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Chlorofluorocarbon Measurements Made by LDGO on

South Atlantic Ventilation Experiment Leg 5

23 January 1988 - 8 March 1989

and

HYDROS Leg 4

13 March - 19 April 1989

Aboard R/V Melville

By

W. M. Smethie, Jr., M. T. Benjamin, and S. C. Sutherland

LDGO-92-2

Lamont-Doherty Geological Observatory of Columbia University

Palisades, NY 10964

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Introduction

The data presented in this report are from the South Atlantic Ventilation Experiment (SAVE) which consisted of SAVE legs 1-5 and Hydros leg 4. Station locations are shown in Figure 1 and the complete hydrographic data is reported in Ocean Data Facility, Scripps Institution of Oceanography (1992a, b, c). The chlorofluorocarbons, F-11 and F-12, were measured on all of these legs by Scripps Institution of Oceanography (SIO) and Lamont-Doherty Geological Observatory (LDGO) using a SIO CFC analysis system. On two legs where station spacing was 30 nautical miles, two CFC analysis systems were used, one from SIO and one from LDGO. The reason for this was to increase coverage where station spacing was 30 nautical miles and to compare analyses performed on two different systems. The LDGO system was used on SAVE leg 5 and Hydros leg 4 which were carried out on the R/V Melville between January 23 and April 19, 1989. Station locations where samples were measured using the LDGO system are shown in Figure 2. The LDGO system was operated by M. T. Benjamin on SAVE leg 5 and by J. Razniewski on Hydros leg 4. CFC data collected with the SIO system on these two legs and on the other SAVE legs are reported in a separate data report.

Methods

Water samples were collected in 10-liter Niskin type bottles attached to a rosette. O-rings on the bottles had been treated to reduce the bottle blank. CFC water samples were drawn into 100-cc glass syringes from these bottles and stored in a bath of running surface seawater until analysis which was no more than 12 hours after collection. Air samples were collected by pumping air from the ship's bow to the CFC analysis system. Water vapor was removed from the air by passing it through a column of manganese perchlorate prior to filling a calibrated loop for the analysis. Air samples were collected when there was a wind across the bow to prevent contamination from ship's air.

Water and air samples were analyzed by gas chromatography using an electron capture detector. Water samples were introduced into a 35 cc calibrated volume and then transferred to a stripper. The water was purged for 4 minutes with carrier gas (ultra pure nitrogen which was passed through a column of molecular sieve 13X to remove any traces of CFCs) at a rate of 100 cc per minute and the CFCs were trapped out of this gas stream onto a unibeads 2s trap maintained at -60° to -80° C. The trapped CFCs were backflushed off of the trap into the gas chromatograph after heating the trap to 100° C. F-11 and F-12 were separated from each other and from other trapped substances on a pre-column/main column packed with Porasil B and a short post column of molecular sieve 5A. The molecular sieve 5A removes nitrous oxide from the gas stream providing a clean F-12 peak. It is valved out of the gas stream prior to the elution of F-11. Substances with long retention times were backflushed off the precolumn to prevent interference with subsequent analyses. The output from the electron capture detector was fed to an integrating recorder which recorded the chromatogram and determined retention times and peak areas. This information was transferred to a Hewlett Packard Integral PC for subsequent data reduction. Air samples were analyzed using the same procedure except that the sample, measured into a calibrated gas loop, was flushed directly to the unibeads 2s trap without passing through the stripper chamber.

The electron capture detector was calibrated by running different size calibrated gas loops of a standard gas mixture which contained known amounts of F-11 and F-12. Blanks were also run for the calibrated gas loops and a correction was applied if necessary. From the blank corrected calibration data, F-11 and F-12 sensitivities were calculated and a normalized reciprocal sensitivity was plotted against normalized area. A polynomial expression was fitted to these data by a least squares technique and this expression was used to calculate concentrations from blank corrected normalized areas of air and water samples. Calibration curves were generally run once a day and the polynomial expression usually fit the calibration



SAVE Stations with LDGO CFC Data

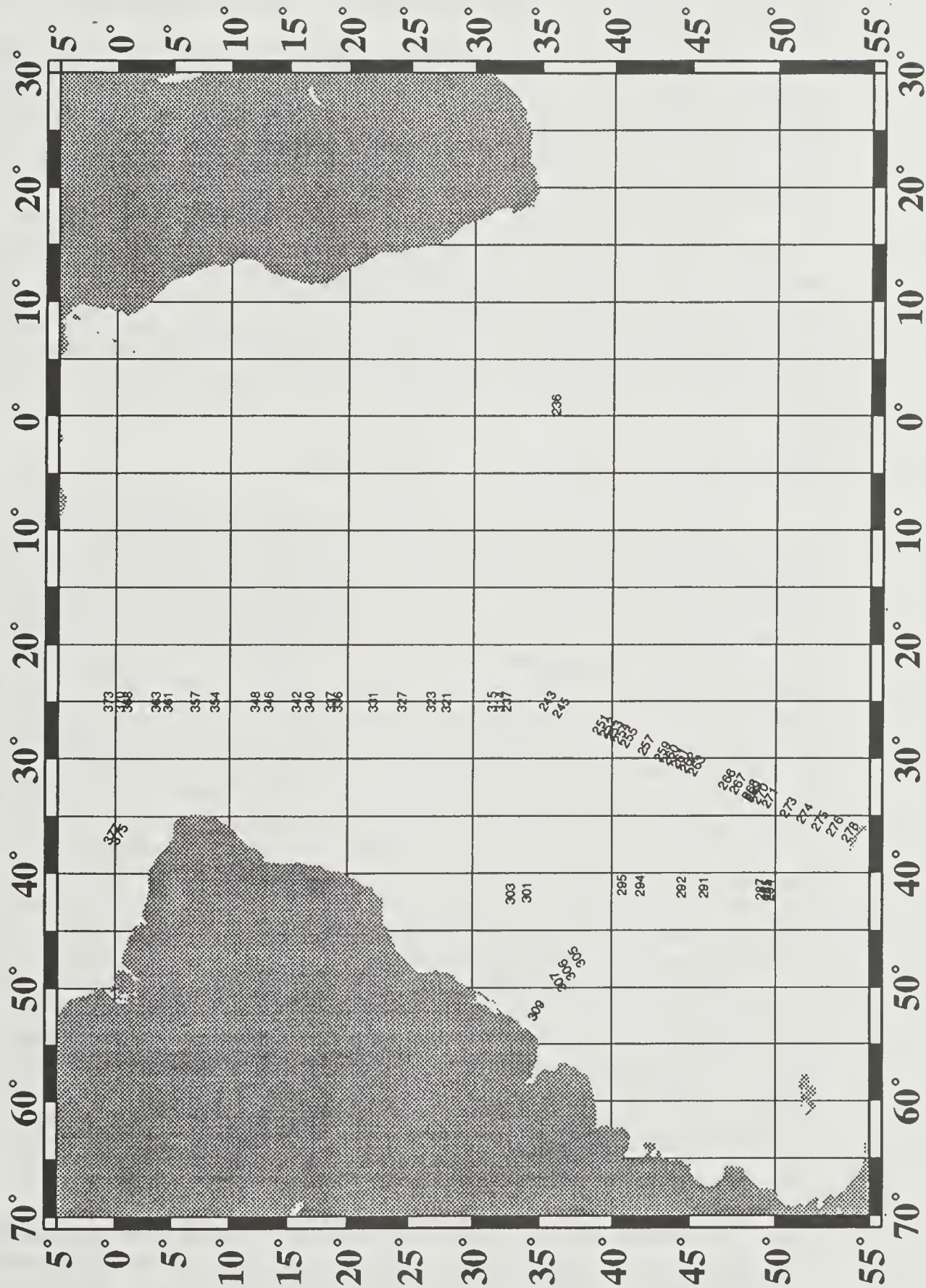


Figure 2: Station locations for SAVE leg 5 and Hydros leg 4 where CFC measurements were made using the LDGO CFC analysis system.

data points to within 0.5 to 1% for F-11 and 1 to 2 % for F-12. Detector drift between calibration curves was monitored by running a calibrated loop of standard gas for about every 6 samples analyzed. These data were used to determine the normalization factor for the water and air samples. Details of this calibration/data reduction procedure are described in Bullister and Weiss (1988).

System blanks for gas and water samples were monitored throughout the cruises and corrections applied. There was also a blank associated with the water sampling bottle, sample drawing, sample storage in syringes, and introduction of the sample into the analysis system. This blank was determined by analyzing deep water samples thought to be free of CFCs. The average values were 0.003 pmol/kg for F-12 and 0.005 pmol/kg for F-11, and these values have been subtracted from all water samples.

The precision of the measurement was determined by measuring duplicate water samples collected in different syringes from the same bottle and by running replicate air samples. The average difference in duplicate water samples was 0.005 pmol/kg for concentrations less than 0.8 pmol/kg and 1.6% for concentrations greater than 0.8 pmol/kg for F-12 and 0.003 pmol/kg (concentrations less 0.8 pmol/kg) and 0.8% (concentrations greater than 0.8 pmol/kg) for F-11, which is based on 31 sets of duplicates analyzed during the course of both legs. Air samples were generally run in groups of 4 or 5 and the average standard deviation was 0.6% for F-12 and 0.3% for F-11.

Comparison of LDGO to SIO Data

To compare results from the SIO and LDGO CFC analysis systems, approximately 240 samples were run on both systems during the two legs. Plots of SIO F-12 versus LDGO F-12 and SIO F-11 versus LDGO F-11 are presented in Figures 3 and 4. There is a strong linear correlation between the two data sets as expected with a correlation coefficient of 0.9986 for F-12 and 0.9985 for F-11, and the intercepts of the linear fits are essentially zero. However, the slope is not one as expected, but is 0.959 ± 0.0016 for F-12 and 0.9685 ± 0.0018 for F-11. Thus, the LDGO CFC data is systematically higher than the SIO CFC data by 3-4%. A comparison of 11 air measurements was also made for SAVE leg 5. Each result is the average of 3-5 measurements for both SIO and LDGO. There is no systematic difference in the air results; the average percent difference is $0.8 \pm 1.3\%$ for F-12 and $0.5 \pm 0.8\%$ for F-11 with the LDGO results lower than the SIO results. This indicates that the difference is not caused by a systematic error in calibration. Since the systematic difference is nearly the same for both F-12 and F-11, it does suggest that there is a systematic difference in the water volume measurement. However, the volume of the calibrated loop used to determine the sample volume was checked and found to be correct. The reason for the offset in the water data has not been resolved and the LDGO data presented here are reported in two ways, 1) as measured and 2) adjusted by multiplying by 0.964 to bring the data in line with the SIO data.

The adjusted LDGO data was compared with the SIO data by calculating differences and percent differences. For both F-12 and F-11, the average difference was 0.008 pmol/kg for concentrations less than 0.8 pmol/kg and 2.3% for concentrations greater than 0.8 pmol/kg. This is roughly twice the differences for duplicates run on either the LDGO system or the SIO system. Users of these two data sets should keep in mind that there is a $\pm 2.3\%$ scatter between the data sets.

Air Samples

Air samples were measured on SAVE leg 5 and these results are presented in Table 1. As discussed above, measurements of air samples with both the LDGO and SIO systems are in good agreement. Many more air samples were analyzed with the SIO system than with the LDGO system. Therefore, the SIO measurements, which are reported in a separate data report, have been used to determine the atmospheric concentrations reported with the oceanographic

SAVE Data

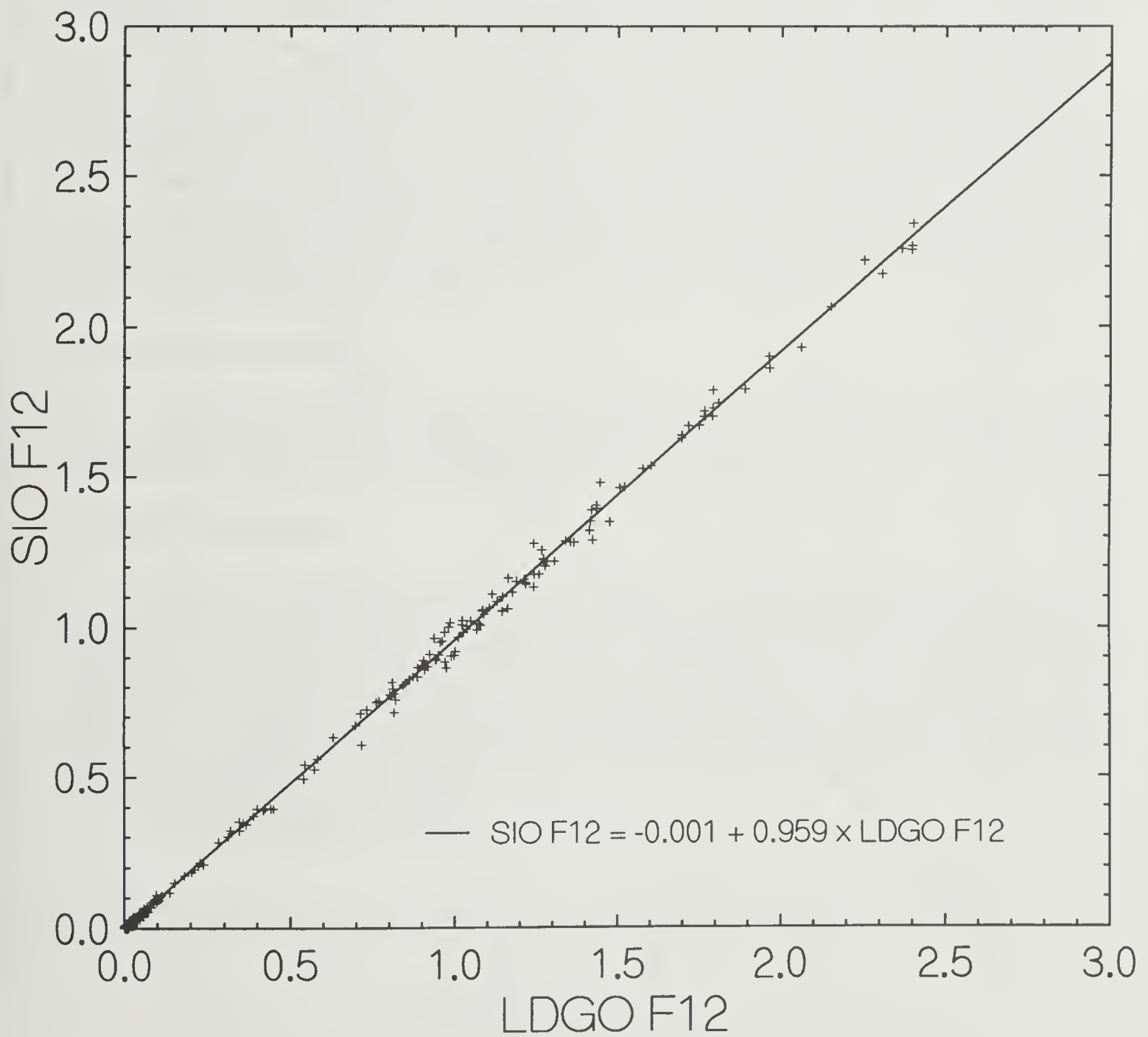


Figure 3: SIO F-12 (pmol/kg) versus LDGO F-12 (pmol/kg).

SAVE Data

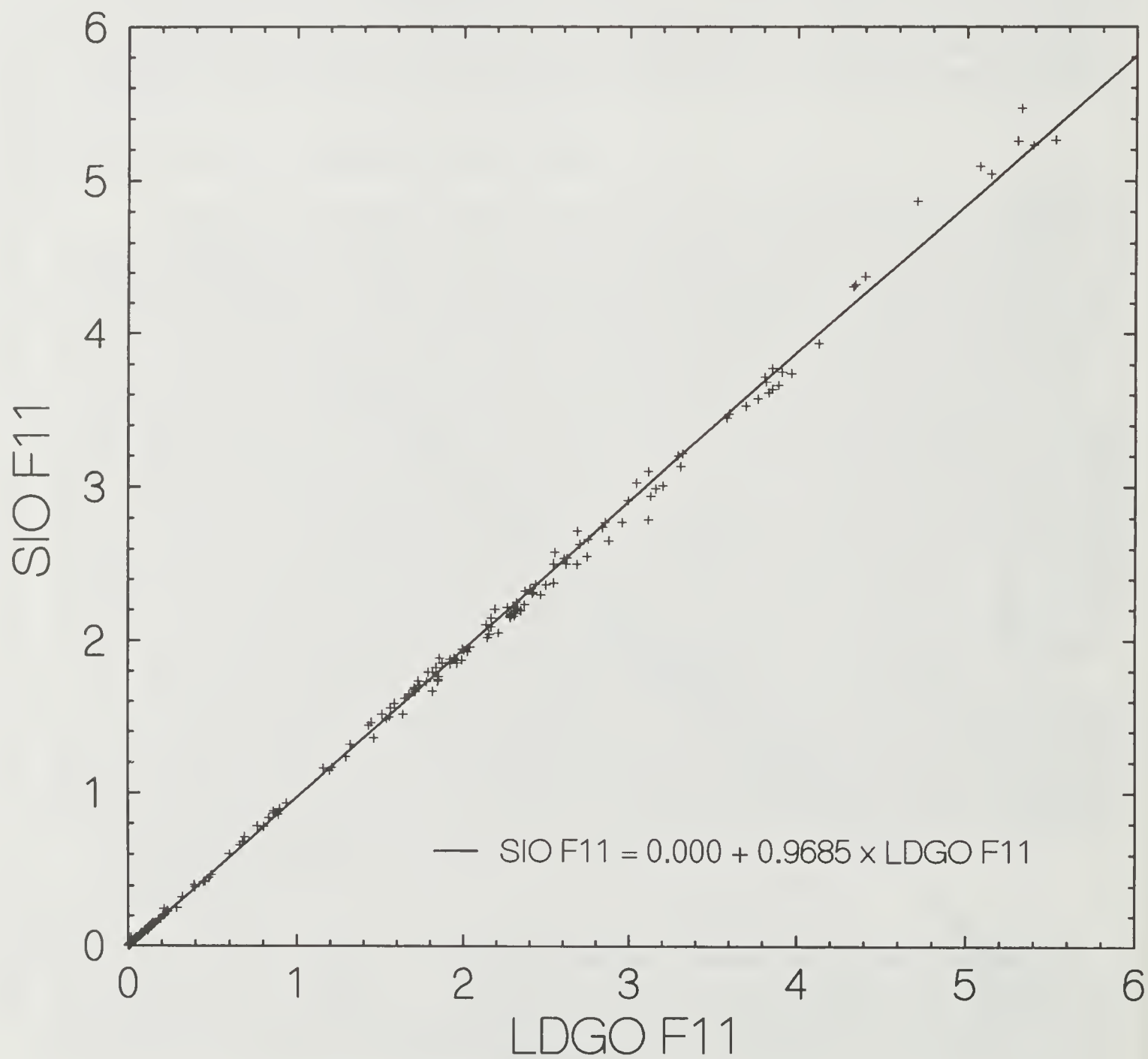


Figure 4: SIO F-11 (pmol/kg) versus LDGO F-11 (pmol/kg).

data. For both legs, the SIO atmospheric CFC data were plotted against date. For SAVE leg 5, F-12 was more or less constant with an average value of 438.0 pptv from January 24 until February 20; after February 20 until the end of the cruise, the average concentration was 441.9 pptv. The average F-11 concentration was 239.2 pptv from January 24 until February 10 and 241.6 pptv from February 11 until the end of the leg. On Hydros leg 4, the cruise track was primarily from south to north and the CFC concentration gradually increased along the cruise track until the Intertropical Convergence Zone where it increased abruptly. The F-12 concentration increased linearly with date from 441 pptv on March 14 to 450 pptv on April 4, then increased sharply to about 464 pptv on April 9. The F-11 concentration increased linearly from 241 to 245 pptv, then increased abruptly to about 256 pptv for the same time period.

Water Samples

CFC data for the water samples are reported for each station with depth, potential temperature, salinity, sigma-theta, oxygen and oxygen saturation. The accompanying hydrographic data are from the final hydrographic data reports (Ocean Data Facility, Scripps Institution of Oceanography, 1992a, b, c). F-11 and F-12 saturation and the F-11:F-12 ratio for concentrations greater than 0.01 pmol/kg are also reported. The F-11 and F-12 saturations were calculated using the atmospheric concentrations, as discussed in the previous section, and the Warner and Weiss (1985) solubility data. The CFC data is reported in two ways, 1) as observed and 2) adjusted downward by 3.6% to account for a systematic difference between the SIO and LDGO measurements as discussed above. Obvious bad data have been removed and a few questionable data have been flagged. Where duplicates were run, the average value is reported but these samples are not noted. The results for water and air samples are reported on the SIO 1986 calibration scale, which has an estimated accuracy of 0.5% for F-12 and 1.3% for F-11 (Bullister and Weiss, 1988).

Vertical Profiles

Vertical profiles of F-11 and F-12 for all stations, except for those having only one or two data points, are presented following the station data. The data are plotted on two concentration scales to show features present in low CFC deep water.

Acknowledgements

This work was carried out with the assistance of many participants in the SAVE program. We especially wish to acknowledge the efforts of the Ocean Data Facility of Scripps Institution of Oceanography for collection of the water samples, collection of the hydrographic and oxygen data, and ensuring that the cruises ran smoothly; R. Weiss for calibrating our standards and providing us with the data acquisition and reduction software; the chief scientists, W. Smethie and M. McCartney for SAVE leg 5 and L. Talley and M. Tsuchiya for Hydros leg 4, and the officers and crewmen of the R/V Melville. This work was supported by NSF Grant Number OCE-86-13327.

References

- Bullister, J. L. and R. F. Weiss. 1988. Determination of CCl_3F and CCl_2F_2 in seawater and air. *Deep-Sea Research* 35: 839-853.
- Ocean Data Facility, Scripps Institution of Oceanography. 1992a. South Atlantic Ventilation Experiment (SAVE) Chemical, Physical, and CTD Data Report, Legs 1, 2, and 3, SIO Reference 92-9. University of California, San Diego. 729 pp.
- Ocean Data Facility, Scripps Institution of Oceanography. 1992b. South Atlantic Ventilation Experiment (SAVE) Chemical, Physical, and CTD Data Report, Legs 4 and 5, SIO Reference 92-10. University of California, San Diego. 625 pp.
- Ocean Data Facility, Scripps Institution of Oceanography. 1992c. Hydros Leg 4 Physical, Chemical, and CTD Data. SIO Reference 92-12. University of California, San Diego. 189 pp.
- Warner, M. J. and R. F. Weiss. 1985. Solubilities of chlorofluorocarbons 11 and 12 in water and seawater. *Deep-Sea Research* 32:1485-1497.

Table 1. F-12 and F-11 concentration in dry marine air measured on SAVE leg 5 using the LDGO CFC analysis system. Concentrations are relative to the SIO 1986 calibration scale.

Station	Date	Latitude	Longitude	F-12 (pptv)	F-11 (pptv)
243	3 Feb 89	35°30'S	24°58'W	441.2 ± 2.7	230.7 ± 0.6
249	5 Feb 89	38°15'S	26°29'W	435.3 ± 1.6	238.4 ± 1.0
252	6 Feb 89	39°40'S	27°19'W	425.3 ± 2.3	240.9 ± 0.8
262	11 Feb 89	44°50'S	30°18'W	440.7 ± 3.9	236.9 ± 0.9
268	13 Feb 89	48°31'S	32°46'W	434.6 ± 1.0	242.9 ± 0.6
271	14 Feb 89	49°46'S	33°11'W	435.7 ± 2.4	241.7 ± 0.7
274	15 Feb 89	51°37'S	34°45'W	434.8 ± 2.1	239.5 ± 0.6
276	16 Feb 89	53°10'S	35°52'W	437.2 ± 0.5	239.4 ± 0.2
285	20 Feb 89	49°24'S	41°32'W	440.8 ± 3.2	239.4 ± 1.0
295	25 Feb 89	40°39'S	41°05'W	436.8 ± 2.1	239.8 ± 1.1
306	5 Mar 89	36°56'S	48°28'W	429.9 ± 3.9	240.6 ± 0.2

CFC Seawater Data



Lamont-Doherty Geological Observatory of Columbia University
 South Atlantic Ventilation Experiment (SAVE) Leg 5

Station 236 36-00.1S 0-59.3E 1/26/89 Bottom Depth 4949 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED			ADJUSTED			F11/F12 Ratio			
						F11 Conc pM/kg	F11 Pct Sat	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F12 Pct Sat				
109	218	12.724	35.066	26.500	222	85.6	2.437	80.9	1.165	79.4	2.349	78.0	1.123	76.5	2.09
110	297	11.611	34.980	26.648	210	79.0	1.948	61.0	0.999	64.6	1.878	58.8	0.963	62.3	1.95
111	414	9.643	34.756	26.822	197	71.0	1.447	40.6	0.714	41.9	1.395	39.2	0.688	40.4	2.03
112	548	7.423	34.504	26.969	216	73.9	1.848	45.7	0.810	42.5	1.781	44.0	0.781	41.0	2.28
113	684	5.349	34.324	27.099	229	74.4	1.586	34.7	0.732	34.5	1.529	33.4	0.706	33.2	2.17
114	856	3.854	34.247	27.202	236	74.1	1.162	23.2	0.544	23.6	1.120	22.4	0.524	22.8	2.14
115	983	3.373	34.286	27.280	223	69.2			0.320	13.6			0.308	13.0	
118	1583	2.662	34.596	27.593	183	56.0	0.048	0.9	0.038	1.6	0.046	0.9	0.037	1.5	1.24
120	1969	2.547	34.745	27.722	198	60.3	0.008	0.1	0.007	0.3	0.008	0.1	0.007	0.3	

Station 237 32-30.0S 24-59.9W 2/ 1/89 Bottom Depth 4148 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED			ADJUSTED			F11/F12 Ratio			
						F11 Conc pM/kg	F11 Pct Sat	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F12 Pct Sat				
103	51	18.634	35.579	25.558	252	109.4	2.469	110.5	1.242	110.2	2.380	106.5	1.197	106.2	1.99
111	397	11.696	35.053	26.688	223	84.0	2.315	72.8	1.145	74.4	2.232	70.2	1.104	71.7	2.02
113	526	8.911	34.686	26.887	209	74.2	1.638	44.1	0.816	46.2	1.579	42.5	0.787	44.6	2.01
115	724	5.618	34.354	27.090	228	74.6	1.460	32.5	0.717	34.2	1.407	31.3	0.691	33.0	2.04
118	992	3.514	34.273	27.256	229	71.3	0.892	17.5	0.449	19.2	0.860	16.8	0.433	18.5	1.99
126	2567	2.553	34.876	27.826	240	73.3			0.002	0.1			0.002	0.1	
128	2865	2.506	34.896	27.846	246	75.1			0.003	0.1			0.003	0.1	
130	3059	2.414	34.899	27.856	248	75.5	0.002	0.0	0.004	0.2	0.002	0.0	0.004	0.2	
135	4039	0.962	34.765	27.859	228	66.8	0.007	0.1	-0.008	-0.3	0.007	0.1	-0.008	-0.3	

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 South Atlantic Ventilation Experiment (SAVE) Leg 5

Station 243 35-28.4S 24-58.3W 2/ 3/89 Bottom Depth 4106 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED F11			ADJUSTED F11			OBSERVED F12			ADJUSTED F12			F11/F12 Ratio
					Conc uM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	
301	1	20.331	35.356	24.947	232	103.8		2.284	110.4	1.163	110.4	2.202	106.4	1.121	106.4	2.202	106.4	1.121	106.4	1.96
303	48	16.876	35.155	25.664	254	106.4		2.621	107.4	1.283	105.2	2.527	103.5	1.237	101.5	2.527	103.5	1.237	101.5	2.04
304	65	15.677	35.370	26.107	259	106.0		2.627	101.7	1.306	101.9	2.532	98.0	1.259	98.3	2.532	98.0	1.259	98.3	2.01
306	149	13.519	35.384	26.585	233	91.4		2.547	88.4	1.259	89.2	2.455	85.3	1.214	86.1	2.455	85.3	1.214	86.1	2.02
309	298	11.869	35.102	26.694	233	91.4		2.499	79.4	1.217	79.7	2.409	76.5	1.173	76.8	2.409	76.5	1.173	76.8	2.05
313	543	6.587	34.409	27.009	233	78.0		2.291	53.9	1.079	54.2	2.209	52.0	1.040	52.2	2.209	52.0	1.040	52.2	2.12
315	737	4.334	34.232	27.140	253	80.3		2.147	44.1	1.002	44.7	2.070	42.6	0.966	43.1	2.070	42.6	0.966	43.1	2.14
316	824	3.922	34.234	27.185	247	77.6		1.713	34.4	0.820	35.7	1.651	33.1	0.790	34.4	1.651	33.1	0.790	34.4	2.09
317	939	3.554	34.254	27.238	235	73.1		1.211	23.8	0.574	24.5	1.167	22.9	0.553	23.6	1.167	22.9	0.553	23.6	2.11
319	1193	2.823	34.359	27.389	205	62.7		0.490	9.2	0.239	9.8	0.472	8.9	0.230	9.5	0.472	8.9	0.230	9.5	2.05
321	1383	2.685	34.479	27.497	187	57.1		0.178	3.3	0.098	4.0	0.172	3.2	0.094	3.8	0.172	3.2	0.094	3.8	1.83
322	1479	2.685	34.558	27.561	185	56.4		0.076	1.4	0.038	1.6	0.073	1.4	0.037	1.5	0.073	1.4	0.037	1.5	1.97
325	1978	2.710	34.778	27.734	209	63.9		-0.002	0.0	0.010	0.4	-0.002	0.0	0.010	0.4	-0.002	0.0	0.010	0.4	
329	2762	2.523	34.886	27.837	240	73.3		-0.005	-0.1	-0.008	-0.3	-0.005	-0.1	-0.008	-0.3	-0.005	-0.1	-0.008	-0.3	
332	3348	1.946	34.852	27.858	238	71.5		-0.006	-0.1	-0.008	-0.3	-0.006	-0.1	-0.008	-0.3	-0.006	-0.1	-0.008	-0.3	

Station 245 36-24.4S 25-29.5W 2/ 4/89 Bottom Depth 4173 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED F11			ADJUSTED F11			OBSERVED F12			ADJUSTED F12			F11/F12 Ratio
					Conc uM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	
101	1	19.236	35.145	25.073	237	103.9		2.371	108.7	1.177	106.6	2.286	104.8	1.135	102.8	2.286	104.8	1.135	102.8	2.01
106	57	14.605	35.236	26.241	259	104.0		2.841	104.1	1.414	105.1	2.739	100.4	1.363	101.3	2.739	100.4	1.363	101.3	2.01
108	136	12.503	35.207	26.653	243	93.5		2.755	90.6	1.366	92.3	2.656	87.3	1.317	89.0	2.656	87.3	1.317	89.0	2.02
110	218	11.598	35.065	26.716	248	93.2		2.880	90.2	1.423	92.0	2.776	86.9	1.372	88.7	2.776	86.9	1.372	88.7	2.02
113	495	5.955	34.343	27.039	238	78.6		2.282	51.7	1.068	51.9	2.200	49.9	1.030	50.0	2.200	49.9	1.030	50.0	2.14
114	604	4.828	34.253	27.103	252	80.9		2.346	49.7	1.049	48.0	2.262	47.9	1.011	46.3	2.262	47.9	1.011	46.3	2.24
116	766	3.878	34.230	27.186	250	78.4		1.850	37.0	0.850	37.0	1.783	35.7	0.819	35.6	1.783	35.7	0.819	35.6	2.18
117	803	3.651	34.221	27.202	254	79.3		2.157	42.5	0.989	42.5	2.079	41.0	0.953	40.9	2.079	41.0	0.953	40.9	2.18
119	1167	2.821	34.374	27.402	203	62.0		0.457	8.6	0.223	9.2	0.441	8.3	0.215	8.8	0.441	8.3	0.215	8.8	2.05
120	1318	2.727	34.462	27.480	190	58.1		0.195	3.6	0.101	4.1	0.188	3.5	0.097	4.0	0.188	3.5	0.097	4.0	1.94
121	1514	2.697	34.588	27.583	186	56.7		0.059	1.1	0.030	1.2	0.057	1.1	0.029	1.2	0.057	1.1	0.029	1.2	1.97
125	2126	2.802	34.825	27.764	217	66.7		0.013	0.2	0.012	0.5	0.013	0.2	0.012	0.5	0.013	0.2	0.012	0.5	1.08
131	3303	1.697	34.815	27.847	227	67.9		0.005	0.1	0.002	0.1	0.005	0.1	0.002	0.1	0.005	0.1	0.002	0.1	
135	4083	0.527	34.715	27.846	218	63.1		0.016	0.3	0.009	0.3	0.015	0.2	0.009	0.3	0.015	0.2	0.009	0.3	

Lamont-Doherty Geological Observatory of Columbia University
 South Atlantic Ventilation Experiment (SAVE) Leg 5

Station 251 39-10.6S 26-58.9W 2/ 6/89 Bottom Depth n/a Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED			ADJUSTED			F11/F12 Ratio		
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg			
102	3	17.321	35.151	25.554	244	103.3	2.547	106.6	1.278	106.8	2.455	102.8	1.232	103.0	1.99
115	656	4.784	34.244	27.101	257	82.6	2.609	55.1	1.219	55.6	2.515	53.1	1.175	53.6	2.14

Station 252 39-38.8S 27-17.5W 2/ 6/89 Bottom Depth 4293 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED			ADJUSTED			F11/F12 Ratio		
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg			
201	3	17.736	35.139	25.444	242	103.2	2.522	107.7	1.227	104.4	2.431	103.8	1.183	100.6	2.05
205	83	13.161	35.234	26.542	246	95.8	2.984	101.6	1.441	100.3	2.877	97.9	1.389	96.7	2.07
207	146	12.303	35.192	26.680	246	94.2	2.951	96.0	1.420	95.0	2.845	92.6	1.369	91.6	2.08
209	248	11.701	35.106	26.729	250	94.4	2.989	94.1	1.424	92.6	2.881	90.7	1.373	89.3	2.10
211	364	9.774	34.781	26.820	234	84.4	2.497	67.6	1.266	74.8	2.407	65.1	1.220	72.1	2.09
212	398	8.996	34.676	26.865	231	82.1	2.329	58.5	1.196	68.0	2.245	56.4	1.153	65.5	2.13
213	457	7.709	34.522	26.942	227	78.1	2.319	52.8	1.093	58.2	2.236	50.9	1.054	56.1	2.16
214	556	6.025	34.347	27.034	237	78.5	2.483	52.7	1.076	52.5	2.394	50.8	1.037	50.6	2.21
215	658	4.854	34.253	27.100	254	81.5	2.297	47.1	1.126	51.6	2.214	45.4	1.085	49.7	2.16
216	754	4.291	34.229	27.143	256	81.2	2.094	42.1	1.064	47.3	2.019	40.6	1.026	45.6	2.19
217	826	3.971	34.224	27.172	253	79.5	1.876	36.7	0.959	41.9	1.808	35.4	0.924	40.4	2.13
218	922	3.527	34.226	27.218	248	77.1	1.417	27.1	0.879	37.5	1.366	26.1	0.847	36.1	2.16
219	1040	3.130	34.253	27.277	235	72.4	0.714	13.4	0.655	27.4	0.688	12.9	0.631	26.4	2.08
220	1237	2.779	34.350	27.386	208	63.5	0.286	5.3	0.342	14.0	0.276	5.1	0.330	13.5	2.09
221	1435	2.684	34.461	27.483	189	57.6	0.178	3.3	0.137	5.6	0.172	3.2	0.132	5.4	1.95
222	1634	2.680	34.588	27.585	185	56.4	0.034	0.6	0.091	3.7	0.033	0.6	0.088	3.6	1.10
223	1828	2.674	34.672	27.653	187	57.3	0.013	0.2	0.031	1.3	0.013	0.2	0.030	1.2	1.18
225	2223	2.715	34.798	27.750	209	64.0	0.001	0.0	0.011	0.5	0.001	0.0	0.011	0.5	0.2
228	2813	2.364	34.857	27.827	229	69.4	0.004	0.1	0.005	0.2	0.004	0.1	0.005	0.2	0.2
230	3202	1.755	34.807	27.836	222	66.2	0.012	0.2	0.005	0.2	0.004	0.1	0.005	0.2	0.92
232	3593	1.050	34.748	27.840	215	63.0	0.019	0.3	0.014	0.5	0.012	0.2	0.013	0.5	1.29
234	3983	0.550	34.712	27.843	215	62.1	0.041	0.7	0.015	0.5	0.018	0.3	0.014	0.5	1.60
235	4178	0.320	34.695	27.842	215	61.9	0.052	0.8	0.026	0.9	0.040	0.6	0.025	0.9	1.43
236	4295	0.213	34.688	27.843	216	61.9			0.036	1.3	0.050	0.8	0.035	1.2	

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Station 253 40-04.4S 27-31.7W 2/ 7/89 Bottom Depth 4254 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat		F12 Conc pM/kg
171	87	13.106	35.202	26.529	245	95.5	2.996	101.7	1.420	98.6	2.888	98.0	1.369	95.1	2.11
114	694	4.499	34.236	27.126	256	81.6	2.373	49.3	1.084	48.7	2.288	47.5	1.045	47.0	2.19

Station 254 40-32.8S 27-46.9W 2/ 7/89 Bottom Depth 4309 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat		F12 Conc pM/kg
101	7	17.068	35.132	25.600	243	102.4	2.580	106.7	1.241	102.6	2.487	102.8	1.196	98.9	2.08
171	98	13.953	35.453	26.548	231	91.5	2.608	92.7	1.270	91.9	2.514	89.3	1.224	88.5	2.05
105	147	13.398	35.373	26.602	236	92.6	2.702	93.2	1.307	92.1	2.605	89.9	1.260	88.8	2.07
107	248	11.699	35.081	26.710	236	89.0	2.642	83.2	1.258	81.7	2.547	80.2	1.213	78.8	2.10
109	337	9.948	34.798	26.803	232	84.3	2.590	74.0	1.234	73.6	2.497	71.3	1.190	70.9	2.10
110	395	8.426	34.597	26.893	226	79.3	2.415	63.3	1.134	62.6	2.328	61.0	1.093	60.4	2.13
111	498	6.491	34.392	27.009	232	77.6	2.282	53.4	1.081	54.0	2.200	51.5	1.042	52.1	2.11
112	599	5.152	34.272	27.081	247	80.1	2.327	50.3	1.043	48.6	2.243	48.5	1.005	46.8	2.23
113	693	4.485	34.240	27.130	253	80.5	2.230	46.3	1.023	46.0	2.150	44.6	0.986	44.3	2.18
114	790	3.944	34.223	27.174	250	78.6	1.945	39.1	0.887	38.7	1.875	37.6	0.855	37.3	2.19
115	888	3.489	34.230	27.225	243	75.5	1.591	31.1	0.728	31.0	1.534	30.0	0.702	29.9	2.19
116	988	3.102	34.262	27.287	230	70.7	1.203	22.9	0.576	24.0	1.160	22.1	0.555	23.2	2.09
117	1092	2.878	34.307	27.343	218	66.7	0.925	17.4	0.430	17.7	0.892	16.8	0.415	17.1	2.15
118	1212	2.779	34.370	27.402	202	61.8	0.512	9.6	0.250	10.3	0.494	9.2	0.241	9.9	2.05
119	1336	2.692	34.441	27.466	195	59.6	0.280	5.2	0.138	5.6	0.270	5.0	0.133	5.4	2.03
121	1632	2.654	34.604	27.600	182	55.5	0.082	1.5	0.043	1.8	0.079	1.5	0.041	1.7	1.93
123	1980	2.703	34.741	27.705	196	60.0	0.020	0.4	0.006	0.2	0.019	0.4	0.006	0.2	
125	2370	2.664	34.835	27.784	219	66.9	0.008	0.1	0.007	0.3	0.008	0.1	0.007	0.3	
128	2959	2.175	34.854	27.841	230	69.5	0.001	0.0	-0.002	-0.1	0.001	0.0	-0.002	-0.1	
130	3350	1.475	34.782	27.837	217	64.3	0.016	0.3	0.006	0.2	0.015	0.3	0.006	0.2	
132	3692	0.912	34.737	27.840	213	62.2	0.025	0.4	0.013	0.5	0.024	0.4	0.013	0.5	1.85
134	4033	0.382	34.698	27.841	214	61.8	0.036	0.6	0.013	0.5	0.035	0.6	0.013	0.5	2.69
135	4178	0.174	34.686	27.843	217	62.1	0.051	0.8	0.021	0.7	0.049	0.8	0.020	0.7	2.45
136	4295	0.054	34.678	27.843	0.074	1.2	0.037	1.3	0.037	1.3	0.071	1.1	0.036	1.3	1.97

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Station 255 41-02.9S 28-07.0W 2/ 8/89 Bottom Depth n/a Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED						ADJUSTED					
						F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11/F12 Ratio			
171	74	14.043	35.454	26.530	233	92.4	2.685	95.8	1.272	92.4	2.588	92.4	1.226	89.1	2.11		
114	692	4.162	34.225	27.153	256	81.0	2.330	47.4	1.022	45.1	2.246	45.7	0.985	43.5	2.28		

Station 257 42-10.4S 28-49.0W 2/ 8/89 Bottom Depth 4527 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED						ADJUSTED					
						F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11/F12 Ratio			
113	8	13.833	34.354	25.723	260	102.2	3.115	108.8	1.476	105.1	3.003	104.9	1.423	101.3	2.11		
124	1485	2.495	34.604	27.614	179	54.3	0.163	3.0	0.080	3.2	0.157	2.9	0.077	3.1	2.04		

Station 259 43-13.9S 29-22.9W 2/ 9/89 Bottom Depth 4563 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED						ADJUSTED					
						F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11/F12 Ratio			
213	719	3.083	34.235	27.267	244	75.2	1.921	36.6	0.887	37.0	1.852	35.3	0.855	35.6	2.17		
216	1086	2.640	34.425	27.458			1.762	32.7	0.805	32.8	1.699	31.6	0.776	31.6	2.19		

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Station 260 43-44.6S 29-41.0W 2/10/89 Bottom Depth 4495 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED			ADJUSTED			F11/F12 Ratio		
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F12 Pct Sat			
101	7	12.884	34.311	25.883	264	101.6	3.207	106.6	1.521	103.6	3.092	102.8	1.466	99.9	2.11
103	56	11.591	34.342	26.155	270	101.0	3.505	108.9	1.641	105.3	3.379	105.0	1.582	101.5	2.14
105	108	7.292	34.352	26.868	274	93.4	4.120	100.9	1.895	98.6	3.972	97.3	1.827	95.1	2.17
107	197	5.816	34.300	27.023	270	88.9	3.704	83.2	1.706	82.3	3.571	80.3	1.645	79.3	2.17
108	247	4.989	34.228	27.065	272	87.6	3.748	80.1	1.697	78.3	3.613	77.3	1.636	75.5	2.21
109	297	4.444	34.192	27.097	269	85.6	3.517	72.8	1.591	71.3	3.390	70.1	1.534	68.7	2.21
110	366	4.109	34.189	27.130	270	85.3	3.364	68.2	1.508	66.4	3.243	65.7	1.454	64.0	2.23
111	465	3.763	34.194	27.169	268	83.7	3.061	60.8	1.351	58.4	2.951	58.6	1.302	56.3	2.27
112	564	3.315	34.191	27.210	263	81.3	2.854	55.1	1.268	53.5	2.751	53.1	1.222	51.5	2.25
113	664	3.018	34.208	27.251	254	78.0	2.436	46.2	1.086	45.1	2.348	44.5	1.047	43.5	2.24
115	924	2.552	34.321	27.383	217	65.9	1.235	22.8	0.565	22.9	1.191	22.0	0.545	22.1	2.19
117	1187	2.561	34.485	27.513	186	56.6	0.365	6.7	0.165	6.7	0.352	6.5	0.159	6.5	2.21
118	1383	2.625	34.602	27.601	182	55.5	0.123	2.3	0.061	2.5	0.119	2.2	0.059	2.4	2.02
119	1582	2.489	34.657	27.657	182	55.4	0.107	2.0	0.047	1.9	0.103	1.9	0.045	1.8	2.29
121	1977	2.580	34.796	27.760	208	63.4	0.025	0.5	0.019	0.8	0.024	0.4	0.018	0.7	1.33
123	2320	2.435	34.846	27.812	225	68.4	0.003	0.1	0.001	0.0	0.003	0.1	0.001	0.0	
128	3152	1.066	34.728	27.822	205	60.1	0.047	0.8	0.022	0.8	0.045	0.8	0.021	0.8	2.14
130	3544	0.663	34.707	27.832	210	60.9	0.066	1.1	0.038	1.4	0.064	1.1	0.037	1.4	1.73
132	3933	0.171	34.682	27.840	219	62.6	0.075	1.2	0.037	1.3	0.072	1.1	0.036	1.3	2.00
134	4274	-0.035	34.673	27.844	222	63.3	0.088	1.4	0.042	1.5	0.085	1.3	0.040	1.4	2.13
135	4420	-0.072	34.673	27.846	223	63.4	0.096	1.5	0.044	1.5	0.093	1.5	0.042	1.5	2.21
136	4469	-0.084	34.671	27.845	222	63.2	0.096	1.5	0.042	1.5	0.093	1.5	0.040	1.4	2.32

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Station 261 44-17.3S 29-59.1W 2/10/89 Bottom Depth 4639 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	5	12.980	34.421	25.949	265	102.2	3.165	105.8	1.504	103.0	3.051	102.0	1.450	99.3	2.10
110	364	4.442	34.208	27.110	264	83.9	3.129	64.7	1.417	63.5	3.016	62.4	1.366	61.2	2.21
116	982	2.623	34.349	27.399	209	63.7	0.941	17.4	0.419	17.0	0.907	16.8	0.404	16.4	2.25
123	2320	2.277	34.808	27.795	212	64.3	0.017	0.3	0.019	0.8	0.016	0.3	0.018	0.7	0.89
125	2660	1.787	34.773	27.807	206	61.6	0.037	0.7	0.019	0.7	0.036	0.6	0.018	0.7	2.00
126	2841	1.497	34.754	27.813	203	60.3	0.037	0.6	0.027	1.0	0.036	0.6	0.026	1.0	1.38

Station 262 44-49.1S 30-19.3W 2/10/89 Bottom Depth 5004 Air Conc (ppt): F11 = 239.2 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	5	10.017	34.233	26.350	282	102.0	3.688	105.1	1.689	100.5	3.555	101.3	1.628	96.8	2.18
105	140	6.533	34.369	26.985	274	91.7	3.850	90.3	1.770	88.6	3.711	87.0	1.706	85.4	2.18
106	191	5.513	34.268	27.034	266	86.9	3.619	79.9	1.627	77.2	3.489	77.0	1.568	74.4	2.23
107	232	4.942	34.224	27.067	264	84.9	3.461	73.8	1.562	71.9	3.336	71.1	1.506	69.3	2.22
108	292	4.338	34.193	27.109	267	84.8	3.362	69.1	1.519	67.7	3.241	66.6	1.464	65.2	2.21
110	490	3.443	34.184	27.193	266	82.5	2.960	57.6	1.316	55.9	2.853	55.5	1.269	53.9	2.25
111	596	3.083	34.212	27.248	251	77.4	2.675	50.9			2.579	49.1			
112	697	2.847	34.251	27.301	237	72.5	1.758	33.0	0.809	33.3	1.695	31.8	0.780	32.1	2.17
113	838	2.681	34.326	27.375	214	65.4	1.046	19.5	0.473	19.3	1.008	18.7	0.456	18.6	2.21
135	4905	-0.200	34.665	27.846	225	64.0	0.083	1.3	0.044	1.5	0.080	1.2	0.042	1.5	1.90
136	5009	-0.206	34.664	27.845	225	63.9	0.139	2.2	0.067	2.3	0.134	2.1	0.065	2.3	2.06

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Station 263 45-21.1S 30-38.0W 2/11/89 Bottom Depth 5294 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	8	9.168	34.078	26.370	287	101.7	3.819	102.7	1.791	102.1	3.682	99.0	1.727	98.4	2.13
110	595	2.550	34.213	27.296	246	74.6	2.422	44.2	1.074	43.4	2.335	42.6	1.035	41.9	2.26

Station 266 47-10.7S 31-48.4W 2/12/89 Bottom Depth 5177 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	7	8.770	34.156	26.494	287	101.0	4.007	105.5	1.838	102.8	3.863	101.7	1.772	99.1	2.18
103	57	8.518	34.222	26.584	283	99.0	4.013	104.2	1.813	100.2	3.869	100.5	1.748	96.6	2.21
105	149	5.363	34.231	27.023	277	90.0	3.968	85.9	1.774	83.5	3.825	82.8	1.710	80.5	2.24
107	237	4.281	34.167	27.094	273	86.6	3.643	73.9	1.663	73.9	3.512	71.2	1.603	71.2	2.19
108	295	3.966	34.171	27.131	272	85.6	3.395	67.5	1.552	67.8	3.273	65.1	1.496	65.3	2.19
109	396	3.413	34.178	27.190	267	82.7	3.026	58.2	1.343	56.9	2.917	56.1	1.295	54.9	2.25
110	494	2.963	34.191	27.243	257	78.9	2.660	49.8	1.177	48.7	2.564	48.0	1.135	47.0	2.26
111	596	2.662	34.220	27.293	247	75.1	2.264	41.6	1.014	41.3	2.182	40.1	0.977	39.8	2.23
112	692	2.505	34.279	27.353	228	69.2	1.681	30.6	0.764	30.8	1.620	29.5	0.736	29.7	2.20
113	786	2.472	34.346	27.409	210	63.7	1.110	20.2	0.523	21.1	1.070	19.5	0.504	20.3	2.12
114	891	2.468	34.421	27.470	195	59.2	0.701	12.8	0.334	13.5	0.676	12.3	0.322	13.0	2.10
116	1189	2.485	34.587	27.601	178	54.2	0.184	3.4	0.084	3.4	0.177	3.2	0.081	3.3	2.19
121	2171	2.010	34.784	27.798	206	61.9	0.032	0.6	0.018	0.7	0.031	0.6	0.017	0.7	1.82
123	2554	1.477	34.753	27.814	204	60.6	0.037	0.6	0.016	0.6	0.036	0.6	0.015	0.6	2.40
125	2956	0.908	34.715	27.822	204	59.6	0.110	1.8	0.047	1.7	0.106	1.8	0.045	1.7	2.36
129	3733	0.198	34.684	27.840	217	62.2	0.123	1.9	0.046	1.6	0.119	1.9	0.044	1.6	2.70
132	4324	-0.093	34.672	27.846	223	63.4	0.101	1.6	0.050	1.8	0.097	1.5	0.048	1.7	2.02
134	4711	-0.176	34.668	27.848	224	63.7	0.116	1.8	0.052	1.8	0.112	1.7	0.050	1.7	2.24
135	4966	-0.221	34.666	27.848	227	64.2	0.153	2.3	0.072	2.5	0.147	2.3	0.069	2.4	2.13

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Station 267 47-48.5S 32-13.3W 2/12/89 Bottom Depth 5171 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED						ADJUSTED					
						F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11/F12 Ratio			
101	4	8.695	34.103	26.464	179	54.3	3.970	104.0	1.809	100.7	3.827	100.2	1.744	97.1	2.19		
115	1188	2.404	34.621	27.635			0.148	2.7	0.064	2.6	0.143	2.6	0.062	2.5	2.31		

Station 268 48-33.1S 32-42.2W 2/13/89 Bottom Depth 5046 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED						ADJUSTED					
						F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11/F12 Ratio			
116	1335	2.048	34.703	27.730	184	55.2	0.086	1.5	0.027	1.1	0.083	1.5	0.026	1.0	3.19		

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Station 269 48-42.5S 32-49.4W 2/13/89 Bottom Depth 3677 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat			
101	7	8.403	34.166	26.559	290	101.4	3.804	98.1	1.807	99.2	3.667	94.6	1.744	95.8	2.10
103	56	8.397	34.164	26.558	291	101.5	3.905	100.7	1.831	100.5	3.764	97.0	1.765	96.9	2.13
105	147	3.838	34.104	27.090	295	92.3	4.204	82.9	1.907	82.7	4.053	80.0	1.838	79.7	2.21
106	197	3.363	34.097	27.131	293	90.9	4.095	78.5	1.885	79.6	3.948	75.6	1.817	76.7	2.17
108	296	2.824	34.130	27.206	275	83.9	3.389	62.8	1.549	63.6	3.267	60.6	1.493	61.3	2.19
110	393	2.358	34.154	27.265	266	80.3	2.979	53.7	1.348	53.9	2.872	51.7	1.299	52.0	2.21
112	590	2.401	34.335	27.407	212	64.1	1.291	23.4	0.572	23.0	1.245	22.5	0.551	22.1	2.26
114	787	2.470	34.484	27.520	185	56.2	0.415	7.6	0.177	7.1	0.400	7.3	0.171	6.9	2.34
118	1186	2.425	34.665	27.668	182	55.3	0.105	1.9	0.041	1.7	0.101	1.8	0.040	1.6	2.52
122	1575	2.434	34.775	27.756	201	61.2	0.032	0.6	0.020	0.8	0.031	0.6	0.019	0.8	1.63
123	1701	1.848	34.707	27.749	190	56.8	0.187*	3.3*	0.094*	3.7*	0.180*	3.2*	0.091*	3.6*	1.98*
124	1774	2.011	34.754	27.774	196	59.1	0.046	0.8	0.034	1.3	0.044	0.8	0.033	1.3	1.33
125	1867	2.076	34.788	27.796	207	62.4	0.025	0.4	0.014	0.6	0.024	0.4	0.013	0.5	1.85
126	2018	1.905	34.784	27.806	208	62.5	0.025	0.4	0.007	0.3	0.024	0.4	0.007	0.3	1.57
128	2228	1.564	34.759	27.812	204	60.7	0.037	0.6	0.024	0.9	0.036	0.6	0.023	0.9	2.67
129	2429	1.274	34.739	27.817	203	59.8	0.050	0.8	0.019	0.7	0.048	0.8	0.018	0.7	1.64
131	2807	0.874	34.716	27.826	206	60.0	0.080	1.3	0.049	1.8	0.077	1.3	0.047	1.7	2.19
132	3008	0.667	34.706	27.831	209	60.6	0.097	1.6	0.045	1.6	0.094	1.5	0.043	1.6	2.41
133	3203	0.501	34.698	27.834	212	61.2	0.115	1.9	0.048	1.7	0.111	1.8	0.046	1.7	2.70
134	3398	0.285	34.687	27.838	216	62.0	0.112	1.8	0.042	1.5	0.108	1.7	0.040	1.4	2.52
135	3586	0.185	34.683	27.840	217	62.2	0.105	1.7	0.041	1.5	0.101	1.6	0.040	1.4	2.52
136	3751	0.005	34.675	27.844	221	63.1	0.094	1.5	0.053	1.9	0.091	1.4	0.051	1.8	1.78

* questionable data, not included in profile plot

Station 270 49-06.7S 33-03.6W 2/13/89 Bottom Depth 5489 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat			
171	116	5.295	34.199	27.006	275	89.5	3.857	83.1	1.794	84.1	3.718	80.1	1.729	81.0	2.15
106	196	4.151	34.134	27.082	285	89.9	3.812	76.7	1.767	77.9	3.675	73.9	1.703	75.1	2.16

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Station 271 49-39.0S 33-23.1W 2/14/89 Bottom Depth 5146 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED						ADJUSTED						F11/F12 Ratio
					Conc uM/kg	Pct Sat	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat					
201	9	6.620	33.877	26.585	305	102.0	4.422	102.7	2.068	103.5	4.263	99.0	1.994	99.8	2.14					
203	97	2.713	34.024	27.131	308	93.9	4.844	89.1	2.182	88.9	4.670	85.9	2.103	85.7	2.22					
206	244	1.794	34.110	27.274	281	83.6	3.656	63.5	1.660	64.3	3.524	61.2	1.600	62.0	2.20					
207	295	1.924	34.172	27.314	261	77.9	2.970	52.1	1.343	52.5	2.863	50.2	1.295	50.6	2.21					
209	392	2.018	34.253	27.372	237	71.1	2.188	38.6	0.988	38.8	2.109	37.2	0.952	37.4	2.22					
210	493	2.107	34.355	27.447	210	63.2	1.406	25.0	0.614	24.3	1.355	24.1	0.592	23.4	2.29					
211	599	2.215	34.439	27.505	191	57.7	0.812	14.5	0.371	14.8	0.783	14.0	0.358	14.2	2.19					
212	698	2.215	34.507	27.559	180	54.4	0.482	8.6	0.227	9.0	0.465	8.3	0.219	8.7	2.12					
213	885	2.223	34.594	27.629	176	53.2	0.240	4.3	0.099	3.9	0.231	4.1	0.095	3.8	2.43					
215	1221	2.015	34.675	27.710	180	54.2	0.145	2.6	0.059	2.3	0.140	2.5	0.057	2.2	2.46					
217	1640	1.682	34.727	27.778			0.092	1.6	0.037	1.4	0.089	1.5	0.036	1.4	2.47					
218	1839	1.670	34.756	27.802	203	60.4	0.055	1.0	0.021	0.8	0.053	0.9	0.020	0.8	2.65					
219	1974	1.383	34.730	27.802	199	58.8	0.090	1.5	0.043	1.6	0.087	1.5	0.041	1.6	2.12					
221	2371	0.923	34.713	27.820	204	59.7	0.113	1.9	0.048	1.8	0.109	1.8	0.046	1.7	2.37					
223	2756	0.596	34.701	27.831			0.141	2.3	0.059	2.1	0.136	2.2	0.057	2.1	2.39					
225	3155	0.274	34.688	27.839	216	61.9	0.169	2.7	0.061	2.2	0.163	2.6	0.059	2.1	2.76					
226	3348	0.140	34.680	27.840	219	62.7	0.143	2.2	0.053	1.9	0.138	2.2	0.051	1.8	2.71					
227	3538	0.029	34.673	27.841	222	63.3	0.171	2.7	0.082	2.9	0.165	2.6	0.079	2.8	2.09					
228	3736	-0.038	34.673	27.844	223	63.4	0.150	2.3	0.081	2.8	0.145	2.3	0.078	2.7	1.86					
229	3913	-0.098	34.670	27.845	225	63.9	0.165	2.6	0.077	2.7	0.159	2.5	0.074	2.6	2.15					
154	4166		34.670		0.149		0.149		0.058		0.144		0.056		2.57					
231	4318	-0.216	34.665	27.847	228	64.7	0.202	3.1	0.089	3.1	0.195	3.0	0.086	3.0	2.27					
155	4571		34.661		0.276		0.276		0.119		0.266		0.115		2.31					
233	4663	-0.350	34.660	27.849	235	66.3	0.322	4.9	0.132	4.6	0.310	4.7	0.127	4.4	2.44					
234	4793	-0.415	34.656	27.849	238	67.1	0.359	5.4	0.151	5.2	0.346	5.2	0.146	5.0	2.37					
157	4872		34.655		0.412		0.412		0.167		0.397		0.161		2.47					
235	4988	-0.519	34.653	27.852	242	68.0	0.445	6.7	0.202	6.9	0.429	6.5	0.195	6.7	2.20					
152	5099		34.651		0.494		0.494		0.213		0.476		0.205		2.32					
160	5118		34.654		0.481		0.481		0.197		0.464		0.190		2.44					
236	5133	-0.561	34.651	27.852	244	68.5	0.479	7.2	0.210	7.2	0.462	6.9	0.202	6.9	2.29					

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Station 273 50-41.2S 34-12.8W 2/15/89 Bottom Depth 4546 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg		F12 Pct Sat
101	8	5.284	33.847	26.729	312	101.2	4.768	102.3	2.196	102.5	4.596	98.6	2.117	98.8	2.17
171	86	1.873	33.949	27.139	319	95.2	5.456	95.1	2.437	94.7	5.260	91.7	2.349	91.3	2.24
105	137	0.862	34.130	27.355	284	82.4	4.024	65.9	1.785	65.6	3.879	63.5	1.721	63.3	2.25
106	197	1.166	34.267	27.445	245	71.9	2.752	46.0	1.230	46.1	2.653	44.4	1.186	44.4	2.24
108	295	1.741	34.449	27.550	198	58.9	1.166	20.3	0.537	20.8	1.124	19.5	0.518	20.1	2.17
109	396	1.968	34.536	27.602	183	54.8	0.612	10.8	0.283	11.1	0.590	10.4	0.273	10.7	2.16
110	496	2.007	34.595	27.647	178	53.3	0.352	6.2	0.154	6.1	0.339	6.0	0.148	5.8	2.29
111	594	1.952	34.638	27.685	177	53.0	0.231	4.1	0.094	3.7	0.223	3.9	0.091	3.6	2.45
112	695	1.816	34.664	27.717	180	53.9	0.232	4.1	0.101	3.9	0.224	3.9	0.097	3.8	2.31
114	889	1.694	34.689	27.747	184	54.7	0.192	3.3	0.084	3.3	0.185	3.2	0.081	3.1	2.28
116	1188	1.503	34.729	27.793	196	58.2	0.097	1.7	0.045	1.7	0.094	1.6	0.043	1.6	2.19
117	1333	1.359	34.728	27.802	198	58.5	0.083	1.4	0.040	1.5	0.080	1.4	0.039	1.5	2.05
118	1483	1.217	34.725	27.810	200	59.0	0.096	1.6	0.039	1.5	0.093	1.6	0.038	1.4	2.45
120	1778	0.919	34.713	27.820	205	59.8	0.106	1.8	0.046	1.7	0.102	1.7	0.044	1.6	2.32
122	2171	0.522	34.698	27.833	211	61.2	0.129	2.1	0.059	2.1	0.124	2.0	0.057	2.1	2.18
124	2563	0.190	34.680	27.837	217	62.3	0.233	3.7	0.104	3.7	0.225	3.5	0.100	3.6	2.25
126	2954	0.026	34.672	27.840	222	63.3	0.306	4.8	0.144	5.1	0.295	4.6	0.139	4.9	2.12
128	3344	-0.119	34.669	27.845	225	63.9	0.162	2.5	0.082	2.9	0.156	2.4	0.079	2.8	1.97
129	3540	-0.187	34.664	27.845	228	64.8	0.276	4.2	0.122	4.2	0.266	4.1	0.118	4.1	2.25
132	3930	-0.248	34.662	27.846	230	65.3	0.292	4.5	0.124	4.3	0.281	4.3	0.120	4.2	2.34
133	4125	-0.303	34.661	27.848	232	65.7	0.279	4.3	0.127	4.4	0.269	4.1	0.122	4.2	2.20
134	4322	-0.405	34.657	27.850	237	66.7	0.353	5.4	0.158	5.4	0.340	5.2	0.152	5.2	2.24
135	4465	-0.499	34.654	27.851	241	67.8	0.461	7.0	0.200	6.8	0.444	6.7	0.193	6.6	2.30
136	4529	-0.505	34.653	27.851	241	67.7	0.428	6.5	0.202	6.9	0.413	6.2	0.195	6.7	2.12

Station 274 51-35.2S 34-45.5W 2/15/89 Bottom Depth 4761 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg		F12 Pct Sat
102	4	3.835	33.875	26.908	329	102.8	5.391	106.1	2.399	103.7	5.197	102.3	2.313	100.0	2.25
105	99	0.291	34.043	27.318	315	90.2	5.521	87.1	2.398	85.3	5.322	83.9	2.312	82.2	2.30
107	205	1.271	34.348	27.503	225	66.1	2.215	37.3	0.971	36.6	2.135	36.0	0.936	35.3	2.28

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Station 275 52-22.9S 35-25.4W 2/16/89 Bottom Depth 3957 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	8	3.985	33.867	26.887	321	100.8	5.140	102.1	2.255	98.3	4.955	98.4	2.174	94.7	2.28

Station 276 53-10.0S 35-54.0W 2/16/89 Bottom Depth 3455 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	3	2.946	33.835	26.960	333	101.8	5.437	101.3	2.432	100.1	5.241	97.6	2.344	96.5	2.24
105	118	0.081	34.118	27.390	293	83.5	4.442	69.2	1.952	68.6	4.282	66.7	1.882	66.2	2.28
106	148	0.185	34.219	27.466	270	77.2	3.611	56.7	1.563	55.3	3.481	54.6	1.507	53.4	2.31
107	247	0.805	34.435	27.604	225	65.4	2.032	33.3	0.900	33.1	1.959	32.1	0.868	31.9	2.26
108	343	1.217	34.538	27.660	204	60.1	1.235	20.8	0.554	20.9	1.191	20.0	0.534	20.1	2.23
109	446	1.489	34.610	27.698	193	57.1	0.712	12.2	0.329	12.6	0.686	11.8	0.317	12.1	2.16
110	544	1.608	34.663	27.732	188	56.0	0.398	6.9	0.191	7.4	0.384	6.6	0.184	7.1	2.09
111	642	1.404	34.672	27.754	195	57.6	0.481	8.2	0.201	7.7	0.464	7.9	0.194	7.4	2.39
112	737	1.394	34.689	27.769	194	57.3	0.348	5.9	0.151	5.8	0.335	5.7	0.146	5.6	2.29
114	939	1.200	34.701	27.792	198	58.2	0.250	4.2	0.092	3.5	0.241	4.1	0.089	3.4	2.71
116	1134	0.955	34.695	27.804	203	59.4	0.293	4.9	0.129	4.8	0.282	4.7	0.124	4.6	2.27
118	1330	0.733	34.690	27.814	207	60.1	0.329	5.4	0.148	5.4	0.317	5.2	0.143	5.3	2.22
120	1532	0.558	34.687	27.822	210	60.8	0.305	4.9	0.124	4.5	0.294	4.8	0.120	4.4	2.45
122	1828	0.369	34.682	27.829	214	61.7	0.307	4.9	0.136	4.9	0.296	4.7	0.131	4.7	2.26
124	2119	0.215	34.677	27.834	217	62.2	0.307	4.9	0.135	4.8	0.296	4.7	0.130	4.6	2.28
127	2555	0.070	34.672	27.838	221	63.2	0.324	5.1	0.132	4.7	0.312	4.9	0.127	4.5	2.46
128	2660	0.014	34.673	27.842	222	63.4	0.317	4.9	0.152*	5.4*	0.306	4.8	0.147*	5.2*	2.08
129	2758	-0.021	34.670	27.841	223	63.6	0.288	4.5	0.130	4.6	0.278	4.3	0.125	4.4	2.22
131	2953	-0.099	34.668	27.843	225	63.9	0.237	3.7	0.103	3.6	0.228	3.5	0.099	3.5	2.30
132	3099	-0.143	34.667	27.845	226	64.1	0.173	2.7	0.081	2.8	0.167	2.6	0.078	2.7	2.14
134	3345	-0.226	34.664	27.846	228	64.7	0.203	3.1	0.094	3.3	0.196	3.0	0.091	3.2	2.15
135	3392	-0.258	34.661	27.846	230	65.1	0.229	3.5	0.100	3.5	0.221	3.4	0.096	3.3	2.30
136	3447	-0.259	34.662	27.847	229	64.9	0.231	3.5	0.099	3.4	0.223	3.4	0.095	3.3	2.35

* appears too high

Lamont-Doherty Geological Observatory of Columbia University
 South Atlantic Ventilation Experiment (SAVE) Leg 5

Station 278 53-56.8S 36-23.8W 2/17/89 Bottom Depth 214 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED						ADJUSTED					
						F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11/F12 Ratio			
129	13	3.257	33.803	26.906	327	100.7	5.299	100.6	2.368	99.1	5.108	96.9	2.283	95.6	2.24		
131	73	2.097	33.881	27.068	325	97.2	5.321	94.0	2.403	94.5	5.129	90.6	2.316	91.0	2.21		

Station 284 49-36.7S 41-34.4W 2/20/89 Bottom Depth 1989 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED						ADJUSTED					
						F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11/F12 Ratio			
117	7	6.599	33.891	26.599	302	100.9	4.406	102.2	2.062	103.1	4.247	98.5	1.988	99.4	2.14		
119	80	3.177	33.972	27.048	310	95.3	5.077	96.0	2.309	96.4	4.894	92.6	2.226	93.0	2.20		
120	145	1.530	34.030	27.229	305	90.2	4.710	80.4	2.153	82.1	4.540	77.5	2.075	79.2	2.19		

Lamont-Doherty Geological Observatory of Columbia University
 South Atlantic Ventilation Experiment (SAVE) Leg 5

Station 285 49-27.5S 41-32.8W 2/20/89 Bottom Depth 3946 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED			ADJUSTED			F11/F12 Ratio		
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg		F11 Pct Sat	F12 Pct Sat
113	6	6.965	33.912	26.567	303	102.2	4.348	103.0	1.964	100.1	4.191	99.3	1.893	96.5	2.21
114	75	4.432	33.962	26.915	301	95.5	4.745	96.9	2.166	96.8	4.574	93.4	2.088	93.3	2.19
115	177	1.947	34.059	27.222	297	88.6	4.337	76.1	1.965	76.7	4.181	73.3	1.894	74.0	2.21
116	296	1.930	34.166	27.309	262	78.4	3.063	53.7	1.340	52.3	2.953	51.8	1.292	50.5	2.29
117	493	2.223	34.368	27.447	213	64.3	1.196	21.4	0.541	21.5	1.153	20.6	0.522	20.8	2.21
118	693	2.213	34.490	27.546	183	55.3	0.556	10.0	0.251	10.0	0.536	9.6	0.242	9.6	2.21
119	891	2.218	34.593	27.628	175	52.9	0.218	3.9	0.091	3.6	0.210	3.8	0.088	3.5	2.39
120	1039	2.245	34.646	27.668	178	53.8	0.125	2.2	0.055	2.2	0.120	2.2	0.053	2.1	2.26
121	1187	2.082	34.659	27.692	177	53.1	0.112	2.0	0.053	2.1	0.108	1.9	0.051	2.0	2.12
122	1385	1.921	34.684	27.725	178	53.3	0.074	1.3	0.039	1.5	0.071	1.3	0.038	1.5	1.87
123	1581	1.792	34.701	27.749	182	54.4	0.068	1.2	0.021	0.8	0.066	1.2	0.020	0.8	3.30
125	2027	1.381	34.722	27.795	194	57.4	0.069	1.2	0.047	1.8	0.067	1.1	0.045	1.7	1.49
126	2271	0.784	34.704	27.821	205	59.7	0.144	2.4	0.065	2.4	0.139	2.3	0.063	2.3	2.21
127	2515	0.520	34.692	27.828	211	61.0	0.212	3.4	0.096	3.5	0.204	3.3	0.093	3.4	2.19
128	2761	0.469	34.692	27.831	212	61.2	0.208	3.3	0.087	3.1	0.201	3.2	0.084	3.0	2.39
129	3005	0.449	34.691	27.832	212	61.3	0.211	3.4	0.097	3.5	0.203	3.3	0.094	3.4	2.16
130	3247	0.374	34.688	27.834	214	61.7	0.229	3.7	0.107	3.8	0.221	3.5	0.103	3.7	2.15
131	3443	-0.109	34.669	27.845	225	64.0	0.155	2.4	0.073	2.6	0.149	2.3	0.070	2.4	2.13
132	3638	-0.190	34.666	27.846	228	64.7	0.186	2.9	0.098	3.4	0.179	2.8	0.094	3.3	1.90
133	3784	-0.209	34.662	27.845	229	64.8	0.194	3.0	0.082	2.9	0.187	2.9	0.079	2.7	2.37
134	3930	-0.233	34.665	27.848	230	65.1	0.209	3.2	0.093	3.2	0.201	3.1	0.090	3.1	2.23
135	4076	-0.258	34.662	27.847	231	65.4	0.221	3.4	0.109	3.8	0.213	3.3	0.105	3.6	2.03
136	4147	-0.286	34.662	27.848	232	65.6	0.235	3.6	0.107	3.7	0.227	3.5	0.103	3.6	2.20

Lamont-Doherty Geological Observatory of Columbia University
 South Atlantic Ventilation Experiment (SAVE) Leg 5

Station 287 49-07.9S 41-29.6W 2/20/89 Bottom Depth 5296 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED				ADJUSTED				F11/F12 Ratio
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	
101	5	8.848	34.113	26.448	290	102.1	3.892	102.8	1.768	99.2	3.752	99.1	1.704	95.6	2.20
103	64	8.664	34.115	26.478	289	101.4	3.914	102.4	1.793	99.7	3.773	98.7	1.728	96.1	2.18
105	147	4.362	34.137	27.062	294	93.3	4.132	84.2	1.891	84.3	3.983	81.1	1.823	81.3	2.18
107	257	3.435	34.122	27.144	287	89.2	3.839	73.9	1.745	74.0	3.701	71.2	1.682	71.3	2.20
108	343	3.218	34.169	27.202	267	82.4	3.042	57.8	1.376	57.7	2.932	55.7	1.326	55.6	2.21
109	439	2.719	34.181	27.256	258	78.6	2.726	50.2	1.258	51.3	2.628	48.4	1.213	49.5	2.17
110	540	2.634	34.258	27.325	235	71.4	1.820	33.4	0.816	33.2	1.754	32.2	0.787	32.0	2.23
111	641	2.515	34.335	27.397	215	65.2	1.257	22.9	0.588	23.8	1.212	22.1	0.567	22.9	2.14
113	939	2.376	34.536	27.569			0.352	6.4	0.160	6.4	0.339	6.1	0.154	6.2	2.20
114	1087	2.399	34.602	27.620	178	54.1	0.178	3.2	0.091	3.7	0.172	3.1	0.088	3.5	1.95
115	1189	2.419	34.649	27.656	184	56.0	0.105	1.9	0.057	2.3	0.101	1.8	0.055	2.2	1.84
116	1356	2.566	34.731	27.709	193	59.0	0.054	1.0	0.025	1.0	0.052	1.0	0.024	1.0	2.17
118	1676	2.238	34.758	27.759	197	59.5	0.032	0.6	0.016	0.6	0.031	0.6	0.015	0.6	2.07
120	2071	1.946	34.777	27.797	206	62.0	0.022	0.4	0.045*	1.8*	0.021	0.4	0.043*	1.7*	0.49
122	2463	1.358	34.740	27.812	202	59.6	0.037	0.6	0.018	0.7	0.036	0.6	0.017	0.6	2.12
123	2655	1.020	34.710	27.811	201	59.0	0.141	2.3	0.064	2.4	0.136	2.3	0.062	2.3	2.19
125	3056	0.716	34.711	27.831	210	61.0	0.069	1.1	0.028	1.0	0.067	1.1	0.027	1.0	2.48
127	3444	0.359	34.690	27.836	216	62.1	0.130	2.1	0.063	2.3	0.125	2.0	0.061	2.2	2.05
129	3840	0.080	34.677	27.841	221	63.1	0.146	2.3	0.074	2.6	0.141	2.2	0.071	2.5	1.99
130	4037	-0.006	34.676	27.845	223	63.5	0.091	1.4	0.047	1.7	0.088	1.4	0.045	1.6	1.96
131	4219	-0.091	34.673	27.847	224	63.8	0.105	1.6	0.054	1.9	0.101	1.6	0.052	1.8	1.94
132	4412	-0.144	34.669	27.847	226	64.2	0.109	1.7	0.061	2.1	0.105	1.6	0.059	2.1	1.78
133	4592	-0.173	34.667	27.846	226	64.3	0.113	1.7	0.057	2.0	0.109	1.7	0.055	1.9	1.98
134	4875	-0.207	34.666	27.847	227	64.3	0.133	2.0	0.072	2.5	0.128	2.0	0.069	2.4	1.86
135	5090	-0.270	34.663	27.848	230	65.2	0.208	3.2	0.105	3.6	0.201	3.1	0.101	3.5	1.99
136	5289	-0.349	34.660	27.849	233	65.9	0.287	4.4	0.136	4.7	0.277	4.2	0.131	4.5	2.11

* questionable data, not included in profile plot

Lamont-Doherty Geological Observatory of Columbia University
 South Atlantic Ventilation Experiment (SAVE) Leg 5

Station 291 45-48.7S 41-18.2W 2/23/89 Bottom Depth 5398 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg		F12 Pct Sat
201	7	12.534	34.452	26.061	267	102.0	3.199	103.5	1.507	101.2	3.084	99.8	1.453	97.5	2.12
203	74	9.308	34.527	26.698	260	92.7	3.586	97.6	1.697	97.8	3.457	94.1	1.636	94.3	2.11
205	198	6.794	34.394	26.970	265	89.4	3.598	84.8	1.699	86.2	3.468	81.8	1.638	83.1	2.12
207	294	4.932	34.207	27.054	267	86.1	3.312	69.9	1.522	70.0	3.193	67.4	1.467	67.5	2.18
208	393	4.313	34.194	27.112	269	85.2	3.156	64.1	1.436	63.9	3.042	61.8	1.384	61.6	2.20
209	524	3.553	34.181	27.179	265	82.6	2.958	57.4	1.340	57.2	2.852	55.3	1.292	55.2	2.21
210	595	3.247	34.187	27.213	262	80.9	2.747	52.3	1.244	52.3	2.648	50.4	1.199	50.4	2.21
212	794	2.627	34.249	27.319	238	72.4	1.921	35.2	0.862	35.0	1.852	34.0	0.831	33.8	2.23
215	1187	2.525	34.478	27.510	185	56.3	0.396	7.2	0.181	7.3	0.382	7.0	0.174	7.0	2.20

Station 292 44-29.5S 41-16.1W 2/23/89 Bottom Depth 5111 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg		F12 Pct Sat
103	128	5.945	34.251	26.968	271	89.4	3.855	86.4	1.765	85.6	3.716	83.3	1.701	82.5	2.18
171	199	4.618	34.163	27.055	280	89.5	3.769	78.0	1.718	77.7	3.633	75.2	1.656	74.9	2.19
105	247	4.272	34.146	27.079	285	90.3	3.834	77.7	1.751	77.7	3.696	74.9	1.688	74.9	2.19
107	395	3.483	34.129	27.145	283	87.9	3.699	71.4	1.697	72.2	3.566	68.9	1.636	69.6	2.18

Lamont-Doherty Geological Observatory of Columbia University
 South Atlantic Ventilation Experiment (SAVE) Leg 5

Station 294 41-50.7S 41-08.8W 2/24/89 Bottom Depth 5166 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED			ADJUSTED			F11/F12 Ratio			
						F11 Conc pM/kg	F11 Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	F12 Pct Sat	F12 Conc pM/kg				
119	1785	2.459	34.716	27.706	188	57.2	0.061	1.1	0.030	1.2	0.059	1.1	0.029	1.2	2.03
120	1980	2.454	34.771	27.751	200	60.8	0.033	0.6	0.016	0.6	0.032	0.6	0.015	0.6	2.13
122	2348	2.237	34.810	27.800	214	64.8	0.016	0.3	0.009	0.4	0.015	0.3	0.009	0.4	
123	2567	1.859	34.779	27.806	206	61.9	0.027	0.5	0.013	0.5	0.026	0.5	0.013	0.5	2.00
127	3348	0.846	34.717	27.828	208	60.6	0.066	1.1	0.026	1.0	0.064	1.1	0.025	0.9	2.56

Station 295 40-38.2S 41-04.4W 2/25/89 Bottom Depth 5187 Air Conc (ppt): F11 = 241.6 F12 = 438.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED			ADJUSTED			F11/F12 Ratio			
						F11 Conc pM/kg	F11 Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	F12 Pct Sat	F12 Conc pM/kg				
101	3	18.026	34.671	25.015	239	102.0	2.402	102.5	1.214	104.1	2.316	98.8	1.170	100.3	1.98
103	74	11.655	34.641	26.376	252	94.6	3.295	102.0	1.577	101.8	3.176	98.3	1.520	98.1	2.09
171	101	10.335	34.717	26.674	251	91.6	3.319	95.8	1.603	97.3	3.200	92.3	1.545	93.8	2.07
105	148	8.498	34.553	26.847	248	87.0	3.116	81.1	1.446	80.1	3.004	78.2	1.394	77.2	2.15
106	195	7.147	34.402	26.927	253	86.1	3.203	77.1	1.512	78.1	3.088	74.3	1.458	75.4	2.12
107	294	5.351	34.258	27.046	256	83.2	3.045	65.9	1.435	67.5	2.935	63.5	1.383	65.1	2.12
109	496	3.916	34.204	27.161	263	82.5	2.704	53.7	1.272	55.4	2.607	51.7	1.226	53.4	2.13
110	596	3.521	34.212	27.207	257	79.9	2.354	45.6	1.094	46.7	2.269	44.0	1.055	45.0	2.15
111	694	3.170	34.226	27.251	248	76.4	2.042	38.7	0.942	39.4	1.968	37.3	0.908	38.0	2.17
113	999	2.664	34.362	27.406	207	63.1	0.836	15.4	0.389	15.9	0.806	14.8	0.375	15.3	2.15

Lamont-Doherty Geological Observatory of Columbia University
 South Atlantic Ventilation Experiment (SAVE) Leg 5

Station 301 34-00.5S 41-39.3W 2/28/89 Bottom Depth 4623 Air Conc (ppt): F11 = 241.6 F12 = 441.9

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED F11			ADJUSTED F11			OBSERVED F12			ADJUSTED F12			F11/F12 Ratio
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	
101	2	22.615	35.840	24.683	220	102.8	1.945	103.7	0.962	99.6	1.875	99.9	0.927	96.0	1.875	99.9	0.927	96.0	2.02	
106	247	15.113	35.628	26.432	220	89.6	2.305	86.1	1.116	84.4	2.222	83.0	1.076	81.4	2.222	83.0	1.076	81.4	2.07	
109	545	10.052	34.811	26.796	208	75.7	1.677	47.7	0.842	50.0	1.617	46.0	0.812	48.2	1.617	46.0	0.812	48.2	1.99	
111	741	5.892	34.340	27.045	240	79.1	2.139	47.8	0.970	46.6	2.062	46.1	0.935	44.9	2.062	46.1	0.935	44.9	2.21	
113	942	4.112	34.252	27.180	246	77.8	1.648	33.1	0.762	33.3	1.589	31.9	0.735	32.1	1.589	31.9	0.735	32.1	2.16	
115	1238	2.980	34.331	27.353	214	65.6	0.663	12.4	0.312	12.8	0.639	12.0	0.301	12.4	0.639	12.0	0.301	12.4	2.12	
117	1436	2.761	34.458	27.474	191	58.5	0.230	4.3	0.112	4.6	0.222	4.1	0.108	4.4	0.222	4.1	0.108	4.4	2.06	
121	2076	2.934	34.818	27.746	215	66.3	0.009	0.2	0.006	0.2	0.009	0.2	0.006	0.2	0.009	0.2	0.006	0.2		
123	2372	2.952	34.894	27.805	235	72.6	0.005	0.1	0.001	0.0	0.005	0.1	0.001	0.0	0.005	0.1	0.001	0.0		
125	2665	2.693	34.892	27.827	238	73.0	0.005	0.1	0.001	0.0	0.005	0.1	0.001	0.0	0.005	0.1	0.001	0.0		

Station 303 32-48.2S 41-49.8W 3/ 1/89 Bottom Depth 4399 Air Conc (ppt): F11 = 241.6 F12 = 441.9

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED F11			ADJUSTED F11			OBSERVED F12			ADJUSTED F12			F11/F12 Ratio
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	Pct Sat	F11 Conc pM/kg	
101	2	23.004	35.793	24.535	218	102.8	1.921	104.1	0.982	103.2	1.852	100.4	0.947	99.5	1.852	100.4	0.947	99.5	1.96	
106	194	14.498	35.530	26.492	221	88.8	2.267	82.1	1.148	84.4	2.185	79.1	1.107	81.4	2.185	79.1	1.107	81.4	1.97	
110	497	9.187	34.698	26.852	213	76.0	1.781	48.2	0.873	49.7	1.717	46.5	0.842	47.9	1.717	46.5	0.842	47.9	2.04	
114	796	4.361	34.238	27.142	257	81.8	2.321	47.3	1.090	48.2	2.237	45.6	1.051	46.5	2.237	45.6	1.051	46.5	2.13	
118	1190	2.941	34.345	27.368	211	64.7	0.600	11.2	0.284	11.6	0.578	10.8	0.274	11.2	0.578	10.8	0.274	11.2	2.11	
119	1387	2.765	34.500	27.507	191	58.4	0.130	2.4	0.069	2.8	0.125	2.3	0.067	2.7	0.125	2.3	0.067	2.7	1.87	
122	1782	2.886	34.744	27.692	203	62.3	0.015	0.3	0.015	0.6	0.014	0.3	0.014	0.6	0.014	0.3	0.014	0.6	1.00	
123	2086	3.017	34.866	27.777	227	70.0	0.005	0.1	0.001	0.0	0.005	0.1	0.001	0.0	0.005	0.1	0.001	0.0		
126	2472	2.893	34.923	27.833	247	76.1	-0.003	-0.1	0.003	0.1	-0.003	-0.1	0.003	0.1	-0.003	-0.1	0.003	0.1		
135	4279	-0.174	34.669	27.848	223	63.3	0.052	0.8	0.026	0.9	0.050	0.8	0.025	0.9	0.050	0.8	0.025	0.9	2.00	

Lamont-Doherty Geological Observatory of Columbia University
 South Atlantic Ventilation Experiment (SAVE) Leg 5

Station 305 37-35.4S 47-19.7W 3/ 4/89 Bottom Depth 5124 Air Conc (ppt): F11 = 241.6 F12 = 441.9

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	5	22.540	35.223	24.236	218	101.5	1.875	99.0	0.956	98.1	1.807	95.4	0.922	94.6	1.96
103	77	20.329	36.339	25.697	213	96.0	2.008	97.0	1.037	98.5	1.936	93.6	1.000	95.0	1.94
107	347	11.459	35.011	26.700	218	82.0	2.110	64.9	1.031	65.6	2.034	62.5	0.994	63.3	2.05
110	586	5.163	34.156	26.987	275	89.1	3.752	80.2	1.731	79.8	3.617	77.3	1.669	77.0	2.17
112	843	4.096	34.189	27.131	267	84.2	2.856	57.3	1.356	59.1	2.753	55.2	1.307	57.0	2.11
114	1137	3.092	34.268	27.292	232	71.4	1.433	27.1	0.631	26.1	1.381	26.1	0.608	25.1	2.27
115	1337	2.678	34.360	27.403	209	63.6	0.900	16.6	0.400	16.2	0.868	16.0	0.386	15.6	2.25
117	1777	2.685	34.632	27.620	184	56.2	0.094	1.7	0.054	2.2	0.091	1.7	0.052	2.1	1.75
121	2571	2.446	34.830	27.799	218	66.4	0.007	0.1	0.007	0.3	0.007	0.1	0.007	0.3	
135	5041	-0.174	34.668	27.847	223	63.3	0.076	1.2	0.044	1.5	0.073	1.1	0.042	1.5	1.74

Station 306 36-55.2S 48-28.7W 3/ 5/89 Bottom Depth 4971 Air Conc (ppt): F11 = 241.6 F12 = 441.9

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	3	22.774	35.560	24.425	220	103.0	1.992	106.6	1.012	105.1	1.920	102.7	0.976	101.4	1.97
106	256	14.221	35.475	26.508	218	87.1	2.307	82.3	1.130	82.0	2.224	79.3	1.089	79.1	2.04
111	894	4.026	34.227	27.169	256	80.7	2.348	46.9	1.024	44.5	2.263	45.2	0.987	42.9	2.29
112	996	3.587	34.232	27.217	249	77.5	1.964	38.2	0.887	37.6	1.893	36.8	0.855	36.3	2.21
114	1189	2.944	34.286	27.320	227	69.8	1.294	24.2	0.583	23.9	1.247	23.3	0.562	23.0	2.22
115	1349	2.707	34.367	27.406	207	63.0	0.805	14.9	0.346	14.0	0.776	14.3	0.334	13.5	2.32
117	1631	2.715	34.559	27.559	184	56.3	0.140	2.6	0.058	2.4	0.135	2.5	0.056	2.3	2.41
119	1932	2.816	34.726	27.683			0.034	0.6	0.019	0.8	0.033	0.6	0.018	0.7	1.83
123	2672	2.542	34.868	27.821	231	70.4	0.003	0.1	0.001	0.0	0.003	0.1	0.001	0.0	
135	4910	-0.181	34.668	27.848	223	63.3	0.066	1.0	0.034	1.2	0.064	1.0	0.033	1.1	1.94

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 South Atlantic Ventilation Experiment (SAVE) Leg 5

Station 307 36-18.9S 49-30.1W 3/ 6/89 Bottom Depth 4639 Air Conc (ppt): F11 = 241.6 F12 = 441.9

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg		F12 Pct Sat
101	2	22.773	35.038	24.029	222	103.5	1.858	98.9	0.938	96.9	1.791	95.3	0.904	93.4	1.98
103	56	16.411	35.268	25.860	258	107.4	2.551	101.3	1.243	99.2	2.459	97.6	1.198	95.6	2.05
110	496	5.316	34.251	27.045	257	83.5	2.684	58.0	1.267	59.0	2.587	55.9	1.221	56.8	2.12
112	695	4.289	34.237	27.149	255	81.0	2.192	44.5	0.986	43.5	2.113	42.9	0.951	41.9	2.22
116	1193	2.749	34.359	27.396	209	63.8	0.767	14.2	0.367	14.9	0.739	13.7	0.354	14.4	2.09
117	1338	2.724	34.462	27.480	192	58.7	0.319	5.9	0.151	6.1	0.308	5.7	0.146	5.9	2.11
118	1485	2.793	34.549	27.544	187	57.2	0.146	2.7	0.075	3.1	0.141	2.6	0.072	2.9	1.96
119	1633	2.727	34.614	27.602	186	56.8	0.098	1.8	0.052	2.1	0.094	1.7	0.050	2.0	1.88
123	2275	2.797	34.845	27.780	220	67.7	0.011	0.2	0.007	0.3	0.011	0.2	0.007	0.3	
132	4033	0.052	34.680	27.845	220	62.8	0.041	0.6	0.032	1.1	0.040	0.6	0.031	1.1	1.29
135	4562	-0.185	34.668	27.848	223	63.3	0.066	1.0	0.041	1.4	0.064	1.0	0.040	1.4	1.60

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 HYDROS 4 South Atlantic Ventilation Experiment (SAVE) Leg 6

Station 309 34-43.1S 52-00.9W 3/14/89 Bottom Depth 261 Air Conc (ppt): F11 = 241.2 F12 = 440.7

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
126	23	24.925	36.192	24.267	220	107.1	1.711	101.3	0.912	103.8	1.649	97.6	0.879	100.0	1.88
128	64	25.139	36.795	24.658	221	108.6	1.706	102.6	0.974	112.4	1.645	98.9	0.939	108.4	1.75
130	105	21.016	36.464	25.606	236	107.8	1.995	99.8	1.028	100.8	1.923	96.2	0.991	97.2	1.94

Station 314 31-59.9S 24-59.8W 3/21/89 Bottom Depth 4296 Air Conc (ppt): F11 = 242.4 F12 = 443.7

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	2	22.126	35.650	24.678	220	101.9	2.026	105.1	1.037	104.7	1.953	101.3	1.000	101.0	1.95
171	98	15.530	35.509	26.247	231	94.6	2.417	91.8	1.189	91.1	2.330	88.5	1.146	87.8	2.03
115	889	3.868	34.278	27.225	228	71.5	0.868	17.1	0.441	18.9	0.837	16.5	0.425	18.2	1.97
116	991	3.370	34.290	27.284	222	68.9	0.680	13.0	0.347	14.5	0.656	12.6	0.335	14.0	1.96

Station 315 31-23.4S 25-00.0W 3/21/89 Bottom Depth 4581 Air Conc (ppt): F11 = 242.4 F12 = 443.7

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
171	60	19.723	36.073	25.655	237	105.4	2.169	101.3	1.086	100.0	2.091	97.7	1.047	96.4	2.00
106	147	15.652	35.510	26.220	214	87.7	2.188	83.6	1.100	84.8	2.109	80.6	1.060	81.7	1.99
108	248	14.115	35.411	26.481	220	87.5	2.262	79.9	1.129	81.2	2.181	77.1	1.088	78.2	2.00
109	298	13.475	35.323	26.547	224	87.7	2.287	78.1	1.130	78.9	2.205	75.3	1.089	76.0	2.02
111	410	11.647	35.037	26.685	214	80.5	1.963	60.8	0.957	61.2	1.892	58.6	0.923	59.0	2.05
112	542	8.688	34.656	26.899	212	74.7	1.674	43.9	0.802	44.3	1.614	42.4	0.773	42.7	2.09
113	633	6.753	34.453	27.022	218	73.4	1.465	34.4	0.709	35.5	1.412	33.1	0.683	34.2	2.07
114	739	5.128	34.322	27.123	229	74.2	1.277	27.2	0.601	27.6	1.231	26.2	0.579	26.6	2.13
115	840	4.237	34.265	27.177	238	75.3	1.315	26.5	0.620	27.1	1.268	25.6	0.598	26.2	2.12
116	942	3.718	34.270	27.234	229	71.7	0.863	16.9	0.425	18.1	0.832	16.3	0.410	17.5	2.03
117	1038	3.284	34.298	27.298	220	68.1	0.629	12.0	0.312	13.0	0.606	11.5	0.301	12.5	2.01
118	1139	3.013	34.361	27.374	205	63.1	0.337	6.3	0.173	7.1	0.325	6.1	0.167	6.9	1.95
132	3747	1.412	34.812	27.866	236	70.1	0.003	0.1	0.005	0.2	0.003	0.1	0.005	0.2	
135	4328	0.794	34.746	27.855	224	65.2	0.011	0.2	0.008	0.3	0.011	0.2	0.008	0.3	
136	4577	0.713	34.737	27.853	223	64.7	0.015	0.2	0.010	0.4	0.014	0.2	0.010	0.4	

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 HYDROS 4 South Atlantic Ventilation Experiment (SAVE) Leg 6

Station 321 27-54.3S 25-02.6W 3/23/89 Bottom Depth 5322 Air Conc (ppt): F11 = 242.8 F12 = 444.5

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED						ADJUSTED					
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11/F12 Ratio				
101	2	24.965	36.307	24.342	209	102.1	1.739	102.6	0.908	102.7	1.676	98.9	0.875	99.0	1.92				
171	108	18.758	35.983	25.836	230	100.6	2.170	96.7	1.107	97.7	2.092	93.2	1.067	94.1	1.96				
106	210	15.922	35.556	26.194	218	90.0	2.215	85.7	1.120	87.2	2.135	82.6	1.080	84.1	1.98				
108	413	12.466	35.128	26.599	208	80.0	1.816	58.7	0.919	61.0	1.751	56.6	0.886	58.8	1.98				
110	615	8.068	34.591	26.943	208	72.1	1.387	35.1	0.690	36.9	1.337	33.8	0.665	35.5	2.01				
111	716	6.106	34.420	27.081	212	70.3	1.087	24.5	0.544	26.3	1.048	23.6	0.524	25.3	2.00				
112	818	4.798	34.326	27.164	220	70.5	0.911	19.0	0.463	20.9	0.878	18.3	0.446	20.1	1.97				
113	919	3.959	34.314	27.245	216	67.9	0.637	12.6	0.320	13.8	0.614	12.2	0.308	13.3	1.99				
114	1021	3.505	34.335	27.307	209	65.2	0.426	8.2	0.221	9.3	0.411	7.9	0.213	9.0	1.93				
115	1123	3.123	34.391	27.388	200	61.6	0.235	4.4	0.129	5.3	0.227	4.3	0.124	5.1	1.83				
135	5176	0.704	34.747	27.861	229	66.5	0.004	0.1	0.004	0.1	0.004	0.1	0.004	0.1					
136	5323	0.661	34.744	27.861	229	66.5	0.003	0.0	0.005	0.2	0.003	0.0	0.005	0.2					

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 HYDROS 4 South Atlantic Ventilation Experiment (SAVE) Leg 6

Station 323 26-43.0S 25-00.1W 3/24/89 Bottom Depth 4861 Air Conc (ppt): F11 = 243.0 F12 = 444.9

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED			ADJUSTED			F11/F12 Ratio		
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg		F11 Pct Sat	F12 Pct Sat
102	4	25.463	36.436	24.286	209	102.9	1.660	100.1	0.880	101.5	1.600	96.5	0.848	97.8	1.89
171	61	21.187	36.301	25.435	234	107.1	2.051	102.5	1.070	104.5	1.977	98.8	1.031	100.7	1.92
105	97	19.951	36.230	25.715	225	100.8	2.062	97.3	1.077	100.0	1.988	93.8	1.038	96.3	1.92
107	193	16.440	35.626	26.128	212	88.6	2.136	84.8	1.116	88.9	2.059	81.7	1.076	85.7	1.91
109	294	13.785	35.281	26.450	210	82.8	2.025	70.1	1.033	72.9	1.952	67.6	0.996	70.3	1.96
110	396	11.982	35.063	26.642	205	77.6	1.720	54.1	0.868	56.3	1.658	52.1	0.837	54.2	1.98
111	497	9.959	34.815	26.815	200	72.5	1.387	39.0	0.708	41.6	1.337	37.6	0.683	40.1	1.96
112	599	7.456	34.547	26.998	203	69.5	1.113	27.2	0.556	28.8	1.073	26.2	0.536	27.7	2.00
113	695	5.727	34.401	27.114	212	69.5	0.934	20.6	0.474	22.4	0.900	19.8	0.457	21.6	1.97
114	796	4.752	34.342	27.182	213	68.3	0.691	14.4	0.359	16.1	0.666	13.8	0.346	15.5	1.92
115	892	3.933	34.333	27.263	209	65.7	0.479	9.5	0.249	10.7	0.462	9.1	0.240	10.3	1.93
116	989	3.569	34.376	27.333	198	61.7	0.253	4.9	0.150	6.3	0.244	4.7	0.145	6.1	1.68
117	1182	3.139	34.504	27.476	186	57.3	0.055	1.0	0.031	1.3	0.053	1.0	0.030	1.2	1.77
118	1380	2.949	34.630	27.594	190	58.4	0.011	0.2	0.008	0.3	0.011	0.2	0.008	0.3	
119	1578	2.859	34.722	27.676	202	62.0	0.004	0.1	0.002	0.1	0.004	0.1	0.002	0.1	
121	1974	2.718	34.849	27.790	230	70.5	-0.001	0.0	-0.002	-0.1	-0.001	0.0	-0.002	-0.1	
135	4672	0.679	34.746	27.862	229	66.7	0.002	0.0	-0.001	0.0	0.002	0.0	-0.001	0.0	
136	4863	0.603	34.739	27.861	229	66.4	0.001	0.0	-0.001	0.0	0.001	0.0	-0.001	0.0	

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 HYDROS 4 South Atlantic Ventilation Experiment (SAVE) Leg 6

Station 327 24-23.9S 25-00.0W 3/25/89 Bottom Depth 5711 Air Conc (ppt): F11 = 243.1 F12 = 445.3

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen Conc uM/kg	OBSERVED						ADJUSTED					
						F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11/F12 Ratio			
102	4	27.247	36.966	24.122	203	103.4	1.595	104.1	0.844	104.4	1.538	100.3	0.814	100.6	1.89		
103	32	27.150	36.960	24.149	204	103.5	1.595	103.6	0.915	112.7	1.538	99.9	0.882	108.7	1.74		
171	63	23.003	36.649	25.186	233	110.1	1.904	103.4	1.036	108.9	1.835	99.7	0.999	105.0	1.84		
107	201	16.402	35.623	26.135	212	88.1	2.093	82.8	1.148	91.2	2.018	79.9	1.107	87.9	1.82		
110	399	11.530	34.992	26.672	202	75.9	1.548	47.5	0.828	52.5	1.492	45.7	0.798	50.6	1.87		
111	495	9.345	34.752	26.868	191	68.2	1.117	30.3	0.602	34.3	1.077	29.3	0.580	33.0	1.86		
112	596	7.404	34.559	27.015	189	64.5	0.792	19.3	0.435	22.4	0.763	18.5	0.419	21.6	1.82		
113	798	4.648	34.377	27.221	197	63.1	0.333	6.9	0.211	9.4	0.321	6.6	0.203	9.1	1.58		
114	989	3.527	34.439	27.388	188	58.5	0.066	1.3	0.056	2.4	0.064	1.2	0.054	2.3	1.19		
115	1188	3.162	34.587	27.540	188	58.0	0.007	0.1	0.009	0.4	0.007	0.1	0.009	0.4			
116	1387	3.051	34.695	27.637	198	61.0	-0.001	0.0	0.008	0.3	-0.001	0.0	0.008	0.3			
117	1575	2.968	34.782	27.714	212	65.4	0.003	0.1	0.001	0.0	0.003	0.1	0.001	0.0			
118	1784	2.981	34.867	27.781	231	71.3	0.005	0.1	0.006	0.2	0.005	0.1	0.006	0.2			
119	1982	3.008	34.919	27.820	247	76.2	0.002	0.0	0.007	0.3	0.002	0.0	0.007	0.3			
123	2871	2.505	34.917	27.863	253	77.0	0.000	0.0	0.005	0.2	0.000	0.0	0.005	0.2			
128	3932	1.388	34.816	27.871	241	71.3	-0.002	0.0	0.003	0.1	-0.002	0.0	0.003	0.1			
132	4707	0.615	34.741	27.862	230	66.6	0.002	0.0	-0.001	0.0	0.002	0.0	-0.001	0.0			
135	5534	0.262	34.705	27.854	225	64.5	0.007	0.1	0.004	0.1	0.007	0.1	0.004	0.1			
136	5713	0.244	34.704	27.854	224	64.3	0.008	0.1	0.004	0.1	0.008	0.1	0.004	0.1			

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 HYDROS 4 South Atlantic Ventilation Experiment (SAVE) Leg 6

Station 331 22-03.0S 25-00.9W 3/26/89 Bottom Depth 5186 Air Conc (ppt): F11 = 243.3 F12 = 445.8

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED						ADJUSTED					
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11/F12 Ratio			
102	10	27.711	37.132	24.096	208	107.0	1.563	104.0	0.839	105.6	1.507	100.3	0.809	101.8	1.86			
105	109	21.810	36.677	25.548	219	101.6	1.888	97.2	0.990	99.2	1.820	93.7	0.954	95.6	1.91			
108	311	13.599	35.232	26.451	205	80.5	1.914	65.5	0.994	69.4	1.845	63.1	0.958	66.9	1.93			
110	513	8.247	34.640	26.954	184	64.2	0.842	21.5	0.439	23.6	0.812	20.7	0.423	22.8	1.92			
111	613	6.072	34.454	27.112	193	64.0	0.553	12.4	0.299	14.4	0.533	12.0	0.288	13.8	1.85			
112	713	4.877	34.383	27.200	195	62.9	0.349	7.3	0.197	8.9	0.336	7.0	0.190	8.6	1.77			
136	815	4.120	34.410	27.304	182	57.6	0.066	1.3	0.056	2.4	0.064	1.3	0.054	2.3	1.19			
113	916	3.700	34.461	27.388	185	57.9	0.100	1.9	0.070	3.0	0.096	1.9	0.067	2.8	1.43			
115	1219	3.452	34.655	27.567	192	59.9	0.070	1.3	0.038	1.6	0.067	1.3	0.037	1.6	1.81			
116	1422	3.312	34.782	27.682	208	64.5	0.000	0.0	0.008	0.3	0.000	0.0	0.008	0.3				
134	5078	0.336	34.713	27.856	226	65.0	0.001	0.0	0.006	0.2	0.001	0.0	0.006	0.2				
135	5183	0.314	34.711	27.856	225	64.6	0.006	0.1	0.007	0.2	0.006	0.1	0.007	0.2				

Station 336 19-09.7S 25-00.5W 3/28/89 Bottom Depth 5050 Air Conc (ppt): F11 = 243.7 F12 = 446.6

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED						ADJUSTED					
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11/F12 Ratio			
103	68	24.128	36.947	25.080	228	110.1	1.791	102.2	0.944	103.6	1.727	98.6	0.910	99.9	1.90			
112	616	5.935	34.484	27.153	163	53.8	0.145	3.2	0.101	4.8	0.140	3.1	0.097	4.6	1.44			
132	4271	0.978	34.779	27.870	235	68.7	0.000	0.0	0.001	0.0	0.000	0.0	0.001	0.0				
135	4880	0.393	34.720	27.858	226	65.1	0.006	0.1	0.006	0.2	0.006	0.1	0.006	0.2				

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Station 337 18-32.6S 25-00.6W 3/28/89 Bottom Depth 5405 Air Conc (ppt): F11 = 243.7 F12 = 446.6

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	2	27.900	37.131	24.033	200	102.8	1.546	103.5	0.832	105.2	1.490	99.8	0.802	101.4	1.86
171	109	22.779	36.827	25.386	217	102.4	1.826	98.2	0.959	99.8	1.760	94.6	0.924	96.2	1.90
106	212	17.028	35.769	26.099	201	84.9	1.980	80.7	1.021	83.2	1.909	77.8	0.984	80.2	1.94
107	313	13.446	35.221	26.474	178	69.5	1.649	55.9	0.840	58.1	1.590	53.9	0.810	56.0	1.96
108	414	10.181	34.860	26.812	159	58.0	0.896	25.5	0.475	28.1	0.864	24.5	0.458	27.1	1.89
110	615	5.675	34.473	27.177	162	53.3	0.118	2.6	0.096	4.5	0.114	2.5	0.093	4.4	1.23
112	820	3.977	34.423	27.330	181	57.1	0.038	0.8	0.030	1.3	0.037	0.7	0.029	1.2	1.28
113	920	3.706	34.467	27.392	181	56.7	0.018	0.4	0.019	0.8	0.017	0.3	0.018	0.8	0.94
115	1224	3.678	34.690	27.573	189	59.3	0.000	0.0	0.005	0.2	0.000	0.0	0.005	0.2	
135	5287	0.225	34.704	27.855	224	64.2	0.009	0.1	0.009	0.3	0.009	0.1	0.009	0.3	
136	5421	0.139	34.695	27.853	225	64.3	0.014	0.2	0.010	0.3	0.013	0.2	0.010	0.3	

Station 340 16-46.7S 25-00.3W 3/29/89 Bottom Depth 5750 Air Conc (ppt): F11 = 243.8 F12 = 447.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
201	1	27.865	37.202	24.098	196	101.0	1.564	104.6	0.800	101.0	1.508	100.9	0.771	97.3	1.96
203	69	24.329	36.840	24.938	225	109.0	1.880	108.1	0.935	103.2	1.812	104.2	0.901	99.5	2.01
271	131	22.260	36.691	25.431	213	99.3	1.911	100.2	0.961	97.8	1.842	96.6	0.926	94.2	1.99
205	212	17.463	35.782	26.004	192	81.7	1.974	82.1	0.971	80.5	1.903	79.2	0.936	77.6	2.03
206	313	11.785	35.033	26.656	157	59.2	1.237	38.4	0.606	38.7	1.192	37.0	0.584	37.3	2.04
207	415	9.371	34.787	26.892	136	48.6	0.530	14.4	0.273	15.5	0.511	13.9	0.263	14.9	1.94
208	516	7.423	34.611	27.053	138	47.4	0.242	5.9	0.134	6.9	0.233	5.7	0.129	6.6	1.81
209	617	5.651	34.484	27.189	149	48.8	0.067	1.5	0.040	1.9	0.065	1.4	0.039	1.8	1.67
210	718	4.611	34.415	27.255	175	56.1	0.068	1.4	0.050	2.2	0.066	1.4	0.048	2.1	1.38
211	820	3.974	34.426	27.332	180	56.7	0.038	0.8	0.030	1.3	0.037	0.7	0.029	1.2	1.28

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Station 342 15-39.6S 25-00.4W 3/30/89 Bottom Depth 5409 Air Conc (ppt): F11 = 244.0 F12 = 447.4

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg		F12 Pct Sat
101	2	27.723	37.219	24.158	202	103.9	1.592	105.8	0.832	104.4	1.535	102.0	0.802	100.7	1.91
103	68	24.765	36.877	24.834	225	109.7	1.876	109.8	0.950	106.6	1.808	105.8	0.916	102.8	1.97
171	109	23.273	36.797	25.219	221	105.3	1.914	105.0	0.988	104.6	1.845	101.2	0.952	100.8	1.94
106	211	17.092	35.761	26.078	188	79.5	2.022*	82.6*	0.968	78.9	1.949*	79.6*	0.933	76.1	2.09
108	313	11.799	35.064	26.678	137	51.7	0.979	30.4	0.505	32.3	0.944	29.3	0.487	31.1	1.94
109	414	8.963	34.754	26.932	135	47.7	0.391	10.4	0.204	11.3	0.377	10.0	0.197	11.0	1.91
110	516	6.312	34.521	27.134	159	52.9	0.134	3.0	0.084	4.1	0.129	2.9	0.081	3.9	1.59
111	617	5.203	34.436	27.205	177	57.4	0.119	2.5	0.058	2.7	0.115	2.4	0.056	2.6	2.05
112	718	4.474	34.406	27.263	181	57.7	0.077	1.6	0.053	2.3	0.074	1.5	0.051	2.2	1.45
113	819	3.949	34.420	27.330	182	57.4	0.050	1.0	0.020	0.9	0.048	0.9	0.019	0.8	2.53
114	920	3.720	34.473	27.396	180	56.5	0.026	0.5	0.011	0.5	0.025	0.5	0.011	0.5	2.27
116	1326	3.896	34.821	27.655	202	63.8	0.001	0.0	0.005	0.2	0.001	0.0	0.005	0.2	
117	1529	3.683	34.894	27.735	223	70.1	0.011	0.2	-0.003	-0.1	0.011	0.2	-0.003	-0.1	
118	1732	3.342	34.913	27.783	237	73.6	0.001	0.0	-0.003	-0.1	0.001	0.0	-0.003	-0.1	
119	1935	3.008	34.914	27.816	242	74.9	-0.002	0.0	0.000	0.0	-0.002	0.0	0.000	0.0	
136	5352	0.186	34.699	27.853	223	64.1	0.012	0.2	0.009	0.3	0.012	0.2	0.009	0.3	

* appears too high

Station 346 13-18.9S 25-00.9W 3/31/89 Bottom Depth 5523 Air Conc (ppt): F11 = 244.2 F12 = 447.9

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg		F12 Pct Sat
101	1	27.935	36.937	23.876	206	106.2	1.556	103.9	0.808	101.8	1.500	100.2	0.779	98.2	1.93
103	70	25.366	37.004	24.746	229	113.0	1.817	109.2	0.901	103.4	1.752	105.3	0.869	99.7	2.02
171	110	23.433	36.870	25.228	226	107.7	1.853	102.3	0.951	101.3	1.786	98.6	0.917	97.7	1.95
107	213	15.058	35.506	26.350	152	61.6	1.538	56.6	0.769	57.2	1.483	54.6	0.741	55.1	2.00

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Station 348 12-08.5S 25-00.7W 4/ 1/89 Bottom Depth 5549 Air Conc (ppt): F11 = 244.4 F12 = 448.3

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	1	27.651	37.044	24.049	207	106.0	1.564	103.3	0.812	101.3	1.508	99.6	0.783	97.7	1.93
103	69	23.903	36.876	25.093	223	107.4	1.819	102.5	0.905	98.1	1.754	98.8	0.872	94.5	2.01
171	110	21.579	36.534	25.504	200	92.4	1.837	93.1	0.924	91.1	1.771	89.7	0.891	87.9	1.99

Station 354 8-38.6S 24-59.2W 4/ 3/89 Bottom Depth 5734 Air Conc (ppt): F11 = 244.7 F12 = 449.1

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat	F11 Conc pM/kg	F12 Conc pM/kg	Pct Sat			
101	1	28.346	36.543	23.444	201	104.0	1.512	102.0	0.816	103.7	1.458	98.4	0.787	100.0	1.85
103	110	23.177	36.709	25.180	203	96.4	1.729	94.1	0.918	96.4	1.667	90.7	0.885	92.9	1.88
105	171	15.154	35.560	26.371	135	55.0	1.322	48.8	0.699	52.1	1.274	47.1	0.674	50.2	1.89
107	242	10.996	35.054	26.819	90	33.5	0.393	11.6	0.228	14.0	0.379	11.2	0.220	13.5	1.72
108	313	8.802	34.796	26.990	94	33.2	0.139	3.6	0.098	5.4	0.134	3.5	0.094	5.2	1.43
109	415	7.442	34.659	27.088	96	32.9	0.055	1.3	0.040	2.1	0.053	1.3	0.039	2.0	1.36

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Station 357 6-55.2S 24-59.2W 4/ 4/89 Bottom Depth 5830 Air Conc (ppt): F11 = 244.9 F12 = 449.5

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED				ADJUSTED				F11/F12 Ratio
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	
101	9	28.410	36.221	23.180	206	106.1	1.513	102.0	0.792	100.4	1.459	98.3	0.763	96.7	1.91
102	37	28.105	36.357	23.383	213	109.3	1.551	103.4	0.829	104.1	1.495	99.6	0.799	100.3	1.87
171	110	19.703	36.022	25.621	132	58.9	1.332	61.5	0.705	64.0	1.284	59.3	0.680	61.7	1.89
106	161	11.985	35.169	26.724	96	36.4	0.563	17.6	0.301	19.3	0.543	17.0	0.290	18.6	1.87
107	262	9.750	34.897	26.914	86	31.1	0.225	6.2	0.142	8.2	0.217	6.0	0.137	7.9	1.58
108	313	9.256	34.839	26.951	84	30.0	0.161	4.3	0.100	5.6	0.155	4.2	0.096	5.4	1.61
109	414	8.065	34.723	27.047	80	27.7	0.078	2.0	0.052	2.8	0.075	1.9	0.050	2.6	1.50
110	565	6.120	34.554	27.185	106	35.2	0.017	0.4	0.013	0.6	0.016	0.4	0.013	0.6	1.23
111	667	5.311	34.502	27.244	125	40.8	0.009	0.2	0.012	0.6	0.009	0.2	0.012	0.6	
112	819	4.491	34.486	27.325	145	46.4	0.002	0.0	0.007	0.3	0.002	0.0	0.007	0.3	
113	971	4.074	34.544	27.416	160	50.7	0.000	0.0	0.008	0.3	0.000	0.0	0.008	0.3	
114	1124	4.057	34.693	27.536	175	55.4	0.000	0.0	0.001	0.0	0.000	0.0	0.001	0.0	
115	1327	4.070	34.857	27.665	201	63.6	-0.001	0.0	-0.005	-0.2	-0.001	0.0	-0.005	-0.2	
116	1530	3.949	34.933	27.738	225	71.2	0.002	0.0	0.006	0.3	0.002	0.0	0.006	0.3	
117	1734	3.609	34.954	27.790	242	75.7	0.003	0.1	0.011	0.5	0.003	0.1	0.011	0.5	
119	2140	2.980	34.928	27.830	244	75.2	0.002	0.0	0.002	0.1	0.002	0.0	0.002	0.1	
120	2394	2.742	34.918	27.843	243	74.6	-0.001	0.0	0.005	0.2	-0.001	0.0	0.005	0.2	
135	5641	0.196	34.700	27.853	223	64.0	0.006	0.1	0.009	0.3	0.006	0.1	0.009	0.3	
136	5838	0.193	34.700	27.854	223	63.8	0.003	0.0	0.012	0.4	0.003	0.0	0.012	0.4	

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Station 361 4-32.1S 25-00.5W 4/ 5/89 Bottom Depth 5462 Air Conc (ppt): F11 = 245.1 F12 = 449.9

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED			ADJUSTED			F11/F12 Ratio		
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat		F12 Conc pM/kg	F12 Pct Sat
101	0	28.832	36.047	22.909	202	104.9	1.516	103.6	0.800	102.7	1.461	99.9	0.771	99.0	1.89
102	47	27.380	36.139	23.456	212	107.4	1.593	102.8	0.840	102.5	1.536	99.1	0.810	98.8	1.90
171	99	20.157	36.180	25.622	148	66.4	1.424	67.2	0.734	67.9	1.373	64.8	0.708	65.5	1.94
106	159	13.259	35.334	26.600	111	43.5	0.825	27.6	0.439	29.9	0.795	26.6	0.423	28.8	1.88
107	240	10.122	34.928	26.875	116	42.3	0.433	12.2	0.228	13.4	0.417	11.8	0.220	12.9	1.90
109	377	8.264	34.729	27.021	105	36.8	0.176	4.5	0.105	5.6	0.170	4.3	0.101	5.4	1.68
110	425	7.570	34.675	27.082	87	30.0	0.050	1.2	0.042	2.2	0.048	1.2	0.040	2.1	1.20
111	513	6.395	34.570	27.162	117	39.2	0.057	1.3	0.048	2.3	0.055	1.3	0.046	2.2	1.20
112	615	5.514	34.505	27.222	132	43.1	0.033	0.7	0.024	1.1	0.032	0.7	0.023	1.1	1.39
113	716	4.712	34.469	27.287	151	48.4	0.021	0.4	0.019	0.8	0.020	0.4	0.018	0.8	1.11
114	817	4.376	34.485	27.337	157	50.1	0.013	0.3	0.009	0.4	0.013	0.3	0.009	0.4	
115	1020	4.160	34.630	27.475	164	52.0	0.000	0.0	-0.001	0.0	0.000	0.0	-0.001	0.0	
116	1223	4.251	34.795	27.597	183	58.1	-0.001	0.0	0.000	0.0	-0.001	0.0	0.000	0.0	
117	1427	4.231	34.922	27.700	215	68.3	0.016	0.3	0.012	0.5	0.015	0.3	0.012	0.5	1.25
118	1630	3.913	34.973	27.774	242	76.3	0.023	0.5	0.017	0.7	0.022	0.4	0.016	0.7	1.38
119	1833	3.566	34.970	27.807	250	78.4	0.011	0.2	0.012	0.5	0.011	0.2	0.012	0.5	0.92
120	2035	3.368	34.966	27.823	253	79.0	0.012	0.2	0.006	0.2	0.012	0.2	0.006	0.2	
121	2238	3.121	34.953	27.836	253	78.5	0.003	0.1	0.007	0.3	0.003	0.1	0.007	0.3	

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 HYDROS 4 South Atlantic Ventilation Experiment (SAVE) Leg 6

Station 363 3-29.2S 25-00.3W 4/ 6/89 Bottom Depth 5550 Air Conc (ppt): F11 = 245.3 F12 = 450.4

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED						ADJUSTED						F11/F12 Ratio
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat					
102	4	28.736	35.995	22.902	202	104.7	1.521	103.5	0.804	102.7	1.466	99.7	0.775	99.0	1.89				
171	52	27.347	36.224	23.530	211	106.8	1.612	103.9	0.868	105.7	1.554	100.2	0.837	102.0	1.86				
106	103	13.996	35.423	26.516	100	39.8	0.854	29.6	0.454	32.0	0.823	28.6	0.438	30.9	1.88				
108	220	12.504	35.212	26.656	90	34.4	0.574	18.4	0.308	20.2	0.553	17.7	0.297	19.5	1.86				
109	336	10.241	34.946	26.869	85	31.1	0.285	8.1	0.167	9.8	0.275	7.8	0.161	9.5	1.71				
111	563	6.254	34.554	27.168	126	41.8	0.073	1.6	0.051	2.5	0.070	1.6	0.049	2.4	1.43				
112	715	4.826	34.475	27.279	146	47.1	0.014	0.3	0.013	0.6	0.013	0.3	0.013	0.6	1.00				
113	867	4.349	34.520	27.368	156	49.5	0.006	0.1	0.005	0.2	0.006	0.1	0.005	0.2					
114	1020	4.224	34.619	27.459	162	51.4	-0.002	0.0	0.000	0.0	-0.002	0.0	0.000	0.0					
115	1171	4.237	34.753	27.565	176	56.1	-0.003	-0.1	-0.005	-0.2	-0.003	-0.1	-0.005	-0.2					
116	1323	4.271	34.883	27.664	203	64.7	0.005	0.1	0.003	0.1	0.005	0.1	0.003	0.1					
117	1525	4.040	34.967	27.756	236	74.9	0.028	0.6	0.023	1.0	0.027	0.5	0.022	0.9	1.23				
118	1728	3.639	34.978	27.806	254	79.6	0.027	0.5	0.018	0.8	0.026	0.5	0.017	0.7	1.53				
119	1930	3.434	34.968	27.818	253	79.1	0.010	0.2	0.013	0.5	0.010	0.2	0.013	0.5					
120	2130	3.195	34.957	27.832	254	78.8	0.009	0.2	0.006	0.2	0.009	0.2	0.006	0.2					
121	2330	2.926	34.939	27.844	252	77.6	-0.002	0.0	0.004	0.2	-0.002	0.0	0.004	0.2					

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 HYDROS 4 South Atlantic Ventilation Experiment (SAVE) Leg 6

Station 368 1-00.5S 24-59.9W 4/ 7/89 Bottom Depth 3223 Air Conc (ppt): F11 = 245.4 F12 = 450.8

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED						ADJUSTED					
					Conc uM/kg	Pct Sat	Pct Sat	F11			F12			F11			F12		
								Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat
102	3	28.207	35.791	22.924	201	103.3	1.588	105.4	0.815	101.9	1.531	101.7	0.786	98.3	1.95				
107	99	15.939	35.620	26.240	132	54.6	1.163	44.6	0.612	47.1	1.121	43.0	0.590	45.4	1.90				
110	208	13.109	35.290	26.596	111	43.4	0.781	25.9	0.413	27.9	0.753	24.9	0.398	26.9	1.89				
112	335	9.163	34.839	26.966	105	37.4	0.279	7.4	0.159	8.9	0.269	7.2	0.153	8.5	1.76				
114	416	7.915	34.707	27.057	115	39.8	0.159	3.9	0.092	4.8	0.153	3.8	0.089	4.7	1.72				
115	492	7.015	34.624	27.121	126	42.6	0.122	2.9	0.078	3.9	0.118	2.8	0.075	3.7	1.57				
117	664	5.238	34.497	27.249	150	48.6	0.049	1.0	0.040	1.8	0.047	1.0	0.039	1.8	1.21				
118	765	4.646	34.488	27.310	158	50.7	0.035	0.7	0.024	1.1	0.034	0.7	0.023	1.0	1.48				
119	867	4.526	34.531	27.357	155	49.5	0.007	0.1	0.009	0.4	0.007	0.1	0.009	0.4					
120	917	4.455	34.563	27.390	157	50.2	0.003	0.1	0.007	0.3	0.003	0.1	0.007	0.3					
121	1018	4.263	34.612	27.450	165	52.5	0.001	0.0	0.007	0.3	0.001	0.0	0.007	0.3					
122	1120	4.368	34.733	27.535	171	54.5	-0.001	0.0	0.005	0.2	-0.001	0.0	0.005	0.2					
123	1222	4.374	34.815	27.599	185	58.9	0.004	0.1	0.005	0.2	0.004	0.1	0.005	0.2					
124	1324	4.317	34.924	27.692	213	67.9	0.015	0.3	0.021	0.9	0.014	0.3	0.020	0.9	0.70				
126	1528	4.030	34.969	27.759	236	74.7	0.025	0.5	0.025	1.1	0.024	0.5	0.024	1.0	1.00				
127	1630	3.928	34.972	27.772	241	76.2	0.022	0.4	0.015	0.6	0.021	0.4	0.014	0.6	1.50				
128	1732	3.893	34.985	27.786	248	78.2	0.052	1.0	0.034	1.4	0.050	1.0	0.033	1.4	1.52				
129	1833	3.672	34.979	27.803	252	79.0	0.029	0.6	0.021	0.9	0.028	0.5	0.020	0.8	1.40				

Station 370 0-20.0S 24-59.2W 4/ 7/89 Bottom Depth 3296 Air Conc (ppt): F11 = 245.4 F12 = 450.8

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED						ADJUSTED					
					Conc uM/kg	Pct Sat	Pct Sat	F11			F12			F11			F12		
								Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat	Conc pM/kg	Pct Sat	Pct Sat
124	1428	4.167	34.951	27.730	226	72.0	0.014	0.3	0.021	0.9	0.013	0.3	0.020	0.9	0.65				
125	1529	4.040	34.970	27.758	236	74.9	0.042	0.8	0.024	1.0	0.040	0.8	0.023	1.0	1.74				
126	1630	3.926	34.978	27.777	244	77.1	0.029	0.6	0.021	0.9	0.028	0.6	0.020	0.9	1.40				
127	1732	3.790	34.977	27.790	249	78.3	0.023	0.4	0.020	0.8	0.022	0.4	0.019	0.8	1.16				
128	1830	3.603	34.979	27.810	255	80.0	0.032	0.6	0.025	1.0	0.031	0.6	0.024	1.0	1.29				

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Station 373 0-39.6N 25-00.1W 4/ 8/89 Bottom Depth 4271 Air Conc (ppt): F11 = 245.6 F12 = 451.2

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat			
113	565	6.354	34.569	27.167	141	47.1	0.127	2.9	0.079	3.8	0.122	2.8	0.076	3.7	1.61
114	666	5.456	34.519	27.240	144	47.0	0.048	1.0	0.036	1.7	0.046	1.0	0.035	1.6	1.31
115	768	4.865	34.502	27.296	150	48.2	0.022	0.5	0.019	0.8	0.021	0.4	0.018	0.8	1.17
119	1225	4.438	34.822	27.598	185	59.0	0.005	0.1	0.006	0.3	0.005	0.1	0.006	0.3	1.45
121	1530	4.026	34.968	27.758	236	74.6	0.017	0.3	0.011	0.5	0.016	0.3	0.011	0.5	1.12
122	1616	3.957	34.972	27.769	240	75.9	0.020	0.4	0.018	0.8	0.019	0.4	0.017	0.7	1.12
124	1834	3.588	34.979	27.812	255	79.8	0.026	0.5	0.020	0.8	0.025	0.5	0.019	0.8	1.32

Station 375 0-20.3S 0-00.0W 4/11/89 Bottom Depth 4503 Air Conc (ppt): F11 = 255.0 F12 = 464.0

Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen			OBSERVED			ADJUSTED			F11/F12 Ratio	
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat			
101	0	27.577	36.247	23.473	202	103.0	1.624	101.6	0.830	99.0	1.566	98.0	0.800	95.4	1.96
106	119	16.469	35.735	26.205	166	69.4	1.413	53.6	0.710	54.3	1.362	51.6	0.684	52.3	1.99
109	200	11.177	35.037	26.773	146	54.5	0.814	23.4	0.416	24.9	0.785	22.5	0.401	24.0	1.96
111	296	10.536	34.992	26.853	108	39.7	0.454	12.6	0.240	13.9	0.438	12.1	0.231	13.4	1.90
113	514	6.689	34.576	27.127	154	51.7	0.251	5.6	0.140	6.7	0.242	5.4	0.135	6.4	1.79
114	615	5.544	34.489	27.206	161	52.6	0.162	3.4	0.087	3.9	0.156	3.2	0.084	3.8	1.86
115	715	5.215	34.507	27.259	147	47.6	0.039	0.8	0.031	1.4	0.038	0.8	0.030	1.3	1.27
117	920	4.416	34.554	27.387	159	50.8	0.012	0.2	0.014	0.6	0.012	0.2	0.013	0.6	0.92
119	1121	4.418	34.728	27.525	171	54.5	0.003	0.1	0.008	0.3	0.003	0.1	0.008	0.3	1.57
120	1323	4.367	34.960	27.715	223	71.2	0.046	0.9	0.029	1.2	0.044	0.9	0.028	1.2	1.07
121	1527	4.051	34.963	27.752	234	74.1	0.016	0.3	0.015	0.6	0.015	0.3	0.014	0.6	1.71
123	1934	3.528	34.979	27.818	257	79.0	0.043	0.8	0.025	1.0	0.041	0.8	0.024	1.0	1.00
126	2544	2.777	34.941	27.858	261	79.4	0.004	0.1	0.008	0.3	0.004	0.1	0.008	0.3	1.00
128	2950	2.466	34.926	27.874	261	79.4	0.011	0.2	0.011	0.4	0.011	0.2	0.011	0.4	1.64
130	3358	2.240	34.909	27.879	259	78.4	0.008	0.1	0.008	0.3	0.008	0.1	0.008	0.3	1.41
131	3561	2.092	34.906	27.889	265	79.8	0.037	0.6	0.023	0.9	0.036	0.6	0.022	0.8	1.41
132	3764	2.032	34.901	27.890	264	79.6	0.032	0.5	0.023	0.9	0.031	0.5	0.022	0.8	1.41
136	4497	0.633	34.743	27.862	229	66.6	0.002	0.0	0.007	0.2	0.002	0.0	0.007	0.2	1.41

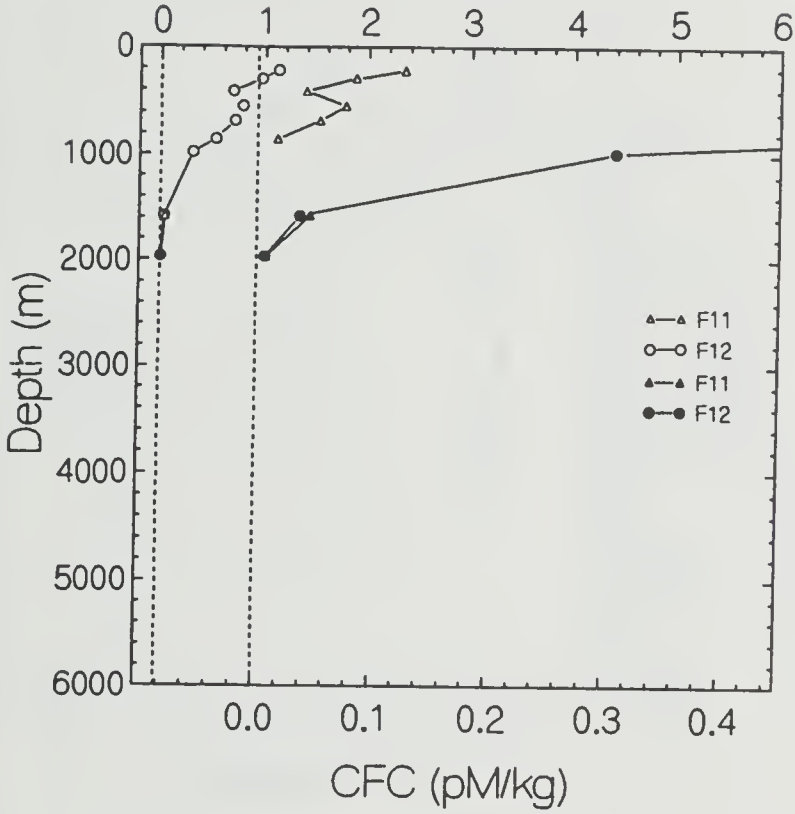
Lamont-Doherty Geological Observatory of Columbia University
 HYDROS 4 South Atlantic Ventilation Experiment (SAVE) Leg 6

Station 377 0-19.6N 36-30.0W 4/12/89 Bottom Depth 4523 Air Conc (ppt): F11 = 256.0 F12 = 464.0

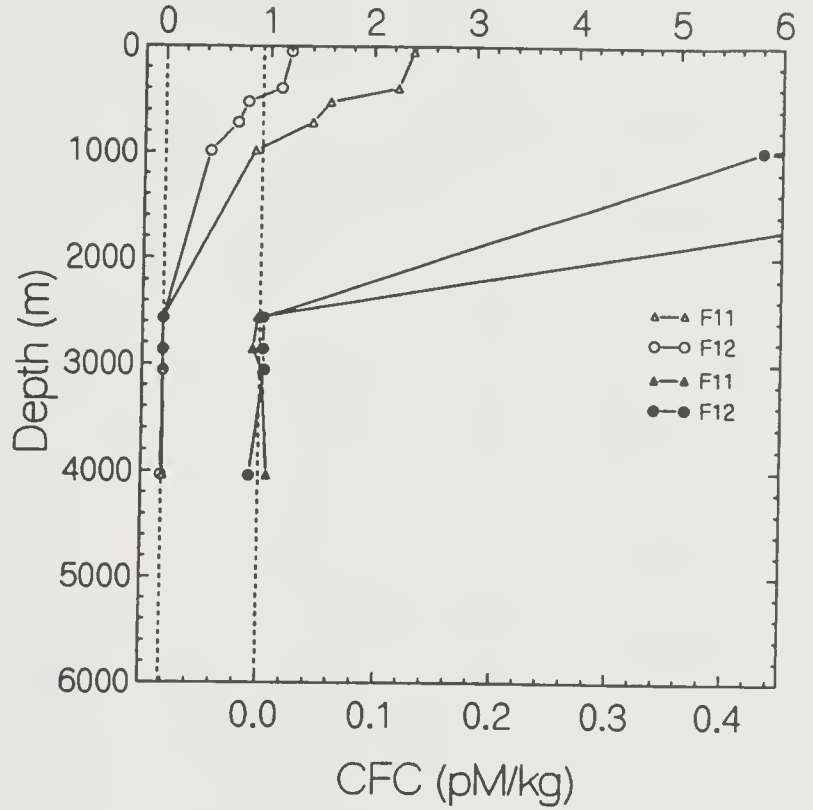
Bot No.	Depth m	Pot. Temp deg C	Salin PSU	Sigma Theta	Oxygen		OBSERVED			ADJUSTED			F11/F12 Ratio		
					Conc uM/kg	Pct Sat	F11 Conc pM/kg	F11 Pct Sat	F12 Conc pM/kg	F12 Pct Sat					
101	2	27.267	36.246	23.573	206	104.4	1.638	100.8	0.858	101.2	1.579	97.2	0.827	97.5	1.91
103	51	25.805	36.477	24.211	206	102.0	1.637	95.1	0.855	95.8	1.578	91.6	0.824	92.3	1.92
106	108	15.974	35.698	26.292	165	68.2	1.385	51.0	0.699	52.3	1.335	49.2	0.674	50.5	1.98
108	210	11.630	35.108	26.744	135	50.8	0.764	22.4	0.404	24.7	0.736	21.6	0.389	23.8	1.89
110	367	9.237	34.846	26.960	106	37.8	0.273	7.0	0.159	8.6	0.263	6.8	0.153	8.3	1.72
111	474	7.585	34.669	27.075	138	47.4	0.262	6.1	0.144	7.2	0.253	5.9	0.139	7.0	1.82
112	534	6.856	34.598	27.122	151	51.1	0.262	5.9	0.152	7.3	0.253	5.7	0.147	7.1	1.72
113	646	5.468	34.528	27.246	143	46.8	0.055	1.1	0.033	1.5	0.053	1.1	0.032	1.4	1.66
114	767	4.809	34.514	27.312	150	48.3	0.020	0.4	0.026	1.1	0.019	0.4	0.025	1.1	0.76
115	918	4.522	34.556	27.377	157	50.0	0.011	0.2	0.013	0.6	0.011	0.2	0.013	0.6	0.85
117	1225	4.533	34.898	27.648	198	63.4	0.028	0.5	0.017	0.7	0.027	0.5	0.016	0.7	1.69
118	1377	4.309	34.960	27.722	224	71.5	0.040	0.8	0.031	1.3	0.039	0.8	0.030	1.3	1.30
119	1529	4.058	34.965	27.752	233	74.0	0.019	0.4	0.017	0.7	0.018	0.3	0.016	0.7	1.13
120	1631	3.874	34.981	27.784	247	77.9	0.035	0.7	0.026	1.1	0.034	0.6	0.025	1.0	1.36
121	1732	3.821	34.991	27.798	254	80.0	0.069	1.3	0.048	2.0	0.067	1.3	0.046	1.9	1.46
122	1834	3.690	34.987	27.808	256	80.3	0.062	1.2	0.040	1.6	0.060	1.1	0.039	1.6	1.54
123	1936	3.580	34.983	27.816	257	80.6	0.052	1.0	0.032	1.3	0.050	0.9	0.031	1.3	1.61
125	2292	2.965	34.958	27.855	262	80.7	0.024	0.4	0.023	0.9	0.023	0.4	0.022	0.9	1.05
128	2952	2.450	34.922	27.872	257	78.3	0.002	0.0	0.004	0.2	0.002	0.0	0.004	0.2	
130	3359	2.245	34.910	27.880	258	78.2	0.004	0.1	0.007	0.3	0.004	0.1	0.007	0.3	
131	3562	2.118	34.908	27.889	265	79.9	0.036	0.6	0.023	0.9	0.035	0.6	0.022	0.8	1.59
132	3765	2.043	34.903	27.891	266	80.0	0.035	0.6	0.024	0.9	0.034	0.6	0.023	0.9	1.48
133	3968	1.913	34.893	27.893	229	66.5	0.034	0.6	0.023	0.9	0.033	0.5	0.022	0.8	1.50
136	4515	0.614	34.745	27.865	229	66.5	0.002	0.0	0.000	0.0	0.002	0.0	0.000	0.0	

CFC Vertical Profiles

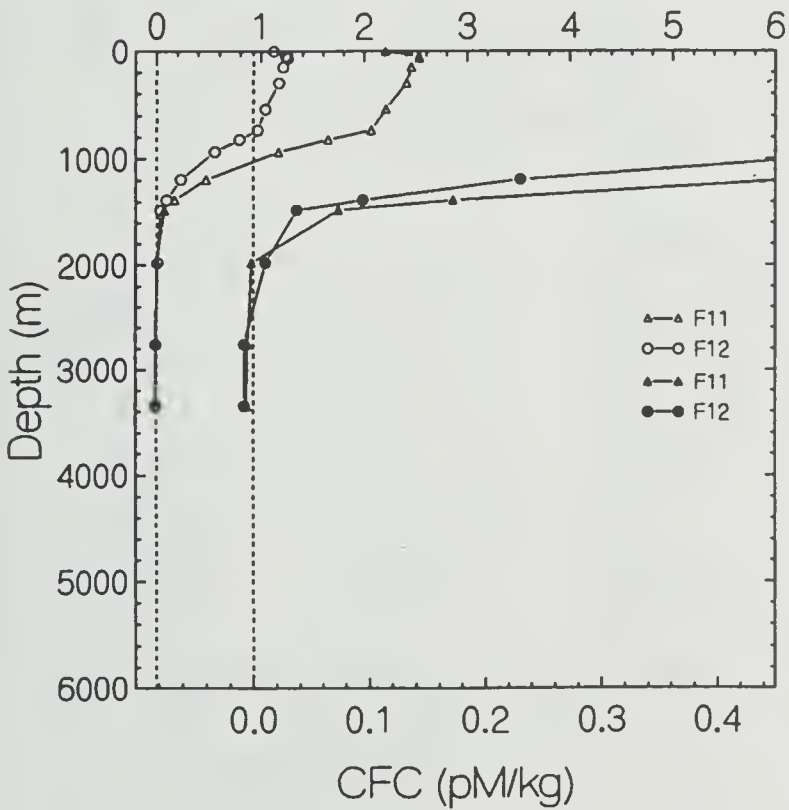
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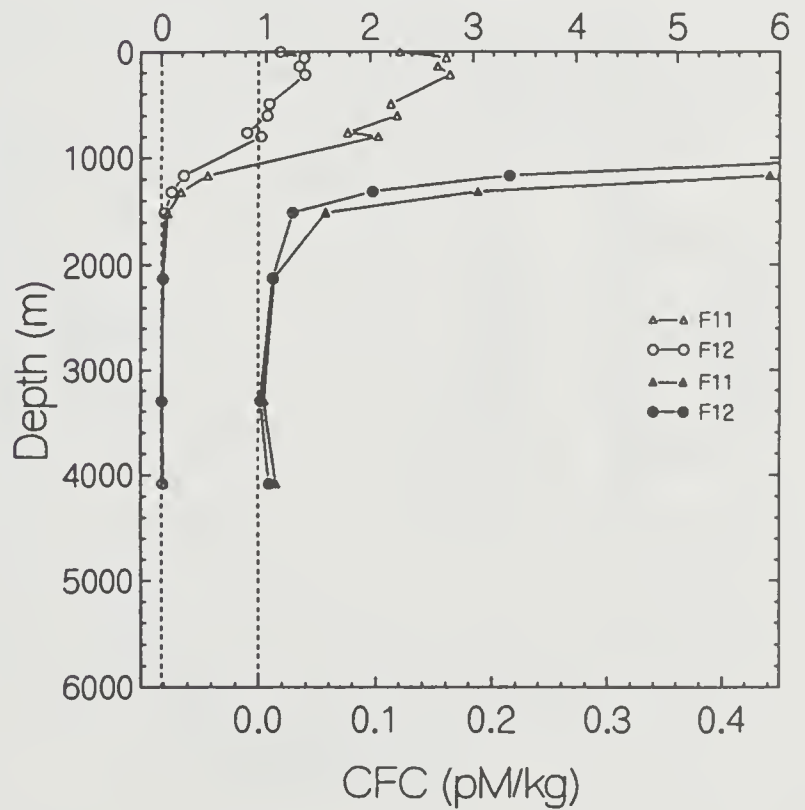
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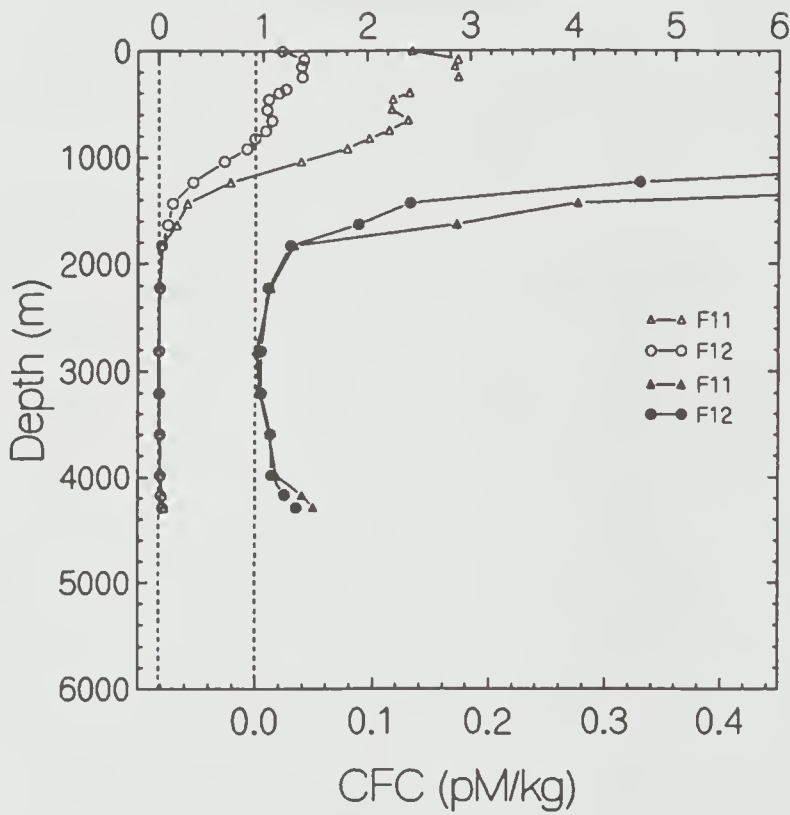
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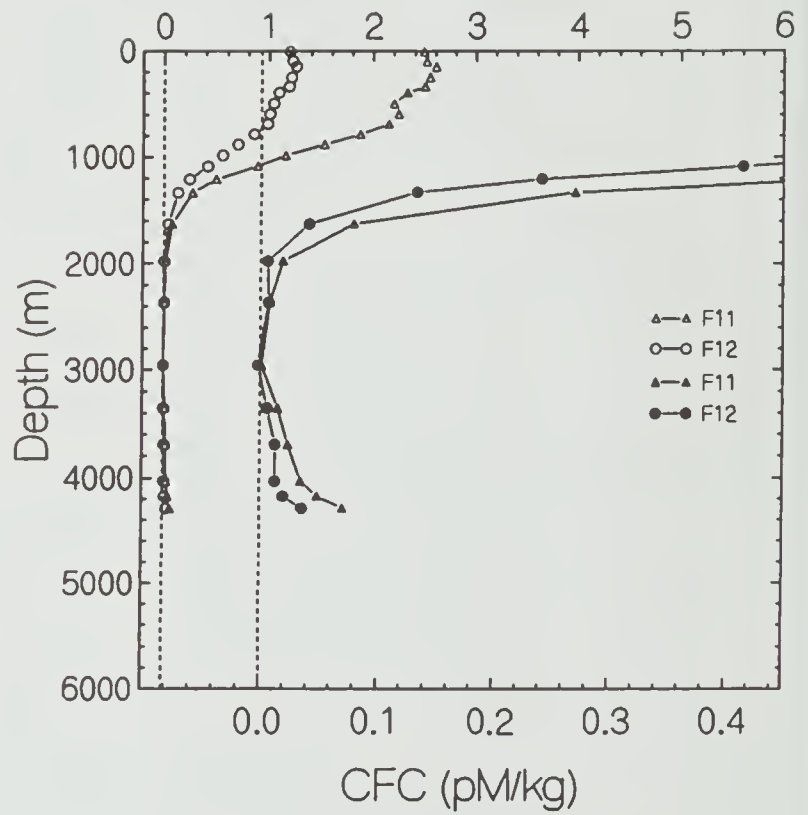
SAVE Station 245



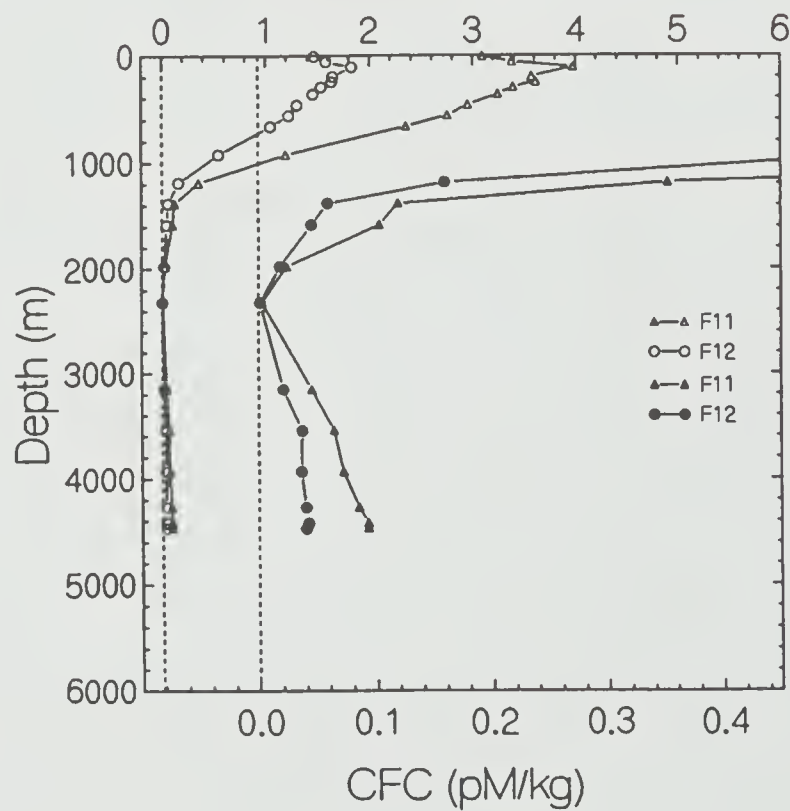
SAVE Station 252



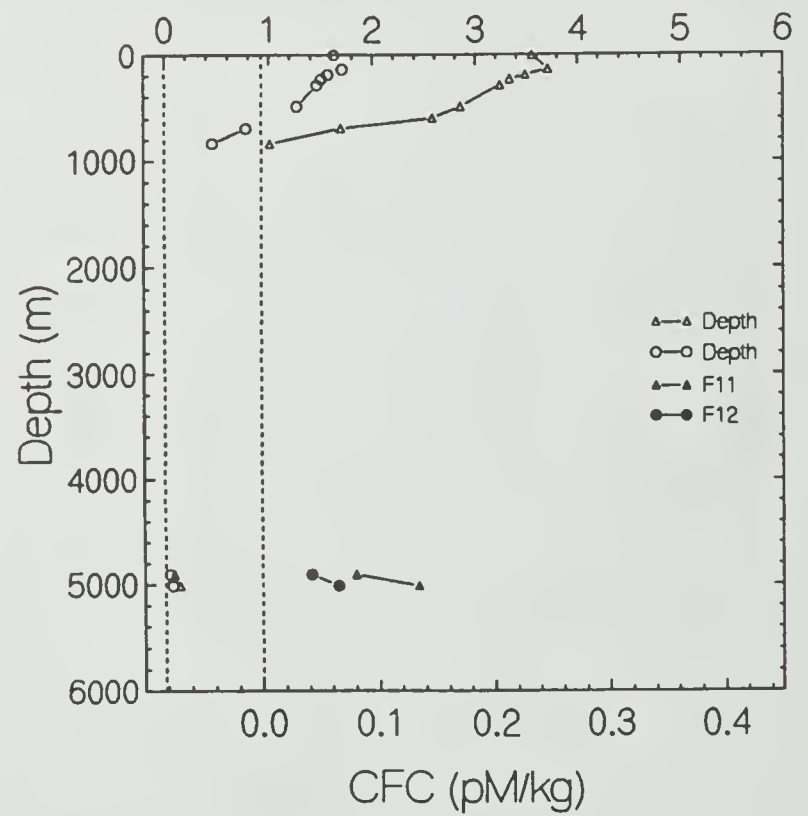
SAVE Station 254



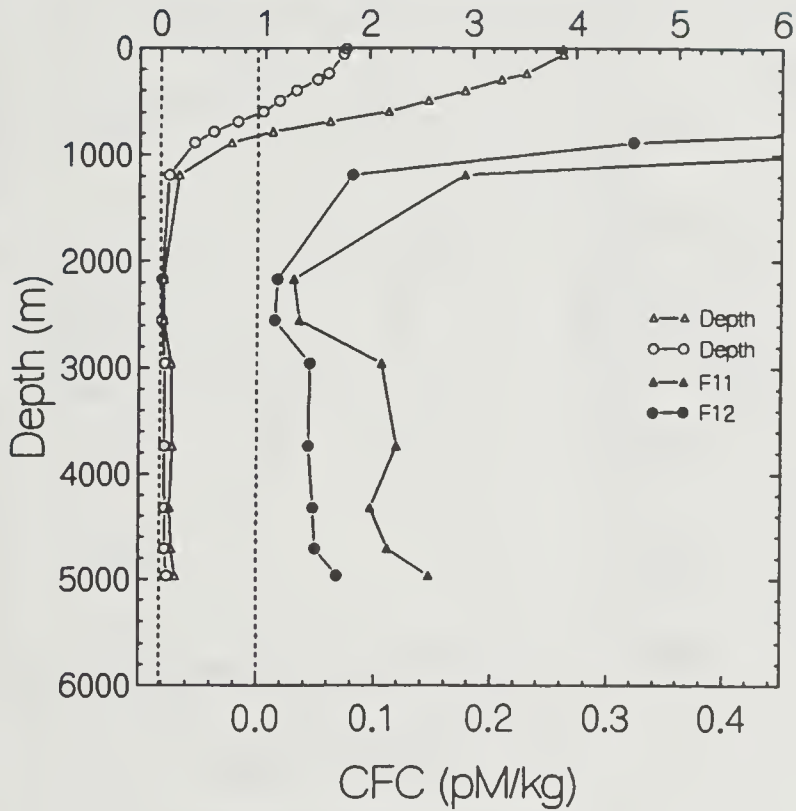
SAVE Station 260



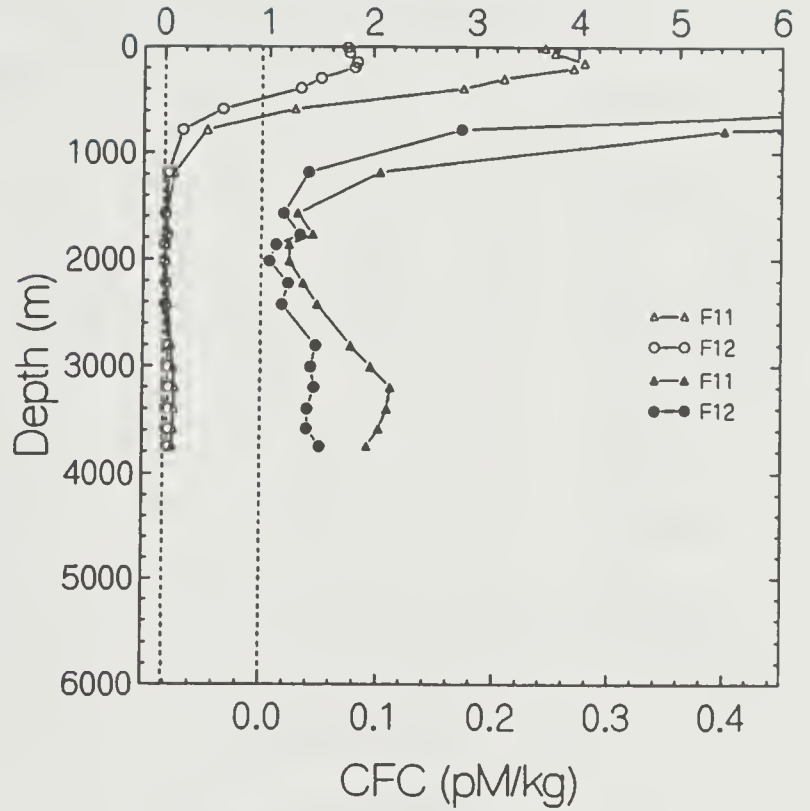
SAVE Station 262



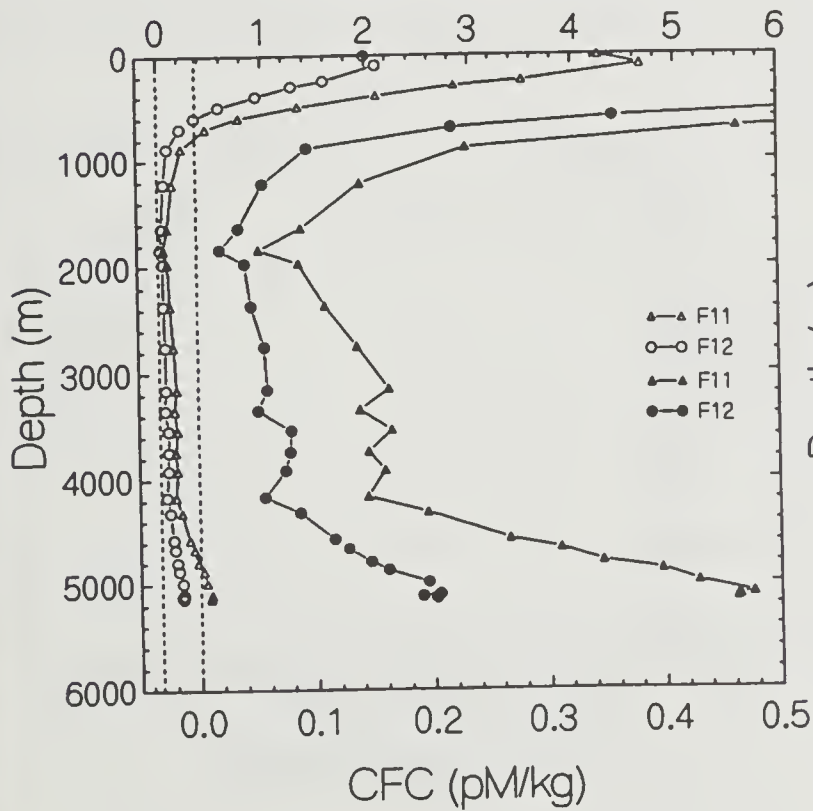
SAVE Station 266



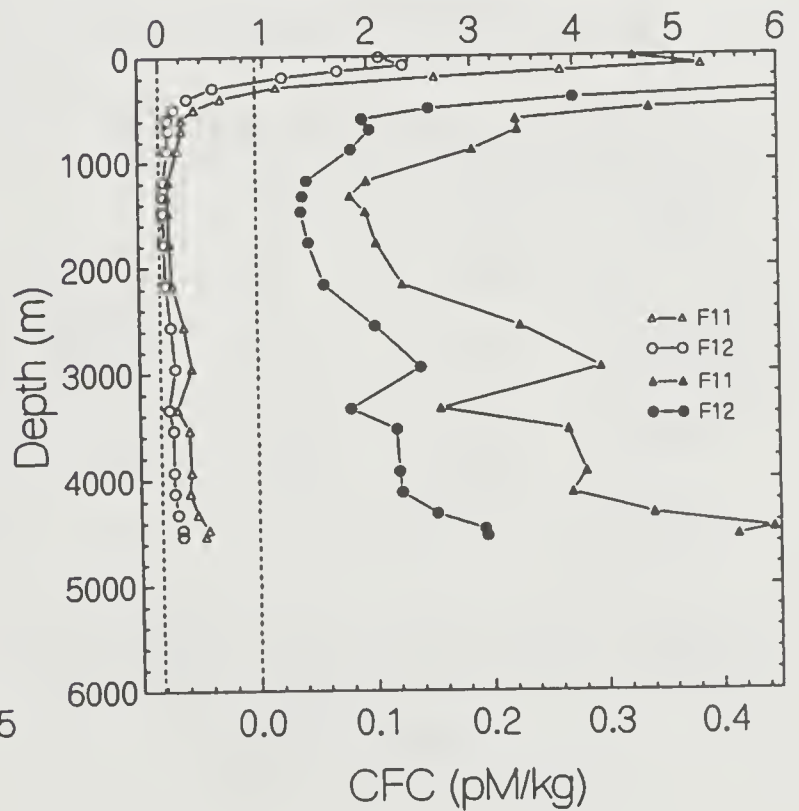
SAVE Station 269



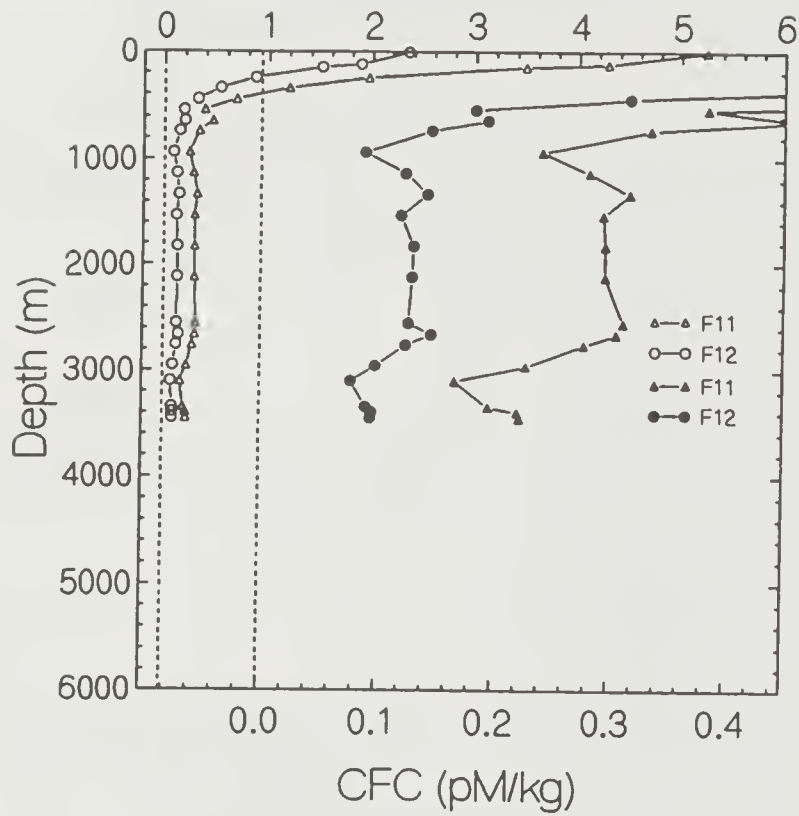
SAVE Station 271



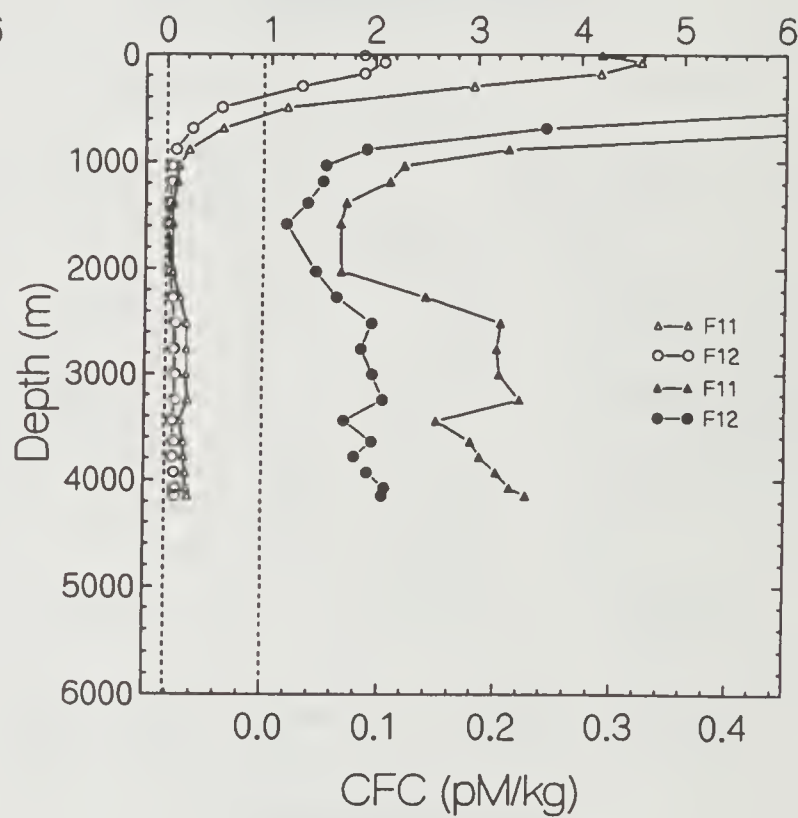
SAVE Station 273



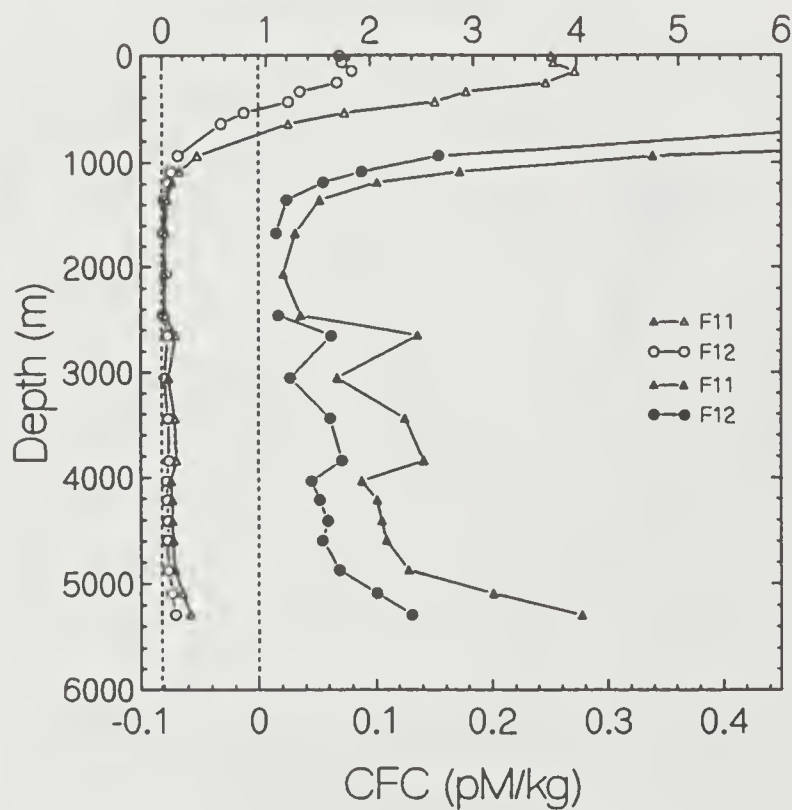
SAVE Station 276



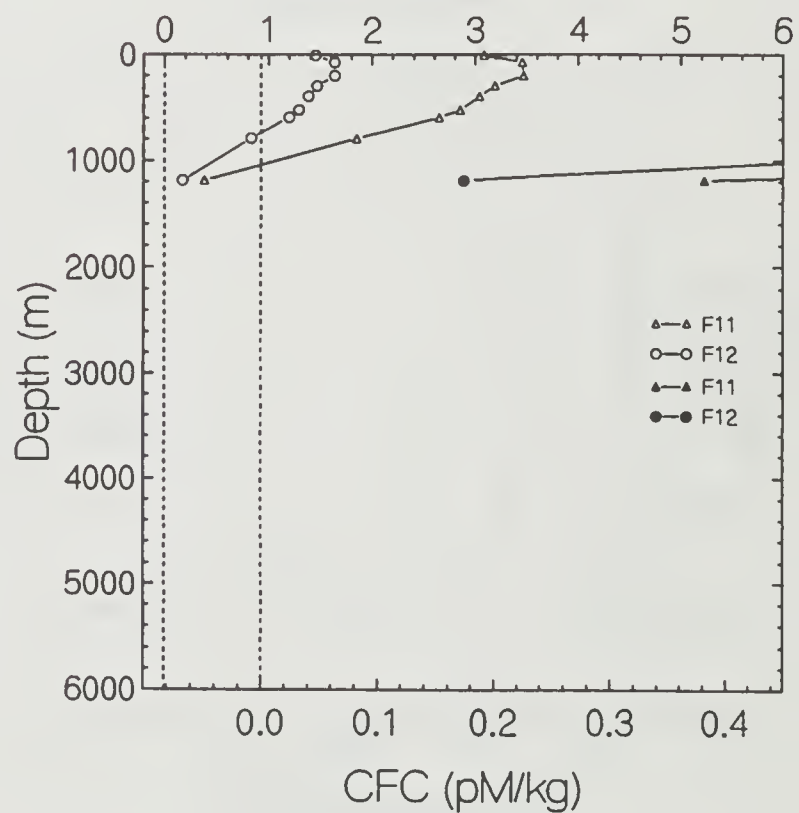
SAVE Station 285



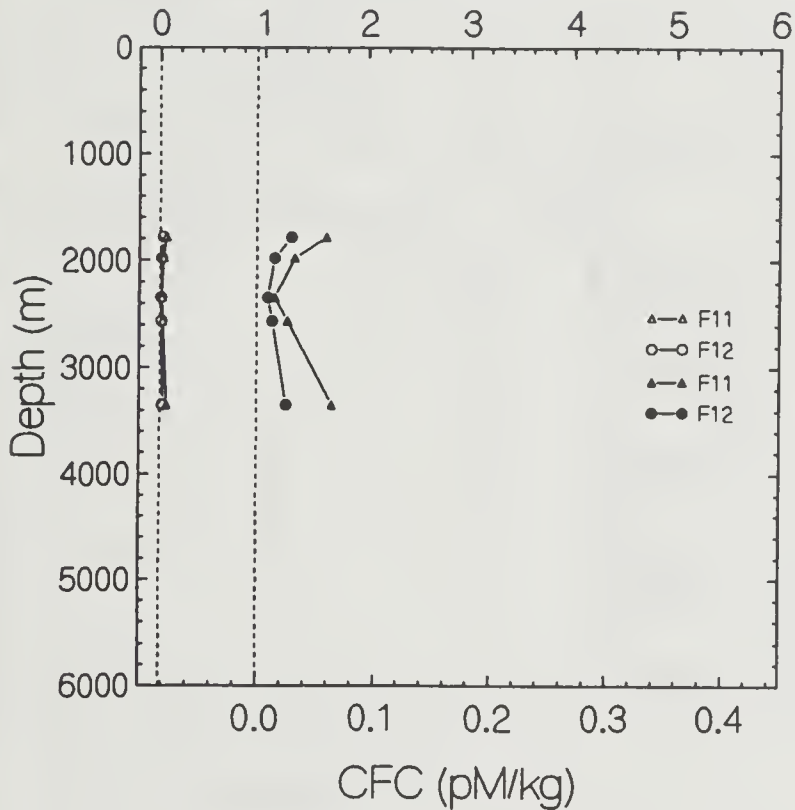
SAVE Station 287



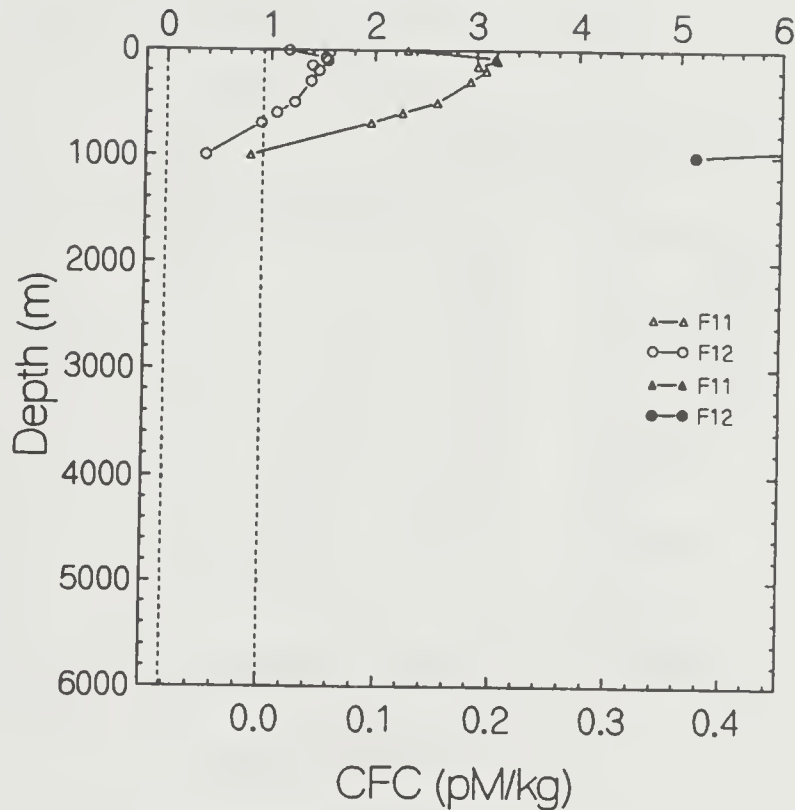
SAVE Station 291



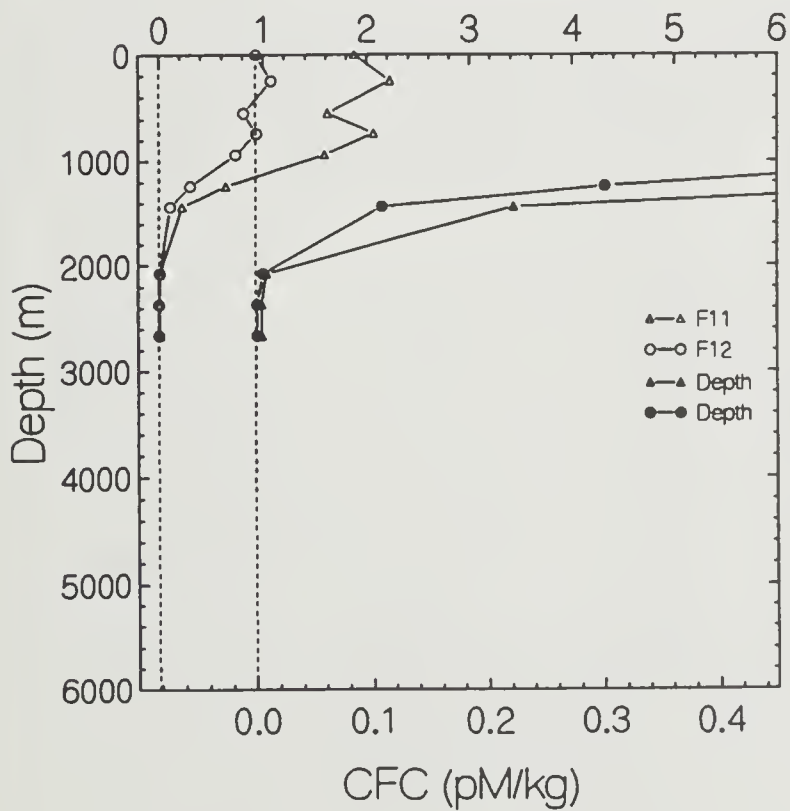
SAVE Station 294



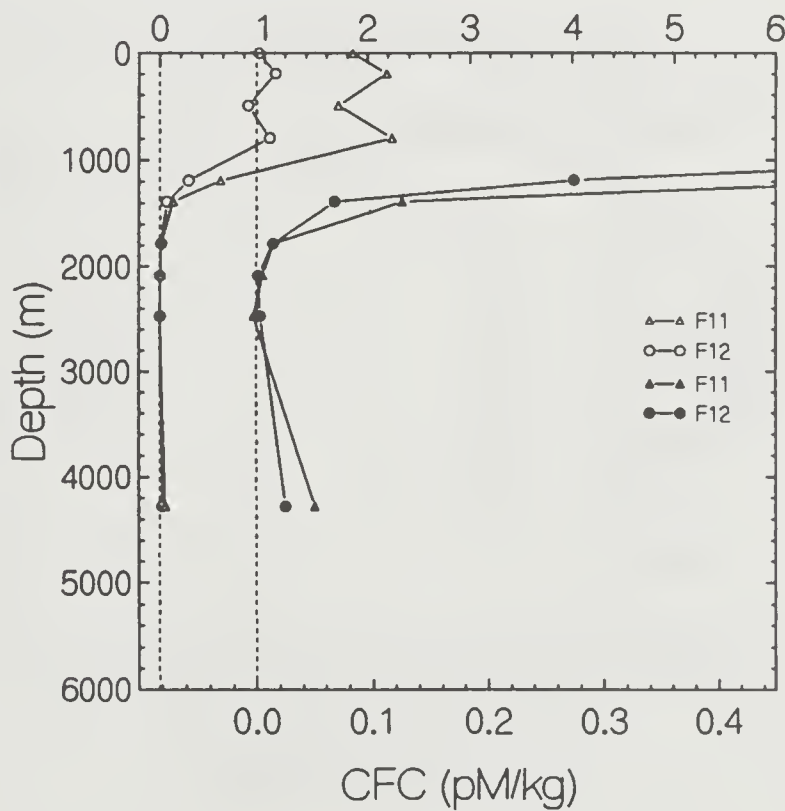
SAVE Station 295



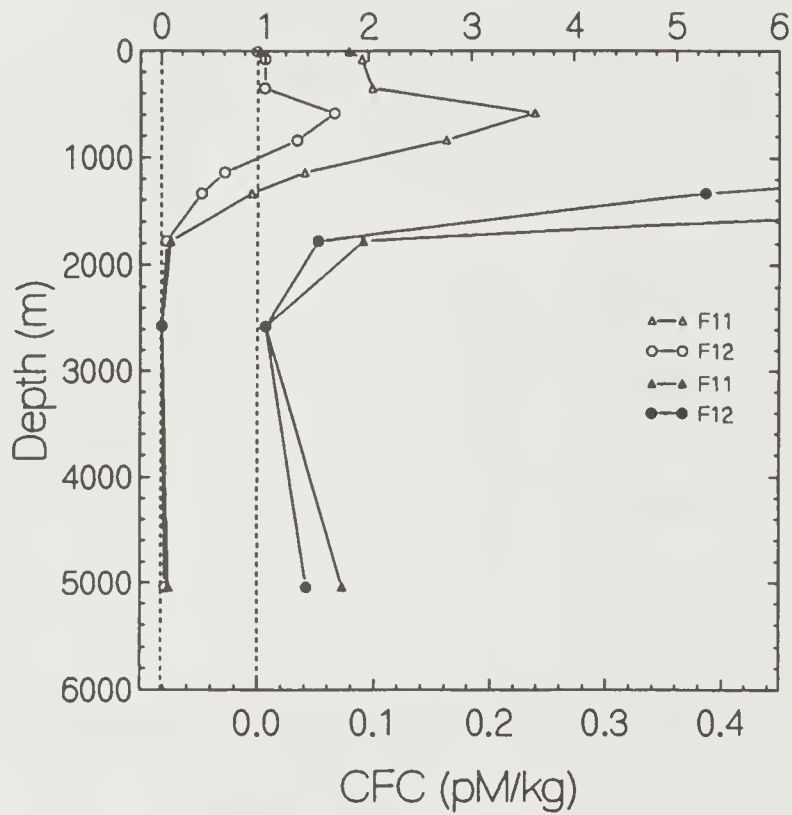
SAVE Station 301



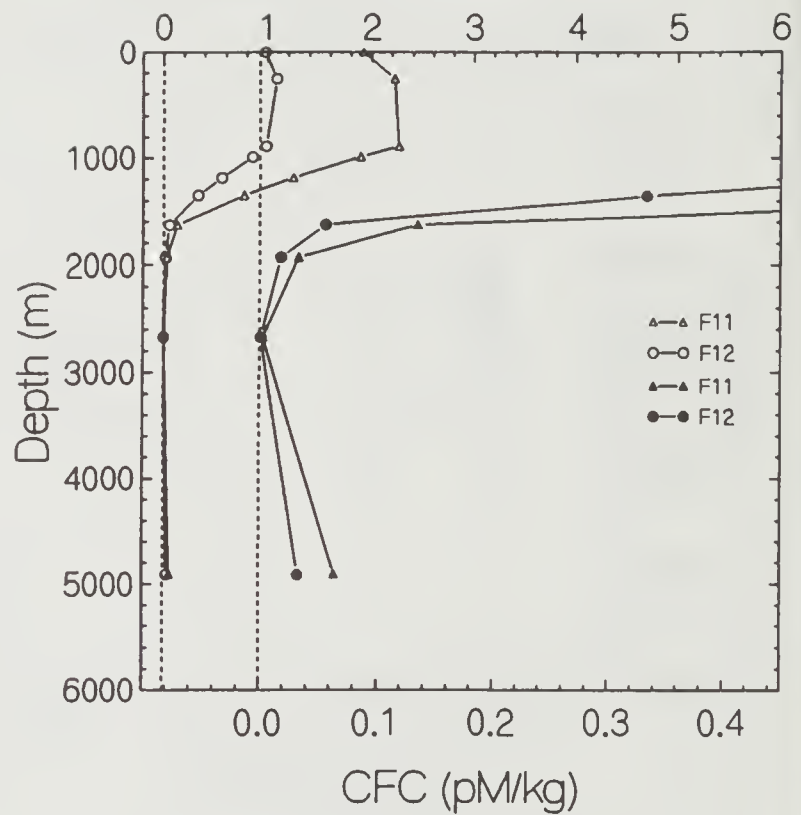
SAVE Station 303



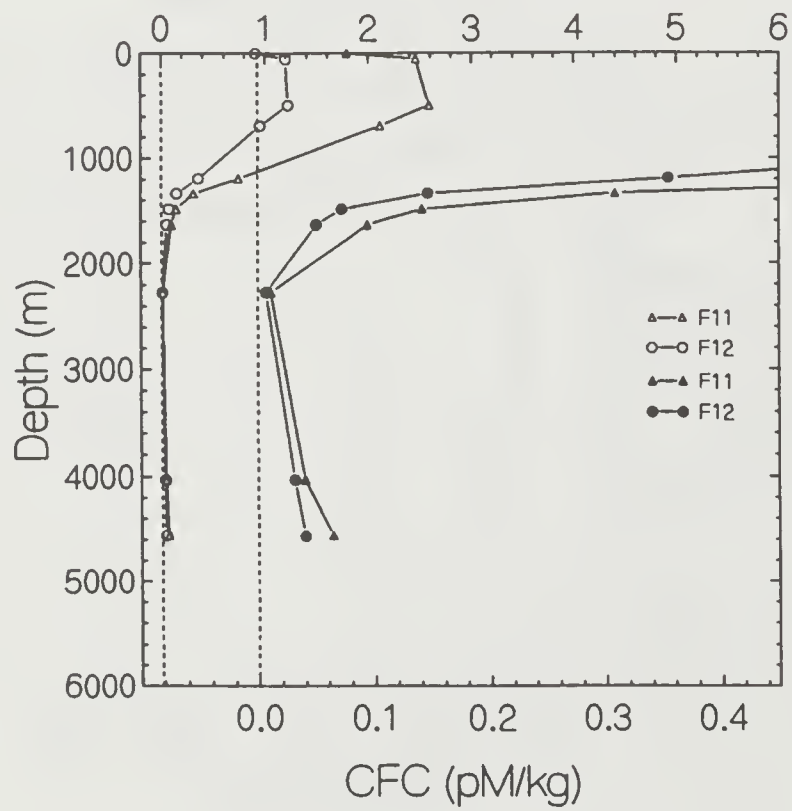
SAVE Station 305



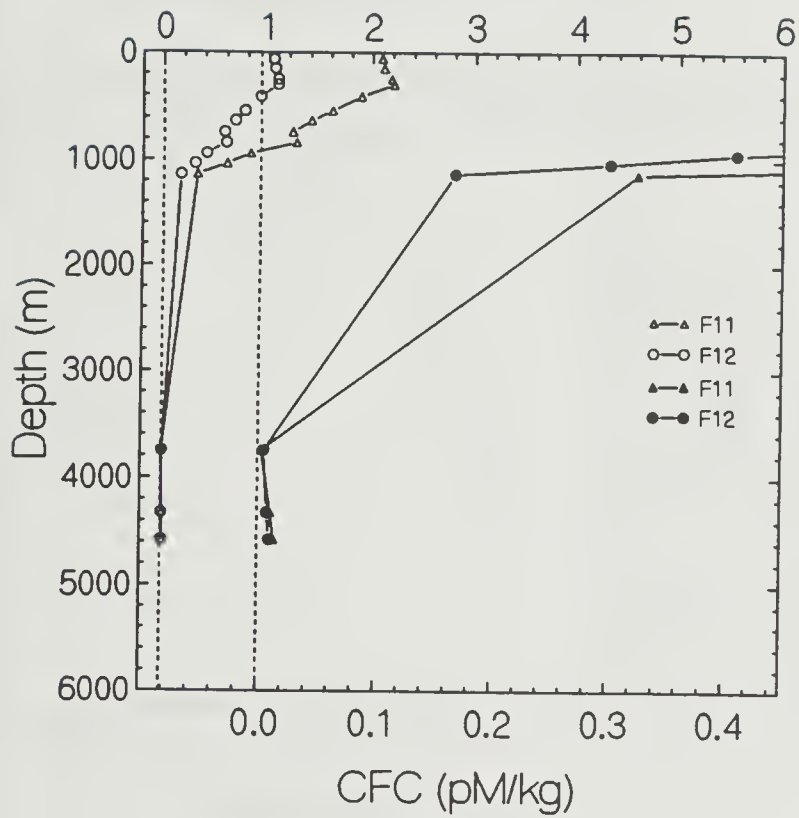
SAVE Station 306



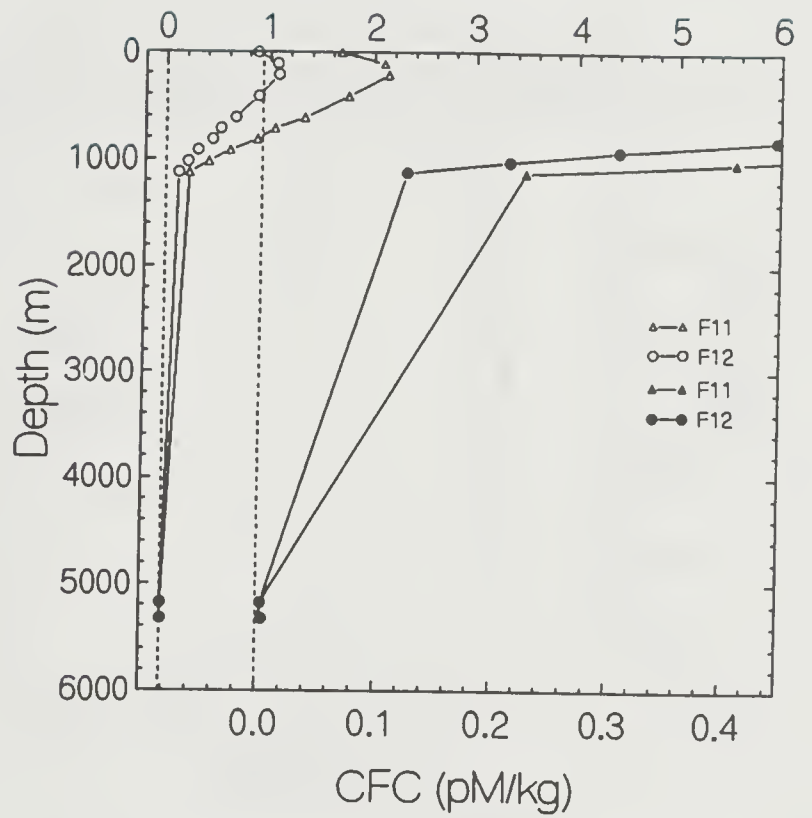
SAVE Station 307



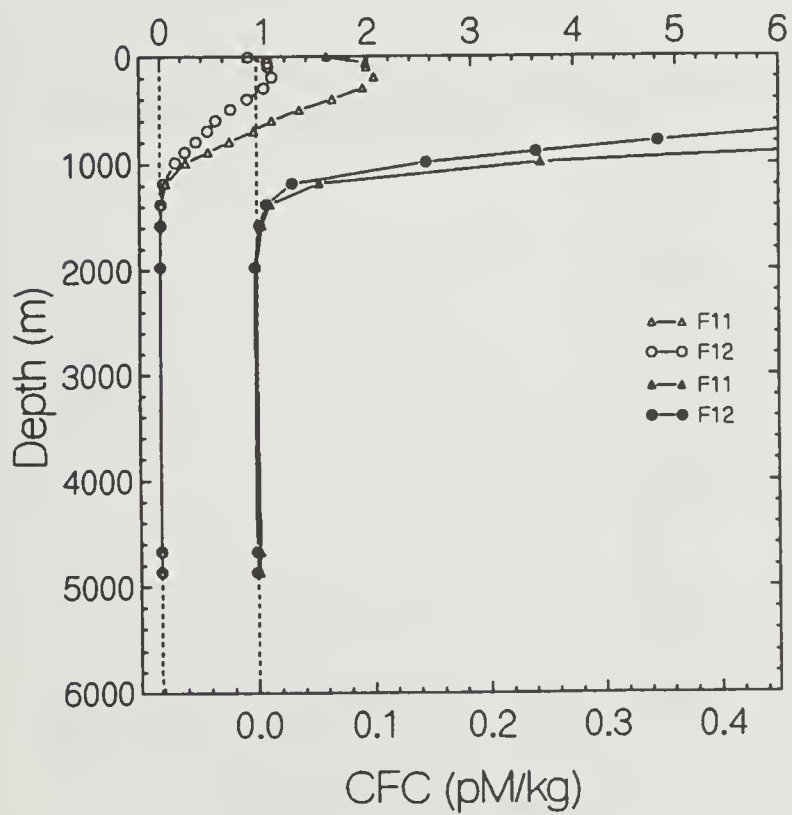
SAVE Station 315



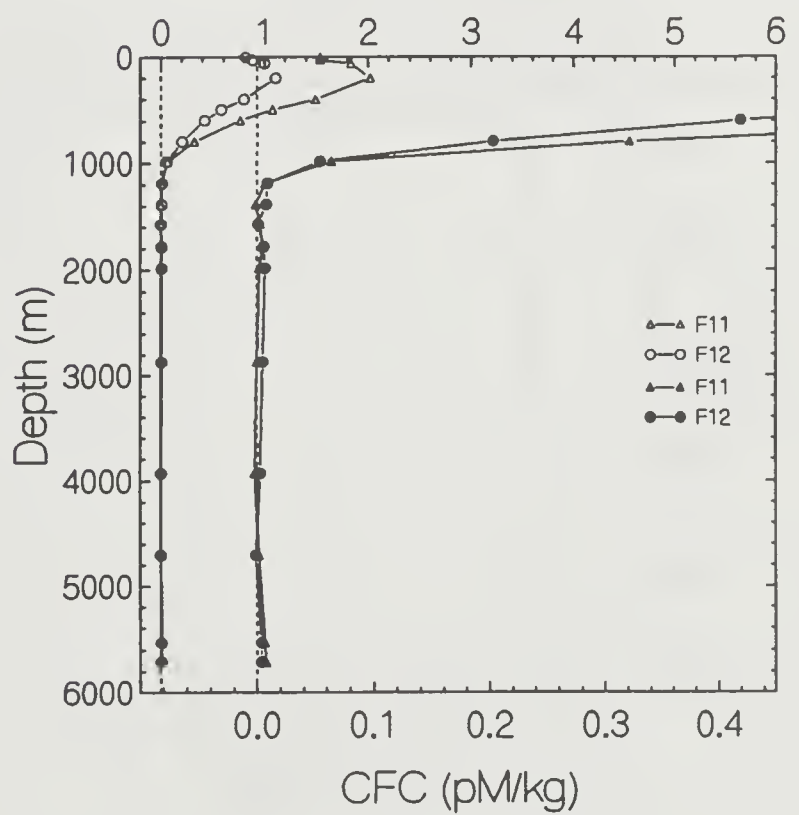
SAVE Station 321



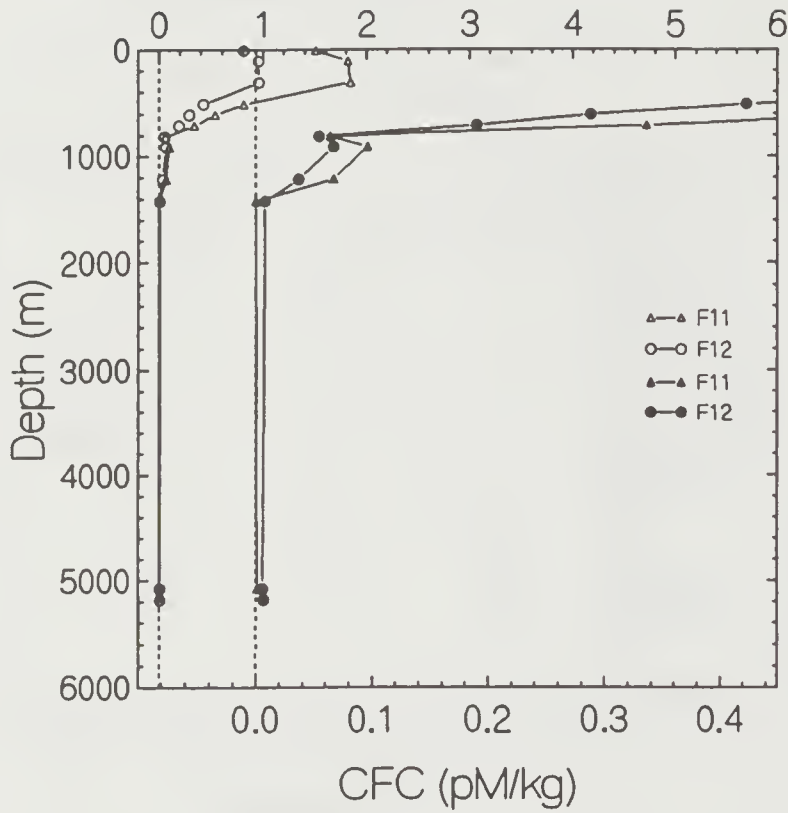
SAVE Station 323



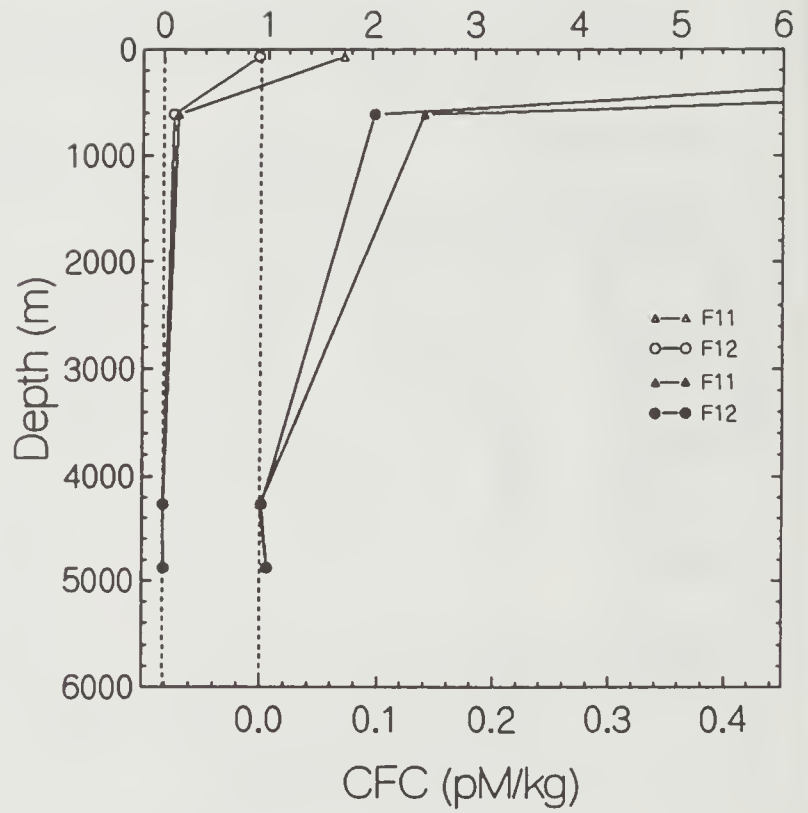
SAVE Station 327



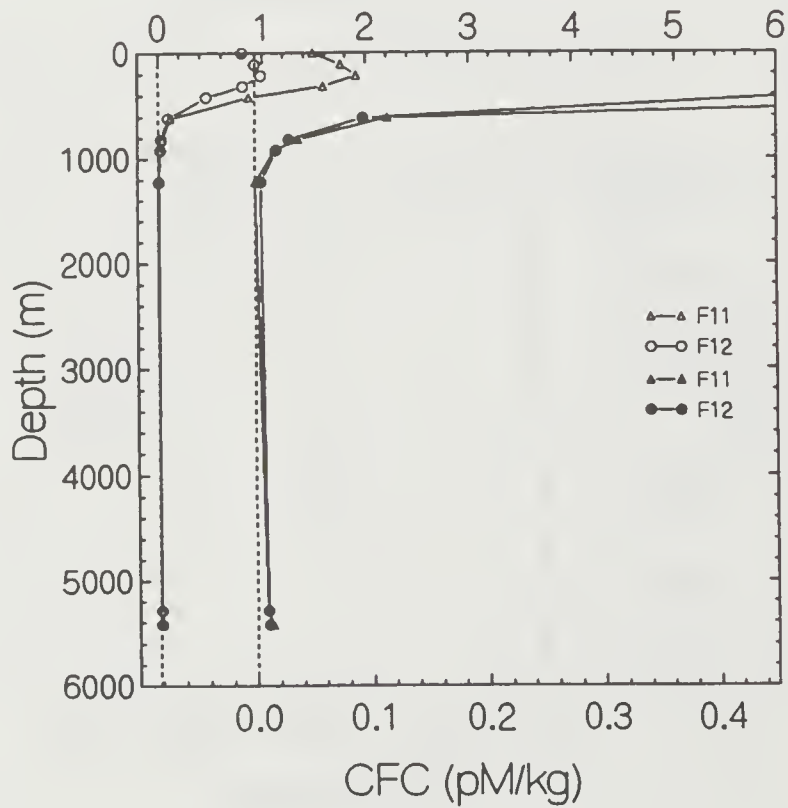
SAVE Station 331



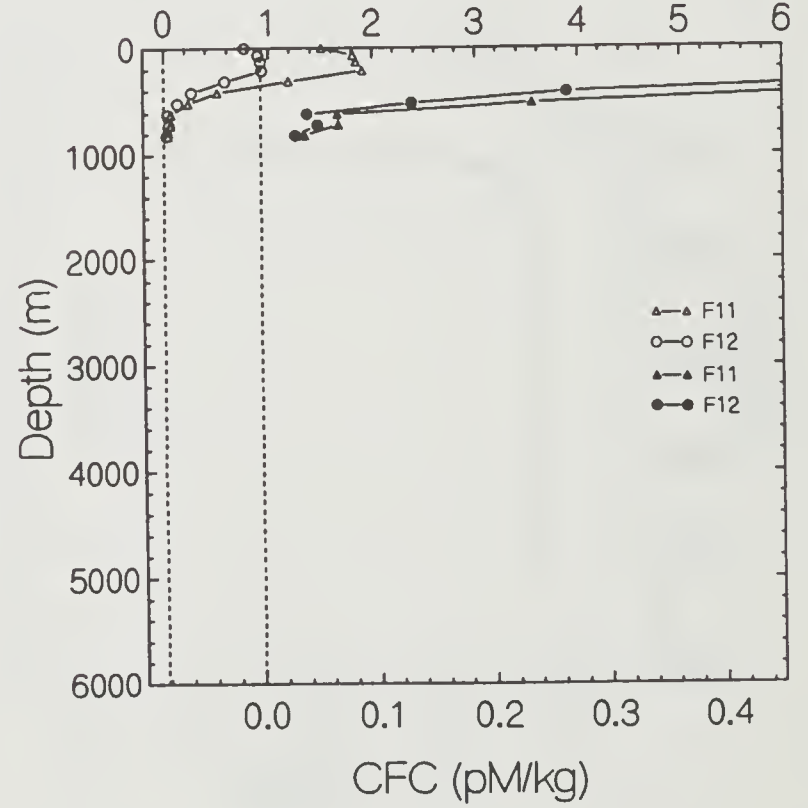
SAVE Station 336



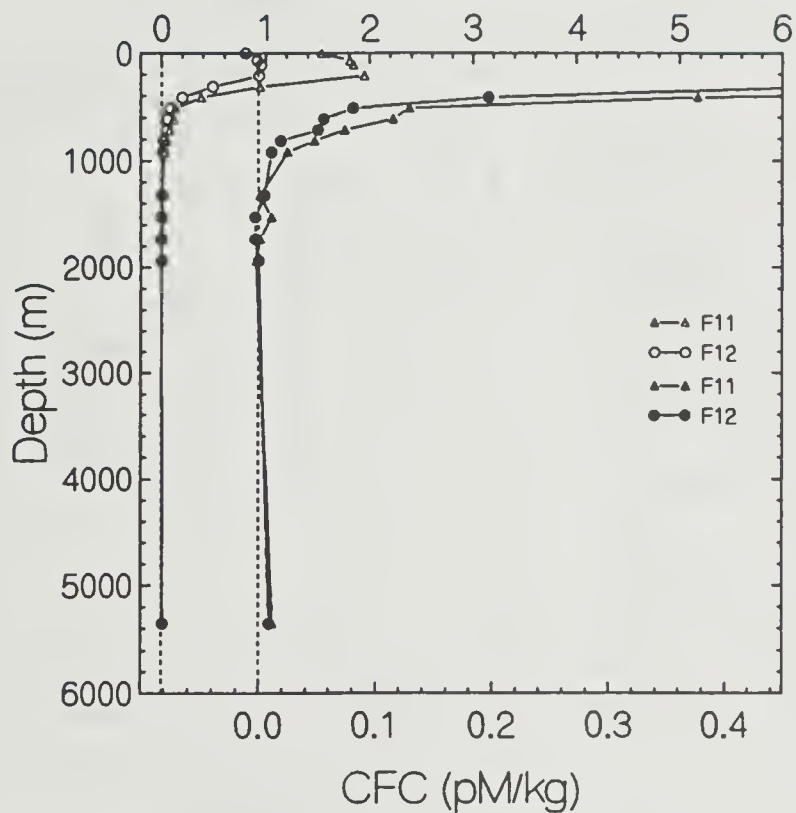
SAVE Station 337



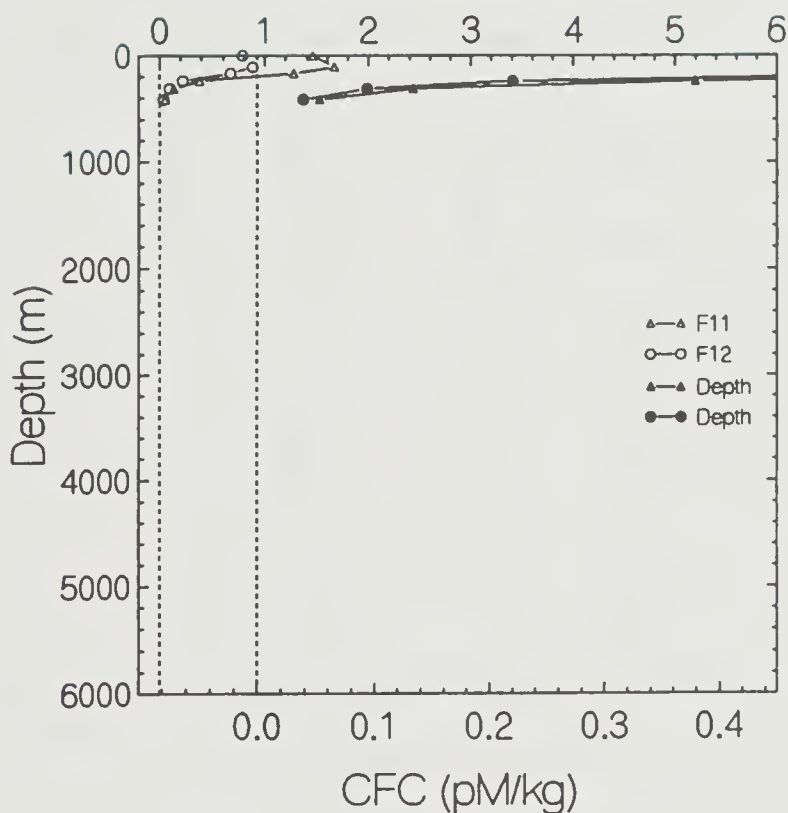
SAVE Station 340



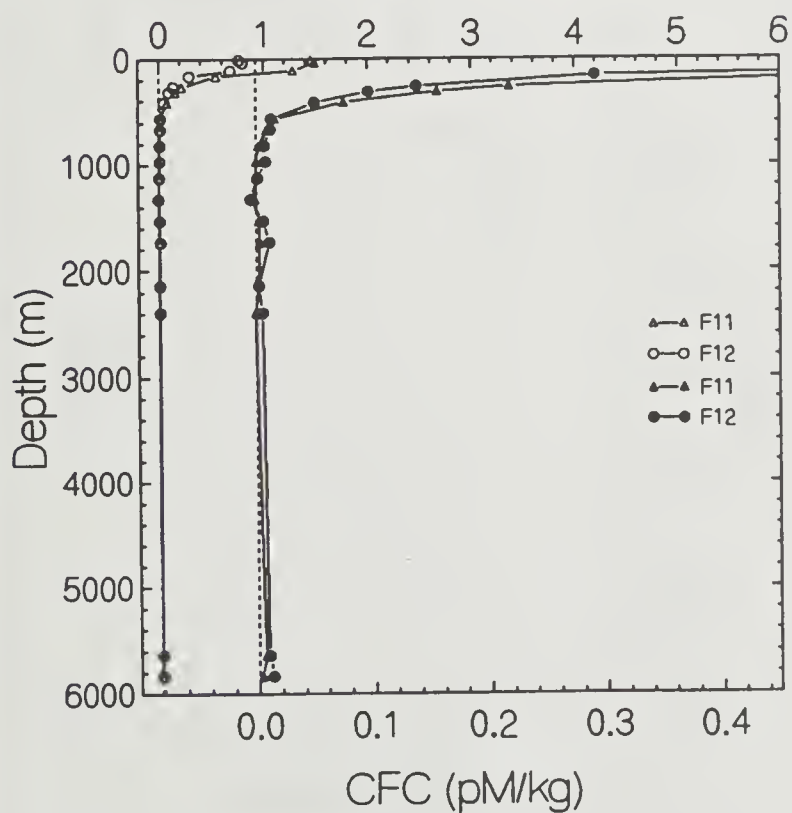
SAVE Station 342



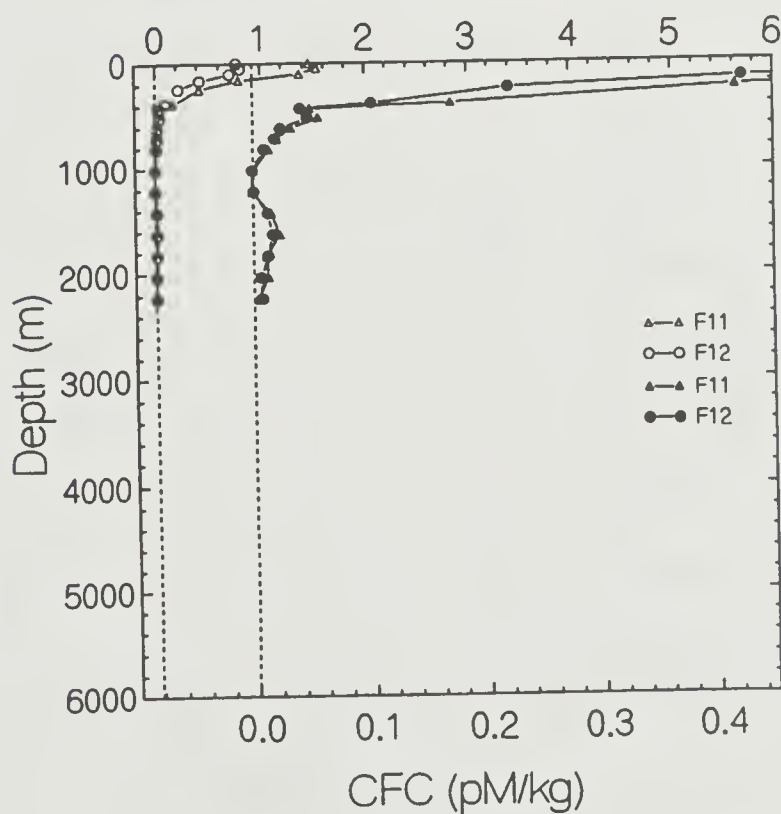
SAVE Station 354



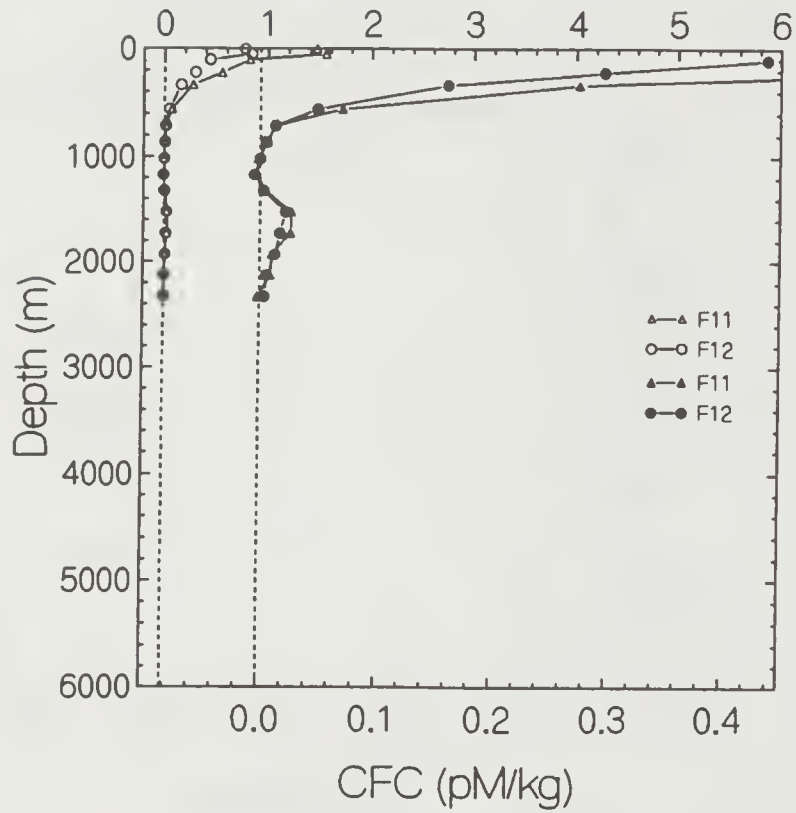
SAVE Station 357



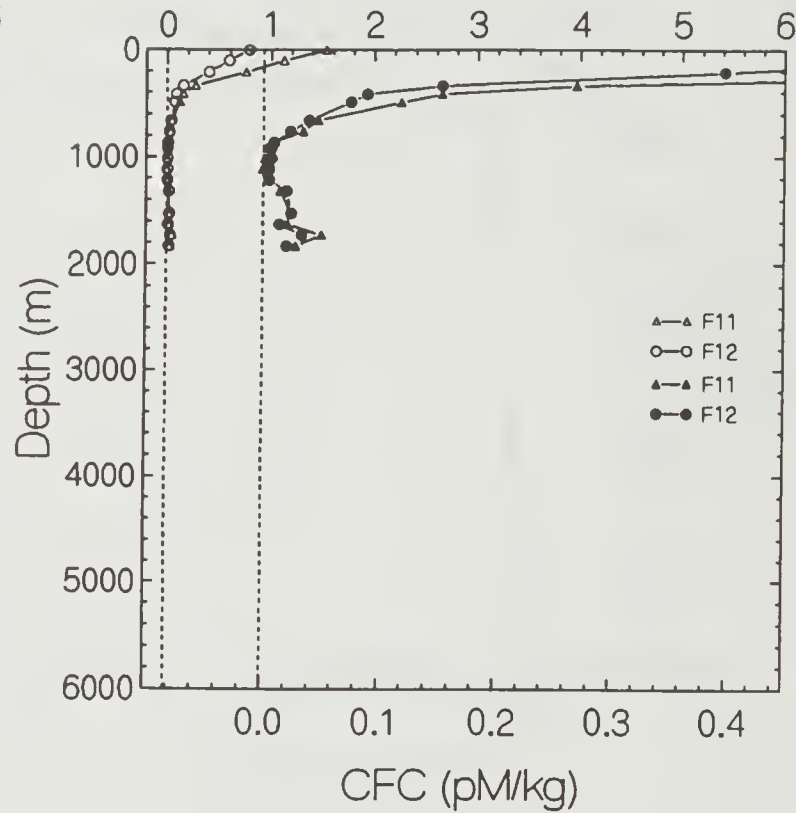
SAVE Station 361



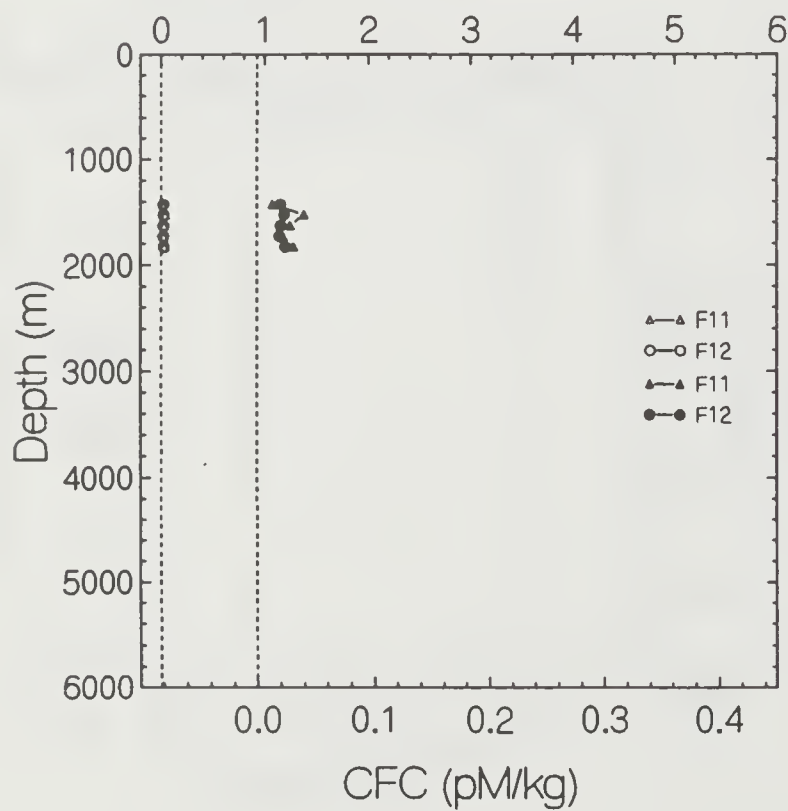
SAVE Station 363



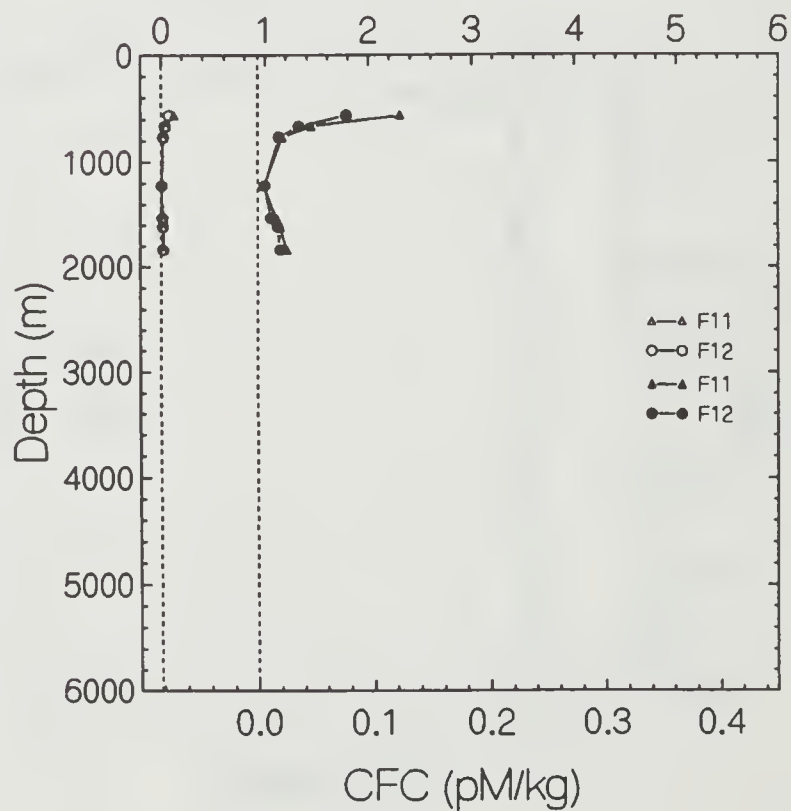
SAVE Station 368



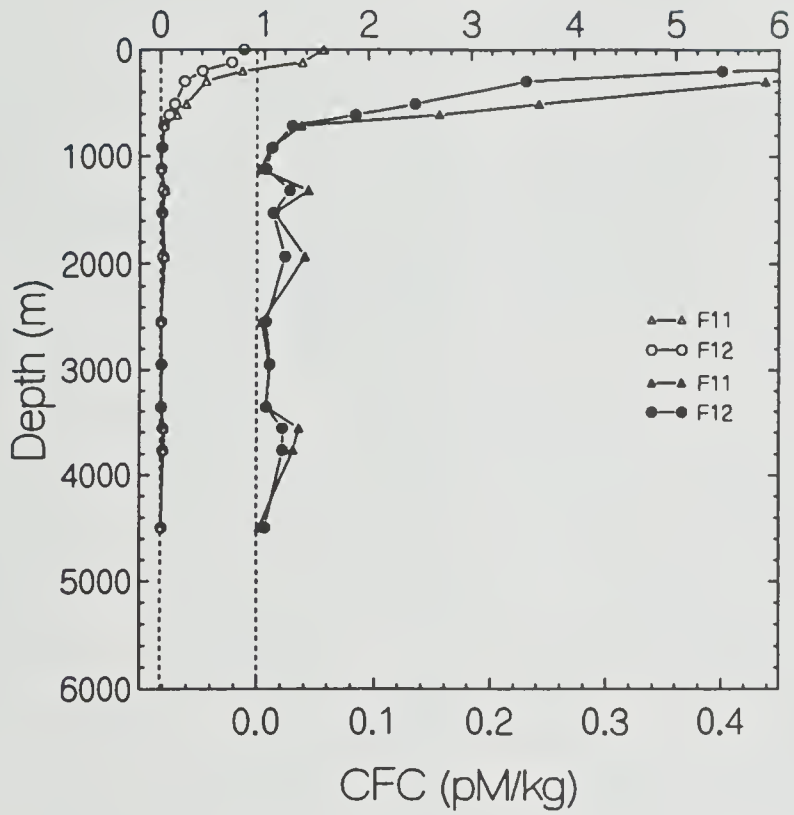
SAVE Station 370



SAVE Station 373



SAVE Station 375



SAVE Station 377

