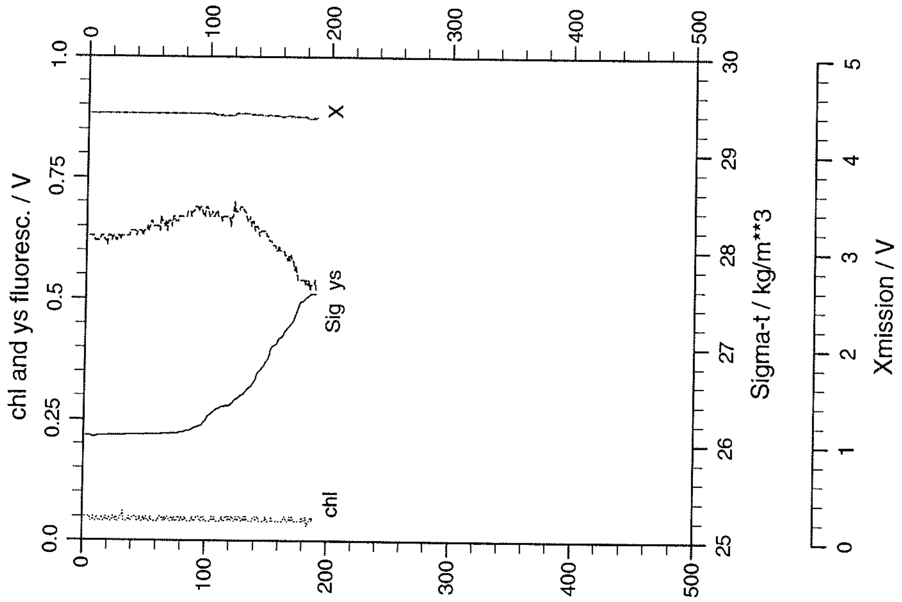
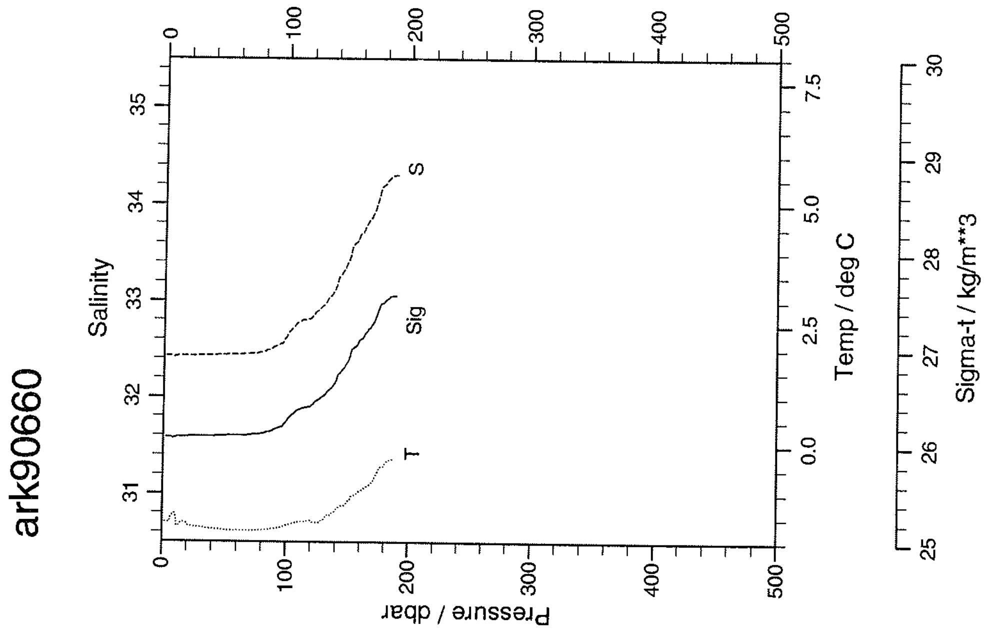

ark90650
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90660



chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
0
100
200
300
400
500
X
Sig
ys
chl
25
26
27
28
29
30
Sigma-t / kg/m**3
0
1
2
3
4
5
Xmission / V



ark90660
Salinity
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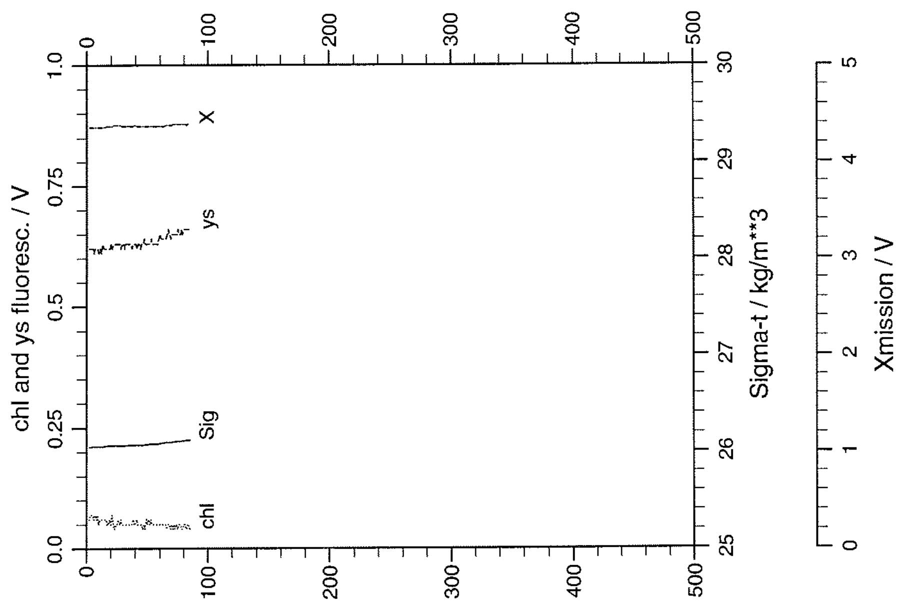
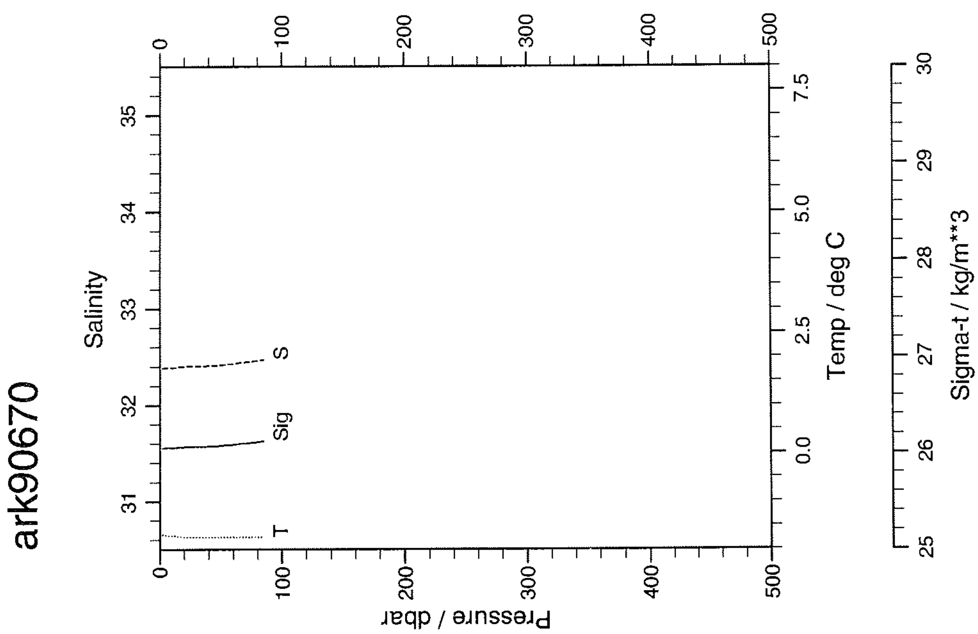
32
33
34
35
0
100
200
300
400
500
S
Sig
T
0.0
2.5
5.0
7.5
Temp / deg C
Pressure / dbar
25
26
27
28
29
30
Sigma-t / kg/m**3

ark90670

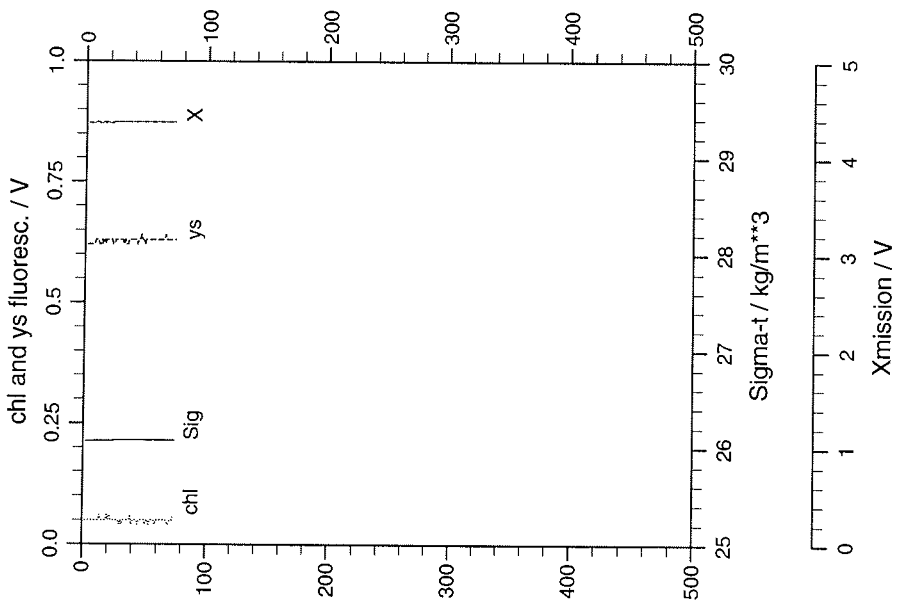


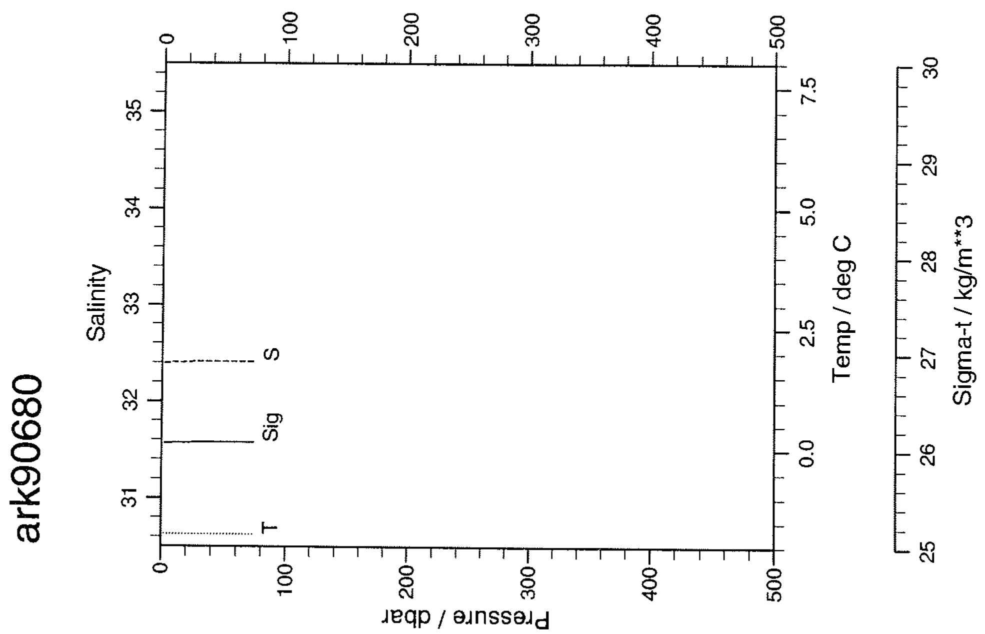
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl



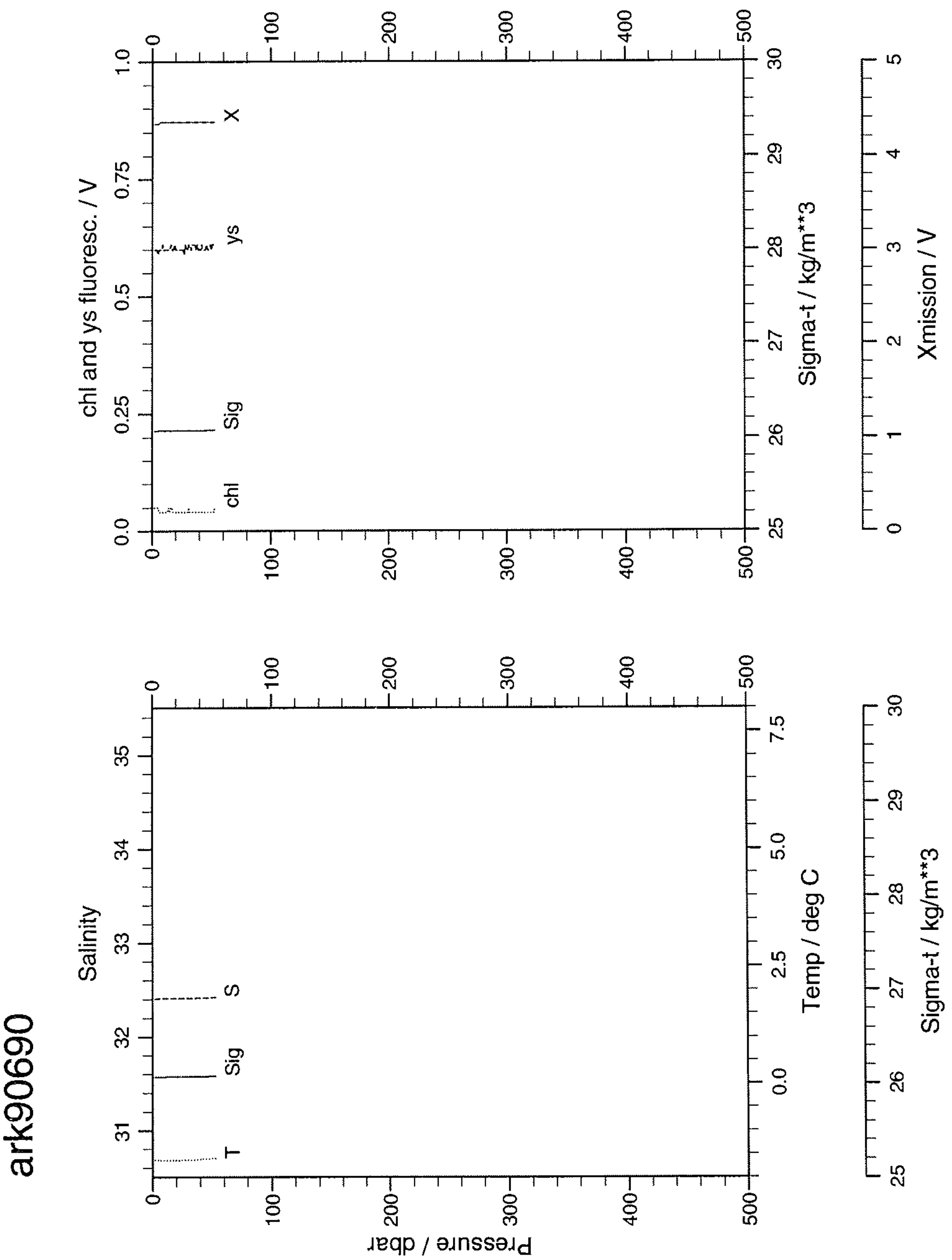
ark90670
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90680

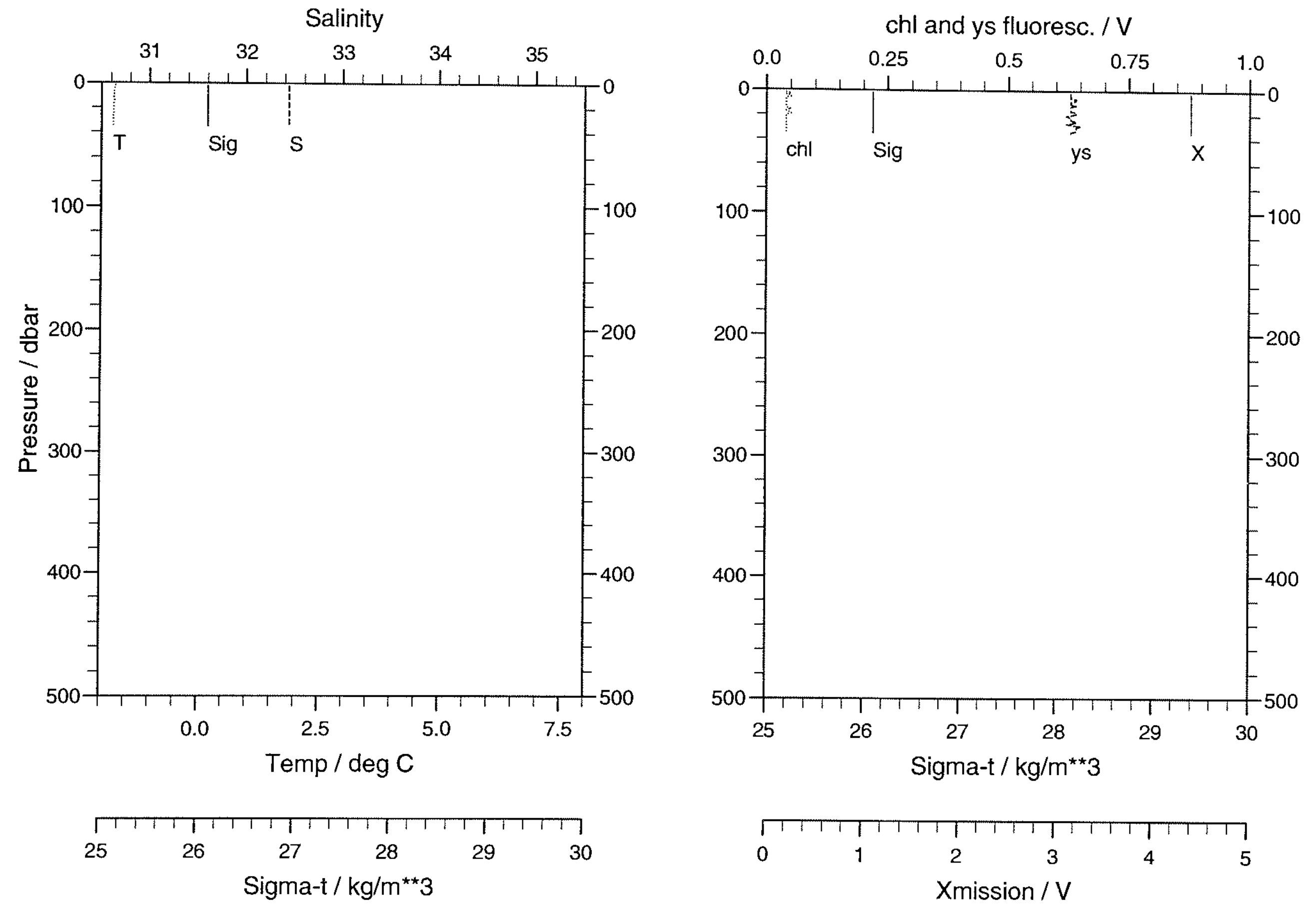

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl


ark90680
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90690

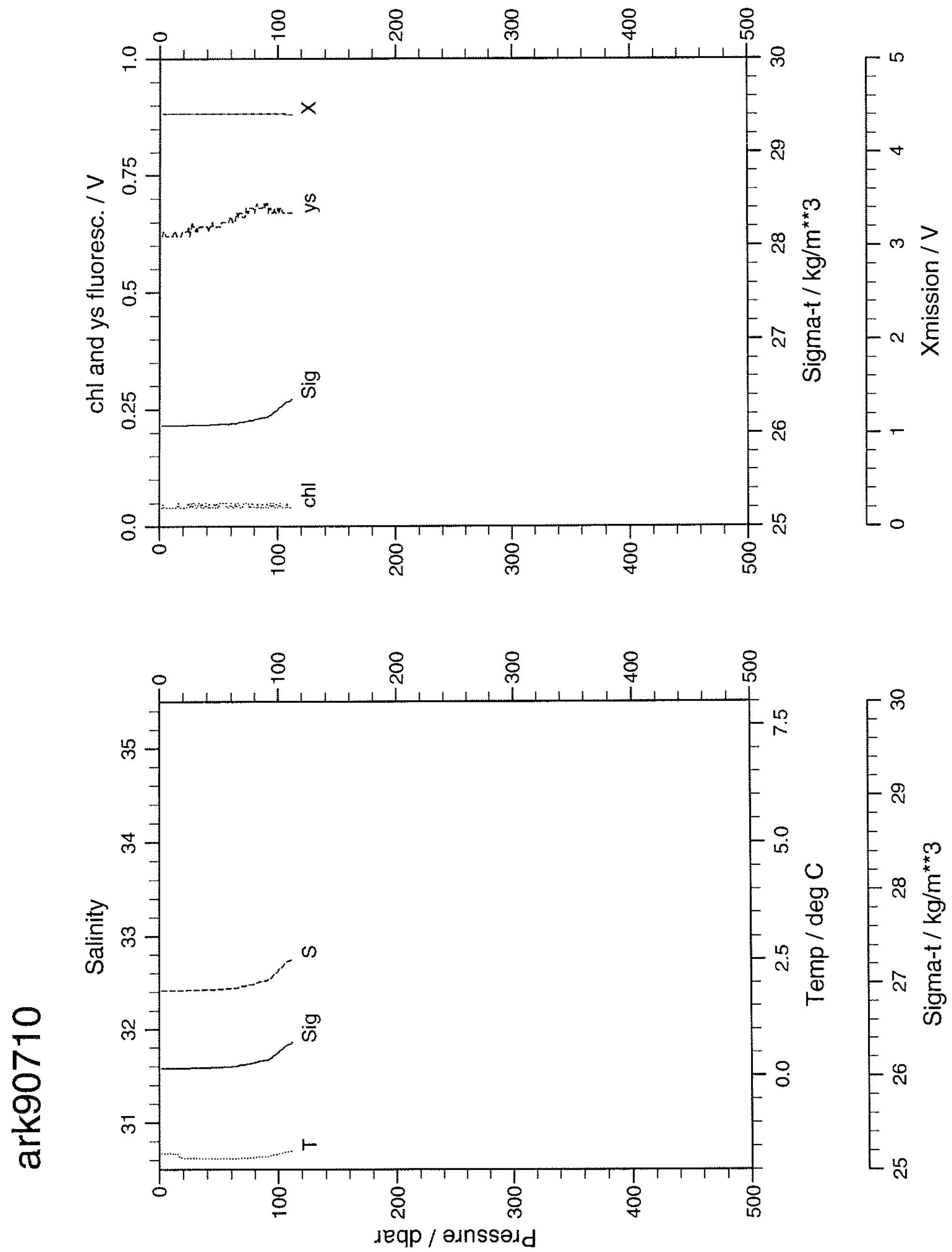

ark90690
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
T
Sig
S
chl and ys fluoresc. / V
Xmission / V
chl
ys
X

ark90700

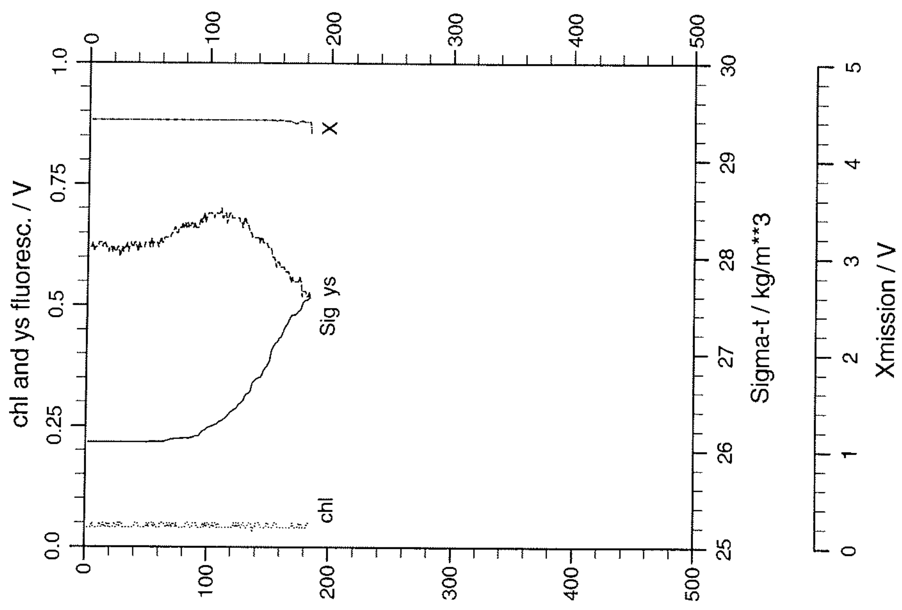


ark90700

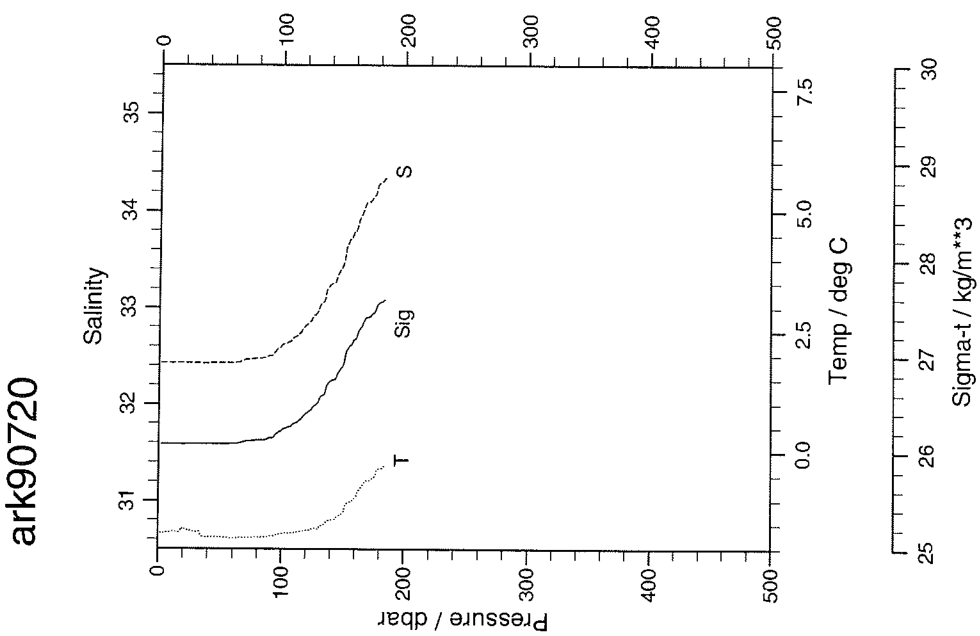
ark90710


ark90710
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90720

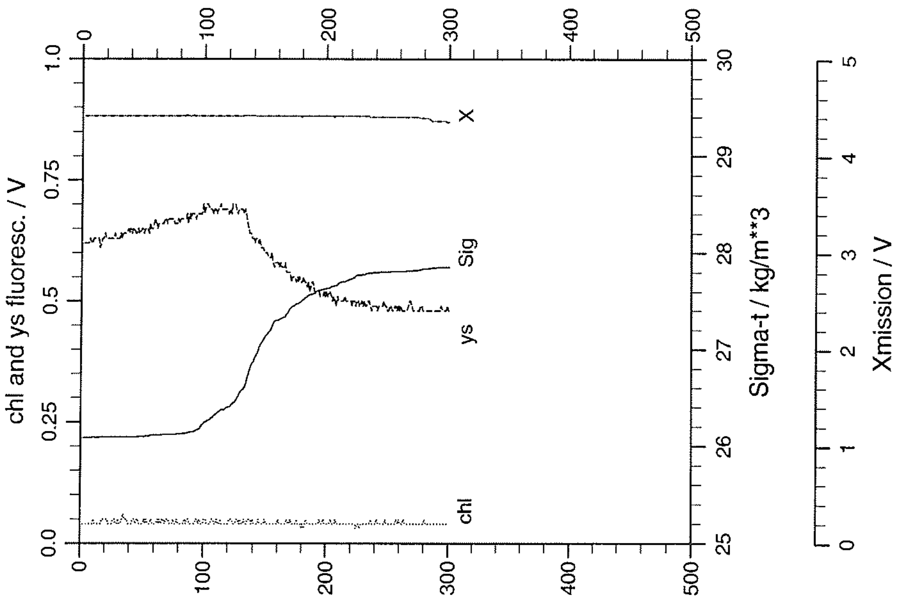


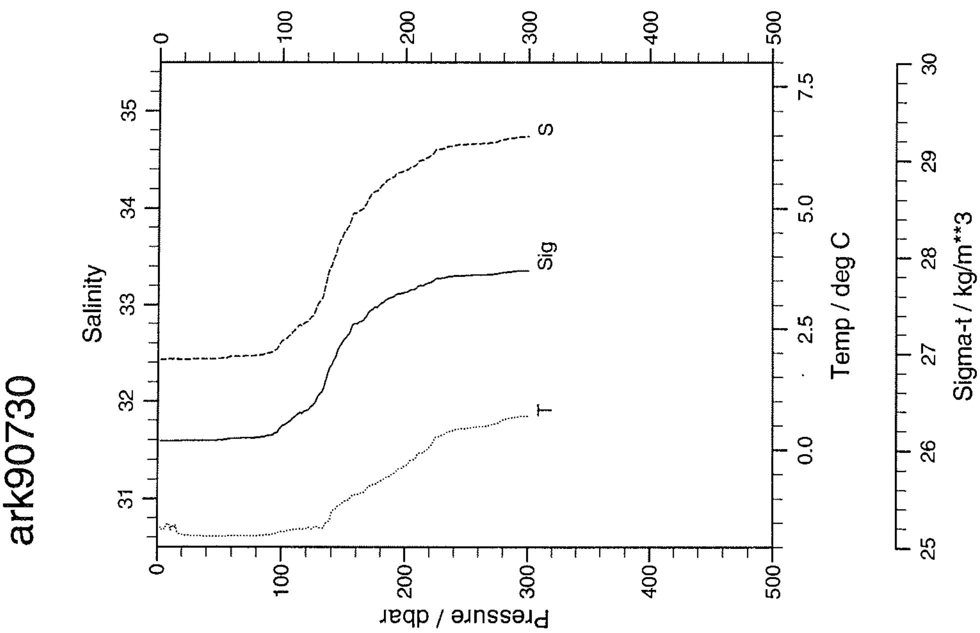
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig ys
chl



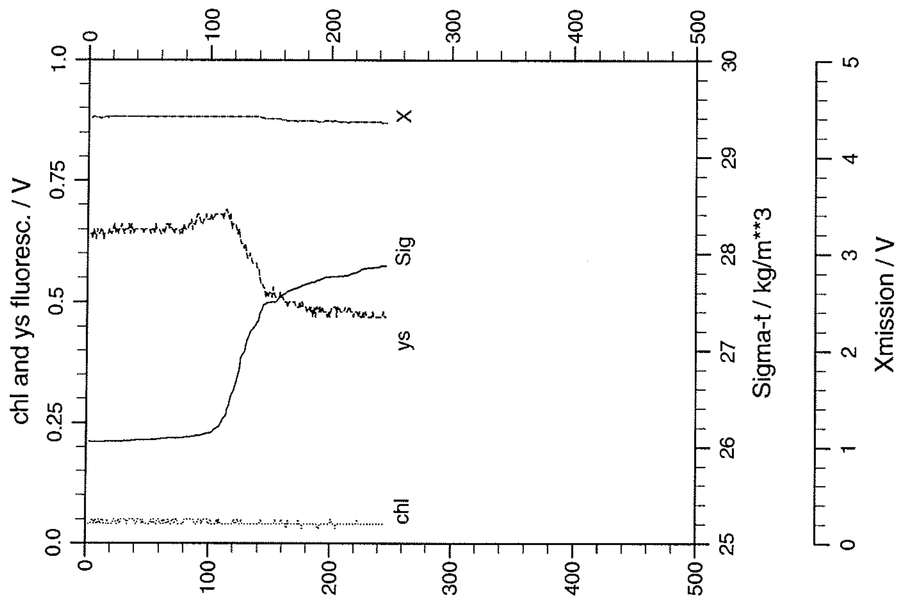
ark90720
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

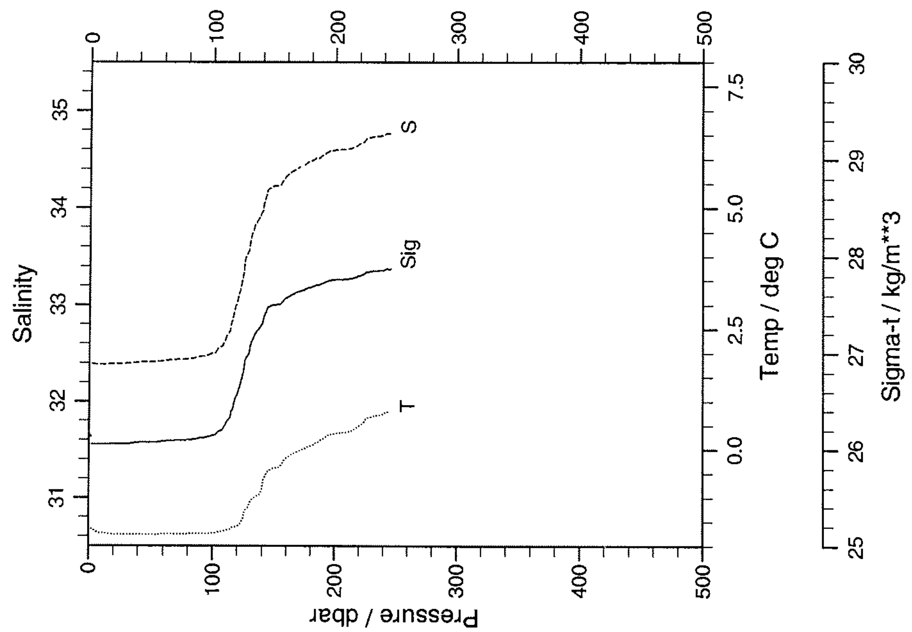
ark90730


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl


ark90730
Salinity
Pressure / dbar
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T

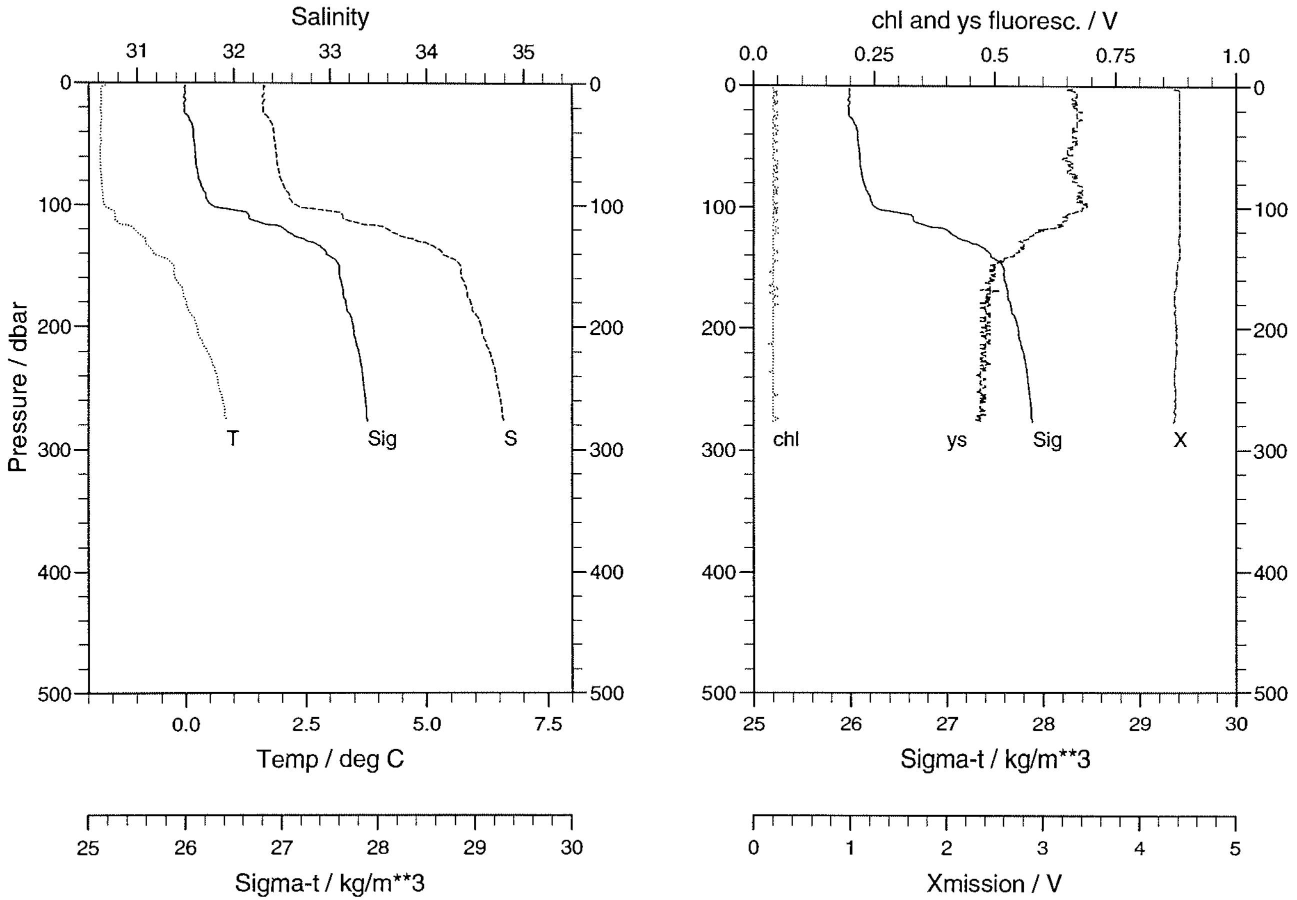
ark90740





ark90740

ark90750



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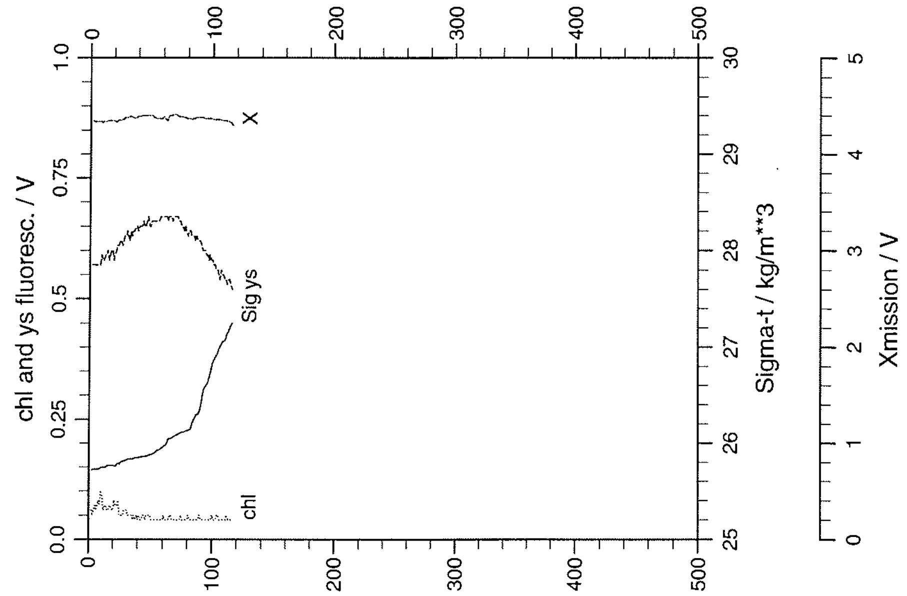
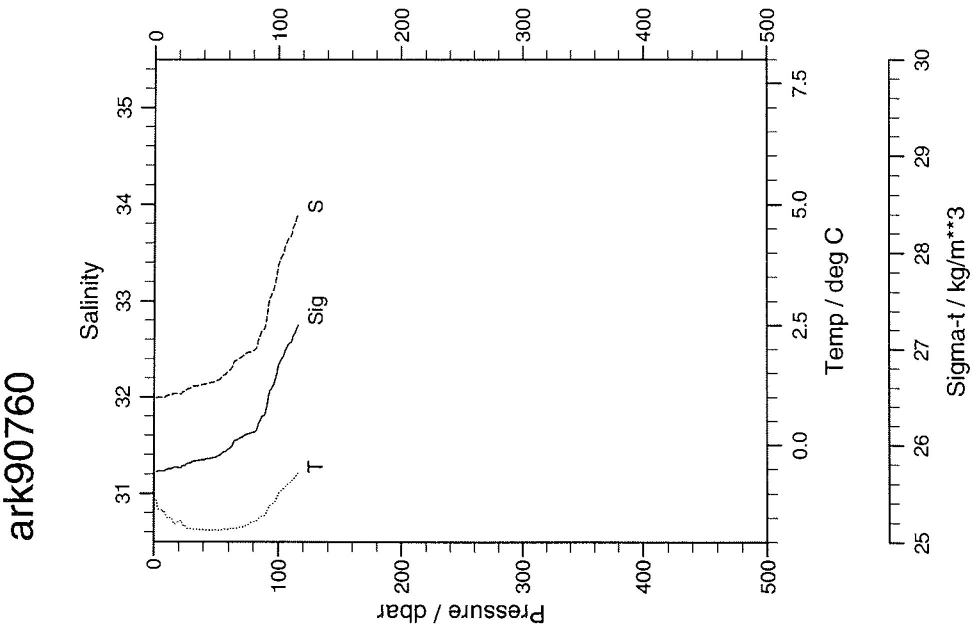
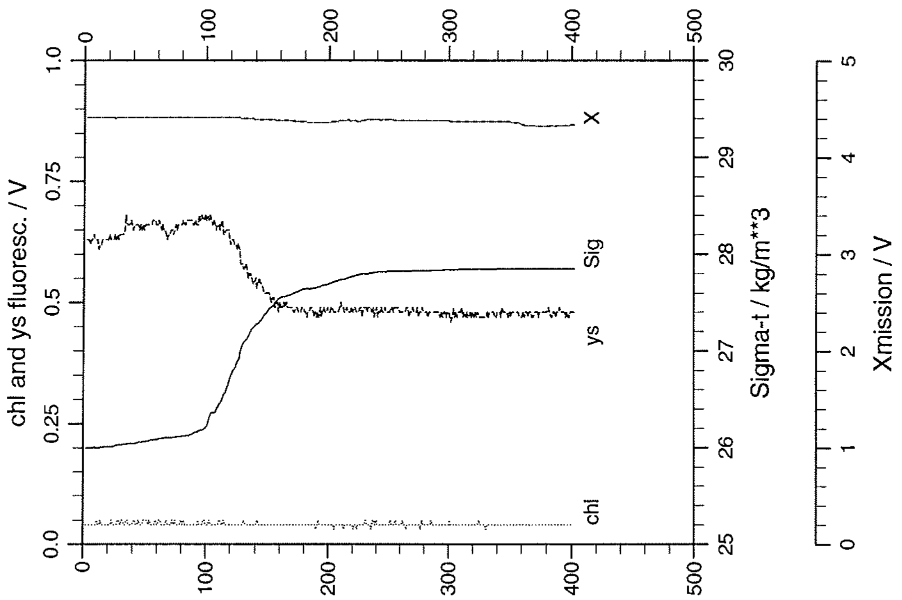
ark90760


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl


ark90760
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark90770



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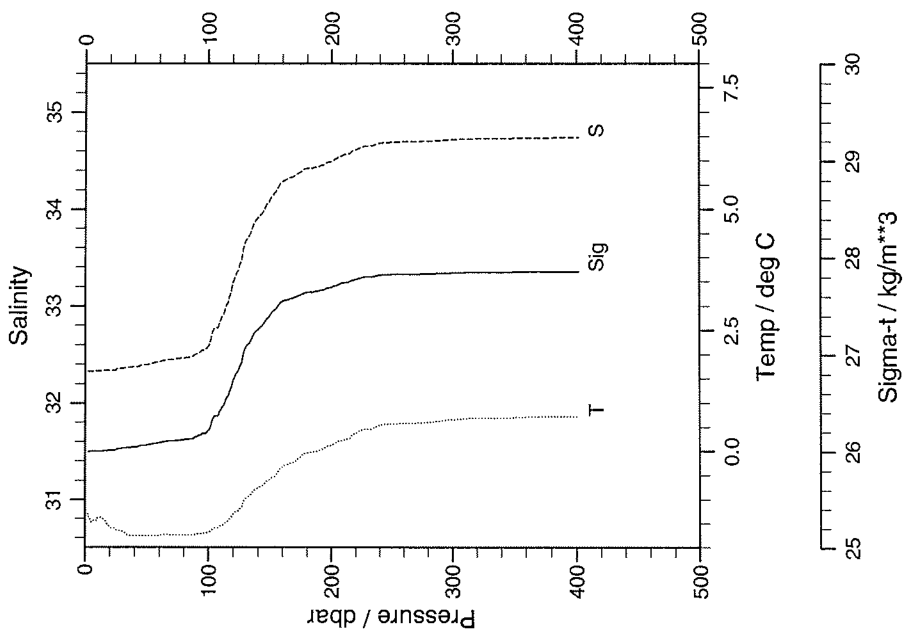

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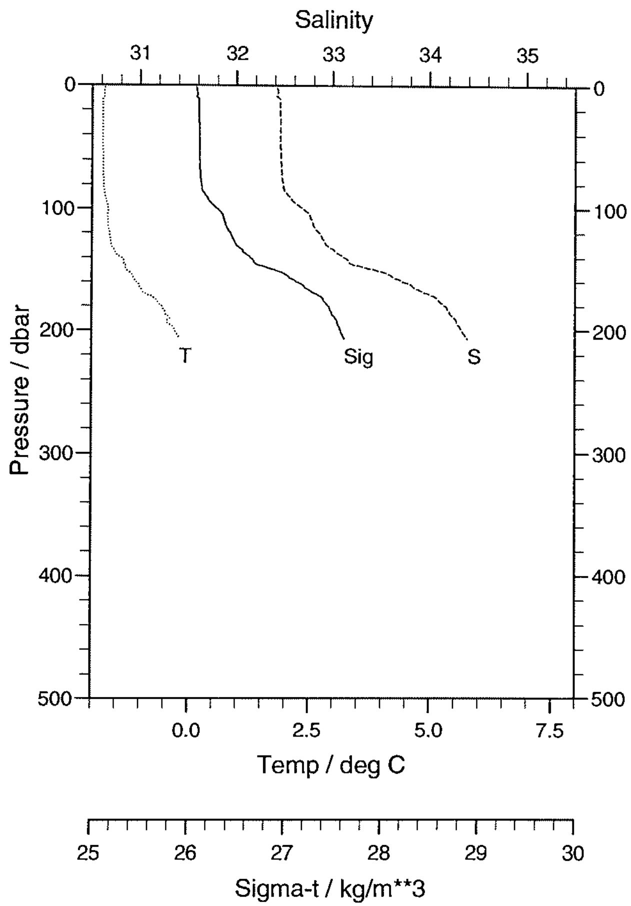

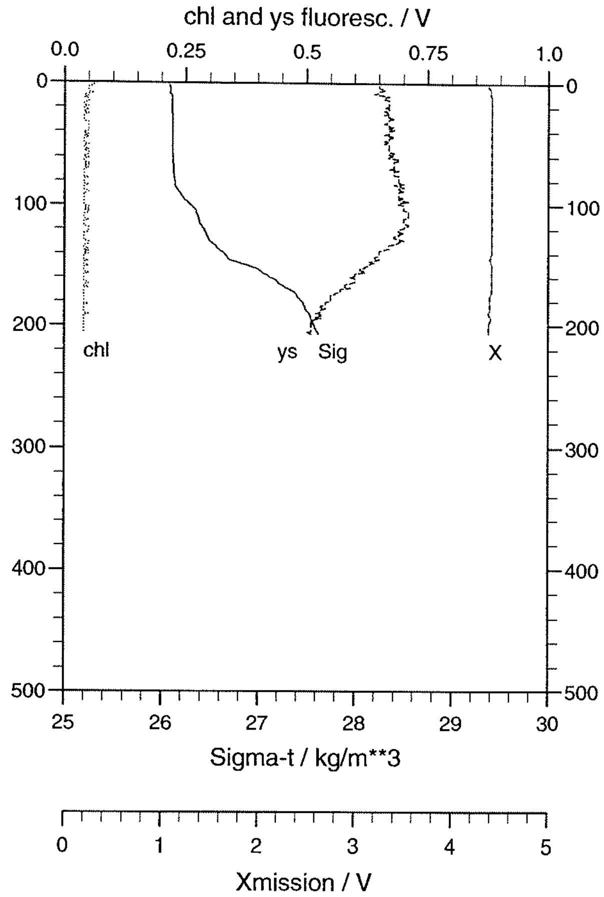

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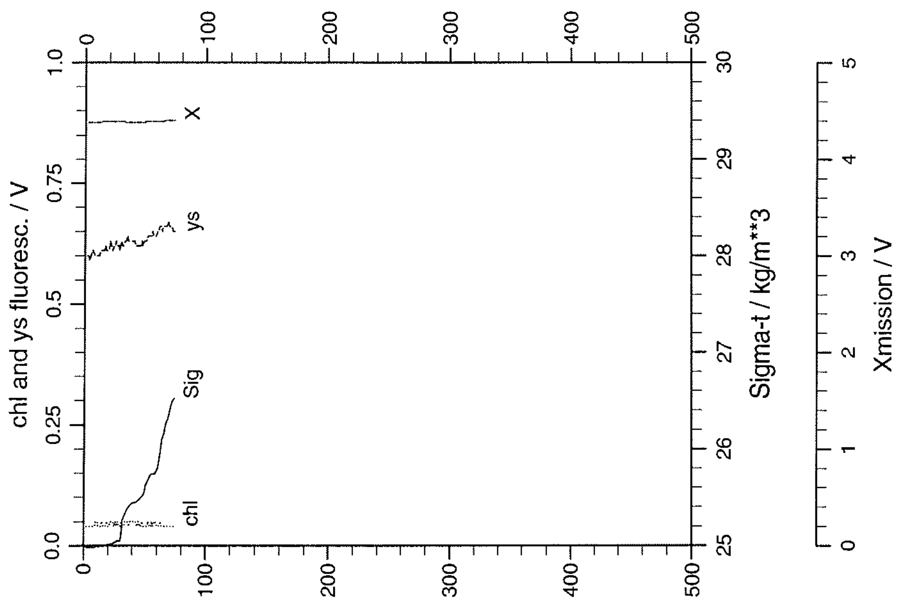

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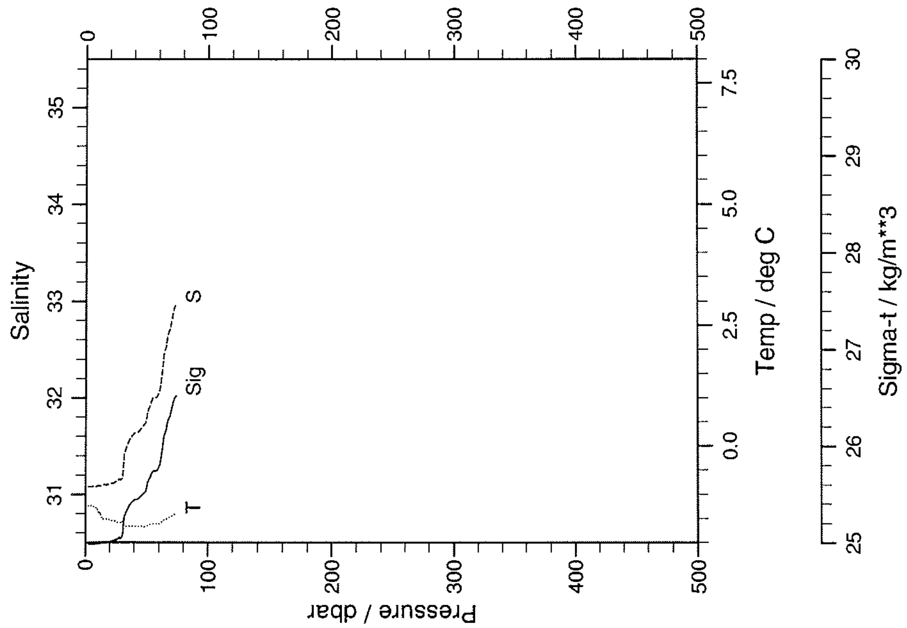

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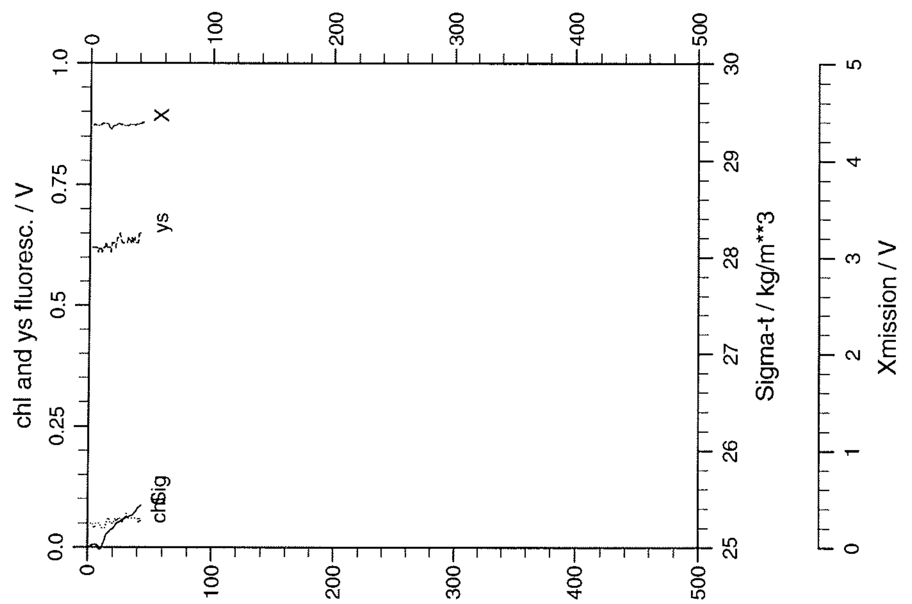

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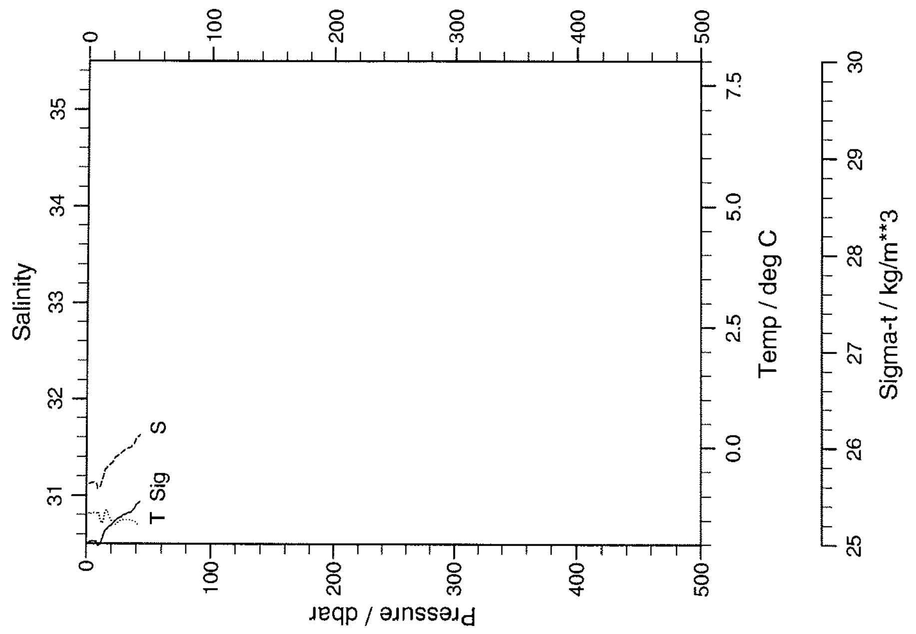

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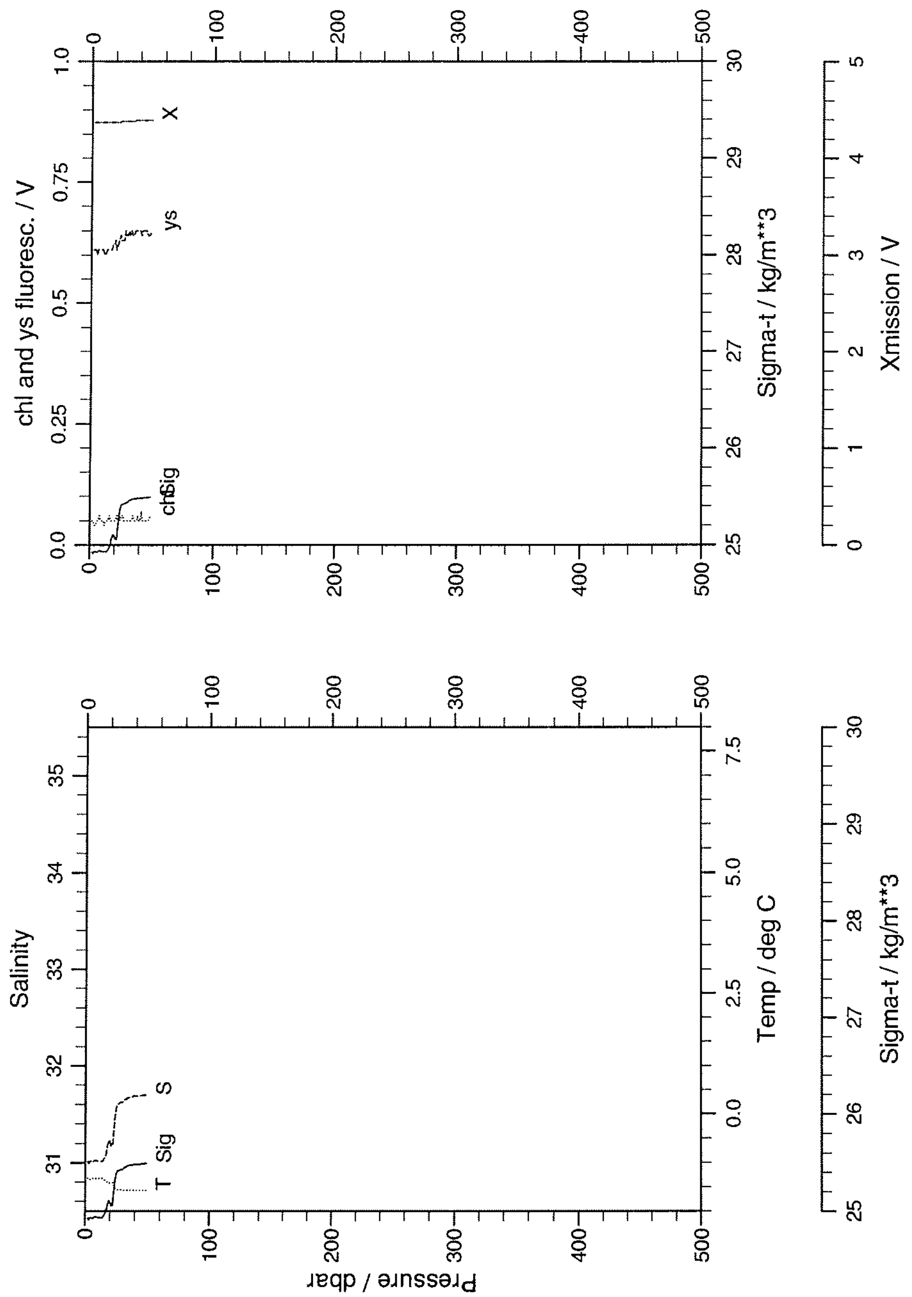

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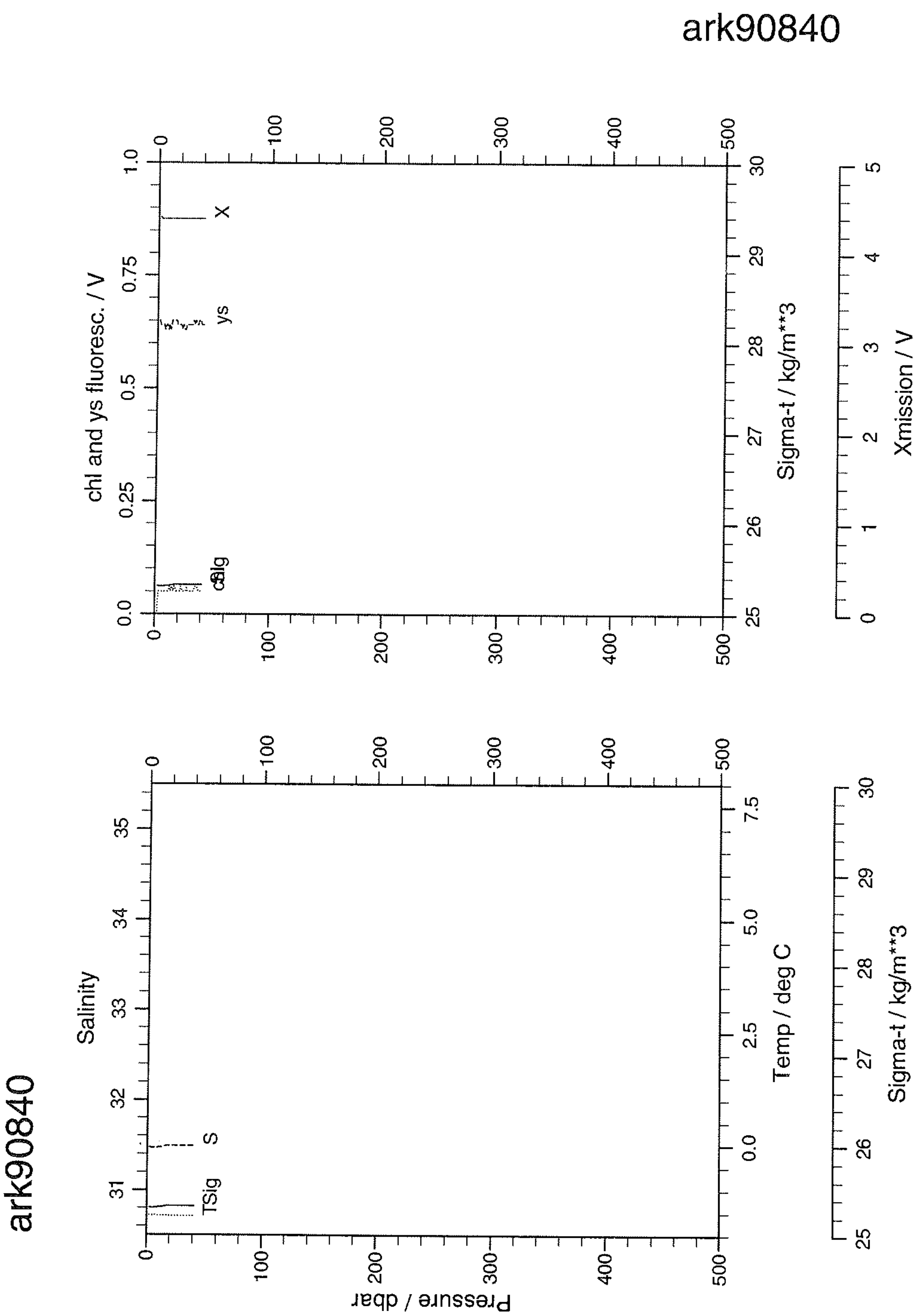
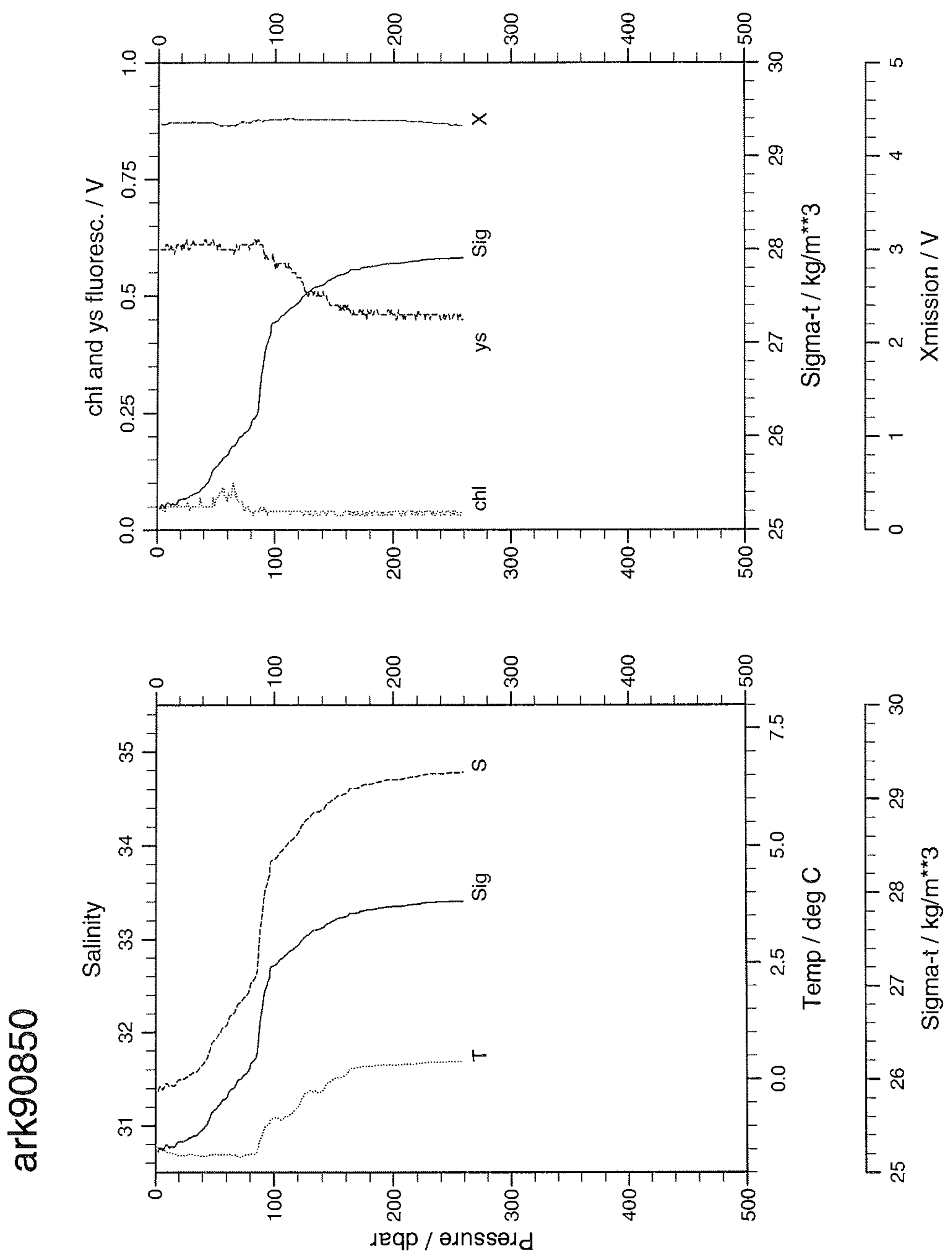


ark90840
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Pressure / dbar
S
TSig
ark90840

ark90850



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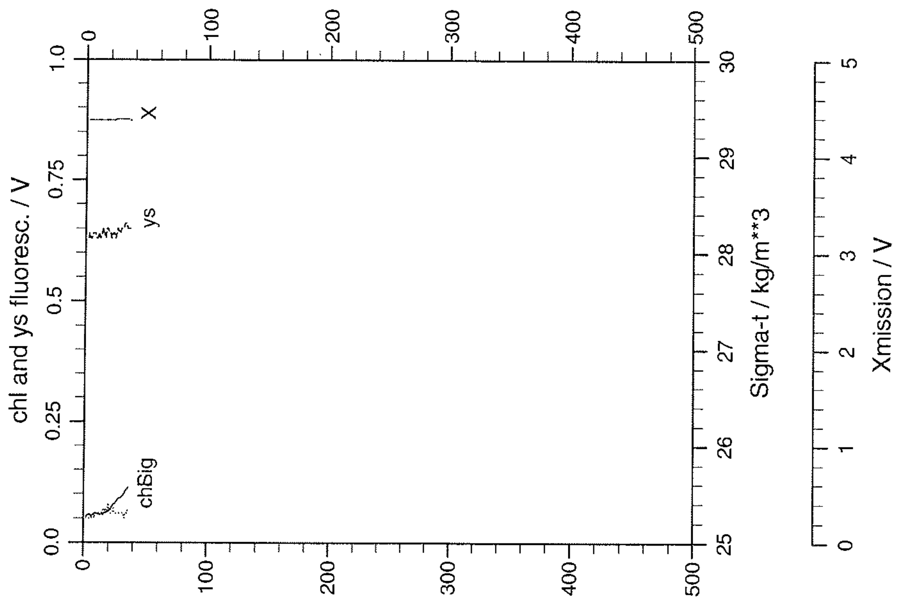
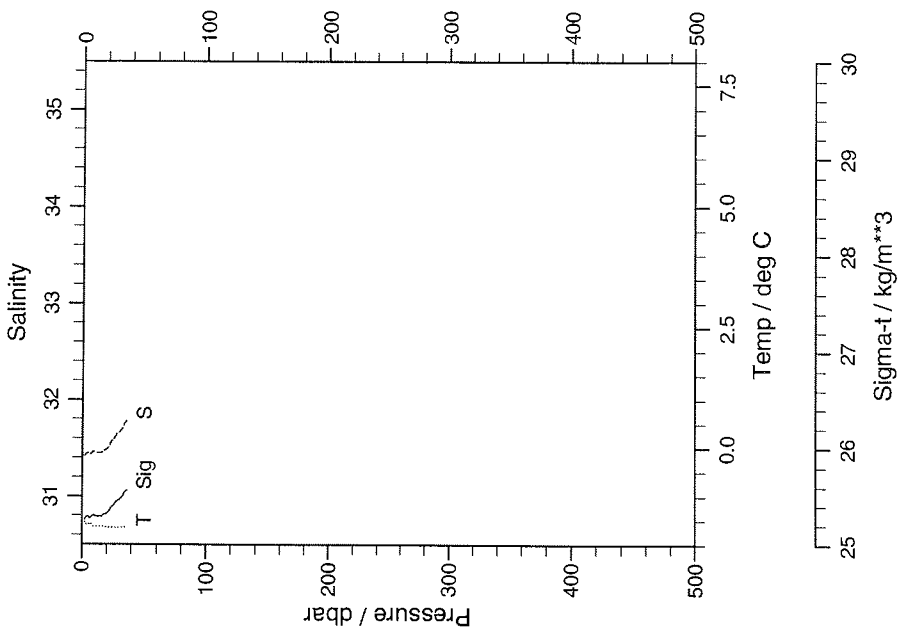
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T
chl and ys fluoresc. / V
Xmission / V
X
ys
chl

ark90851





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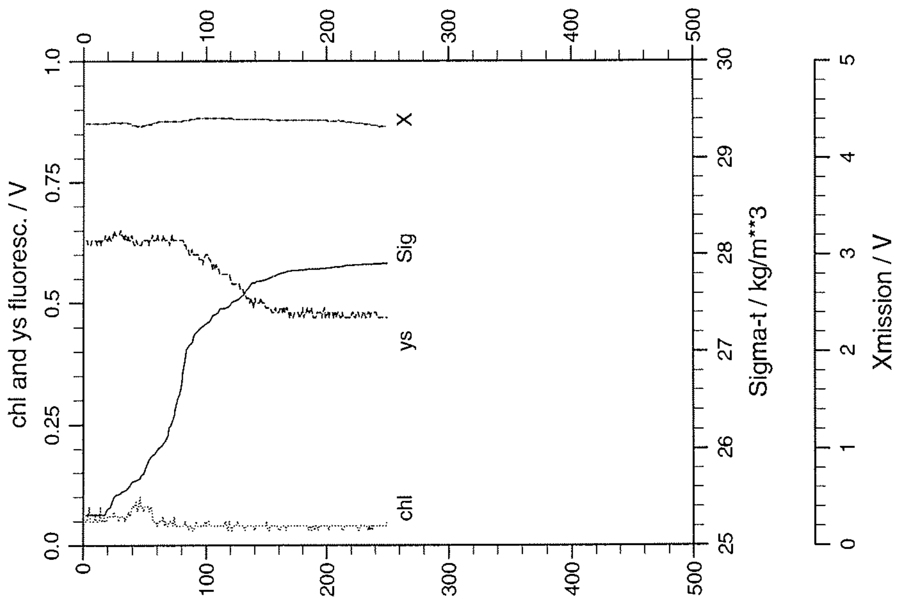

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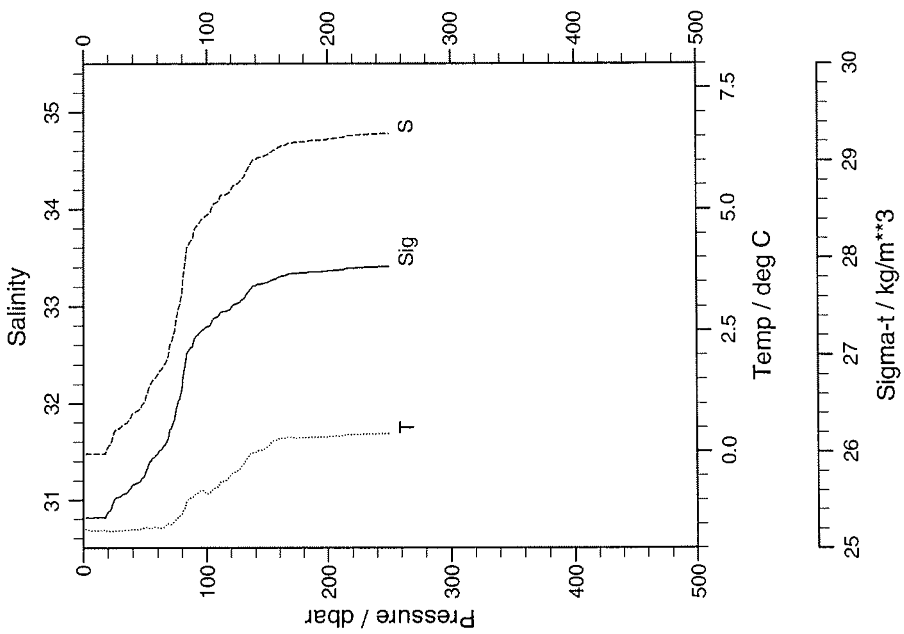

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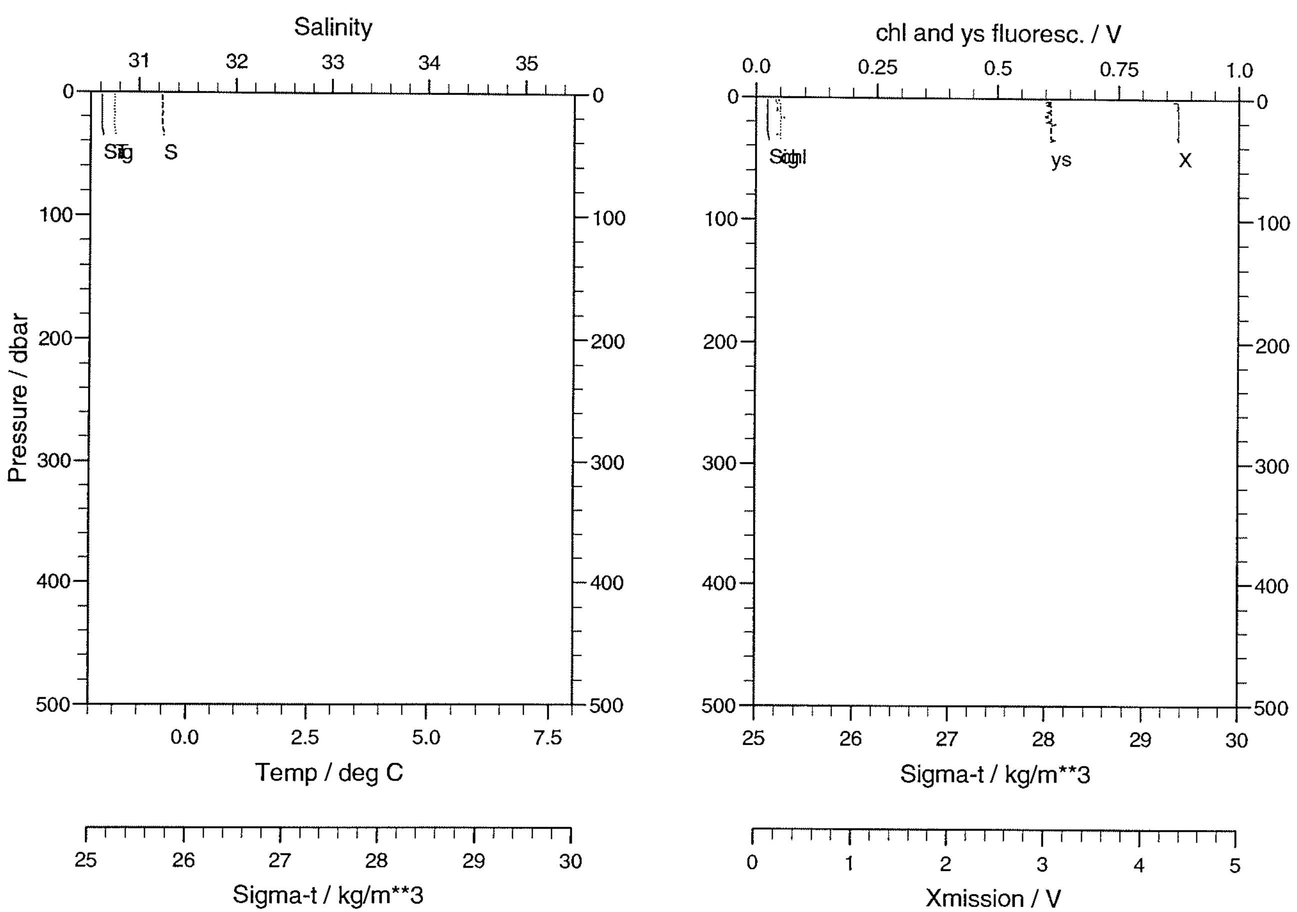

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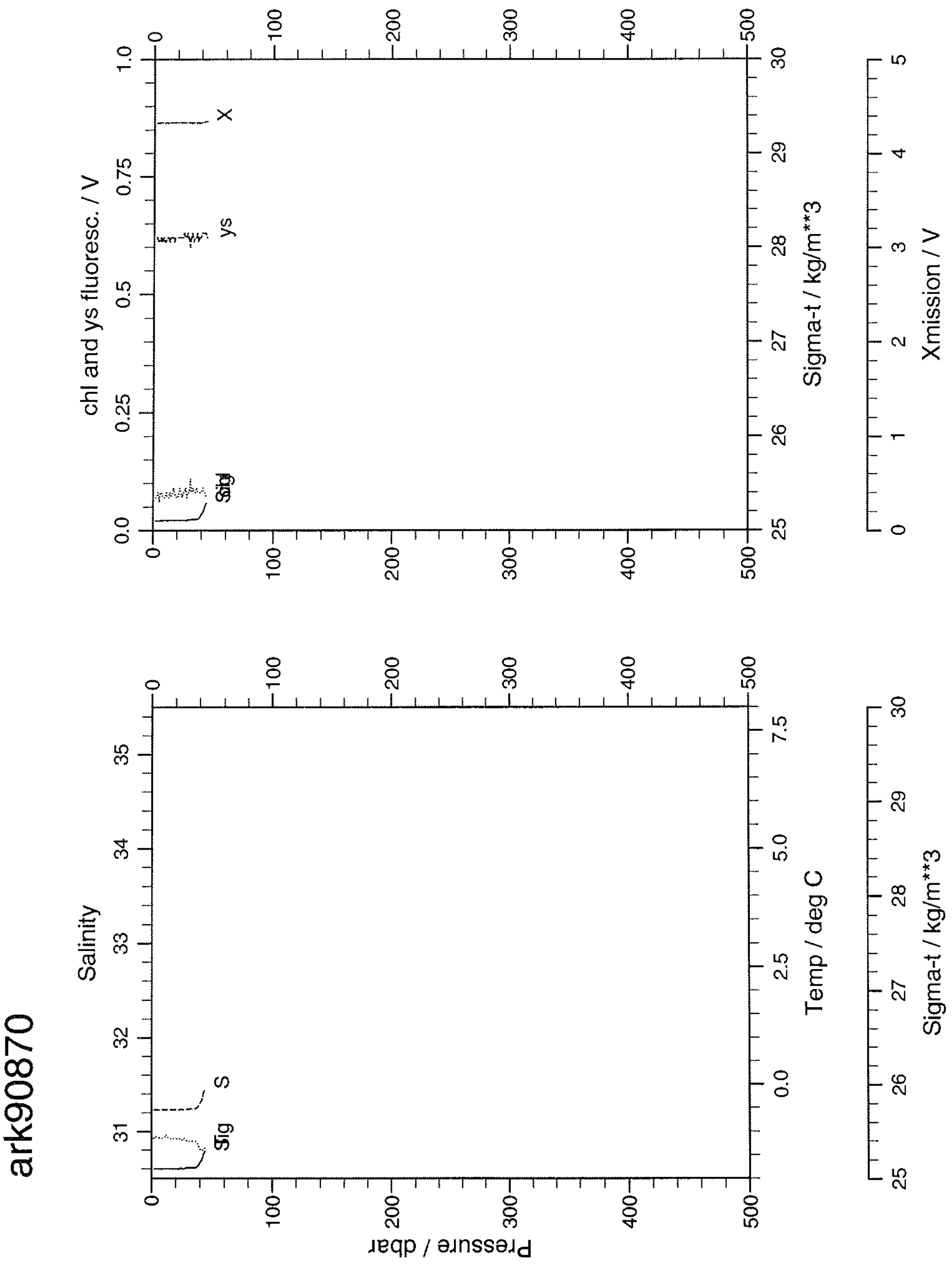
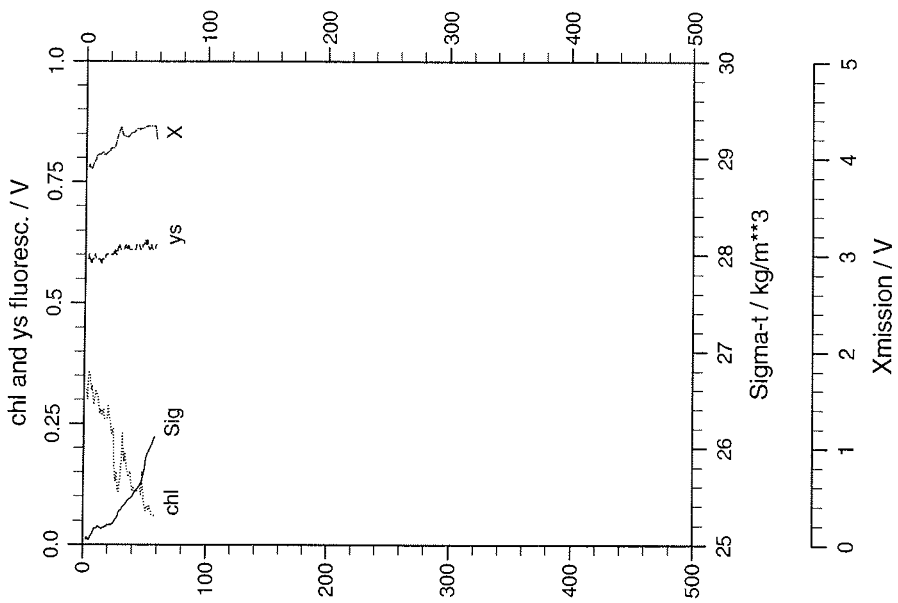
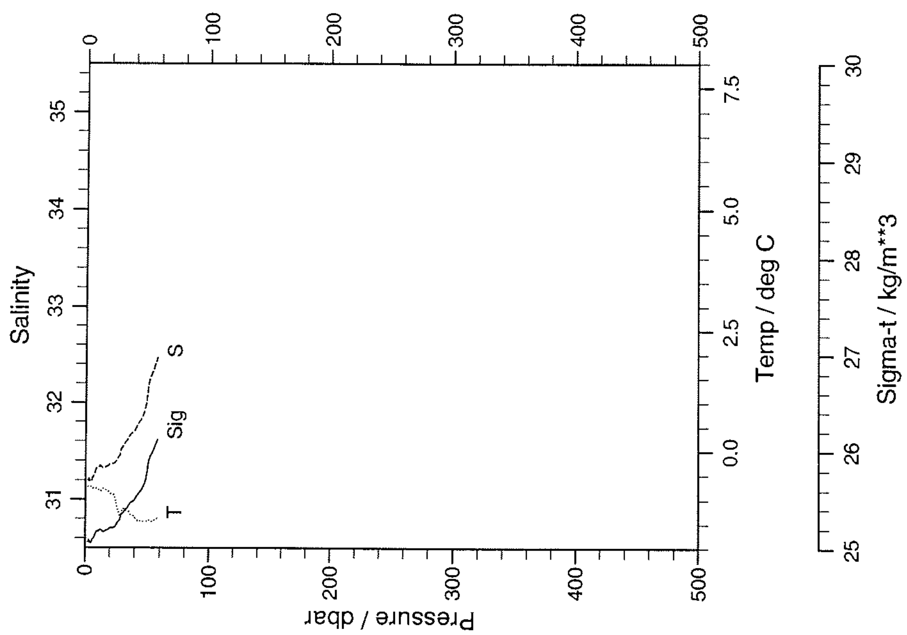

ark90870
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig

ark90880





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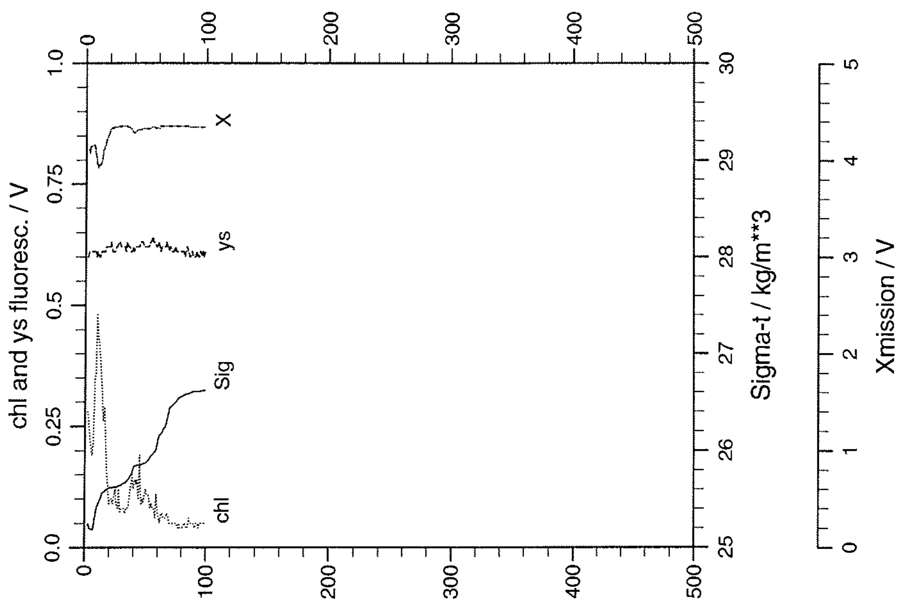

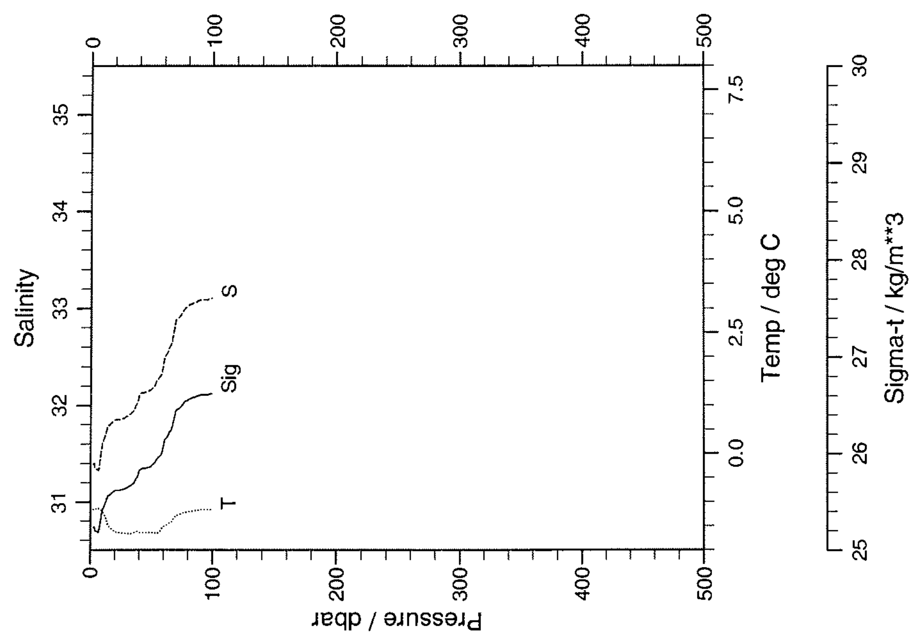

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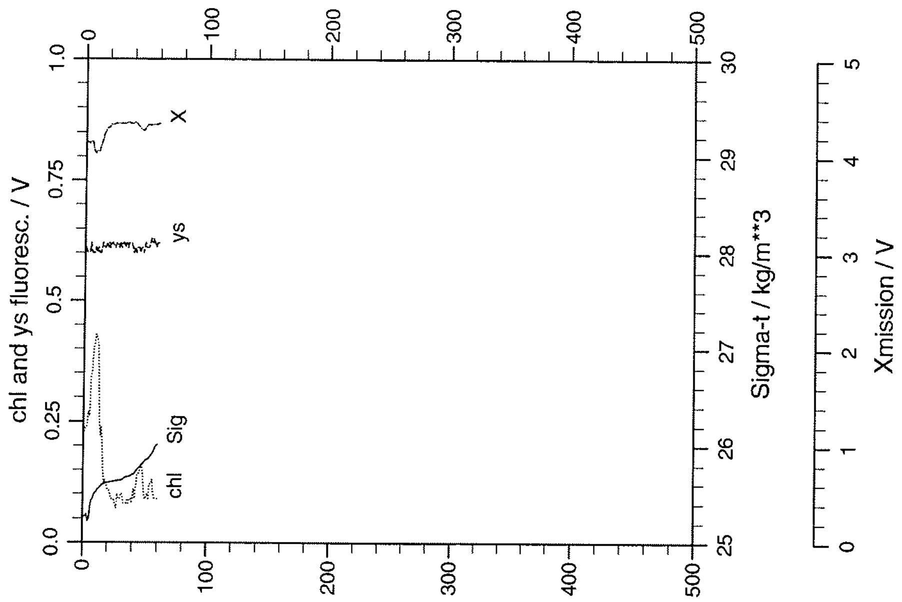

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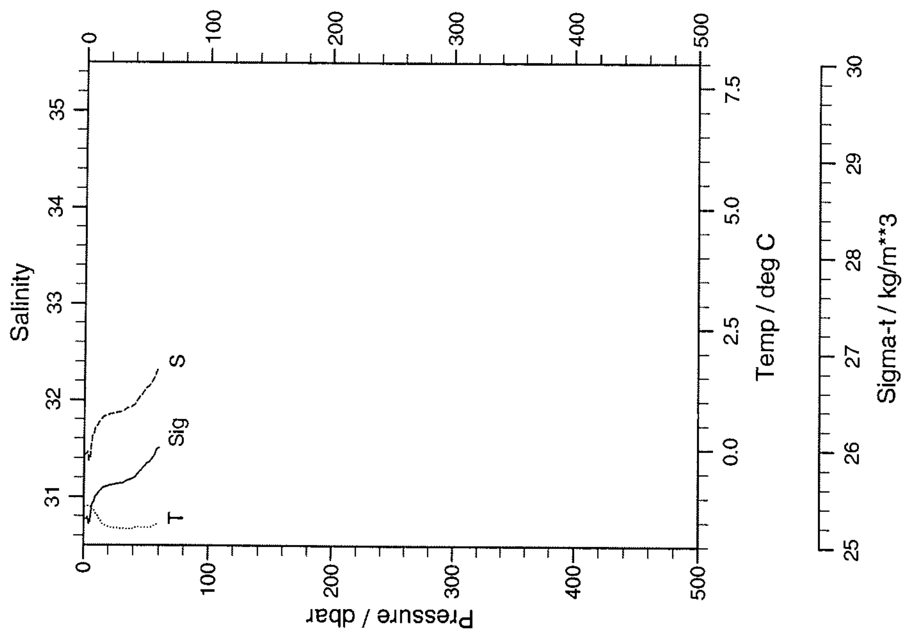

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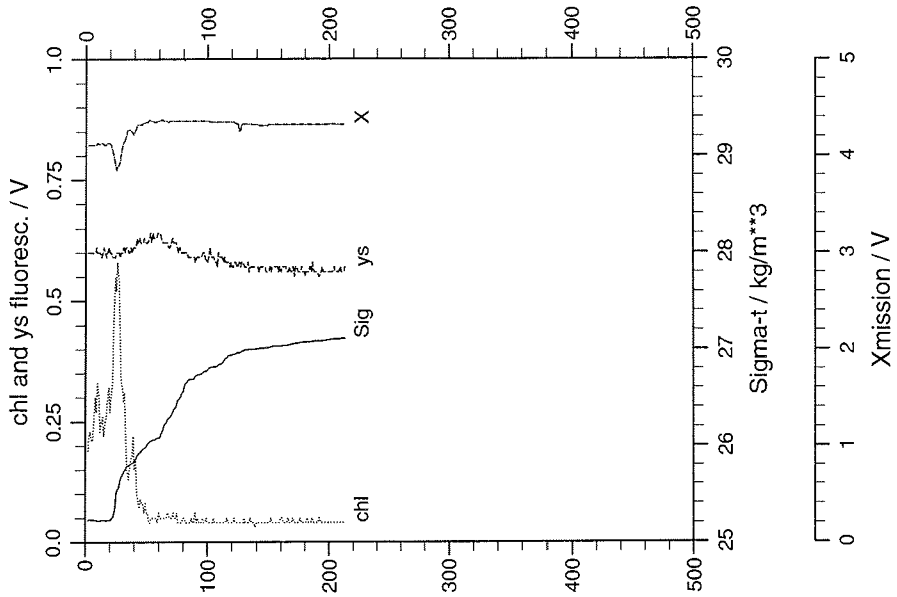

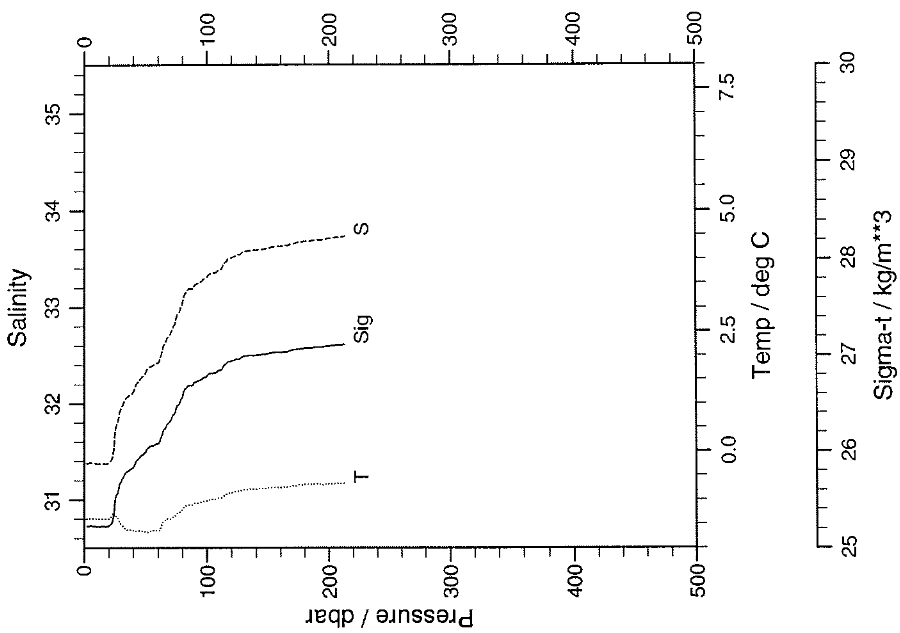

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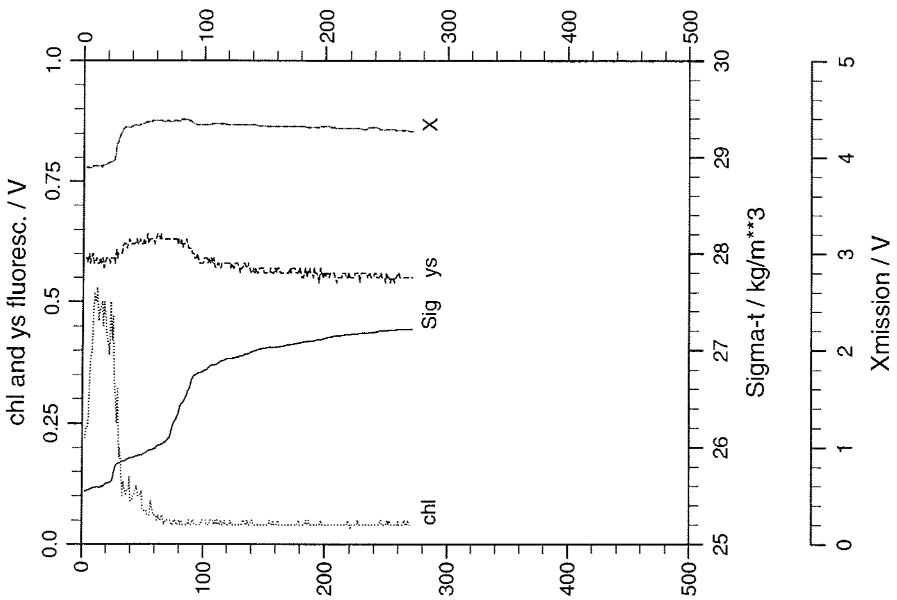
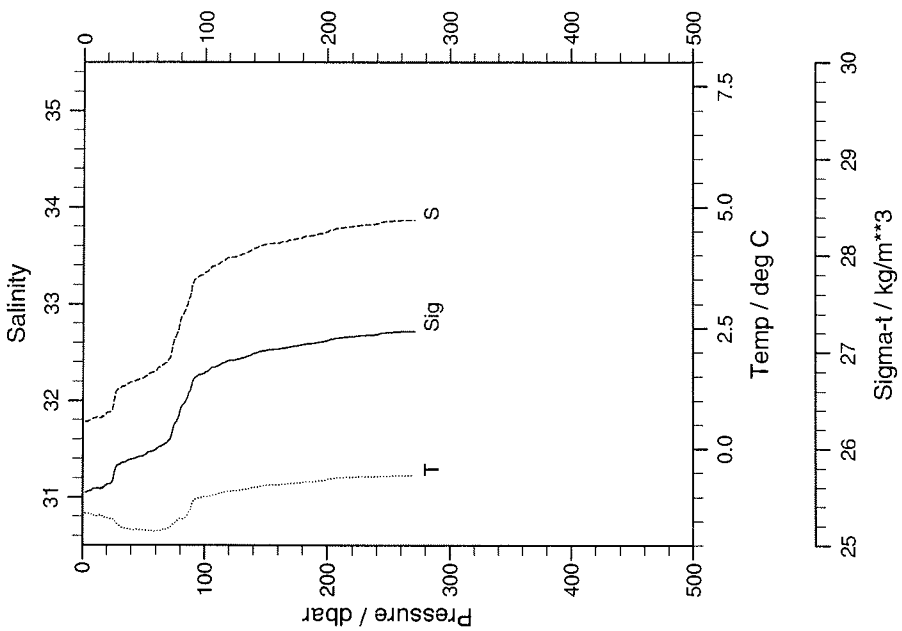


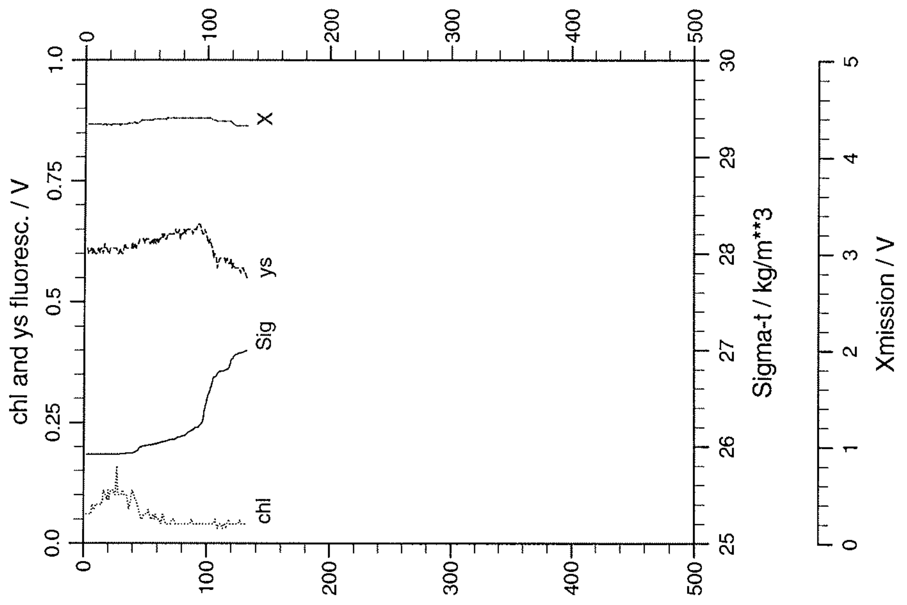
chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
X
ys
Sig
chl
Sigma-t / kg/m**3
Xmission / V

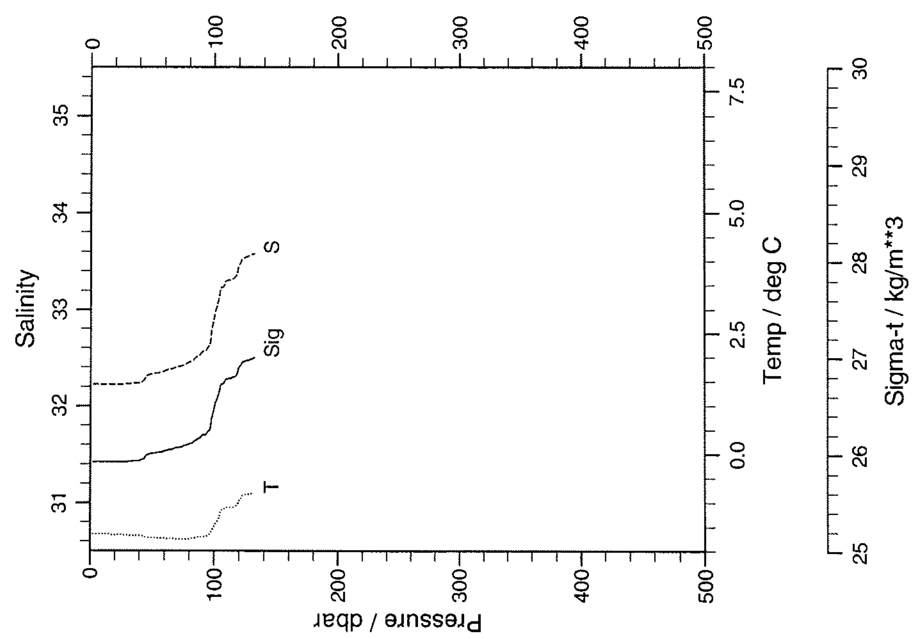


Salinity
S
Sig
T
Pressure / dbar
Temp / deg C
Sigma-t / kg/m**3

ark90910

ark90920





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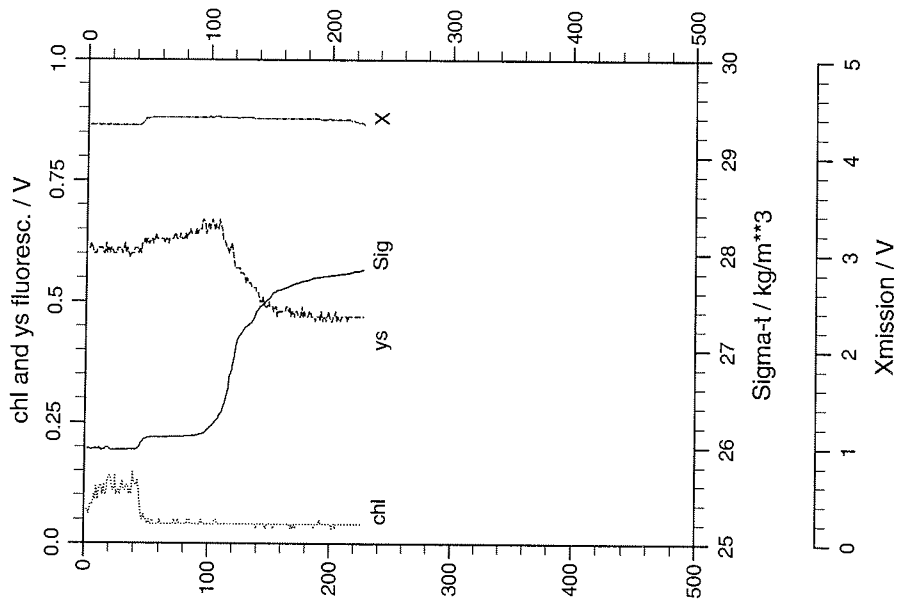

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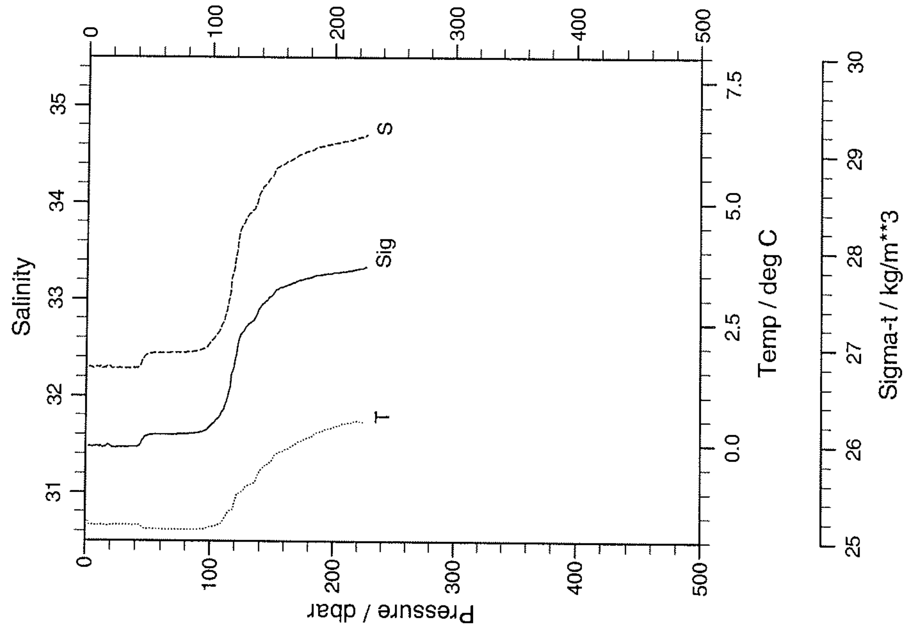

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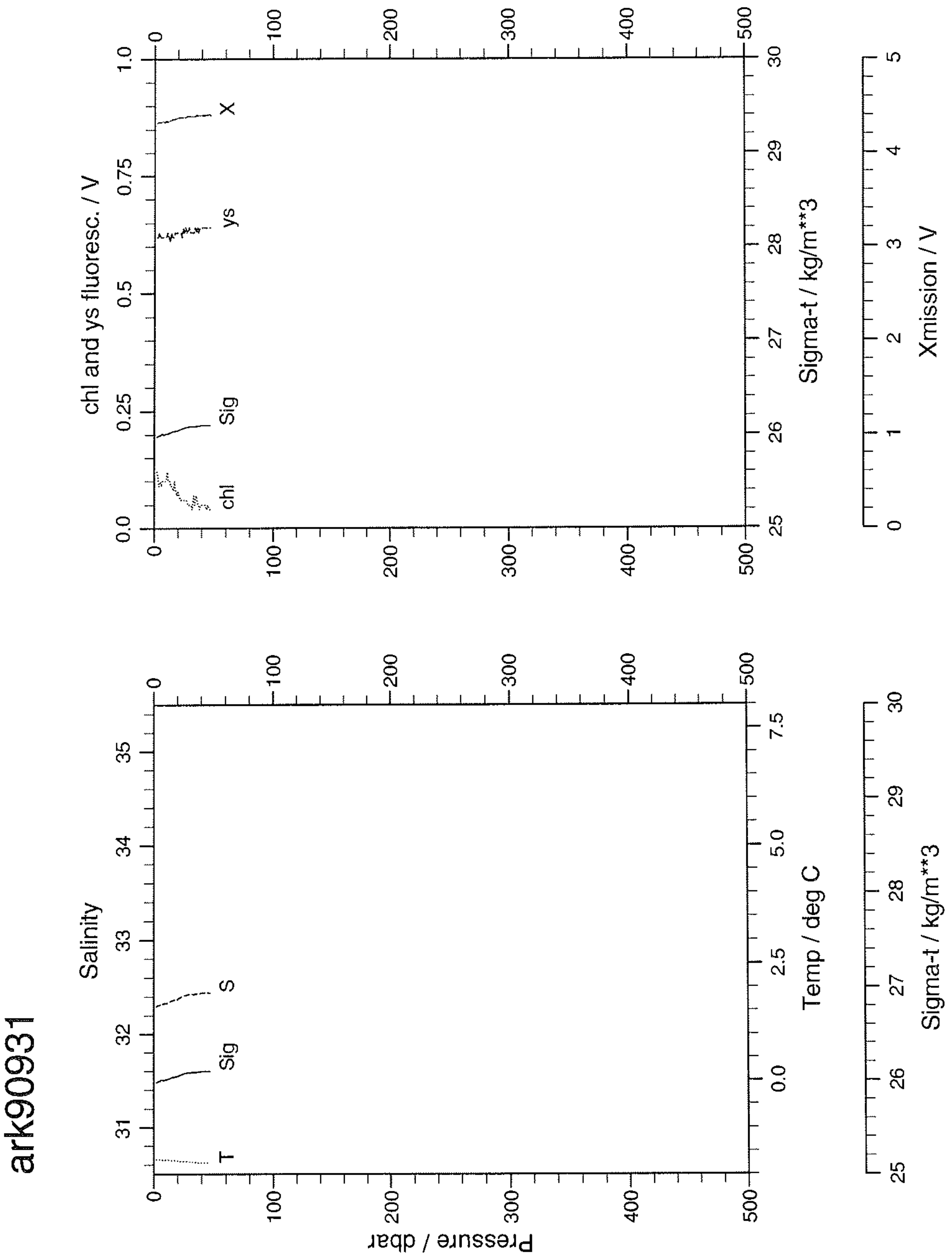
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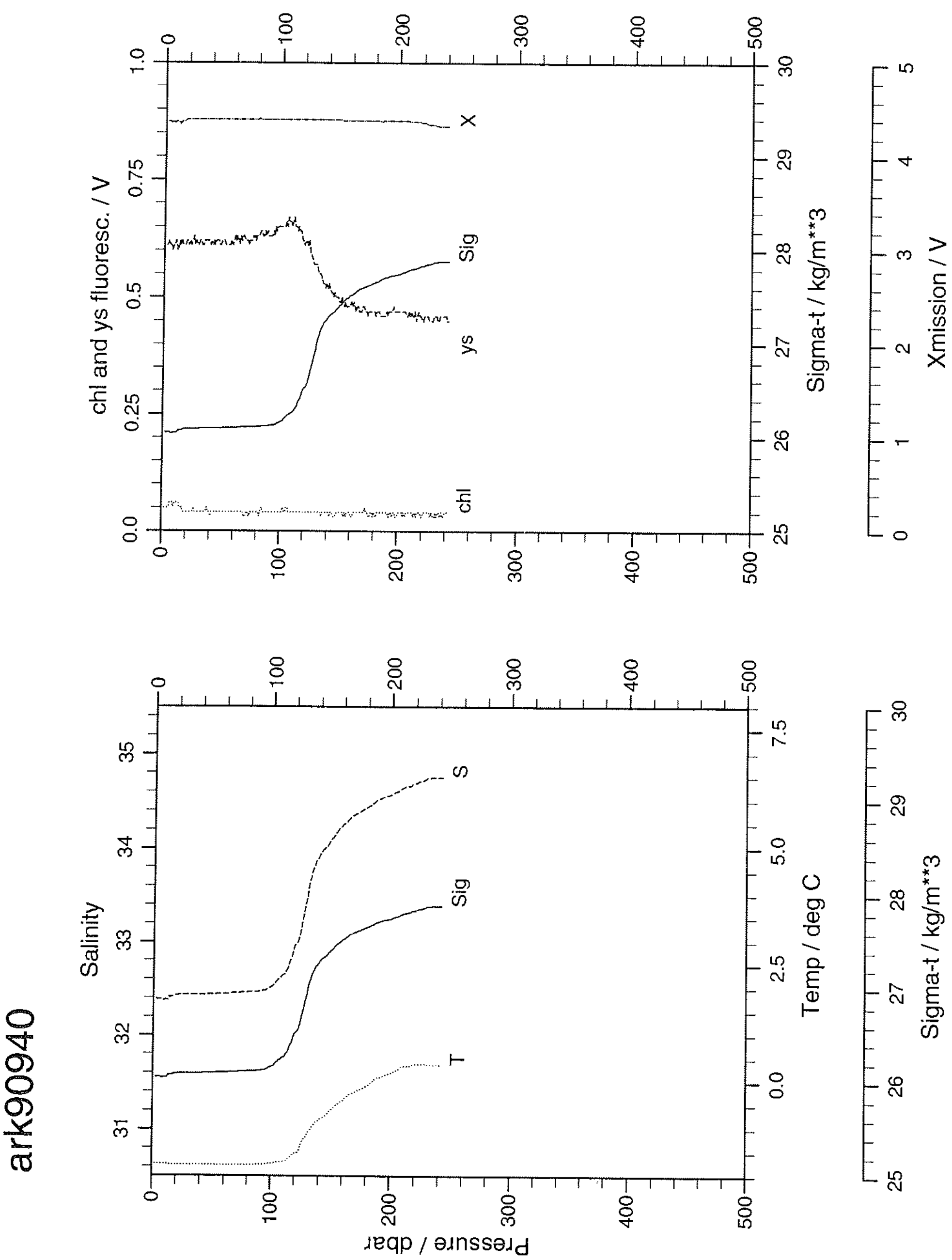
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Pressure / dbar
S
T

ark90940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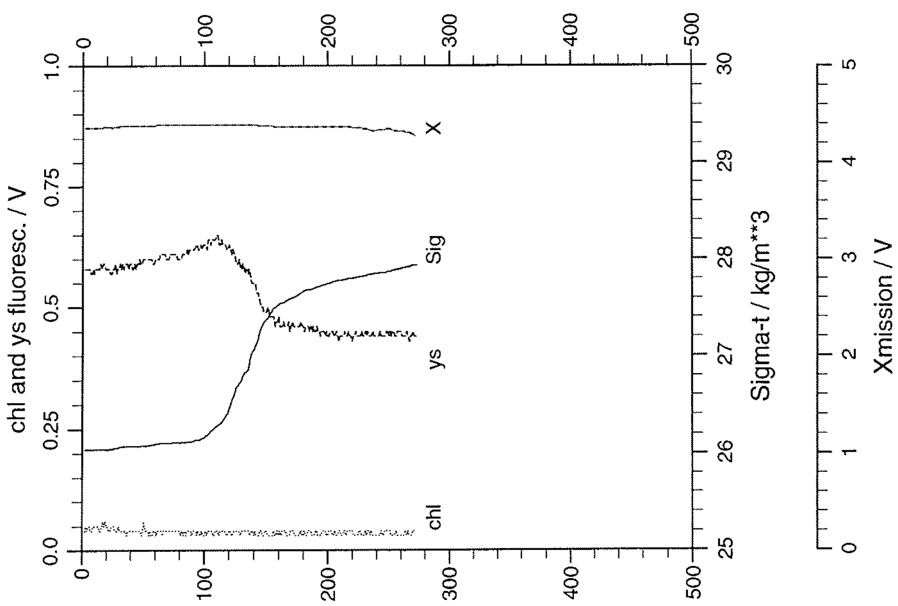
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Pressure / dbar
S
T

ark90941



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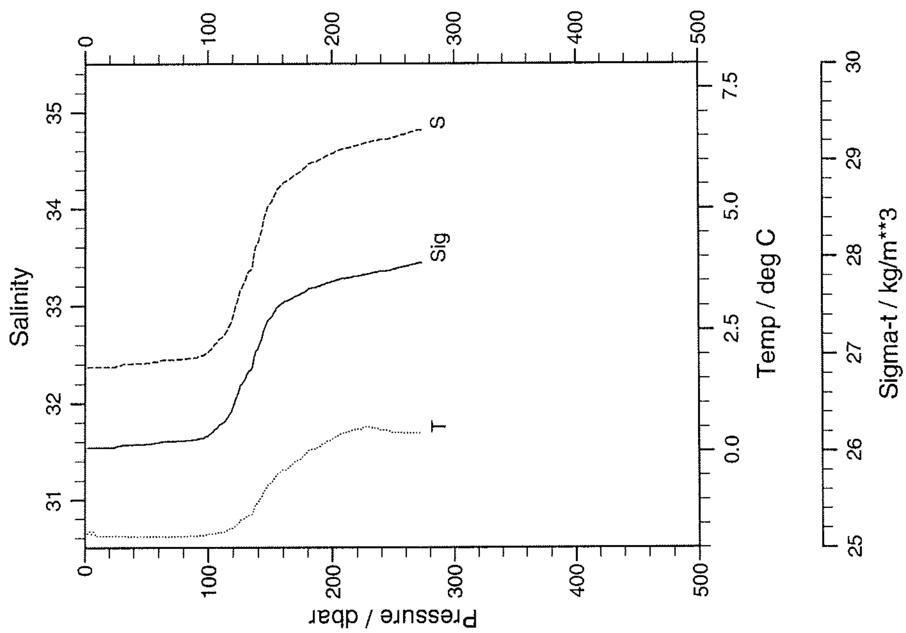

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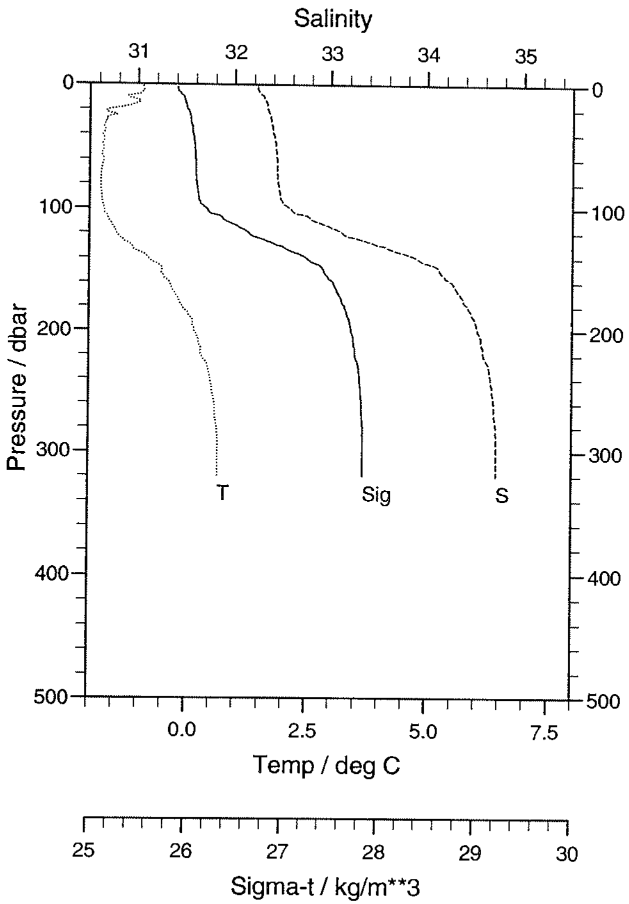

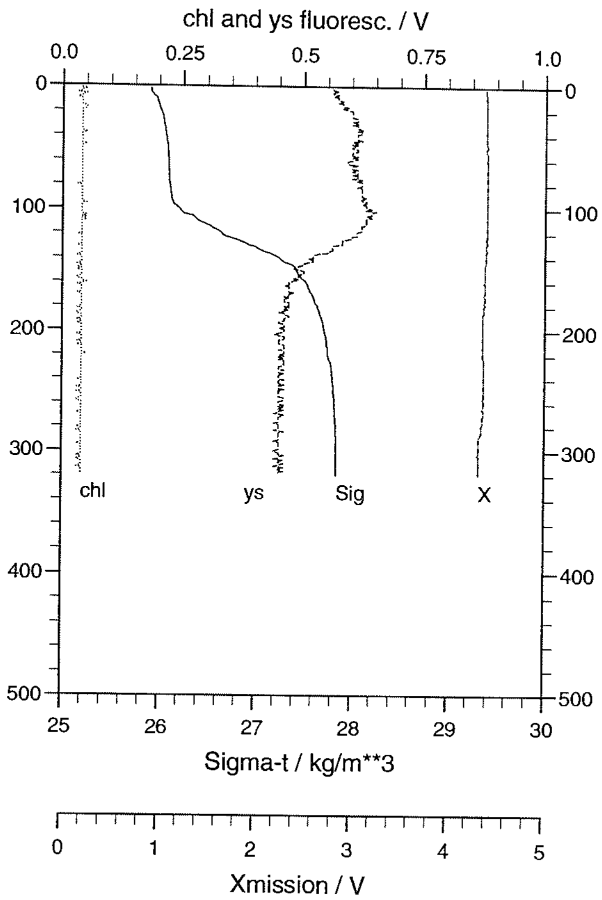

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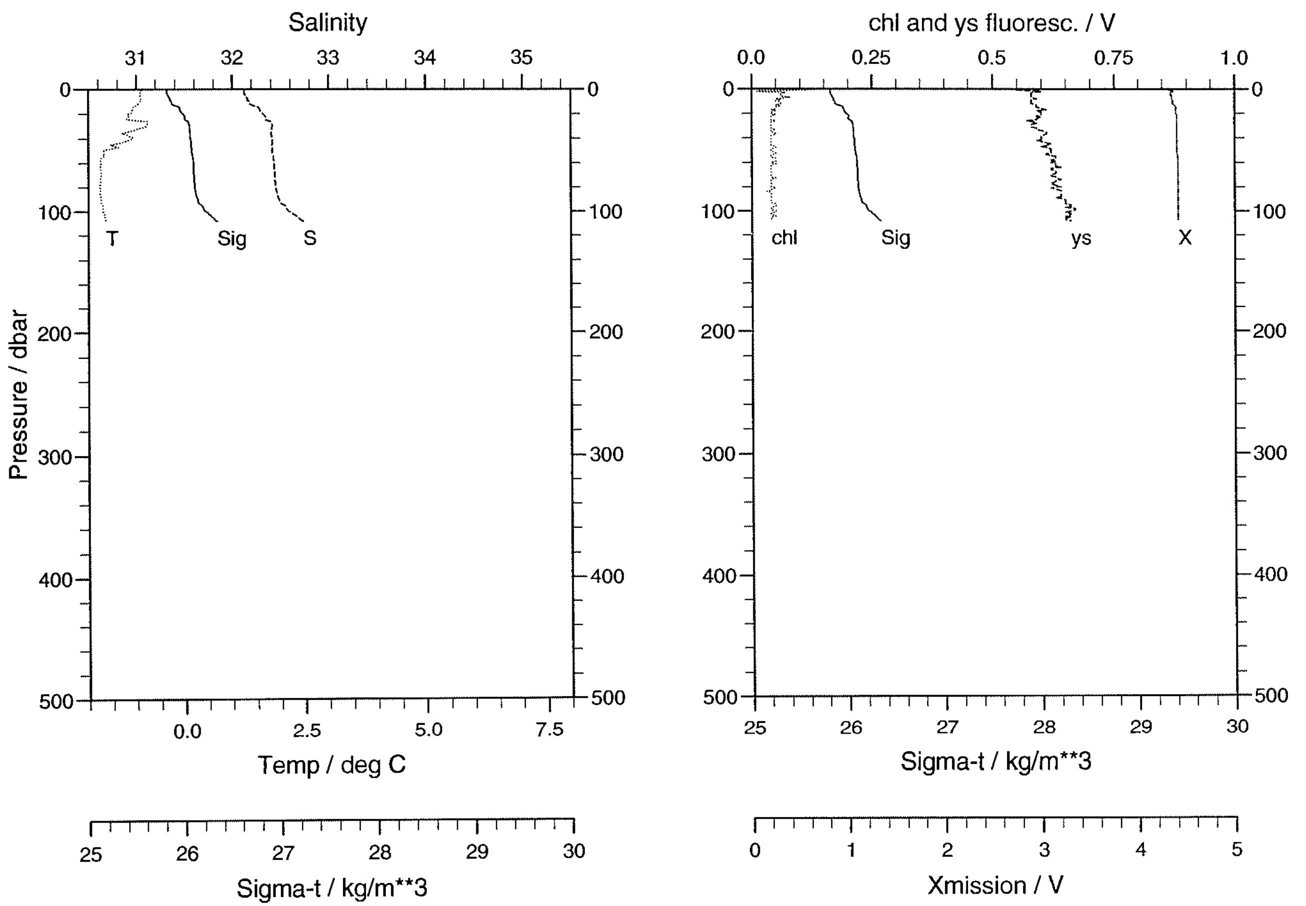

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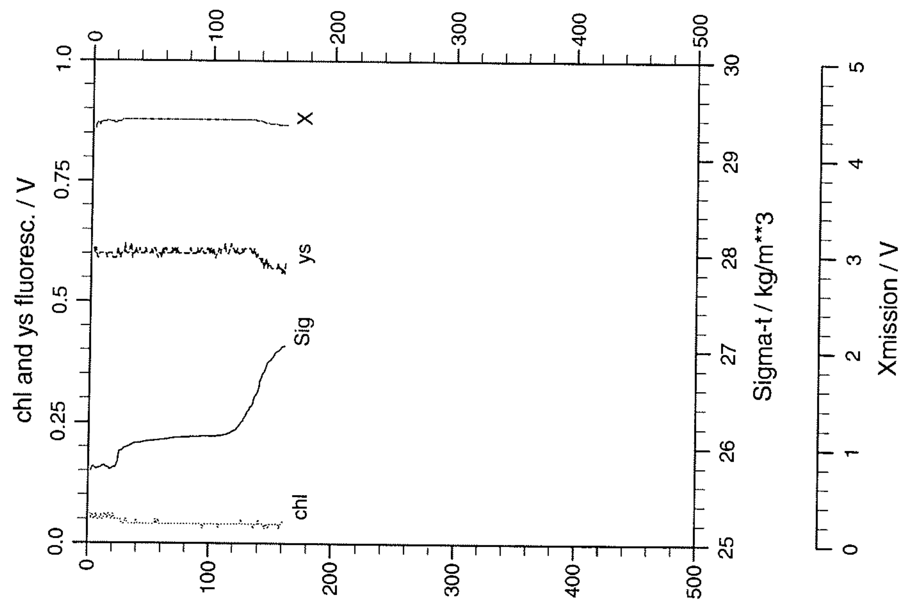

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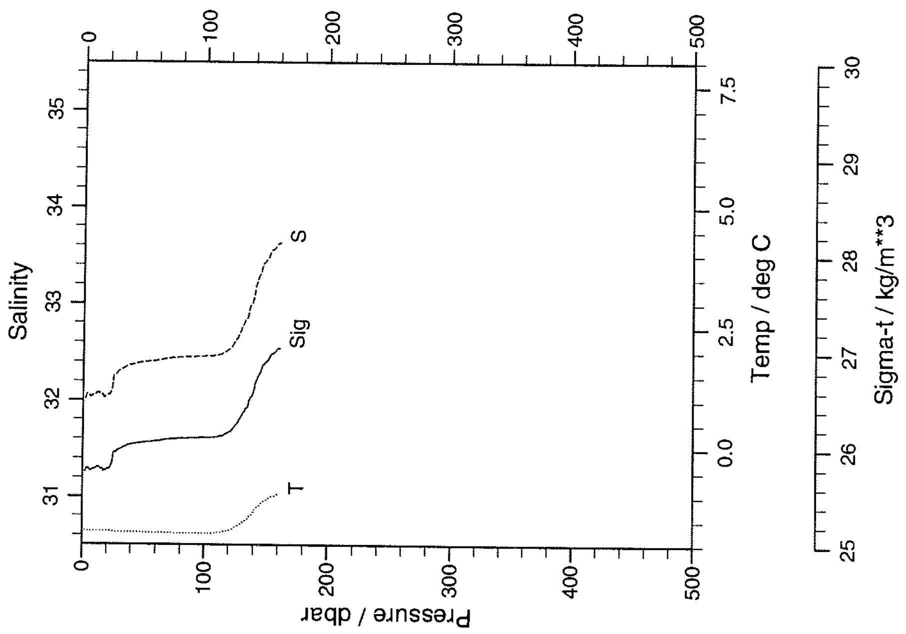

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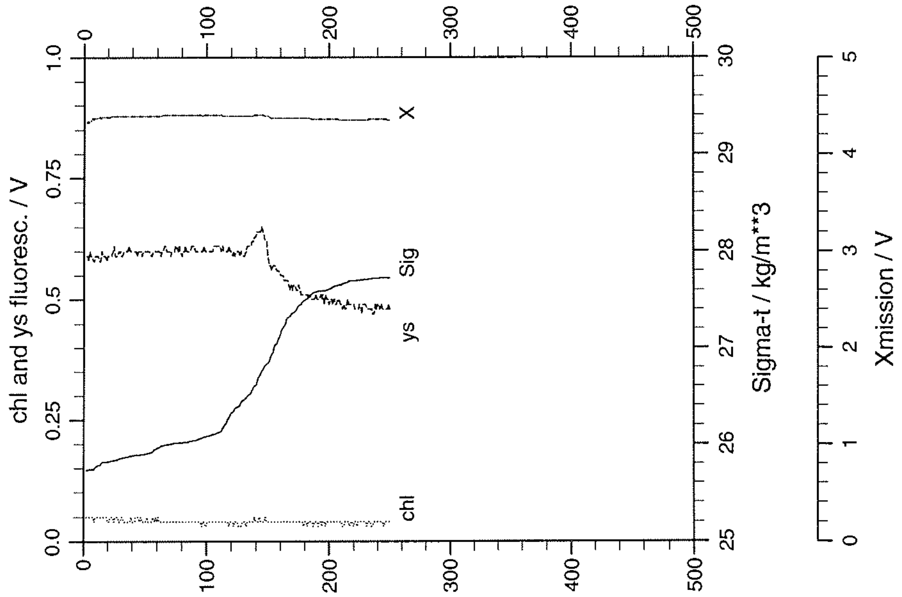
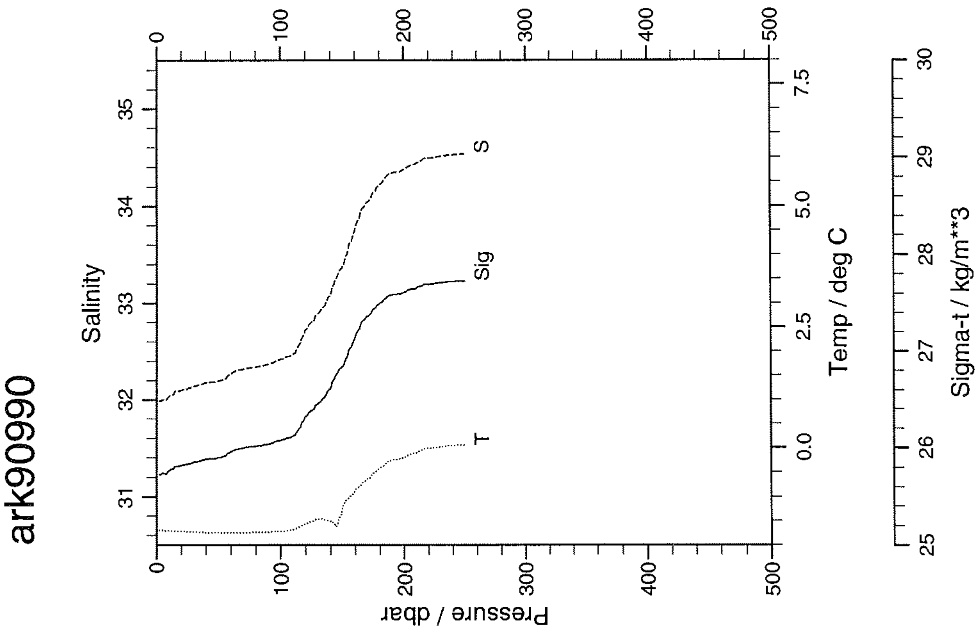
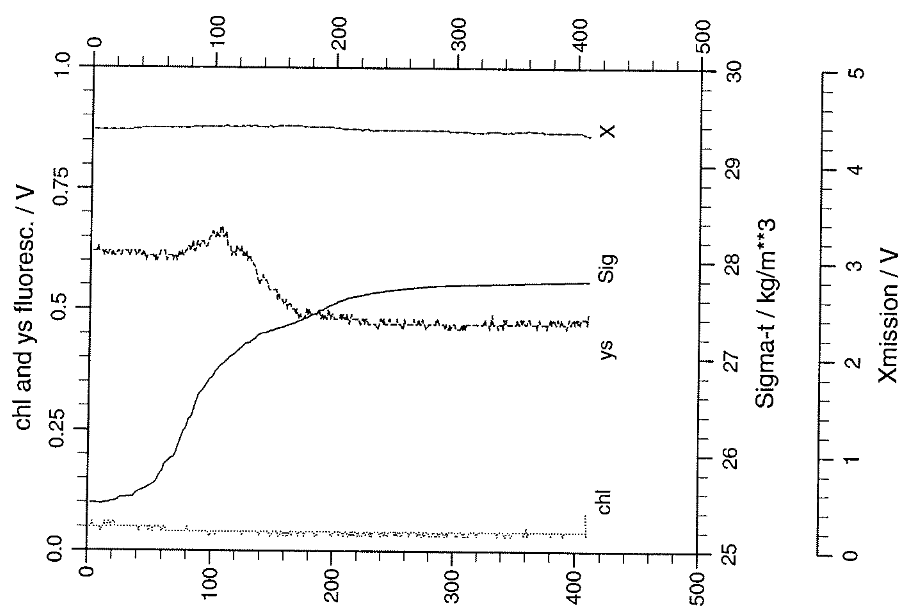
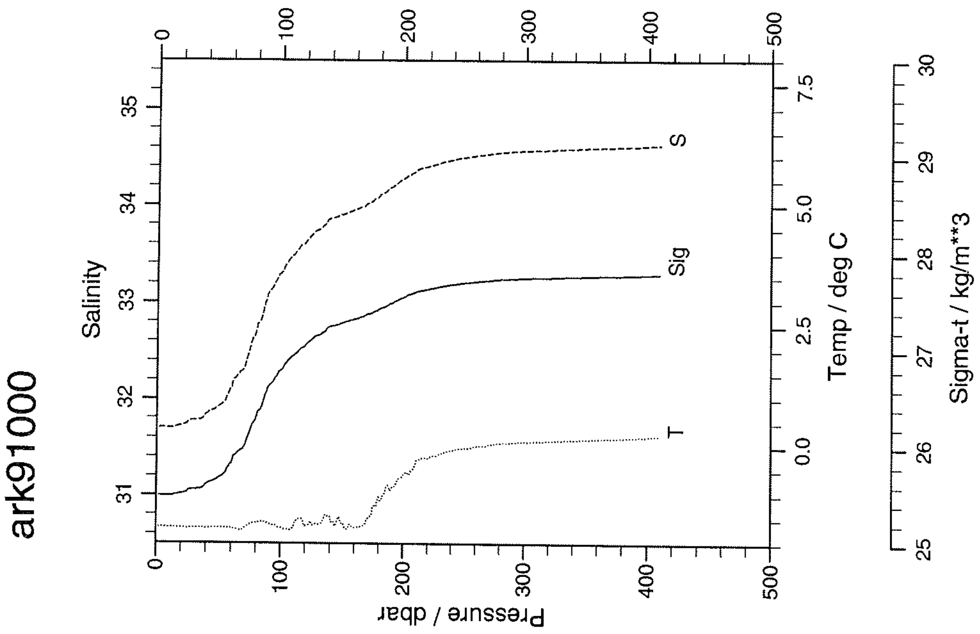

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl


ark90990
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark91000



chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl



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Salinity
Pressure / dbar
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T

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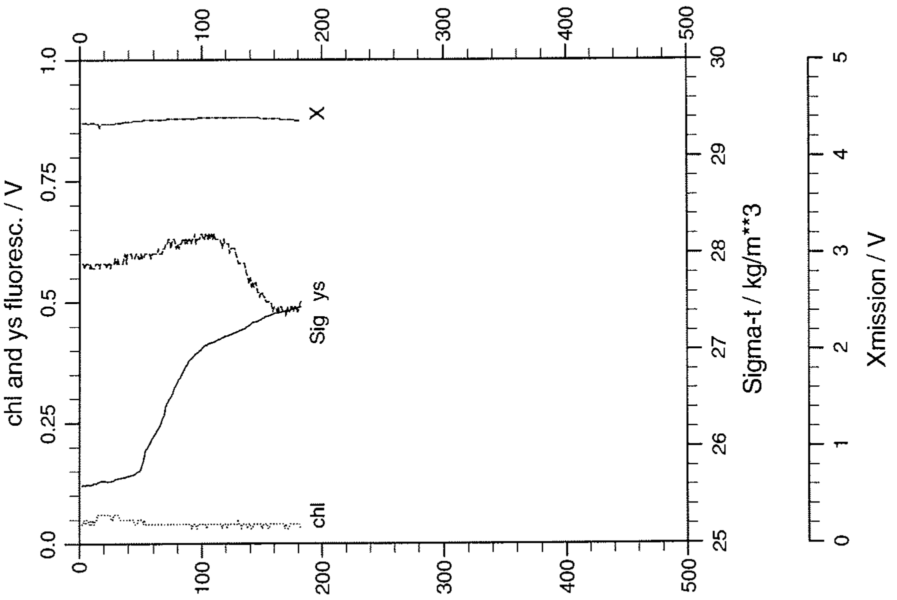

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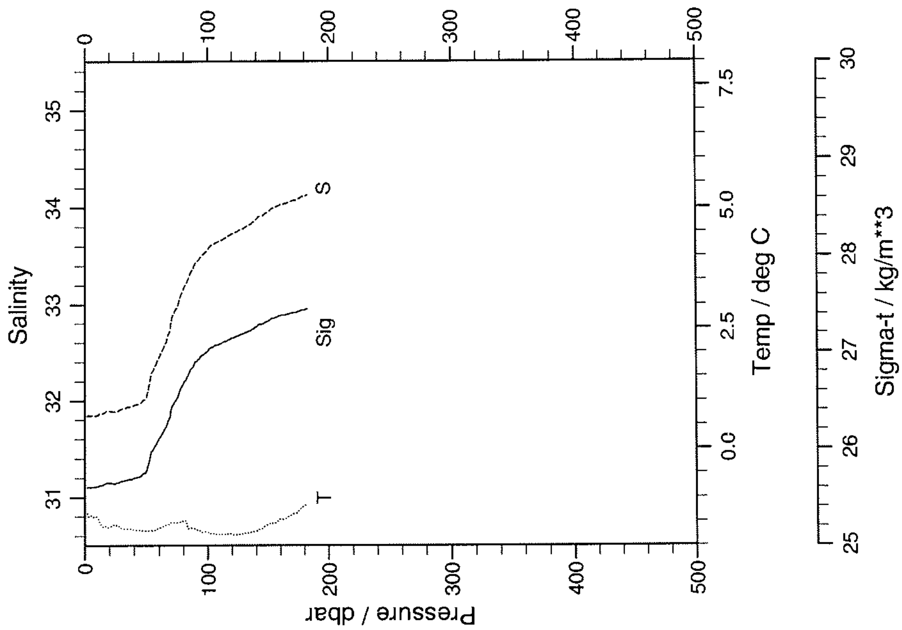

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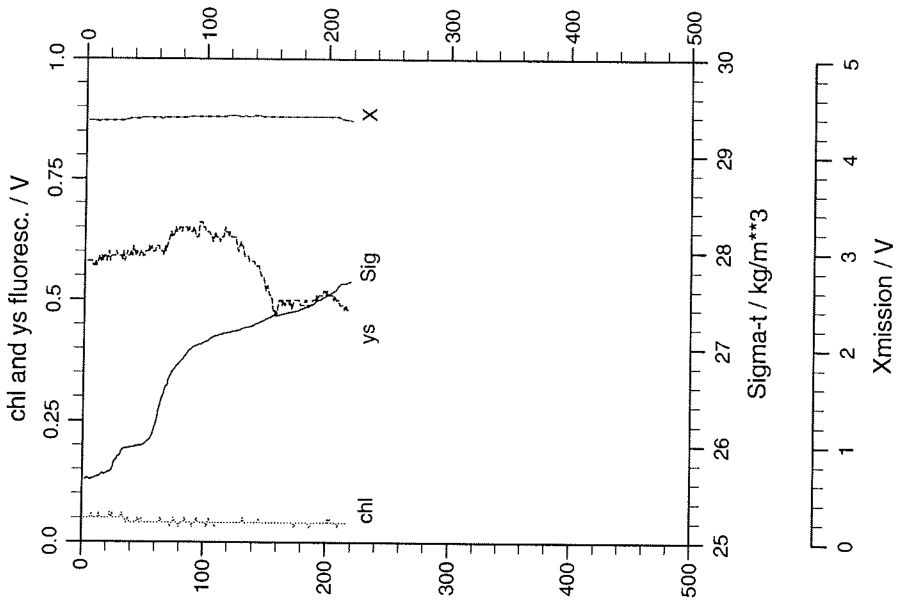

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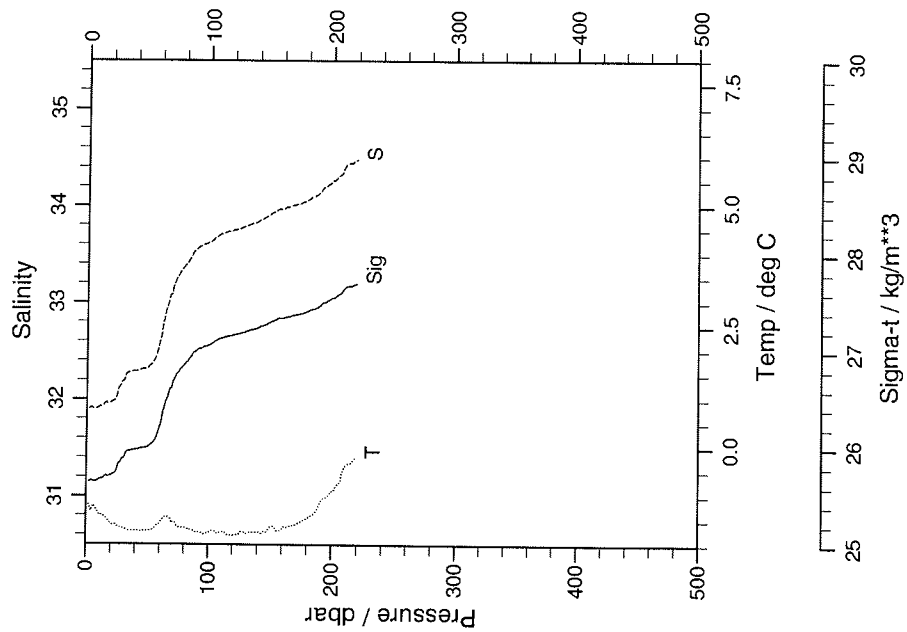

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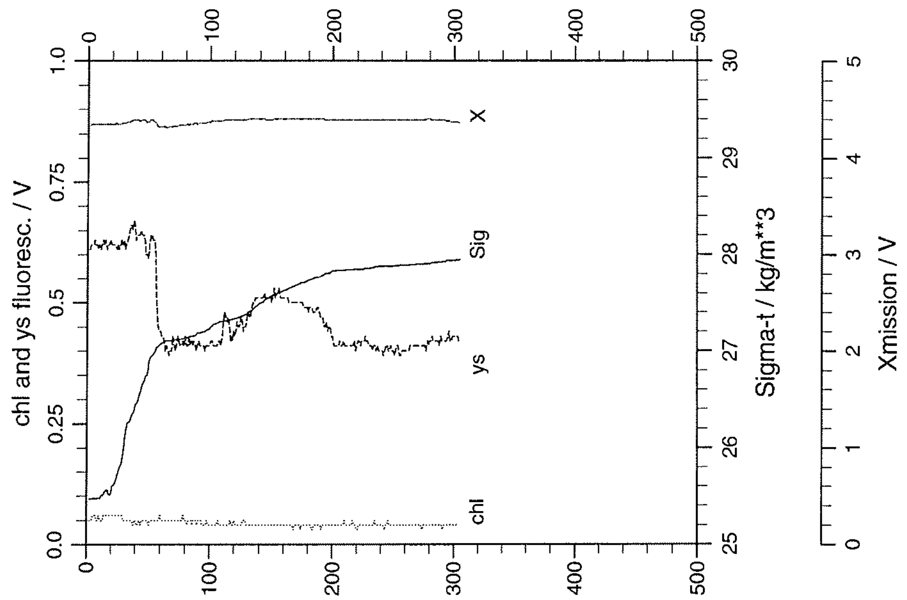
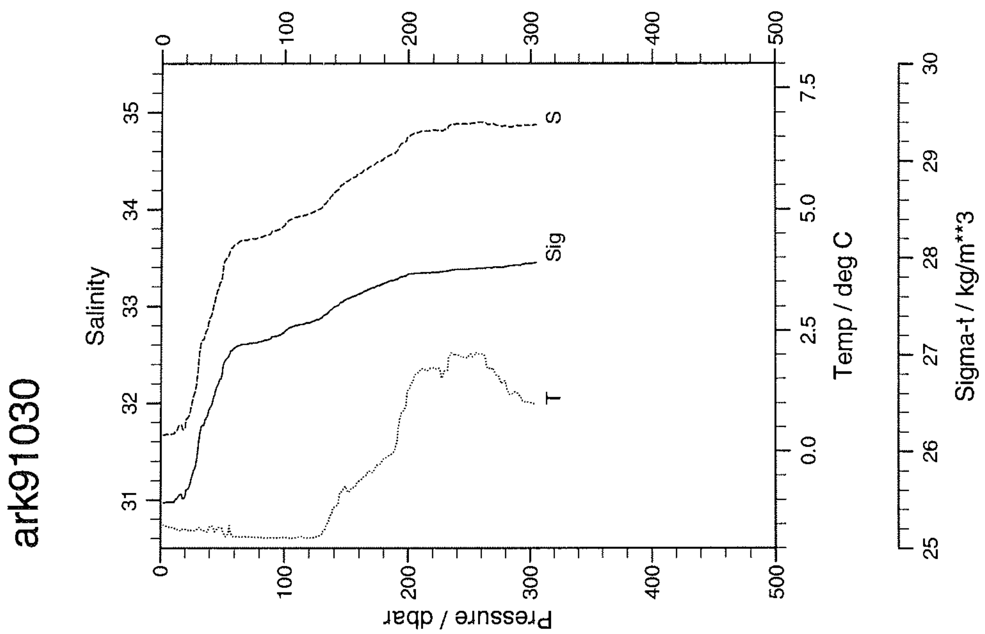

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl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Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

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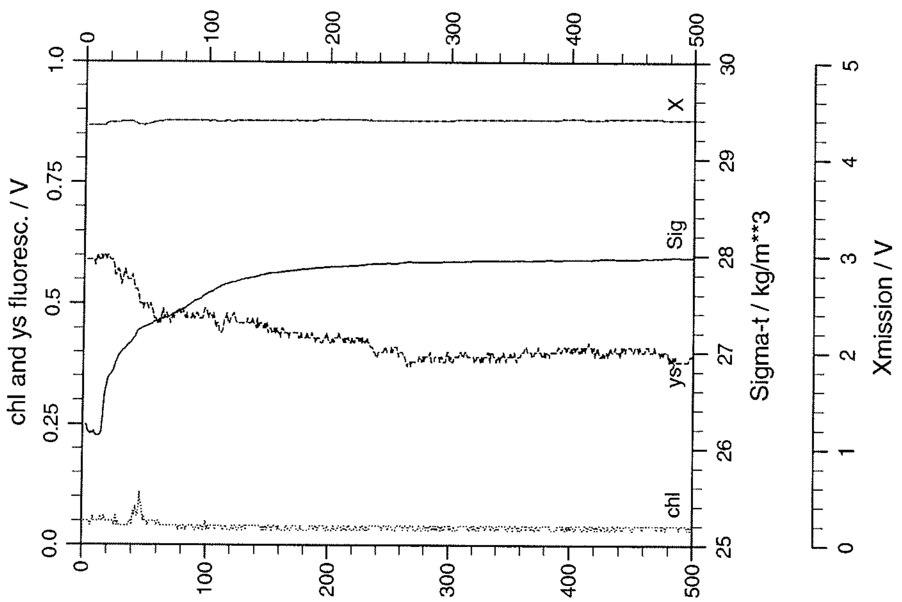

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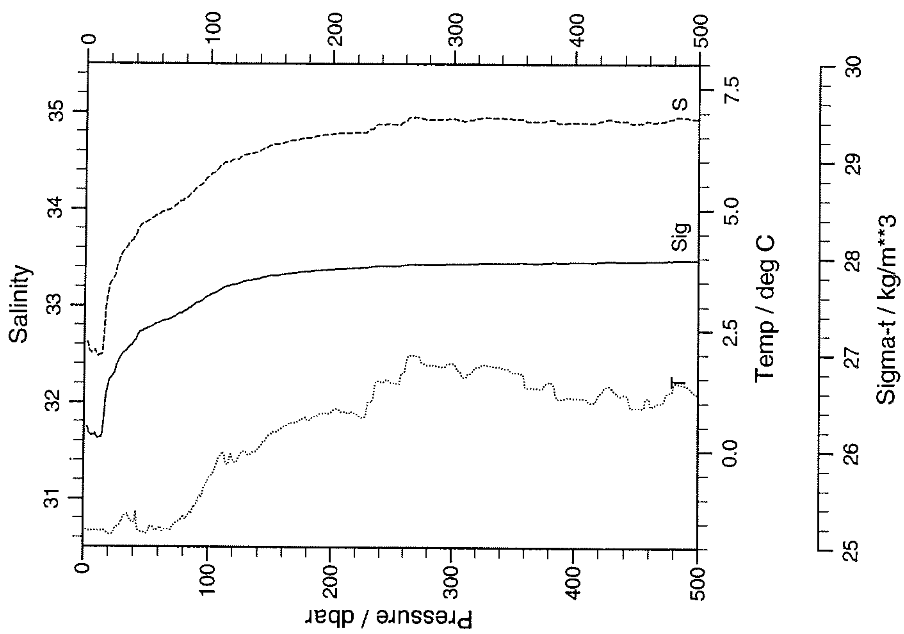

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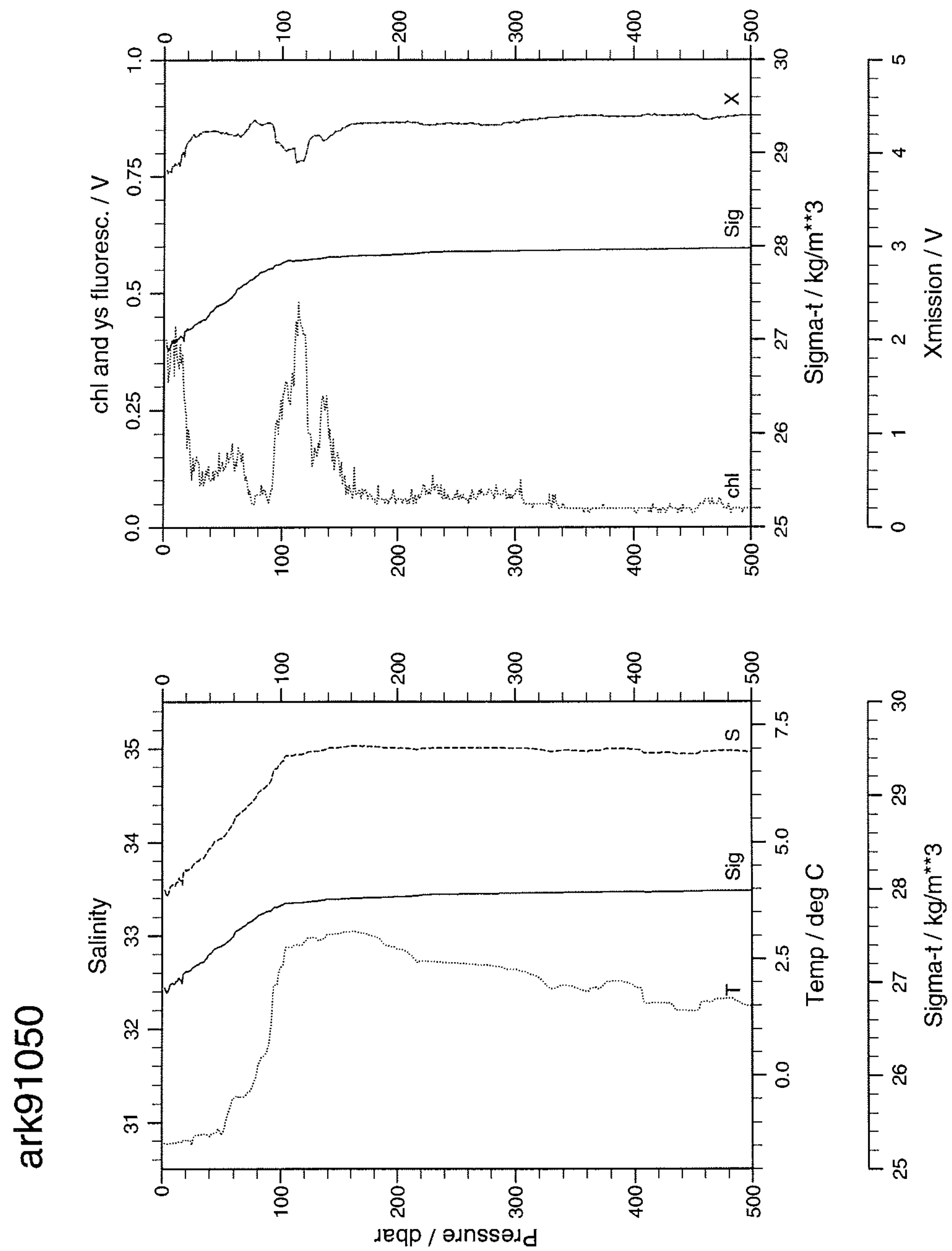
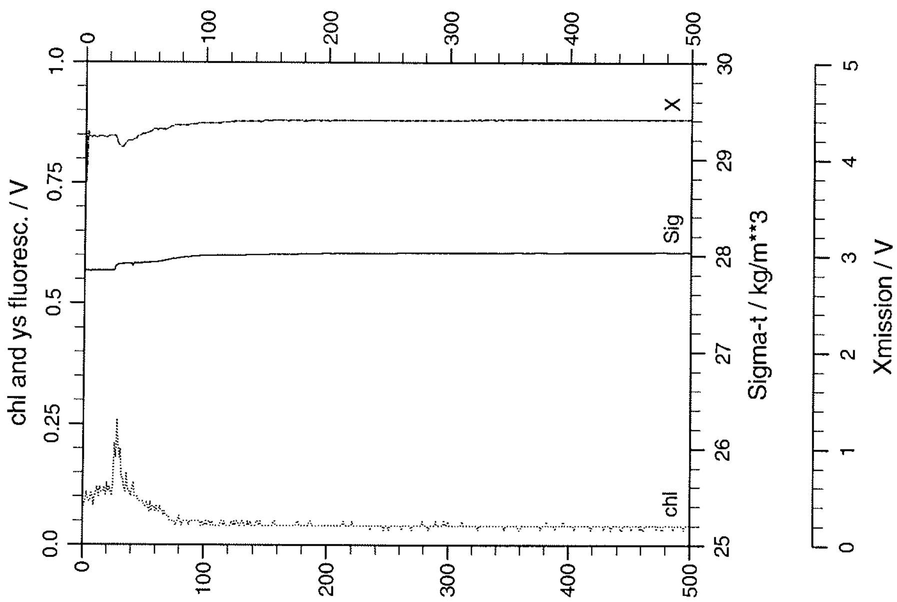

ark91050
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
chl
Salinity
Temp / deg C
S
T
Pressure / dbar

ark91060



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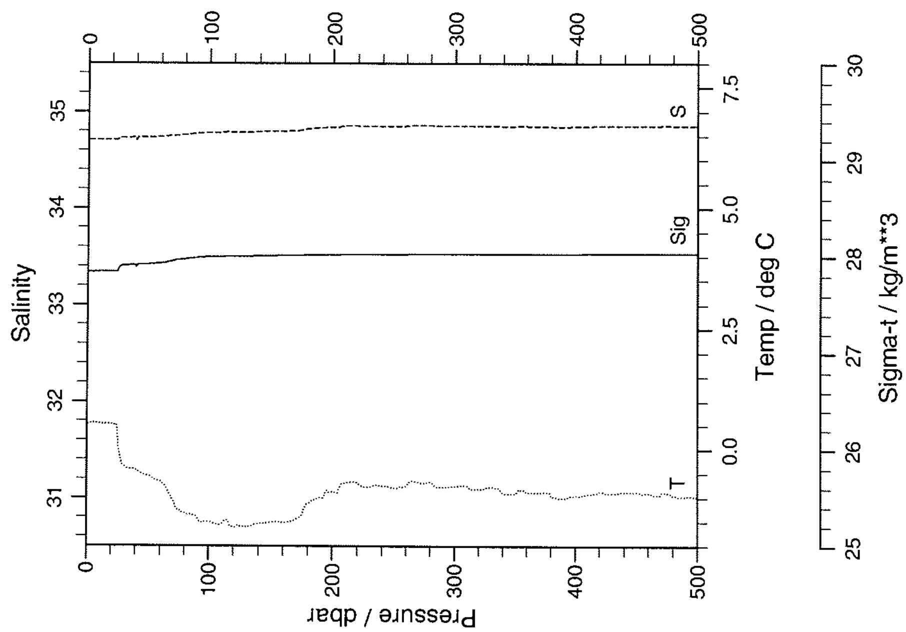

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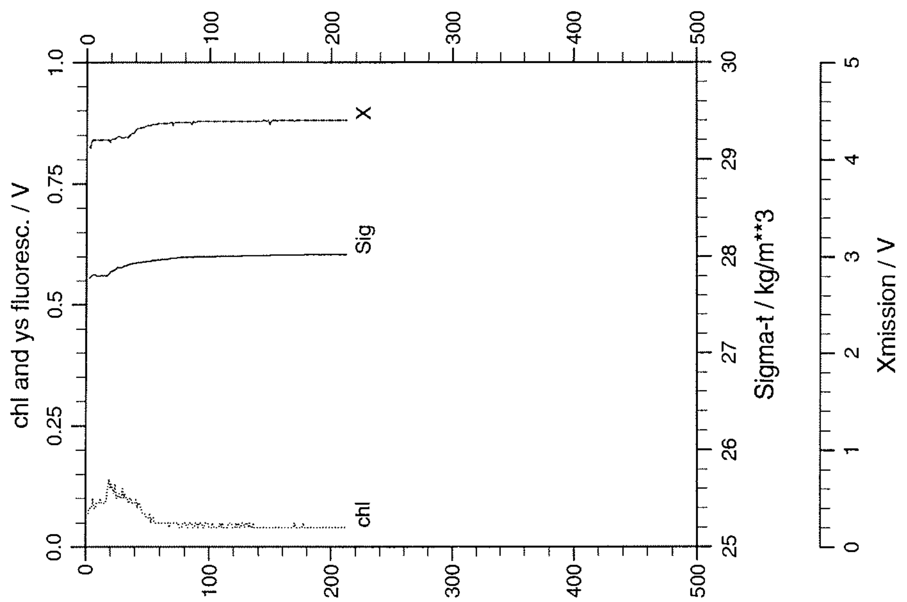

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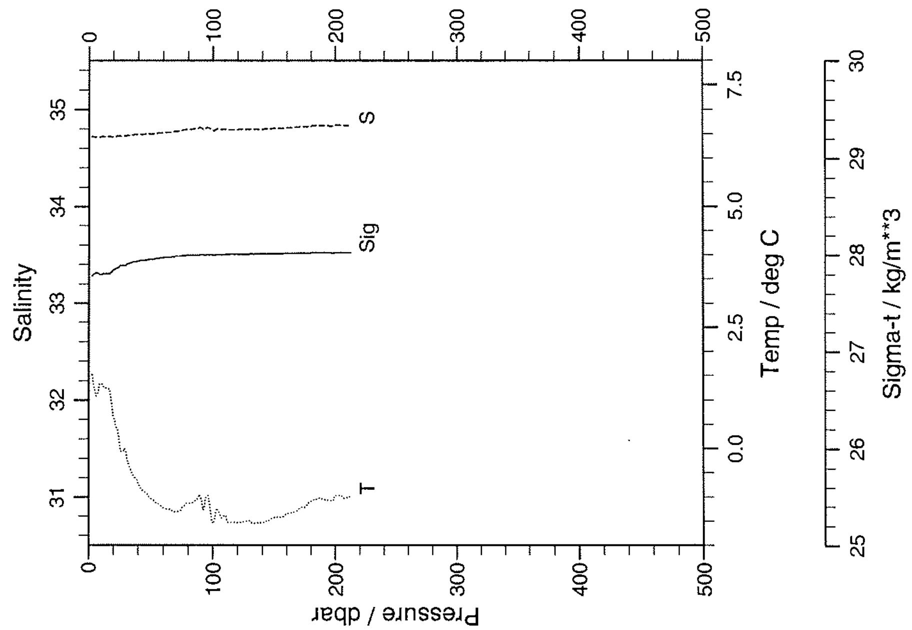

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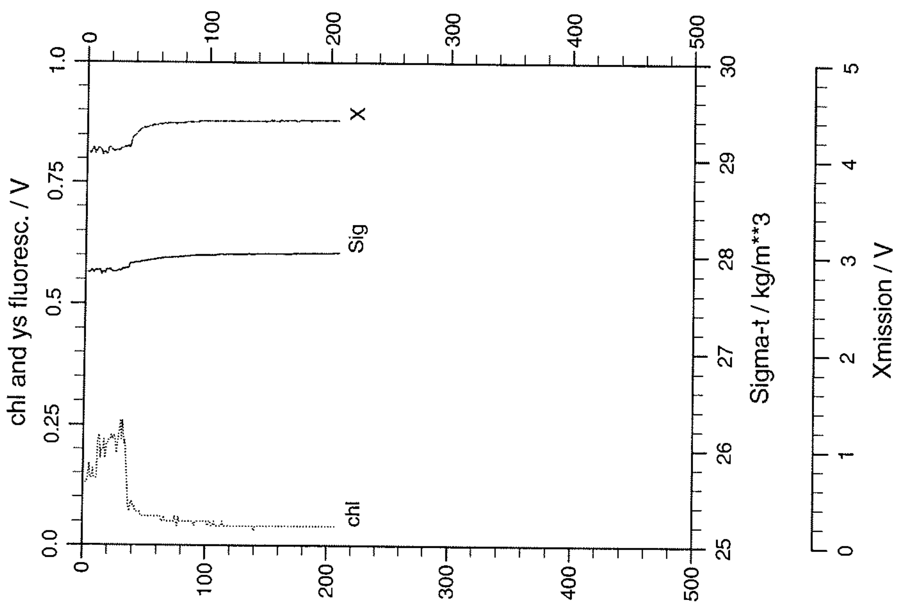

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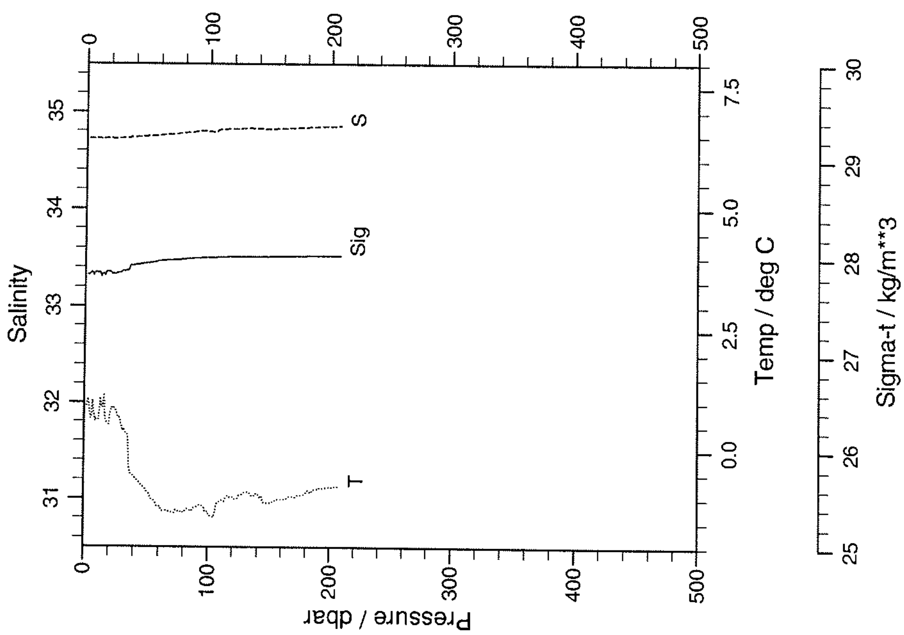

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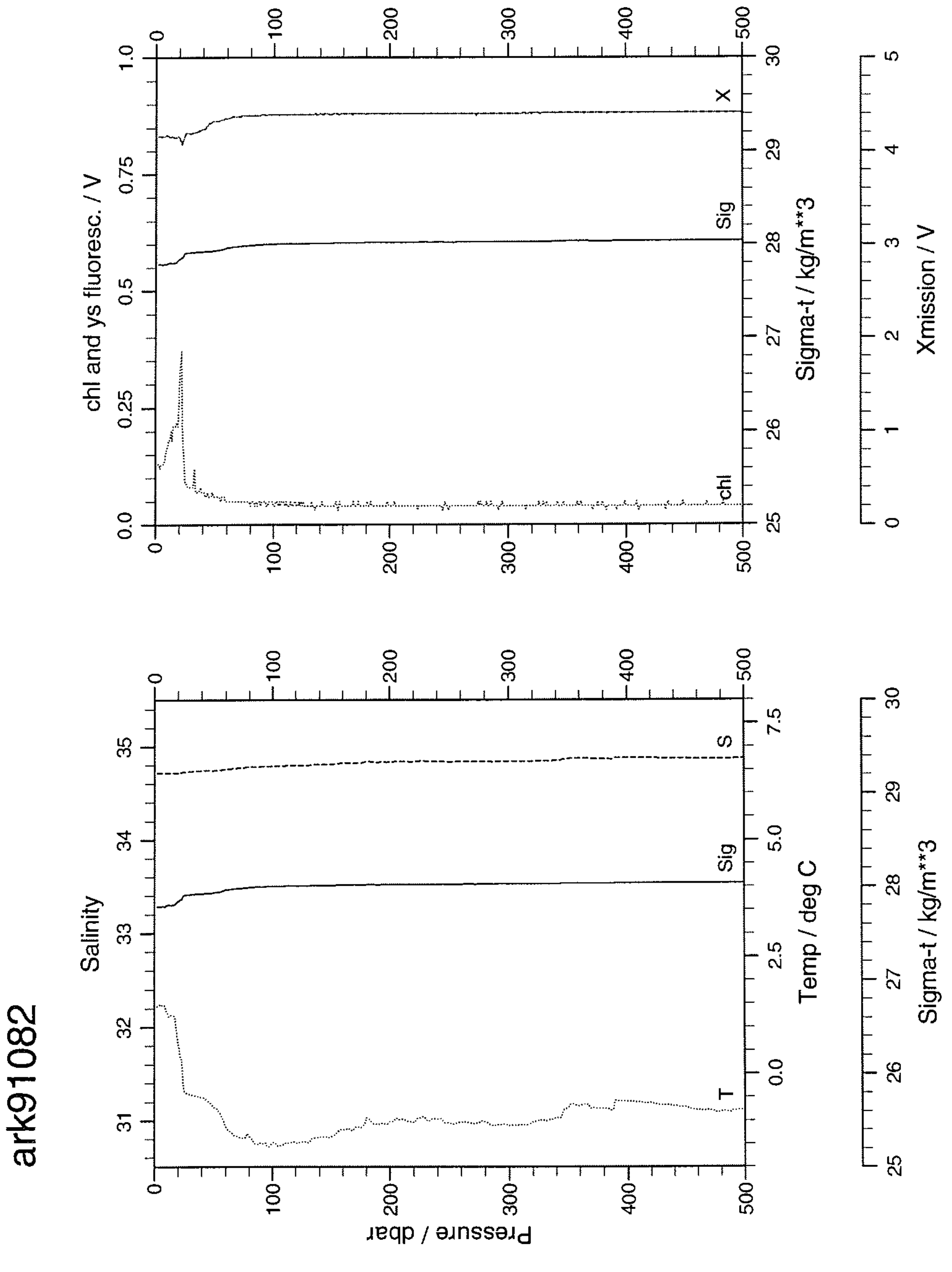
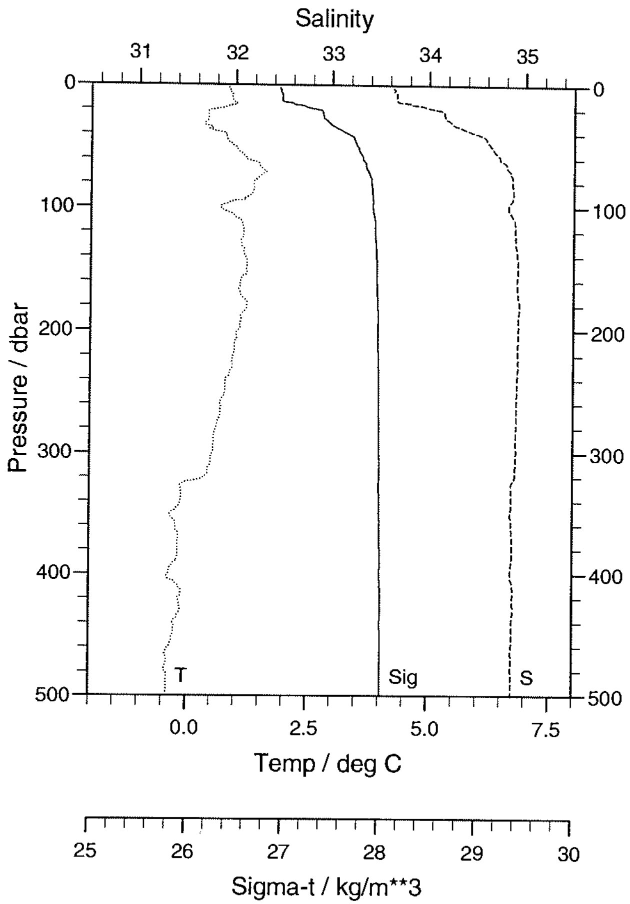
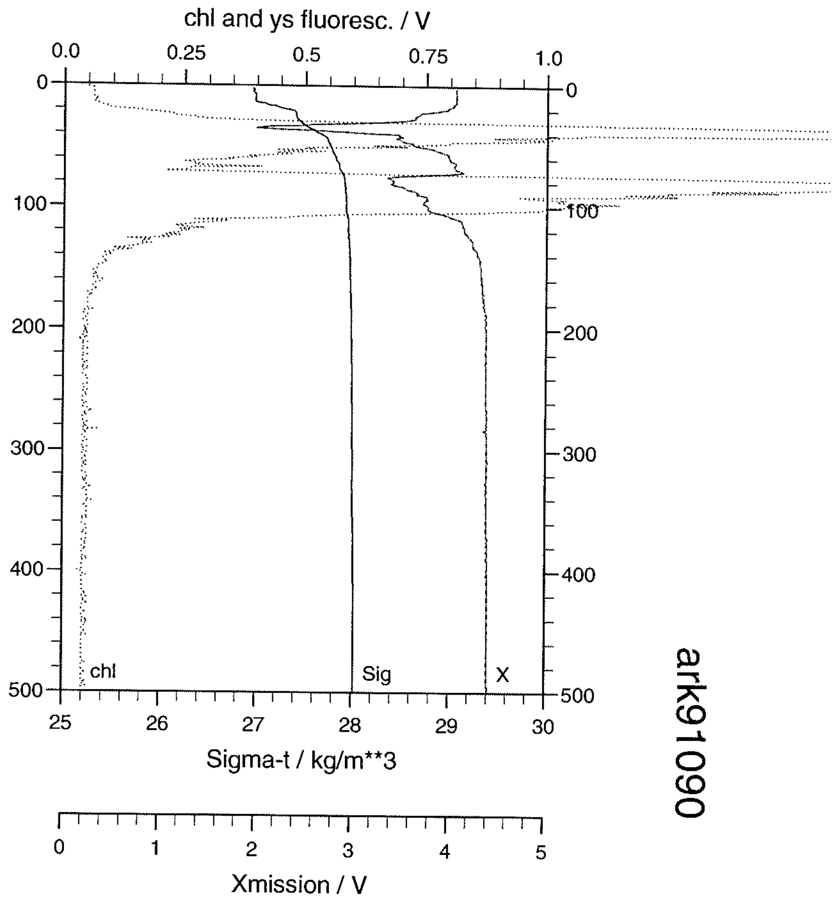


ark91082
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T
Pressure / dbar

ark91090





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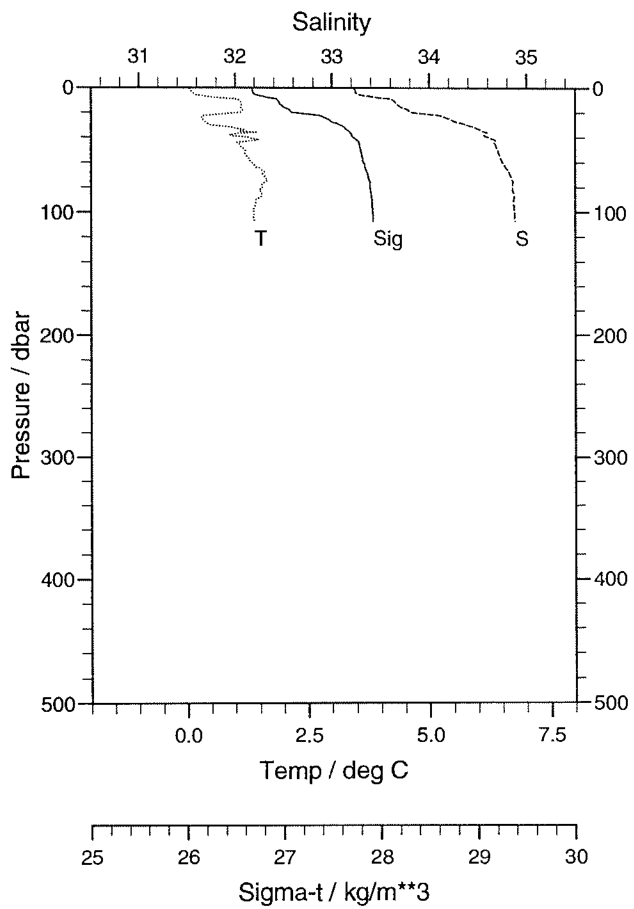

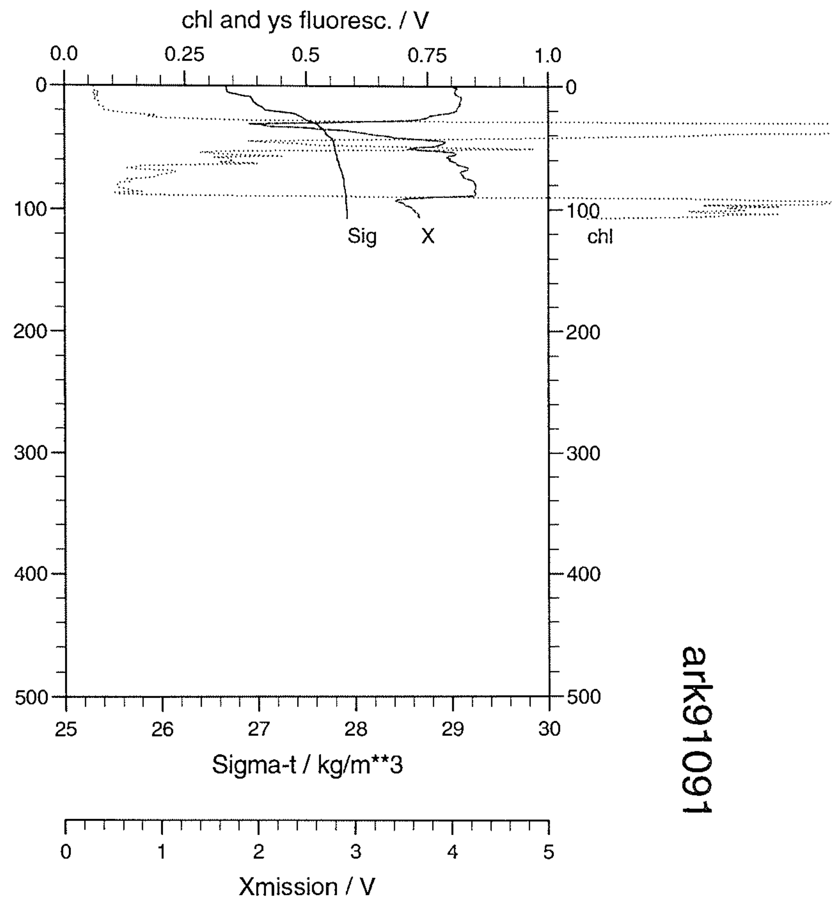

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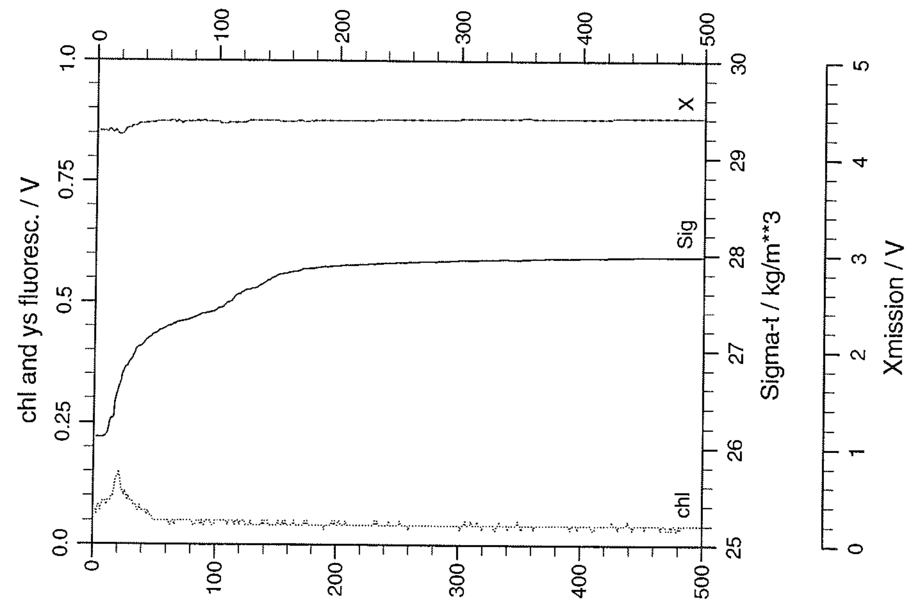

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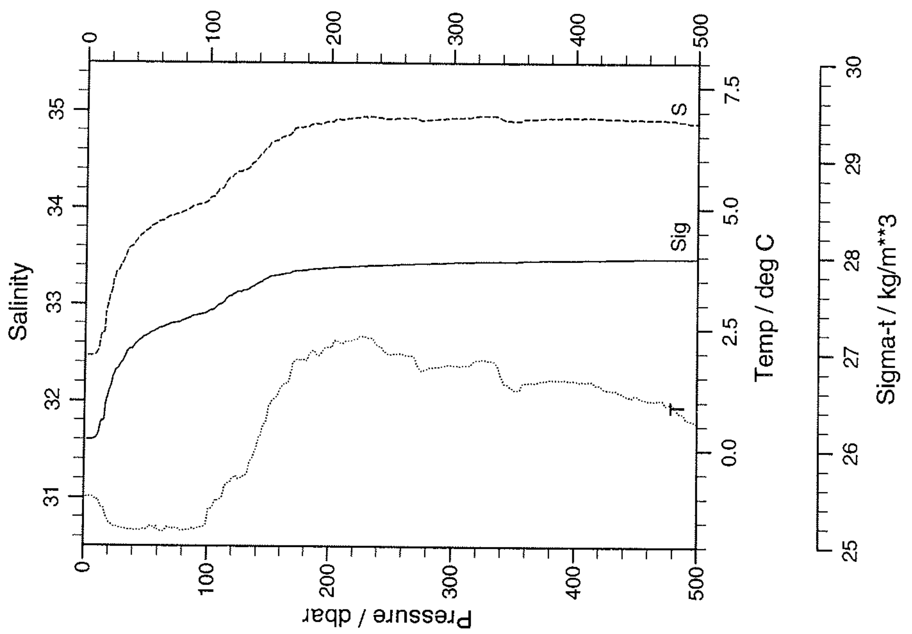

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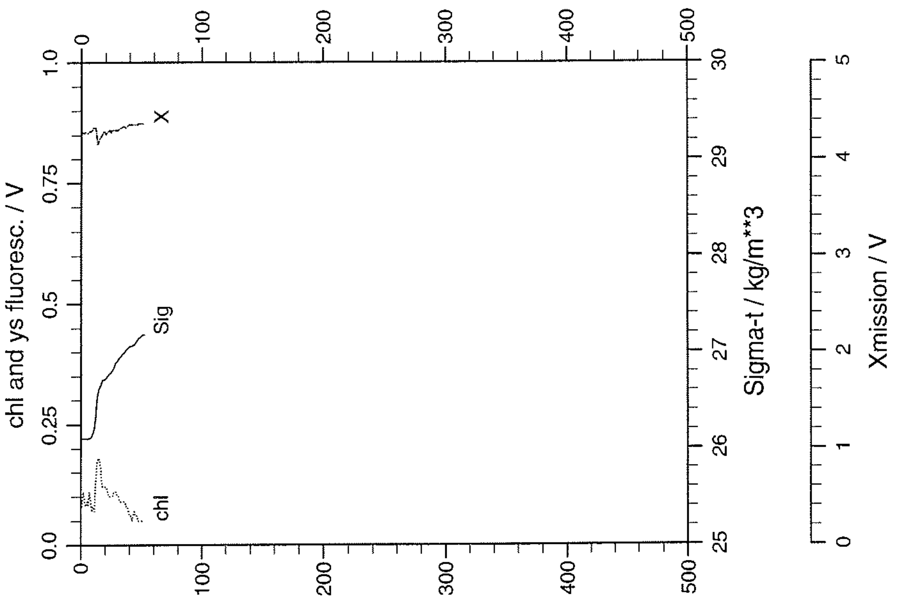

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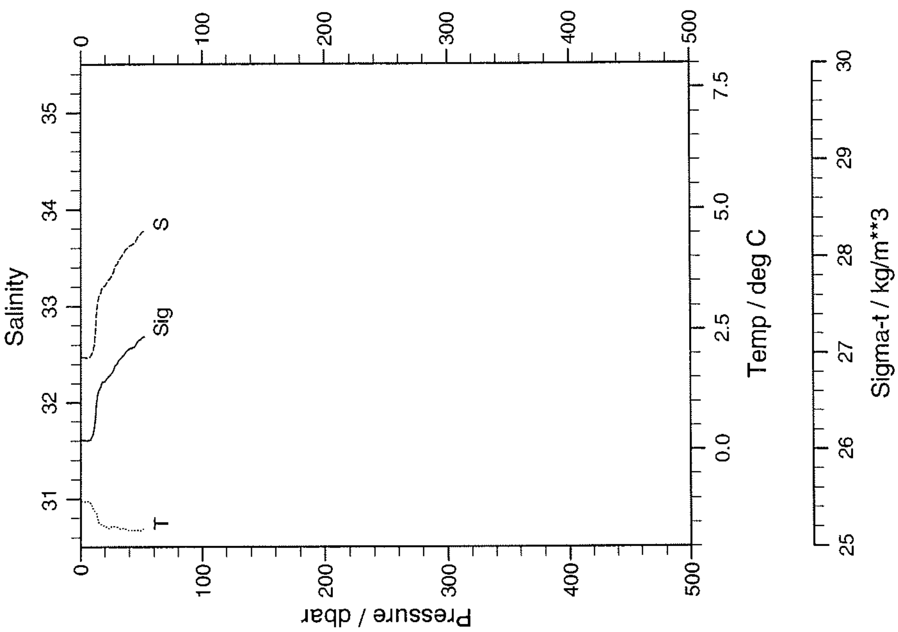

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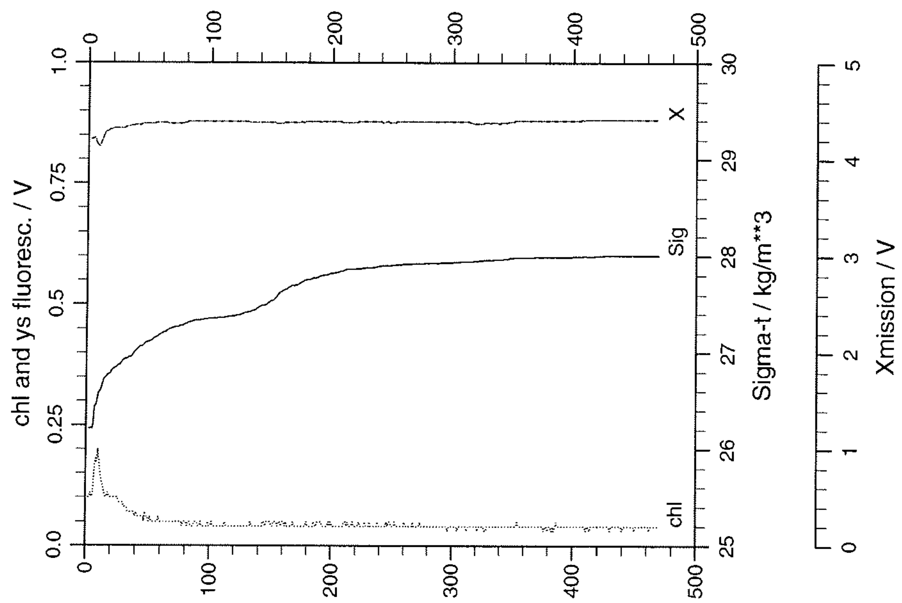

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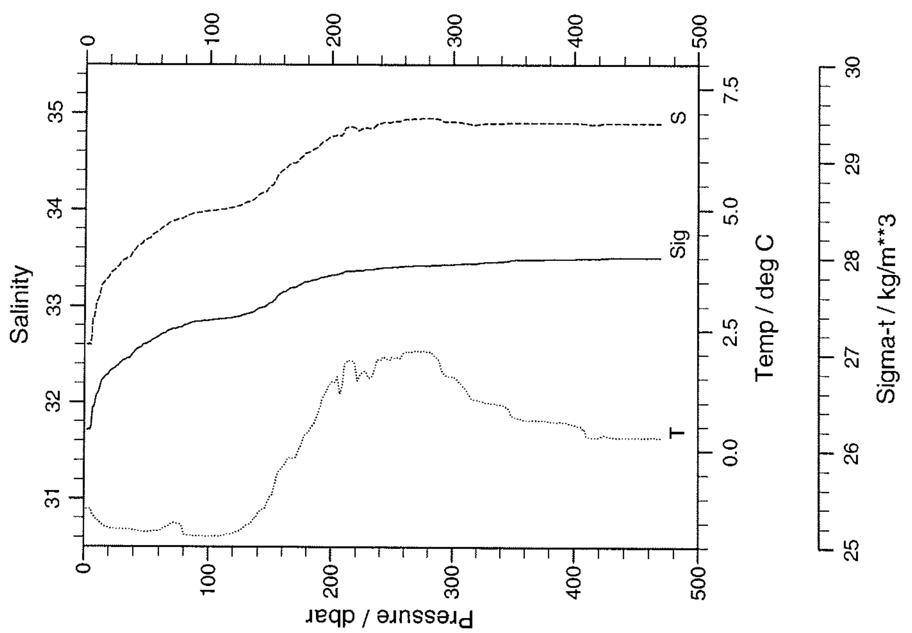

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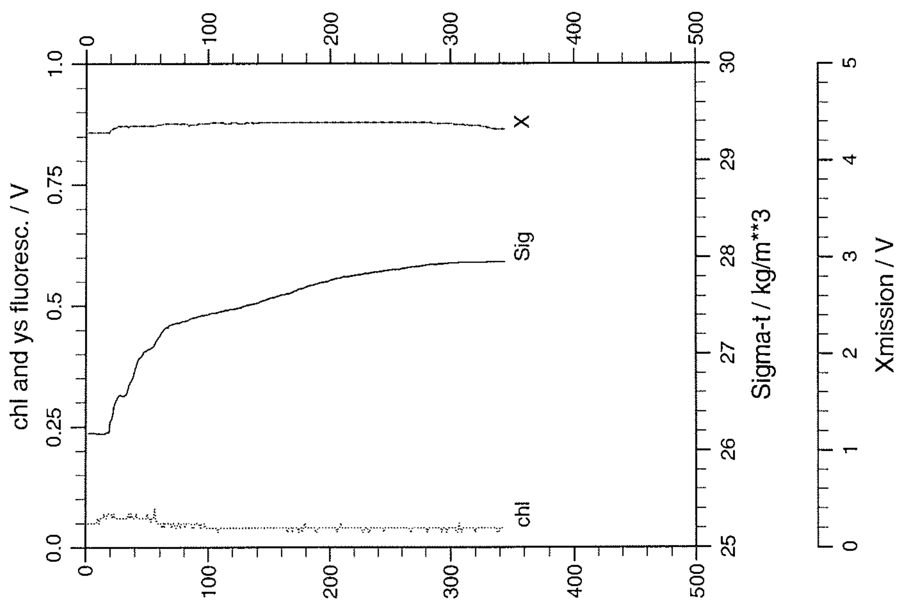
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Sigma-t / kg/m**3
Xmission / V
X
Sig
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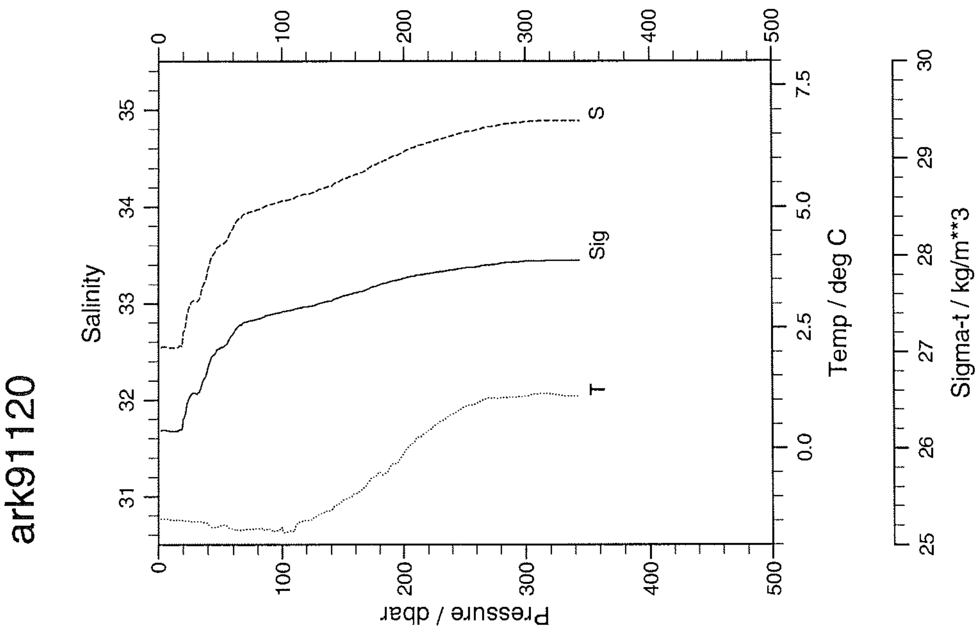
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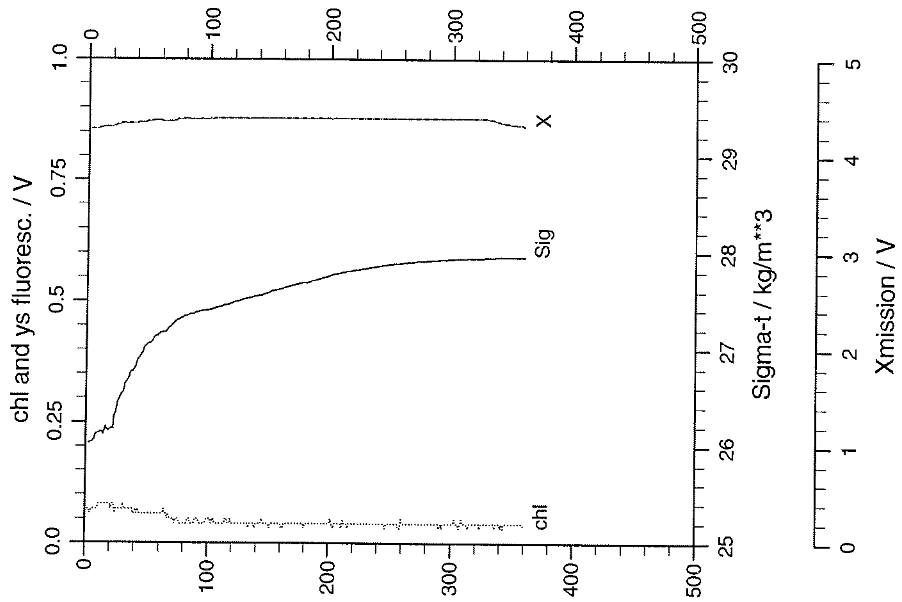

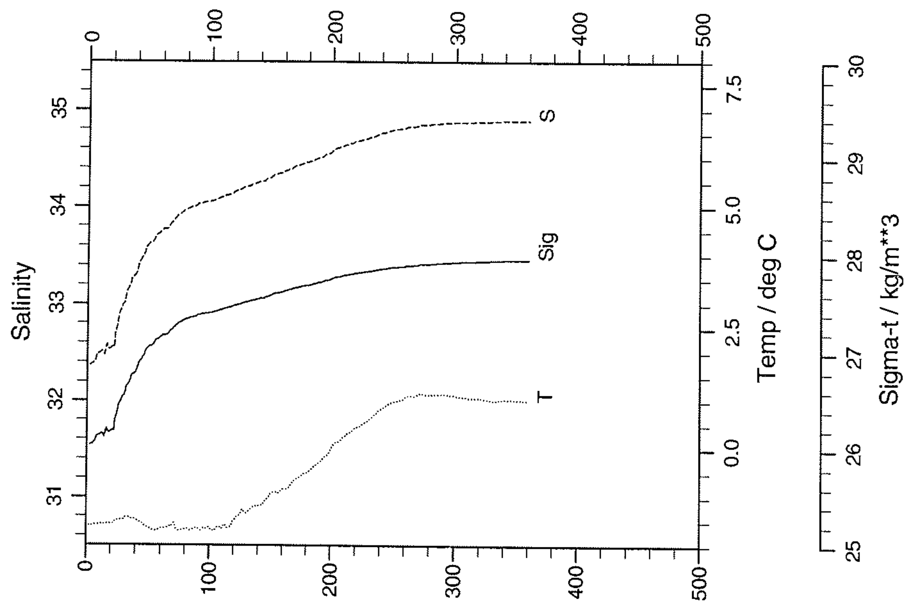

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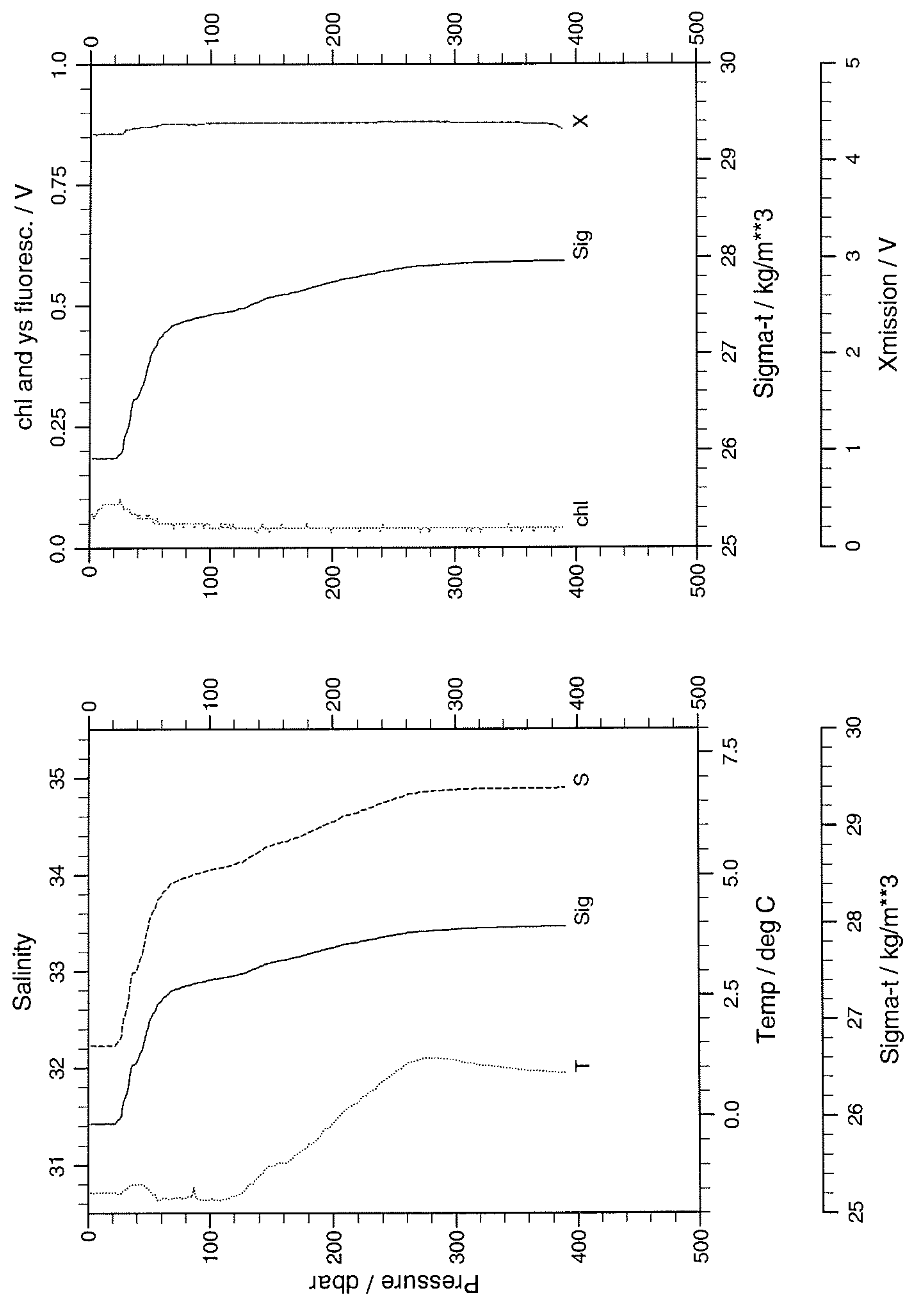

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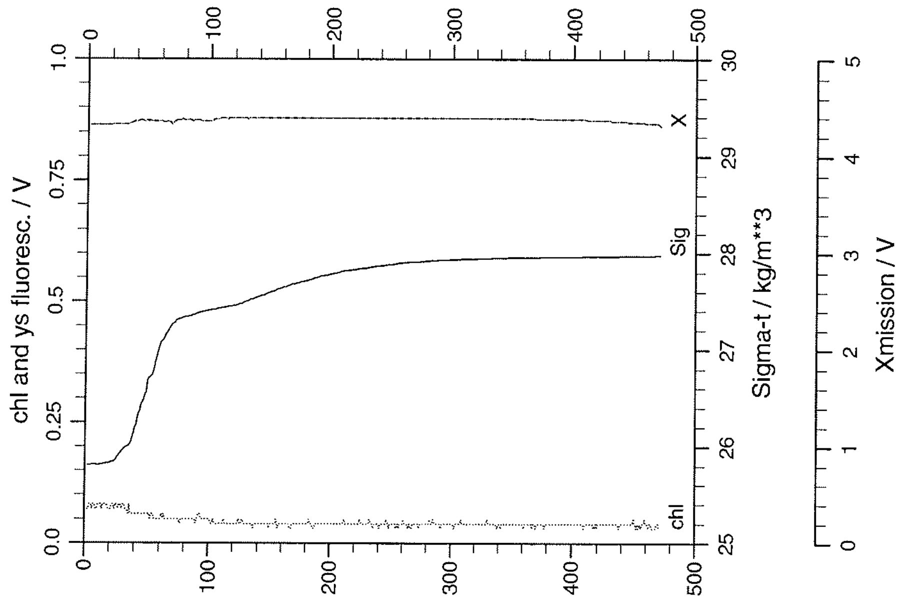

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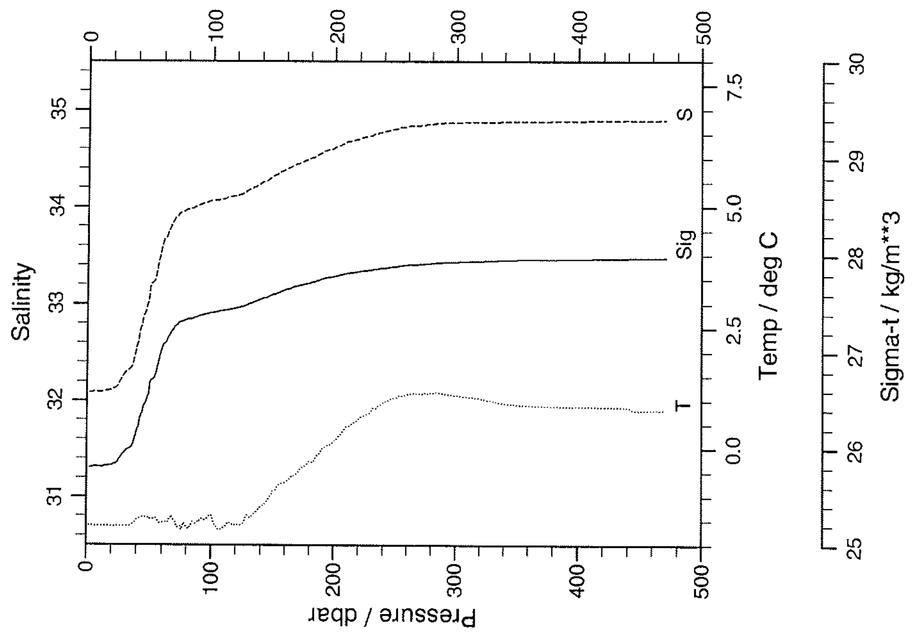

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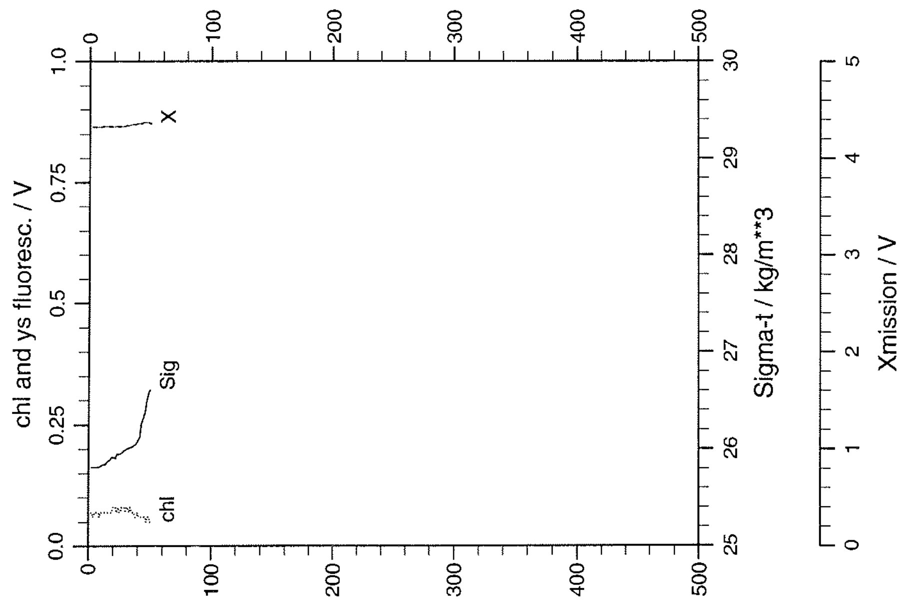

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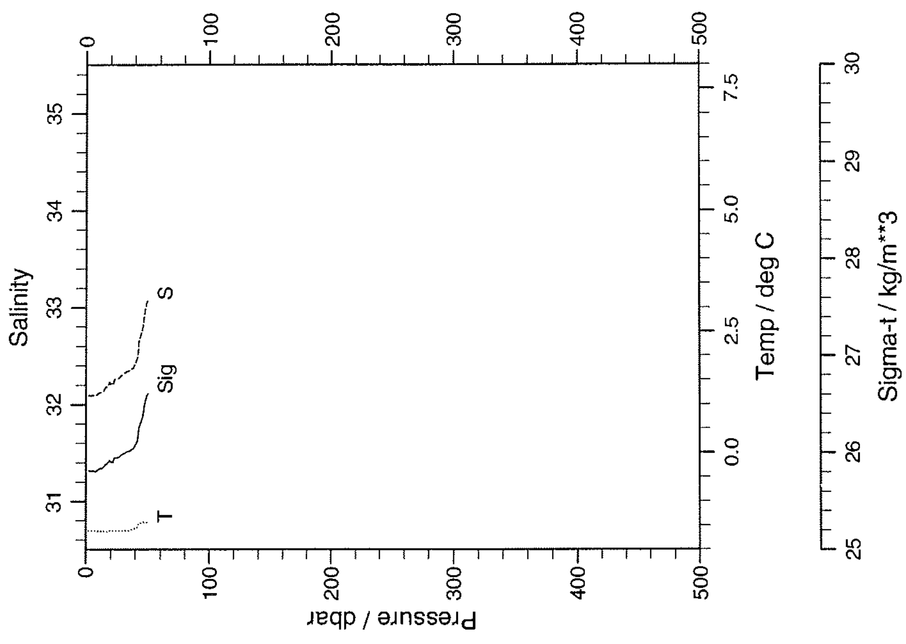

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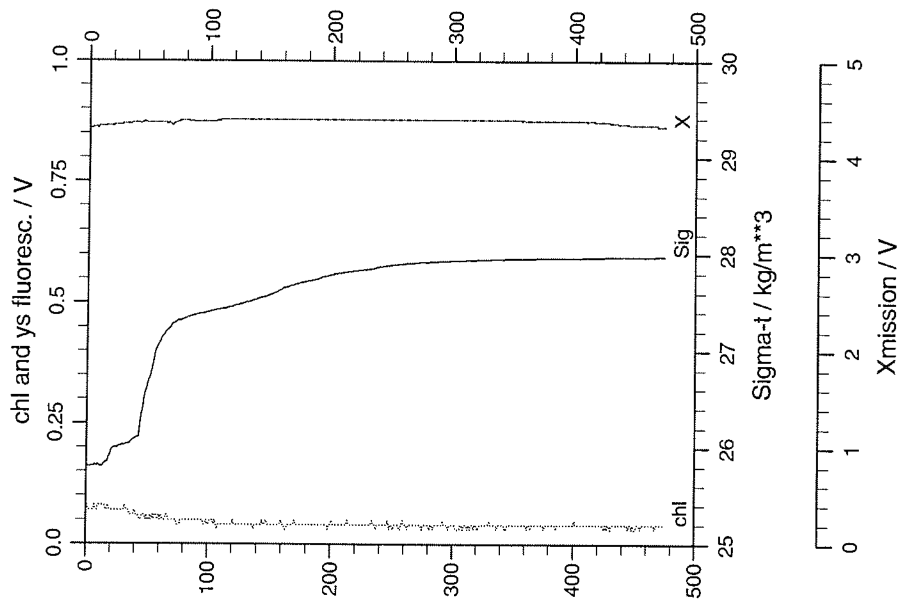

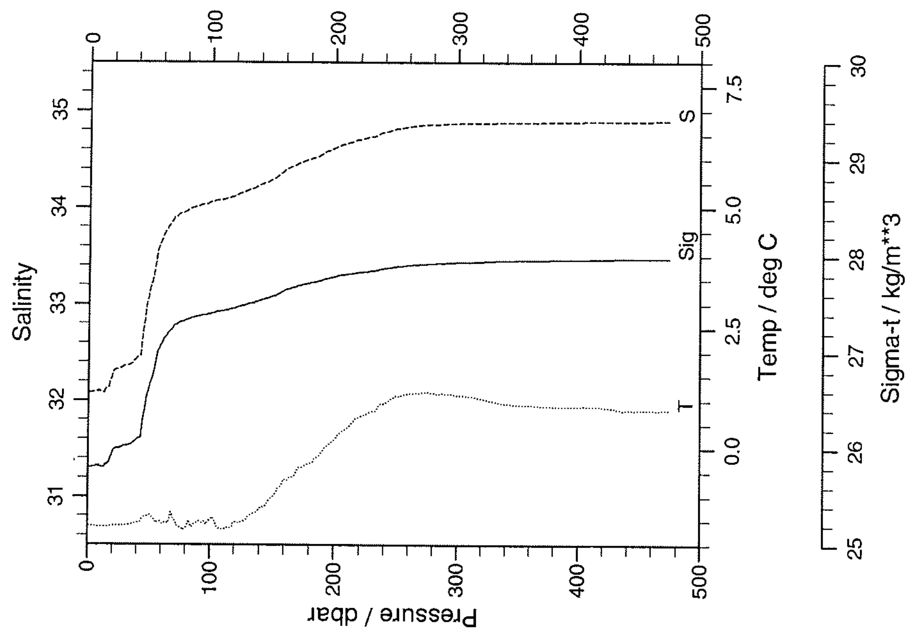

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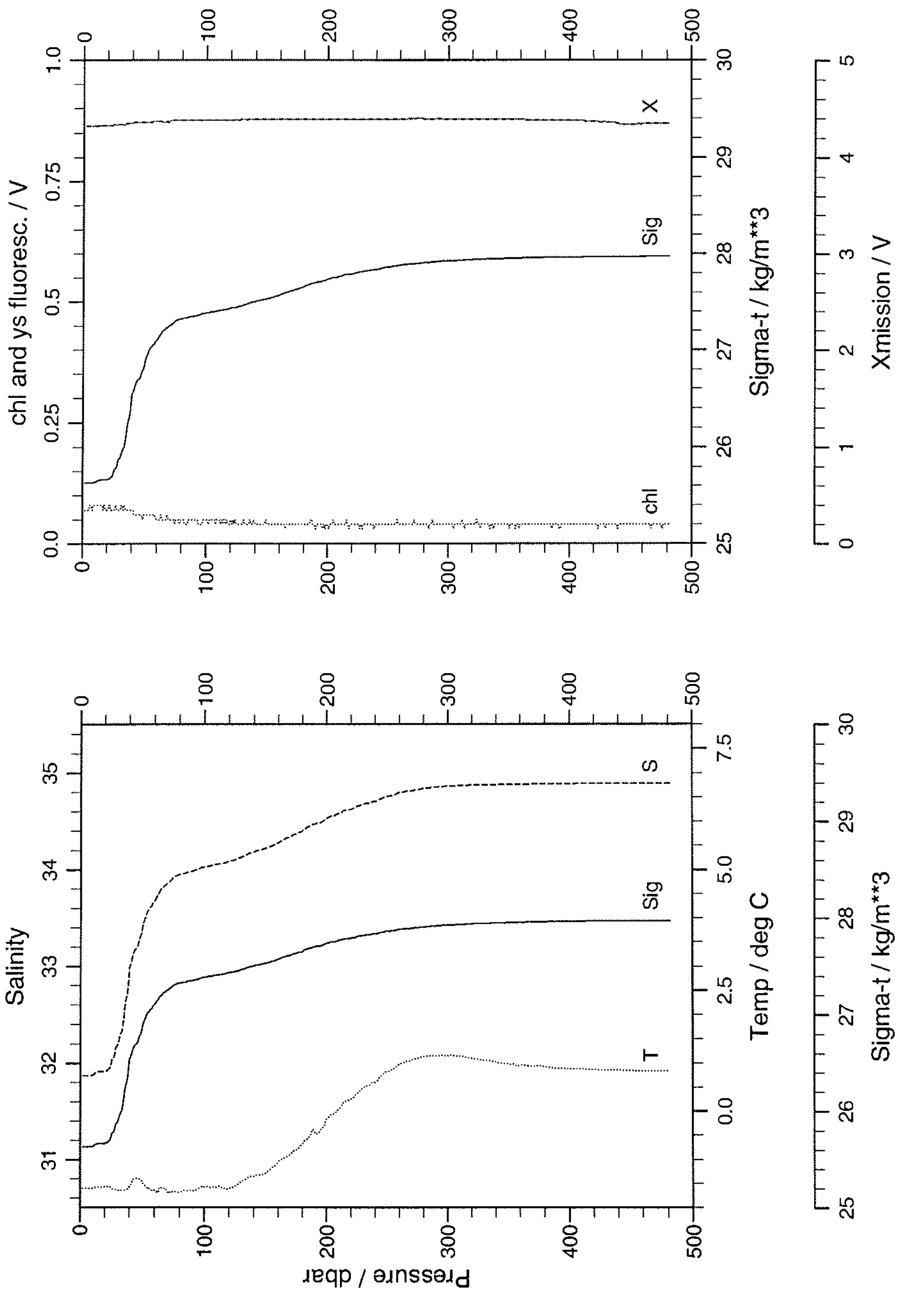

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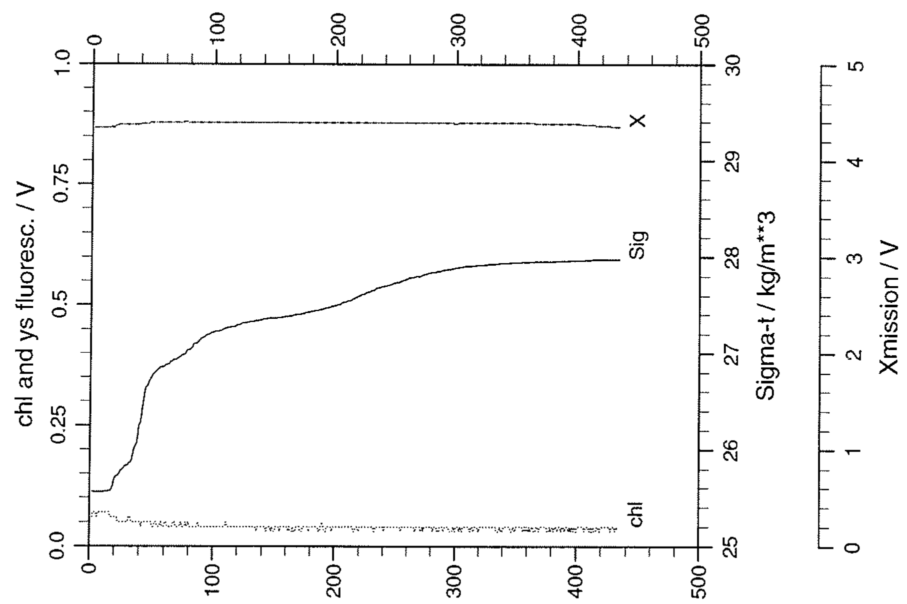

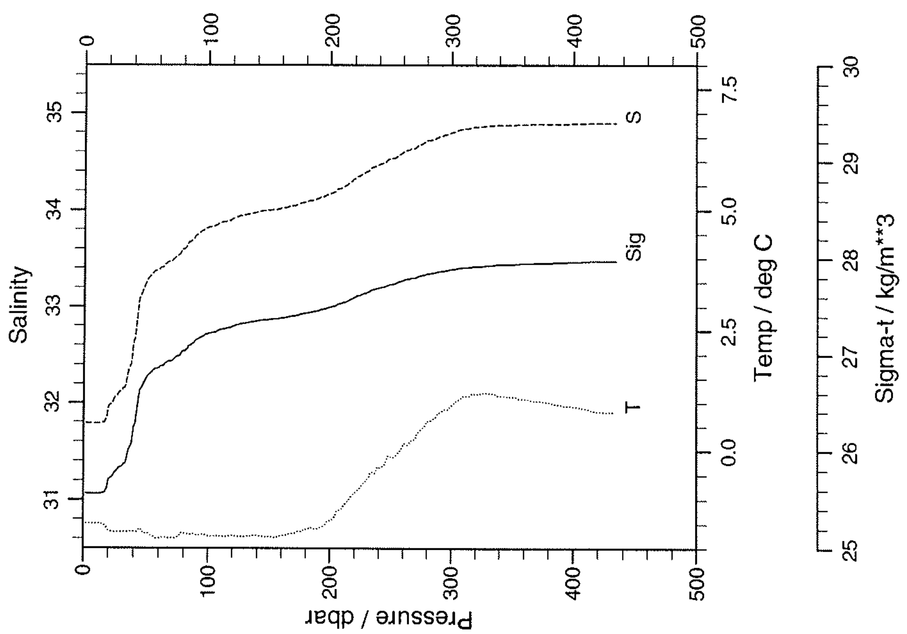

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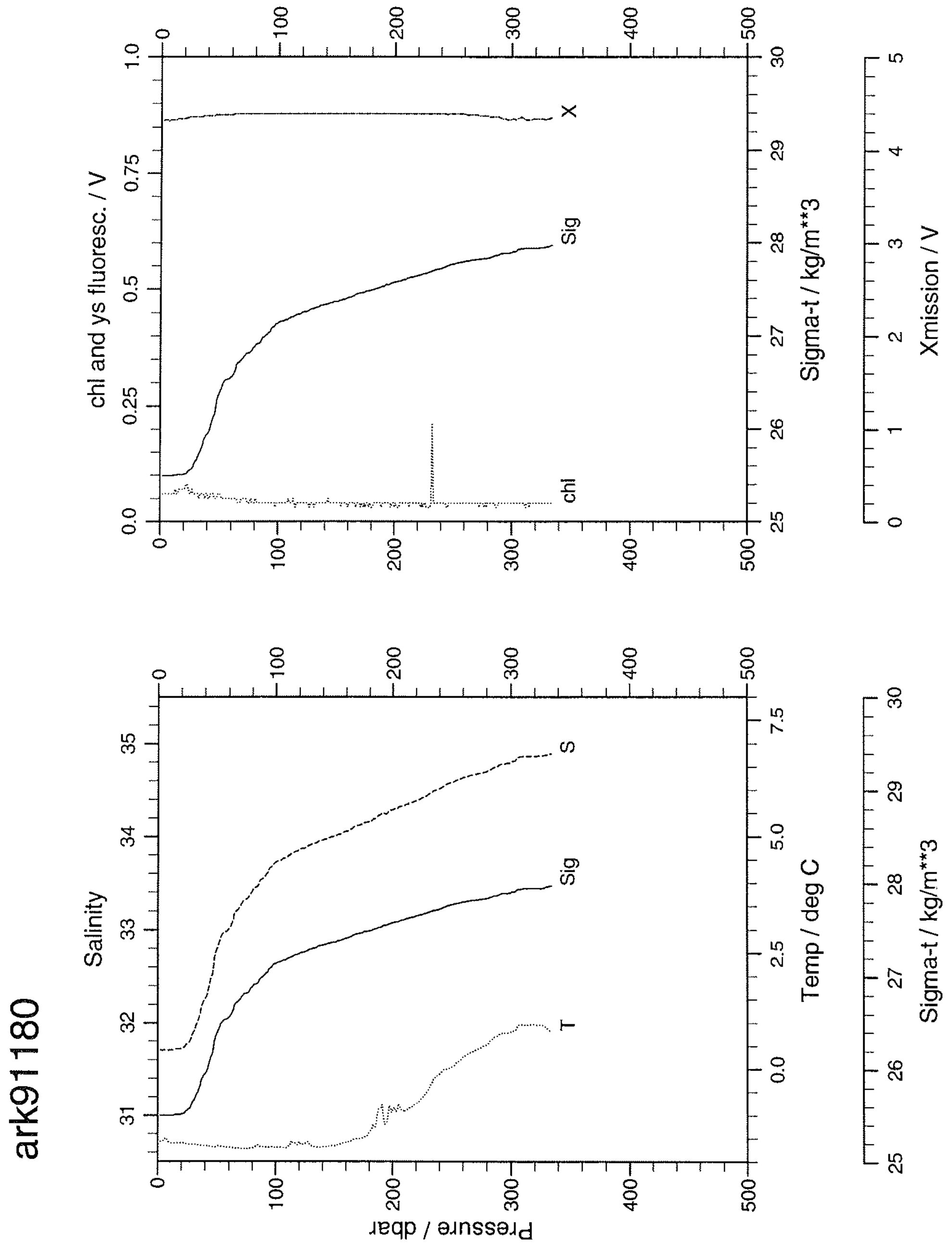
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Salinity
Pressure / dbar
Temp / deg C
Sigma-t / kg/m**3
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Sig
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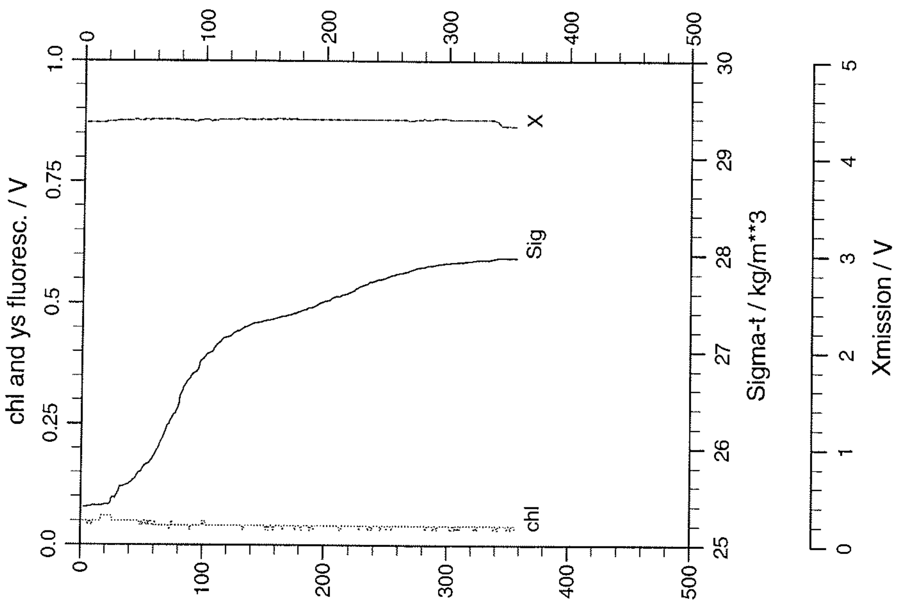
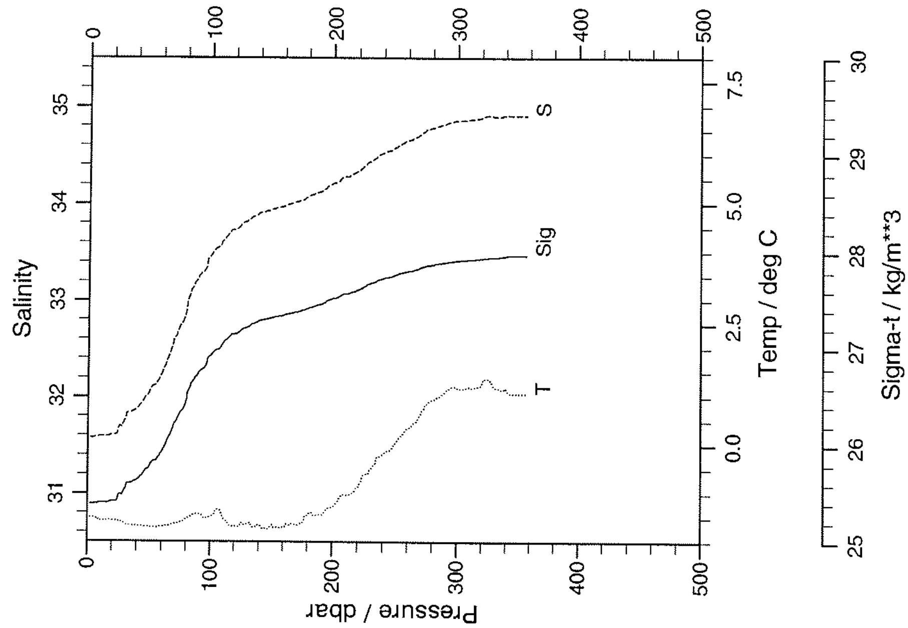
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
chl

ark91190





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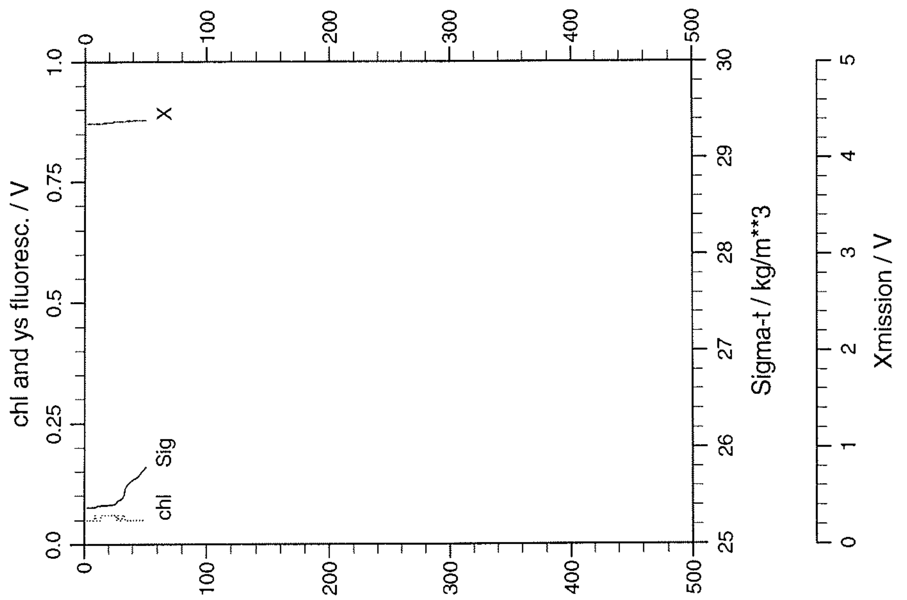
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Sigma-t / kg/m**3
Xmission / V
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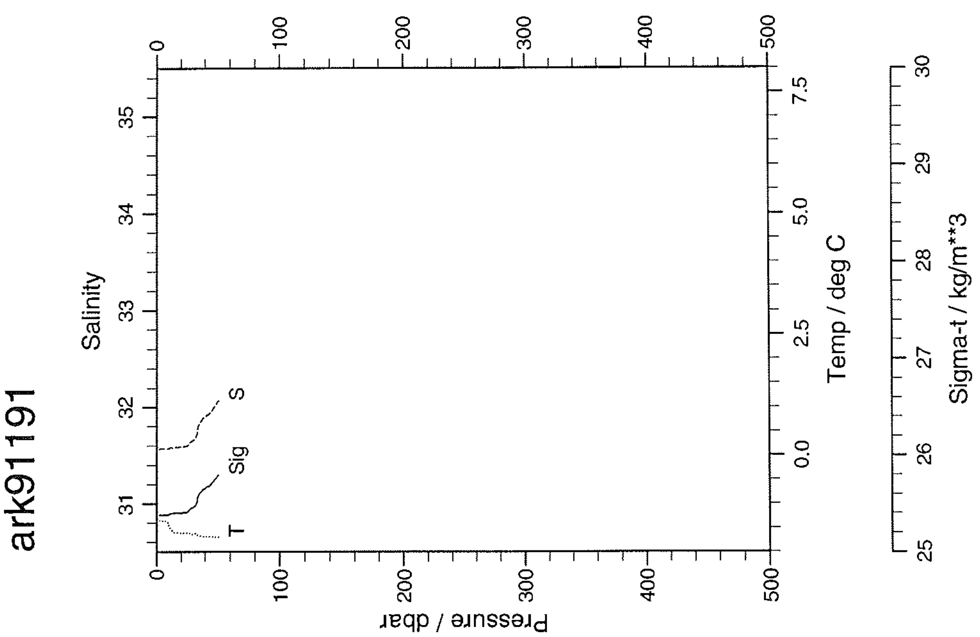
chl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Sigma-t / kg/m**3
Pressure / dbar
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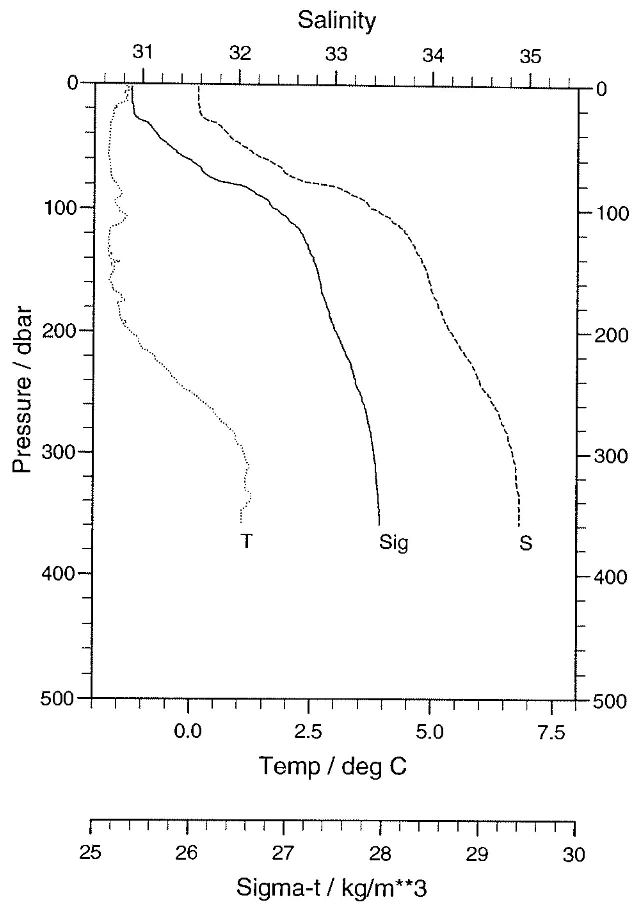

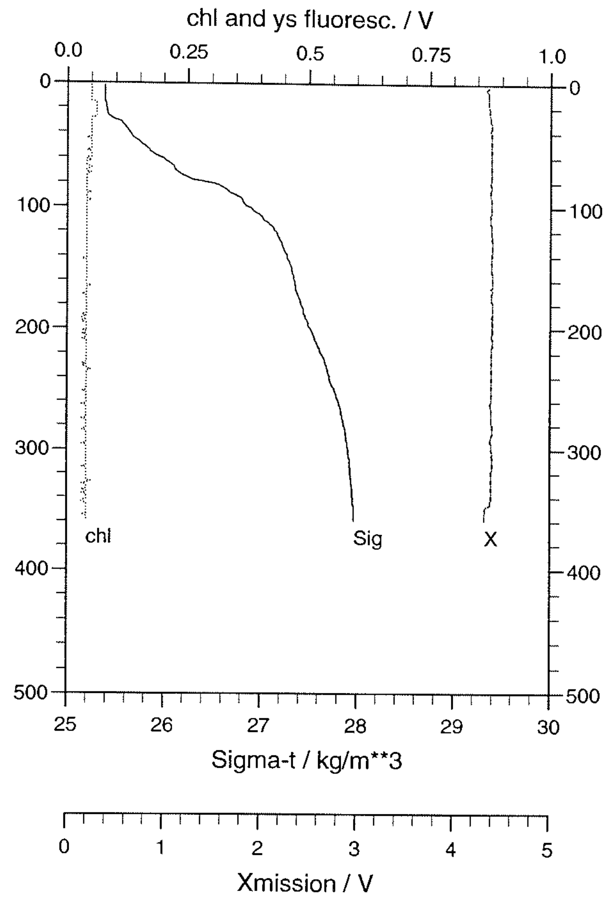

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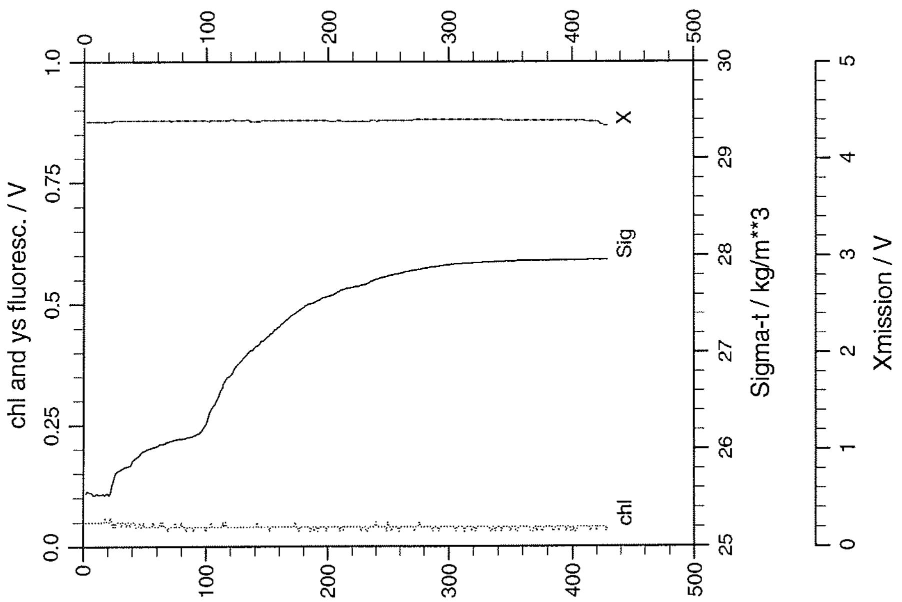

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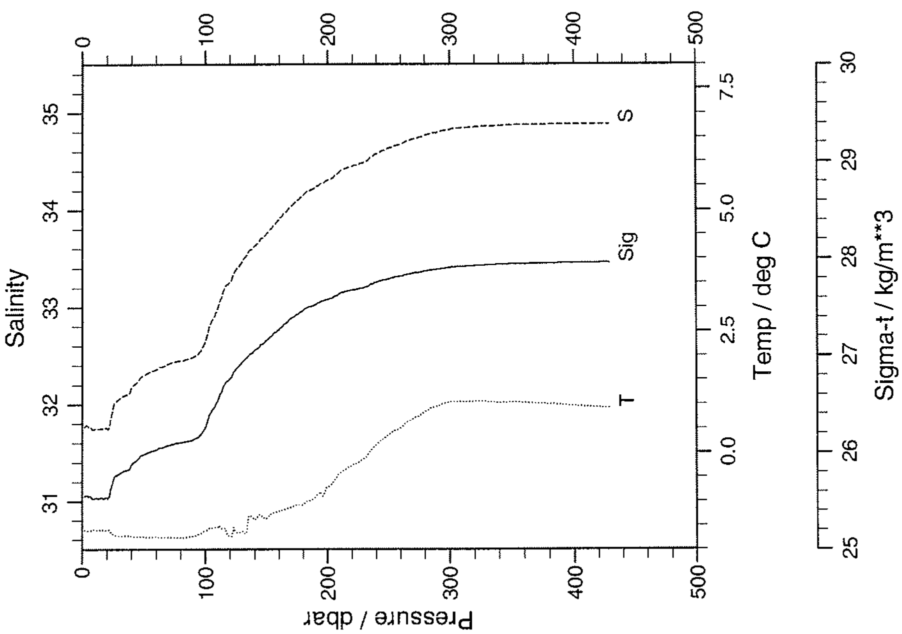

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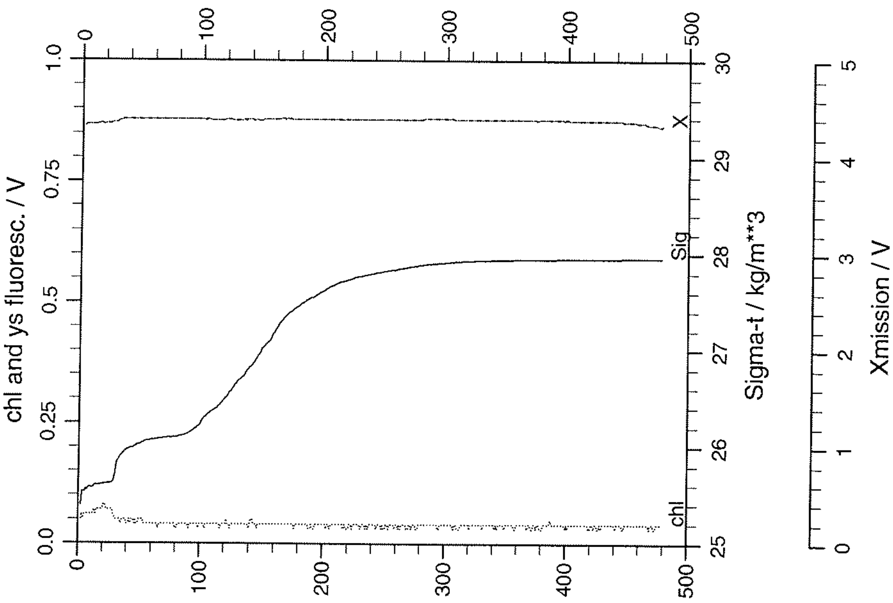

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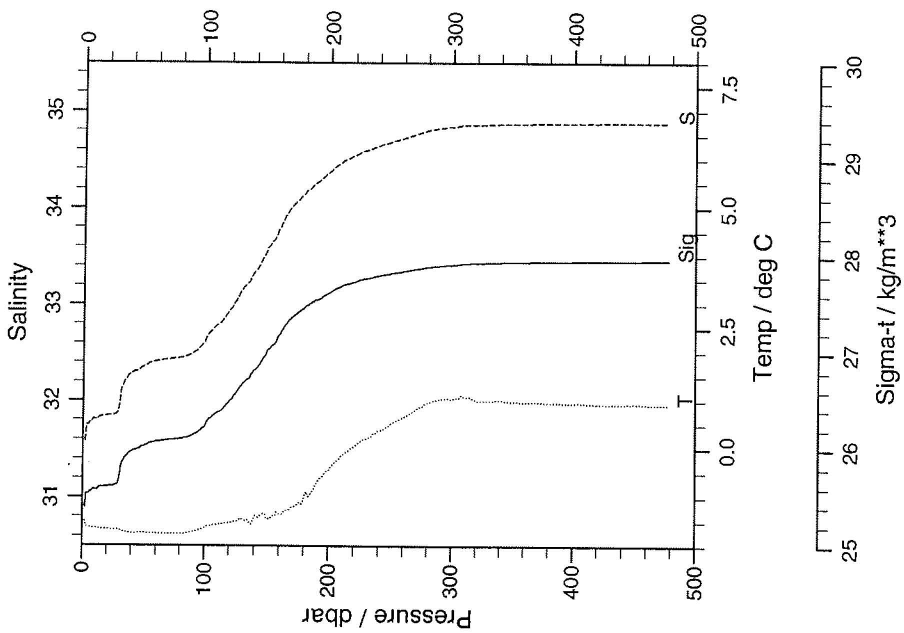

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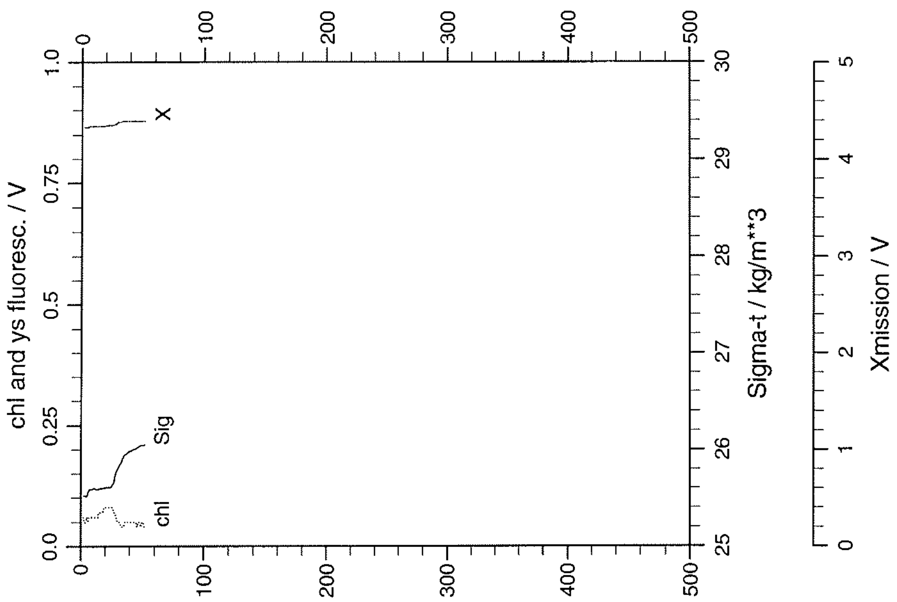

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Sigma-t / kg/m**3
Xmission / V
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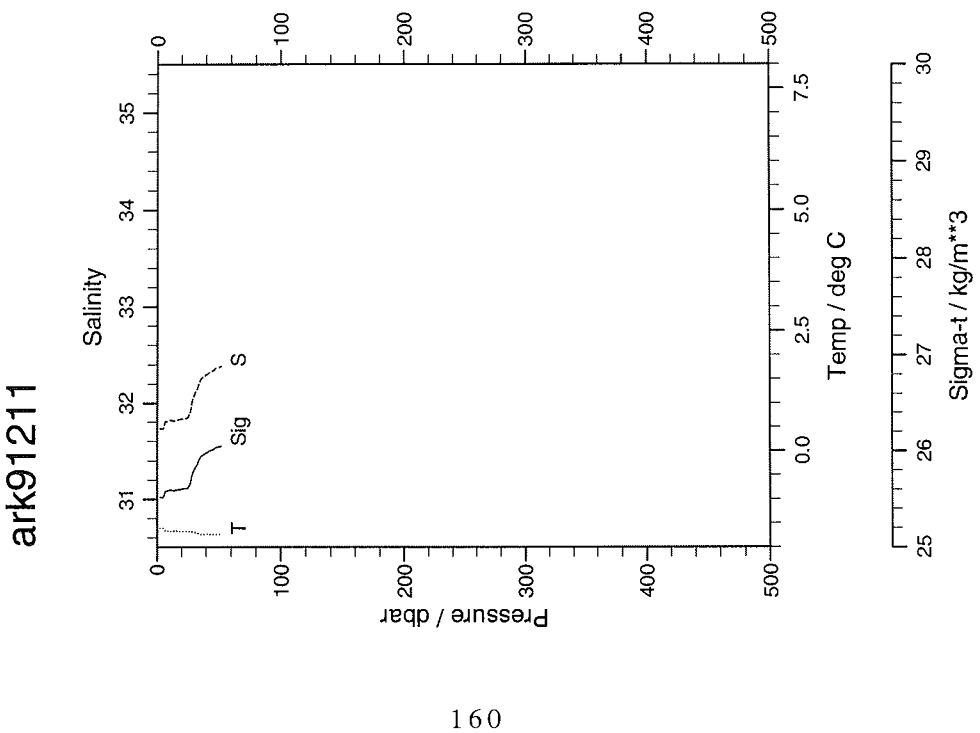

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Salinity
Pressure / dbar
Temp / deg C
Sigma-t / kg/m**3
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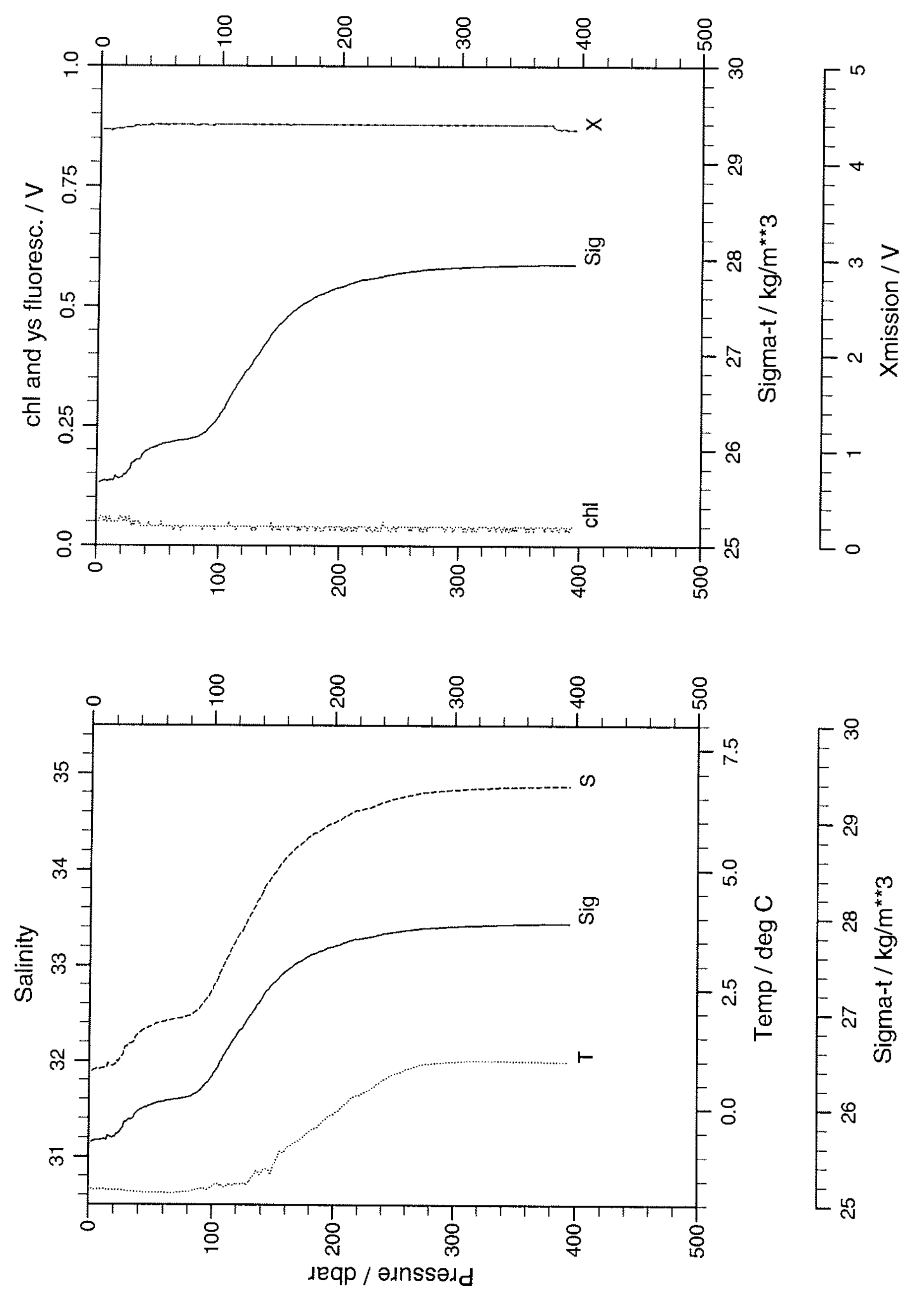
ark91220



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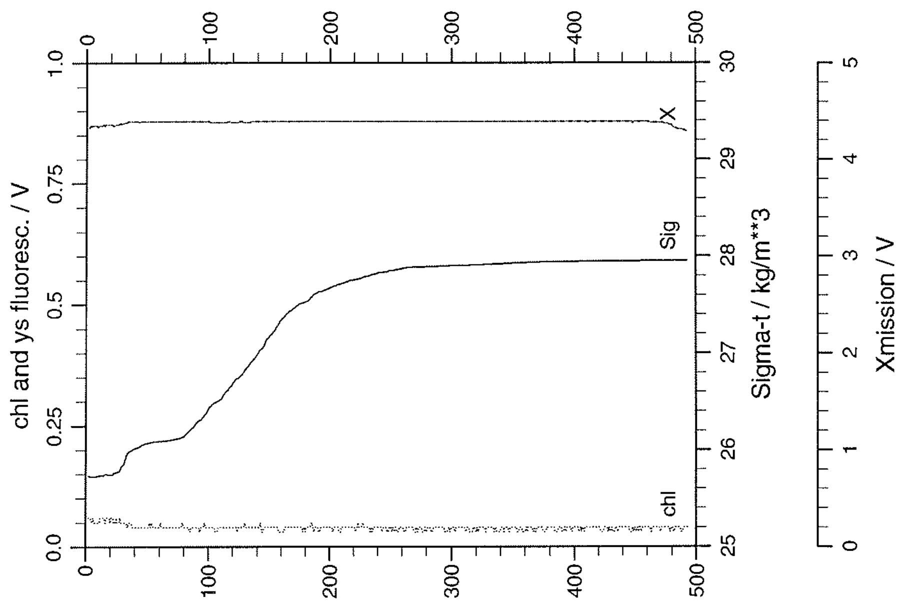

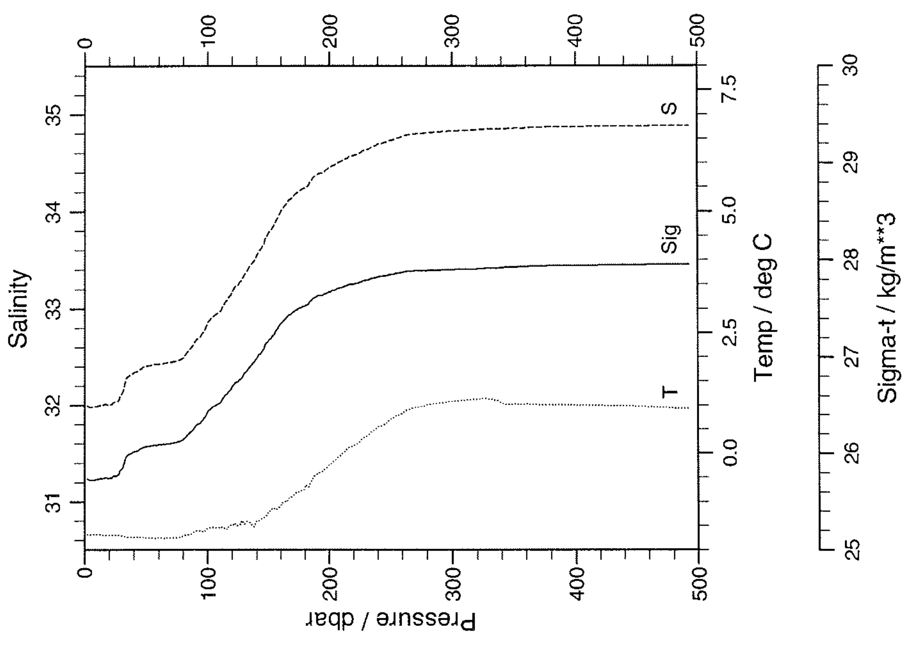

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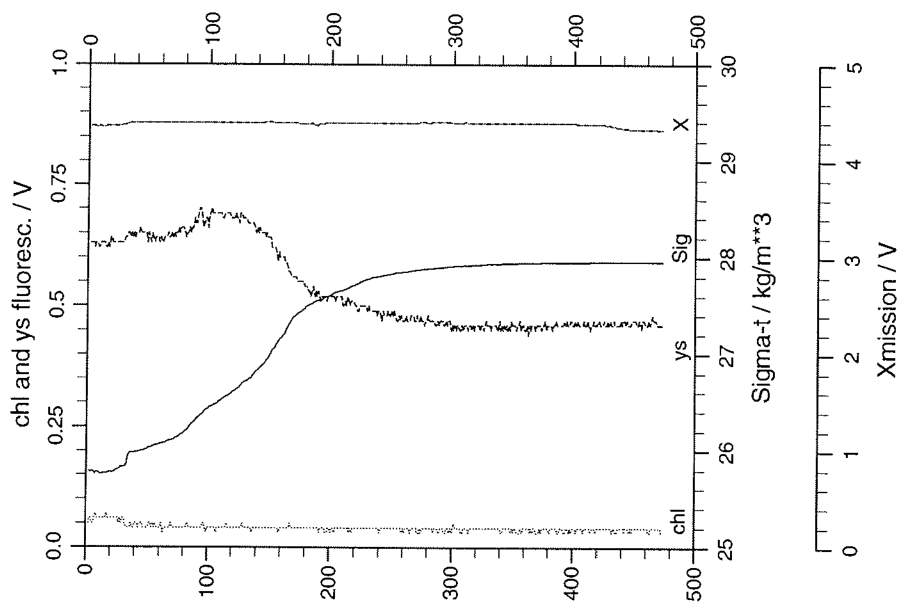
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Sigma-t / kg/m**3
Xmission / V
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ys
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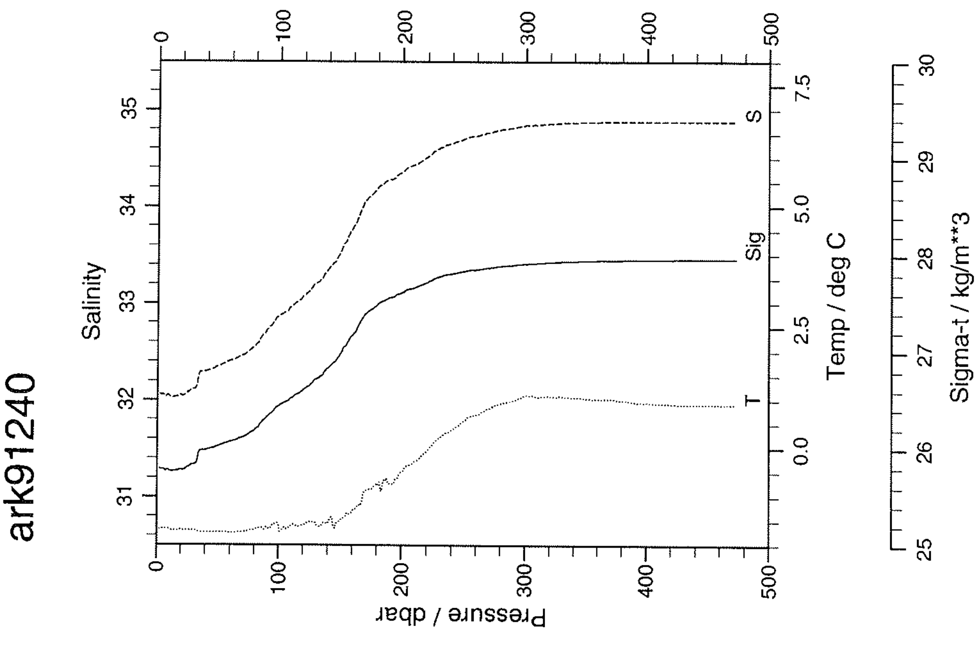
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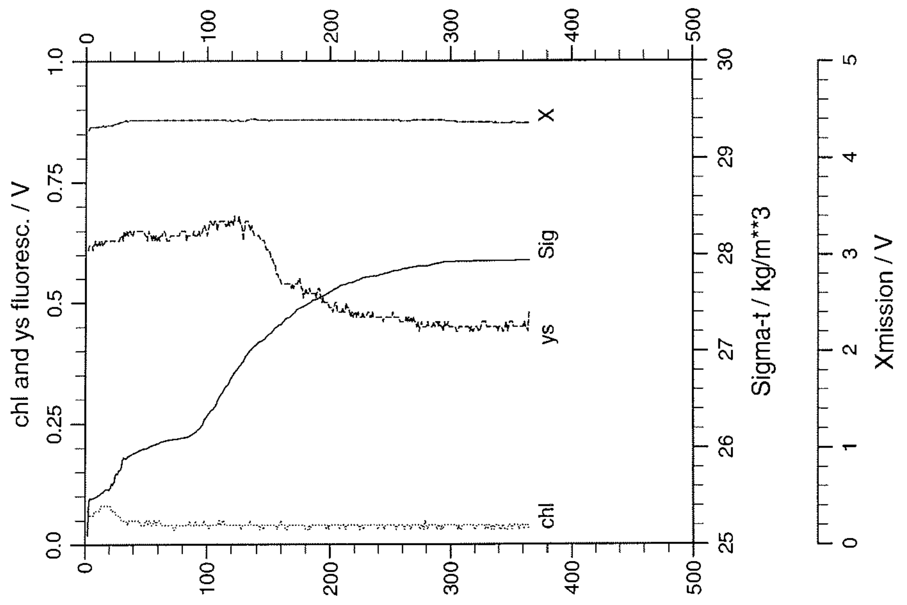

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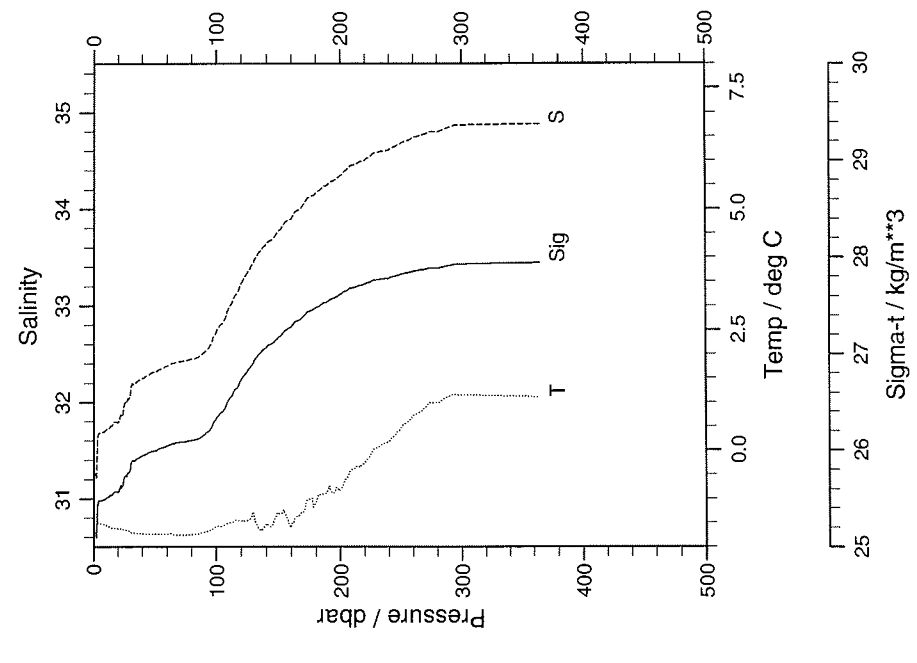

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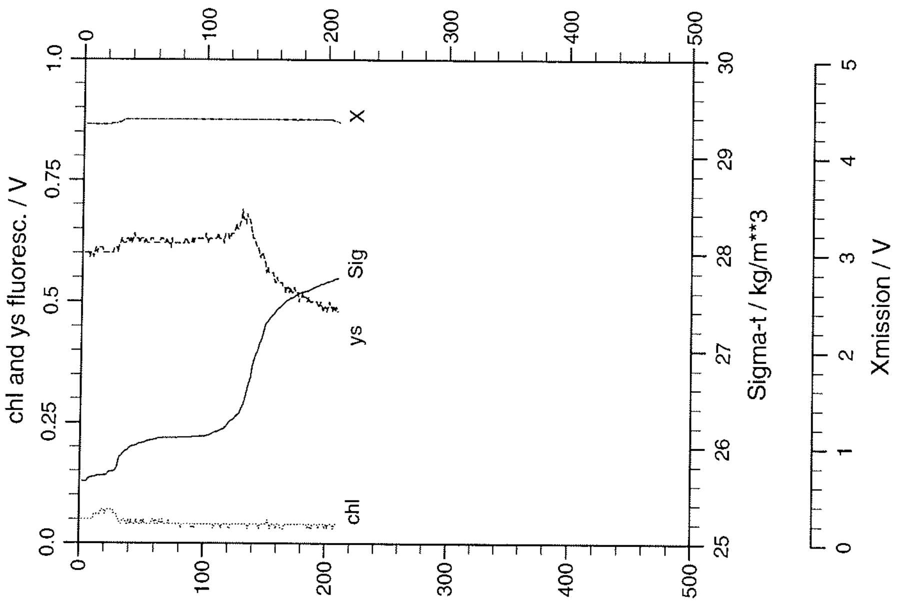

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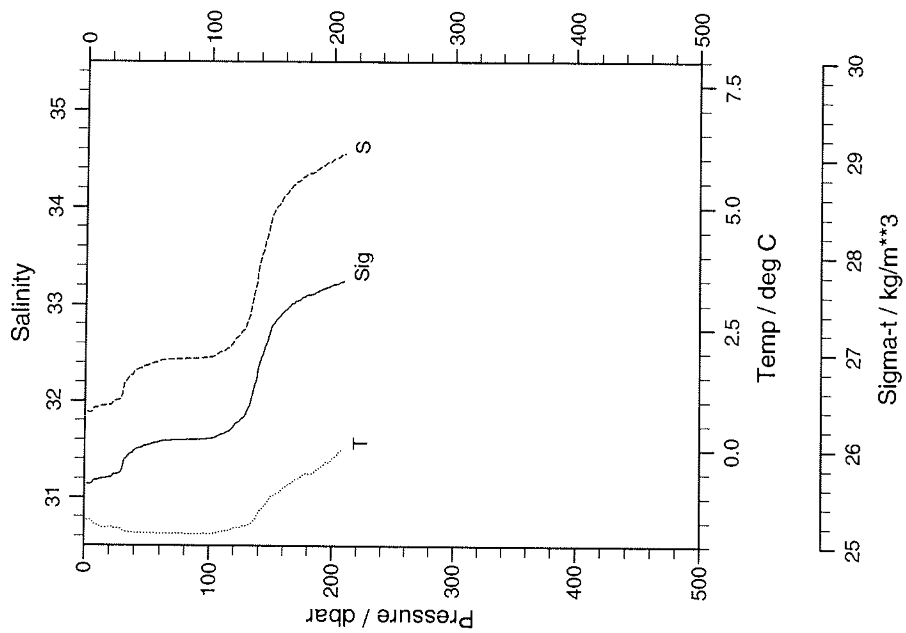

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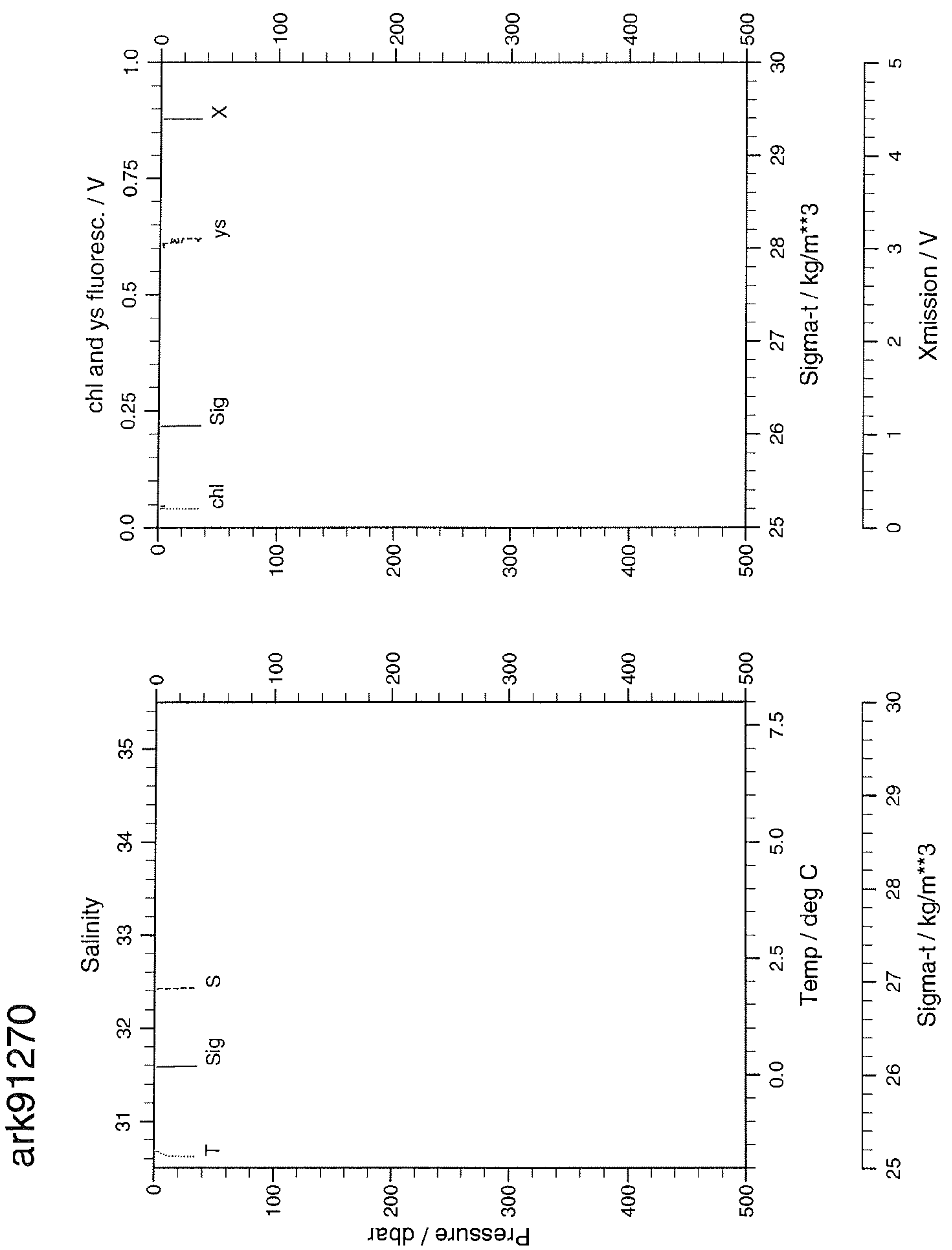
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ys
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chl
Sigma-t / kg/m**3
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Salinity
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Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
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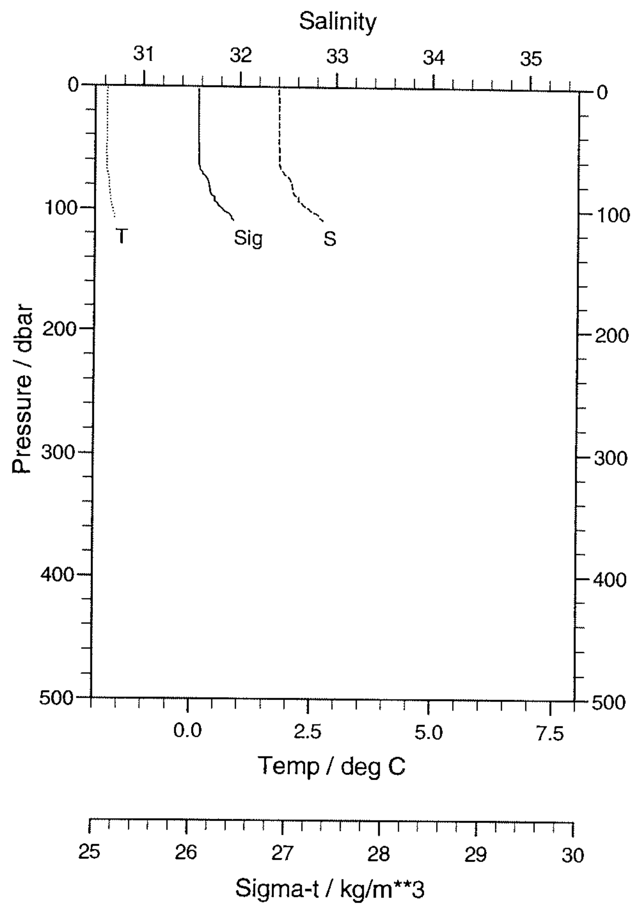

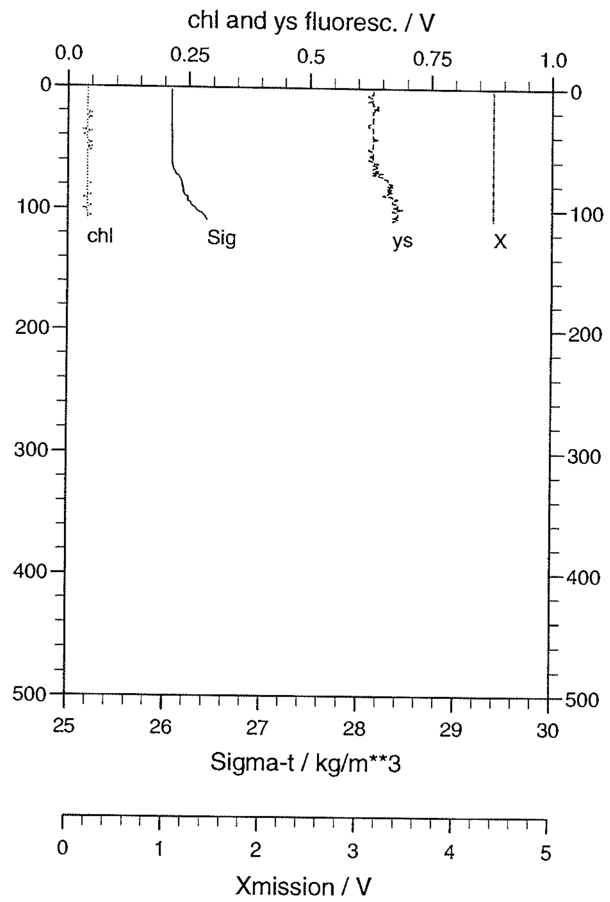

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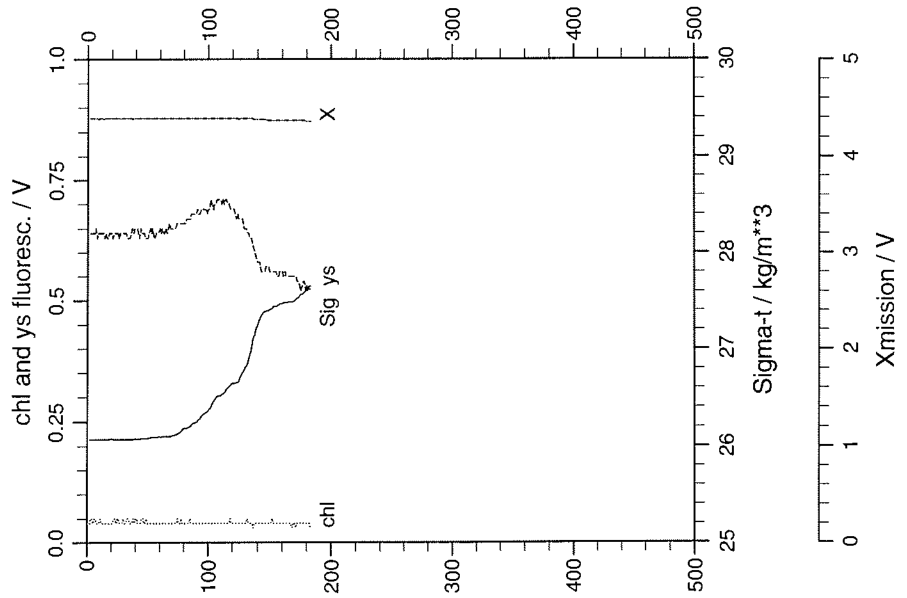

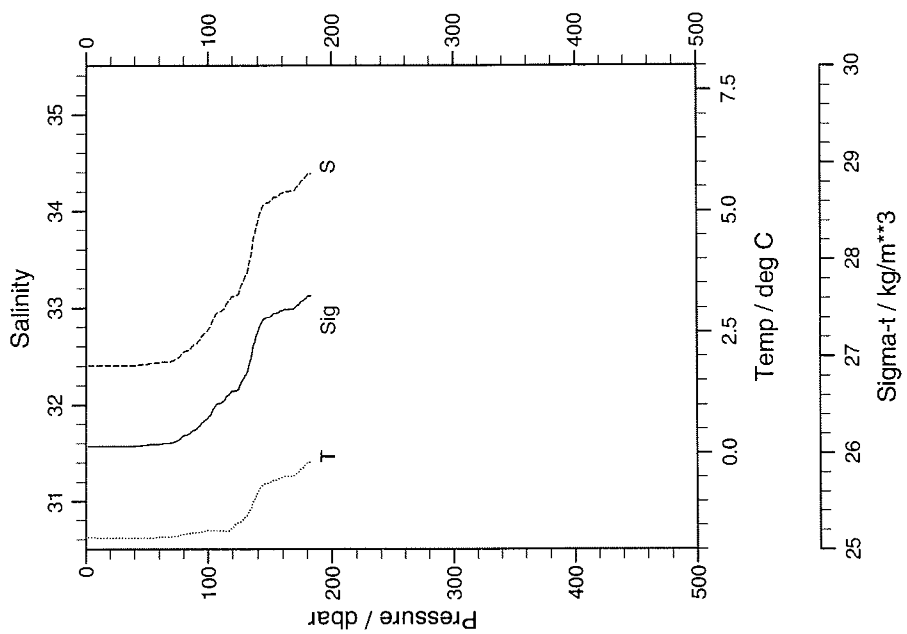

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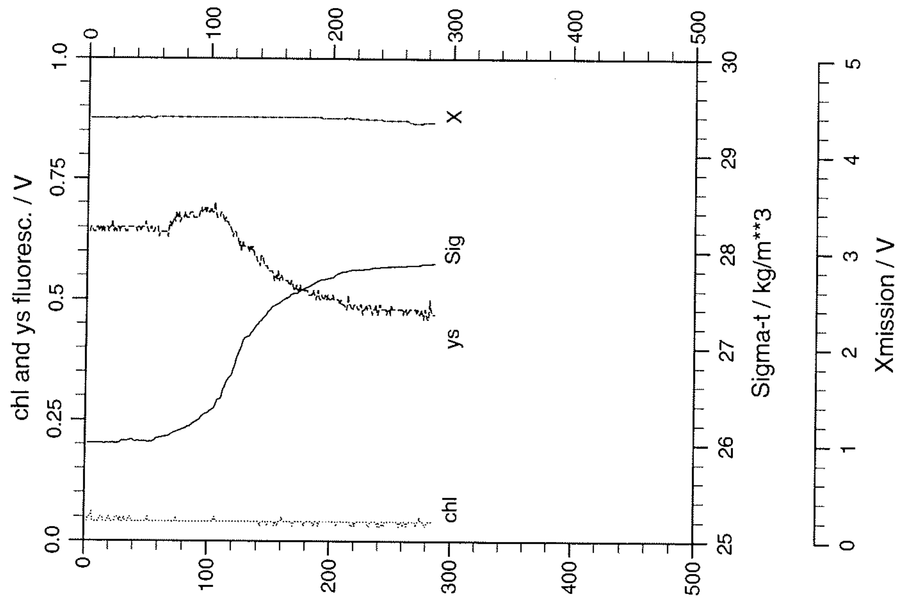

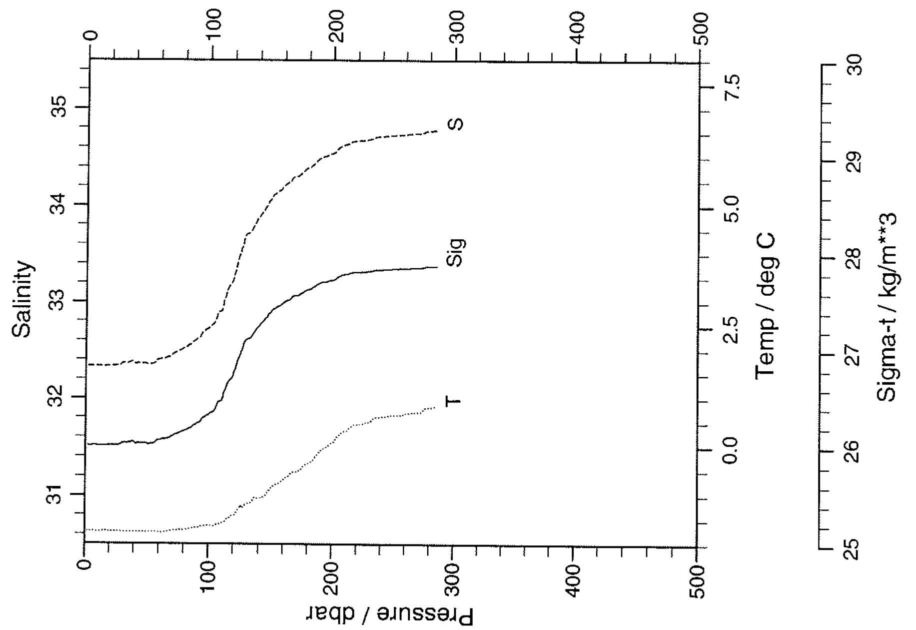

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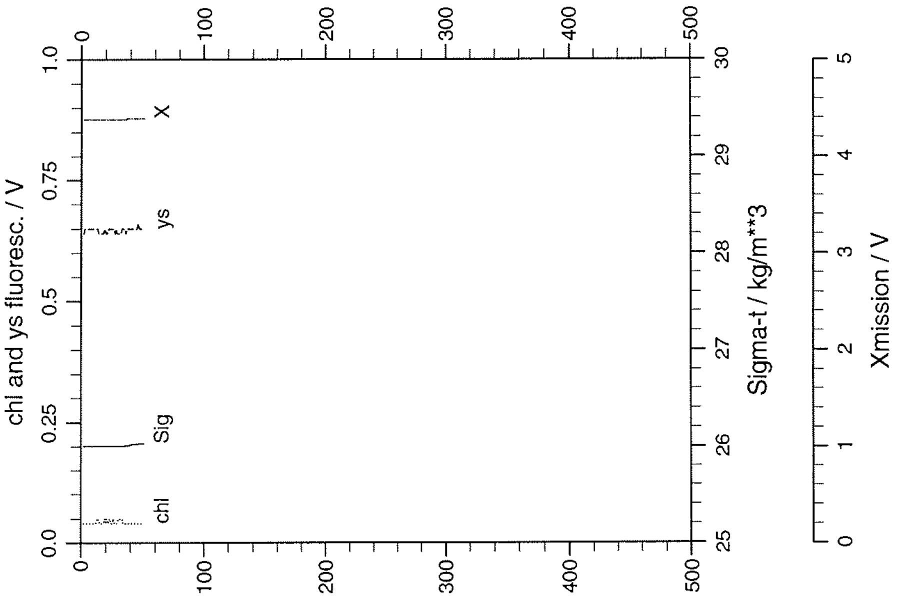

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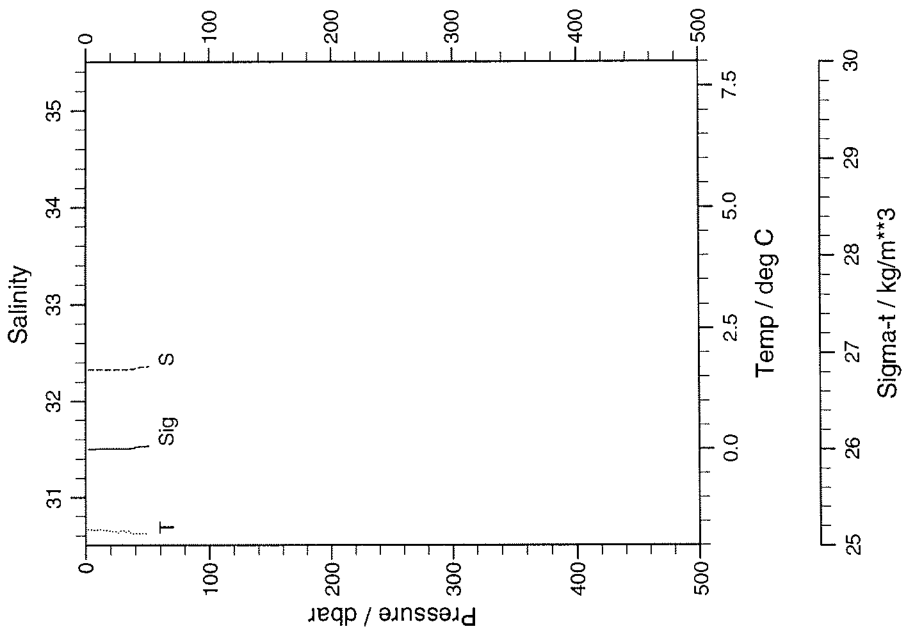

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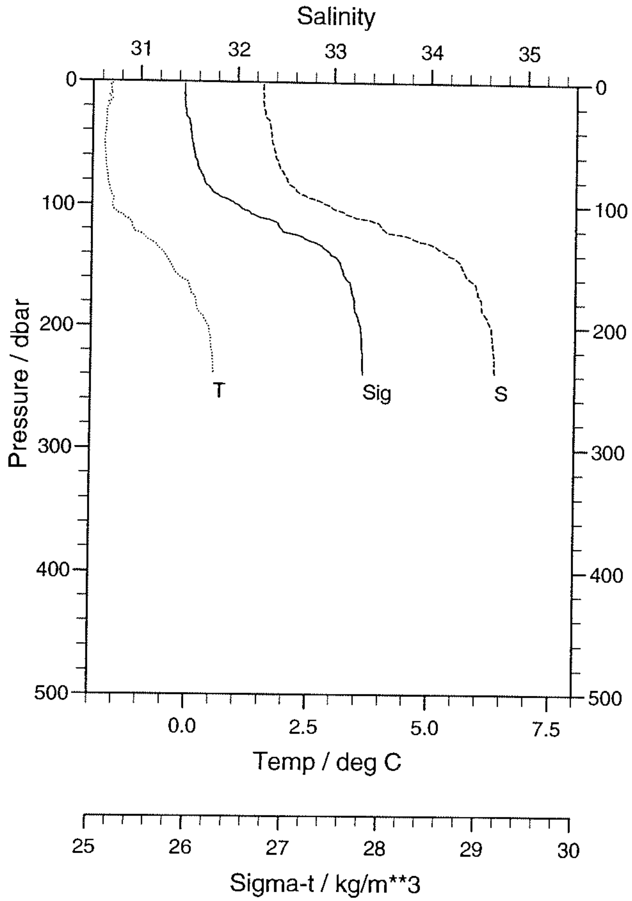

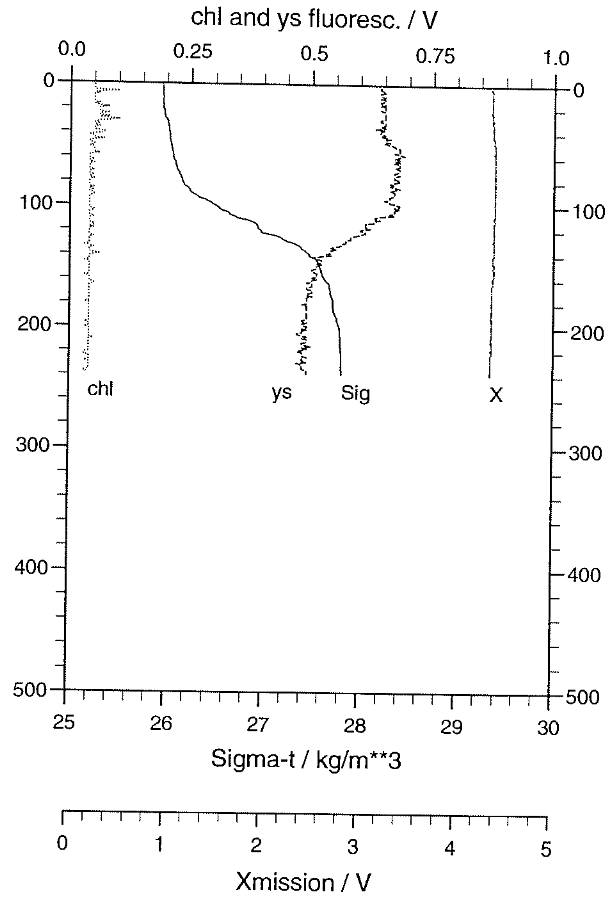

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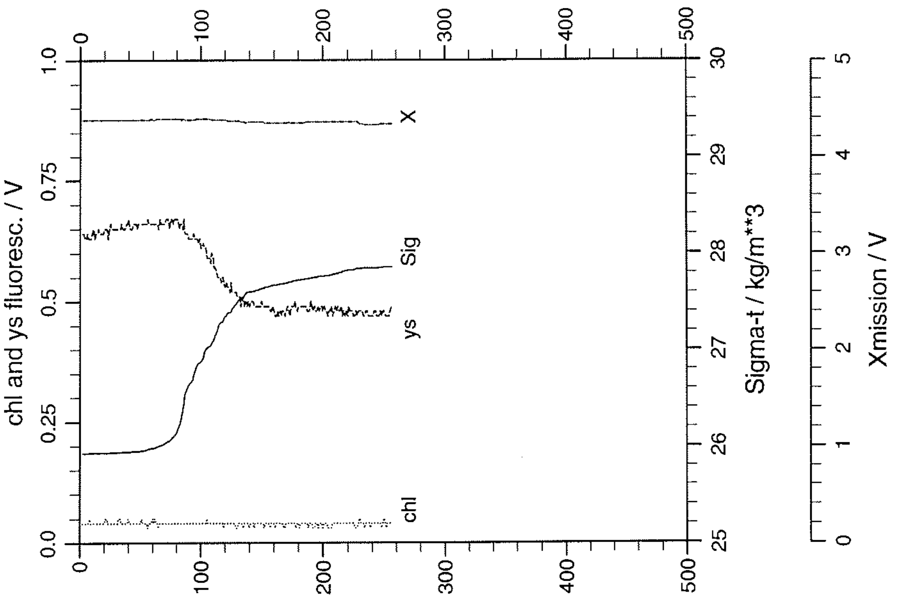

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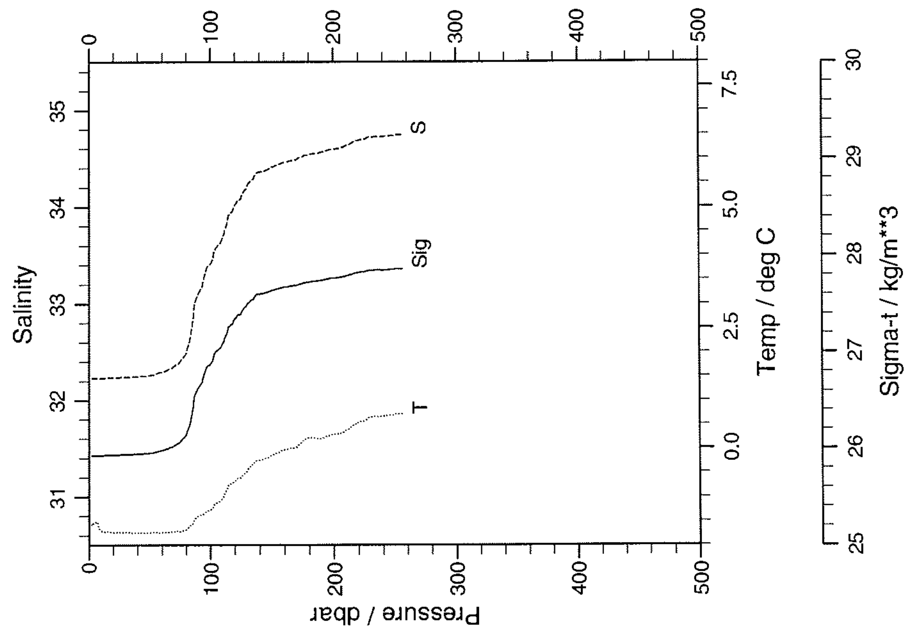

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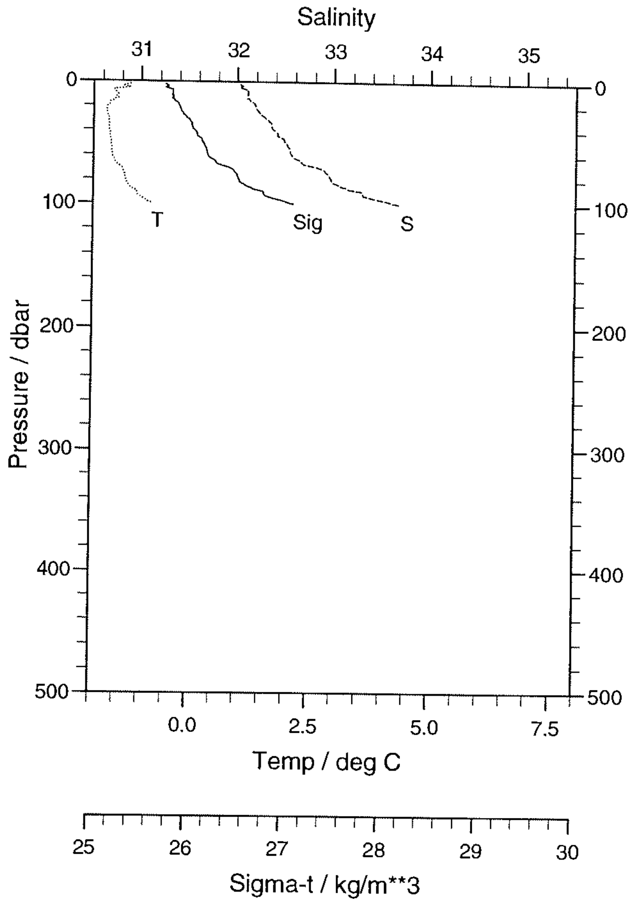

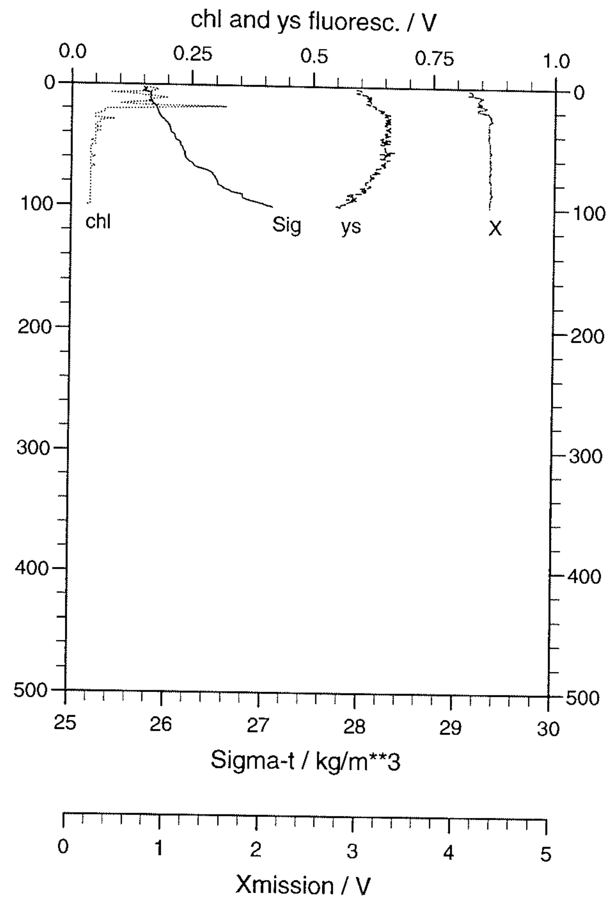

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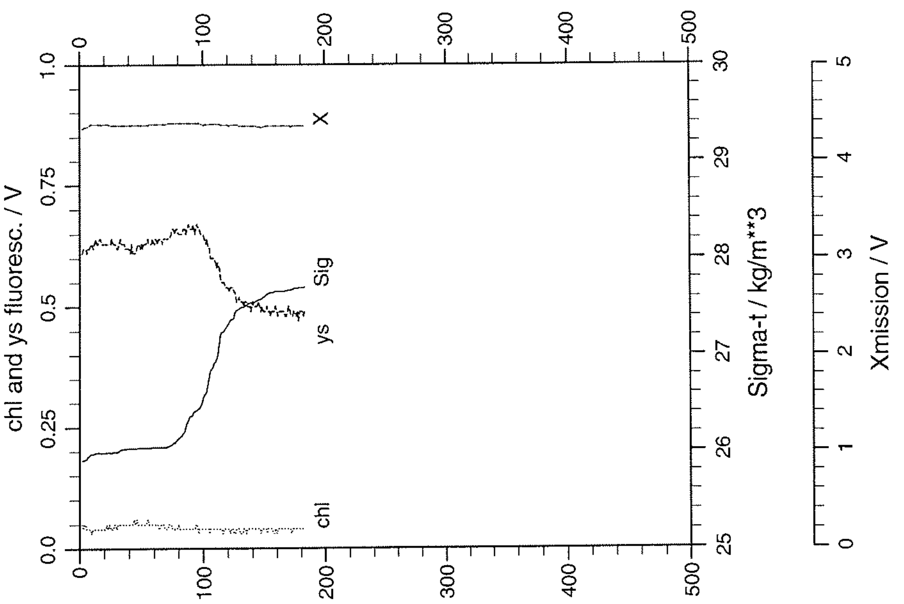

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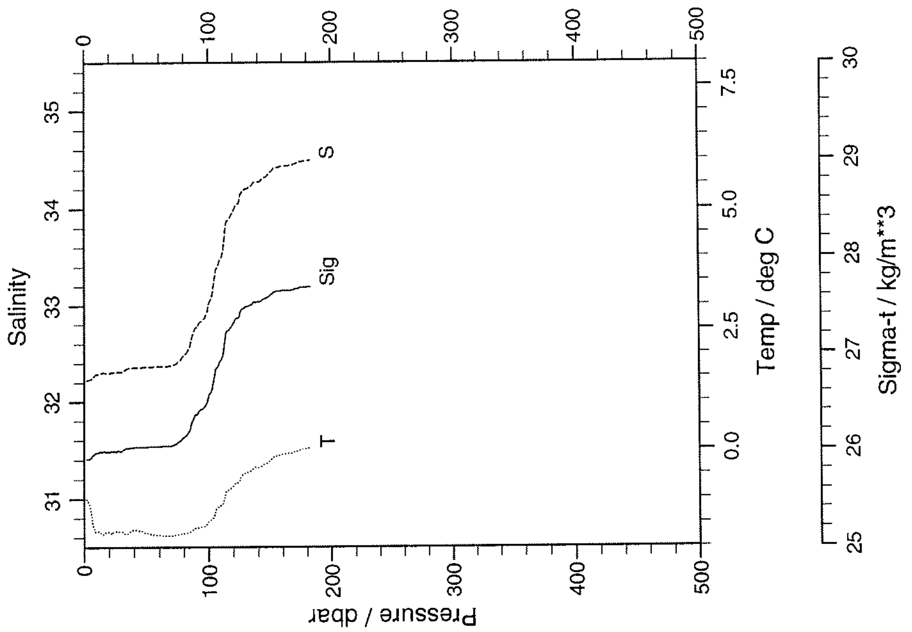

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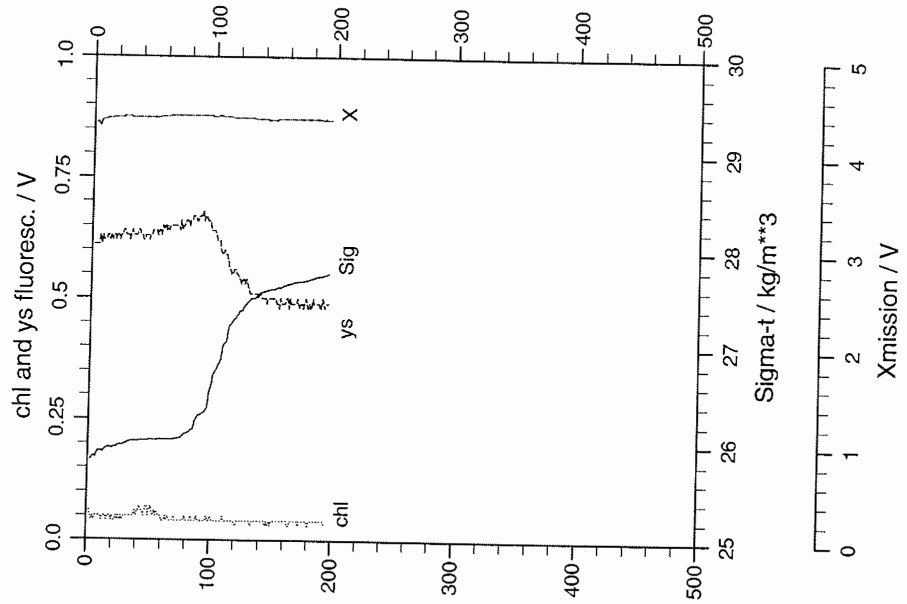

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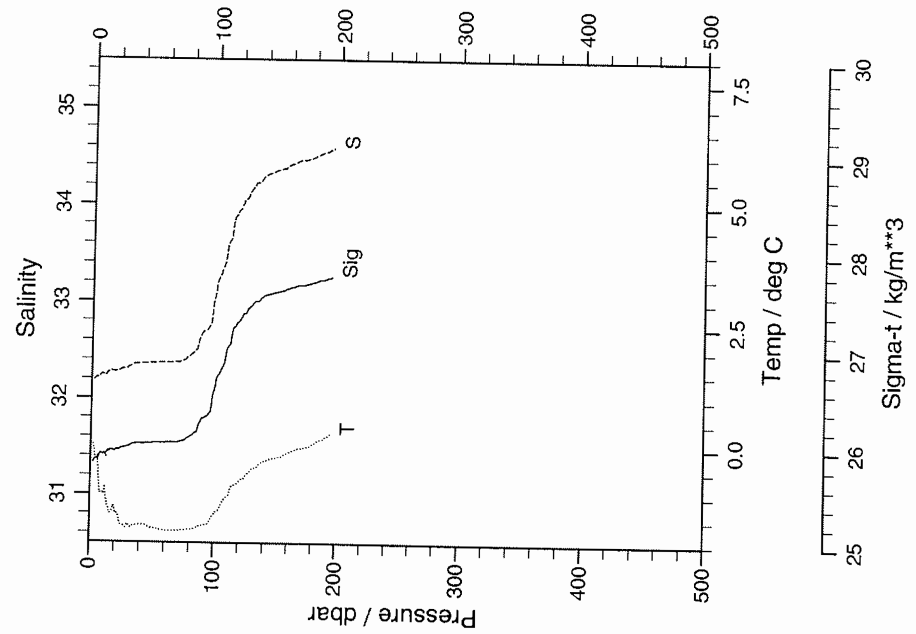

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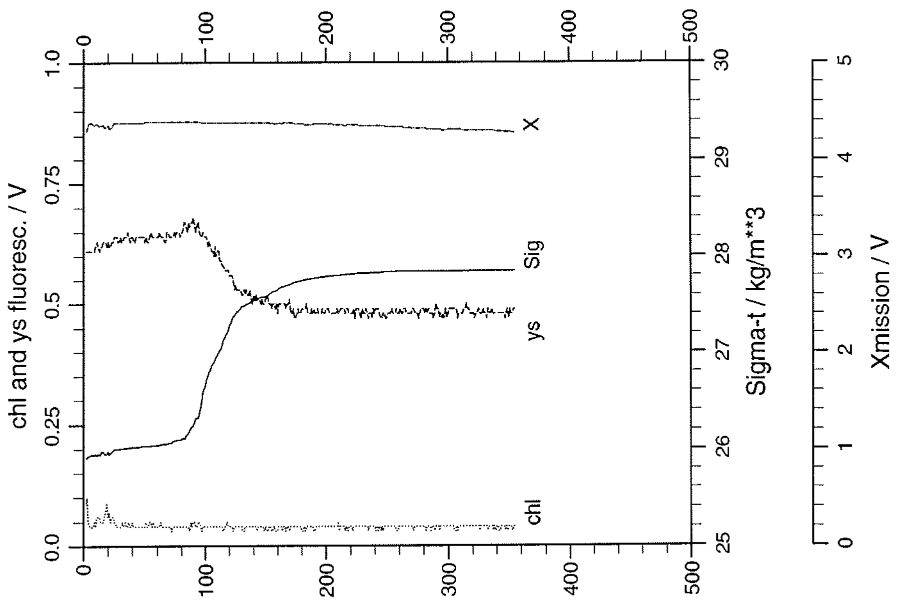

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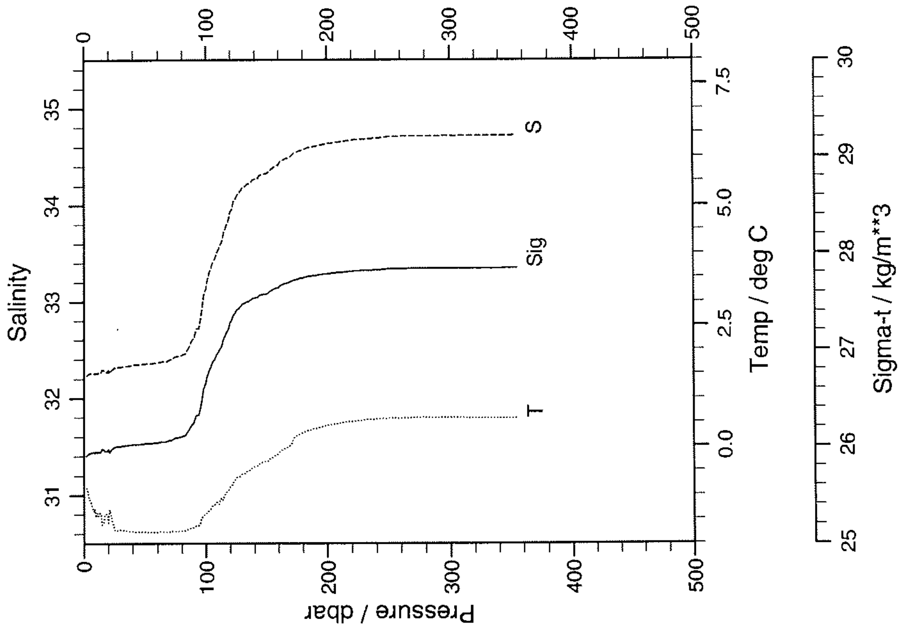

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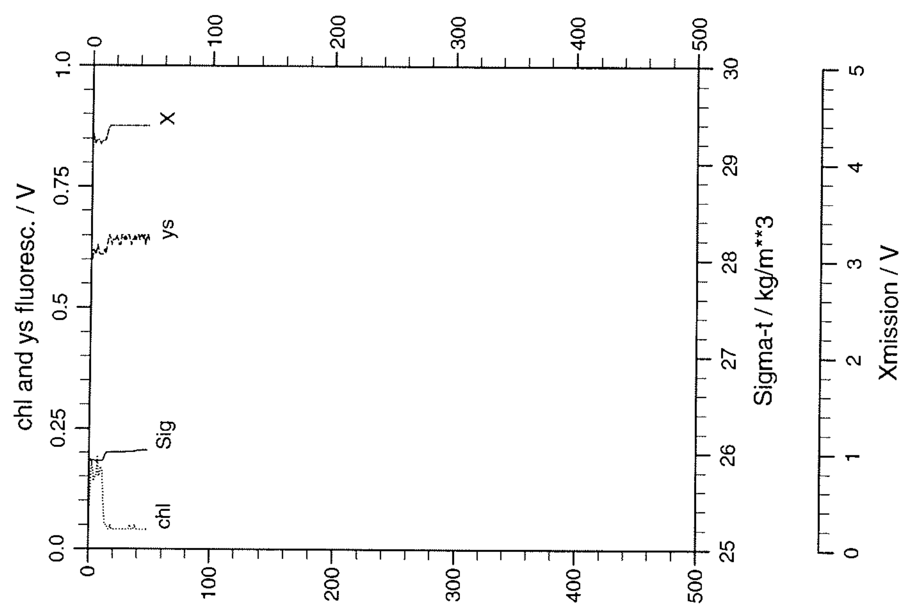

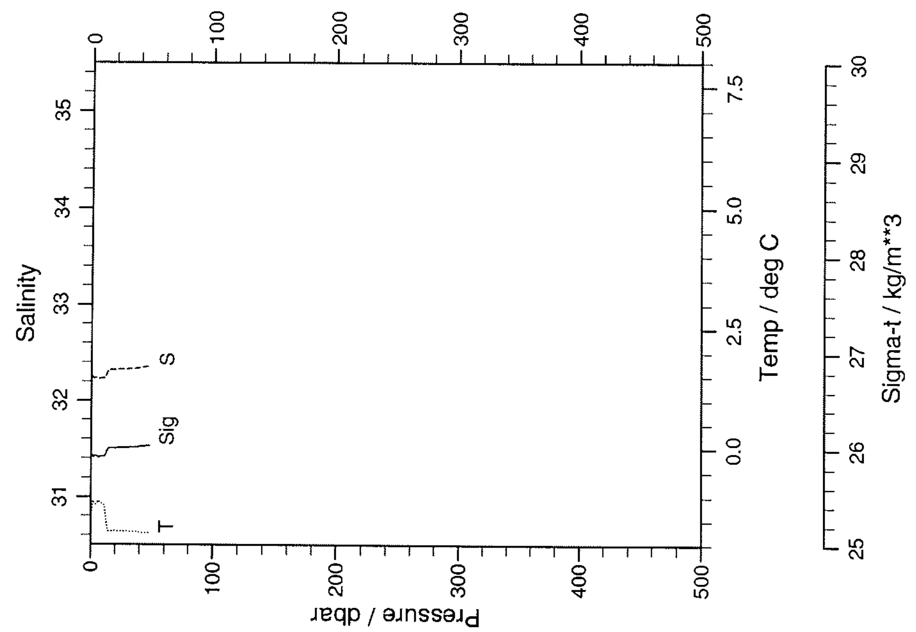

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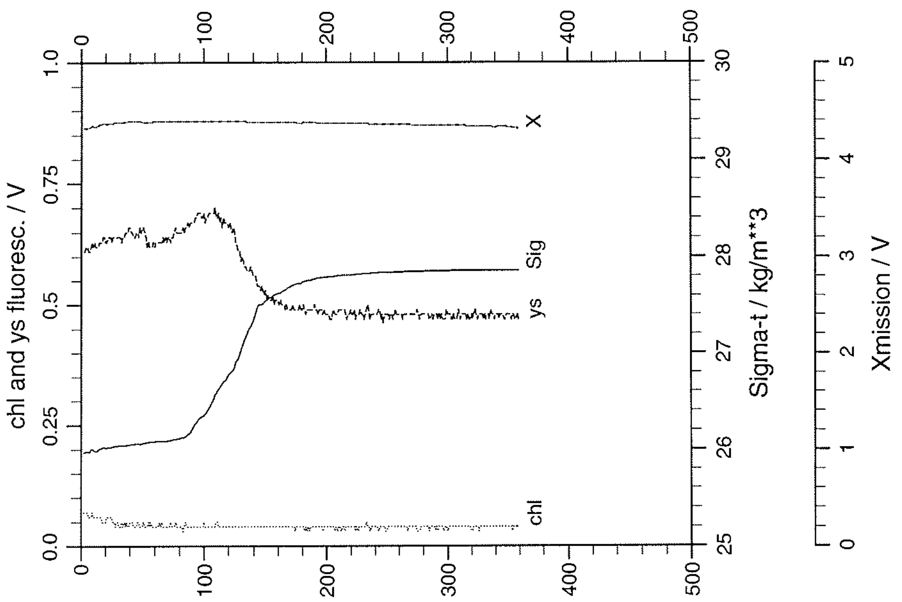

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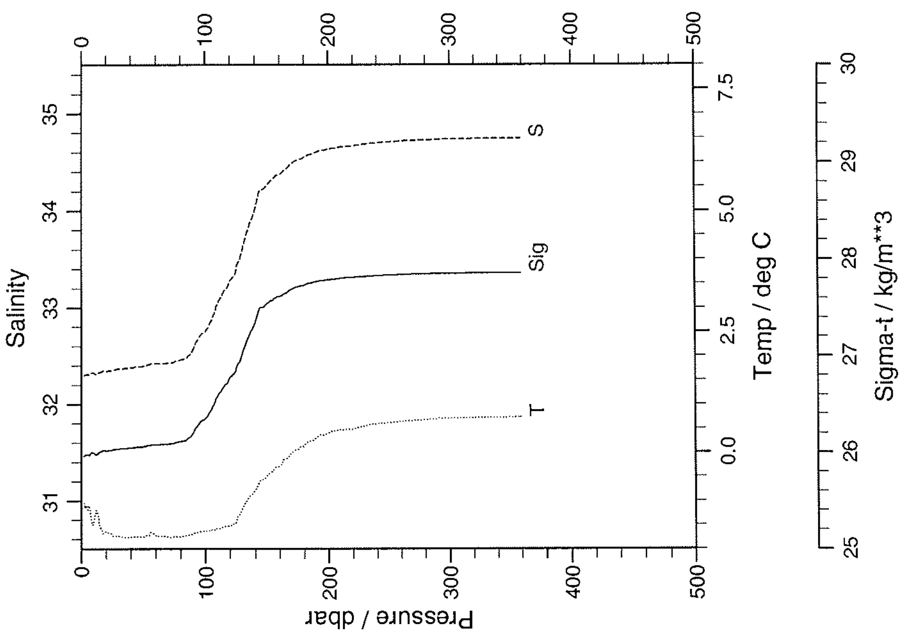

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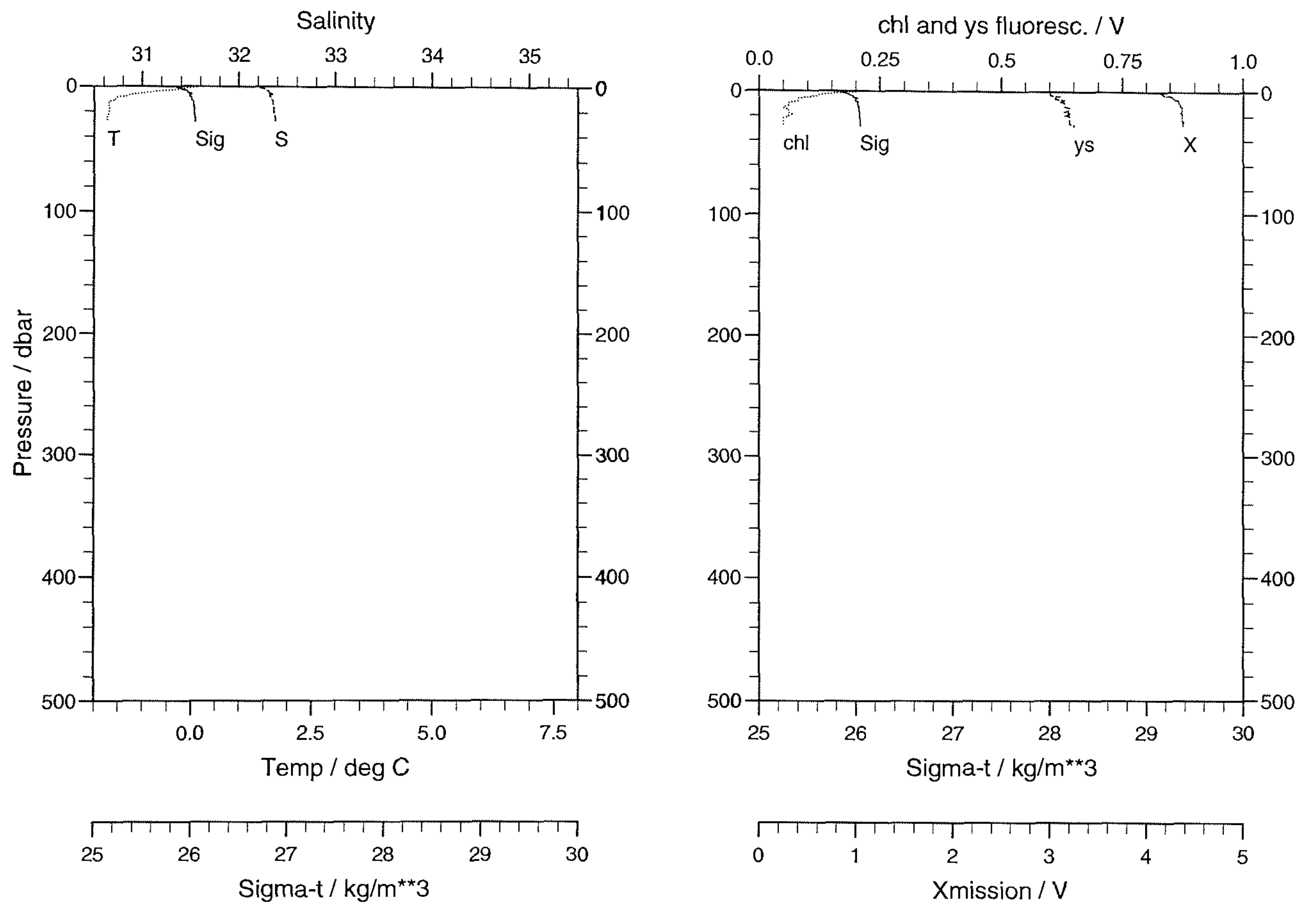

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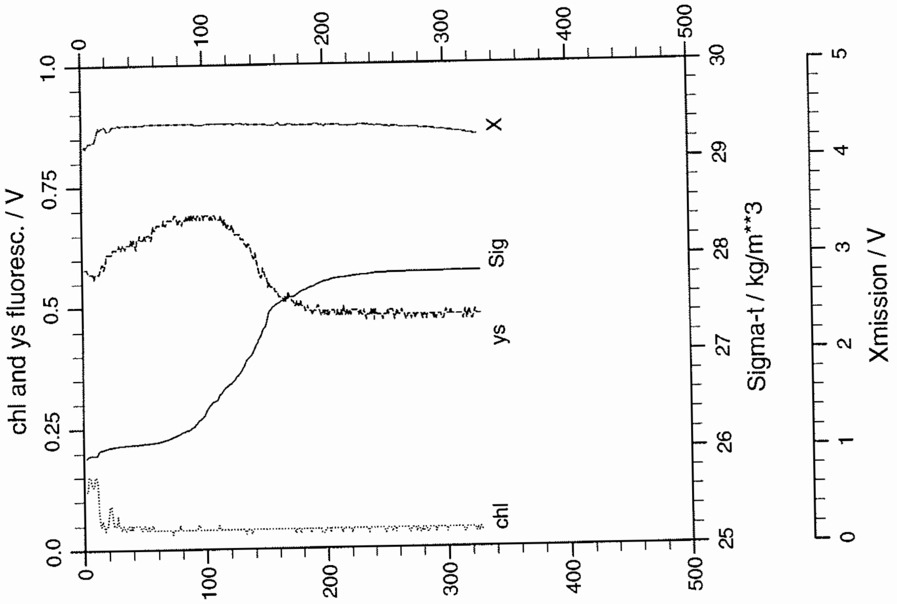
chl and ys fluoresc. / V
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Sigma-t / kg/m**3
0
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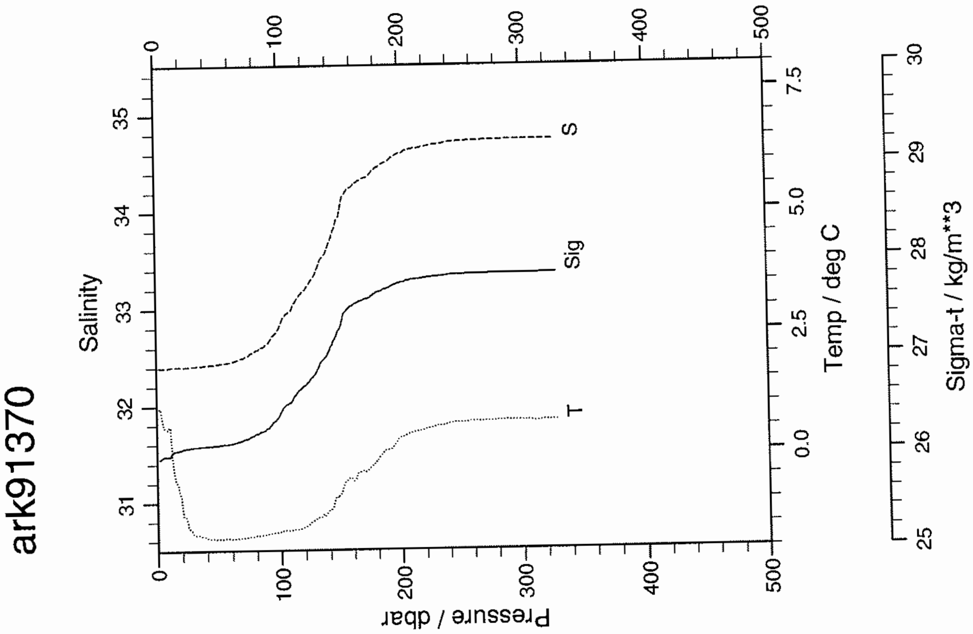
5
Xmission / V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34
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300
400
500
S
Sig
T
0.0
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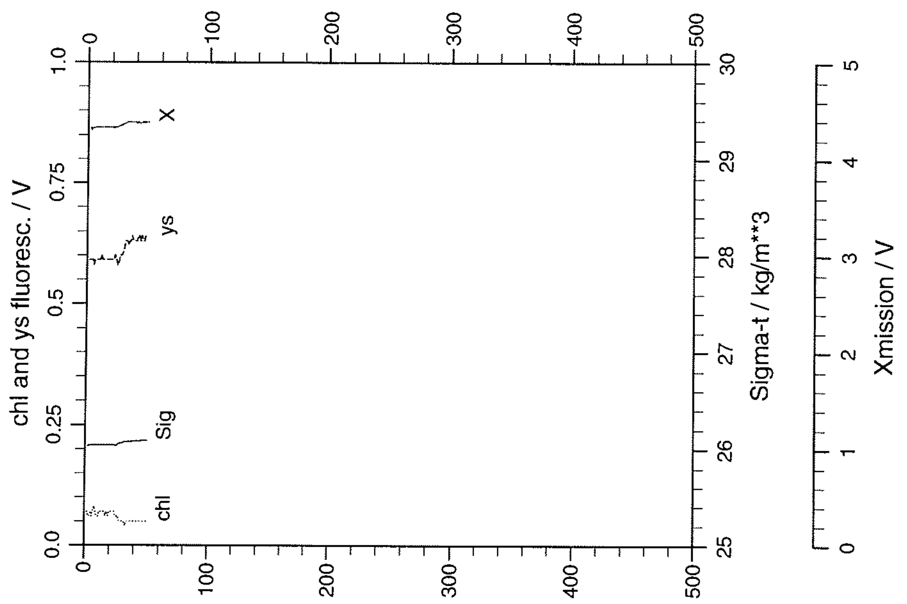
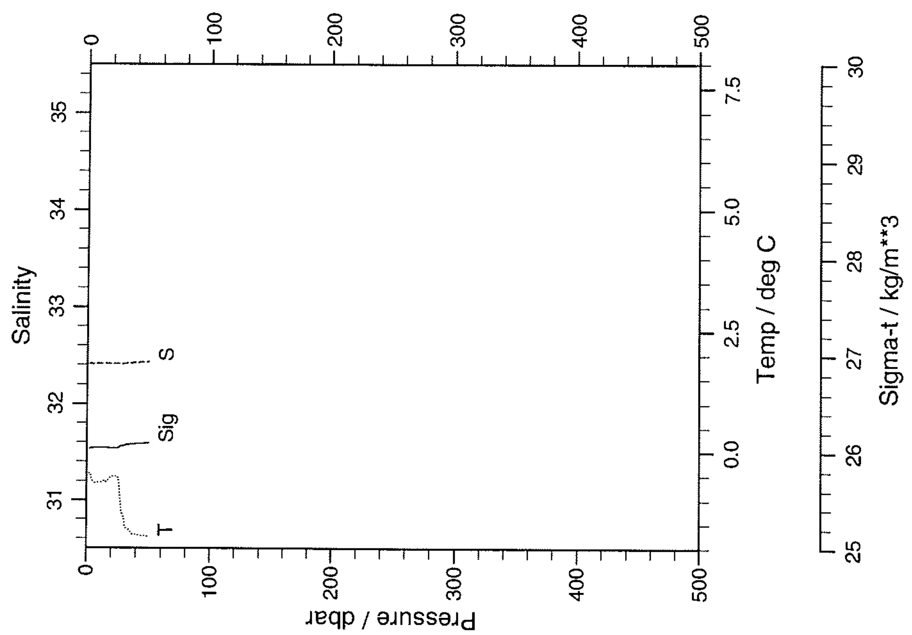
5.0
7.5
Temp / deg C
25
26
27
28
29
30
Sigma-t / kg/m**3
Pressure / dbar

ark91371





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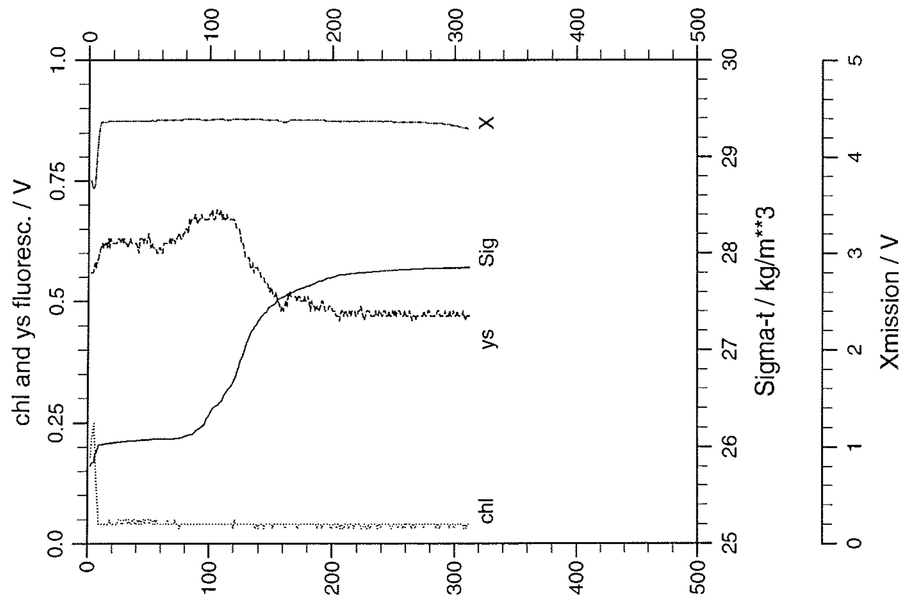

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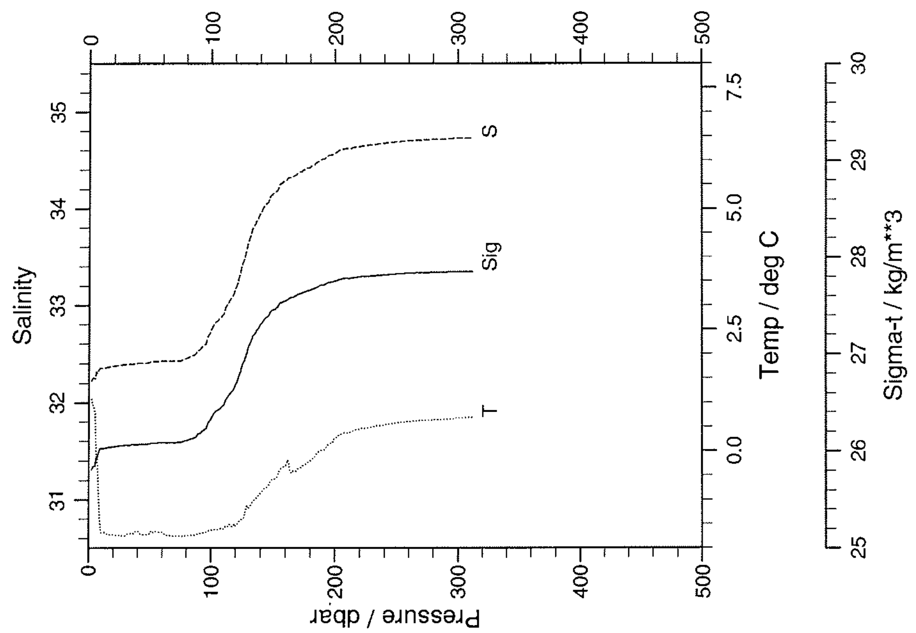

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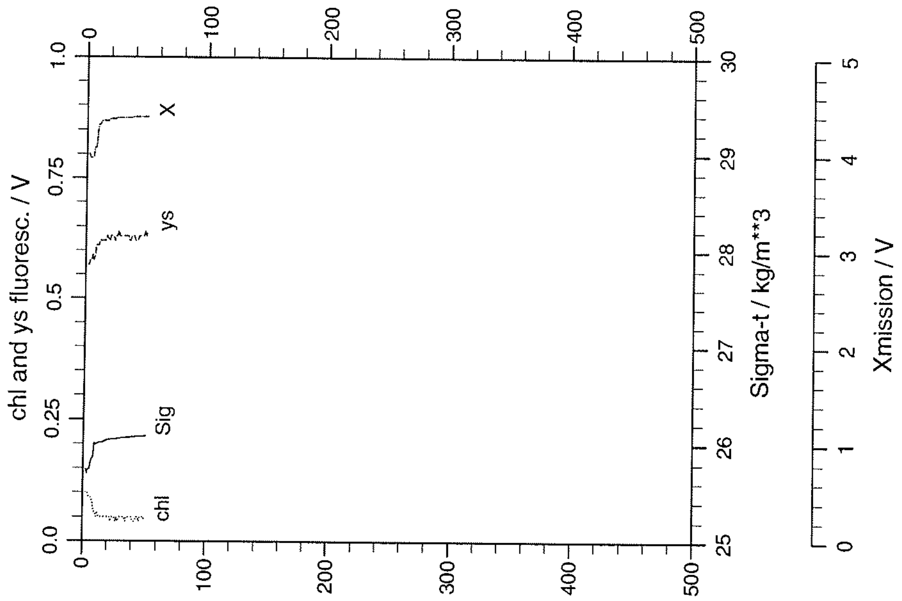

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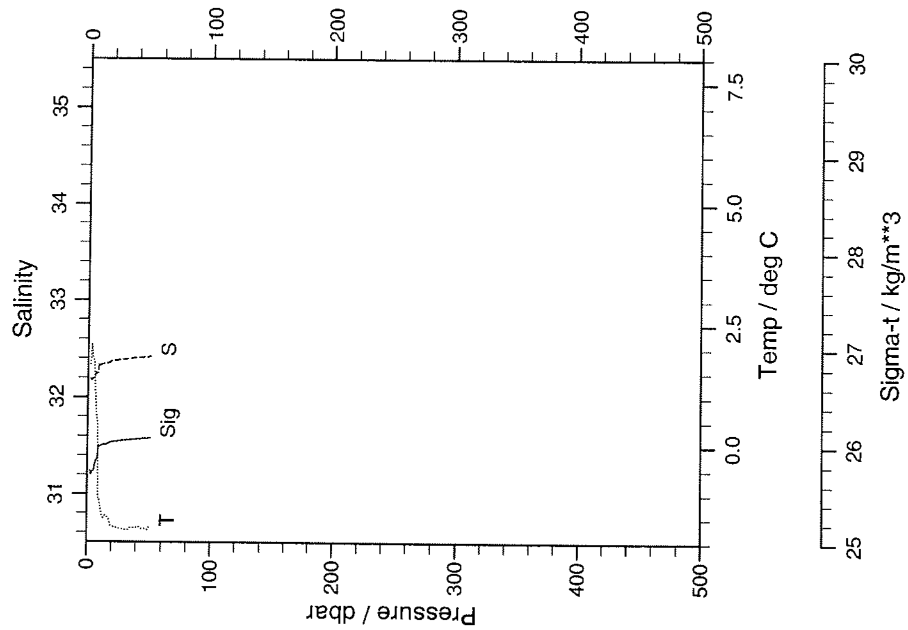

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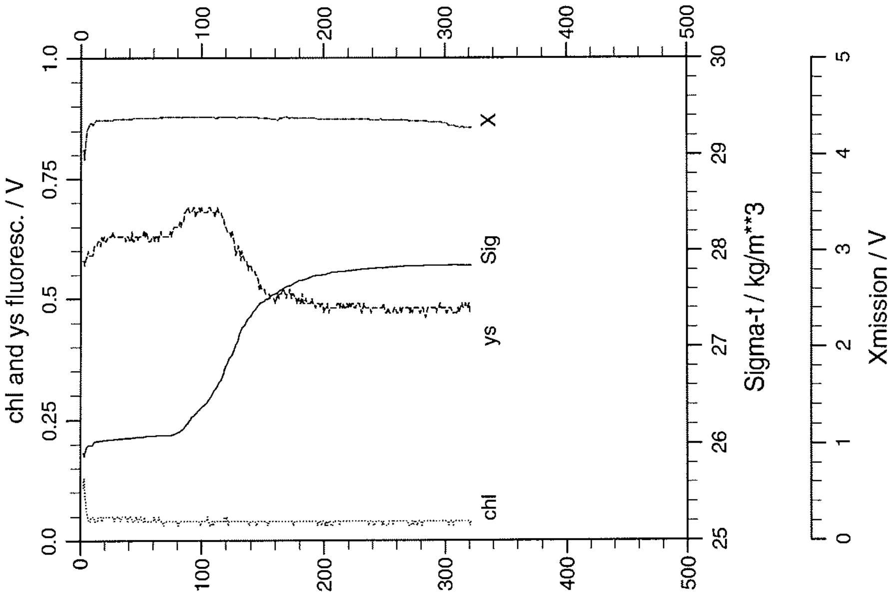

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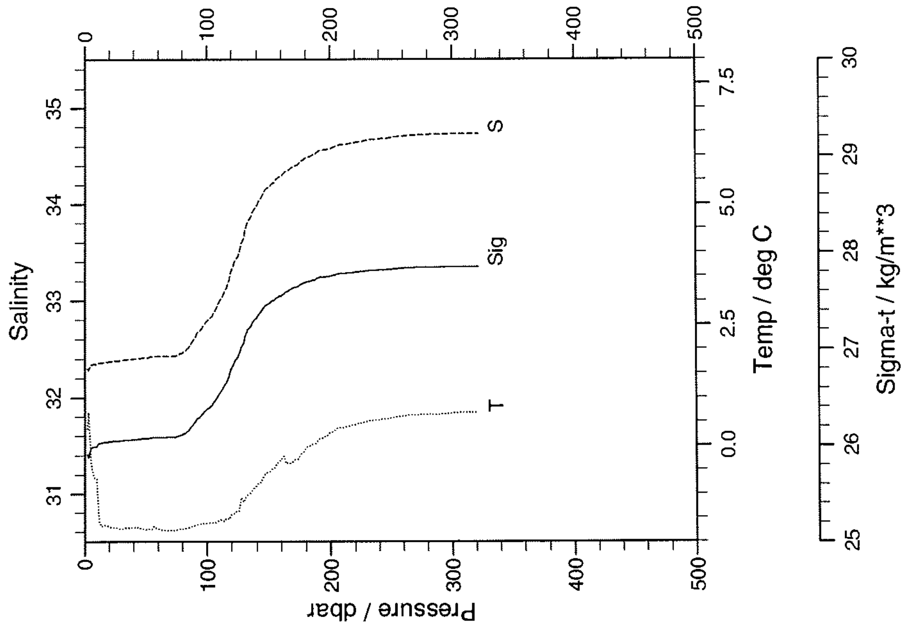

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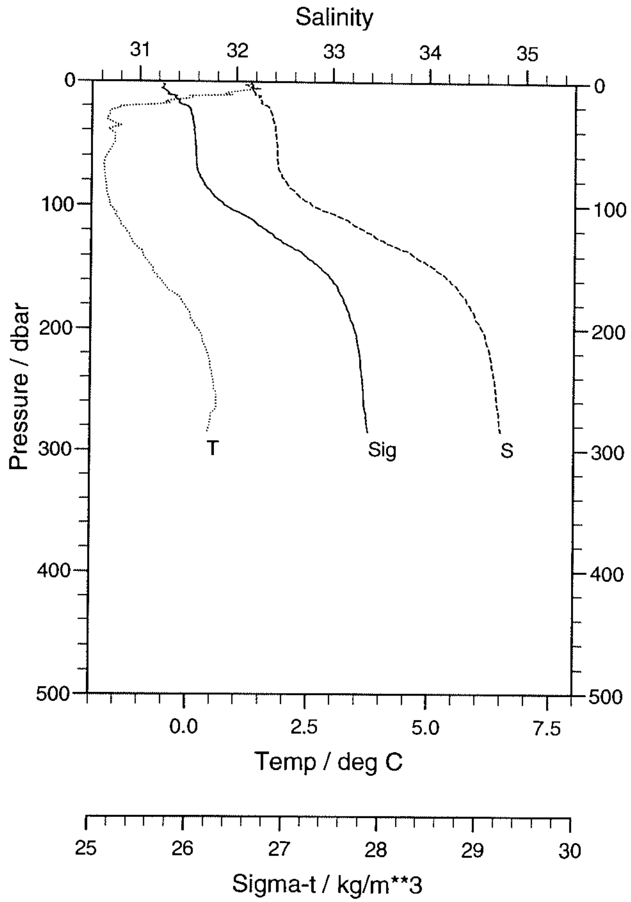

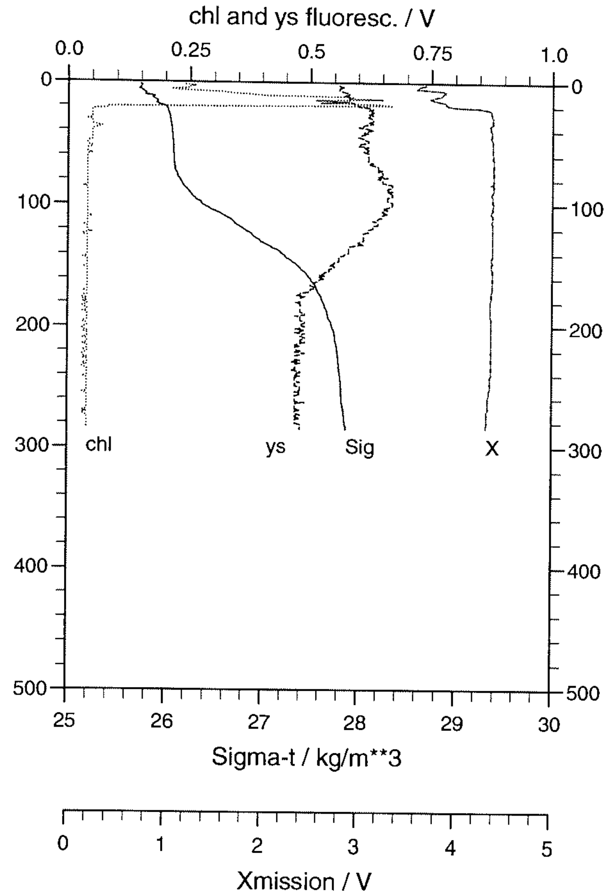

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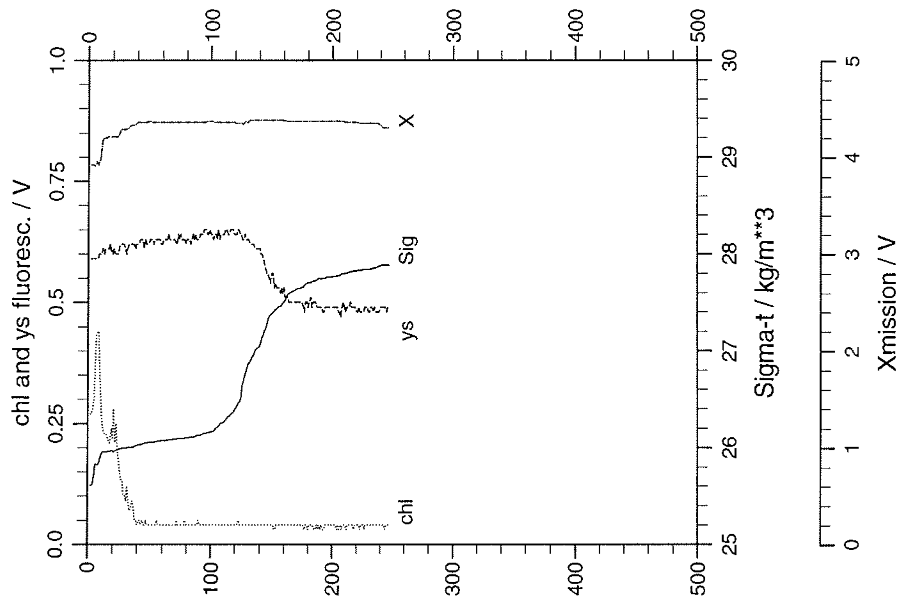

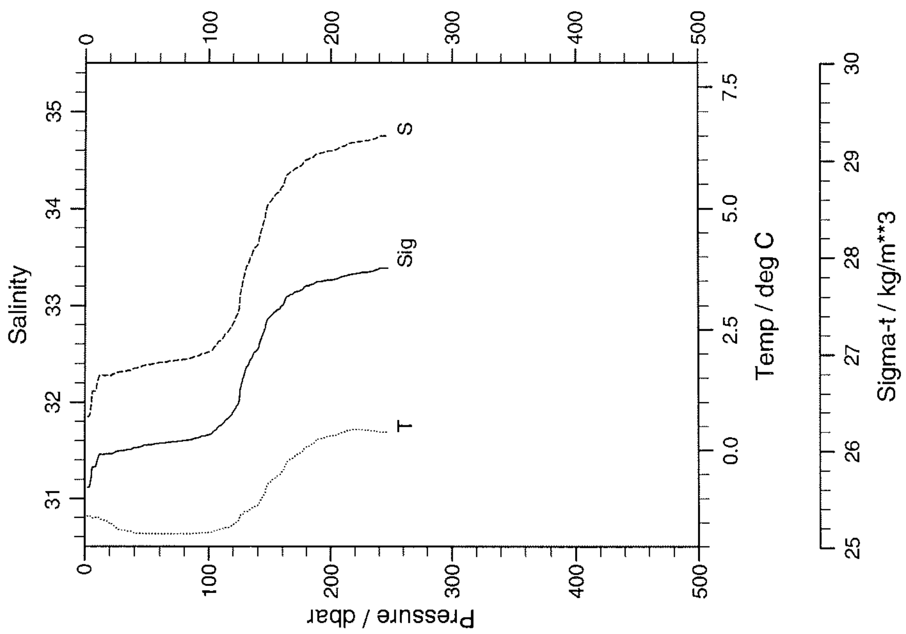

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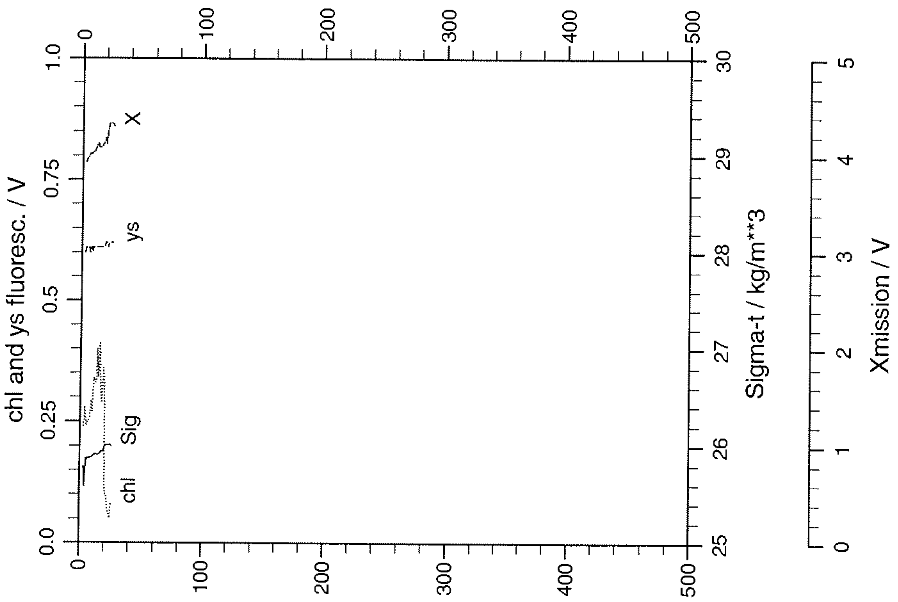

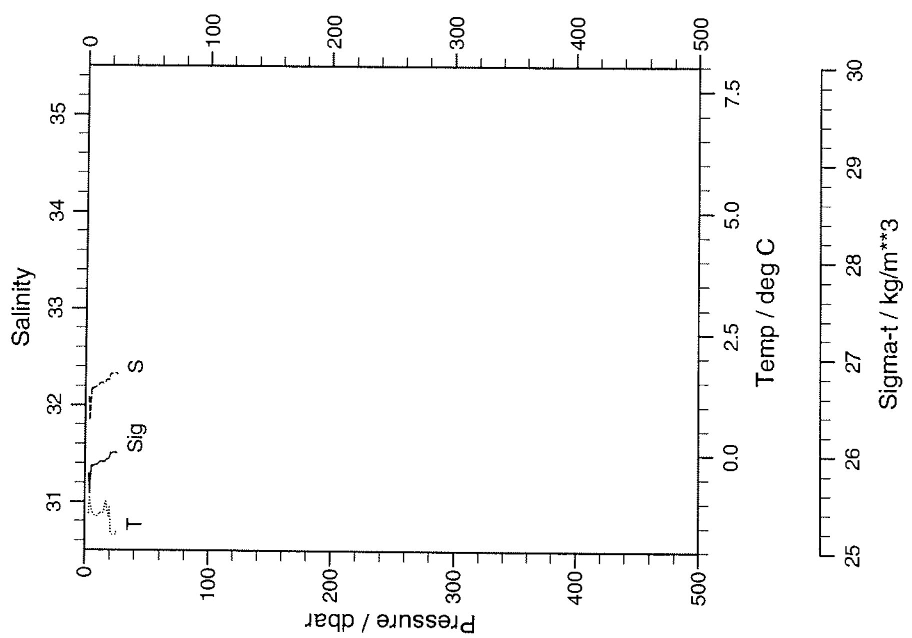

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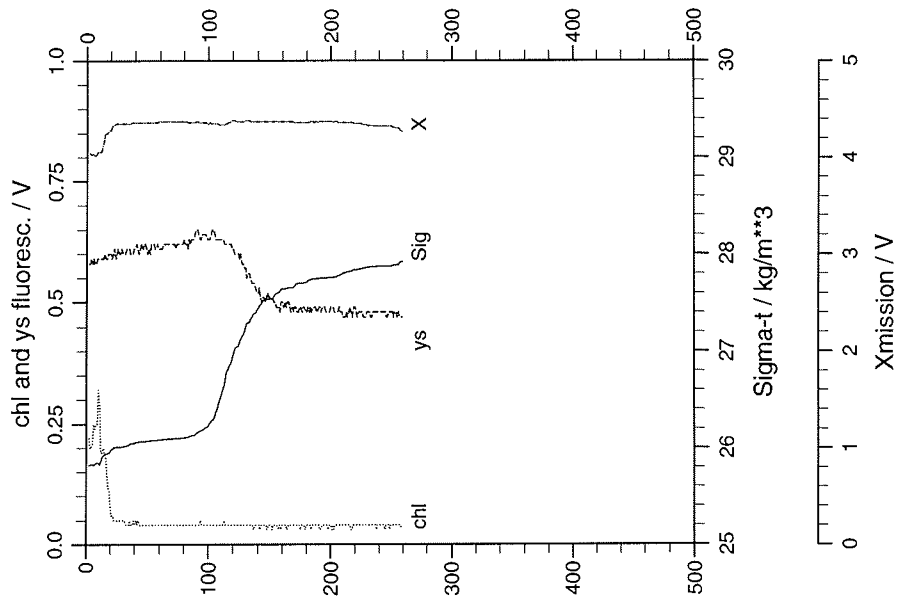
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Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
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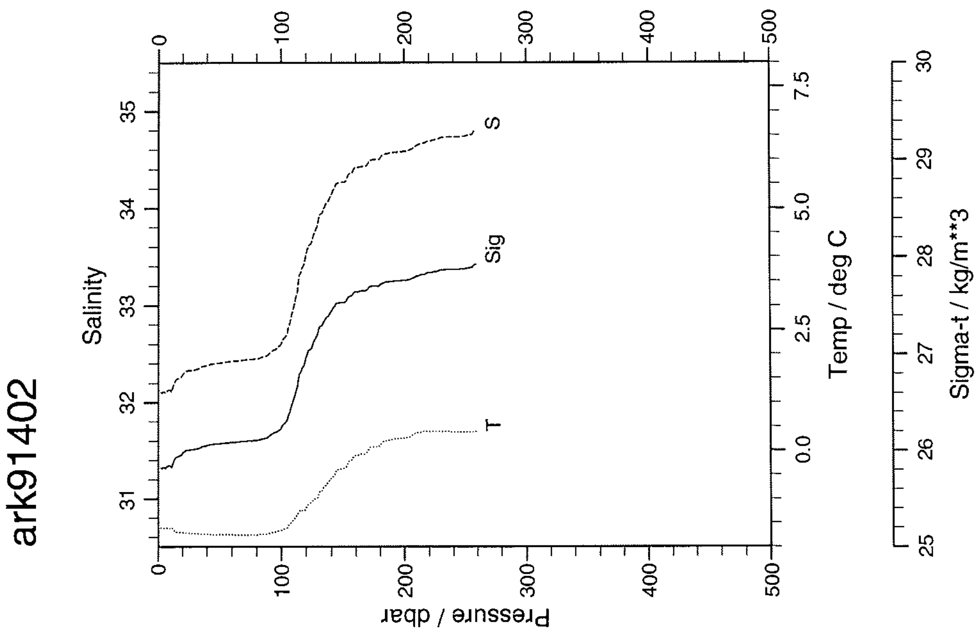
4
5


ark91402
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T
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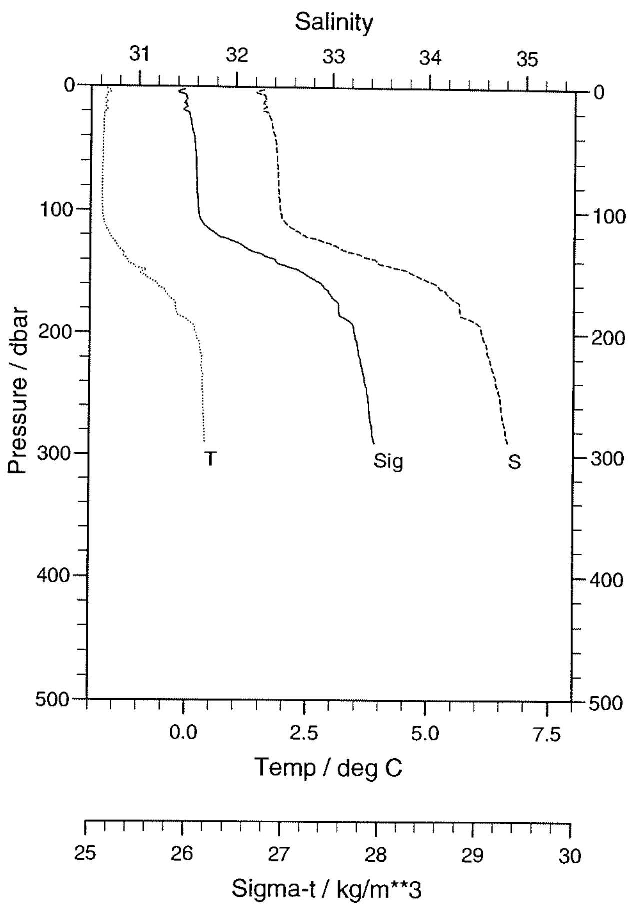
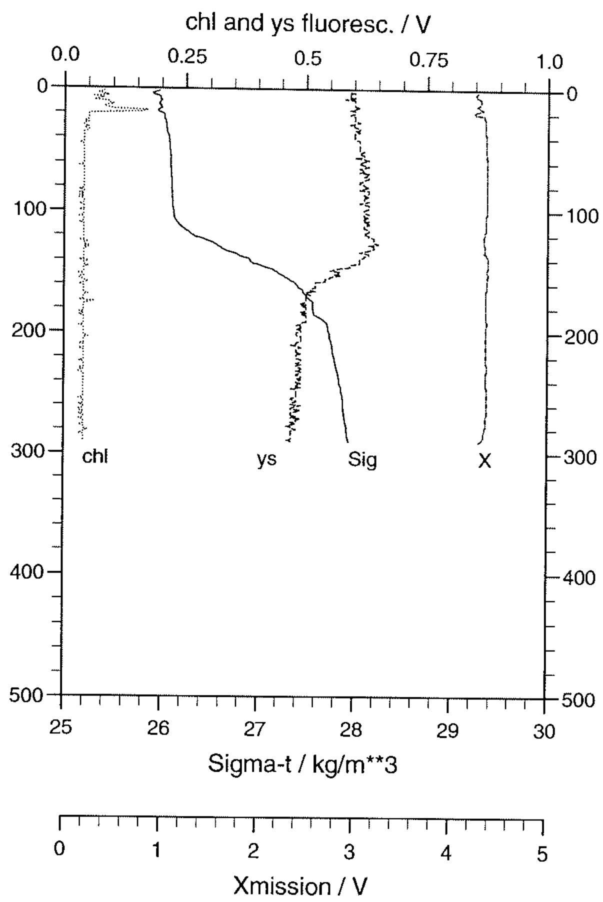
ark91410





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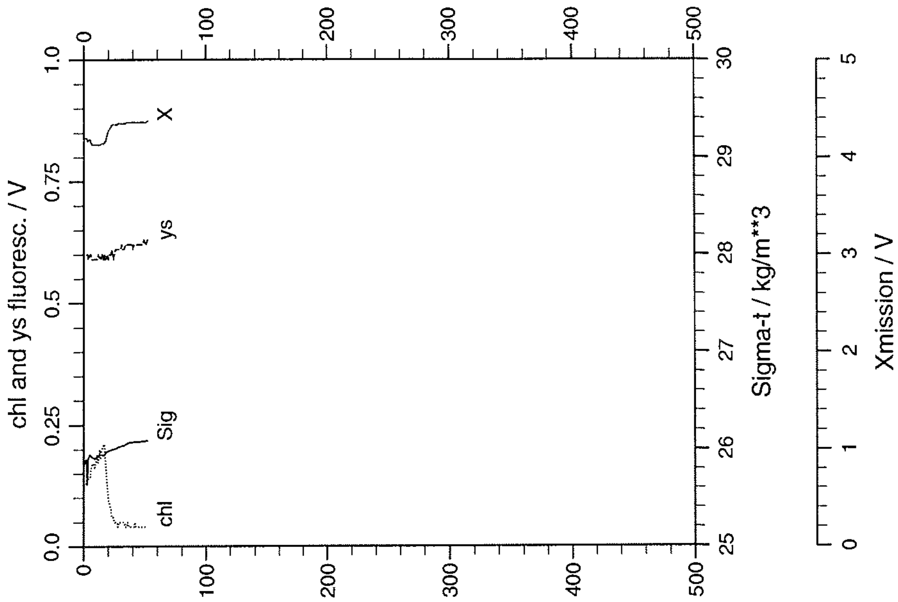

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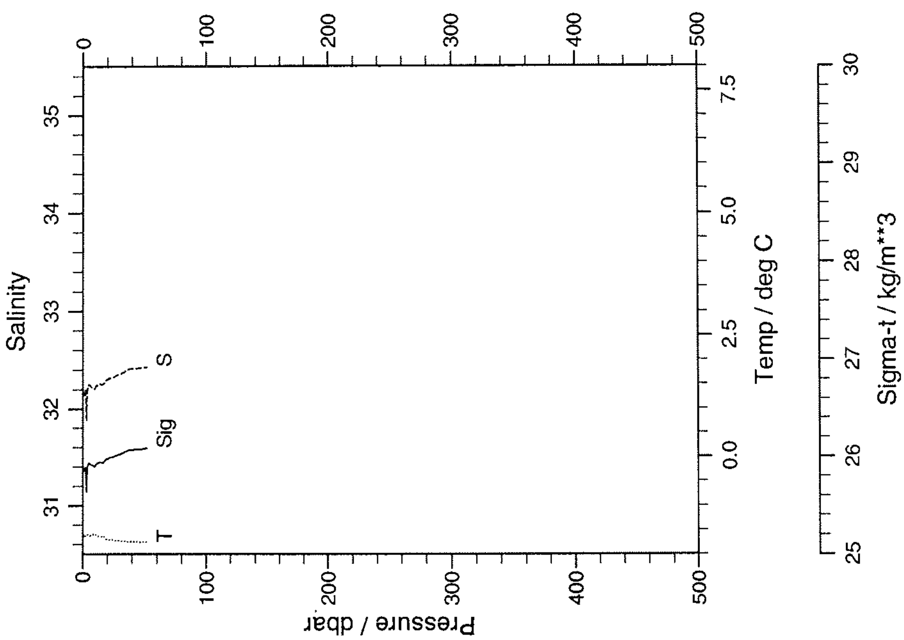

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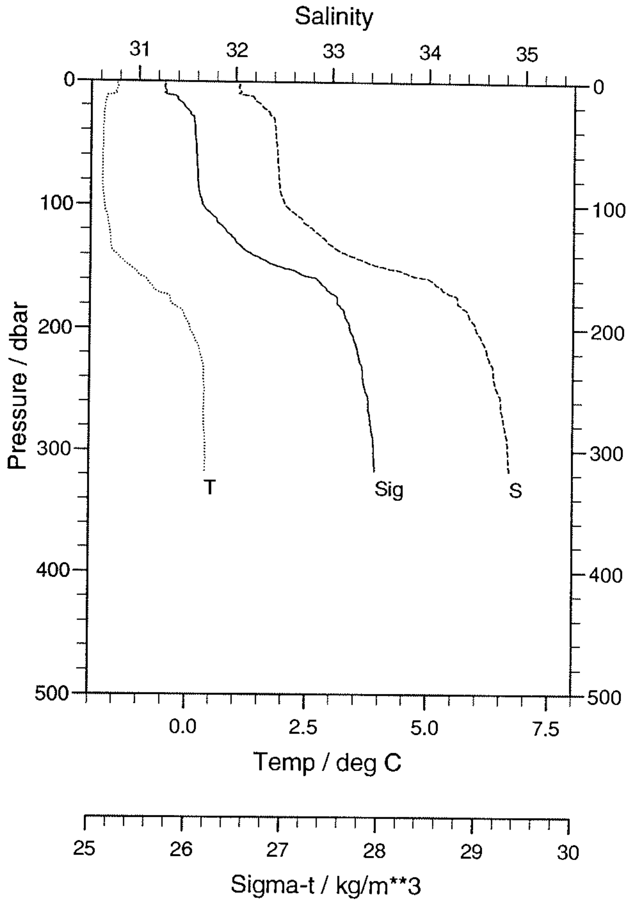

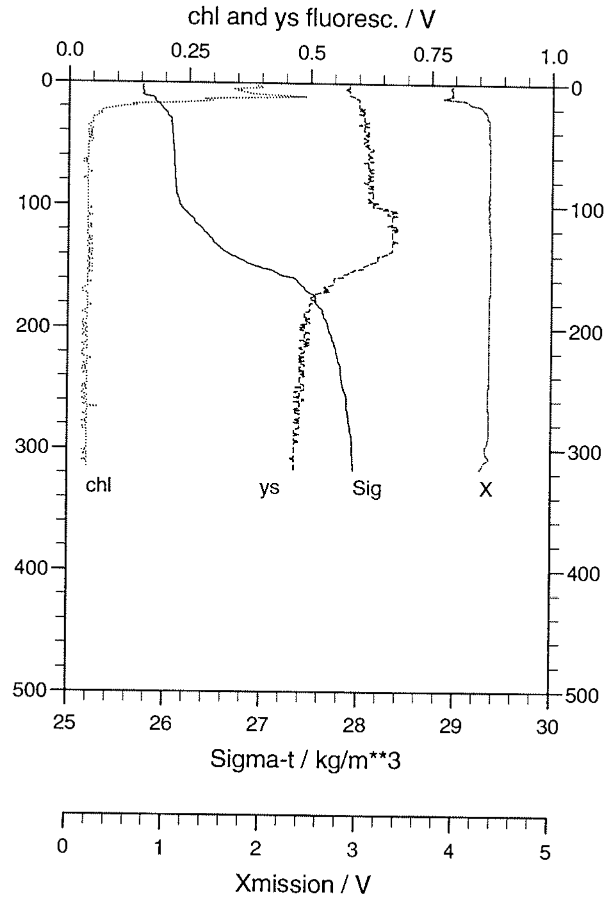

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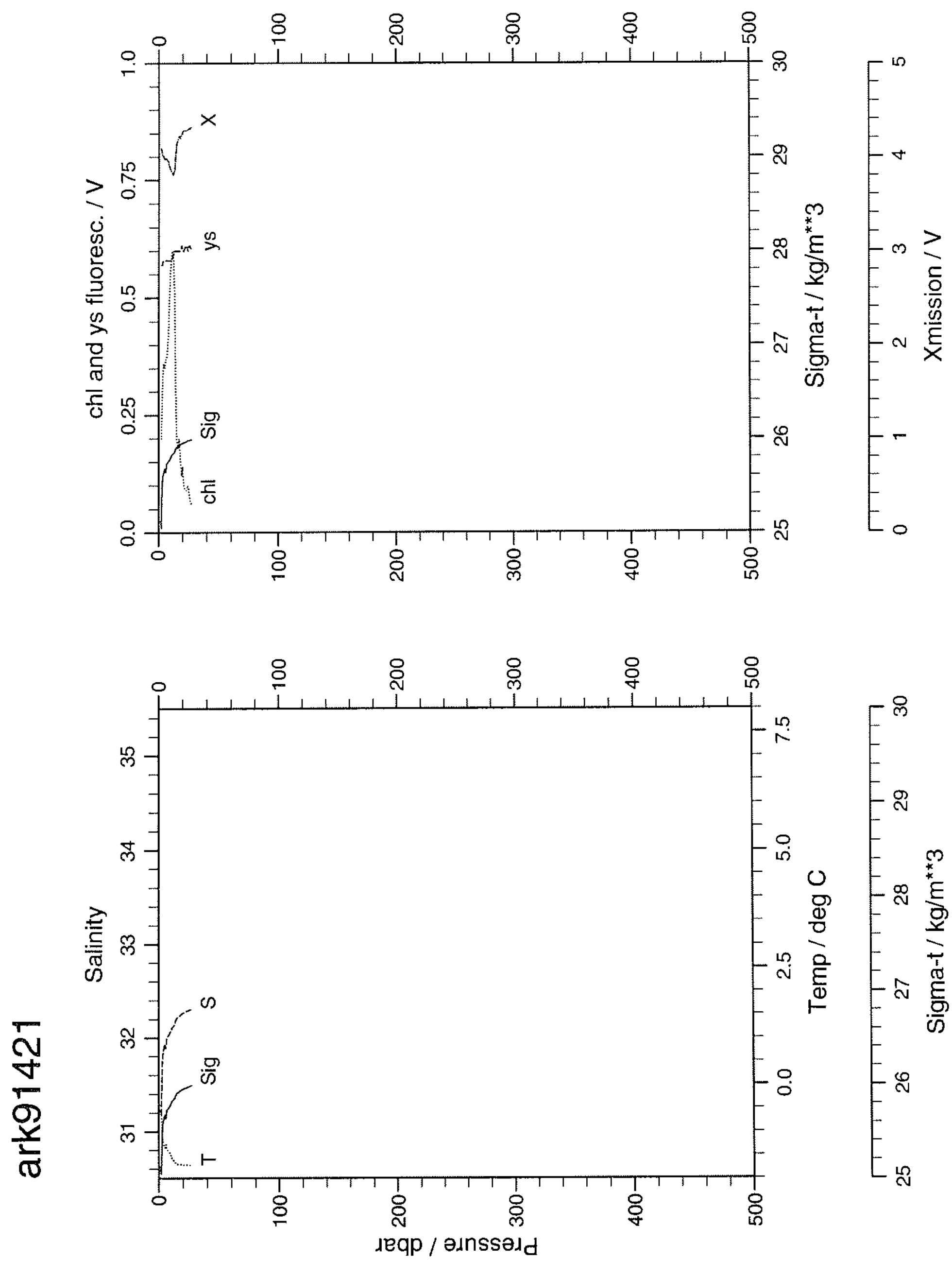
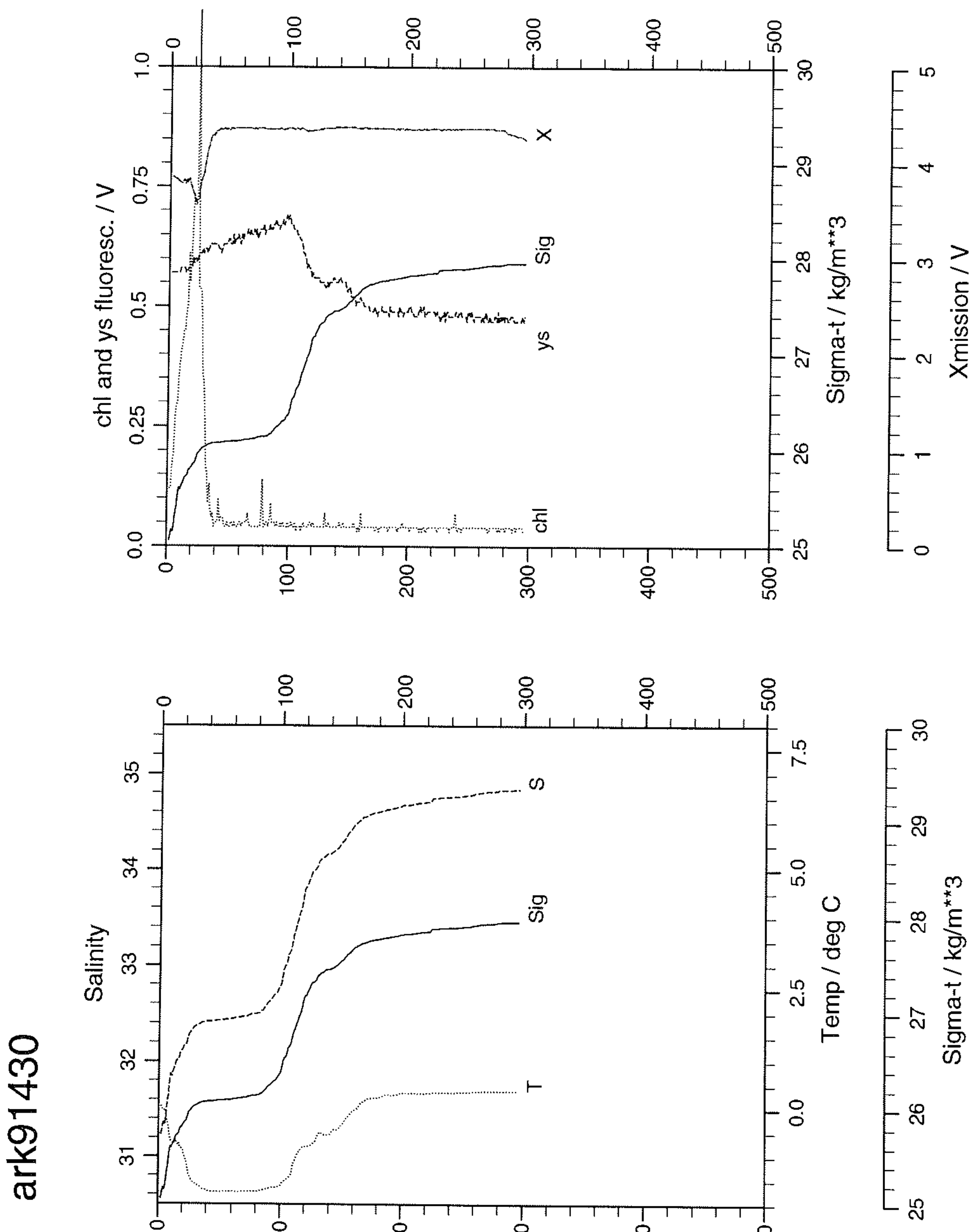
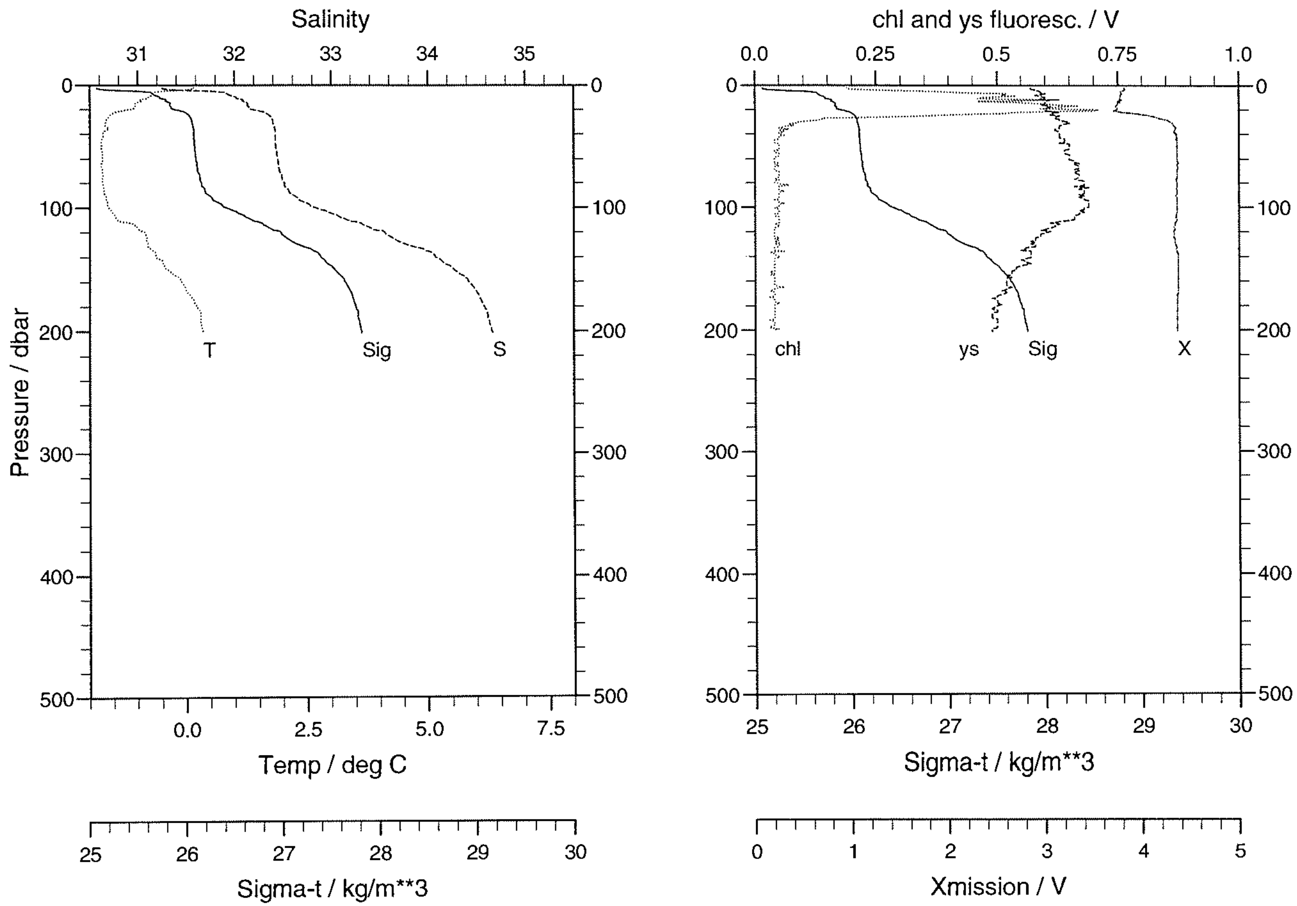


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
ark91421
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark91430


ark91430
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Pressure / dbar
S
T

ark91432



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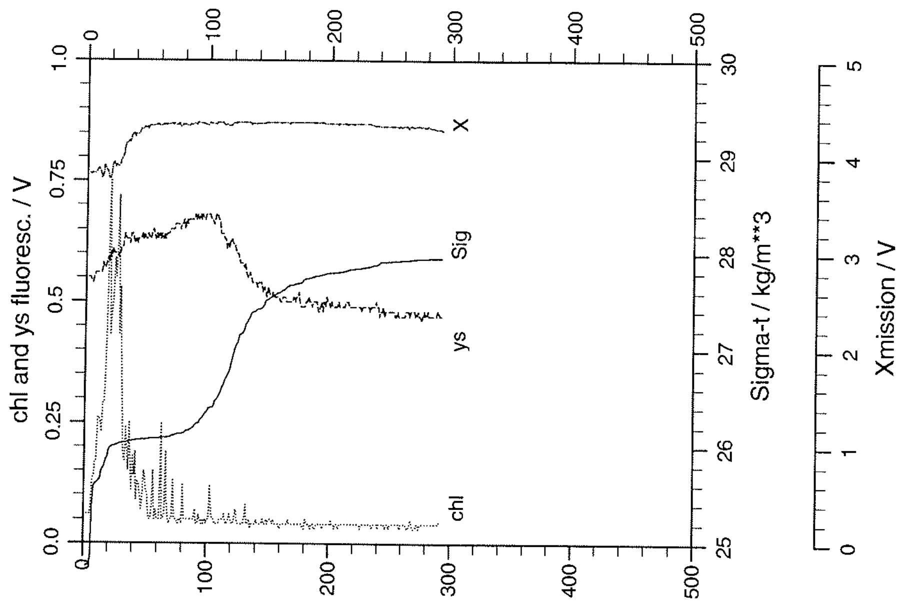

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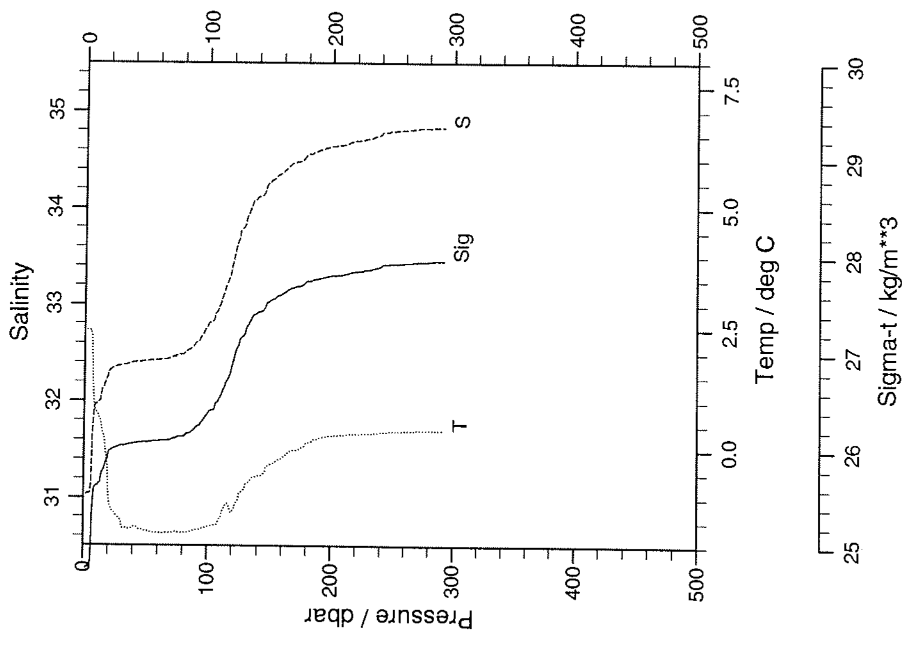

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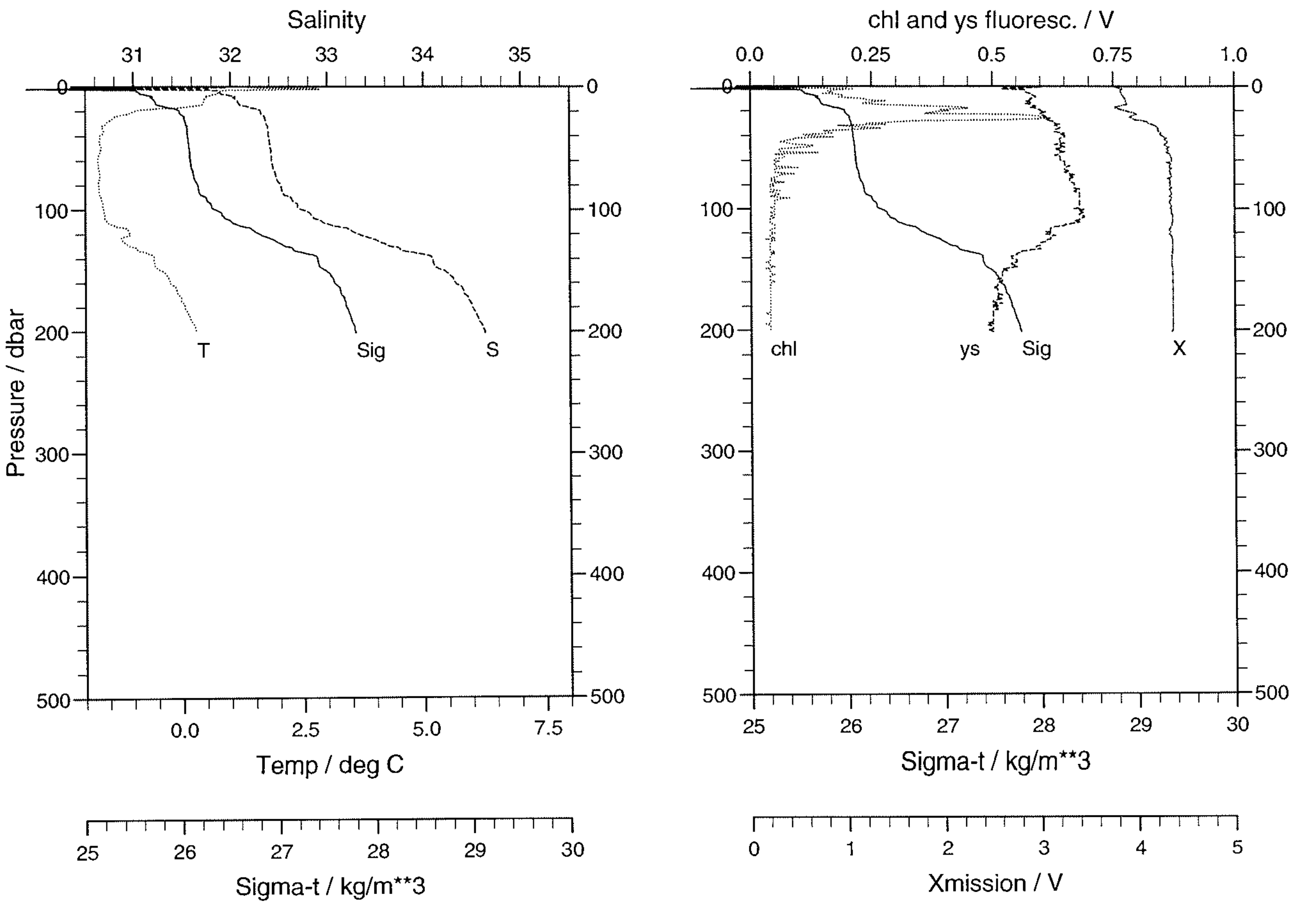

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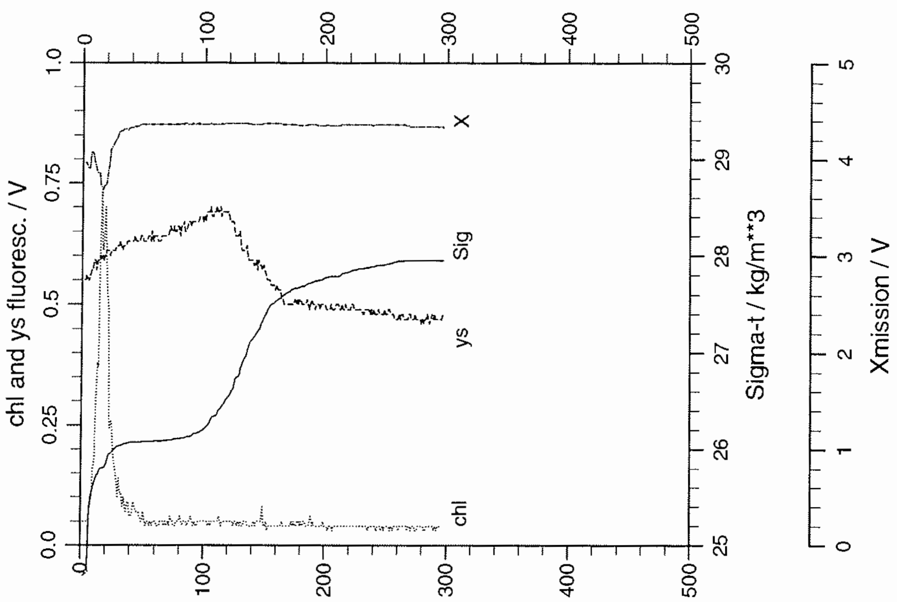

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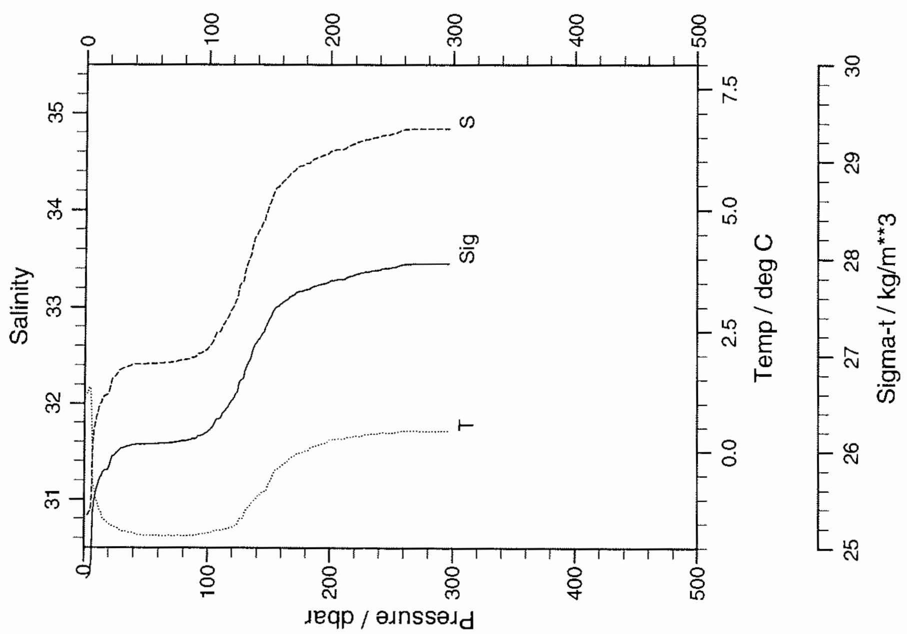

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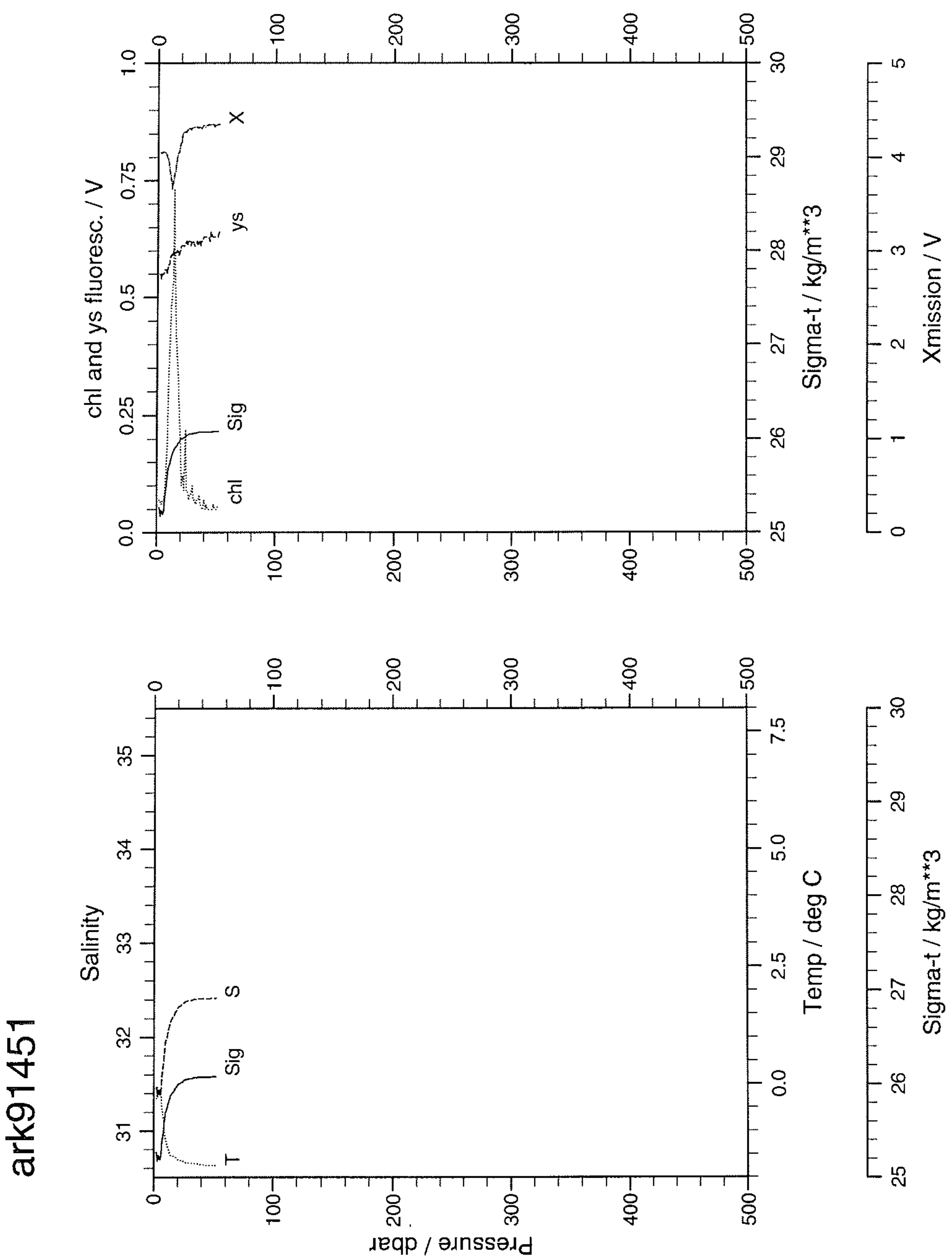
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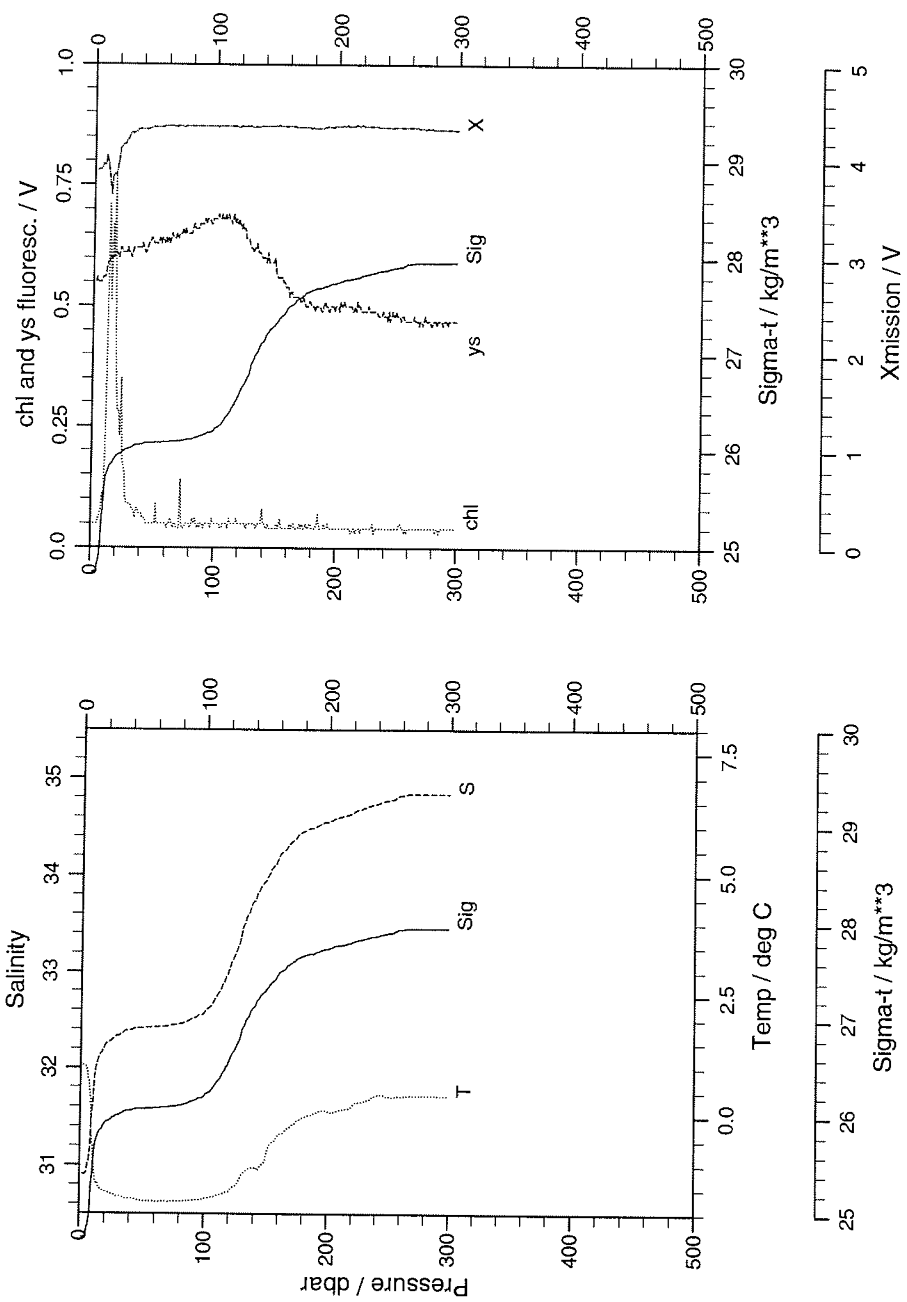
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark91452



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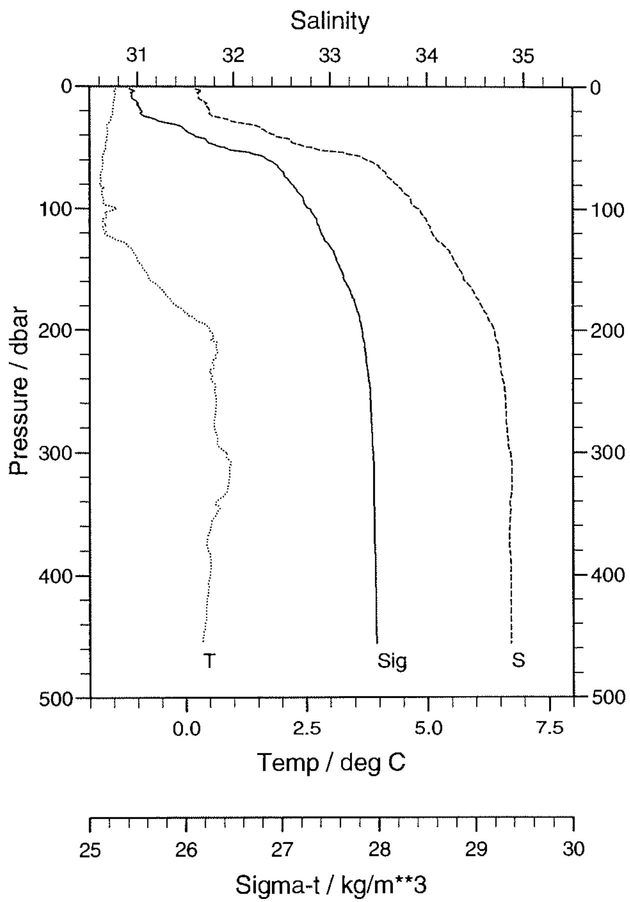

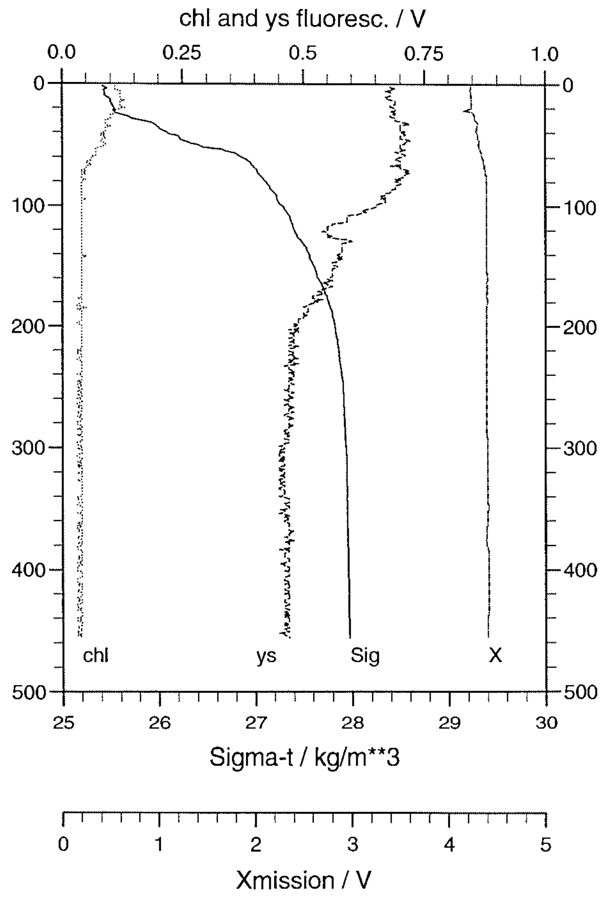

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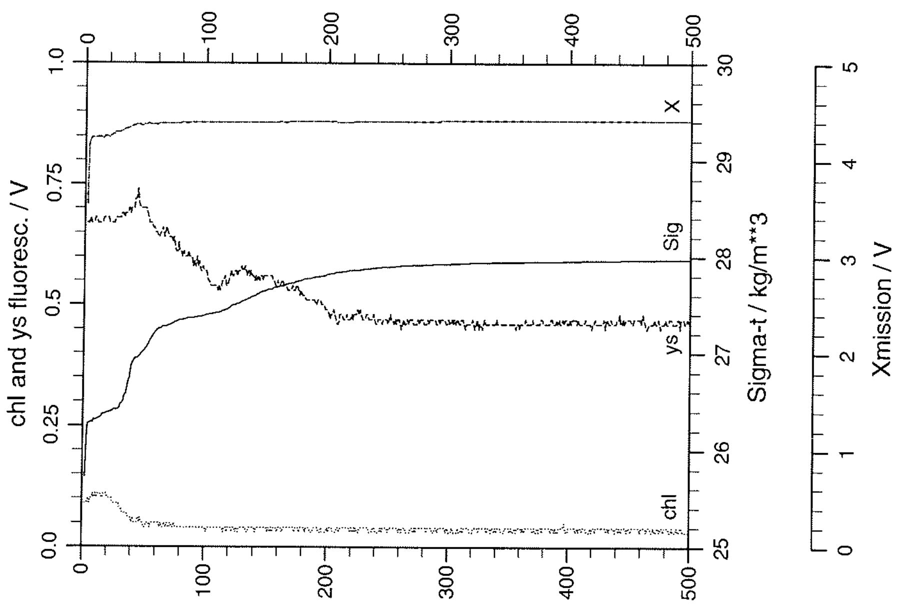

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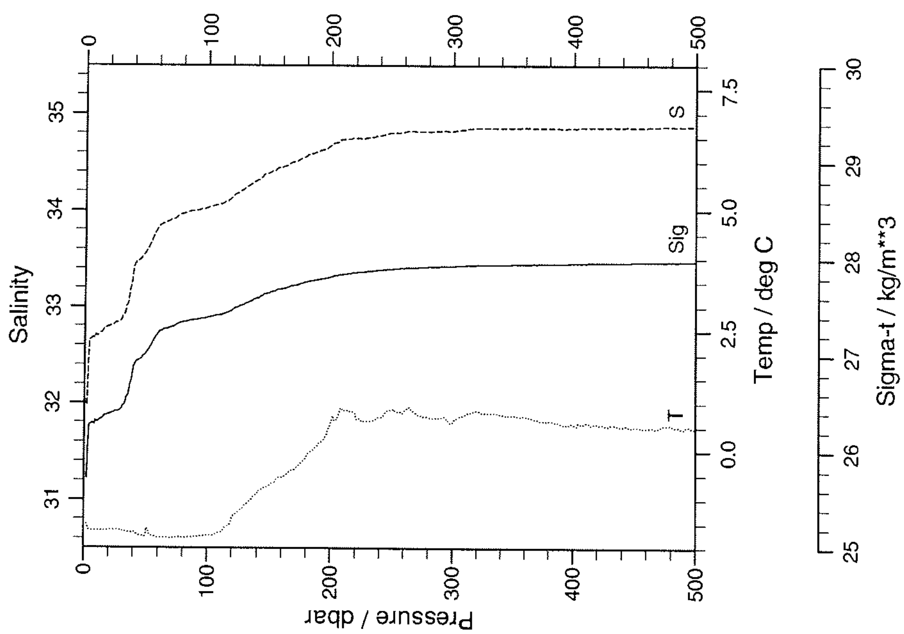

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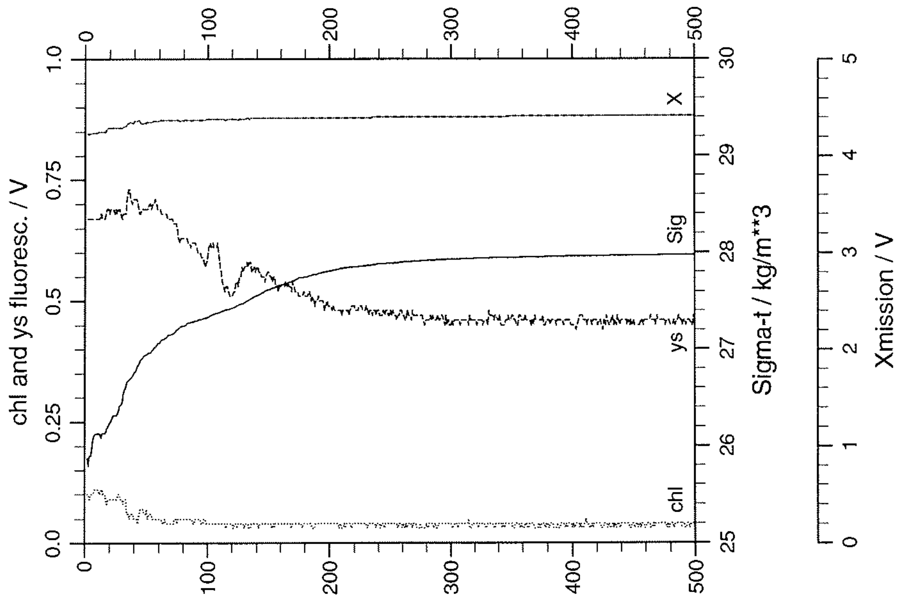

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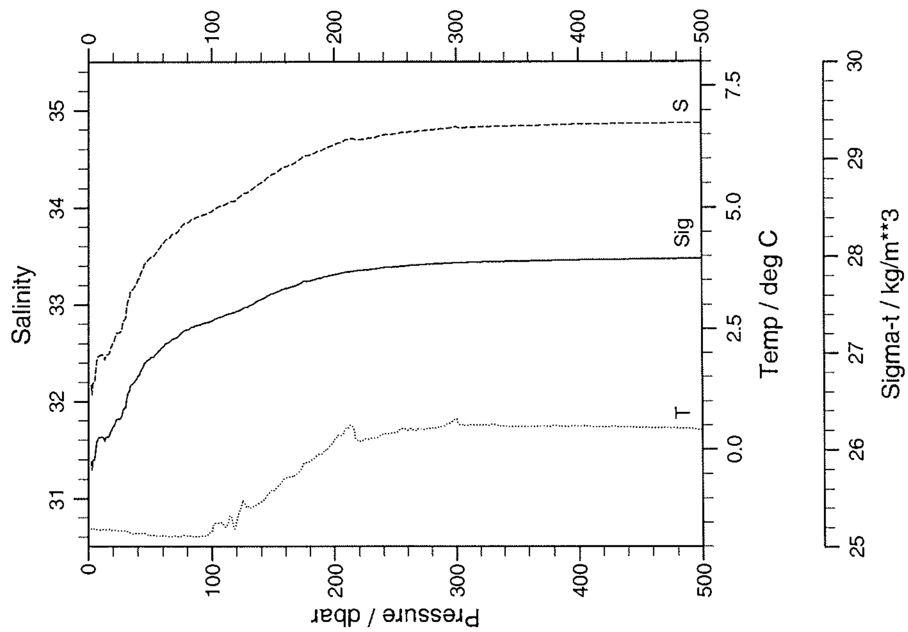

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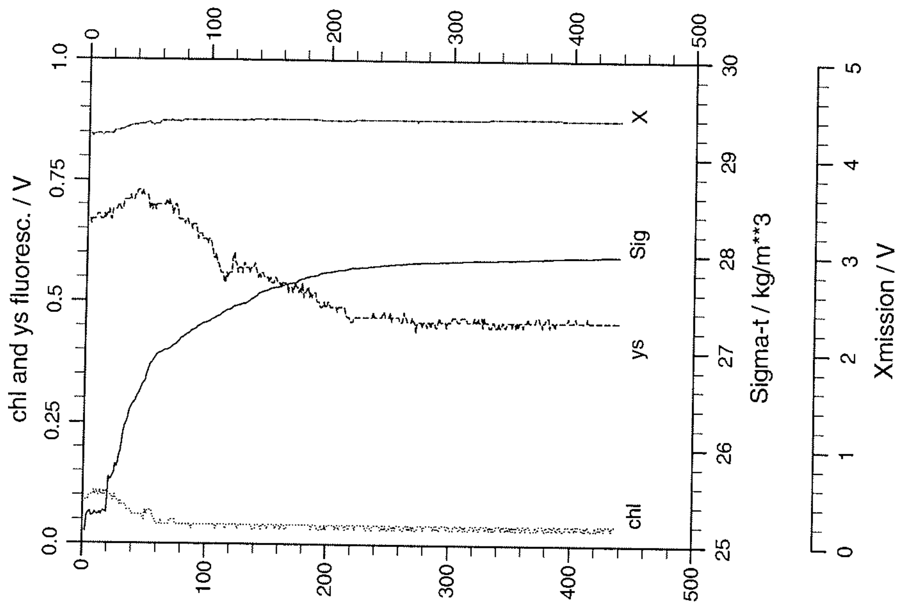

chl and ys fluoresc. / V
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0.5
0.75
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100
200
300
400
500
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Sigma-t / kg/m**3
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2
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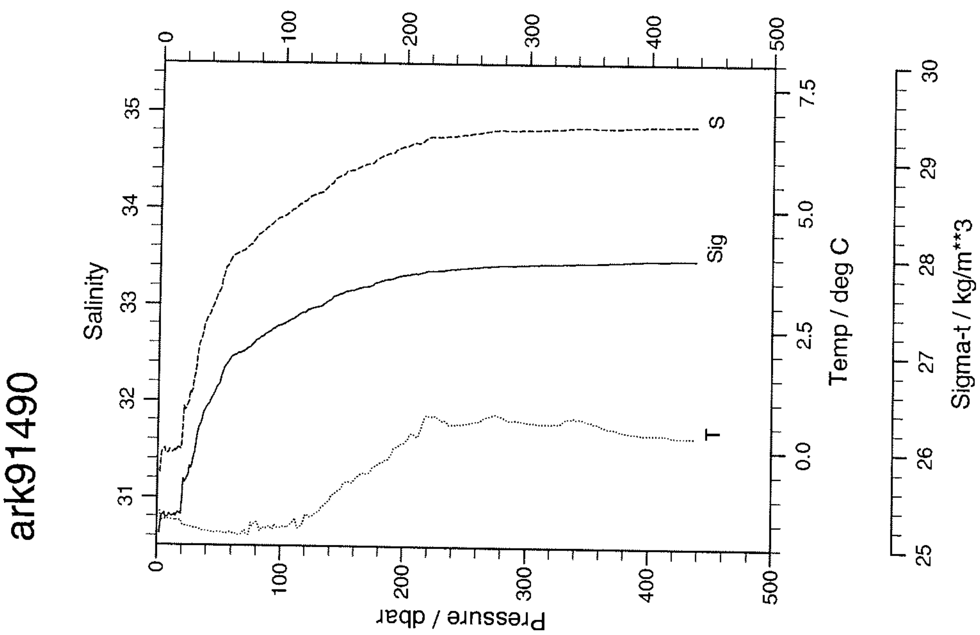
4
5
Xmission / V
X
Sig
ys
chl



ark91490
Salinity
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Temp / deg C
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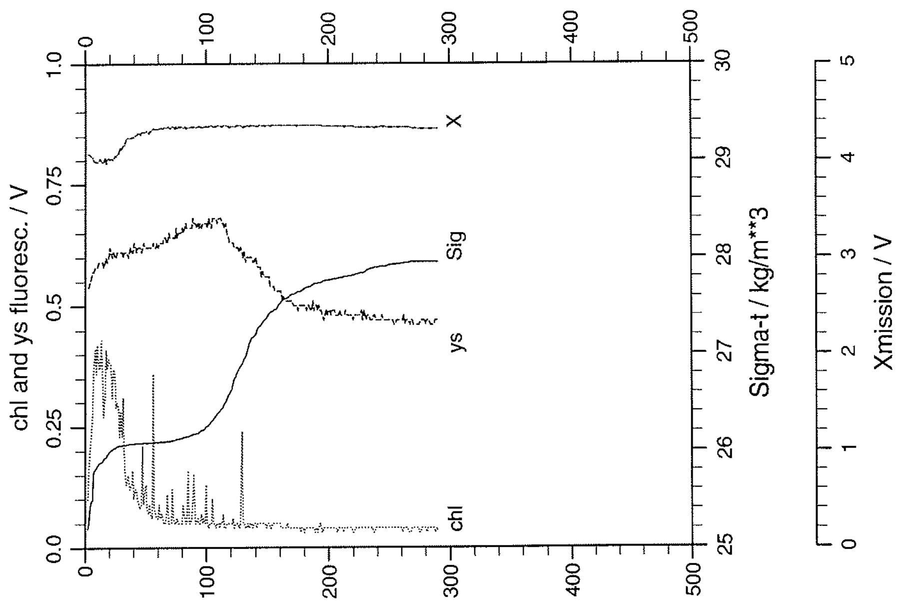
Sigma-t / kg/m**3
S
Sig
T

ark91500



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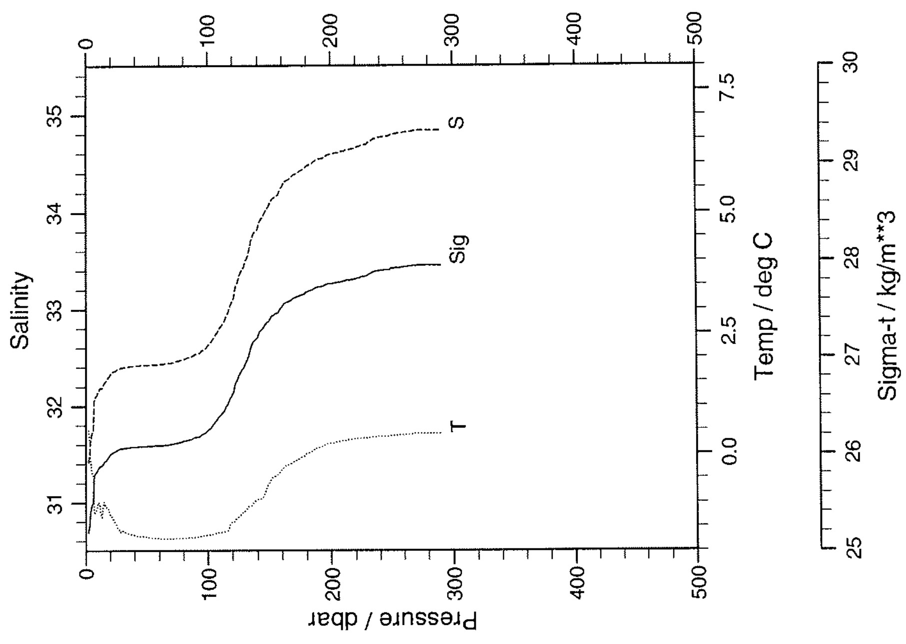

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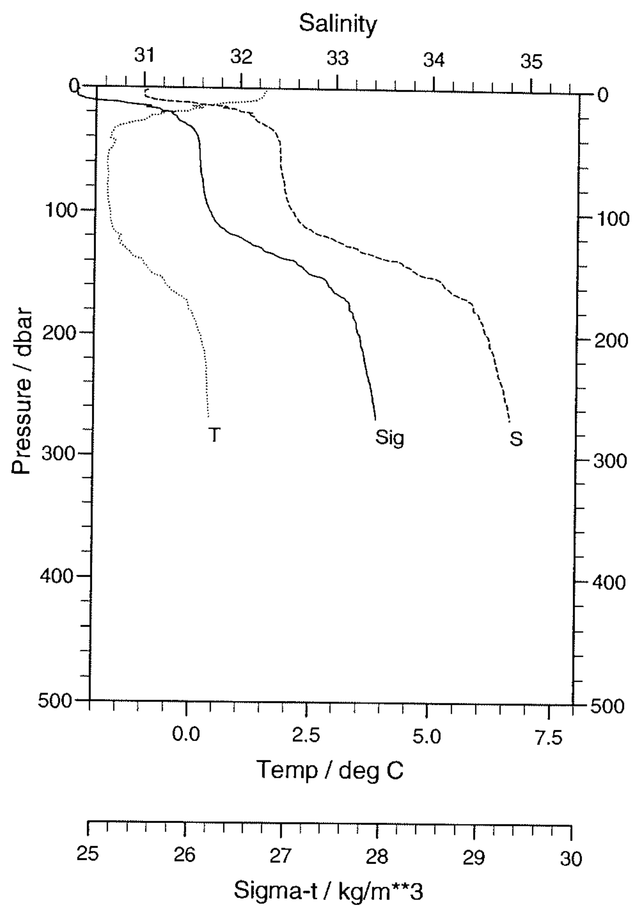

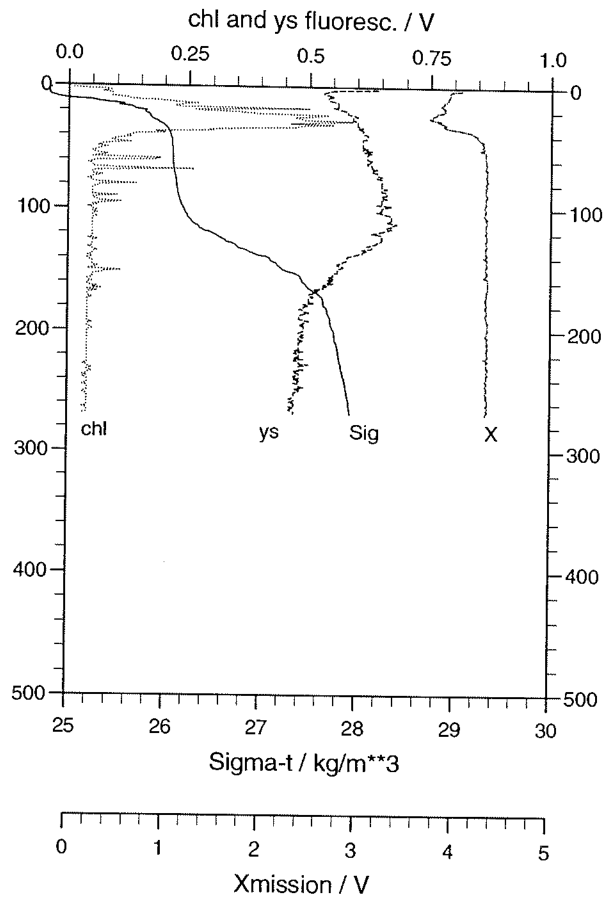

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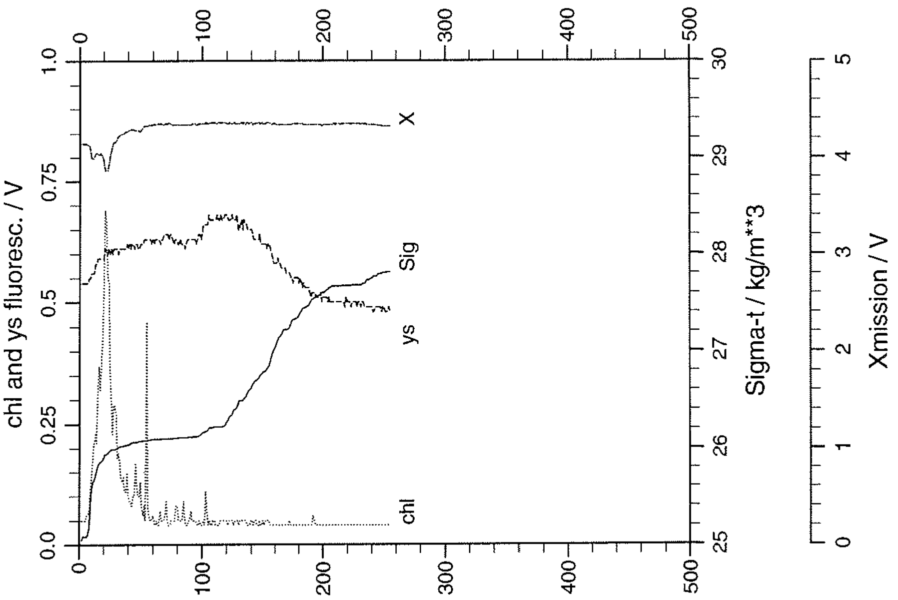
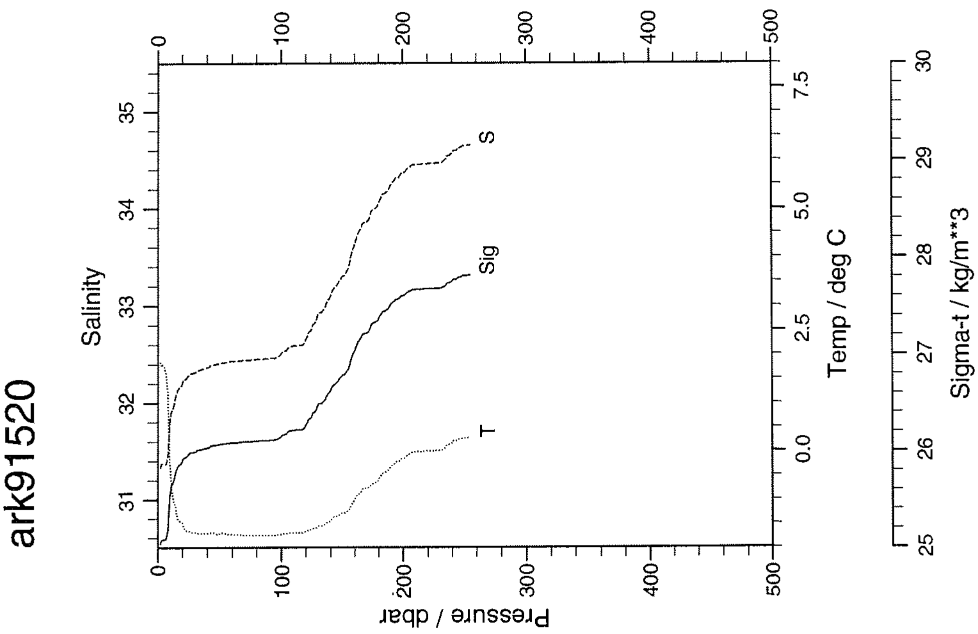

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl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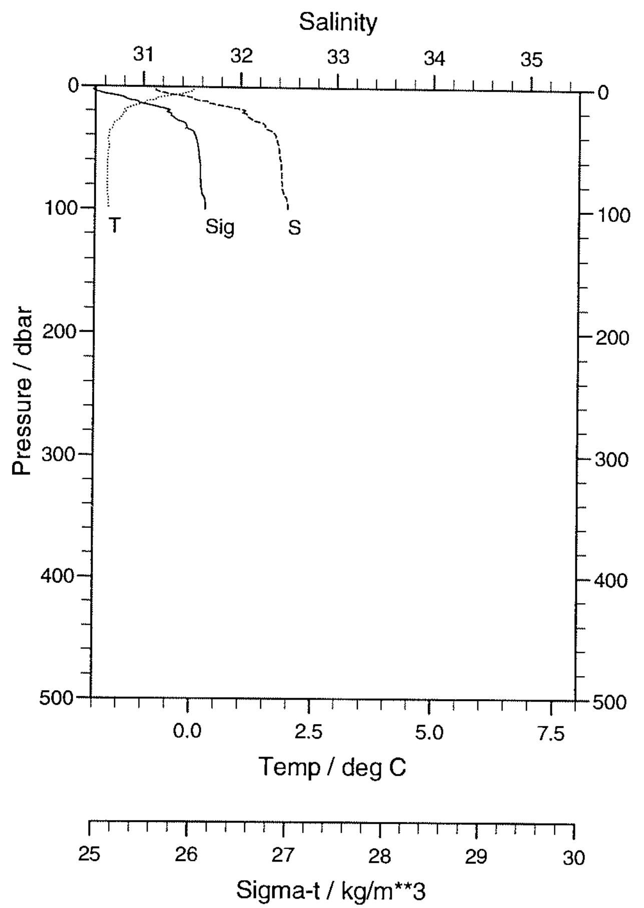
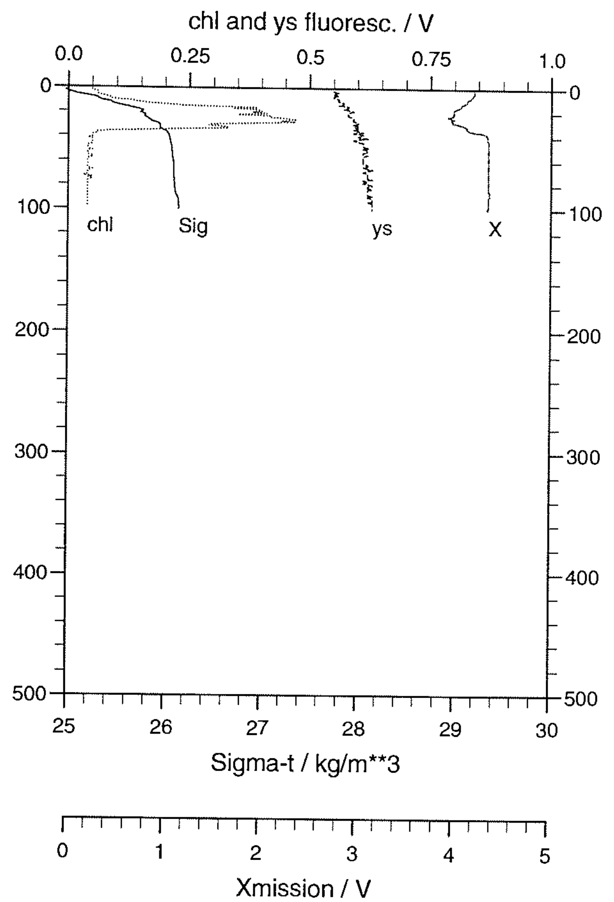
Salinity
Pressure / dbar
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T

ark91530





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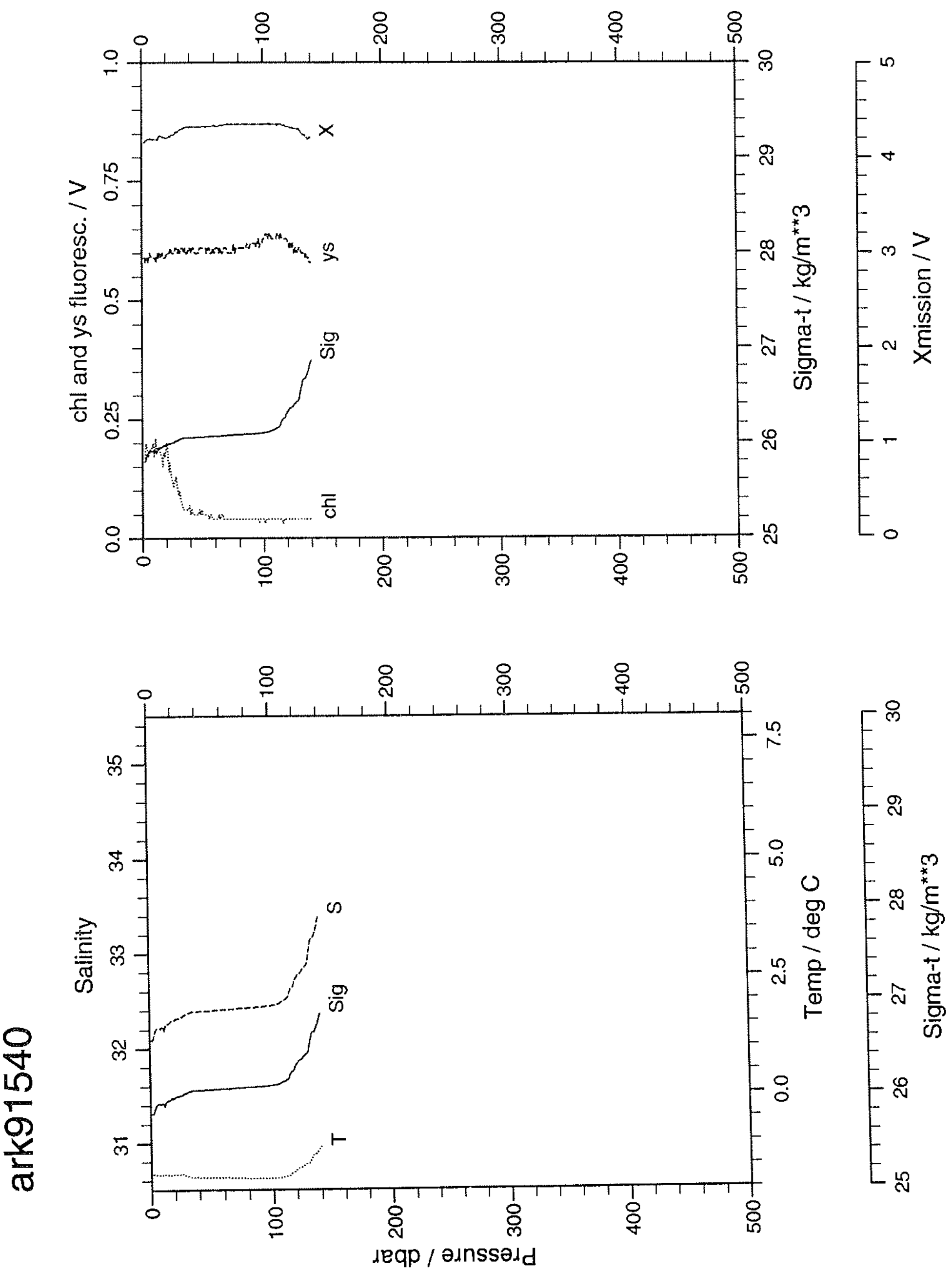

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Sigma-t / kg/m**3
Xmission / V
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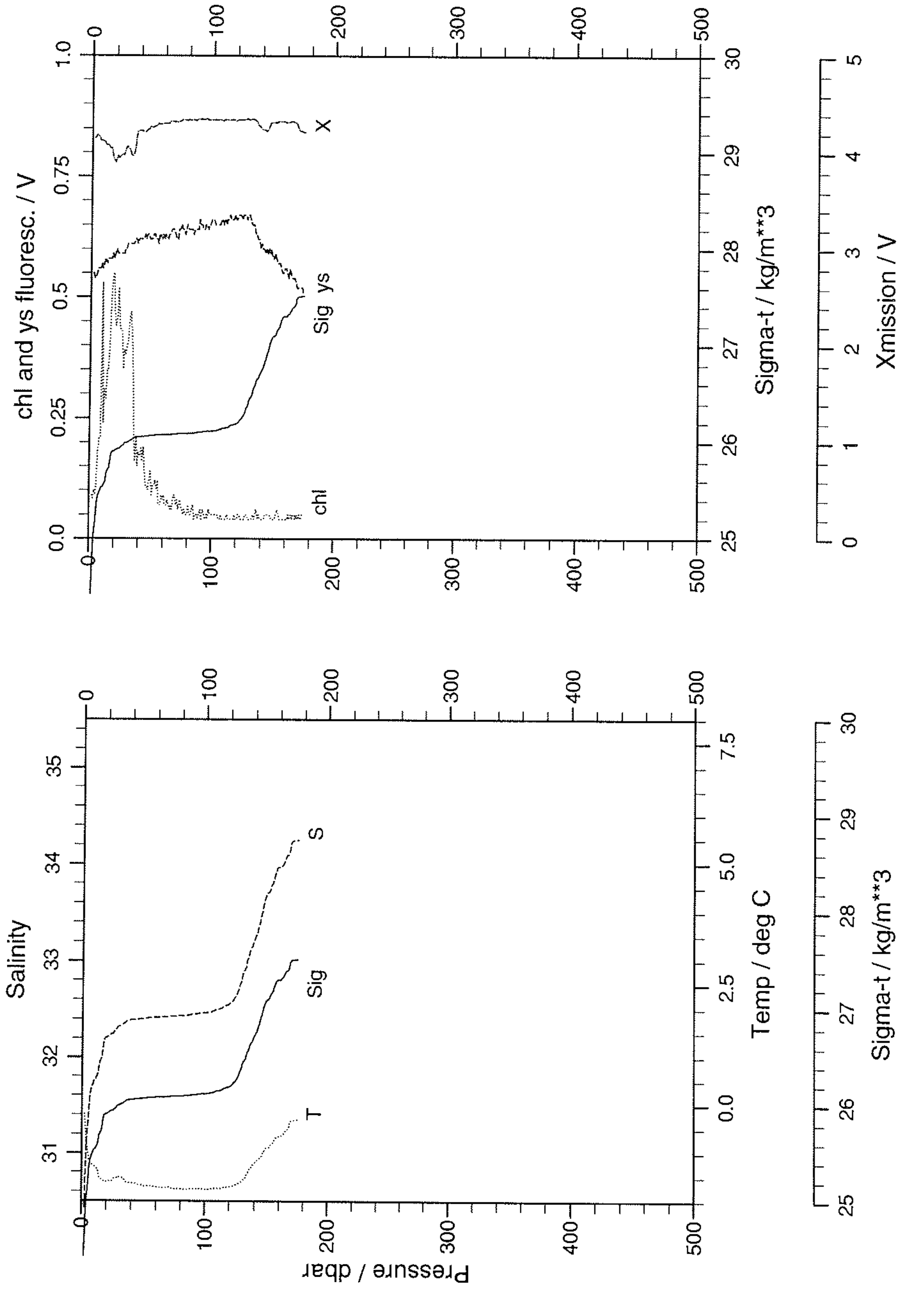
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark91550



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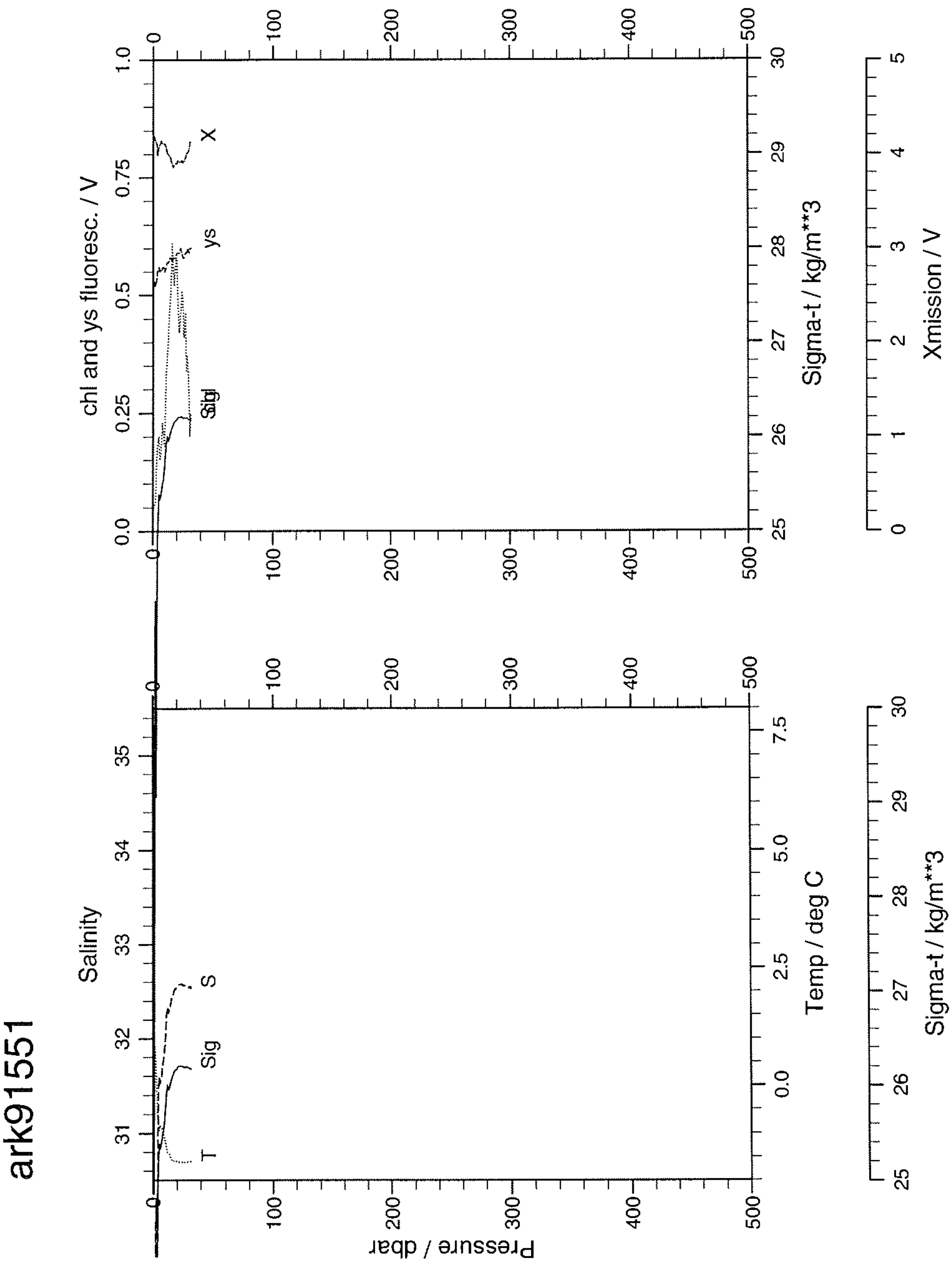
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Sigma-t / kg/m**3
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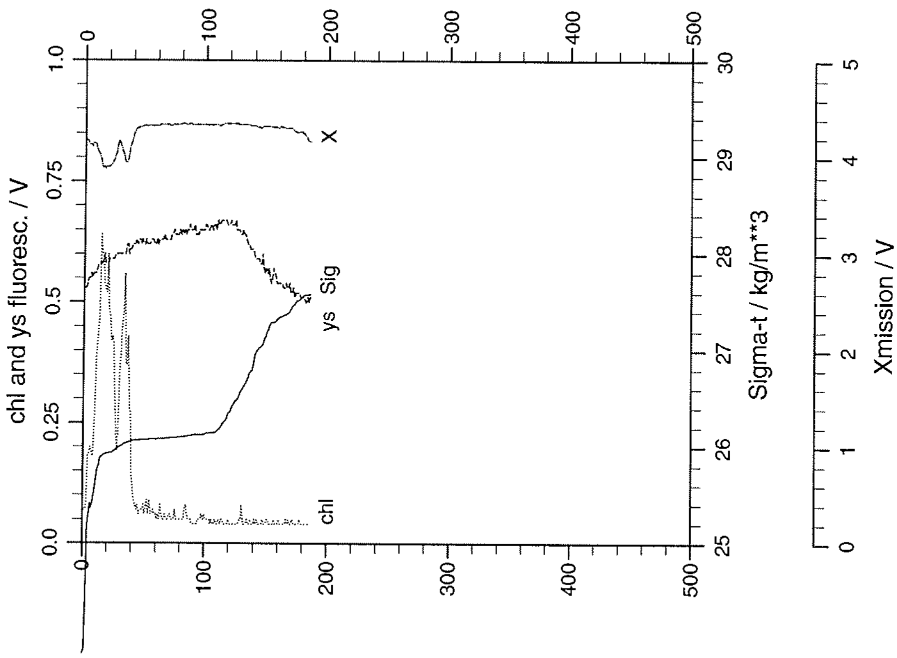
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T
Pressure / dbar

ark91552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Sigma-t / kg/m**3
Xmission / V
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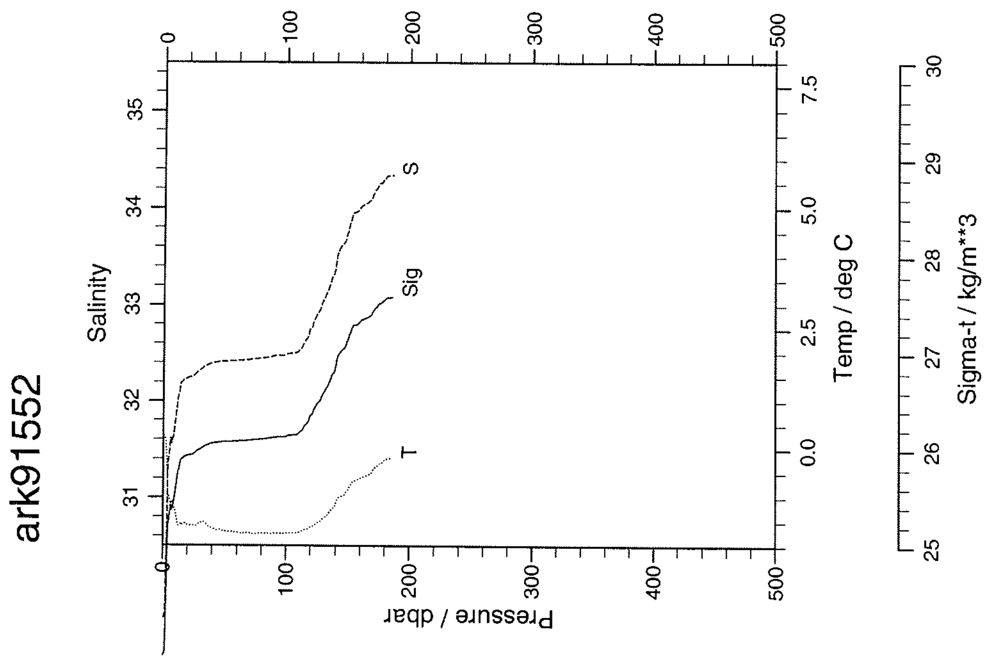
ys Sig
chl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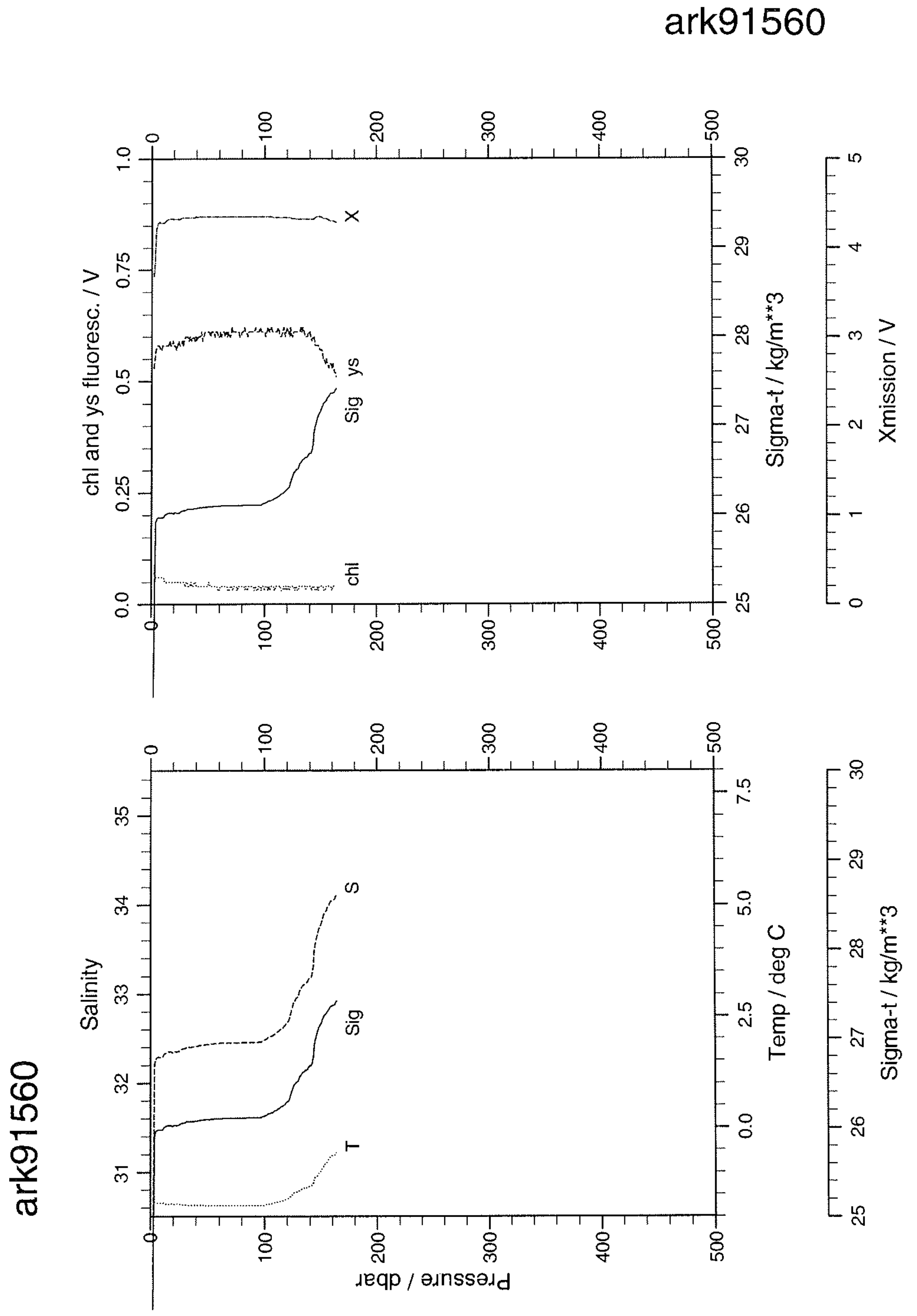
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T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ark91560
Pressure / dbar
Salinity
Temp / deg C
Sigma-t / kg/m**3
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Sig
T
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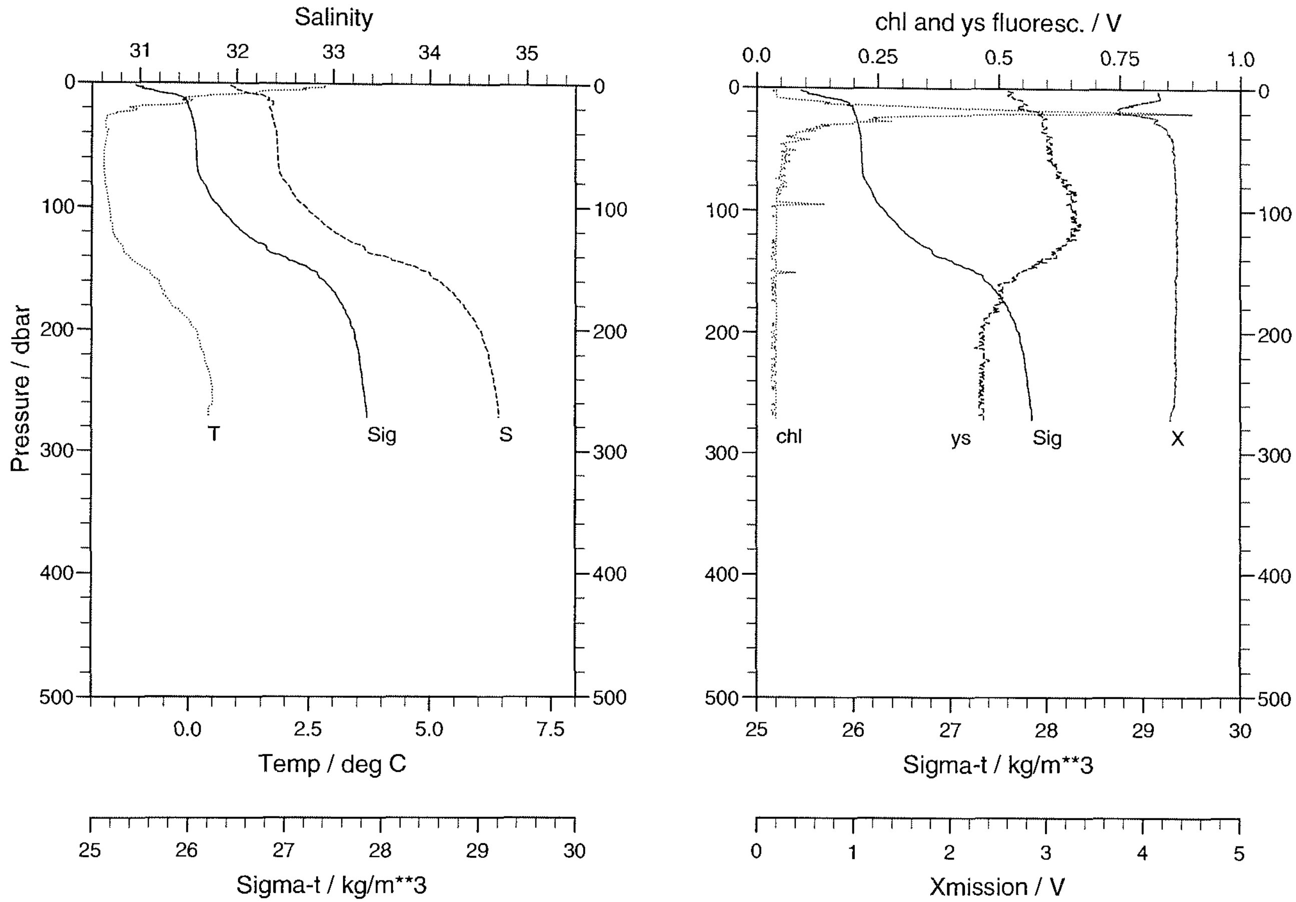
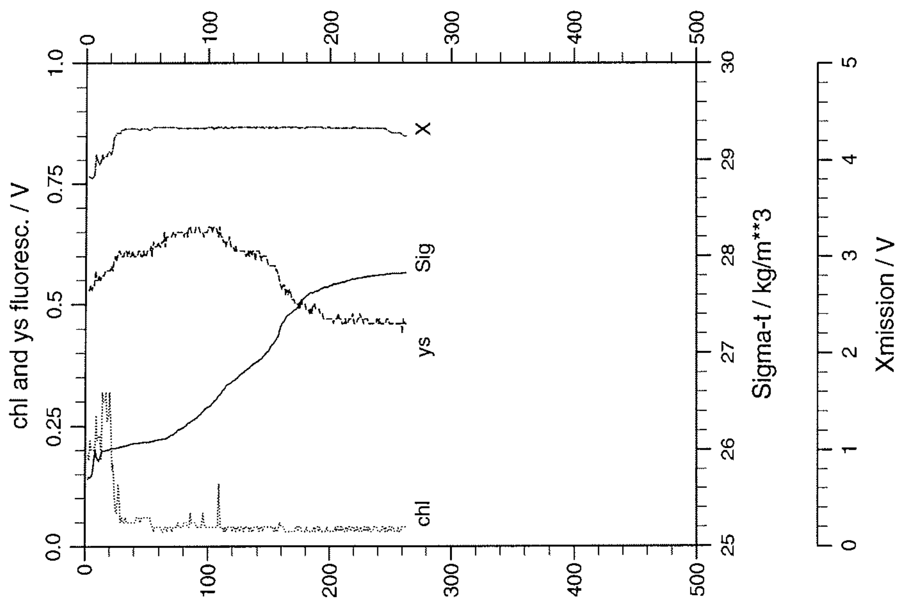
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl

ark91570

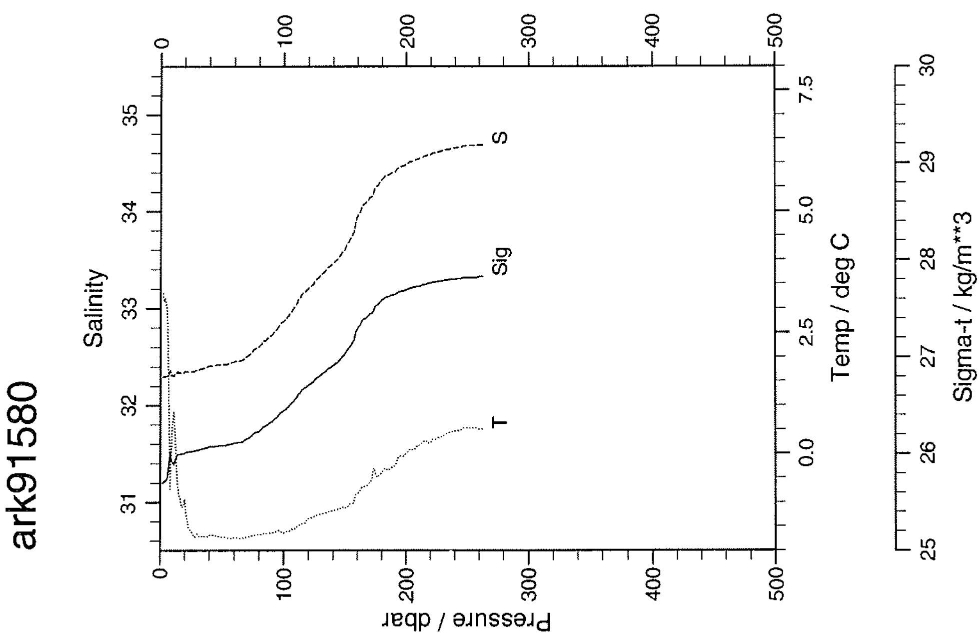


ark91570

ark91580

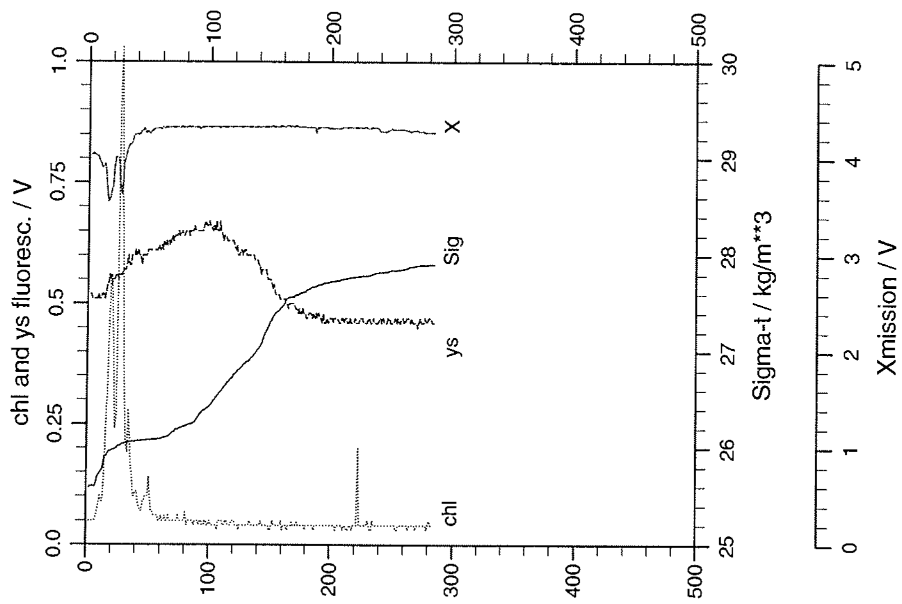


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl



ark91580
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark91590



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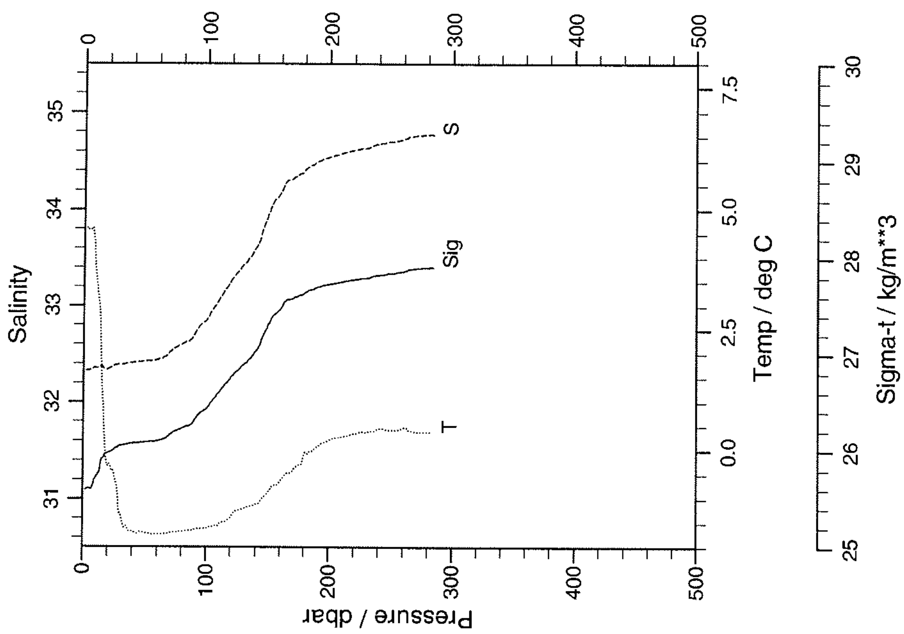

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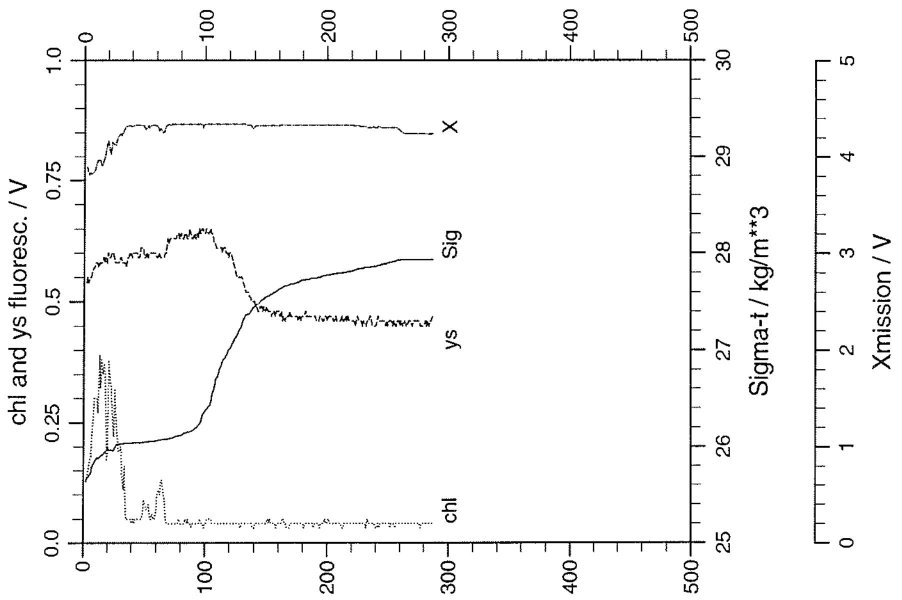

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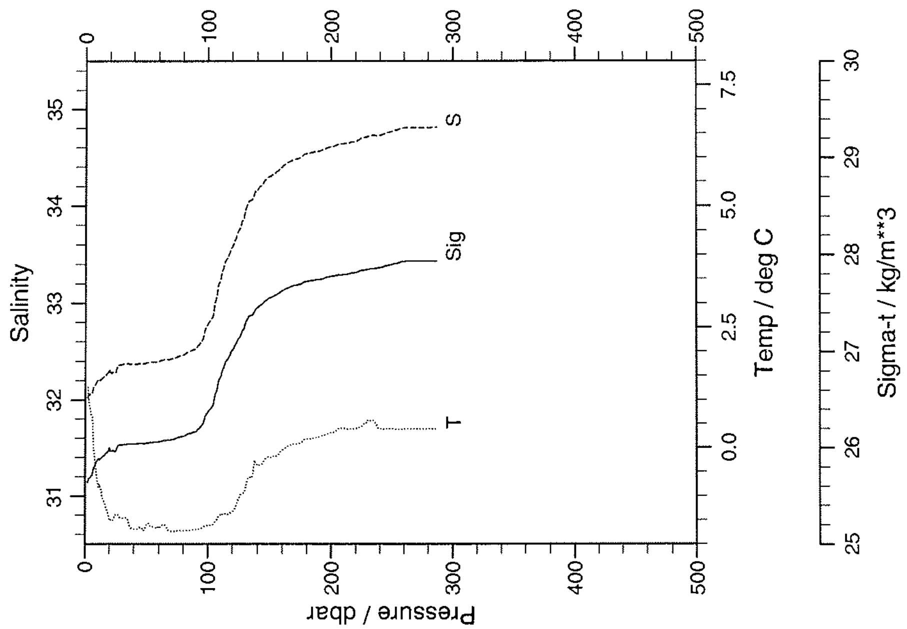
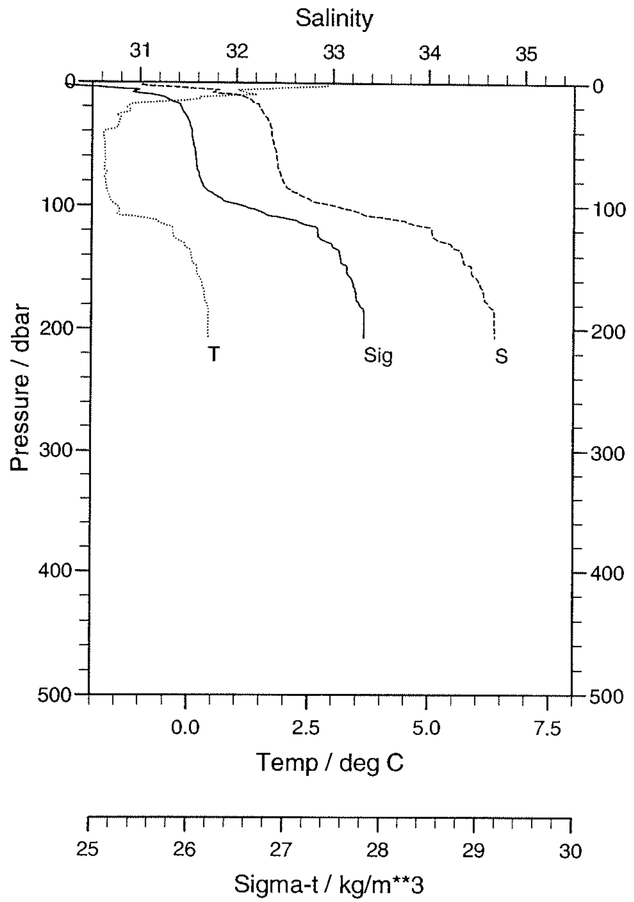
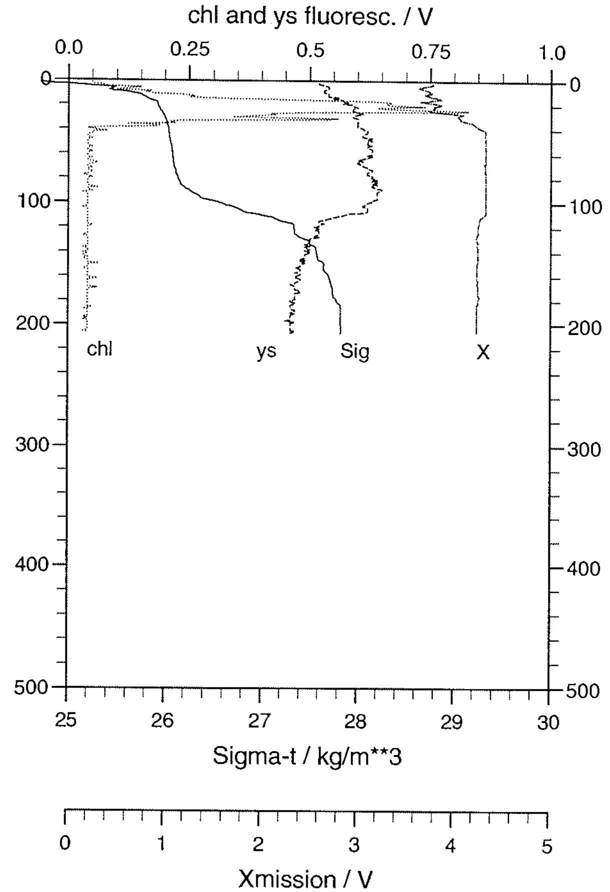


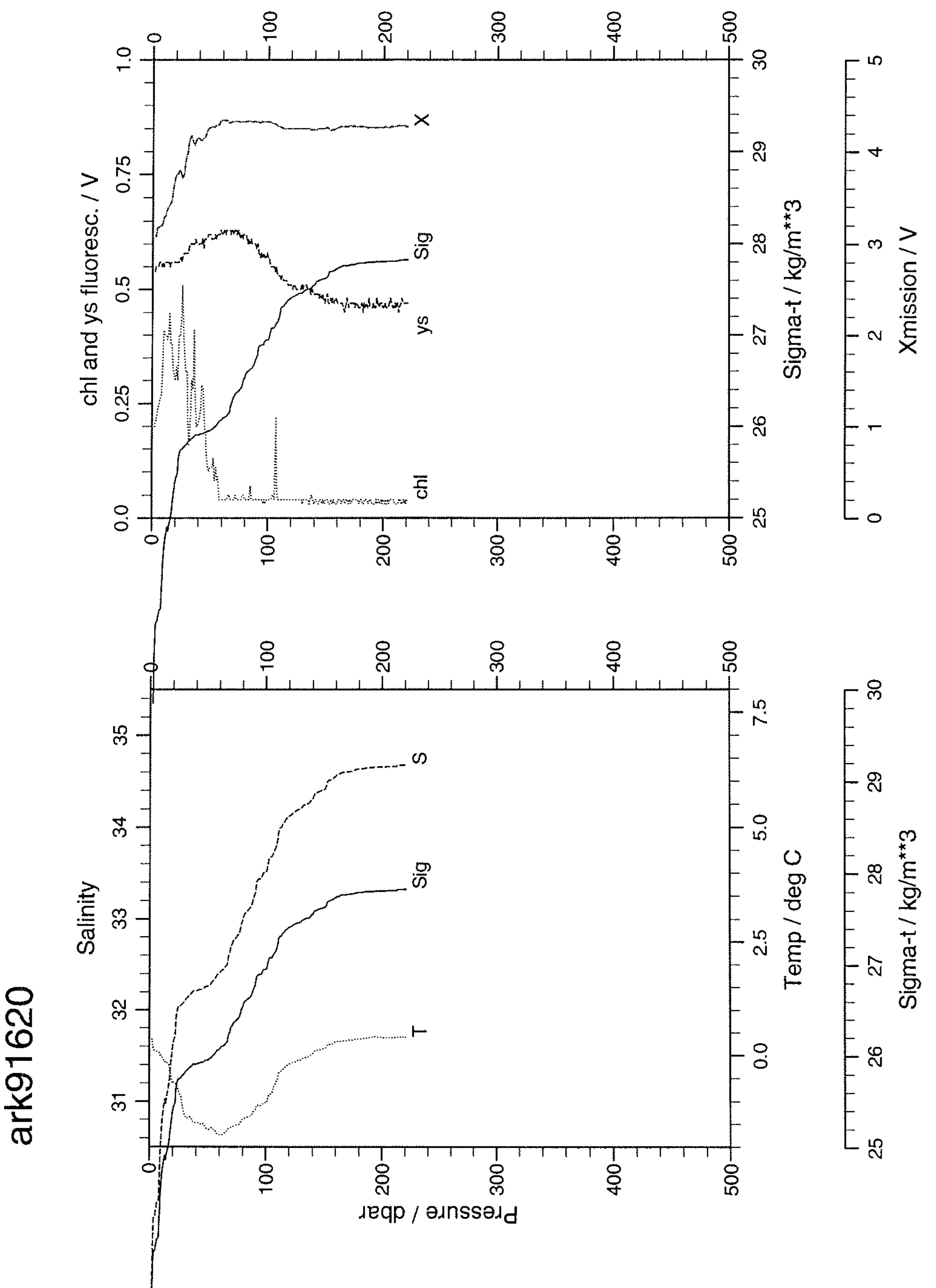
ark91610



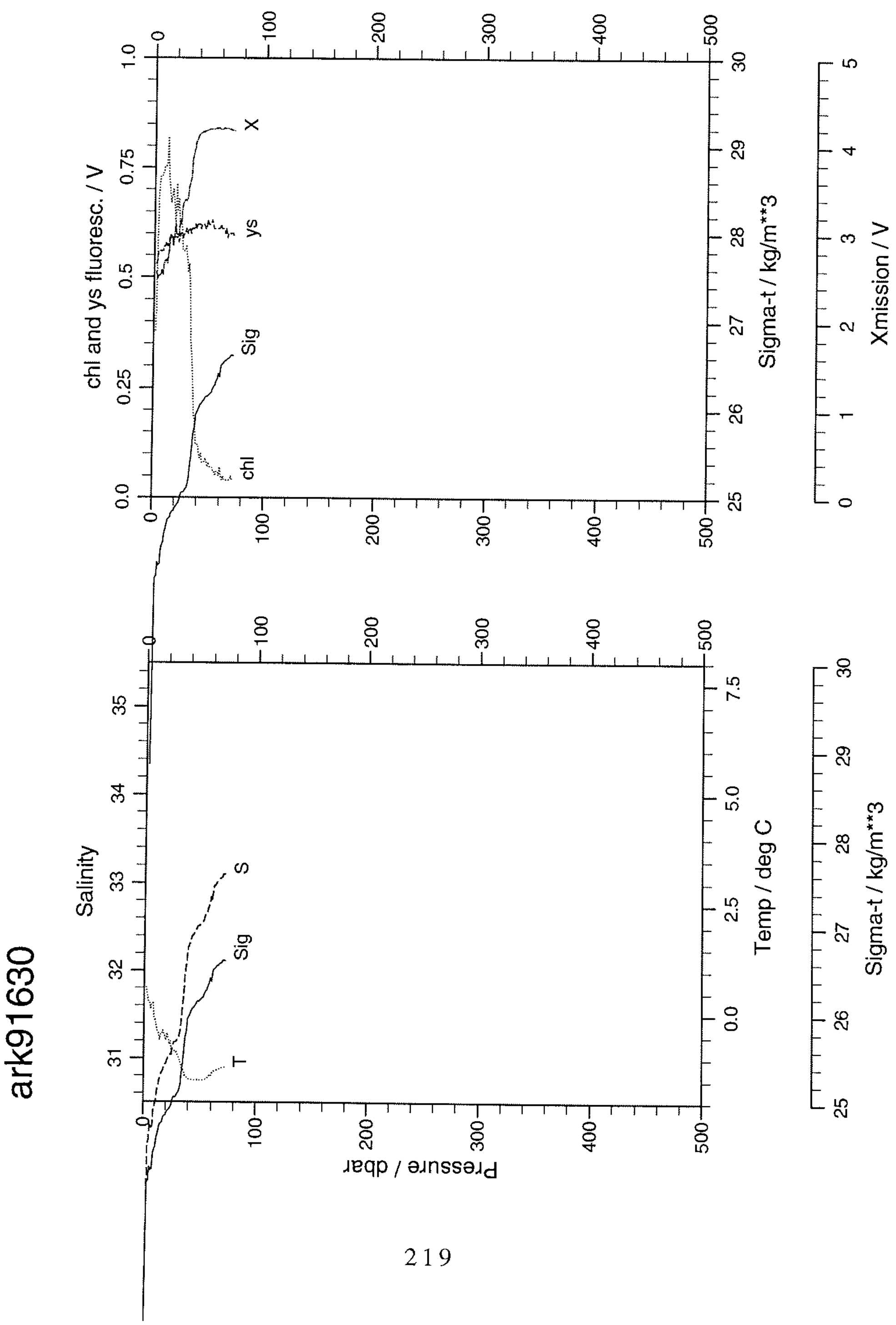


ark91610

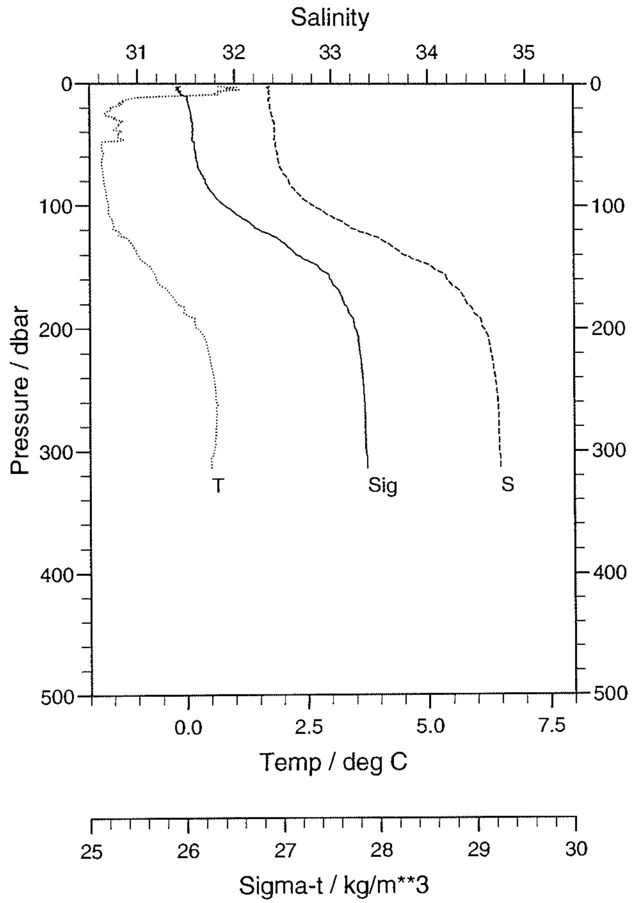
ark91620

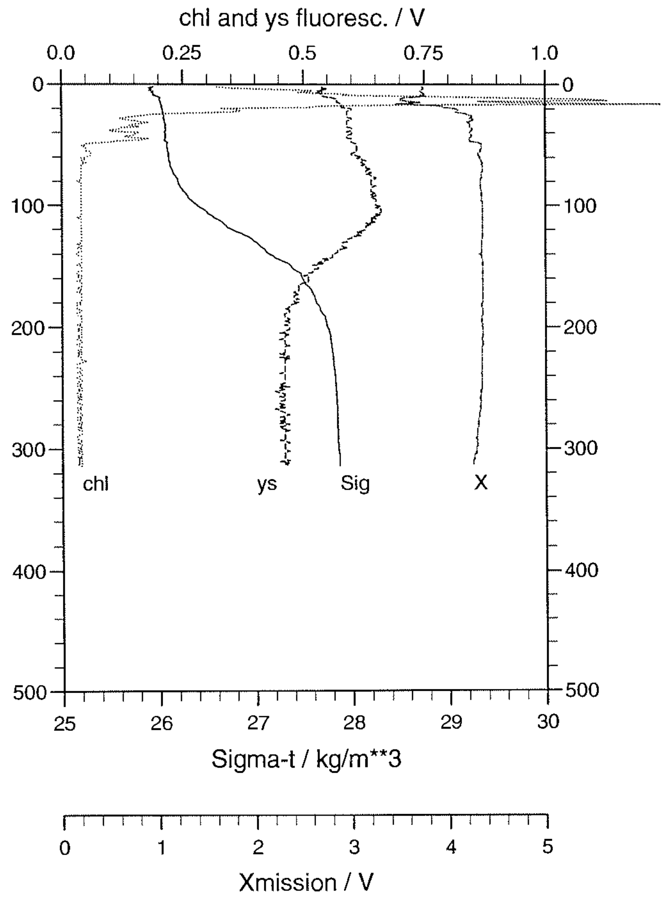

ark91620
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Pressure / dbar
S
T

ark91630


ark91630
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T
Pressure / dbar

ark91650





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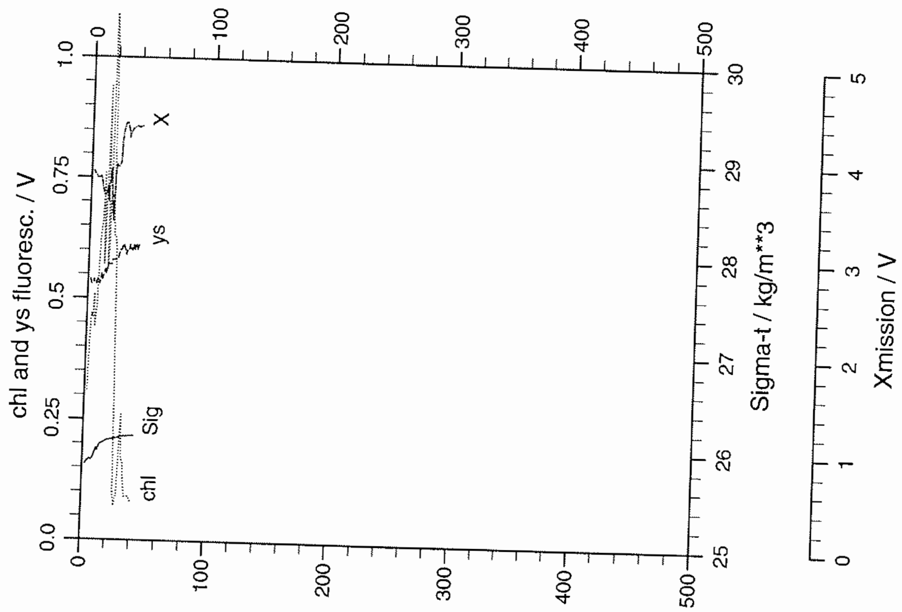
ark91651



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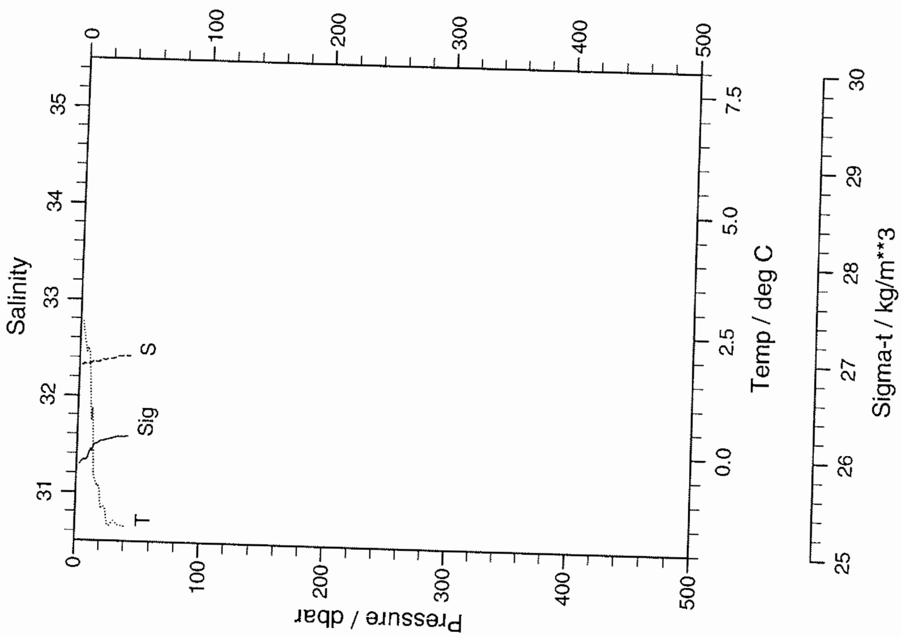
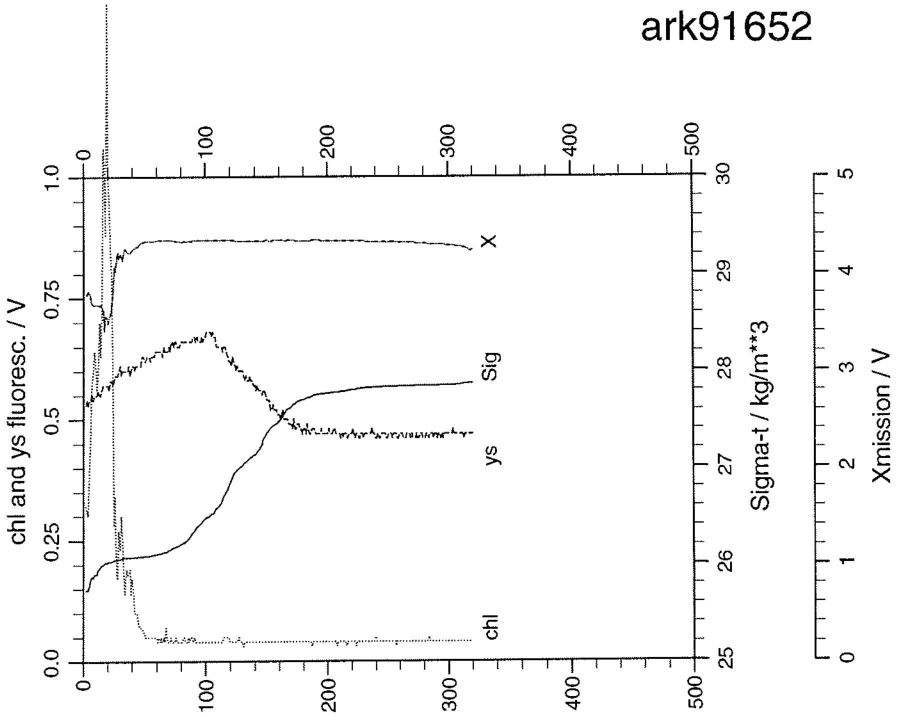
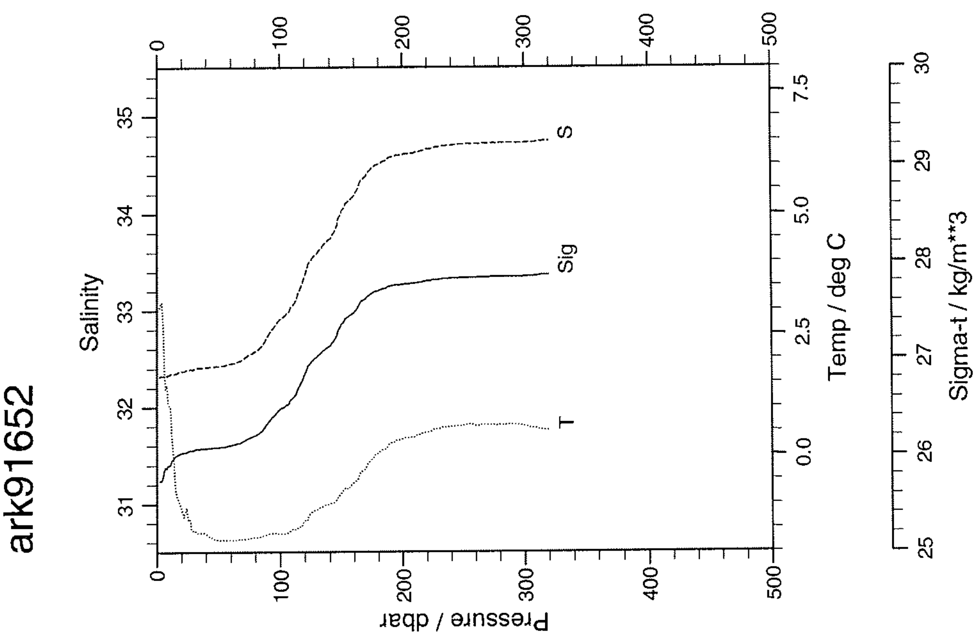
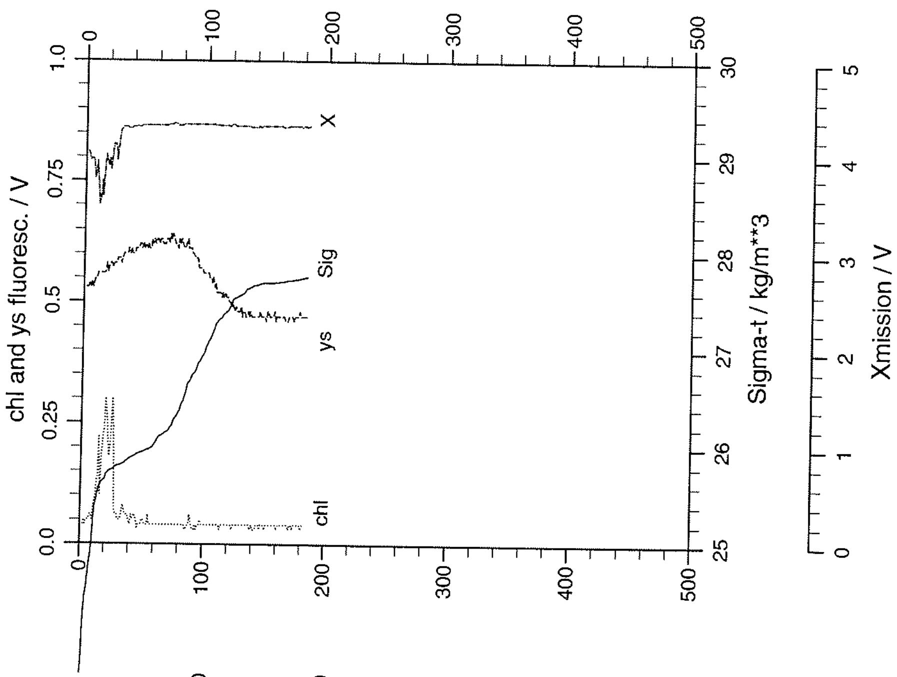
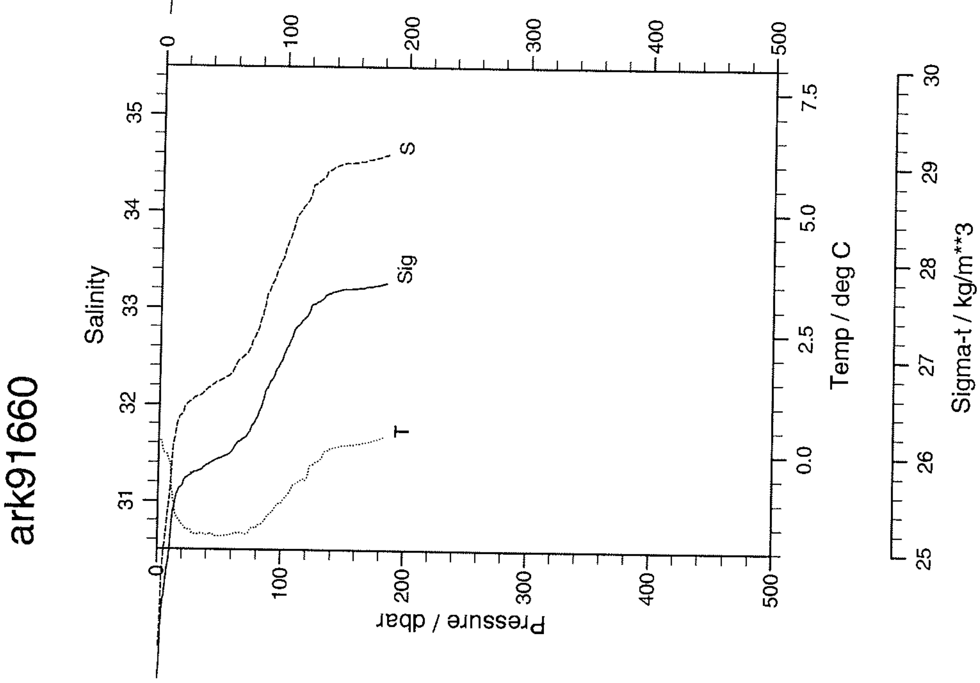



ark91652
chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
0
100
200
300
400
500
X
Sig
ys
chl
25
26
27
28
29
30
Sigma-t / kg/m**3
0
1
2
3
4
5
Xmission / V

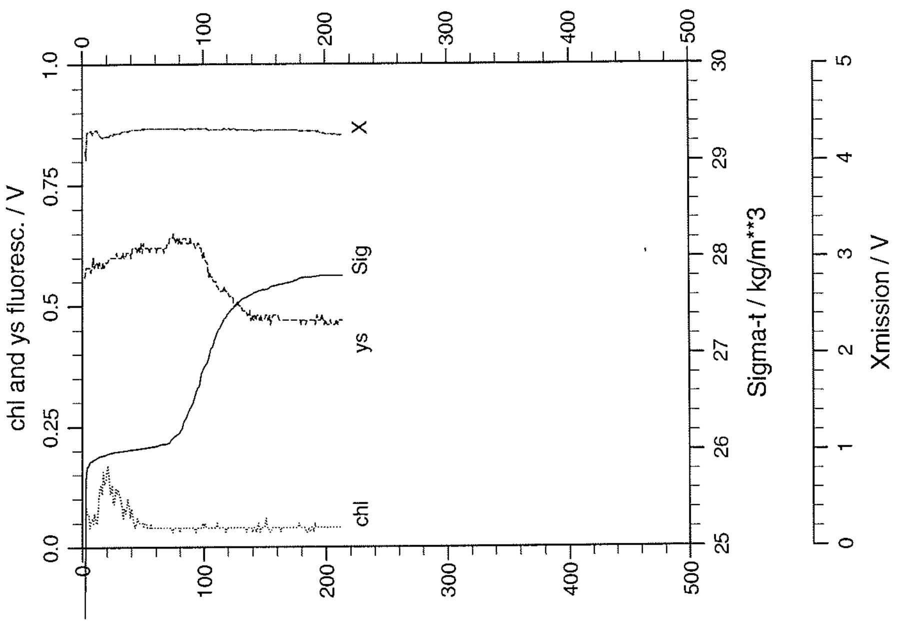

ark91652
Salinity
31
32
33
34
35
0
100
200
300
400
500
Pressure / dbar
S
Sig
T
0.0
2.5
5.0
7.5
Temp / deg C
25
26
27
28
29
30
Sigma-t / kg/m**3

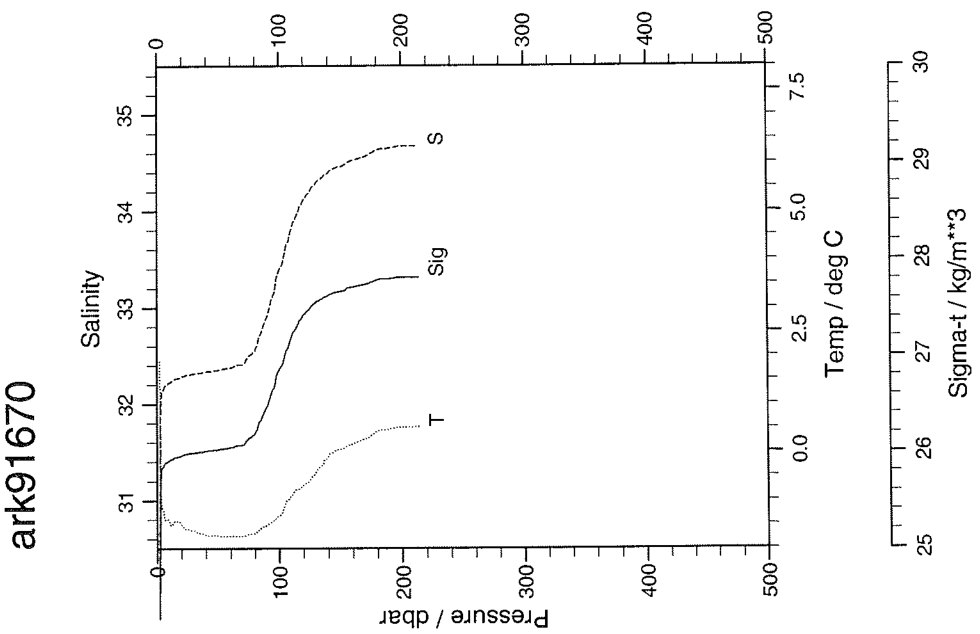
ark91660


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl

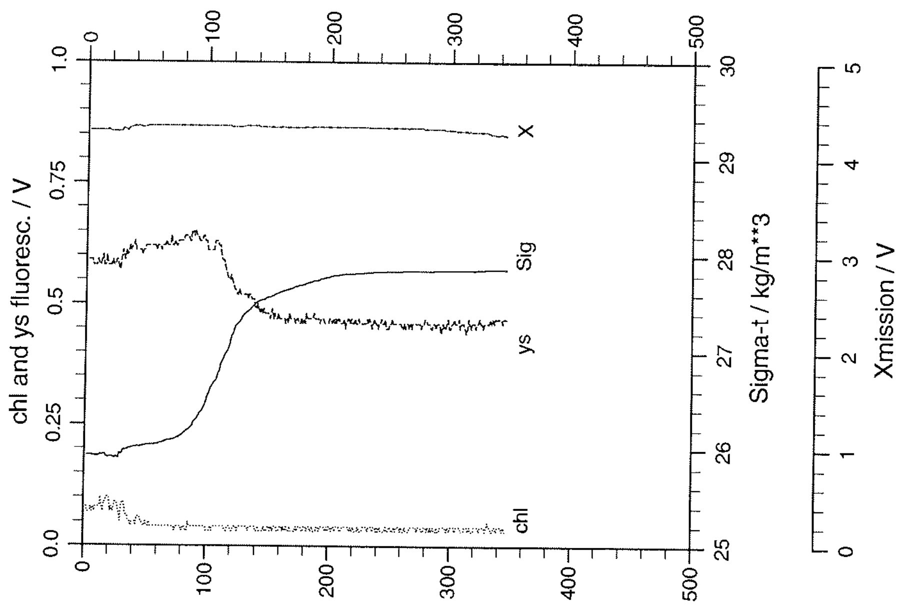

ark91660
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark91670


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl


ark91670
Salinity
Pressure / dbar
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T

ark91680



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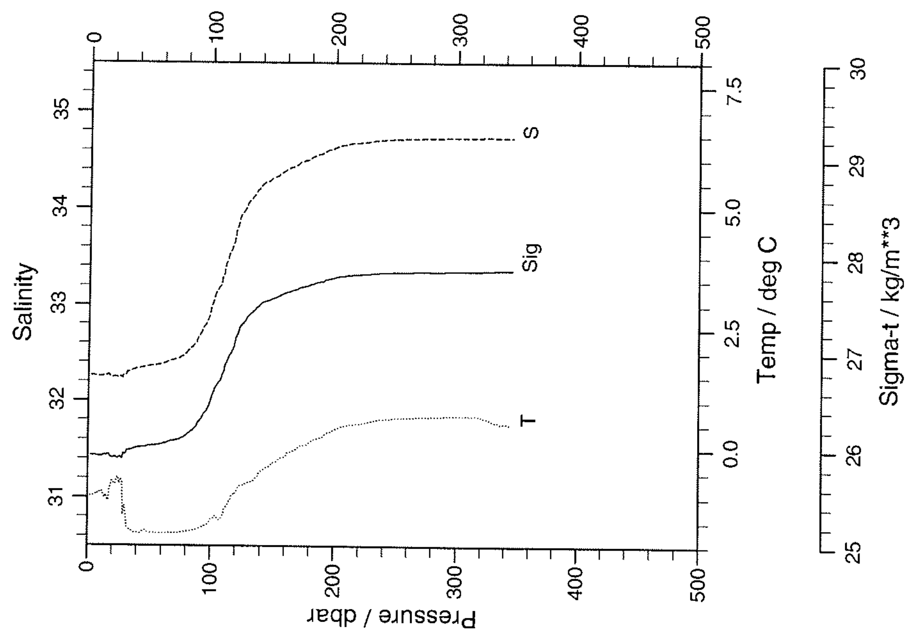
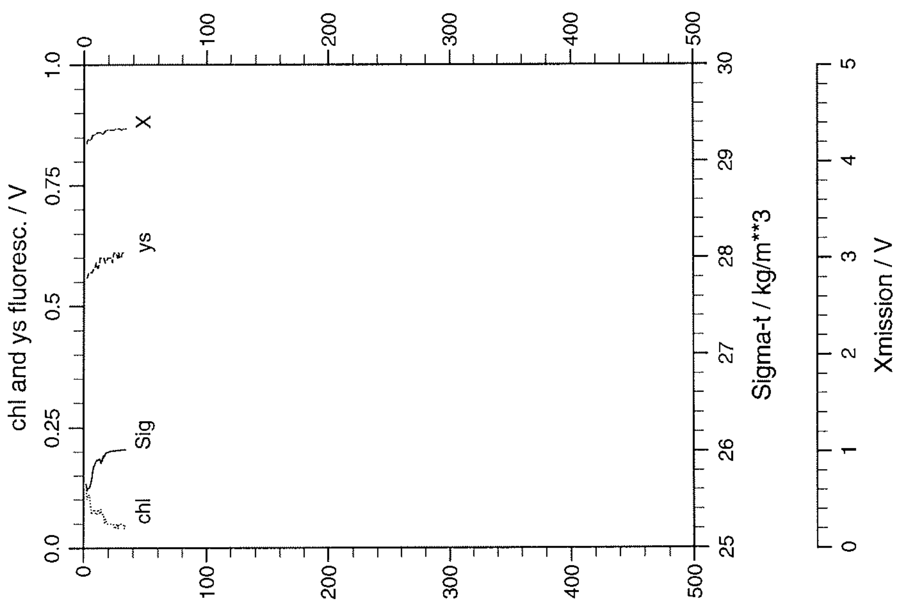
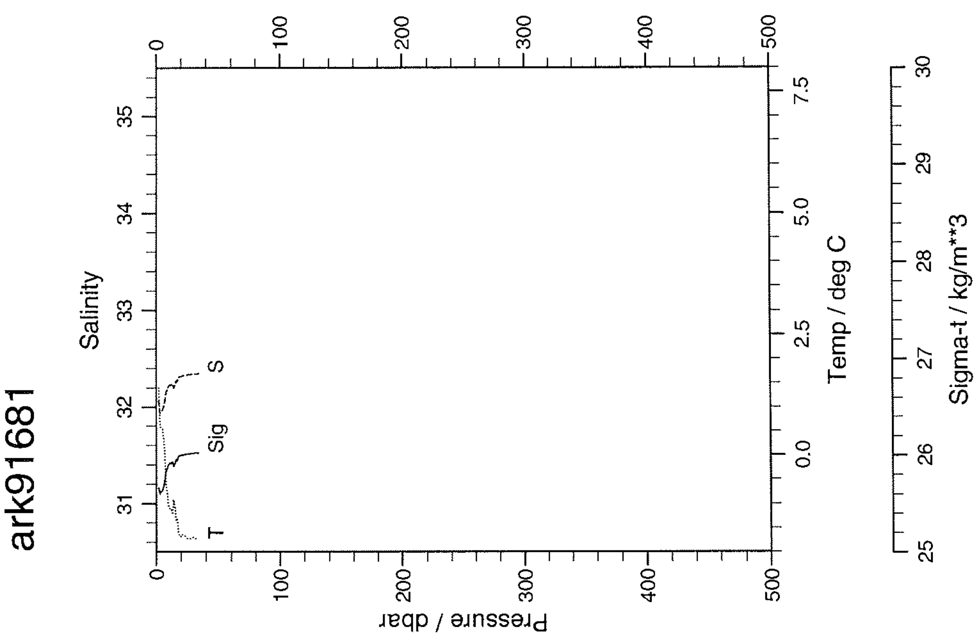
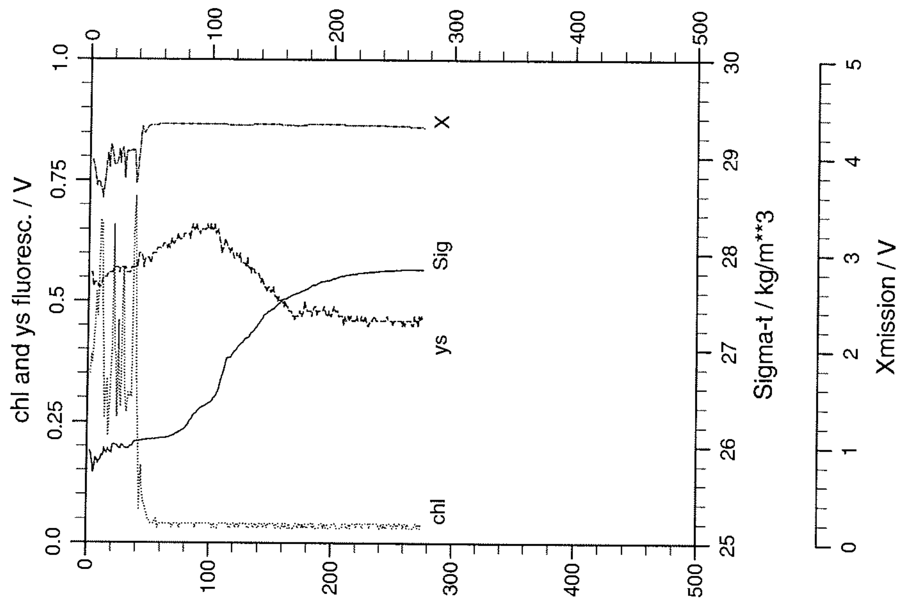


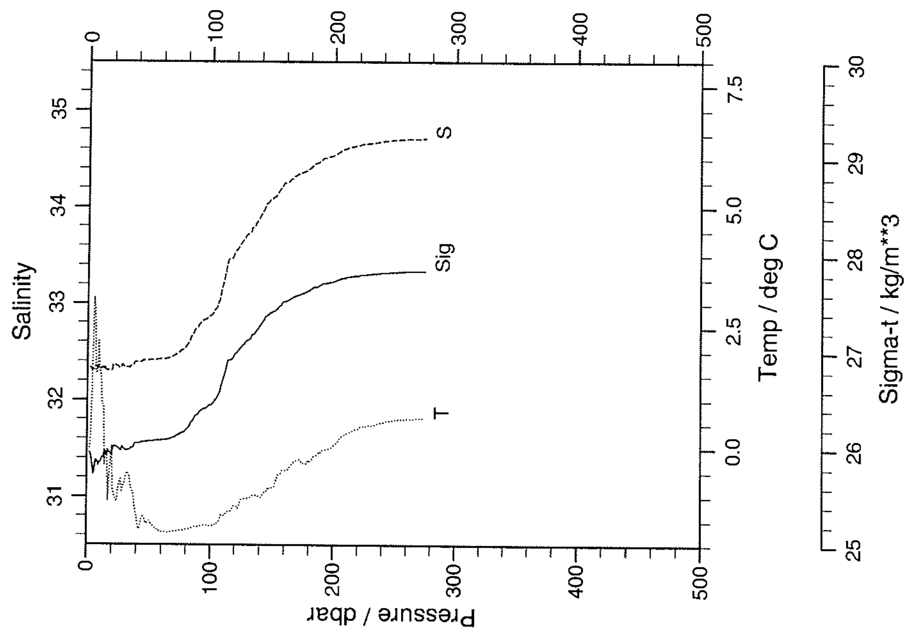
ark91681


chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
chl
Sig
ys
X
0
100
200
300
400
500
25
26
27
28
29
30
Sigma-t / kg/m**3
0
1
2
3
4
5
Xmission / V

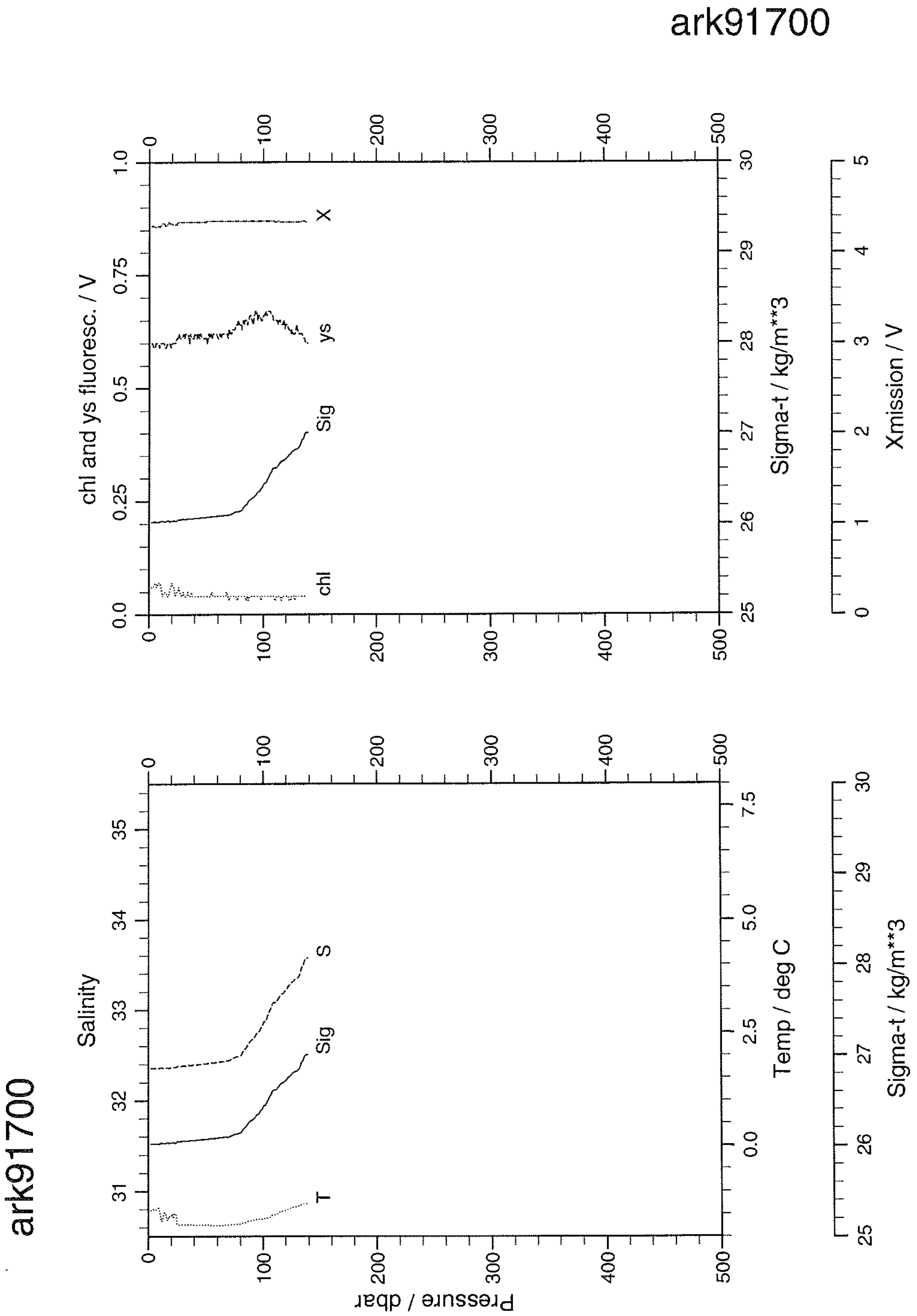

ark91681
Salinity
31
32
33
34
35
T
Sig
S
0
100
200
300
400
500
Pressure / dbar
0.0
2.5
5.0
7.5
Temp / deg C
25
26
27
28
29
30
Sigma-t / kg/m**3

ark91690



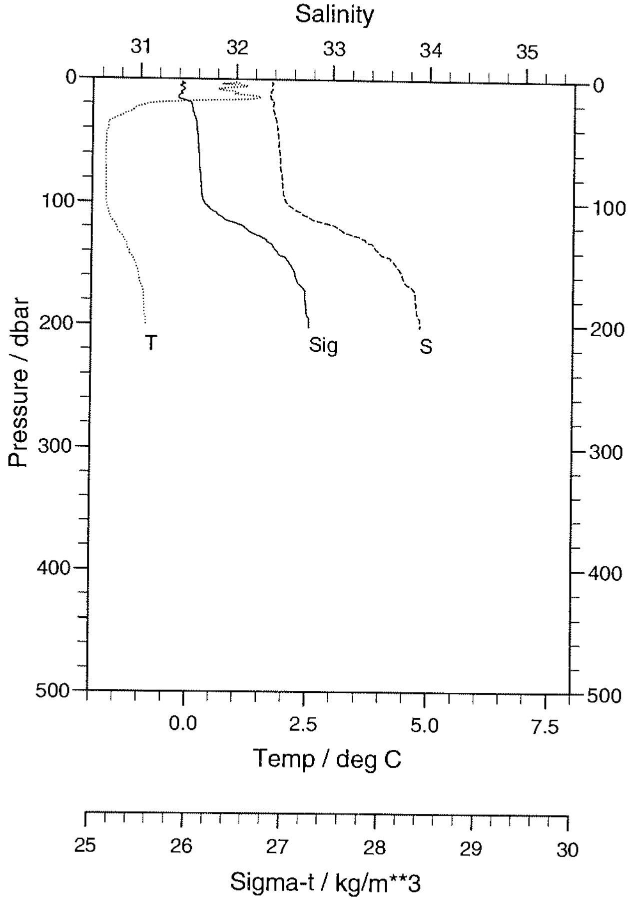


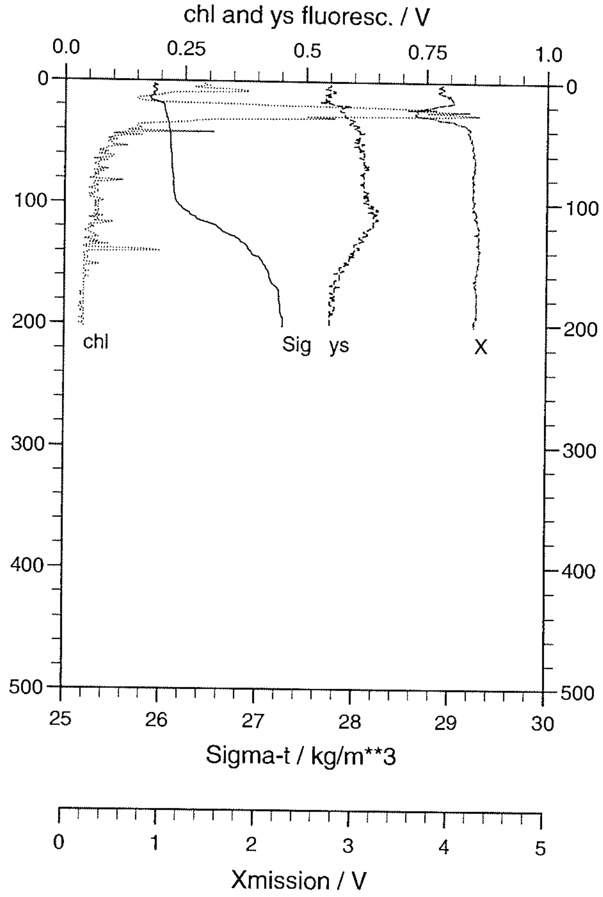
ark91690



ark91700
ark91700
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
chl
Sig
ys
X
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
T
Sig
S

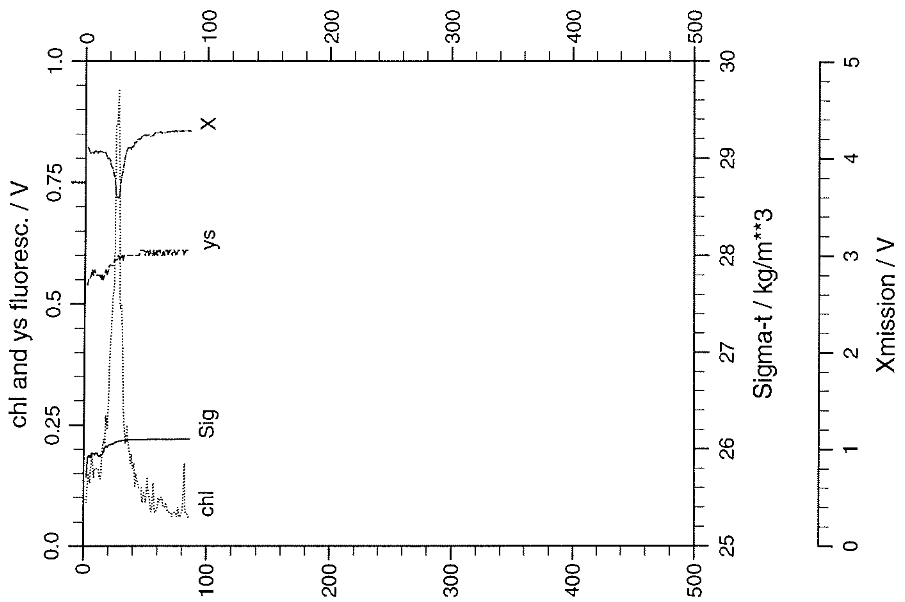
ark91710





ark91710

ark91720



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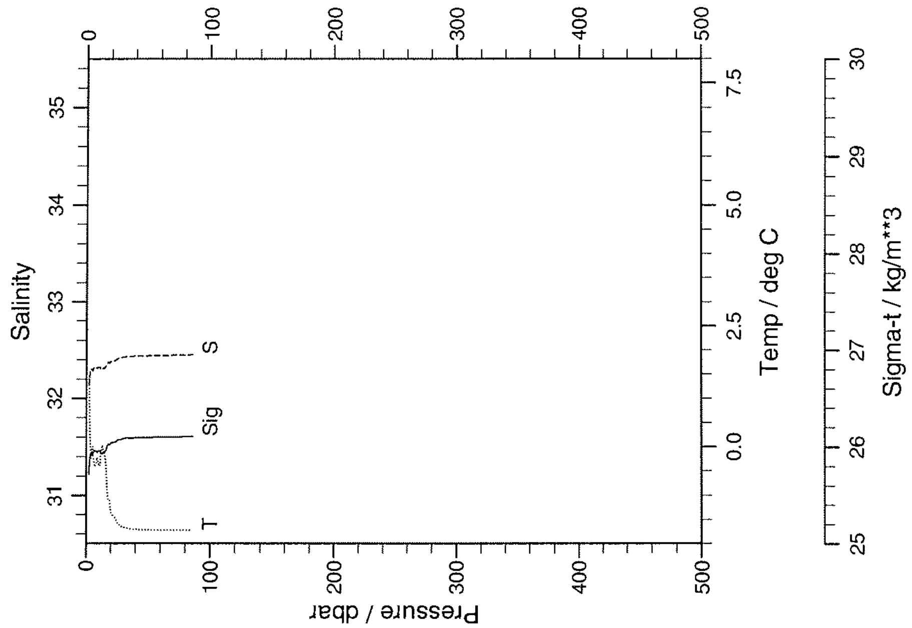
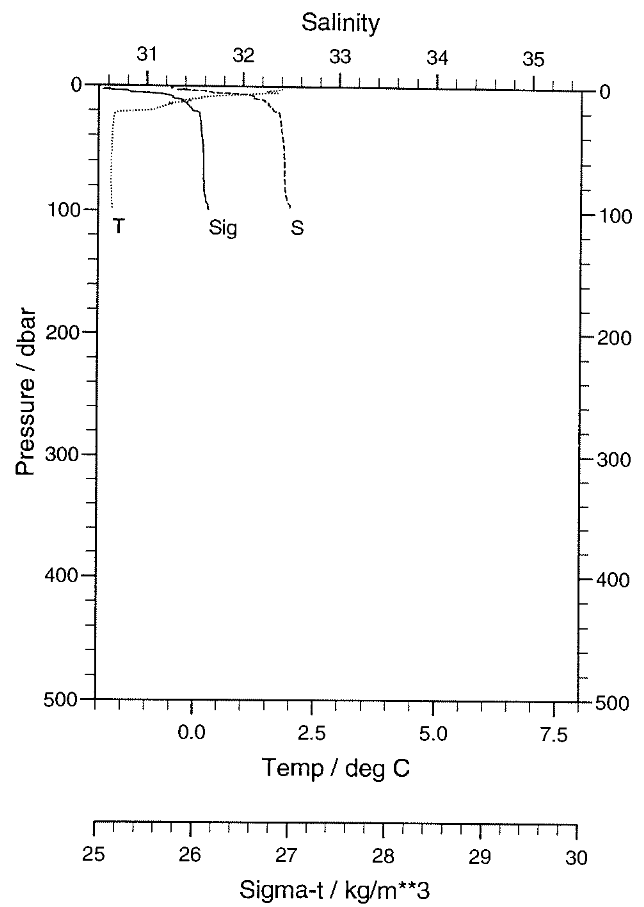
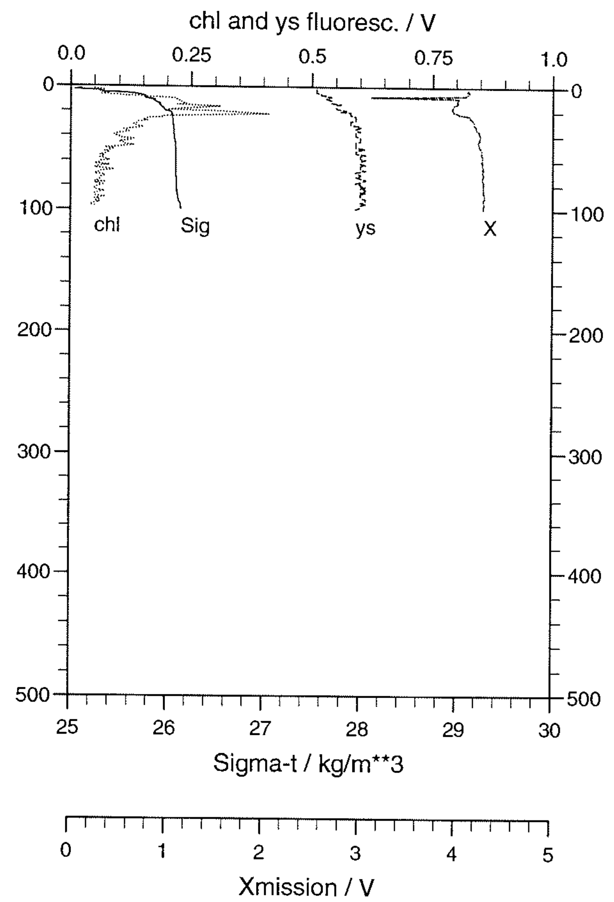


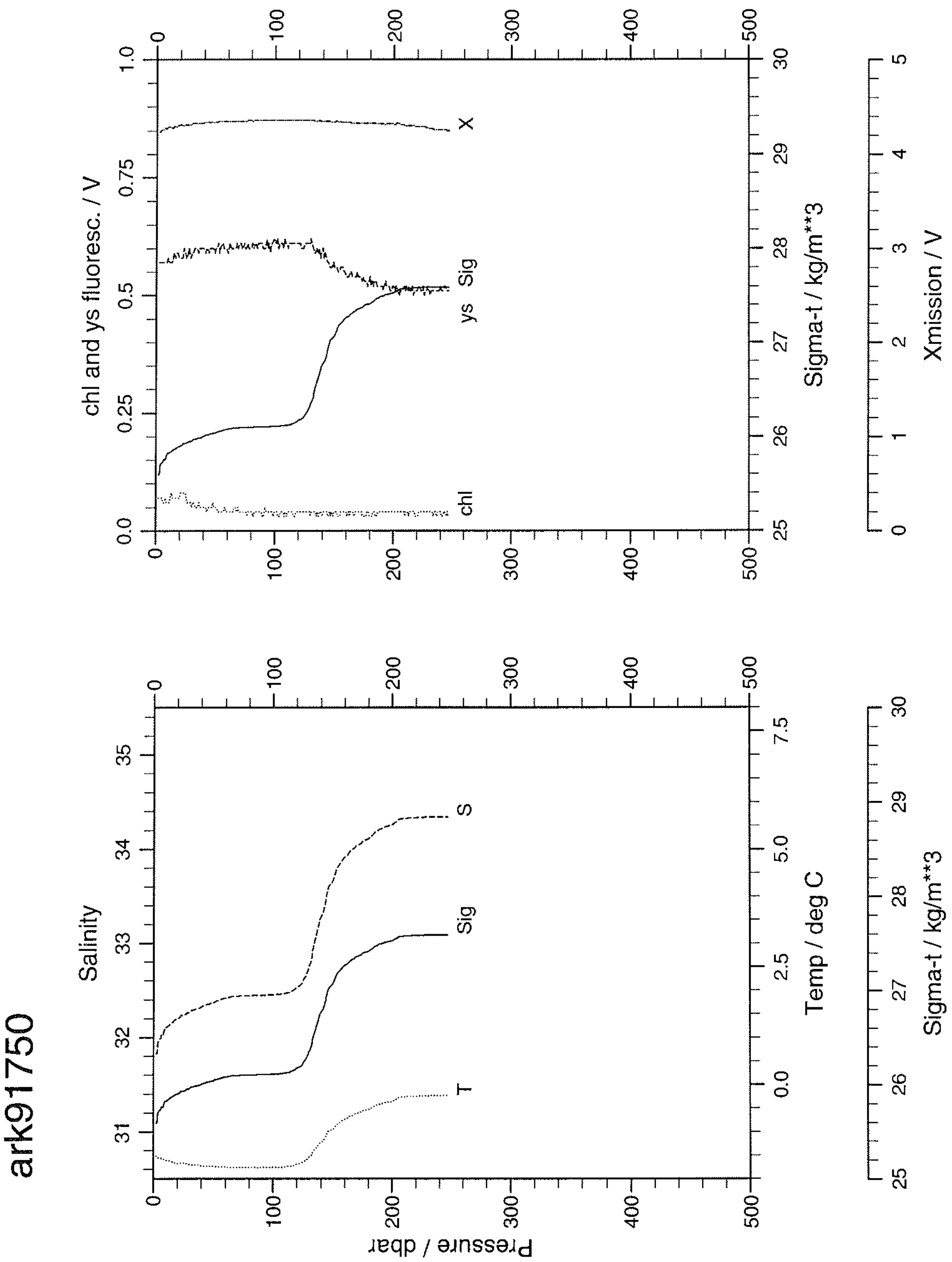
ark91730



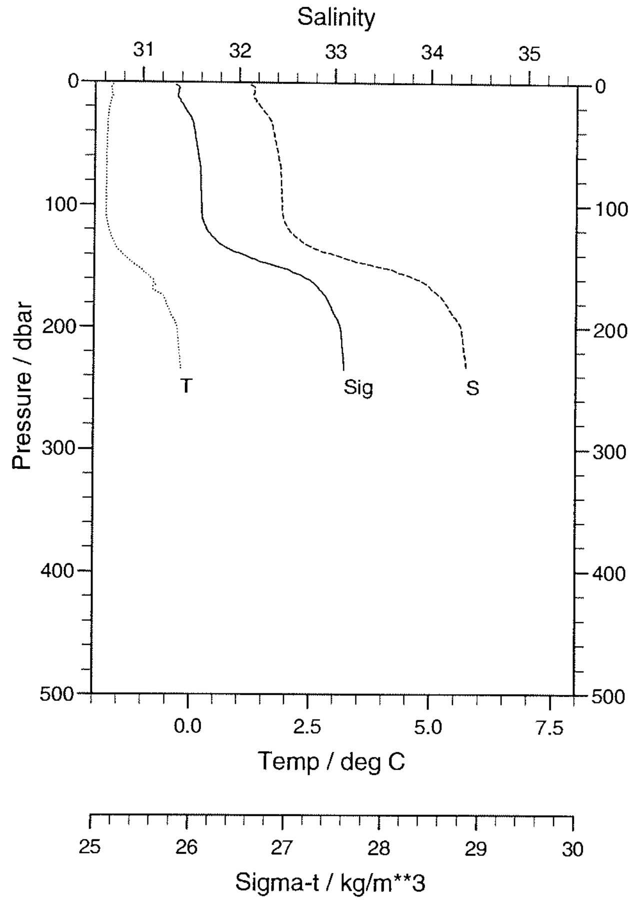


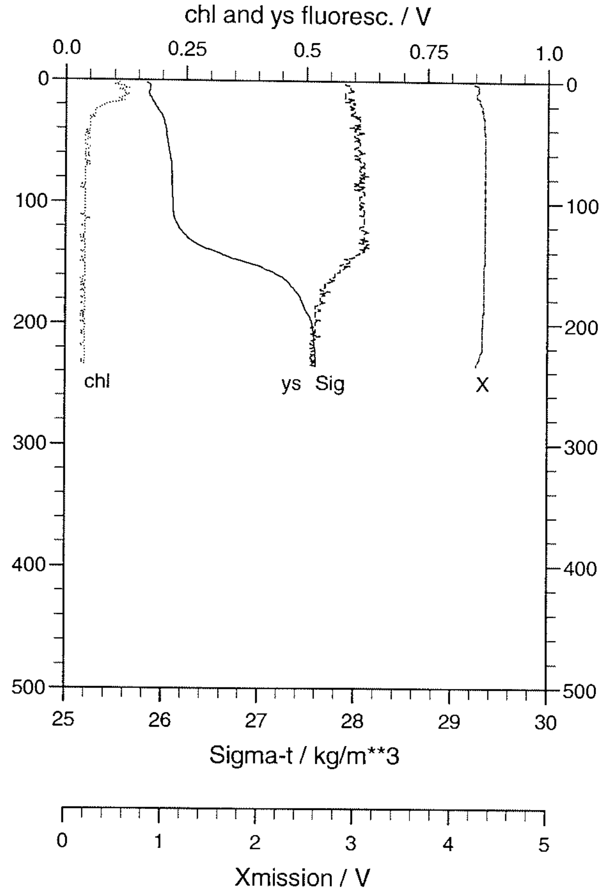
ark91730

ark91750


ark91750
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

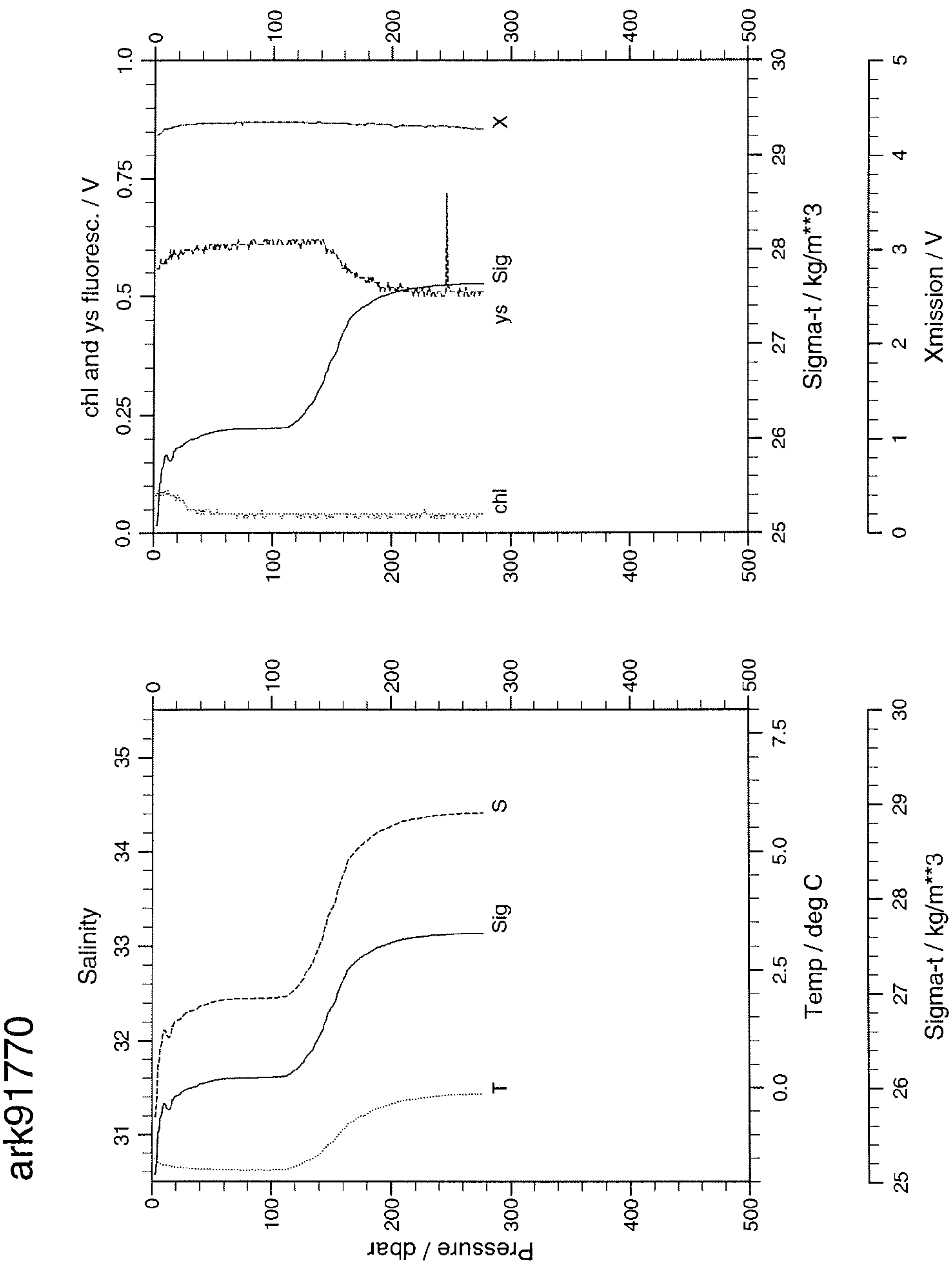
ark91760



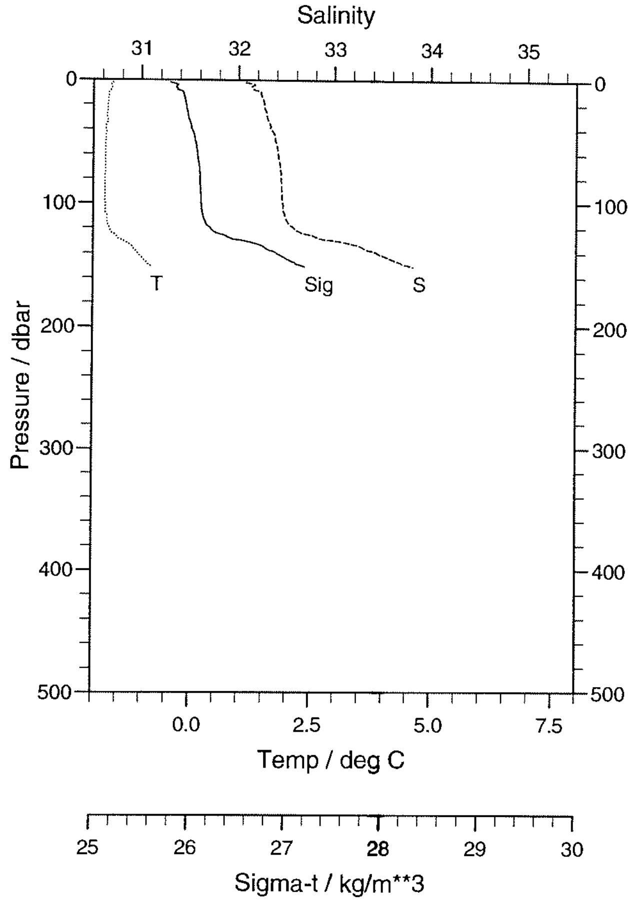


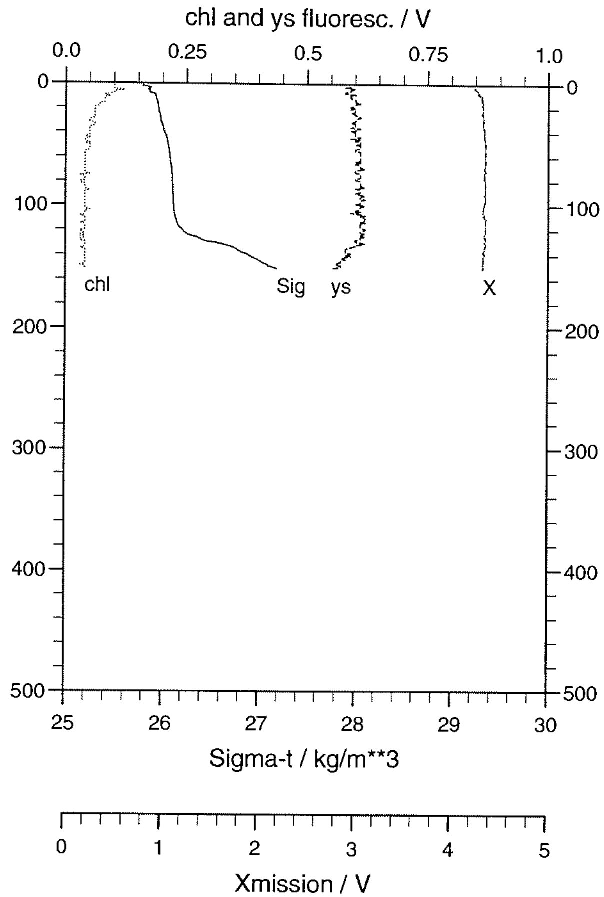
ark91760

ark91770

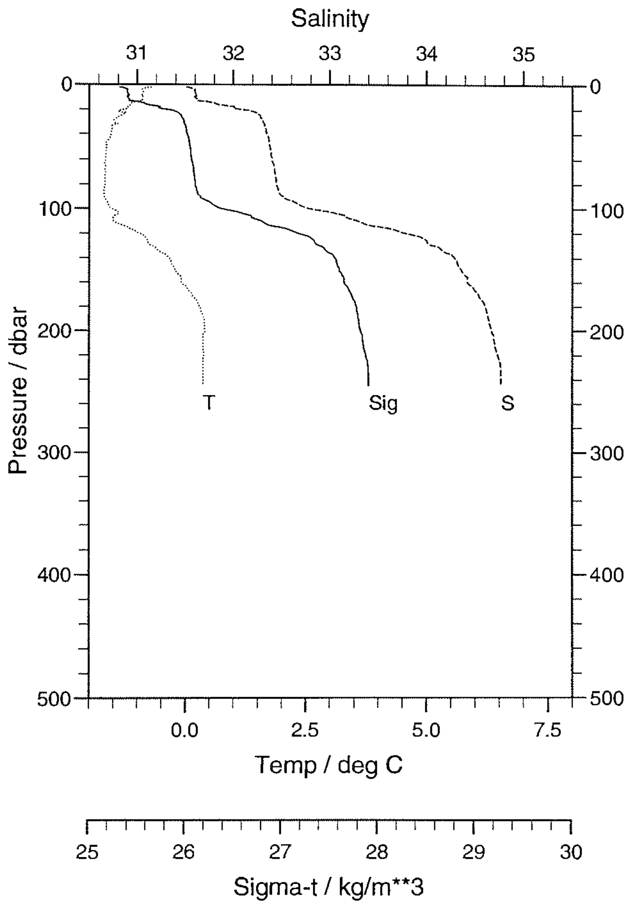

ark91770
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

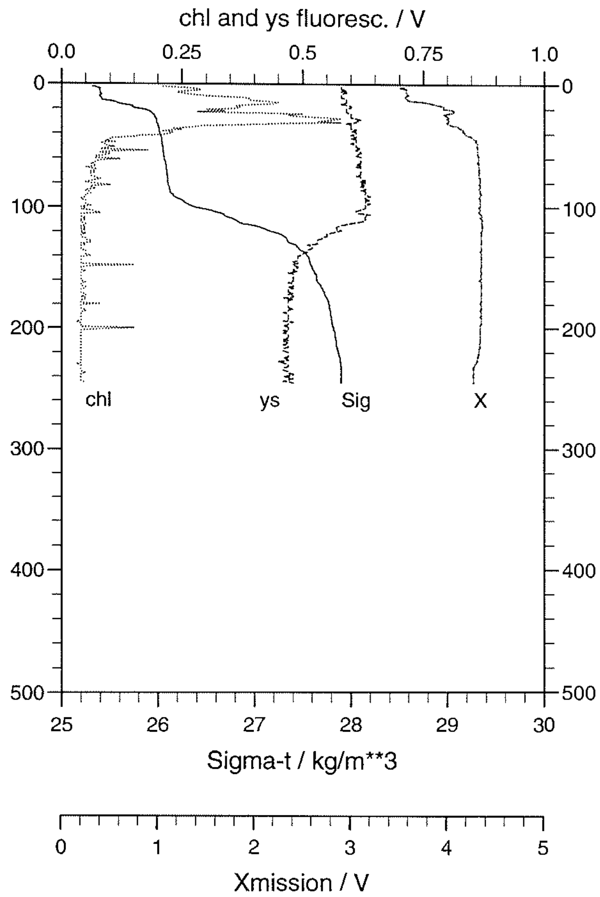
ark91780


Salinity
31
32
33
34
35
T
Sig
S
Pressure / dbar
0
100
200
300
400
500
0.0
2.5
5.0
7.5
Temp / deg C
25
26
27
28
29
30
Sigma-t / kg/m**3


chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
chl
Sig
ys
X
0
100
200
300
400
500
25
26
27
28
29
30
Sigma-t / kg/m**3
0
1
2
3
4
5
Xmission / V

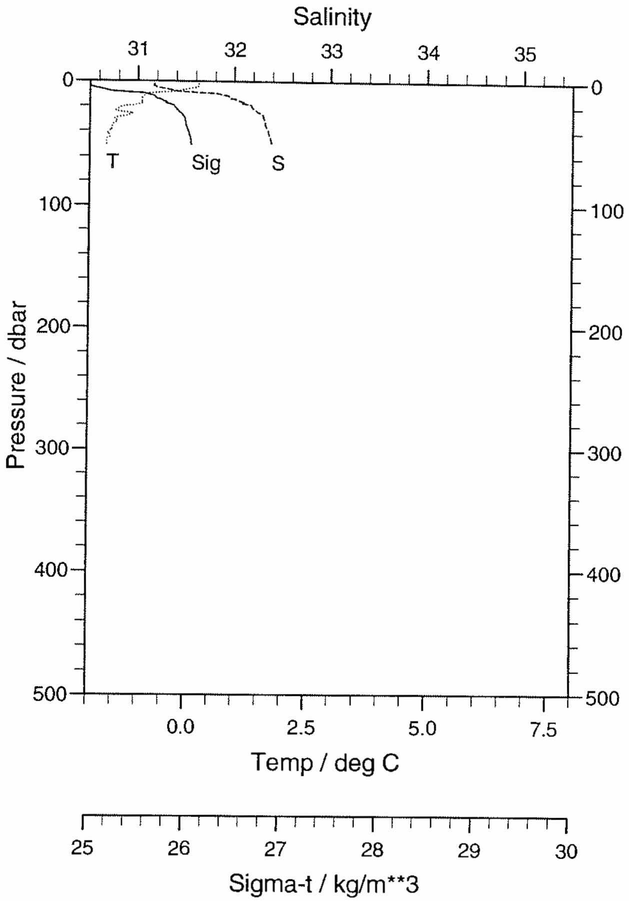
ark91790

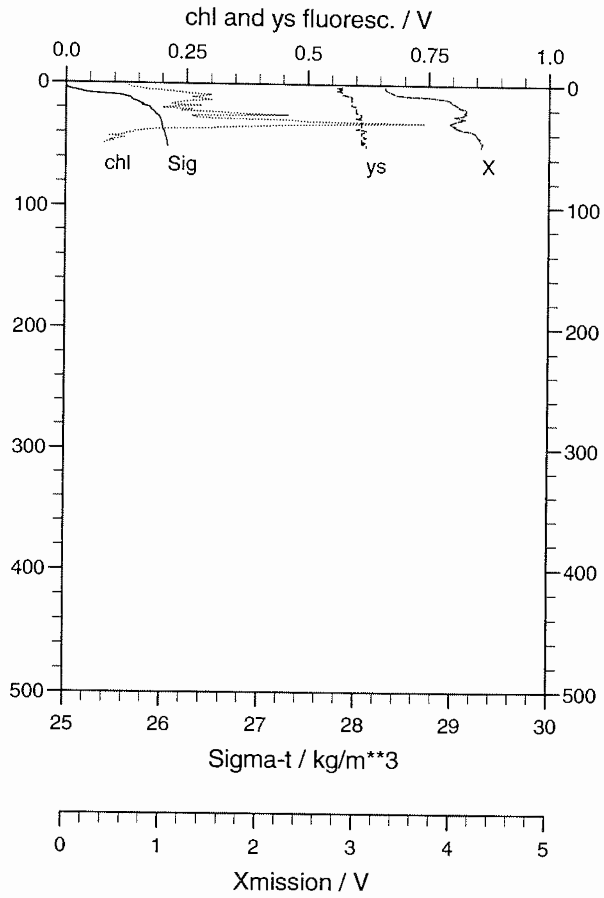




ark91790

ark91791

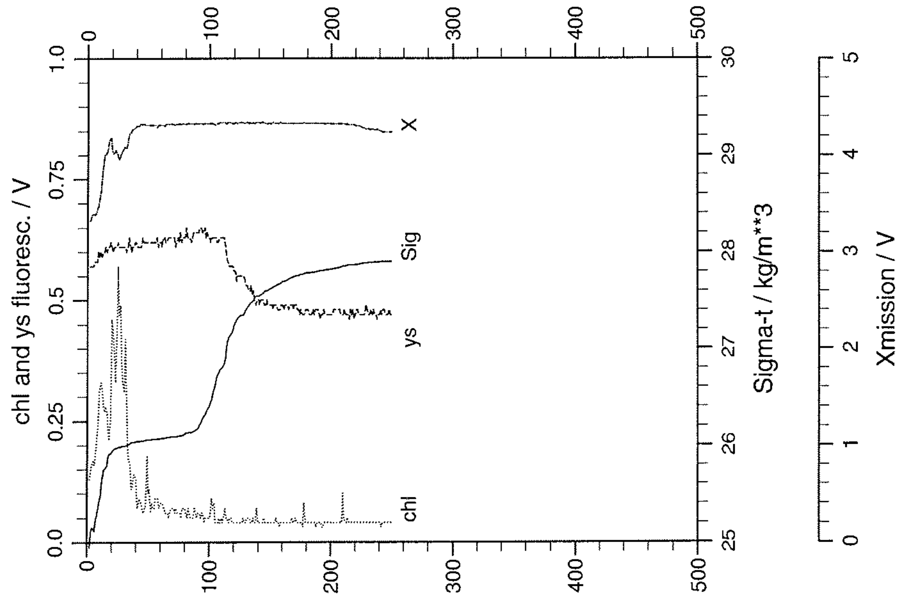




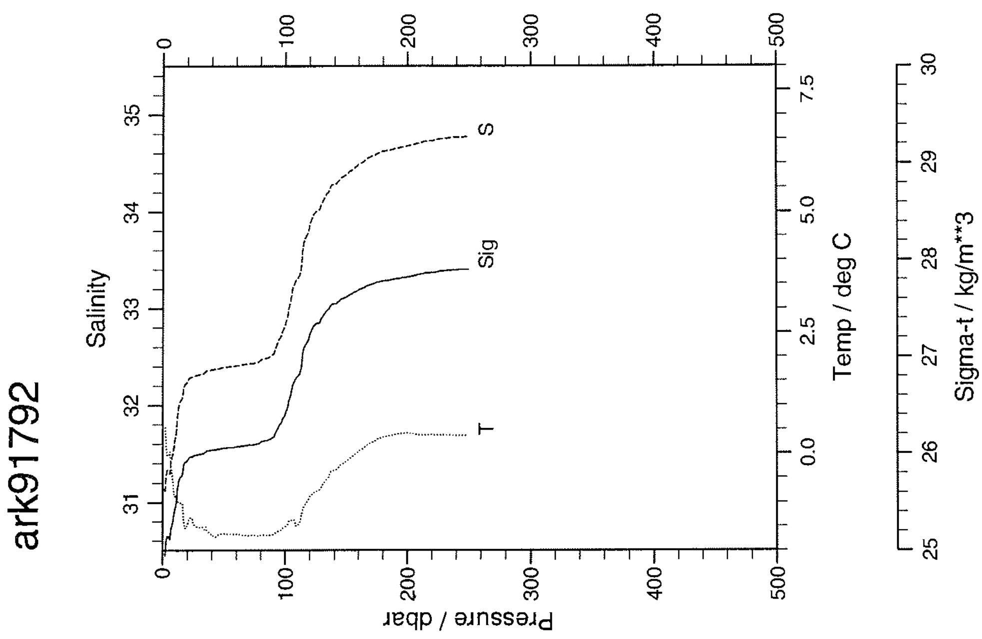
237

ark91791

ark91792

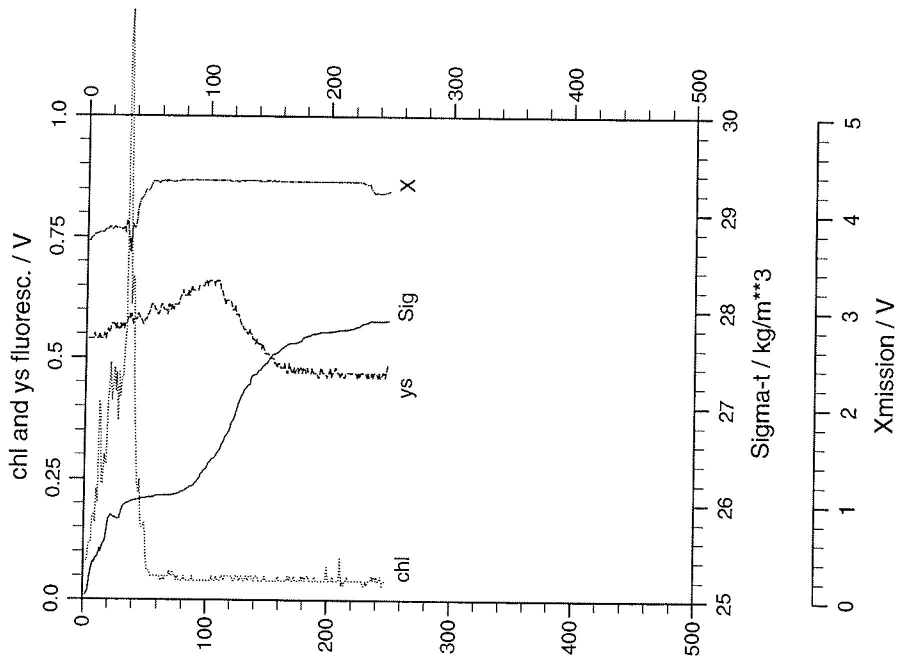


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl

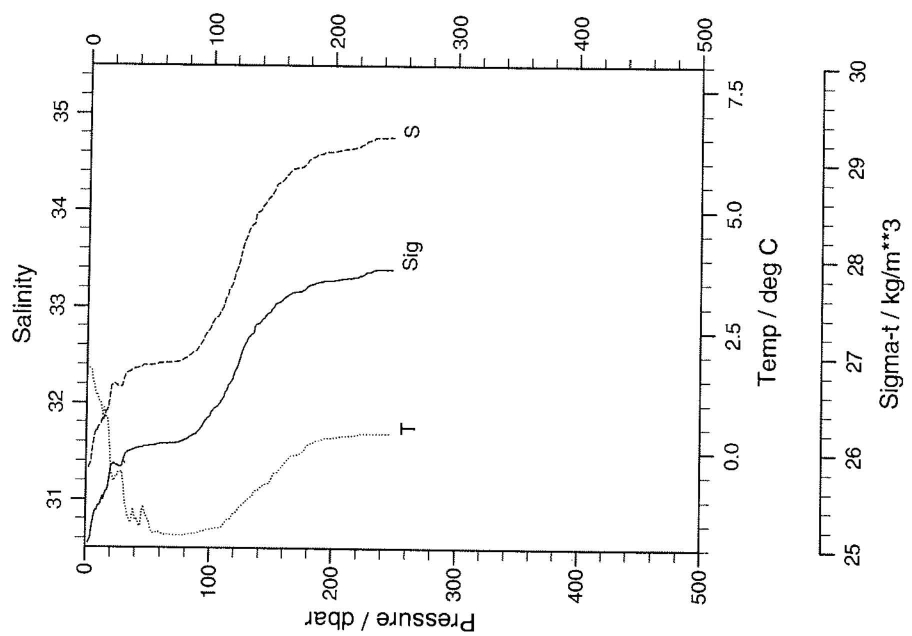


ark91792
Salinity
Pressure / dbar
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T

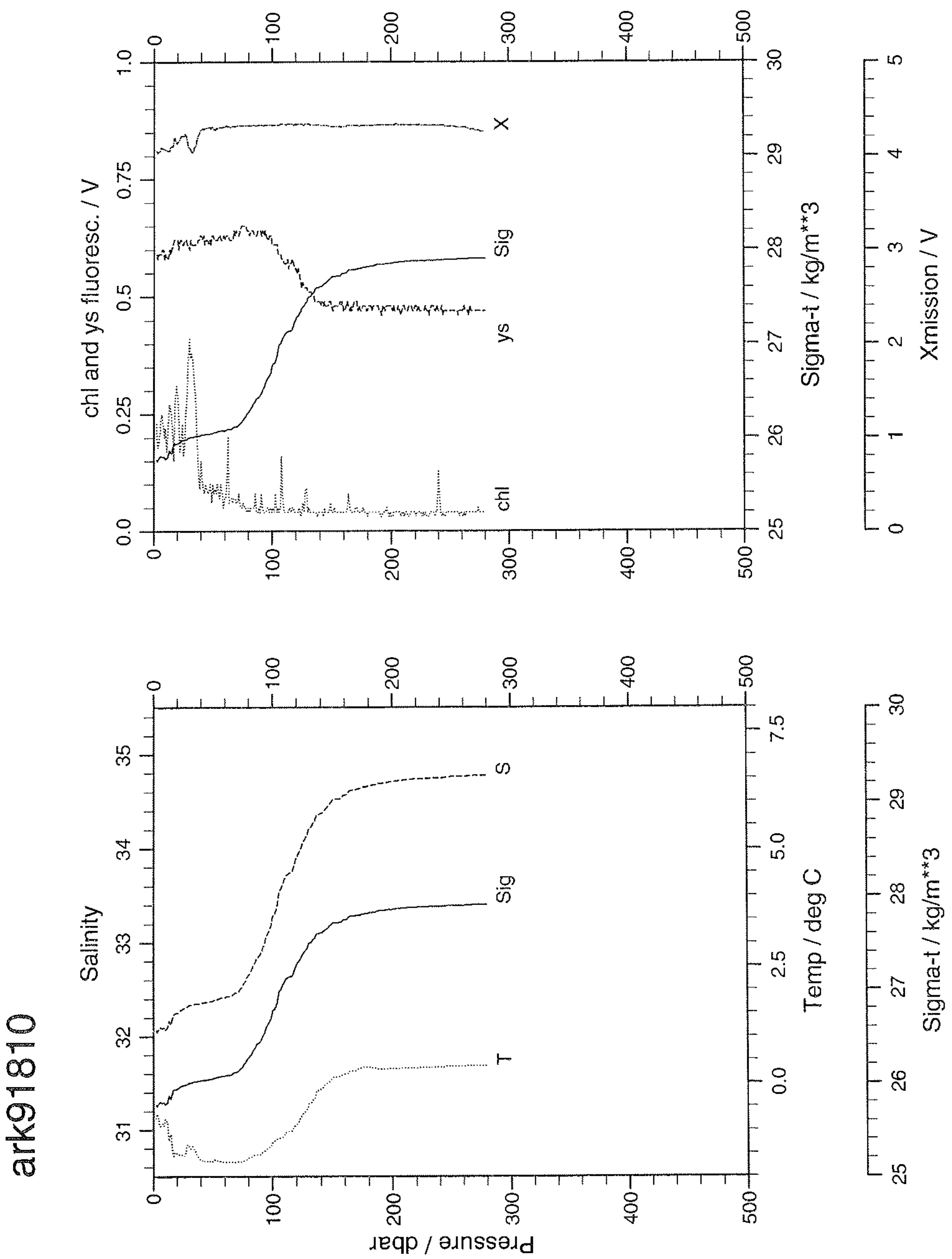
ark91800



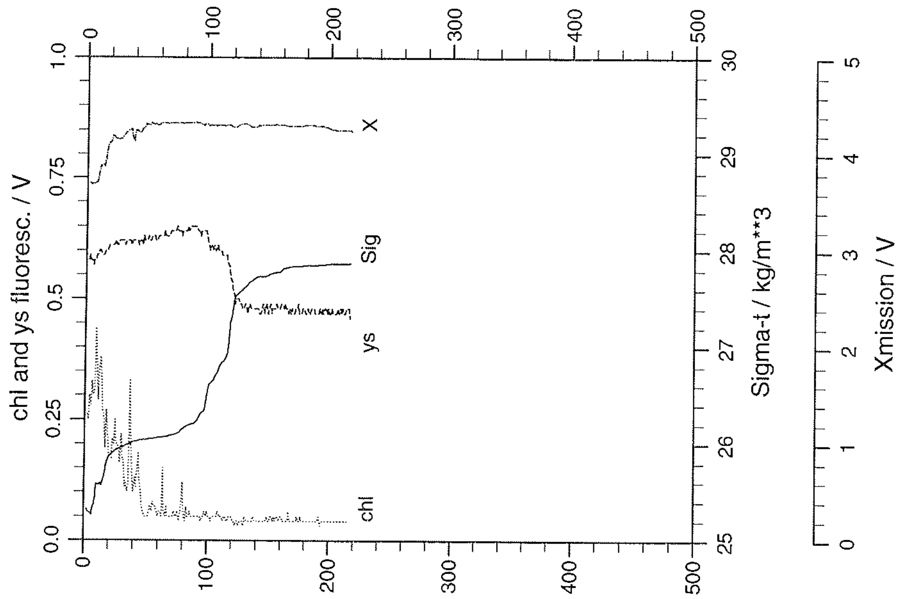
ark91800

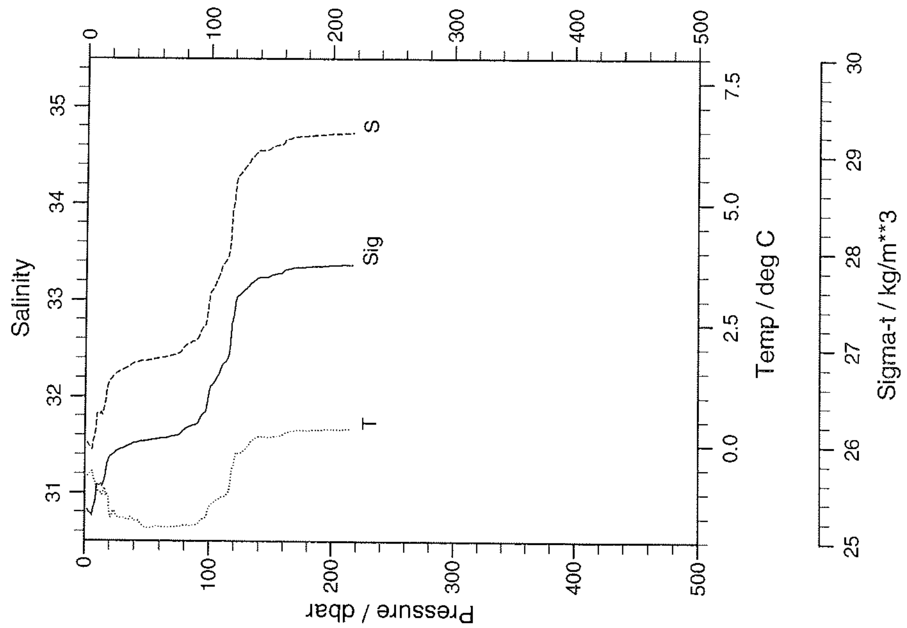


ark91810


ark91810
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T
Pressure / dbar

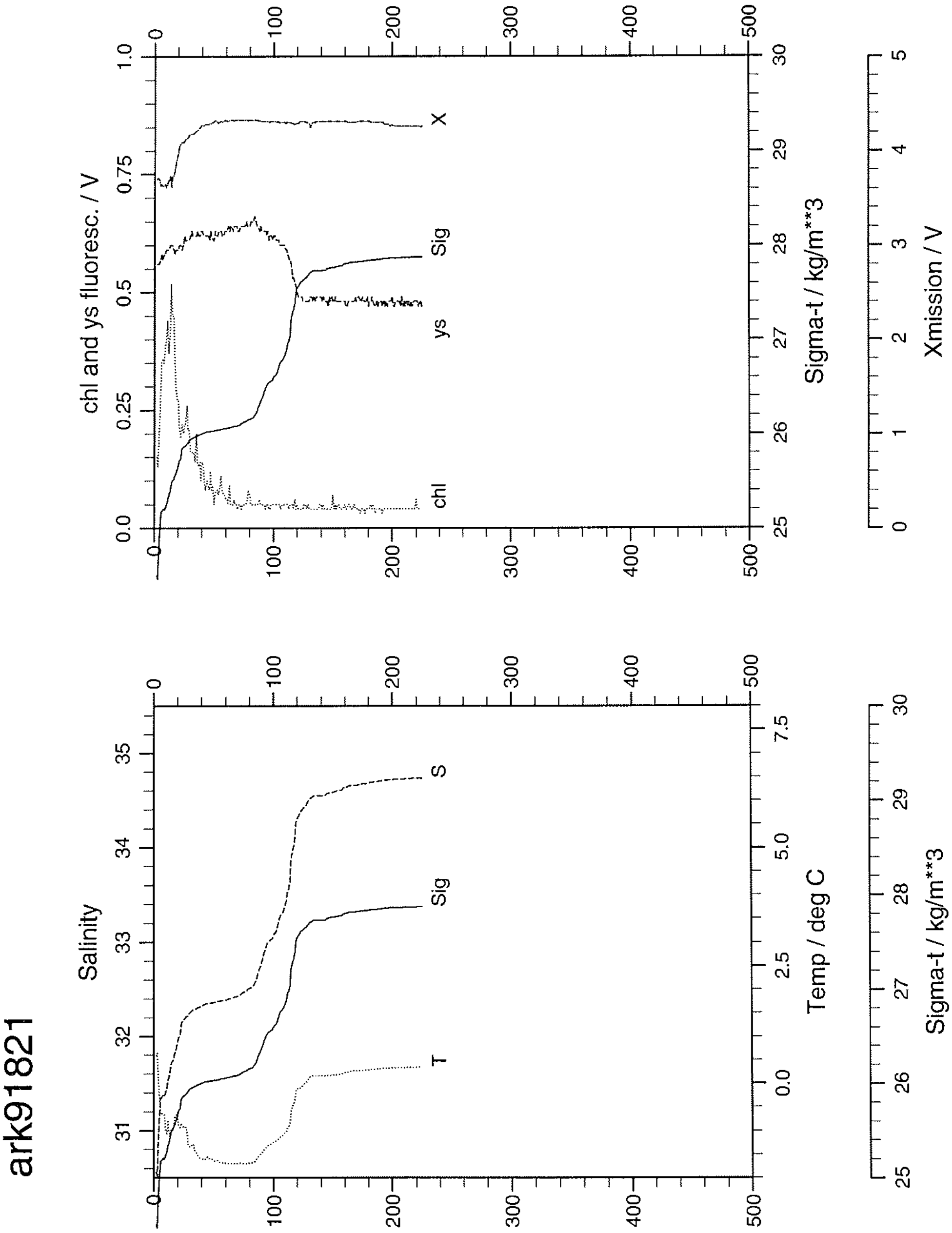
ark91820



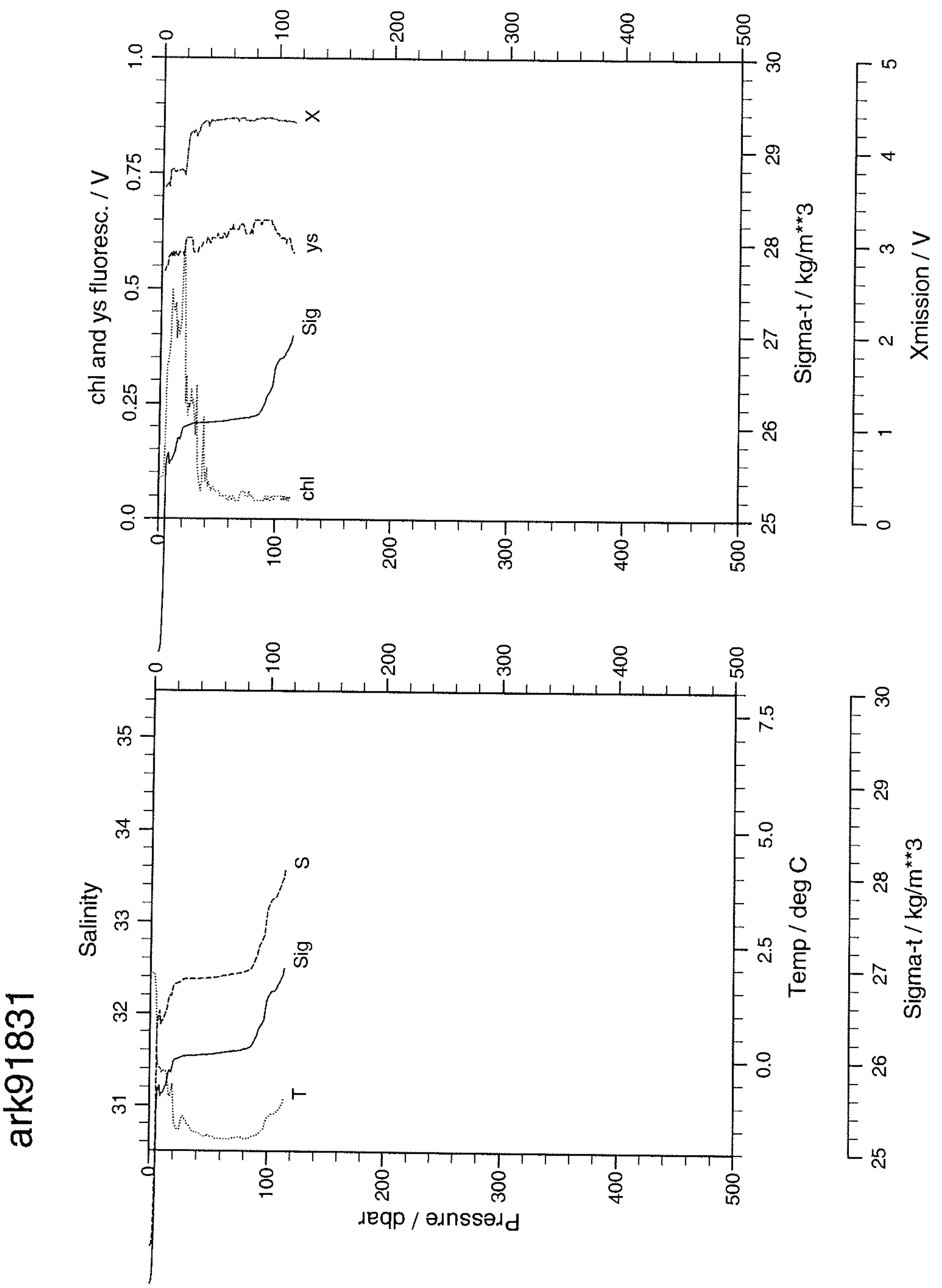


ark91820

ark91821

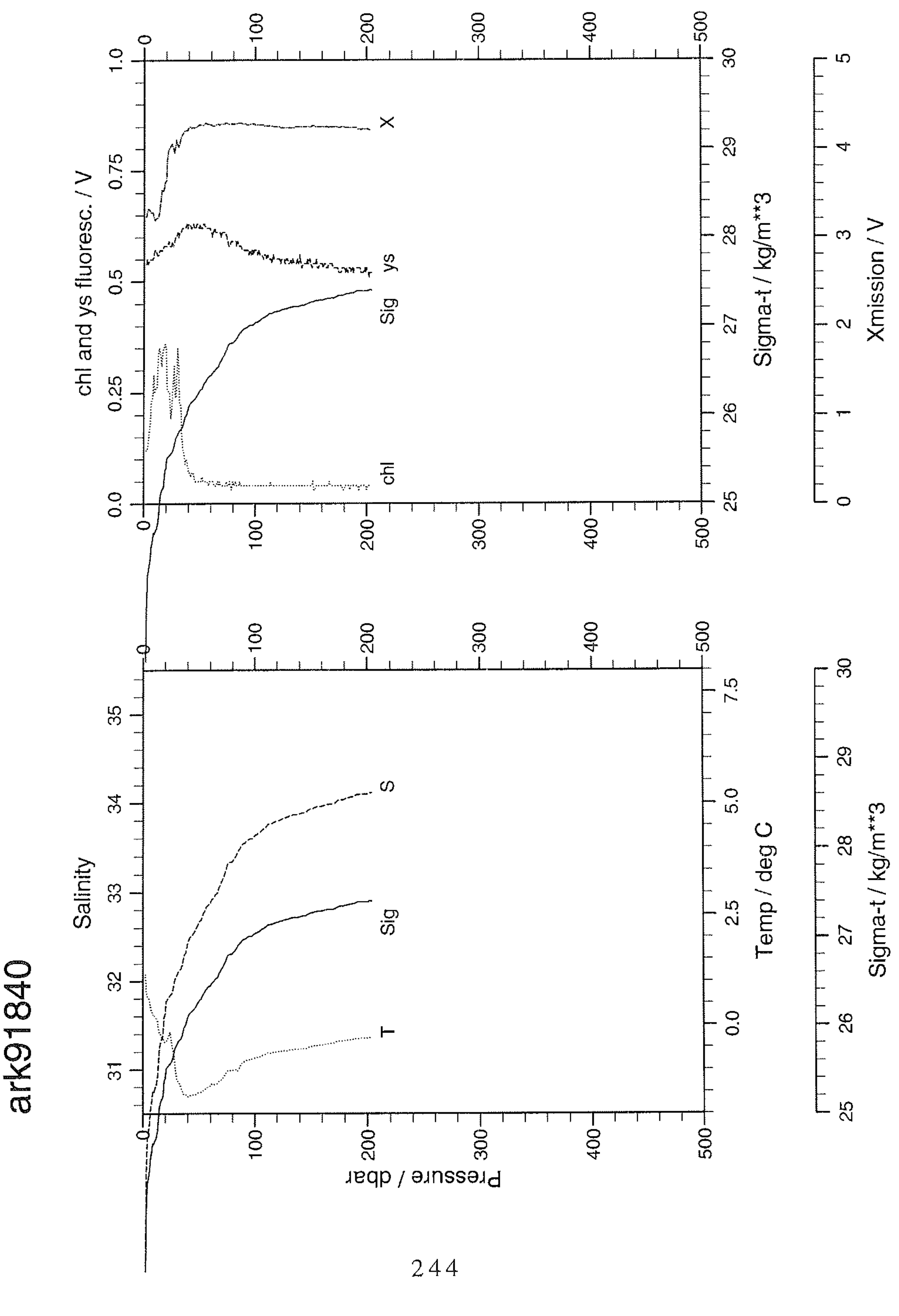

ark91821
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T
chl and ys fluoresc. / V
Xmission / V
X
ys
chl

ark91831

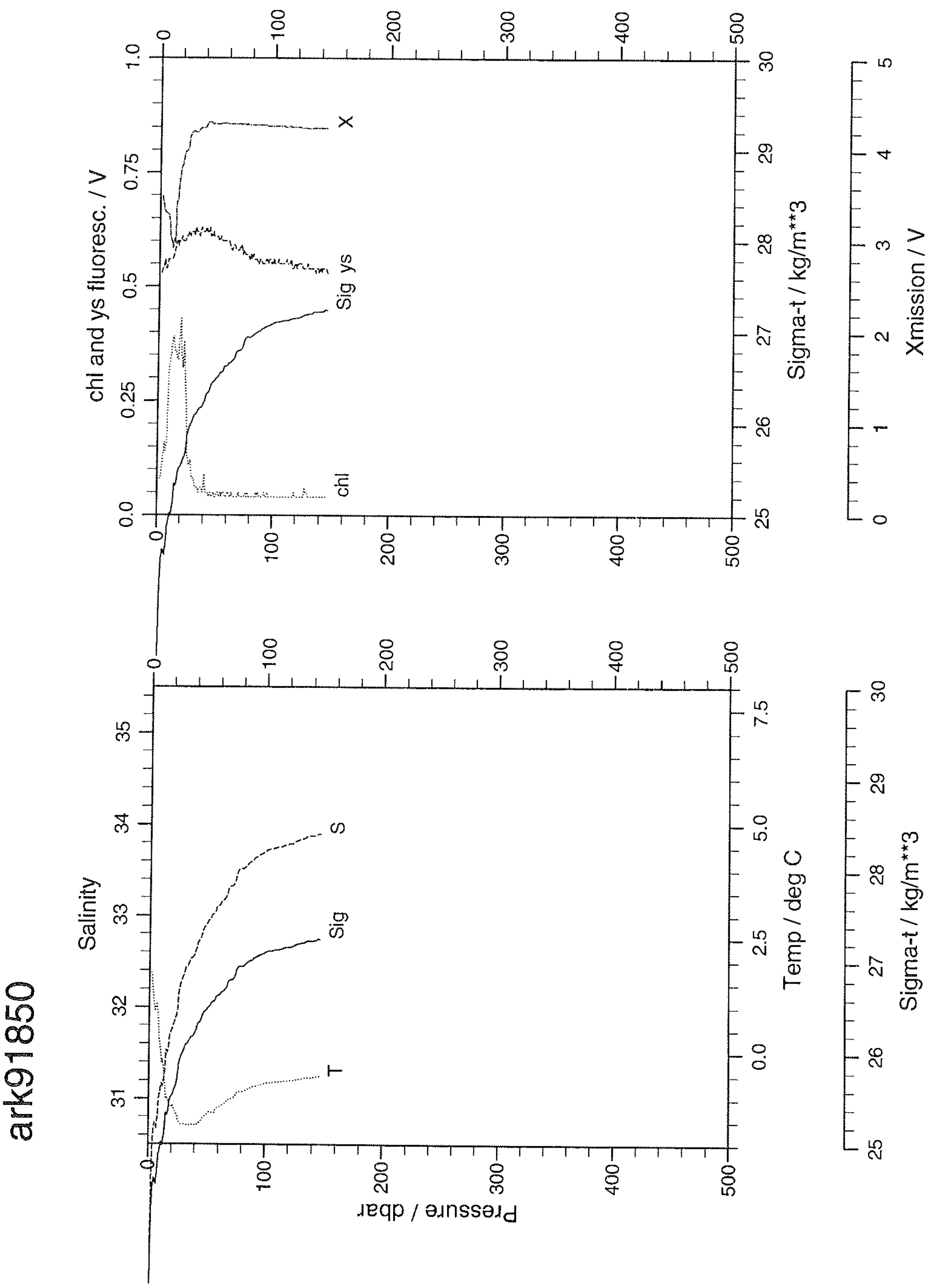


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Pressure / dbar
S
Sig
T
ark91831

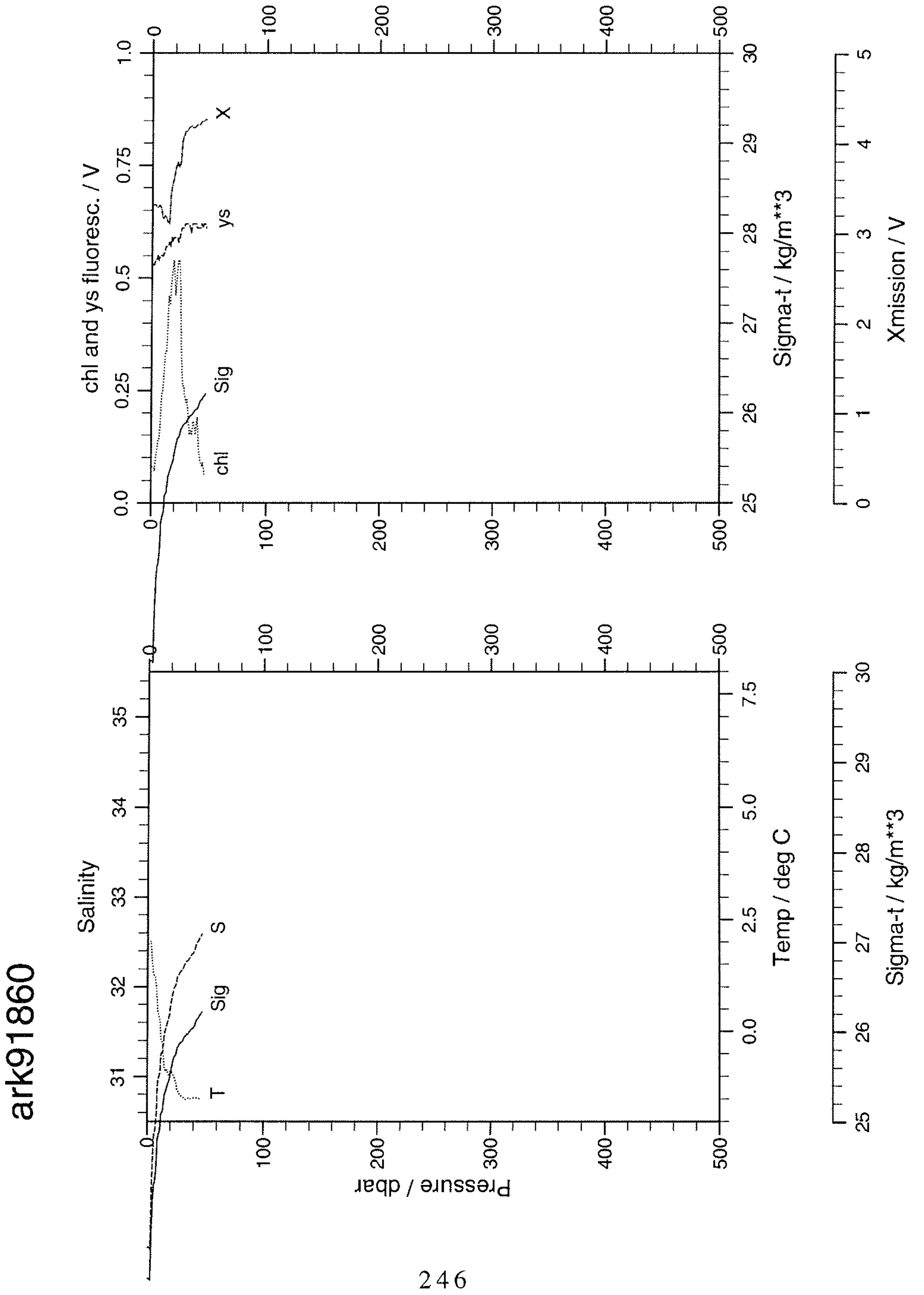
ark91840


ark91840
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T
Pressure / dbar

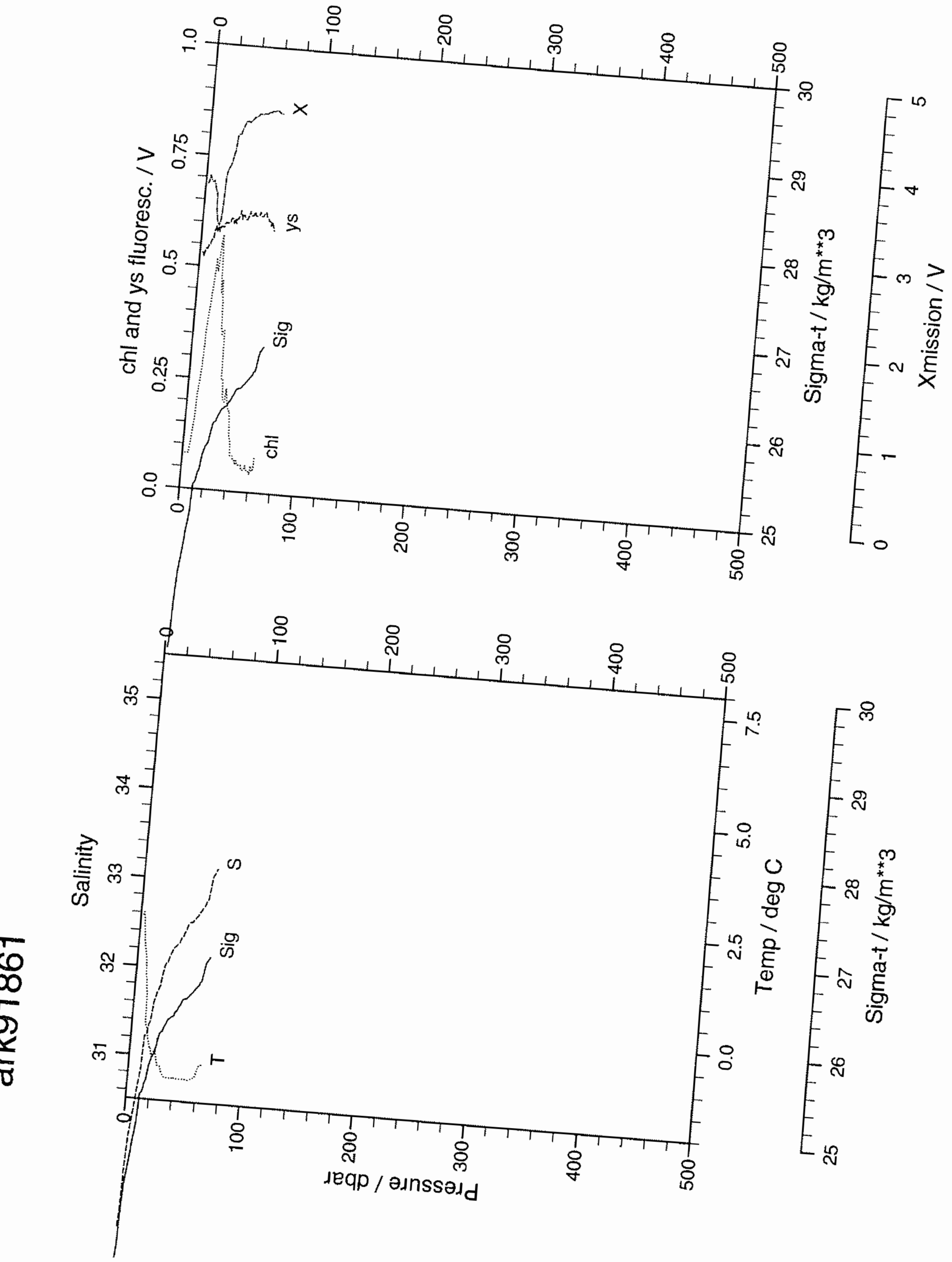
ark91850


ark91850
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

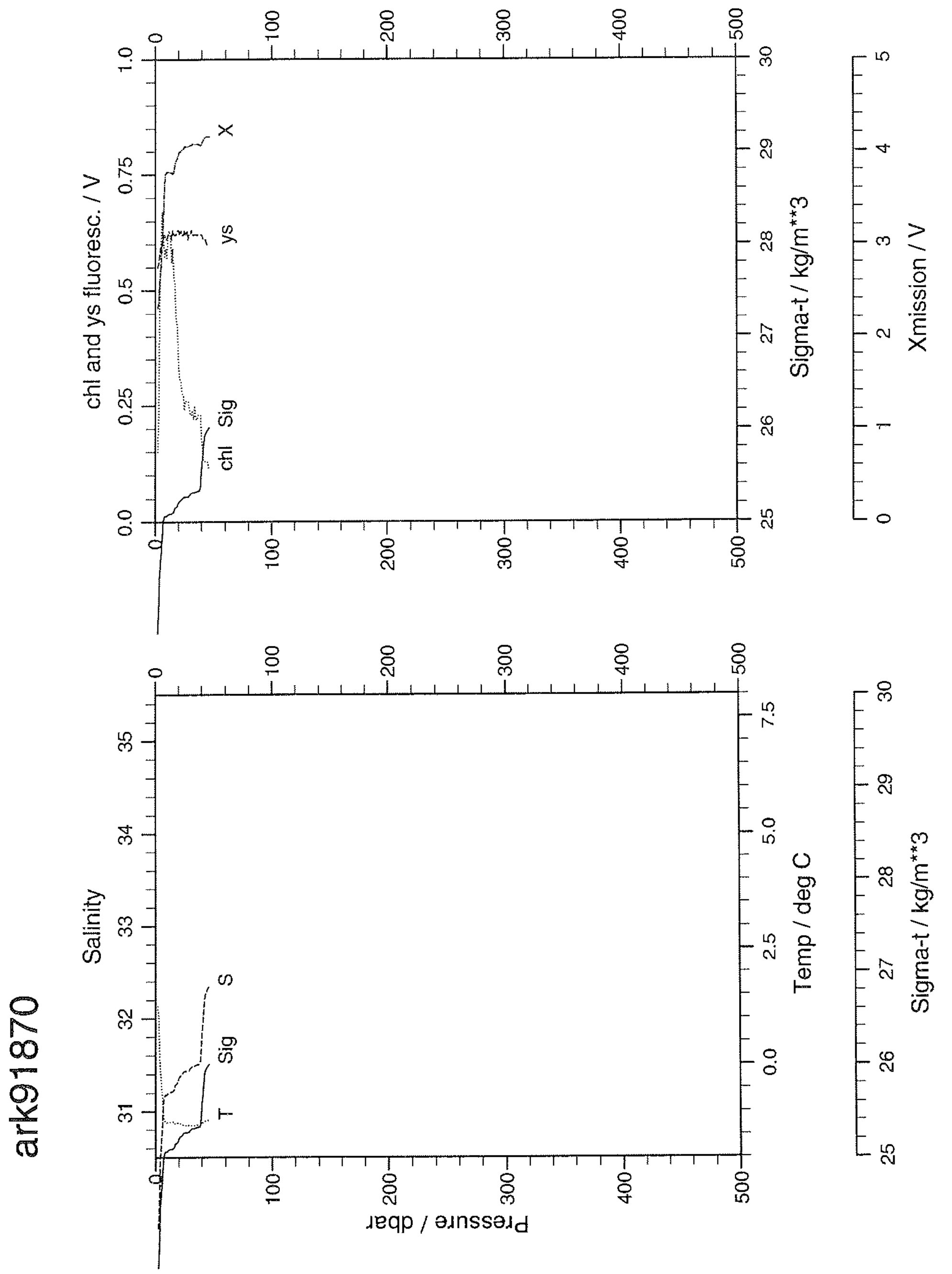
ark91860


ark91860
chl and ys fluoresc. / V
X
ys
Sig
chl
Sigma-t / kg/m**3
Xmission / V
Salinity
S
Sig
T
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar

ark91861

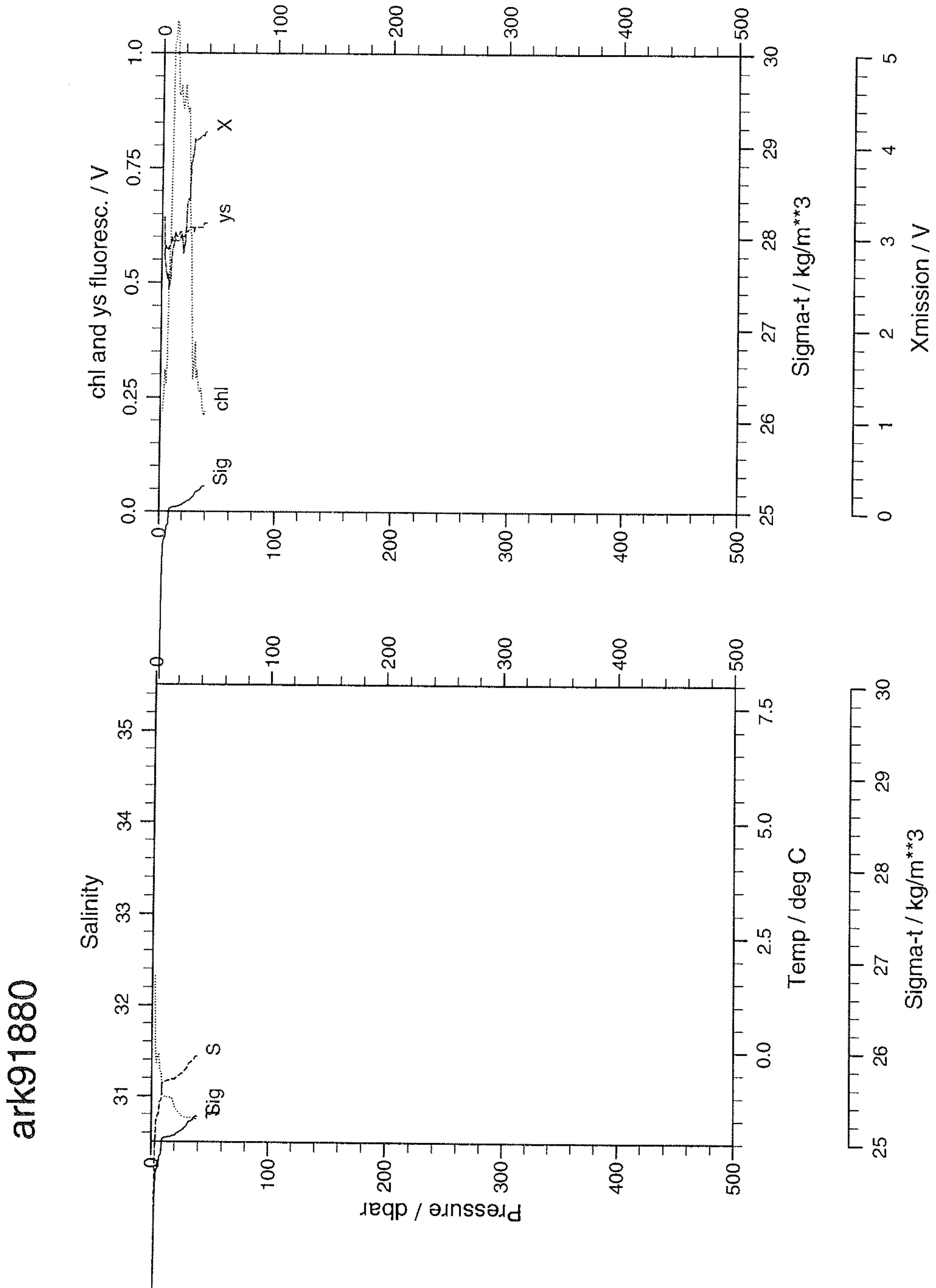

ark91861
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Pressure / dbar
S
Sig
T

ark91870

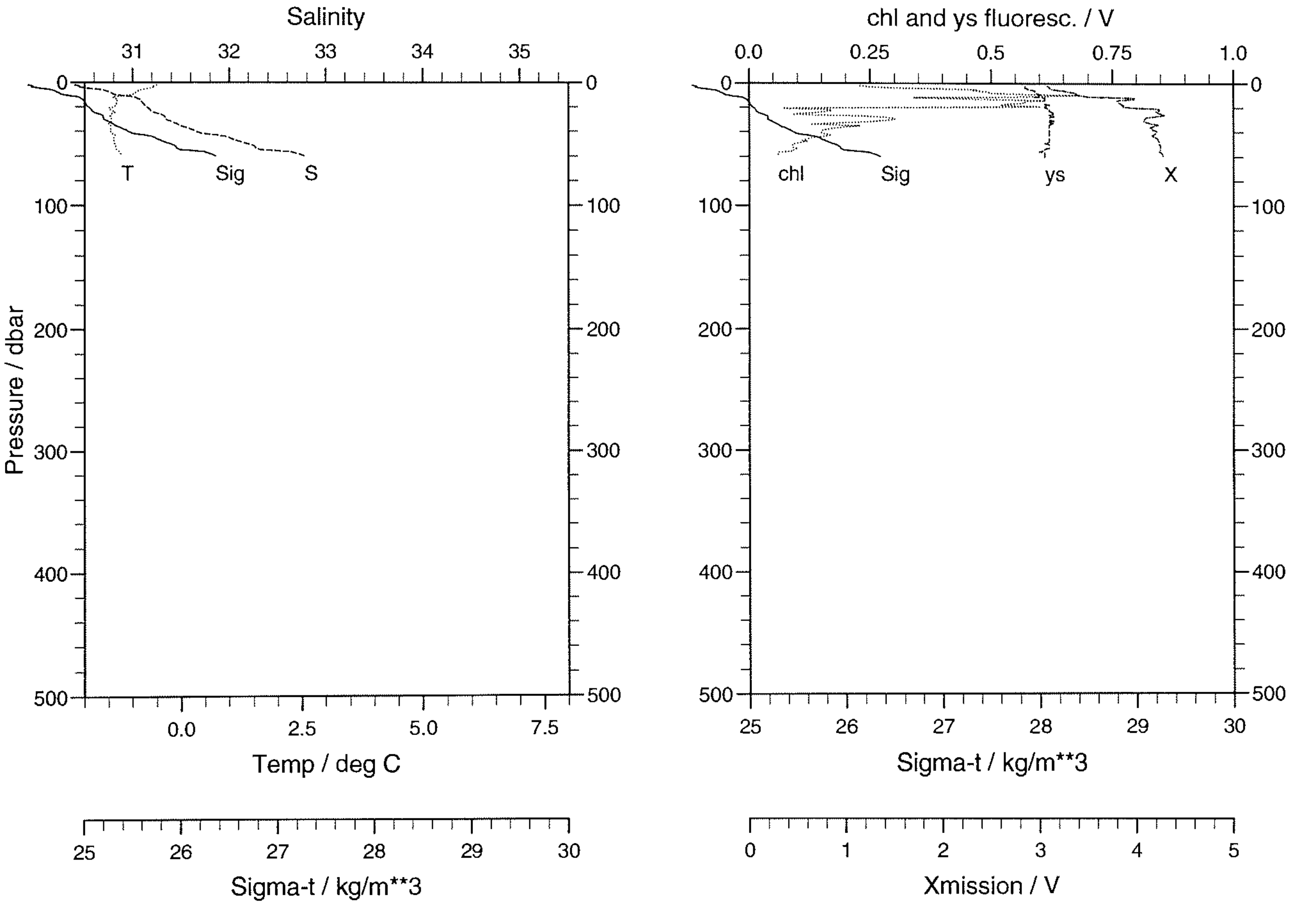


ark91870
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark91880

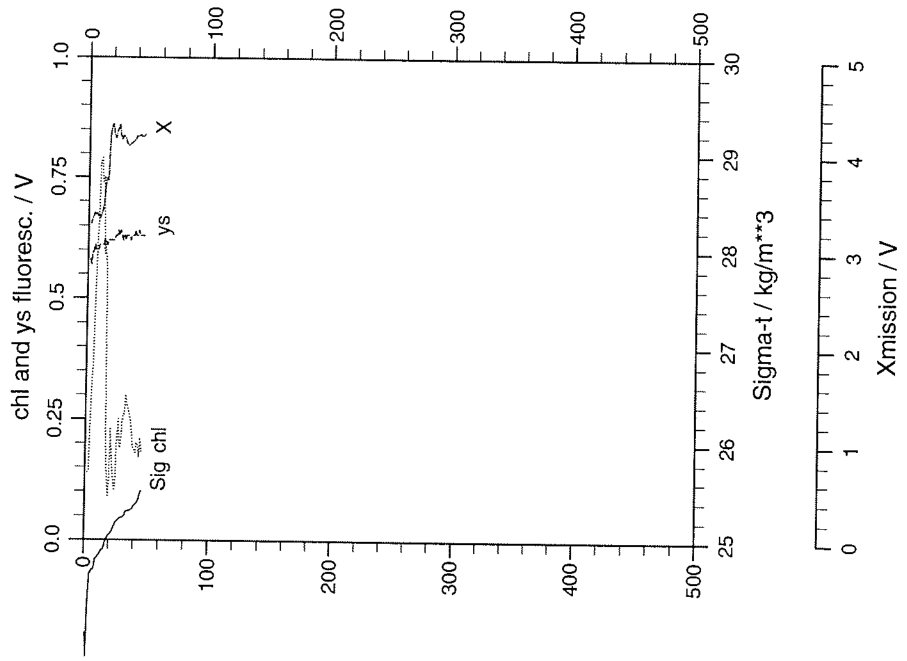

ark91880
chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
Sig
chl
ys
X
Sigma-t / kg/m**3
25
26
27
28
29
30
Xmission / V
0
1
2
3
4
5
Salinity
31
32
33
34
35
S
Sig
Temp / deg C
0.0
2.5
5.0
7.5
Pressure / dbar
0
100
200
300
400
500

ark91890



ark91890

ark91891



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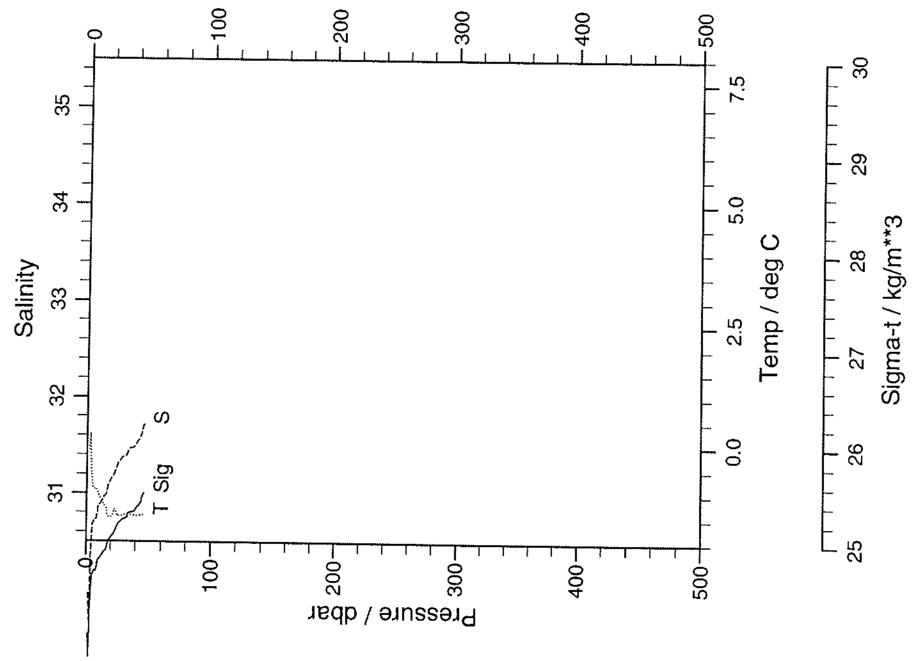

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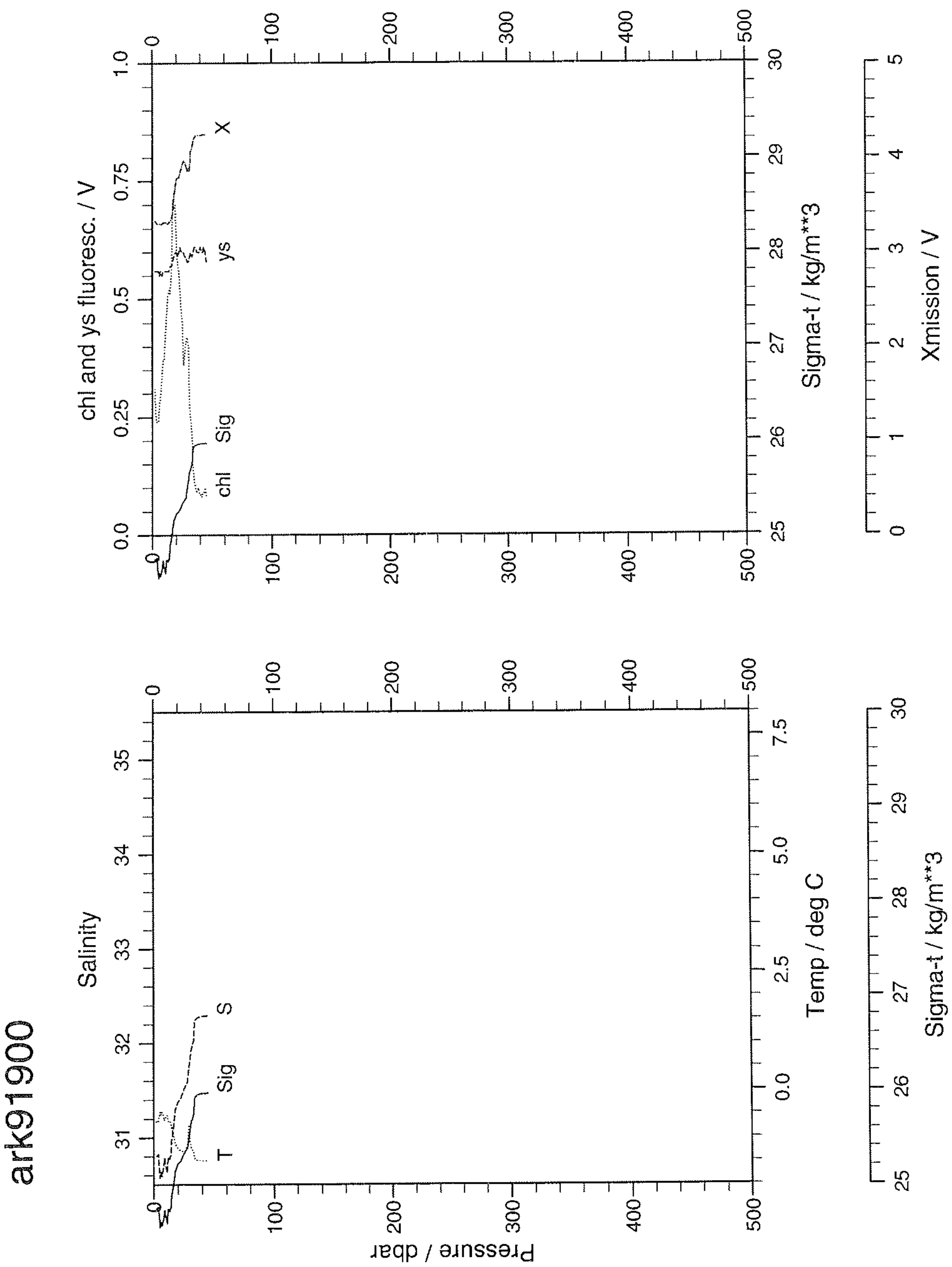
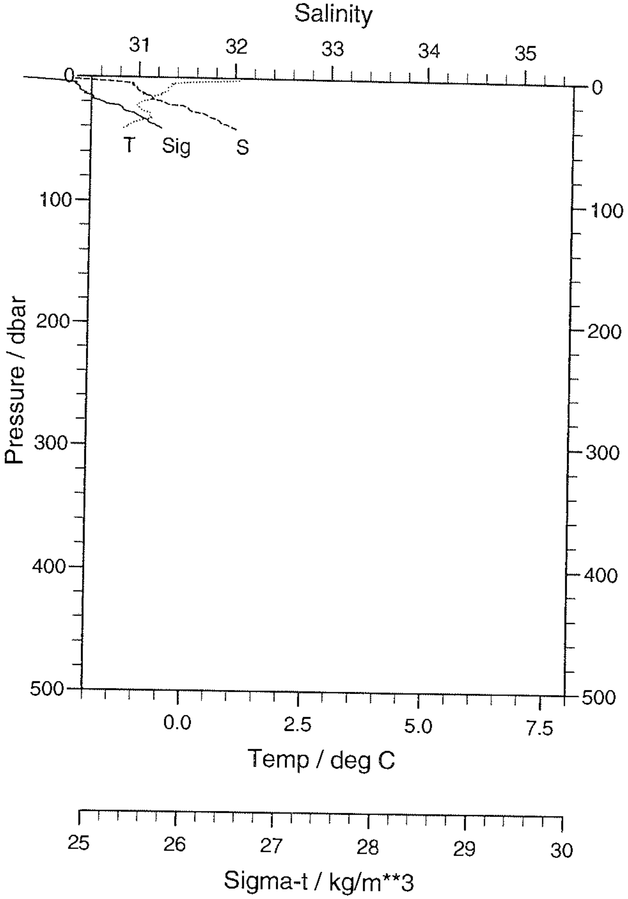
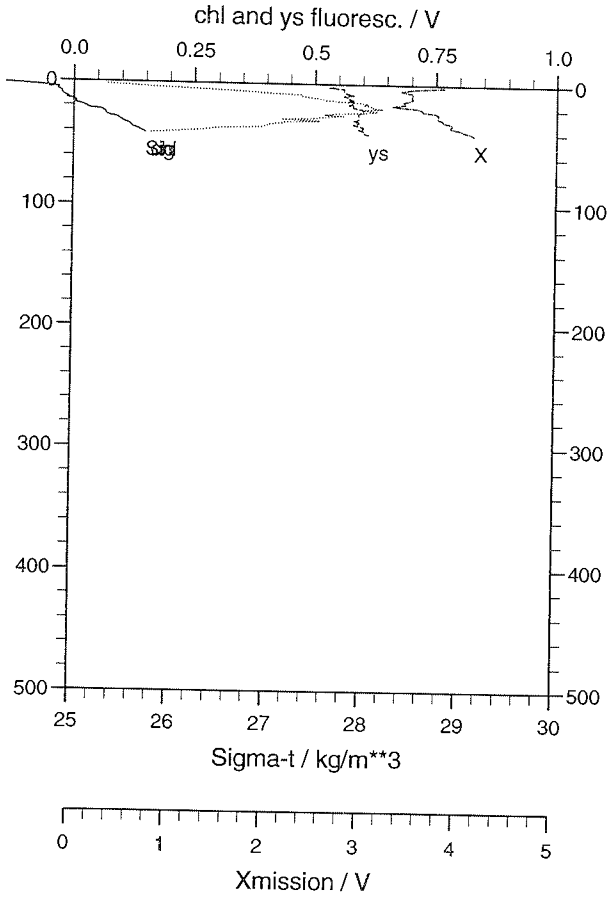


ark91900
Salinity
Pressure / dbar
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl

ark91910





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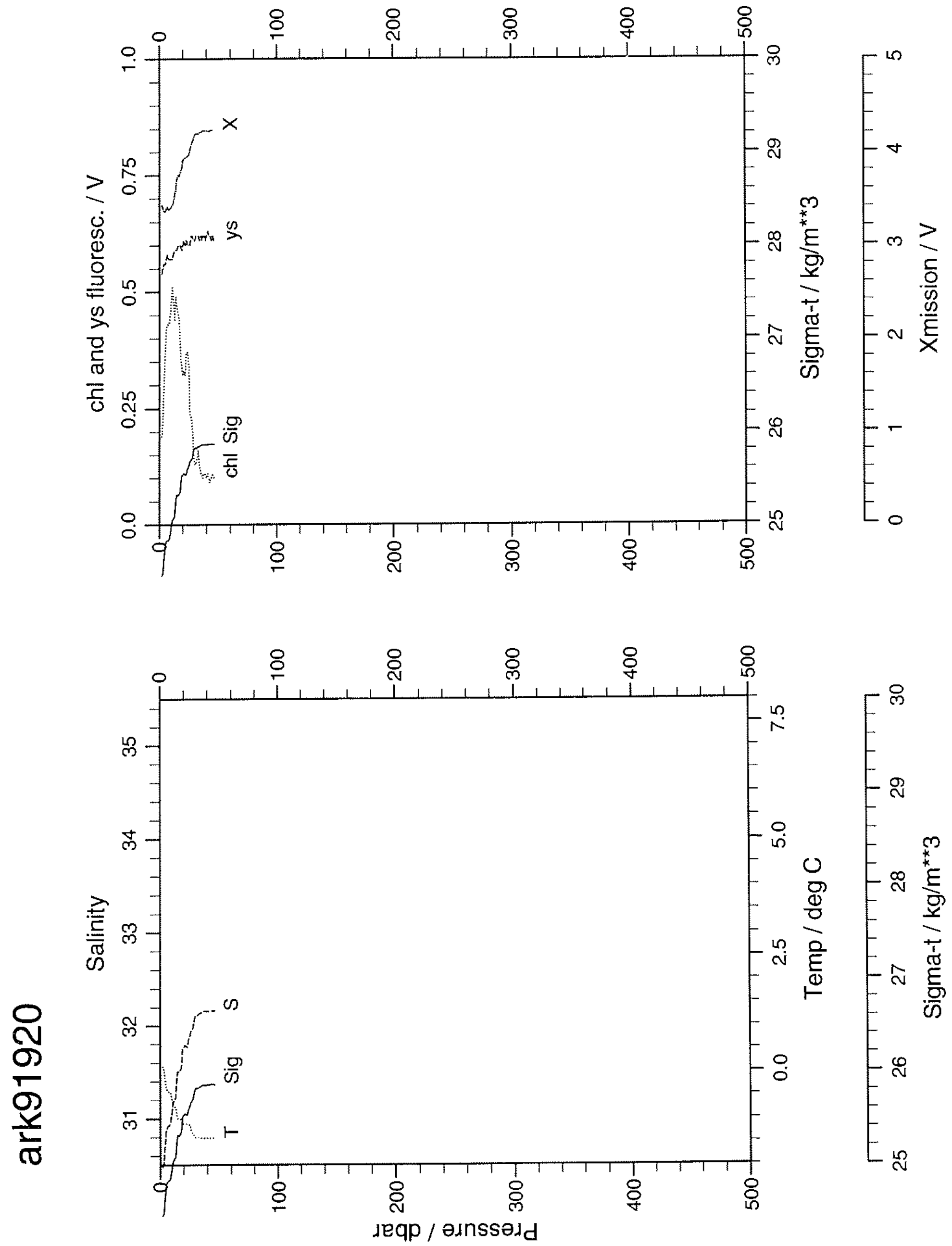
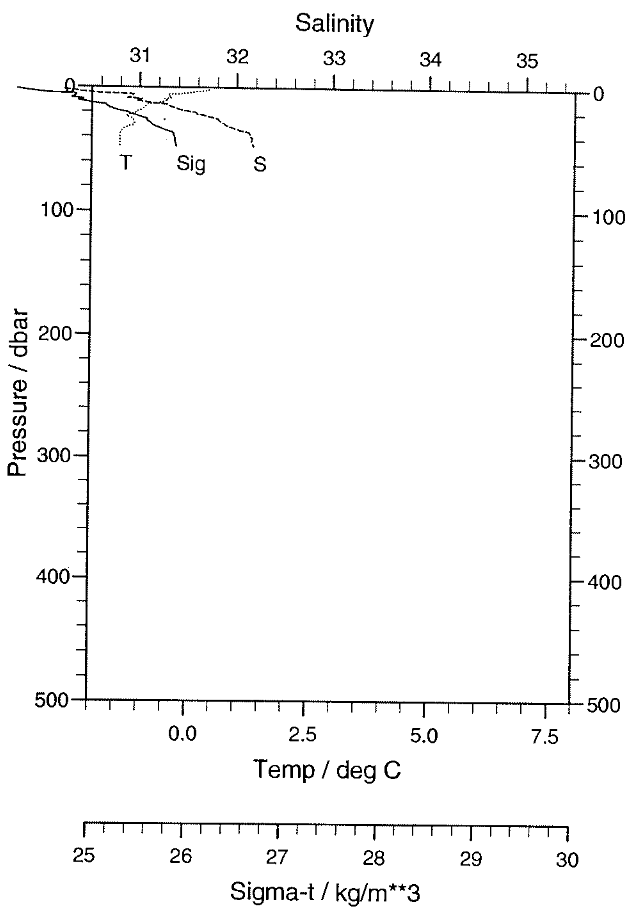
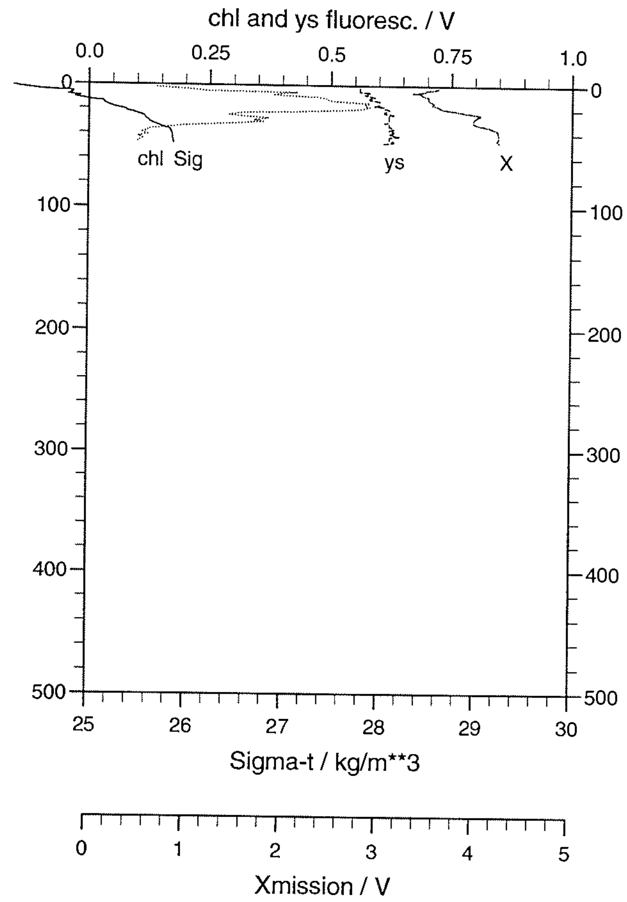

ark91920
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
chl Sig
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark91921





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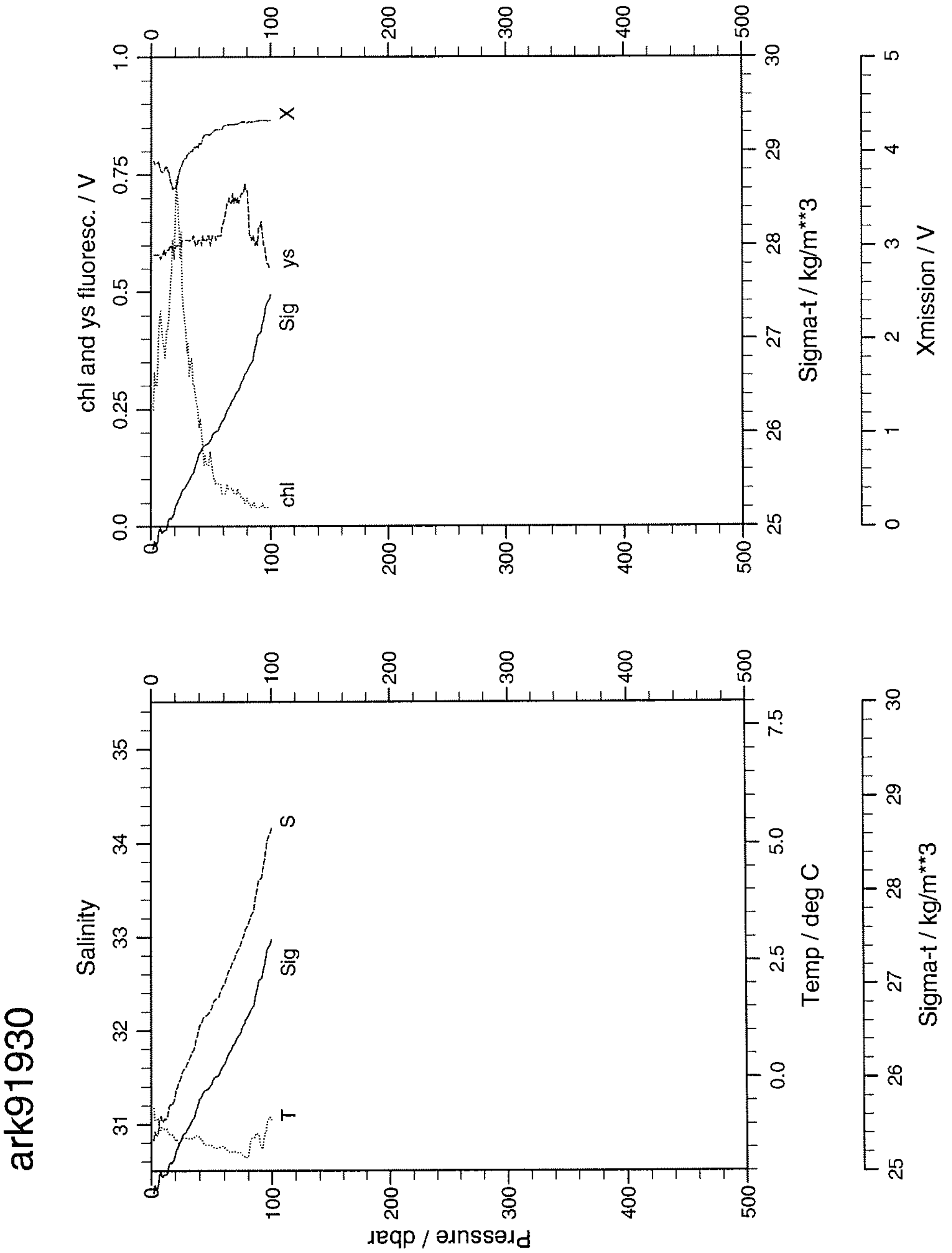
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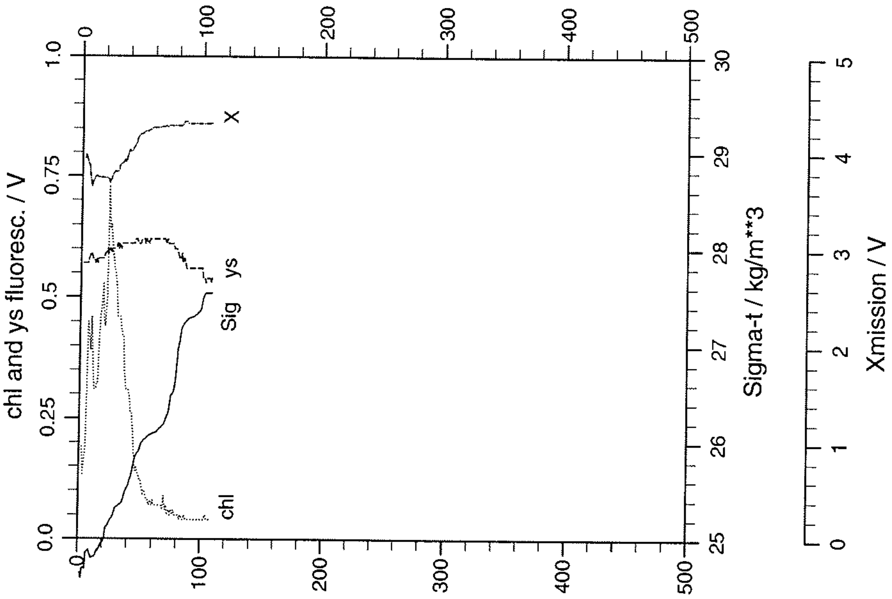
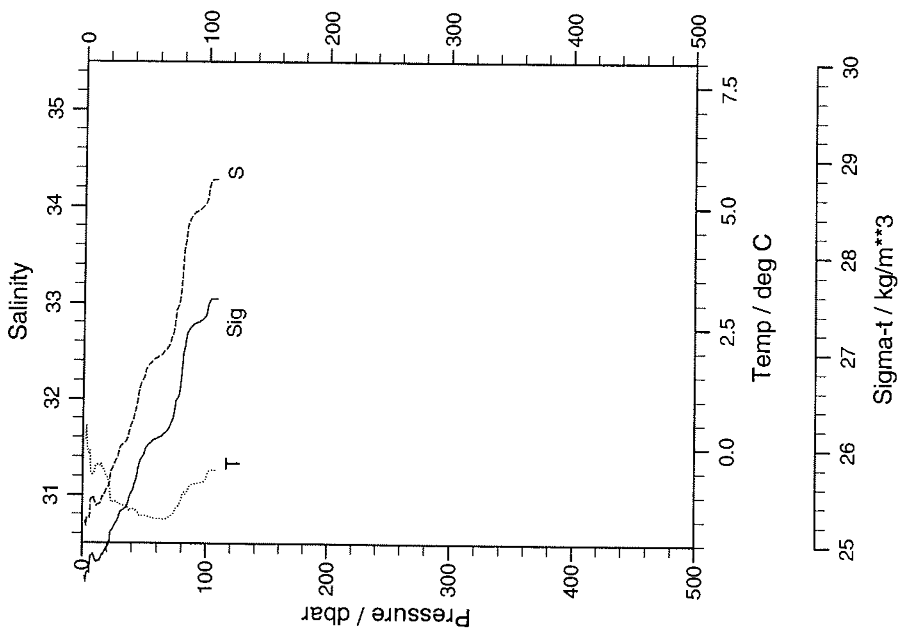
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark91940





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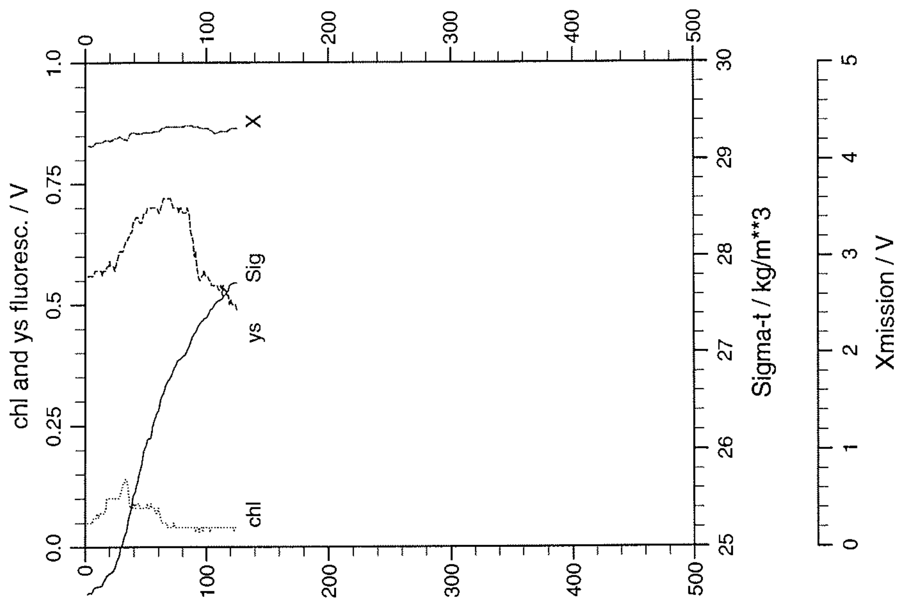

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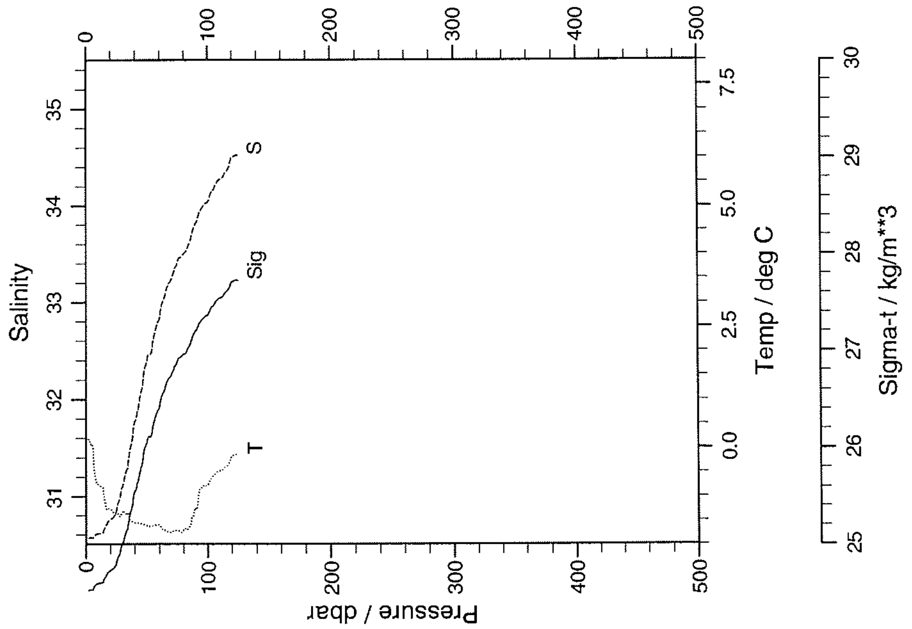

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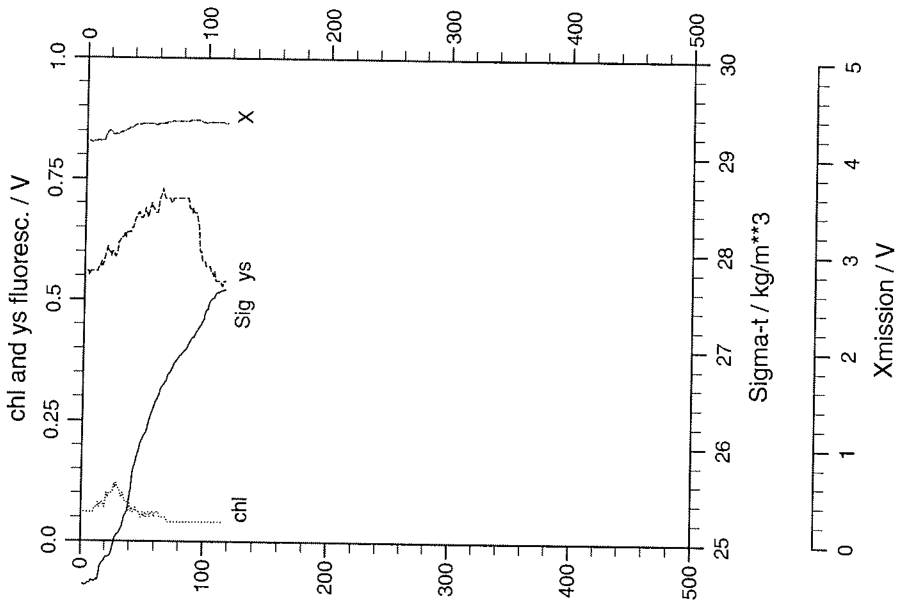

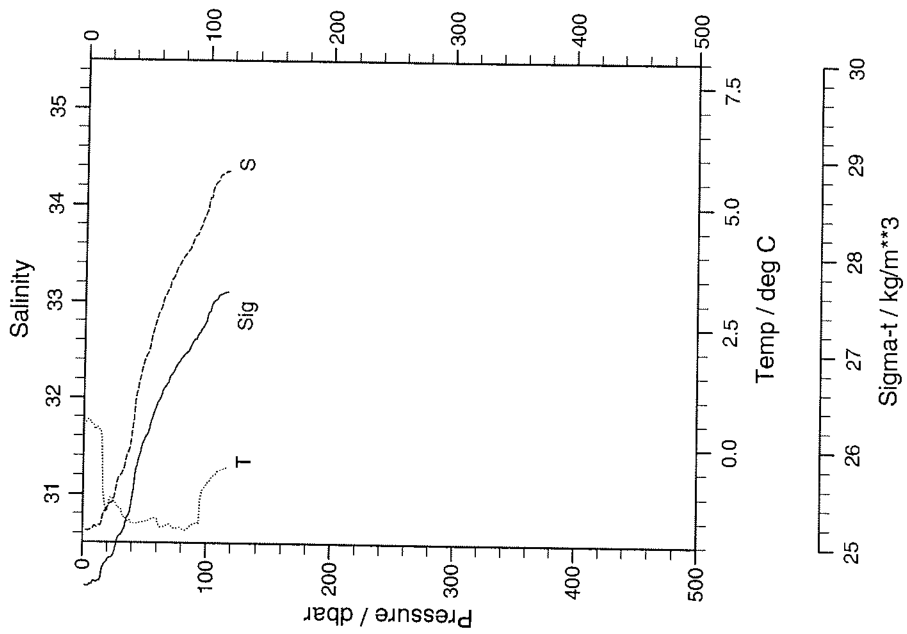

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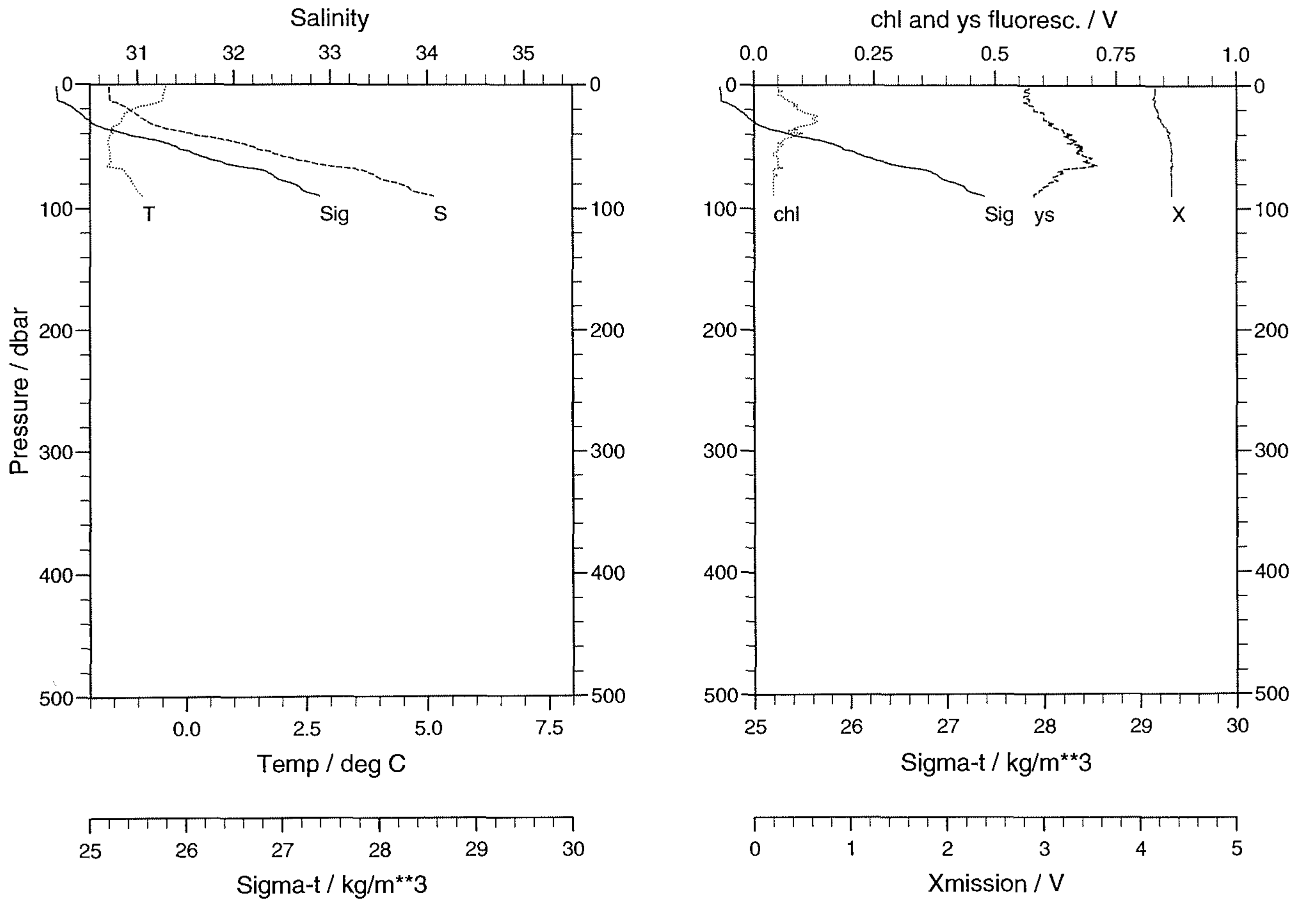

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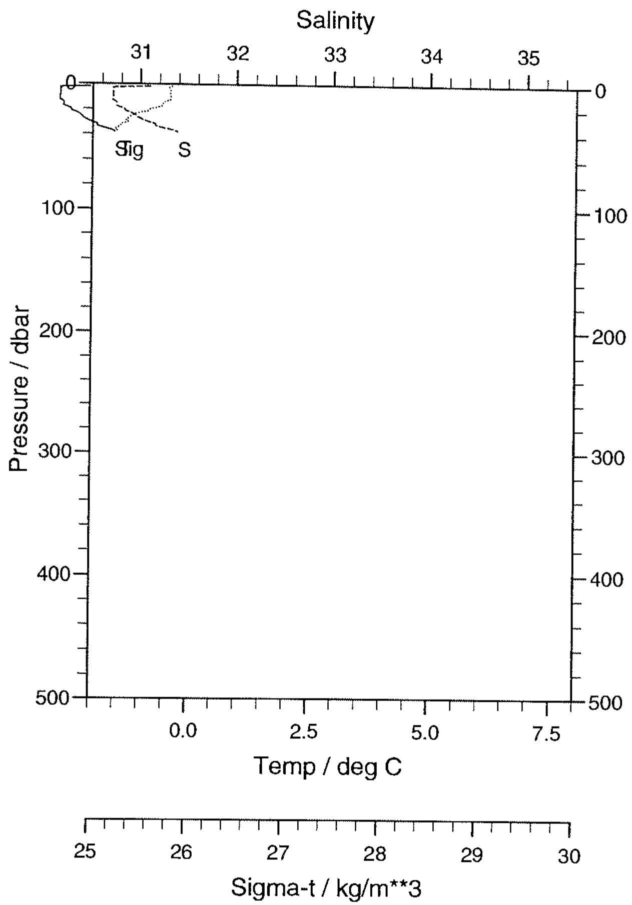

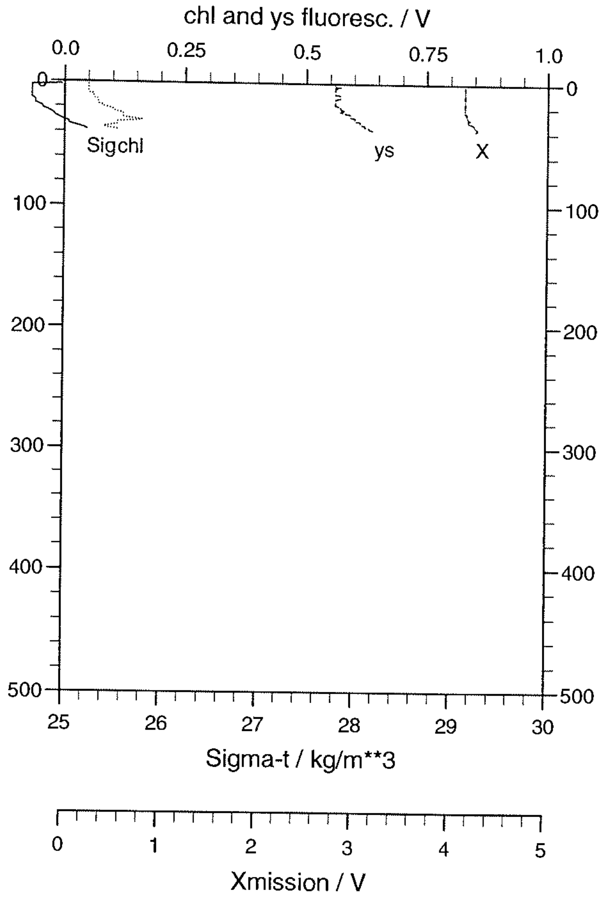

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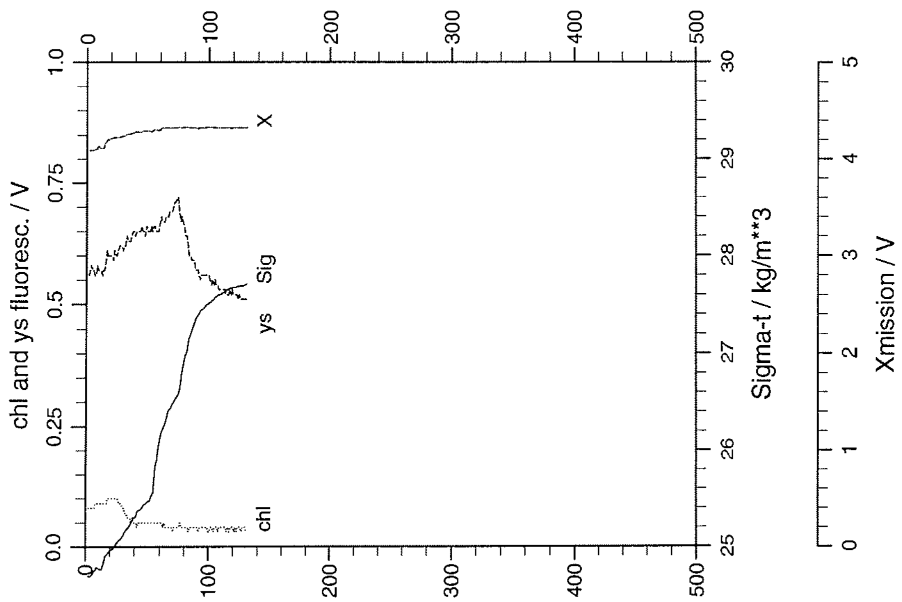
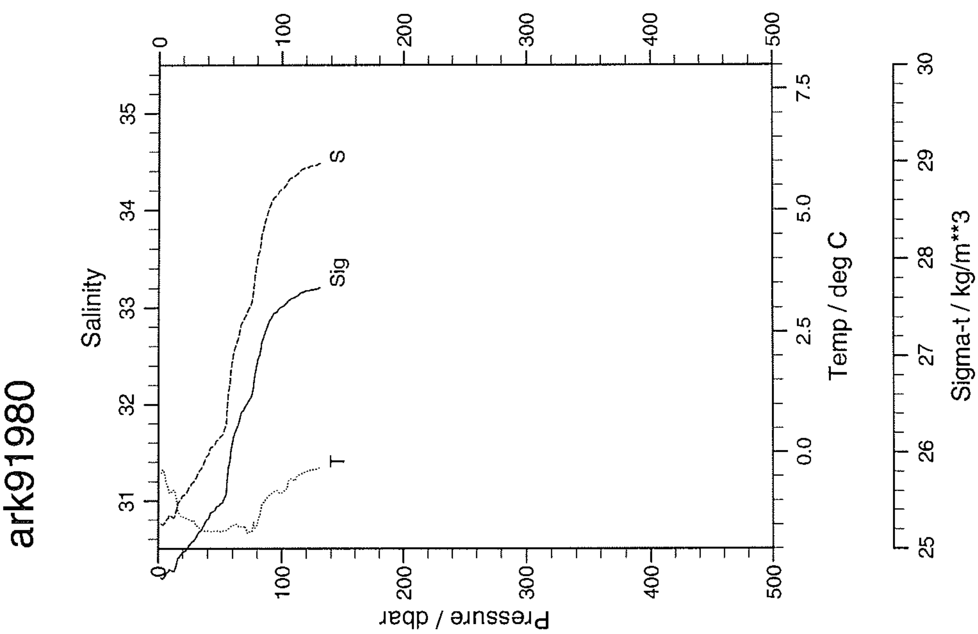
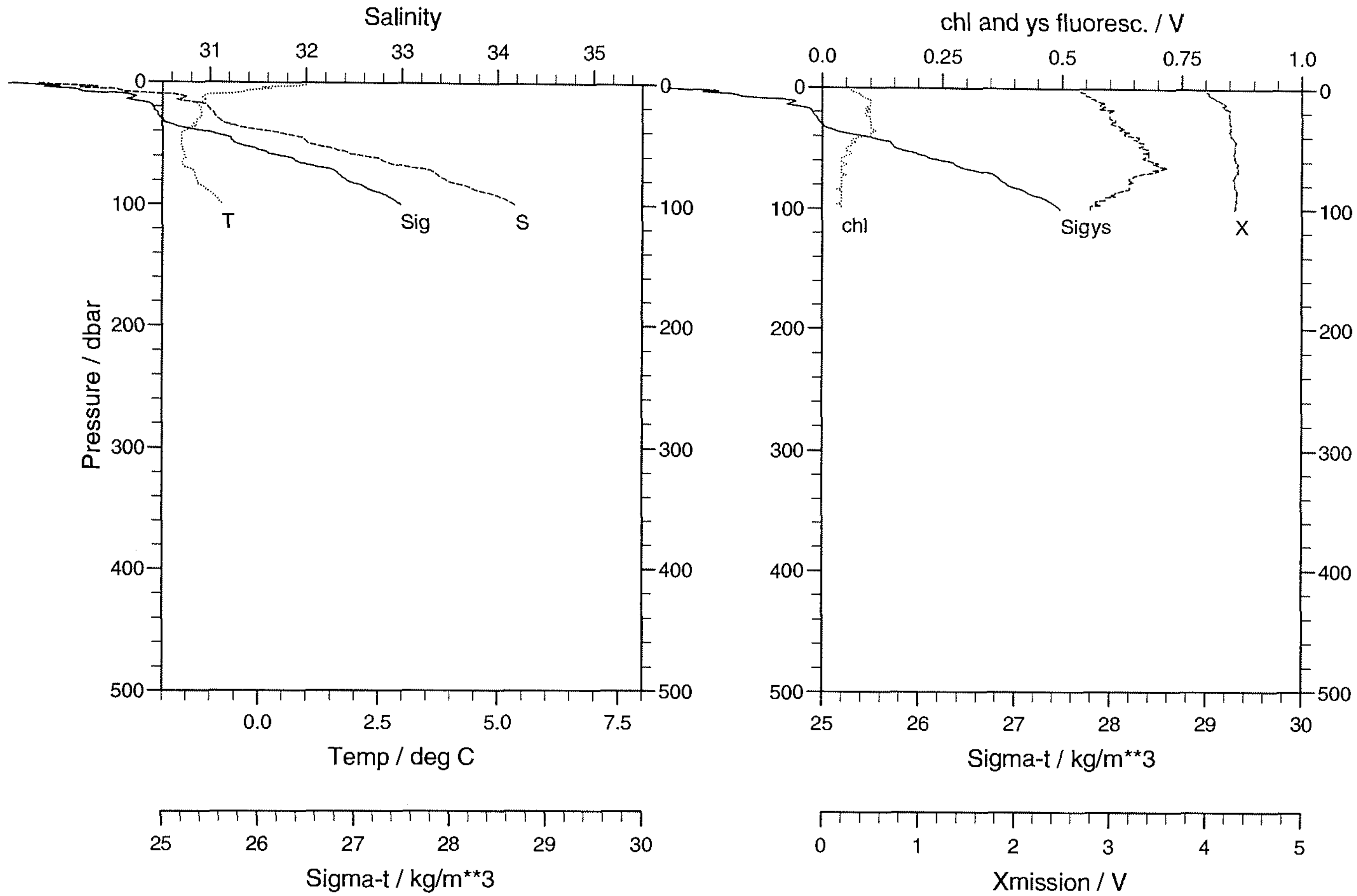

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl


ark91980
Salinity
Pressure / dbar
Temp / deg C
Sigma-t / kg/m**3
S
Sig
T

ark91990



ark91990

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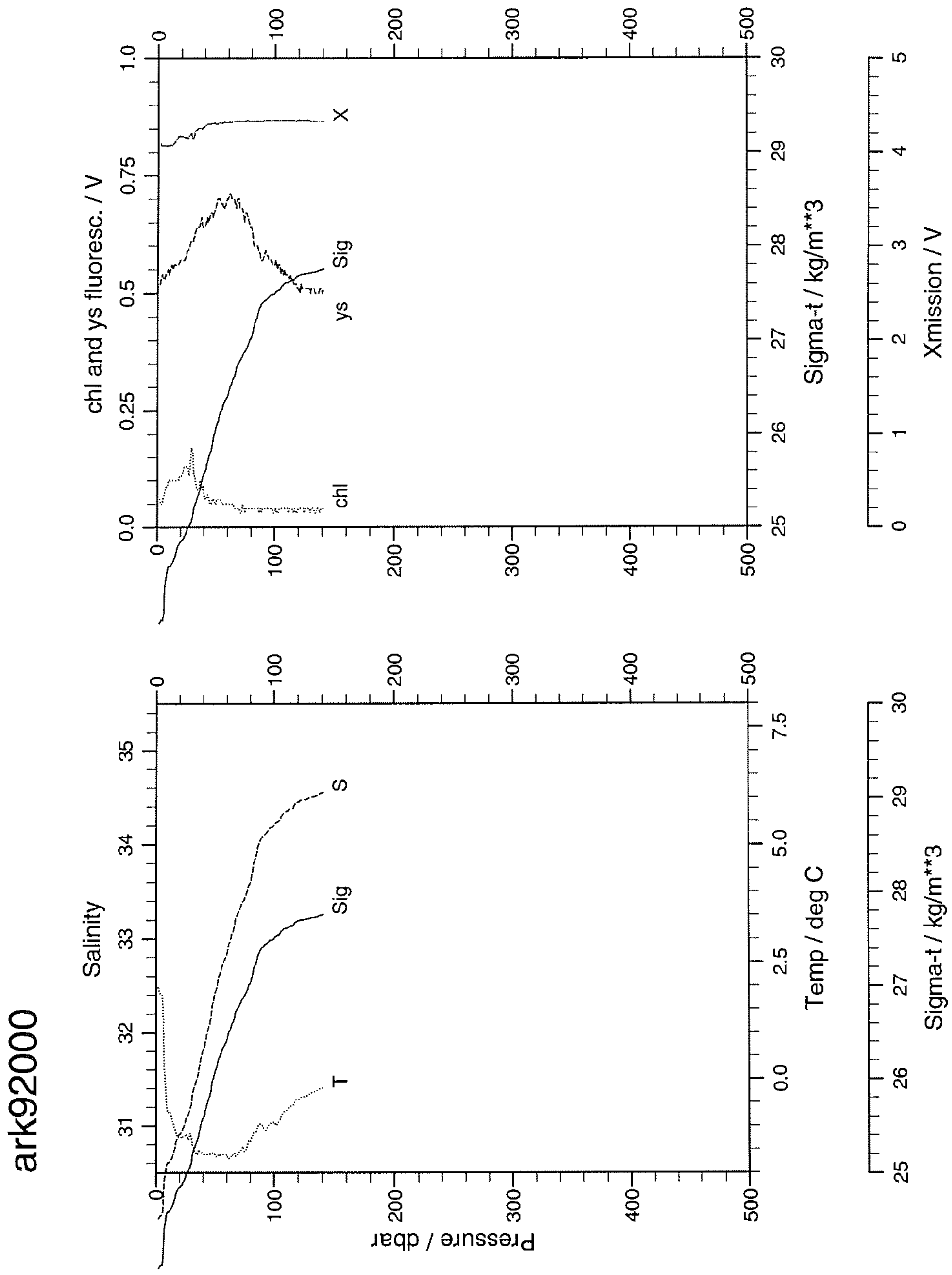
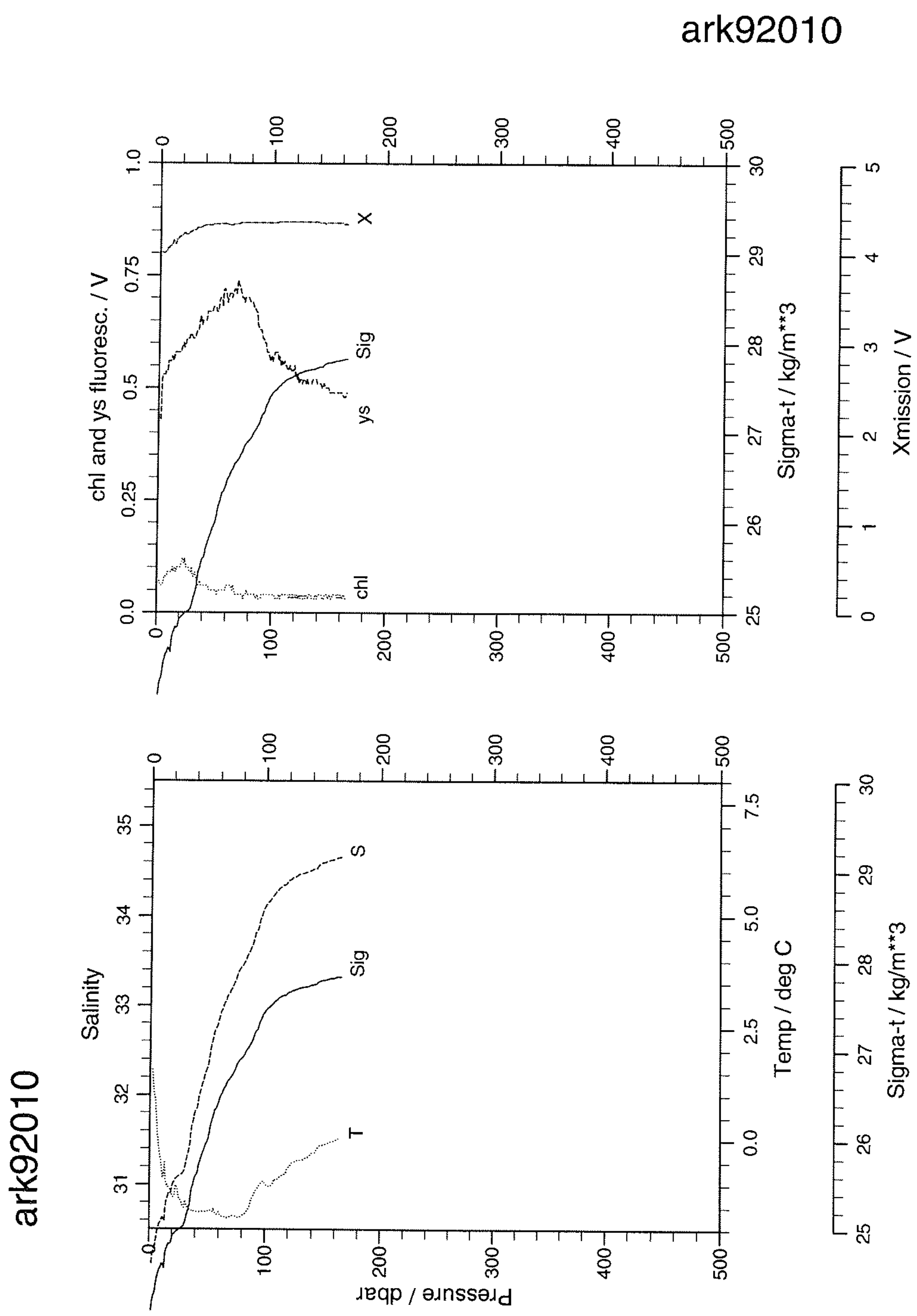
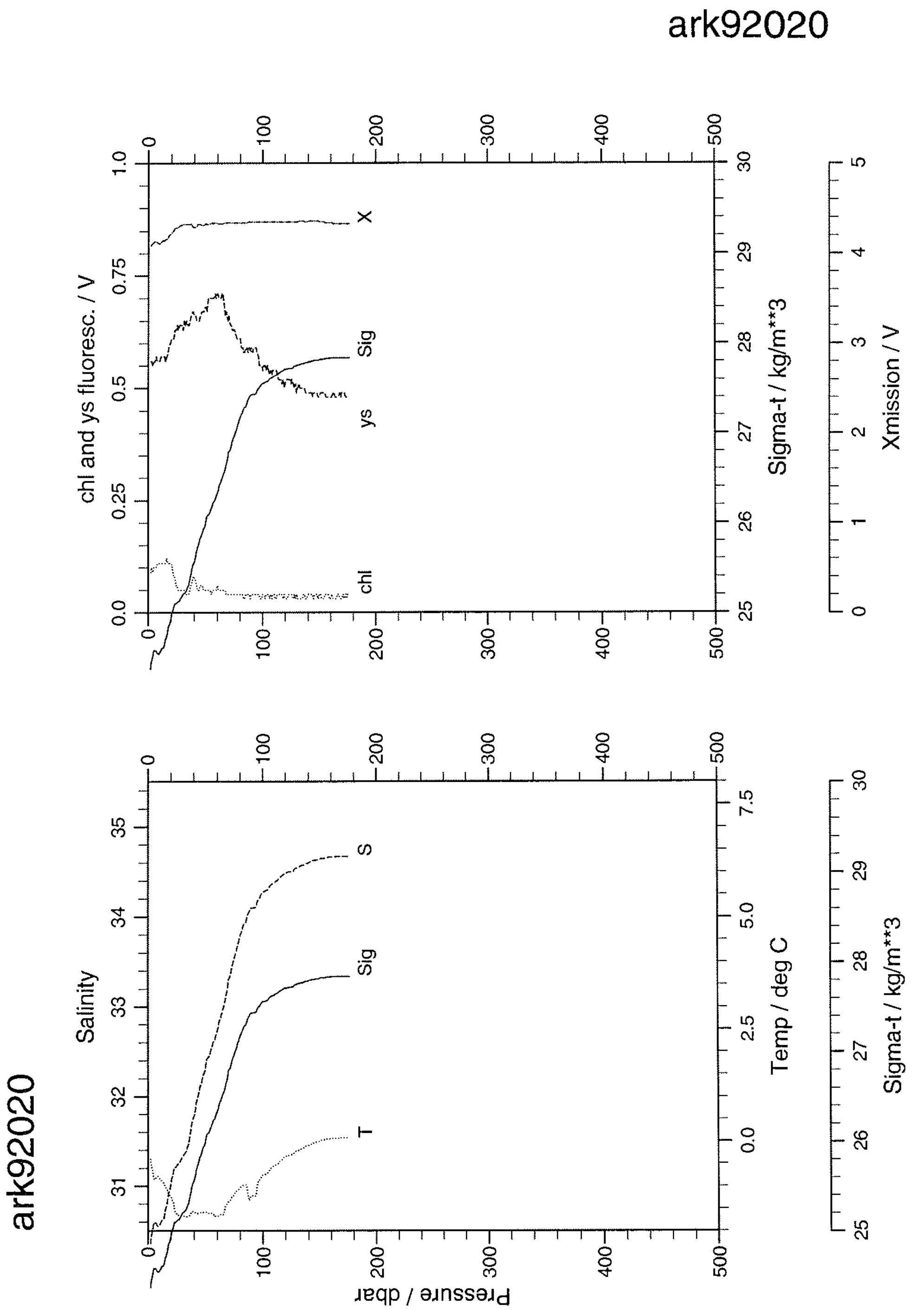


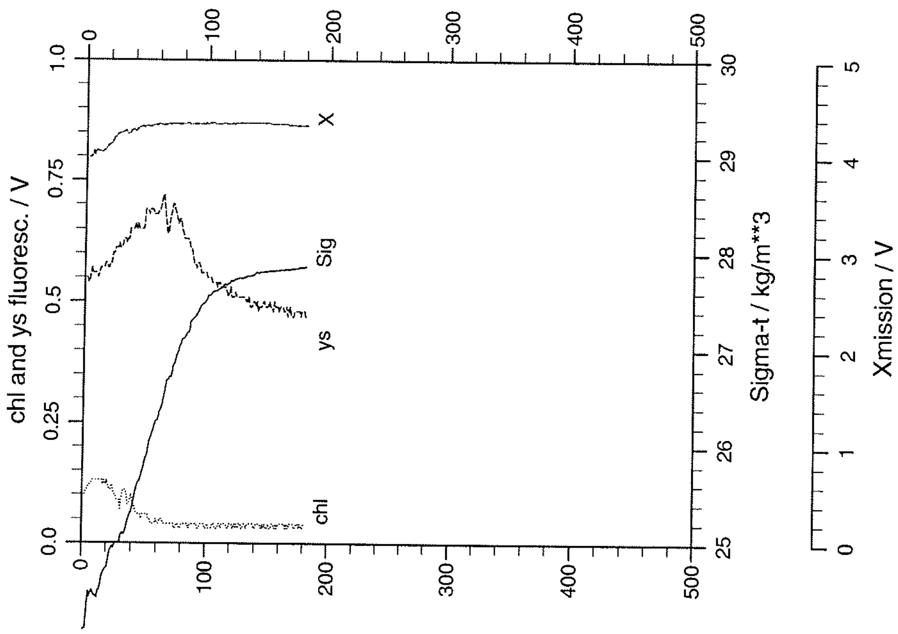
ark92000
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T



ark92010
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
ark92010
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T


ark92020
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
ark92020
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92030



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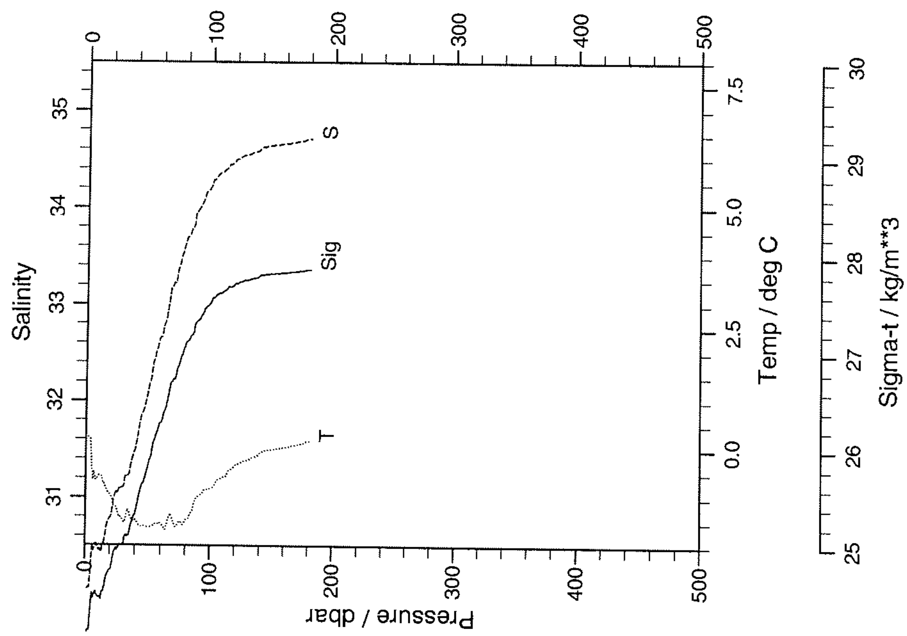

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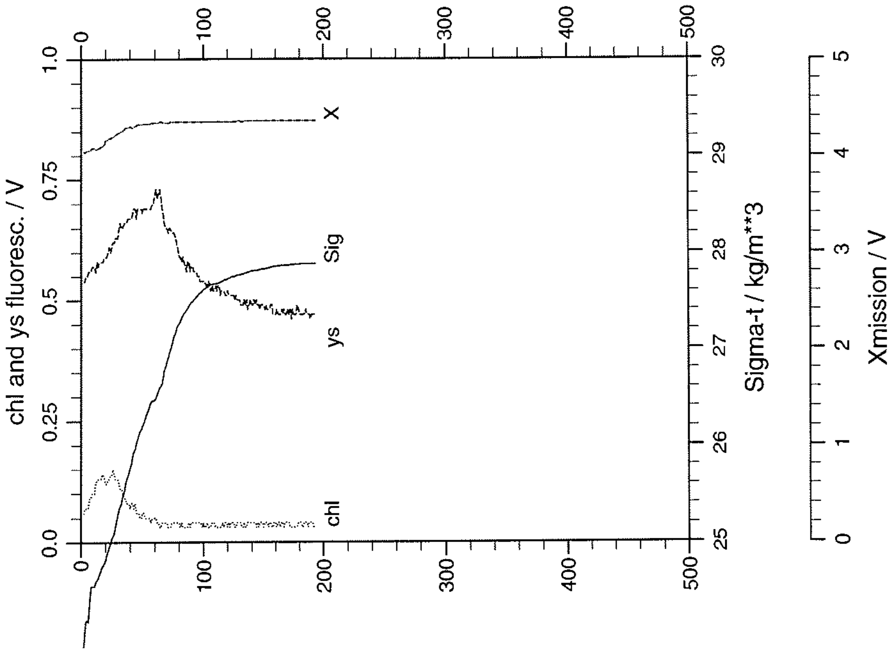

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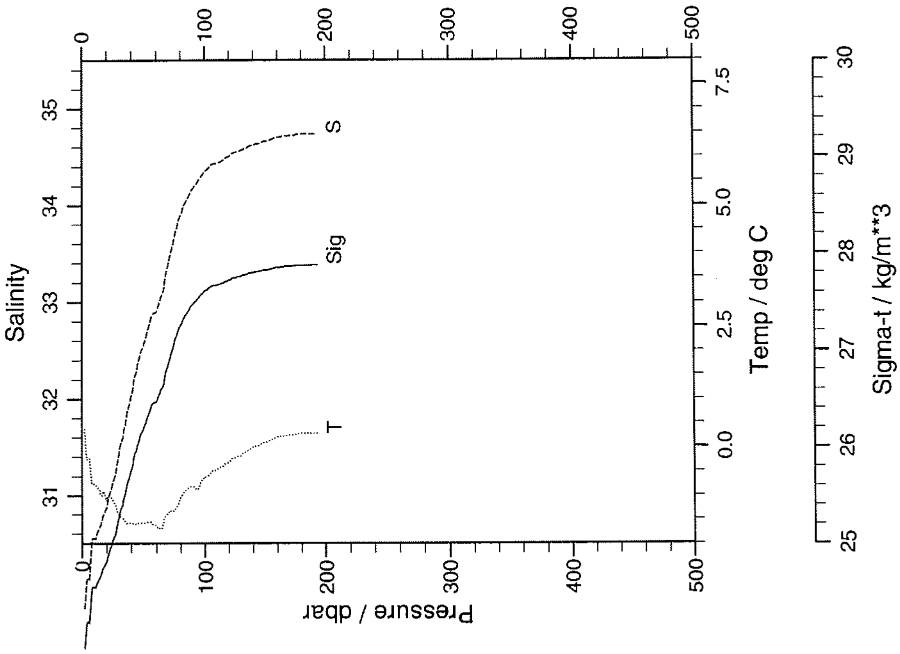

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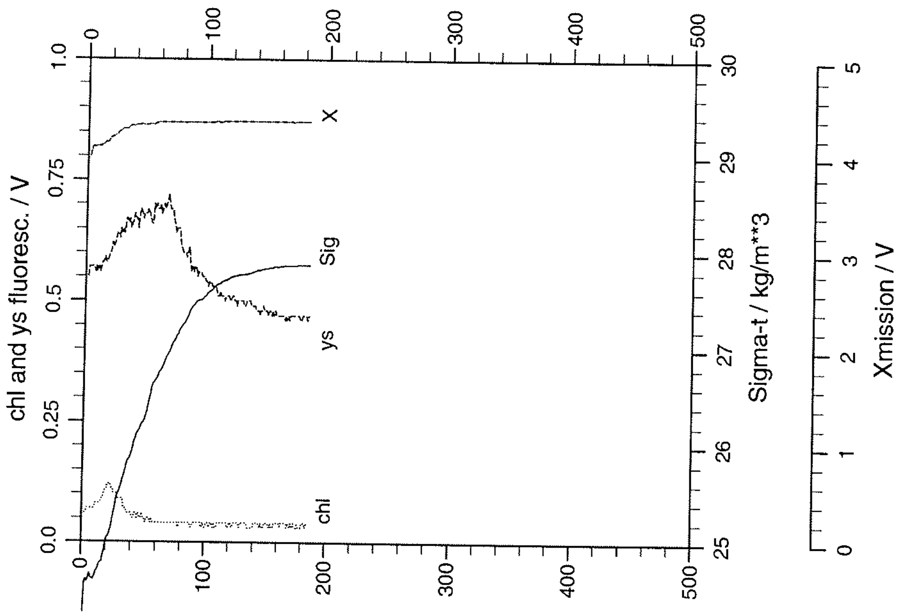

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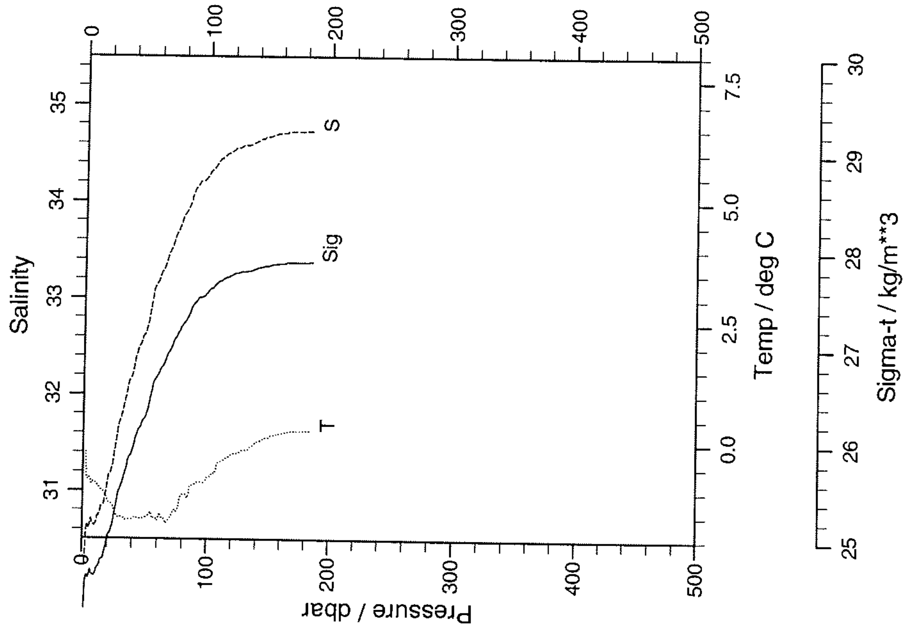
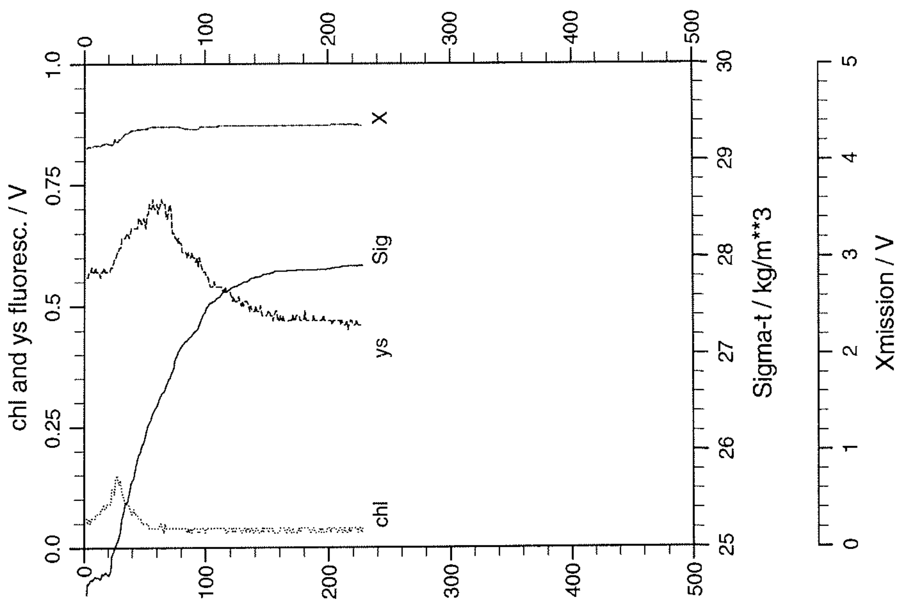
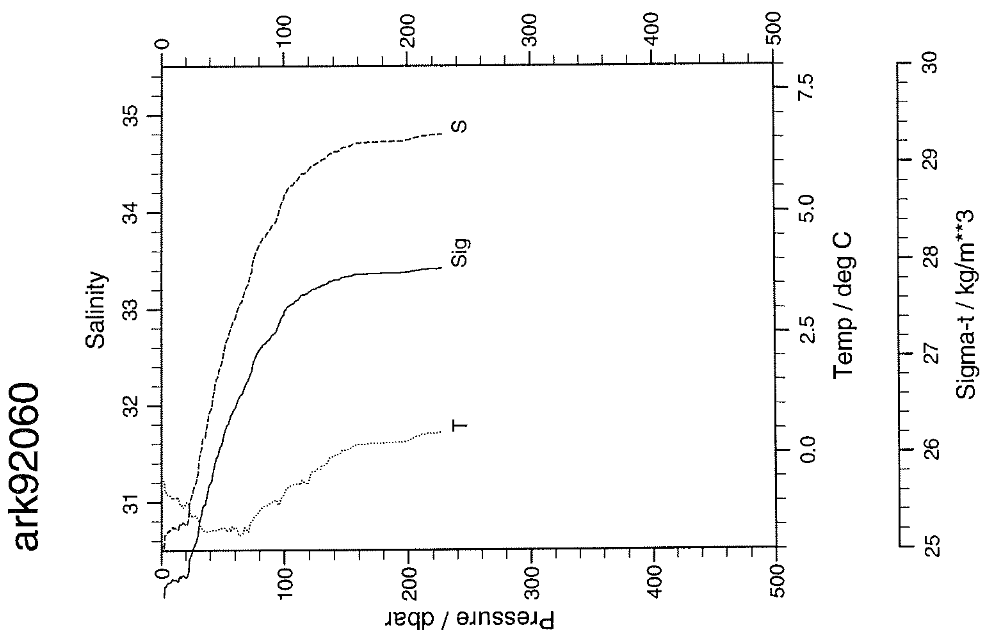
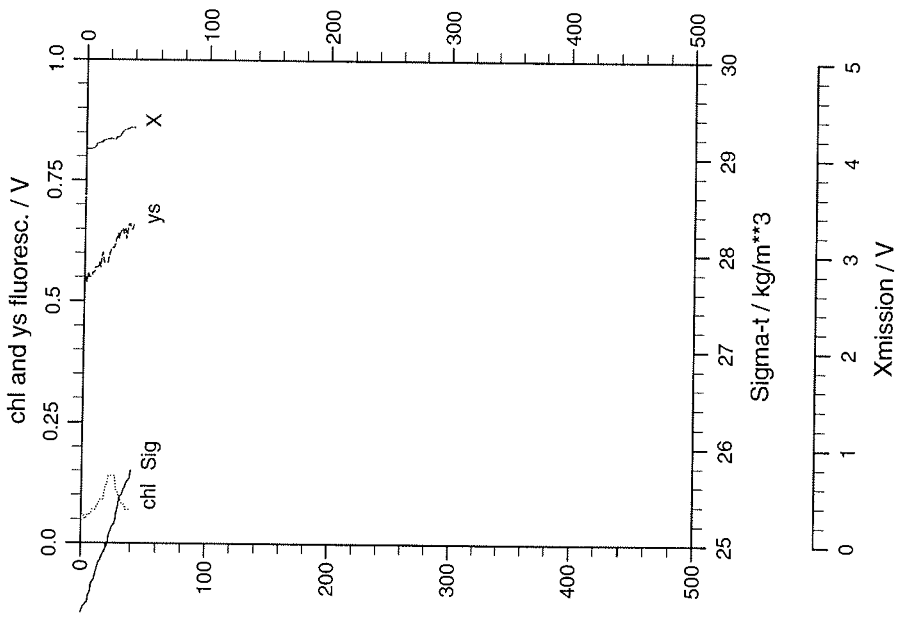



chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl


ark92060
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92061



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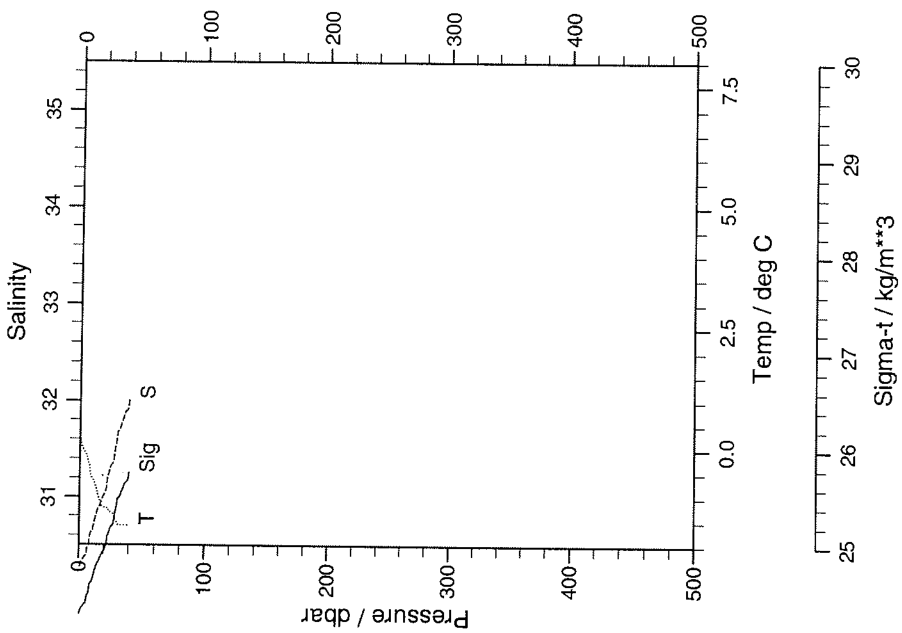

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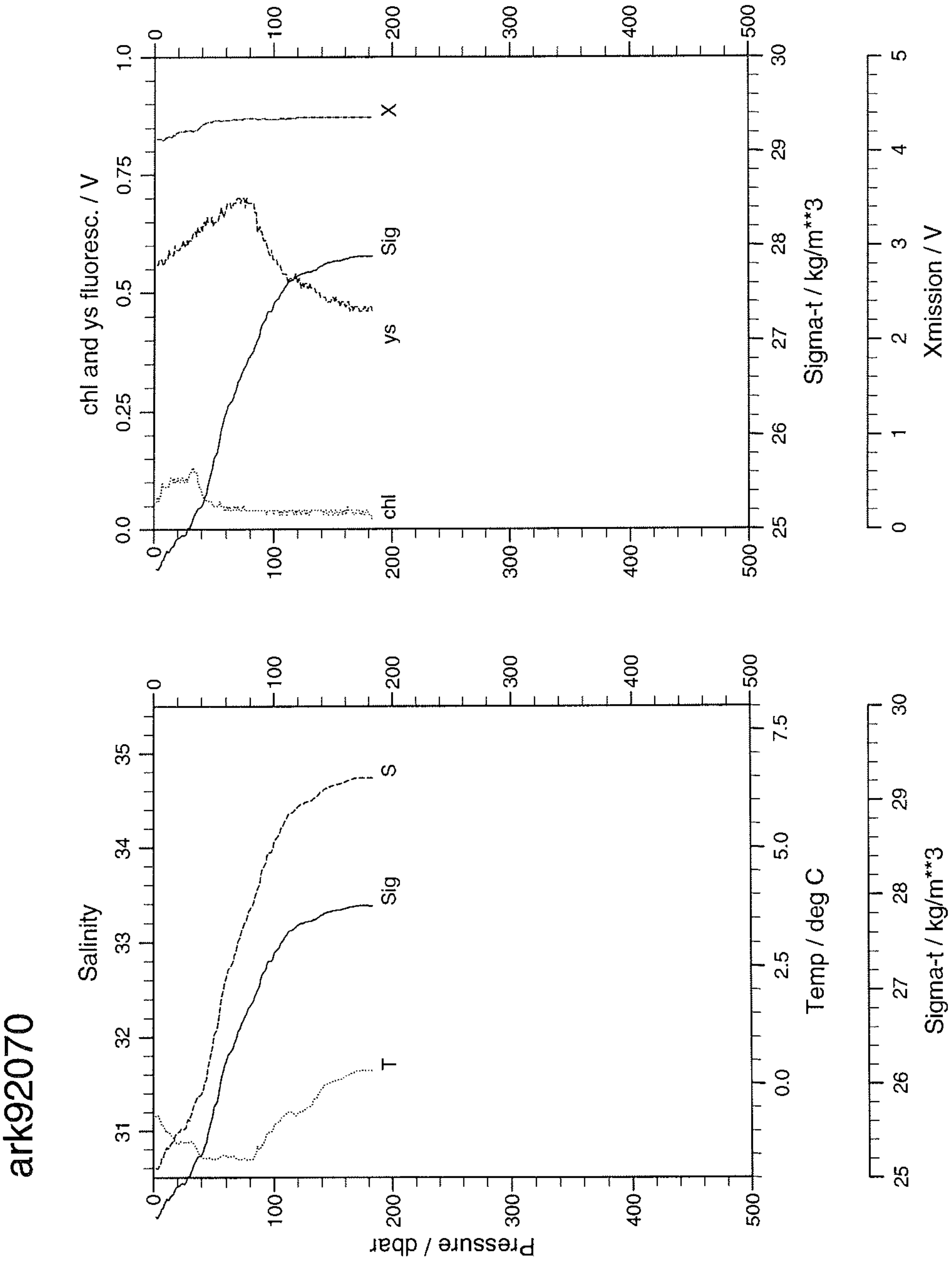
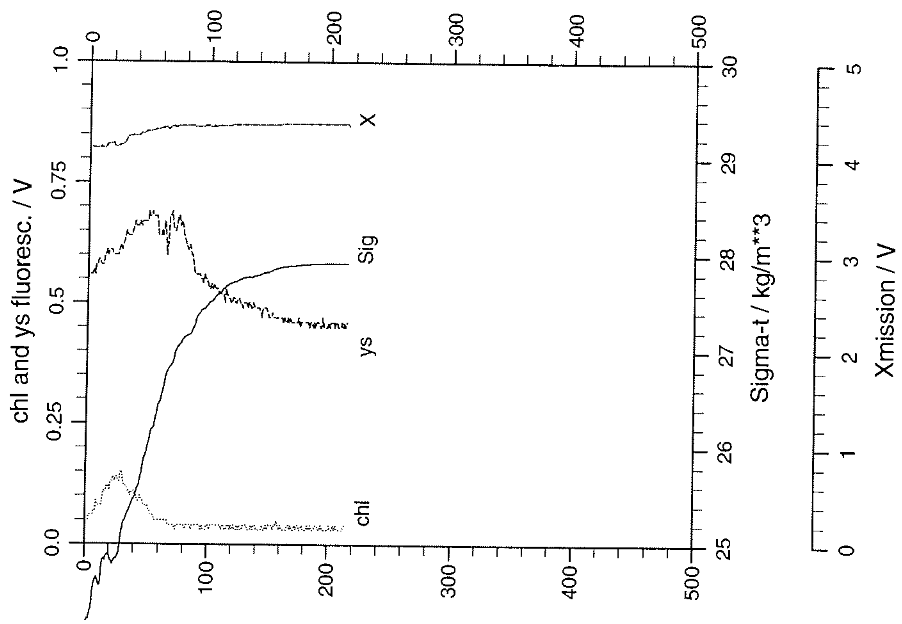
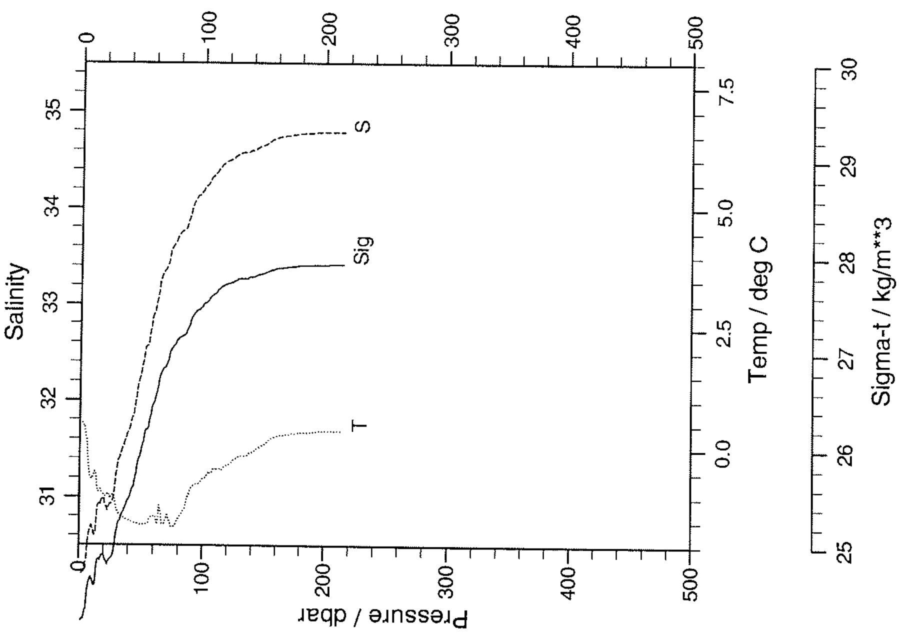


ark92070
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

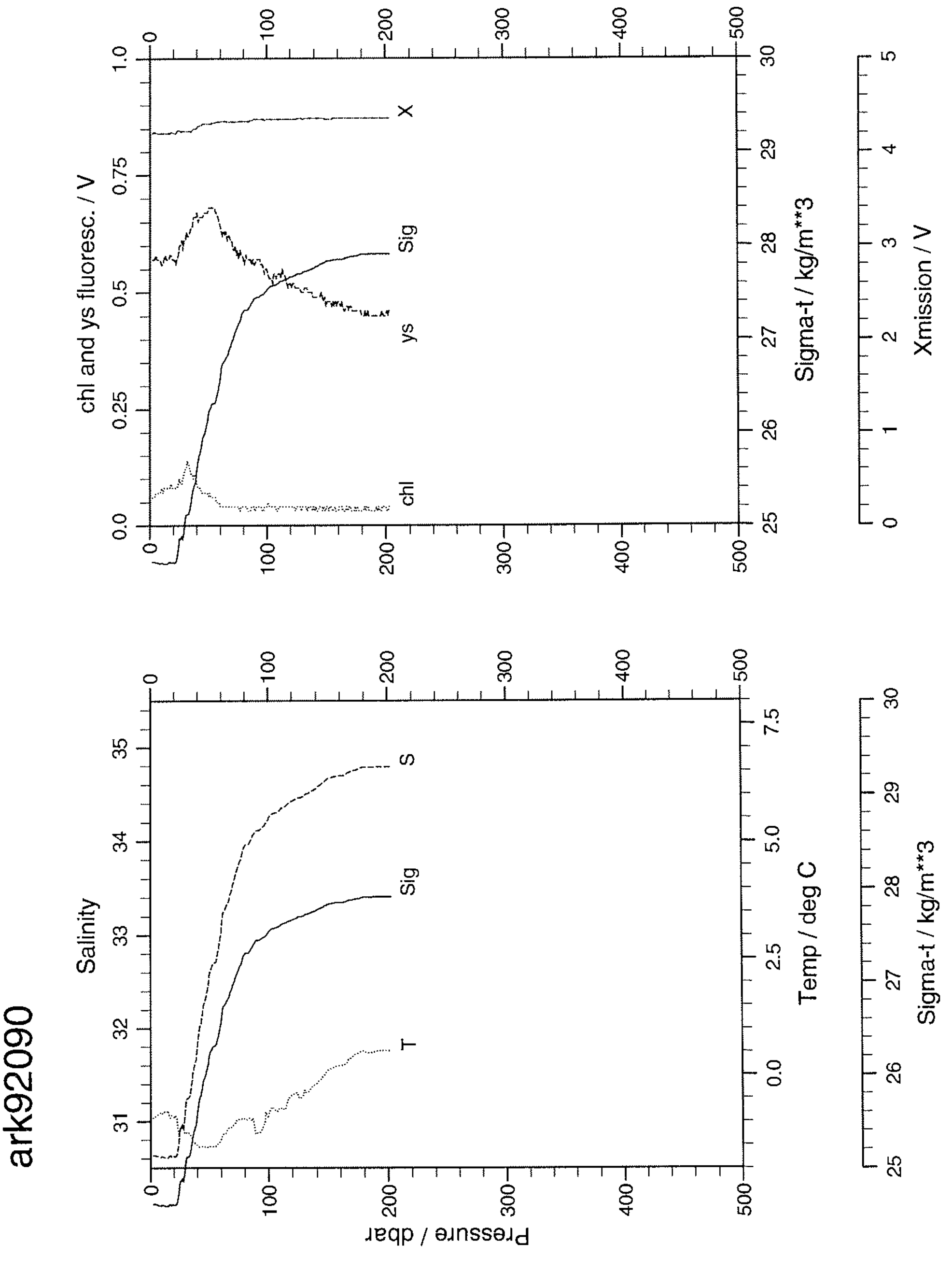
ark92080



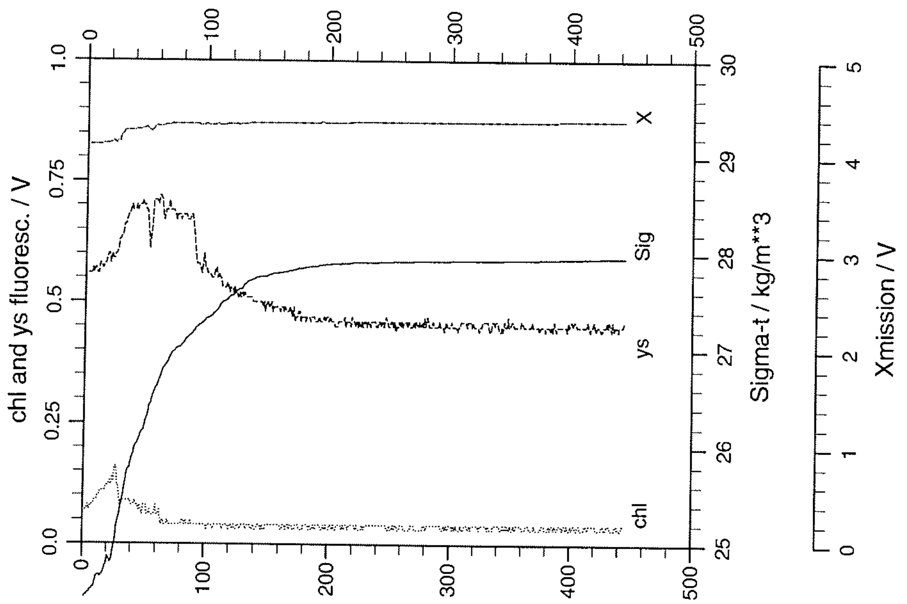


ark92080

ark92090


ark92090
chl and ys fluoresc. / V
X
Sig
ys
chl
Sigma-t / kg/m**3
Xmission / V
Salinity
S
Sig
T
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar

ark92100



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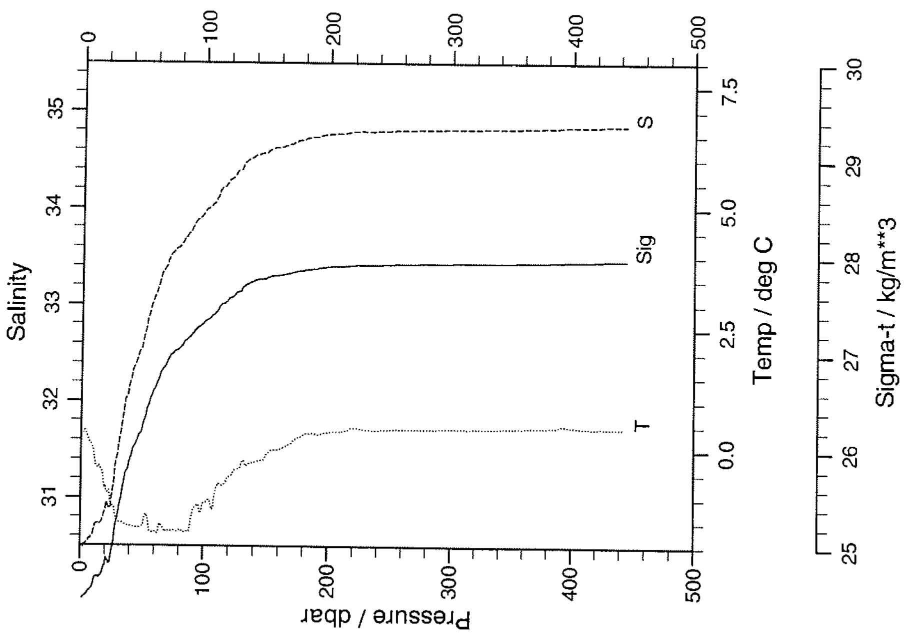

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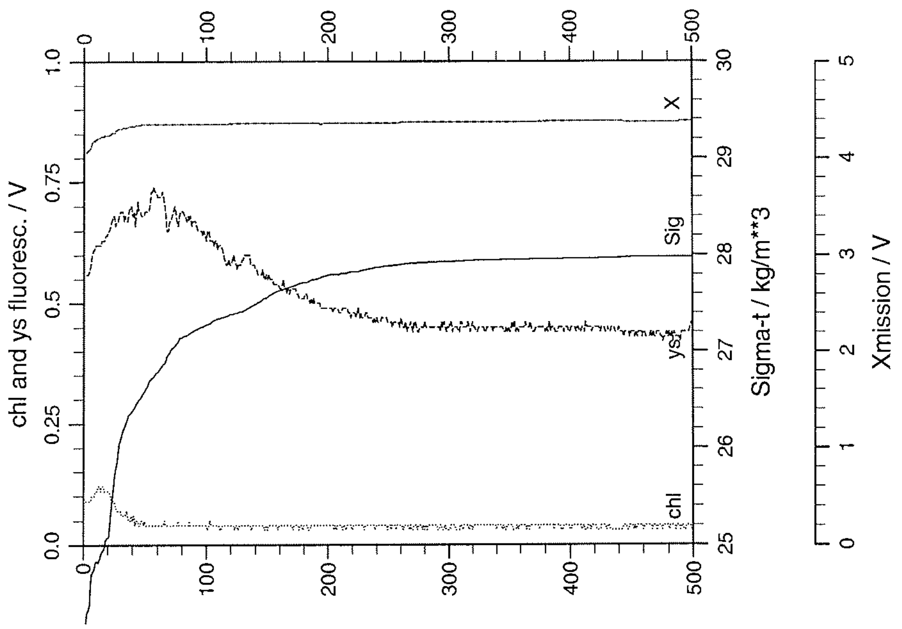
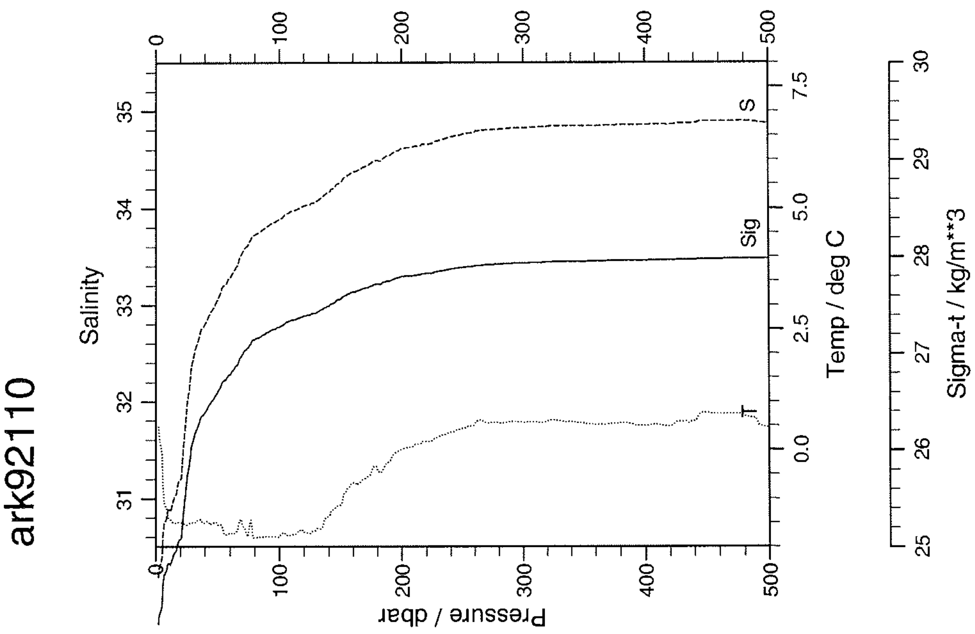
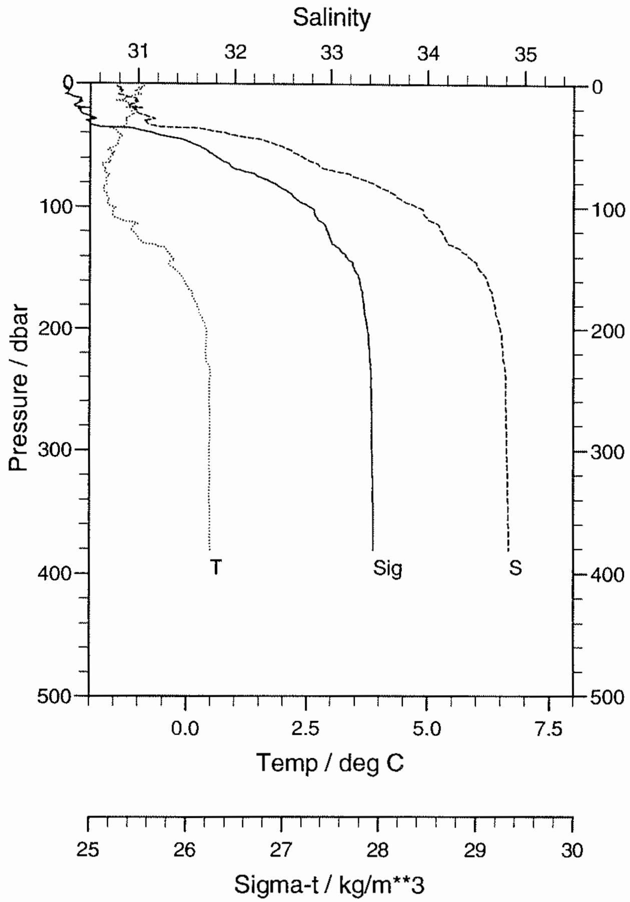
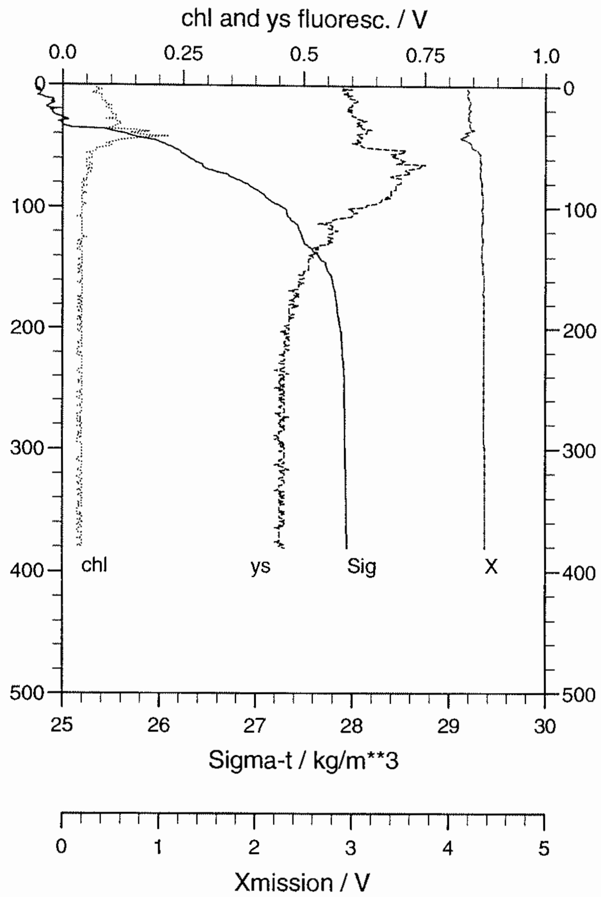

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl


ark92110
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92120





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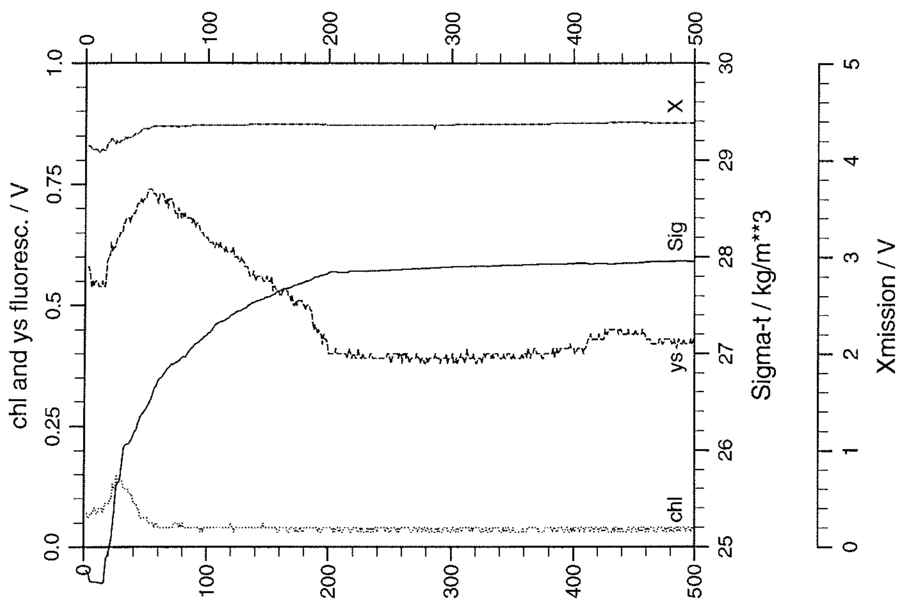
ark92130



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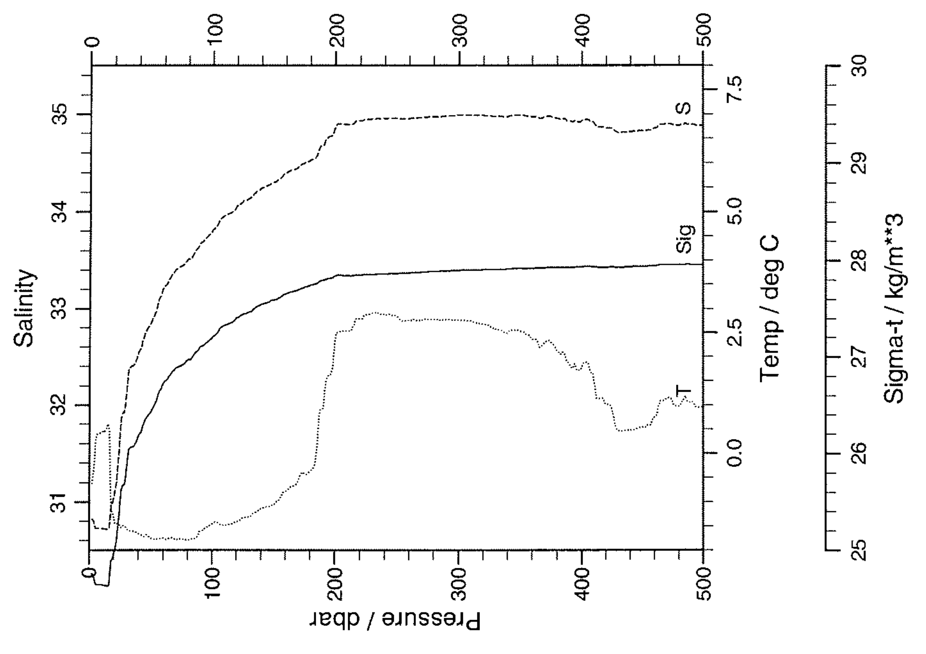

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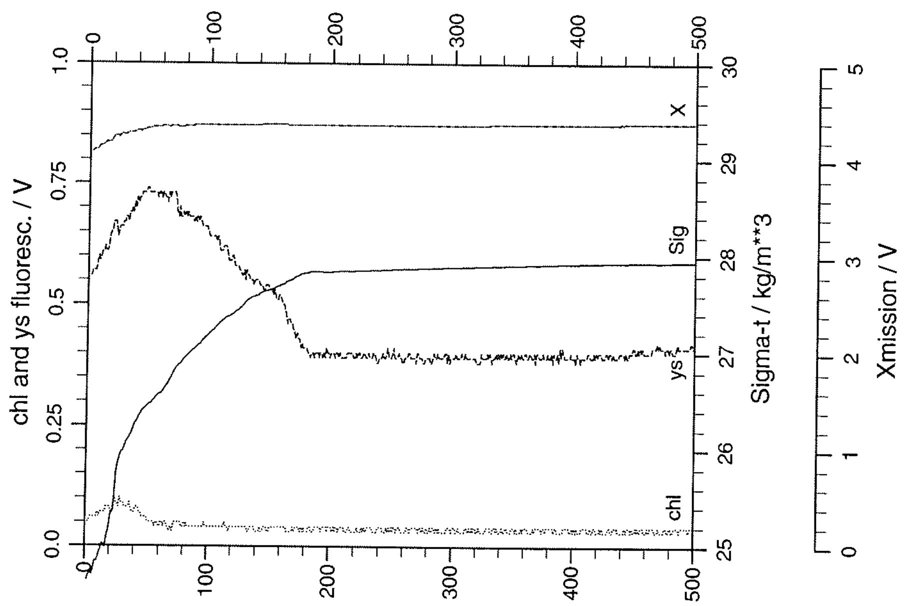
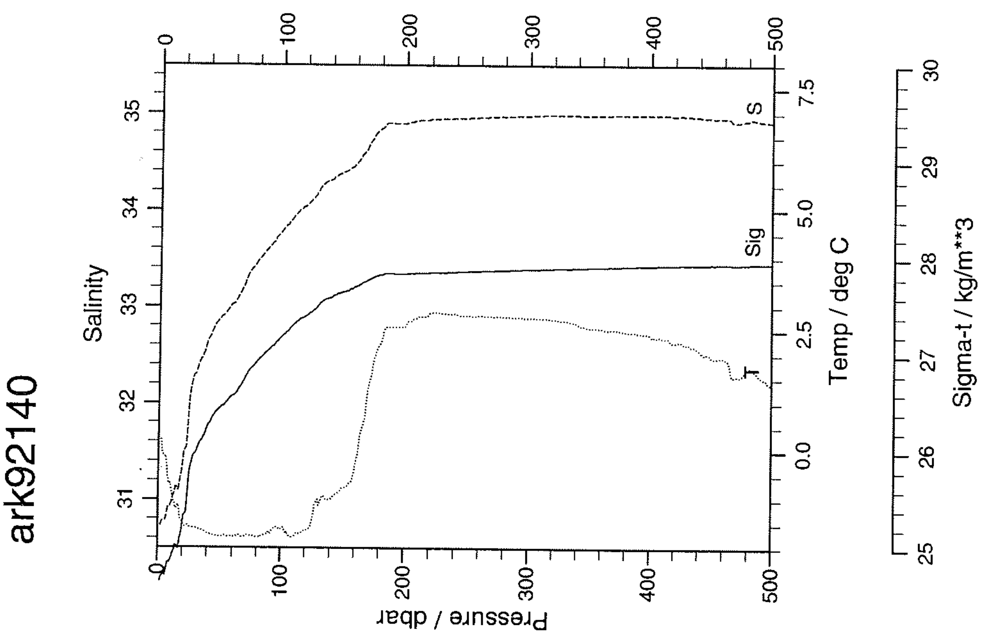
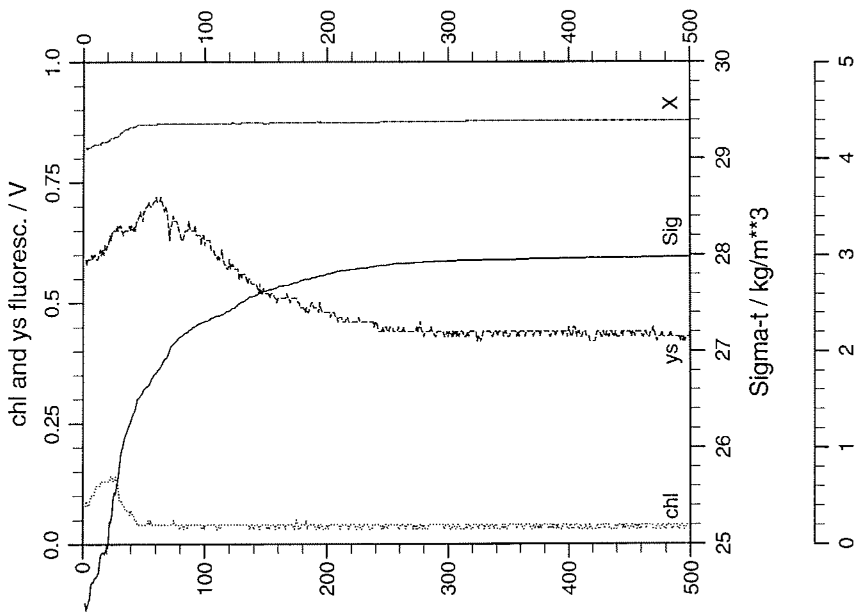


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl

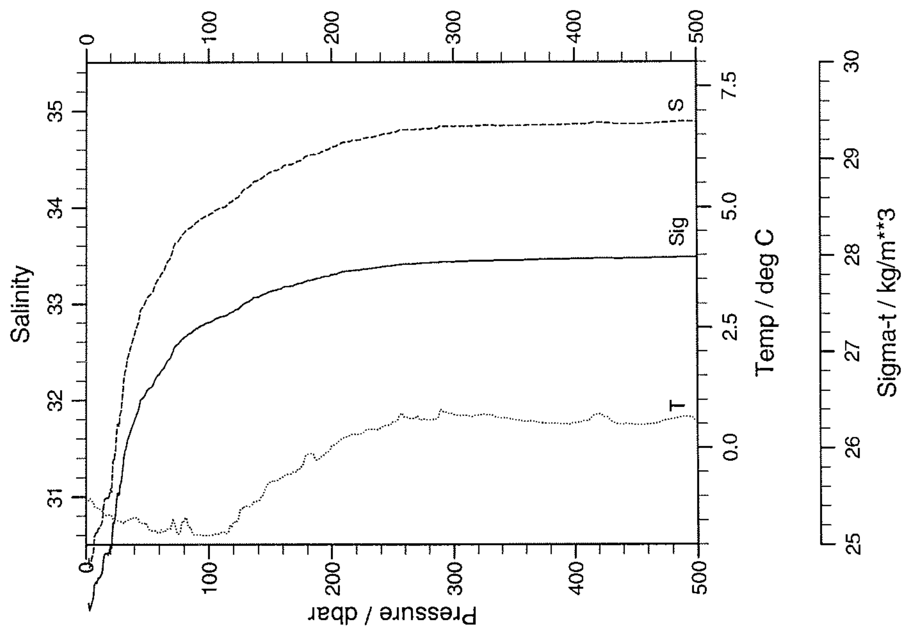


ark92140
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92150



ark92150



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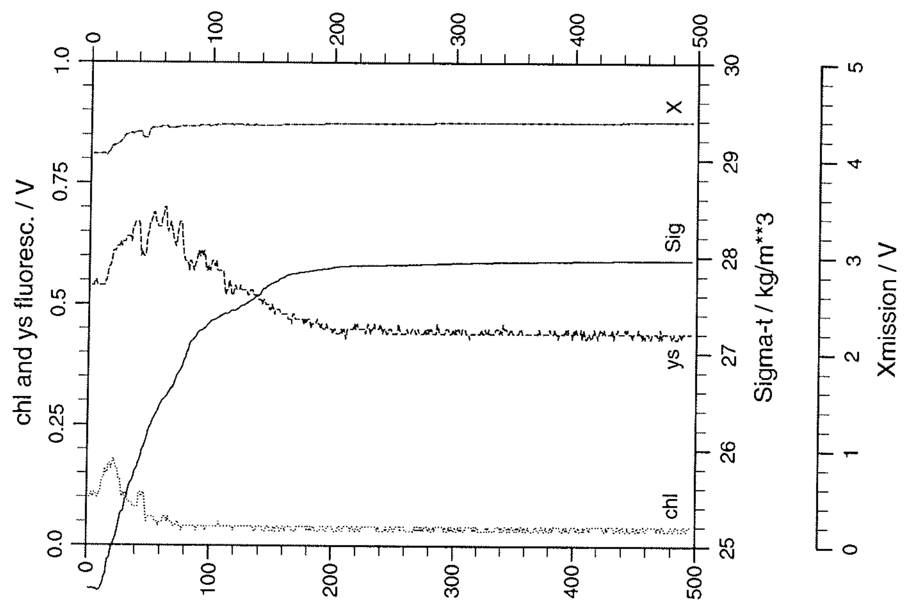

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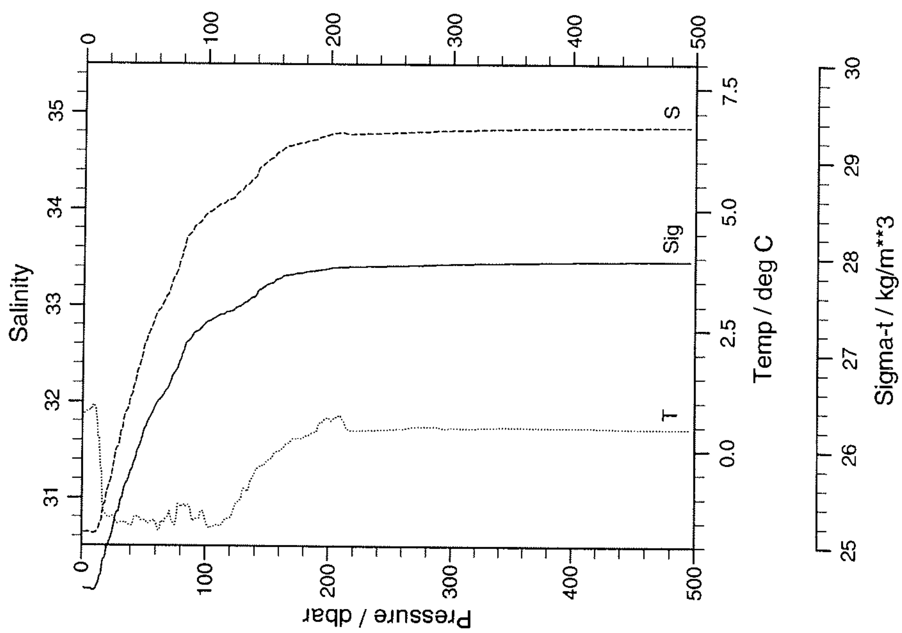

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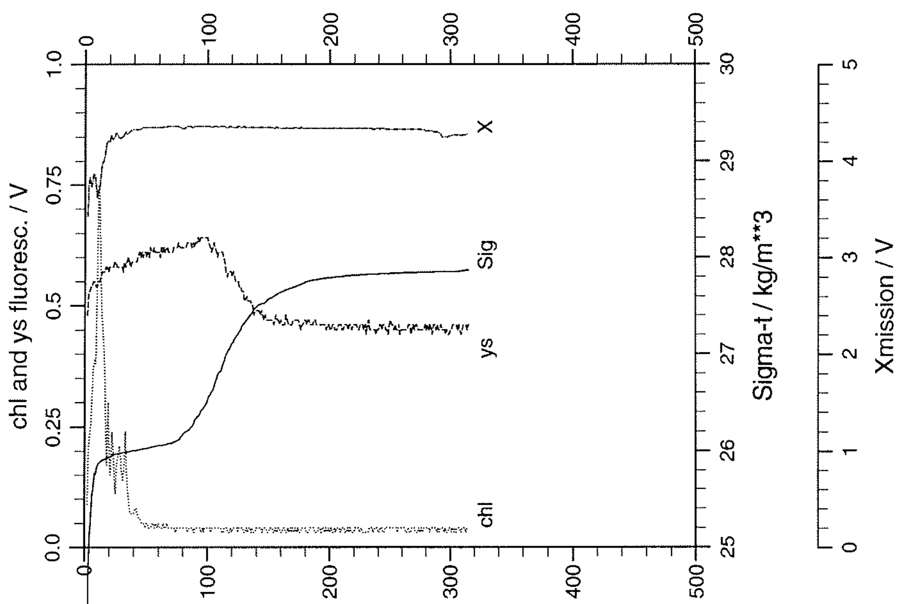
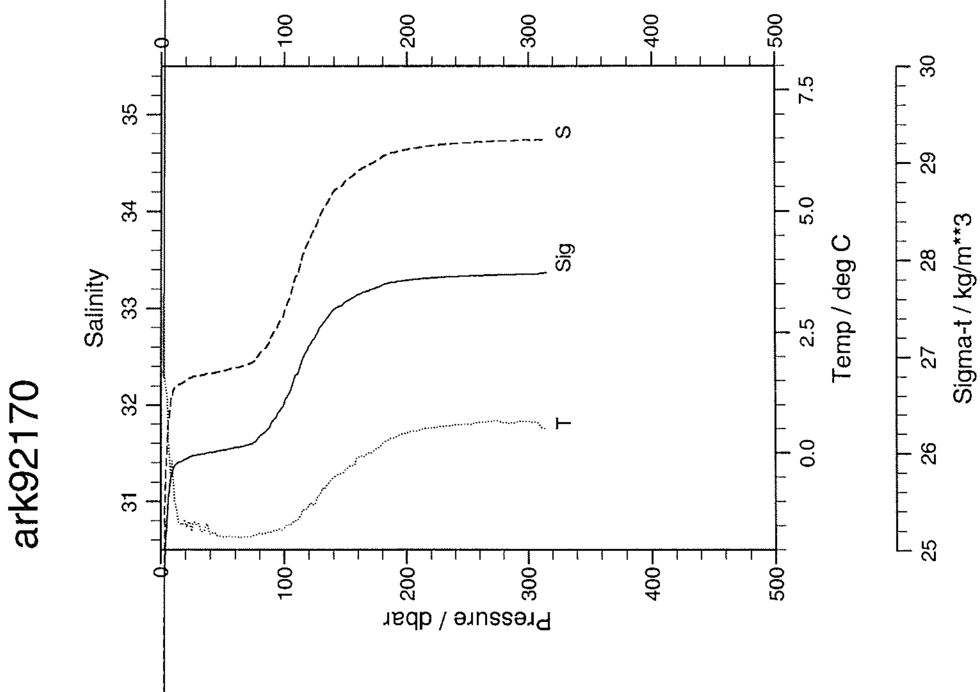
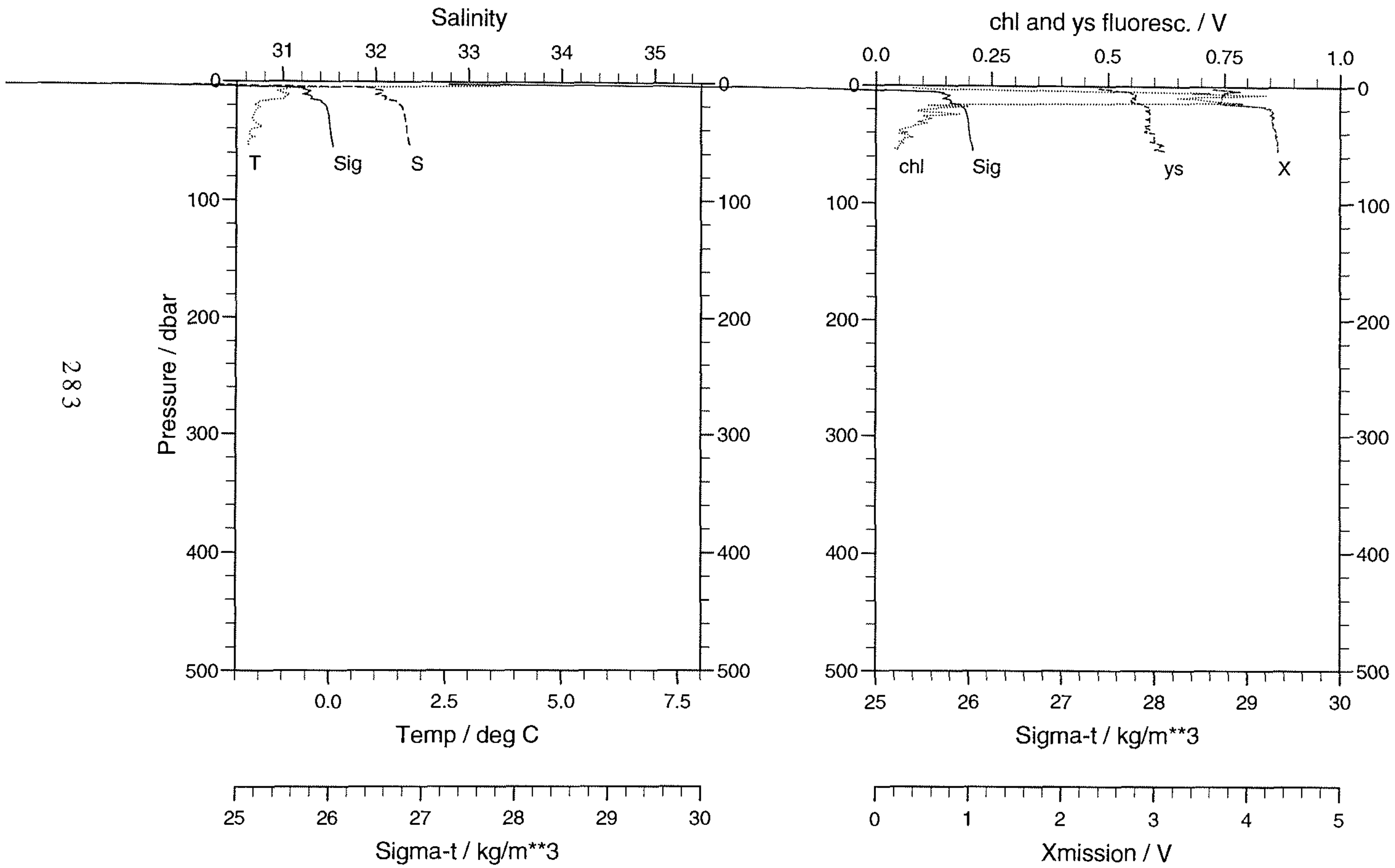
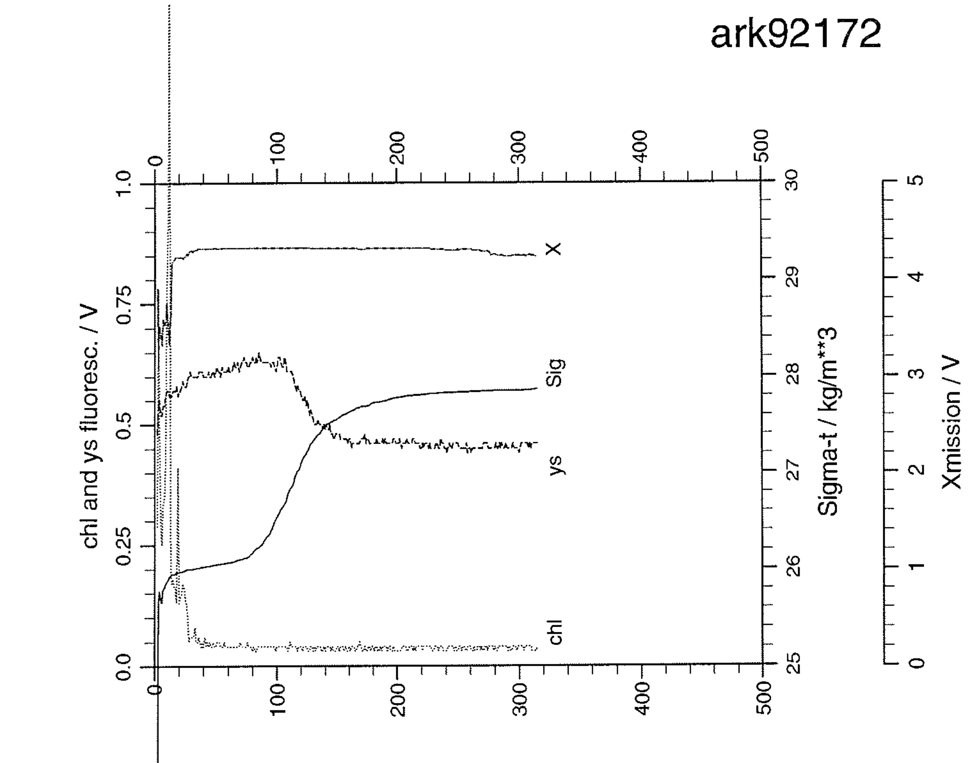

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl

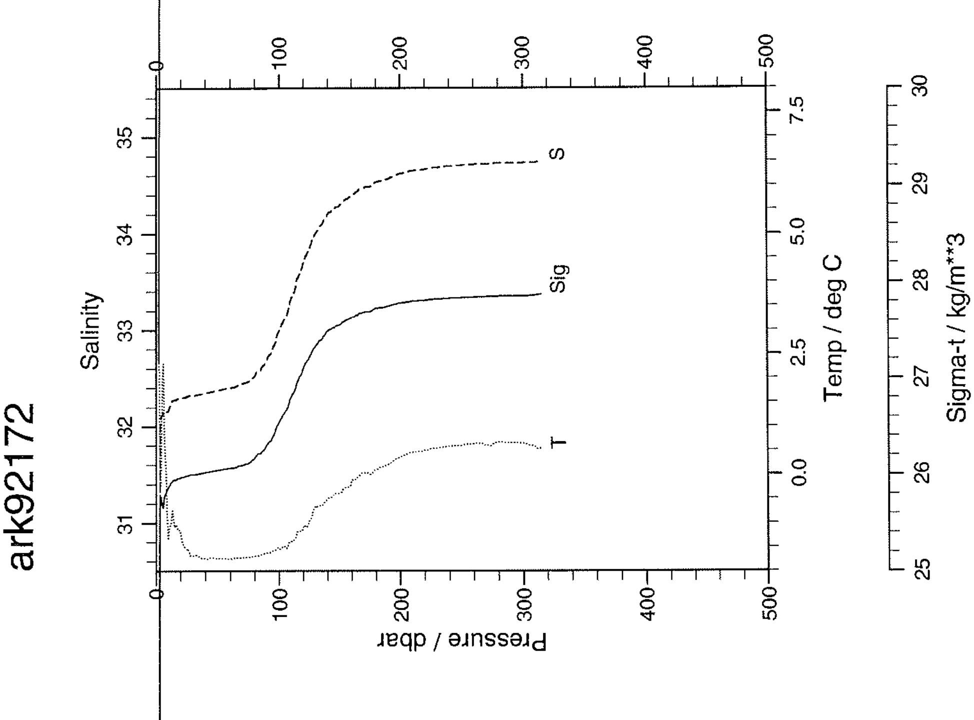

ark92170
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92171

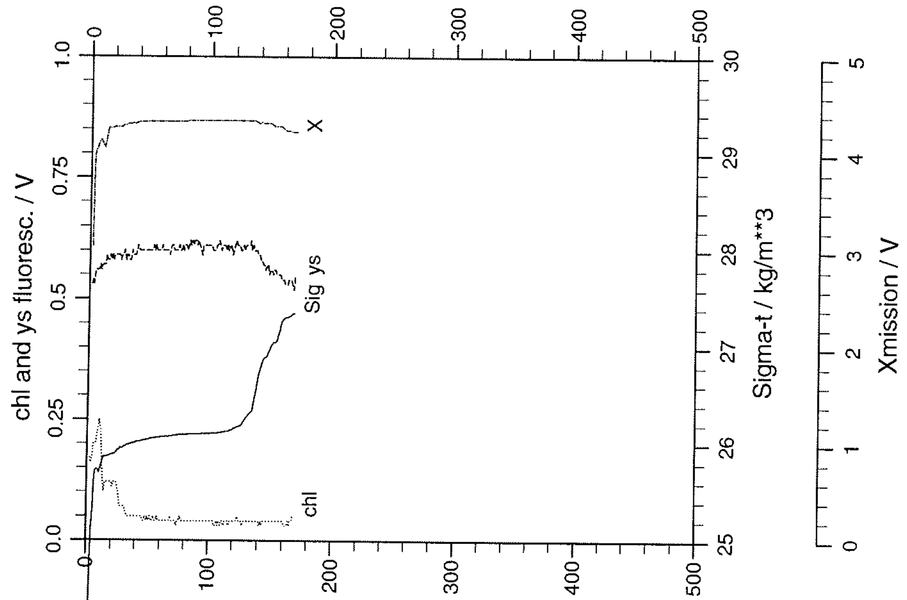


ark92171

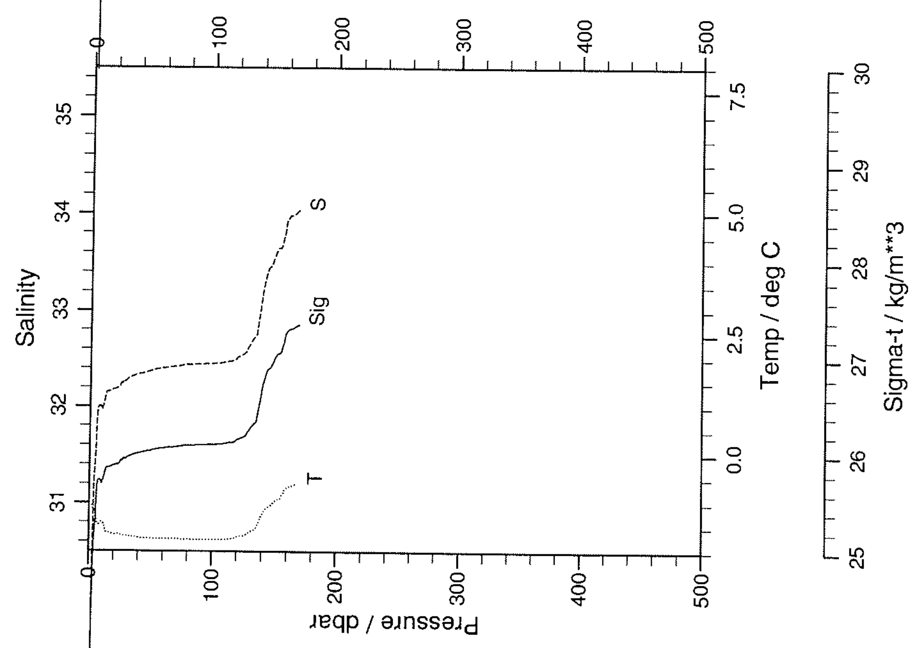

ark92172
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl


ark92172
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

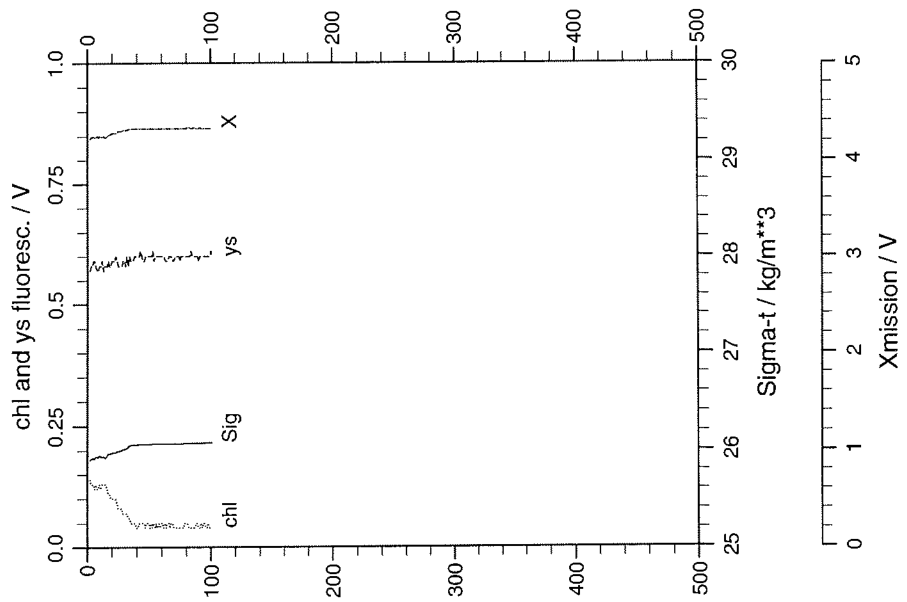
ark92180



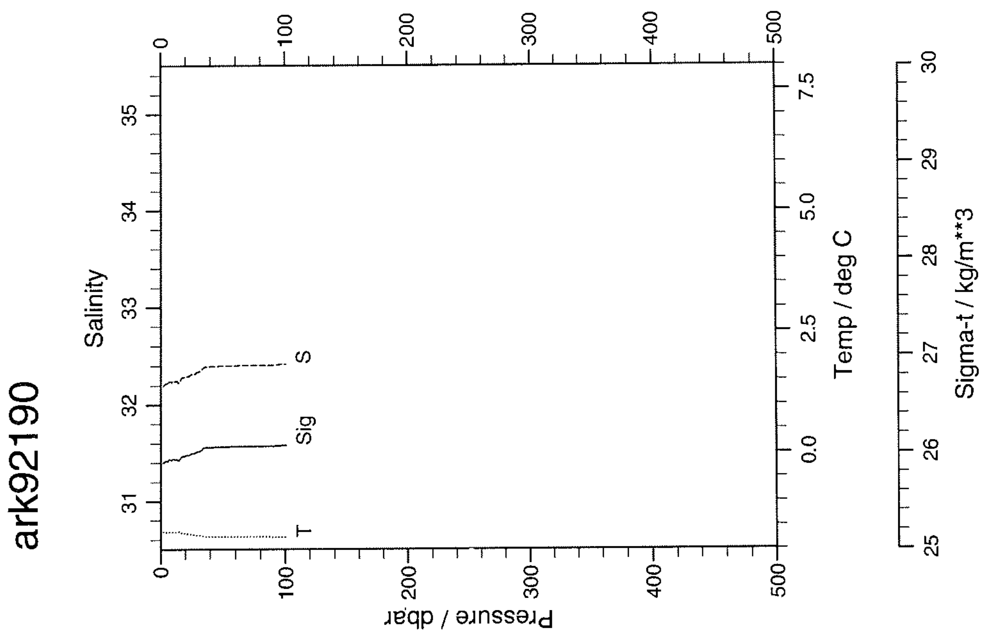
ark92180



ark92190

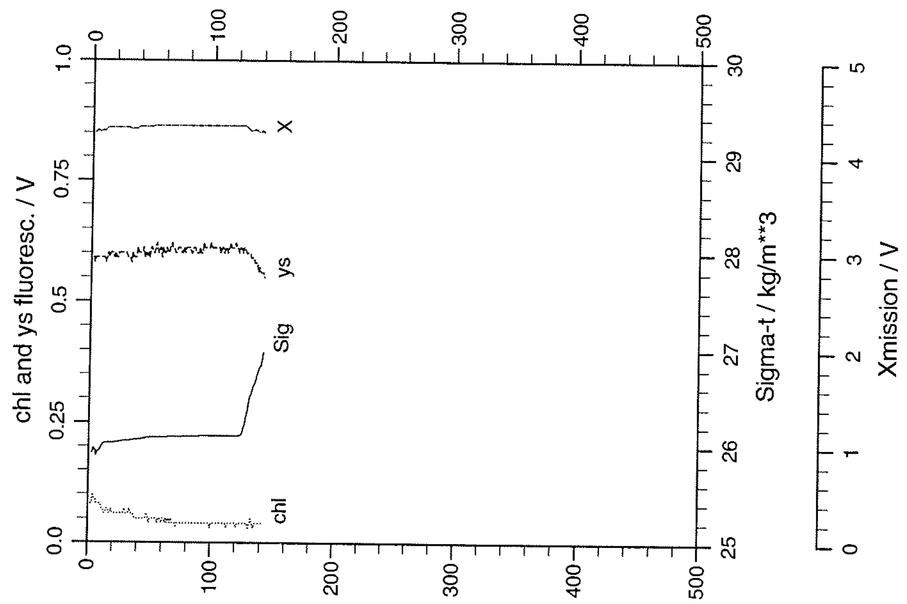


chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
0
100
200
300
400
500
X
ys
Sig
chl
Sigma-t / kg/m**3
25
26
27
28
29
30
Xmission / V
0
1
2
3
4
5

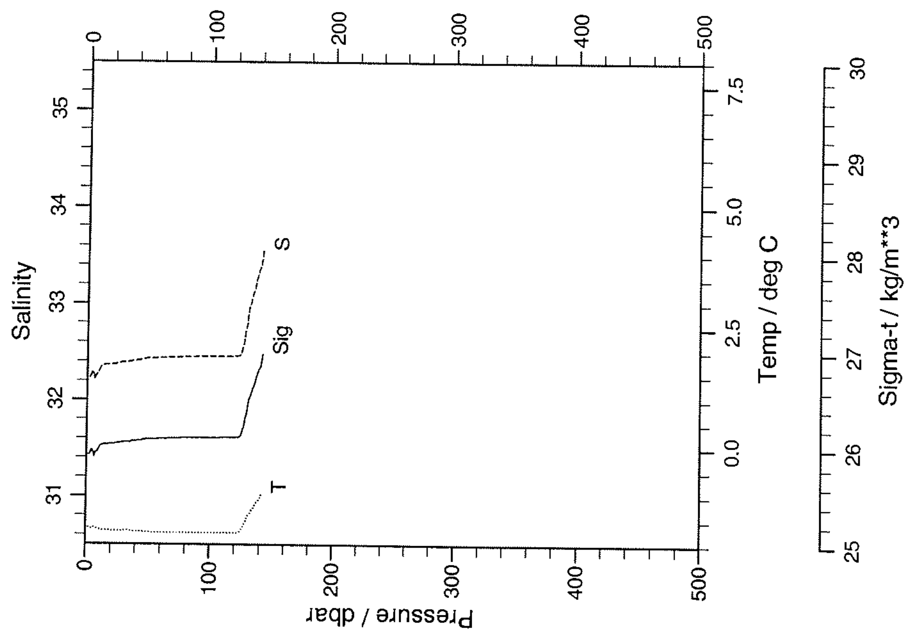


ark92190
Salinity
31
32
33
34
35
0
100
200
300
400
500
Pressure / dbar
S
Sig
T
Temp / deg C
0.0
2.5
5.0
7.5
Sigma-t / kg/m**3
25
26
27
28
29
30

ark92200



ark92200



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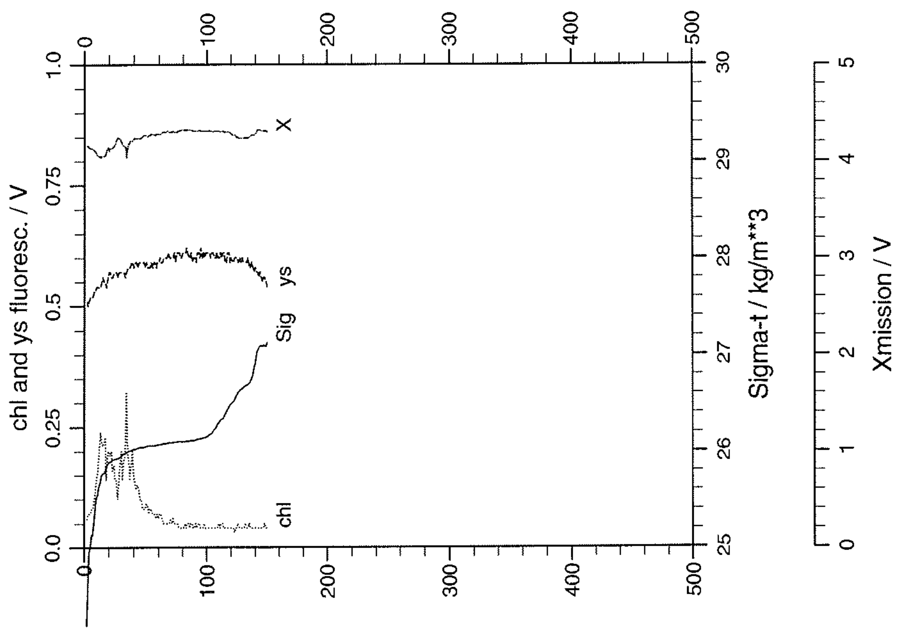

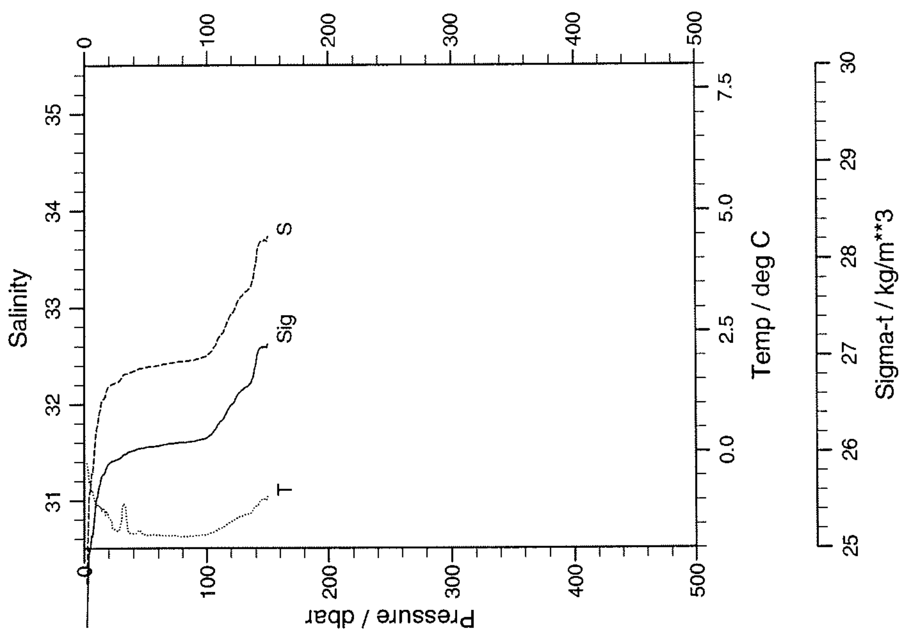

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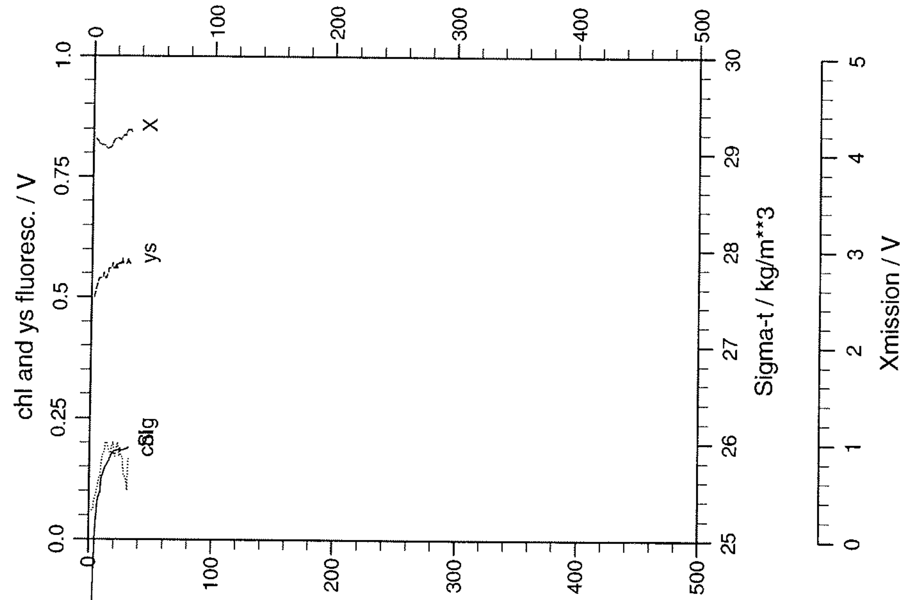
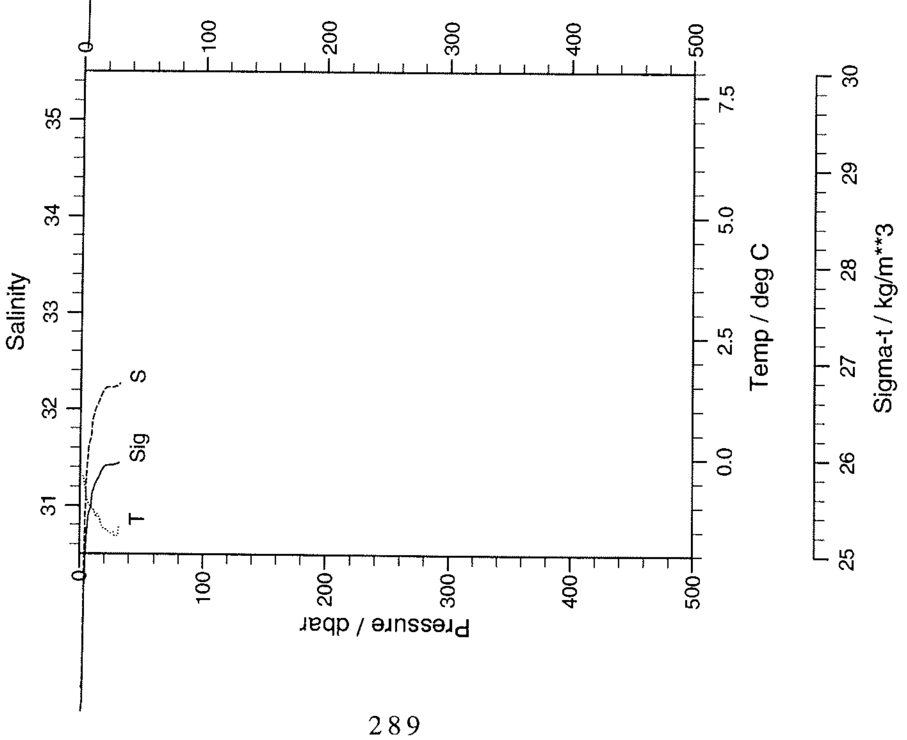
ark92211





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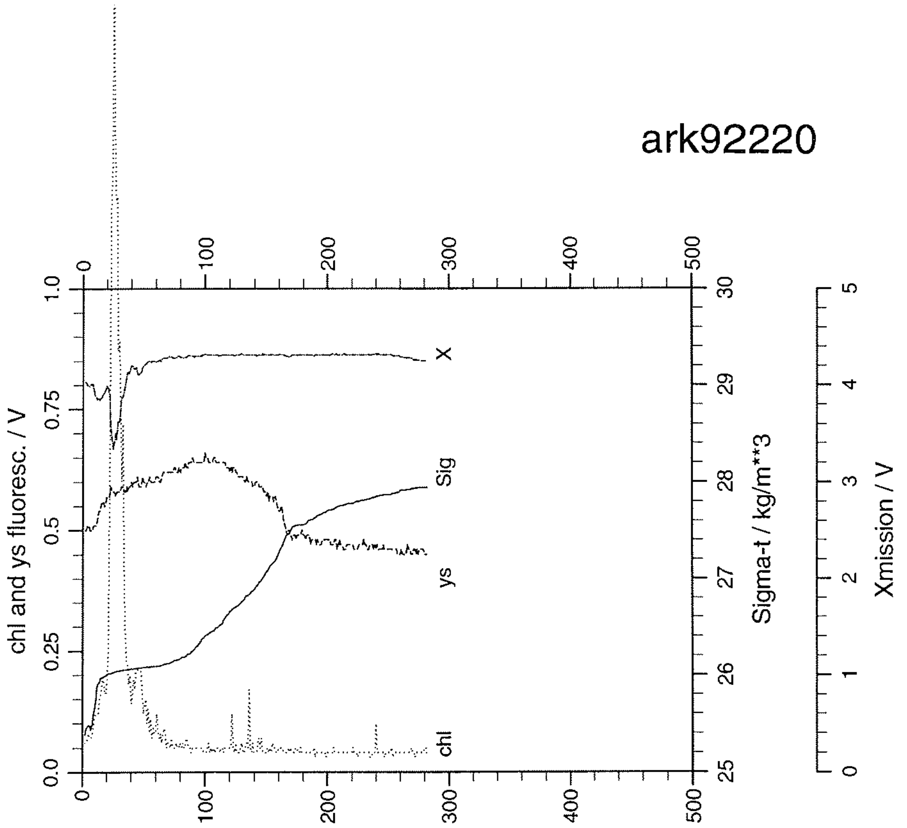
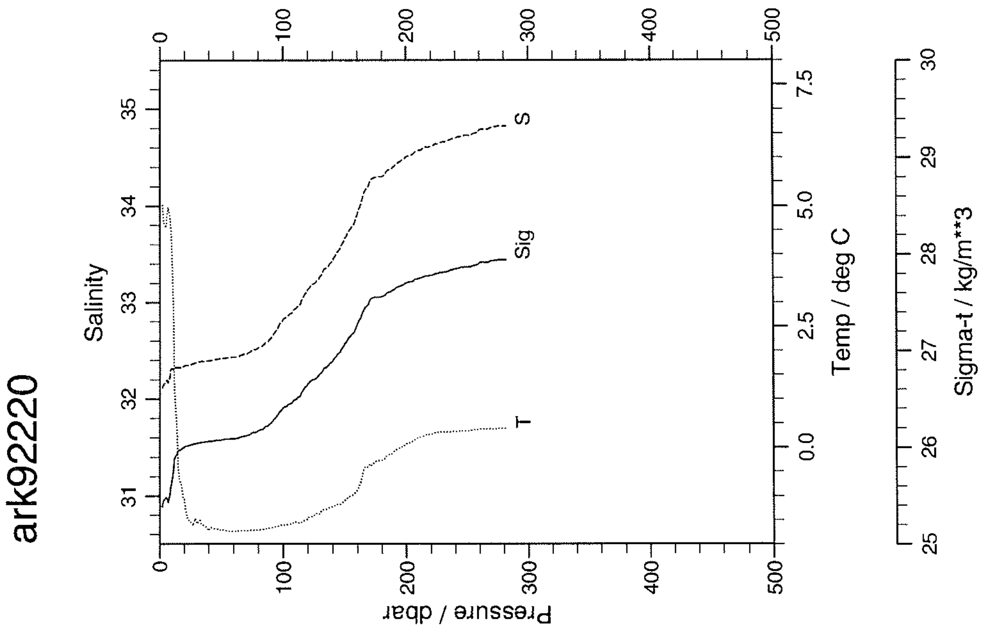
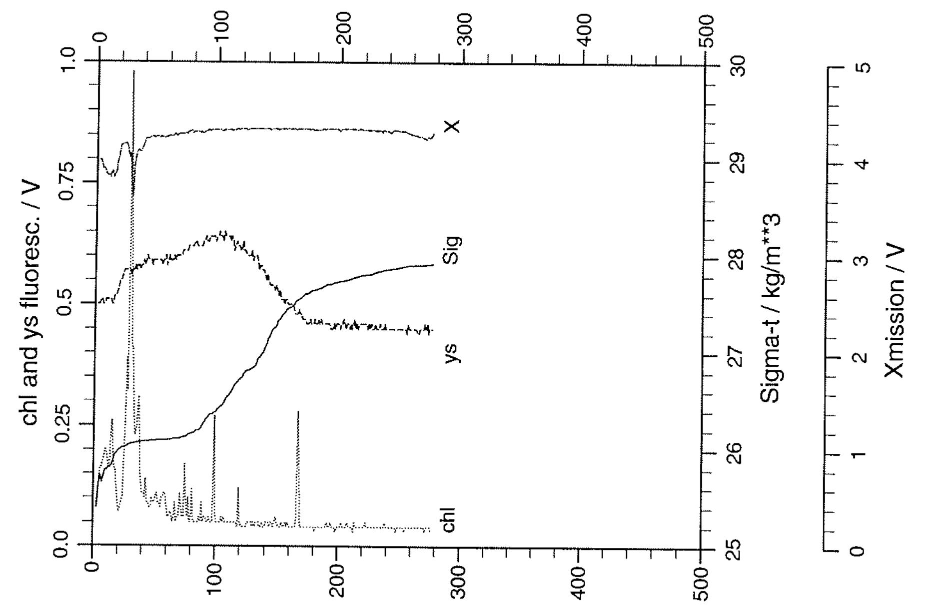


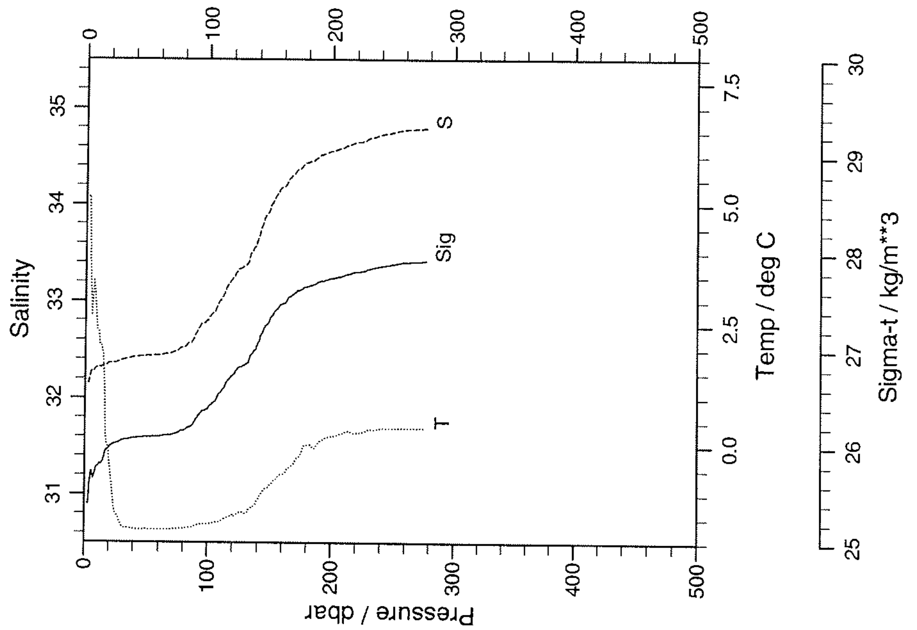
ark92220
chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
0
100
200
300
400
500
25
26
27
28
29
30
Sigma-t / kg/m**3
0
1
2
3
4
5
Xmission / V
X
Sig
ys
chl



ark92220
Salinity
31
32
33
34
35
Pressure / dbar
0
100
200
300
400
500
0.0
2.5
5.0
7.5
Temp / deg C
25
26
27
28
29
30
Sigma-t / kg/m**3
S
Sig
T

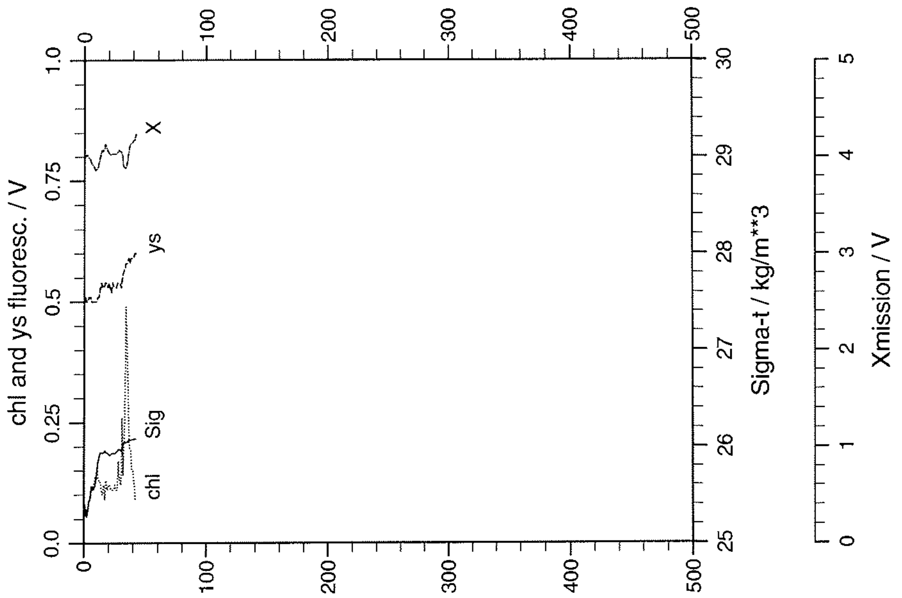
ark92230

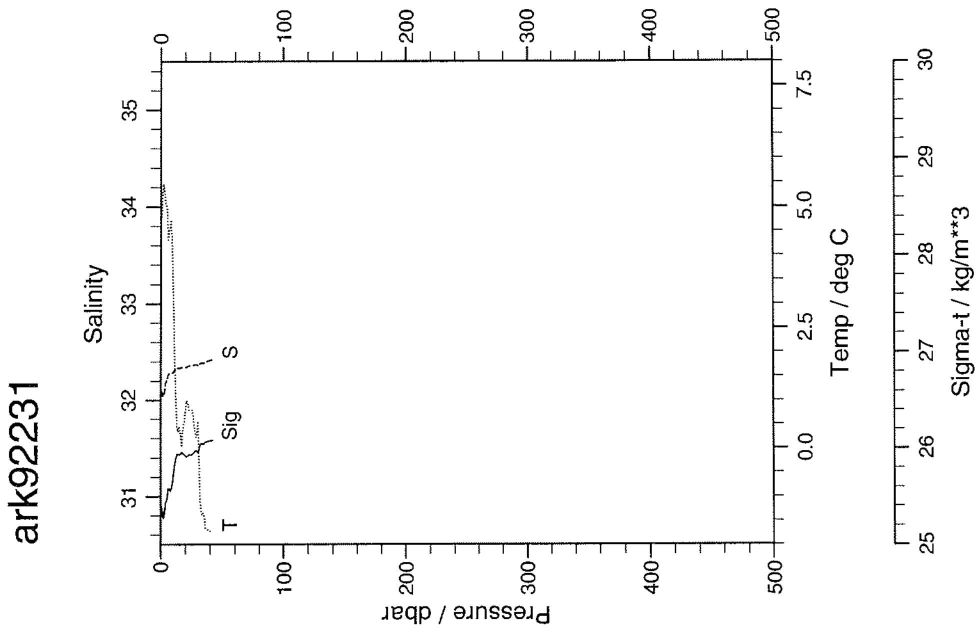




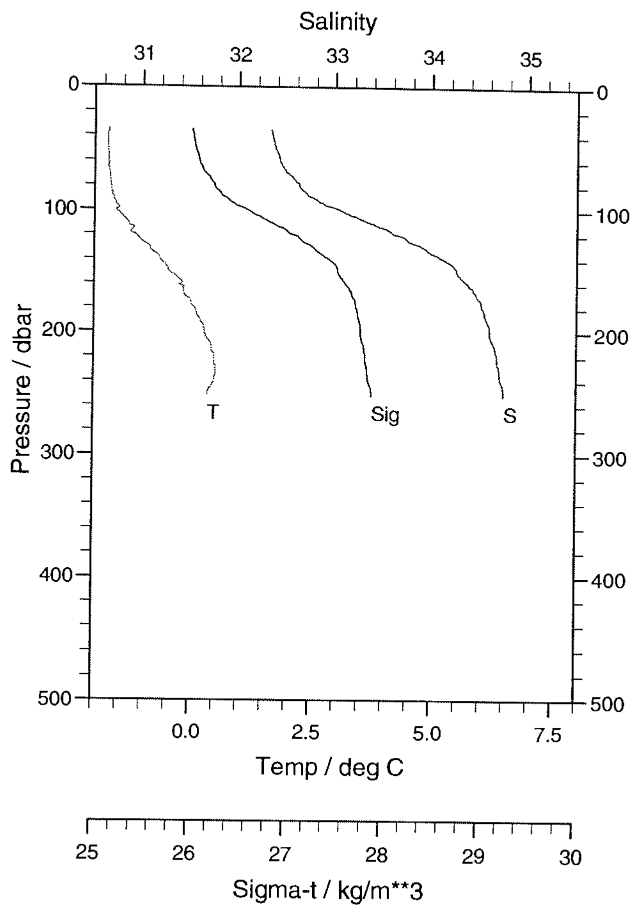
ark92230

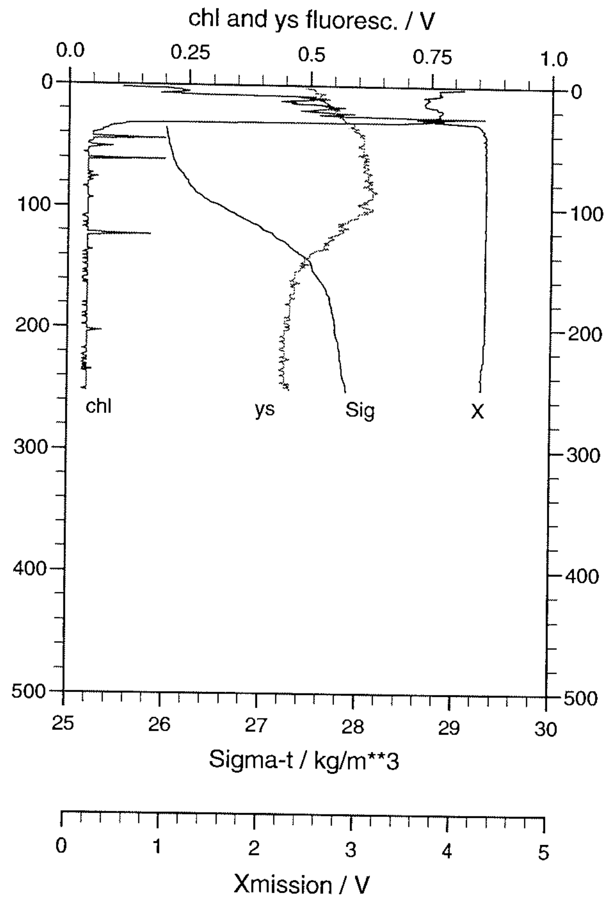
ark92231


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
chl
Sig
ys
X


ark92231
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
T
Sig
S

ark92240





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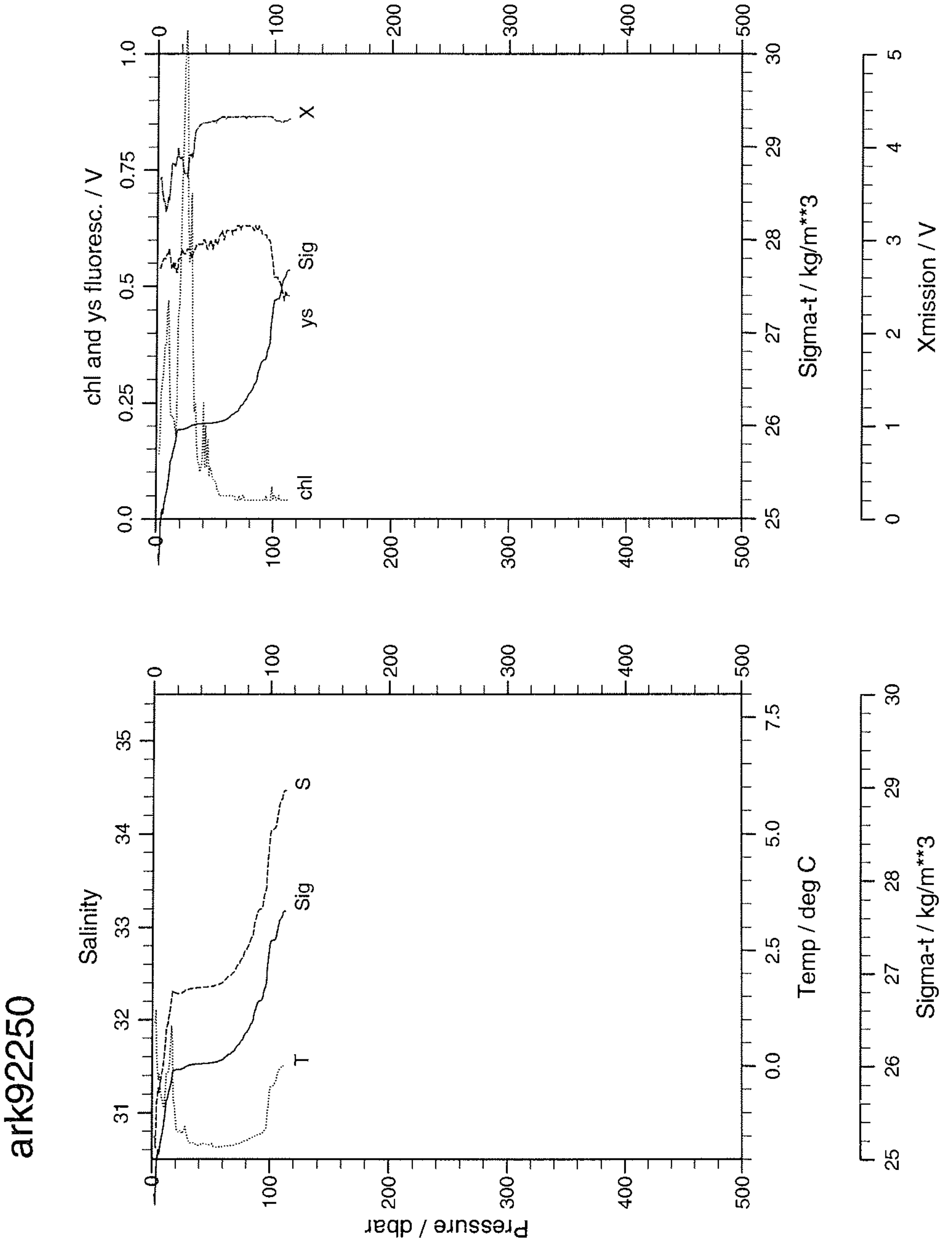
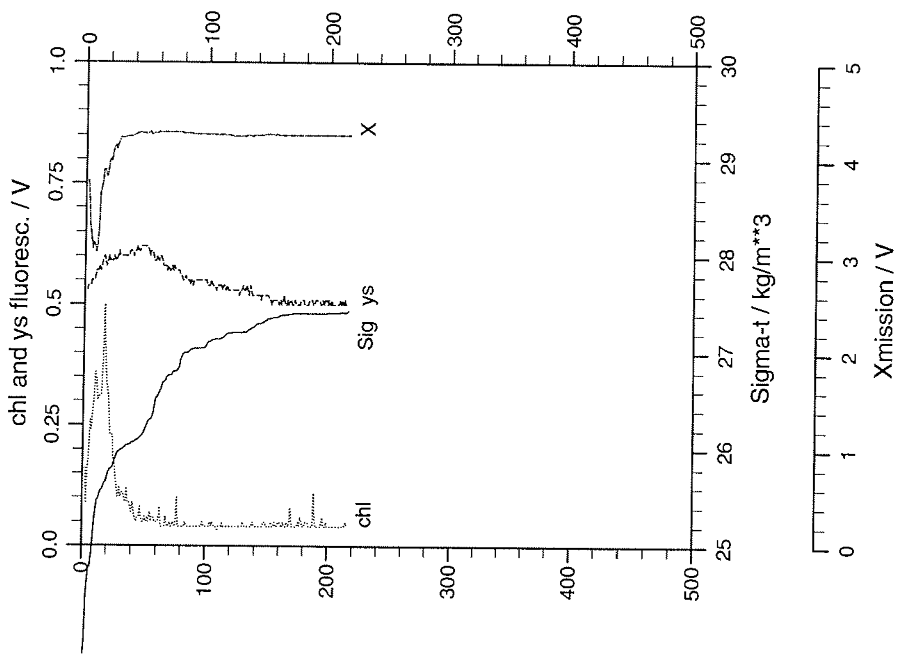
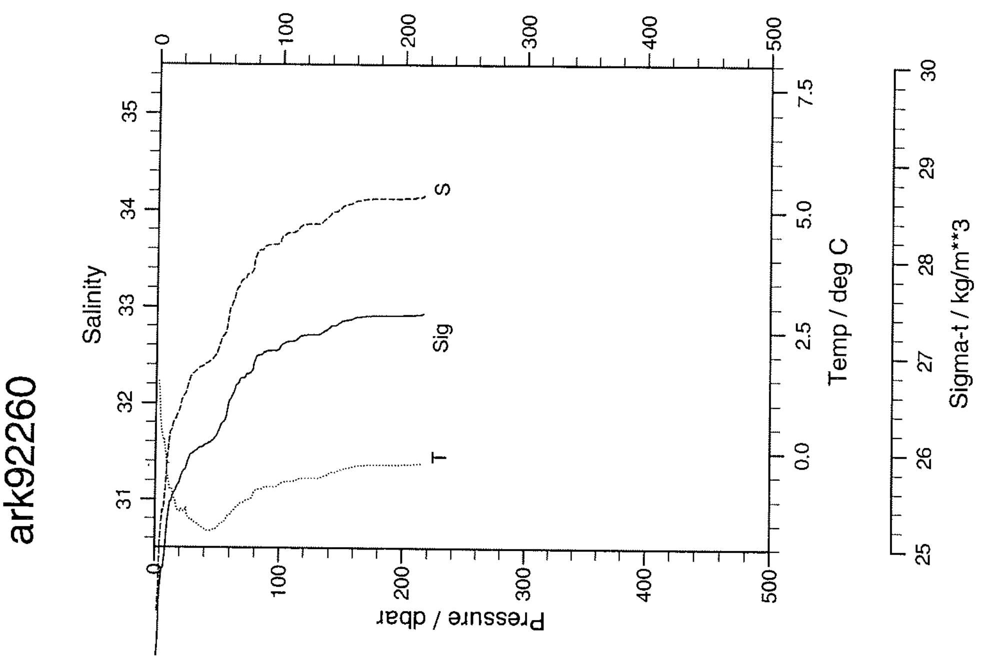
ark92250



ark92250
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Pressure / dbar
S
T

ark92260


chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
0
100
200
300
400
500
X
Sig
ys
chl
25
26
27
28
29
30
Sigma-t / kg/m**3
0
1
2
3
4
5
Xmission / V


ark92260
Salinity
31
32
33
34
35
0
100
200
300
400
500
S
Sig
T
0.0
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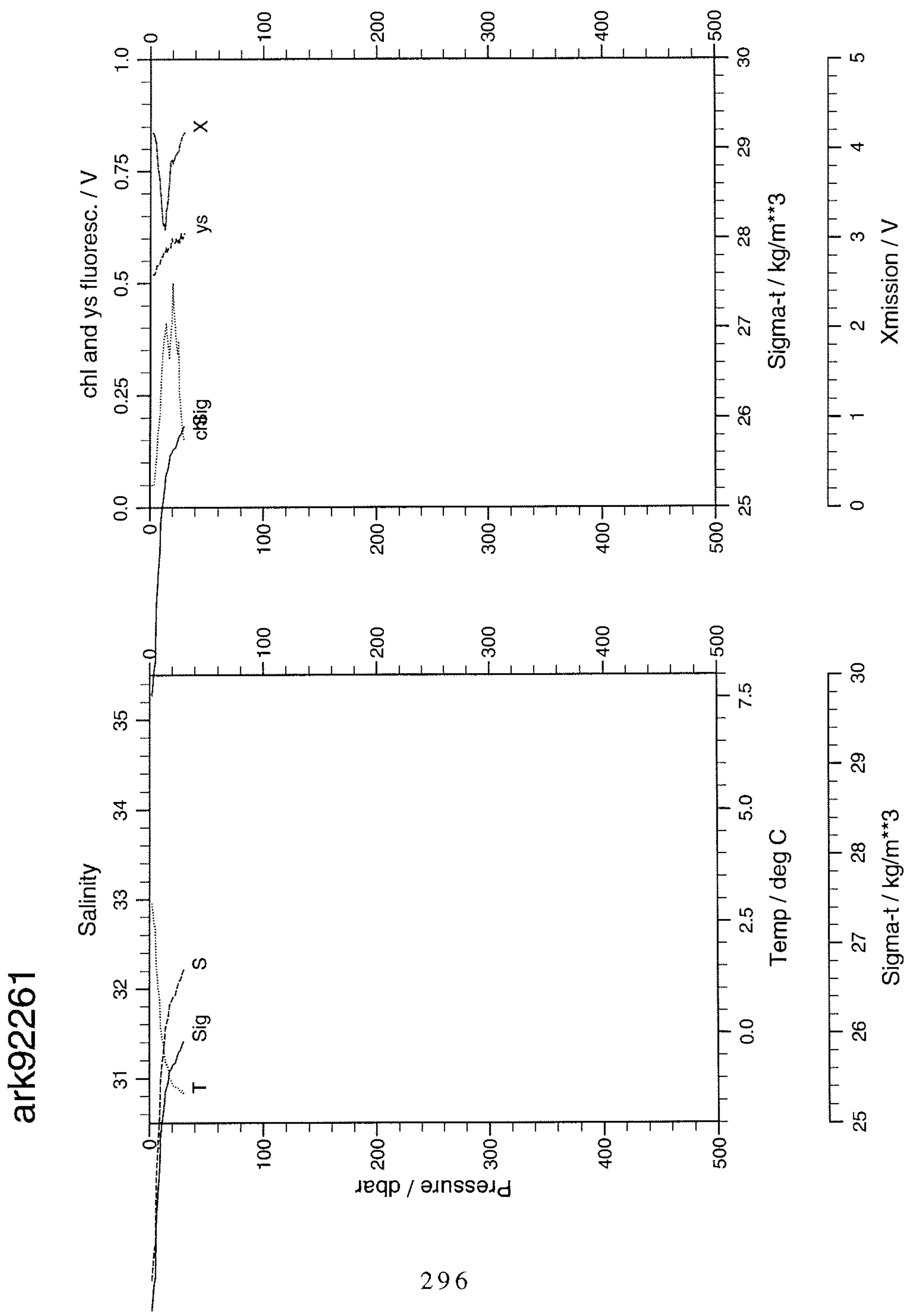
5.0
7.5
Temp / deg C
25
26
27
28
29
30
Sigma-t / kg/m**3
Pressure / dbar

ark92261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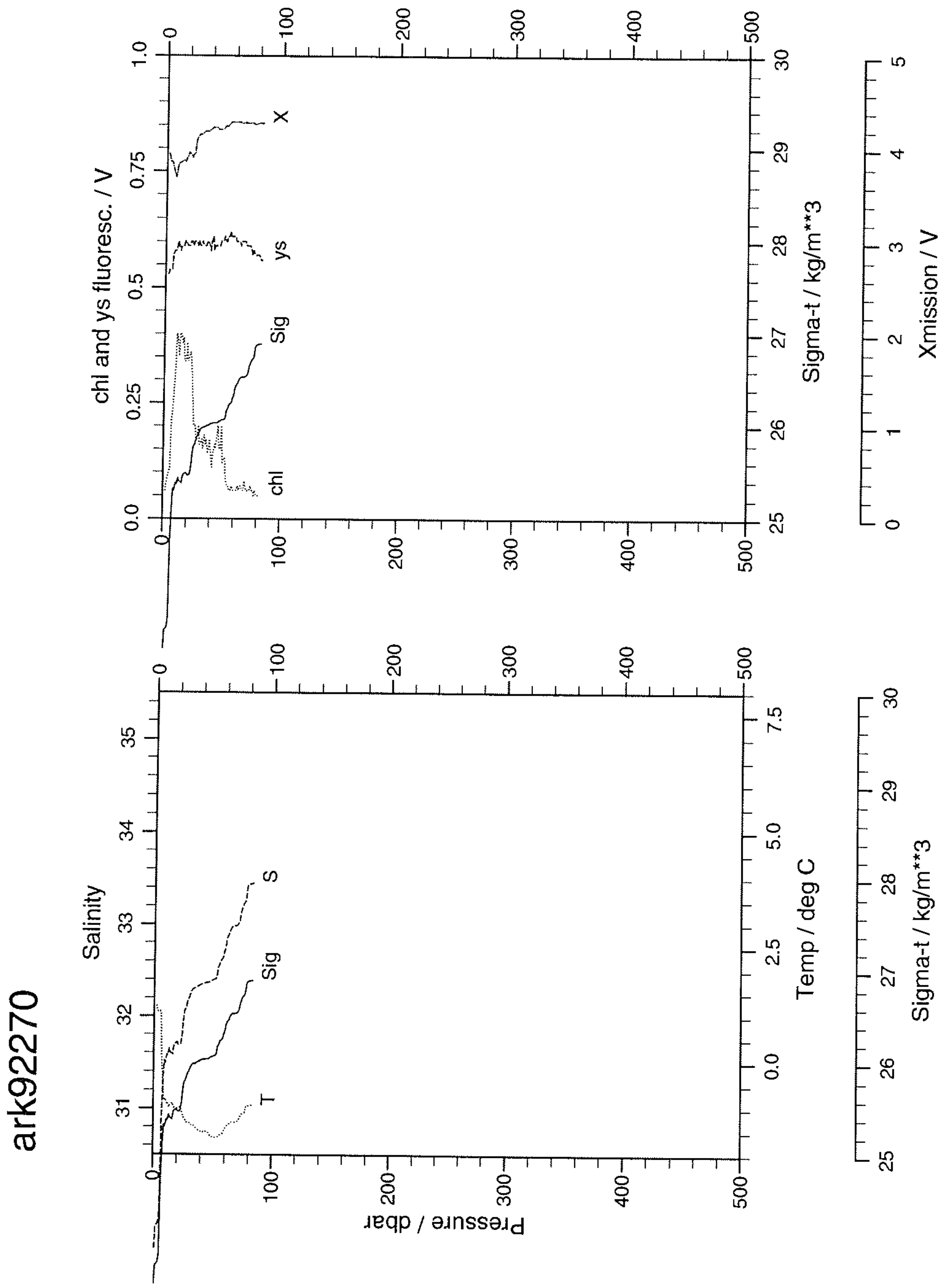
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
chl
Sig
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92270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chl and ys fluoresc. / V
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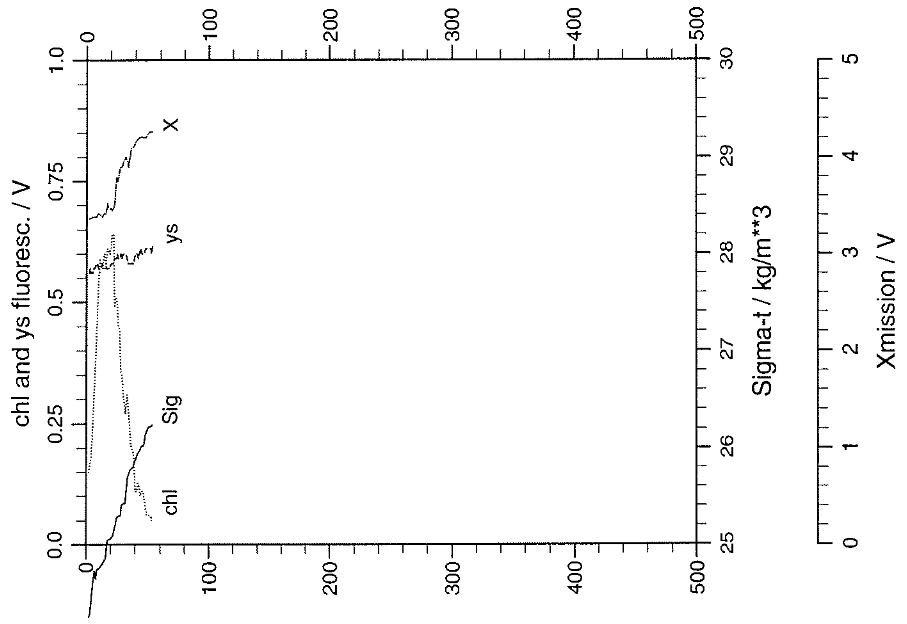
0.25
0.5
0.75
1.0
X
ys
Sig
chl
Sigma-t / kg/m**3
25
26
27
28
29
30
Xmission / V
0
1
2
3
4
5
0
100
200
300
400
500
Salinity
31
32
33
34
35
S
Sig
T
Temp / deg C
0.0
2.5
5.0
7.5
Sigma-t / kg/m**3
Pressure / dbar

ark92280



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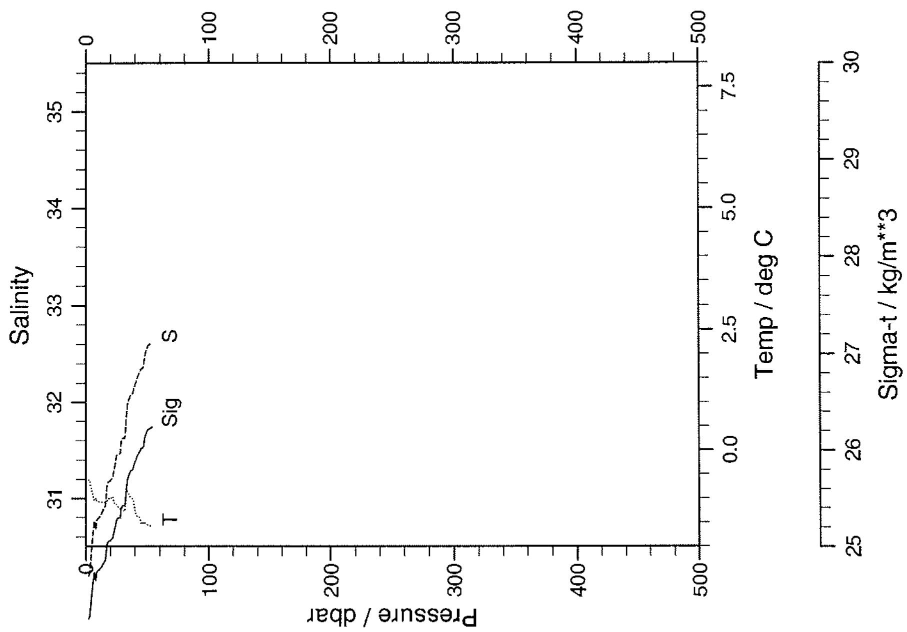

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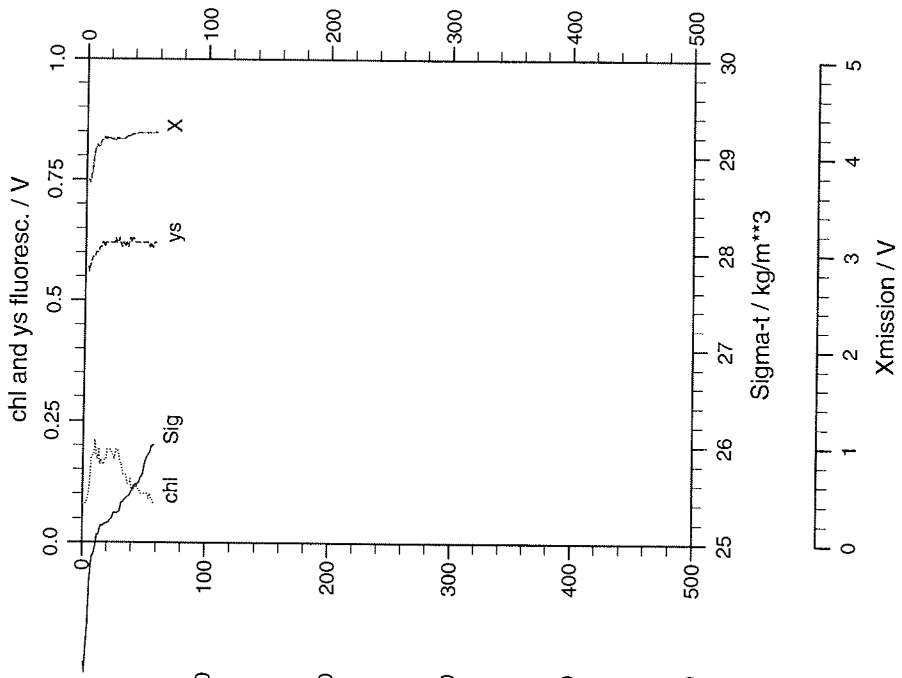
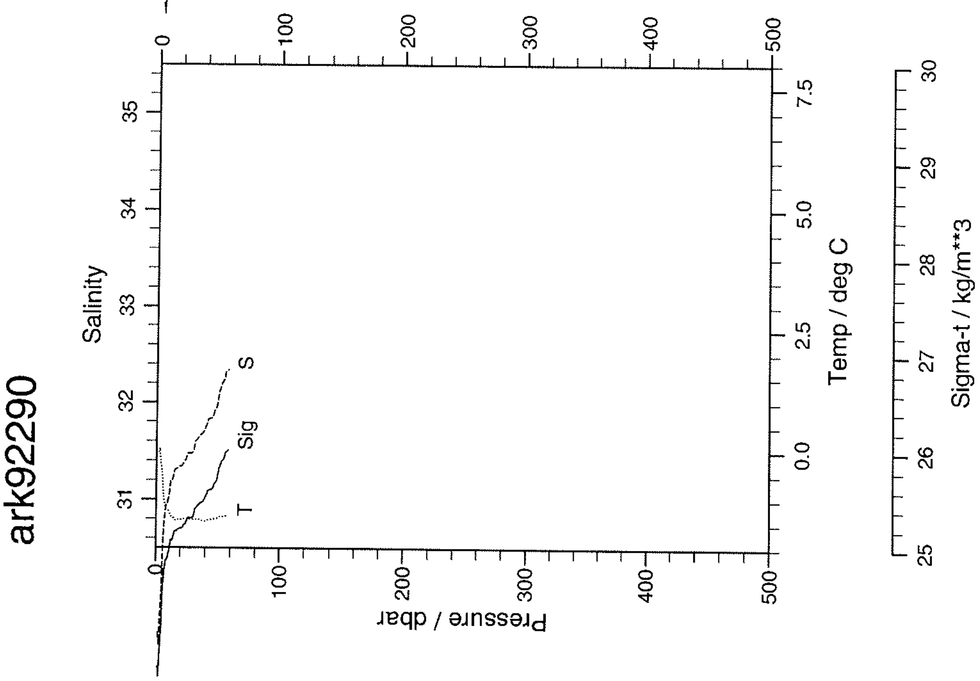

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl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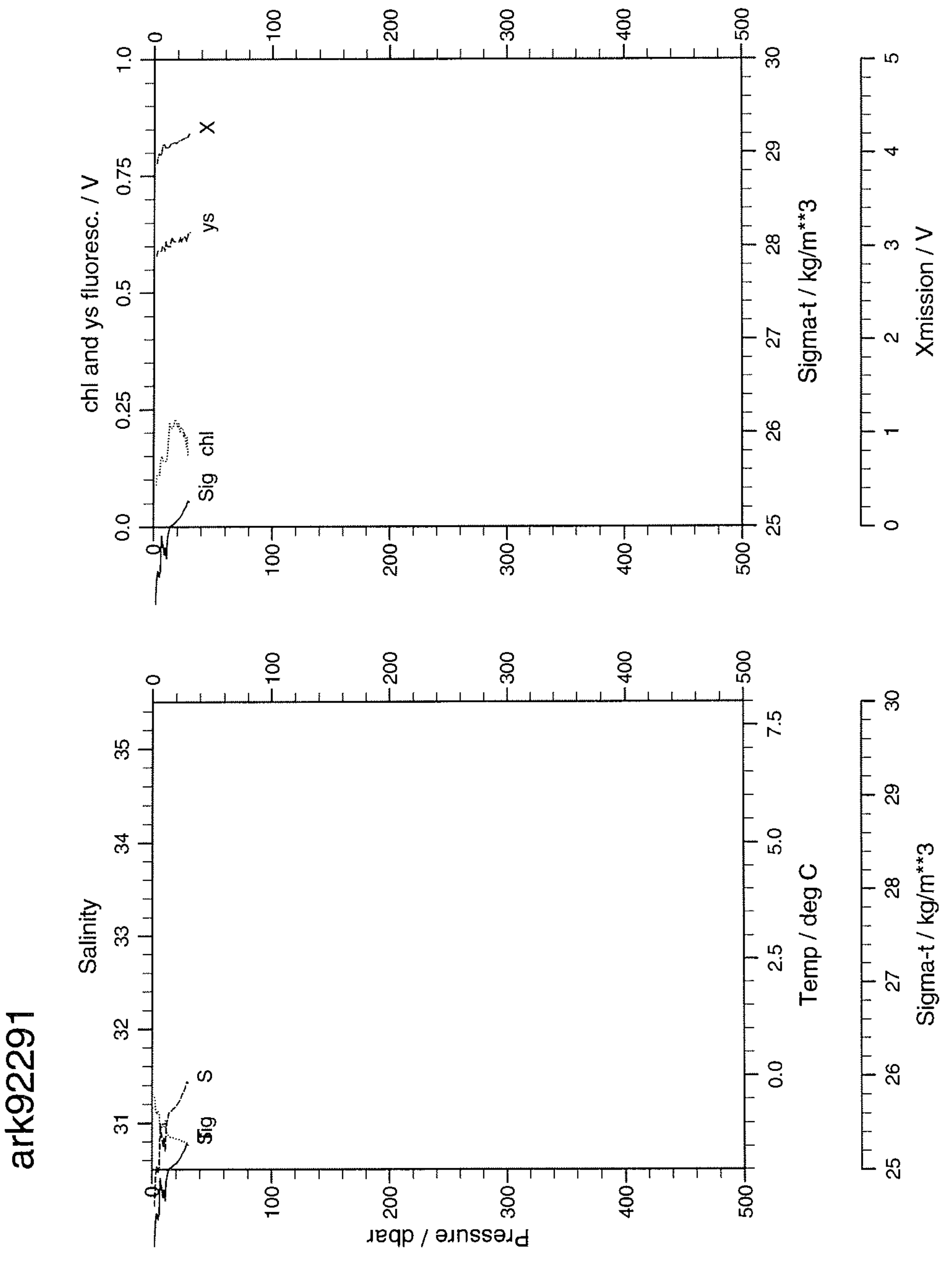
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92291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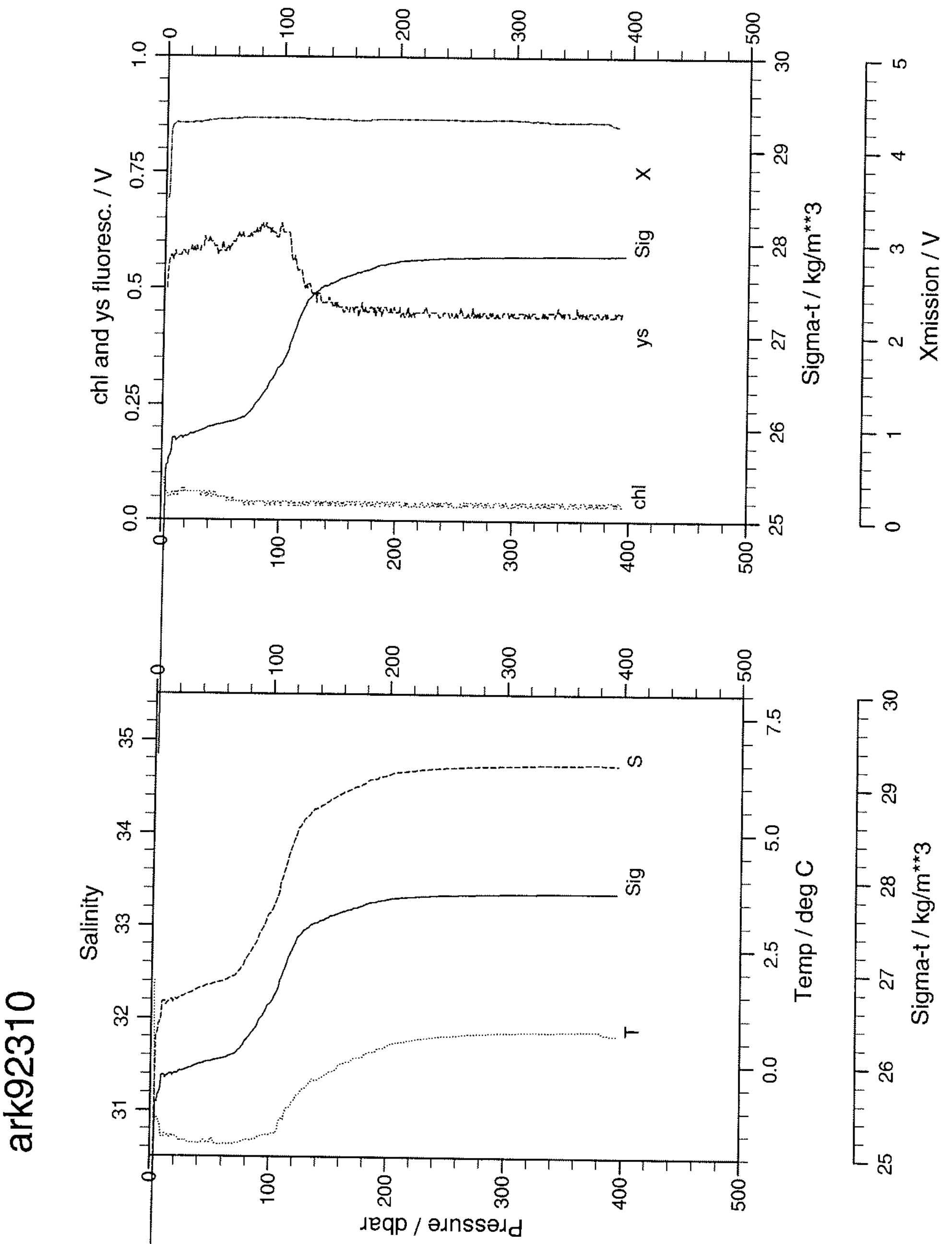
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
chl
Sig
Salinity
Temp / deg C
Pressure / dbar
S
T
Sig

ark92310



ark92310
chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
X
Sig
ys
chl
Sigma-t / kg/m**3
25
26
27
28
29
30
Xmission / V
0
1
2
3
4
5
Salinity
31
32
33
34
35
S
Sig
T
Temp / deg C
0.0
2.5
5.0
7.5
Sigma-t / kg/m**3
25
26
27
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29
30
Pressure / dbar
0
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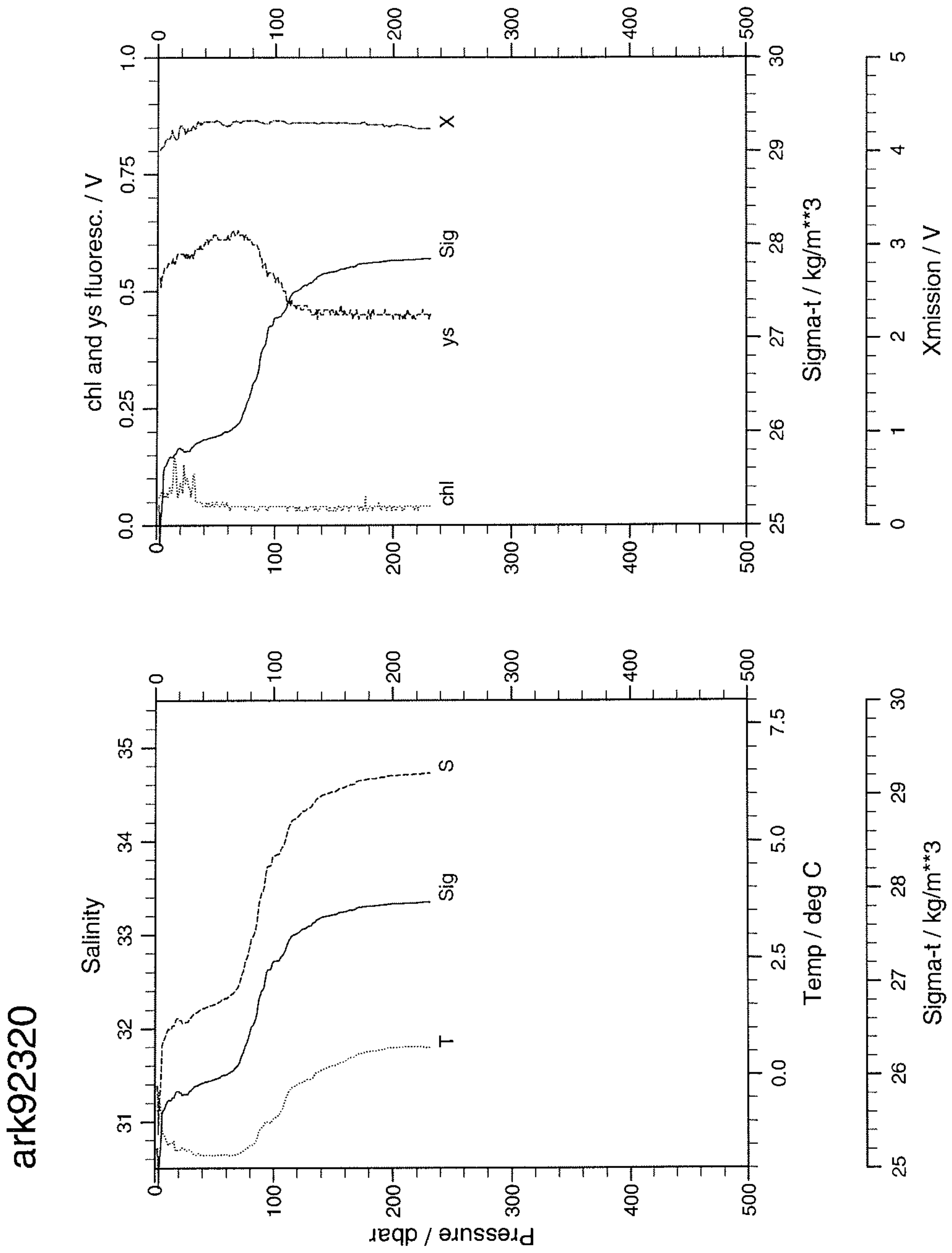
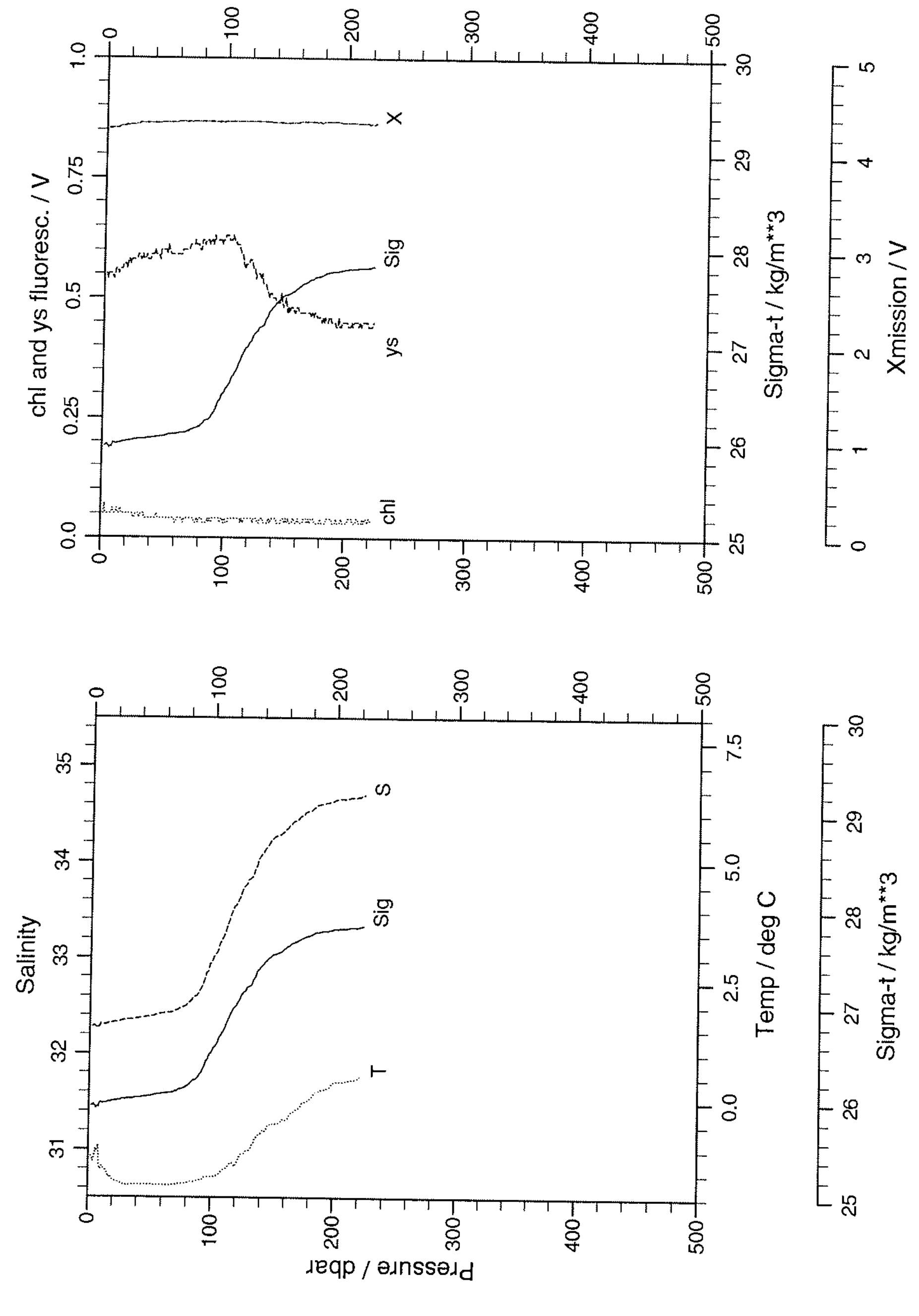
200
300
400
500

ark92320


ark92320
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92330



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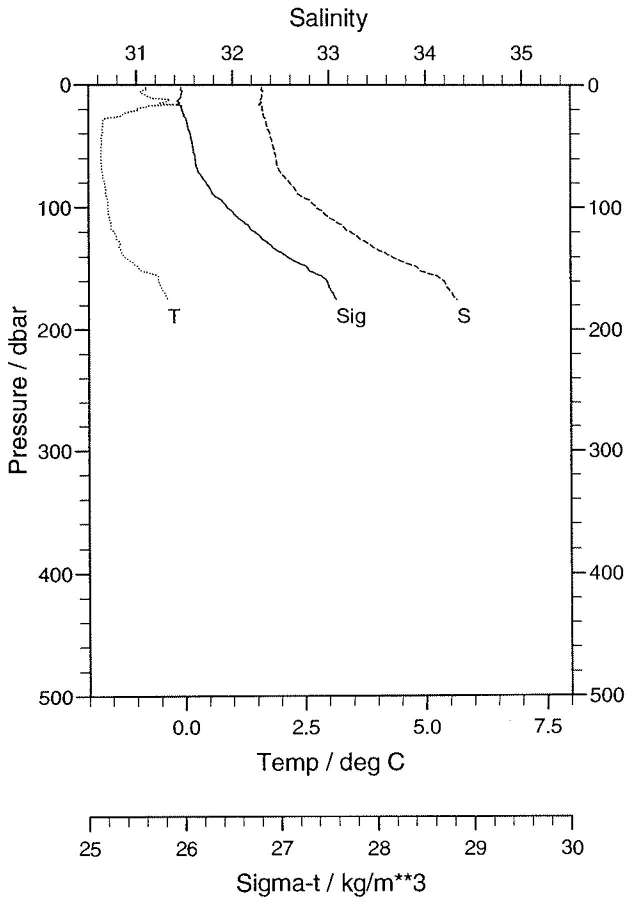

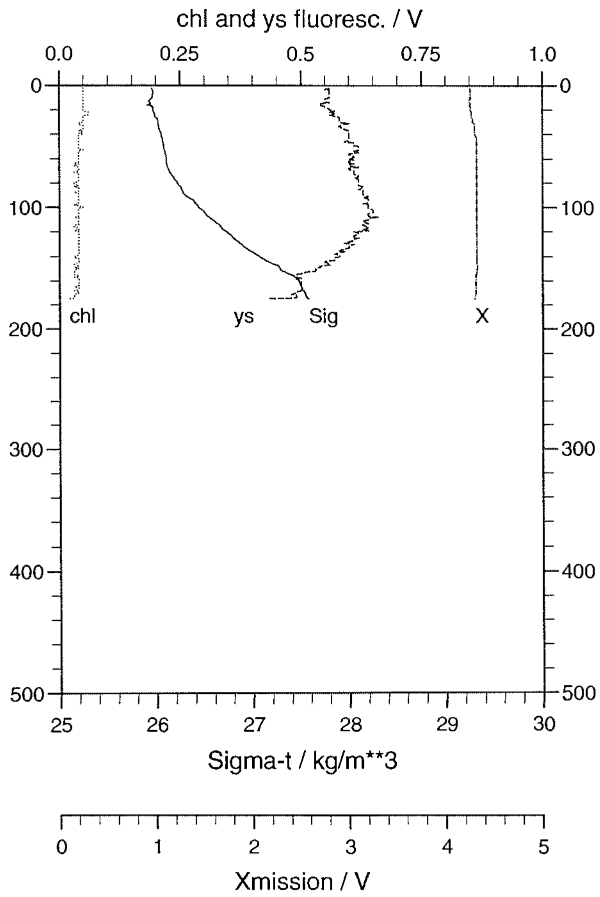

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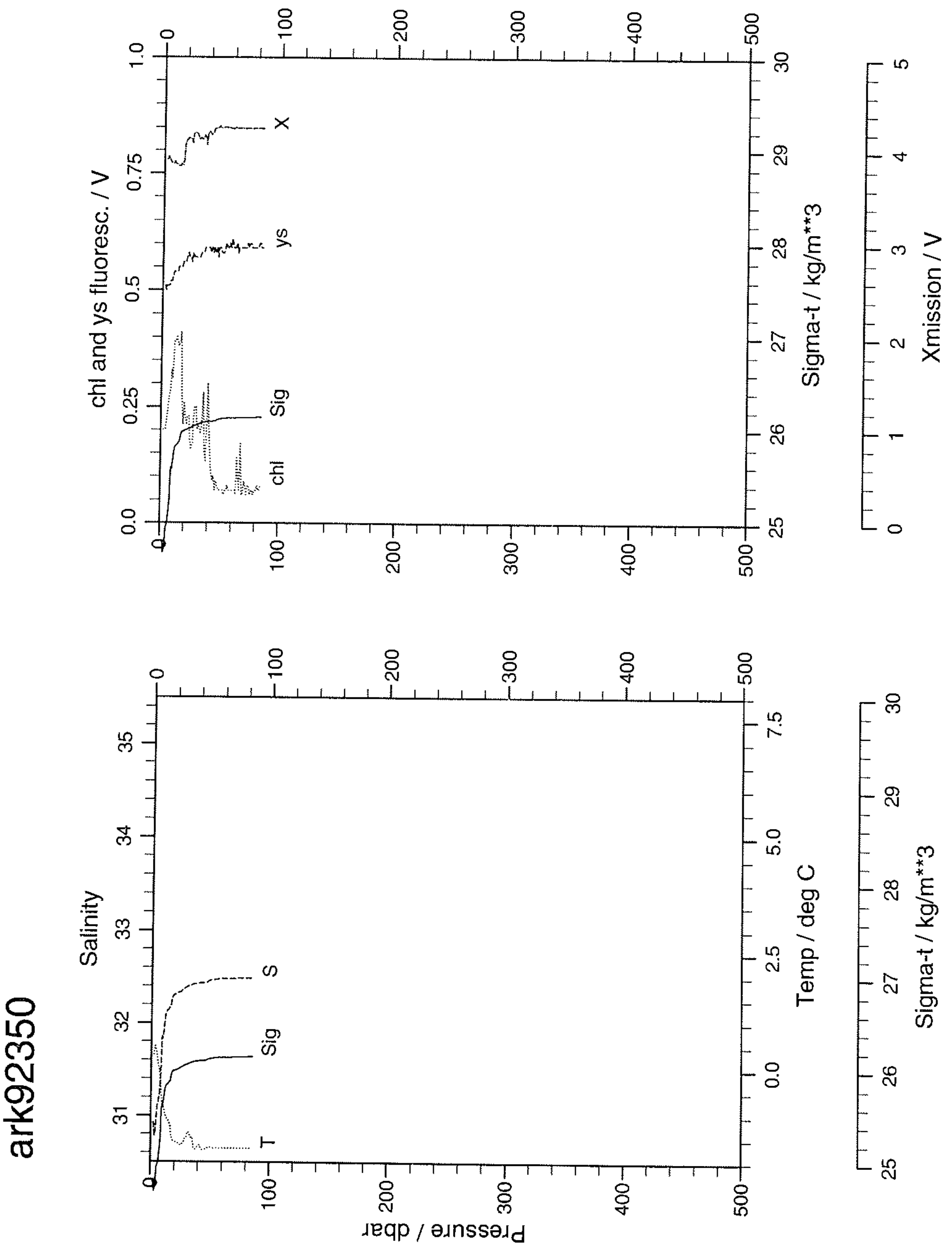
ark92350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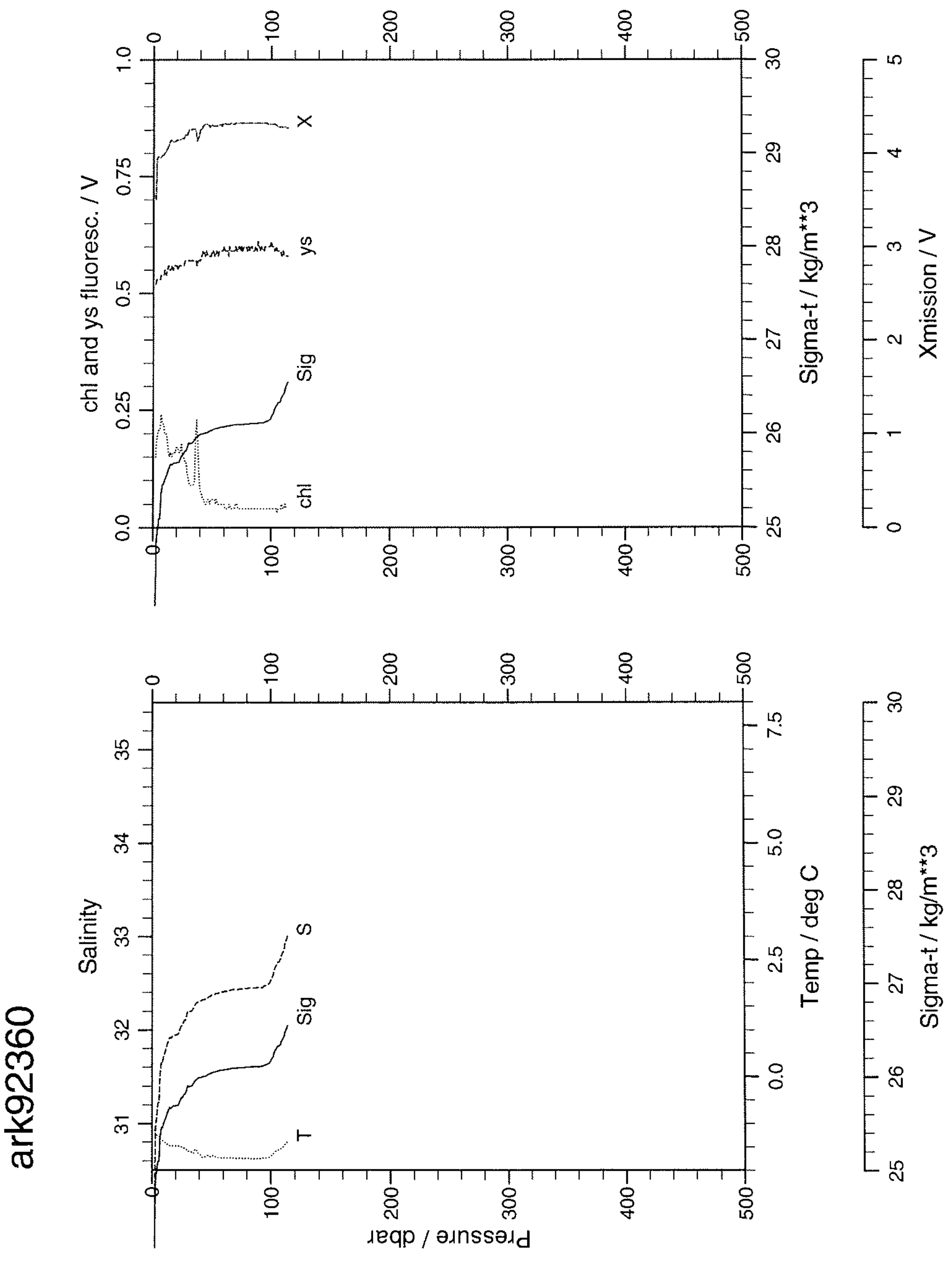
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92360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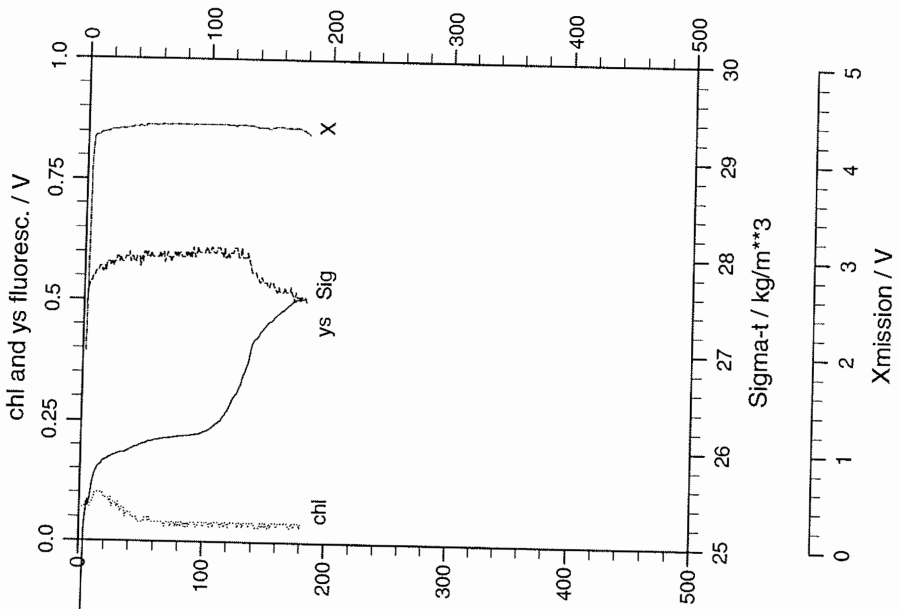
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92370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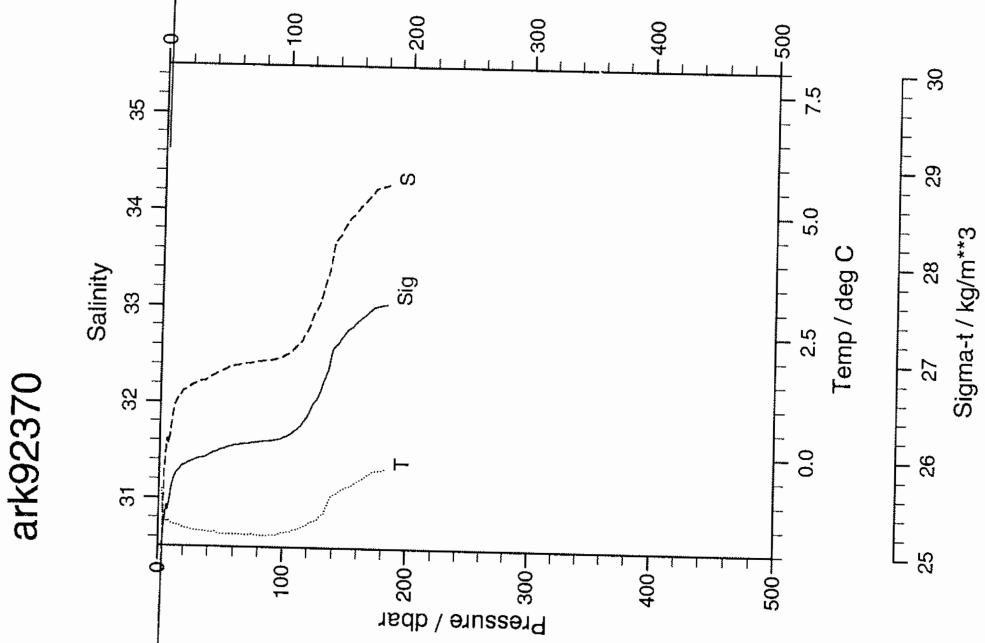
Sigma-t / kg/m**3
Xmission / V
X
ys Sig
chl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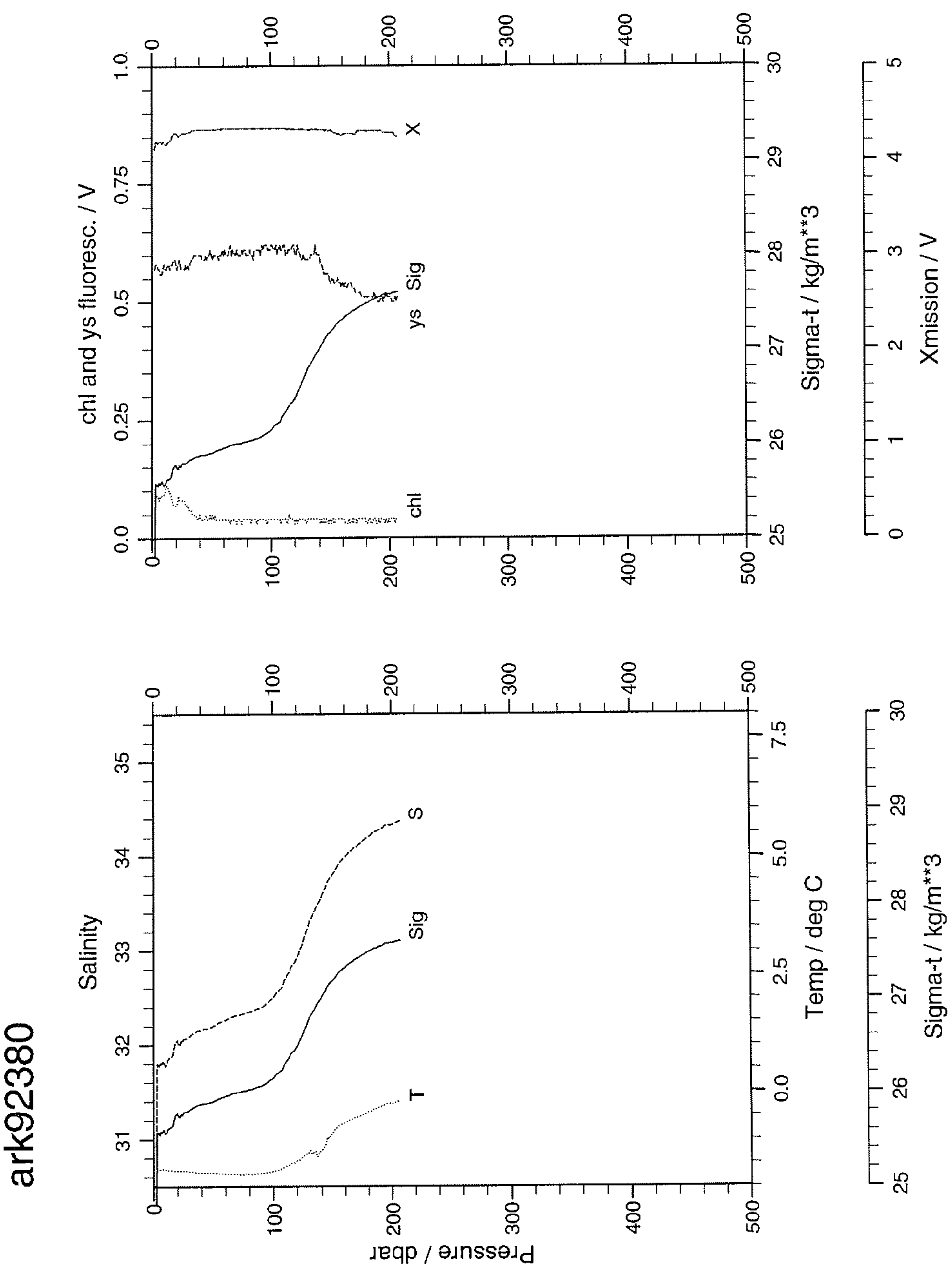
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92380



ark92380
chl and ys fluoresc. / V
Sigma-t / kg/m**3
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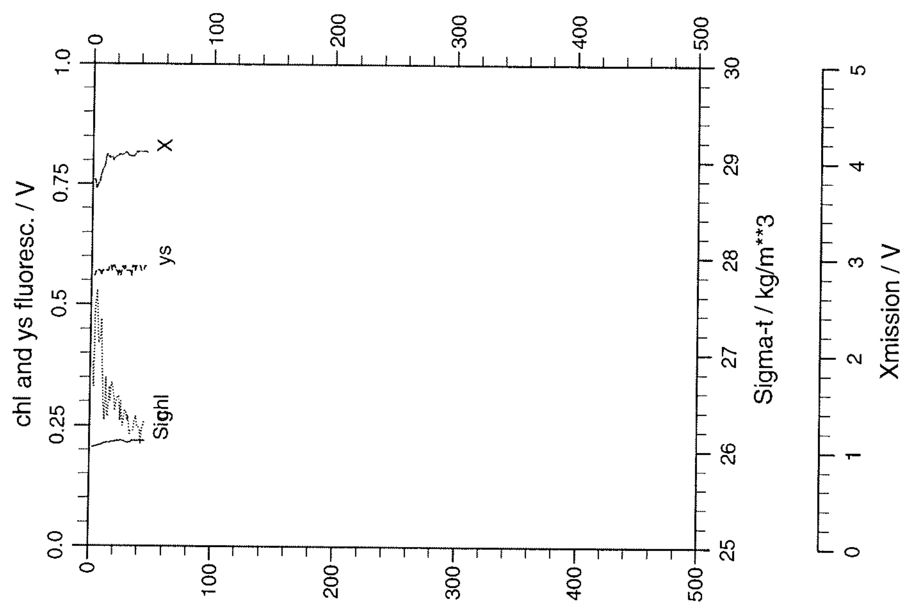
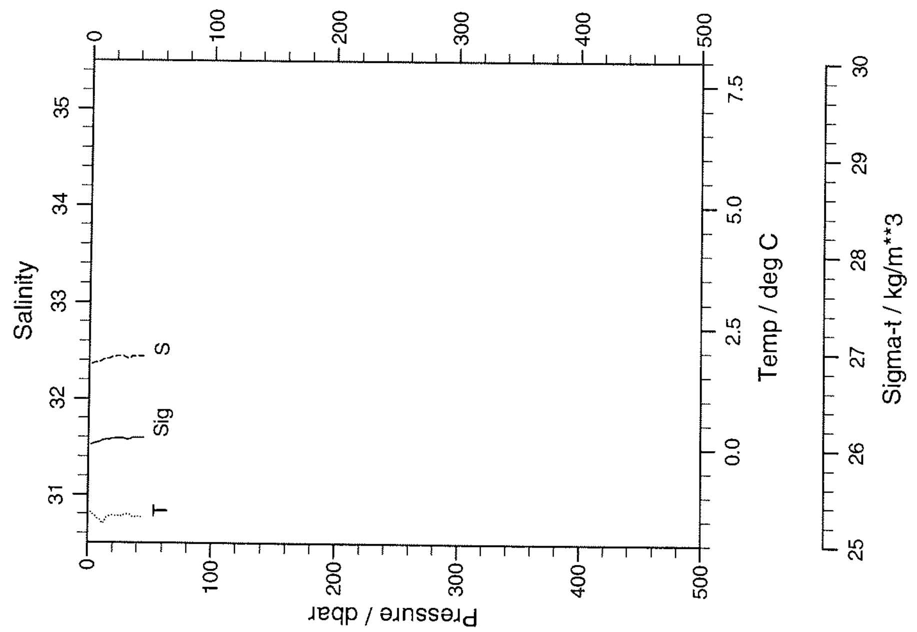
Sig
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92400





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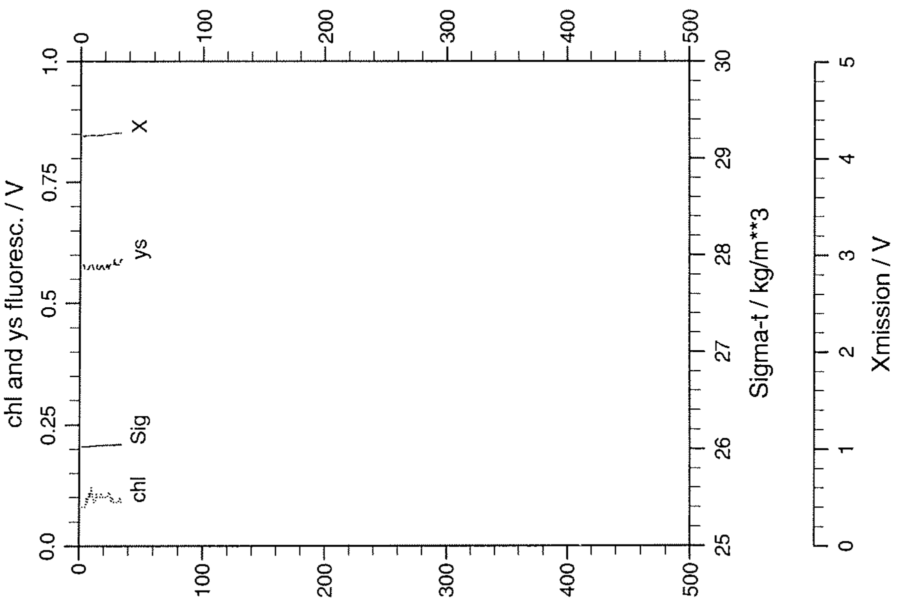
chl and ys fluoresc. / V
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0.5
0.75
1.0
X
ys
Sig
chl
0
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200
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400
500
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26
27
28
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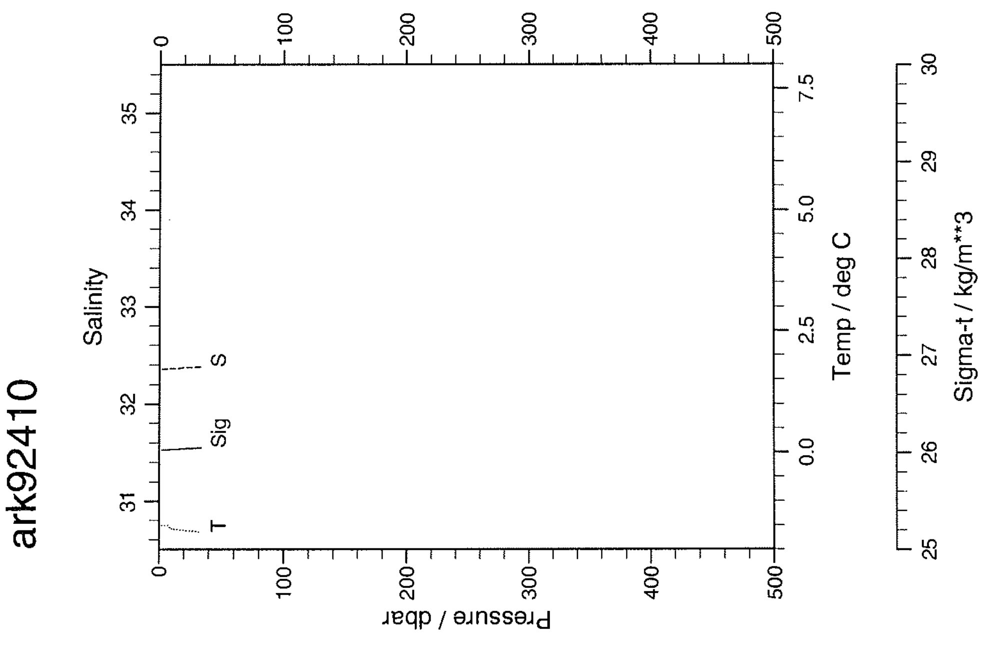
30
Sigma-t / kg/m**3
0
1
2
3
4
5
Xmission / V


ark92410
Salinity
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S
Sig
T
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500
Pressure / dbar
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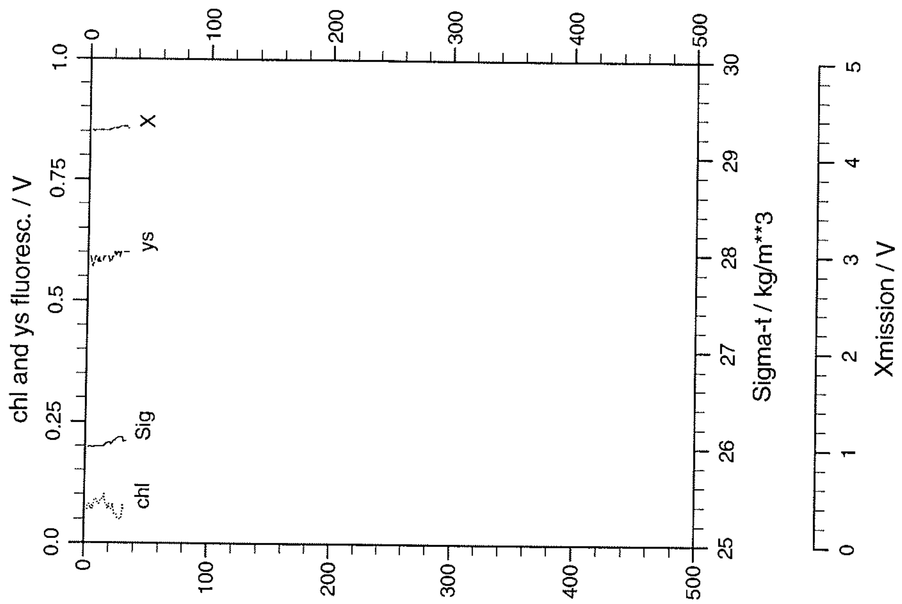
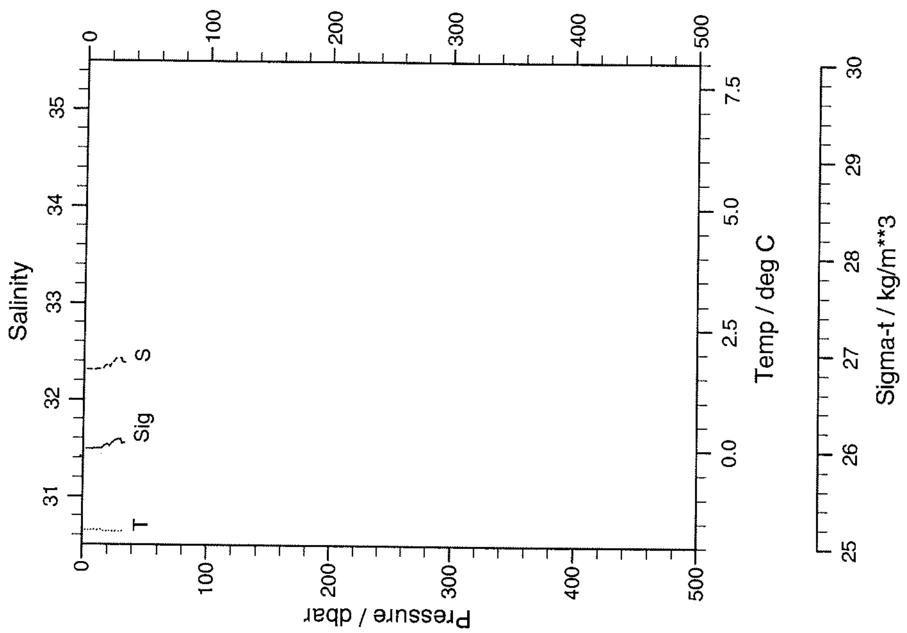
7.5
Temp / deg C
25
26
27
28
29
30
Sigma-t / kg/m**3

ark92420





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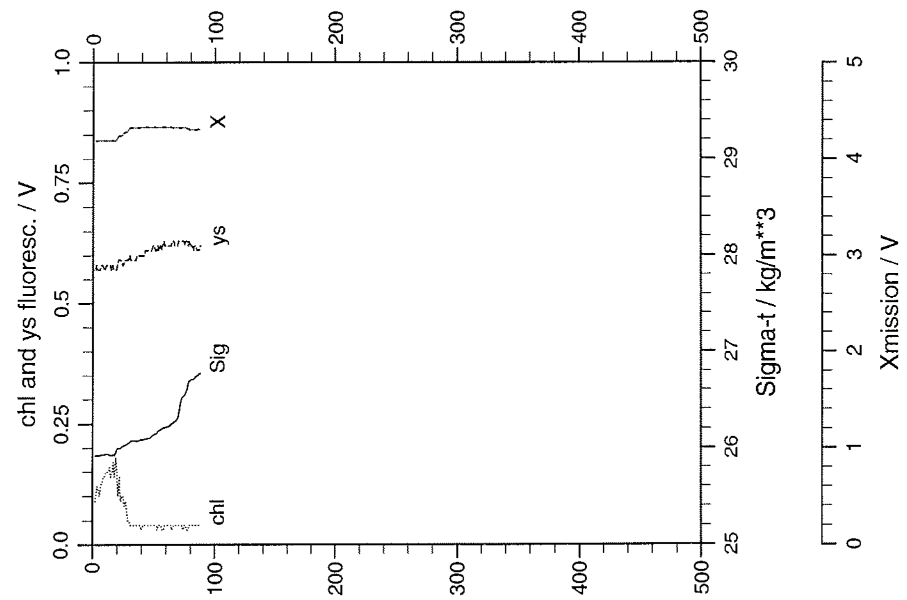
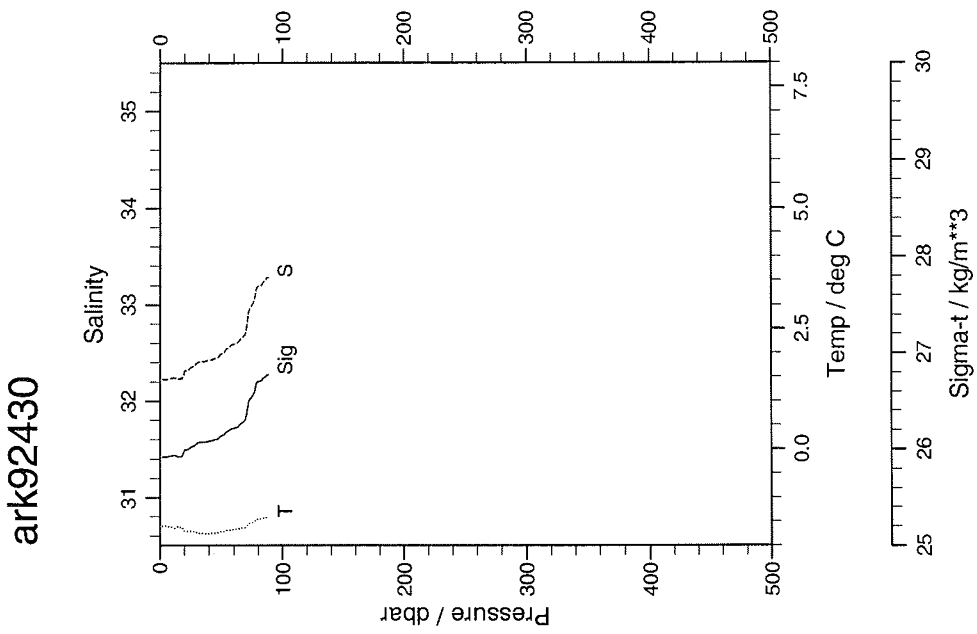

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl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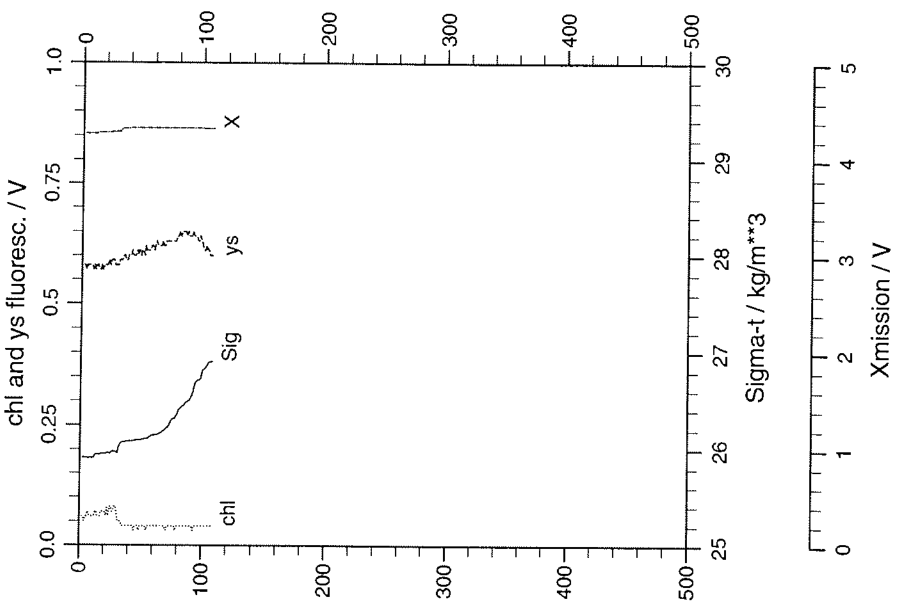
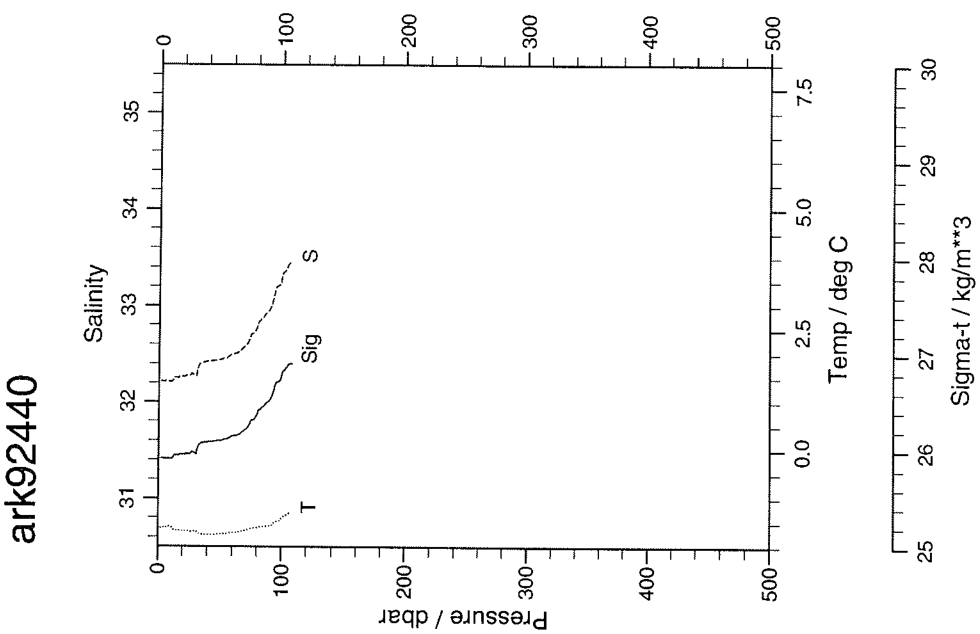
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92440

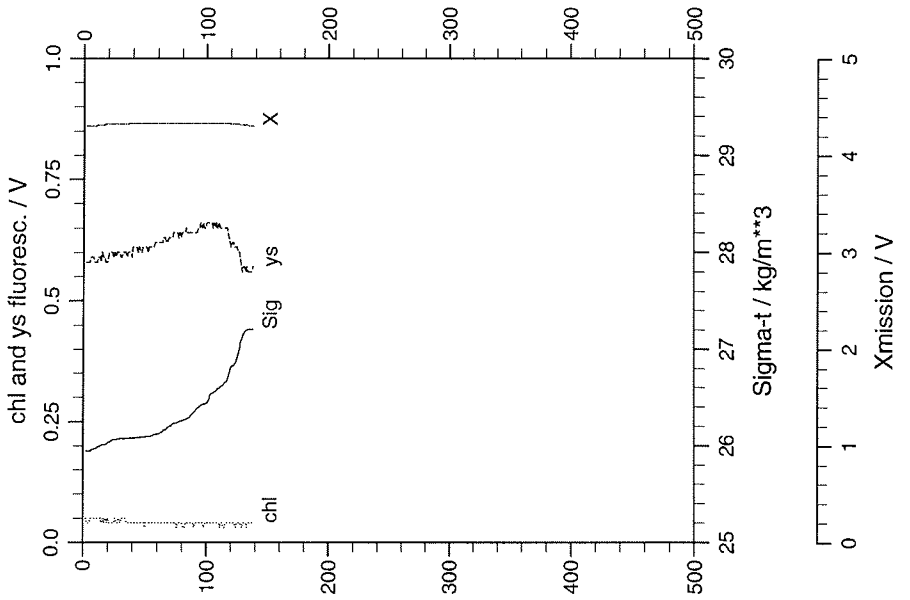


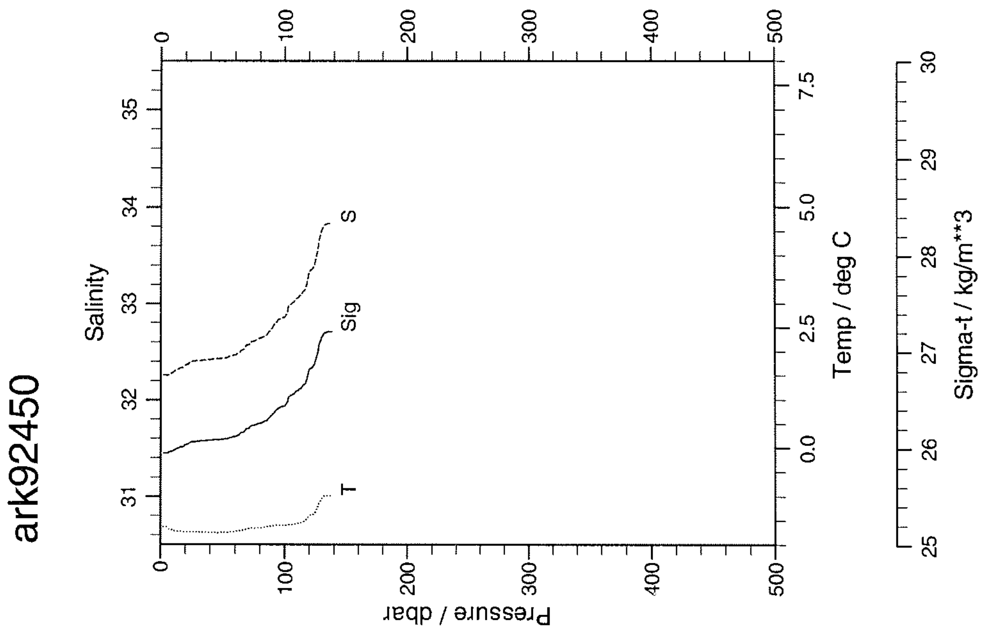
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl



ark92440
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92450


chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
ys
Sig
chl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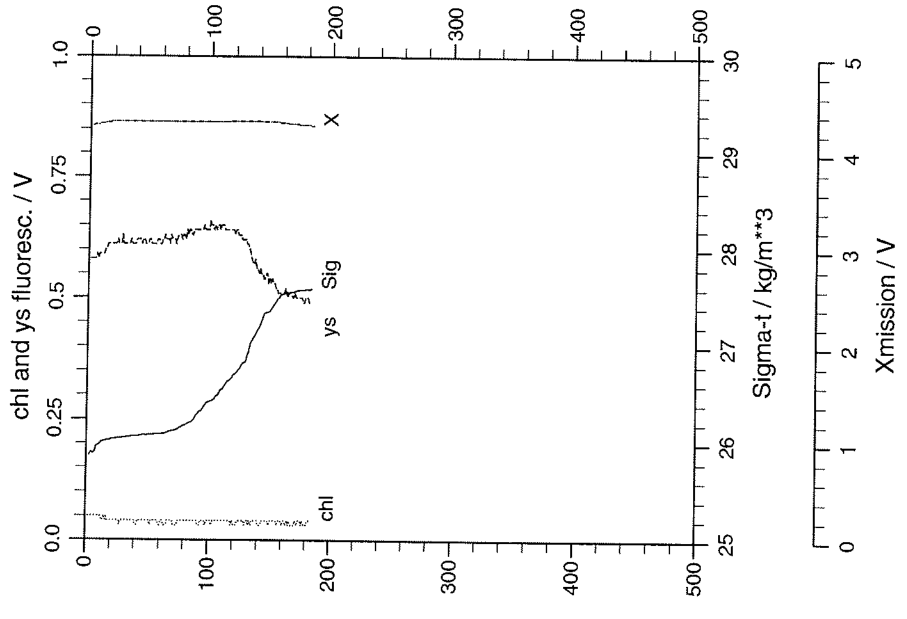
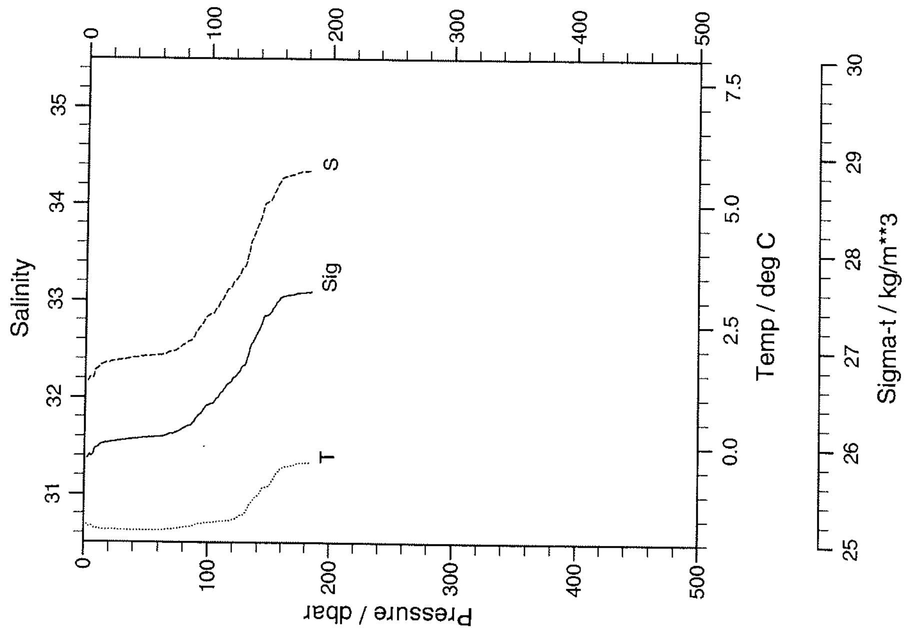
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92460





ark92460

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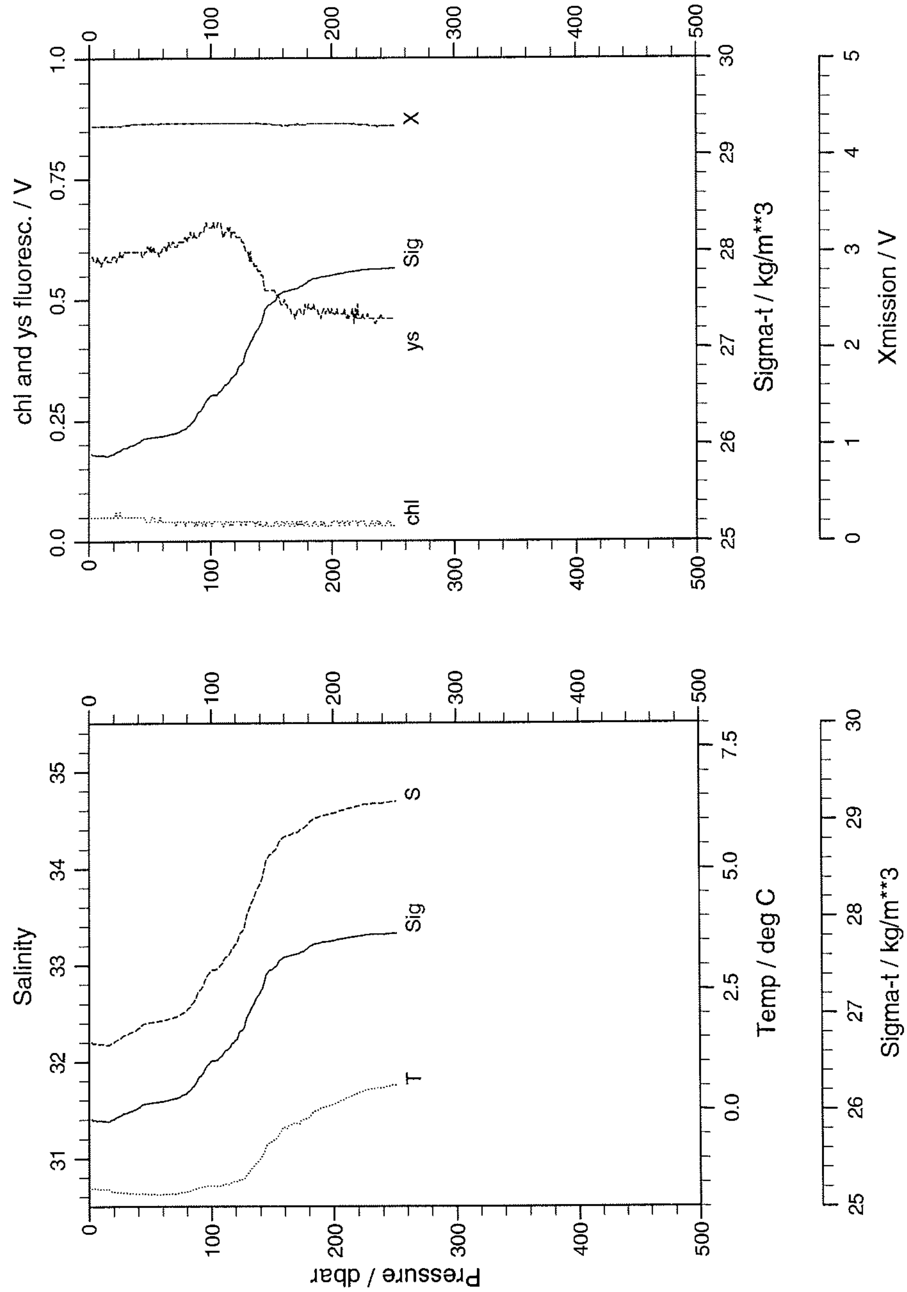

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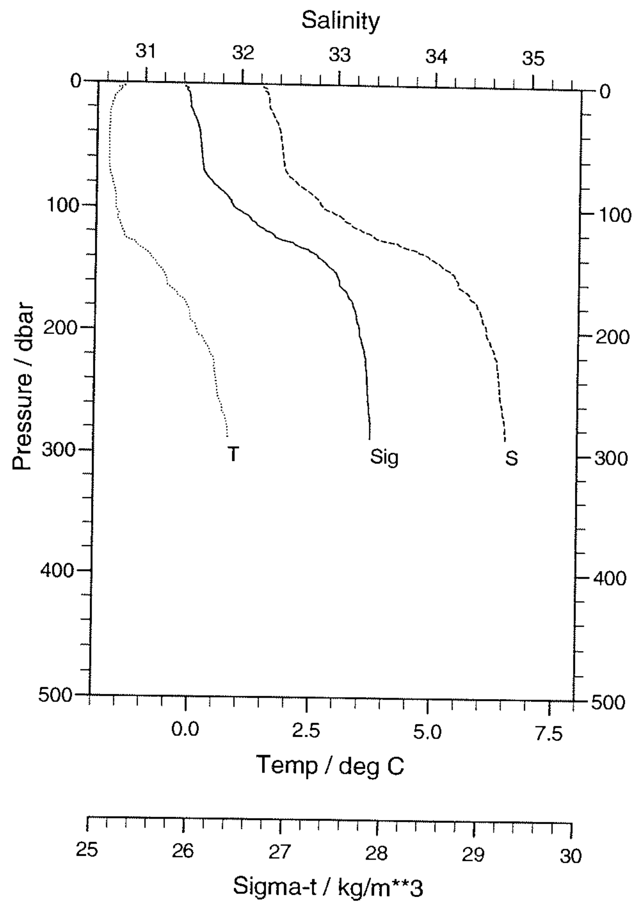

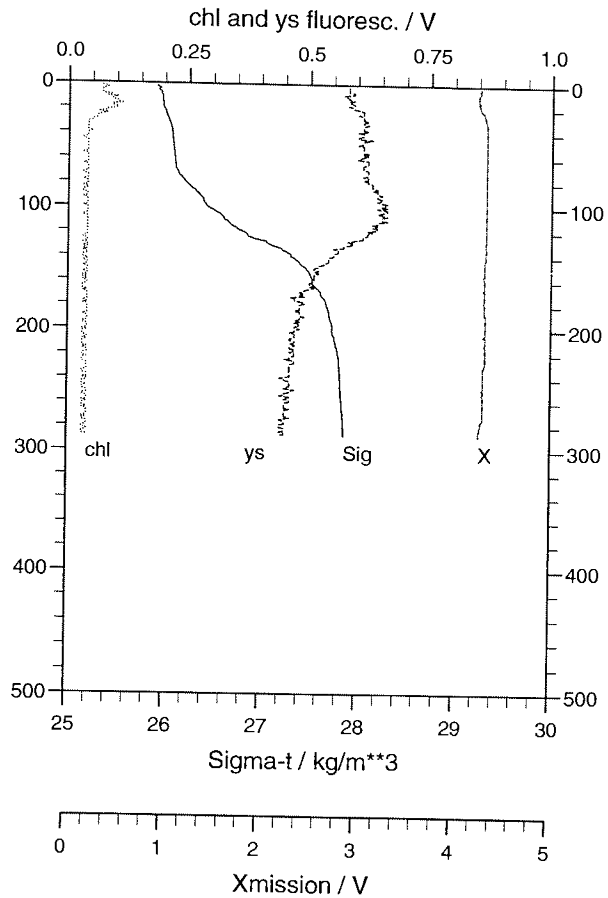

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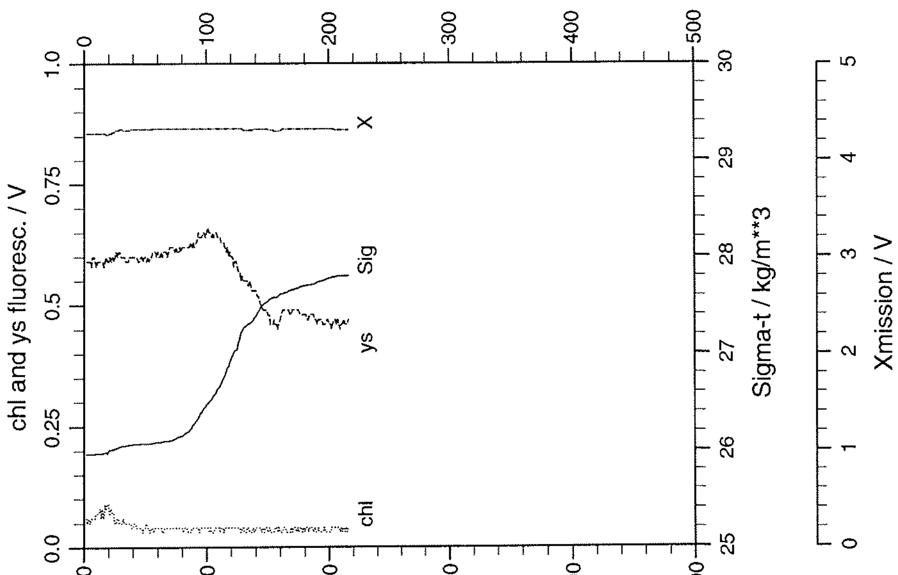

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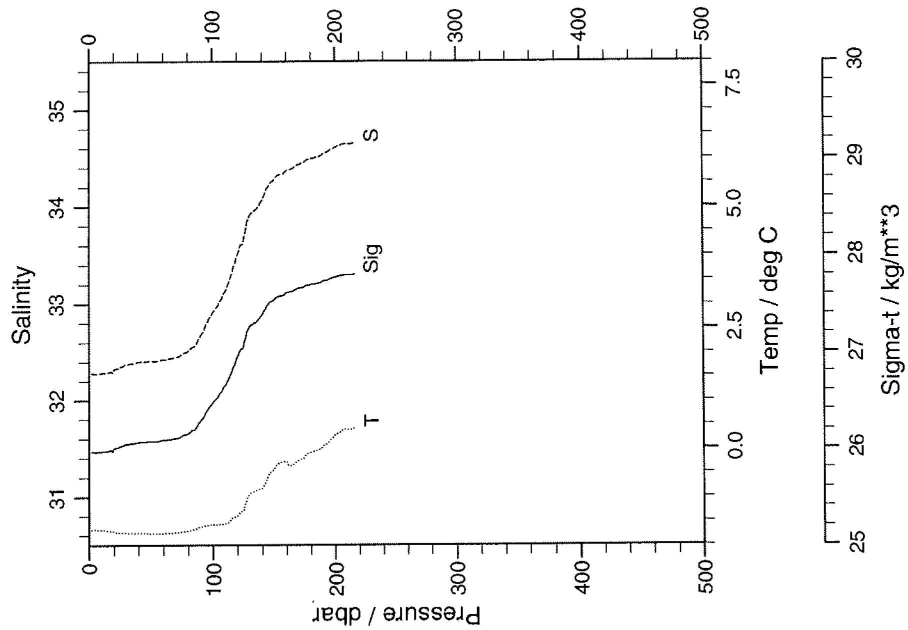

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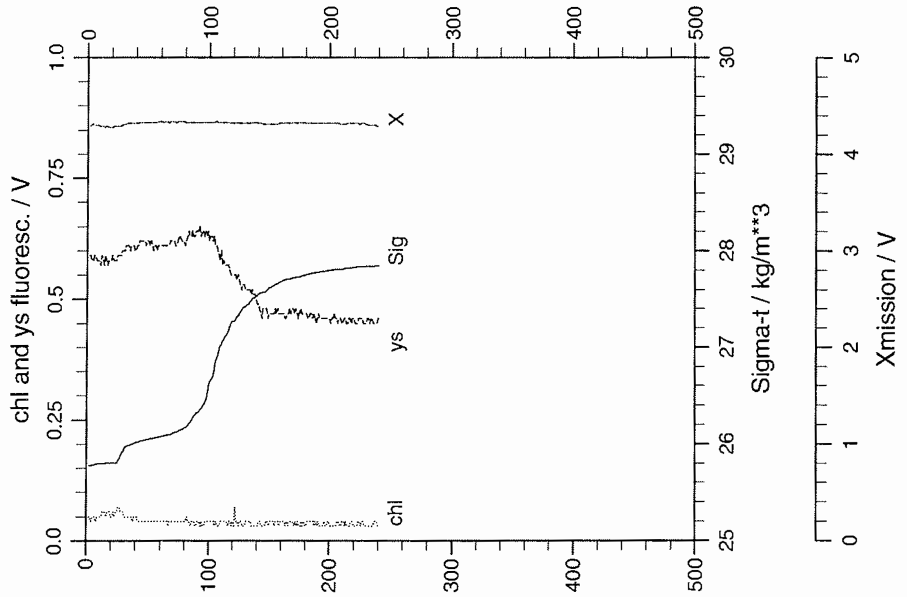

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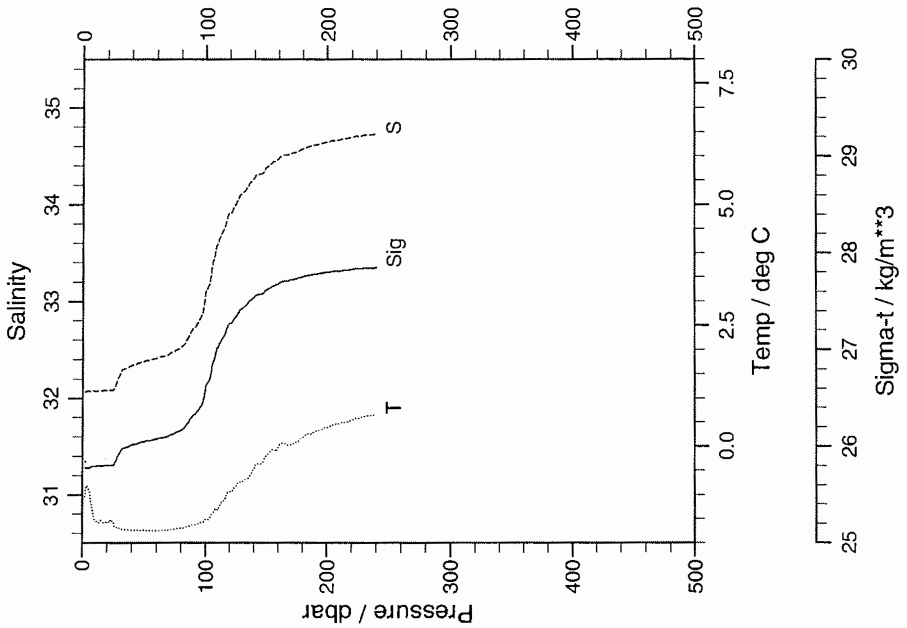

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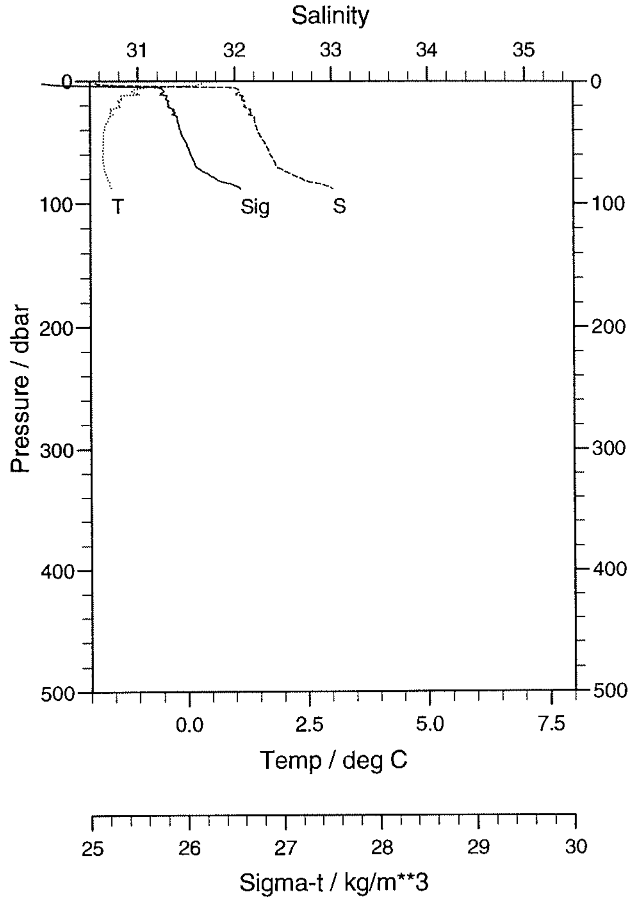

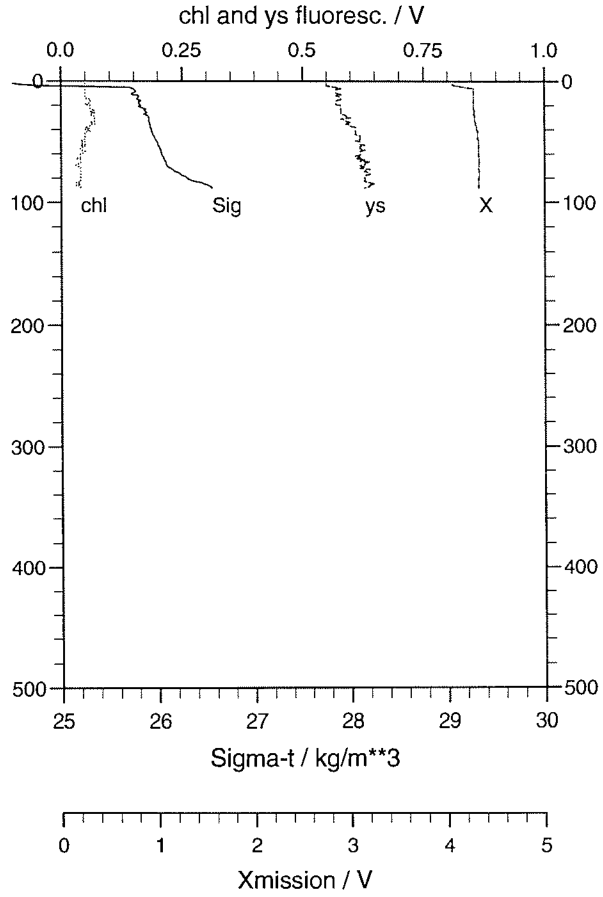

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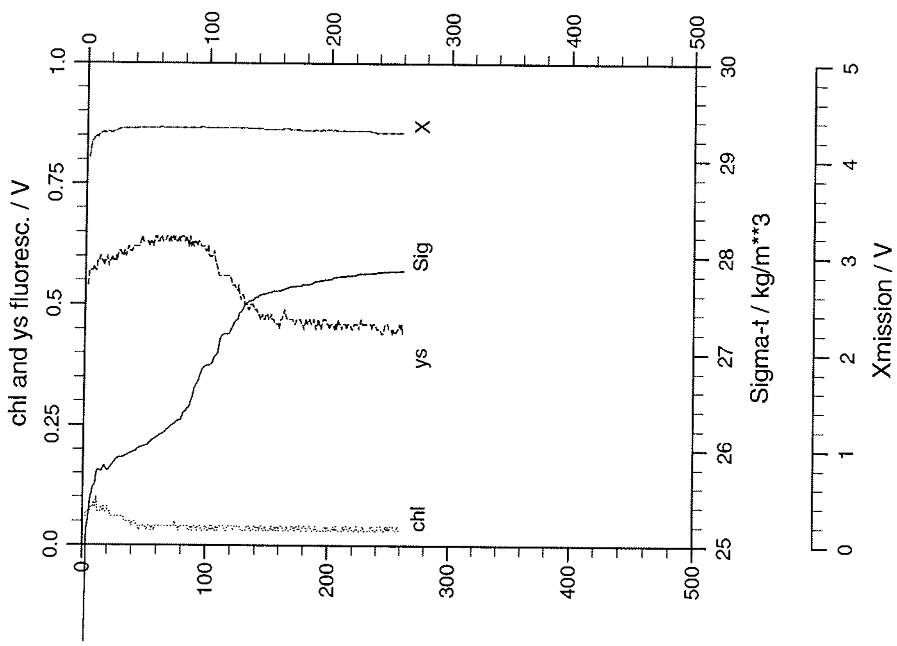
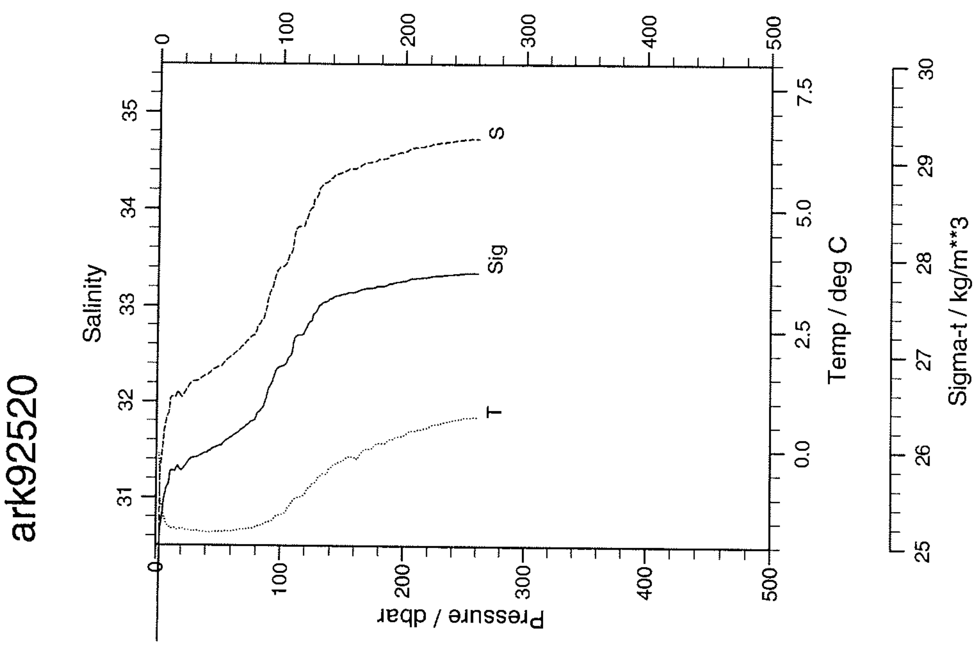
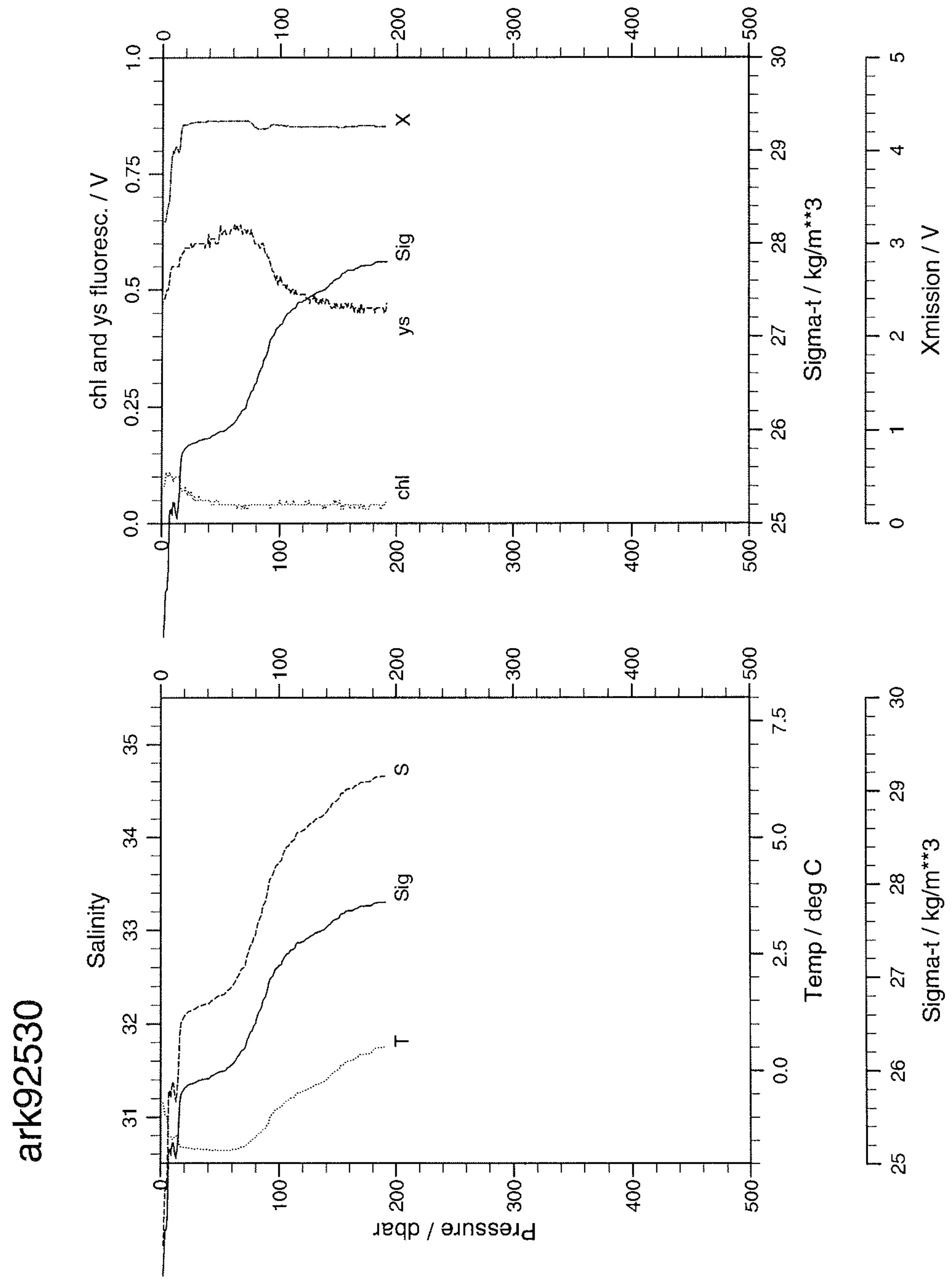
ark92520

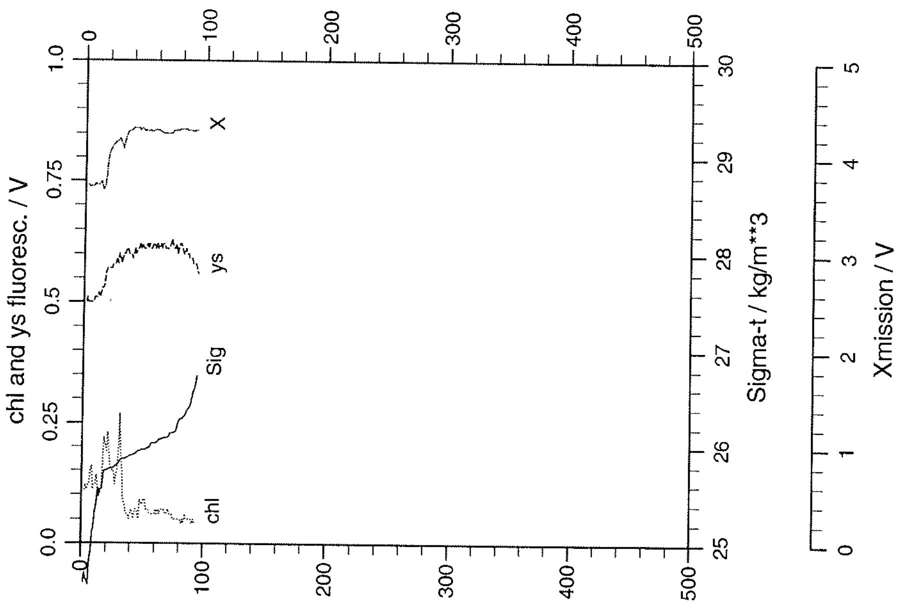

chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
0
100
200
300
400
500
X
Sig
ys
chl
Sigma-t / kg/m**3
25
26
27
28
29
30
Xmission / V
0
1
2
3
4
5


ark92520
Salinity
31
32
33
34
35
0
100
200
300
400
500
S
Sig
T
Pressure / dbar
Temp / deg C
0.0
2.5
5.0
7.5
Sigma-t / kg/m**3
25
26
27
28
29
30

ark92530


ark92530
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92540



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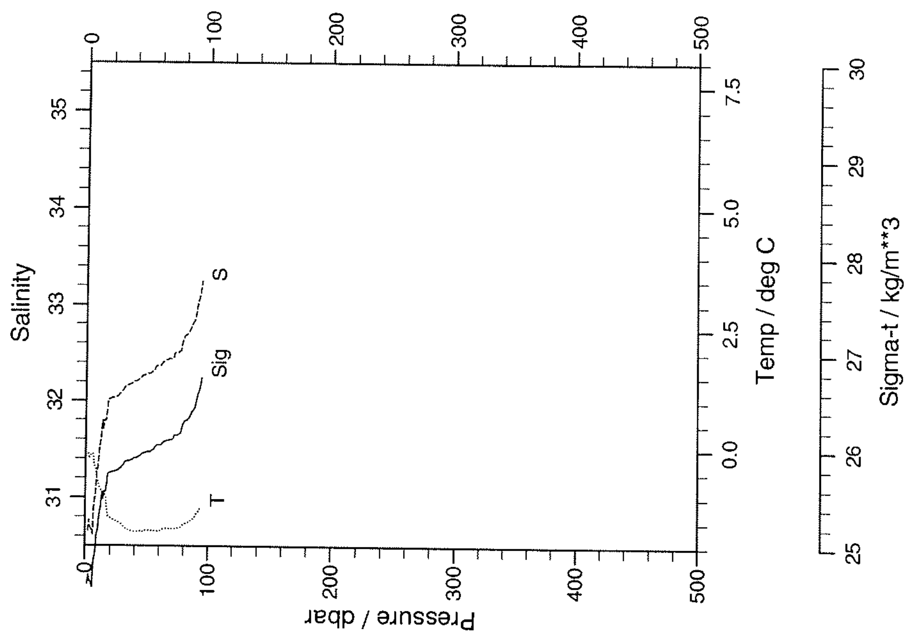

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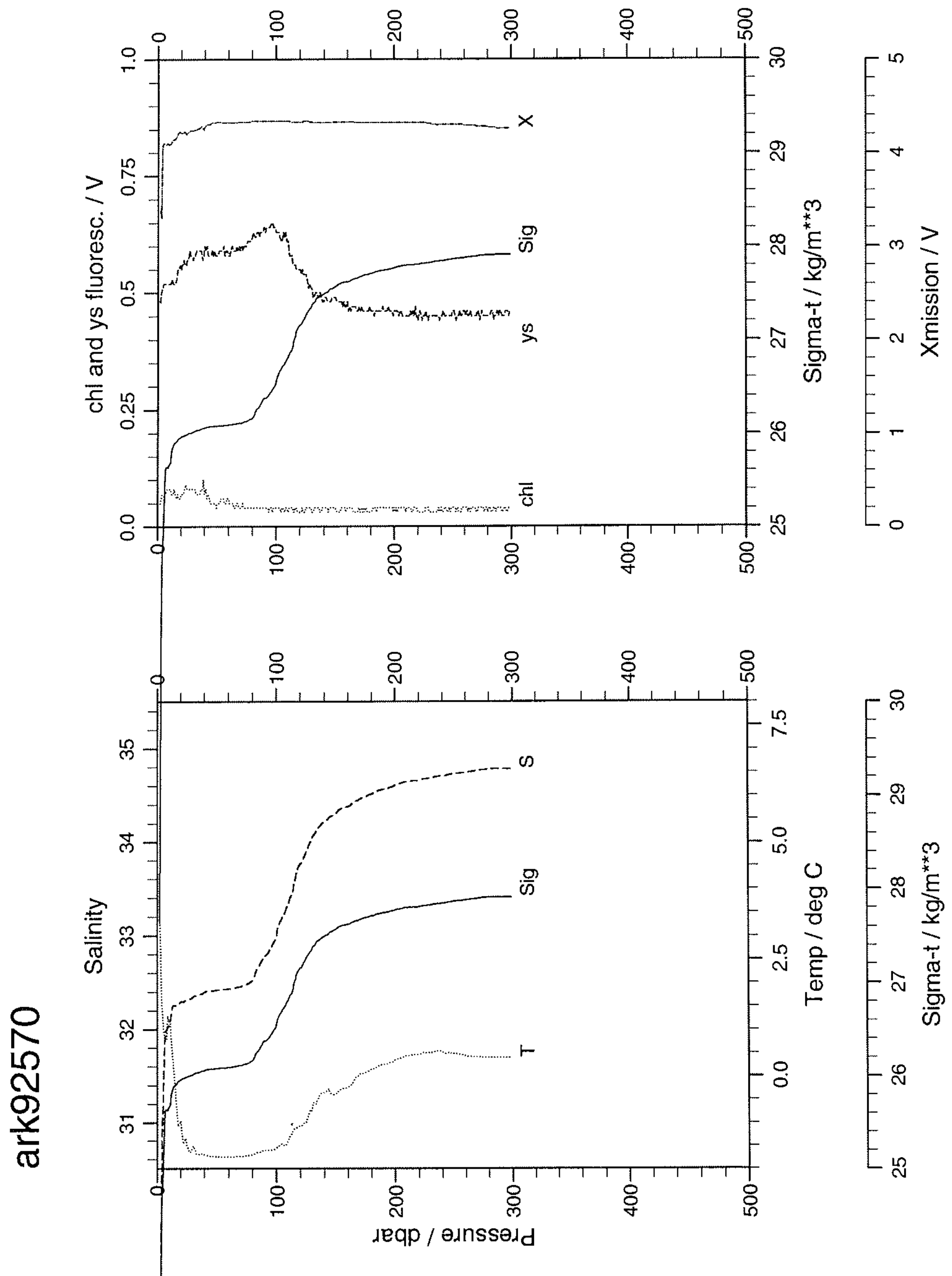
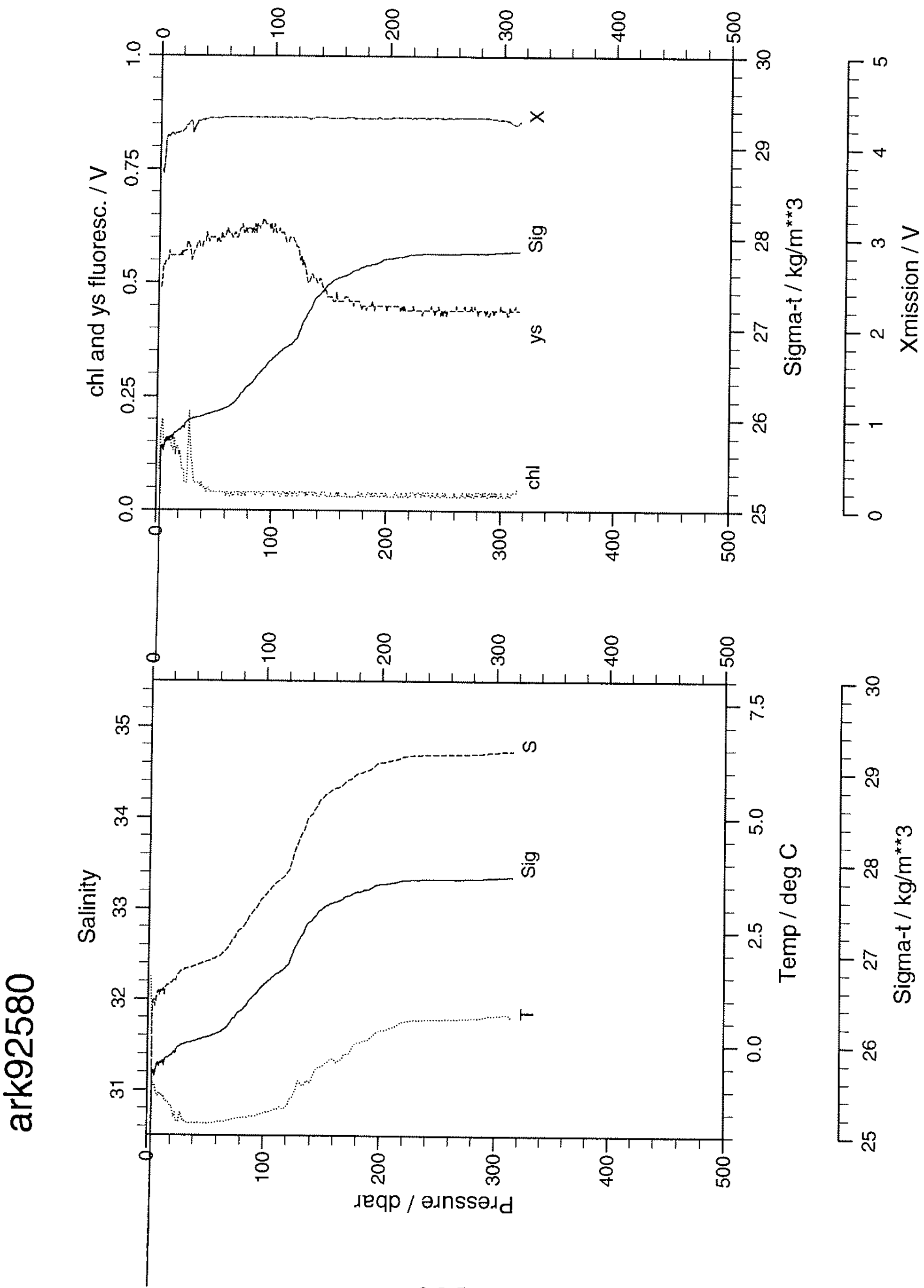
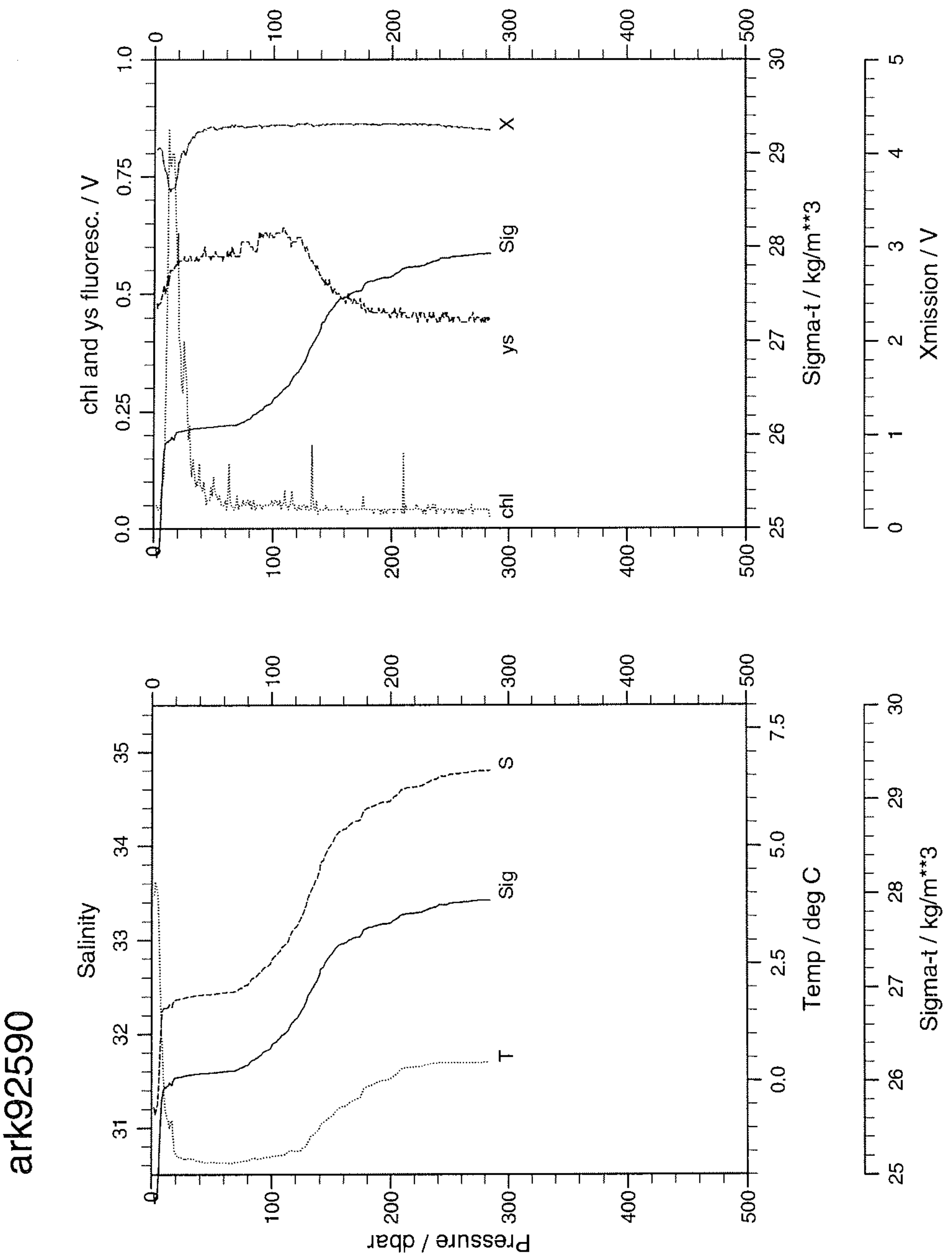

ark92570
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92580



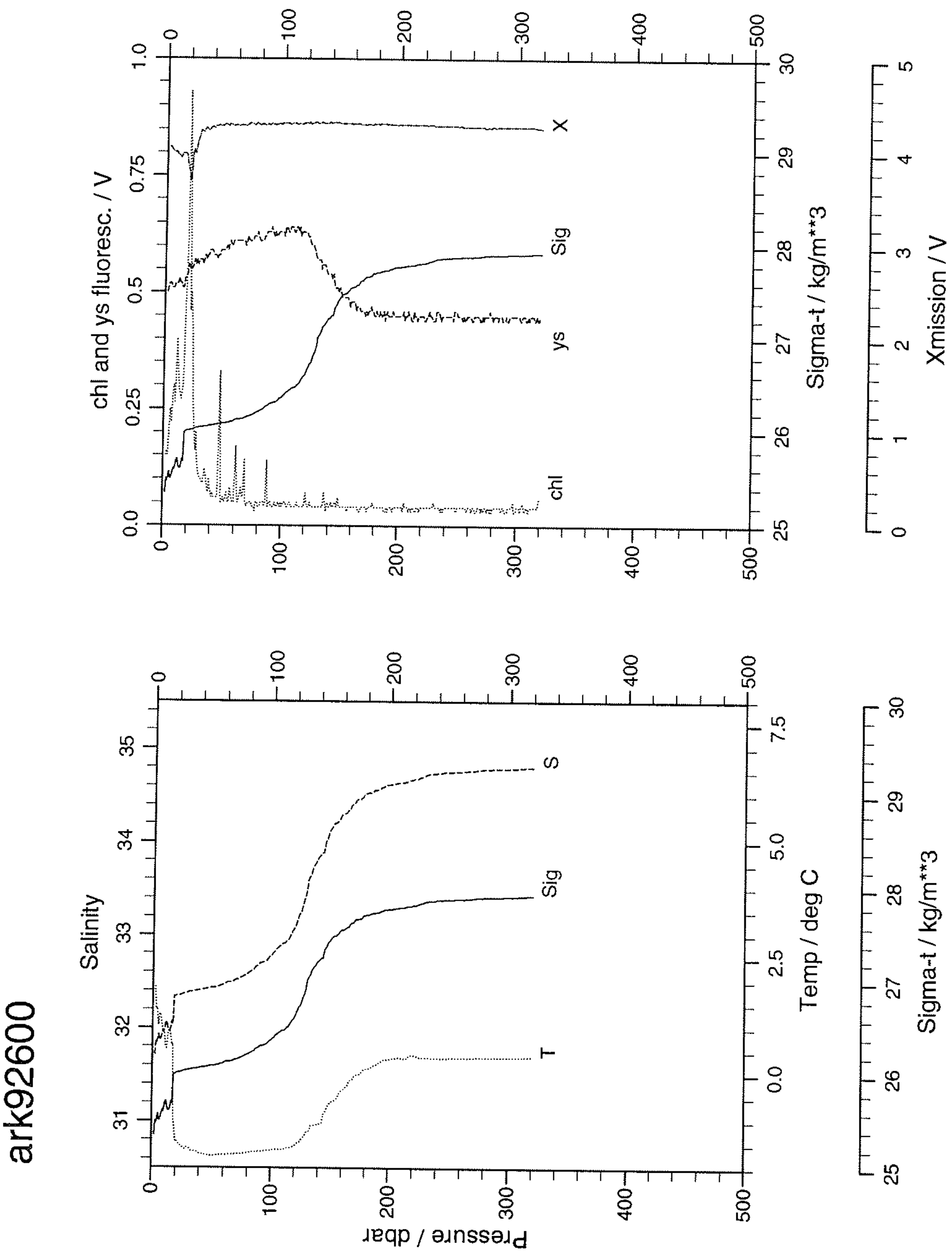
ark92580
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92590



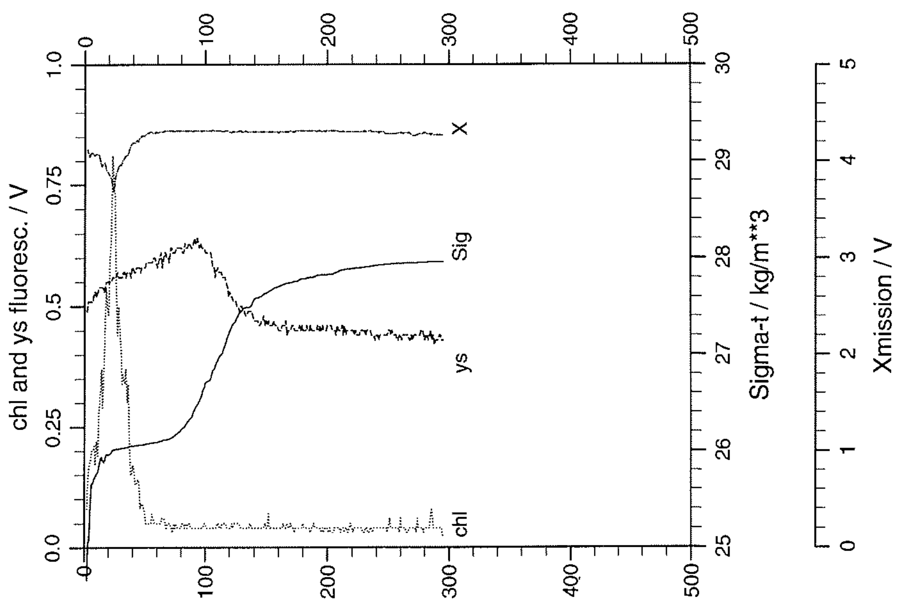
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
ark92590
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92600

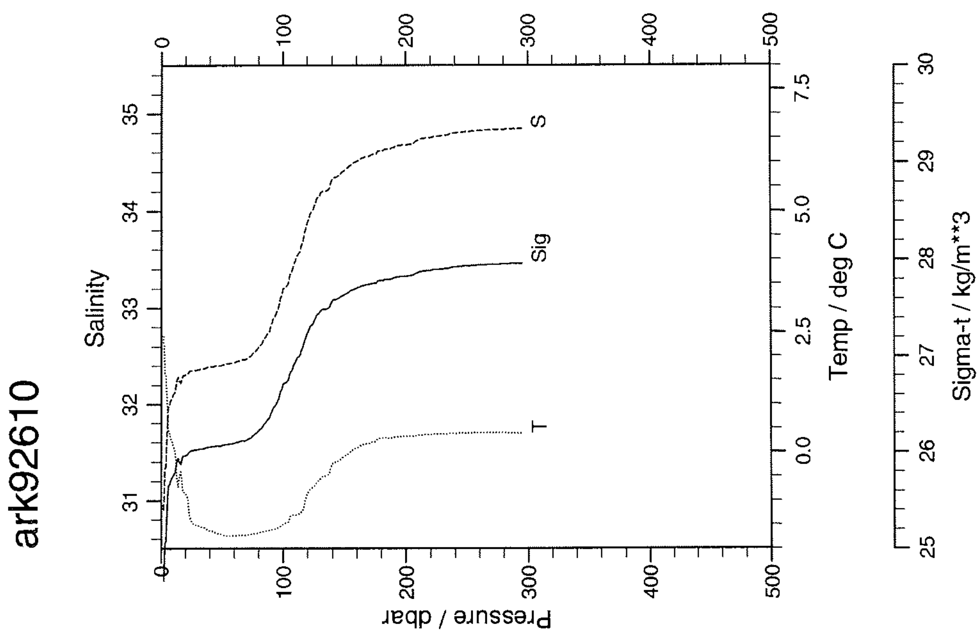


chl and ys fluoresc. / V
X
Sig
ys
chl
Sigma-t / kg/m**3
Xmission / V
ark92600
Salinity
S
Sig
T
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar

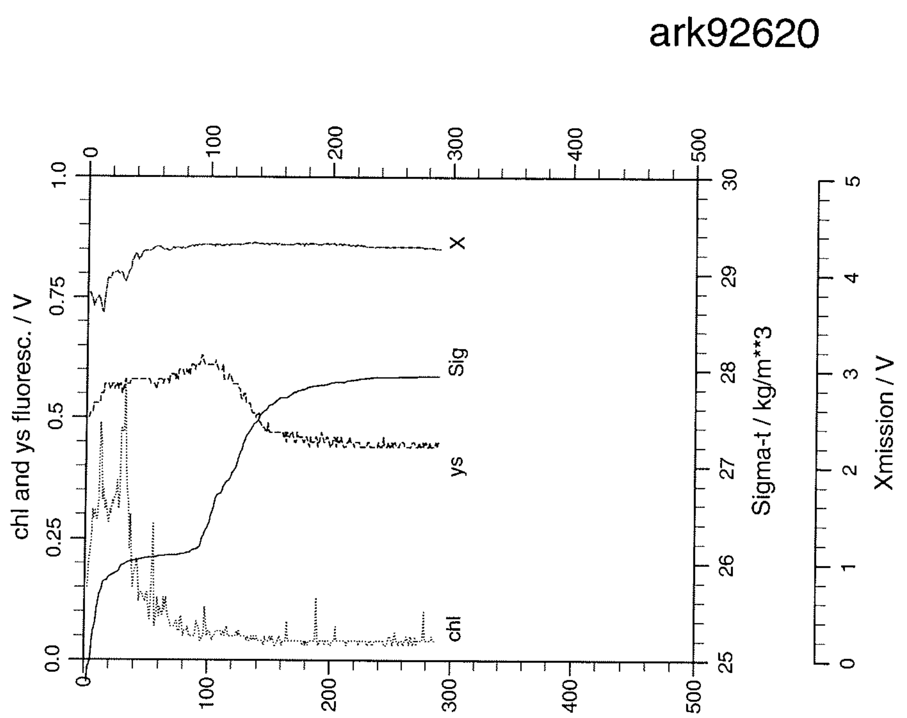
ark92610



chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl



ark92610
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T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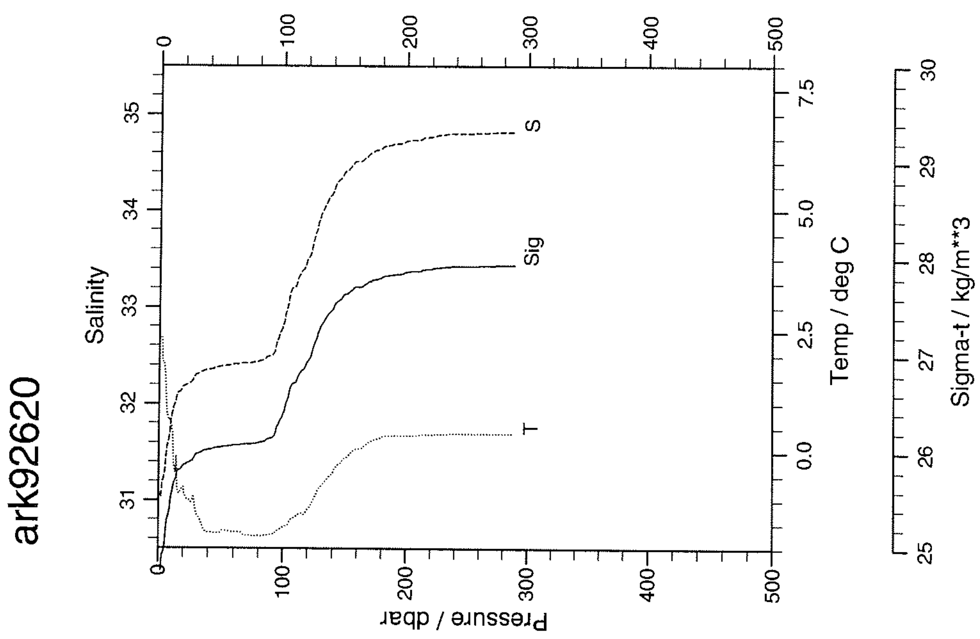
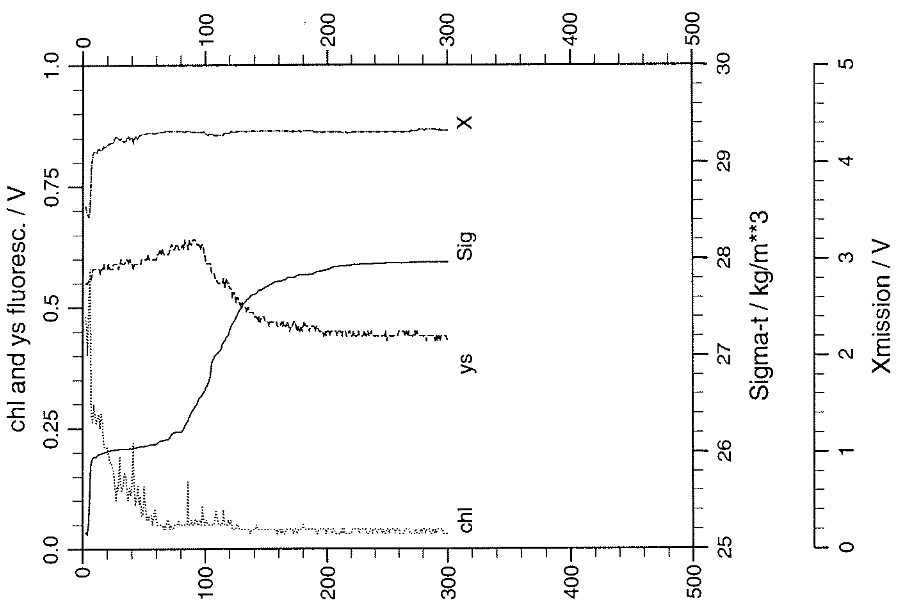
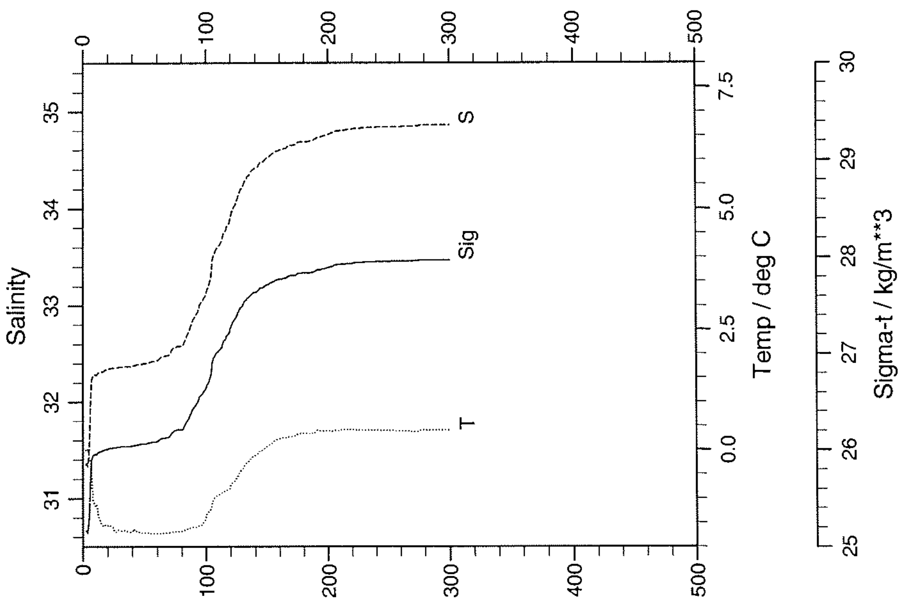
chl and ys fluoresc. / V
0.0
0.25
0.5
0.75
1.0
0
100
200
300
400
500
X
Sig
ys
chl
25
26
27
28
29
30
Sigma-t / kg/m**3
0
1
2
3
4
5
Xmission / V


ark92620
Salinity
31
32
33
34
35
0
100
200
300
400
500
S
Sig
T
Pressure / dbar
0.0
2.5
5.0
7.5
Temp / deg C
25
26
27
28
29
30
Sigma-t / kg/m**3

ark92630





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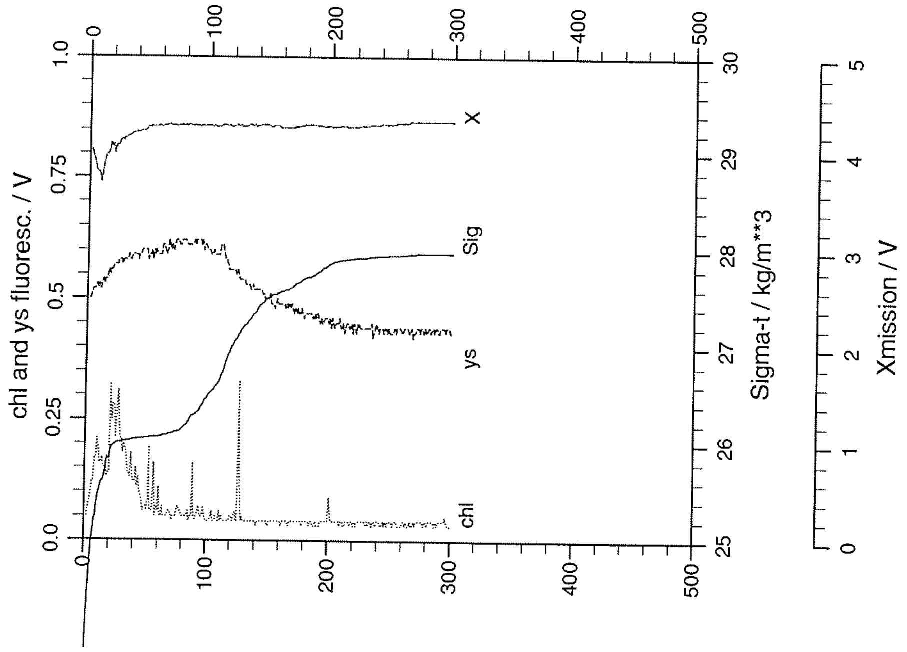

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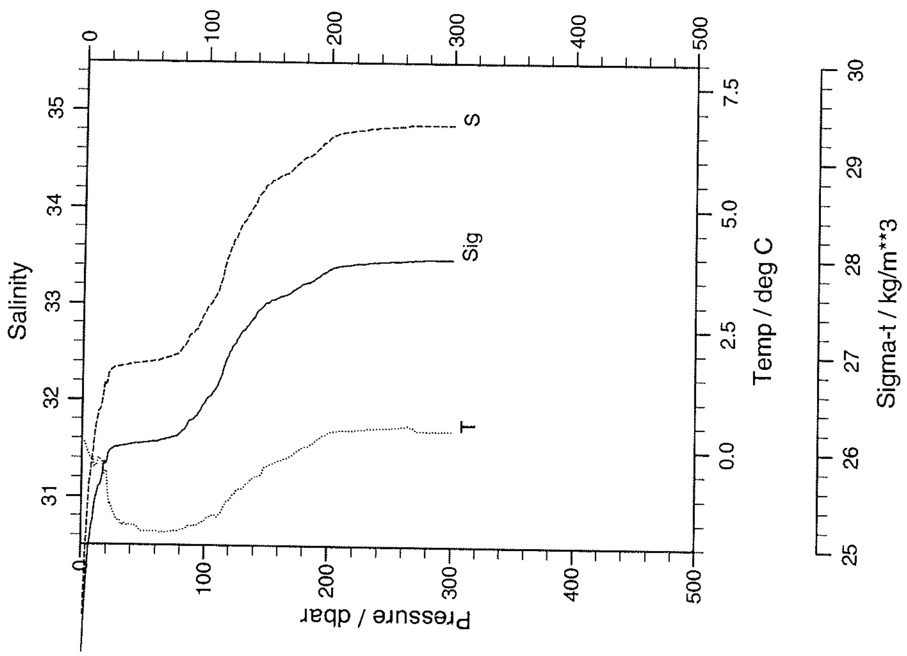

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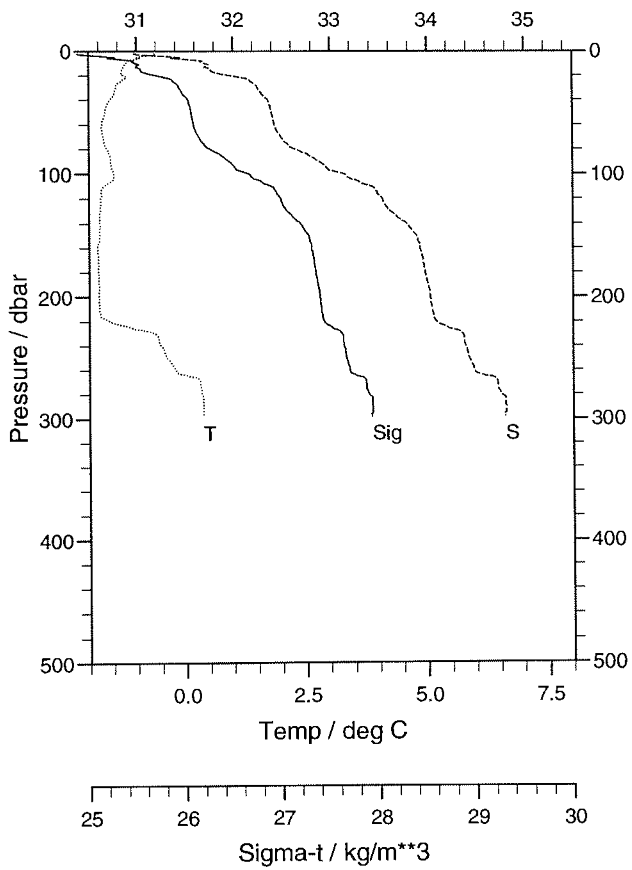

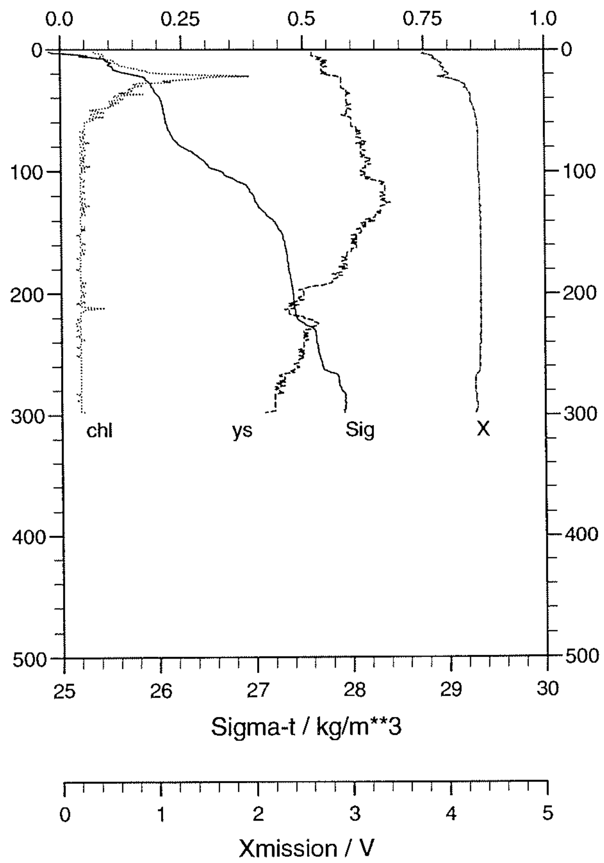

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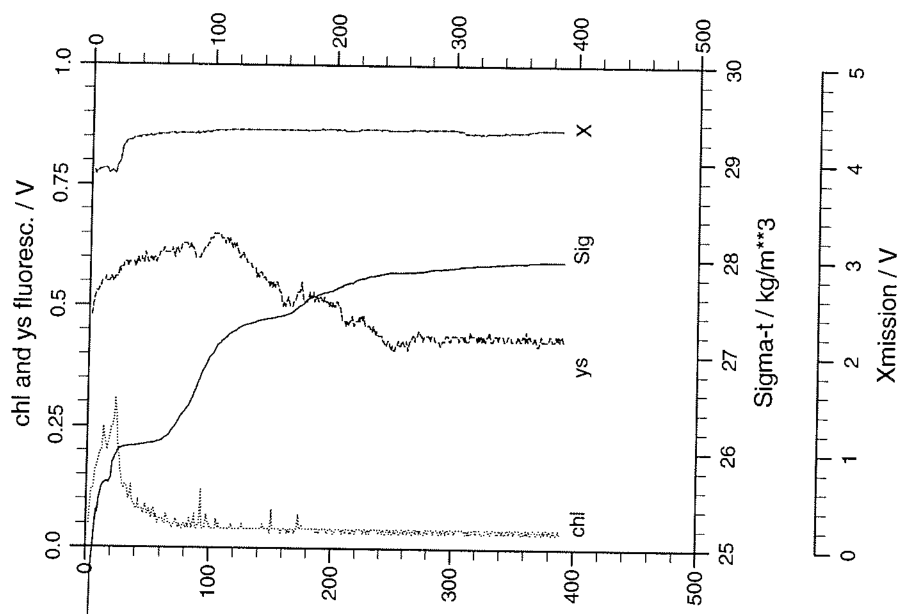
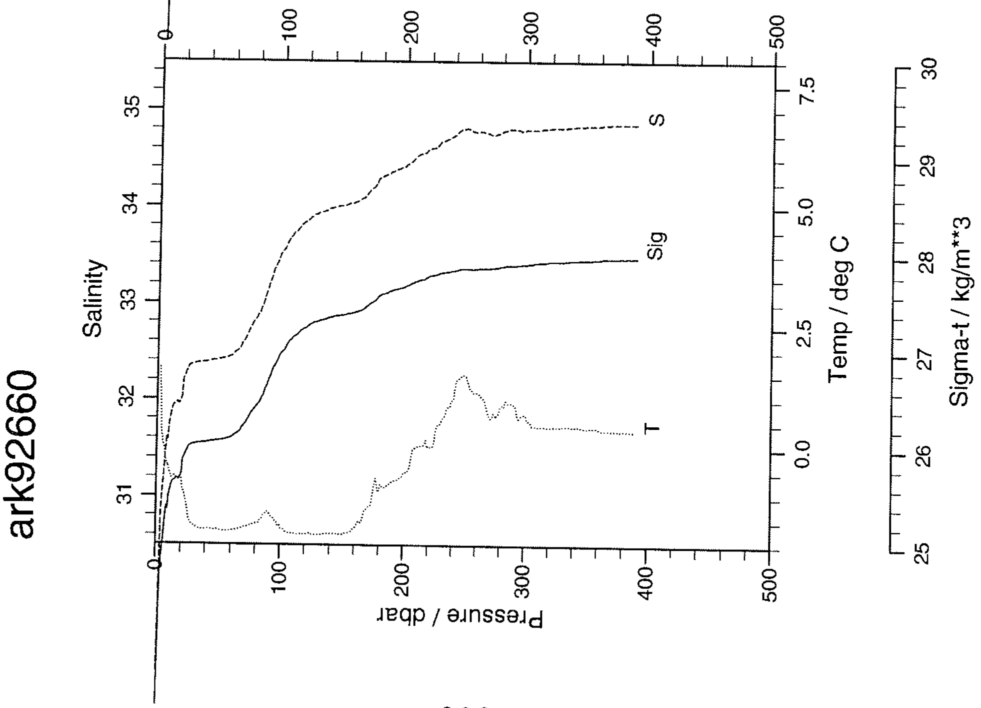
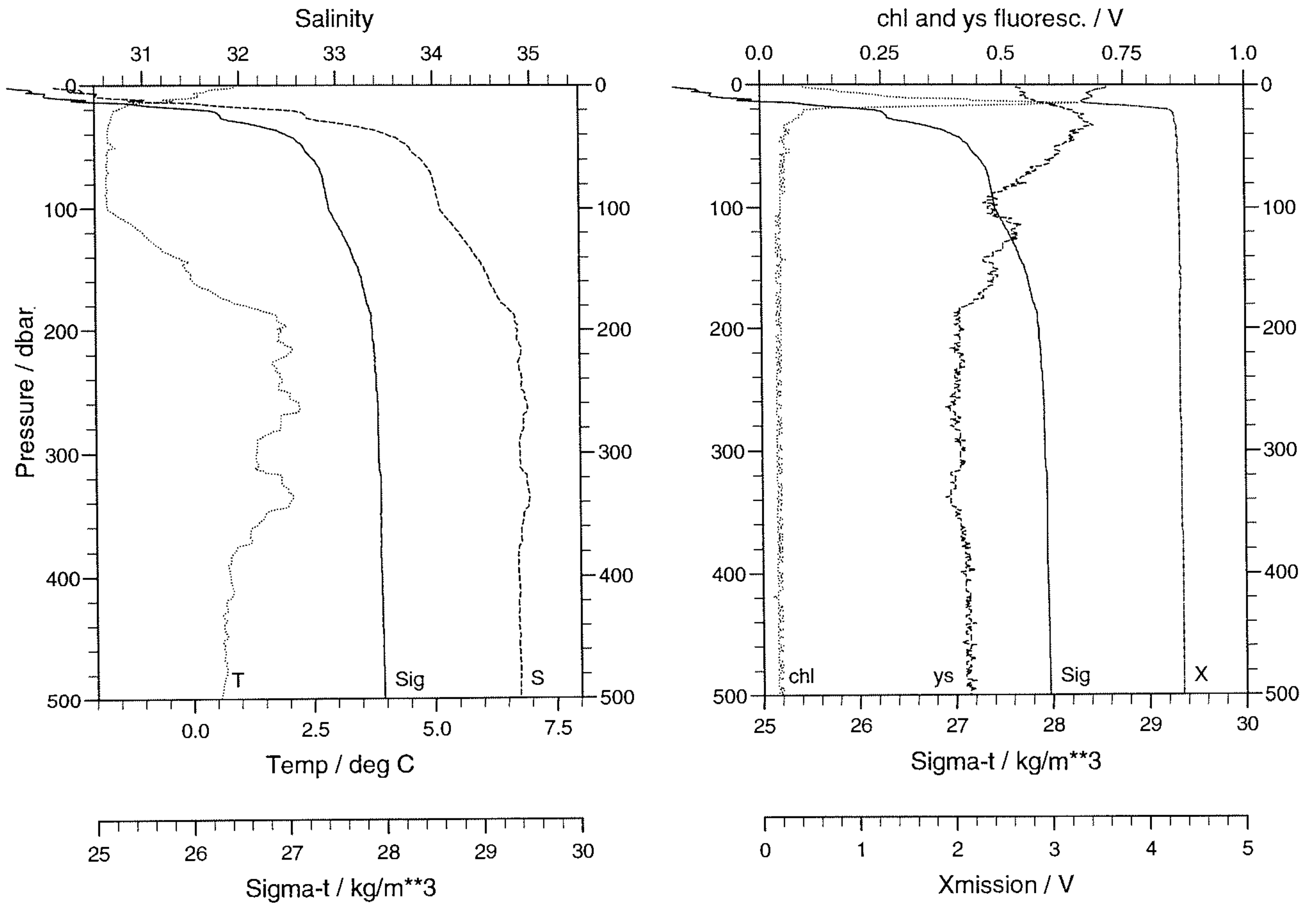

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl


ark92660
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92670



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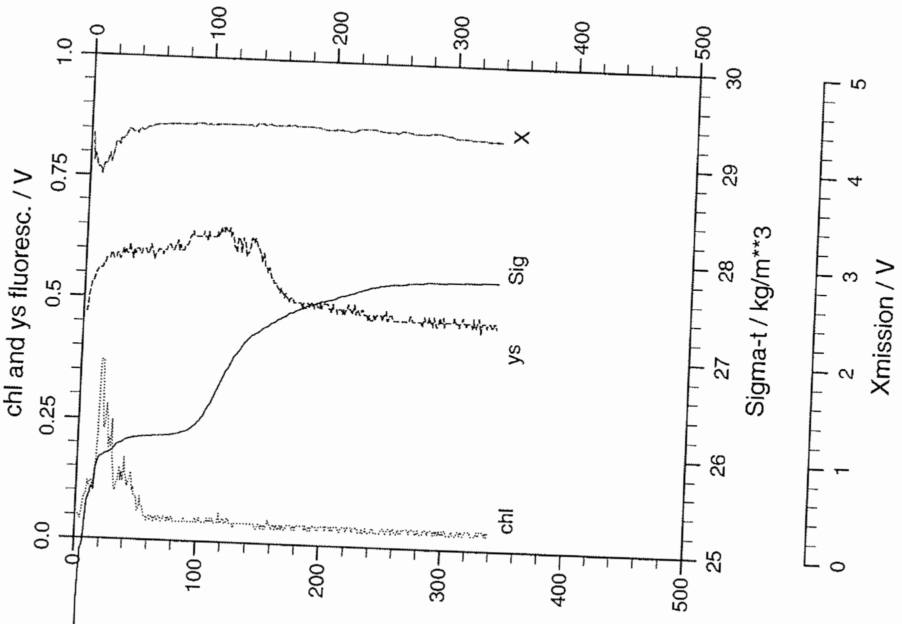
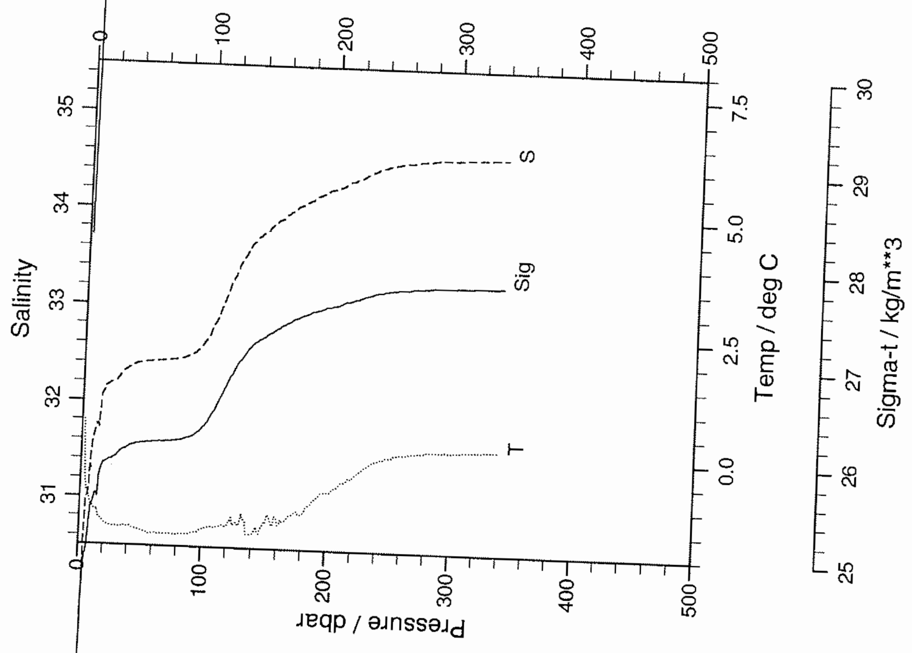
ark92710





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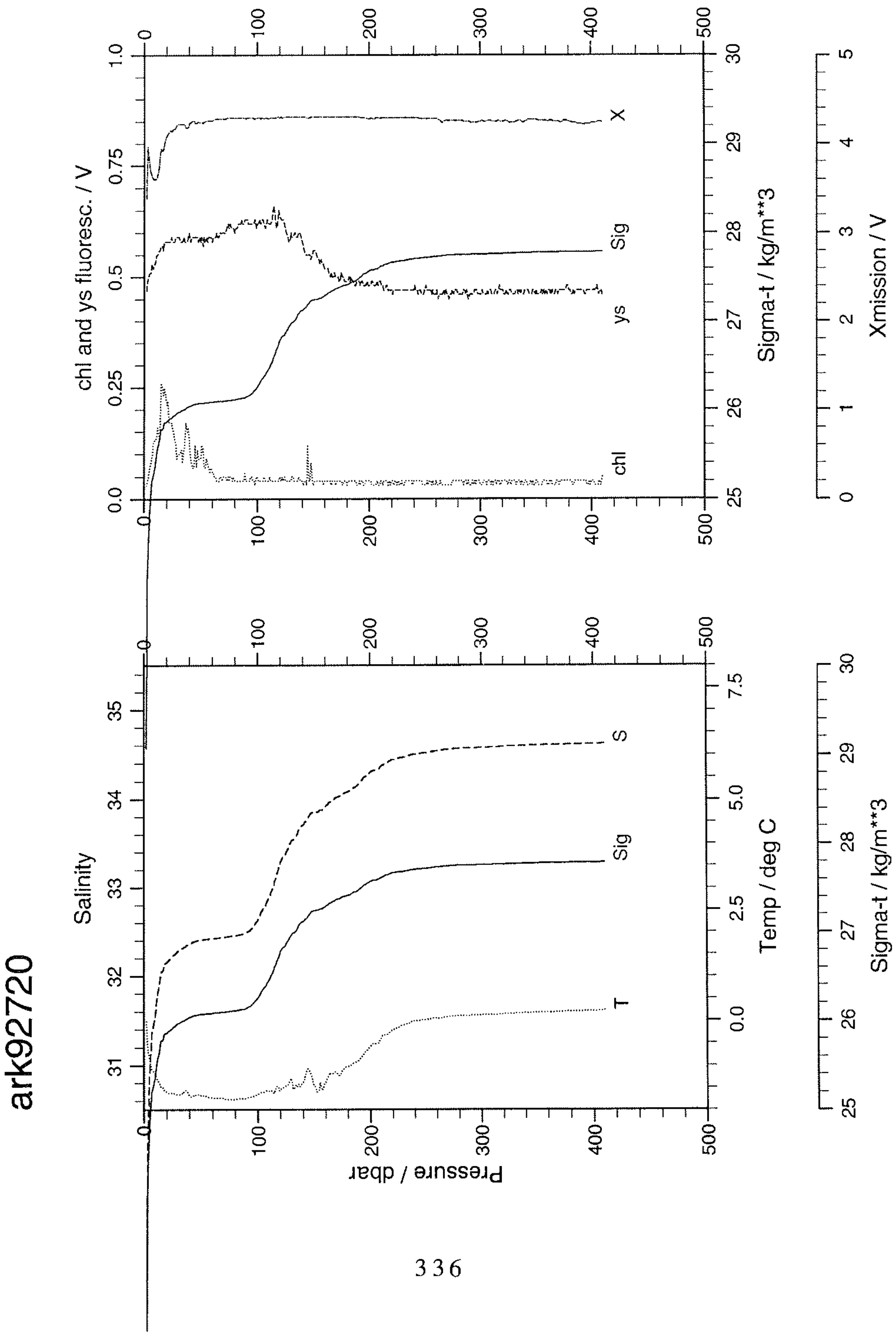
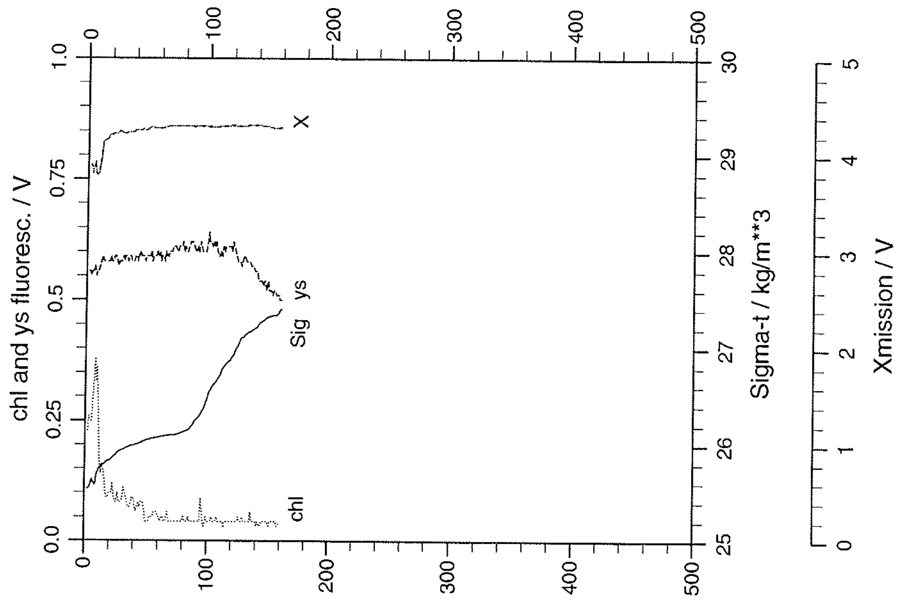

ark92720
chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl
Salinity
Temp / deg C
Pressure / dbar
S
T

ark92730



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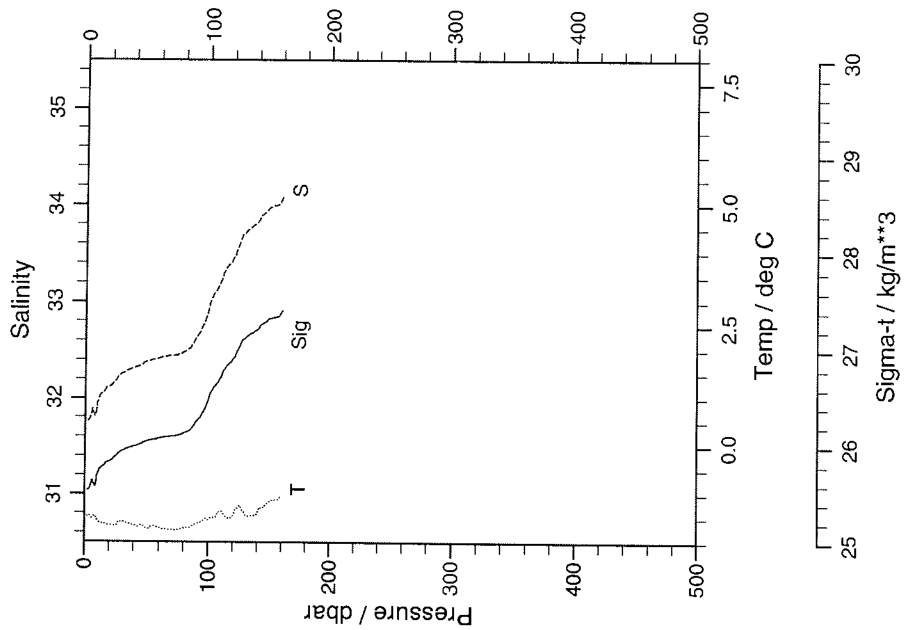

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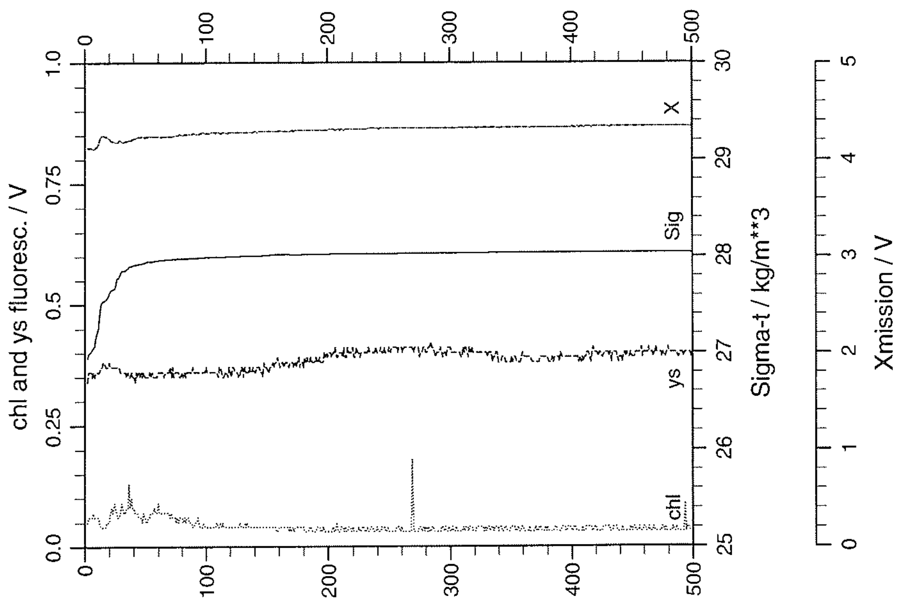
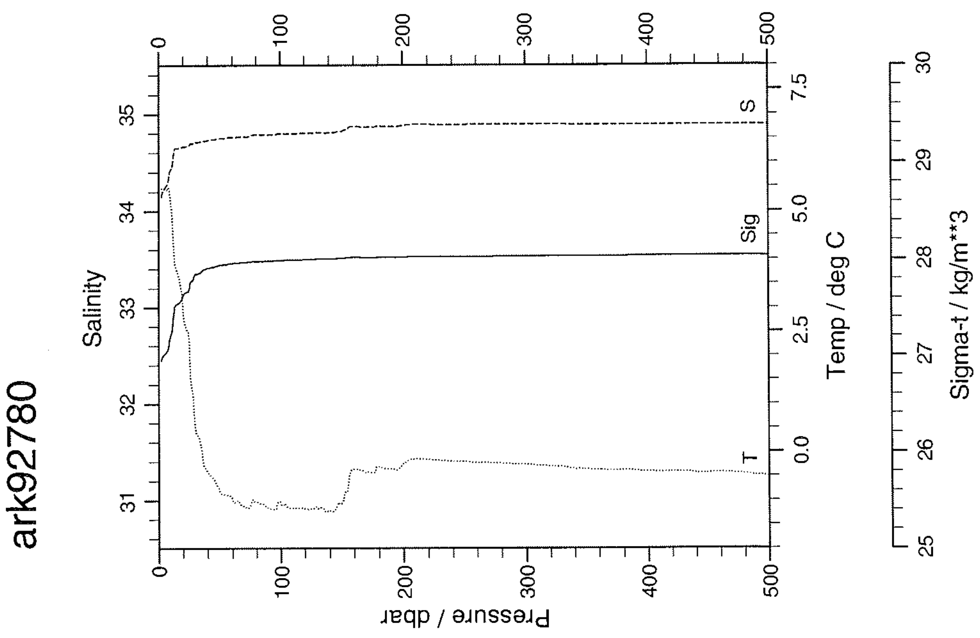

chl and ys fluoresc. / V
Sigma-t / kg/m**3
Xmission / V
X
Sig
ys
chl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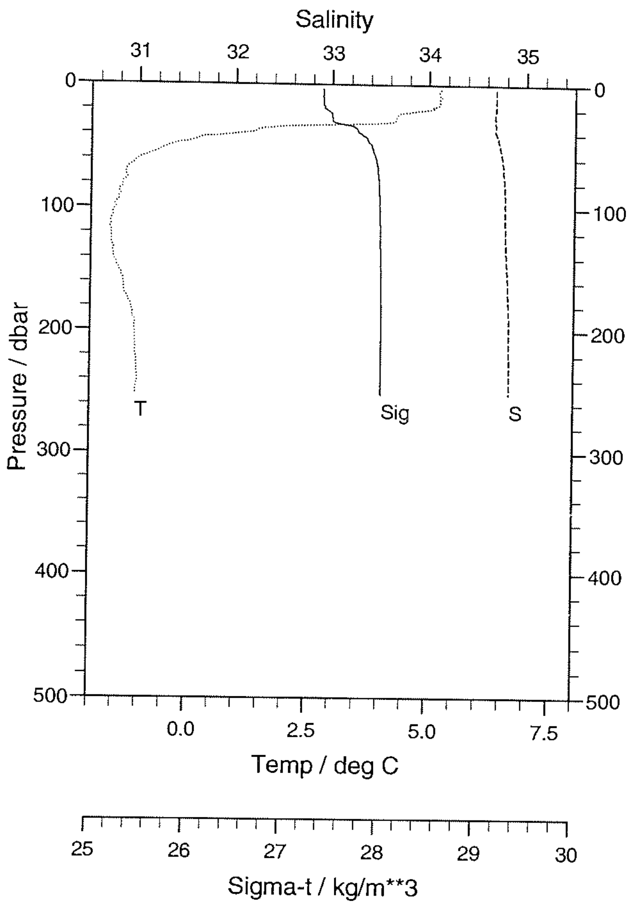
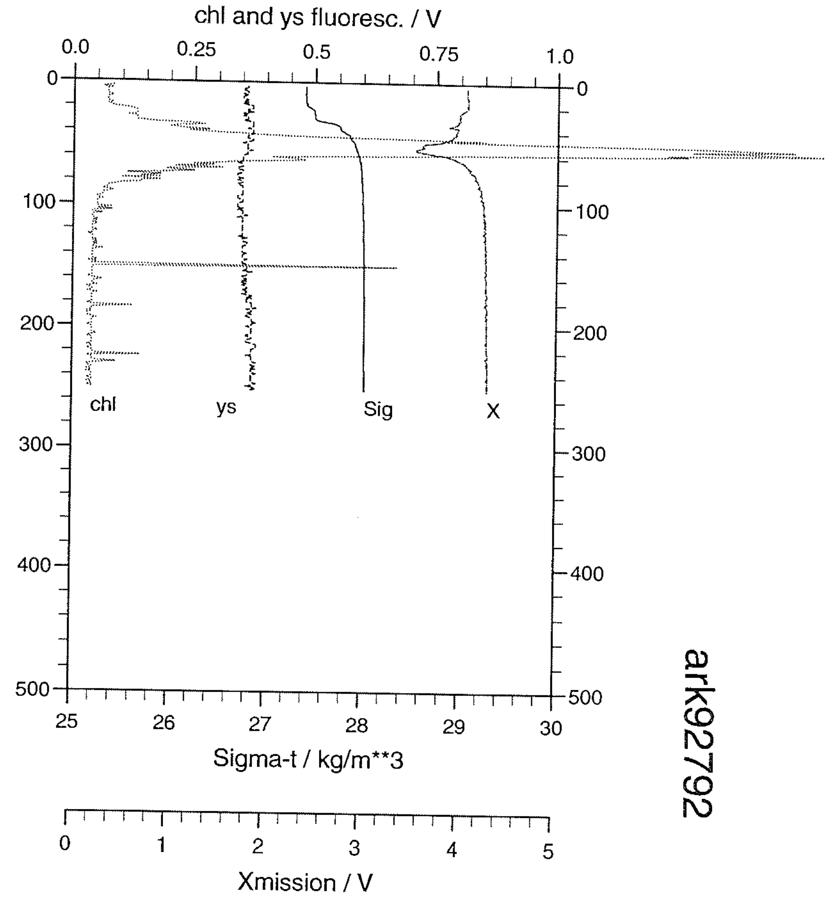
Salinity
Temp / deg C
Sigma-t / kg/m**3
Pressure / dbar
S
Sig
T

ark92792





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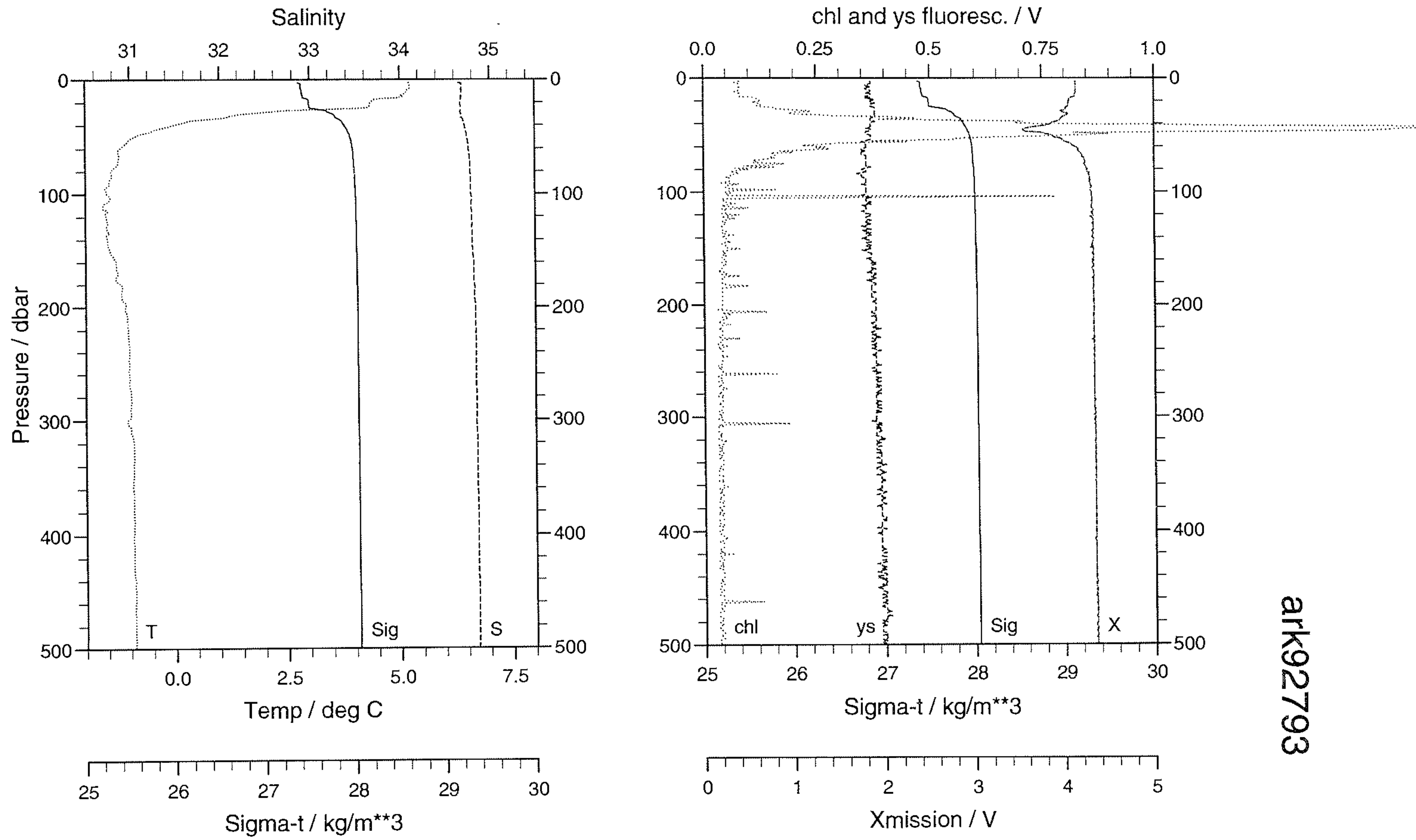

ark92793