

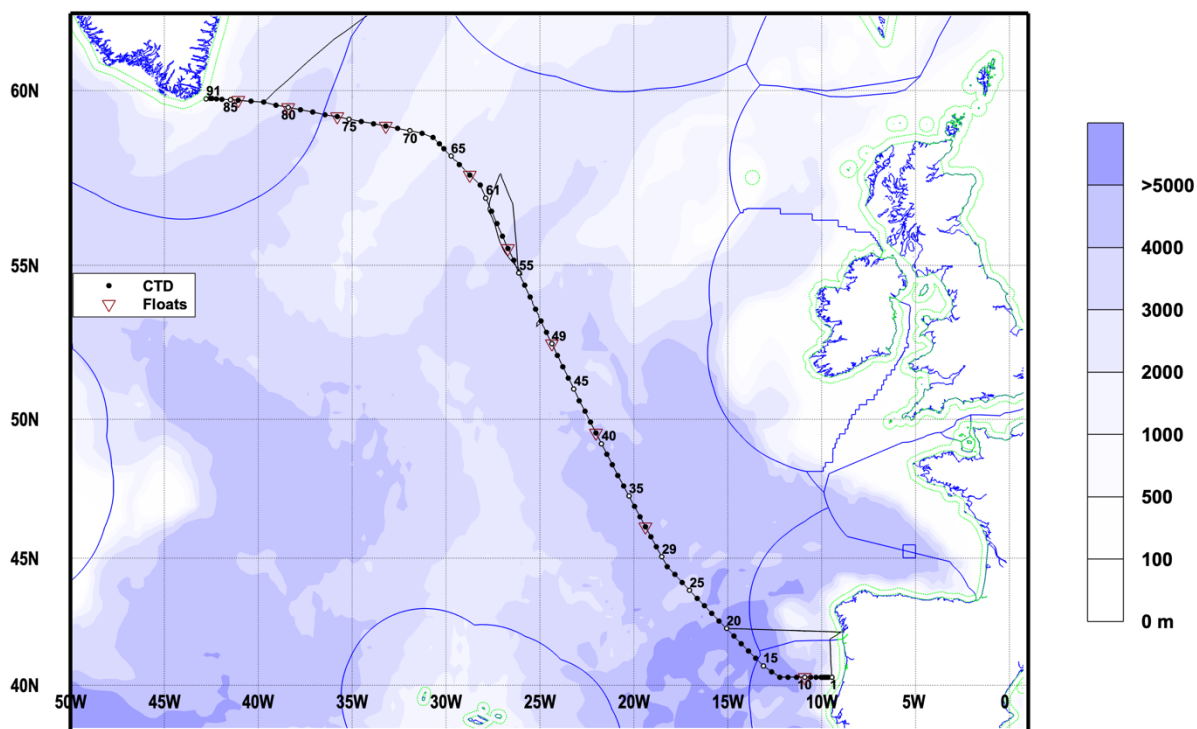


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# BOCATS 2021

## CTD-O<sub>2</sub> Data report

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## ABSTRACT

**BOCATS 2021** cruise focused on the 10th repetition of the OVIDE section. OVIDE (BOCATS) cruises have been run biennially since 2002, always in June-July, and the section is labelled as the A25 high-resolution reference section in the international program GO-SHIP. With the COVID situation, the cruise couldn't be run in 2020 but in 2021. BOCATS 2021 started in Vigo on May 26 and ended in Reykjavik on June 29 on the R/V Sarmiento de Gamboa. The 98 stations of the OVIDE section, from Portugal to the tip of Greenland, couldn't be realized in totality because of the presence of sea ice near Greenland. The last station (91) is on the shelf-break but a little away from the original section. The core of the work consisted in acquiring surface-to-bottom hydrographic profiles of pressure, temperature, salinity and dissolved oxygen, and analyzing 17 physical and biogeochemical tracers from 11500 samples drawn from the Niskin bottles of the CTD frame. In this report, we focus on the acquisition and calibration steps of the variables measured specifically by the hydrographic CTD-O2 probe.

After calibration, we find precisions for pressure, temperature, salinity and dissolved oxygen that fit the GO-SHIP international quality requirements. Pressure and temperature were calibrated at the laboratory before and after the cruise, leading to a repeatability better than 1 dbar and 0.001°C respectively. The calibration of salinity and dissolved oxygen data is obtained by applying polynomial correcting functions that are calculated to statistically minimize the differences between the probe data and the sample data analyzed on board in the chemistry container. These chemical data are also evaluated by comparison of replicates. After calibration, the CTD/chemical differences in salinity and oxygen data follow a zero-centered Gaussian-like distribution which standard deviation is used to evaluate the probe precision for each variable. For salinity, we find a standard deviation of 0.001, and for oxygen, 0.025 ml/l (or 1.1 µmol/kg). Those numbers correspond to a 68 % confidence interval and must be doubled to obtain the precision within a 95 % confidence interval.

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# The BOCATS 2021 Cruise

## 1.1 Introduction

The BOCATS 2021 cruise took place on board the R/V Sarmiento de Gamboa from 26<sup>th</sup> May to 29<sup>th</sup> June 2021, starting at Vigo (Spain) and finishing at Reykjavik (Island). It was led by Fiz F. Perez and Anton Velo (CSIC, Vigo). The Cruise Summary Report is available here: <https://csr.seadatanet.org/report/20218518> and more documents are available here: <https://doi.org/10.20351/29sg20210528>. Note that the Spanish data center uses “29SG” for the ship code, but the official code is “29AH” as related on <http://rvinfobase.eurocean.org/spec/vessel.jsp?id=3874> and on the [SeaDataNet vocabulary website](#).



Figure 1: R/V Sarmiento de Gamboa

The working area is between Portugal and Greenland (see fig. 2).

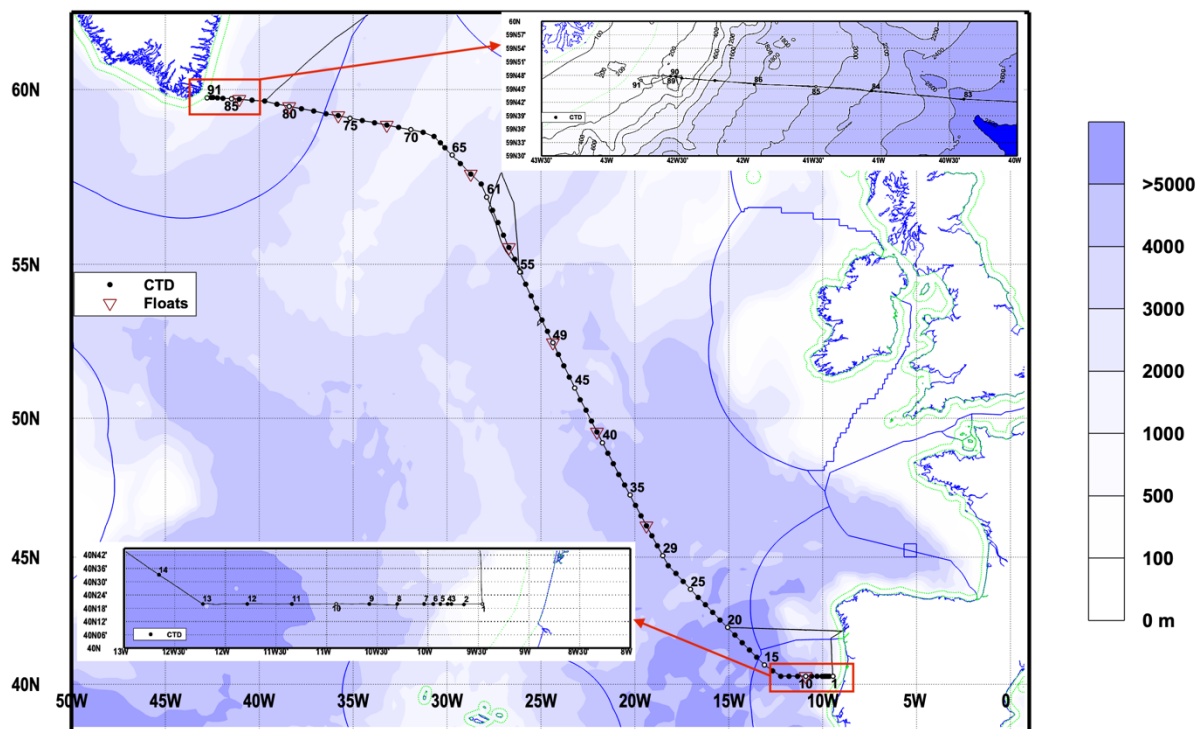


Figure 2: map of the working area, with zooms in the Iberian and Greenland areas. Blue lines delimit coasts and EEZ limits and green lines the 3 and 12 Nm national waters. Black and white dots are CTD stations (white when numbered), and red triangles are positions of float deployments.

## 1.2 Cruise participants

<b>Names</b>	<b>Organism</b>	<b>Responsibility on board</b>
Anton Velo Lanchas	IIM-CSIC	Planning + Data + Carbonic
Fiz Fernández Pérez	IIM-CSIC	Planning + Data + Carbonic
Mercedes de la Paz Arándiga	IIM-CSIC	Nutrients + N2O + Sampling
Jesús Rey	IIM-CSIC	Nutrients
Xose Antonio Padín	IIM-CSIC	Sampling + fCO2
Marcos Morente Fontela	CCMAR	Carbonic + Data
Marta López Mozos	IIM-CSIC	Sampling + Carbonic + Data
Elisabet Rodriguez-Cruz	UAveiro	Sampling + Carbonic + Data
M <sup>ª</sup> Xesus Alvarez Fernandez (Susa)	CCMAR	Sampling + Carbonic + Data
Damien Desbruyères	IFREMER	supervision of physics and link with chief scientist + ADCP analysis + weather and Mercator monitoring
Caroline Le Bihan	IFREMER	chemistry, supervision and CTD calibration
Lidia Carracedo	IFREMER	CTD watch (4-8) and sampling
Antoine Nasser	LOCEAN	CTD watch (0-4) and sampling
Yingjie Liu	IFREMER	CTD watch (8-12) and sampling
Philippe Le Bot	IFREMER	chemistry, O2
Michel Hamon	IFREMER	chemistry, salinity
Maxi Castrillejo	ETHZ	C-14, I-129, U-236
Lisa Leist	ETHZ	C-14, I-129, U-236



Figure 3: Scientific team and UTM crew members

### 1.3 Description of cruise operations

The following operations were carried out during the cruise:

- 93 CTD stations with O<sub>2</sub>, Salinity, pH total, alkalinity, Carbone total, nitrous oxide, methane, carbon isotopes (13 and 14), Nutrients, Oxygen 18, Uranium 236 and Iodine 129 sampling:
  - 1 test stations (number 0).
  - 91 OVIDE CTD stations (1-91) with 2 casts for the station 81 and no sampling for the station 89.

*Remark: for the treatment, the second cast of the station 81 will be the station 92.*

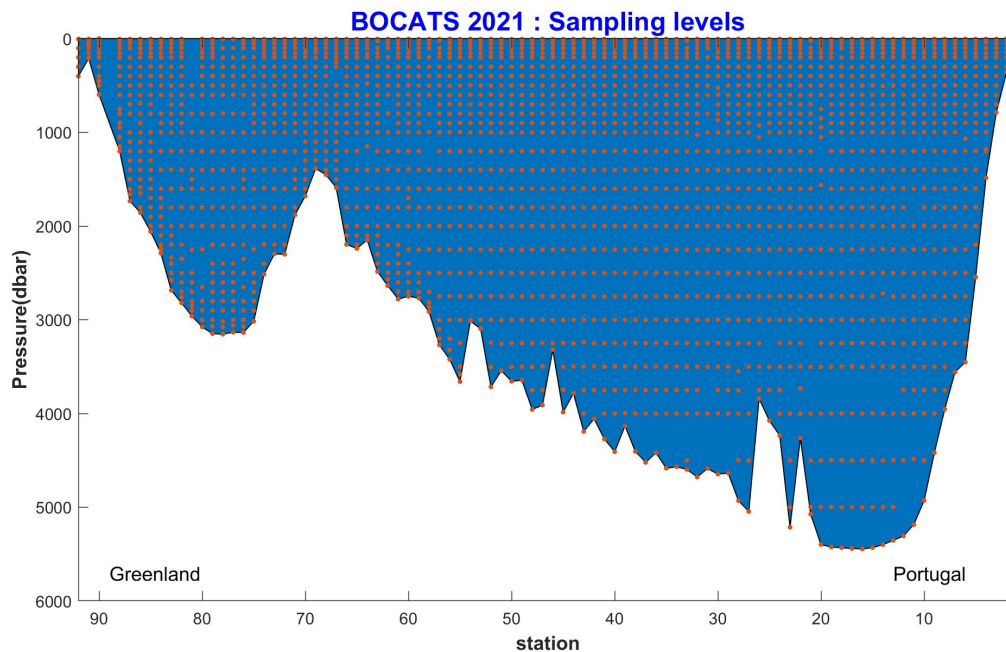


Figure 4: Synoptic chart indicating the sampling levels for CTD

- 20 Argo floats launched (Deep Arvor).
- SADCP measurements (Ship Acoustic Doppler Current Profiler, 75 and 150 kHz data acquisition).
- Underway measurements (Thermosalinometer monitoring).
- Stations of multi plankton sampler (Multinet)

## 1.4 Station list

Station number	Latitude begin	Longitude begin	Date begin	Latitude end	Longitude end	Date end	Latitude (mean)	Longitude (mean)	2021 day (mean)	Station duration (min.)	CTD max depth	Bottom depth	Magnetic dev. (deg.)
1	40.33208	-9.45964	2021/05/29 05:10:20	40.3321	-9.45962	2021/05/29 05:25:14	40.332	-9.46	149.2207	15	142	155	-2.1
2	40.32996	-9.64258	2021/05/29 07:07:55	40.32702	-9.64208	2021/05/29 07:33:57	40.328	-9.642	149.3062	26	358	370	-2.2
3	40.33336	-9.76686	2021/05/29 09:27:36	40.33298	-9.768	2021/05/29 10:14:43	40.333	-9.767	149.4105	47	782	798	-2.2
4	40.33314	-9.80496	2021/05/29 12:03:45	40.33314	-9.80494	2021/05/29 13:12:37	40.333	-9.805	149.5265	69	1471	1486	-2.2
5	40.3327	-9.87744	2021/05/29 14:45:58	40.3327	-9.87746	2021/05/29 16:31:21	40.333	-9.877	149.6518	105	2513	2528	-2.2
6	40.33323	-10.0374	2021/05/29 21:53:27	40.33336	-10.03744	2021/05/30 00:48:31	40.333	-10.037	149.9729	175	3504	3522	-2.3
7	40.33272	-9.94716	2021/05/30 02:54:22	40.33274	-9.94716	2021/05/30 05:07:56	40.333	-9.947	150.1675	134	3400	3413	-2.3
8	40.33336	-10.30204	2021/05/30 07:29:44	40.33232	-10.30486	2021/05/30 10:06:40	40.333	-10.303	150.3668	157	3889	3905	-2.4
9	40.33298	-10.57764	2021/05/30 14:48:38	40.33296	-10.57766	2021/05/30 17:30:53	40.333	-10.578	150.6734	162	4341	4353	-2.5
10	40.33334	-10.9054	2021/05/30 19:43:45	40.33332	-10.90544	2021/05/30 22:59:56	40.333	-10.905	150.8902	196	4838	4850	-2.6
11	40.3331	-11.34312	2021/05/31 01:46:54	40.3331	-11.3431	2021/05/31 04:52:56	40.333	-11.343	151.1388	186	5088	5098	-2.7
12	40.33334	-11.7832	2021/05/31 07:34:17	40.33336	-11.7832	2021/05/31 10:53:35	40.333	-11.783	151.3847	199	5203	5216	-2.9
13	40.33288	-12.2223	2021/05/31 15:53:24	40.33286	-12.22228	2021/05/31 19:28:50	40.333	-12.222	151.7369	215	5248	5259	-3
14	40.55182	-12.65486	2021/06/01 02:23:04	40.55182	-12.65486	2021/06/01 05:40:26	40.552	-12.655	152.1679	197	5294	5307	-3.2
15	40.78804	-13.10126	2021/06/01 08:41:23	40.78804	-13.10124	2021/06/01 12:10:47	40.788	-13.101	152.4348	209	5323	5339	-3.4
16	41.08714	-13.49766	2021/06/01 15:47:50	41.08714	-13.49766	2021/06/01 19:16:18	41.087	-13.498	152.7306	208	5337	5348	-3.5
17	41.38306	-13.88916	2021/06/01 23:07:04	41.38306	-13.88916	2021/06/02 02:28:27	41.383	-13.889	153.0332	201	5332	5346	-3.7
18	41.68398	-14.2812	2021/06/02 06:11:09	41.68416	-14.28126	2021/06/02 09:47:23	41.684	-14.281	153.3328	216	5325	5338	-3.9
19	41.98312	-14.67728	2021/06/02 14:50:19	41.9831	-14.67728	2021/06/02 18:14:17	41.983	-14.677	153.6891	204	5317	5330	-4
20	42.28344	-15.06614	2021/06/05 14:45:09	42.28309	-15.06624	2021/06/05 18:04:02	42.283	-15.066	156.6837	199	5291	5306	-4.2
21	42.5811	-15.46616	2021/06/05 20:55:17	42.58114	-15.46622	2021/06/06 00:14:09	42.581	-15.466	156.9408	199	4976	4990	-4.4
22	42.88106	-15.85268	2021/06/06 03:12:36	42.88108	-15.85304	2021/06/06 05:53:58	42.881	-15.853	157.1898	161	4187	4201	-4.5
23	43.18196	-16.24696	2021/06/06 08:34:53	43.18192	-16.24692	2021/06/06 11:54:44	43.182	-16.247	157.427	200	5112	5126	-4.7
24	43.46642	-16.63736	2021/06/06 14:45:36	43.46646	-16.6374	2021/06/06 17:25:04	43.466	-16.637	157.6704	159	4163	4178	-4.9
25	43.76748	-17.0286	2021/06/06 20:04:38	43.76274	-17.0155	2021/06/06 22:44:40	43.765	-17.022	157.8921	160	4009	4025	-5.1
26	44.07872	-17.42114	2021/06/07 01:51:48	44.0787	-17.42114	2021/06/07 04:17:58	44.079	-17.421	158.1284	146	3778	3793	-5.3
27	44.37708	-17.82104	2021/06/07 07:04:03	44.39146	-17.82822	2021/06/07 10:19:32	44.384	-17.825	158.3624	195	4949	4963	-5.5
28	44.68026	-18.2134	2021/06/07 13:10:59	44.68906	-18.21694	2021/06/07 16:10:55	44.685	-18.215	158.6118	180	4836	4850	-5.6
29	45.0499	-18.50608	2021/06/07 19:05:21	45.0499	-18.50608	2021/06/07 22:06:27	45.05	-18.506	158.8583	181	4551	4564	-5.8

30	45.42364	-18.79968	2021/06/08 01:04:37	45.42362	-18.79972	2021/06/08 03:57:35	45.424	-18.8	159.1049	173	4561	4575	-6
31	45.7961	-19.09116	2021/06/08 06:49:36	45.796	-19.09108	2021/06/08 09:54:25	45.796	-19.091	159.3486	185	4502	4519	-6.1
32	46.17458	-19.38002	2021/06/08 12:50:28	46.17491	-19.38112	2021/06/08 15:46:30	46.175	-19.381	159.5962	176	4592	4606	-6.3
33	46.54404	-19.67306	2021/06/08 18:38:42	46.54406	-19.67302	2021/06/08 21:35:35	46.544	-19.673	159.8383	177	4512	4526	-6.5
34	46.91718	-19.96976	2021/06/09 00:23:06	46.91714	-19.97024	2021/06/09 03:15:19	46.917	-19.97	160.0758	172	4484	4500	-6.7
35	47.29004	-20.2635	2021/06/09 05:58:05	47.28992	-20.26302	2021/06/09 08:54:05	47.29	-20.263	160.3098	176	4499	4516	-6.8
36	47.66516	-20.55164	2021/06/09 11:32:16	47.66592	-20.55298	2021/06/09 14:24:18	47.666	-20.552	160.5405	172	4339	4354	-7
37	48.03818	-20.84924	2021/06/09 17:05:23	48.0465	-20.86432	2021/06/09 20:01:32	48.042	-20.857	160.7732	176	4441	4457	-7.2
38	48.41312	-21.14064	2021/06/09 22:48:41	48.41304	-21.14072	2021/06/10 01:39:27	48.413	-21.141	161.0098	171	4324	4340	-7.4
39	48.78608	-21.43034	2021/06/10 04:44:06	48.79792	-21.43985	2021/06/10 07:26:02	48.792	-21.435	161.2535	162	4060	4077	-7.6
40	49.15734	-21.71842	2021/06/10 10:22:08	49.15254	-21.71601	2021/06/10 13:18:26	49.155	-21.717	161.4933	176	4330	4343	-7.8
41	49.53106	-22.01414	2021/06/10 16:22:30	49.53108	-22.01412	2021/06/10 19:06:52	49.531	-22.014	161.7394	164	4196	4203	-8
42	49.90516	-22.31132	2021/06/10 22:16:29	49.90514	-22.3113	2021/06/11 00:48:45	49.905	-22.311	161.981	152	3987	4002	-8.2
43	50.27733	-22.60088	2021/06/11 03:37:44	50.27734	-22.60084	2021/06/11 06:20:44	50.277	-22.601	162.2078	163	4118	4133	-8.4
44	50.63994	-22.90058	2021/06/11 08:52:23	50.6403	-22.90104	2021/06/11 11:20:33	50.64	-22.901	162.4212	148	3721	3735	-8.6
45	51.02896	-23.1924	2021/06/11 14:02:24	51.03918	-23.19942	2021/06/11 16:30:58	51.034	-23.196	162.6366	149	3915	3928	-8.8
46	51.39906	-23.4804	2021/06/11 19:10:30	51.39906	-23.48026	2021/06/11 21:23:11	51.399	-23.48	162.845	133	3267	3282	-9.1
47	51.77035	-23.77792	2021/06/12 00:10:30	51.7708	-23.77782	2021/06/12 02:38:44	51.771	-23.778	163.0588	148	3842	3857	-9.3
48	52.14758	-24.07174	2021/06/12 05:33:37	52.15078	-24.07722	2021/06/12 08:10:27	52.149	-24.074	163.2861	157	3888	3903	-9.5
49	52.52024	-24.36146	2021/06/12 10:43:10	52.52072	-24.35806	2021/06/12 13:03:27	52.52	-24.36	163.4954	140	3582	3598	-9.7
50	52.8916	-24.66362	2021/06/12 16:16:02	52.8964	-24.65654	2021/06/12 18:40:04	52.894	-24.66	163.7278	144	3595	3609	-10
51	53.25998	-24.94969	2021/06/12 22:00:27	53.25726	-24.94648	2021/06/13 00:21:49	53.259	-24.948	163.9661	141	3486	3505	-10.2
52	53.63274	-25.23252	2021/06/14 00:49:17	53.62362	-25.2269	2021/06/14 03:09:05	53.628	-25.23	165.0828	140	3655	3667	-10.4
53	54.0148	-25.53268	2021/06/14 06:24:40	54.0148	-25.53258	2021/06/14 08:31:15	54.015	-25.533	165.3111	127	3048	3063	-10.7
54	54.38506	-25.8201	2021/06/14 11:22:20	54.3913	-25.81132	2021/06/14 13:20:26	54.388	-25.816	165.5148	118	2967	2982	-10.9
55	54.76227	-26.1252	2021/06/16 20:18:11	54.76065	-26.12734	2021/06/16 22:46:38	54.761	-26.126	167.8975	148	3600	3612	-11.2
56	55.14866	-26.39837	2021/06/17 02:02:59	55.15474	-26.38125	2021/06/17 04:13:57	55.152	-26.39	168.1309	131	3367	3380	-11.4
57	55.50494	-26.70838	2021/06/17 07:21:43	55.51771	-26.69831	2021/06/17 09:39:23	55.511	-26.703	168.3545	138	3216	3227	-11.7
58	55.88376	-26.99767	2021/06/17 13:14:49	55.8805	-26.98968	2021/06/17 15:06:17	55.882	-26.994	168.5907	111	2870	2883	-11.9
59	56.25148	-27.29178	2021/06/17 18:16:37	56.24452	-27.2872	2021/06/17 20:13:49	56.248	-27.289	168.8022	117	2728	2741	-12.2
60	56.62662	-27.58046	2021/06/17 23:28:53	56.61932	-27.57334	2021/06/18 01:22:38	56.623	-27.577	169.0179	114	2711	2722	-12.5
61	57.0041	-27.88022	2021/06/18 04:31:22	57.0041	-27.88024	2021/06/18 06:26:21	57.004	-27.88	169.2284	115	2737	2752	-12.8
62	57.37666	-28.17628	2021/06/18 09:18:35	57.37668	-28.17626	2021/06/18 11:03:22	57.377	-28.176	169.4243	105	2598	2612	-13
63	57.67354	-28.73242	2021/06/18 13:59:57	57.67354	-28.73242	2021/06/18 15:40:44	57.674	-28.732	169.6183	101	2448	2464	-13.4



64	57.97086	-29.28418	2021/06/18 19:53:39	57.97074	-29.28476	2021/06/18 21:23:37	57.971	-29.284	169.8602	90	2120	2135	-13.8
65	58.2066	-29.72952	2021/06/18 23:40:56	58.20676	-29.72974	2021/06/19 01:14:26	58.207	-29.73	170.0192	93	2208	2224	-14.1
66	58.40834	-30.11244	2021/06/19 03:26:12	58.4069	-30.1197	2021/06/19 04:55:01	58.408	-30.116	170.174	89	2167	2180	-14.3
67	58.5495	-30.36835	2021/06/19 06:37:17	58.54954	-30.36818	2021/06/19 07:53:48	58.55	-30.368	170.3025	77	1572	1586	-14.5
68	58.72562	-30.7031	2021/06/19 09:37:59	58.72554	-30.70302	2021/06/19 10:42:18	58.726	-30.703	170.4237	64	1435	1449	-14.7
69	58.84318	-31.27768	2021/06/19 12:52:42	58.84372	-31.27902	2021/06/19 13:54:03	58.843	-31.278	170.5579	61	1370	1385	-15
70	58.90986	-31.91988	2021/06/19 16:11:41	58.91034	-31.92632	2021/06/19 17:25:33	58.91	-31.923	170.7004	74	1657	1673	-15.3
71	58.97318	-32.56938	2021/06/19 19:48:03	58.97312	-32.5693	2021/06/19 21:10:35	58.973	-32.569	170.8537	83	1855	1868	-15.6
72	59.03988	-33.21256	2021/06/19 23:34:19	59.03986	-33.21254	2021/06/20 01:10:08	59.04	-33.213	171.0154	96	2272	2284	-15.9
73	59.10148	-33.8508	2021/06/20 03:39:41	59.10148	-33.85078	2021/06/20 05:12:15	59.101	-33.851	171.1847	93	2265	2279	-16.2
74	59.16246	-34.50268	2021/06/20 09:29:54	59.16232	-34.50262	2021/06/20 11:11:21	59.162	-34.503	171.431	101	2477	2490	-16.5
75	59.231	-35.15406	2021/06/20 13:33:39	59.22956	-35.16644	2021/06/20 15:34:19	59.23	-35.16	171.6069	121	2969	2983	-16.9
76	59.29718	-35.8026	2021/06/20 17:48:44	59.29716	-35.80264	2021/06/20 19:57:52	59.297	-35.803	171.787	129	3086	3100	-17.1
77	59.3474	-36.44256	2021/06/20 22:26:19	59.3474	-36.44256	2021/06/21 00:27:37	59.347	-36.443	171.9771	121	3082	3094	-17.4
78	59.42394	-37.09796	2021/06/21 02:53:27	59.42386	-37.09608	2021/06/21 04:54:30	59.424	-37.097	172.1625	121	3103	3117	-17.7
79	59.48702	-37.74762	2021/06/21 07:20:02	59.487	-37.74778	2021/06/21 09:31:44	59.487	-37.748	172.3513	132	3096	3110	-18
80	59.55172	-38.3981	2021/06/21 11:53:38	59.5517	-38.39784	2021/06/21 13:53:35	59.552	-38.398	172.5372	120	3026	3041	-18.3
81	59.60986	-39.05516	2021/06/21 17:24:38	59.60988	-39.05514	2021/06/21 19:28:13	59.61	-39.055	172.7684	124	2914	2928	-18.6
82	59.69282	-39.71684	2021/06/21 21:42:31	59.69252	-39.71652	2021/06/21 23:39:11	59.693	-39.717	172.945	117	2776	2783	-18.9
83	59.71178	-40.3933	2021/06/22 01:58:19	59.71184	-40.39336	2021/06/22 03:47:42	59.712	-40.393	173.1201	109	2645	2658	-19.2
84	59.7426	-41.06958	2021/06/22 06:04:03	59.7426	-41.06958	2021/06/22 07:43:44	59.743	-41.07	173.2874	100	2257	2272	-19.5
85	59.7583	-41.48126	2021/06/22 11:04:33	59.75834	-41.48128	2021/06/22 12:33:59	59.758	-41.481	173.4925	89	2030	2037	-19.6
86	59.76714	-41.93464	2021/06/22 14:15:00	59.76716	-41.93474	2021/06/22 15:36:02	59.767	-41.935	173.6219	81	1833	1847	-19.8
87	59.78134	-42.2256	2021/06/22 17:01:10	59.77874	-42.22204	2021/06/22 18:24:55	59.78	-42.224	173.7382	84	1711	1724	-19.9
88	59.79022	-42.46864	2021/06/22 19:58:30	59.79022	-42.46866	2021/06/22 21:01:36	59.79	-42.469	173.8542	63	1186	1200	-20
89	59.79614	-42.51248	2021/06/23 07:30:18	59.79614	-42.51246	2021/06/23 08:01:38	59.796	-42.512	174.3236	31	878	893	-20
90	59.79708	-42.55066	2021/06/23 09:31:11	59.79708	-42.55066	2021/06/23 10:01:35	59.797	-42.551	174.4072	30	591	607	-20
91	59.7817	-42.76752	2021/06/24 09:17:12	59.7817	-42.76752	2021/06/24 09:35:23	59.782	-42.768	175.3933	18	209	223	-20.1



## 1.5 General and technical problems during the cruise

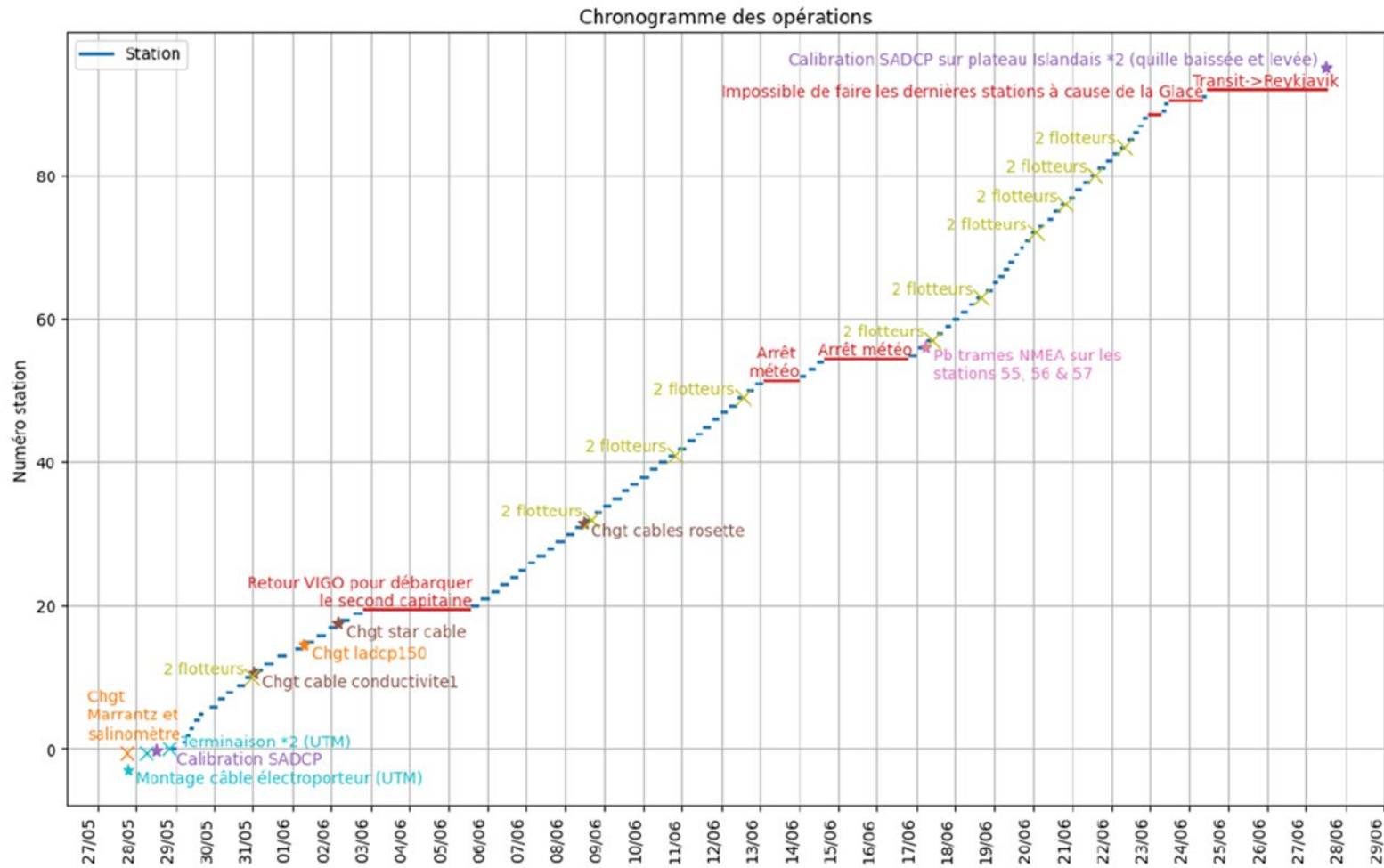


Figure 5: chronogram of the operations

The 27<sup>th</sup> May, a new electrocarrier cable has been installed on board and the vessel left Vigo the 28<sup>th</sup> to go to the CTD test station. At the geographic point of station (0), a tension test on the cable has been made with a load of 500kg at its end to simulate the CTD that has been immersed until 1800m.

During the test station, the communication with the CTD has been lost at 140m of depth. The cable of the secondary conductivity sensor has been changed and finally, the junction between the CTD and the electrocarrier cable shows some problems and has to be remade. The test station was finally realized during the night between the 28<sup>th</sup> and 29<sup>th</sup> May.

A new tension test on the cable has been realized at the station 6 geographical position and the crew thought the station 6 was realized so the vessel went to the geographical point of the station7 which is just at 4nm, did the CTD and came back to the station 6 geographical point. So, in the original files, the station 6 was realized at the station 7 geographical point and the station 7 at the station 6 geographical point. To be sure of not be disturbed, the files has been changed to finally have the good corresponding between the number of the station and the geographical point.

During the stations 9 and 10 and between two levels of pressure, the pump of the primary conductivity sensor stopped with the loss of primary conductivity and oxygen data for result. Some issues appeared on the secondary conductivity and oxygen data too. More details are available in section 6.3.9.

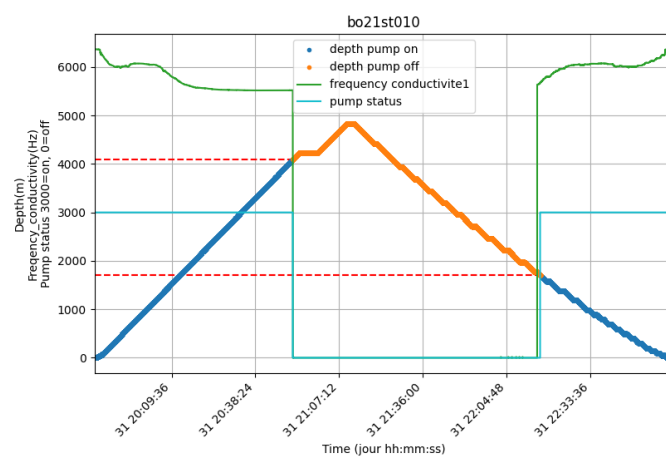


Figure 6: pump and conductivity sensor behaviors during station n°10

The problem has been solved by changing the conductivity sensor cable.

Before the station 20, we headed for Vigo to disembark a crew member for medical issue. We took back the cruise the 5<sup>th</sup> June.

After the station 31 (the 8<sup>th</sup> of June) and problems with the fired bottles, the cables between the motor and the CTD were changed.

The 13<sup>th</sup>, 15<sup>th</sup> and 16<sup>th</sup> of June, the operations stopped because of the bad weather conditions.

The stations 55, 56 and 57 were done after the stop but it seems that the bad weather had consequences on the NMEA information from the EIVA system. The information of navigation in these files had to be corrected.

Finally, the presence of ice at the station 91 forced to stop the cruise. For information, this station on the shelf break wasn't made at its original position.

All operations are summarized in Figure 5 as a function of time, with station number on the Y-axis.

## 2 General information about data acquisition

### 2.1 Equipment

For hydrology acquisition, we used our LOPS frame with 28 bottles of 8 liters and a SBE911+ CTD. The frame is also equipped with 2 LADCP, electronic reversing sensors and altimeter.

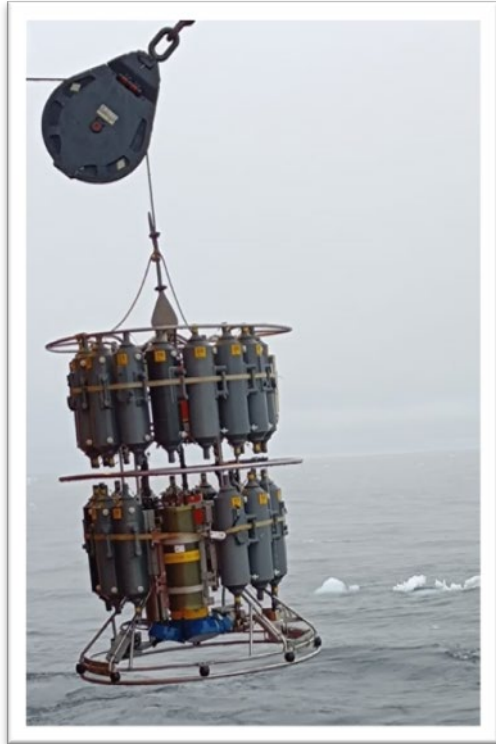


Figure 7: LOPS CTD rosette

(bottles 3 to 16 on the upper level)  
(bottles 17 to 30 on the lower level)



Figure 8: Upper LADCP on CTD frame

The same Seabird 911+ CTD probe (s/n. 813) was used throughout the cruise. It was equipped with two sets of T, C, and O<sub>2</sub> sensors. We found also on the frame, 2 LADCP (150 kHz and 300 kHz), 4 SIS reversing sensors (2 for Pressure measurements and 2 for Temperature measurements) and a Valeport altimeter (500 kHz) working at a frequency significantly different than the ADCP's. The LADCPs take the place of bottles 1, 2, 31 and 32.

#### The CTD sensors used:

	Primary sensors	Secondary sensors
Temperature (SBE3+)	s/n 2911	s/n 4594
Conductivity (SBE4c)	s/n 3194	s/n 3166
Oxygen (SBE43)	s/n 1402	s/n 526

Electronics mounted on the LOPS frame:

	top	bottom
PASH 6000 Rosette	s/n 462	s/n 4618
ADCP	Upward-looking: s/n 3777 (IRD's property) RDI 300 kHz WorkHorse (slave)	Downward-looking: s/n 24609 RDI 150 kHz WorkHorse (master) and after the station n°14, s/n 23909 RDI 150 kHz WorkHorse
IXSEA Pinger		s/n 530
Valeport altimeter		s/n 59678

SIS Reversing sensors:

	Bottle 3	Bottle 5
SIS pressure meter RPM 6000X	s/n 6664 (change of its battery after the station 61)	s/n 6665
SIS thermometer RTM4002X	s/n 1751	s/n 1752

## 2.2 CTD Acquisition Protocol

The control of the CTD is carried out by 2 people: one from UTM team and one from IFREMER team.

The CTD casts start with a round trip at a depth of 30 m to remove the air bubbles in the 2 circuits of the sensors. The CTD profile then begins from the surface down to a distance of about 10 meters above the bottom, with a velocity of about 1m/s. At each cast, the electro-mechanical cable is unwound and wound at a speed of 1 meter per second.

The measurements of the probe are monitored on a screen with Seasave v7 software. This system allows the real time visualization of the different parameters measured and calculated on the profiles, while controlling the quality of the signal transmitted by the probe. All of the data transmitted by the probe, at the rate of 24 cycles per second, are saved on a disk. The final bottom approach is performed using the altimeter, as soon as it has 'latched' the bottom at a distance of about 90 m.

During the upcast, also done at 1m/s, the frame is stopped at predefined levels of closure of the 28 sampling bottles. A wait of 30 seconds at each level is performed before the closing of the bottle(s) and the CTD data are recorded during 8 seconds to generate the bottles files.

## 2.3 Sampling protocol

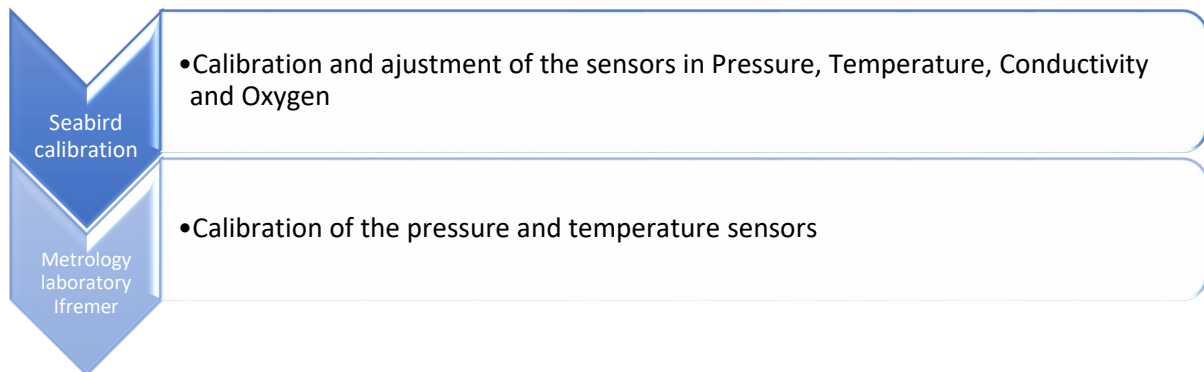
As soon as they reach the surface, the samples are taken from each bottle for the numerous analyses performed on board, in the order recommended by the WOCE instructions (i.e., dissolved gas, alkalinity, carbon isotopes, alkalinity, nutrients, salinity, seawater isotopes, radionuclides). The bottles are sampled from the deepest to the shallowest levels (from bottle 3 to 30).

The salinity and oxygen samples will be used to adjust the salinity and dissolved oxygen CTD profiles. For a lot of casts, two bottles are fired at the same pressure level to have replicates in the protocol. It improves the adjustment and helps to quantify the quality of the measurements.

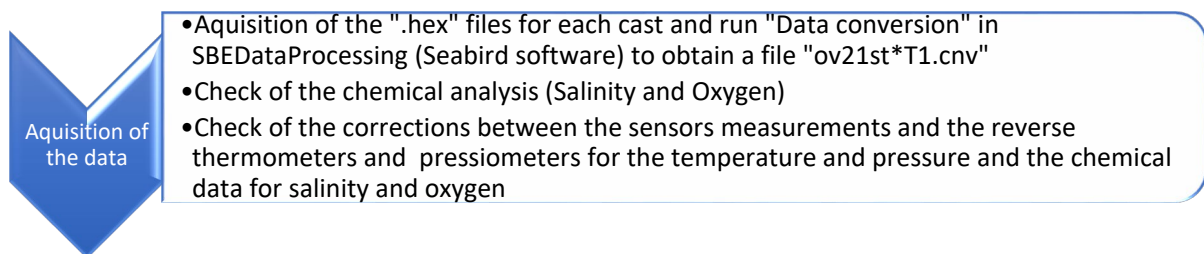
The details of the protocols are described in appendix E and F

### 3 Chronological steps applied to the CTD-O2 data

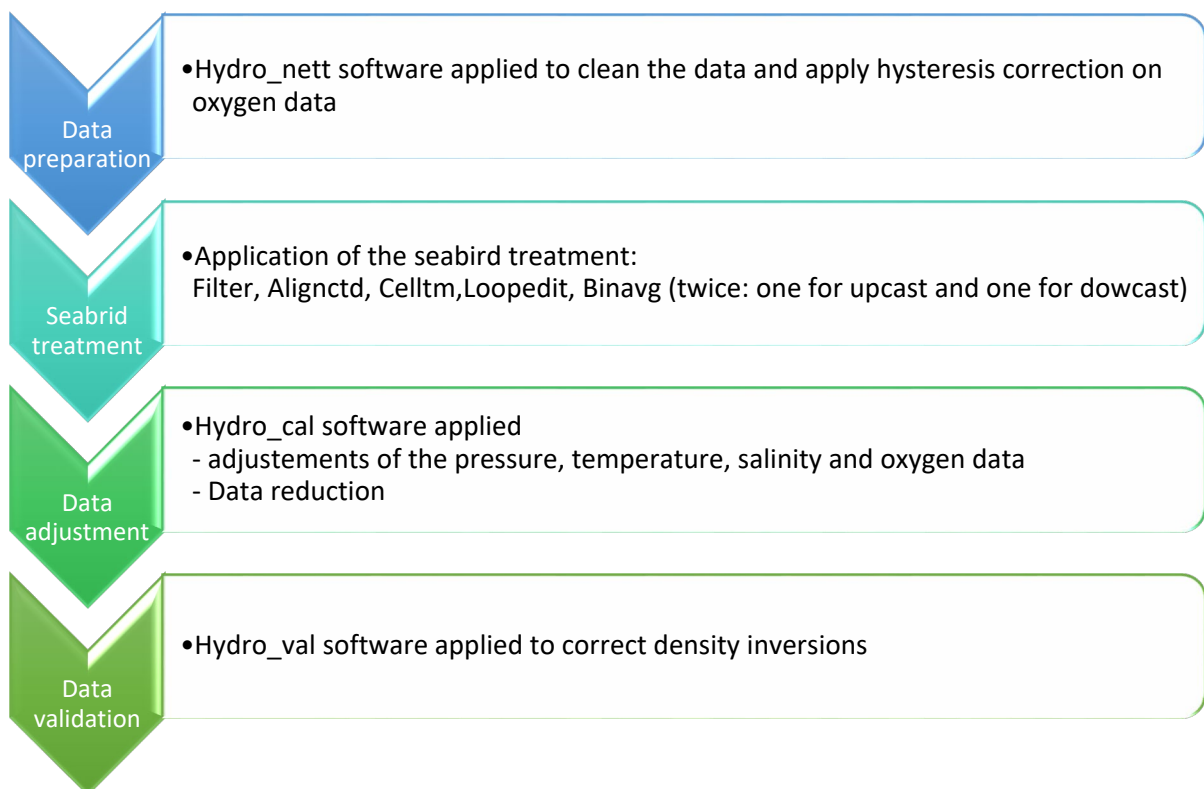
#### 3.1 Pre-cruise activity



#### 3.2 During the cruise



#### 3.3 Post-cruise treatment



## 4 CTD probe measurements

Before each cruise, the CTD was adjusted by Seabird for the parameters Pressure, Temperature, Conductivity and Oxygen. New coefficients are calculated for each sensor.

Independently, before and after each cruise our CTD was calibrated in the Ifremer Metrology laboratory which is under COFRAC accreditation for Pressure and Temperature calibration.

### 4.1 Pressure measurements

The SBE9+ probe is equipped with a Paroscientific digiquartz pressure sensor which characteristics are:

Resolution: 0.001 %, i.e. 0.1 psi or 0.07 dbar  
Accuracy: 0.015 % of the full scale (10000 psi), or in our case  $\pm 1.5$  psi or  $\pm 1.0$  dbar

The sensor was calibrated by Seabird the 26<sup>th</sup> of January 2021 before the cruise to have new coefficients (Refer to appendix A).

#### 4.1.1 Calibration of the pressure sensor at Ifremer metrology laboratory

The sensor is connected to a Desgranges and Huot pressure balance, which delivers a reference pressure with an uncertainty of 0.93 dbar at a nominal pressure of 6000dbar. The traceability of the measurements to the SI (International system) is sure.

Three cycles of increasing and decreasing pressure, by successive increments of 600 dbar, from 0 to 6000 dbar, are performed at laboratory temperature. ( $20\text{ °C} \pm 1\text{ °C}$ ).

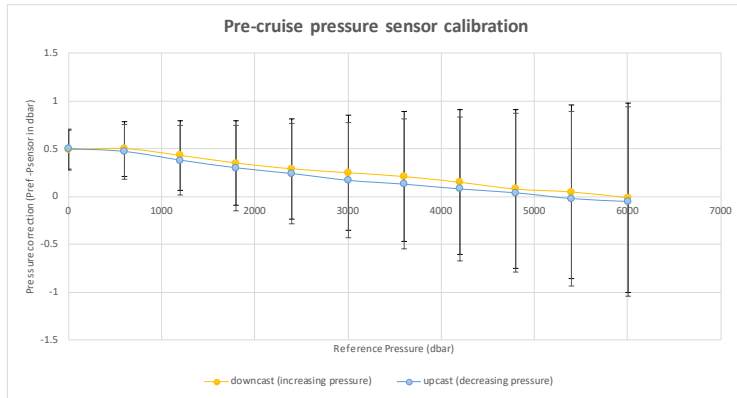


Figure 9: Mean of the correction of the pressure sensor at each level of pressure (26th of April 2021)

The uncertainty on the correction is 0.99 dbar at a nominal pressure of 6000dbar.

$$U = 2100\text{Pa} + 1,3E^{-4} \times \text{Pressure}(\text{Pa})$$

(with k=2)

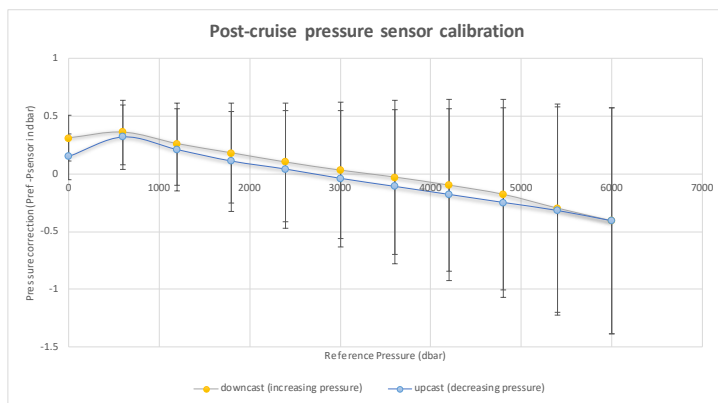


Figure 10: Mean of the correction of the pressure sensor at each level of pressure (12th of October 2021)

The uncertainty on the correction is 0.98 dbar at a nominal pressure of 6000dbar.

$$U = 2000\text{Pa} + 1,3E^{-4} \times \text{Pressure}(\text{Pa})$$

(with k=2)

The maximum difference observed between pre-and post-cruise (downcast and upcast) is 0.40 dbar.

#### 4.1.2 Correction of the pressure measurements on the CTD profiles

The uncertainty on the correction compared with the correction itself is important so correction on the pressure measurements is not applied but the final uncertainty on the pressure measurements (in the conditions of the laboratory) needs to take into account this correction adding it linearly. The maximal calibration uncertainty obtained is 1.4dbar.

#### 4.1.3 Validation of the CTD pressure measurements

On the CTD, we had only one pressure sensor, so we followed the response of the CTD pressure sensor, during the cruise, by different ways.

- Firstly, we noted the value of the sensor in the air (the frequency in Hz) before each station, at the beginning of the downcast (in dbar) and at the end of the upcast (in dbar)

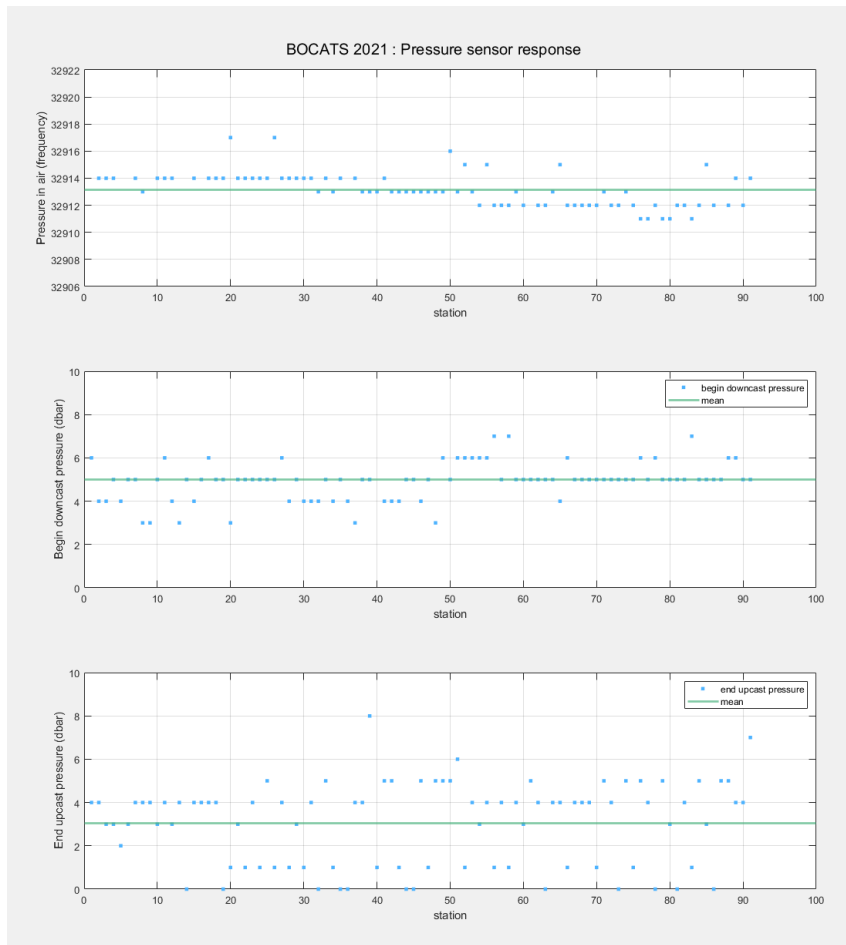


Figure 11: Monitoring of the pressure sensor  
*a) in air, at the start of the cast (value in Hertz),  
 b) at the start of the downcast,  
 c) at the end of the downcast.*  
*Means values are shown as solid lines*

Conclusion: no drift was observed during the cruise.

- Secondly the frame is equipped with reversing pressure meter sensor (SIS RPM 6000X) on bottle 3 and bottle 5. We compared the value of the CTD sensor and SIS sensor at the bottom to detect any drift.

The SIS pressiometers have not been calibrated since we bought them, so we followed relative relation. Here again, no drift was observed.



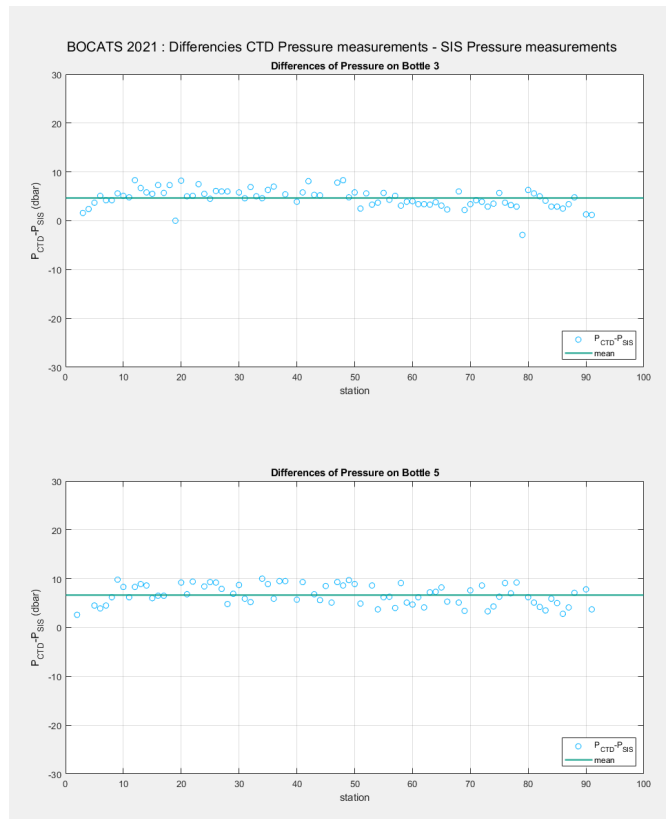


Figure 12: Monitoring of the pressure sensor drift during the cruise

As a general conclusion, the pressure measured by the SBE 911 was not corrected.

## 4.2 Temperature measurements

Our probe is equipped with two sets of temperature sensors Seabird SBE3 which characteristics are:

Resolution: 0.0003°C

Accuracy: 0.0010°C

The sensors were calibrated by Seabird the 23<sup>th</sup> of February 2021 before the cruise to have new coefficients (Refer to appendix B).

### 4.2.1 Calibration of the temperature sensors at Ifremer metrology laboratory

The temperature sensors are fully immersed in a thermostatic seawater bath HART model 7BATH-045 which temperature stability is  $\pm 0.001^\circ\text{C}$ . The reference temperature of the bath is provided by a Rosemount platinum resistance  $25\Omega$  thermometer, placed in close proximity to the sensors. This reference thermometer is periodically calibrated at two fixed point of the EIT90: the triple point of water and the Gallium fusion point. The traceability of the measurements to the SI (International system) is sure.

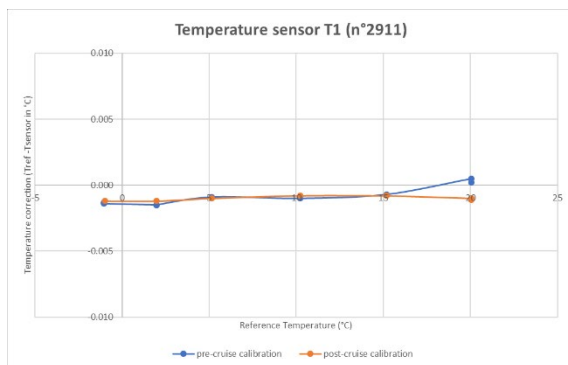


Figure 13: pre-cruise and post-cruise calibration of the primary temperature sensor n°2911

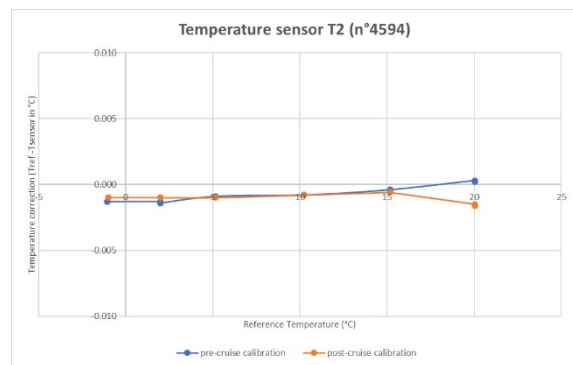


Figure 14: pre-cruise and post-cruise calibration of the secondary temperature sensor n°4594

The uncertainty on the temperature corrections obtained in the laboratory conditions is  $U = 0.014^\circ\text{C}$  (with  $k=2$ )

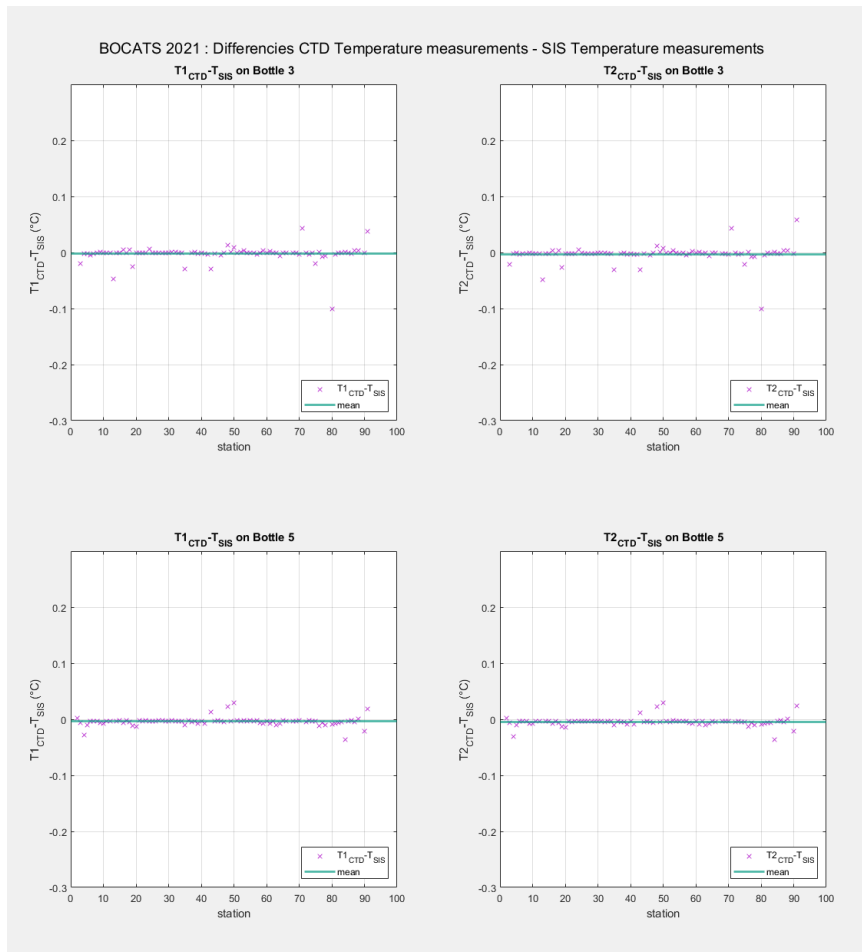
### 4.2.2 Correction of the temperature measurements on the CTD profiles

The uncertainty on the correction compared with the correction itself is important so no correction on the temperature measurements was applied but the final uncertainty on the temperature measurements (in the conditions of the laboratory) needs to take in account this correction by add it linearly. The maximal calibration uncertainty obtained is  $0.015^\circ\text{C}$ .

*Remark: we have to keep in mind that the major component of this budget uncertainty comes from the bath and its homogeneity. The standard deviation of the measurements during the calibration is around  $0.0004^\circ\text{C}$  and the repeatability is around  $0.0001^\circ\text{C}$ .*

### 4.2.3 Validation of the CTD temperature measurements

During the cruise, we followed the response of the CTD temperature sensor compared with the reversing thermometers (SIS RTM 4002X) on bottle 3 and bottle 5. We compared the value of the CTD sensor and SIS sensor at the bottom to detect any drift.



*Figure 15: Monitoring of the temperature sensor drift during the cruise*

Conclusion: no correction was applied to temperature measurements.

### 4.3 Conductivity measurements

Our probe is equipped with two sets of conductivity sensors Seabird SBE4c which characteristics are:

Resolution: 0.0004mS/cm  
Accuracy: 0.0030mS/cm

The sensors were calibrated by Seabird the 21<sup>th</sup> of January 2021 before the cruise to have new coefficients (Refer to appendix C).

During the cruise, salinity samples were taken at each station to adjust the conductivity measurements of the probe.

### 4.4 Oxygen measurements

Two sets of oxygen sensors Seabird SBE43 are also connected to the probe which characteristics are:

Resolution: No information  
Accuracy: 2% of saturation

The SBE43 sensors provide data in Volt. To convert them in ml/l, Seabird applies this formula:

$$Oxygen = \left[ Soc \times \left( V + V_{offset} + tau * \frac{dV}{dt} \right) \right] \times Ox_{sol} \times \underbrace{(1 + A \times T + B \times T^2 + C \times T^3) \times e^{(E \times \frac{P}{K})}}_{\varphi}$$

Where:

- $V$  = Oxygen in volt
- $\frac{dV}{dt}$  = derivatives (volt/second)
- $T$  = Temperature in °C
- $S$  = Salinity
- $P$  = Pressure in dbar
- $K$  = Temperature in kelvin (°K = °C + 273.15)
- $tau$  = Time constant
- $Ox_{sol}$  = Oxygen solubility
- $Soc, V_{offset}, A, B, C, E$ : sensor calibration coefficients

In practice, the term associated with tau is neglected because it adds noise when the profile is homogenous vertically (see Application note n° 64; Nov 2008). The equation becomes:

$$Oxygen = [Soc \times (V + V_{offset})] \times \varphi$$

The sensors were adjusted by Seabird the 27<sup>th</sup> and 29<sup>th</sup> of April 2021 before the cruise to have new coefficients (Refer to appendix D).

During the cruise, oxygen samples were taken at each station to adjust the dissolved oxygen measurements of the probe.

## 5 Salinity and oxygen samples analysis

During the cruise, 2166 salinity samples and 2155 oxygen samples were analyzed. Some of them are replicates of two bottles at the same sampling level.

### 5.1 Equipment

All the salinity and dissolved oxygen samples are analyzed on board, during the cruise, in the LOPS chemical analysis container, which has Metrohm 798 titrinos and Guildline Portasal salinometers. Air conditioning allows regulation of the room temperature ( $20\text{ }^{\circ}\text{C}$  at  $\pm 0.5\text{ }^{\circ}\text{C}$ ).

As soon as the collection of the cast is finished, the samples are placed in the analysis container. The samples (specially the salinity samples) are analyzed 20 to 30 hours after collection to allow them to achieve a thermal equilibrium.



Figure 16: samples boxes



Figure 17: salinity sample



Figure 18: oxygen sample

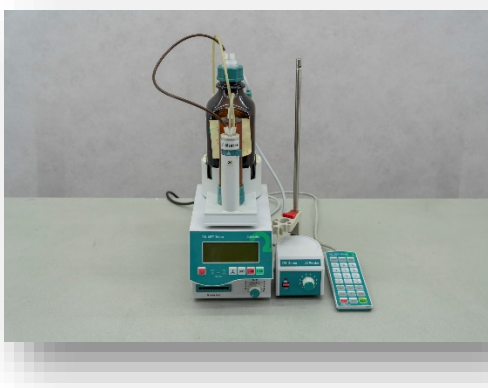


Figure 19: Metrohm 798 titrino oxygen analyzer with a platinum titrode, a 20 ml burette to deliver the sodium thiosulfate and a 5ml burette to deliver the potassium iodate



Figure 20: Guildline portasal 8410A salinometer

The daily standardization of the measuring instruments (salinometers and tritinos) was performed by Caroline LE BIHAN, all salinity analyses were performed by Michel HAMON, and oxygen analyses by Philippe LE BOT.

## 5.2 Salinity analysis

### 5.2.1 General protocol

The salinity of the samples is determined according to the equation PSS 78 (UNESCO 1981). Throughout the cruise, the temperature of the salinometer is fixed at 21°C.

For each sample, three successive rinses of the cell are performed before making three readings separated each time by a rinse.

The salinometer Guildline was connected to a PC and all the analysis were saved directly on computer with a homemade software in python 'easysal'

All salinity measurements taken during the OVIDE cruise were performed on the same Portasal salinometer (s/n: 71420 id « D »).

This salinometer was standardized using one batch of standard seawater bottles (IAPSO Standard Seawater): batch P162 (Salinity = 34.993, one-year old). The standardization was verified every morning and after analysis of two casts (56 samples).

Dates of salinometer adjustment: May, 30; June 10, June 24

### 5.2.2 Replicates in salinity

The replicates help to quantify the quality of the chemical data.

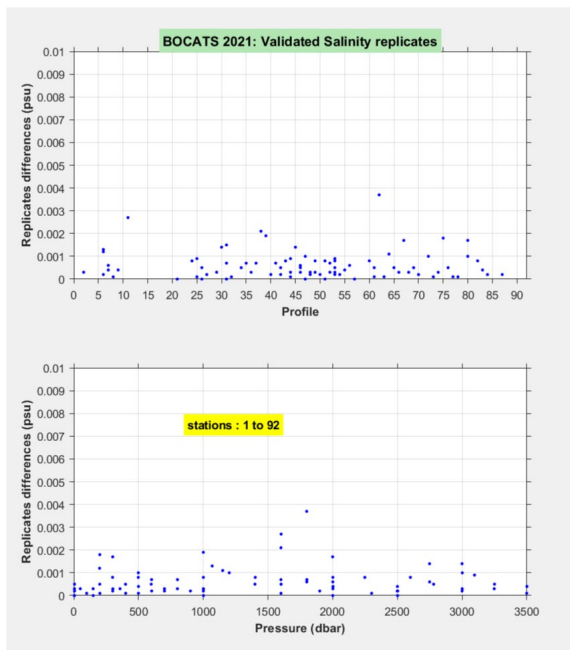


Figure 21: validated salinity replicates

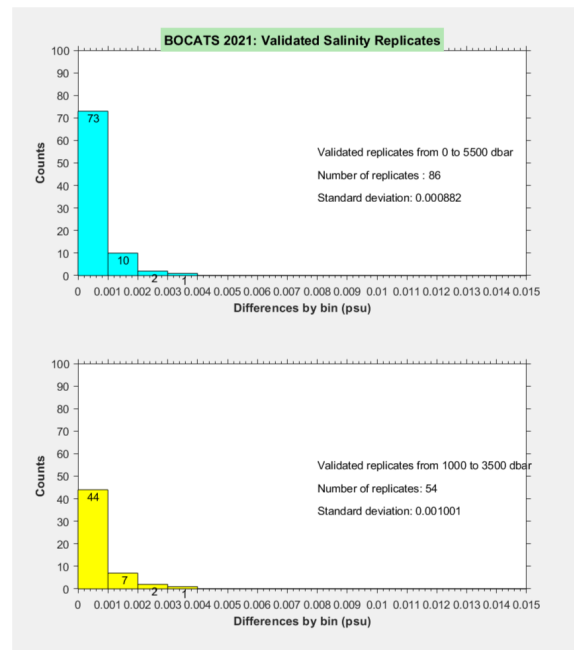


Figure 22: histogram of the validated salinity replicates

The standard deviation of salinity replicates is 0.001, used to quantify “chemical salinity error” (section 7).

## 5.3 Oxygen analysis

### 5.3.1 General protocol

The operating conditions and the analysis method (Winkler titration) comply to the recommendations of WOCE (WOCE Operations Manual, 1991).

The details of the protocol are described in appendix G

After acidification in the sampling bottle, the liberated iodine is dosed with a solution of sodium thiosulfate which normality is about 0.02 N. Its normality is determined daily, before the start of the analysis series, by comparison to a potassium iodate solution, which normality is 0.019996.

The titrino (s/n 1798001011224) was connected to a PC and all the analysis were saved directly on computer with a homemade software in python 'easytitrino'.

### 5.3.2 Replicates in oxygen

The replicates help to quantify the quality of the chemical data.

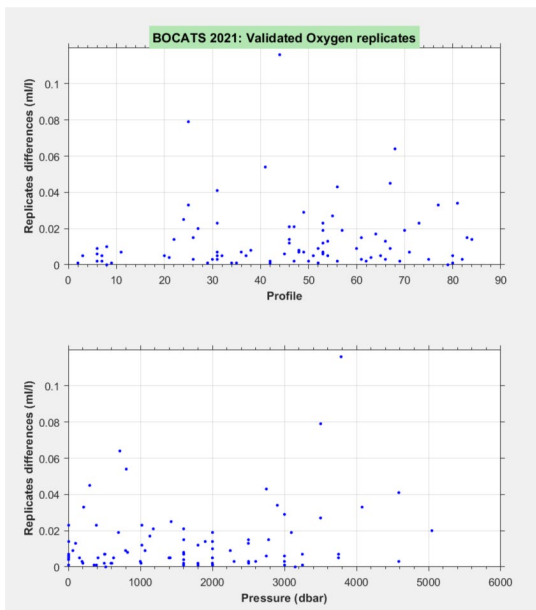


Figure 23: validated oxygen replicates

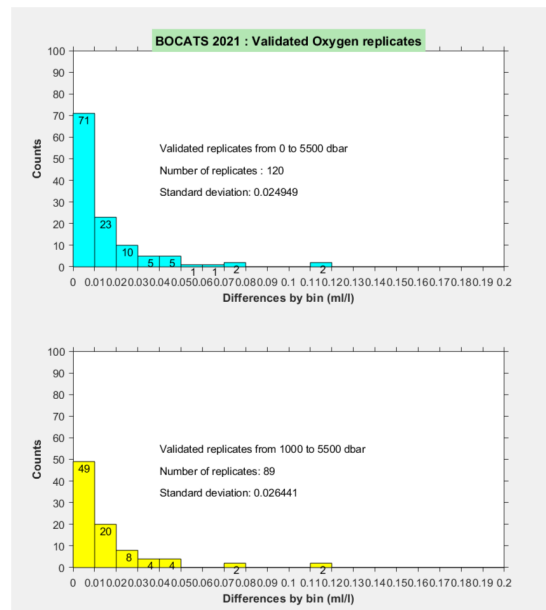


Figure 24: histogram of the validated oxygen replicates

The standard deviation of dissolved oxygen replicates is 0.025 ml/l, used to quantify “chemical oxygen error” (section 7).

## 6 Post-cruise treatment

During this part of data treatment, all the steps given in paragraph 3.3 will be described more precisely.

### 6.1 Data preparation

To clean the measurements, we use the hydro\_net software. Hydro\_net is applied to « ov21st\*T1.cnv » files, obtained after decoding the probe measurements by datcnv (part of the SbeDataProcessing seabird software).

#### 6.1.1 Data cleaning with Hydro\_net

The software is first used to correct aberrant pressure measurements in the .cnv files. Then, all measurements are cleaned using thresholds and median deviation tests, parametrized as seen in Figure 25.

The screenshot shows the 'Nettoyage' (Cleaning) tab of the Hydro\_net software. The window title is 'Figure 1: Chaîne Hydrologie : Mise au propre des données avant calibration'. The interface includes the following elements:

- Information generale**: Nettoyage des données, Hysteresis, Regeneration des fichiers .ros, Autres
- Nettoyage**:
  - Selection du repertoire de donnees: Y:\Caro\Bocats\data\_ajustage
  - Selection du repertoire resultat: Y:\Caro\Bocats/hydronet\data
  - Choix de l'extension: \*T1.cnv
  - Pause inter\_fichier:
  - Liste des fichiers:
  - Sauvegarde figures (fig):
- Seuillage** (Thresholds):

	Pression (db)	Temperature (deg)	Conductivite	Oxygene (Volt)
Min.	0	-5	20	0.5
Max.	6000	30	70	5
- Ecart a la mediane** (Median deviation):

	Pression	Temperature	Conductivite	Oxygene
Taille de la fenetre	20	6	10	10
Nb std	2.8	3	2.8	2.8
Ecart min	1.5	0.05	0.01	0.01
Ecart max	10	0.4	0.4	0.4
Iteration	2	2	3	3
- Buttons**: Valider, Annuler

Figure 25: Hydro\_net options used for BOCATS21



### 6.1.2 Correction of the hysteresis on O2 measurements

The principle of hysteresis correction on the SBE 43 sensor from Seabird is described in the application note SBE 64-3 and was coded in Matlab.

The hysteresis correction depends on three coefficients: H1, H2 and H3. The default values of these coefficients are provided by Seabird.

H1 = -0.033  
H2 = 5000  
H3 = 1450

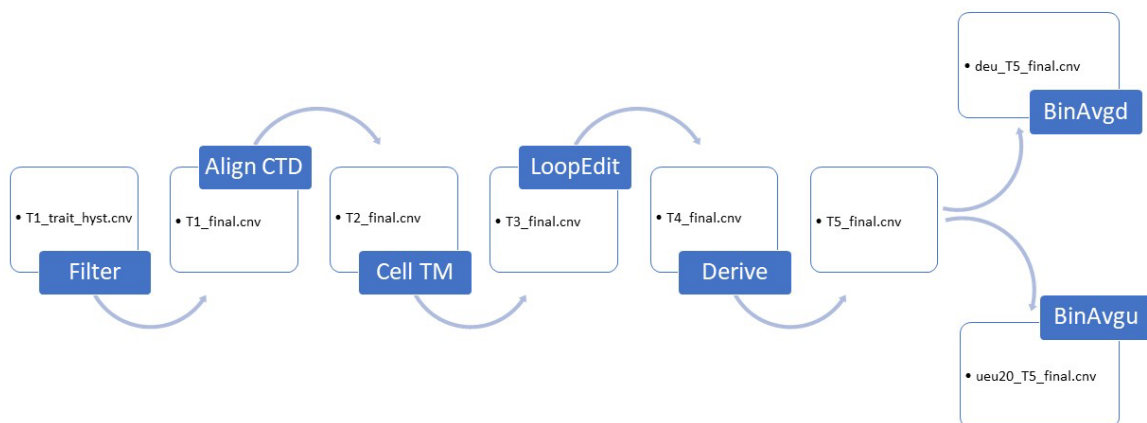
Those coefficients were used for this cruise and the resulting files are called bo21st\*T1\_trait\_hyst.cnv.

### 6.1.3 Bottle file

After cleaning and correcting the pressure, temperature, conductivity and dissolved oxygen profiles from the probe (referred to as CTDO2 profiles in the following), we create a new bottle file with CTDO2 values corrected. For each station, the name of the file is « bo21st\*\*\*T1corr.btl ».

## 6.2 Seabird treatment

Seabird developed a bunch of routines in its Seasoft V2 (SBEDataPostprocessing) software suite in order to improve the recorded probe measurements. The sequence of programs chosen by the LOPS is the result of a study performed on the 2008 CTD cruises (see C. Kermabon, M. Arhan, "Validation et Réduction des données de la sonde 9+", June 2008). The Seabird programs are applied after Hydro\_net and hysteresis correction, with the following parameters:



✧ **Filter:** filters on pressure measurements

Low pass filter A: 0.03s  
Low pass filter B: 0.15s

✧ **Alignctd:** applies a delay on the primary and secondary oxygen measurements

Delay applied: 4s

- ✧ **Cell TM:** takes into account the effect of the thermal mass of the conductivity cell using a recursive filter

Thermal anomaly amplitude  
(alpha): 0.03  
Thermal anomaly time constant  
(1/beta): 7

- ✧ **LoopEdit:** flags the cycles compared to the speed of the probe.

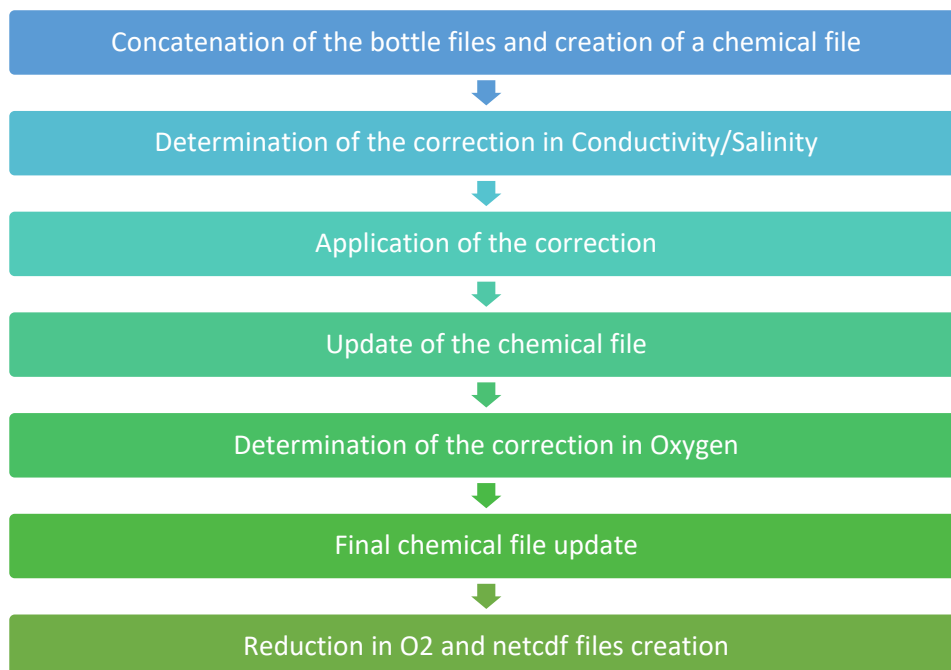
Minimum velocity type: fixed minimum velocity  
Minimum CTD velocity (m/s): 0  
Remove surface soak: Not selected  
Exclude scans marked bad: selected

- ✧ **Derive:** new calculation of O2 ml/l and salinity.

- ✧ **BinAvg:** average the data for 1dbar and separate downcast and upcast

### 6.3 Data adjustment

Hydro\_cal software, part of the Cadhyac software suite, is used to adjust the data of the probe by following different steps:



At this point, it is necessary to choose between primary and secondary sensors since corrections will most probably be different. For this cruise, secondary sensors were chosen for their overall better quality.

### 6.3.1 Concatenation of the bottle files and creation of a chemical file

The goal of this part is to generate a global file for all the cruise from the bottle files of each station (obtained in the 6.1.3 paragraph) including both CTD and chemical data.

The information in this file is:

- Number of the station
- number of the sampling bottle
- probe's data average at the closure of the bottle (pressure (corrected if it was necessary), primary temperature (corrected if it was necessary), primary conductivity, primary salinity, secondary temperature (corrected if it was necessary), secondary conductivity, secondary salinity, primary oxygen measurement in Volt, secondary oxygen measurement in Volt, primary oxygen data in ml/l and secondary oxygen data in ml/l)
- salinity of the sample
- oxygen and temperature of the sample

This "bottle file" is used in the following steps.

### 6.3.2 Determination of the correction in Conductivity/Salinity

#### Operating mode

The calibration procedure for the conductivity measurements given by the sensors ( $CO_s$ ), written according to the recommendations of the GO-SHIP group, first involves the conversion of the chemical salinity into chemical conductivity ( $CO_H$ ).

Then, the different corrections to be applied successively are calculated to minimize the differences  $\Delta C = CO_H - CO_s$  (shown in Figure 26):

- Correction as a function of time to take into account a potential slow drift of the conductivity sensor.

$$\mathbf{Ccorrsta} = Csonde + A2 * station^2 + A1 * station + A0.$$

- Correction as a function of the conductivity.

$$\mathbf{Ccorrcond} = Ccorrsta + A2 * Ccorrsta^2 + A1 * Ccorrsta + A0$$

- Correction as a function of the pressure.

$$\mathbf{Ccorr} = \mathbf{Ccorrcond} + A5 * P^5 + A4 * P^4 + \dots + A1 * P + A0$$

The selected coefficients result from successive iterations on the considered group of samples, removing outsiders at each iteration. The process is stopped when no additional sample is removed at the end of the current iteration. It follows that, at the end of the last iteration, all the differences  $\Delta C$  are lower than the  $2.8 * \sigma$  ( $\sigma$ : standard deviation of the differences) for the samples used in the calculation process.

Analysis of the initial results and choice of the polynomial correction

The conductivity differences between conductivity bottle and raw conductivity sensor without any correction or offset is plotted in different plots in function of conductivity, time and pressure.

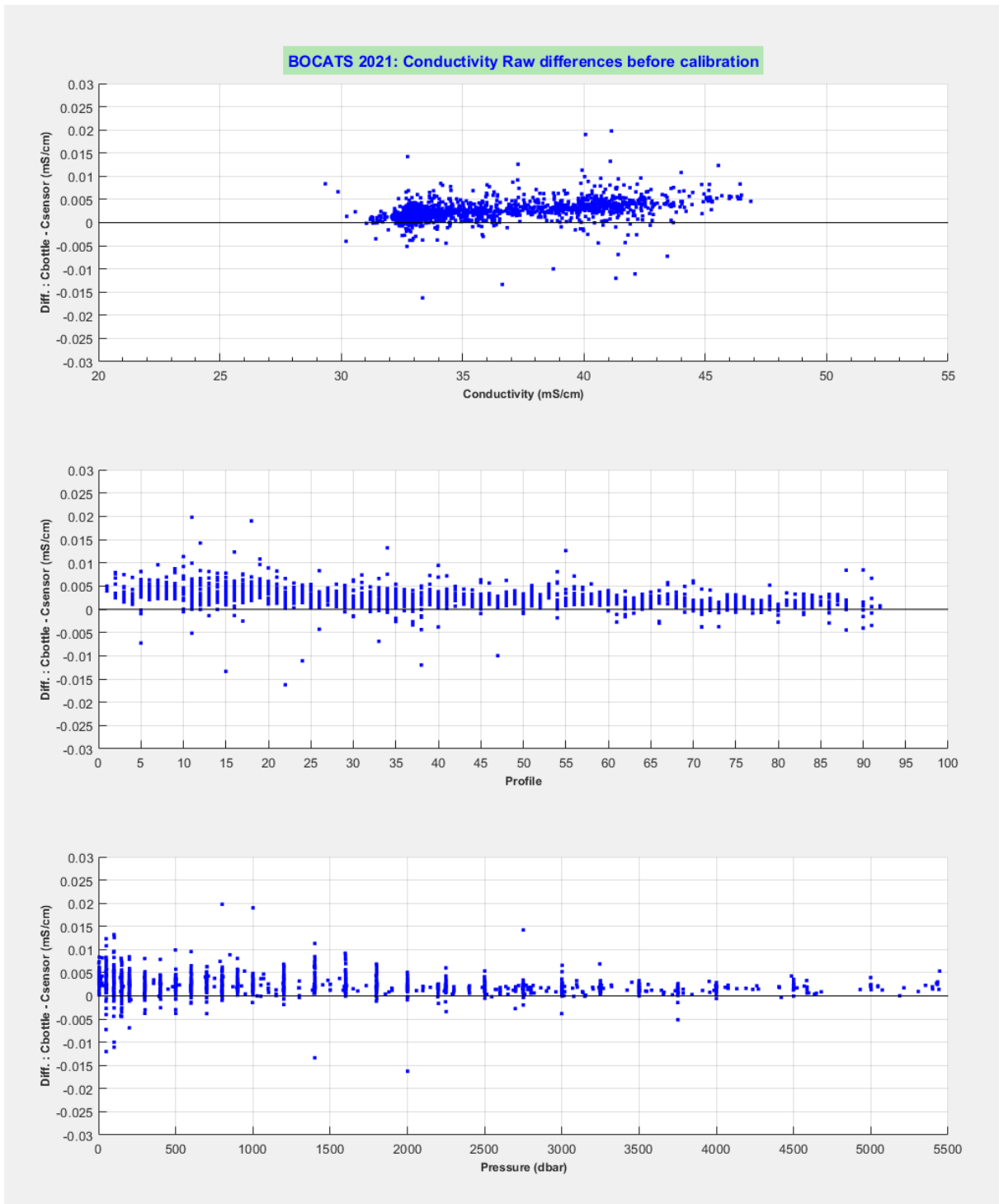


Figure 26: Conductivity raw differences

- a) as a function of the conductivity,
- b) as a function of the time (as the casts progress),
- c) as a function of the pressure of the sampling level.

By analyzing these raw results, we applied the different corrections described in paragraph « Operating mode » successively to all the casts together:

- No correction for a potential drift of the sensor
- A degree 1 polynomial correction as a function of the conductivity
- A degree 1 polynomial correction as a function of the pressure.

Figure 27 shows the result of the adjustment of the conductivity sensor with the application of corrections. All the dots are plotted (blue dots kept as validated samples, red dots rejected) and around 90% of the samples have been kept for the determination of the conductivity correction.

Polynomial corrections applied:

	Drift coeff		Conductivity coeff		Pressure coeff	
	A <sub>1</sub>	A <sub>0</sub>	A <sub>1</sub>	A <sub>0</sub>	A <sub>1</sub>	A <sub>0</sub>
Station 1-92	0	0	5.27972e-05	-2.31420e-4	-2.96078e-08	4.20122e-05

*Table 1: Conductivity polynomial corrections applied*

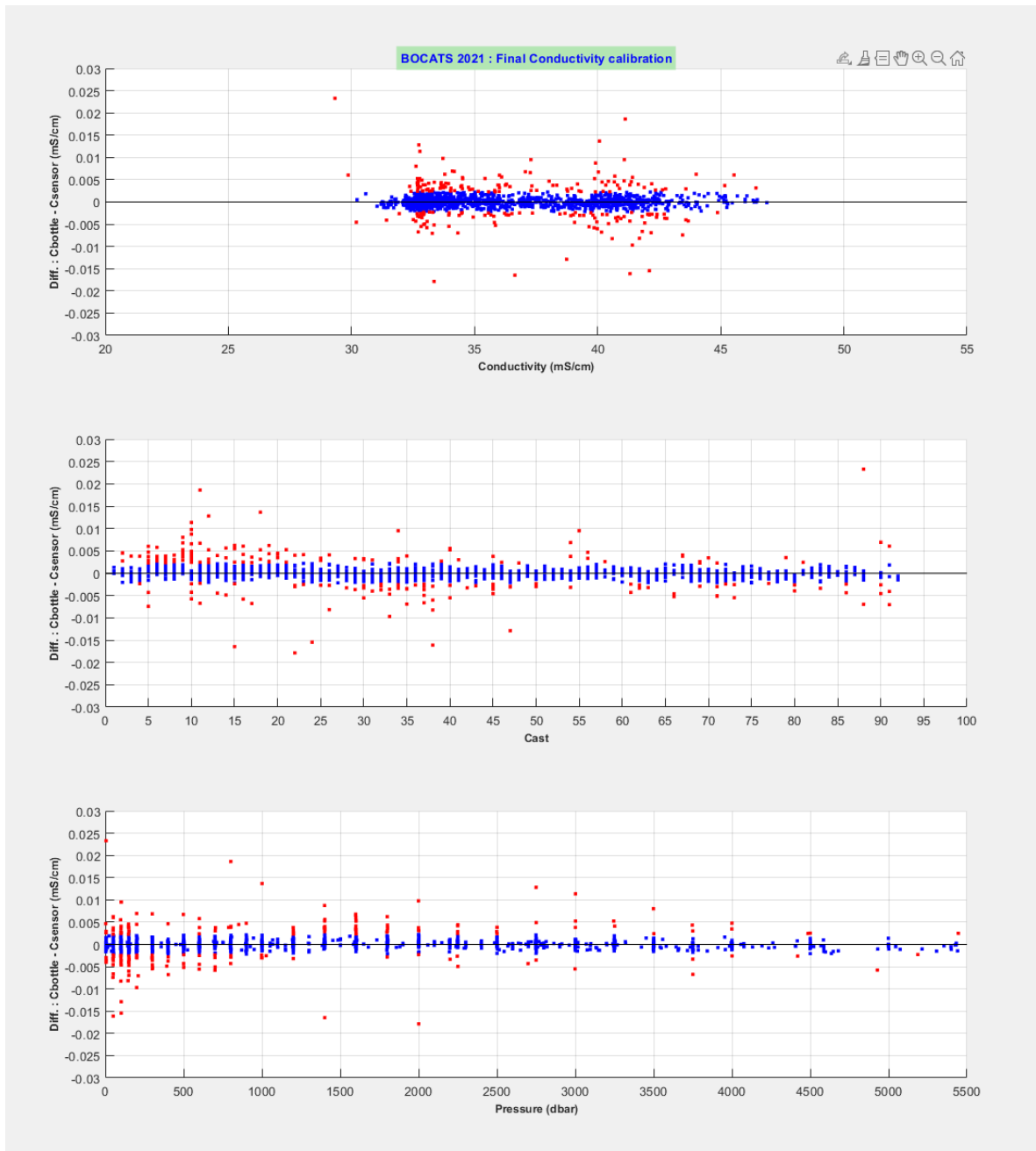


Figure 27: Final conductivity calibration  
 a) as a function of the conductivity,  
 b) as a function of the time (as the casts progress),  
 c) as a function of the pressure of the sampling level.

The differences between the conductivity/salinity of the validated samples and the CTD conductivity/salinity at the sampling level are categorized in these histograms:

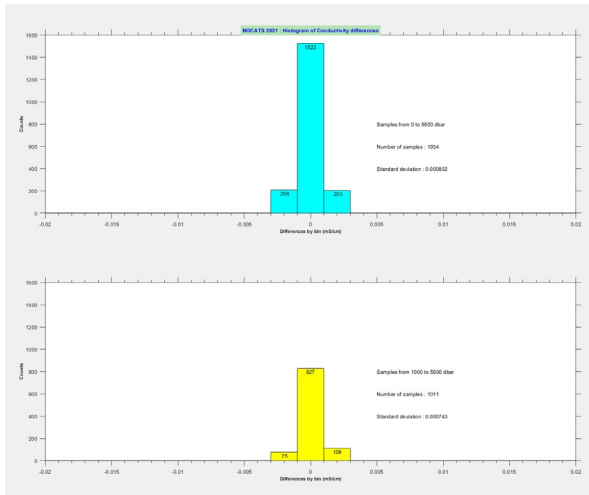


Figure 28: histogram of conductivity differences  
 a) for all the validated samples  
 b) for the validated samples at a pressure greater than 980dbar

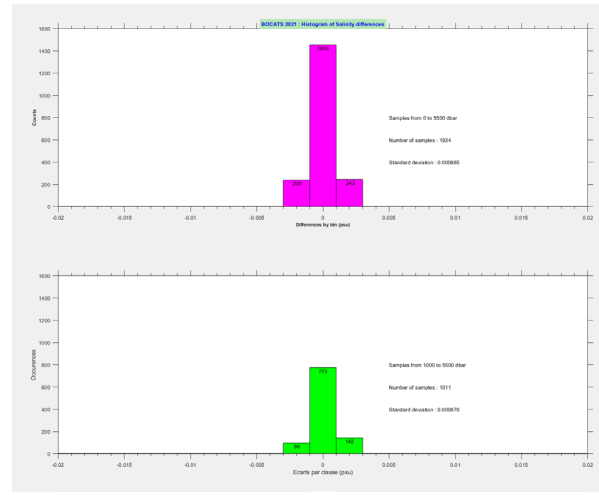


Figure 29: histogram of salinity differences  
 a) for all the validated samples  
 b) for the validated samples at a pressure greater than 980dbar

The histograms confirm that the distribution of the differences is satisfactory and confirm the quality of the adjustment.

In 80 % of cases, the differences in conductivity are lower than  $\pm 0.001$  mS/cm, while in 100.0 %, they are less than  $\pm 0.003$  mS/cm. The standard deviation in conductivity is around 0.001 mS/cm.

### 6.3.3 Application of the correction

The polynomial correction in conductivity calculated above is apply to all the casts of the cruise and new files are created: bo21st\*\*\*corr\_PTC.cnv

To check the data, the theta-S diagram is plotted for 2 stations visited biennially since 2010 (Figure 30), with a zoom on deep water for evaluating the quality and consistency of the data. Station 13 is located in the deepest part of the Iberian Abyssal Plain, where we expect a minimal variability, as observed, and station 55 is located in the Iceland Basin, near Eriador Seamount, where deep water properties vary much more.

Additionally, the theta-S diagrams were plotted for all the casts of 2021 in Figure 30.

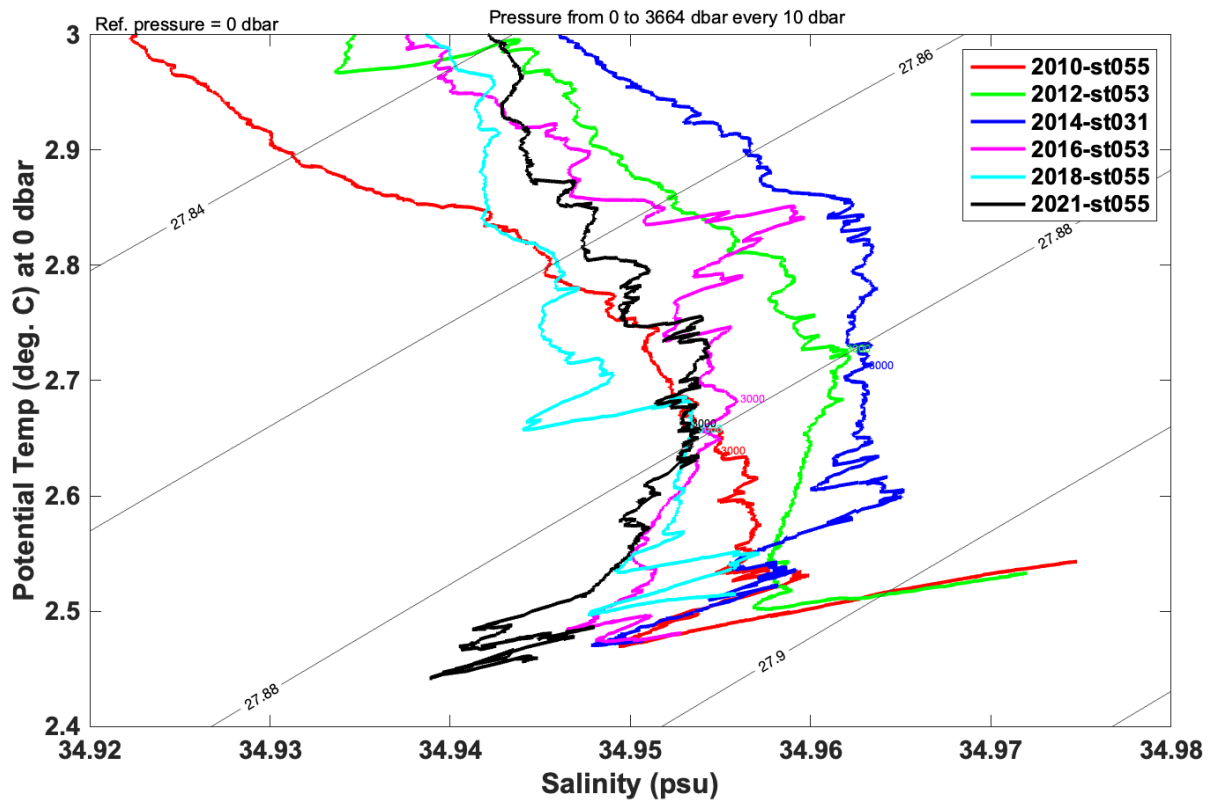
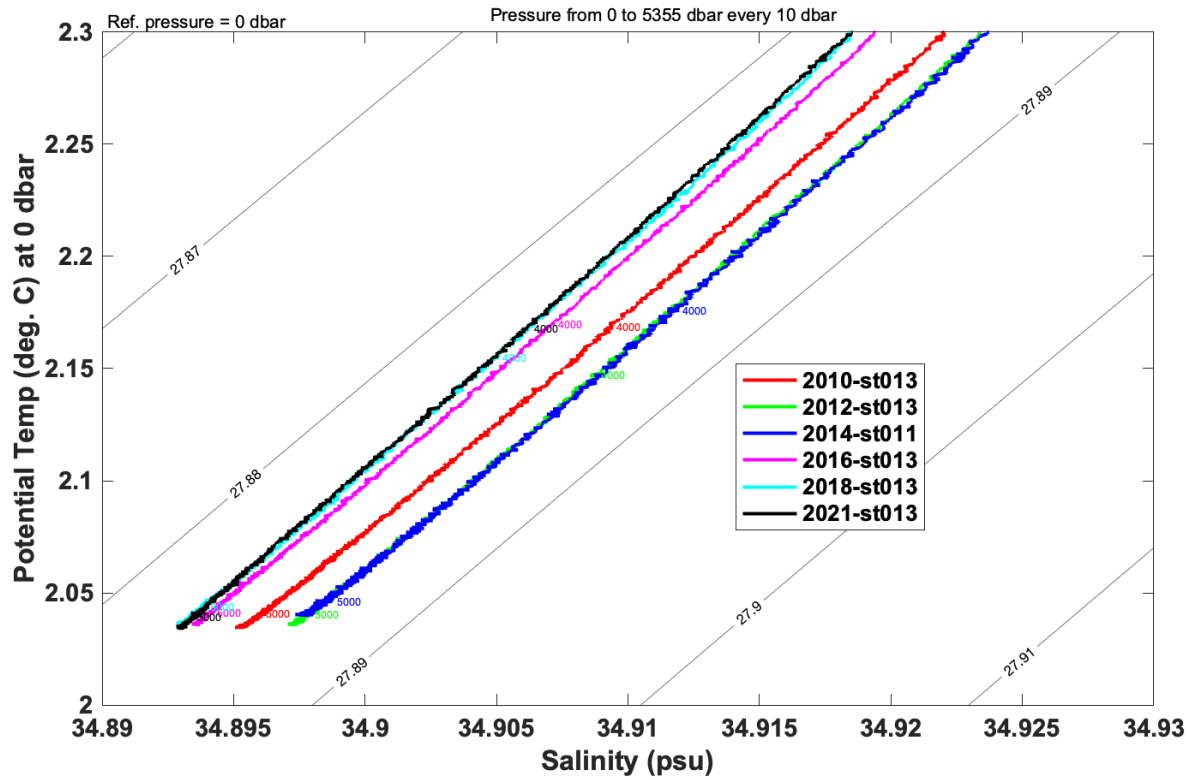
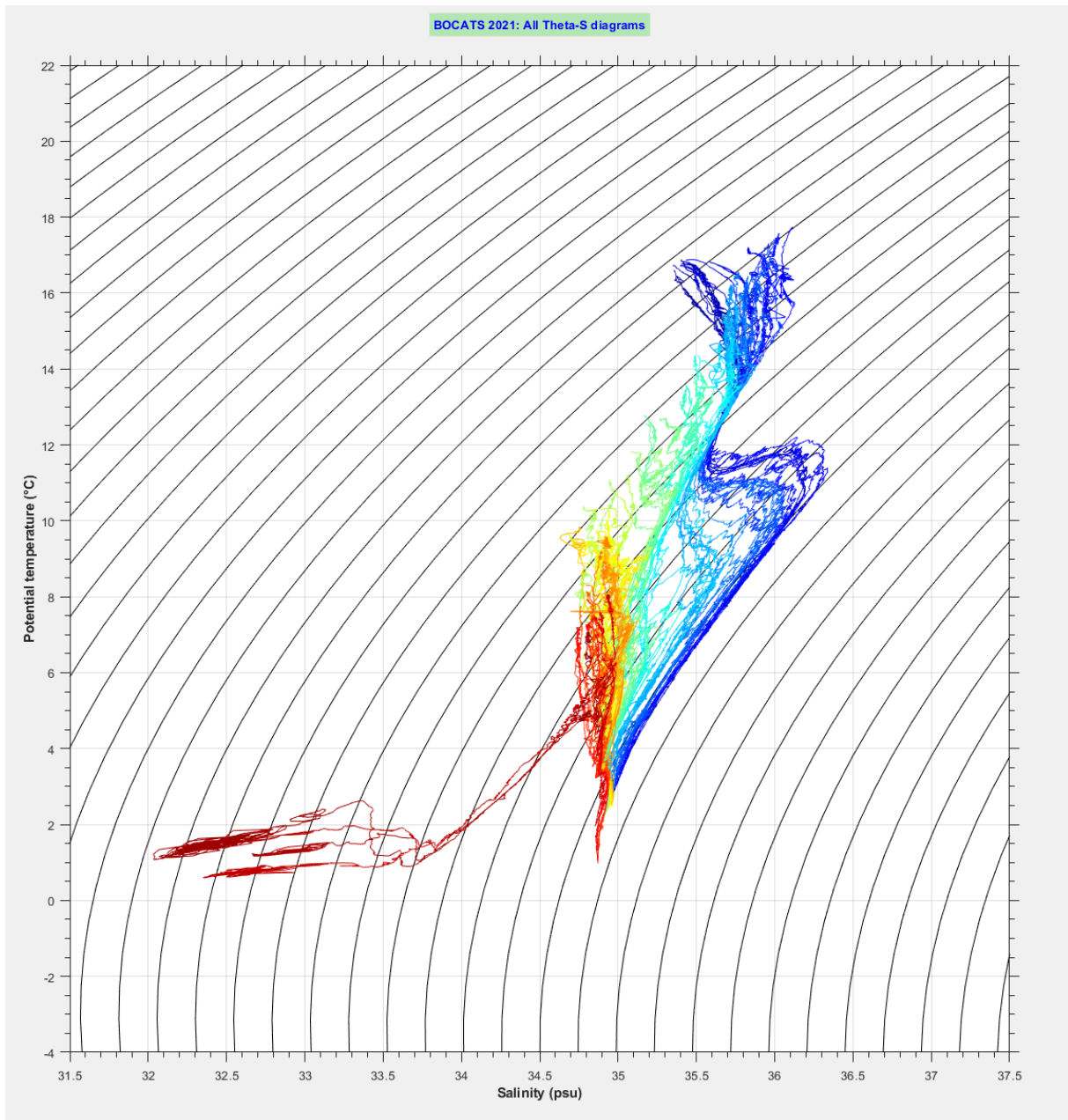


Figure 30: Theta-S comparisons for deep waters of CTD stations made at (top) 40.333°N 12.223°W in Iberian Abyssal Plain, and (bottom) 54.762°N 26.125°W in Iceland Basin. Numbers indicate pressure level every 1000dbar.





*Figure 31: All Theta-S for BOCATS 2021 cruise  
The color of the profiles changes gradually from blue (profile 1 to red profile 91). Isopycnals of potential density referenced to the surface are plotted in black.*

#### 6.3.4 Update of the chemical file

The chemical file created in the paragraph 6.3.1 will be updated by:

- correcting the conductivity data with the polynomial correction obtained
- preparing the file to the calculation of the better oxygen polynomial correction

Actually, the oxygen data in the file come from the bottle file of the station so taken during the upcast. These data are disturbed with turbulences during the closure of the bottles, and they are also more affected by the sensor hysteresis that is never completely corrected. The idea is to replace these data by the equivalent data at the same pressure level of closure from the downcast of the files bo21st\*\*\*corr\_PTC.cnv generated just above. It will be a mean of the data on a water column of 15 dbar.

#### 6.3.5 Calculation of the polynomial correction in oxygen

##### Operating mode

The method used to adjust the probe measurements to the chemistry measurements ( $OXY_C$  in ml/l) involves the determination of the coefficients M and B of the equation below to minimize the differences between them.

$$\frac{OXY_C}{\varphi} = OXY_S \times M + B$$

*Remark: This equation is the developed equation indicated in the paragraph 4.4*

where:

$$\varphi = Ox_{sol} \times (1 + A \times T + B \times T^2 + C \times T^3) \times e^{(E \times \frac{P}{K})}$$

$OXY_S$ : data measurement of the probe in Volt

$$M = Soc$$

$$B = V_{offset} \times Soc$$

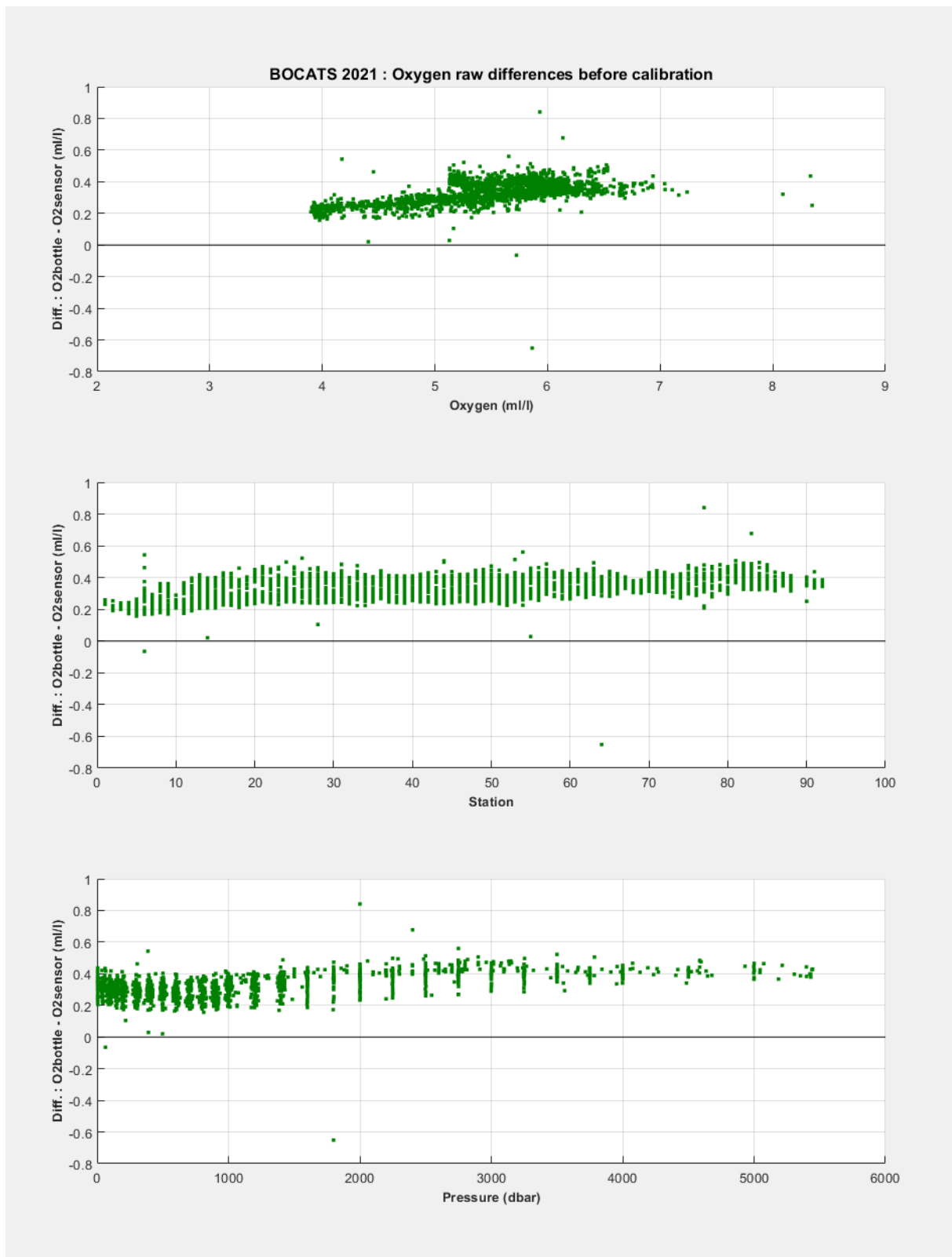
The Soc and  $V_{offset}$  coefficients (deduced from the values of M and B) of the Seabird sensor characteristics are determined for a set of samples, using successive iterations based on a principle similar to that for the conductivity.

Thus, and if necessary, a pressure polynomial correction can be calculated (from degree 0 to 5):

$$OXY_{corr} = OXY + A_0 + A_1 \times P + A_2 \times P^2 + \dots + A_5 \times P^5$$

##### Analysis of the initial results and choice of the polynomial correction

The oxygen differences between oxygen bottle and oxygen sensor with hysteresis correction is plotted in different plots in function of oxygen, time and pressure (Figure 32).



*Figure 32: Oxygen raw differences*

*a) as a function of the oxygen,  
 b) as a function of the time (as the casts progress),  
 c) as a function of the pressure of the sampling level*

By analyzing these raw results and to improve the distribution of the differences, we:

- divided the casts in 3 groups (M and B calculated for each group): 1-10 ; 11-20 ;21-92
- applied a polynomial pressure correction of degree 1
- gave a weight of 2 to substantiate the data over 2000m of depth

	Oxy coeff		Pressure coeff	
	M	B	A <sub>1</sub>	A <sub>0</sub>
Station 1-10	0.466165	-0.66313	6.30616e-07	-1.29033e-03
Station 11-20	0.471402	-0.666711	-1.8098e-07	-6.62668e-05
Station 21-92	0.470867	-0.654825	-3.30286e-07	5.91699e-04

*Table 2: oxygen polynomial correction applied*

Figure 33 shows the results of the adjustment of the oxygen sensor with the application of corrections. All the dots are plotted (green dots kept as validated samples, red dots rejected) and around 95% of the samples have been kept for the determination of the oxygen correction.

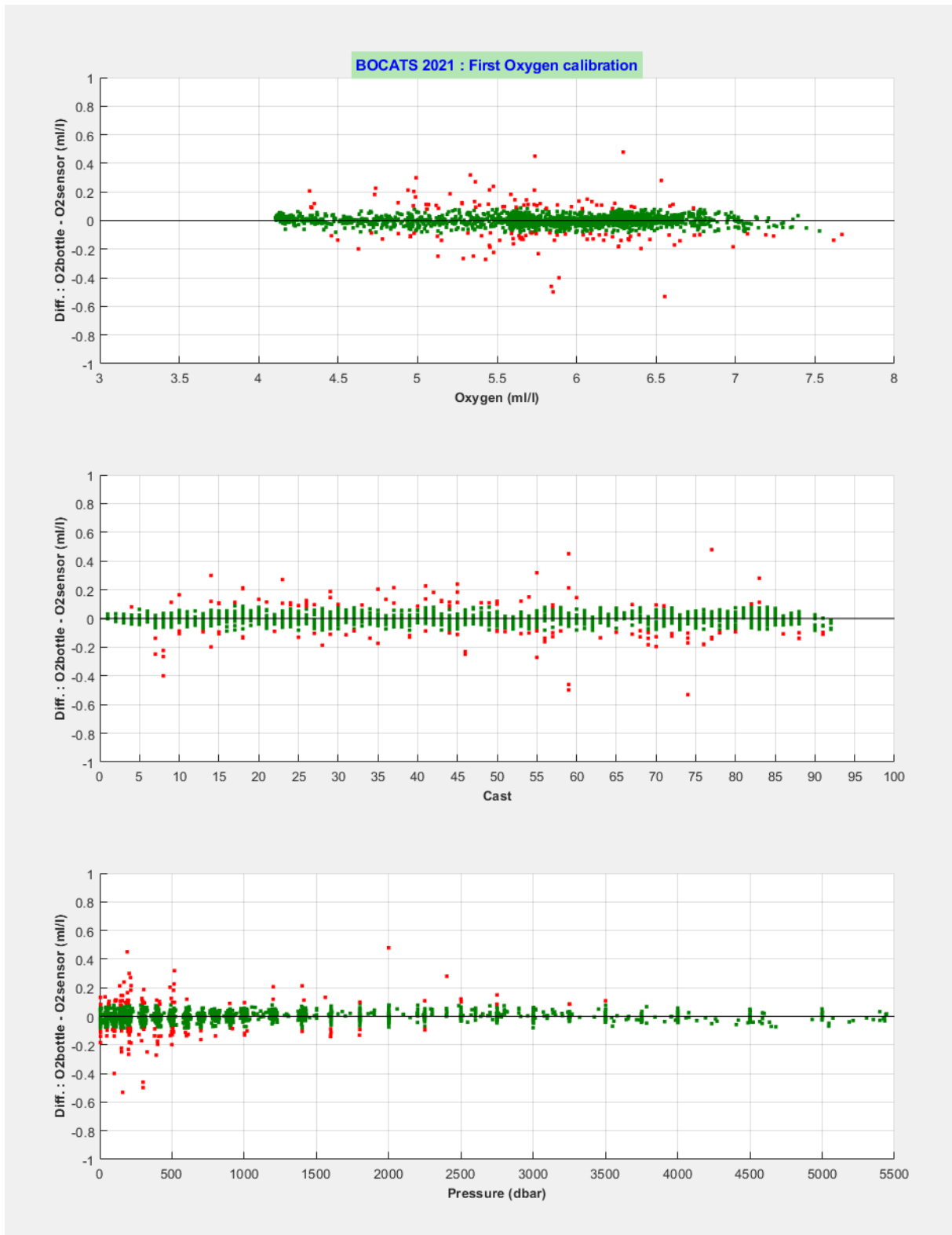
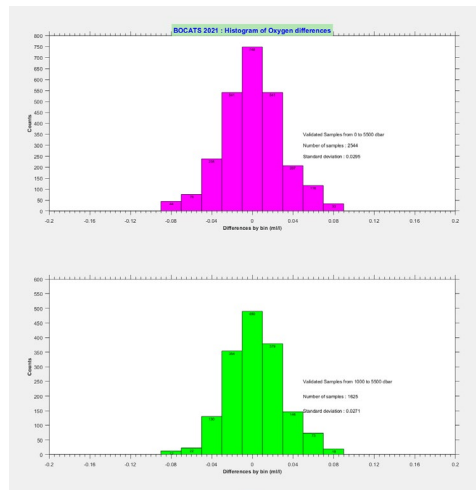


Figure 33: Final oxygen calibration

- a) as a function of the oxygen,
- b) as a function of the time (as the casts progress),
- c) as a function of the pressure of the sampling level

The differences between the oxygen of the validated samples and the CTD adjusted oxygen measurements at the sampling level are visualized with histograms below. They confirm that the distribution of the differences is satisfactory and confirm the quality of the adjustment. In 72 % of cases, the differences in oxygen are lower than  $\pm 0.03$  ml/l, while in 100.0 %, they are less than  $\pm 0.08$  ml/l. The standard deviation in oxygen is around 0.030 ml/l.



### 6.3.6 Application of the correction

The polynomial corrections in oxygen calculated above are applied to all the casts of the cruise and new files are created: `bo21st***corr_PTC_oxy.cnv`.

To check the data, the theta-O<sub>2</sub> diagram is plotted for all the casts in Figure 34. Oxygen profiles are also plotted in function of pressure and a zoom of the deep waters in the Iberian Abyssal Plain (Figure 35) show a good consistency and are also in close vicinity with Saunders' (1986) value of 5.67 ml/l.

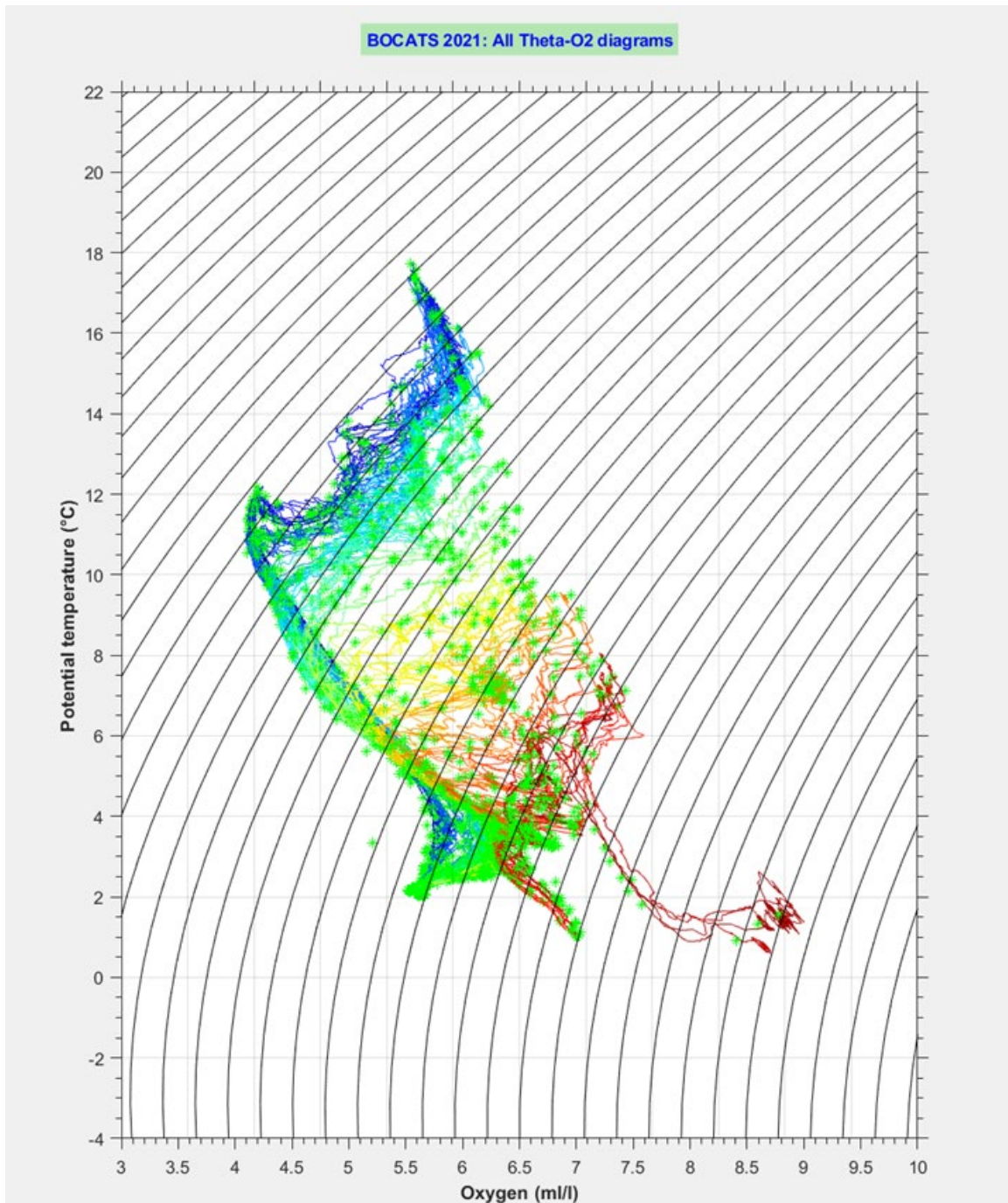


Figure 34: All Theta-O<sub>2</sub> for BOCATS 2021 cruise  
The color of the profiles changes gradually from blue (profile 1 to red profile 91)

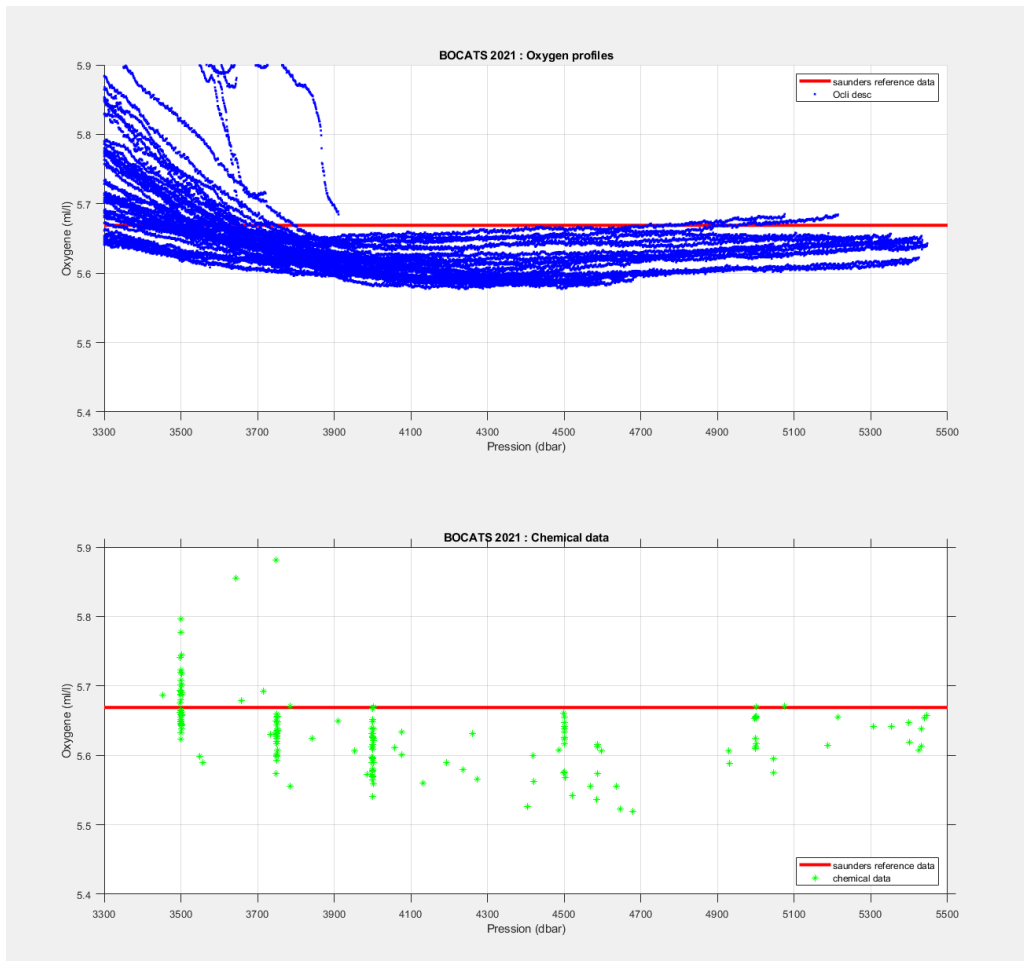


Figure 35: Dissolved oxygen measurements (profiles and bottle data for stations 1 to 52 with a zoom corresponding to the Iberian Abyssal Plain) for the BOCATS cruise at a pressure greater than 3300 dbar:  
a) continuous measurements on the probe downcast profiles,  
b) chemical measurements obtained on the samples.  
The red line represents the reference value proposed by Saunders (1986) in the Northeast Atlantic.

### 6.3.7 Final chemical file update

The chemical file created in the paragraph 6.3.5 will be updated by correcting the oxygen data with the polynomial correction obtained.

This final chemical file contains:

- Number of the station
- Number of the bottle
- Pressure measurement adjusted
- Temperature measurement adjusted
- Salinity measurements adjusted
- Oxygen measurements in ml/l adjusted
- Oxygen measurements in  $\mu\text{mol/kg}$  adjusted
- Potential temperature calculated
- Potential density calculated
- Immersion
- Salinity of the samples
- Oxygen in ml/l of the samples
- Oxygen in  $\mu\text{mol/kg}$  of the samples

For each indication, a quality flag is indicated (refer Appendix H).



### 6.3.8 Reduction in O2 and netcdf files creation

All of the calibration part of the data processing is done based on the total probe measurements at 24 Hz. The data are then reduced to one measurement per decibar.

The elimination of non-validated cycles and the data reduction was carried out using the parameter gradients as elimination criteria:

$$\frac{|ParamCycle_N - ParamCycle_{N-1}|}{PressionCycle_N - PressionCycle_{N-1}}$$

A cycle is validated if the values of the gradients are lower than the selected thresholds. Initially, a determination of the gradient histograms allows us to choose threshold values beyond which the parameters will be rejected. After removal of non-validated cycles, the decimation of the data is performed by calculating, for each integer pressure value, the mean of the parameters on a 1 dbar-layer centered on this value.

The set of criteria used to reduce the probe measurements is described in the document: "Validation et Réduction des données de la sonde SBE9+", C. Kermabon, M. Arhan, Nov 2008.

The options used for the cruise are shown below:

Threshold values for stations:

- Echant. 1
- Nb val min 6
- Threshold P 0.5
- Threshold T, C surface 0.6
- Threshold T, C bottom 0.2
- Threshold O<sub>2</sub> (Volt) surf 1.8
- Threshold O<sub>2</sub> (Volt) fond 2.0

The downcast and upcast files were generated in netcdf format.

bo21d\*\*\*\_cli.nc for the downcasts

bo21a\*\*\*\_cli.nc for the upcasts

### 6.3.9 Specific case for station 9 and 10

The stations 9 and 10 presented some technical issues described in the paragraph 1.4. For these stations, it was necessary to analyze the problems on the data and find a way to keep these stations in the process.

## Station 9

The salinity downcast profile presents some perturbations from 4372m of depth to the bottom.

The idea was to use the upcast salinity data with a correction (+0.0014) to replace downcast conductivity data. This correction comes from the differences measured between the upcast and downcast just before the issue occurring.

These corrected data are flagged to be considered as interpolated data.

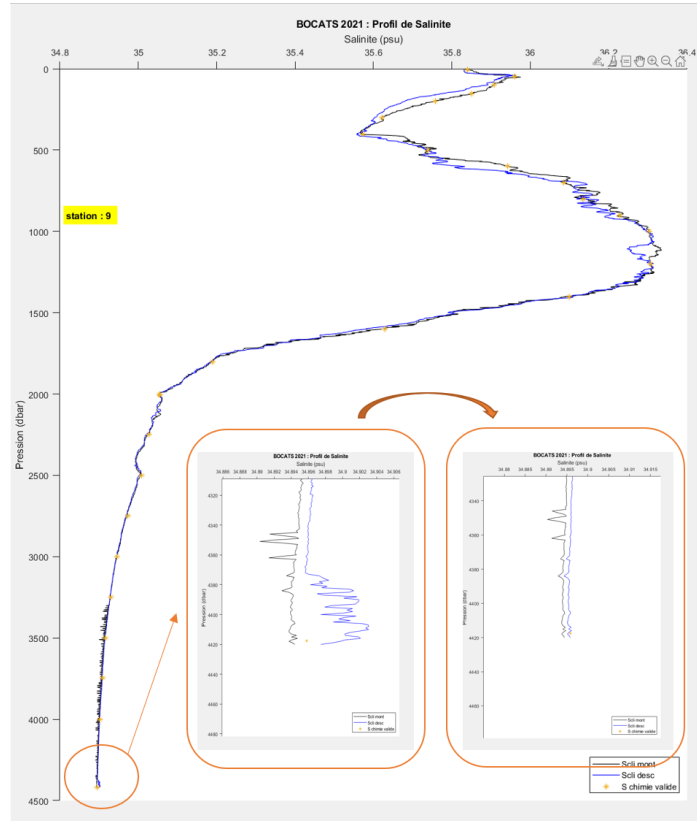


Figure 36: Station 9, salinity upcast and downcast

The oxygen downcast profile presents no data from 4372m of depth to the bottom.

In that case and considering the last chemical data as « good », the data from the last oxygen data available to the bottom passing by the chemical data are interpolated and are flagged to « 8 »



Figure 37: Station 9, salinity upcast and downcast

## Station 10

The salinity downcast profile presents some perturbations from 4158 dbar to the bottom (pump off, see Figure 6).

In a first step, the idea was to use the less noisy upcast salinity data with a correction (+0.0016) to replace downcast salinity data. This correction comes from the differences measured between the upcast and downcast just before the issue occurring.

In a final step, a quadratic filter has been used: `sdeep=smoothdata(xsd_cli,'rloess')`

At those depth, the primary temperature sensor was less noisy than the secondary, and very similar above, so we took the primary sensor with a similar filtering below 4158m.

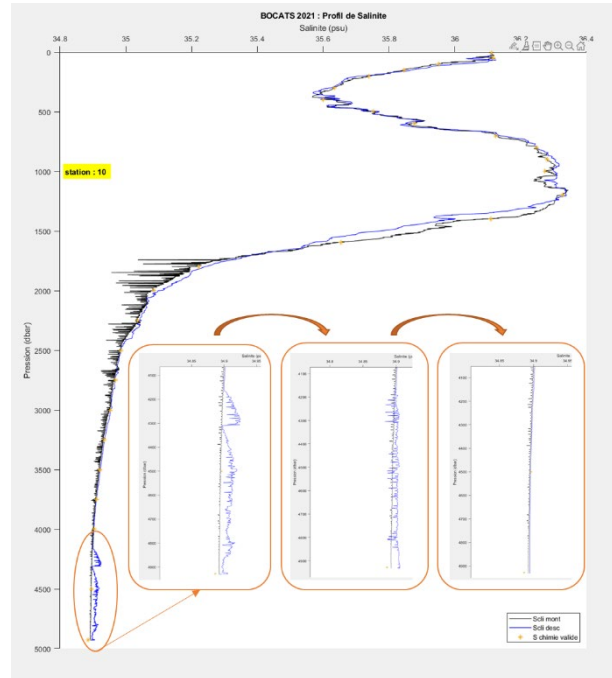


Figure 38: Station 10, salinity upcast and downcast

In oxygen, the data are unfortunately unusable from 4158 m of depth to the bottom, so they also have been linearly interpolated to the bottom chemical data, after inspection of other years that prove that it is a reasonable estimate.

The whole profile is dubious, and should be used with suspicion, although the downcast until 4160m should be fine. The reconstructed data are consistent with other years.

*Remark: for this station, between 1300 and 1700m of depth, the upcast and the downcast are very different, although the pump was on again at 1800m during the upcast. It can be a natural variability since the station is in a strong meddy and this layer is at the base of the Mediterranean Water. However, we consider the downcast as more reliable than the upcast. Note also that the chemical data were flagged good and the CTD data dubious in the bottle file.*

## 6.4 Data final validation

Hydro\_val software, part of the Cadhyac software suite, is used:

- to validate the oxygen data of the probe
- to analyze the density inversions in order to flag the corresponding T, S, O2 data as bad, if necessary

### 6.4.1 Validation of the Oxygen profiles

The software flags as 'bad' (QC = 4), the small number of oxygen peaks which were not eliminated during the data reduction by testing the difference with the median. This is only done in the deep part of the profile since the variability above is too high.

The data is invalidated if these 2 conditions are present:

- Data pressure > Minimal pressure (data above minimal pressure are not changed)
- $|Median - oxygen\ data| \geq standard\ deviation\ number \times std$   
With,  
 $Minimal\ difference \leq standard\ deviation\ number \times std \leq Maximal\ difference$

The iteration of the protocol is indicated in the Table 1.

	Downcast	upcast
Minimal pressure:	2800	2800
Size of the window:	80	80
Minimal difference:	0.005	0.005
Maximal difference:	1	1
Standard deviation number:	2.7	3.4
Iteration:	3	3

Table 3: options for validation of the oxygen profiles

#### 6.4.2 Density inversion

By superposing the reduced file, the adjusted file at 24 Hz and the file before loopedit at 24 Hz on the same graph, we can detect density inversions related to the drag of the probe.

We can see on the graph below (figure 46) that the peak at 407 and 408 dbar in T and C corresponds to the measurements recorded by the probe 3 dbar previously. This crossed water (blue arrows) was drawn in by the frame and pollutes the sensors when the probe slows down. These inversions are not at all physical: they must be identified and the quality flag is set to 4 (QC = 4) for all the parameters. During the transfer to the.clc.nc files (intermediate format before the multi-cast format), a linear interpolation will be performed at these locations.

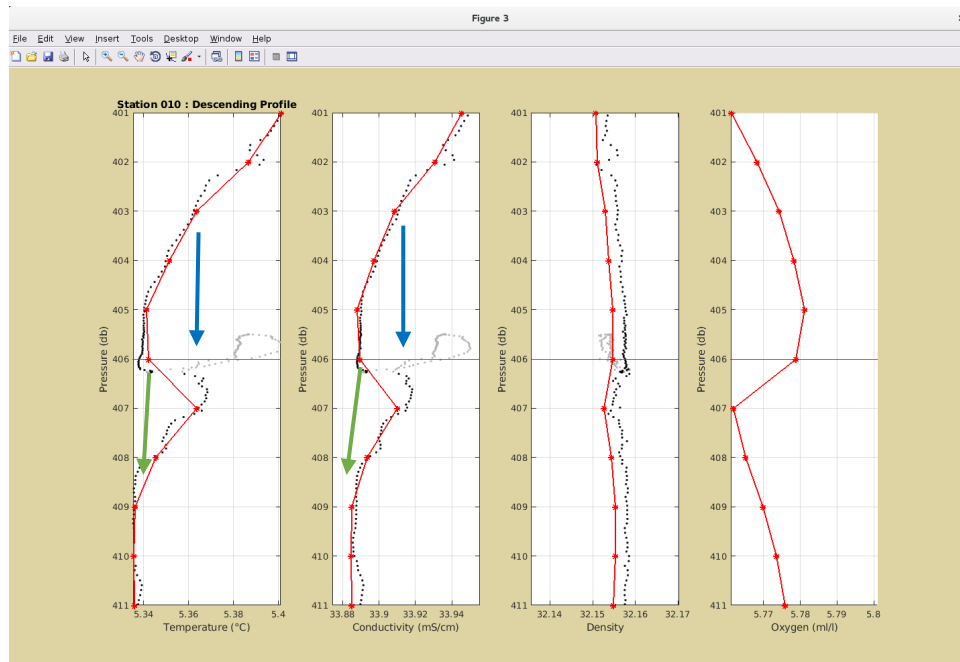


Figure 39: example of invalidation of density inversions  
The reduce profile is shown in red  
The adjusted data at 24 Hz in black  
The data at 24Hz before loopedit in grey.

### 6.4.3 Correction of the flags of oxygen bottle data

Using downcast CTD O<sub>2</sub> data at the pressure of the bottle samples to compare with oxygen sample measurements have several advantages:

- we gain precision since the rosette has less influence on the data when it's moving downward.
- we reduce the impact of the hysteresis effect on the oxygen sensor that is never totally corrected (indeed, the influence of the pressure on O<sub>2</sub> measurements is weaker during the downcast than during the upcast).

However, the drawback is that we also don't consider the changes in the water column between the upcast and the downcast. In the upper water column, those changes are mainly due to internal waves that heave the water masses up and down by several tens of meters (Saout-Grit et al., 2015), particularly in the upper water column.

For the OVIDE-BOCATS data, this is not really an issue for the calibration, since we have many samples, and the chemical data that don't match the CTD-O<sub>2</sub> data because of this effect are simply discarded from the calibration. Among the 2092 samples, only 136 were moved out by the calibration because of a too large discrepancy with the probe data. However, the side effect is that these chemical data were flagged bad, although only 38 were actually within 3 standard deviations from the profile if we consider either the upcast data or the downcast data adjusted in density.

Since chemical data are distributed and widely used (particular by biogeochemists), it is important to flag the data the best we can. This is why CTD-O<sub>2</sub> data and flags of chemical oxygen data are corrected after calibration in the final chemical database by associating the sample measurement to its best match with CTD data between (i) the downcast point adjusted in pressure (ii) the downcast point adjusted in density and (iii) the upcast point at the effective level where the bottle was closed. This way, 98 chemical data were rehabilitated, leaving only 38 data flagged bad.

This processing improved also greatly the histogram of the difference between CTD and chemical data (Figure 40), with a standard deviation down to 0.8 instead of 1.3  $\mu\text{mol.kg}^{-1}$ , better than the 1.1  $\mu\text{mol.kg}^{-1}$  value found for replicates in section 3.3.3. So an accuracy of 1.1  $\mu\text{mol.kg}^{-1}$  could be claimed on oxygen CTD data.

Note finally that those correction don't affect the calibration results and that the CTD-O<sub>2</sub> oxygen profiles were not corrected. The above changes appear:

- in the csv and excel sheet of the chemical data.
- in the chemical data of the multi-station netcdf file: variables CHPOXYLP, CHOXYLB\_QC, CHPOXYKP and CHOXYKB\_QC were updated, with previous values saved in CHPOXYLPD, CHOXYLBD\_QC, CHPOXYKPD, CHOXYKBD\_QC respectively.

Chemical data in the cli and clc netcdf files were not changed.

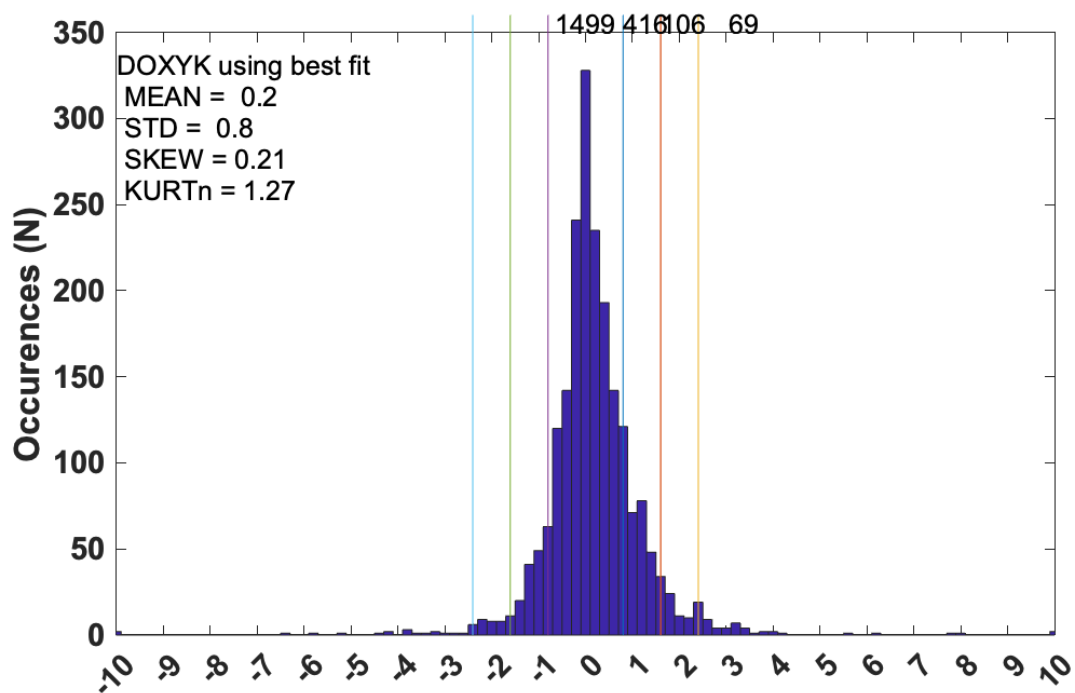
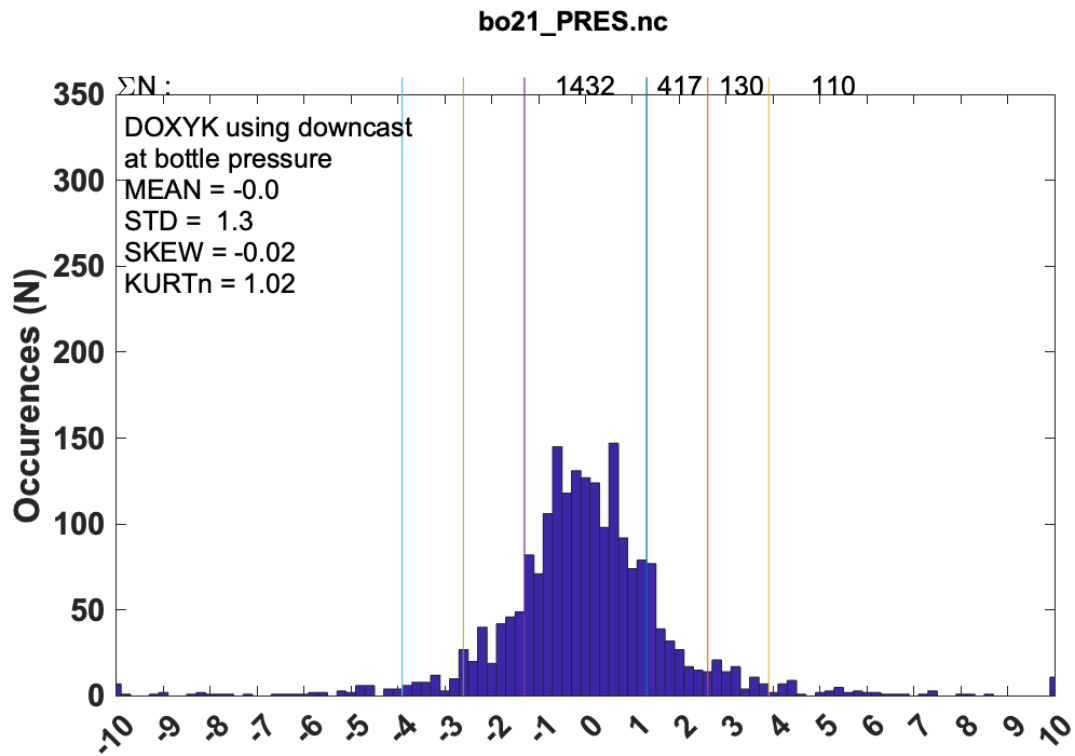


Figure 40: Histogram of the oxygen difference between the chemical measurements flagged good and the probe data, in  $\mu\text{mol.kg}^{-1}$ , (a) using only downcast data at the bottle pressure level, and (b) using the best match between chemical and probe data by using either upcast data, downcast data at the bottle pressure level or downcast data at the bottle density level

## 7 Precision of the BOCATS 2021 measurements

The calibration of the CTD measurements ends with the determination of the quality of the different types of measurements (probe and chemistry) by giving in the table below the accuracies for the different measurements of the cruise coming from a statistical treatment or directly from the constructor.

As a reminder, the accuracy for the different CTD sensors are evaluated in section 4 and 6.5 and the accuracy of chemical parameters are evaluated with the replicates in section 5.

Probe Param	Value	Unit	Chemical Param	Value	Unit
PRES	1	dbar			
TEMP	0.001	°C			
COND	0.001	mS/cm			
PSAL	0.001		CHPSALB	0.001	
OXY	0.025	ml/l	CHOXYLB	0.025	ml/l
OXYK	1.1	µmol/kg	CHOXYKB	1.1	µmol/kg
			CHTMPOB	0.5	°C

Table 4: quality data measurements obtained for BOCATS 2021 cruise

PRES: accuracy of the sensor given by the manufacturer

TEMP: accuracy of the sensor given by the manufacturer

COND: standard deviation of the differences Conductivity probe / Conductivity from the sample

PSAL: standard deviation of the differences Salinity probe / Salinity from the sample

CHPSALB: standard deviation of the replicates validated in salinity

OXY: standard deviation of the differences Oxygen probe / Oxygen from the sample in ml/l

CHOXYLB: standard deviation of the replicates validated in oxygen (ml/l)

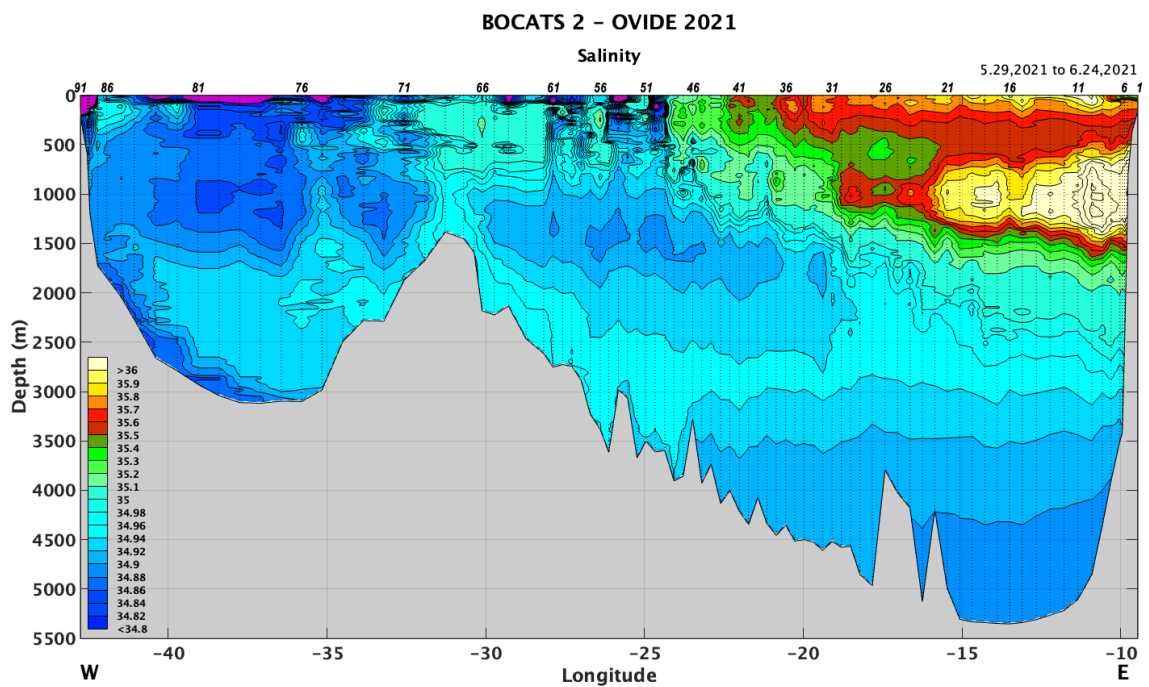
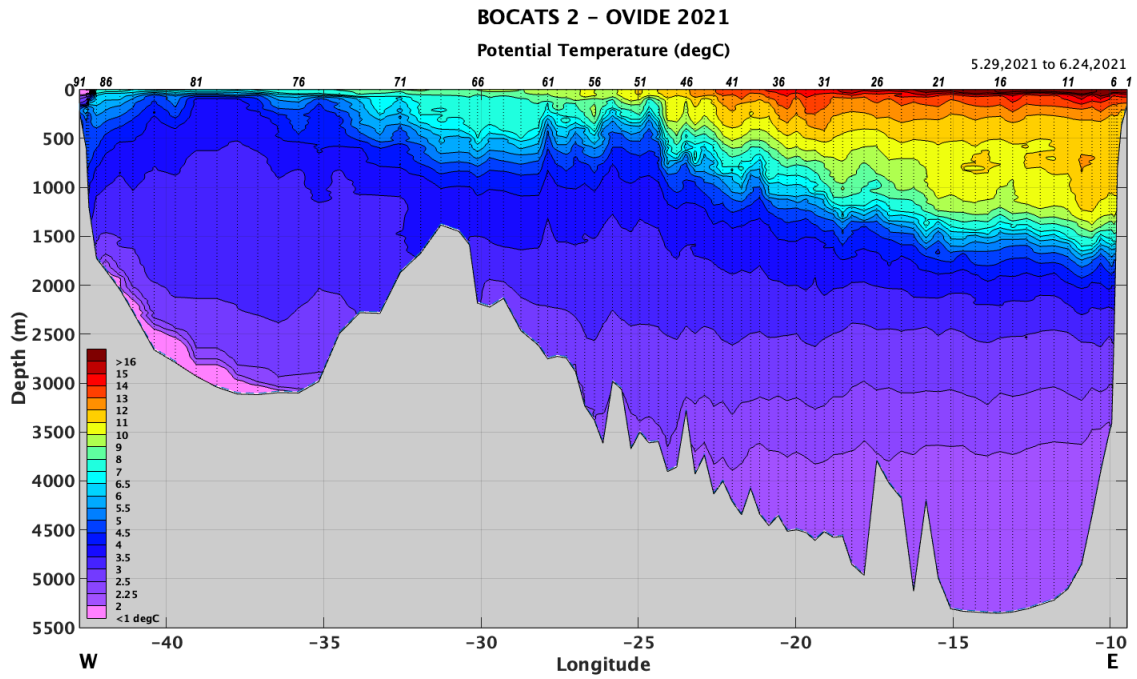
OXYK: standard deviation of the differences Oxygen probe / Oxygen from the sample in µmol/kg

CHOXYKB: standard deviation of the replicates validated in oxygen (µmol/kg)

CHTMPOB: accuracy of the thermometer used for the oxygen sampling

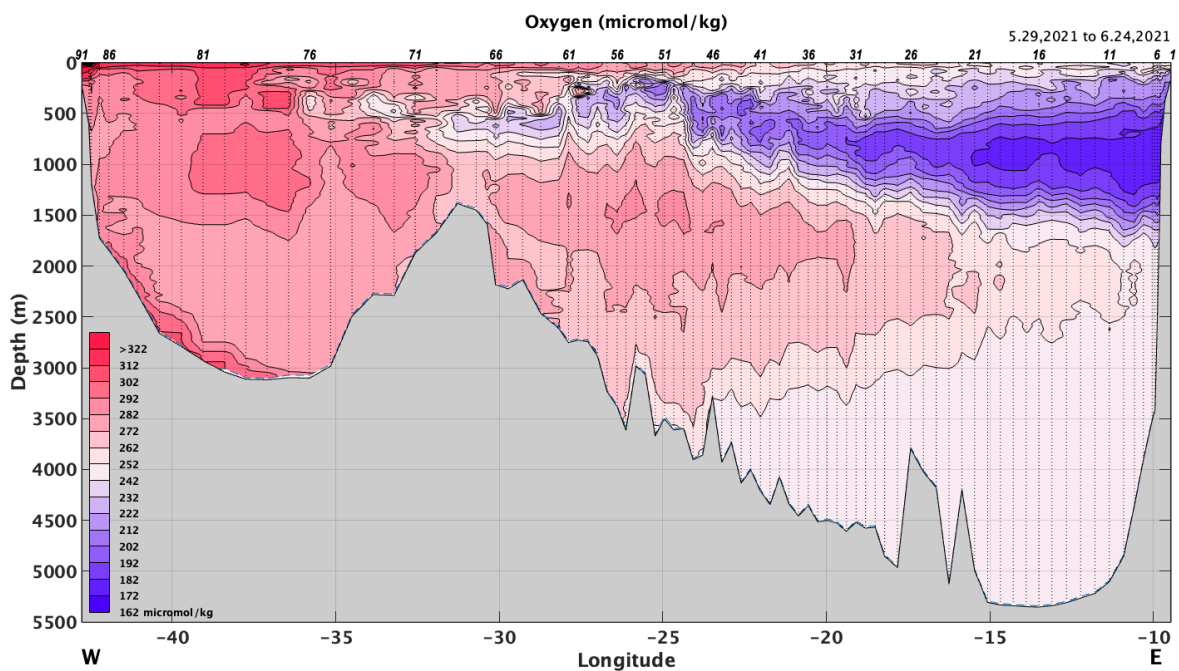
## 8 Sections

Following figures present the A25 section for the different parameters.

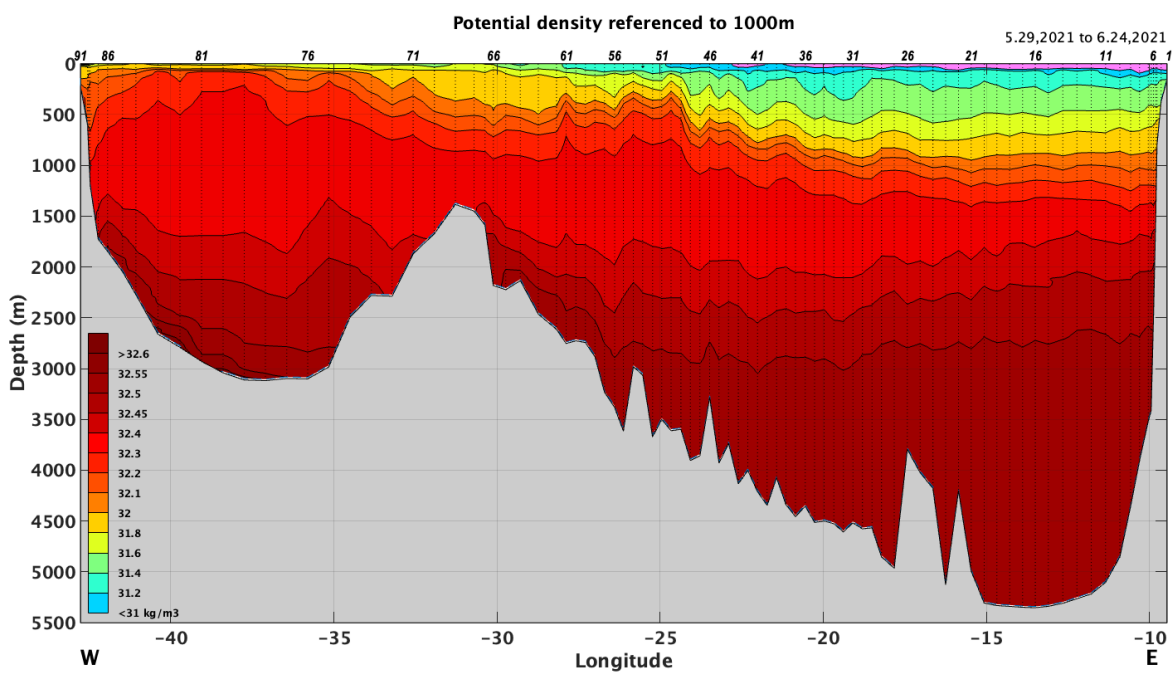




### BOCATS 2 - OVIDE 2021



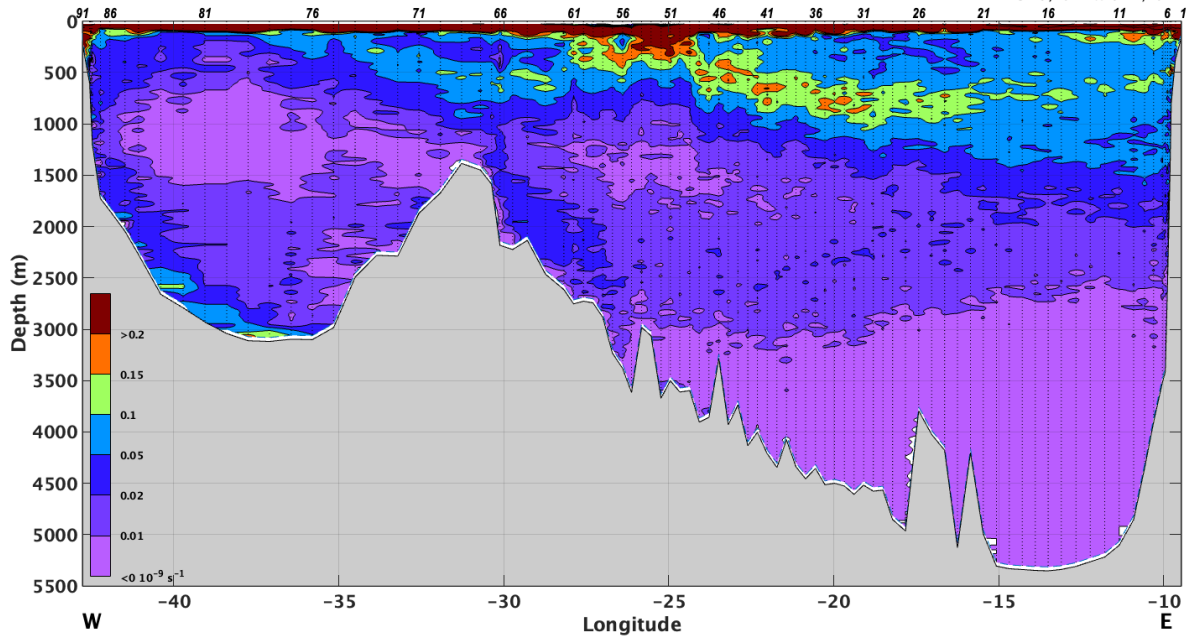
### BOCATS 2 - OVIDE 2021



BOCATS 2 - OVIDE 2021

Potential Vorticity ( $10^{-9} \text{ s}^{-1}$ )

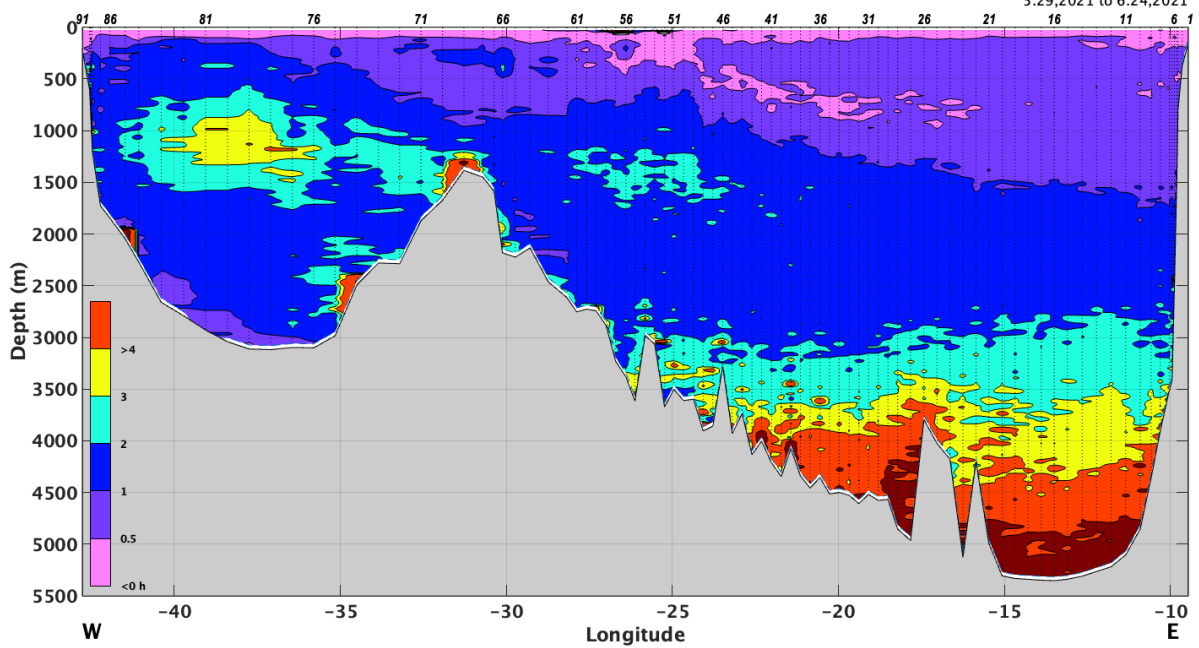
5.29,2021 to 6.24,2021



BOCATS 2 - OVIDE 2021

Brunt-Vaisala period (h)

5.29,2021 to 6.24,2021



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## 10 Acknowledgments

This work received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 862626 (EUROSEA), the French National Programme Les Enveloppes Fluides et l’Environnement (LEFE) and Ifremer. The cruise was supported by the BOCATS2 (PID2019-104279GB-C21) project funded by MCIN/AEI/10.13039/501100011033. We are very grateful to the captain and crew of the Sarmiento de Gamboa for their hard work.

# Appendix

## A. Seabird pressure sensor of the 813 probe calibration



Sea-Bird GmbH  
Postfach 1167  
87401 Kempten  
Germany

+49 831 9 60994 701  
seabird.eu@seabird.com  
www.seabird.com

SENSOR SERIAL NUMBER: 0813  
CALIBRATION DATE: 26-Jan-21

SBE 9plus PRESSURE CALIBRATION DATA  
10000 psia S/N 98623

**DIGIQUARTZ COEFFICIENTS:**

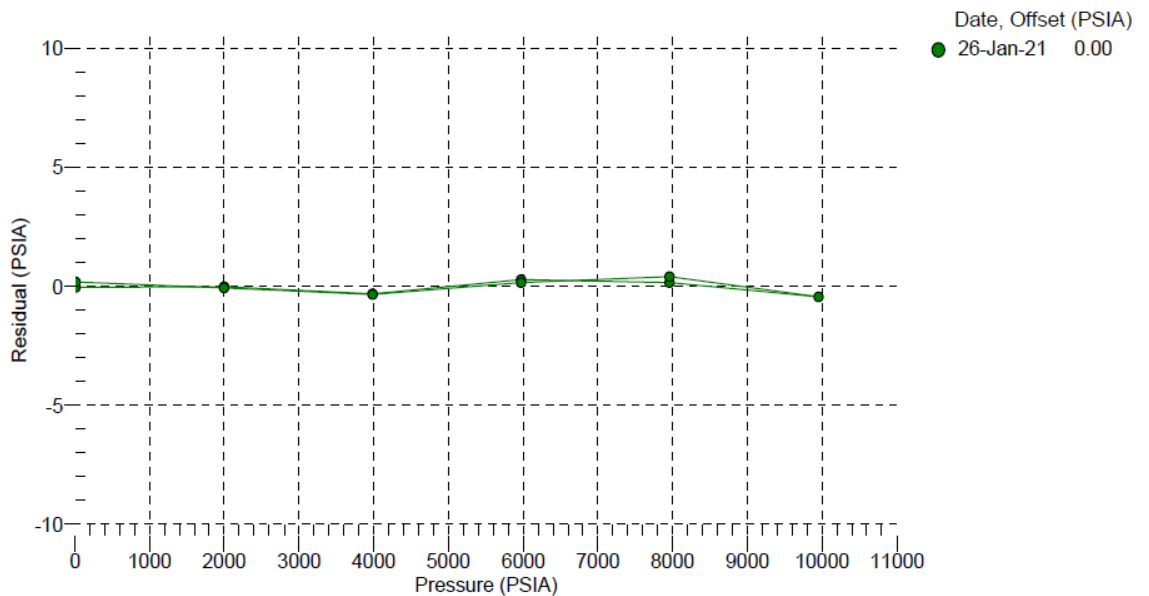
C1 = -4.480765e+004  
C2 = -5.250438e-001  
C3 = 1.424300e-002  
D1 = 3.732300e-002  
D2 = 0.000000e+000  
T1 = 3.039466e+001  
T2 = -4.630908e-004  
T3 = 4.384490e-006  
T4 = 1.785720e-009  
T5 = 0.000000e+000

**AD590M, AD590B, SLOPE AND OFFSET:**

AD590M = 1.28893e-002  
AD590B = -8.41874e+000  
Slope = 1.00004  
Offset = -2.9026 (dbars)

PRESSURE (PSIA)	INSTRUMENT OUTPUT (Hz)	INSTRUMENT TEMPERATURE (°C)	INSTRUMENT PRESSURE (PSIA)	CORRECTED PRESSURE (PSIA)	RESIDUAL (PSIA)
13.605	32916.20	23.6	17.788	13.579	-0.026
1999.857	33636.30	23.6	2003.979	1999.849	-0.008
3987.541	34339.40	23.7	3991.277	3987.226	-0.315
5974.427	35026.20	23.8	5978.687	5974.715	0.288
7961.970	35697.60	23.8	7966.013	7962.121	0.151
9949.966	36354.50	23.9	9953.338	9949.525	-0.441
7961.958	35697.70	23.9	7966.265	7962.373	0.415
5974.721	35026.30	23.9	5978.845	5974.874	0.153
3987.946	34339.60	23.9	3991.656	3987.605	-0.341
2000.206	33636.50	24.0	2004.279	2000.149	-0.057
13.603	32916.40	24.0	17.996	13.787	0.184

Residual (PSIA) = corrected instrument pressure - reference pressure



## B. Seabird temperature sensor of the 813 probe calibration



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SENSOR SERIAL NUMBER: 4594  
CALIBRATION DATE: 23-Feb-21

SBE 3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

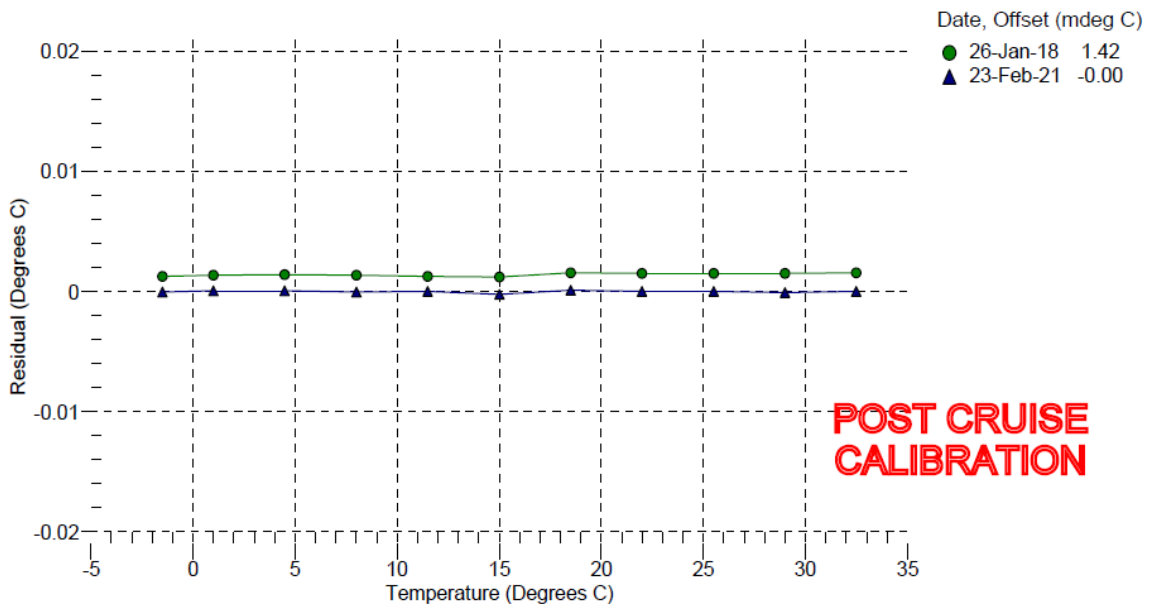
g = 4.35879497e-003  
h = 6.40893036e-004  
i = 2.13530166e-005  
j = 1.82419197e-006  
f0 = 1000.0

BATH TEMP (° C)	INSTRUMENT OUTPUT (Hz)	INST TEMP (° C)	RESIDUAL (° C)
-1.5000	2984.294	-1.5000	-0.00005
1.0000	3156.061	1.0001	0.00005
4.5000	3408.358	4.5001	0.00005
8.0000	3674.809	8.0000	-0.00001
11.4999	3955.798	11.4999	0.00001
15.0000	4251.697	14.9998	-0.00020
18.5000	4562.909	18.5001	0.00012
22.0000	4889.712	22.0000	0.00004
25.5000	5232.486	25.5000	0.00004
29.0000	5591.540	28.9999	-0.00006
32.4999	5967.207	32.4999	0.00001

f = Instrument Output (Hz)

$$\text{Temperature ITS-90 (°C)} = 1 / \{g + h[\ln(f_0 / f)] + i[\ln^2(f_0 / f)] + j[\ln^3(f_0 / f)]\} - 273.15$$

$$\text{Residual (°C)} = \text{instrument temperature} - \text{bath temperature}$$



### C. Seabird Conductivity sensor of the 813 probe calibration



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SENSOR SERIAL NUMBER: 3166  
CALIBRATION DATE: 21-Jan-21

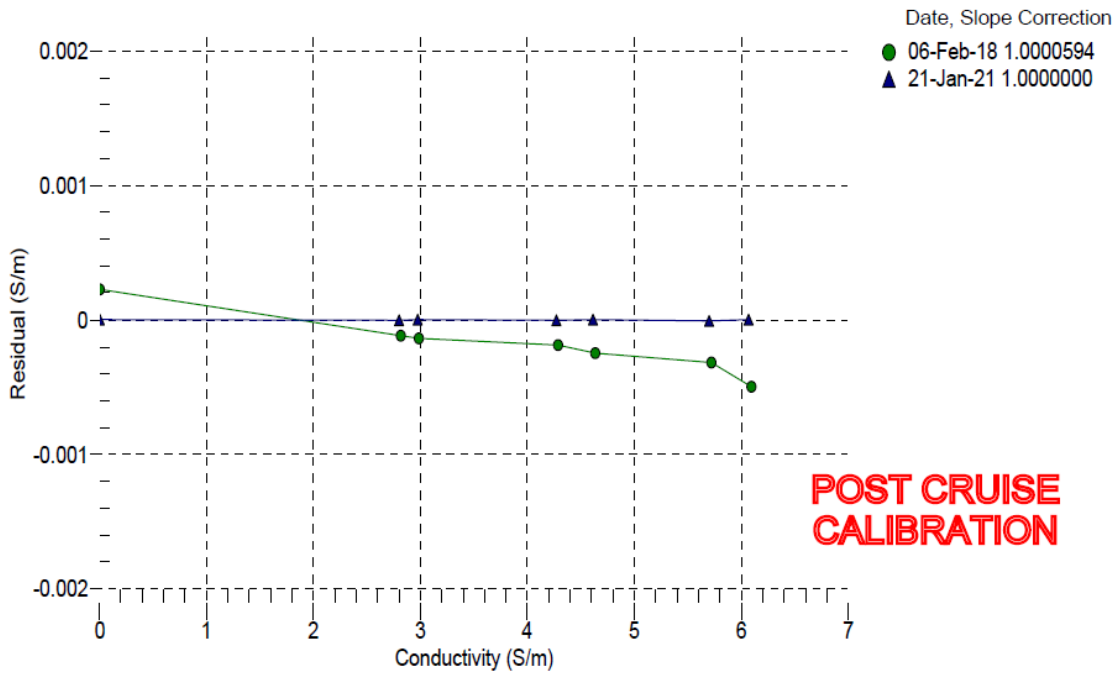
SBE 4 CONDUCTIVITY CALIBRATION DATA  
PSS 1978: C(35,15,0) = 4.2914 Siemens/meter

COEFFICIENTS:

g = -1.03509751e+001                      CPcor = -9.5700e-008 (nominal)  
h = 1.51887399e+000                      CTcor = 3.2500e-006 (nominal)  
i = -5.33173904e-004  
j = 1.26134457e-004

BATH TEMP (° C)	BATH SAL (PSU)	BATH COND (S/m)	INSTRUMENT OUTPUT (kHz)	INSTRUMENT COND (S/m)	RESIDUAL (S/m)
0.0000	0.0000	0.00000	2.61099	0.00000	0.00000
-1.0000	34.7985	2.80328	5.02620	2.80327	-0.00000
1.0000	34.7989	2.97462	5.13703	2.97462	0.00000
15.0000	34.7994	4.26976	5.90752	4.26976	-0.00000
18.5000	34.7986	4.61627	6.09707	4.61628	0.00000
29.0000	34.7944	5.69913	6.65440	5.69913	-0.00001
32.5000	34.7843	6.07104	6.83525	6.07104	0.00000

f = Instrument Output (kHz)  
t = temperature (°C); p = pressure (decibars); δ = CTcor; ε = CPcor;  
Conductivity (S/m) = (g + h \* f<sup>2</sup> + i \* f<sup>3</sup> + j \* f<sup>4</sup>) / 10 (1 + δ \* t + ε \* p)  
Residual (Siemens/meter) = instrument conductivity - bath conductivity





## D. Seabird oxygen sensor of the 813 probe calibration



Sea-Bird Scientific  
13431 NE 20<sup>th</sup> Street  
Bellevue, WA 98005  
USA

+1 425-643-9866  
seabird@seabird.com  
www.seabird.com

SENSOR SERIAL NUMBER: 0526  
CALIBRATION DATE: 29-Apr-21

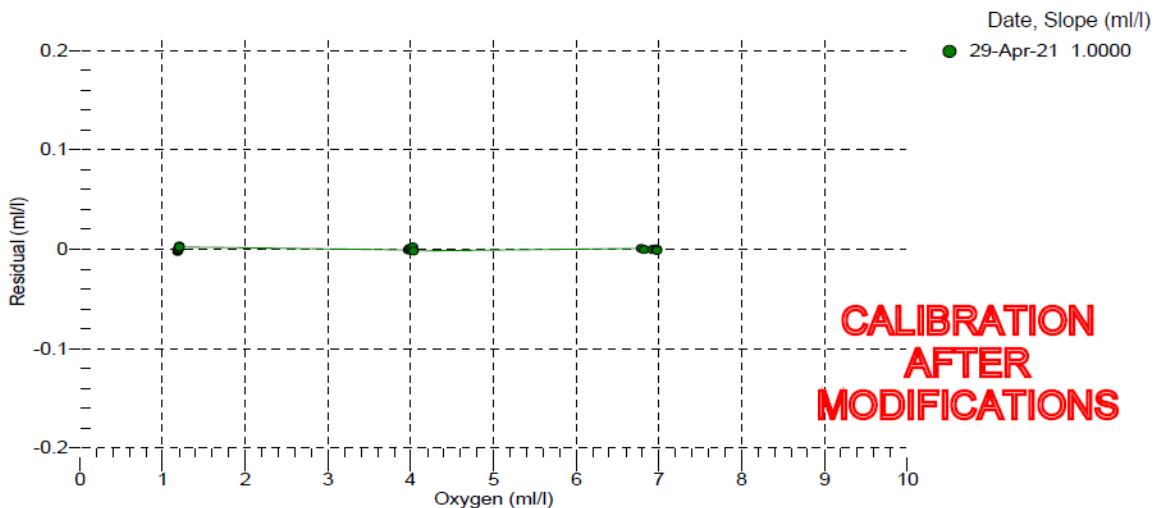
SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS:  
Soc = 0.4545  
Voffset = -0.6980  
Tau20 = 1.55  
A = -4.6057e-003  
B = 1.4547e-004  
C = -2.3904e-006  
E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS  
D1 = 1.92634e-4 H1 = -3.300000e-2  
D2 = -4.64803e-2 H2 = 5.00000e+3  
H3 = 1.45000e+3

BATH OXYGEN (ml/l)	BATH TEMPERATURE (° C)	BATH SALINITY (PSU)	INSTRUMENT OUTPUT (volts)	INSTRUMENT OXYGEN (ml/l)	RESIDUAL (ml/l)
1.18	2.00	0.00	0.968	1.18	-0.00
1.19	6.00	0.00	1.005	1.19	-0.00
1.19	12.00	0.00	1.060	1.19	0.00
1.20	20.00	0.00	1.135	1.20	0.00
1.20	30.00	0.00	1.238	1.20	0.00
1.20	26.00	0.00	1.196	1.20	0.00
3.97	2.00	0.00	1.608	3.97	-0.00
3.98	6.00	0.00	1.728	3.98	0.00
4.01	12.00	0.00	1.914	4.01	-0.00
4.03	26.00	0.00	2.363	4.02	-0.00
4.03	20.00	0.00	2.169	4.03	0.00
4.03	30.00	0.00	2.504	4.03	-0.00
6.79	2.00	0.00	2.255	6.79	0.00
6.82	6.00	0.00	2.462	6.82	-0.00
6.92	12.00	0.00	2.797	6.92	-0.00
6.96	30.00	0.00	3.817	6.96	0.00
6.97	26.00	0.00	3.584	6.97	-0.00
6.98	20.00	0.00	3.246	6.98	-0.00

V = instrument output (volts); T = temperature (°C); S = salinity (PSU); K = temperature (°K)  
Oxsol(T,S) = oxygen saturation (ml/l); P = pressure (dbar)  
Oxygen (ml/l) = Soc \* (V + Voffset) \* (1.0 + A \* T + B \* T<sup>2</sup> + C \* T<sup>3</sup>) \* Oxsol(T,S) \* exp(E \* P / K)  
Residual (ml/l) = instrument oxygen - bath oxygen





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 www.seabird.com

SENSOR SERIAL NUMBER: 1402  
 CALIBRATION DATE: 27-Apr-21

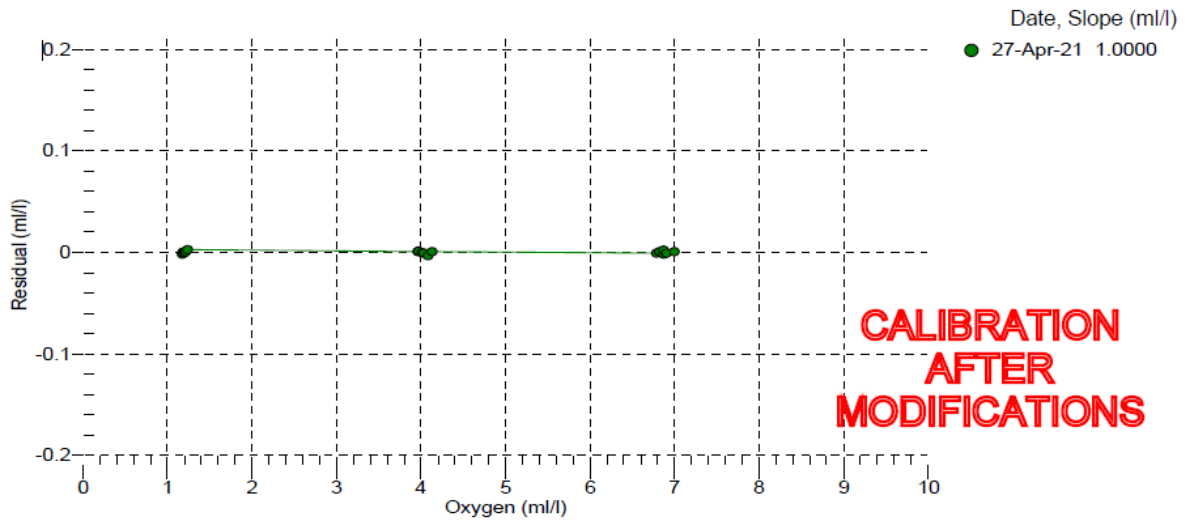
SBE 43 OXYGEN CALIBRATION DATA

COEFFICIENTS:  
 Soc = 0.5066  
 Voffset = -0.4748  
 Tau20 = 1.20  
 A = -3.7931e-003  
 B = 1.1832e-004  
 C = -1.7709e-006  
 E nominal = 0.036

NOMINAL DYNAMIC COEFFICIENTS  
 D1 = 1.92634e-4  
 D2 = -4.64803e-2  
 H1 = -3.300000e-2  
 H2 = 5.00000e+3  
 H3 = 1.45000e+3

BATH OXYGEN (ml/l)	BATH TEMPERATURE (° C)	BATH SALINITY (PSU)	INSTRUMENT OUTPUT (volts)	INSTRUMENT OXYGEN (ml/l)	RESIDUAL (ml/l)
1.17	2.00	0.00	0.716	1.17	-0.00
1.18	6.00	0.00	0.748	1.18	0.00
1.19	12.00	0.00	0.796	1.19	-0.00
1.20	20.00	0.00	0.865	1.20	-0.00
1.22	26.00	0.00	0.922	1.22	0.00
1.24	30.00	0.00	0.966	1.24	0.00
3.96	2.00	0.00	1.289	3.96	0.00
3.97	6.00	0.00	1.393	3.97	0.00
4.01	12.00	0.00	1.558	4.01	-0.00
4.03	20.00	0.00	1.782	4.03	-0.00
4.08	26.00	0.00	1.968	4.08	-0.00
4.13	30.00	0.00	2.108	4.14	0.00
6.78	2.00	0.00	1.868	6.78	-0.00
6.82	6.00	0.00	2.050	6.82	0.00
6.87	12.00	0.00	2.331	6.87	-0.00
6.87	20.00	0.00	2.703	6.87	0.00
6.91	30.00	0.00	3.202	6.91	-0.00
6.99	26.00	0.00	3.034	6.99	0.00

V = instrument output (volts); T = temperature (°C); S = salinity (PSU); K = temperature (°K)  
 Oxsol(T,S) = oxygen saturation (ml/l); P = pressure (dbar)  
 $Oxygen (ml/l) = Soc * (V + Voffset) * (1.0 + A * T + B * T^2 + C * T^3) * Oxsol(T,S) * exp(E * P / K)$   
 Residual (ml/l) = instrument oxygen - bath oxygen





## E. Salinity sampling protocol



## F. Oxygen sampling protocol



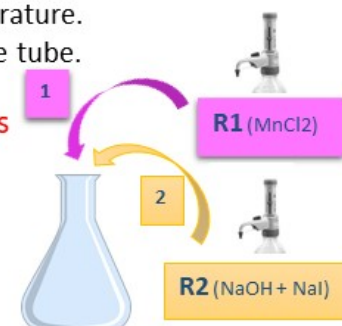
### User's guide for dissolved oxygen sampling

1. Put the gloves.
2. Purge the reagent distributors of R1 and R2 to be sure that there is no bubbles in the tubes.
3. Take :
  - ✓ A flask in the box and check that the number on the flask and on the cap are in agreement.
  - ✓ The sampling tube.
  - ✓ The thermometer.
4. Give the number information to the secretary.
5. Start the sampling :
  - ✓ Install the sampling tube on the tap.
  - ✓ Drain the tube and be sure that no bubbles are present.
  - ✓ Pinch the tube and inside it to the bottom of the flask a little inclined.
  - ✓ Release the tube carefully to not create a vortex or bubbles.
  - ✓ Let overflow the water (3 times the volume of the flask) and take the temperature.
  - ✓ Pinch again the tube to reduce the flow (don't stop the flow) and get out the tube.
  - ✓ Stop the flow of the niskin bottle.
6. Inject the reagents R1 (pink) then R2.
7. Close the flask and start the agitation during 30 seconds minimum.
8. Apply the same protocol for the others samples of the station.

Take the flask in increasing order please



The order of the reagents is important!!!!



At the end of the station : shake again very softly all the samples of the station and add distilled water in the top of the flasks.

Cr  e par CLB le 09/01/2020

## G. Oxygen sampling analysis

### User's guide for dissolved oxygen analysis



1. Put the gloves and check that the method on the titrator is « oxy3 ».
2. Check on the container's PC that the software esayitrino has been launched.

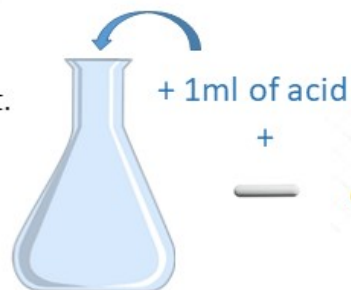
3. Put out the excess of water.



4. Open the flask and rinse the bottom of the cap with distilled water.  
( to be sure to have all the precipitate for the analysis)



5. Add the acid (R3) then the bar magnet.



The order acid then stirrer is really important.

6. Put in the titrod and the anti diffusion tube in the flask on the magnetic stirrer.



The anti diffusion tube must always be behind the titrode and never be glue on it.

7. Push on « START » then write

- the station number,
- The flask number,
- The flask volume. (confirm by « Entrée » each time)

Créé par CLB le 09/01/2020

## H. Quality Flag

During Cadhyac treatment, each data will be marked with a quality flag:

1	good
4	bad
9	no data

During the generation of the clc file, some flags can appear:

2	probably good
8	interpolated

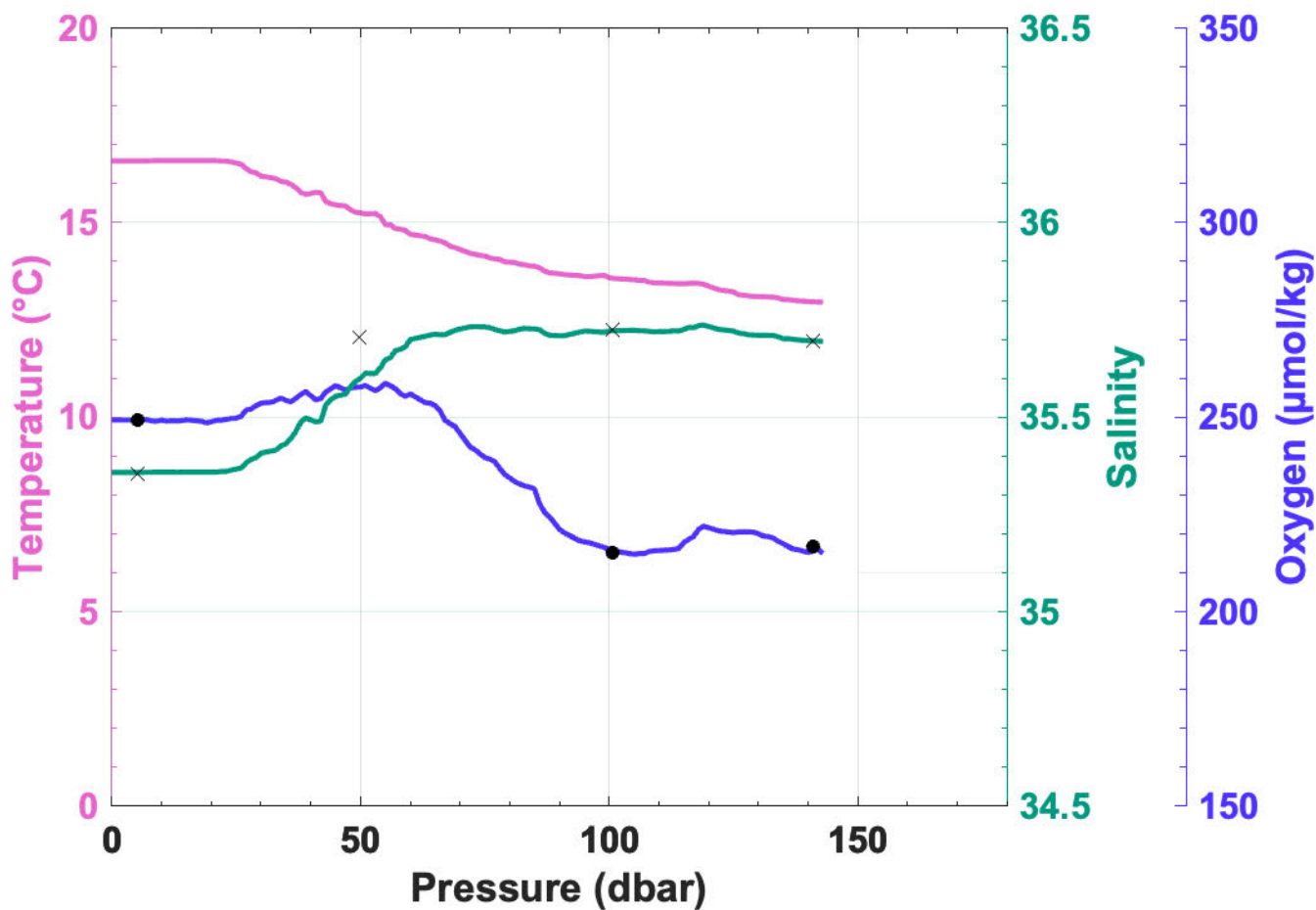
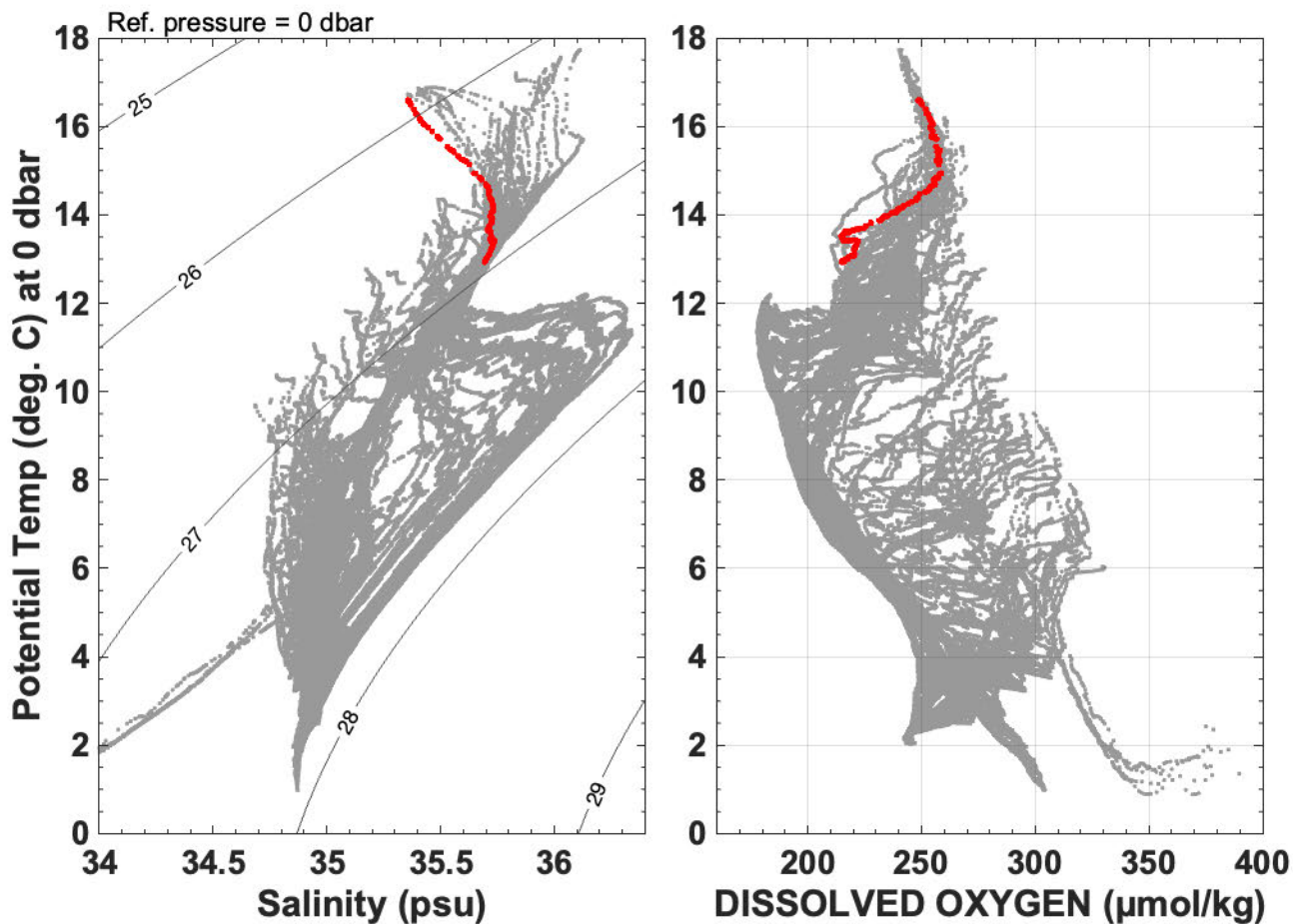
## Listing and figures of the CTD and associated bottle data

The following pages present decimated CTD-O<sub>2</sub> data facing plots showing (top-left)  $\theta$ -S diagram, (top-right)  $\theta$ -Ox diagram and (bottom) profiles of CTD temperature, salinity and dissolved oxygen as a function of pressure, along with bottle data (points). On top figures, all stations are plotted in grey while the specified station appears in red.

Cruise : BOCATS 2021  
Station : 1  
Date : 29/05/2021  
Depth : 155  
Position : N 40 19.93  
W 9 27.58

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	16.586	35.358	249.3	16.586
10	16.593	35.359	249.2	16.591
20	16.592	35.359	248.8	16.588
30	16.189	35.407	253.6	16.185
40	15.749	35.493	255.5	15.743
50	15.249	35.600	257.7	15.242
100	13.582	35.722	216.0	13.568
143	12.952	35.695	215.0	12.933

# STATION 1

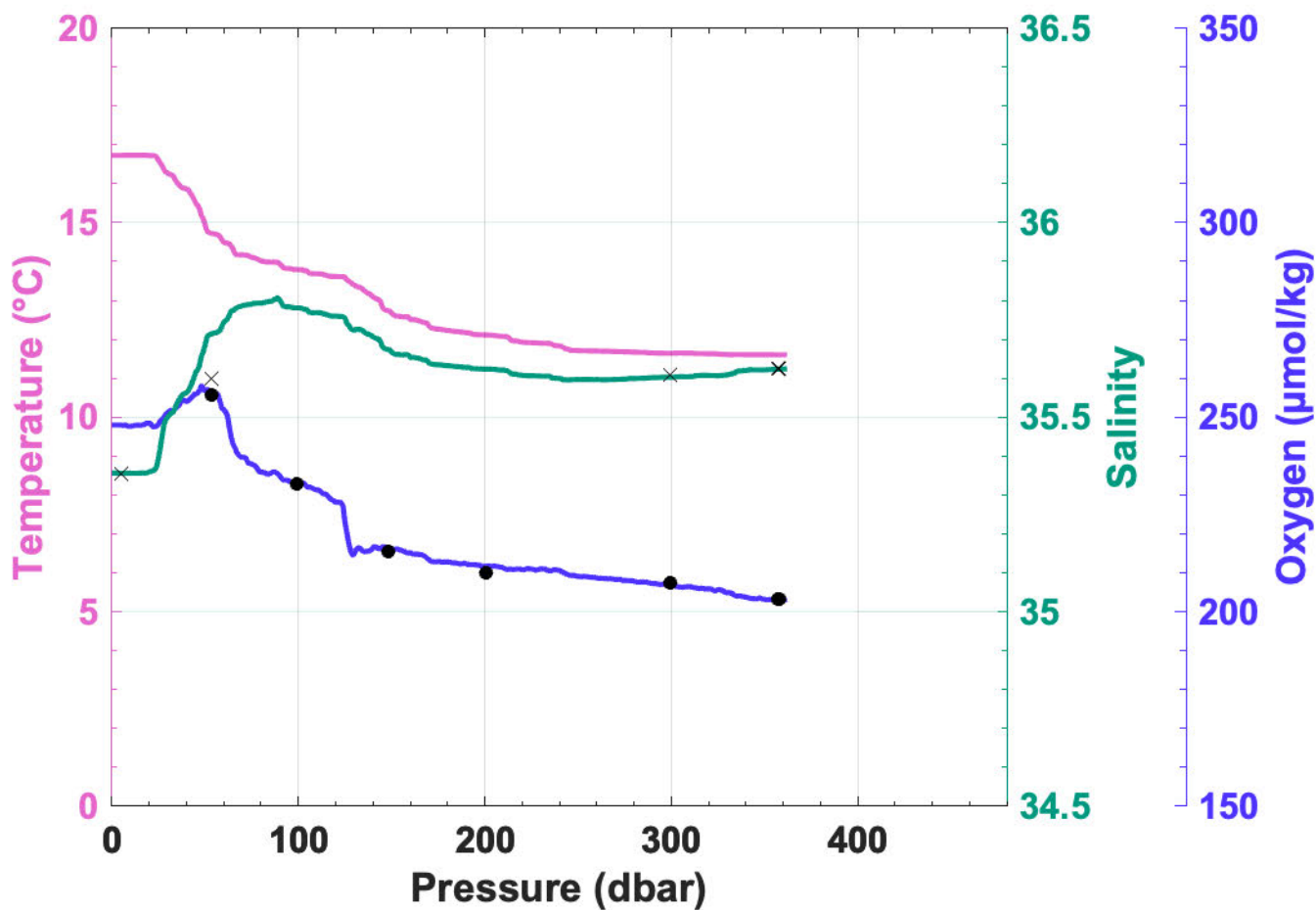
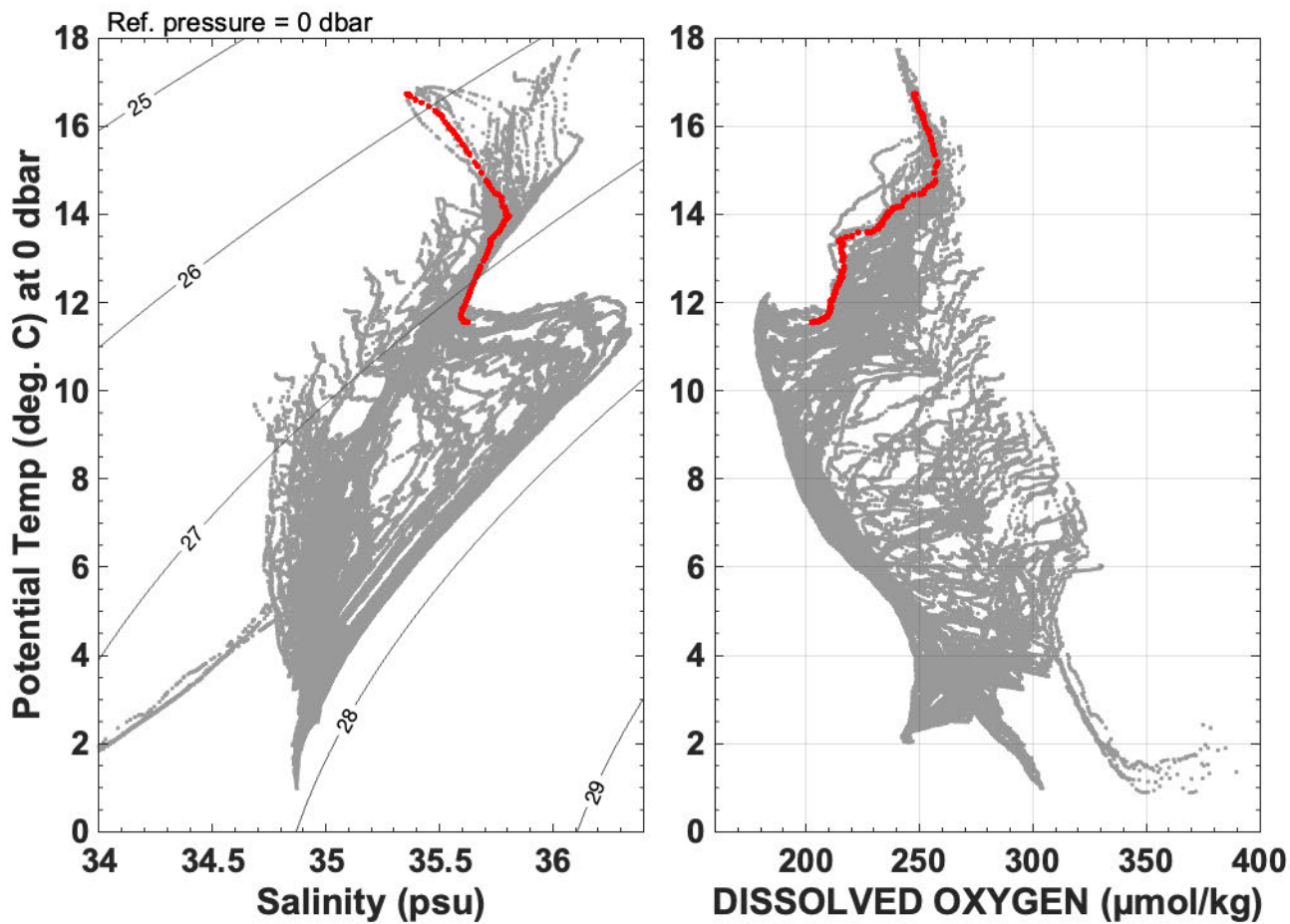


Cruise : BOCATS 2021  
Station : 2  
Date : 29/05/2021  
Depth : 370  
Position : N 40 19.82  
W 9 38.56

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	16.726	35.356	248.0	16.726
10	16.729	35.356	247.6	16.727
20	16.723	35.359	248.4	16.720
30	16.268	35.500	251.2	16.263
40	15.865	35.563	254.0	15.859
50	14.951	35.685	256.7	14.944
100	13.789	35.781	233.4	13.775
150	12.680	35.668	215.8	12.659
200	12.111	35.624	211.7	12.084
250	11.710	35.597	209.1	11.678
300	11.641	35.602	206.8	11.602
350	11.605	35.621	203.1	11.560



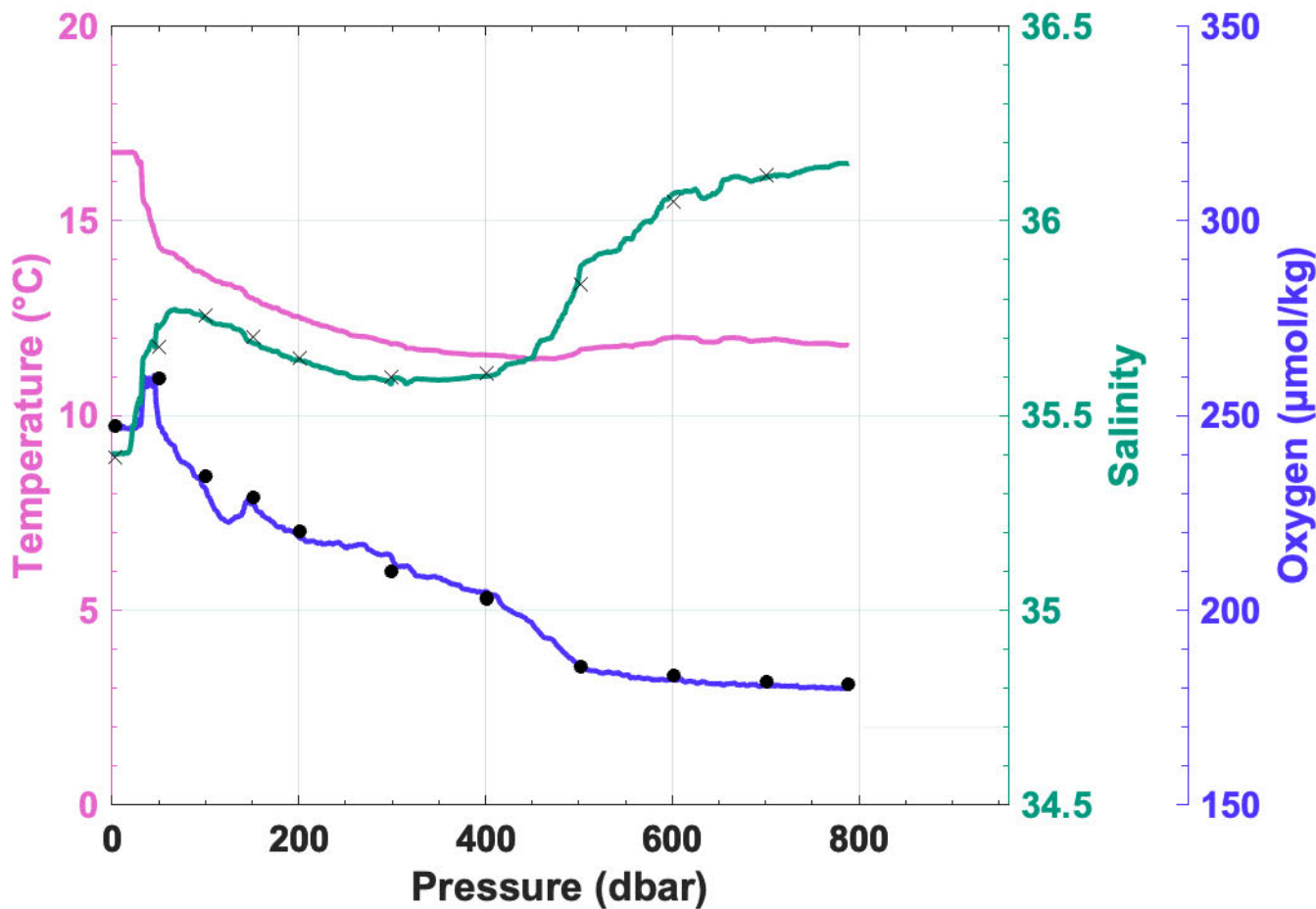
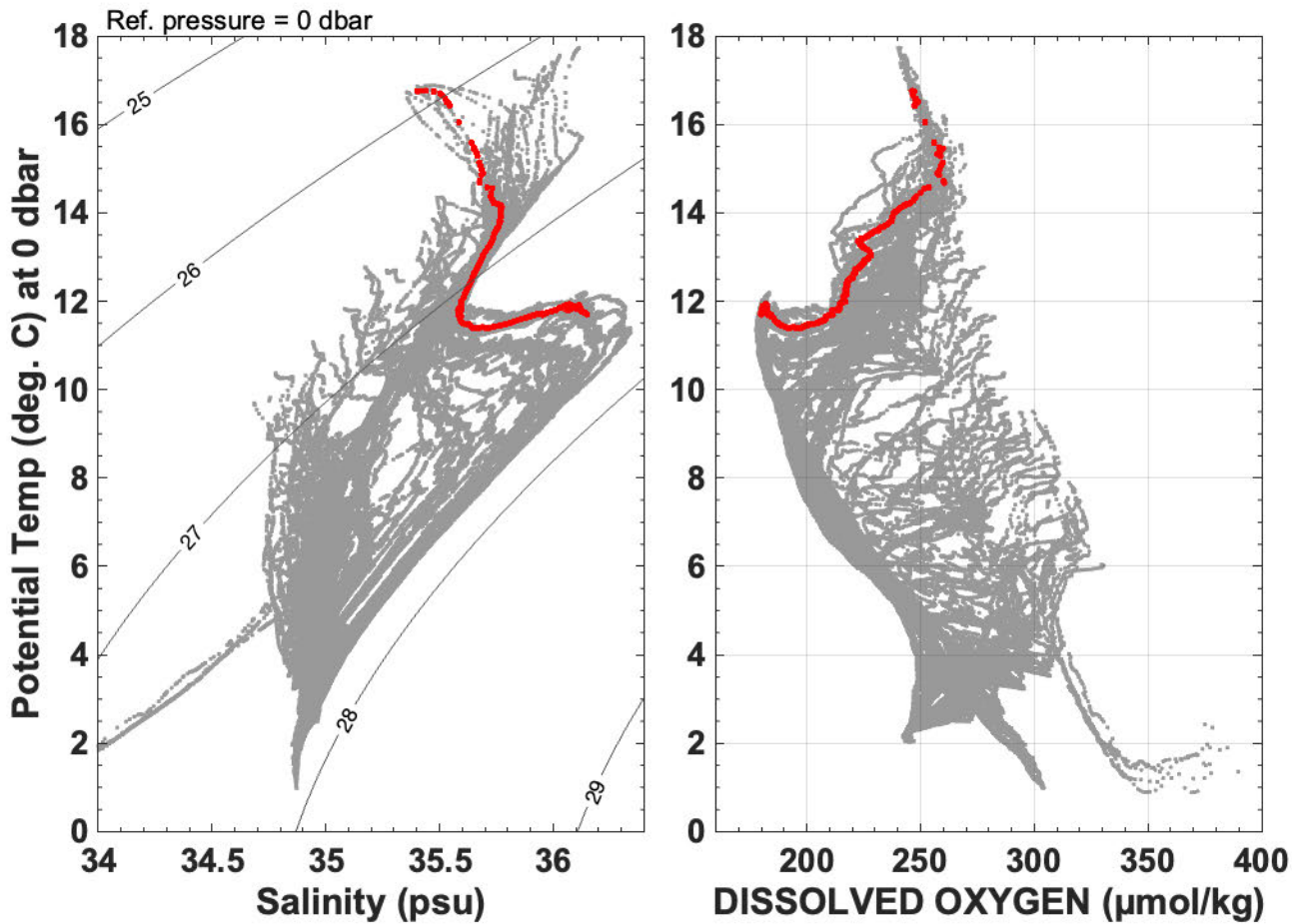
# STATION 2



Cruise : BOCATS 2021  
Station : 3  
Date : 29/05/2021  
Depth : 798  
Position : N 40 20.00  
W 9 46.01

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	16.755	35.402	247.0	16.755
10	16.756	35.402	246.7	16.754
20	16.761	35.424	246.4	16.757
30	16.429	35.546	247.4	16.424
40	15.145	35.674	259.7	15.139
50	14.377	35.724	248.1	14.370
100	13.615	35.749	231.4	13.601
150	13.016	35.688	227.3	12.995
200	12.536	35.643	218.8	12.509
250	12.142	35.608	216.0	12.109
300	11.838	35.590	213.3	11.799
350	11.666	35.591	208.3	11.620
400	11.559	35.601	204.8	11.507
450	11.454	35.649	196.6	11.396
500	11.658	35.858	185.7	11.593
550	11.796	35.954	183.4	11.724
600	12.009	36.068	182.2	11.929
650	11.911	36.079	181.2	11.824
700	11.942	36.112	180.8	11.848
750	11.850	36.135	180.3	11.750

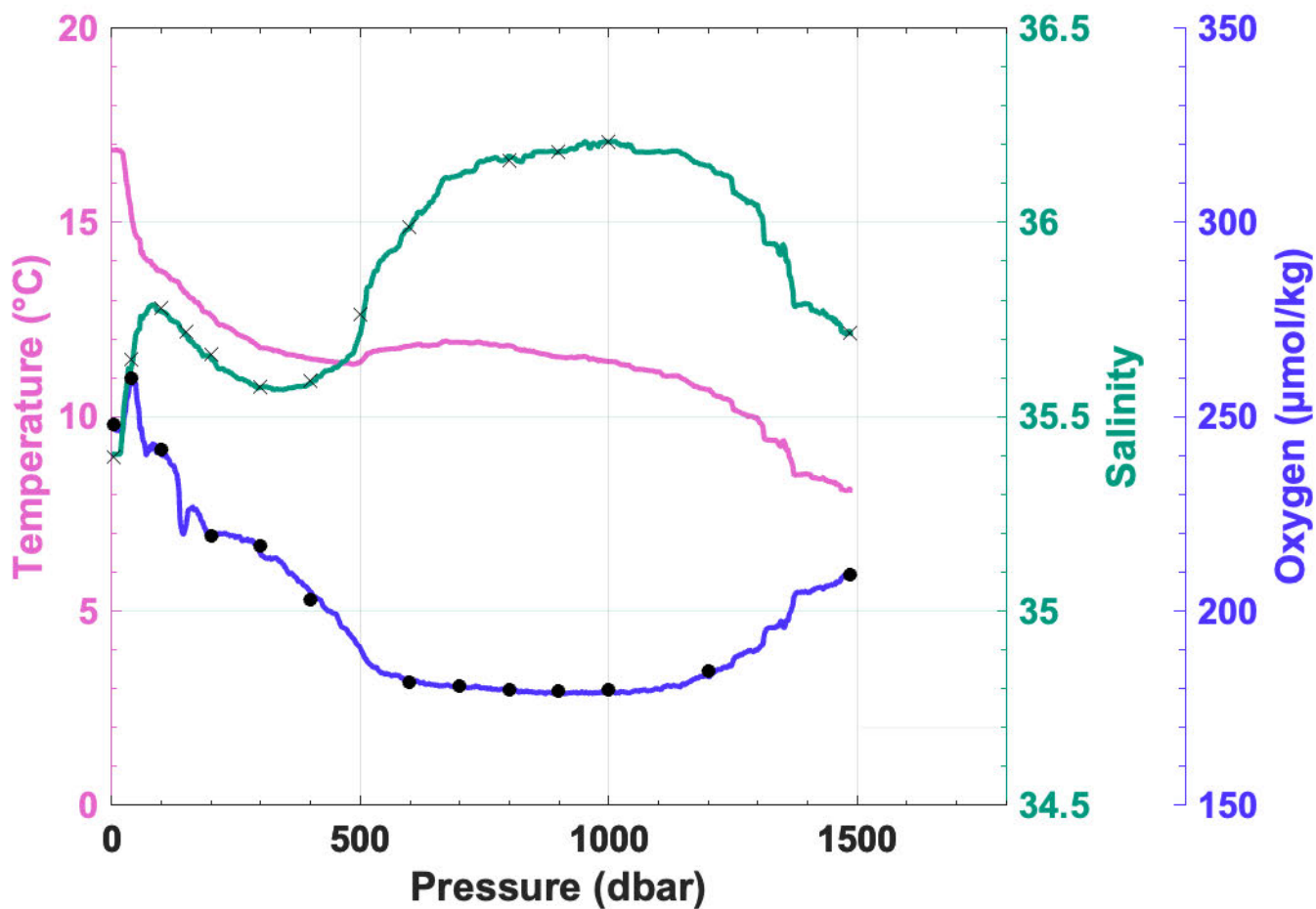
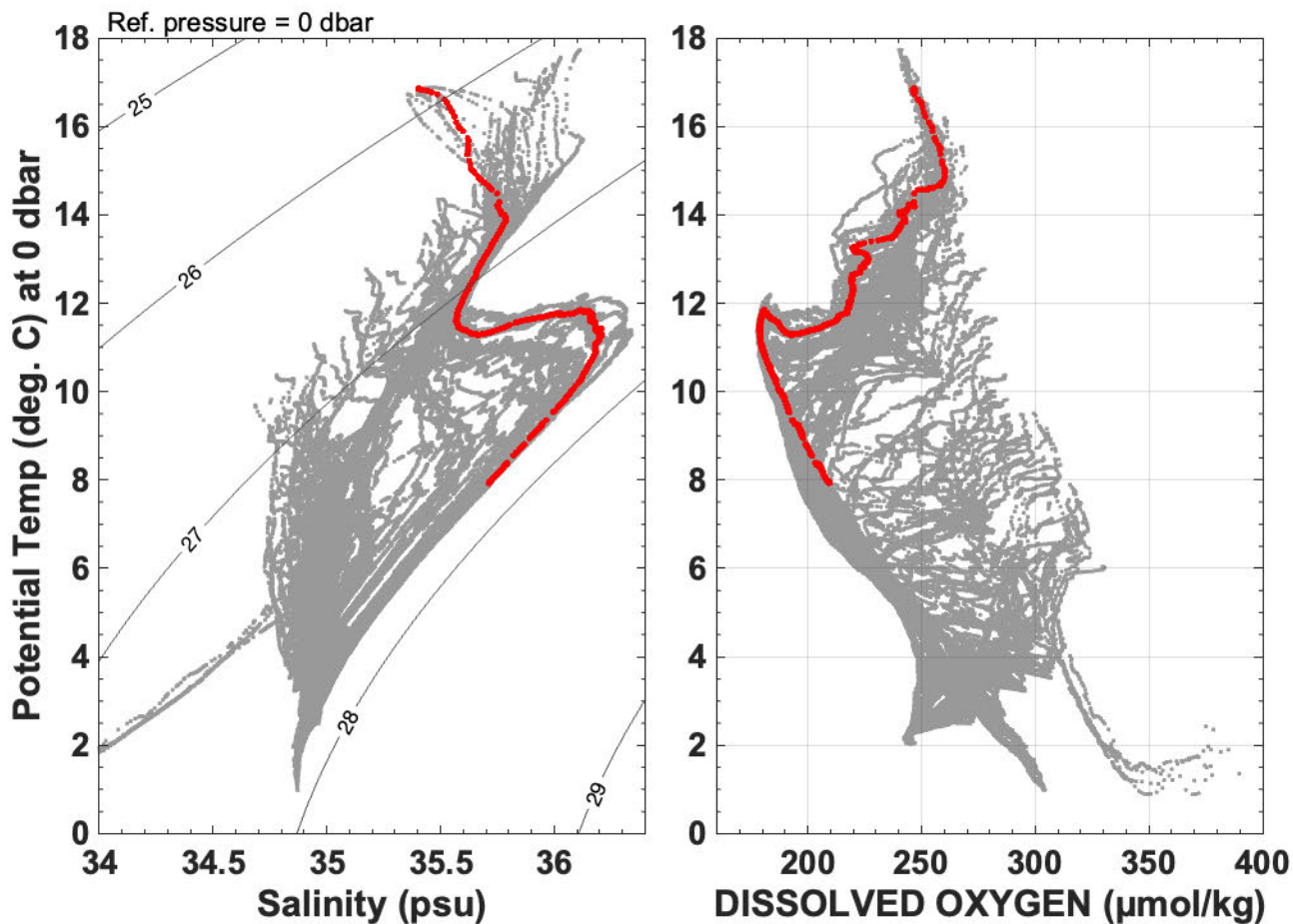
# STATION 3



Cruise : BOCATS 2021  
 Station : 4  
 Date : 29/05/2021  
 Depth : 1486  
 Position : N 40 19.99  
           W 9 48.30

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	16.855	35.403	247.0	16.855
10	16.858	35.403	246.4	16.857
20	16.814	35.440	246.8	16.811
30	15.988	35.580	254.6	15.984
40	15.151	35.632	259.1	15.145
50	14.625	35.717	255.3	14.618
100	13.738	35.771	240.1	13.724
150	13.175	35.709	222.5	13.154
200	12.603	35.649	219.7	12.576
250	12.153	35.602	218.9	12.120
300	11.770	35.576	214.6	11.731
350	11.611	35.571	211.0	11.566
400	11.487	35.588	205.0	11.436
450	11.405	35.626	199.2	11.347
500	11.397	35.714	190.5	11.333
550	11.730	35.914	183.8	11.658
600	11.814	35.986	182.1	11.734
650	11.841	36.067	180.8	11.755
700	11.914	36.120	180.6	11.820
750	11.878	36.158	180.2	11.777
800	11.828	36.170	179.7	11.721
850	11.679	36.181	179.1	11.566
900	11.536	36.182	178.7	11.417
950	11.550	36.205	178.9	11.424
1000	11.420	36.207	179.1	11.288
1100	11.153	36.182	179.9	11.009
1200	10.696	36.146	183.1	10.542
1300	9.957	36.042	190.0	9.796
1400	8.524	35.790	204.8	8.365
1450	8.313	35.752	206.7	8.150

# STATION 4

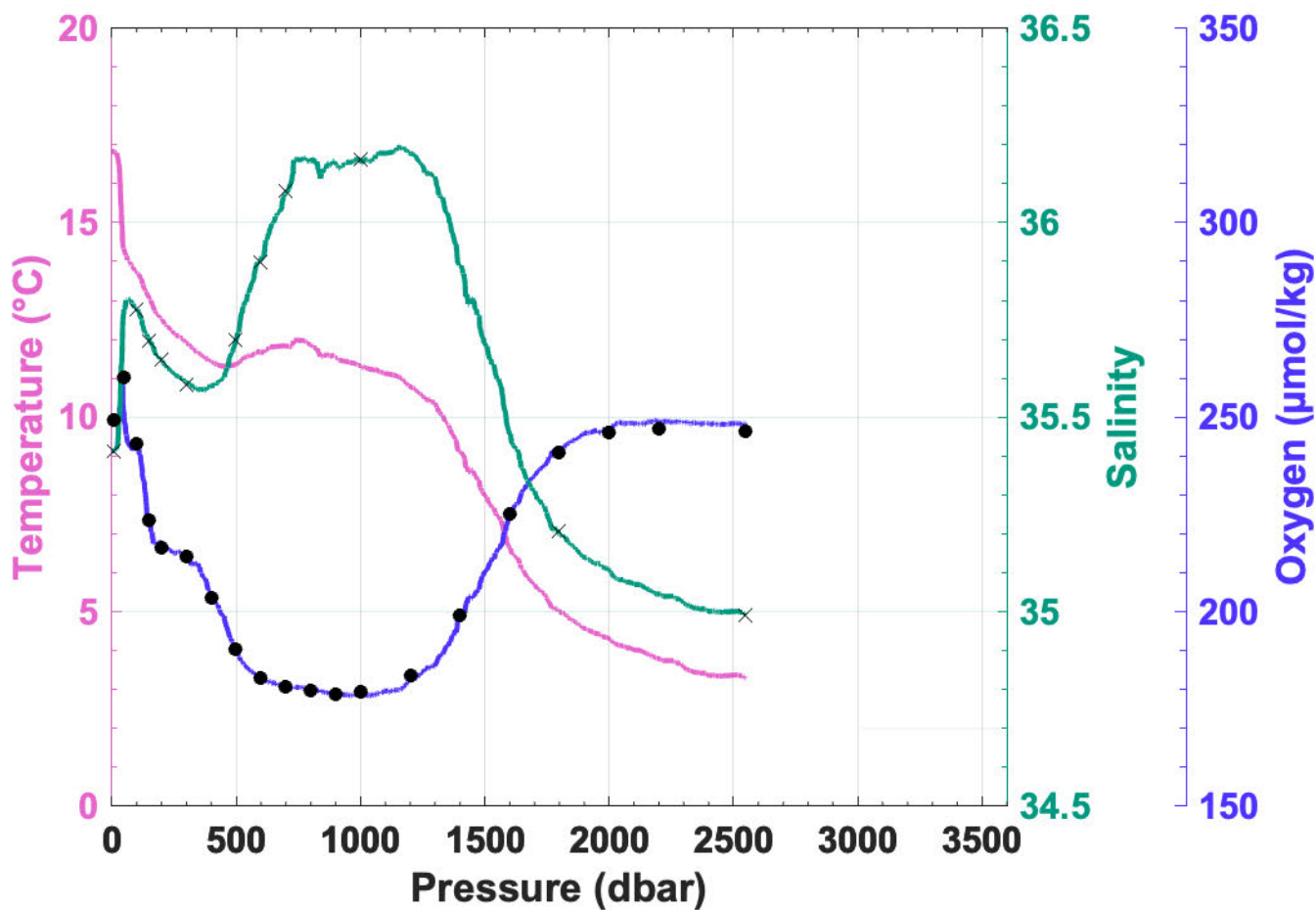
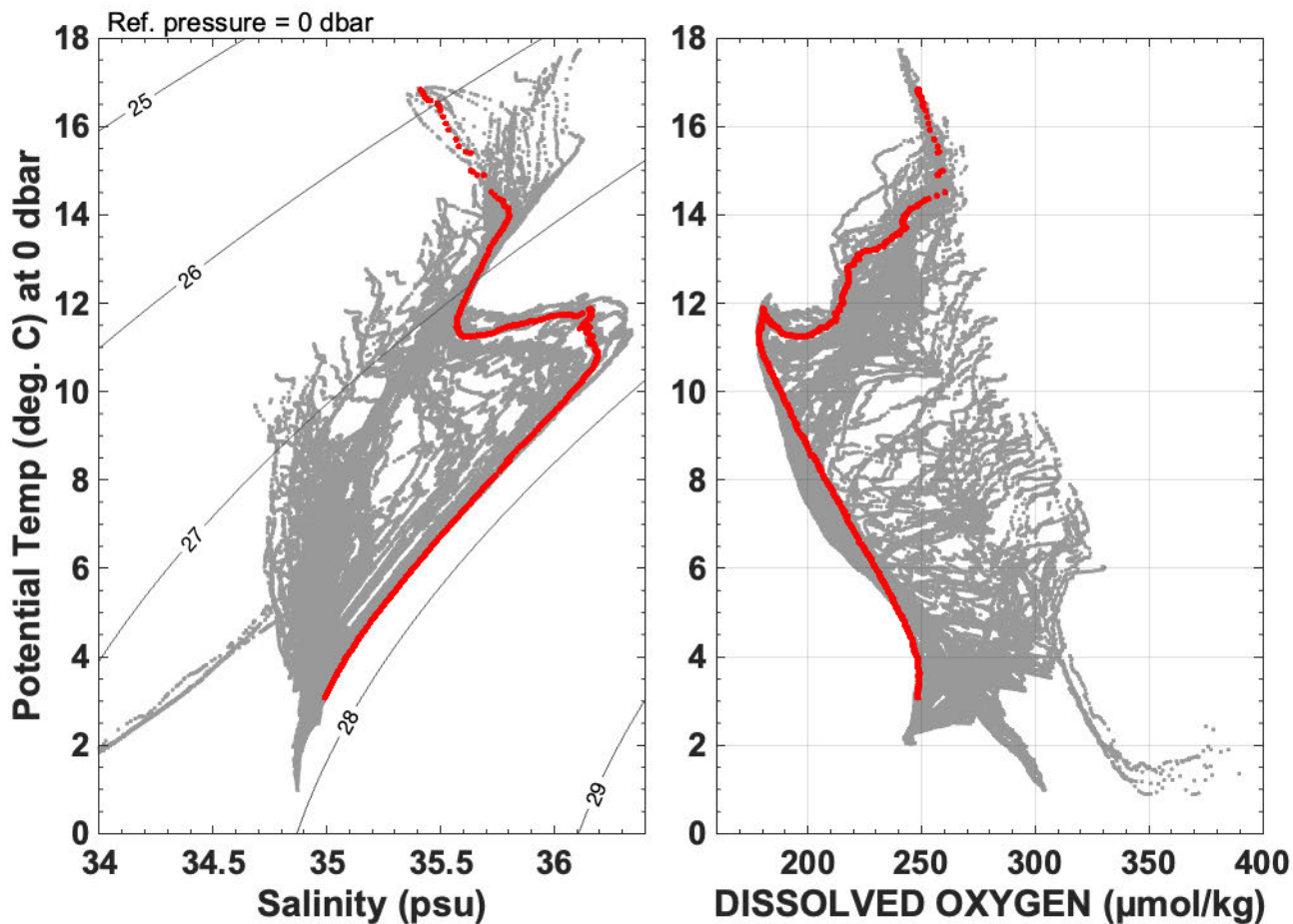


Cruise : BOCATS 2021  
 Station : 5  
 Date : 29/05/2021  
 Depth : 2528  
 Position : N 40 19.96  
           W 9 52.65

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	16.827	35.413	248.1	16.827
10	16.828	35.413	248.4	16.827
20	16.763	35.423	248.7	16.759
30	16.454	35.493	250.6	16.449
40	14.981	35.644	258.2	14.975
50	14.279	35.777	249.9	14.271
100	13.724	35.777	243.2	13.709
150	13.054	35.698	222.4	13.033
200	12.534	35.647	217.8	12.507
250	12.140	35.610	215.2	12.107
300	11.899	35.589	213.9	11.859
350	11.637	35.571	211.5	11.592
400	11.429	35.580	204.2	11.378
450	11.316	35.601	199.0	11.258
500	11.349	35.698	190.2	11.285
550	11.577	35.818	185.2	11.506
600	11.661	35.904	183.1	11.582
650	11.807	35.999	181.7	11.720
700	11.826	36.075	180.6	11.733
750	11.975	36.161	180.5	11.874
800	11.845	36.159	180.7	11.738
850	11.573	36.131	179.4	11.460
900	11.547	36.152	178.7	11.428
950	11.423	36.155	178.5	11.298
1000	11.316	36.159	178.5	11.184
1100	11.119	36.178	179.6	10.975
1200	10.778	36.177	182.4	10.624
1300	10.364	36.115	186.0	10.199
1400	9.107	35.889	198.2	8.941
1500	7.988	35.691	210.1	7.822
1600	6.623	35.455	224.9	6.461
1700	5.714	35.310	234.9	5.553
1800	4.997	35.199	241.9	4.835
1900	4.571	35.140	245.8	4.405
2000	4.302	35.107	246.9	4.130
2100	4.019	35.071	248.3	3.841
2200	3.792	35.045	248.9	3.607
2300	3.556	35.021	248.9	3.366
2400	3.367	35.001	248.4	3.170
2500	3.366	35.000	248.3	3.159
2548	3.304	34.993	248.5	3.093



# STATION 5

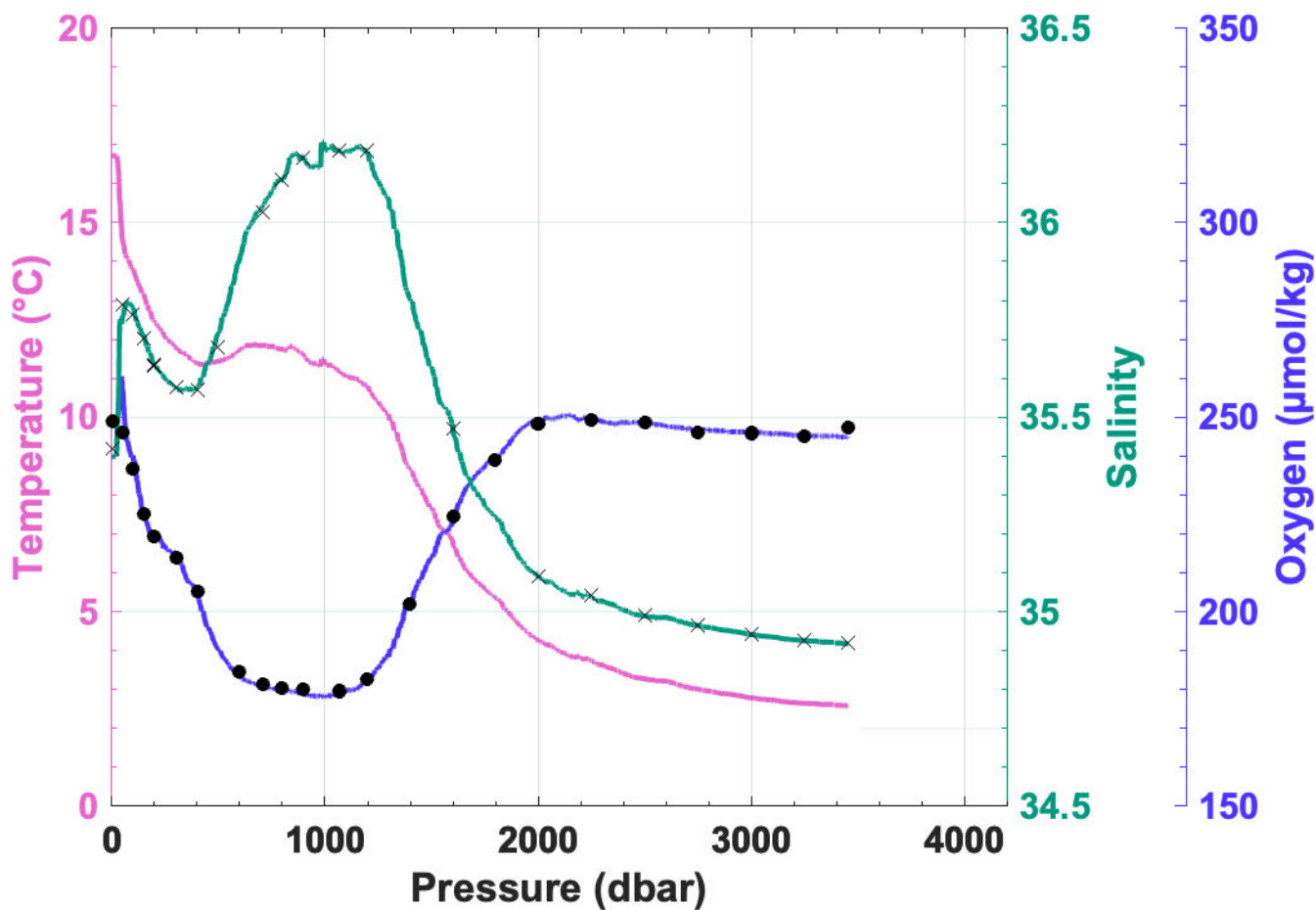
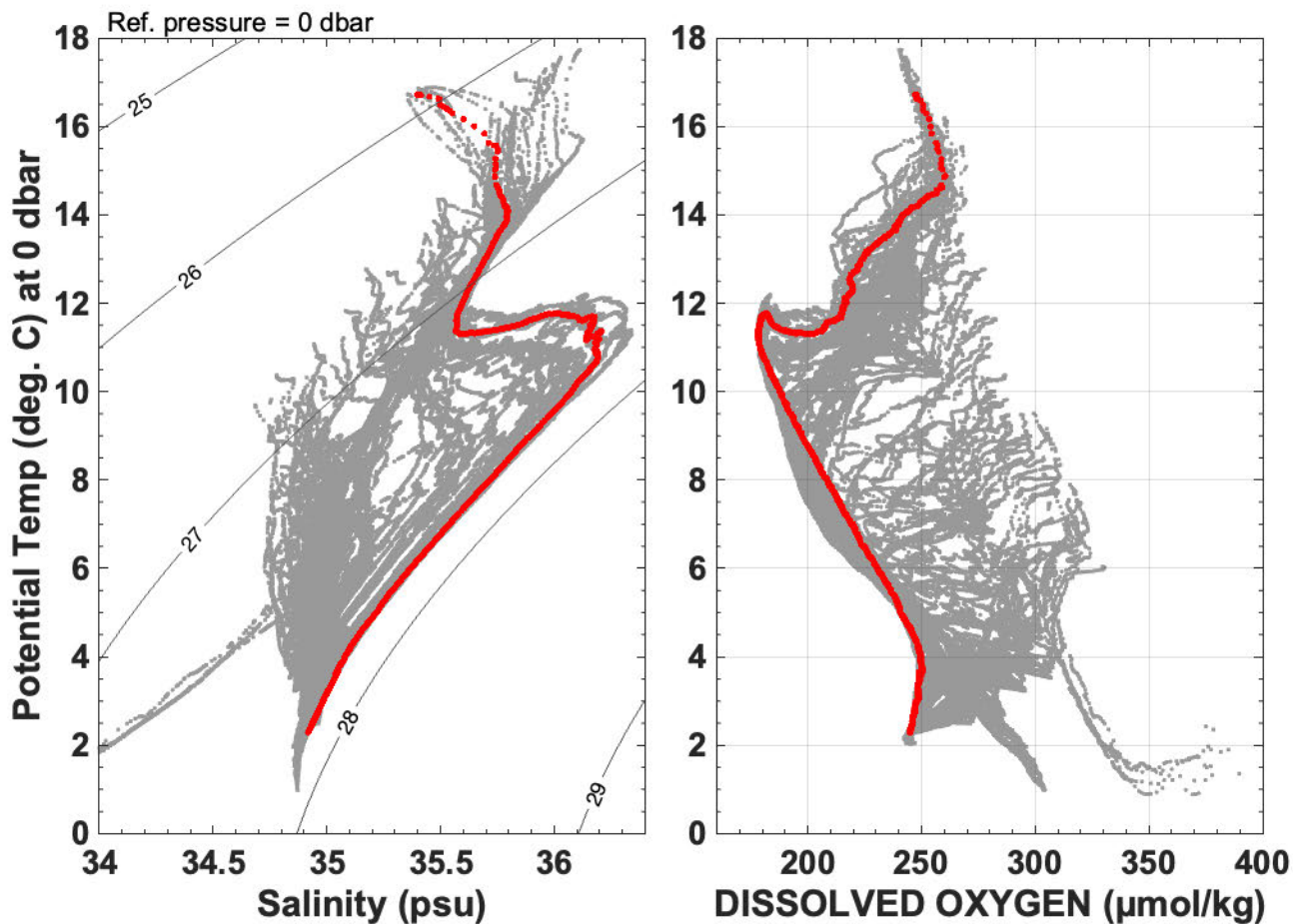


Cruise : BOCATS 2021  
 Station : 6  
 Date : 30/05/2021  
 Depth : 3413  
 Position : N 40 19.96  
           W 9 56.83

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	16.716	35.399	247.7	16.716
10	16.716	35.399	247.7	16.714
20	16.718	35.403	247.5	16.715
30	16.402	35.527	250.8	16.397
40	15.433	35.752	257.6	15.427
50	14.570	35.758	256.8	14.563
100	13.791	35.781	240.1	13.777
150	13.146	35.710	225.8	13.125
200	12.445	35.634	219.4	12.418
250	12.057	35.598	216.8	12.024
300	11.796	35.576	214.6	11.757
350	11.614	35.574	208.6	11.569
400	11.384	35.579	203.7	11.333
450	11.392	35.639	196.0	11.334
500	11.438	35.717	190.2	11.373
550	11.528	35.803	186.4	11.457
600	11.725	35.907	183.5	11.646
650	11.838	35.993	182.0	11.752
700	11.837	36.035	180.9	11.744
750	11.814	36.081	180.2	11.714
800	11.745	36.110	179.5	11.639
850	11.794	36.178	179.6	11.680
900	11.570	36.159	178.7	11.451
950	11.377	36.143	178.3	11.252
1000	11.383	36.185	178.4	11.251
1100	11.078	36.187	179.6	10.935
1200	10.802	36.181	181.9	10.647
1300	10.055	36.058	188.6	9.893
1400	8.644	35.802	203.2	8.484
1500	7.674	35.628	214.0	7.512
1600	6.799	35.474	222.8	6.635
1700	5.818	35.312	234.6	5.655
1800	5.359	35.243	239.6	5.192
1900	4.733	35.151	245.7	4.564
2000	4.271	35.091	249.4	4.099
2100	3.987	35.059	249.9	3.809
2200	3.796	35.040	249.3	3.611
2300	3.632	35.027	248.9	3.440
2400	3.406	35.003	248.7	3.208
2500	3.277	34.989	248.8	3.072
2600	3.215	34.985	247.8	3.001
2700	3.068	34.971	247.0	2.846
2800	2.959	34.959	246.7	2.729
2900	2.880	34.951	246.2	2.642
3000	2.786	34.941	246.1	2.539
3100	2.727	34.935	245.8	2.472
3200	2.664	34.928	245.5	2.399
3300	2.634	34.924	245.1	2.360
3400	2.595	34.919	245.1	2.311
3450	2.580	34.918	244.8	2.291



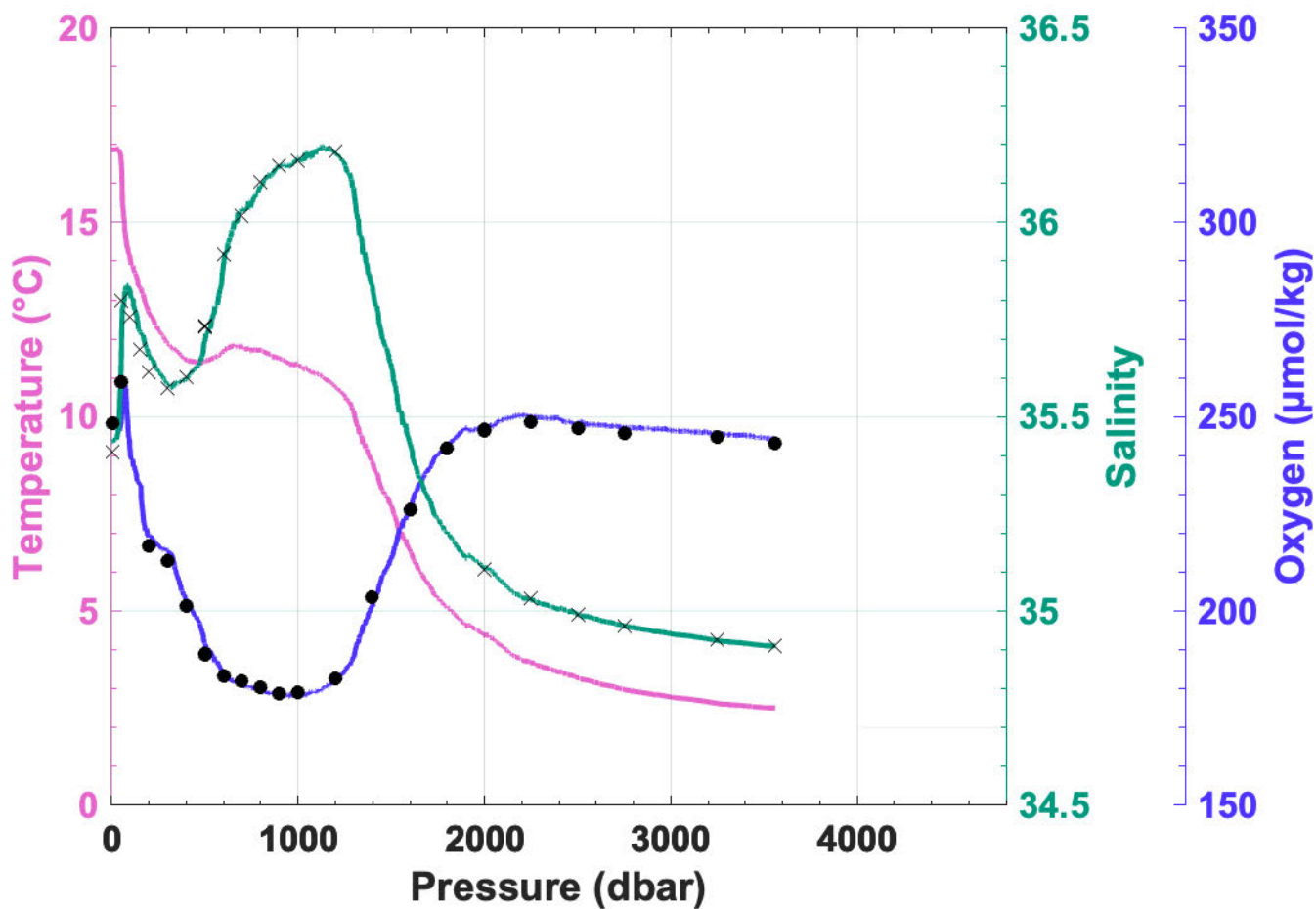
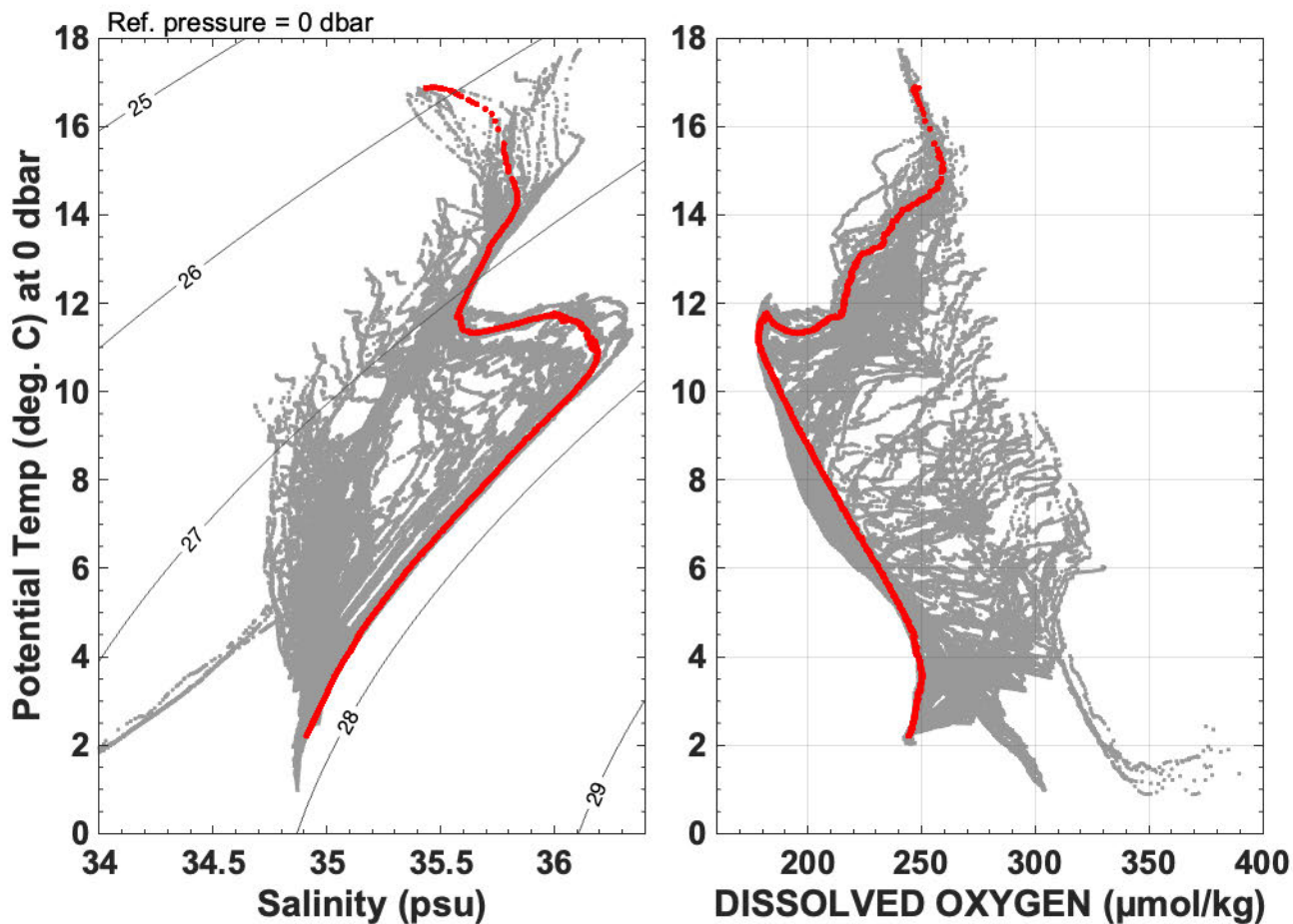
# STATION 6



Cruise : BOCATS 2021  
 Station : 7  
 Date : 29/05/2021  
 Depth : 3522  
 Position : N 40 19.99  
           W 10 2.24

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	16.868	35.436	248.4	16.868
10	16.870	35.439	248.2	16.869
20	16.876	35.440	247.5	16.872
30	16.880	35.453	247.8	16.875
40	16.874	35.494	247.1	16.868
50	16.602	35.624	248.3	16.594
100	13.991	35.812	240.3	13.976
150	13.326	35.719	232.7	13.305
200	12.661	35.658	219.3	12.634
250	12.227	35.616	216.7	12.193
300	11.870	35.583	215.5	11.831
350	11.695	35.588	209.1	11.650
400	11.465	35.596	203.1	11.414
450	11.408	35.624	198.5	11.350
500	11.424	35.696	191.7	11.360
550	11.513	35.764	187.7	11.442
600	11.702	35.892	183.7	11.623
650	11.814	35.984	182.2	11.728
700	11.805	36.035	180.9	11.712
750	11.711	36.050	180.4	11.611
800	11.706	36.093	179.5	11.599
850	11.599	36.120	178.7	11.486
900	11.487	36.144	178.6	11.368
950	11.359	36.145	178.2	11.234
1000	11.334	36.165	178.2	11.202
1100	11.120	36.188	179.1	10.976
1200	10.773	36.179	182.4	10.618
1300	10.096	36.079	188.4	9.934
1400	8.844	35.835	201.2	8.681
1500	7.707	35.630	213.5	7.544
1600	6.550	35.429	226.8	6.389
1700	5.681	35.288	236.7	5.521
1800	5.089	35.201	242.6	4.926
1900	4.626	35.136	247.1	4.459
2000	4.378	35.110	248.0	4.205
2100	4.084	35.074	249.1	3.905
2200	3.739	35.034	250.2	3.556
2300	3.585	35.020	249.7	3.394
2400	3.430	35.005	249.6	3.232
2500	3.283	34.992	248.4	3.077
2600	3.155	34.979	247.8	2.942
2700	3.049	34.968	247.3	2.828
2800	2.941	34.958	247.1	2.712
2900	2.861	34.949	246.7	2.624
3000	2.789	34.941	246.5	2.543
3100	2.736	34.936	246.2	2.480
3200	2.664	34.928	245.9	2.400
3300	2.604	34.921	245.4	2.330
3400	2.565	34.917	245.2	2.281
3500	2.514	34.911	244.5	2.222
3550	2.513	34.910	244.4	2.215

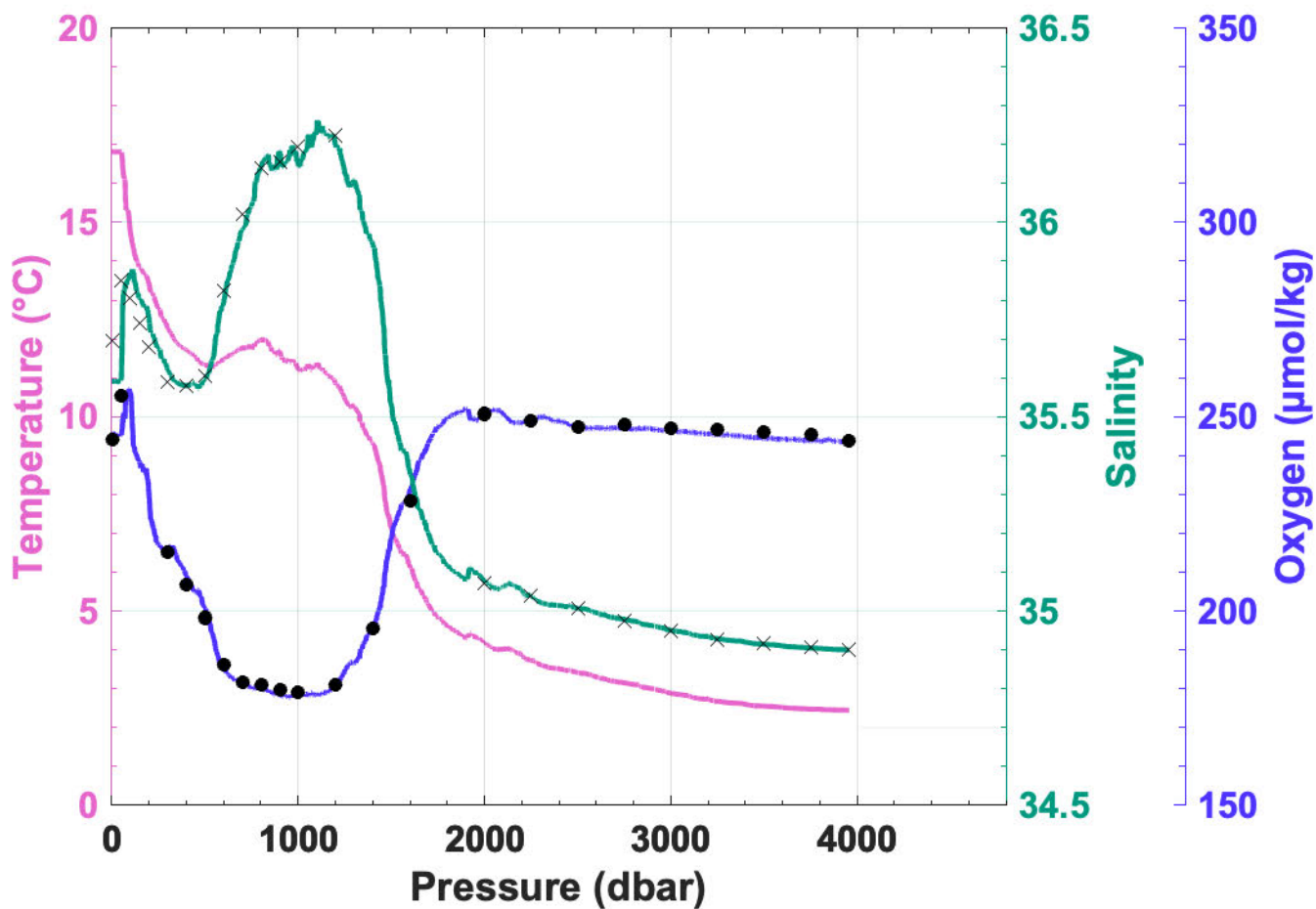
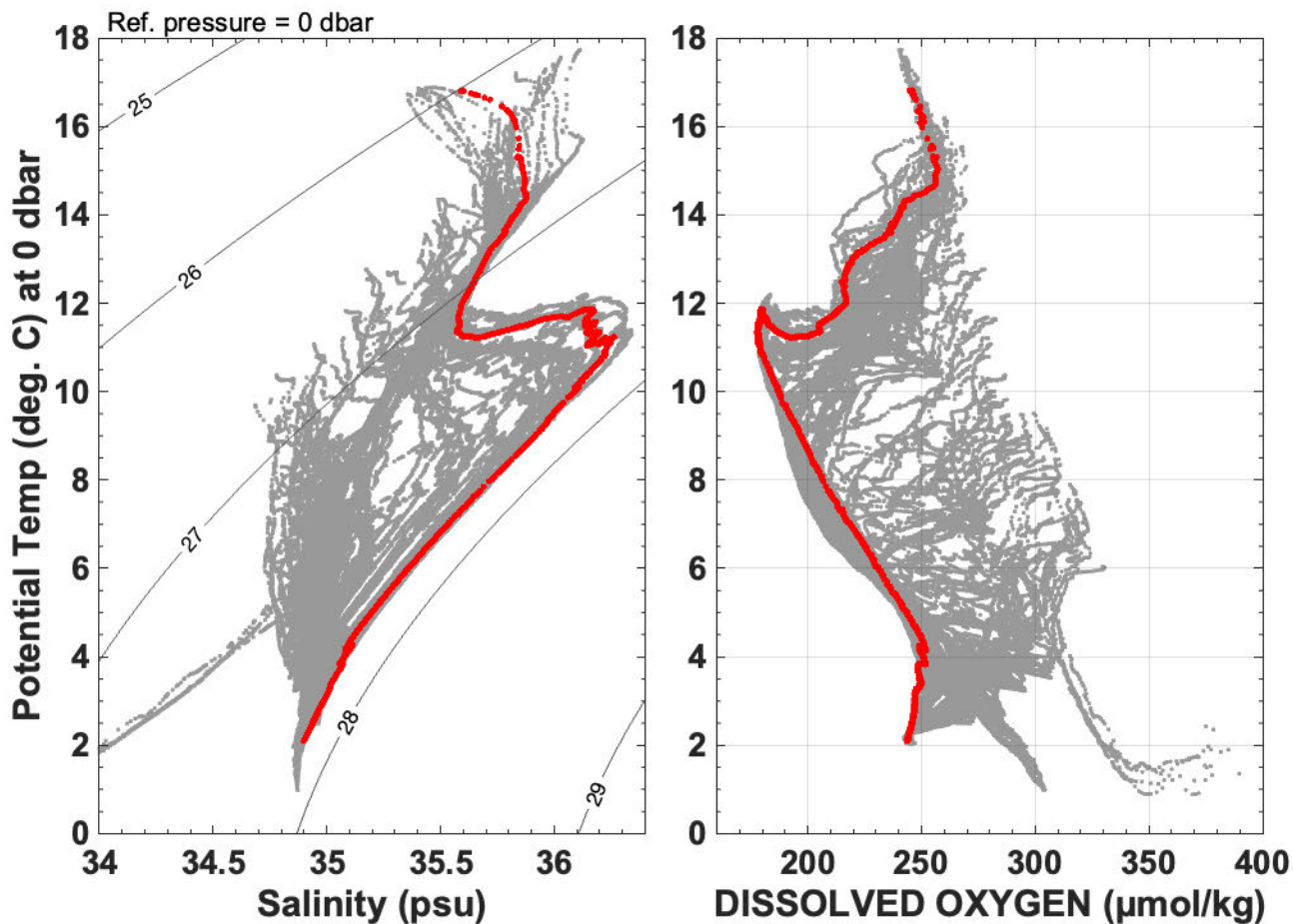
# STATION 7



Cruise : BOCATS 2021  
 Station : 8  
 Date : 30/05/2021  
 Depth : 3905  
 Position : N 40 20.00  
           W 10 18.12

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	16.813	35.591	245.3	16.813
10	16.816	35.591	245.6	16.815
20	16.813	35.590	245.4	16.810
30	16.814	35.590	245.0	16.809
40	16.815	35.591	245.4	16.808
50	16.807	35.596	245.3	16.798
100	14.755	35.870	256.2	14.740
150	13.839	35.802	238.3	13.817
200	13.427	35.754	229.9	13.398
250	12.793	35.675	217.1	12.759
300	12.267	35.619	216.2	12.227
350	11.890	35.587	213.3	11.844
400	11.711	35.580	209.1	11.659
450	11.528	35.581	204.9	11.470
500	11.325	35.595	200.7	11.261
550	11.296	35.666	192.6	11.225
600	11.467	35.792	185.5	11.389
650	11.621	35.895	182.5	11.536
700	11.761	35.982	181.4	11.668
750	11.796	36.042	180.4	11.696
800	11.977	36.141	180.0	11.869
850	11.798	36.148	179.2	11.684
900	11.690	36.184	178.3	11.570
950	11.456	36.170	177.7	11.331
1000	11.201	36.148	178.4	11.071
1100	11.302	36.233	178.8	11.157
1200	10.856	36.201	181.1	10.700
1300	10.275	36.110	186.6	10.112
1400	9.322	35.944	195.7	9.155
1500	7.151	35.531	218.8	6.995
1600	6.143	35.357	231.1	5.987
1700	5.166	35.199	243.3	5.012
1800	4.638	35.120	249.5	4.481
1900	4.324	35.083	251.8	4.161
2000	4.177	35.076	250.8	4.006
2100	4.020	35.064	250.8	3.842
2200	3.881	35.055	248.3	3.695
2300	3.617	35.022	249.9	3.426
2400	3.510	35.014	248.9	3.311
2500	3.419	35.007	247.5	3.211
2600	3.309	34.996	247.1	3.093
2700	3.181	34.982	247.1	2.957
2800	3.109	34.974	246.8	2.877
2900	3.001	34.962	246.7	2.761
3000	2.885	34.950	246.4	2.637
3100	2.813	34.943	246.0	2.556
3200	2.733	34.934	245.6	2.467
3300	2.643	34.925	245.3	2.369
3400	2.602	34.920	244.7	2.318
3500	2.552	34.915	244.4	2.259
3600	2.517	34.910	244.3	2.214
3700	2.488	34.906	244.1	2.174
3800	2.471	34.904	243.8	2.146
3900	2.452	34.901	243.6	2.117
3950	2.449	34.900	243.6	2.108

# STATION 8

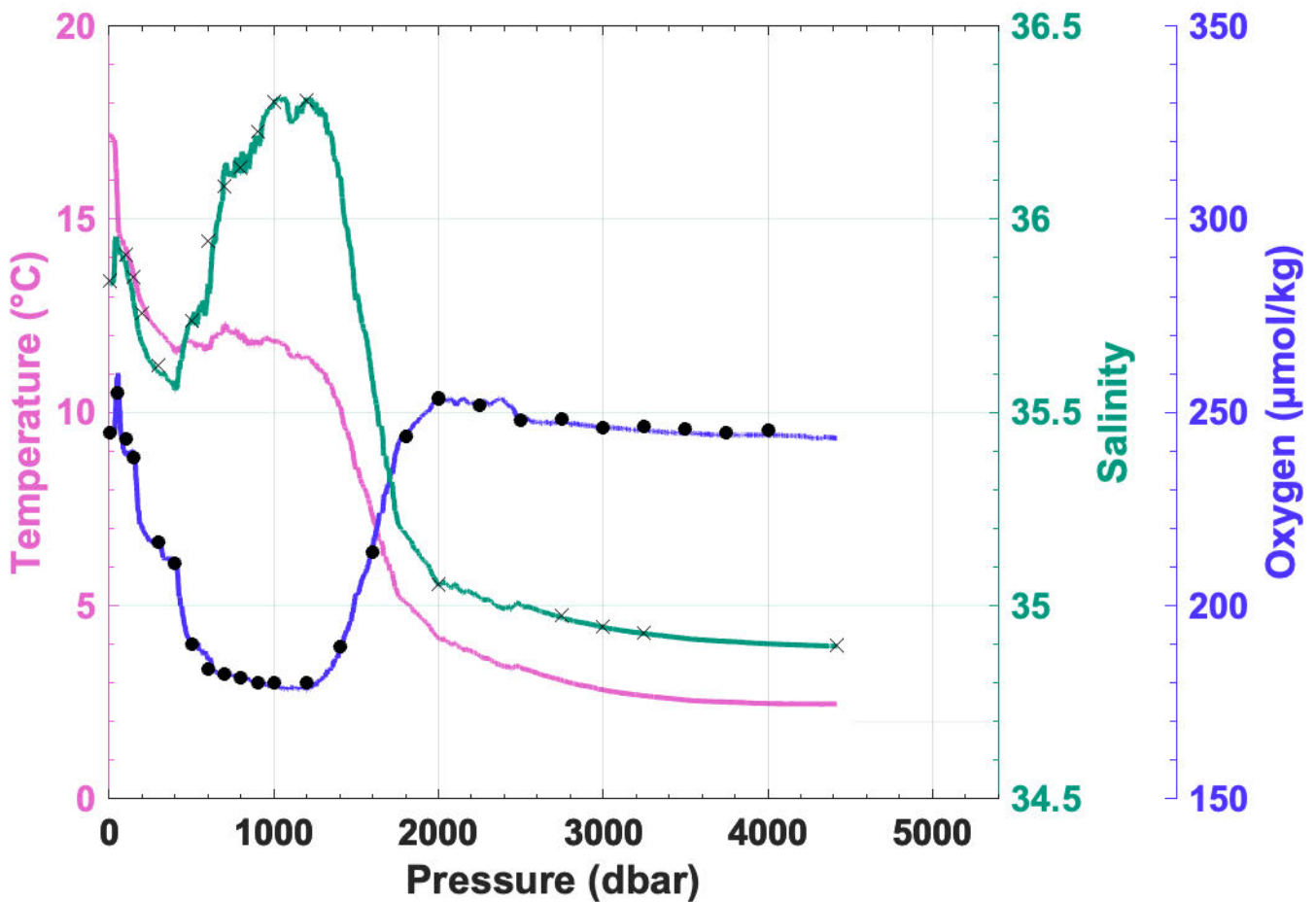
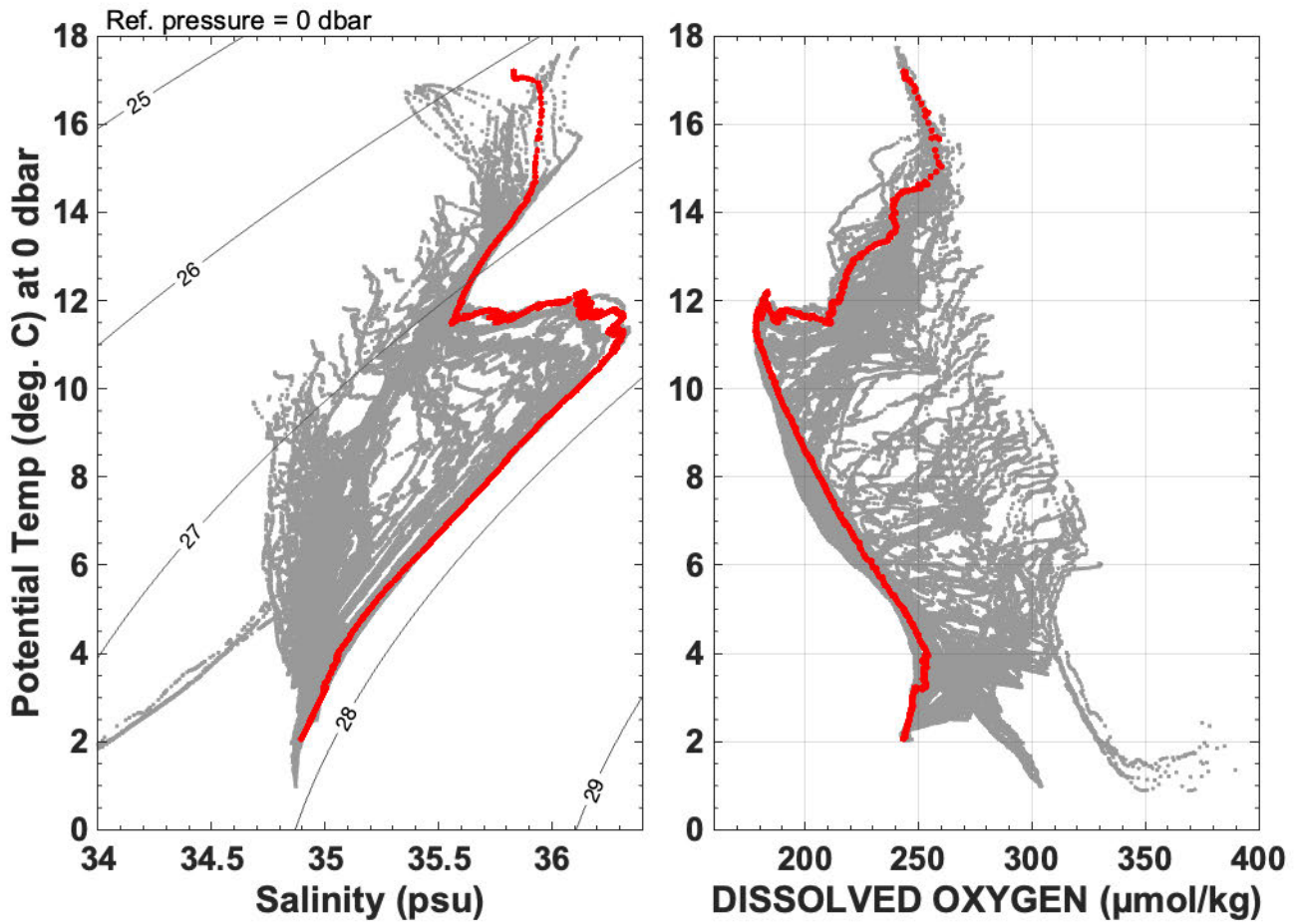


Cruise : BOCATS 2021  
 Station : 9  
 Date : 30/05/2021  
 Depth : 4354  
 Position : N 40 19.98  
           W 10 34.66

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	17.171	35.832	244.4	17.171
10	17.198	35.832	243.4	17.196
20	17.125	35.833	243.8	17.122
30	17.055	35.861	244.3	17.051
40	16.464	35.953	251.4	16.457
50	15.416	35.936	257.3	15.408
100	14.292	35.891	239.5	14.277
150	13.557	35.785	238.2	13.536
200	12.808	35.679	220.5	12.781
250	12.361	35.629	217.2	12.327
300	12.089	35.603	215.7	12.050
350	11.881	35.589	212.2	11.835
400	11.555	35.558	211.3	11.503
450	11.751	35.663	197.1	11.692
500	11.839	35.742	190.2	11.773
550	11.793	35.775	188.3	11.720
600	11.741	35.826	186.3	11.661
650	12.023	35.978	182.7	11.935
700	12.275	36.130	183.4	12.179
750	12.080	36.122	181.8	11.979
800	11.881	36.118	181.9	11.774
850	11.724	36.133	180.7	11.611
900	11.800	36.202	179.8	11.679
950	11.903	36.268	179.6	11.774
1000	11.825	36.295	179.0	11.690
1100	11.465	36.253	178.8	11.318
1200	11.453	36.312	178.4	11.292
1300	11.002	36.264	181.8	10.831
1400	10.141	36.108	187.9	9.965
1500	8.523	35.789	203.2	8.352
1600	7.324	35.580	215.7	7.154
1700	6.050	35.348	231.3	5.884
1800	5.088	35.185	244.2	4.925
1900	4.657	35.122	249.0	4.489
2000	4.153	35.055	253.9	3.983
2100	4.036	35.058	252.1	3.858
2200	3.824	35.034	252.3	3.639
2300	3.632	35.015	252.2	3.441
2400	3.424	34.993	253.1	3.226
2500	3.396	35.002	248.5	3.189
2600	3.253	34.989	247.4	3.038
2700	3.127	34.975	247.4	2.904
2800	3.004	34.963	247.0	2.774
2900	2.917	34.954	246.6	2.678
3000	2.824	34.945	246.1	2.577
3100	2.748	34.937	245.9	2.493
3200	2.691	34.930	245.3	2.426
3300	2.646	34.925	245.2	2.371
3400	2.602	34.920	244.7	2.318
3500	2.562	34.915	244.6	2.268
3600	2.531	34.912	244.4	2.227
3700	2.513	34.909	244.1	2.199
3800	2.501	34.907	244.2	2.176
3900	2.483	34.904	244.0	2.146
4000	2.469	34.901	244.1	2.122
4100	2.460	34.900	244.0	2.102
4200	2.460	34.898	243.9	2.090
4300	2.458	34.897	243.4	2.076
4400	2.458	34.895	243.4	2.064
4400	2.458	34.895	243.4	2.064



# STATION 9

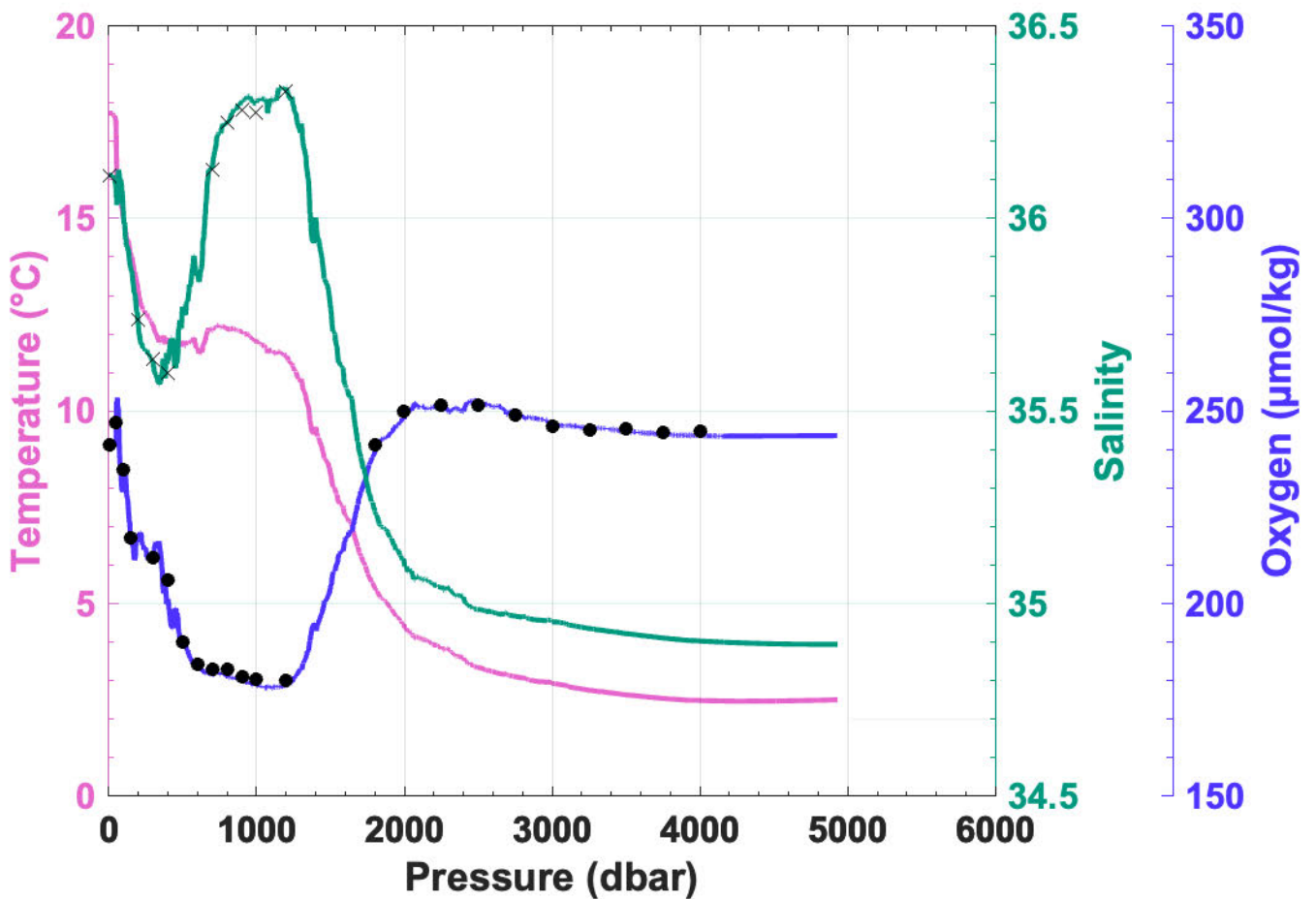
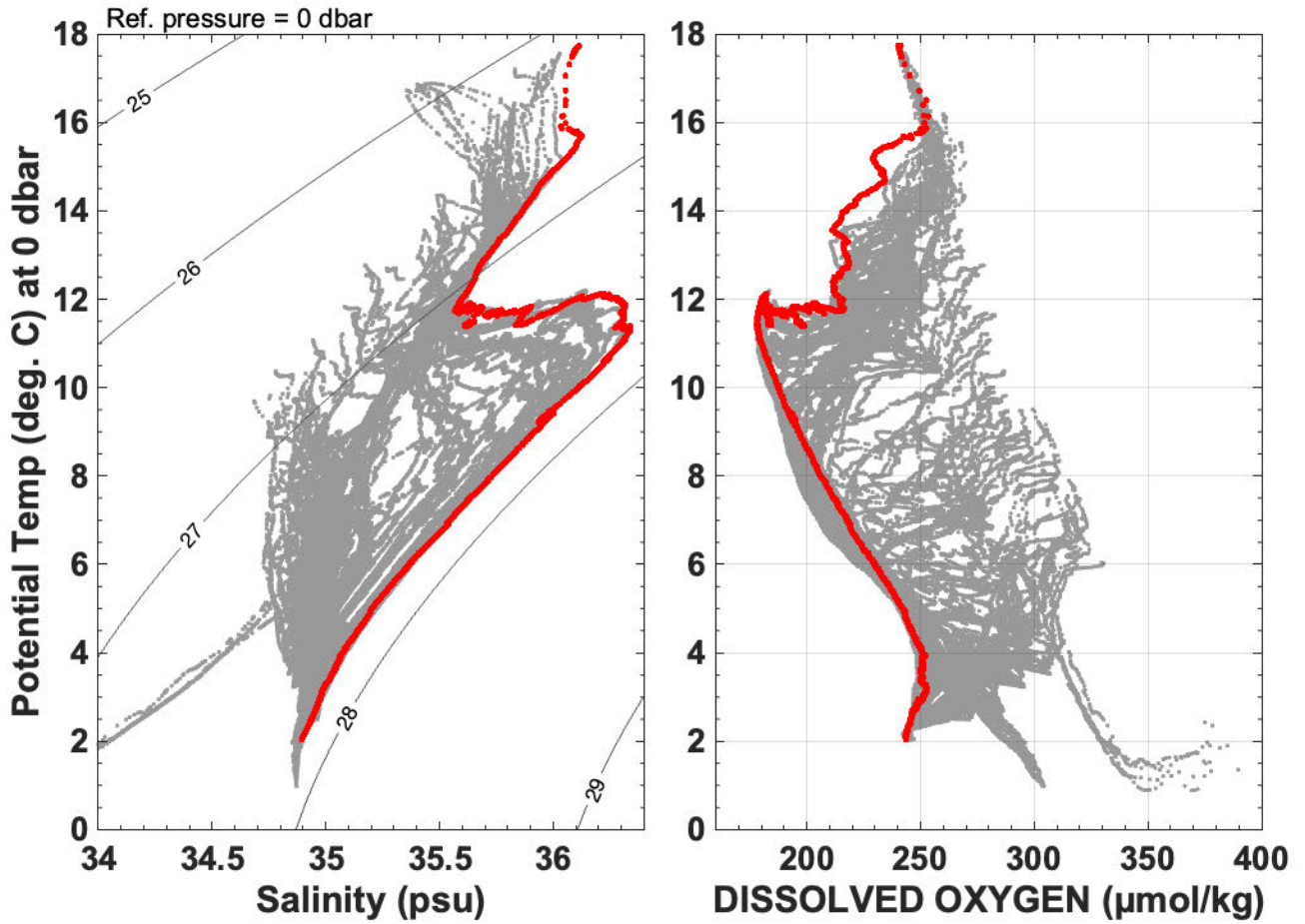


Cruise : BOCATS 2021  
 Station : 10  
 Date : 30/05/2021  
 Depth : 4656  
 Position : N 40 20.00  
 W 10 54.33

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	17.732	36.113	241.3	17.732
10	17.733	36.113	240.8	17.731
20	17.729	36.113	240.7	17.726
30	17.701	36.106	240.8	17.695
40	17.642	36.098	240.7	17.635
50	17.068	36.053	245.2	17.060
100	14.949	36.005	232.8	14.934
150	14.046	35.867	217.6	14.024
200	13.079	35.721	216.6	13.051
250	12.538	35.655	214.1	12.504
300	12.213	35.624	211.8	12.173
350	11.781	35.577	213.2	11.736
400	11.785	35.630	200.9	11.733
450	11.449	35.611	198.8	11.391
500	11.827	35.771	188.9	11.761
550	11.784	35.824	185.9	11.711
600	11.620	35.856	183.7	11.542
650	11.813	35.995	181.8	11.727
700	12.091	36.136	181.5	11.996
750	12.193	36.222	181.7	12.091
800	12.141	36.247	181.2	12.032
850	12.118	36.279	180.7	12.002
900	12.056	36.304	179.9	11.933
950	11.964	36.316	179.5	11.835
1000	11.799	36.301	178.7	11.664
1100	11.573	36.311	178.2	11.426
1200	11.445	36.340	178.9	11.285
1300	10.788	36.234	183.1	10.619
1400	9.580	36.000	193.2	9.410
1500	8.383	35.771	204.3	8.213
1600	7.301	35.567	216.4	7.131
1700	6.298	35.389	228.1	6.130
1800	5.407	35.240	239.3	5.239
1900	4.904	35.173	244.1	4.733
2000	4.383	35.100	248.5	4.210
2100	4.105	35.066	251.1	3.926
2200	3.931	35.048	251.1	3.744
2300	3.813	35.041	249.9	3.619
2400	3.590	35.017	249.9	3.389
2500	3.337	34.984	252.7	3.131
2600	3.228	34.977	251.1	3.014
2700	3.154	34.973	249.2	2.931
2800	3.076	34.967	248.6	2.844
2900	2.980	34.957	248.0	2.740
3000	2.928	34.953	246.5	2.678
3100	2.865	34.947	246.1	2.606
3200	2.786	34.939	245.7	2.519
3300	2.728	34.933	245.5	2.451
3400	2.681	34.927	245.1	2.395
3500	2.631	34.922	244.6	2.336
3600	2.597	34.918	244.4	2.291
3700	2.559	34.913	244.2	2.243
3800	2.524	34.909	244.0	2.198
3900	2.498	34.905	243.6	2.161
4000	2.485	34.903	243.6	2.137
4100	2.477	34.901	243.5	2.118
4200	2.470	34.899	243.5	2.100
4300	2.468	34.898	243.5	2.085
4400	2.471	34.897	243.5	2.076
4500	2.471	34.896	243.5	2.065
4600	2.478	34.895	243.6	2.059
4700	2.485	34.895	243.6	2.054
4800	2.492	34.894	243.6	2.048
4900	2.502	34.894	243.6	2.045
4900	2.502	34.894	243.6	2.045



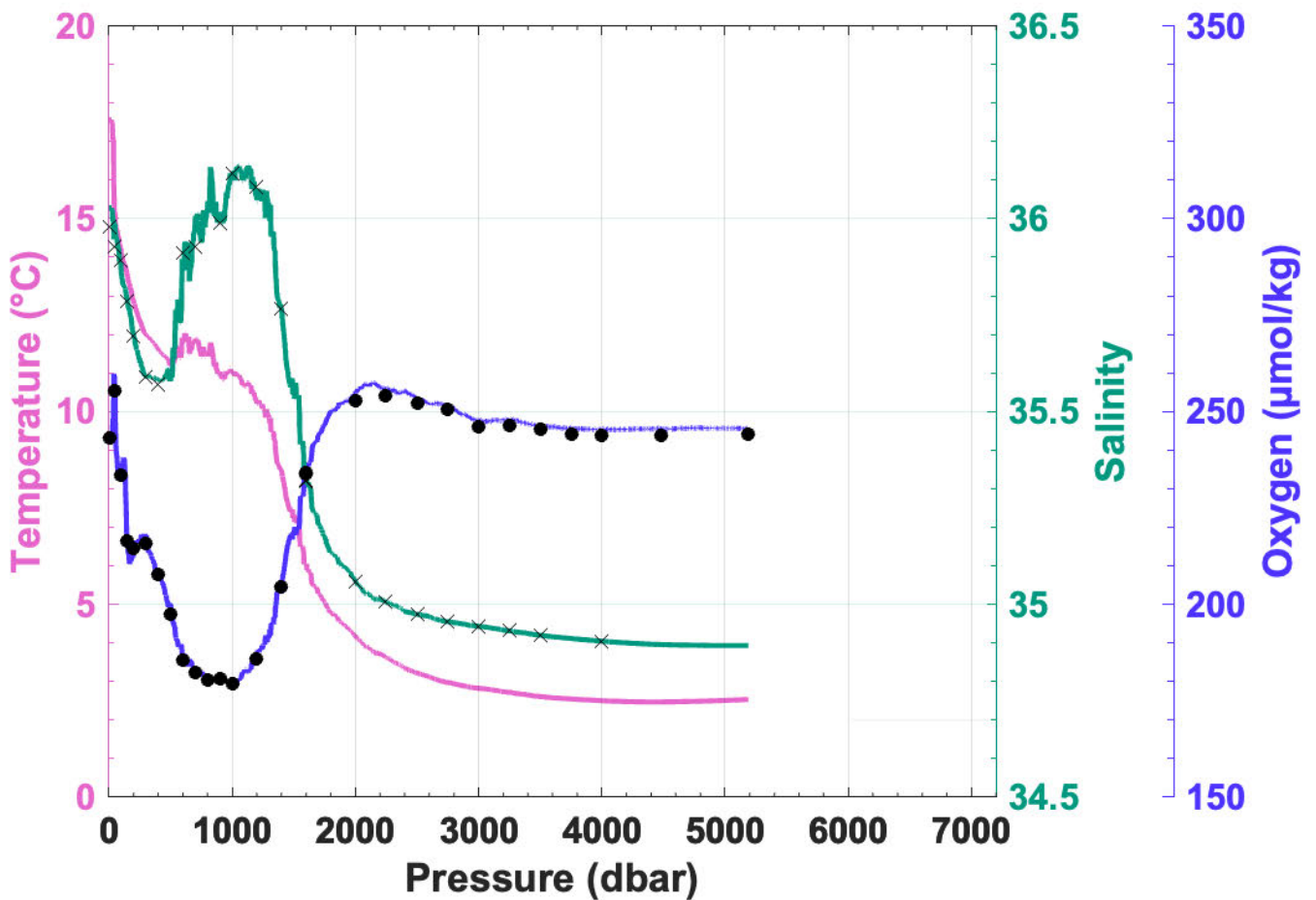
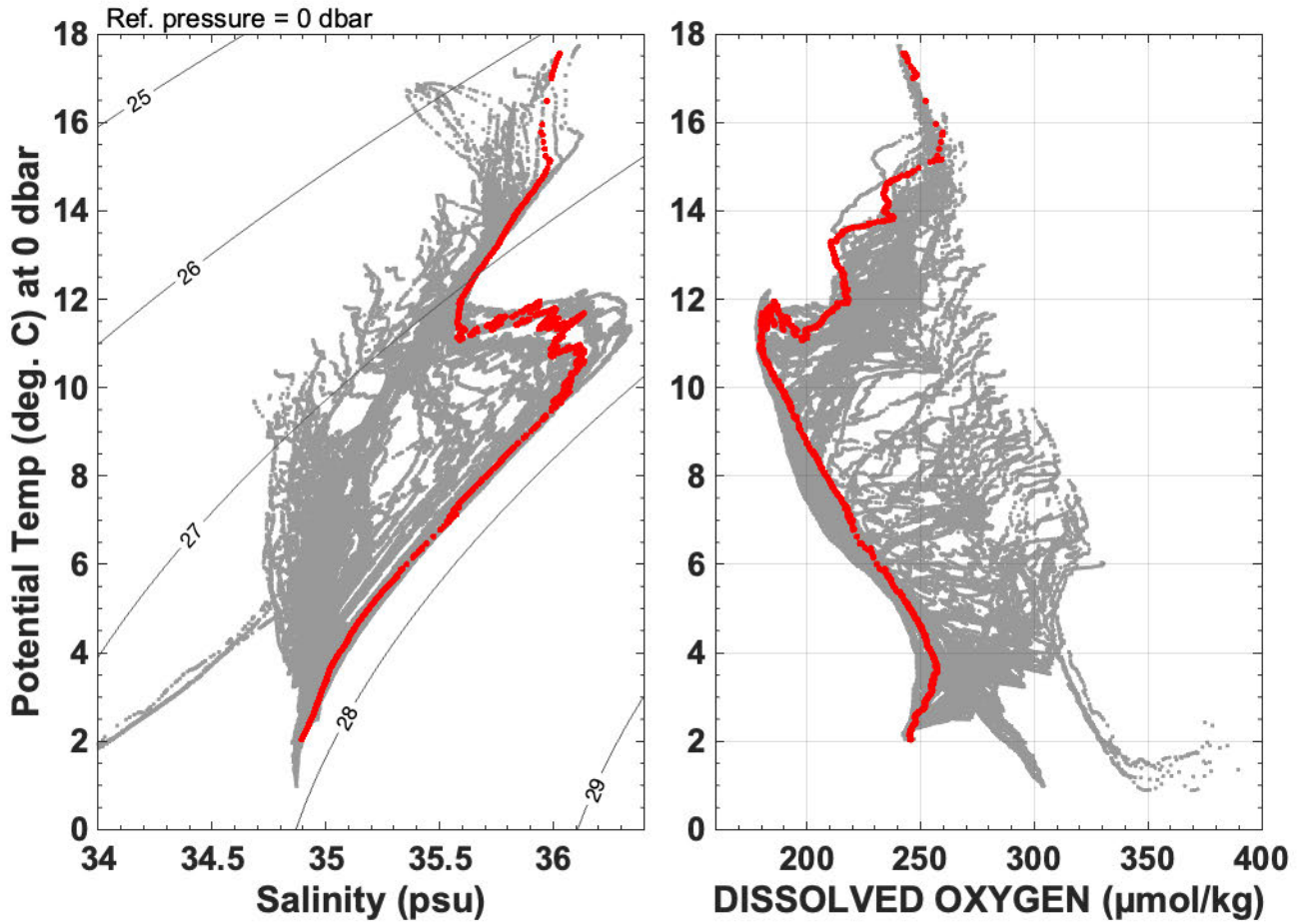
# STATION 10



Cruise : BOCATS 2021  
 Station : 11  
 Date : 31/05/2021  
 Depth : 5098  
 Position : N 40 19.98  
 W 11 20.59

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	17.560	36.028	243.1	17.560
10	17.562	36.028	242.4	17.561
20	17.559	36.028	243.0	17.555
30	17.266	36.006	245.8	17.261
40	15.784	35.946	259.8	15.778
50	15.110	35.984	254.3	15.102
100	14.102	35.859	235.6	14.087
150	13.495	35.783	215.6	13.473
200	12.844	35.700	212.6	12.816
250	12.372	35.636	216.0	12.339
300	11.992	35.592	217.6	11.953
350	11.831	35.588	211.7	11.785
400	11.609	35.583	207.0	11.557
450	11.426	35.583	204.1	11.368
500	11.189	35.580	200.1	11.125
550	11.675	35.766	190.5	11.603
600	11.900	35.890	186.6	11.820
650	11.781	35.898	184.3	11.695
700	11.865	35.995	182.9	11.772
750	11.453	35.940	182.6	11.355
800	11.522	36.025	181.5	11.416
850	11.351	36.040	180.1	11.240
900	11.034	36.015	180.4	10.918
950	10.985	36.050	180.2	10.863
1000	11.051	36.118	179.6	10.922
1100	10.674	36.108	182.7	10.534
1200	10.227	36.050	187.4	10.077
1300	9.843	36.028	191.7	9.684
1400	8.470	35.767	205.3	8.311
1500	7.325	35.571	218.2	7.167
1600	6.035	35.333	234.7	5.881
1700	5.286	35.209	243.8	5.130
1800	4.775	35.134	250.0	4.616
1900	4.496	35.101	252.3	4.331
2000	4.183	35.062	254.8	4.013
2100	3.887	35.028	256.7	3.711
2200	3.714	35.013	256.3	3.531
2300	3.525	34.998	255.5	3.336
2400	3.342	34.981	255.2	3.145
2500	3.224	34.974	253.4	3.020
2600	3.121	34.968	252.0	2.909
2700	3.006	34.957	252.1	2.786
2800	2.939	34.952	250.8	2.710
2900	2.873	34.948	249.0	2.635
3000	2.824	34.943	247.8	2.577
3100	2.788	34.939	247.5	2.532
3200	2.734	34.933	247.9	2.468
3300	2.688	34.928	247.8	2.412
3400	2.648	34.924	246.8	2.363
3500	2.607	34.920	246.3	2.312
3600	2.576	34.916	245.9	2.271
3700	2.556	34.913	245.6	2.240
3800	2.534	34.910	245.6	2.208
3900	2.519	34.907	245.5	2.182
4000	2.499	34.904	245.3	2.151
4100	2.487	34.902	245.2	2.128
4200	2.479	34.900	245.4	2.108
4300	2.472	34.898	245.4	2.090
4400	2.467	34.897	245.5	2.073
4500	2.469	34.895	245.6	2.063
4600	2.473	34.895	245.6	2.055
4700	2.481	34.894	245.8	2.049
4800	2.488	34.894	245.8	2.044
4900	2.497	34.893	245.6	2.041
5000	2.508	34.893	245.7	2.038
5100	2.521	34.893	245.7	2.038
5150	2.528	34.893	245.7	2.038

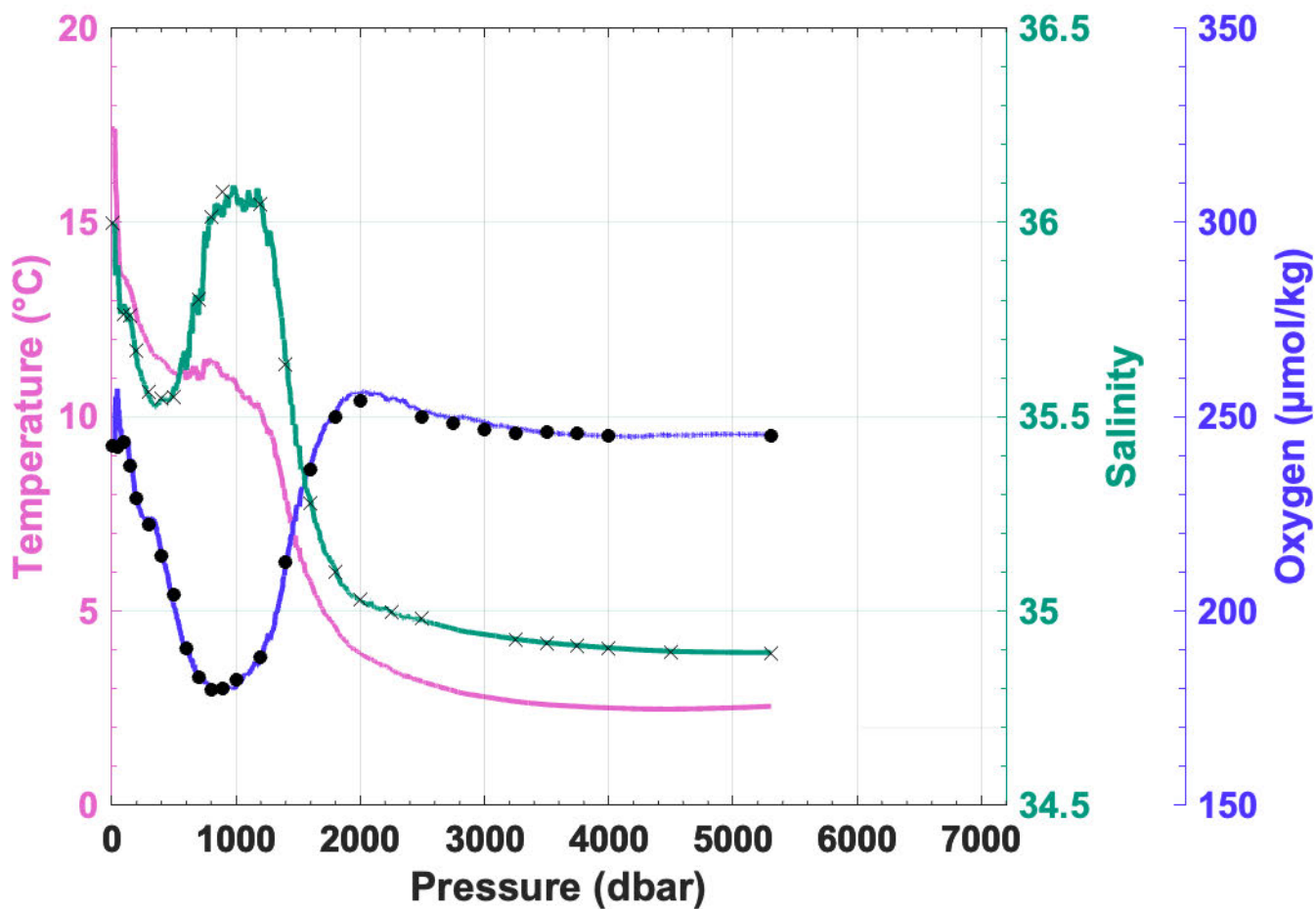
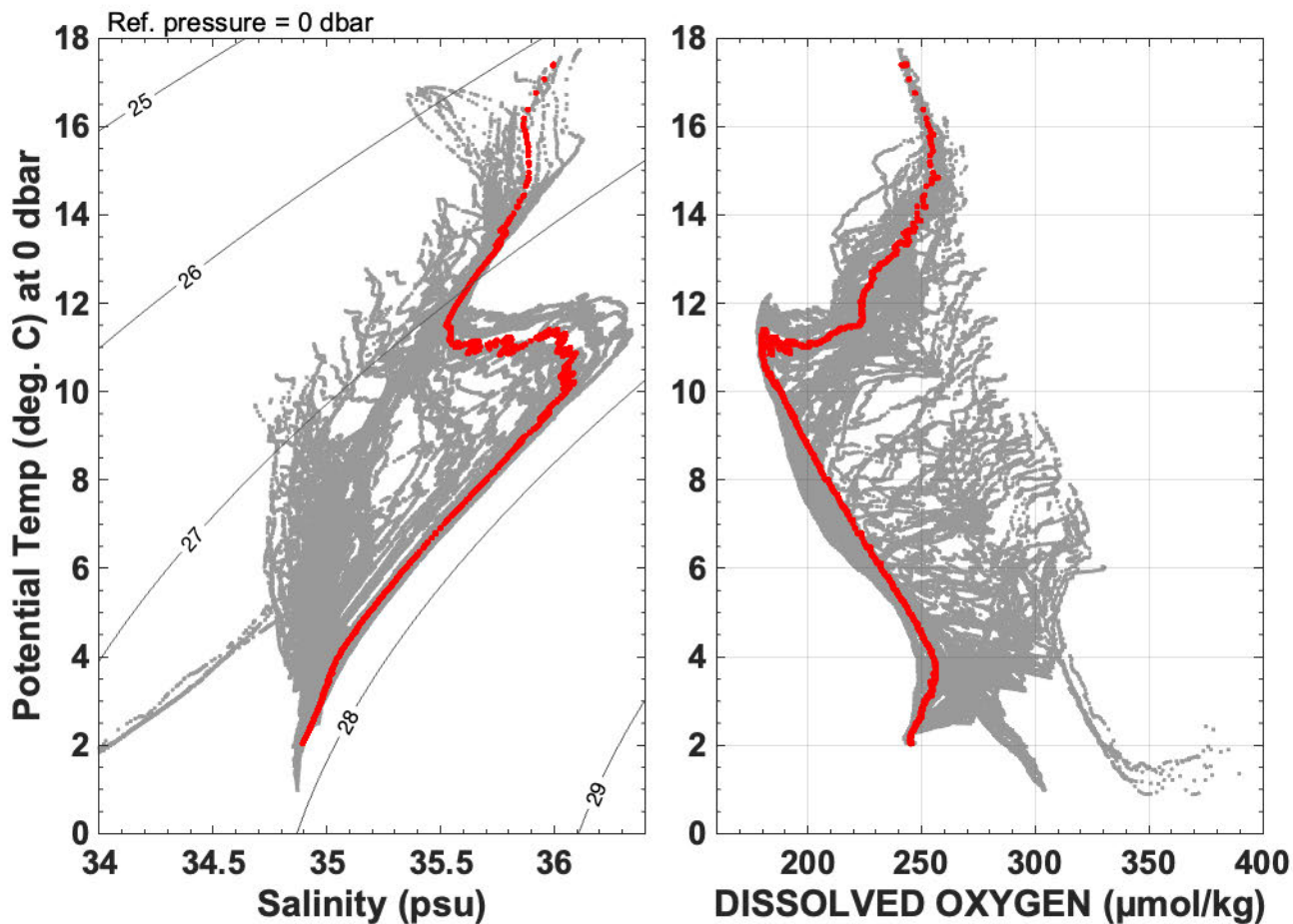
# STATION 11



Cruise : BOCATS 2021  
 Station : 12  
 Date : 31/05/2021  
 Depth : 5216  
 Position : N 40 20.00  
 W 11 46.99

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	17.402	35.997	243.2	17.402
10	17.404	35.997	243.3	17.402
20	17.409	35.997	242.9	17.405
30	16.060	35.865	252.6	16.055
40	15.442	35.886	255.0	15.435
50	14.759	35.882	254.6	14.752
100	13.595	35.787	242.8	13.581
150	13.266	35.751	238.5	13.245
200	12.594	35.649	228.9	12.566
250	12.156	35.591	224.1	12.123
300	11.833	35.552	223.9	11.794
350	11.541	35.525	222.8	11.496
400	11.475	35.547	214.8	11.424
450	11.317	35.544	209.5	11.259
500	11.160	35.572	201.3	11.097
550	11.140	35.614	194.9	11.070
600	10.942	35.620	192.3	10.866
650	11.129	35.742	187.2	11.046
700	10.947	35.768	184.3	10.858
750	11.490	35.977	181.4	11.391
800	11.446	36.009	180.6	11.341
850	11.302	36.030	179.9	11.192
900	11.004	36.017	180.3	10.888
950	10.970	36.064	180.3	10.847
1000	10.836	36.073	180.6	10.708
1100	10.541	36.081	183.6	10.402
1200	10.150	36.054	188.1	10.001
1300	9.401	35.929	195.2	9.245
1400	7.866	35.646	211.9	7.714
1500	6.626	35.426	227.5	6.476
1600	5.766	35.285	237.4	5.615
1700	5.058	35.172	246.2	4.906
1800	4.587	35.106	250.8	4.431
1900	4.152	35.050	255.2	3.992
2000	3.924	35.029	256.2	3.758
2100	3.730	35.012	256.0	3.557
2200	3.592	35.005	254.8	3.411
2300	3.405	34.990	254.5	3.217
2400	3.303	34.985	252.3	3.107
2500	3.193	34.977	251.0	2.990
2600	3.079	34.966	250.8	2.868
2700	2.995	34.959	250.1	2.775
2800	2.900	34.950	249.8	2.672
2900	2.844	34.945	249.3	2.607
3000	2.796	34.940	248.7	2.549
3100	2.743	34.935	247.5	2.487
3200	2.696	34.930	247.3	2.431
3300	2.653	34.926	246.8	2.378
3400	2.623	34.922	246.2	2.338
3500	2.593	34.918	245.9	2.298
3600	2.573	34.916	245.6	2.267
3700	2.553	34.913	245.4	2.238
3800	2.536	34.910	245.3	2.210
3900	2.519	34.908	245.2	2.182
4000	2.509	34.905	245.0	2.161
4100	2.498	34.903	245.0	2.138
4200	2.487	34.901	244.8	2.116
4300	2.479	34.899	245.0	2.097
4400	2.478	34.898	245.2	2.084
4500	2.476	34.896	245.3	2.070
4600	2.480	34.896	245.2	2.061
4700	2.485	34.895	245.3	2.054
4800	2.493	34.894	245.5	2.049
4900	2.501	34.894	245.4	2.044
5000	2.511	34.894	245.5	2.041
5100	2.521	34.893	245.4	2.038
5200	2.534	34.893	245.4	2.038
5300	2.548	34.893	245.4	2.038
5300	2.548	34.893	245.4	2.038

# STATION 12

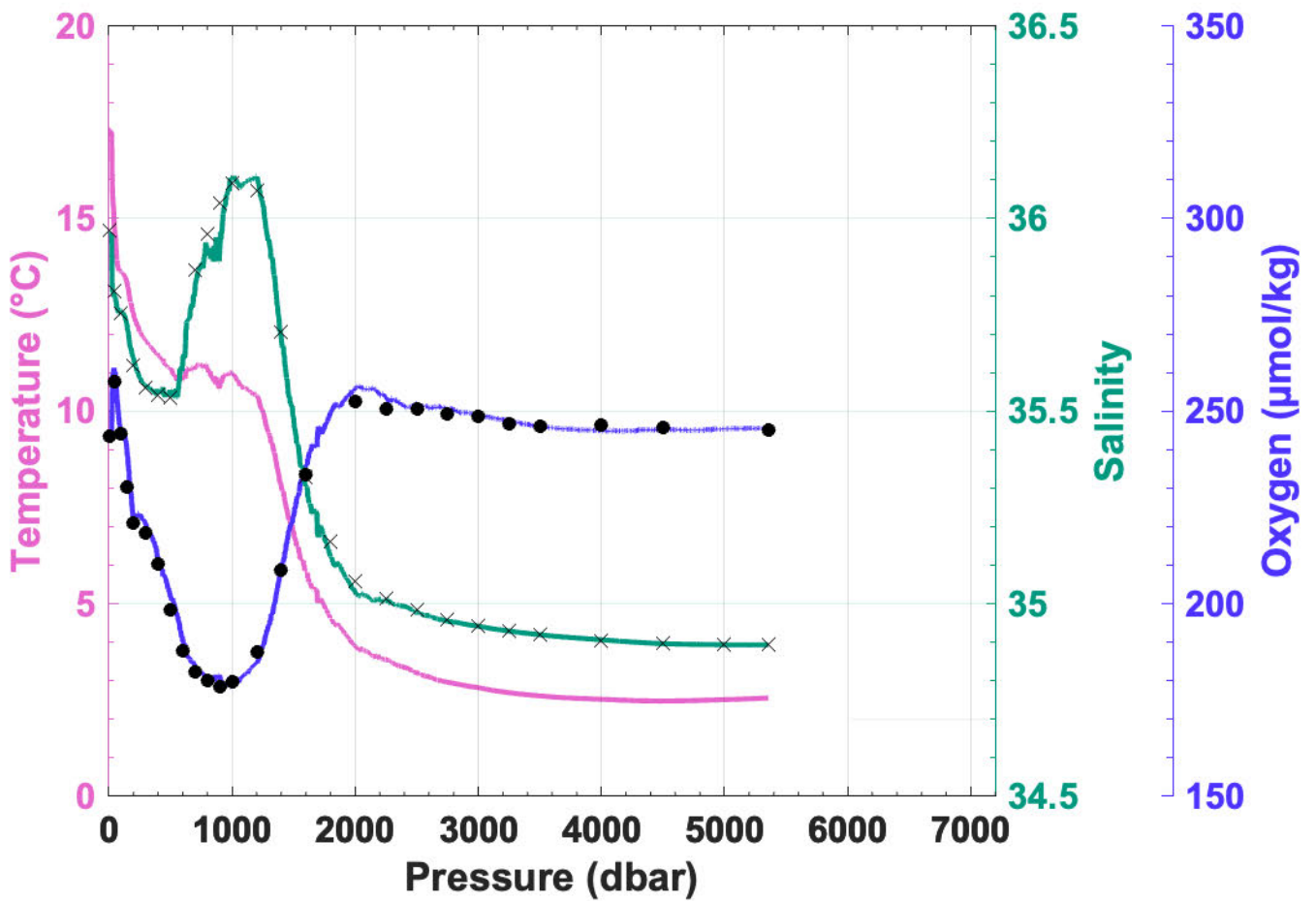
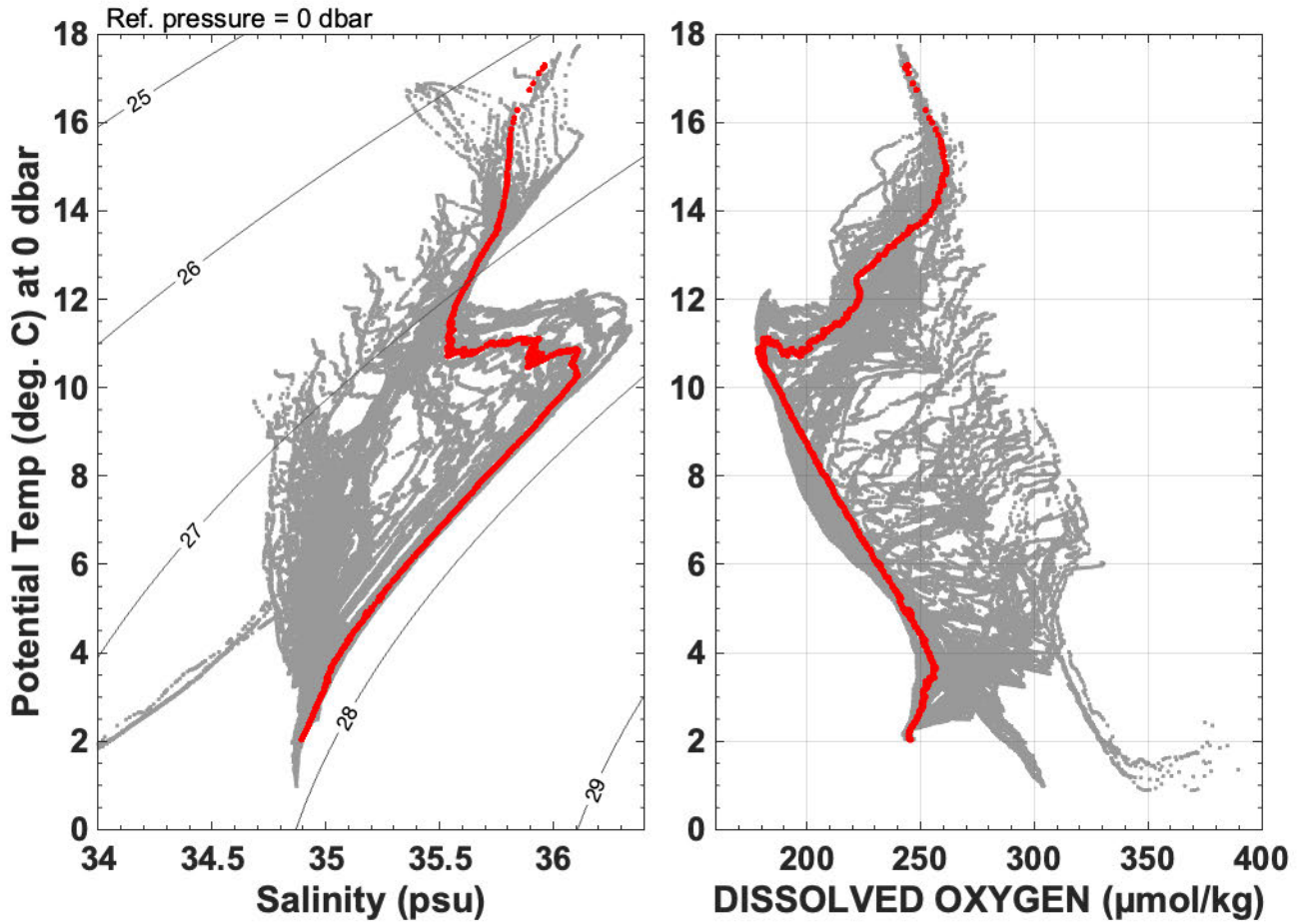


Cruise : BOCATS 2021  
 Station : 13  
 Date : 31/05/2021  
 Depth : 5259  
 Position : N 40 19.97  
 W 12 13.34

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	17.291	35.963	244.6	17.291
10	17.293	35.963	244.4	17.291
20	17.242	35.957	244.1	17.239
30	15.724	35.812	257.8	15.719
40	15.119	35.804	260.6	15.113
50	14.617	35.796	259.5	14.610
100	13.624	35.761	245.4	13.610
150	13.281	35.716	238.5	13.260
200	12.531	35.638	222.3	12.504
250	12.063	35.586	223.4	12.030
300	11.830	35.566	220.5	11.791
350	11.628	35.553	217.3	11.582
400	11.447	35.551	211.7	11.396
450	11.237	35.540	207.5	11.180
500	11.114	35.555	201.8	11.051
550	10.811	35.537	197.6	10.742
600	10.846	35.626	190.4	10.771
650	11.056	35.738	186.2	10.974
700	11.132	35.818	183.8	11.043
750	11.181	35.879	182.1	11.084
800	11.105	35.917	181.0	11.002
850	10.785	35.889	181.3	10.678
900	10.643	35.916	181.1	10.530
950	10.938	36.050	178.8	10.816
1000	10.983	36.106	178.5	10.854
1100	10.610	36.091	181.5	10.471
1200	10.422	36.108	184.7	10.270
1300	9.442	35.945	194.3	9.286
1400	8.061	35.689	209.3	7.907
1500	6.868	35.483	222.7	6.715
1600	5.836	35.306	235.7	5.685
1700	5.020	35.173	245.5	4.867
1800	4.624	35.123	249.6	4.467
1900	4.307	35.083	252.4	4.144
2000	3.895	35.031	255.7	3.729
2100	3.744	35.019	255.5	3.571
2200	3.615	35.012	254.1	3.434
2300	3.465	35.001	253.3	3.276
2400	3.347	34.993	251.1	3.151
2500	3.210	34.979	251.9	3.006
2600	3.106	34.969	250.8	2.894
2700	3.003	34.959	251.0	2.783
2800	2.931	34.952	250.4	2.703
2900	2.873	34.947	249.5	2.635
3000	2.819	34.942	249.1	2.572
3100	2.760	34.936	248.3	2.504
3200	2.712	34.931	247.8	2.446
3300	2.670	34.927	247.1	2.395
3400	2.635	34.923	246.6	2.350
3500	2.605	34.919	246.0	2.310
3600	2.581	34.916	245.7	2.276
3700	2.561	34.913	245.4	2.245
3800	2.544	34.911	245.3	2.217
3900	2.530	34.908	245.1	2.192
4000	2.517	34.906	245.0	2.168
4100	2.505	34.904	244.9	2.145
4200	2.494	34.902	244.9	2.122
4300	2.482	34.899	245.0	2.100
4400	2.477	34.898	245.1	2.082
4500	2.474	34.896	245.1	2.067
4600	2.477	34.895	245.2	2.058
4700	2.482	34.895	245.1	2.051
4800	2.490	34.894	245.0	2.046
4900	2.499	34.894	245.2	2.043
5000	2.509	34.893	245.3	2.039
5100	2.519	34.893	245.4	2.036
5200	2.531	34.893	245.6	2.035
5300	2.545	34.893	245.5	2.035
5350	2.551	34.893	245.8	2.034



# STATION 13

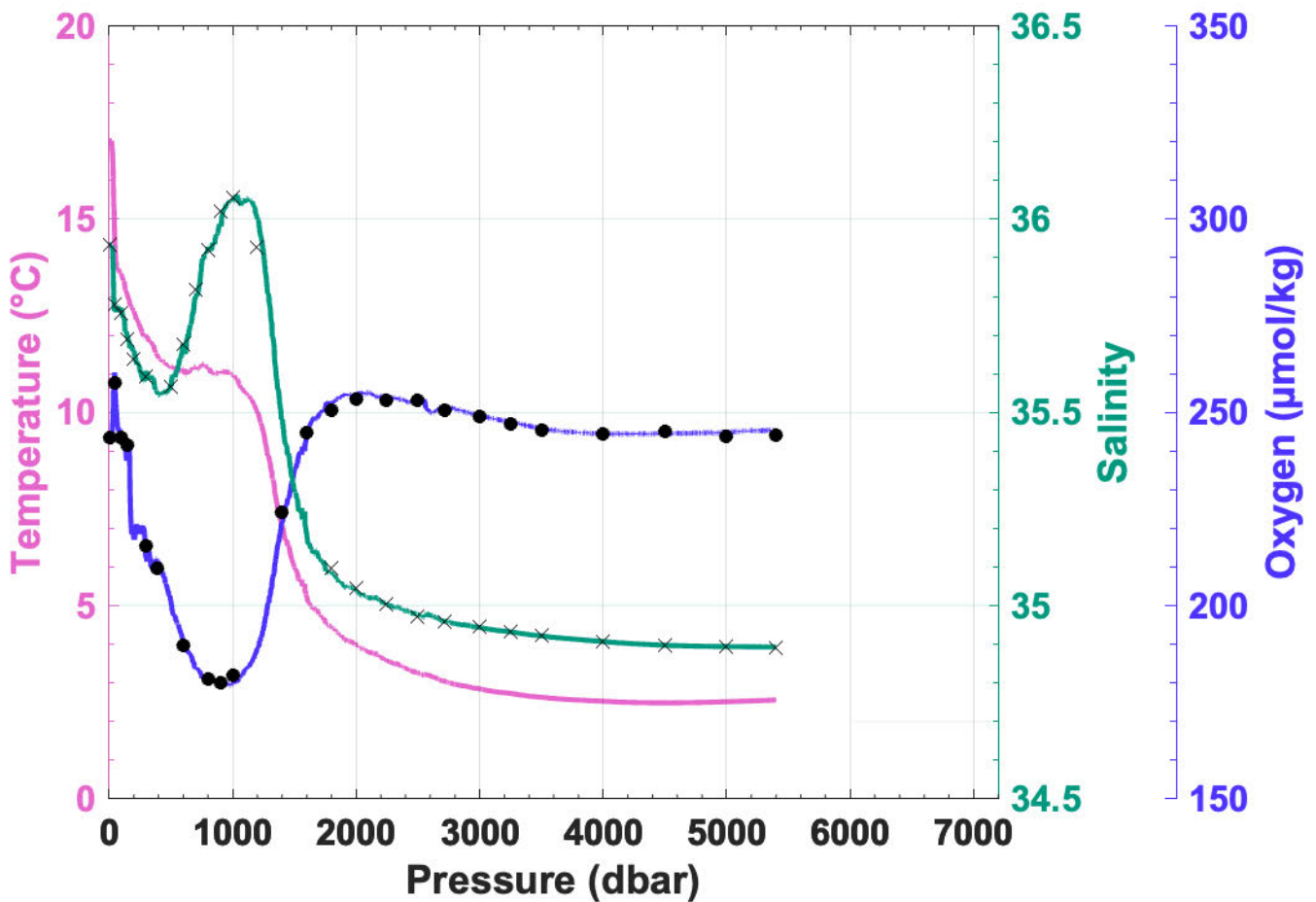
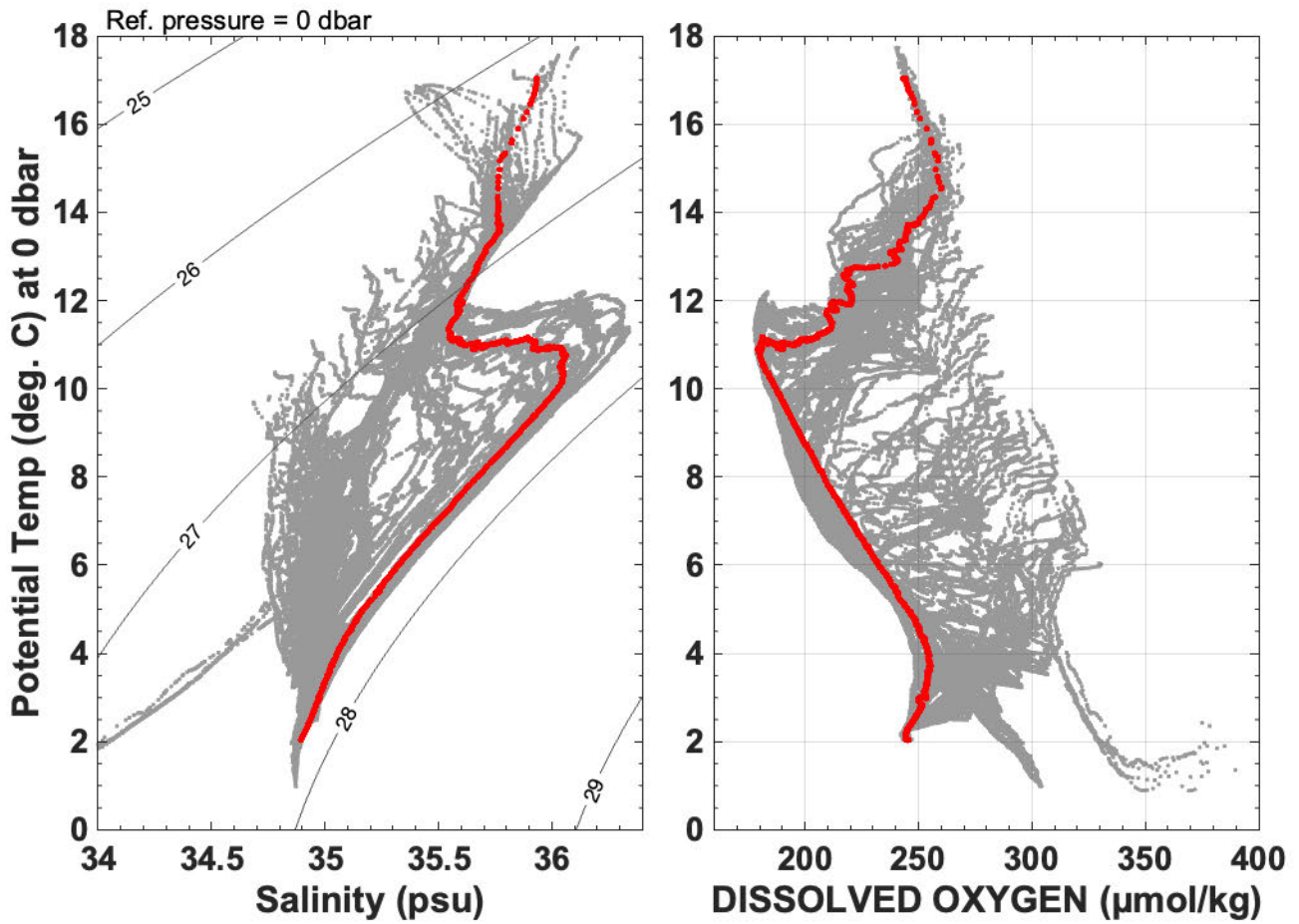


Cruise : BOCATS 2021  
 Station : 14  
 Date : 01/06/2021  
 Depth : 5307  
 Position : N 40 33.11  
 W 12 39.29

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	17.029	35.933	244.1	17.029
10	17.031	35.933	244.0	17.030
20	17.033	35.933	243.1	17.030
30	16.490	35.908	248.1	16.485
40	15.178	35.771	258.6	15.172
50	14.120	35.765	254.9	14.112
100	13.565	35.767	244.7	13.551
150	13.003	35.692	239.4	12.982
200	12.617	35.659	217.3	12.590
250	12.186	35.604	220.4	12.153
300	11.982	35.606	212.2	11.942
350	11.768	35.589	209.6	11.722
400	11.412	35.545	211.4	11.361
450	11.298	35.553	207.2	11.241
500	11.156	35.568	201.1	11.092
550	11.074	35.609	195.4	11.004
600	11.120	35.675	190.4	11.043
650	11.071	35.715	187.5	10.988
700	11.159	35.799	183.8	11.069
750	11.242	35.885	181.5	11.145
800	11.165	35.924	180.6	11.061
850	11.001	35.935	180.5	10.892
900	11.034	35.983	180.3	10.918
950	11.049	36.039	179.8	10.926
1000	10.977	36.052	179.8	10.848
1100	10.502	36.045	183.4	10.363
1200	9.990	36.001	189.0	9.843
1300	8.720	35.777	202.4	8.571
1400	7.073	35.483	221.6	6.929
1500	5.995	35.300	234.8	5.852
1600	5.240	35.184	243.9	5.095
1700	4.773	35.121	249.6	4.624
1800	4.447	35.085	252.4	4.292
1900	4.151	35.052	254.5	3.991
2000	3.992	35.038	254.8	3.824
2100	3.794	35.019	255.1	3.620
2200	3.657	35.010	254.2	3.475
2300	3.507	34.997	253.7	3.318
2400	3.383	34.987	252.9	3.186
2500	3.261	34.977	253.0	3.056
2600	3.187	34.976	250.0	2.973
2700	3.053	34.961	251.5	2.832
2800	2.966	34.954	250.9	2.736
2900	2.910	34.949	249.9	2.672
3000	2.847	34.944	249.1	2.599
3100	2.787	34.938	248.5	2.531
3200	2.748	34.934	247.8	2.482
3300	2.705	34.930	247.2	2.429
3400	2.659	34.925	246.5	2.373
3500	2.631	34.922	245.9	2.336
3600	2.600	34.918	245.4	2.294
3700	2.578	34.915	245.0	2.262
3800	2.560	34.913	244.8	2.233
3900	2.540	34.910	244.6	2.202
4000	2.527	34.907	244.4	2.178
4100	2.511	34.905	244.4	2.151
4200	2.500	34.902	244.4	2.129
4300	2.493	34.901	244.5	2.109
4400	2.488	34.899	244.6	2.093
4500	2.485	34.898	244.7	2.078
4600	2.488	34.897	244.7	2.069
4700	2.491	34.896	244.6	2.060
4800	2.497	34.895	244.7	2.053
4900	2.506	34.895	244.7	2.049
5000	2.515	34.894	244.9	2.046
5100	2.525	34.894	245.0	2.042
5200	2.536	34.894	245.3	2.040
5300	2.547	34.893	245.3	2.037
5400	2.560	34.893	245.4	2.037
5400	2.560	34.893	245.4	2.037



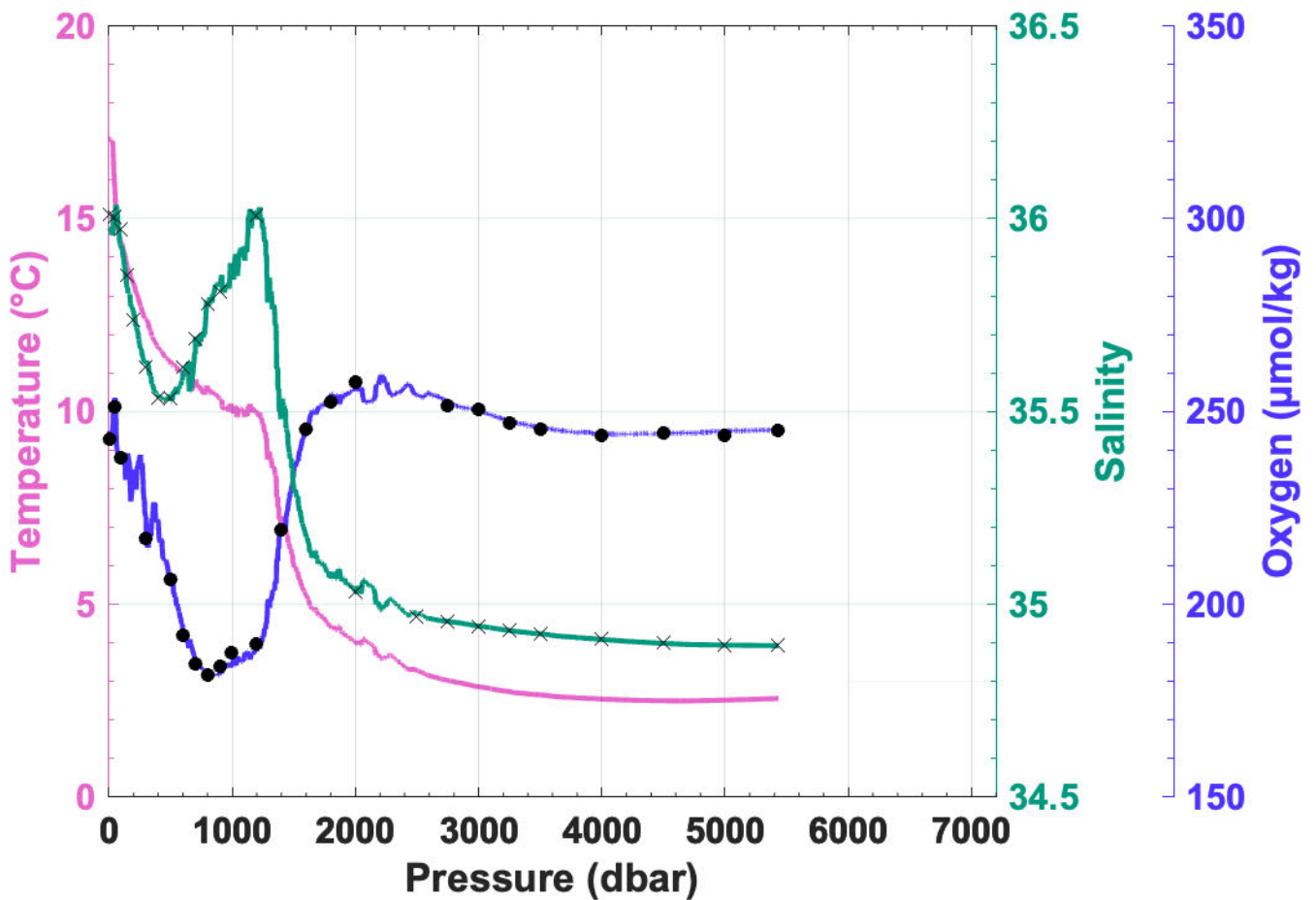
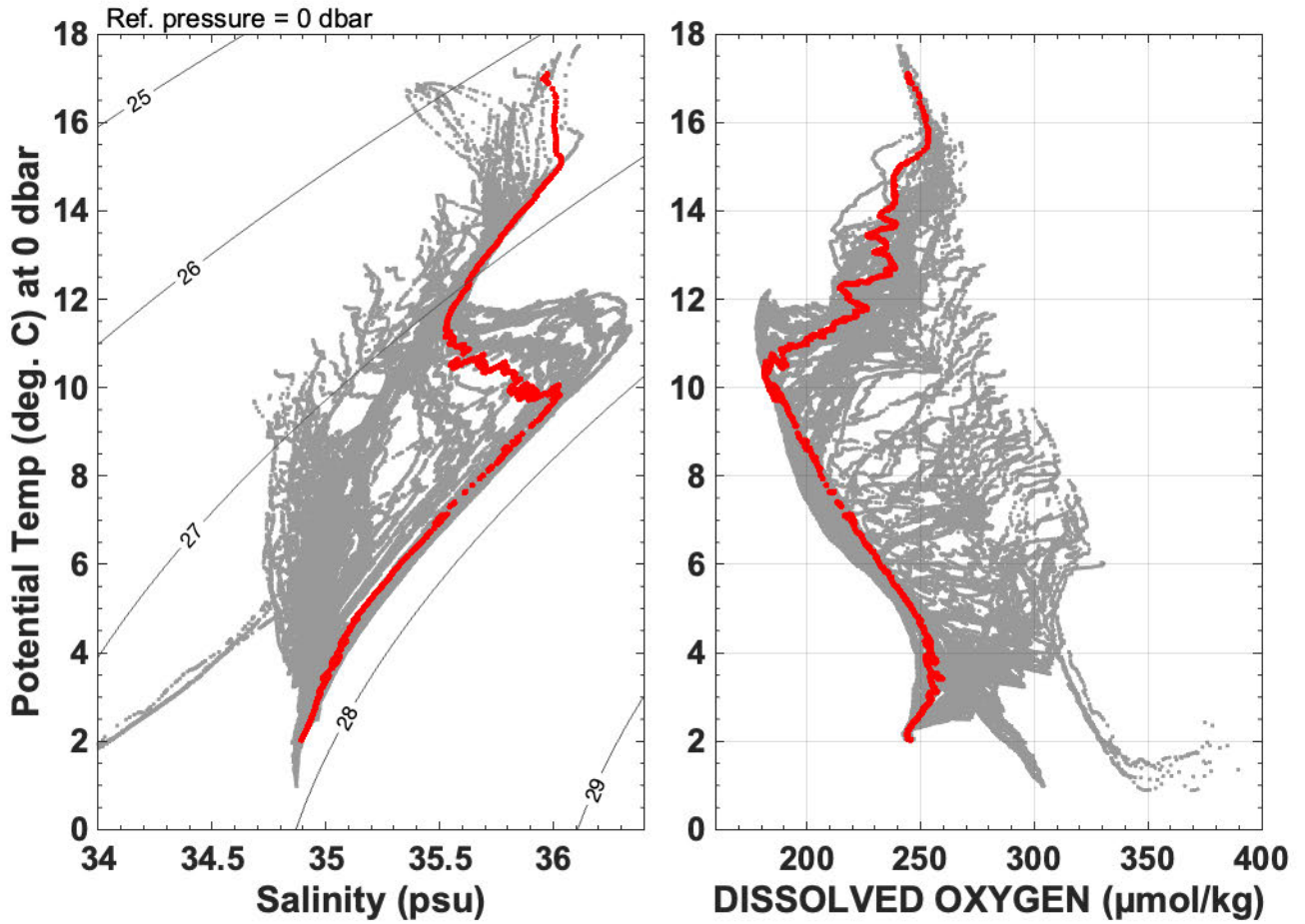
# STATION 14



Cruise : BOCATS 2021  
Station : 15  
Date : 01/06/2021  
Depth : 5339  
Position : N 40 47.28  
          : W 13 6.08

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	17.092	35.974	244.3	17.092
10	17.067	35.972	244.9	17.065
20	17.032	35.966	244.9	17.028
30	16.989	35.957	244.7	16.984
40	16.166	36.004	251.8	16.160
50	15.648	36.013	253.4	15.640
100	14.356	35.921	238.9	14.342
150	13.739	35.820	239.2	13.717
200	13.309	35.756	234.8	13.281
250	12.793	35.671	238.4	12.759
300	12.393	35.624	222.7	12.352
350	11.953	35.571	222.3	11.907
400	11.657	35.540	221.4	11.605
450	11.427	35.529	211.5	11.370
500	11.283	35.539	206.3	11.219
550	11.148	35.562	199.8	11.079
600	11.029	35.595	193.8	10.953
650	10.717	35.578	189.8	10.636
700	10.720	35.651	185.9	10.632
750	10.587	35.700	183.7	10.494
800	10.615	35.779	181.9	10.515
850	10.467	35.806	181.7	10.361
900	10.318	35.833	182.2	10.207
950	10.084	35.828	184.0	9.968
1000	10.019	35.853	185.0	9.897
1100	9.868	35.894	186.8	9.735
1200	9.969	36.010	188.3	9.821
1300	8.955	35.845	199.6	8.803
1400	7.187	35.508	220.4	7.042
1500	5.987	35.297	234.4	5.844
1600	5.227	35.177	245.4	5.082
1700	4.721	35.107	251.3	4.573
1800	4.418	35.074	254.0	4.264
1900	4.265	35.067	254.2	4.103
2000	4.007	35.033	256.2	3.839
2100	4.025	35.054	252.5	3.847
2200	3.608	34.988	258.6	3.427
2300	3.655	35.011	254.3	3.463
2400	3.382	34.979	256.2	3.185
2500	3.294	34.977	254.2	3.089
2600	3.150	34.963	254.6	2.938
2700	3.058	34.957	253.5	2.837
2800	2.992	34.954	251.9	2.762
2900	2.932	34.949	251.0	2.693
3000	2.864	34.944	250.0	2.616
3100	2.810	34.939	249.0	2.553
3200	2.754	34.934	248.0	2.487
3300	2.710	34.930	247.2	2.434
3400	2.678	34.927	246.5	2.392
3500	2.652	34.924	246.0	2.356
3600	2.616	34.919	245.4	2.310
3700	2.592	34.916	244.9	2.275
3800	2.573	34.914	244.5	2.246
3900	2.557	34.911	244.5	2.219
4000	2.544	34.909	244.3	2.195
4100	2.532	34.907	244.2	2.171
4200	2.520	34.904	244.1	2.148
4300	2.509	34.902	244.2	2.126
4400	2.503	34.901	244.2	2.108
4500	2.499	34.899	244.3	2.091
4600	2.494	34.897	244.4	2.075
4700	2.494	34.896	244.5	2.063
4800	2.501	34.895	244.6	2.057
4900	2.508	34.895	244.7	2.051
5000	2.515	34.894	244.9	2.045
5100	2.525	34.894	245.0	2.042
5200	2.534	34.893	245.0	2.038
5300	2.544	34.893	245.3	2.035
5400	2.555	34.893	245.5	2.032
5400	2.555	34.893	245.5	2.032

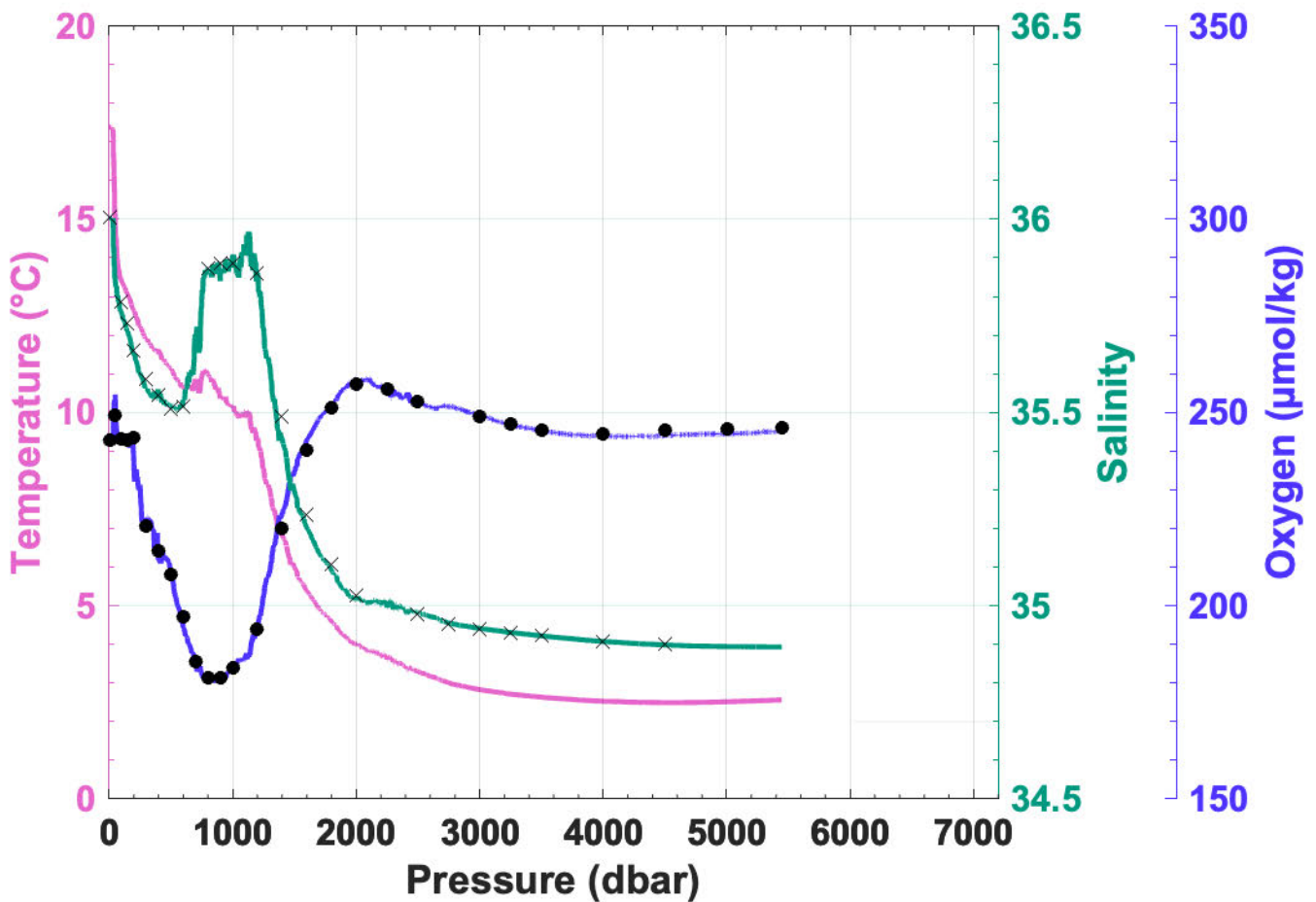
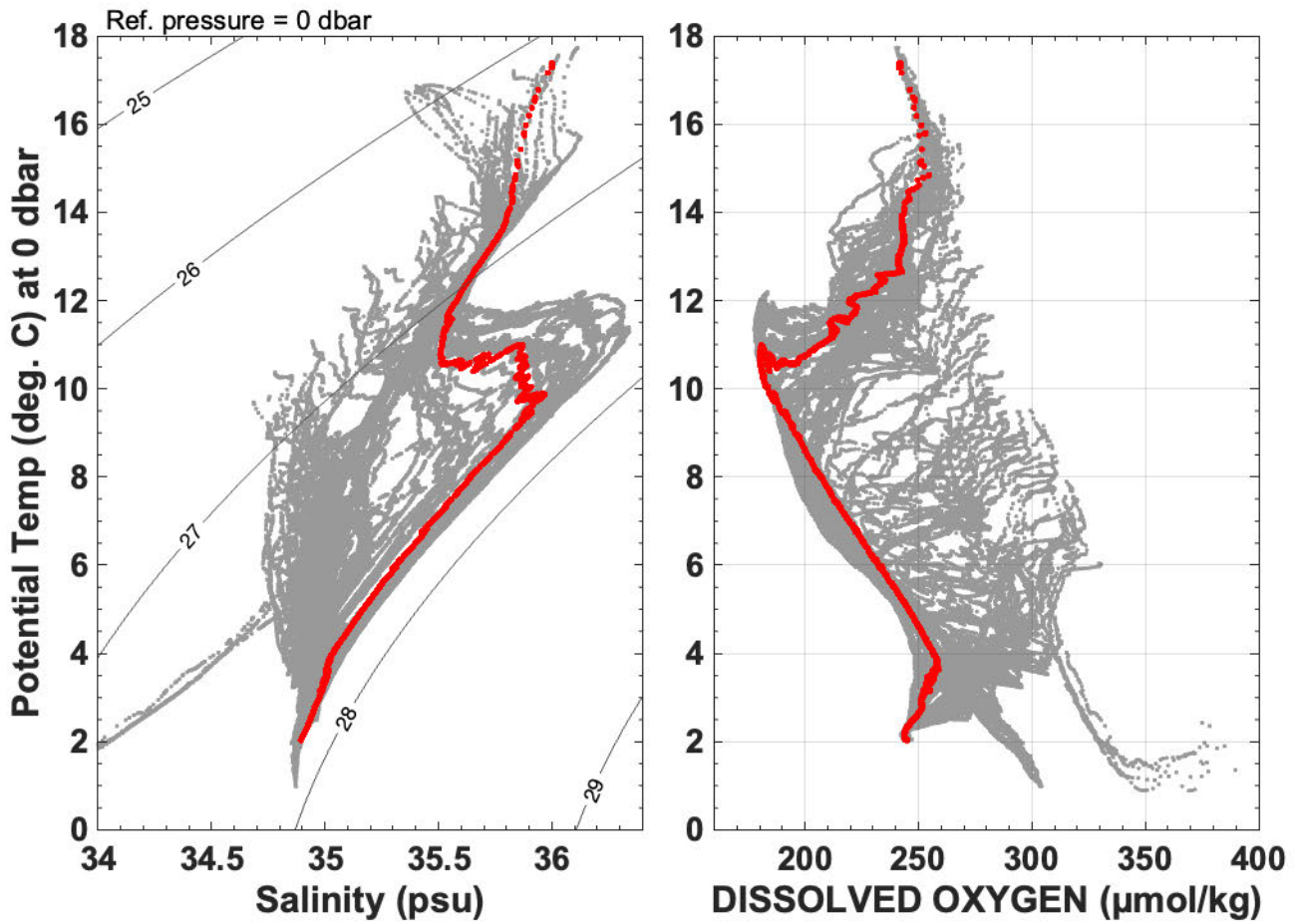
# STATION 15



Cruise : BOCATS 2021  
 Station : 16  
 Date : 01/06/2021  
 Depth : 5346  
 Position : N 41 5.23  
 W 13 29.86

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	17.385	36.001	242.1	17.385
10	17.382	36.001	242.1	17.380
20	17.376	36.002	241.6	17.373
30	17.317	36.002	242.2	17.312
40	15.973	35.886	251.3	15.967
50	14.792	35.838	252.2	14.785
100	13.392	35.756	243.9	13.378
150	13.062	35.709	241.6	13.041
200	12.627	35.651	236.9	12.600
250	12.231	35.602	231.0	12.198
300	11.908	35.562	222.2	11.868
350	11.657	35.538	219.8	11.611
400	11.604	35.554	211.7	11.552
450	11.304	35.521	212.8	11.247
500	11.136	35.517	209.3	11.072
550	10.837	35.511	200.3	10.768
600	10.665	35.533	194.5	10.591
650	10.714	35.604	189.9	10.633
700	10.847	35.701	184.5	10.759
750	10.934	35.794	182.3	10.838
800	10.986	35.864	180.6	10.884
850	10.756	35.875	180.4	10.649
900	10.374	35.846	182.0	10.263
950	10.268	35.871	182.1	10.150
1000	10.171	35.906	183.5	10.047
1100	10.010	35.935	186.0	9.875
1200	9.340	35.861	194.3	9.198
1300	7.997	35.620	208.8	7.855
1400	6.838	35.432	223.6	6.697
1500	5.995	35.296	234.5	5.852
1600	5.380	35.202	242.8	5.234
1700	4.921	35.135	248.4	4.770
1800	4.582	35.090	252.0	4.426
1900	4.230	35.042	256.3	4.068
2000	4.009	35.019	258.3	3.841
2100	3.827	35.006	258.5	3.652
2200	3.700	35.003	257.0	3.518
2300	3.527	34.990	255.2	3.338
2400	3.428	34.990	253.8	3.230
2500	3.293	34.981	252.3	3.087
2600	3.176	34.972	251.4	2.963
2700	3.062	34.960	251.8	2.841
2800	2.958	34.952	251.2	2.729
2900	2.891	34.947	250.1	2.653
3000	2.829	34.941	249.1	2.582
3100	2.780	34.937	248.1	2.523
3200	2.733	34.933	247.2	2.467
3300	2.696	34.929	246.4	2.420
3400	2.665	34.926	246.0	2.379
3500	2.633	34.922	245.3	2.338
3600	2.606	34.918	244.9	2.300
3700	2.585	34.916	244.4	2.268
3800	2.558	34.912	244.2	2.231
3900	2.542	34.910	244.0	2.204
4000	2.527	34.907	243.9	2.178
4100	2.520	34.906	243.7	2.160
4200	2.508	34.903	243.8	2.136
4300	2.499	34.901	244.0	2.116
4400	2.496	34.900	243.9	2.101
4500	2.491	34.898	244.0	2.084
4600	2.491	34.897	244.1	2.071
4700	2.494	34.896	244.3	2.063
4800	2.498	34.895	244.3	2.054
4900	2.505	34.895	244.4	2.048
5000	2.514	34.894	244.5	2.044
5100	2.524	34.894	244.6	2.041
5200	2.534	34.894	244.6	2.038
5300	2.545	34.893	245.1	2.035
5400	2.557	34.893	244.9	2.034
5447	2.563	34.893	245.2	2.033

# STATION 16

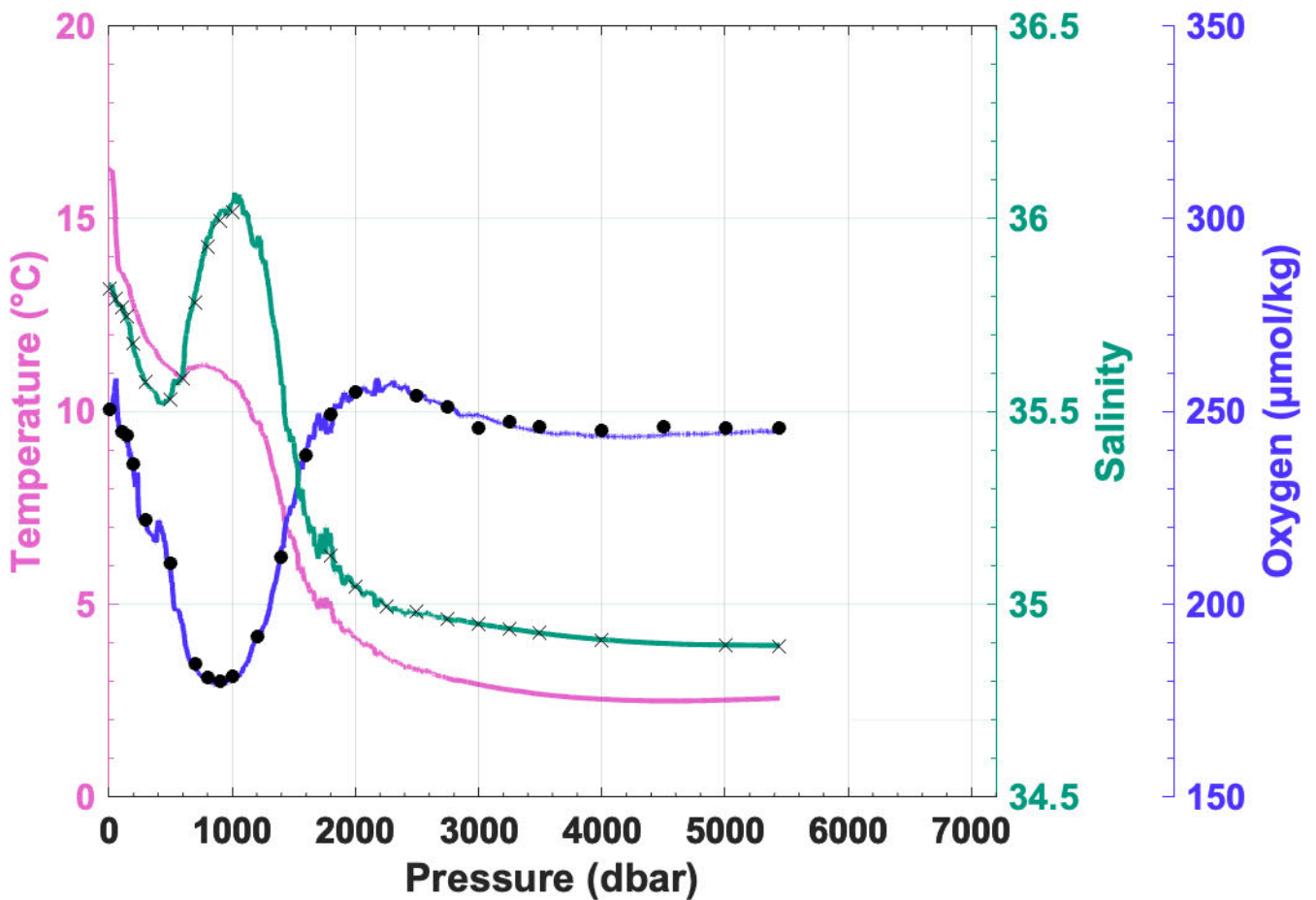
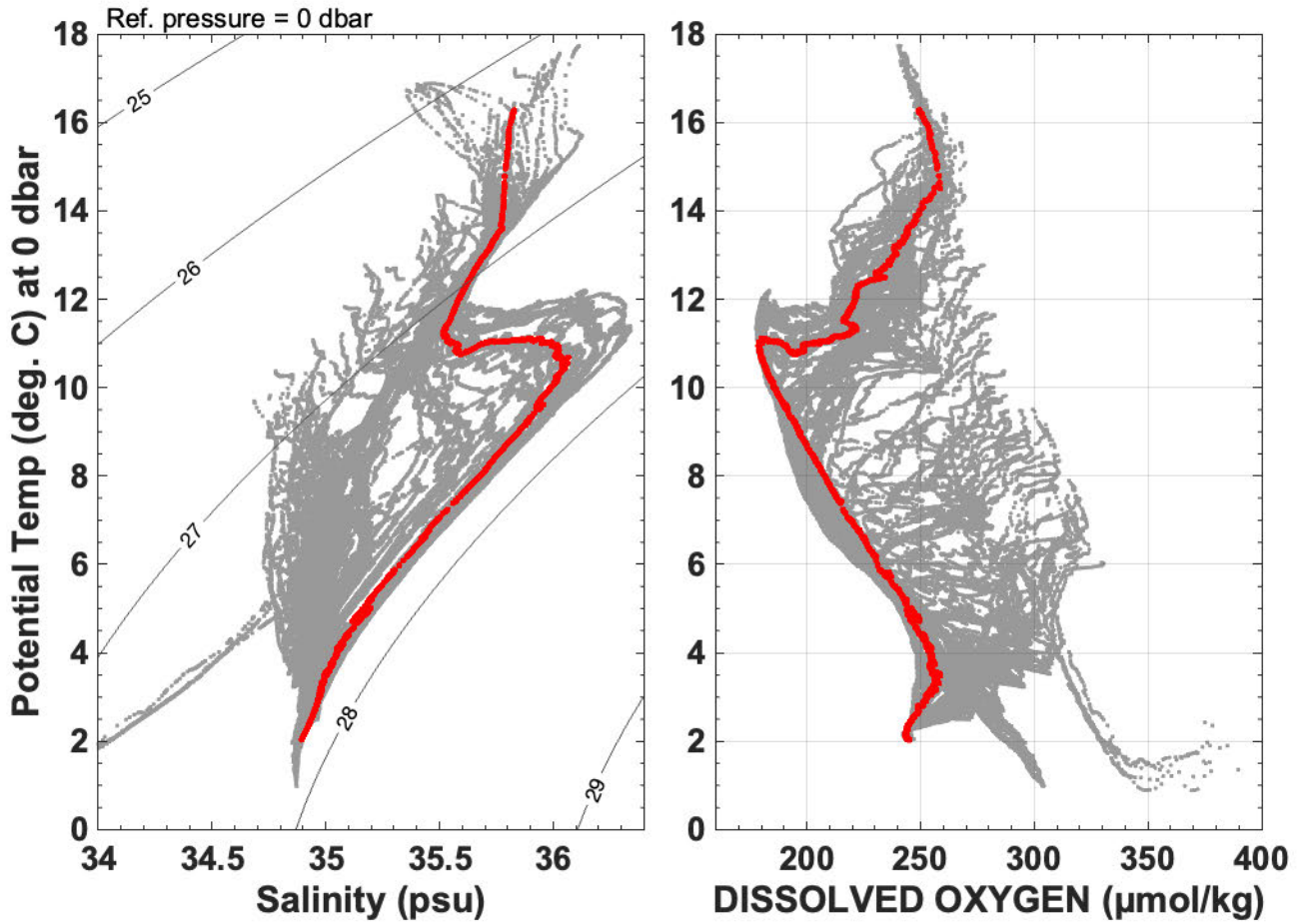


Cruise : BOCATS 2021  
 Station : 17  
 Date : 01/06/2021  
 Depth : 5346  
 Position : N 41 22.98  
 W 13 53.35

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	16.269	35.829	249.4	16.269
10	16.269	35.828	249.4	16.268
20	16.268	35.828	249.1	16.265
30	16.116	35.820	250.9	16.111
40	15.739	35.805	254.4	15.732
50	15.218	35.797	256.4	15.211
100	13.625	35.776	244.5	13.611
150	13.312	35.733	241.8	13.291
200	12.785	35.667	234.7	12.758
250	12.307	35.612	222.3	12.273
300	11.915	35.574	220.1	11.876
350	11.692	35.556	218.1	11.646
400	11.430	35.527	221.4	11.379
450	11.238	35.522	216.3	11.181
500	11.099	35.537	208.7	11.036
550	10.954	35.576	198.4	10.885
600	10.836	35.598	194.5	10.761
650	11.119	35.738	186.0	11.036
700	11.148	35.807	183.3	11.058
750	11.180	35.875	181.4	11.083
800	11.207	35.952	180.1	11.103
850	11.145	35.994	179.2	11.035
900	11.065	36.017	178.7	10.949
950	10.846	36.008	179.9	10.725
1000	10.769	36.040	180.0	10.642
1100	10.338	36.012	184.0	10.201
1200	9.681	35.925	190.8	9.536
1300	8.969	35.815	198.5	8.818
1400	7.585	35.570	214.5	7.436
1500	6.662	35.418	225.9	6.512
1600	5.584	35.230	240.5	5.435
1700	4.893	35.124	249.4	4.742
1800	4.908	35.154	245.4	4.748
1900	4.297	35.054	253.7	4.135
2000	4.121	35.046	255.0	3.952
2100	3.965	35.034	255.0	3.788
2200	3.768	35.016	255.4	3.584
2300	3.514	34.983	257.5	3.325
2400	3.370	34.974	256.8	3.173
2500	3.301	34.974	254.7	3.095
2600	3.261	34.977	252.5	3.046
2700	3.136	34.966	251.7	2.913
2800	3.036	34.958	250.9	2.805
2900	2.994	34.956	249.0	2.754
3000	2.924	34.949	249.0	2.674
3100	2.862	34.944	247.8	2.604
3200	2.804	34.939	246.8	2.537
3300	2.756	34.934	246.0	2.479
3400	2.716	34.930	245.4	2.429
3500	2.671	34.925	244.7	2.375
3600	2.636	34.921	244.2	2.329
3700	2.606	34.918	244.2	2.289
3800	2.579	34.914	244.2	2.251
3900	2.558	34.911	243.8	2.220
4000	2.538	34.909	243.7	2.189
4100	2.526	34.906	243.4	2.165
4200	2.511	34.904	243.5	2.139
4300	2.505	34.902	243.6	2.122
4400	2.495	34.900	243.8	2.100
4500	2.495	34.899	243.8	2.088
4600	2.494	34.897	244.1	2.075
4700	2.495	34.896	244.2	2.063
4800	2.500	34.895	244.2	2.056
4900	2.509	34.895	244.3	2.052
5000	2.517	34.895	244.3	2.047
5100	2.527	34.894	244.6	2.044
5200	2.537	34.894	244.7	2.041
5300	2.548	34.894	244.9	2.038
5400	2.560	34.893	244.9	2.036
5443	2.566	34.893	NaN	2.036



# STATION 17

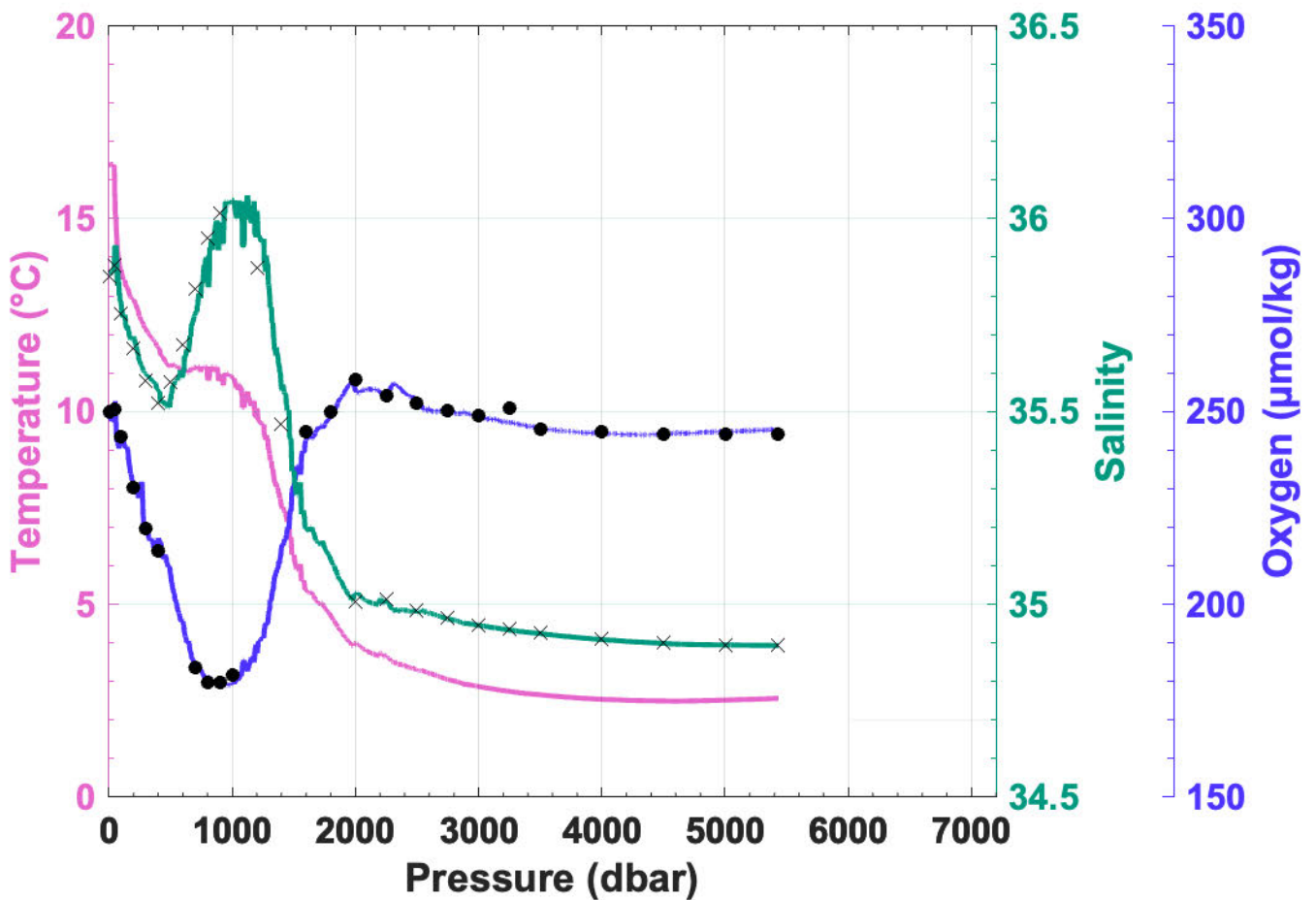
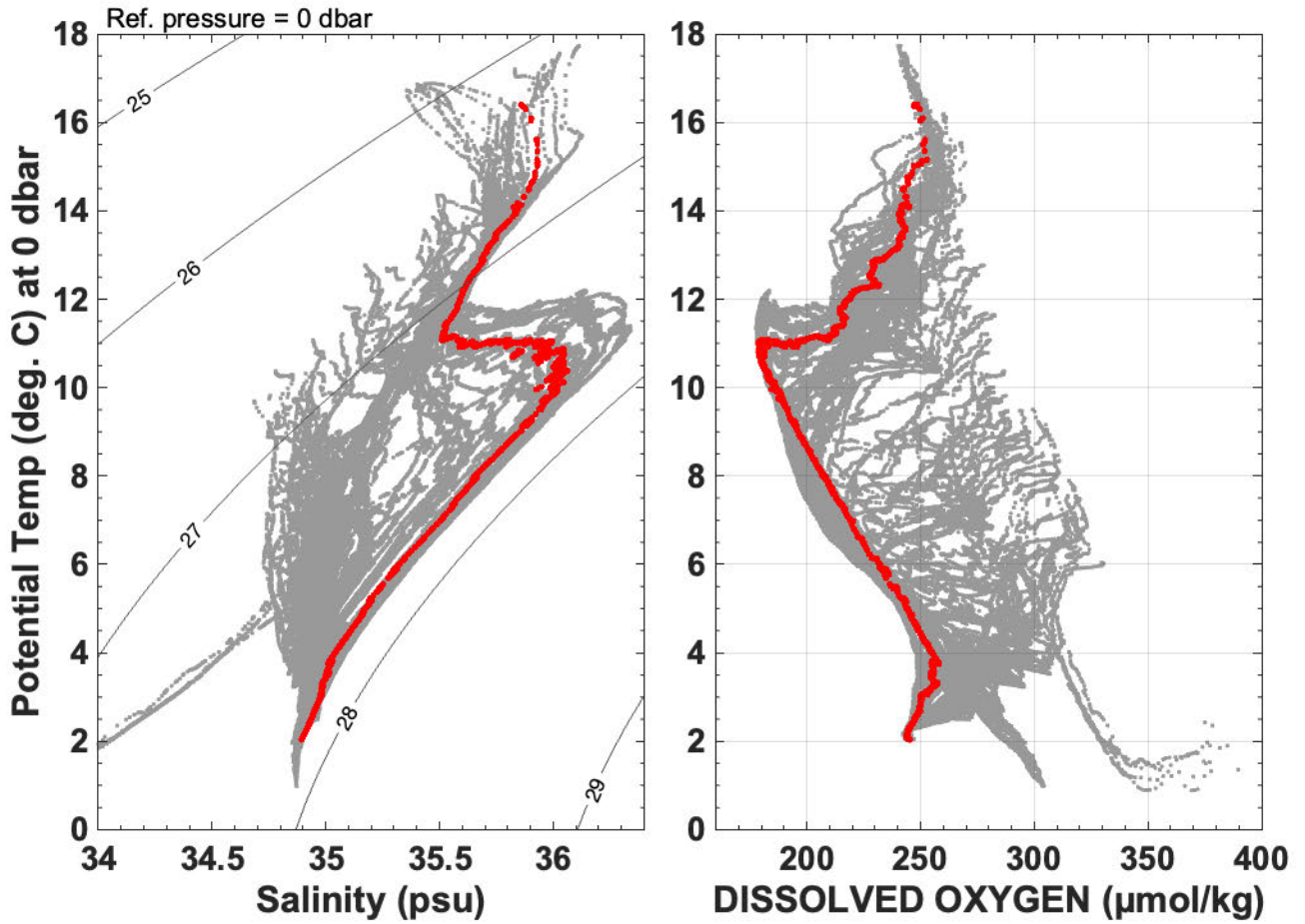


Cruise : BOCATS 2021  
 Station : 18  
 Date : 02/06/2021  
 Depth : 5337  
 Position : N 41 41.04  
 W 14 16.87

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	16.405	35.860	248.2	16.405
10	16.395	35.861	248.3	16.394
20	16.400	35.860	247.8	16.397
30	16.410	35.860	248.0	16.405
40	16.386	35.864	248.4	16.379
50	15.362	35.930	251.8	15.354
100	13.634	35.778	243.1	13.620
150	13.178	35.711	240.2	13.157
200	12.915	35.695	230.3	12.887
250	12.474	35.631	229.3	12.441
300	12.134	35.598	219.4	12.094
350	11.879	35.578	216.7	11.834
400	11.644	35.553	216.9	11.592
450	11.340	35.522	211.9	11.283
500	11.188	35.533	207.8	11.124
550	11.166	35.581	200.2	11.096
600	11.004	35.595	195.5	10.928
650	11.020	35.666	189.8	10.937
700	11.136	35.753	184.8	11.046
750	11.109	35.825	182.7	11.013
800	10.900	35.843	180.8	10.799
850	11.060	35.937	180.1	10.950
900	10.950	35.974	179.5	10.835
950	10.998	36.045	179.0	10.875
1000	10.884	36.048	179.5	10.756
1100	10.308	35.993	184.3	10.171
1200	10.083	36.020	187.8	9.935
1300	8.988	35.819	198.2	8.837
1400	7.521	35.560	214.6	7.372
1500	6.282	35.347	230.4	6.136
1600	5.376	35.199	242.5	5.230
1700	5.025	35.157	245.9	4.873
1800	4.694	35.114	248.8	4.536
1900	4.220	35.049	254.3	4.059
2000	3.978	35.028	255.4	3.811
2100	3.773	35.007	255.8	3.599
2200	3.722	35.011	255.1	3.539
2300	3.509	34.985	257.1	3.320
2400	3.405	34.984	254.7	3.208
2500	3.290	34.978	252.7	3.085
2600	3.211	34.977	250.5	2.997
2700	3.103	34.967	250.0	2.881
2800	3.012	34.959	249.7	2.782
2900	2.924	34.950	249.5	2.685
3000	2.868	34.946	248.8	2.620
3100	2.812	34.940	248.0	2.555
3200	2.763	34.936	247.4	2.496
3300	2.720	34.931	246.9	2.444
3400	2.683	34.927	246.1	2.397
3500	2.655	34.924	245.7	2.359
3600	2.625	34.921	245.2	2.318
3700	2.595	34.917	244.8	2.278
3800	2.573	34.914	244.6	2.246
3900	2.553	34.911	244.5	2.215
4000	2.536	34.908	244.2	2.187
4100	2.527	34.906	244.2	2.166
4200	2.512	34.904	244.0	2.140
4300	2.505	34.902	243.9	2.121
4400	2.500	34.901	244.0	2.104
4500	2.494	34.899	244.0	2.087
4600	2.489	34.897	244.4	2.070
4700	2.493	34.896	244.4	2.062
4800	2.500	34.895	244.6	2.056
4900	2.507	34.895	244.7	2.050
5000	2.516	34.895	244.7	2.046
5100	2.526	34.894	244.9	2.043
5200	2.535	34.894	244.9	2.039
5300	2.545	34.893	245.2	2.036
5400	2.558	34.893	245.3	2.034
5400	2.558	34.893	245.3	2.034



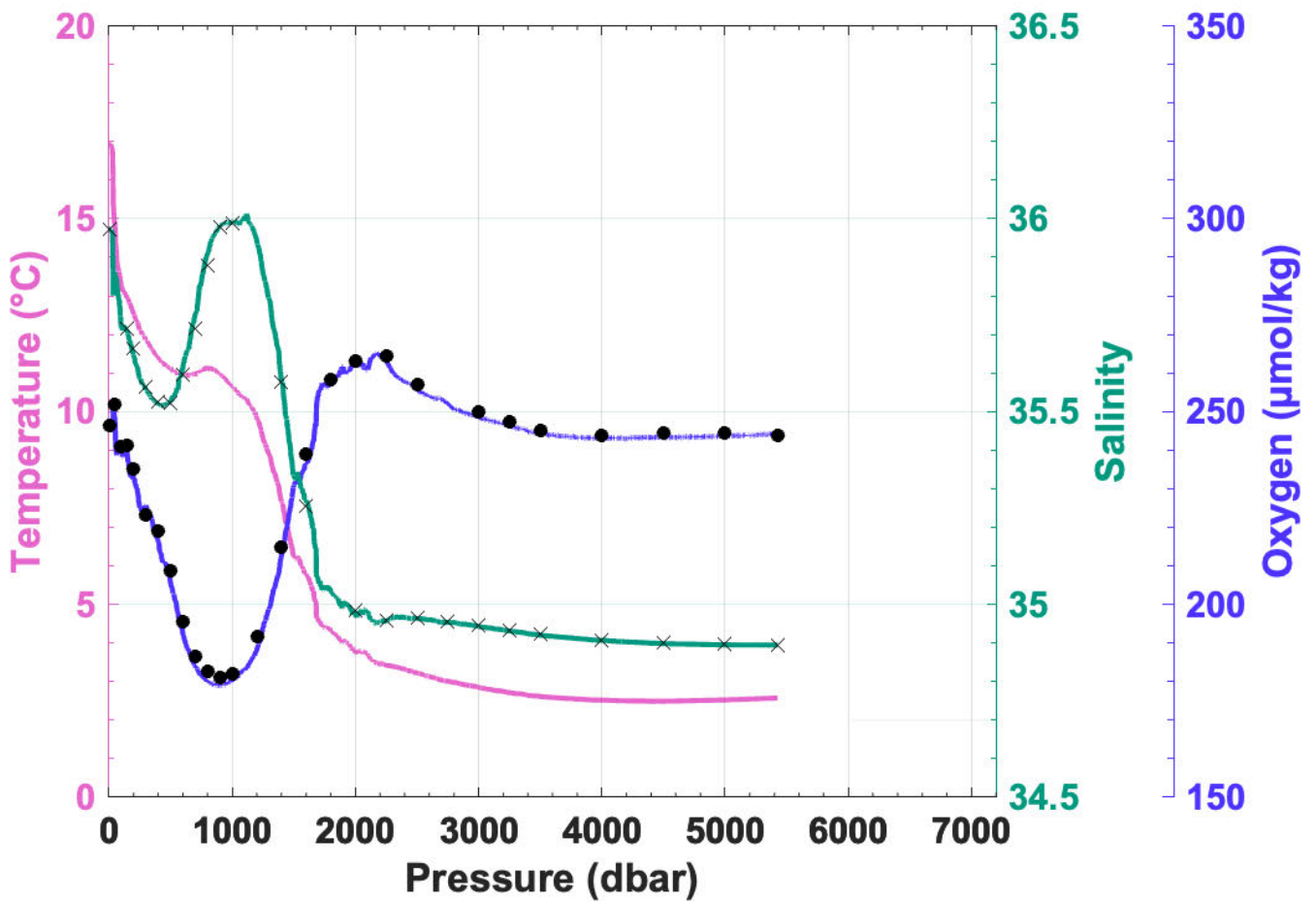
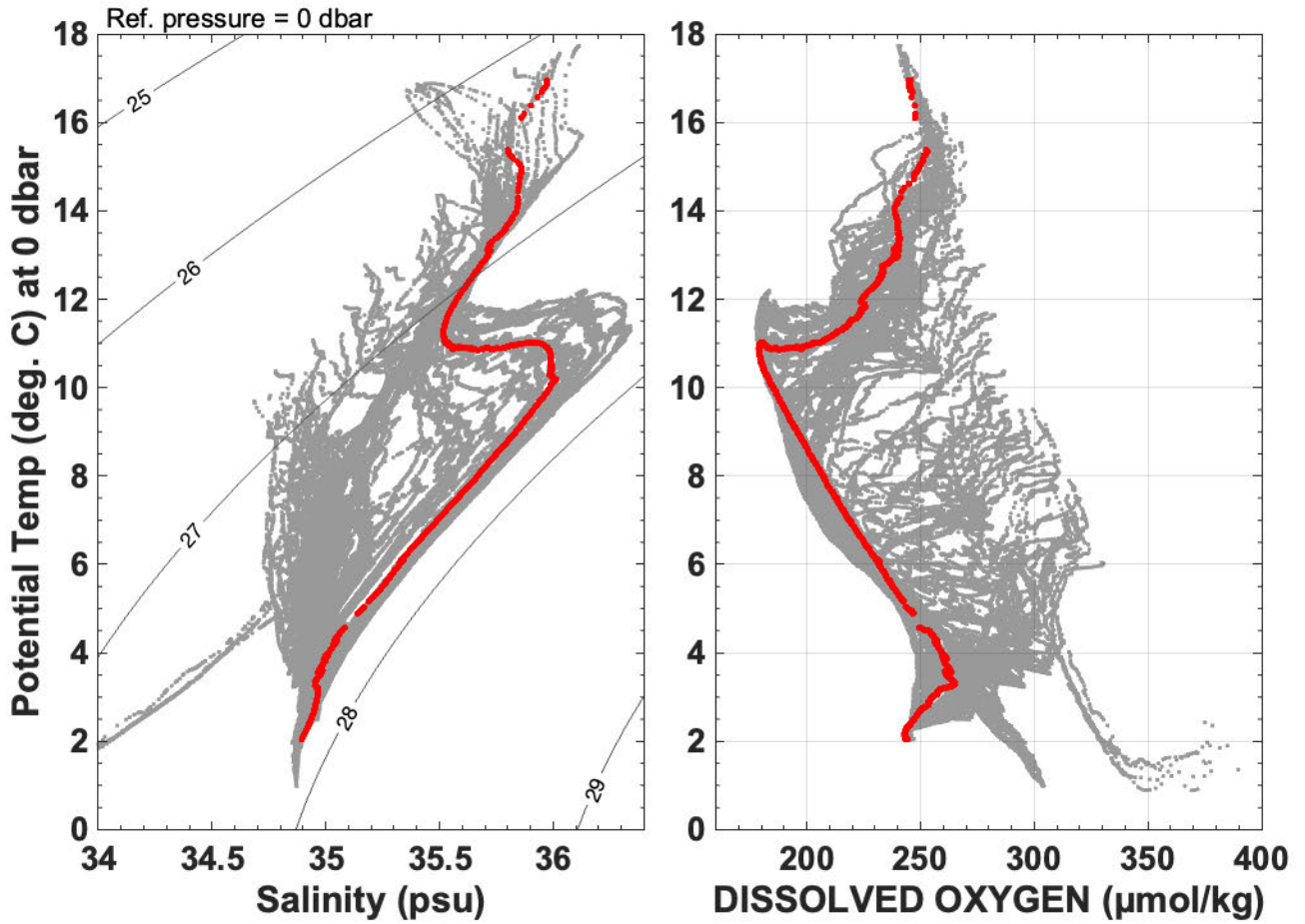
# STATION 18



Cruise : BOCATS 2021  
 Station : 19  
 Date : 02/06/2021  
 Depth : 5329  
 Position : N 41 58.99  
 W 14 40.64

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	16.947	35.973	245.7	16.947
10	16.939	35.973	244.9	16.937
20	16.871	35.972	245.0	16.867
30	16.728	35.953	245.4	16.723
40	15.121	35.842	251.0	15.115
50	14.759	35.853	247.1	14.752
100	13.236	35.718	240.7	13.222
150	12.935	35.703	238.5	12.914
200	12.549	35.646	233.1	12.522
250	12.108	35.585	225.1	12.075
300	11.854	35.556	225.7	11.815
350	11.607	35.531	221.7	11.562
400	11.392	35.519	216.2	11.341
450	11.226	35.518	210.6	11.168
500	11.084	35.524	205.6	11.021
550	11.013	35.557	199.4	10.944
600	10.975	35.614	192.6	10.900
650	10.930	35.668	187.9	10.847
700	10.981	35.751	183.9	10.892
750	11.060	35.836	181.6	10.964
800	11.119	35.908	180.1	11.016
850	11.086	35.955	179.5	10.976
900	10.966	35.982	179.1	10.851
950	10.825	35.990	179.4	10.704
1000	10.657	35.992	180.2	10.531
1100	10.356	36.004	182.9	10.218
1200	9.843	35.942	188.0	9.697
1300	8.884	35.790	199.0	8.733
1400	7.670	35.583	212.6	7.520
1500	6.259	35.335	230.5	6.112
1600	5.790	35.271	236.4	5.639
1700	4.569	35.058	254.6	4.423
1800	4.322	35.034	257.2	4.169
1900	4.023	34.994	261.7	3.865
2000	3.800	34.977	262.1	3.635
2100	3.722	34.982	260.8	3.548
2200	3.453	34.953	264.6	3.274
2300	3.395	34.965	260.2	3.207
2400	3.319	34.966	257.7	3.123
2500	3.220	34.964	255.4	3.016
2600	3.124	34.960	254.1	2.912
2700	3.037	34.954	253.1	2.816
2800	2.980	34.953	250.6	2.750
2900	2.908	34.948	249.5	2.670
3000	2.843	34.943	248.5	2.595
3100	2.791	34.938	247.7	2.534
3200	2.744	34.934	246.8	2.478
3300	2.691	34.929	245.6	2.415
3400	2.641	34.924	244.8	2.355
3500	2.610	34.920	244.2	2.315
3600	2.587	34.917	243.9	2.282
3700	2.566	34.914	243.6	2.250
3800	2.544	34.911	243.2	2.217
3900	2.526	34.908	243.1	2.188
4000	2.518	34.907	243.1	2.169
4100	2.506	34.905	243.1	2.146
4200	2.497	34.903	243.0	2.126
4300	2.494	34.901	243.2	2.111
4400	2.488	34.899	243.3	2.093
4500	2.489	34.898	243.3	2.082
4600	2.493	34.897	243.3	2.074
4700	2.501	34.897	243.3	2.069
4800	2.507	34.896	243.4	2.063
4900	2.513	34.896	243.6	2.056
5000	2.522	34.895	243.6	2.051
5100	2.532	34.895	243.8	2.049
5200	2.545	34.895	243.8	2.048
5300	2.557	34.895	244.0	2.047
5400	2.570	34.895	244.1	2.046
5400	2.570	34.895	244.1	2.046

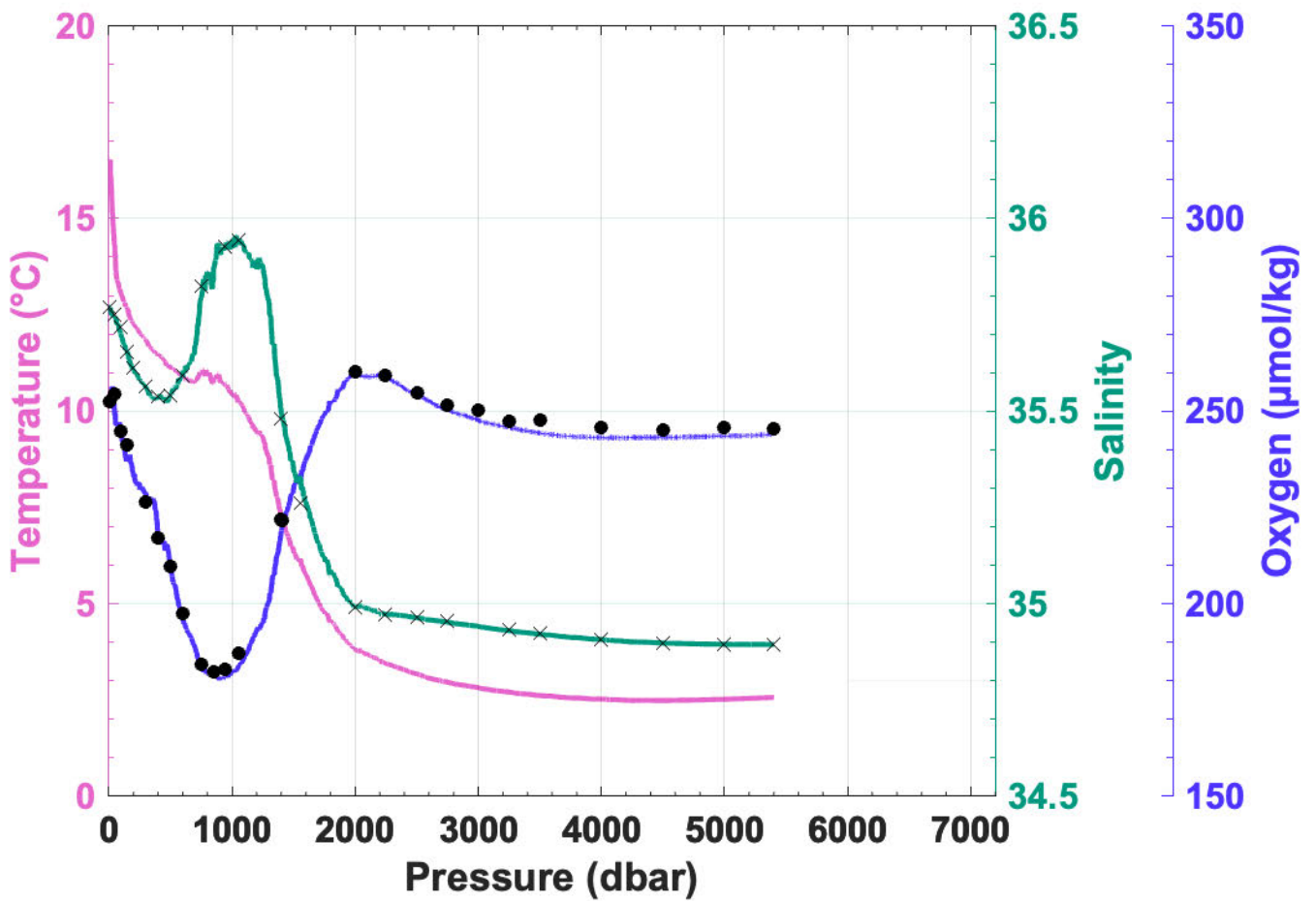
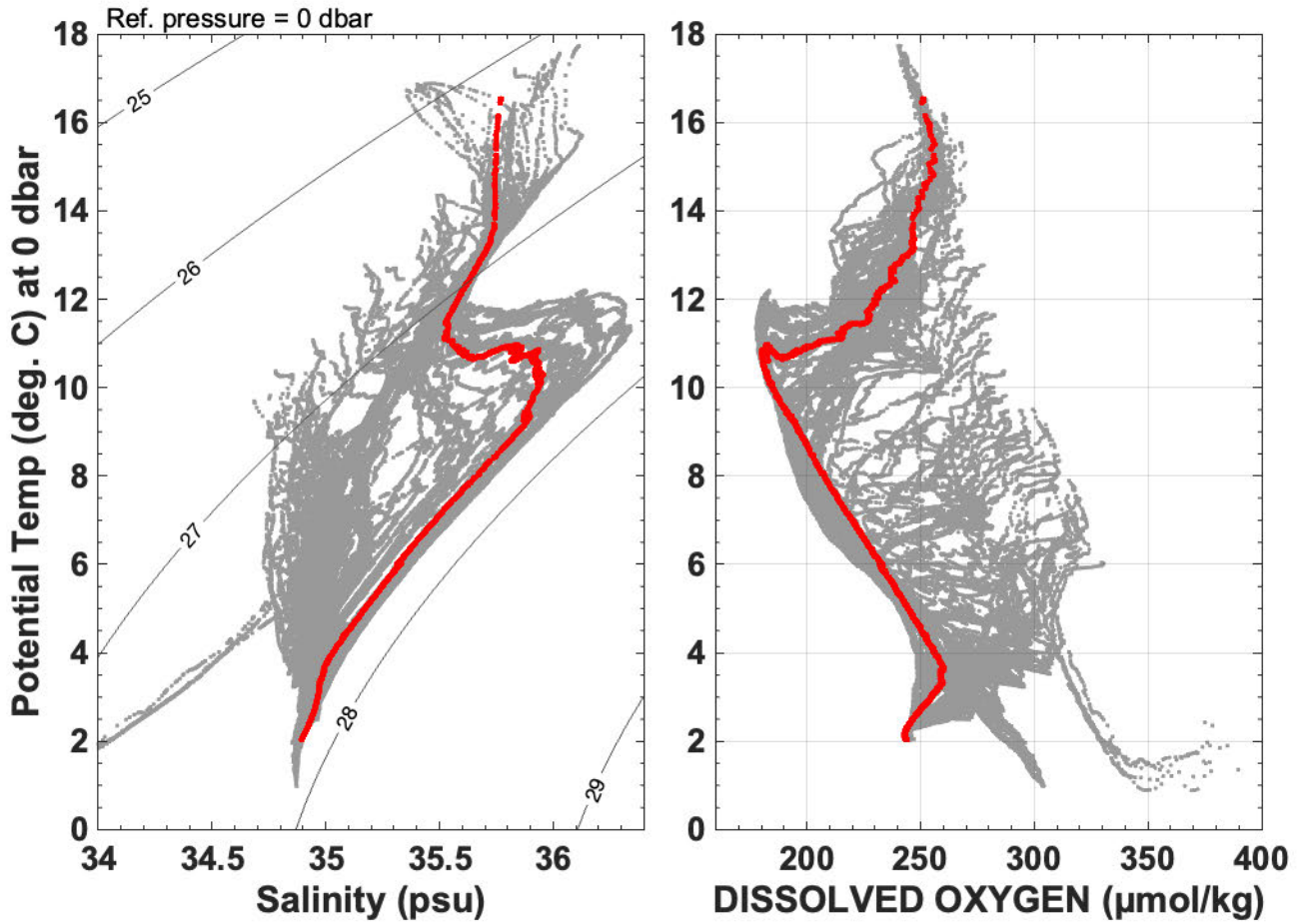
# STATION 19



Cruise : BOCATS 2021  
 Station : 20  
 Date : 05/06/2021  
 Depth : 5305  
 Position : N 42 17.00  
 W 15 3.97

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	16.521	35.769	250.9	16.521
10	16.514	35.769	251.2	16.512
20	15.881	35.755	254.0	15.878
30	15.135	35.749	256.4	15.130
40	14.610	35.743	251.6	14.604
50	14.081	35.746	249.2	14.074
100	13.033	35.696	244.6	13.020
150	12.654	35.654	238.3	12.633
200	12.274	35.607	233.3	12.248
250	12.028	35.581	230.1	11.995
300	11.851	35.563	228.8	11.812
350	11.616	35.537	226.8	11.571
400	11.469	35.538	218.6	11.417
450	11.309	35.531	215.7	11.252
500	11.140	35.542	209.4	11.076
550	11.010	35.564	202.5	10.941
600	10.915	35.601	195.8	10.839
650	10.805	35.621	192.4	10.724
700	10.783	35.670	188.4	10.695
750	11.003	35.795	183.1	10.907
800	11.017	35.861	181.8	10.915
850	10.785	35.856	182.3	10.677
900	10.821	35.914	180.5	10.706
950	10.684	35.931	180.9	10.564
1000	10.428	35.927	182.4	10.303
1100	10.000	35.918	186.2	9.865
1200	9.475	35.875	192.9	9.331
1300	8.785	35.781	200.8	8.636
1400	7.226	35.494	218.9	7.080
1500	6.346	35.347	229.8	6.199
1600	5.762	35.263	237.6	5.611
1700	5.037	35.156	245.9	4.884
1800	4.563	35.087	252.3	4.407
1900	4.160	35.031	256.2	4.000
2000	3.816	34.992	260.0	3.651
2100	3.681	34.988	258.8	3.508
2200	3.509	34.973	259.7	3.330
2300	3.403	34.973	257.8	3.216
2400	3.286	34.969	256.1	3.091
2500	3.176	34.963	254.4	2.973
2600	3.069	34.958	252.6	2.858
2700	2.992	34.954	250.8	2.772
2800	2.922	34.949	249.6	2.693
2900	2.877	34.946	248.8	2.639
3000	2.820	34.941	247.7	2.573
3100	2.761	34.936	246.8	2.505
3200	2.722	34.932	246.1	2.457
3300	2.678	34.927	245.5	2.403
3400	2.650	34.924	244.9	2.365
3500	2.616	34.921	244.3	2.320
3600	2.599	34.918	243.9	2.294
3700	2.568	34.914	243.6	2.251
3800	2.551	34.912	243.3	2.224
3900	2.530	34.908	243.2	2.192
4000	2.524	34.907	243.1	2.175
4100	2.508	34.904	243.0	2.148
4200	2.494	34.902	243.0	2.123
4300	2.488	34.900	243.2	2.105
4400	2.493	34.900	243.2	2.098
4500	2.487	34.898	243.3	2.080
4600	2.492	34.897	243.2	2.072
4700	2.495	34.896	243.2	2.063
4800	2.501	34.895	243.4	2.057
4900	2.510	34.895	243.5	2.053
5000	2.519	34.895	243.5	2.049
5100	2.530	34.894	243.7	2.047
5200	2.542	34.894	243.8	2.046
5300	2.556	34.894	243.8	2.046
5400	2.568	34.894	244.0	2.044
5400	2.568	34.894	244.0	2.044

# STATION 20

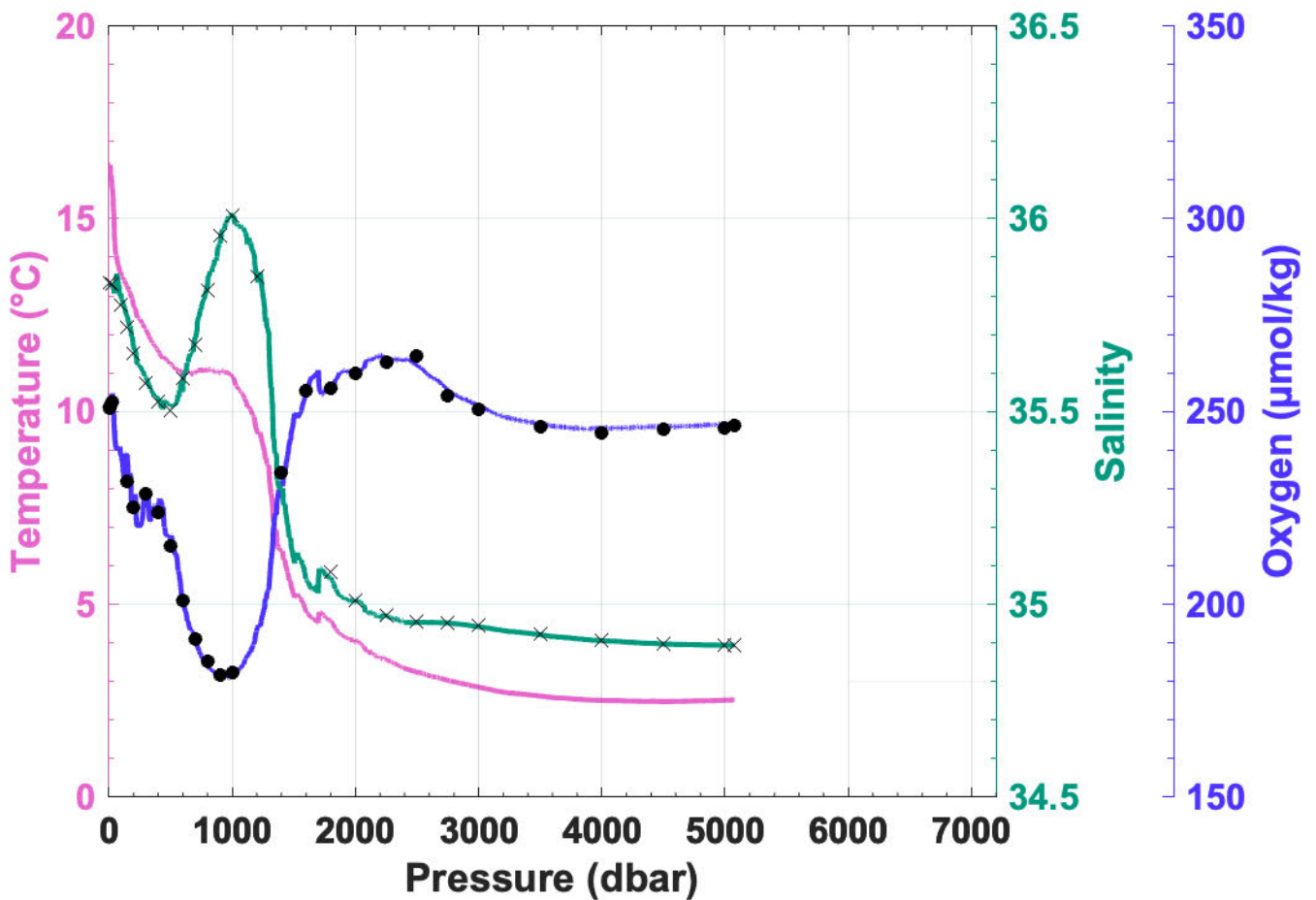
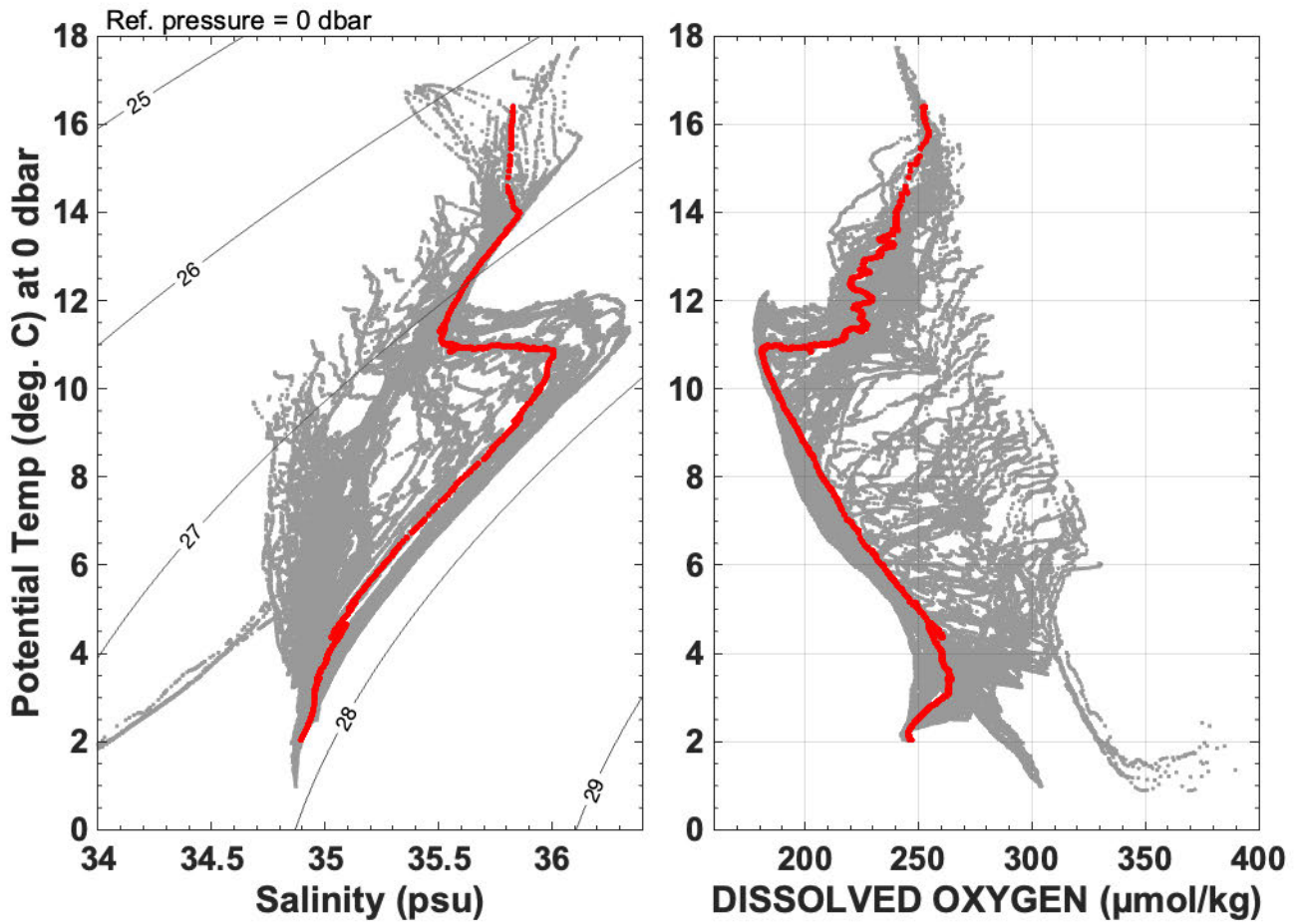


Cruise : BOCATS 2021  
 Station : 21  
 Date : 05/06/2021  
 Depth : 4990  
 Position : N 42 34.87  
 W 15 27.97

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	16.384	35.828	252.6	16.384
10	16.393	35.829	252.0	16.392
20	16.080	35.827	252.6	16.077
30	15.756	35.821	254.2	15.751
40	15.103	35.817	248.8	15.097
50	14.277	35.825	242.7	14.270
100	13.547	35.797	239.1	13.533
150	13.240	35.746	237.4	13.219
200	12.751	35.668	225.8	12.724
250	12.405	35.620	220.1	12.371
300	12.129	35.590	228.5	12.089
350	11.804	35.551	224.5	11.758
400	11.570	35.532	226.0	11.518
450	11.405	35.529	220.1	11.348
500	11.244	35.515	217.4	11.180
550	11.099	35.525	212.3	11.029
600	10.934	35.559	202.3	10.858
650	11.028	35.640	194.4	10.946
700	11.016	35.691	190.8	10.927
750	11.080	35.767	186.8	10.984
800	11.062	35.830	184.1	10.959
850	11.047	35.880	182.6	10.938
900	11.004	35.935	181.7	10.888
950	11.013	35.988	181.1	10.891
1000	10.903	36.008	181.1	10.774
1100	10.333	35.968	185.1	10.195
1200	9.518	35.854	193.3	9.374
1300	8.397	35.665	205.1	8.251
1400	6.366	35.296	230.9	6.229
1500	5.234	35.115	248.0	5.099
1600	4.816	35.065	255.4	4.676
1700	4.580	35.044	260.2	4.434
1800	4.581	35.070	256.1	4.425
1900	4.184	35.018	260.5	4.024
2000	4.040	35.008	260.7	3.872
2100	3.771	34.978	263.5	3.597
2200	3.614	34.966	264.0	3.432
2300	3.494	34.964	263.6	3.305
2400	3.333	34.953	263.5	3.137
2500	3.236	34.953	261.8	3.032
2600	3.147	34.953	259.3	2.934
2700	3.071	34.952	257.1	2.850
2800	2.992	34.950	254.5	2.762
2900	2.921	34.946	253.1	2.683
3000	2.851	34.942	251.4	2.603
3100	2.788	34.937	250.0	2.531
3200	2.721	34.932	248.8	2.456
3300	2.685	34.928	248.0	2.410
3400	2.655	34.925	247.4	2.369
3500	2.619	34.921	246.7	2.323
3600	2.583	34.917	246.2	2.278
3700	2.562	34.914	245.9	2.246
3800	2.542	34.911	245.7	2.215
3900	2.520	34.908	245.6	2.183
4000	2.509	34.906	245.7	2.160
4100	2.505	34.904	245.8	2.145
4200	2.493	34.902	245.8	2.121
4300	2.487	34.900	245.9	2.104
4400	2.485	34.899	246.2	2.091
4500	2.477	34.897	246.0	2.071
4600	2.482	34.896	246.0	2.063
4700	2.489	34.896	246.2	2.057
4800	2.498	34.895	246.3	2.054
4900	2.503	34.894	246.5	2.046
5000	2.513	34.894	246.7	2.043
5050	2.519	34.894	246.8	2.043



# STATION 21

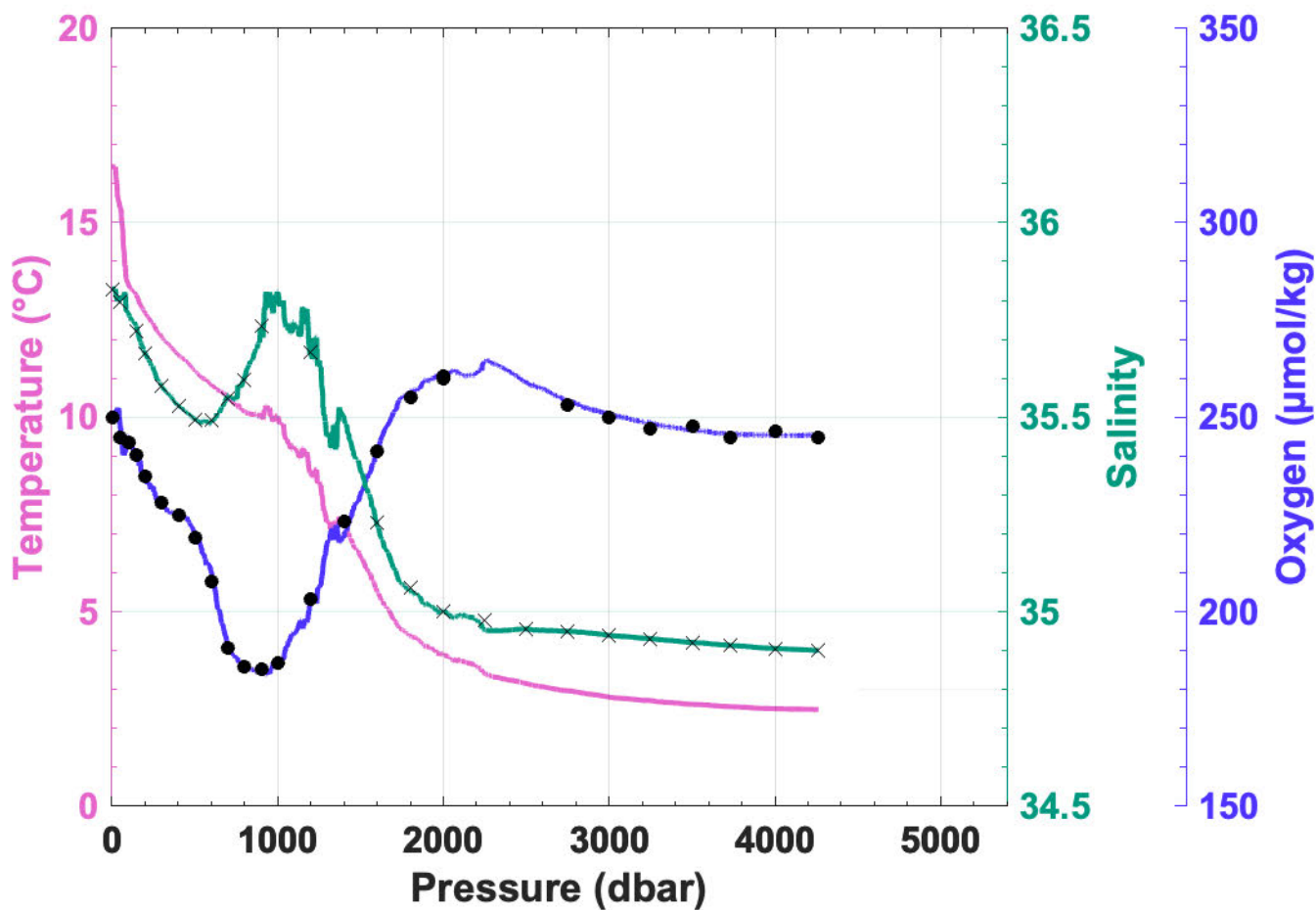
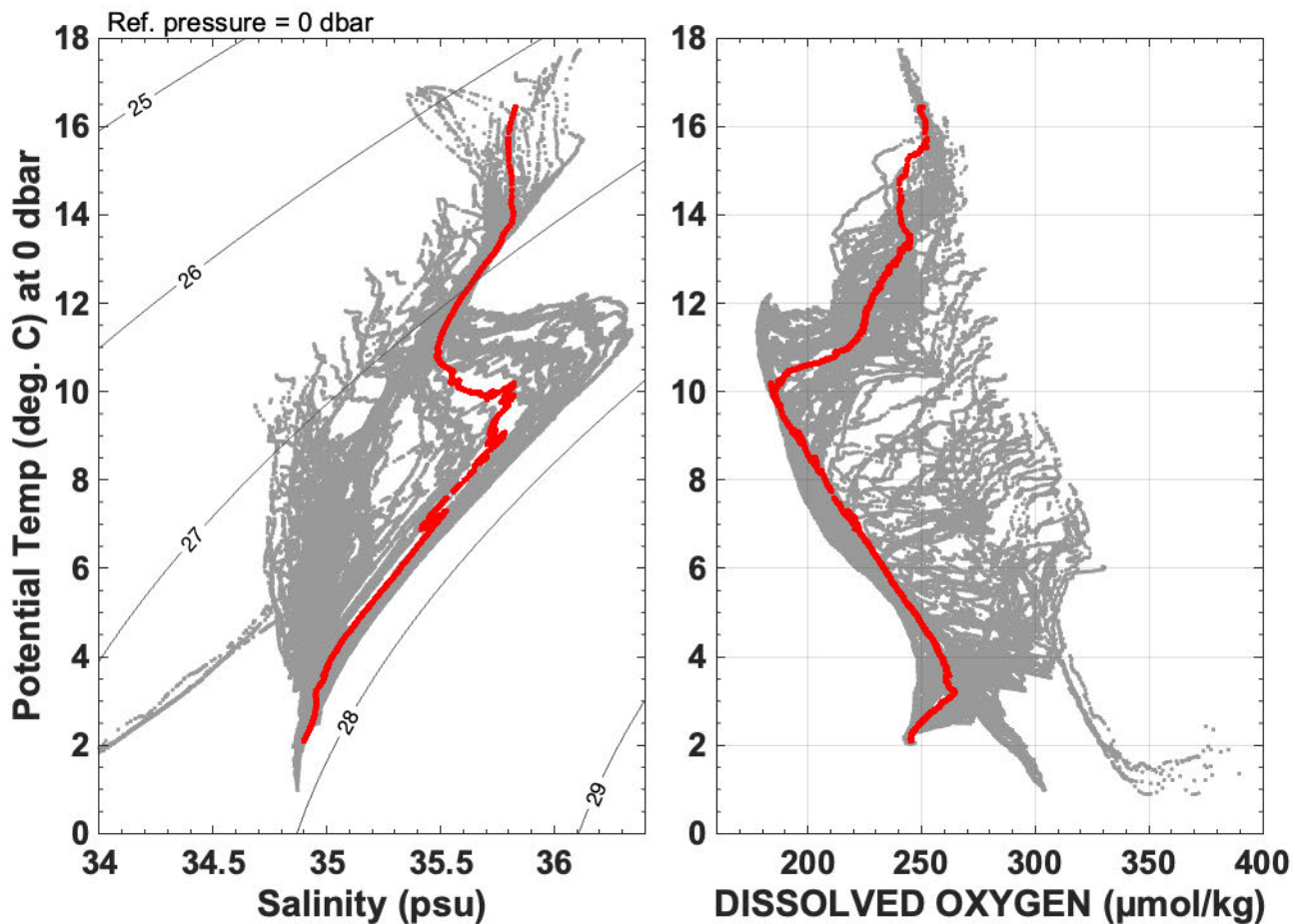


Cruise : BOCATS 2021  
 Station : 22  
 Date : 06/06/2021  
 Depth : 4201  
 Position : N 42 52.86  
 W 15 51.16

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	16.431	35.830	250.6	16.431
10	16.432	35.830	250.3	16.430
20	16.436	35.830	249.5	16.433
30	15.980	35.804	251.8	15.975
40	15.558	35.798	251.7	15.552
50	15.396	35.800	248.0	15.388
100	13.424	35.769	245.0	13.410
150	13.131	35.732	240.3	13.110
200	12.691	35.665	234.2	12.664
250	12.384	35.624	232.1	12.350
300	12.066	35.581	227.8	12.027
350	11.854	35.557	225.7	11.808
400	11.606	35.530	224.5	11.554
450	11.425	35.512	224.5	11.367
500	11.189	35.495	220.3	11.126
550	10.995	35.488	214.9	10.926
600	10.840	35.485	210.3	10.765
650	10.679	35.511	200.0	10.598
700	10.541	35.555	191.9	10.454
750	10.286	35.546	188.3	10.194
800	10.145	35.601	185.9	10.048
850	10.074	35.648	185.0	9.971
900	10.057	35.720	184.8	9.948
950	10.219	35.811	184.5	10.102
1000	10.026	35.822	185.7	9.903
1100	9.207	35.737	194.1	9.079
1200	8.559	35.664	202.3	8.424
1300	7.299	35.452	217.7	7.164
1400	7.278	35.500	219.3	7.132
1500	6.413	35.364	230.2	6.265
1600	5.514	35.221	241.7	5.366
1700	4.800	35.112	251.2	4.651
1800	4.385	35.054	256.7	4.232
1900	4.105	35.020	259.4	3.946
2000	3.908	35.003	260.5	3.741
2100	3.760	34.993	261.0	3.587
2200	3.596	34.978	261.5	3.415
2300	3.324	34.951	263.7	3.138
2400	3.239	34.953	261.6	3.045
2500	3.155	34.955	258.9	2.952
2600	3.071	34.952	257.3	2.859
2700	2.991	34.950	255.3	2.771
2800	2.941	34.948	253.6	2.712
2900	2.871	34.944	251.8	2.633
3000	2.805	34.939	250.9	2.559
3100	2.767	34.936	249.7	2.511
3200	2.724	34.932	248.8	2.458
3300	2.683	34.928	247.9	2.408
3400	2.652	34.924	247.2	2.367
3500	2.622	34.921	246.6	2.326
3600	2.599	34.918	246.2	2.293
3700	2.567	34.914	245.8	2.251
3800	2.545	34.911	245.6	2.218
3900	2.518	34.908	245.3	2.181
4000	2.506	34.905	245.3	2.157
4100	2.495	34.903	245.4	2.136
4200	2.491	34.902	245.3	2.120
4250	2.485	34.900	245.5	2.108



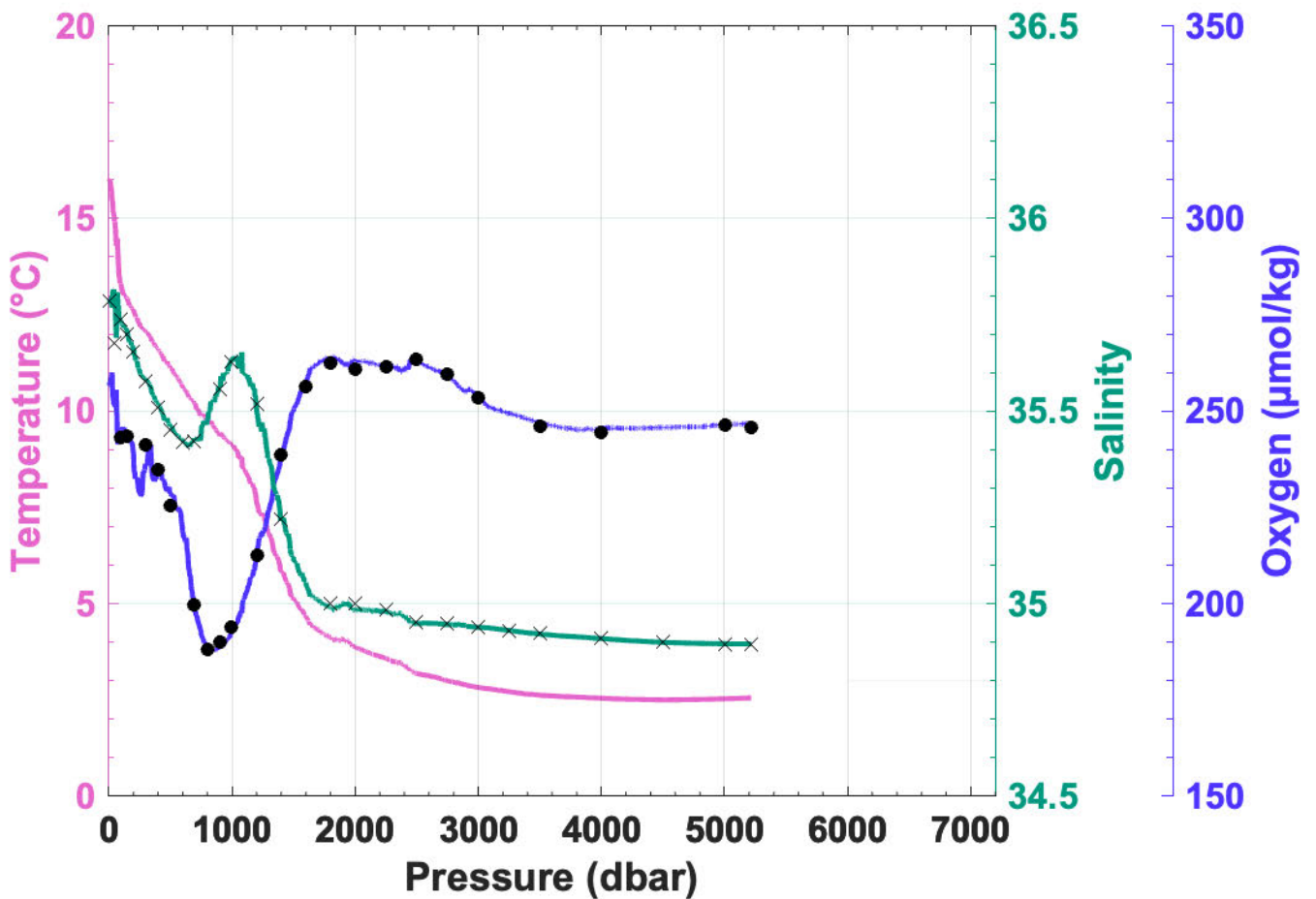
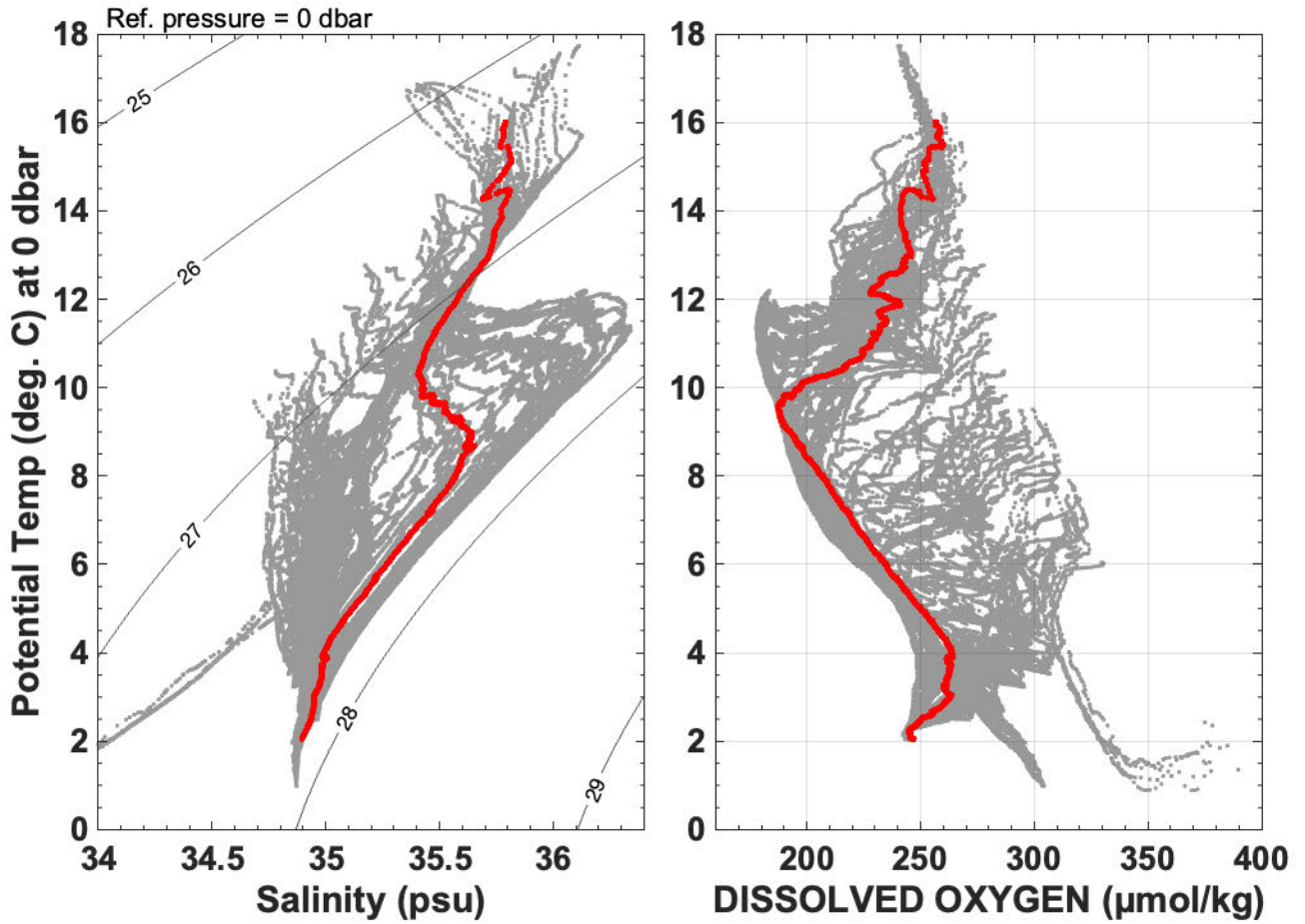
# STATION 22



Cruise : BOCATS 2021  
 Station : 23  
 Date : 06/06/2021  
 Depth : 5125  
 Position : N 43 10.92  
 W 16 14.82

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	15.994	35.790	256.9	15.994
10	15.947	35.788	257.2	15.945
20	15.767	35.782	258.5	15.764
30	15.450	35.801	255.5	15.446
40	15.123	35.816	251.9	15.117
50	14.883	35.788	250.9	14.875
100	13.259	35.733	244.3	13.245
150	12.922	35.708	242.8	12.901
200	12.609	35.660	239.0	12.581
250	12.255	35.604	229.1	12.222
300	12.071	35.582	236.4	12.031
350	11.813	35.546	234.4	11.767
400	11.611	35.520	234.4	11.559
450	11.311	35.478	231.6	11.254
500	11.124	35.460	228.5	11.061
550	10.902	35.439	224.3	10.833
600	10.627	35.424	218.5	10.553
650	10.363	35.406	209.2	10.284
700	10.193	35.430	197.9	10.108
750	9.900	35.444	192.4	9.811
800	9.745	35.473	189.3	9.650
850	9.616	35.530	187.6	9.516
900	9.375	35.563	188.7	9.270
950	9.256	35.595	190.2	9.146
1000	9.119	35.633	192.7	9.003
1100	8.483	35.597	201.4	8.361
1200	7.643	35.503	212.9	7.516
1300	6.828	35.376	224.2	6.697
1400	5.844	35.221	239.0	5.713
1500	5.143	35.119	249.9	5.010
1600	4.682	35.053	257.3	4.545
1700	4.314	35.009	262.4	4.172
1800	4.127	34.990	263.7	3.977
1900	4.069	35.000	262.2	3.910
2000	3.893	34.986	262.8	3.727
2100	3.741	34.983	262.6	3.568
2200	3.622	34.979	261.9	3.441
2300	3.503	34.973	261.3	3.314
2400	3.371	34.963	261.1	3.174
2500	3.189	34.949	262.7	2.985
2600	3.129	34.949	261.4	2.916
2700	3.051	34.947	260.0	2.830
2800	2.962	34.945	257.9	2.732
2900	2.891	34.942	255.0	2.653
3000	2.824	34.938	253.9	2.577
3100	2.786	34.937	250.9	2.529
3200	2.739	34.933	249.8	2.473
3300	2.691	34.928	248.9	2.416
3400	2.650	34.924	247.8	2.365
3500	2.623	34.921	246.9	2.328
3600	2.605	34.918	246.3	2.299
3700	2.585	34.916	245.6	2.269
3800	2.576	34.914	245.2	2.248
3900	2.557	34.911	245.3	2.218
4000	2.545	34.909	245.6	2.196
4100	2.530	34.907	245.6	2.169
4200	2.520	34.905	245.5	2.148
4300	2.514	34.903	245.5	2.131
4400	2.506	34.901	245.6	2.111
4500	2.501	34.899	245.8	2.094
4600	2.504	34.898	245.8	2.084
4700	2.507	34.897	245.8	2.075
4800	2.513	34.897	245.9	2.069
4900	2.521	34.896	246.3	2.063
5000	2.531	34.896	246.4	2.060
5100	2.540	34.896	246.6	2.056
5200	2.552	34.896	246.8	2.056
5200	2.552	34.896	246.8	2.056

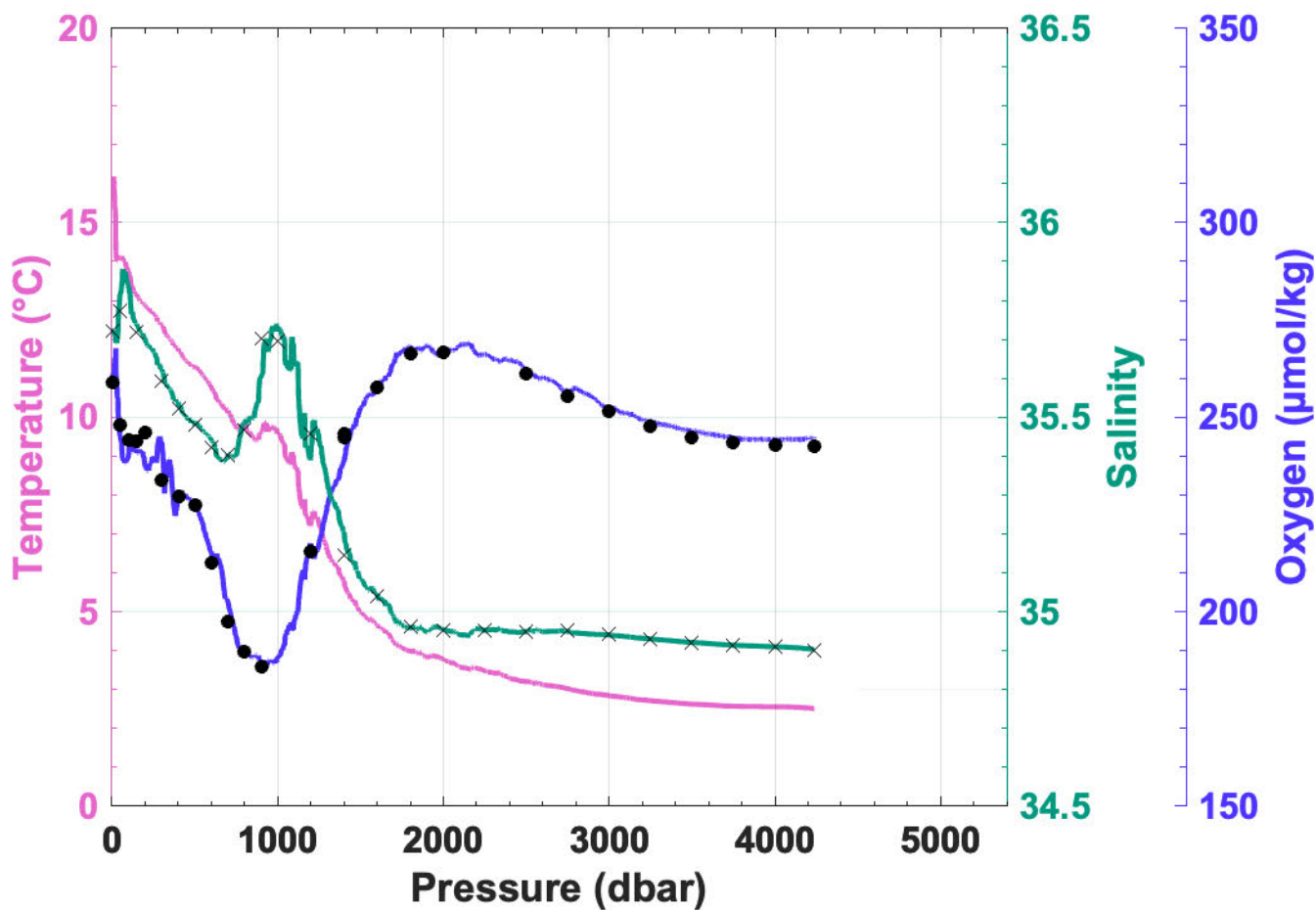
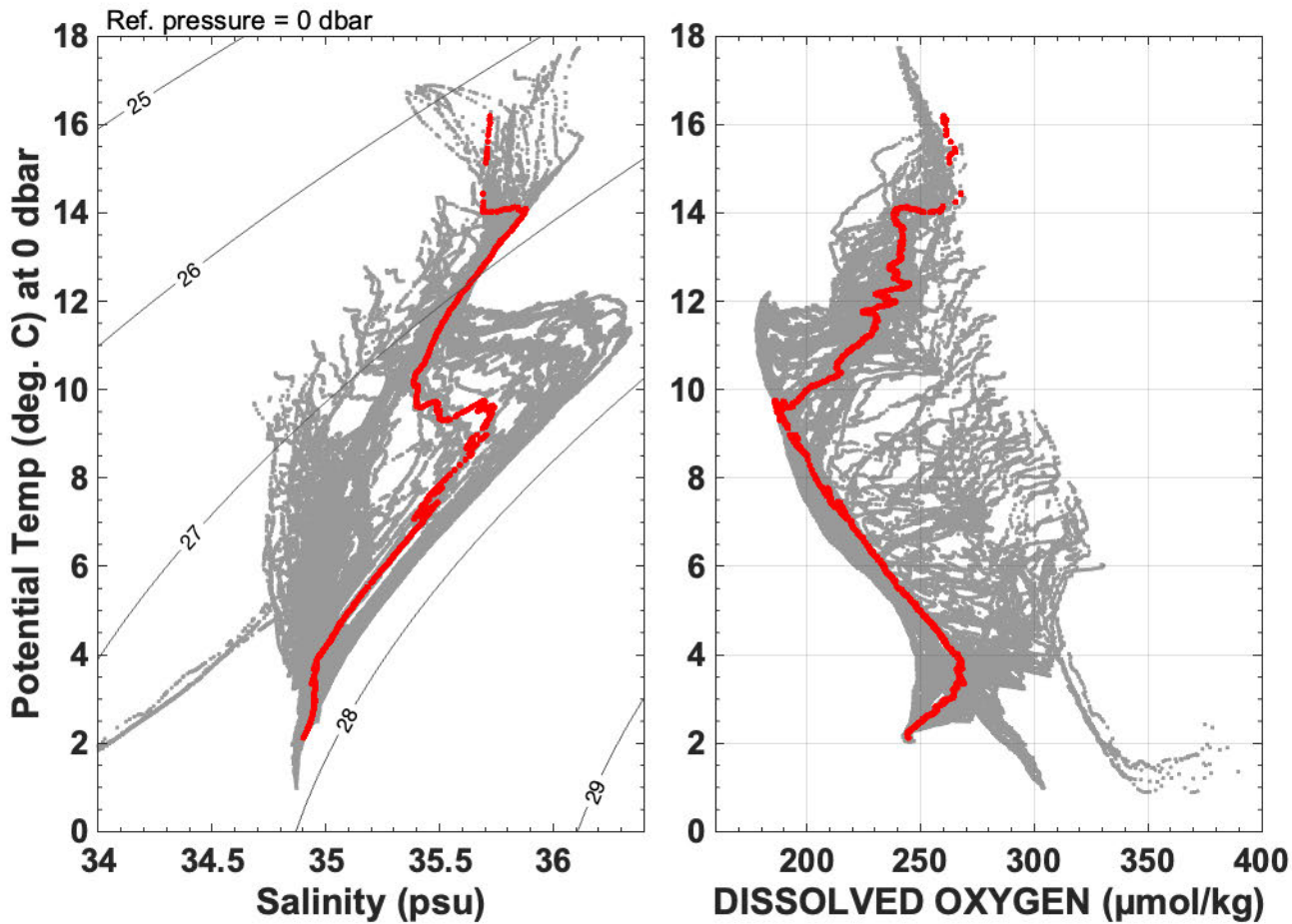
# STATION 23



Cruise : BOCATS 2021  
 Station : 24  
 Date : 06/06/2021  
 Depth : 4178  
 Position : N 43 27.99  
           W 16 38.24

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	16.115	35.722	260.8	16.115
10	16.162	35.722	259.8	16.160
20	15.342	35.710	263.8	15.339
30	14.034	35.691	258.7	14.029
40	14.047	35.762	249.5	14.041
50	14.107	35.814	245.2	14.099
100	13.753	35.837	240.0	13.739
150	13.141	35.739	240.7	13.120
200	12.879	35.700	237.7	12.851
250	12.659	35.669	239.6	12.625
300	12.367	35.623	243.5	12.327
350	12.020	35.573	238.3	11.974
400	11.763	35.539	229.7	11.711
450	11.438	35.500	229.6	11.380
500	11.284	35.485	227.4	11.220
550	11.065	35.463	222.4	10.996
600	10.765	35.441	215.4	10.690
650	10.376	35.392	212.5	10.297
700	10.180	35.401	202.5	10.095
750	9.731	35.400	193.8	9.643
800	9.798	35.485	189.7	9.703
850	9.464	35.499	188.3	9.365
900	9.603	35.602	187.1	9.497
950	9.691	35.692	187.1	9.577
1000	9.595	35.728	188.5	9.476
1100	8.790	35.646	197.6	8.665
1200	7.256	35.405	217.4	7.132
1300	6.563	35.330	227.4	6.435
1400	5.802	35.206	239.0	5.671
1500	4.992	35.084	252.4	4.860
1600	4.683	35.047	257.4	4.545
1700	4.230	34.987	263.9	4.088
1800	3.985	34.958	267.8	3.837
1900	3.837	34.948	268.3	3.681
2000	3.782	34.955	266.4	3.618
2100	3.578	34.941	268.6	3.408
2200	3.548	34.956	266.1	3.368
2300	3.432	34.954	265.0	3.244
2400	3.288	34.948	264.5	3.093
2500	3.202	34.949	262.3	2.999
2600	3.124	34.949	260.2	2.912
2700	3.065	34.951	258.0	2.844
2800	2.974	34.945	257.4	2.744
2900	2.898	34.942	255.0	2.660
3000	2.846	34.940	252.4	2.598
3100	2.786	34.936	251.1	2.529
3200	2.731	34.932	249.3	2.466
3300	2.696	34.928	248.3	2.420
3400	2.656	34.924	247.3	2.371
3500	2.625	34.921	246.5	2.330
3600	2.603	34.918	245.7	2.297
3700	2.577	34.915	245.0	2.261
3800	2.566	34.913	244.2	2.239
3900	2.562	34.911	244.3	2.224
4000	2.554	34.910	244.2	2.204
4100	2.548	34.908	244.2	2.187
4200	2.525	34.905	244.4	2.153
4200	2.525	34.905	244.4	2.153

# STATION 24

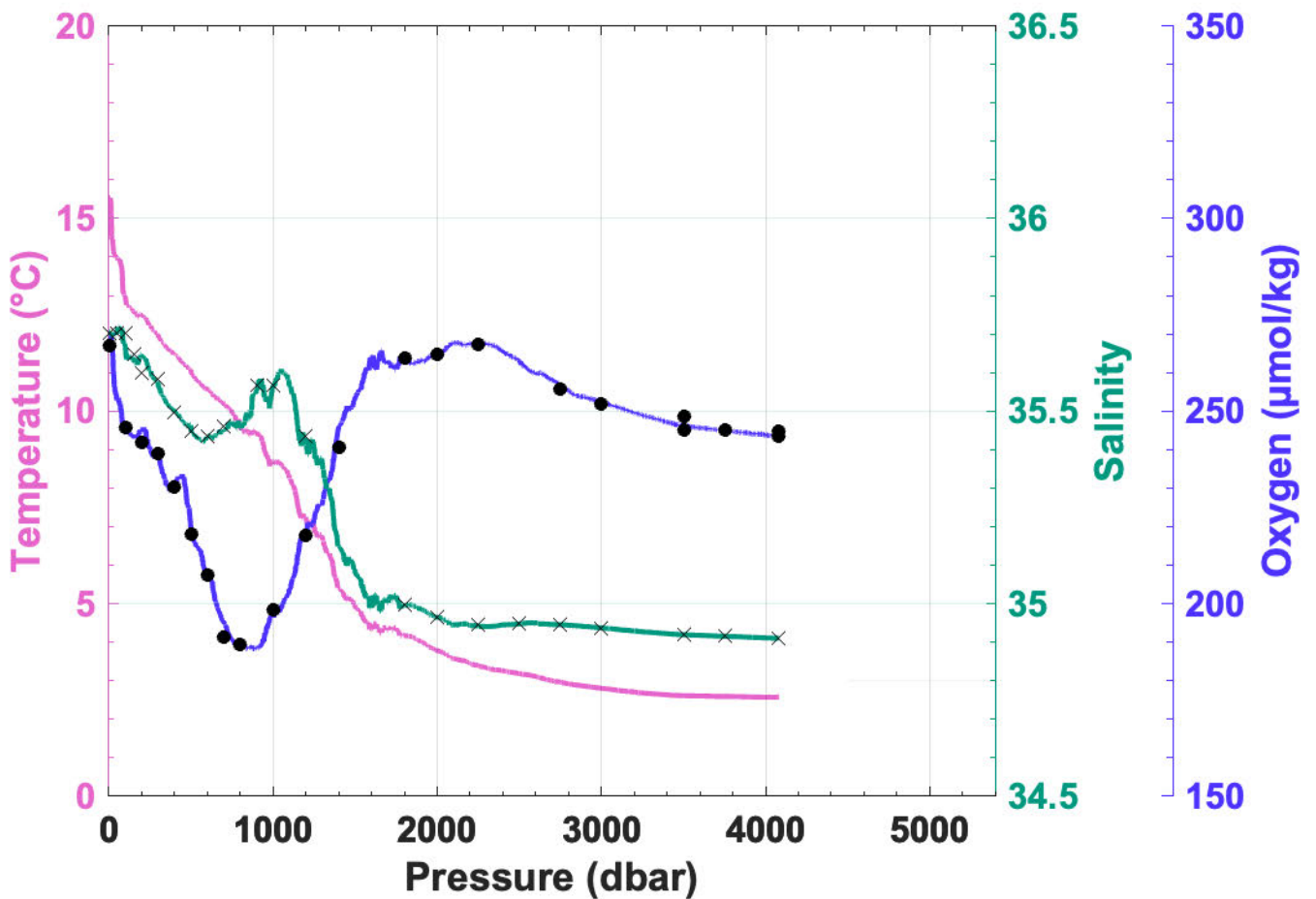
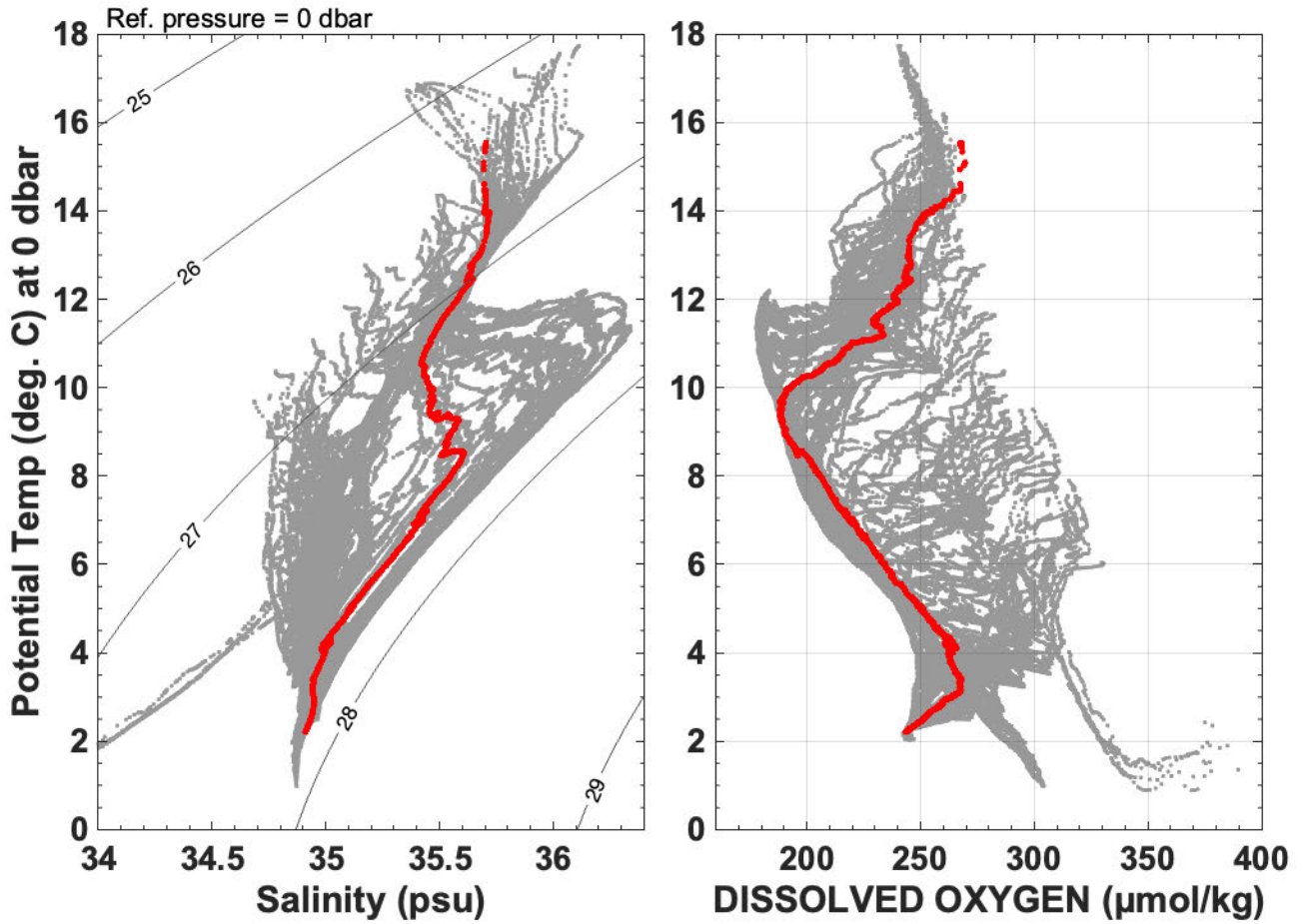


Cruise : BOCATS 2021  
 Station : 25  
 Date : 06/06/2021  
 Depth : 4025  
 Position : N 43 46.05  
 W 17 1.71

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	15.537	35.705	267.6	15.537
10	15.509	35.704	267.3	15.507
20	14.447	35.701	266.9	14.444
30	14.119	35.702	259.4	14.115
40	13.978	35.697	255.3	13.973
50	13.959	35.705	252.8	13.952
100	12.963	35.669	244.5	12.949
150	12.587	35.632	243.2	12.567
200	12.488	35.643	245.1	12.461
250	12.220	35.604	240.1	12.186
300	11.966	35.571	240.1	11.927
350	11.643	35.520	230.7	11.598
400	11.489	35.500	230.1	11.438
450	11.239	35.473	233.1	11.182
500	11.053	35.459	219.5	10.990
550	10.744	35.428	214.2	10.675
600	10.572	35.434	208.3	10.498
650	10.348	35.438	200.5	10.268
700	10.191	35.449	195.1	10.106
750	9.953	35.465	190.8	9.863
800	9.603	35.457	189.2	9.509
850	9.413	35.479	188.6	9.314
900	9.408	35.553	188.4	9.303
950	8.944	35.536	192.3	8.836
1000	8.685	35.564	196.5	8.573
1100	8.262	35.566	203.7	8.142
1200	7.245	35.426	217.7	7.122
1300	6.717	35.365	225.9	6.587
1400	5.392	35.148	245.8	5.266
1500	4.925	35.083	253.7	4.794
1600	4.345	34.993	263.7	4.212
1700	4.307	35.002	263.0	4.164
1800	4.180	34.995	263.3	4.029
1900	4.022	34.987	263.1	3.864
2000	3.781	34.965	265.0	3.617
2100	3.574	34.945	267.7	3.403
2200	3.442	34.943	267.6	3.264
2300	3.343	34.941	267.4	3.157
2400	3.260	34.945	265.6	3.065
2500	3.180	34.947	263.1	2.977
2600	3.113	34.950	259.7	2.901
2700	3.000	34.946	258.0	2.780
2800	2.926	34.944	255.3	2.698
2900	2.858	34.941	253.6	2.620
3000	2.803	34.937	252.5	2.557
3100	2.748	34.933	250.9	2.492
3200	2.706	34.929	249.7	2.440
3300	2.665	34.926	248.3	2.390
3400	2.632	34.922	247.1	2.347
3500	2.613	34.919	246.2	2.318
3600	2.603	34.918	245.7	2.297
3700	2.593	34.916	245.1	2.276
3800	2.591	34.914	244.5	2.263
3900	2.579	34.913	244.2	2.240
4000	2.573	34.911	243.8	2.223
4050	2.572	34.910	243.7	2.216



# STATION 25

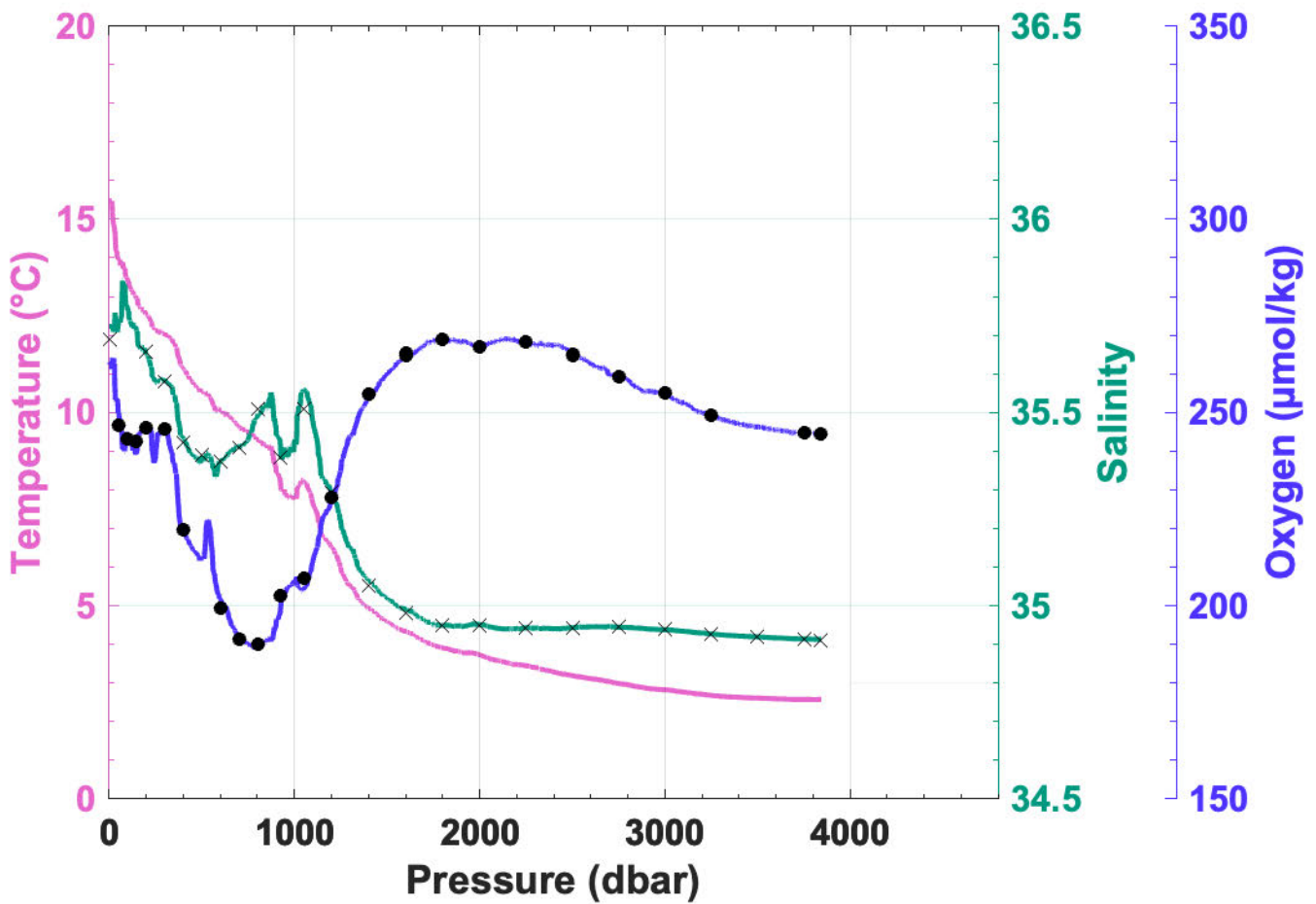
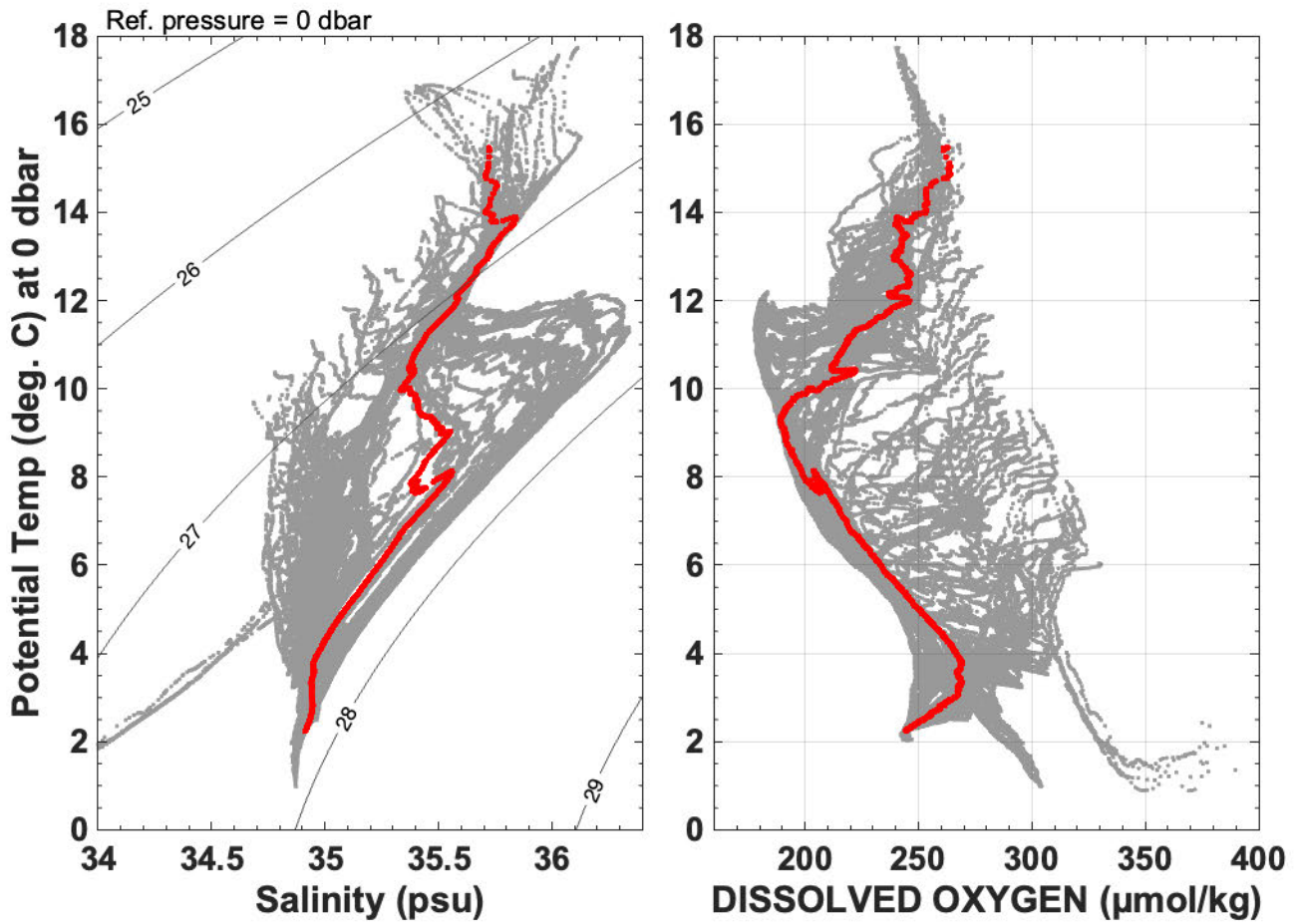


Cruise : BOCATS 2021  
 Station : 26  
 Date : 07/06/2021  
 Depth : 3793  
 Position : N 44 4.72  
 W 17 25.27

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	15.467	35.723	262.7	15.467
10	15.468	35.723	262.8	15.466
20	15.005	35.718	263.1	15.002
30	14.711	35.734	257.8	14.707
40	14.163	35.726	252.9	14.157
50	13.956	35.731	249.9	13.949
100	13.443	35.770	243.0	13.429
150	12.945	35.709	240.2	12.924
200	12.533	35.649	245.5	12.506
250	12.126	35.578	238.3	12.093
300	12.024	35.582	245.7	11.985
350	11.779	35.544	236.7	11.733
400	11.132	35.432	218.3	11.082
450	10.794	35.390	214.6	10.739
500	10.548	35.382	212.2	10.486
550	10.341	35.378	216.8	10.275
600	10.060	35.375	201.6	9.988
650	9.914	35.399	196.3	9.836
700	9.624	35.412	191.4	9.542
750	9.488	35.428	190.2	9.400
800	9.300	35.488	189.4	9.208
850	9.126	35.514	190.7	9.029
900	8.590	35.465	194.8	8.490
950	7.916	35.399	203.2	7.815
1000	7.829	35.423	206.2	7.723
1100	7.653	35.475	211.6	7.537
1200	6.518	35.294	226.9	6.401
1300	5.509	35.149	244.0	5.392
1400	4.934	35.064	253.6	4.812
1500	4.588	35.019	259.9	4.461
1600	4.339	34.991	264.2	4.206
1700	4.085	34.962	267.3	3.945
1800	3.913	34.949	268.8	3.766
1900	3.795	34.947	268.2	3.640
2000	3.726	34.951	267.1	3.563
2100	3.580	34.942	268.7	3.409
2200	3.481	34.941	268.4	3.302
2300	3.402	34.942	267.7	3.215
2400	3.286	34.940	267.3	3.091
2500	3.189	34.943	265.5	2.986
2600	3.113	34.945	262.6	2.901
2700	3.039	34.946	259.4	2.818
2800	2.952	34.944	258.6	2.723
2900	2.866	34.940	255.2	2.628
3000	2.825	34.938	254.4	2.578
3100	2.766	34.934	252.5	2.510
3200	2.708	34.929	249.9	2.443
3300	2.657	34.925	248.3	2.383
3400	2.627	34.922	247.2	2.342
3500	2.612	34.920	246.3	2.316
3600	2.594	34.917	245.5	2.288
3700	2.576	34.914	244.7	2.260
3800	2.571	34.913	244.6	2.244
3844	2.577	34.913	244.7	2.244



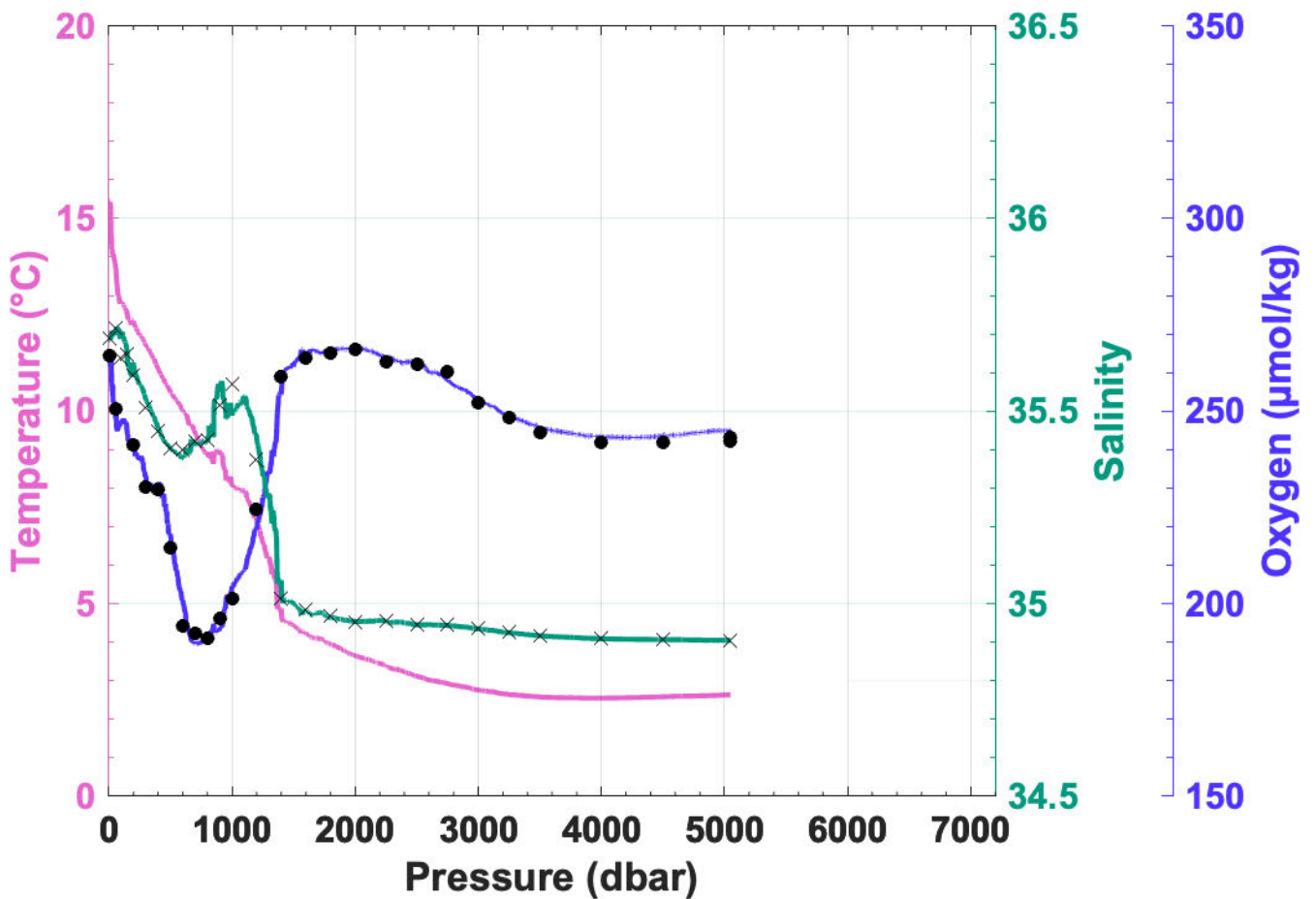
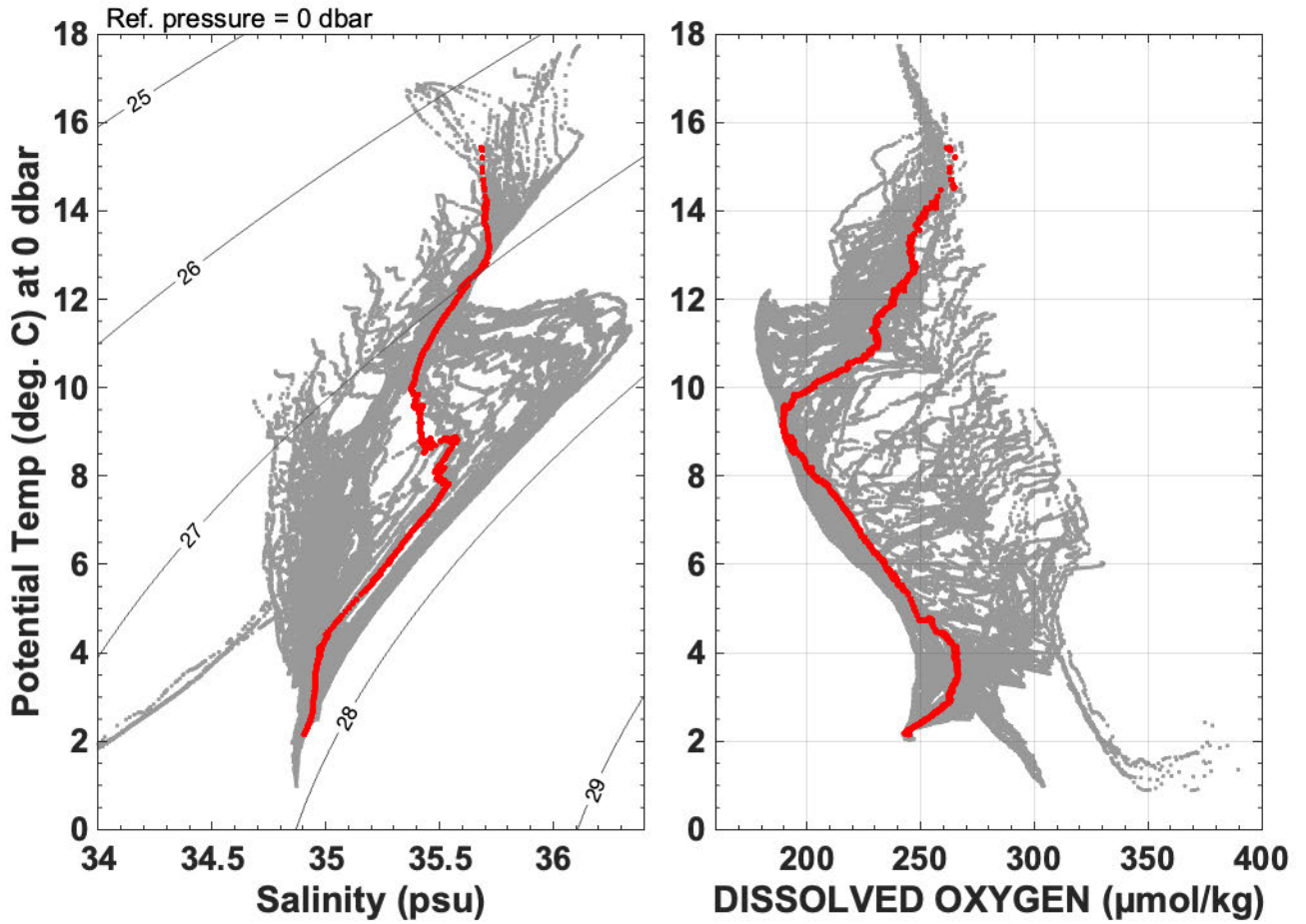
# STATION 26



Cruise : BOCATS 2021  
 Station : 27  
 Date : 07/06/2021  
 Depth : 4963  
 Position : N 44 22.62  
 W 17 49.26

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	15.431	35.684	262.6	15.431
10	15.430	35.685	262.8	15.428
20	14.529	35.696	265.1	14.526
30	14.127	35.702	256.3	14.123
40	14.001	35.705	252.2	13.995
50	13.855	35.702	249.9	13.848
100	12.842	35.707	246.9	12.828
150	12.490	35.639	244.1	12.470
200	12.330	35.621	242.5	12.303
250	11.970	35.568	237.2	11.938
300	11.709	35.530	233.0	11.670
350	11.454	35.497	230.8	11.409
400	11.110	35.459	230.6	11.059
450	10.792	35.422	225.4	10.736
500	10.501	35.403	217.9	10.440
550	10.274	35.392	208.7	10.208
600	10.022	35.378	201.0	9.950
650	9.648	35.387	192.8	9.572
700	9.434	35.414	190.1	9.354
750	9.072	35.417	190.3	8.987
800	8.861	35.420	191.6	8.771
850	8.625	35.432	194.6	8.531
900	8.893	35.556	193.4	8.791
950	8.304	35.494	199.9	8.201
1000	8.059	35.488	204.2	7.951
1100	7.941	35.540	208.8	7.823
1200	7.178	35.432	219.4	7.055
1300	6.223	35.287	233.6	6.098
1400	4.854	35.056	255.3	4.733
1500	4.438	35.001	261.6	4.313
1600	4.211	34.978	265.6	4.079
1700	4.100	34.976	265.1	3.960
1800	3.948	34.964	266.0	3.801
1900	3.798	34.958	266.2	3.643
2000	3.652	34.954	266.2	3.490
2100	3.554	34.954	265.7	3.384
2200	3.442	34.956	264.7	3.264
2300	3.310	34.951	263.6	3.124
2400	3.234	34.951	262.7	3.040
2500	3.116	34.945	263.1	2.914
2600	3.018	34.945	260.2	2.808
2700	2.960	34.944	259.5	2.741
2800	2.886	34.942	256.7	2.658
2900	2.834	34.939	255.2	2.597
3000	2.763	34.934	253.0	2.517
3100	2.718	34.931	251.3	2.463
3200	2.660	34.926	249.4	2.396
3300	2.632	34.923	248.2	2.358
3400	2.600	34.919	246.9	2.315
3500	2.576	34.916	245.8	2.281
3600	2.565	34.915	245.0	2.260
3700	2.558	34.913	244.6	2.242
3800	2.554	34.912	244.1	2.227
3900	2.548	34.910	243.5	2.209
4000	2.548	34.909	243.3	2.198
4100	2.551	34.908	243.2	2.190
4200	2.559	34.907	243.0	2.185
4300	2.566	34.907	243.2	2.180
4400	2.577	34.907	243.2	2.179
4500	2.583	34.907	243.7	2.173
4600	2.594	34.907	243.8	2.171
4700	2.599	34.906	244.0	2.164
4800	2.608	34.906	244.4	2.160
4900	2.616	34.905	244.7	2.155
5000	2.628	34.905	245.0	2.154
5048	2.634	34.905	NaN	2.154

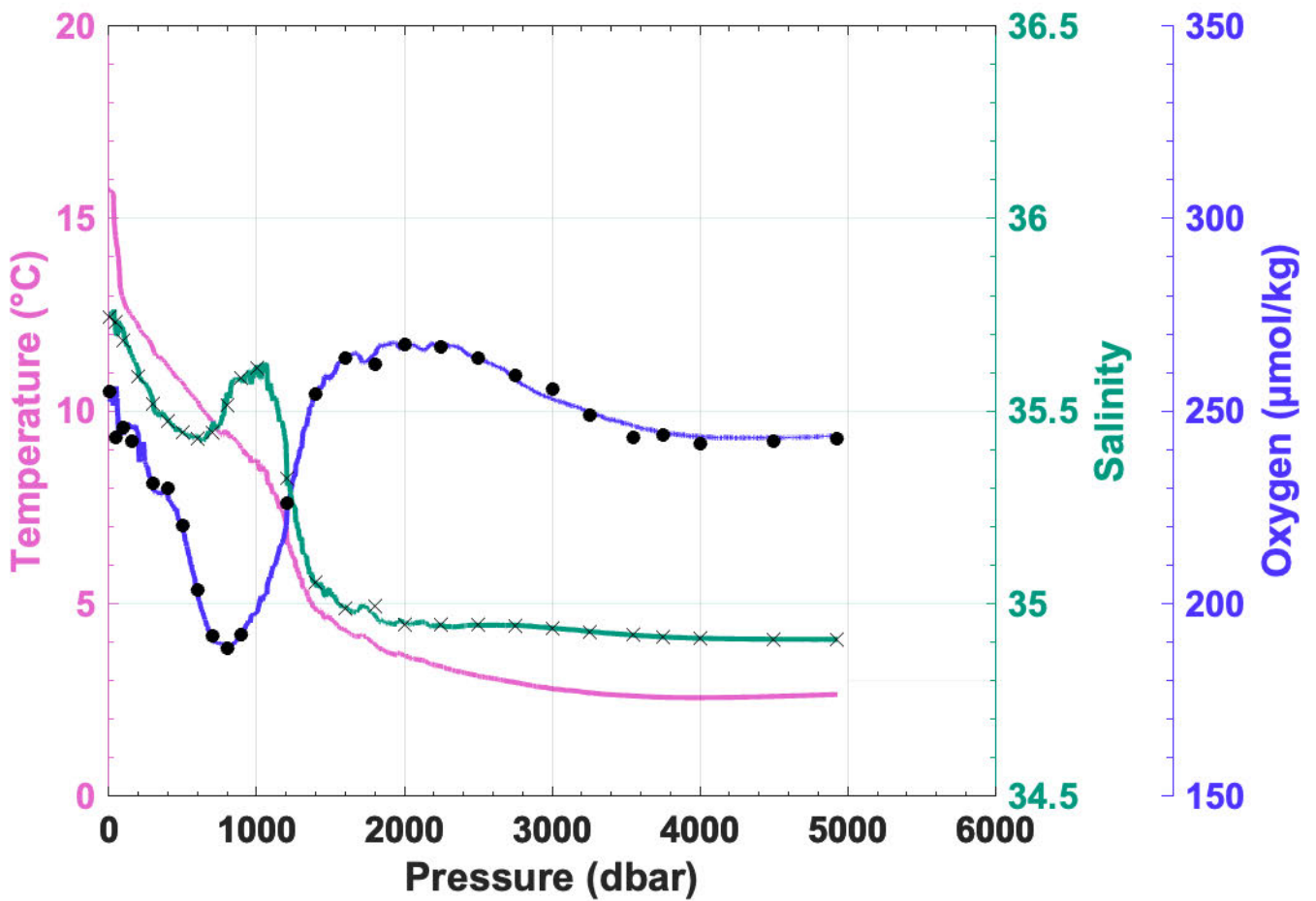
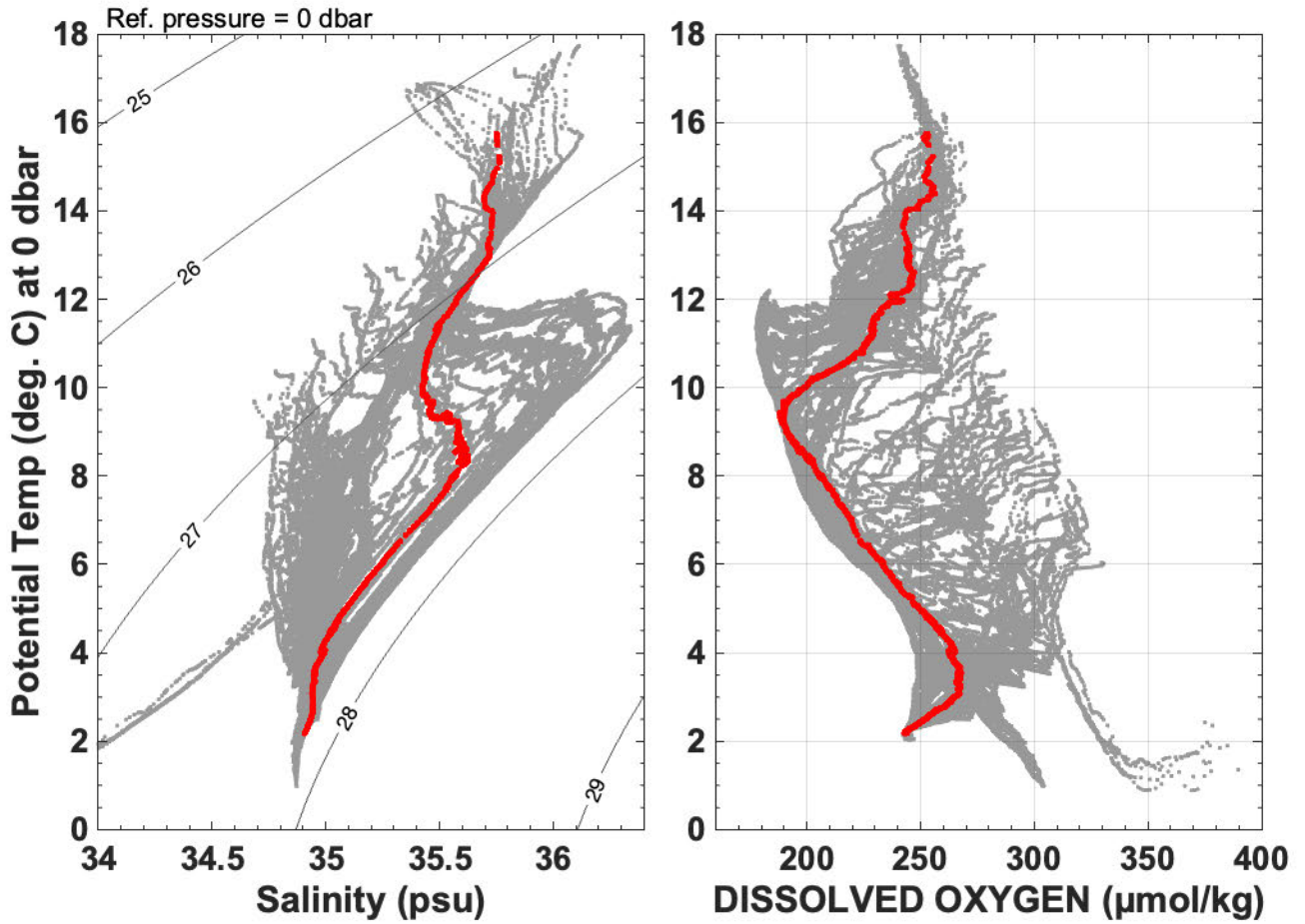
# STATION 27



Cruise : BOCATS 2021  
 Station : 28  
 Date : 07/06/2021  
 Depth : 4850  
 Position : N 44 40.82  
 W 18 12.80

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	15.741	35.752	252.9	15.741
10	15.733	35.752	252.4	15.732
20	15.715	35.752	252.8	15.712
30	15.629	35.752	251.6	15.624
40	14.778	35.737	251.7	14.772
50	14.392	35.700	255.6	14.385
100	12.876	35.704	244.0	12.862
150	12.489	35.648	246.2	12.469
200	12.216	35.606	243.1	12.190
250	11.949	35.571	236.1	11.916
300	11.617	35.522	230.3	11.578
350	11.347	35.483	228.2	11.303
400	11.185	35.481	227.7	11.135
450	10.920	35.457	224.1	10.864
500	10.724	35.443	220.7	10.662
550	10.465	35.435	211.2	10.398
600	10.275	35.438	202.4	10.202
650	9.965	35.426	195.9	9.887
700	9.757	35.467	190.6	9.674
750	9.436	35.462	189.6	9.349
800	9.483	35.545	188.3	9.390
850	9.272	35.583	190.0	9.174
900	9.020	35.577	192.2	8.918
950	8.846	35.605	195.1	8.738
1000	8.721	35.614	197.9	8.609
1100	8.027	35.553	207.8	7.908
1200	6.994	35.393	220.3	6.873
1300	5.670	35.172	240.5	5.551
1400	4.879	35.055	254.6	4.759
1500	4.637	35.031	258.3	4.509
1600	4.317	34.991	263.9	4.184
1700	4.167	34.990	264.0	4.026
1800	3.948	34.970	265.0	3.800
1900	3.713	34.949	267.5	3.560
2000	3.666	34.953	266.3	3.503
2100	3.541	34.951	266.2	3.371
2200	3.415	34.943	267.5	3.237
2300	3.306	34.941	267.1	3.120
2400	3.213	34.942	265.7	3.019
2500	3.119	34.944	263.1	2.917
2600	3.059	34.944	262.0	2.848
2700	2.987	34.944	260.2	2.767
2800	2.916	34.943	257.0	2.688
2900	2.846	34.940	254.7	2.609
3000	2.796	34.937	253.2	2.549
3100	2.750	34.933	251.8	2.495
3200	2.710	34.930	250.7	2.445
3300	2.670	34.926	249.1	2.395
3400	2.638	34.923	247.8	2.353
3500	2.616	34.920	246.7	2.320
3600	2.592	34.917	245.7	2.287
3700	2.578	34.915	244.7	2.262
3800	2.566	34.913	244.1	2.239
3900	2.563	34.912	243.7	2.225
4000	2.560	34.910	243.5	2.210
4100	2.565	34.909	243.1	2.203
4200	2.569	34.909	243.2	2.196
4300	2.576	34.908	243.0	2.190
4400	2.584	34.908	243.0	2.186
4500	2.593	34.908	243.2	2.183
4600	2.604	34.907	243.2	2.181
4700	2.616	34.908	243.2	2.181
4800	2.628	34.907	243.3	2.180
4900	2.640	34.907	243.7	2.179
4900	2.640	34.907	243.7	2.179

# STATION 28

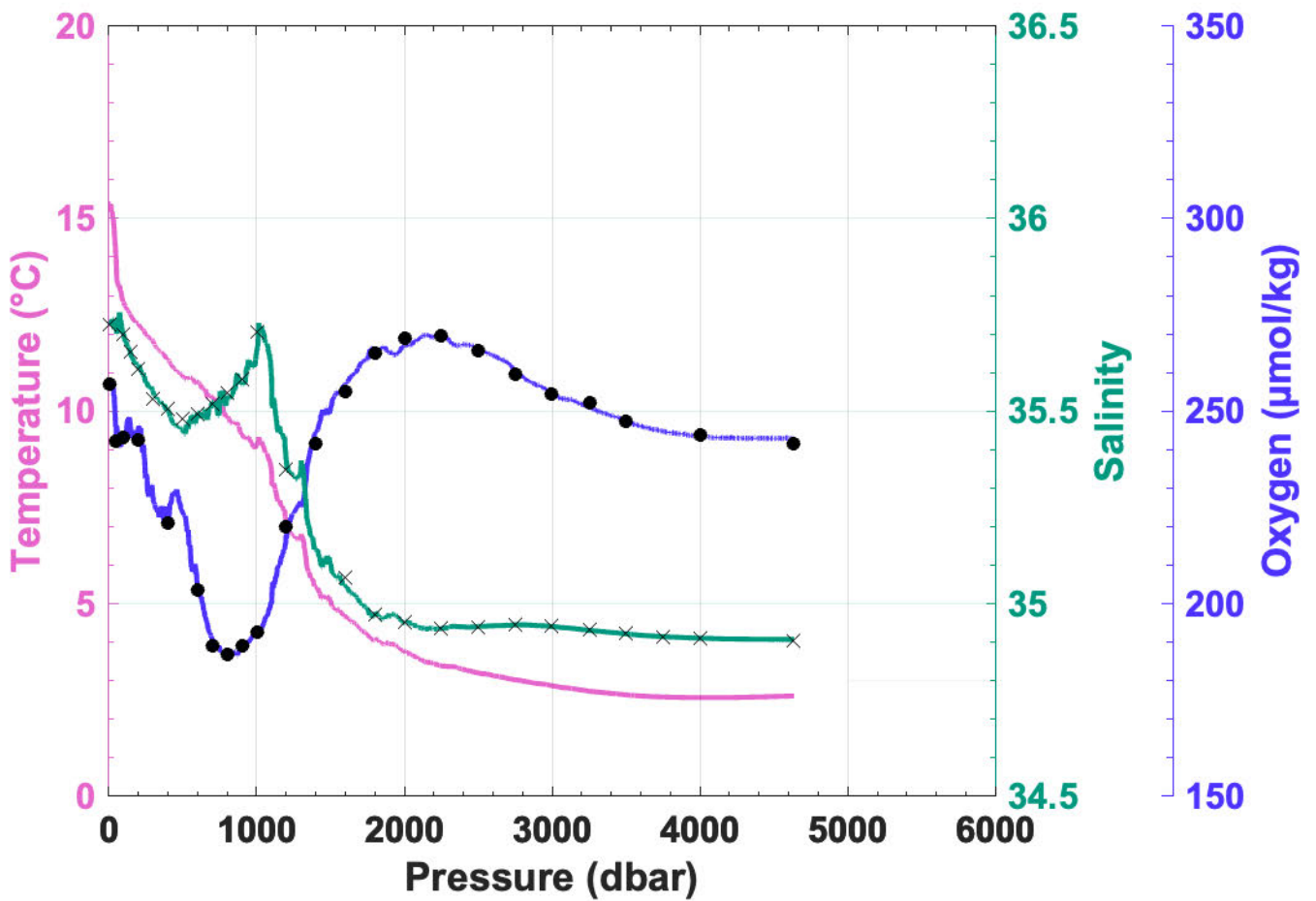
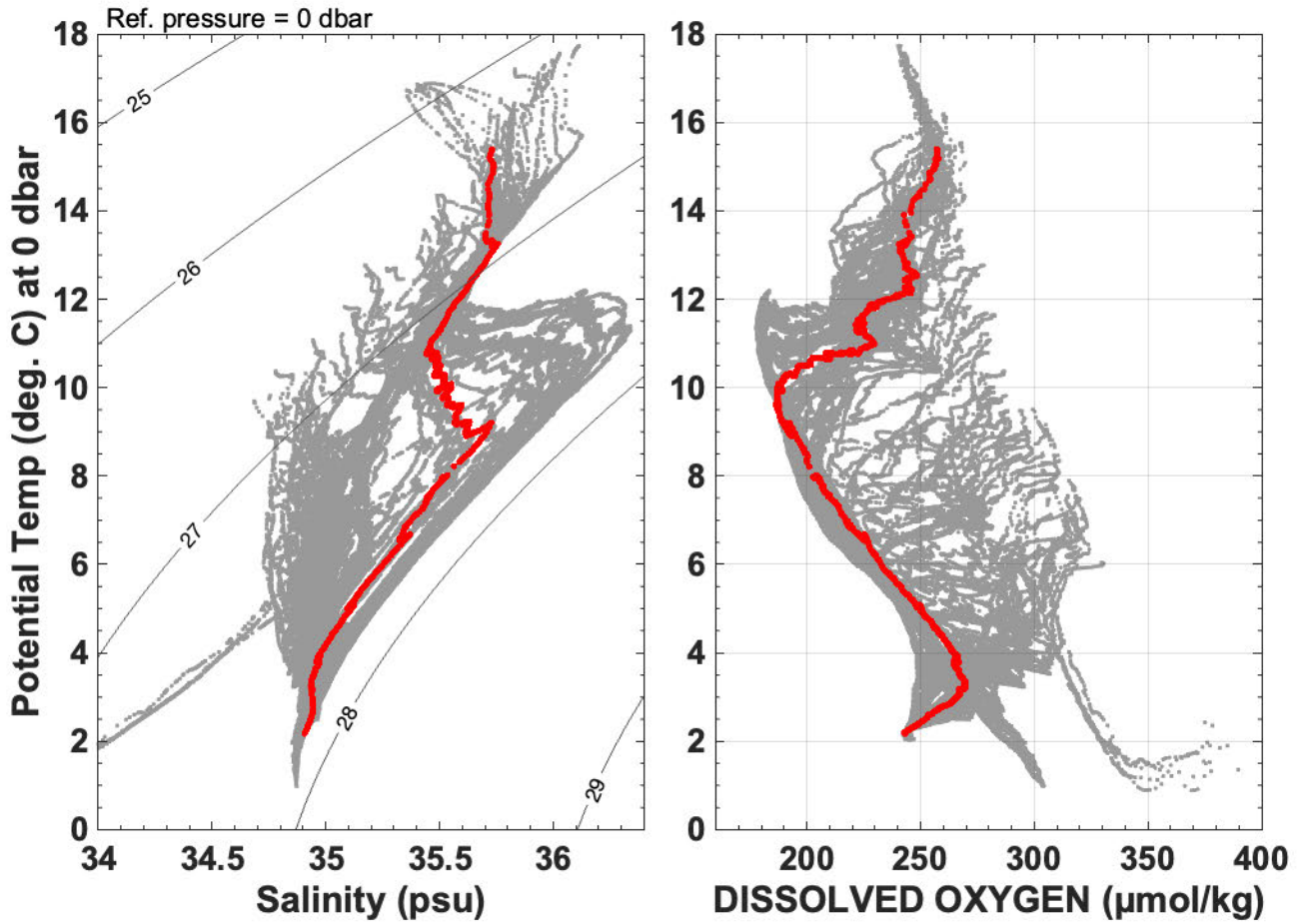


Cruise : BOCATS 2021  
 Station : 29  
 Date : 07/06/2021  
 Depth : 4565  
 Position : N 45 3.00  
           W 18 30.36

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	15.382	35.731	257.0	15.382
10	15.375	35.730	257.5	15.374
20	15.179	35.722	257.6	15.176
30	14.992	35.739	255.8	14.987
40	14.482	35.715	250.7	14.476
50	13.910	35.717	242.8	13.903
100	12.826	35.700	244.5	12.813
150	12.468	35.644	243.2	12.448
200	12.273	35.622	245.4	12.246
250	11.984	35.575	232.9	11.951
300	11.812	35.551	227.2	11.773
350	11.545	35.523	224.2	11.500
400	11.337	35.503	221.7	11.286
450	11.078	35.462	229.2	11.022
500	10.914	35.451	223.6	10.851
550	10.828	35.467	214.8	10.759
600	10.754	35.495	204.6	10.680
650	10.567	35.500	196.8	10.487
700	10.371	35.524	190.8	10.285
750	10.109	35.527	188.3	10.018
800	9.882	35.537	186.9	9.786
850	9.667	35.553	187.5	9.566
900	9.403	35.574	188.6	9.298
950	9.293	35.631	190.2	9.182
1000	9.095	35.652	193.2	8.979
1100	8.453	35.592	199.9	8.331
1200	7.104	35.372	217.9	6.982
1300	6.740	35.354	226.1	6.610
1400	5.442	35.143	244.6	5.315
1500	5.057	35.101	250.7	4.925
1600	4.672	35.046	257.3	4.534
1700	4.337	35.001	262.2	4.194
1800	4.075	34.972	266.4	3.926
1900	3.954	34.969	265.2	3.797
2000	3.745	34.950	267.1	3.581
2100	3.564	34.938	268.8	3.394
2200	3.443	34.935	269.1	3.265
2300	3.368	34.939	268.4	3.181
2400	3.291	34.940	267.3	3.096
2500	3.197	34.941	266.1	2.994
2600	3.137	34.943	264.3	2.925
2700	3.052	34.944	262.3	2.831
2800	2.989	34.945	258.9	2.759
2900	2.928	34.943	256.8	2.689
3000	2.868	34.941	254.9	2.620
3100	2.814	34.937	253.0	2.557
3200	2.758	34.933	251.8	2.492
3300	2.709	34.929	250.1	2.433
3400	2.671	34.925	248.7	2.386
3500	2.637	34.922	247.4	2.341
3600	2.603	34.918	246.2	2.297
3700	2.587	34.916	245.2	2.270
3800	2.574	34.914	244.3	2.246
3900	2.566	34.912	243.9	2.227
4000	2.563	34.910	243.4	2.213
4100	2.563	34.910	243.1	2.201
4200	2.564	34.908	243.0	2.191
4300	2.571	34.908	242.9	2.186
4400	2.580	34.908	243.0	2.182
4500	2.590	34.907	242.9	2.180
4600	2.601	34.907	243.0	2.178
4600	2.601	34.907	243.0	2.178



# STATION 29

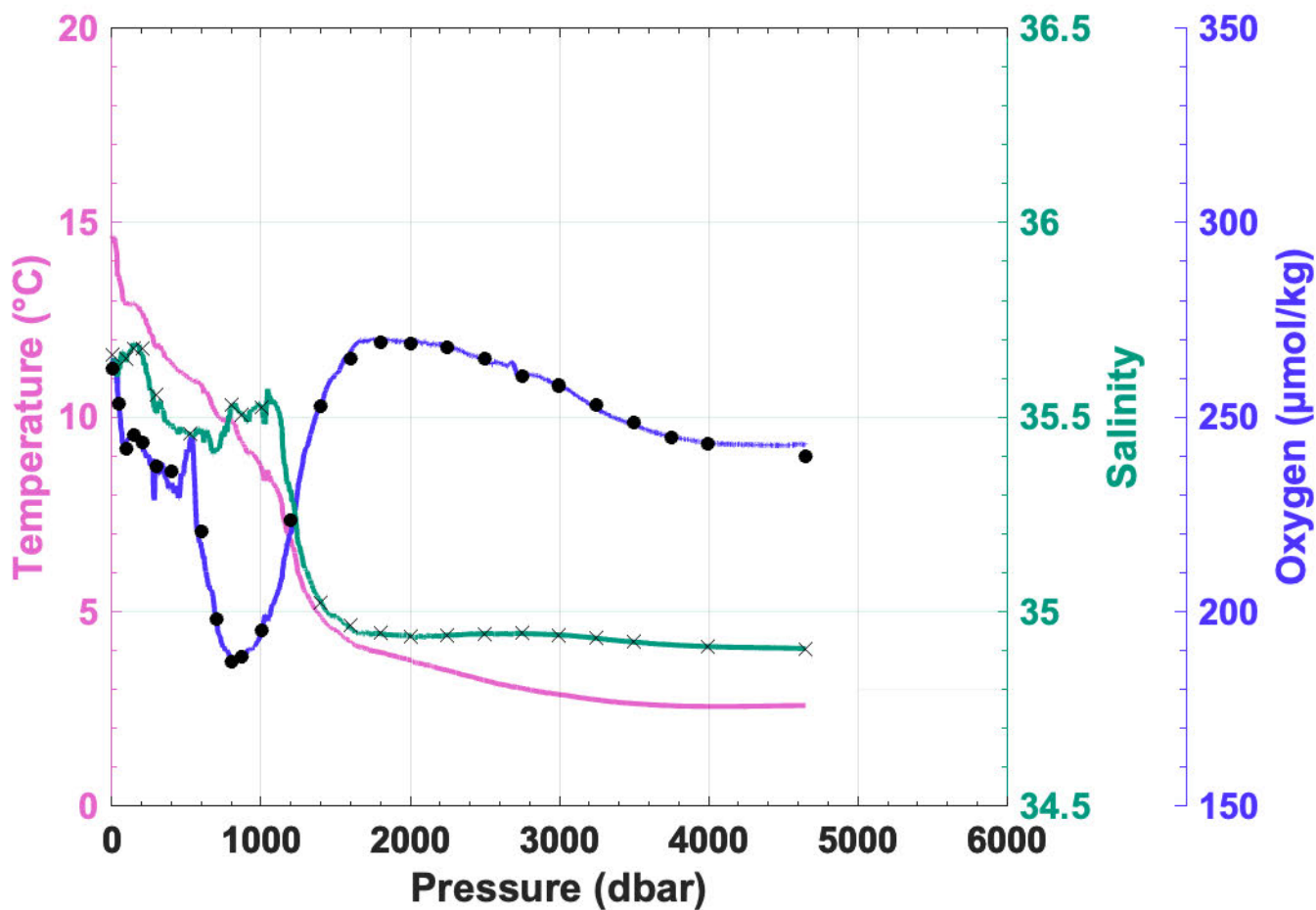
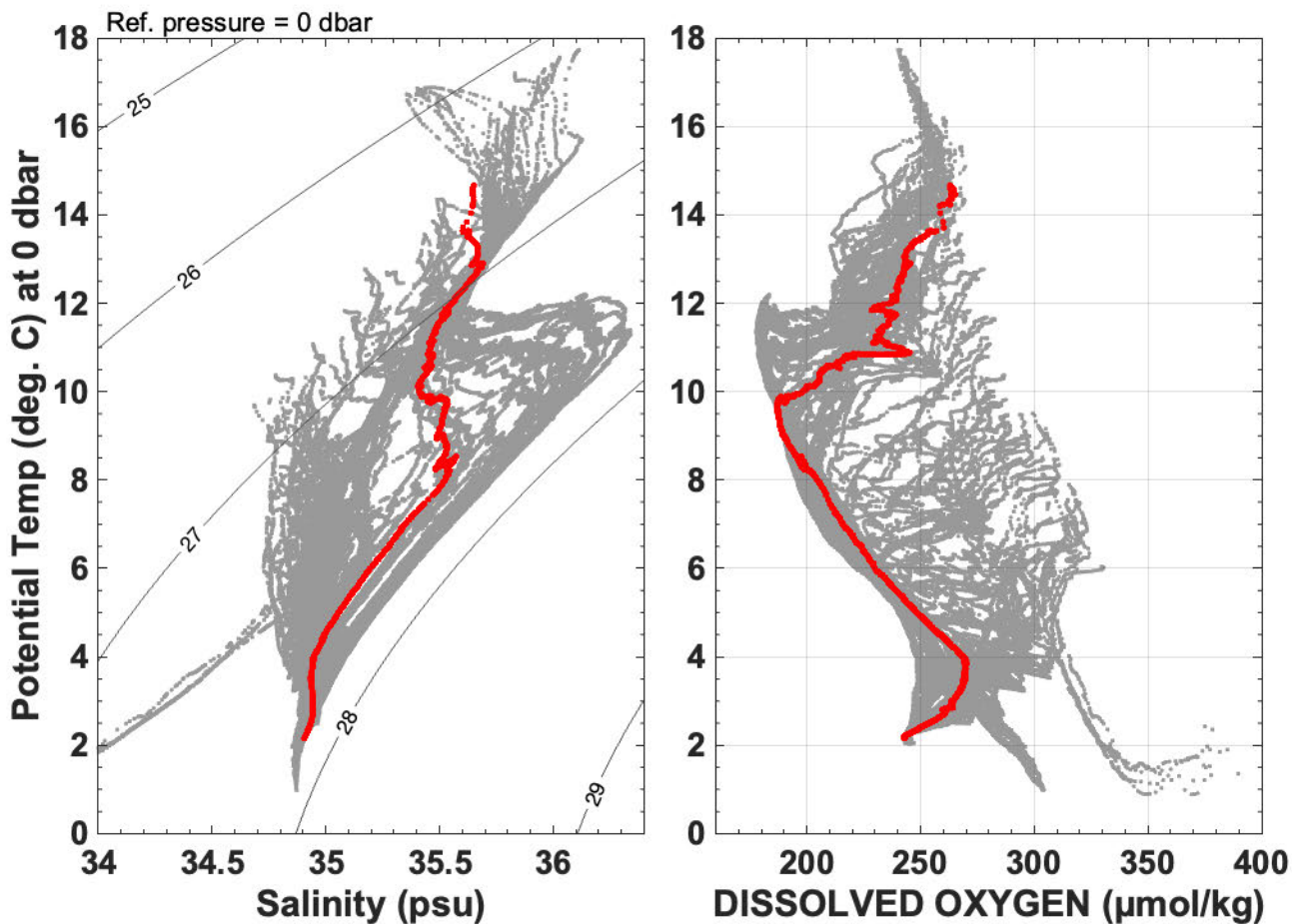


Cruise : BOCATS 2021  
 Station : 30  
 Date : 08/06/2021  
 Depth : 4575  
 Position : N 45 25.42  
           W 18 47.98

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	14.660	35.650	263.1	14.660
10	14.585	35.647	264.2	14.583
20	14.593	35.649	263.3	14.590
30	14.319	35.650	262.5	14.314
40	13.617	35.607	256.0	13.612
50	13.562	35.629	253.0	13.555
100	12.917	35.657	244.0	12.904
150	12.910	35.689	245.1	12.890
200	12.698	35.662	242.4	12.671
250	12.251	35.586	239.4	12.217
300	11.763	35.510	235.5	11.724
350	11.633	35.506	235.9	11.587
400	11.409	35.483	232.7	11.358
450	11.159	35.457	229.2	11.102
500	11.048	35.460	240.8	10.985
550	10.916	35.452	236.7	10.847
600	10.844	35.467	216.4	10.769
650	10.540	35.448	206.4	10.460
700	10.097	35.411	198.4	10.013
750	9.869	35.449	191.0	9.780
800	9.931	35.528	188.0	9.835
850	9.521	35.516	187.7	9.422
900	9.144	35.492	189.3	9.041
950	9.050	35.520	190.8	8.941
1000	8.734	35.526	194.3	8.621
1100	8.198	35.530	203.6	8.078
1200	6.854	35.311	220.0	6.735
1300	5.492	35.108	241.9	5.375
1400	4.883	35.026	253.2	4.762
1500	4.527	34.989	261.2	4.400
1600	4.230	34.957	266.6	4.098
1700	4.062	34.946	269.9	3.923
1800	3.957	34.943	269.9	3.809
1900	3.860	34.940	269.5	3.705
2000	3.756	34.938	269.0	3.592
2100	3.627	34.935	269.5	3.456
2200	3.536	34.937	268.6	3.356
2300	3.440	34.940	267.6	3.252
2400	3.338	34.943	266.0	3.142
2500	3.234	34.944	264.6	3.030
2600	3.137	34.943	264.0	2.925
2700	3.067	34.944	262.8	2.846
2800	2.992	34.943	260.7	2.762
2900	2.922	34.942	259.8	2.683
3000	2.869	34.940	258.1	2.621
3100	2.816	34.937	255.9	2.559
3200	2.759	34.934	253.2	2.492
3300	2.710	34.929	251.1	2.434
3400	2.667	34.925	249.3	2.381
3500	2.636	34.922	248.0	2.341
3600	2.610	34.919	246.5	2.304
3700	2.592	34.916	245.4	2.275
3800	2.577	34.914	244.5	2.249
3900	2.568	34.912	243.9	2.229
4000	2.565	34.911	243.5	2.215
4100	2.562	34.909	243.1	2.201
4200	2.566	34.909	243.0	2.192
4300	2.572	34.908	243.0	2.186
4400	2.576	34.907	242.8	2.179
4500	2.583	34.907	242.7	2.173
4600	2.586	34.906	243.0	2.164
4649	2.590	34.905	NaN	2.161



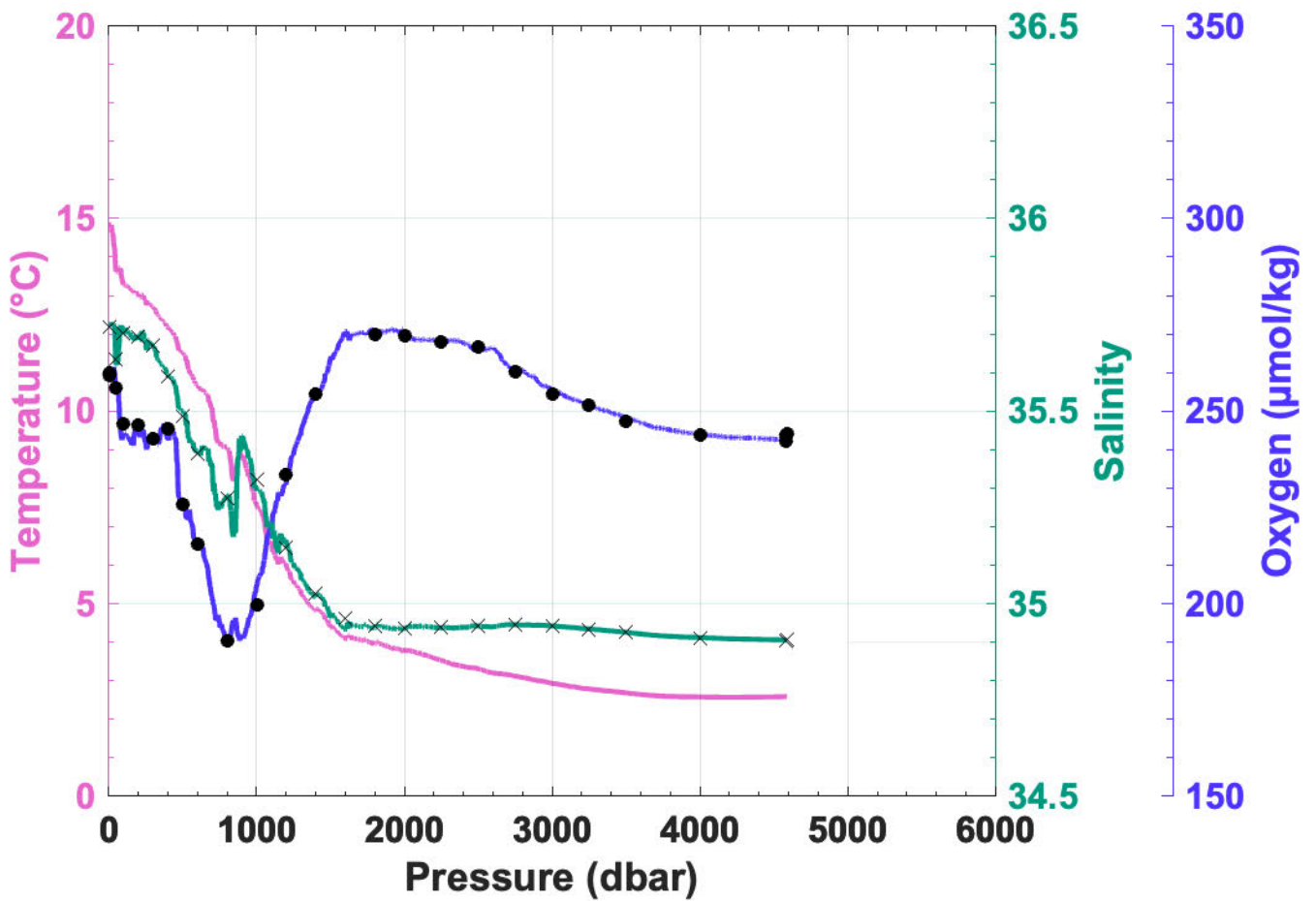
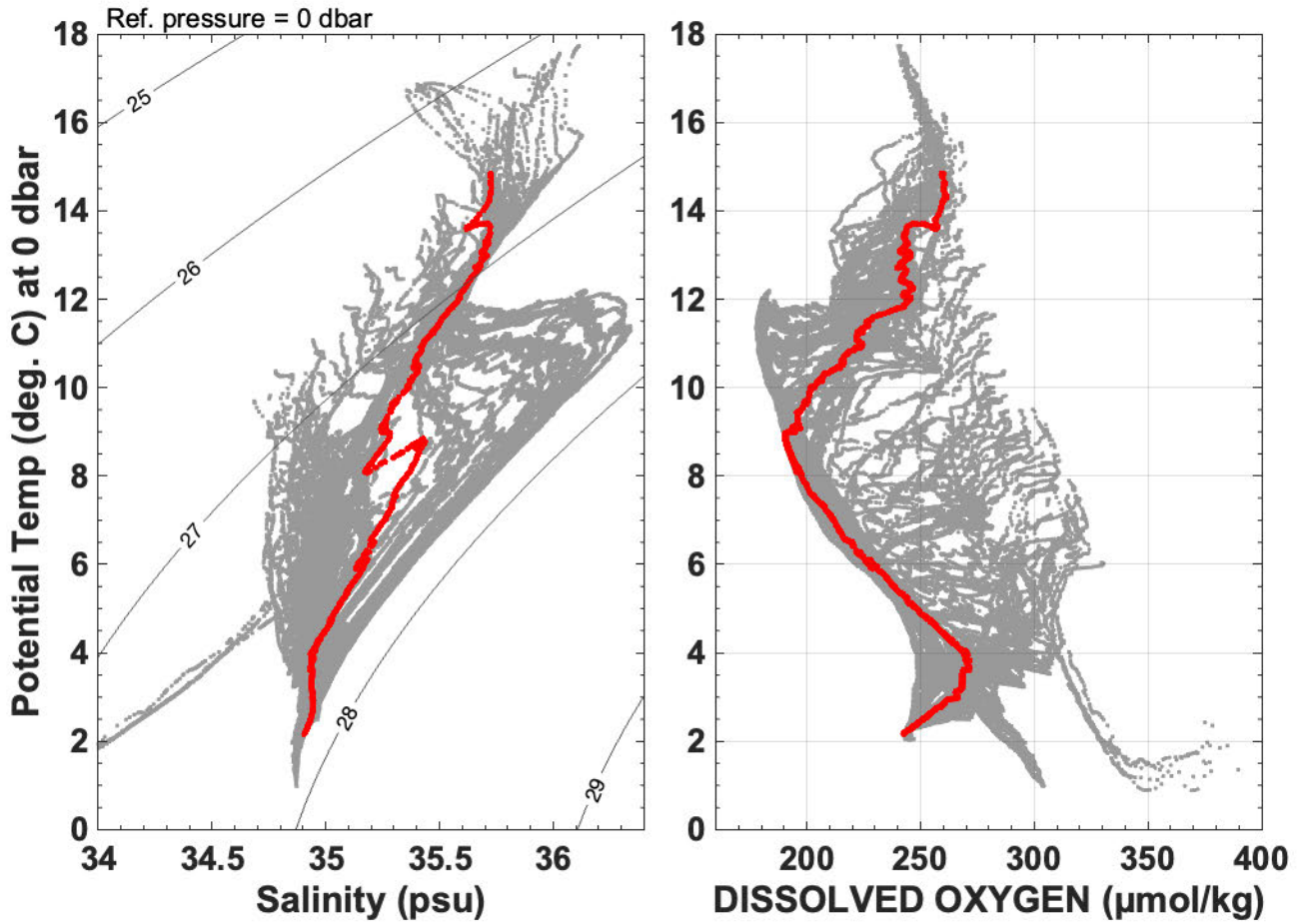
# STATION 30



Cruise : BOCATS 2021  
 Station : 31  
 Date : 08/06/2021  
 Depth : 4519  
 Position : N 45 47.77  
 W 19 5.47

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	14.830	35.725	260.0	14.830
10	14.834	35.725	259.7	14.832
20	14.764	35.725	259.9	14.761
30	14.521	35.728	260.2	14.517
40	14.158	35.711	259.4	14.152
50	13.623	35.621	257.3	13.616
100	13.269	35.699	244.4	13.256
150	13.140	35.693	242.0	13.119
200	13.049	35.698	245.4	13.022
250	12.867	35.682	241.4	12.833
300	12.690	35.668	243.6	12.648
350	12.403	35.624	244.5	12.356
400	12.178	35.593	242.8	12.124
450	11.934	35.567	242.8	11.875
500	11.512	35.500	227.0	11.448
550	10.969	35.419	222.4	10.900
600	10.659	35.396	215.9	10.585
650	10.478	35.404	211.7	10.398
700	9.996	35.347	201.6	9.912
750	9.198	35.261	194.9	9.113
800	9.061	35.283	190.7	8.971
850	8.189	35.184	195.6	8.098
900	8.866	35.436	191.1	8.765
950	8.287	35.379	196.3	8.184
1000	7.555	35.296	204.6	7.451
1100	6.589	35.209	220.1	6.482
1200	6.011	35.161	231.2	5.899
1300	5.263	35.065	244.6	5.148
1400	4.841	35.021	254.6	4.720
1500	4.376	34.963	263.8	4.252
1600	4.105	34.934	270.5	3.974
1700	4.064	34.941	270.4	3.924
1800	3.983	34.939	270.8	3.835
1900	3.865	34.936	271.2	3.709
2000	3.785	34.936	270.2	3.620
2100	3.715	34.942	268.5	3.542
2200	3.588	34.938	268.5	3.407
2300	3.464	34.938	268.2	3.276
2400	3.374	34.939	267.6	3.177
2500	3.310	34.943	265.4	3.104
2600	3.201	34.940	266.3	2.988
2700	3.159	34.945	261.7	2.936
2800	3.087	34.945	260.7	2.855
2900	3.003	34.944	257.6	2.762
3000	2.936	34.942	255.5	2.687
3100	2.868	34.940	253.7	2.610
3200	2.808	34.936	252.1	2.540
3300	2.766	34.933	250.6	2.489
3400	2.726	34.929	249.6	2.439
3500	2.686	34.926	248.5	2.389
3600	2.646	34.922	246.8	2.339
3700	2.612	34.918	245.6	2.295
3800	2.593	34.915	245.0	2.265
3900	2.584	34.913	244.5	2.245
4000	2.580	34.912	244.0	2.230
4100	2.577	34.911	243.6	2.215
4200	2.571	34.909	243.2	2.198
4300	2.574	34.908	243.0	2.189
4400	2.578	34.907	242.9	2.180
4500	2.582	34.907	242.7	2.172
4550	2.586	34.906	242.7	2.169

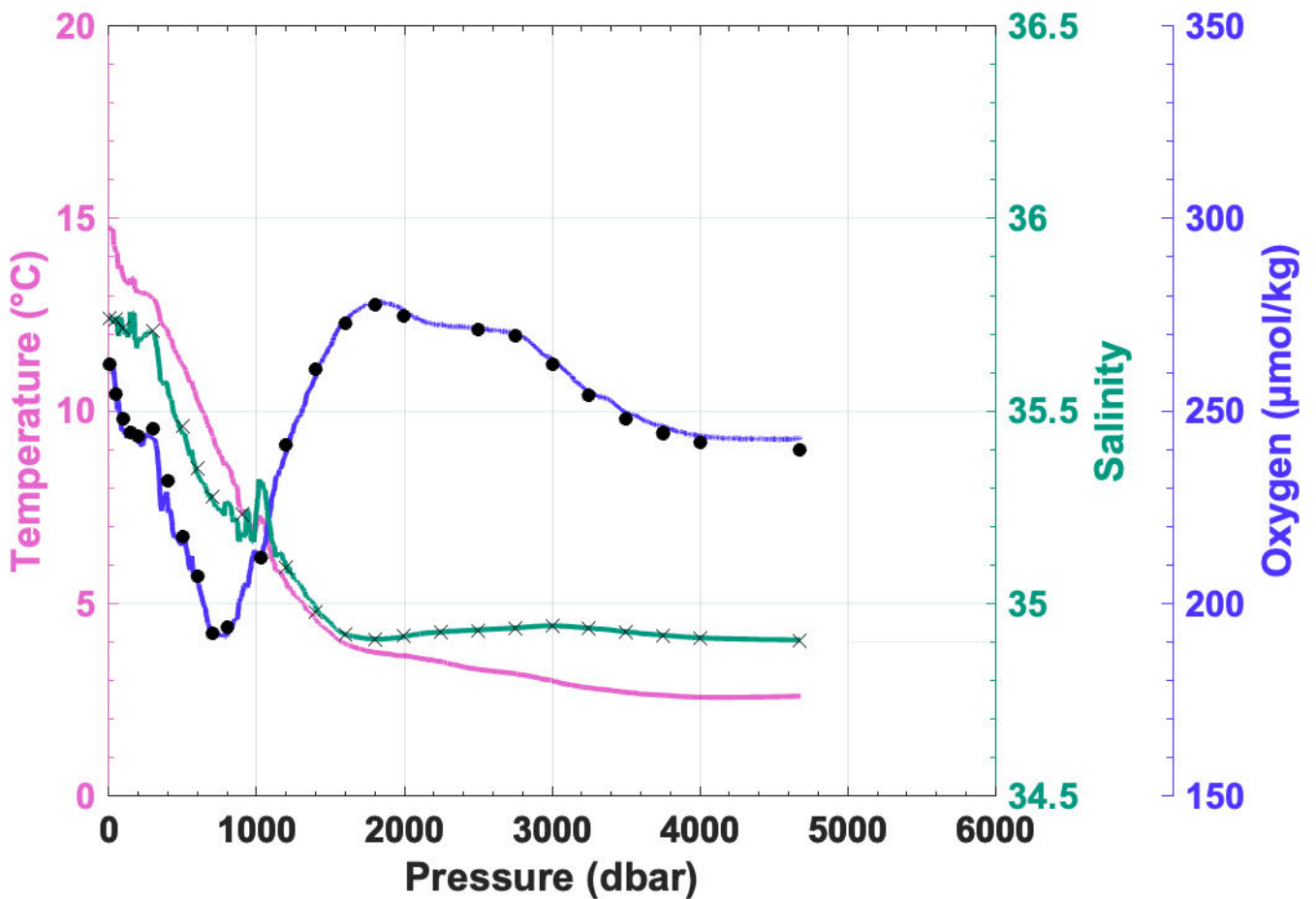
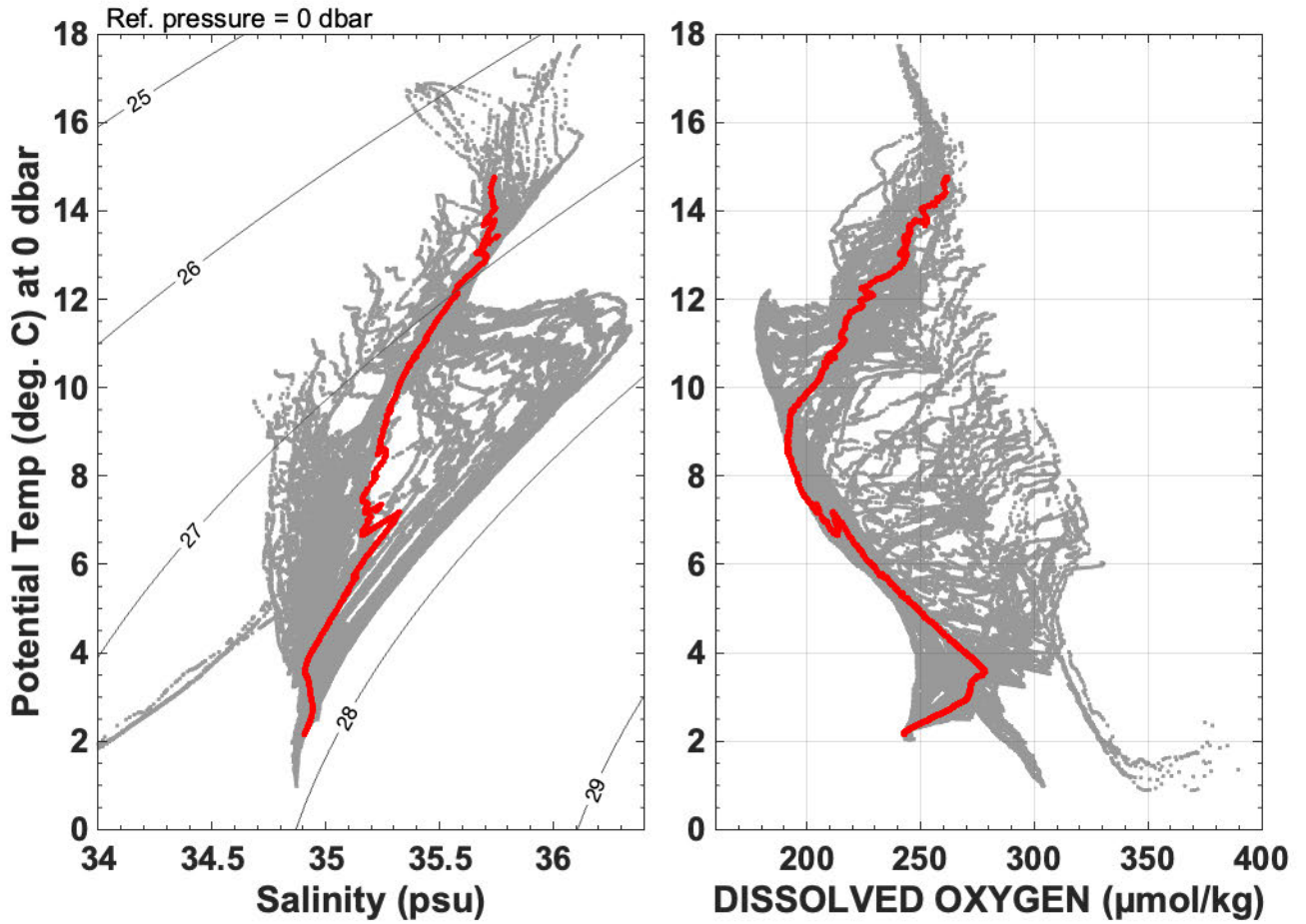
# STATION 31



Cruise : BOCATS 2021  
 Station : 32  
 Date : 08/06/2021  
 Depth : 4605  
 Position : N 46 10.47  
           W 19 22.80

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	14.753	35.740	261.7	14.753
10	14.740	35.741	261.5	14.738
20	14.733	35.741	261.3	14.730
30	14.619	35.731	260.2	14.615
40	14.234	35.736	257.6	14.228
50	14.126	35.737	254.3	14.118
100	13.478	35.712	244.7	13.464
150	13.433	35.752	243.3	13.412
200	13.099	35.685	242.5	13.072
250	13.053	35.703	244.1	13.018
300	12.926	35.702	243.0	12.885
350	12.338	35.580	226.3	12.291
400	12.051	35.558	225.0	11.998
450	11.553	35.485	217.2	11.495
500	11.177	35.439	215.5	11.114
550	10.731	35.383	208.7	10.663
600	10.286	35.338	206.0	10.213
650	9.884	35.307	199.1	9.807
700	9.389	35.267	192.5	9.308
750	8.868	35.241	192.0	8.784
800	8.612	35.264	191.8	8.524
850	8.087	35.215	195.8	7.996
900	7.454	35.185	201.9	7.362
950	7.102	35.187	207.3	7.007
1000	7.030	35.244	212.8	6.930
1100	6.200	35.168	226.6	6.096
1200	5.562	35.101	239.2	5.454
1300	5.085	35.048	249.3	4.972
1400	4.600	34.991	259.1	4.483
1500	4.262	34.953	266.8	4.139
1600	3.954	34.920	273.9	3.825
1700	3.823	34.912	276.6	3.687
1800	3.736	34.908	278.1	3.592
1900	3.695	34.909	277.8	3.541
2000	3.645	34.915	276.1	3.483
2100	3.584	34.921	273.9	3.414
2200	3.523	34.925	272.5	3.344
2300	3.440	34.928	272.0	3.252
2400	3.359	34.930	271.6	3.163
2500	3.294	34.932	271.4	3.088
2600	3.248	34.934	271.0	3.034
2700	3.208	34.936	270.5	2.984
2800	3.150	34.939	269.3	2.917
2900	3.078	34.941	266.3	2.836
3000	2.997	34.942	263.5	2.746
3100	2.905	34.941	260.0	2.646
3200	2.840	34.938	256.6	2.572
3300	2.786	34.935	254.1	2.508
3400	2.750	34.932	252.6	2.462
3500	2.702	34.927	249.6	2.404
3600	2.655	34.923	248.0	2.348
3700	2.633	34.920	246.4	2.315
3800	2.610	34.917	245.3	2.281
3900	2.585	34.914	244.3	2.246
4000	2.572	34.911	243.5	2.222
4100	2.568	34.910	243.1	2.207
4200	2.569	34.909	242.9	2.195
4300	2.573	34.908	242.8	2.187
4400	2.575	34.907	242.8	2.178
4500	2.583	34.907	242.7	2.173
4600	2.590	34.906	242.7	2.167
4650	2.595	34.906	242.9	2.167

# STATION 32

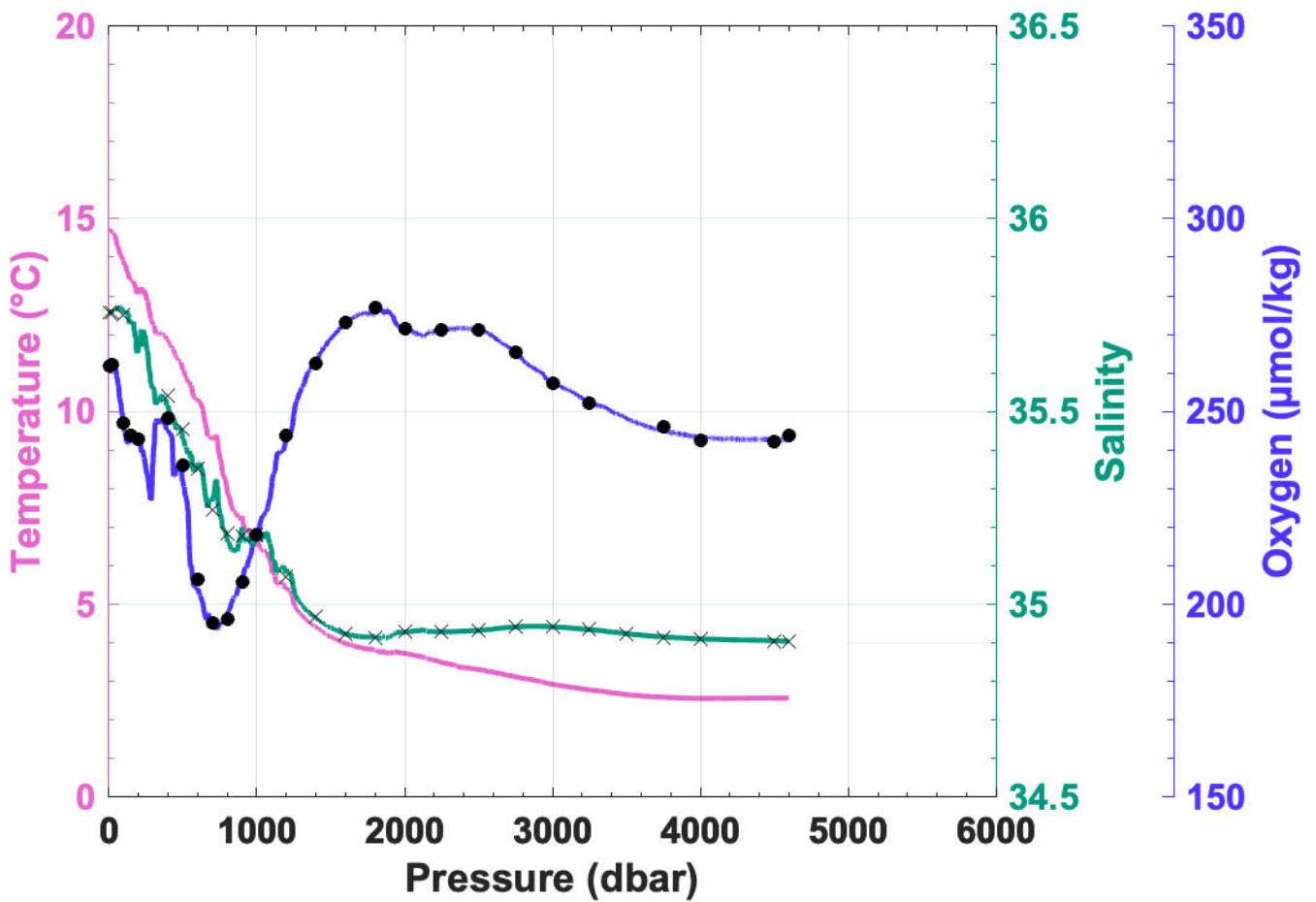
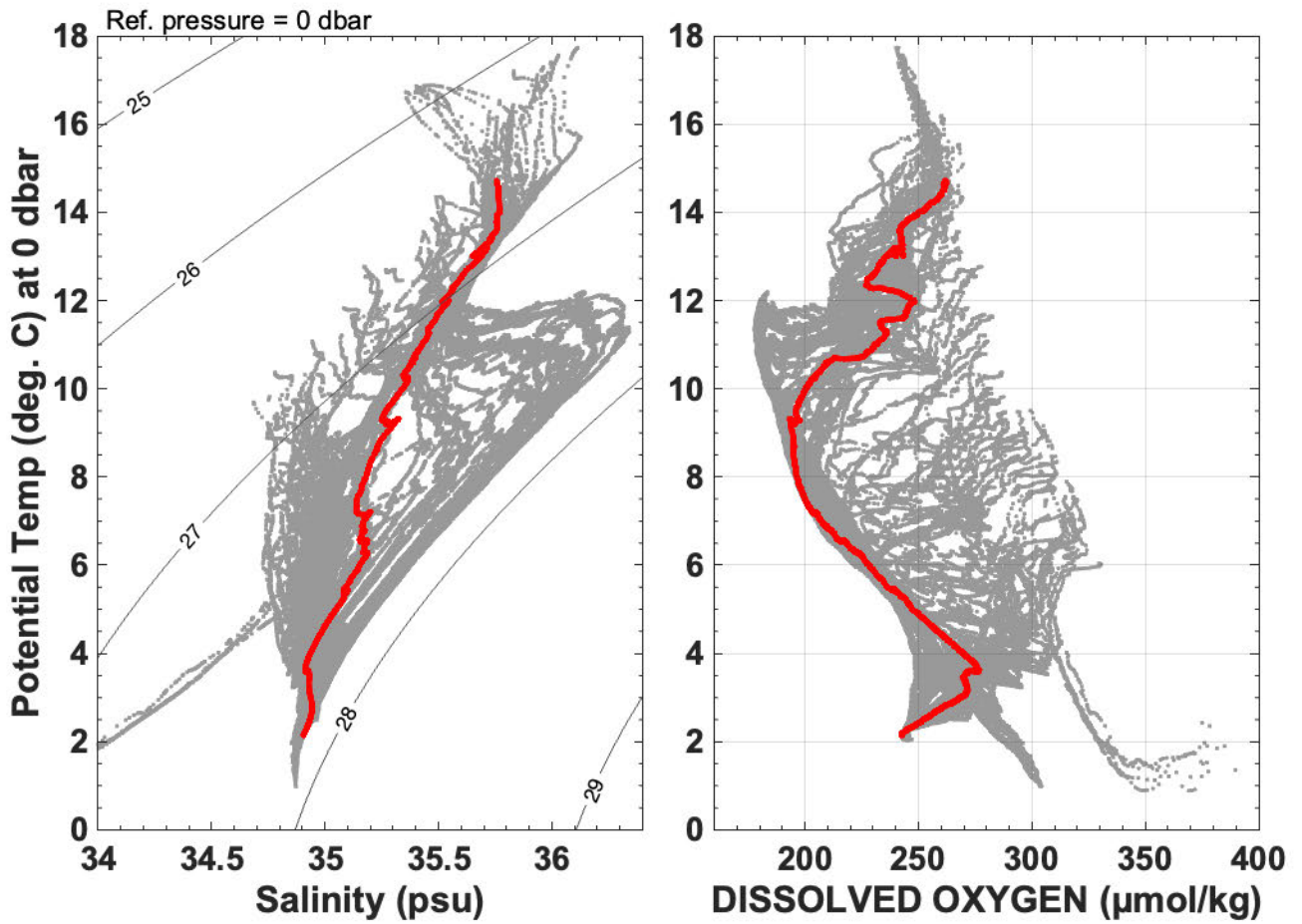


Cruise : BOCATS 2021  
 Station : 33  
 Date : 08/06/2021  
 Depth : 4525  
 Position : N 46 32.64  
 W 19 40.38

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	14.713	35.757	262.0	14.713
10	14.686	35.758	262.3	14.684
20	14.662	35.759	262.0	14.659
30	14.631	35.761	261.6	14.626
40	14.564	35.763	261.7	14.558
50	14.421	35.764	260.2	14.413
100	13.887	35.759	246.4	13.873
150	13.412	35.733	242.4	13.390
200	13.079	35.663	243.2	13.051
250	12.990	35.678	235.2	12.956
300	12.269	35.562	238.1	12.229
350	12.021	35.537	247.6	11.975
400	11.844	35.513	245.3	11.791
450	11.459	35.462	233.9	11.401
500	11.076	35.429	231.7	11.013
550	10.694	35.384	210.4	10.626
600	10.303	35.352	204.0	10.231
650	9.720	35.289	197.1	9.644
700	9.265	35.269	194.9	9.185
750	8.804	35.234	195.2	8.721
800	7.980	35.172	197.0	7.896
850	7.391	35.140	202.3	7.305
900	7.292	35.197	204.9	7.201
950	6.883	35.177	211.8	6.790
1000	6.656	35.186	217.4	6.560
1100	5.984	35.142	230.2	5.883
1200	5.376	35.080	243.2	5.270
1300	4.732	35.000	255.9	4.623
1400	4.412	34.964	263.3	4.297
1500	4.173	34.940	268.7	4.051
1600	3.981	34.923	273.2	3.852
1700	3.881	34.917	275.1	3.744
1800	3.816	34.916	275.3	3.670
1900	3.749	34.918	275.4	3.595
2000	3.730	34.928	271.6	3.567
2100	3.655	34.932	270.1	3.483
2200	3.551	34.929	270.8	3.371
2300	3.450	34.929	271.3	3.262
2400	3.362	34.931	271.5	3.166
2500	3.312	34.932	271.2	3.107
2600	3.242	34.936	269.5	3.028
2700	3.160	34.940	266.6	2.937
2800	3.081	34.943	263.2	2.849
2900	3.016	34.943	260.6	2.775
3000	2.925	34.942	257.6	2.676
3100	2.868	34.939	255.7	2.610
3200	2.808	34.936	253.5	2.541
3300	2.761	34.933	251.6	2.484
3400	2.705	34.928	250.1	2.419
3500	2.663	34.924	248.2	2.367
3600	2.628	34.920	246.7	2.321
3700	2.600	34.917	245.4	2.283
3800	2.582	34.914	244.5	2.254
3900	2.571	34.912	244.1	2.232
4000	2.560	34.910	243.4	2.210
4100	2.562	34.909	243.0	2.200
4200	2.562	34.908	242.9	2.189
4300	2.566	34.908	242.7	2.181
4400	2.573	34.907	242.7	2.175
4500	2.569	34.905	242.7	2.159
4598	2.571	34.904	NaN	2.149
4598	2.571	34.904	NaN	2.149



# STATION 33

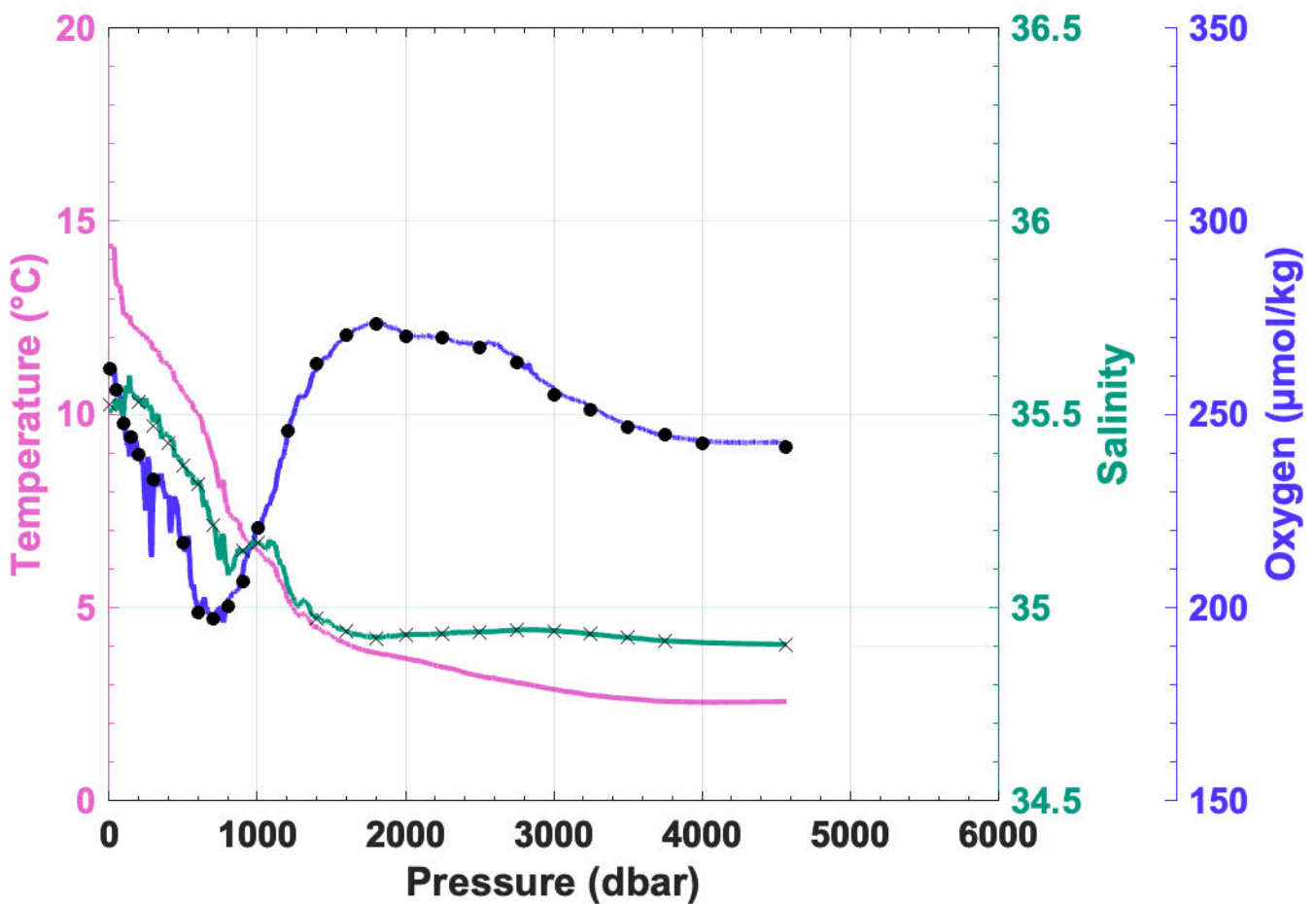
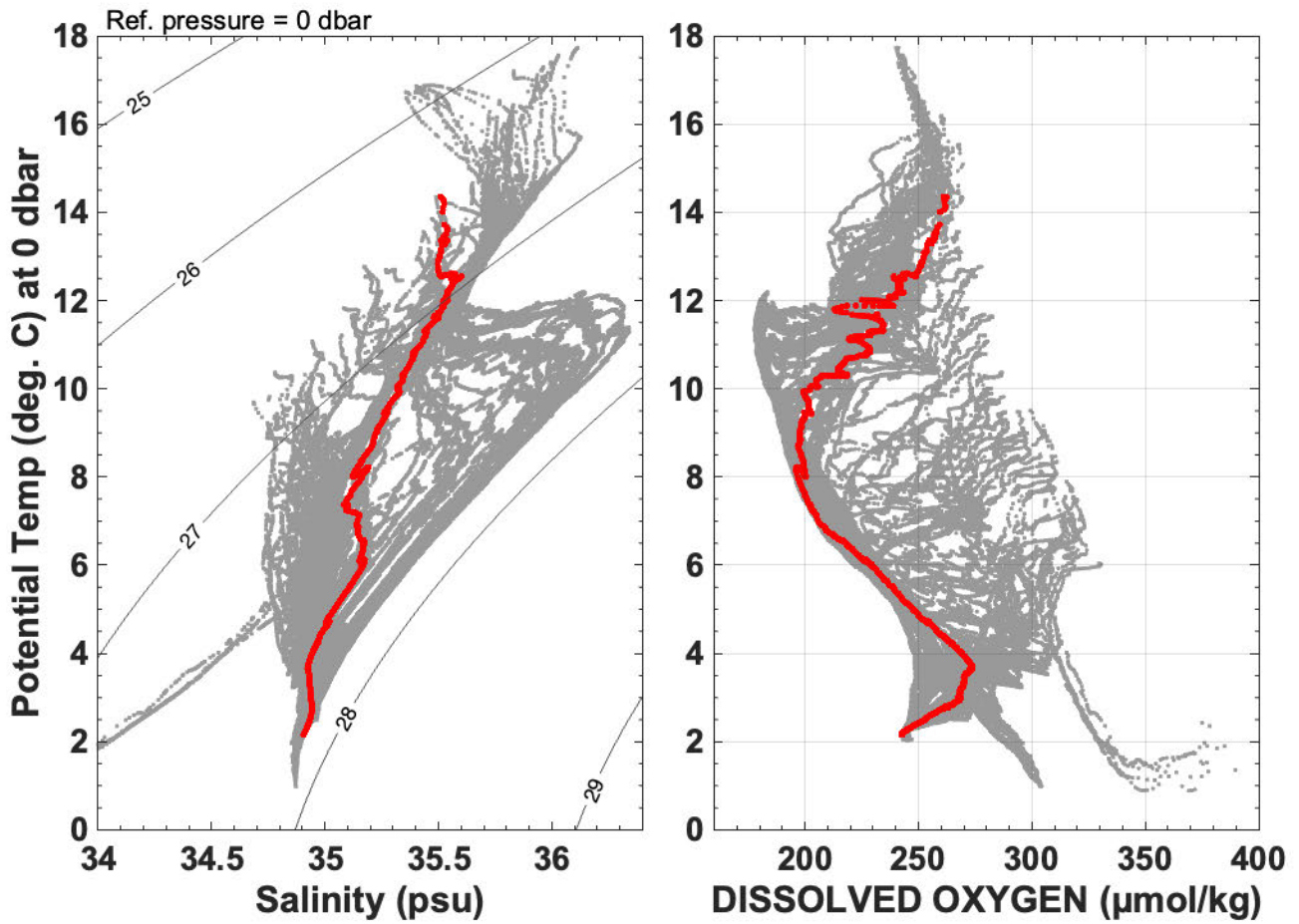


Cruise : BOCATS 2021  
 Station : 34  
 Date : 09/06/2021  
 Depth : 4500  
 Position : N 46 55.03  
 W 19 58.18

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	14.351	35.509	262.3	14.351
10	14.351	35.509	262.2	14.350
20	14.352	35.509	261.6	14.349
30	14.340	35.514	262.3	14.335
40	13.666	35.536	258.4	13.660
50	13.370	35.519	256.3	13.363
100	12.557	35.514	248.6	12.544
150	12.323	35.554	241.9	12.303
200	12.178	35.542	240.2	12.151
250	12.009	35.536	228.2	11.976
300	11.656	35.479	230.7	11.617
350	11.450	35.455	234.4	11.406
400	11.287	35.447	229.1	11.236
450	10.870	35.393	228.0	10.814
500	10.569	35.368	215.6	10.507
550	10.366	35.350	207.3	10.300
600	10.015	35.329	199.7	9.943
650	9.544	35.277	200.6	9.468
700	8.889	35.214	197.7	8.811
750	8.082	35.129	200.2	8.002
800	7.541	35.094	201.0	7.460
850	7.283	35.129	204.0	7.197
900	6.931	35.148	208.9	6.843
950	6.667	35.158	215.3	6.576
1000	6.496	35.167	220.0	6.400
1100	6.161	35.172	228.4	6.058
1200	5.259	35.060	244.3	5.153
1300	4.840	35.019	254.3	4.730
1400	4.498	34.979	261.6	4.382
1500	4.270	34.957	266.2	4.147
1600	4.060	34.937	270.3	3.930
1700	3.923	34.929	272.6	3.785
1800	3.826	34.923	273.5	3.680
1900	3.763	34.926	272.5	3.609
2000	3.691	34.930	270.8	3.529
2100	3.611	34.931	270.0	3.440
2200	3.501	34.932	270.2	3.322
2300	3.427	34.935	269.3	3.239
2400	3.316	34.936	268.4	3.121
2500	3.234	34.938	267.7	3.030
2600	3.173	34.938	268.0	2.960
2700	3.094	34.941	265.7	2.873
2800	3.032	34.943	262.0	2.801
2900	2.957	34.942	259.1	2.717
3000	2.887	34.940	256.9	2.638
3100	2.821	34.937	254.4	2.564
3200	2.765	34.934	253.2	2.498
3300	2.716	34.930	251.0	2.440
3400	2.670	34.925	248.9	2.385
3500	2.646	34.923	247.4	2.350
3600	2.618	34.919	246.1	2.311
3700	2.584	34.916	244.8	2.267
3800	2.568	34.913	244.2	2.241
3900	2.561	34.911	243.7	2.223
4000	2.553	34.910	243.3	2.203
4100	2.554	34.909	242.8	2.193
4200	2.554	34.908	242.8	2.181
4300	2.556	34.906	242.7	2.171
4400	2.563	34.906	242.7	2.166
4500	2.567	34.905	242.8	2.158
4550	2.572	34.905	242.8	2.156



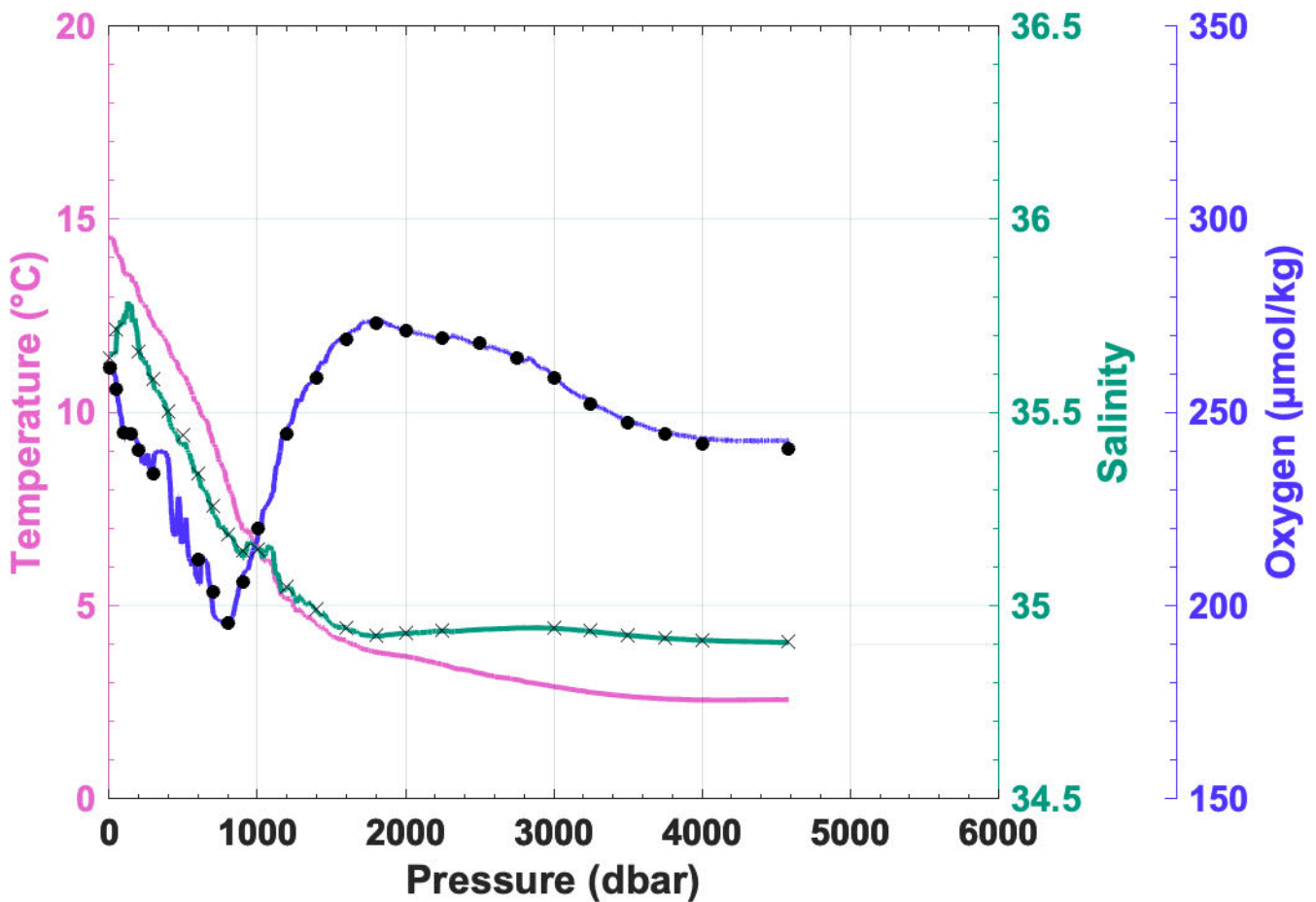
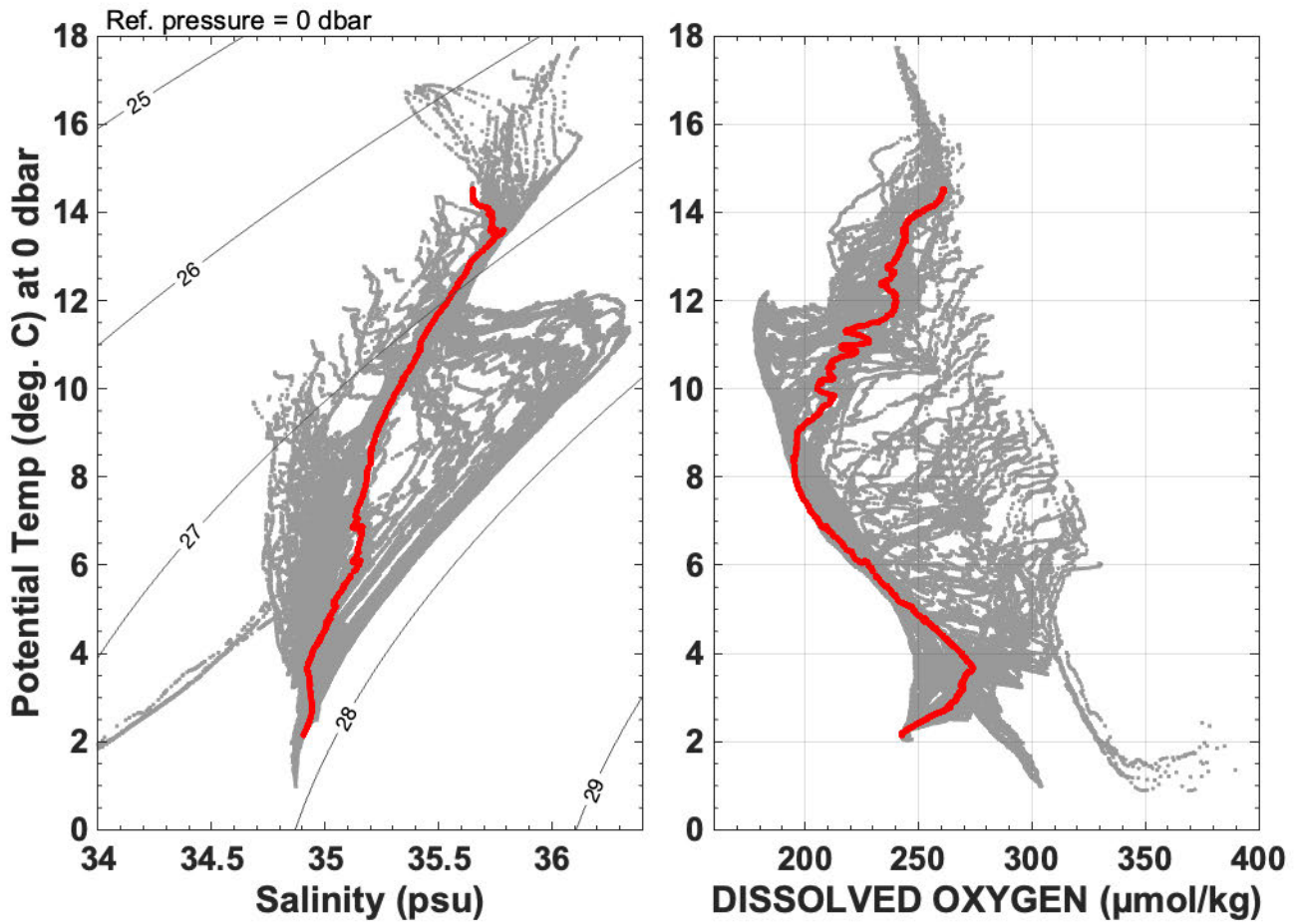
# STATION 34



Cruise : BOCATS 2021  
 Station : 35  
 Date : 09/06/2021  
 Depth : 4515  
 Position : N 47 17.40  
 W 20 15.81

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	14.523	35.652	261.3	14.523
10	14.528	35.651	261.1	14.527
20	14.513	35.651	261.2	14.510
30	14.445	35.653	261.0	14.441
40	14.281	35.651	259.4	14.275
50	14.142	35.691	255.9	14.135
100	13.610	35.739	244.0	13.596
150	13.529	35.774	243.6	13.507
200	13.006	35.664	240.7	12.979
250	12.695	35.621	238.4	12.661
300	12.280	35.572	237.0	12.240
350	12.024	35.541	240.3	11.978
400	11.720	35.494	236.8	11.668
450	11.332	35.446	218.6	11.274
500	10.979	35.418	216.7	10.916
550	10.563	35.376	212.2	10.496
600	10.197	35.336	207.2	10.124
650	9.845	35.299	211.4	9.769
700	9.190	35.236	198.7	9.111
750	8.704	35.207	195.9	8.622
800	8.154	35.183	195.6	8.069
850	7.539	35.157	200.2	7.452
900	6.963	35.123	207.6	6.875
950	6.834	35.162	211.7	6.741
1000	6.548	35.149	216.9	6.452
1100	6.048	35.143	229.1	5.946
1200	5.173	35.043	246.0	5.069
1300	4.830	35.017	253.8	4.719
1400	4.526	34.986	260.6	4.409
1500	4.238	34.953	266.8	4.115
1600	4.084	34.942	269.4	3.953
1700	3.894	34.925	272.8	3.757
1800	3.798	34.921	273.9	3.653
1900	3.739	34.925	272.6	3.585
2000	3.686	34.928	271.2	3.524
2100	3.613	34.931	270.2	3.442
2200	3.525	34.934	269.3	3.345
2300	3.421	34.933	269.5	3.233
2400	3.340	34.936	268.7	3.143
2500	3.254	34.938	267.4	3.049
2600	3.172	34.939	266.7	2.959
2700	3.121	34.941	265.4	2.899
2800	3.037	34.942	263.3	2.806
2900	2.972	34.943	261.6	2.732
3000	2.904	34.941	259.1	2.655
3100	2.847	34.939	255.8	2.589
3200	2.792	34.936	254.0	2.525
3300	2.734	34.931	251.4	2.458
3400	2.693	34.927	249.6	2.406
3500	2.655	34.923	247.9	2.359
3600	2.624	34.920	246.7	2.318
3700	2.599	34.917	245.4	2.282
3800	2.582	34.914	244.4	2.254
3900	2.569	34.912	243.8	2.230
4000	2.559	34.910	243.4	2.209
4100	2.557	34.909	243.0	2.195
4200	2.556	34.908	242.8	2.183
4300	2.561	34.907	242.7	2.175
4400	2.564	34.906	242.8	2.166
4500	2.565	34.905	242.7	2.156
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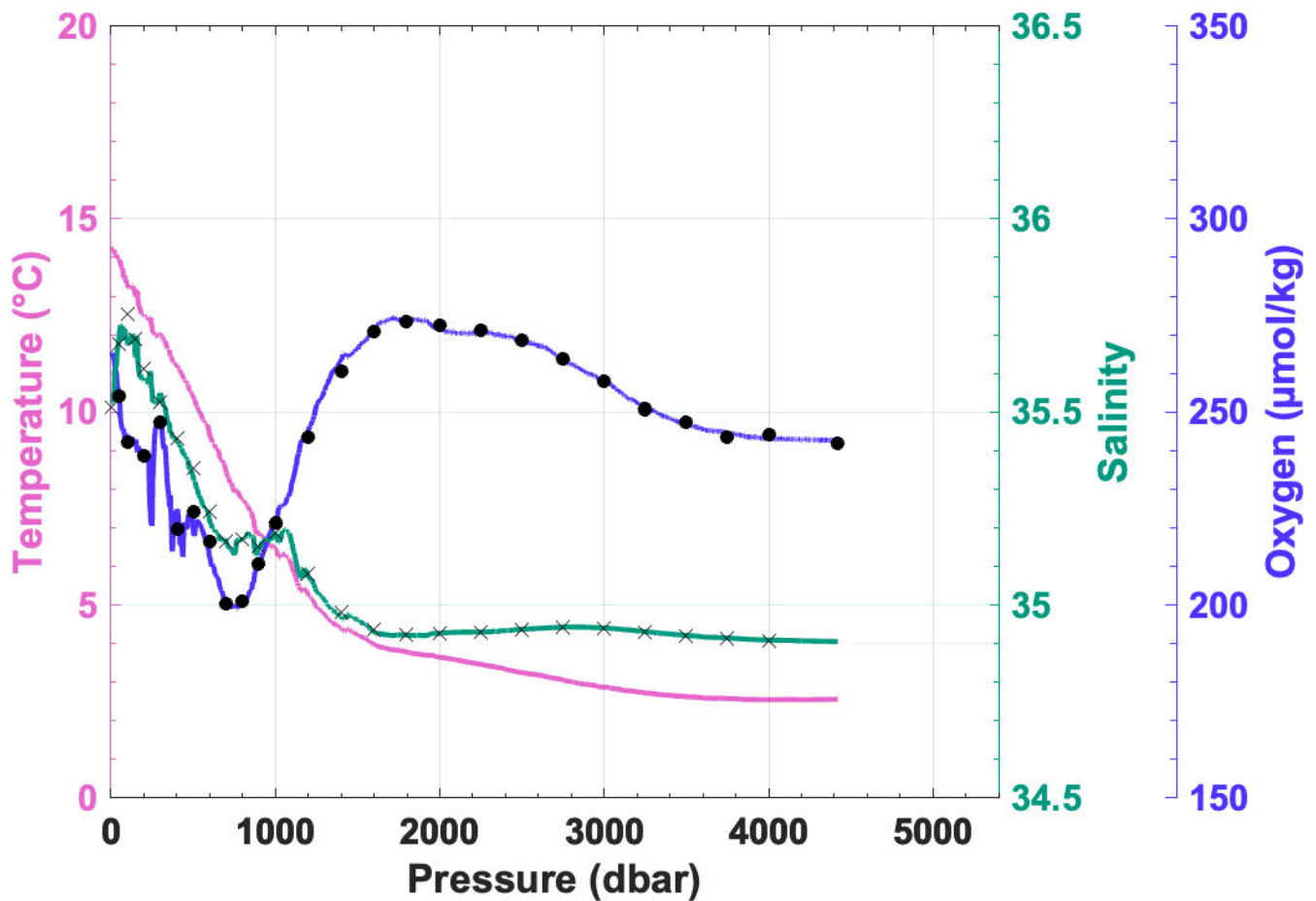
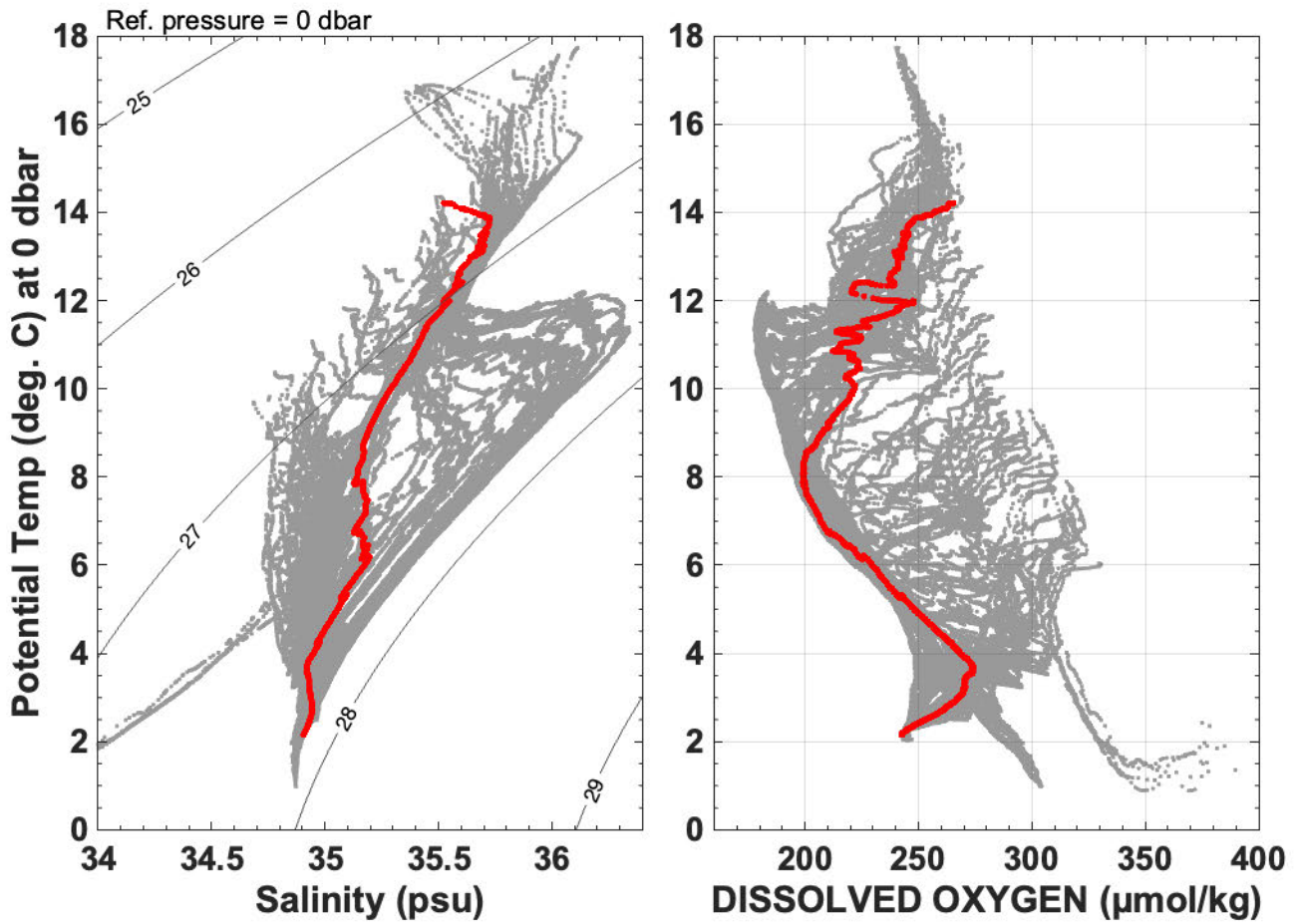
# STATION 35



Cruise : BOCATS 2021  
 Station : 36  
 Date : 09/06/2021  
 Depth : 4354  
 Position : N 47 39.91  
 W 20 33.09

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	14.210	35.527	265.3	14.210
10	14.209	35.525	264.3	14.208
20	14.189	35.563	263.3	14.186
30	14.082	35.616	260.8	14.078
40	13.998	35.663	256.5	13.992
50	13.943	35.695	253.8	13.936
100	13.320	35.693	243.2	13.306
150	12.992	35.641	242.9	12.971
200	12.515	35.588	237.5	12.488
250	12.209	35.556	221.0	12.176
300	12.030	35.549	247.7	11.990
350	11.626	35.474	229.1	11.580
400	11.222	35.428	223.8	11.172
450	10.818	35.386	220.8	10.763
500	10.407	35.333	219.8	10.346
550	9.920	35.272	219.9	9.855
600	9.427	35.220	212.4	9.359
650	9.012	35.184	207.0	8.939
700	8.464	35.166	199.9	8.388
750	7.927	35.129	200.0	7.848
800	7.726	35.170	200.7	7.644
850	7.430	35.179	203.9	7.344
900	6.859	35.145	210.7	6.771
950	6.654	35.170	216.1	6.562
1000	6.462	35.184	221.5	6.367
1100	5.998	35.159	231.7	5.896
1200	5.257	35.072	245.3	5.152
1300	4.764	35.013	255.6	4.654
1400	4.382	34.967	263.6	4.267
1500	4.240	34.962	266.2	4.117
1600	3.983	34.930	271.7	3.854
1700	3.846	34.921	274.1	3.710
1800	3.781	34.922	273.7	3.636
1900	3.708	34.921	273.6	3.554
2000	3.643	34.927	271.6	3.481
2100	3.577	34.929	270.4	3.406
2200	3.499	34.930	270.4	3.320
2300	3.422	34.930	270.5	3.234
2400	3.334	34.933	269.7	3.138
2500	3.252	34.937	268.4	3.047
2600	3.180	34.940	267.2	2.967
2700	3.097	34.942	264.9	2.876
2800	3.012	34.943	262.5	2.782
2900	2.940	34.942	260.1	2.701
3000	2.870	34.941	257.8	2.622
3100	2.809	34.937	255.2	2.552
3200	2.749	34.933	252.4	2.483
3300	2.704	34.929	250.4	2.428
3400	2.659	34.925	248.4	2.373
3500	2.624	34.921	246.8	2.328
3600	2.592	34.917	245.6	2.286
3700	2.587	34.916	244.9	2.270
3800	2.565	34.913	244.2	2.238
3900	2.552	34.911	243.4	2.214
4000	2.547	34.909	243.2	2.198
4100	2.549	34.908	243.0	2.188
4200	2.548	34.907	242.9	2.175
4300	2.552	34.906	242.7	2.167
4400	2.555	34.905	242.8	2.158
4400	2.555	34.905	242.8	2.158

# STATION 36

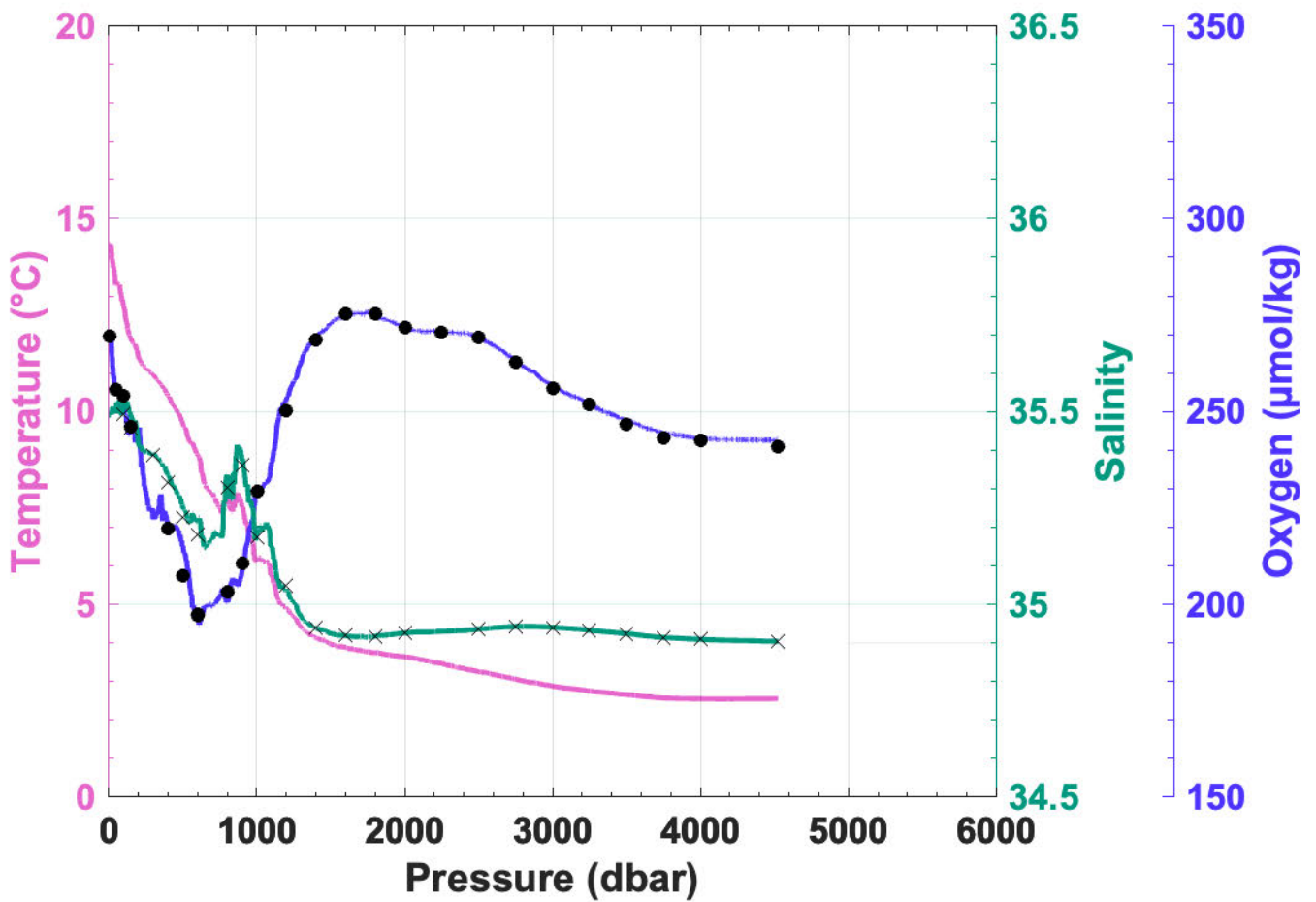
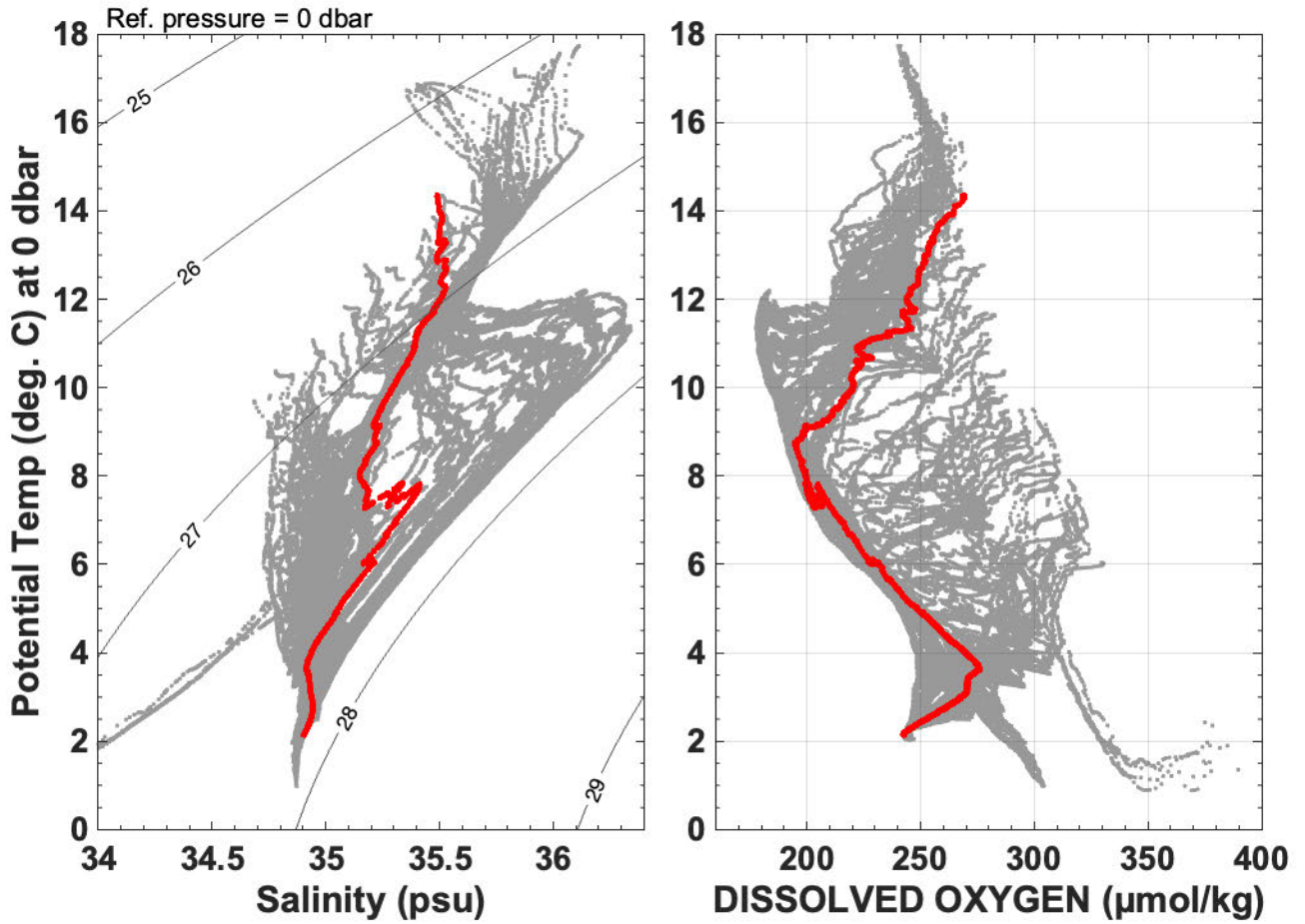


Cruise : BOCATS 2021  
 Station : 37  
 Date : 09/06/2021  
 Depth : 4457  
 Position : N 48 2.29  
 W 20 50.95

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	14.345	35.491	269.3	14.345
10	14.315	35.491	269.3	14.313
20	13.996	35.499	264.5	13.993
30	13.756	35.510	259.5	13.751
40	13.471	35.498	256.1	13.465
50	13.276	35.497	255.2	13.269
100	12.725	35.529	250.6	12.711
150	11.872	35.488	245.4	11.853
200	11.403	35.417	245.0	11.377
250	11.135	35.397	229.1	11.104
300	10.958	35.392	222.1	10.921
350	10.716	35.370	228.5	10.674
400	10.410	35.334	220.8	10.362
450	10.082	35.298	220.4	10.028
500	9.687	35.251	215.2	9.629
550	9.203	35.216	204.3	9.141
600	8.884	35.215	196.1	8.817
650	8.105	35.148	199.5	8.037
700	7.888	35.169	199.5	7.815
750	7.496	35.181	202.0	7.420
800	7.910	35.334	200.6	7.826
850	7.617	35.340	206.1	7.530
900	7.539	35.374	208.7	7.446
950	6.778	35.273	219.4	6.685
1000	6.129	35.178	229.2	6.036
1100	5.758	35.150	236.7	5.658
1200	4.895	35.036	253.1	4.793
1300	4.406	34.967	263.0	4.300
1400	4.133	34.938	269.2	4.020
1500	3.971	34.924	272.9	3.851
1600	3.887	34.919	274.4	3.759
1700	3.804	34.917	275.3	3.668
1800	3.745	34.917	275.2	3.601
1900	3.688	34.922	273.4	3.535
2000	3.640	34.926	271.7	3.478
2100	3.571	34.928	271.0	3.400
2200	3.493	34.929	271.0	3.314
2300	3.412	34.931	270.4	3.225
2400	3.338	34.932	270.2	3.142
2500	3.252	34.936	269.0	3.047
2600	3.178	34.939	267.0	2.965
2700	3.103	34.942	264.5	2.882
2800	3.019	34.943	261.7	2.788
2900	2.953	34.942	259.6	2.713
3000	2.881	34.940	256.9	2.632
3100	2.824	34.938	254.6	2.567
3200	2.783	34.935	253.0	2.516
3300	2.730	34.931	250.9	2.454
3400	2.700	34.928	249.3	2.414
3500	2.660	34.924	247.7	2.363
3600	2.620	34.920	246.4	2.313
3700	2.581	34.915	244.9	2.265
3800	2.566	34.913	244.0	2.239
3900	2.556	34.911	243.6	2.217
4000	2.551	34.910	243.1	2.201
4100	2.546	34.908	242.8	2.185
4200	2.546	34.907	242.7	2.173
4300	2.550	34.906	242.5	2.165
4400	2.553	34.905	242.6	2.156
4500	2.555	34.904	242.5	2.146
4500	2.555	34.904	242.5	2.146



# STATION 37

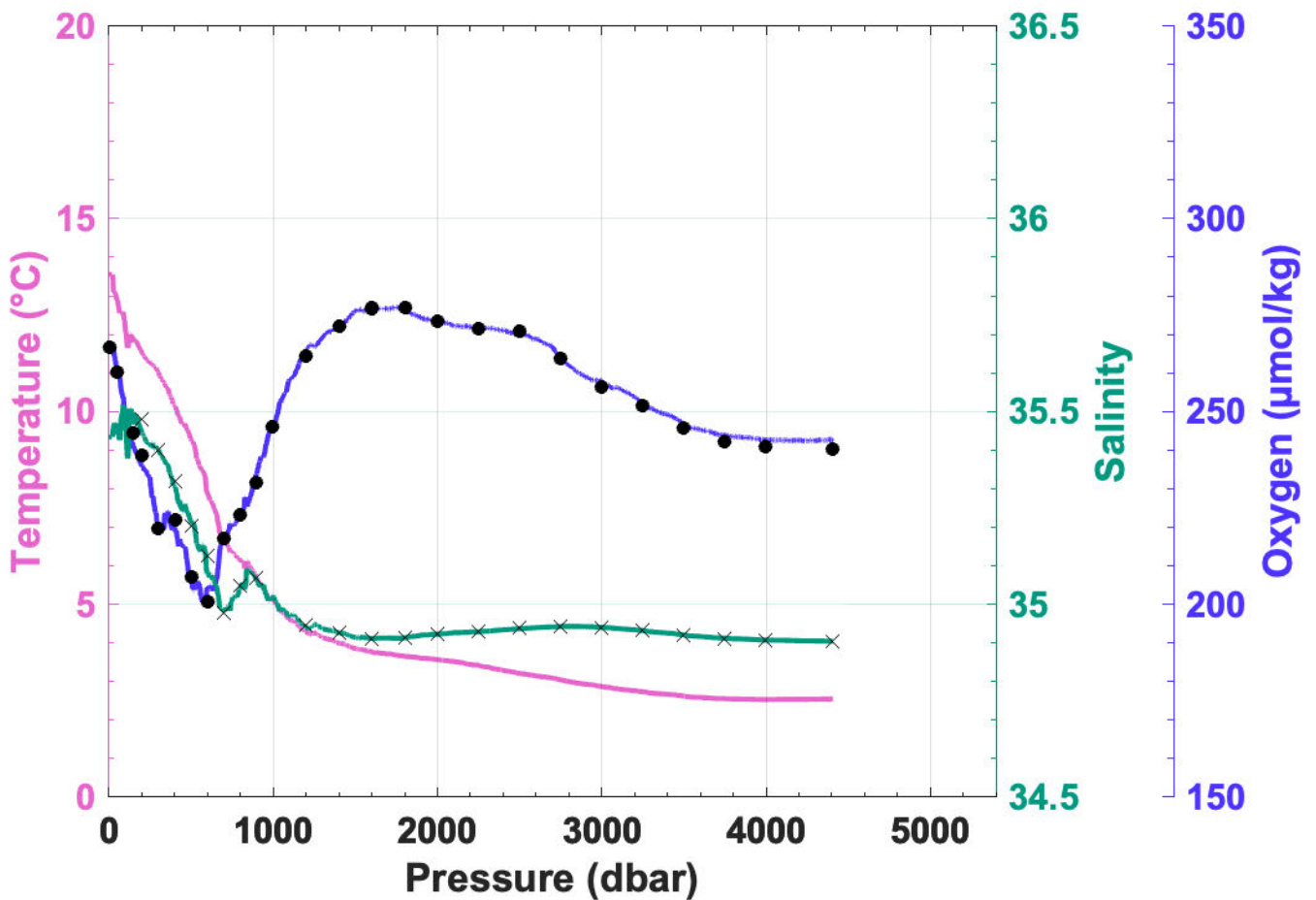
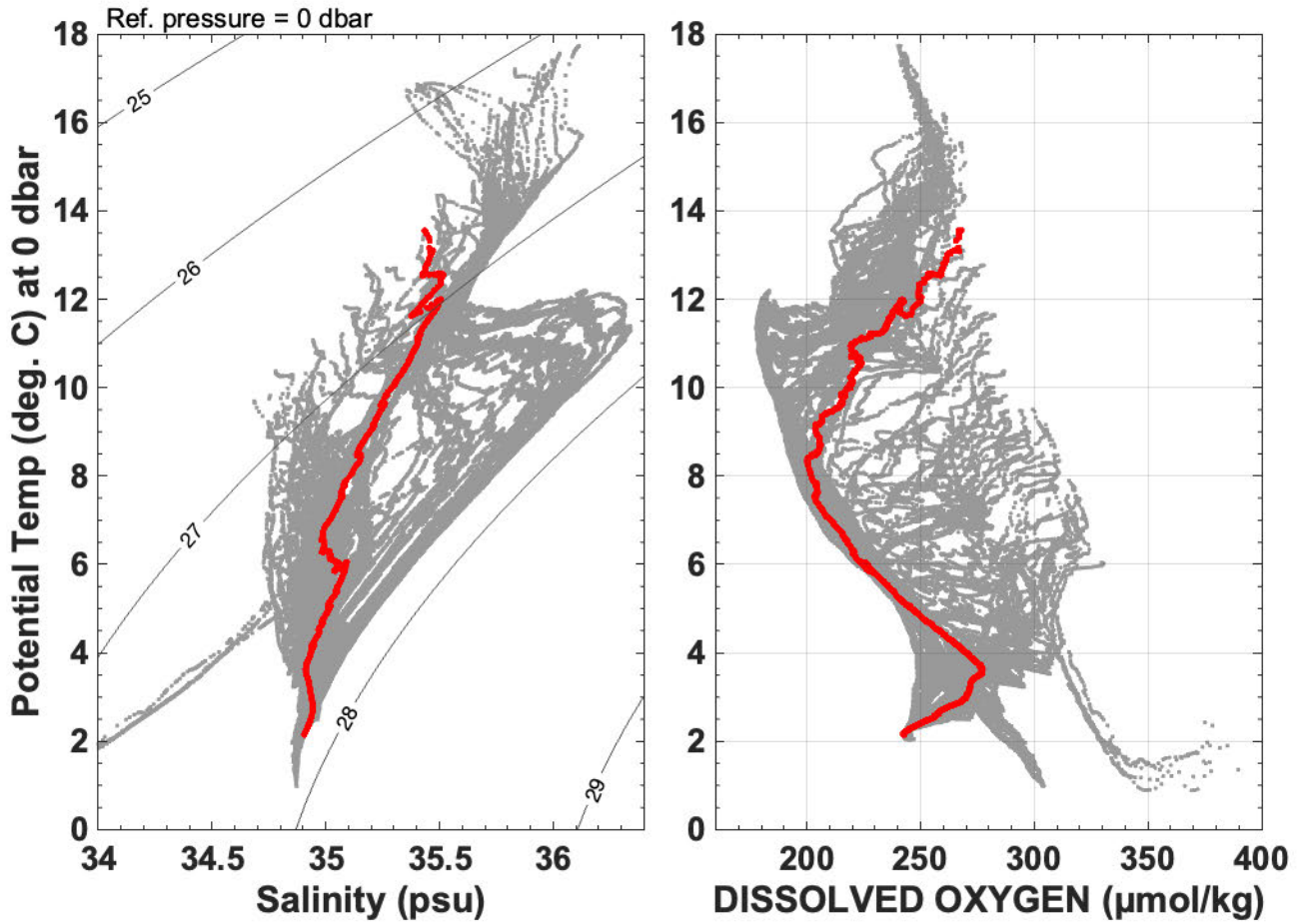




Cruise : BOCATS 2021  
 Station : 38  
 Date : 09/06/2021  
 Depth : 4340  
 Position : N 48 24.78  
 W 21 8.44

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	13.557	35.434	267.6	13.557
10	13.557	35.434	267.4	13.555
20	13.538	35.436	267.2	13.535
30	13.107	35.466	265.9	13.103
40	13.043	35.466	263.2	13.037
50	12.897	35.454	261.3	12.890
100	12.125	35.463	249.0	12.112
150	11.796	35.467	241.1	11.776
200	11.534	35.447	236.0	11.508
250	11.267	35.413	232.7	11.236
300	11.031	35.403	220.3	10.993
350	10.618	35.363	223.0	10.576
400	10.146	35.305	219.9	10.098
450	9.663	35.242	215.2	9.611
500	9.283	35.216	206.5	9.227
550	8.604	35.141	205.3	8.544
600	7.863	35.080	204.1	7.801
650	7.385	35.051	205.6	7.321
700	6.618	34.981	217.6	6.552
750	6.354	35.010	220.3	6.285
800	6.147	35.040	223.2	6.074
850	6.038	35.087	226.5	5.961
900	5.694	35.064	233.9	5.614
950	5.364	35.035	239.7	5.282
1000	5.145	35.023	245.5	5.060
1100	4.599	34.969	258.4	4.509
1200	4.274	34.940	266.1	4.178
1300	4.143	34.937	269.2	4.040
1400	3.995	34.927	272.8	3.884
1500	3.859	34.915	276.1	3.741
1600	3.766	34.911	277.1	3.640
1700	3.715	34.913	276.7	3.580
1800	3.656	34.913	276.6	3.512
1900	3.604	34.920	274.2	3.452
2000	3.563	34.923	273.2	3.402
2100	3.516	34.926	272.2	3.346
2200	3.439	34.928	271.9	3.261
2300	3.376	34.930	271.6	3.189
2400	3.285	34.934	270.9	3.090
2500	3.212	34.937	270.2	3.008
2600	3.143	34.939	268.9	2.930
2700	3.088	34.942	266.7	2.866
2800	2.996	34.943	262.0	2.766
2900	2.929	34.942	259.0	2.690
3000	2.869	34.940	257.9	2.621
3100	2.805	34.937	256.2	2.548
3200	2.761	34.934	253.8	2.494
3300	2.701	34.929	250.8	2.425
3400	2.667	34.925	249.1	2.382
3500	2.618	34.920	246.9	2.323
3600	2.588	34.917	245.3	2.282
3700	2.557	34.913	244.2	2.241
3800	2.543	34.911	243.4	2.217
3900	2.539	34.909	243.1	2.201
4000	2.529	34.907	242.5	2.180
4100	2.534	34.907	242.6	2.173
4200	2.534	34.906	242.6	2.161
4300	2.537	34.905	242.5	2.152
4400	2.546	34.904	242.5	2.149
4400	2.546	34.904	242.5	2.149

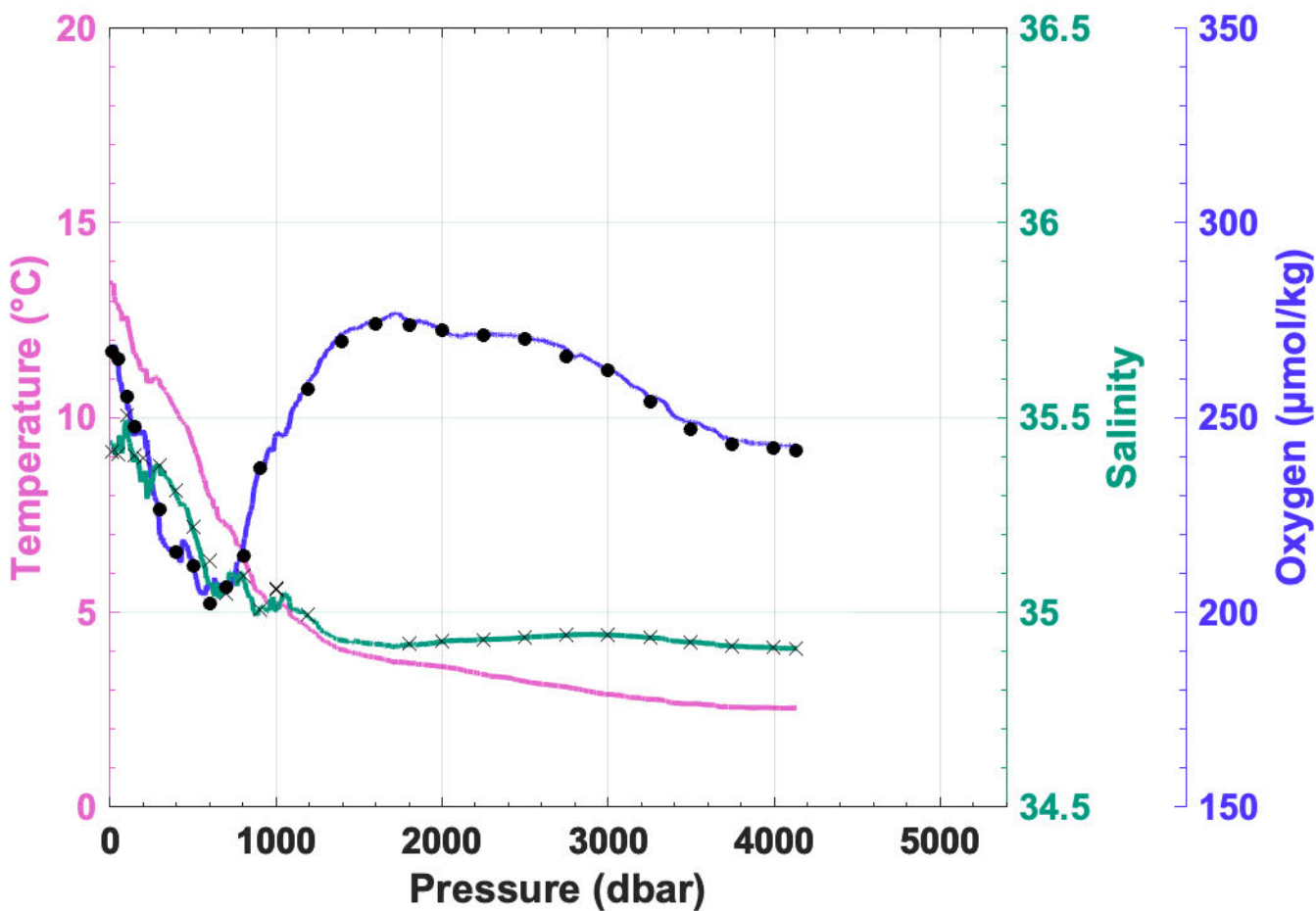
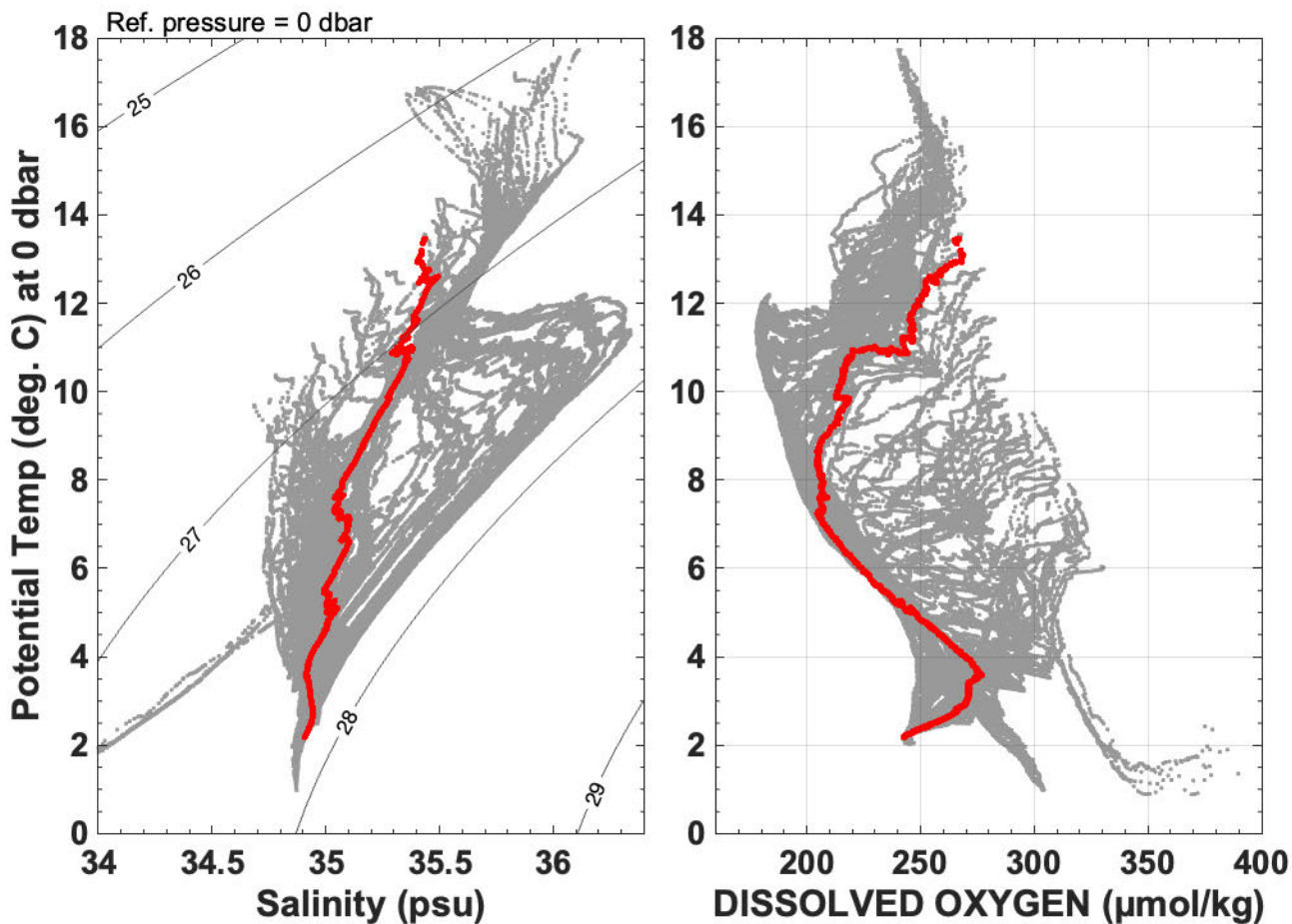
# STATION 38



Cruise : BOCATS 2021  
 Station : 39  
 Date : 10/06/2021  
 Depth : 4077  
 Position : N 48 47.16  
 W 21 25.82

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	13.460	35.435	266.4	13.460
10	13.460	35.436	266.4	13.459
20	13.426	35.431	266.5	13.424
30	12.940	35.403	268.1	12.936
40	12.945	35.418	266.0	12.939
50	12.878	35.427	263.4	12.871
100	12.596	35.491	254.3	12.582
150	11.627	35.391	245.7	11.608
200	11.189	35.337	246.7	11.164
250	10.938	35.334	234.5	10.908
300	10.879	35.361	220.1	10.842
350	10.566	35.344	216.3	10.523
400	10.167	35.299	214.6	10.120
450	9.815	35.271	217.9	9.763
500	9.315	35.213	212.3	9.258
550	8.570	35.137	204.9	8.510
600	7.965	35.070	206.8	7.902
650	7.440	35.041	207.3	7.375
700	7.194	35.057	206.2	7.125
750	6.984	35.096	208.8	6.911
800	6.522	35.091	215.8	6.447
850	5.965	35.038	226.4	5.888
900	5.514	35.008	236.1	5.436
950	5.251	35.003	241.1	5.170
1000	5.096	35.005	245.8	5.011
1100	4.869	35.008	252.0	4.777
1200	4.573	34.986	259.5	4.474
1300	4.237	34.946	266.8	4.133
1400	4.040	34.928	271.5	3.929
1500	3.934	34.925	273.1	3.815
1600	3.846	34.919	274.7	3.718
1700	3.731	34.912	276.6	3.596
1800	3.700	34.917	274.7	3.556
1900	3.651	34.918	274.3	3.498
2000	3.610	34.925	272.2	3.448
2100	3.545	34.928	271.0	3.375
2200	3.456	34.929	271.5	3.277
2300	3.355	34.931	271.5	3.169
2400	3.321	34.932	271.1	3.125
2500	3.233	34.935	270.5	3.029
2600	3.156	34.938	270.0	2.943
2700	3.112	34.940	268.6	2.890
2800	3.046	34.943	265.7	2.815
2900	2.955	34.943	264.6	2.715
3000	2.894	34.942	262.1	2.645
3100	2.845	34.940	259.8	2.587
3200	2.793	34.937	257.2	2.526
3300	2.760	34.934	254.8	2.483
3400	2.671	34.926	250.2	2.385
3500	2.652	34.924	248.8	2.356
3600	2.626	34.920	247.2	2.319
3700	2.575	34.915	244.8	2.259
3800	2.565	34.912	244.0	2.237
3900	2.553	34.911	243.4	2.215
4000	2.547	34.909	243.0	2.197
4100	2.543	34.908	242.8	2.182
4100	2.543	34.908	242.8	2.182

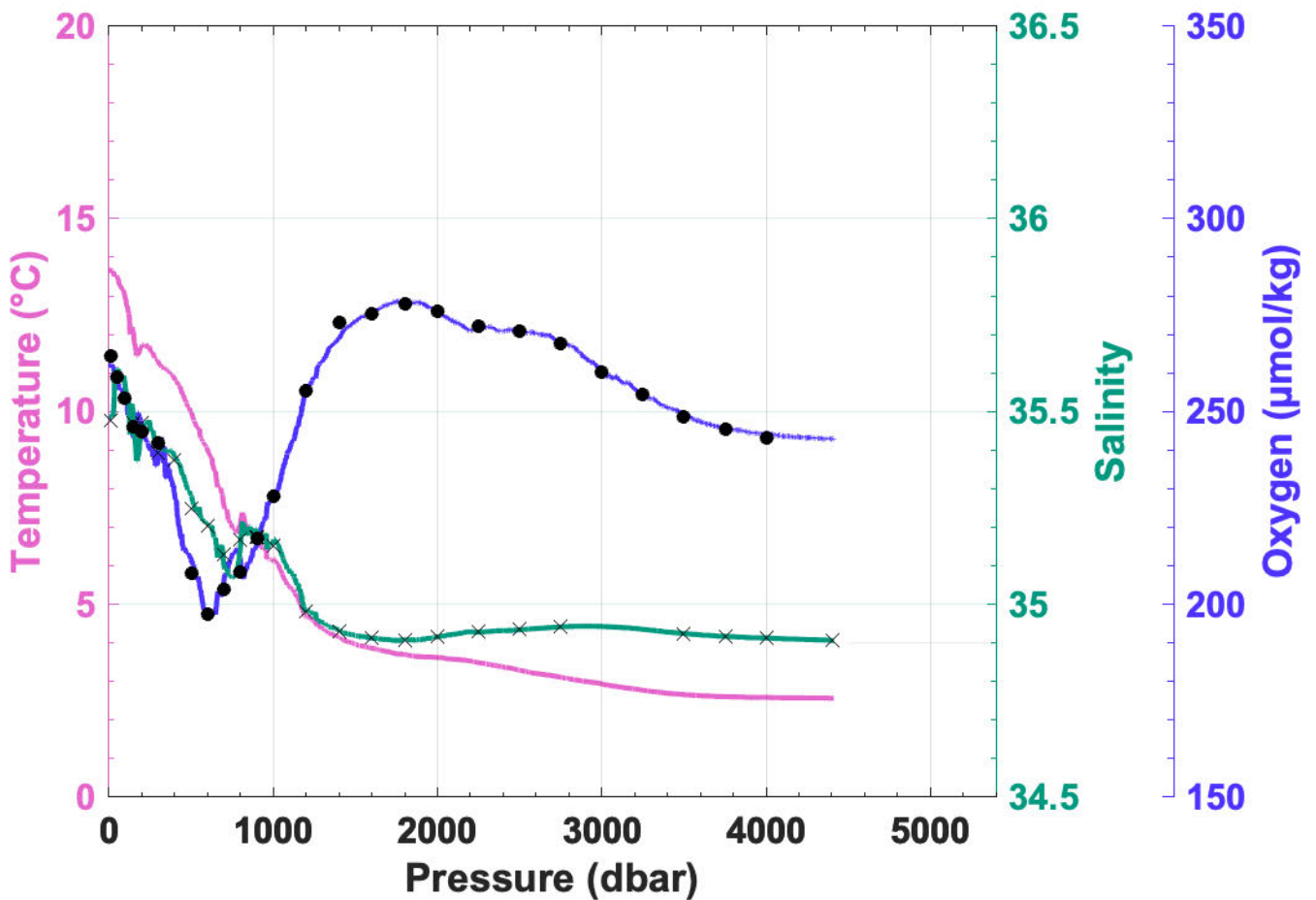
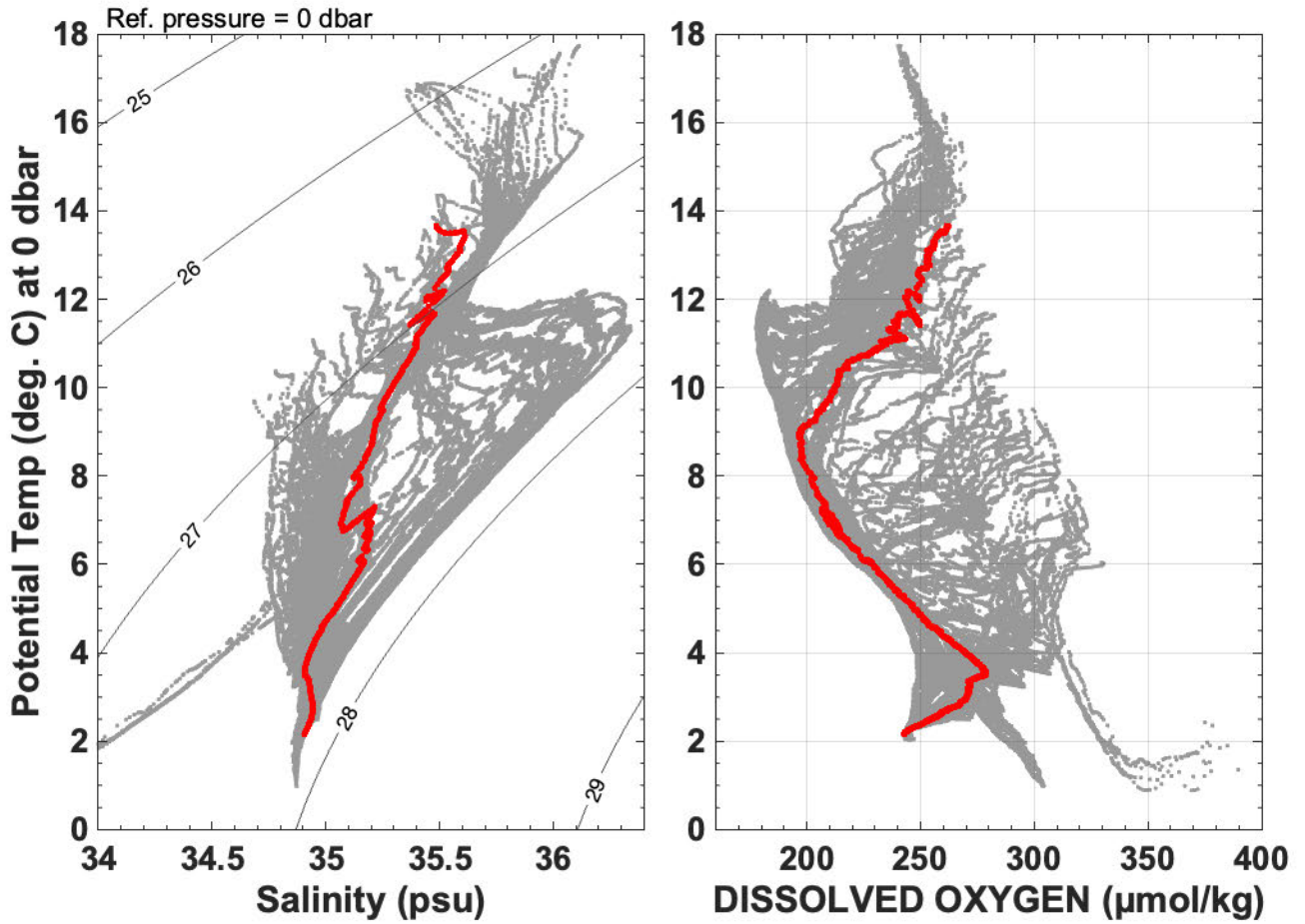
# STATION 39



Cruise : BOCATS 2021  
 Station : 40  
 Date : 10/06/2021  
 Depth : 4343  
 Position : N 49 9.44  
 W 21 43.11

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	13.656	35.486	262.0	13.656
10	13.656	35.486	262.0	13.654
20	13.656	35.486	262.0	13.653
30	13.519	35.516	260.9	13.515
40	13.539	35.606	259.3	13.534
50	13.485	35.609	258.3	13.478
100	12.939	35.564	253.3	12.925
150	12.032	35.491	243.4	12.013
200	11.691	35.451	247.0	11.665
250	11.626	35.463	240.4	11.593
300	11.293	35.417	238.1	11.255
350	11.088	35.399	233.4	11.044
400	10.836	35.382	228.4	10.786
450	10.436	35.334	215.1	10.381
500	9.979	35.281	211.8	9.920
550	9.508	35.246	205.6	9.445
600	9.014	35.210	196.6	8.947
650	8.415	35.171	197.7	8.346
700	7.566	35.102	206.0	7.495
750	7.002	35.068	212.6	6.929
800	7.080	35.140	211.9	7.001
850	6.997	35.187	210.7	6.914
900	6.725	35.190	215.6	6.638
950	6.400	35.177	222.4	6.310
1000	6.151	35.164	227.8	6.058
1100	5.469	35.086	240.4	5.372
1200	4.674	34.982	255.6	4.574
1300	4.378	34.953	263.0	4.272
1400	4.141	34.932	269.3	4.028
1500	3.967	34.919	273.6	3.848
1600	3.856	34.912	276.0	3.729
1700	3.771	34.909	277.7	3.636
1800	3.701	34.909	277.9	3.557
1900	3.639	34.909	278.2	3.486
2000	3.623	34.915	275.4	3.462
2100	3.574	34.922	273.0	3.403
2200	3.529	34.929	271.0	3.349
2300	3.451	34.929	271.9	3.263
2400	3.376	34.932	270.9	3.179
2500	3.287	34.934	270.7	3.082
2600	3.206	34.937	270.3	2.992
2700	3.148	34.940	269.3	2.925
2800	3.073	34.942	267.1	2.842
2900	3.003	34.943	263.7	2.763
3000	2.936	34.943	261.4	2.687
3100	2.859	34.940	258.3	2.601
3200	2.806	34.937	255.7	2.538
3300	2.741	34.933	253.3	2.464
3400	2.694	34.928	251.1	2.408
3500	2.656	34.924	249.3	2.360
3600	2.631	34.921	247.3	2.324
3700	2.607	34.918	246.0	2.290
3800	2.600	34.916	245.3	2.272
3900	2.588	34.914	244.5	2.248
4000	2.588	34.913	244.4	2.237
4100	2.577	34.911	243.6	2.215
4200	2.574	34.909	243.4	2.200
4300	2.574	34.908	243.0	2.188
4400	2.562	34.906	242.8	2.165
4400	2.562	34.906	242.8	2.165

# STATION 40

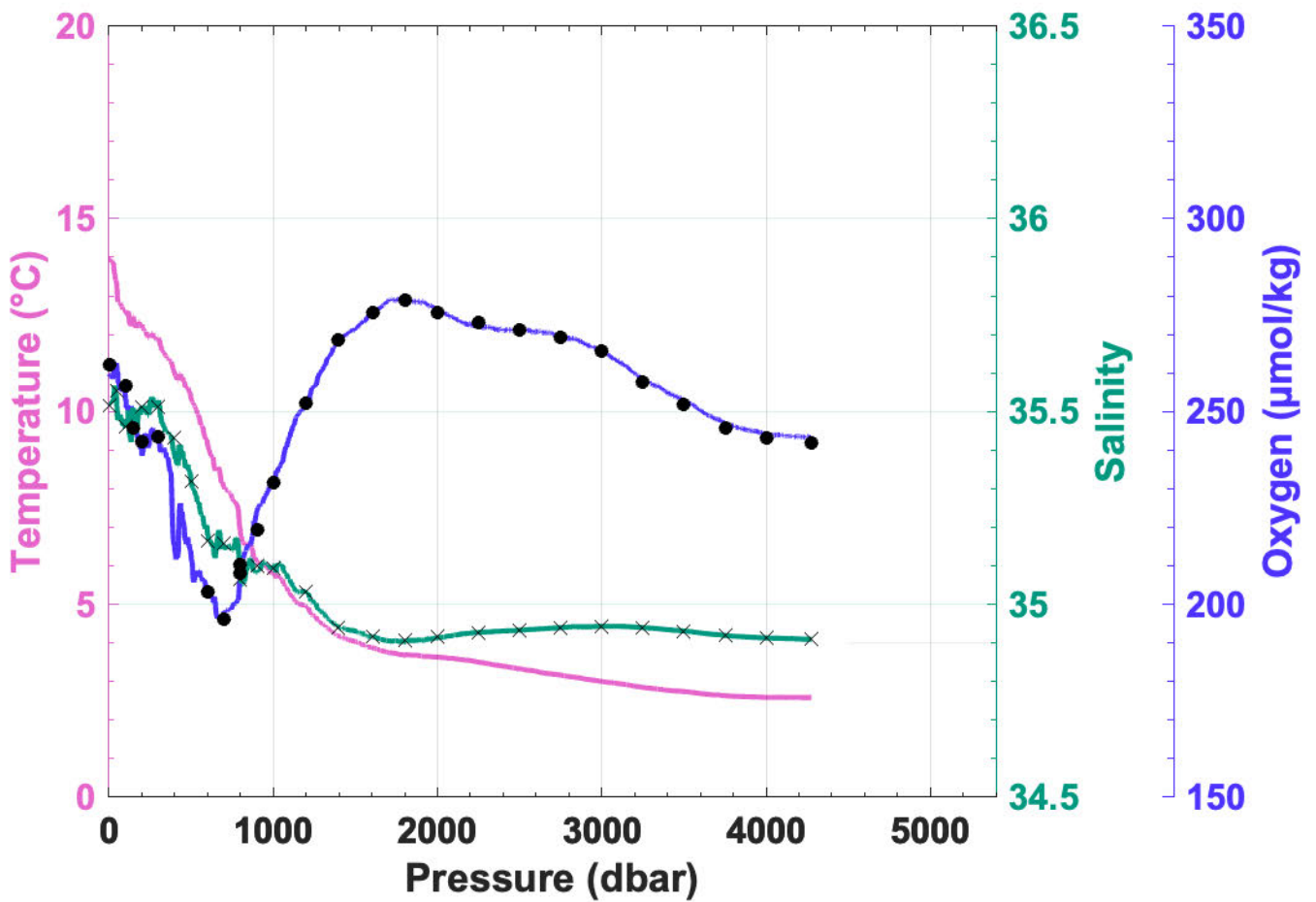
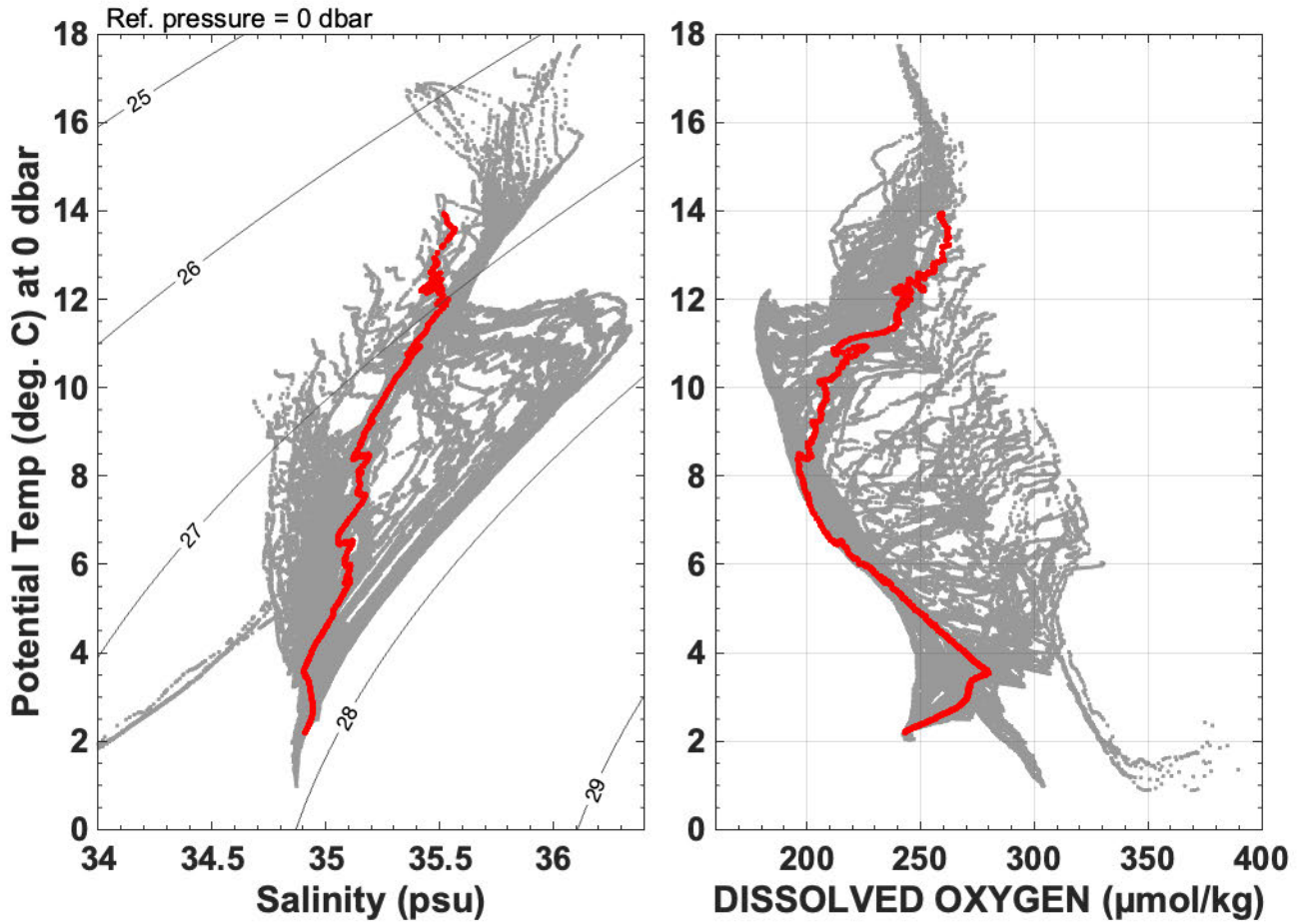


Cruise : BOCATS 2021  
 Station : 41  
 Date : 10/06/2021  
 Depth : 4203  
 Position : N 49 31.86  
 W 22 0.85

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	13.934	35.520	259.6	13.934
10	13.928	35.521	259.1	13.926
20	13.907	35.523	258.5	13.905
30	13.741	35.534	260.2	13.737
40	13.407	35.544	262.2	13.402
50	13.186	35.511	259.6	13.179
100	12.628	35.472	254.0	12.614
150	12.412	35.499	244.8	12.392
200	12.255	35.511	239.8	12.229
250	12.007	35.527	243.1	11.974
300	11.920	35.529	243.4	11.880
350	11.402	35.448	238.1	11.358
400	11.020	35.391	214.7	10.970
450	10.886	35.396	221.9	10.830
500	10.345	35.319	212.6	10.285
550	9.853	35.258	208.5	9.788
600	9.178	35.189	203.7	9.111
650	8.483	35.131	198.9	8.413
700	8.047	35.147	197.8	7.974
750	7.744	35.141	199.4	7.667
800	6.873	35.072	207.1	6.795
850	6.547	35.097	215.6	6.466
900	6.101	35.082	224.1	6.018
950	5.999	35.106	228.0	5.912
1000	5.811	35.101	232.8	5.720
1100	5.294	35.063	243.4	5.198
1200	4.941	35.031	251.6	4.839
1300	4.503	34.980	260.7	4.396
1400	4.176	34.941	268.4	4.063
1500	4.039	34.931	271.4	3.919
1600	3.881	34.917	275.0	3.753
1700	3.755	34.906	278.7	3.620
1800	3.687	34.904	279.6	3.543
1900	3.663	34.908	278.3	3.510
2000	3.631	34.913	276.4	3.469
2100	3.593	34.920	274.2	3.422
2200	3.542	34.925	272.5	3.362
2300	3.468	34.928	271.9	3.280
2400	3.397	34.931	271.1	3.200
2500	3.329	34.933	270.9	3.123
2600	3.261	34.936	270.7	3.046
2700	3.189	34.938	270.4	2.966
2800	3.126	34.941	269.0	2.894
2900	3.061	34.942	267.6	2.819
3000	3.003	34.943	265.6	2.752
3100	2.946	34.943	263.1	2.686
3200	2.882	34.941	259.9	2.613
3300	2.824	34.938	257.3	2.545
3400	2.771	34.934	254.9	2.483
3500	2.738	34.931	252.8	2.440
3600	2.689	34.926	250.1	2.380
3700	2.651	34.921	248.0	2.333
3800	2.615	34.917	246.2	2.287
3900	2.601	34.915	245.1	2.261
4000	2.588	34.913	244.2	2.238
4100	2.589	34.912	243.8	2.226
4200	2.589	34.910	243.5	2.214
4250	2.584	34.910	243.4	2.204



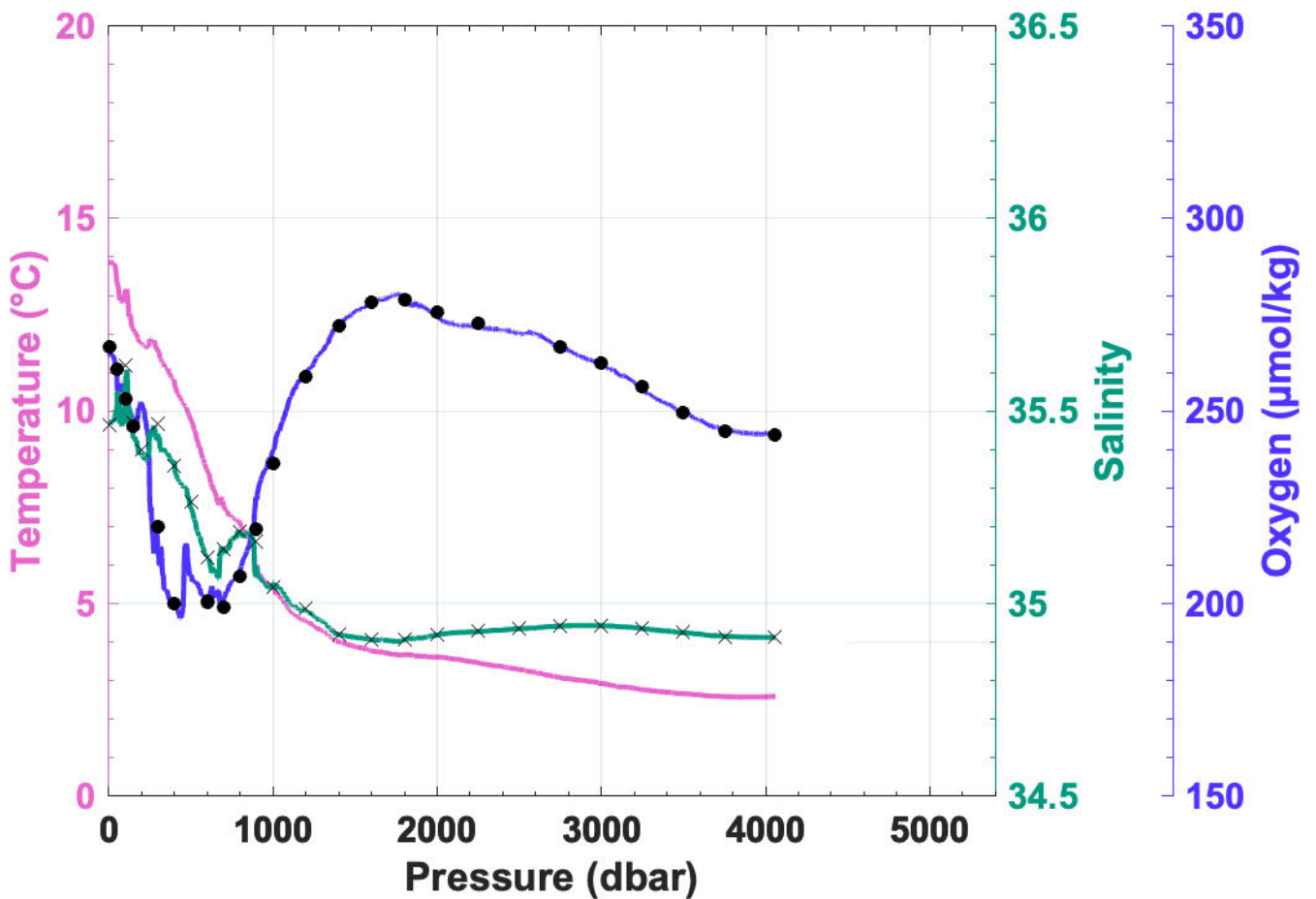
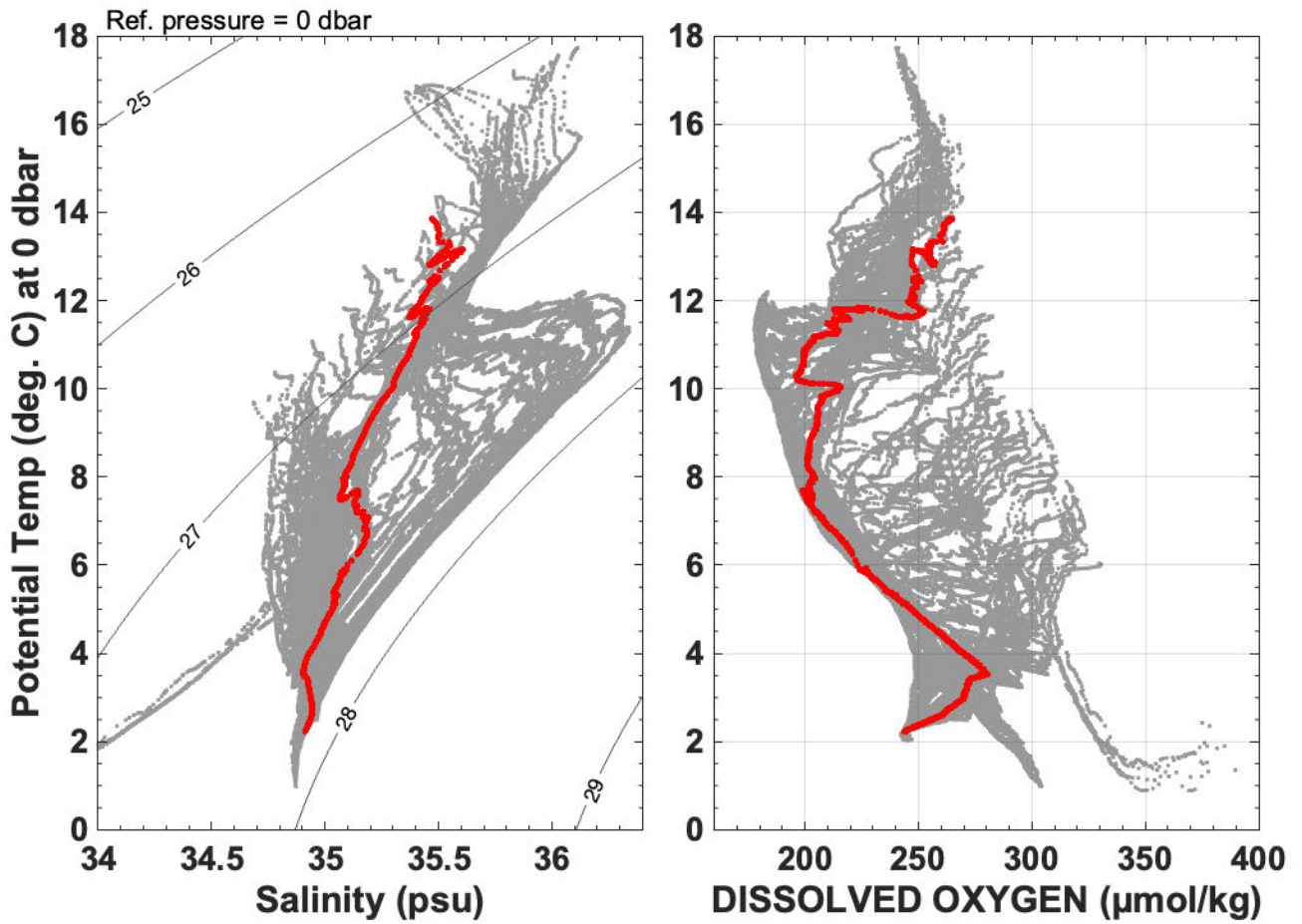
# STATION 41



Cruise : BOCATS 2021  
 Station : 42  
 Date : 10/06/2021  
 Depth : 4002  
 Position : N 49 54.31  
 W 22 18.68

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	13.848	35.471	264.5	13.848
10	13.849	35.471	264.5	13.848
20	13.851	35.471	264.7	13.848
30	13.848	35.474	263.8	13.844
40	13.735	35.491	261.3	13.729
50	13.331	35.518	257.9	13.324
100	13.089	35.558	252.3	13.075
150	12.090	35.430	248.3	12.071
200	11.768	35.389	251.9	11.742
250	11.871	35.447	226.3	11.839
300	11.510	35.421	213.5	11.472
350	11.118	35.392	203.4	11.074
400	10.725	35.360	199.4	10.676
450	10.231	35.305	198.4	10.177
500	9.762	35.247	207.4	9.704
550	9.071	35.175	204.0	9.010
600	8.440	35.120	201.3	8.376
650	7.867	35.090	201.5	7.800
700	7.515	35.131	201.1	7.444
750	7.250	35.169	205.8	7.175
800	7.074	35.185	208.3	6.995
850	6.756	35.184	214.9	6.674
900	6.016	35.097	227.0	5.934
950	5.598	35.051	234.7	5.514
1000	5.410	35.052	239.7	5.322
1100	4.828	35.003	252.9	4.736
1200	4.555	34.983	259.9	4.456
1300	4.300	34.954	265.4	4.194
1400	4.011	34.920	272.7	3.900
1500	3.879	34.912	276.0	3.760
1600	3.771	34.906	278.4	3.645
1700	3.714	34.905	279.2	3.579
1800	3.676	34.907	279.0	3.533
1900	3.634	34.911	277.3	3.482
2000	3.611	34.919	274.6	3.449
2100	3.564	34.924	272.6	3.394
2200	3.498	34.927	272.0	3.319
2300	3.421	34.929	271.5	3.233
2400	3.362	34.932	271.0	3.166
2500	3.286	34.935	270.2	3.081
2600	3.215	34.937	270.2	3.002
2700	3.122	34.941	267.5	2.900
2800	3.052	34.943	265.9	2.821
2900	2.998	34.943	263.7	2.758
3000	2.929	34.943	261.9	2.680
3100	2.839	34.940	259.4	2.582
3200	2.802	34.938	257.5	2.535
3300	2.739	34.933	254.2	2.462
3400	2.702	34.929	251.8	2.415
3500	2.667	34.925	249.5	2.370
3600	2.632	34.921	247.6	2.326
3700	2.598	34.917	245.8	2.281
3800	2.584	34.914	244.9	2.256
3900	2.579	34.913	244.1	2.240
4000	2.584	34.912	244.2	2.234
4050	2.591	34.912	244.2	2.234

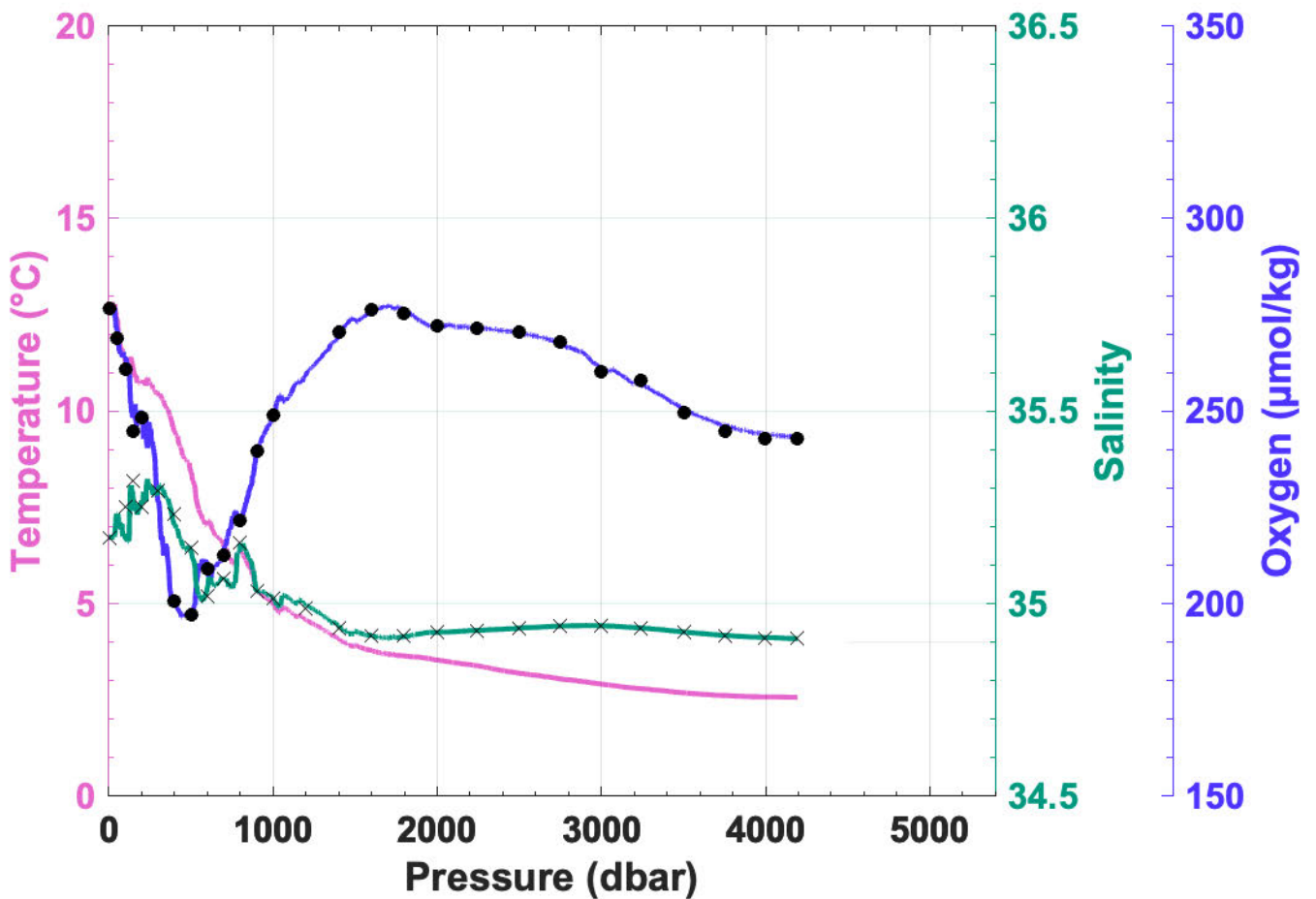
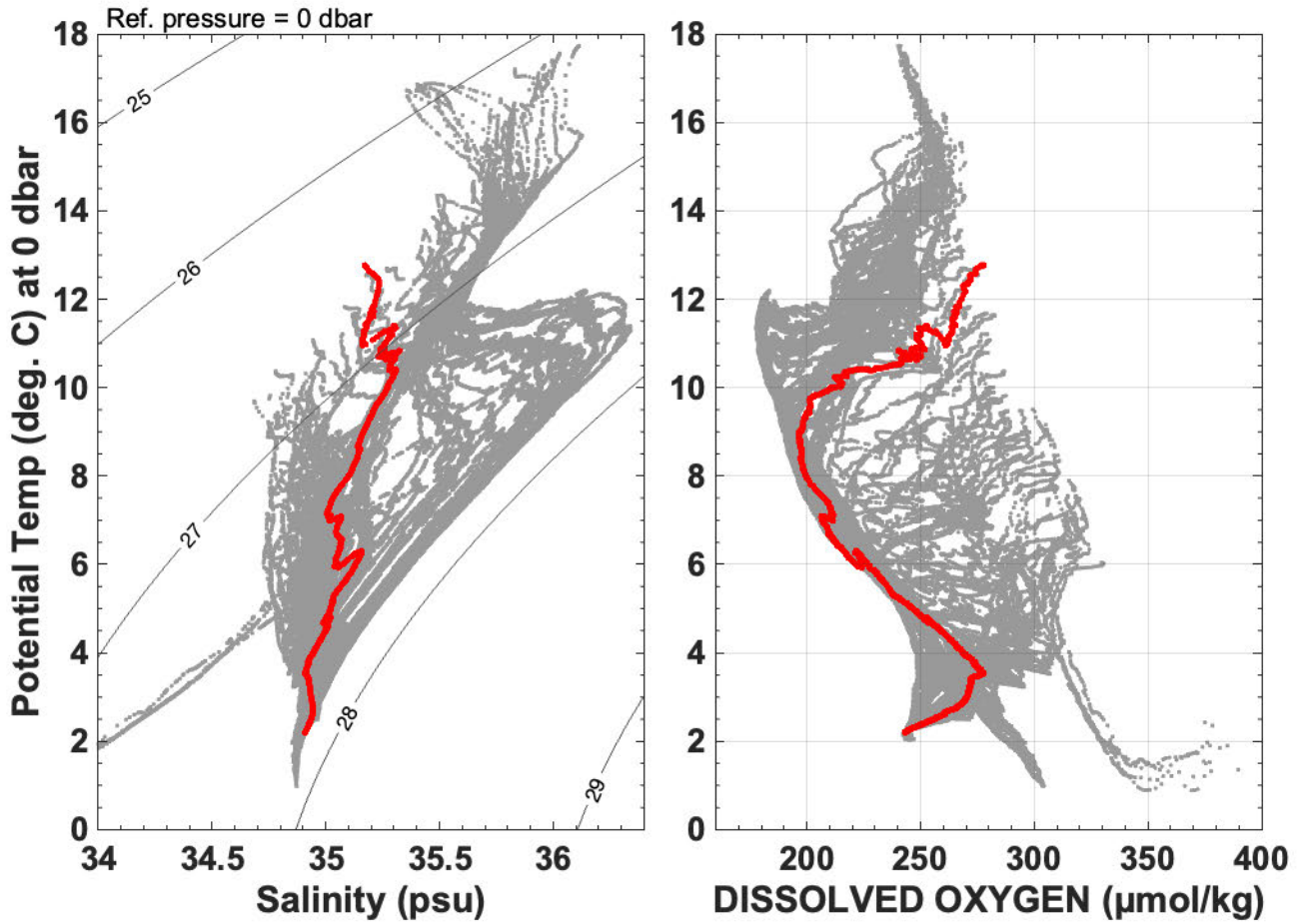
# STATION 42



Cruise : BOCATS 2021  
 Station : 43  
 Date : 11/06/2021  
 Depth : 4133  
 Position : N 50 16.64  
 W 22 36.05

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	12.769	35.172	277.8	12.769
10	12.769	35.173	277.3	12.768
20	12.771	35.173	277.5	12.768
30	12.772	35.173	276.8	12.768
40	12.619	35.197	274.1	12.614
50	12.382	35.233	271.1	12.375
100	11.290	35.170	264.0	11.277
150	11.051	35.264	249.9	11.033
200	10.780	35.269	247.1	10.755
250	10.724	35.302	244.4	10.693
300	10.448	35.296	226.2	10.412
350	10.083	35.274	214.8	10.042
400	9.471	35.205	200.8	9.426
450	8.857	35.151	197.0	8.808
500	8.430	35.136	197.3	8.376
550	7.403	35.020	209.8	7.348
600	7.091	35.042	209.6	7.033
650	6.768	35.046	210.1	6.707
700	6.489	35.065	213.7	6.423
750	6.086	35.046	221.4	6.018
800	6.379	35.155	221.7	6.305
850	5.968	35.119	228.3	5.891
900	5.350	35.033	239.4	5.273
950	5.171	35.028	244.4	5.090
1000	5.015	35.017	248.3	4.931
1100	4.807	35.012	253.9	4.715
1200	4.578	34.997	259.2	4.479
1300	4.343	34.970	264.2	4.237
1400	4.089	34.943	269.0	3.977
1500	3.917	34.928	273.5	3.798
1600	3.790	34.918	275.3	3.664
1700	3.693	34.911	277.3	3.559
1800	3.644	34.914	276.2	3.501
1900	3.606	34.922	273.3	3.454
2000	3.537	34.926	272.3	3.376
2100	3.470	34.927	272.0	3.301
2200	3.413	34.930	271.6	3.236
2300	3.344	34.932	271.3	3.158
2400	3.262	34.934	270.8	3.067
2500	3.195	34.937	270.3	2.992
2600	3.141	34.939	269.6	2.929
2700	3.081	34.941	268.4	2.860
2800	3.025	34.942	266.5	2.794
2900	2.971	34.943	264.8	2.731
3000	2.909	34.942	261.2	2.660
3100	2.861	34.941	259.8	2.603
3200	2.807	34.938	257.3	2.540
3300	2.769	34.935	255.7	2.491
3400	2.728	34.931	253.2	2.441
3500	2.687	34.927	250.6	2.390
3600	2.651	34.923	248.6	2.344
3700	2.624	34.919	247.0	2.307
3800	2.603	34.916	245.7	2.275
3900	2.587	34.914	244.6	2.248
4000	2.579	34.912	244.0	2.228
4100	2.576	34.911	243.6	2.214
4195	2.569	34.909	243.3	2.196
4195	2.569	34.909	243.3	2.196

# STATION 43

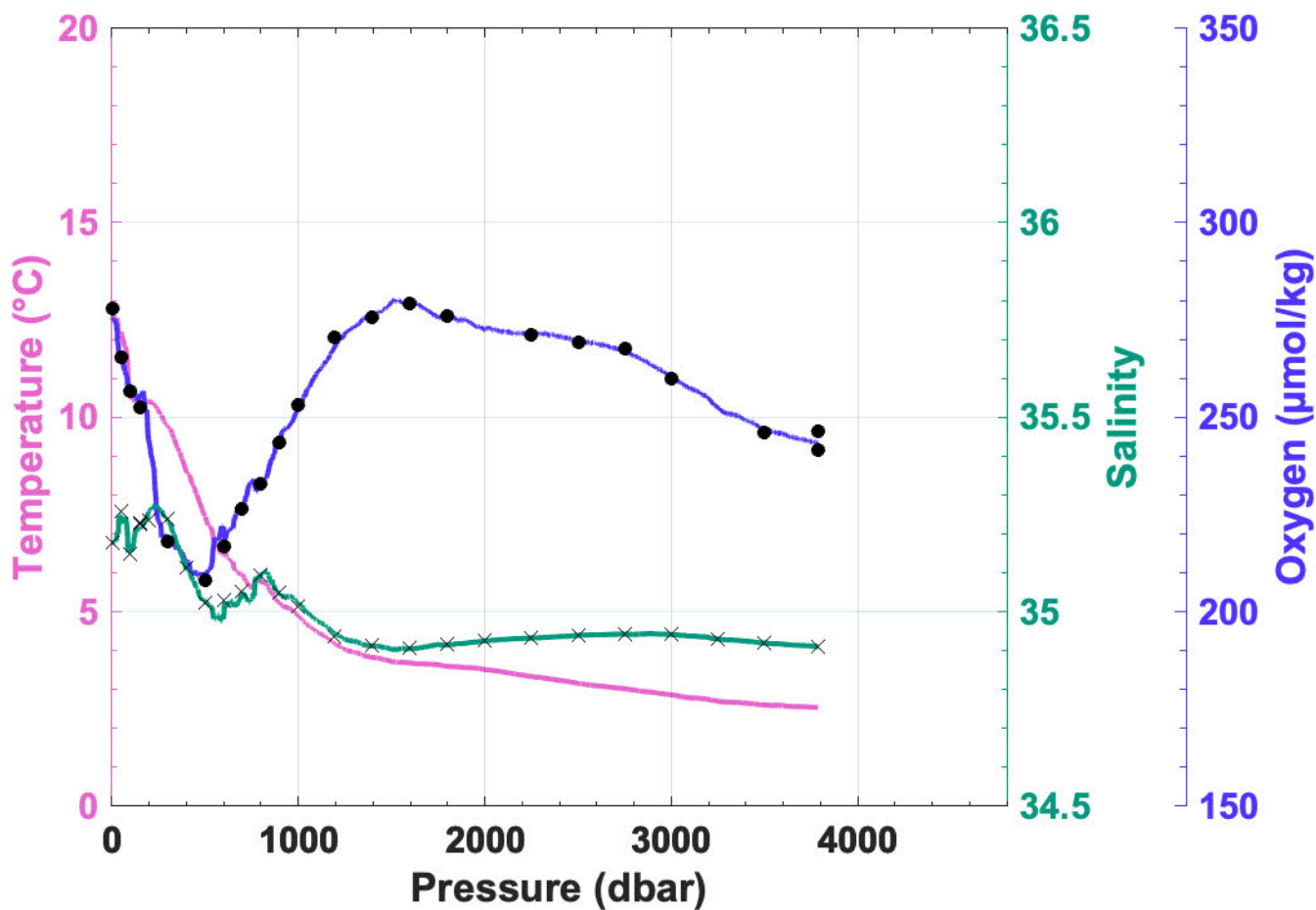
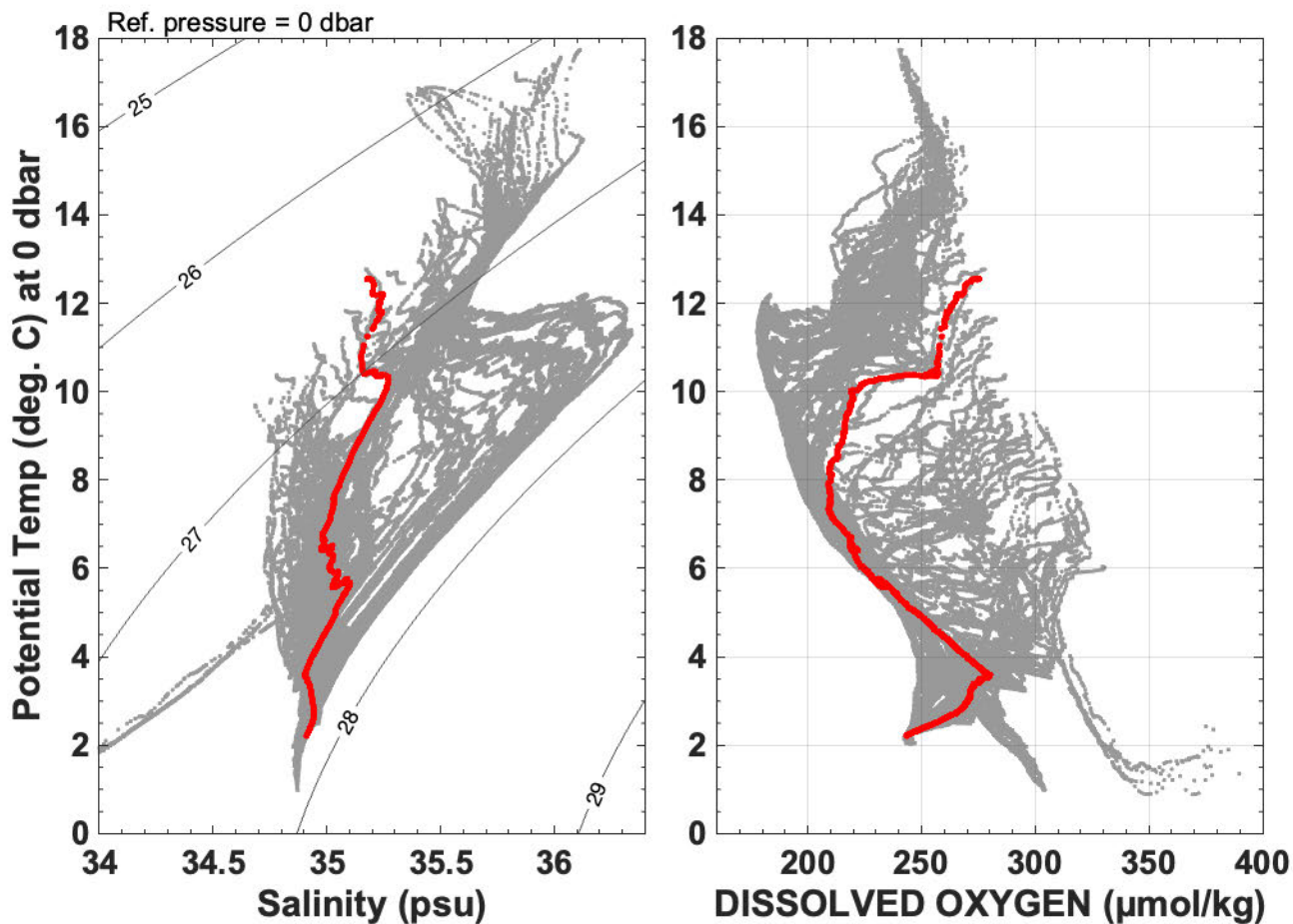


Cruise : BOCATS 2021  
 Station : 44  
 Date : 11/06/2021  
 Depth : 3735  
 Position : N 50 38.40  
           W 22 54.04

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	12.547	35.178	275.4	12.547
10	12.544	35.178	275.1	12.542
20	12.542	35.180	274.6	12.540
30	12.462	35.205	270.2	12.458
40	12.212	35.246	266.1	12.207
50	12.168	35.244	265.4	12.162
100	10.651	35.155	256.9	10.639
150	10.400	35.213	255.5	10.382
200	10.398	35.257	243.6	10.374
250	10.162	35.266	223.2	10.133
300	9.761	35.233	218.7	9.727
350	9.222	35.173	216.2	9.183
400	8.597	35.109	213.3	8.554
450	8.048	35.063	210.0	8.002
500	7.445	35.028	209.7	7.395
550	6.777	34.982	218.4	6.725
600	6.464	34.985	221.5	6.409
650	6.240	35.026	221.6	6.181
700	5.960	35.051	226.7	5.897
750	5.649	35.032	233.5	5.584
800	5.766	35.096	232.8	5.695
850	5.515	35.078	238.2	5.441
900	5.238	35.048	243.6	5.161
950	5.094	35.039	247.6	5.014
1000	4.886	35.022	252.4	4.803
1100	4.483	34.977	261.4	4.395
1200	4.154	34.942	268.5	4.060
1300	3.958	34.923	273.1	3.856
1400	3.825	34.912	276.5	3.716
1500	3.717	34.903	279.7	3.600
1600	3.679	34.906	279.1	3.554
1700	3.651	34.911	277.5	3.517
1800	3.598	34.915	276.2	3.455
1900	3.563	34.919	274.9	3.411
2000	3.511	34.925	272.6	3.351
2100	3.447	34.928	272.1	3.278
2200	3.369	34.931	271.5	3.192
2300	3.304	34.933	271.5	3.118
2400	3.235	34.936	270.8	3.040
2500	3.160	34.939	269.7	2.957
2600	3.097	34.941	268.9	2.885
2700	3.045	34.942	267.7	2.824
2800	2.983	34.942	265.8	2.753
2900	2.932	34.943	263.1	2.693
3000	2.862	34.941	260.4	2.614
3100	2.786	34.937	257.3	2.530
3200	2.744	34.934	254.8	2.478
3300	2.675	34.928	250.9	2.400
3400	2.648	34.924	249.2	2.362
3500	2.601	34.919	246.7	2.306
3600	2.584	34.917	245.7	2.279
3700	2.557	34.913	244.3	2.241
3750	2.546	34.912	243.8	2.225



# STATION 44

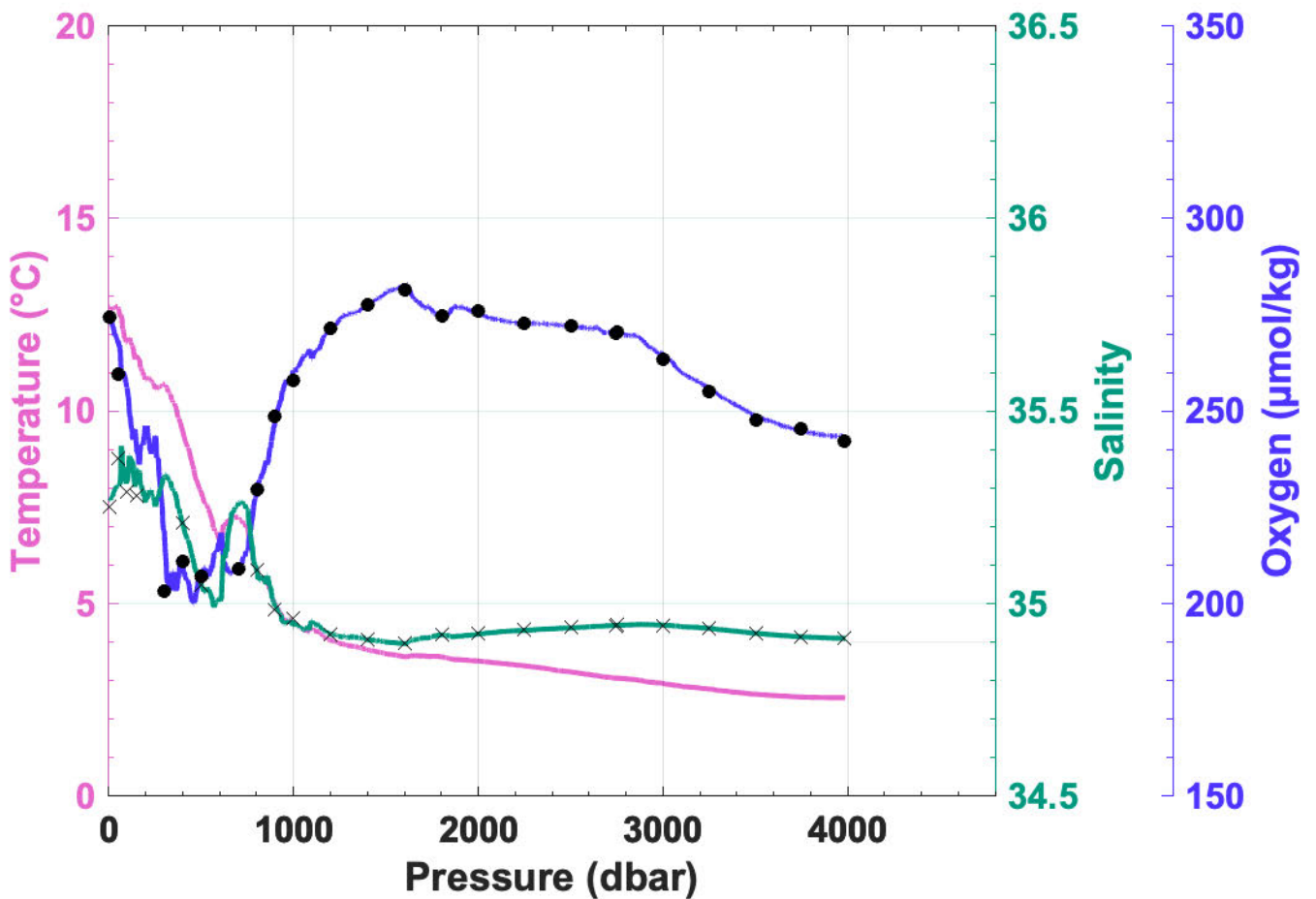
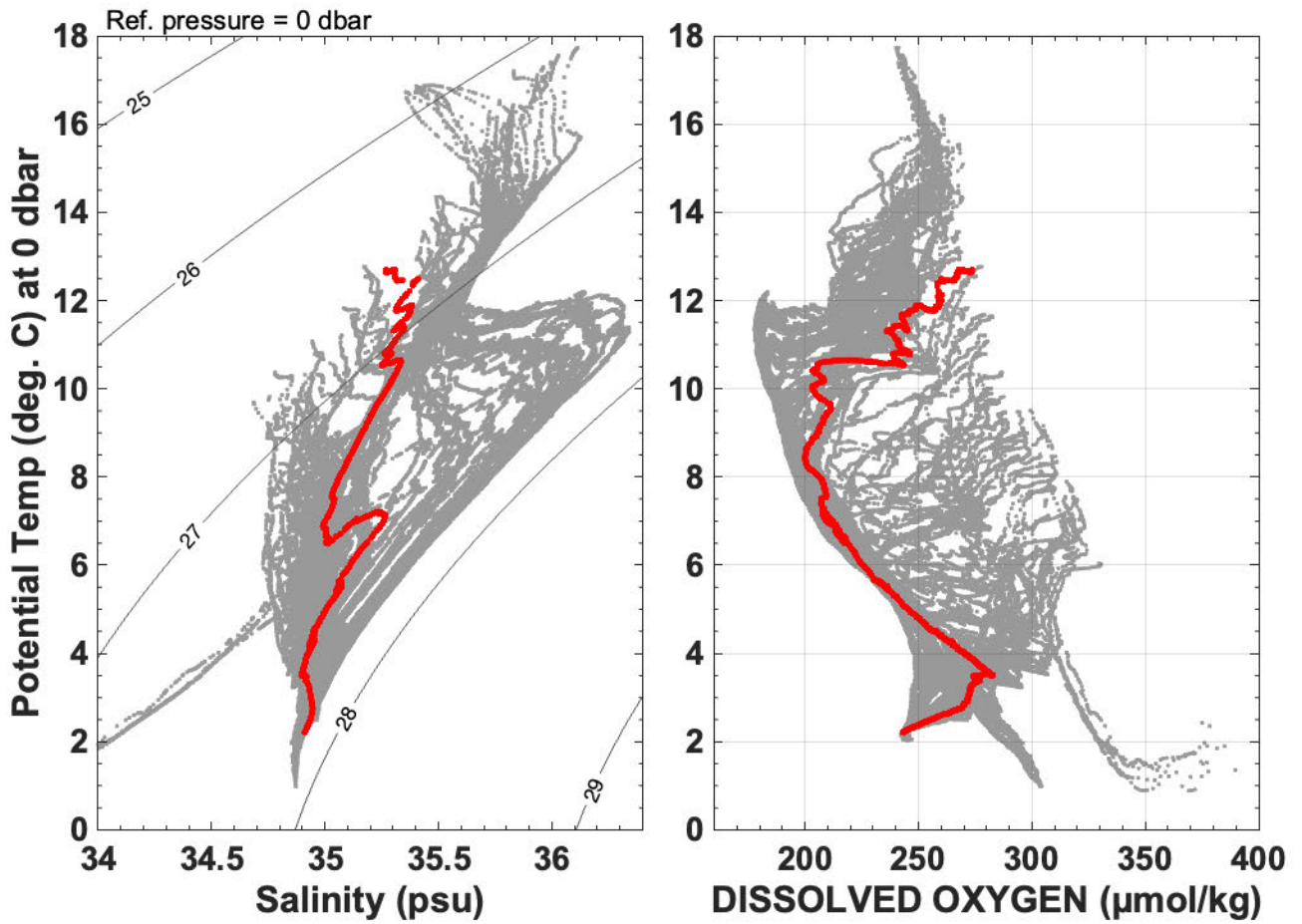




Cruise : BOCATS 2021  
 Station : 45  
 Date : 11/06/2021  
 Depth : 3928  
 Position : N 51 1.73  
           W 23 11.54

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	12.691	35.270	273.6	12.691
10	12.644	35.273	273.4	12.642
20	12.651	35.280	272.1	12.648
30	12.683	35.293	270.1	12.678
40	12.705	35.304	269.1	12.700
50	12.683	35.308	267.7	12.677
100	11.796	35.320	255.8	11.783
150	11.442	35.346	240.4	11.423
200	10.832	35.269	245.3	10.807
250	10.582	35.253	243.3	10.552
300	10.690	35.328	219.0	10.653
350	10.212	35.292	208.1	10.170
400	9.480	35.207	209.6	9.434
450	8.686	35.127	200.6	8.638
500	7.905	35.050	208.2	7.853
550	7.317	35.027	208.2	7.263
600	6.589	35.006	216.7	6.533
650	7.191	35.194	208.2	7.127
700	7.236	35.256	209.1	7.167
750	6.970	35.246	213.8	6.897
800	5.898	35.087	228.6	5.826
850	5.512	35.051	237.0	5.438
900	4.978	34.993	247.5	4.903
950	4.587	34.949	256.7	4.510
1000	4.447	34.941	260.6	4.368
1100	4.380	34.956	263.6	4.292
1200	4.041	34.920	271.7	3.947
1300	3.908	34.912	275.3	3.806
1400	3.797	34.906	277.7	3.688
1500	3.698	34.900	280.8	3.581
1600	3.628	34.897	282.5	3.503
1700	3.646	34.911	277.3	3.512
1800	3.618	34.919	274.4	3.475
1900	3.543	34.916	276.9	3.392
2000	3.512	34.921	275.7	3.352
2100	3.462	34.926	273.8	3.293
2200	3.409	34.930	272.9	3.232
2300	3.355	34.932	272.8	3.168
2400	3.287	34.934	272.5	3.092
2500	3.226	34.937	271.9	3.022
2600	3.159	34.940	271.4	2.946
2700	3.090	34.943	270.4	2.868
2800	3.044	34.945	269.9	2.813
2900	2.983	34.946	267.9	2.743
3000	2.932	34.945	264.9	2.682
3100	2.854	34.940	260.1	2.596
3200	2.809	34.938	257.5	2.541
3300	2.747	34.933	254.1	2.471
3400	2.698	34.928	251.5	2.412
3500	2.649	34.923	248.9	2.353
3600	2.615	34.919	247.2	2.309
3700	2.585	34.915	245.4	2.269
3800	2.569	34.913	244.3	2.242
3900	2.561	34.911	243.7	2.222
3950	2.559	34.910	243.5	2.215

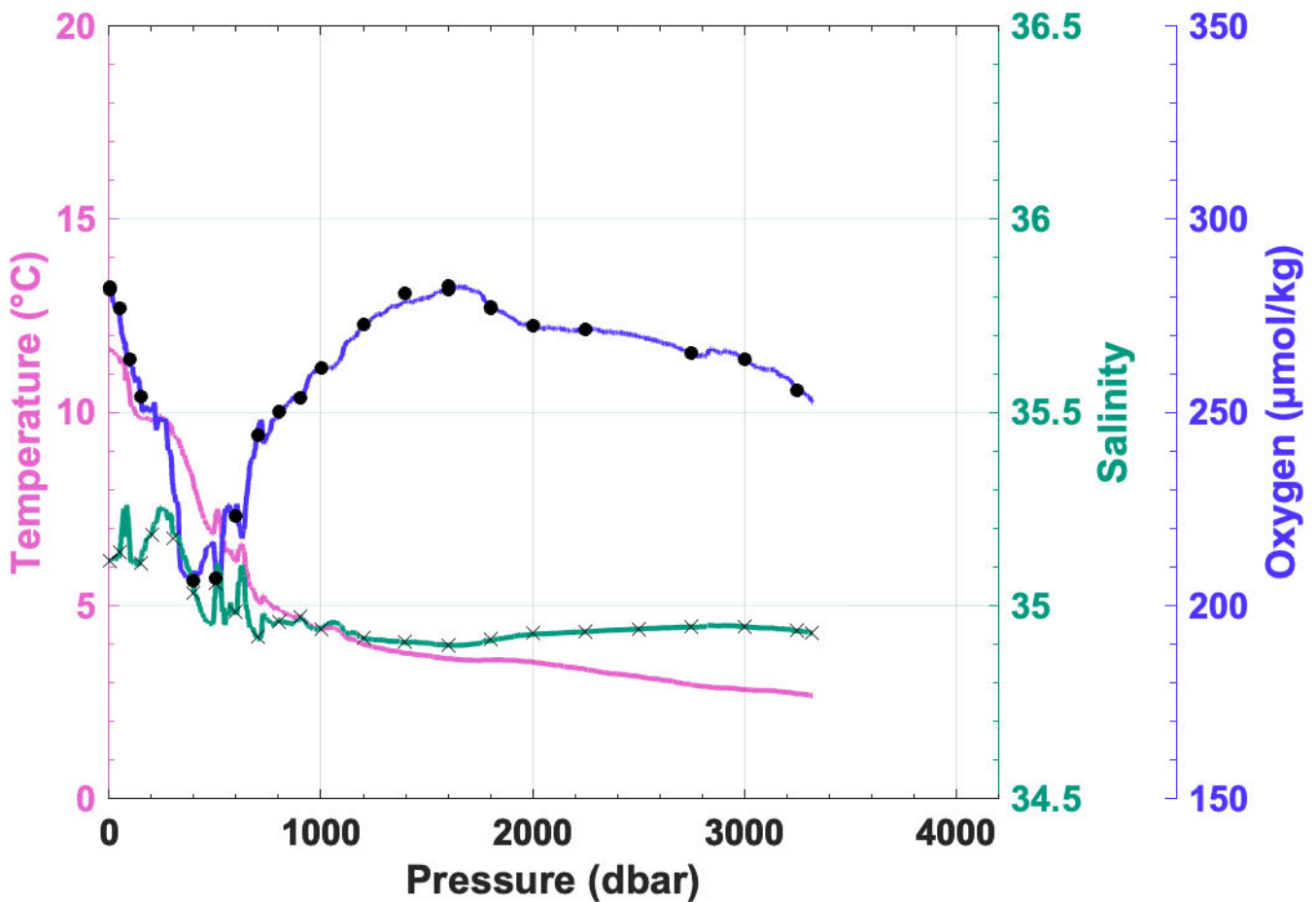
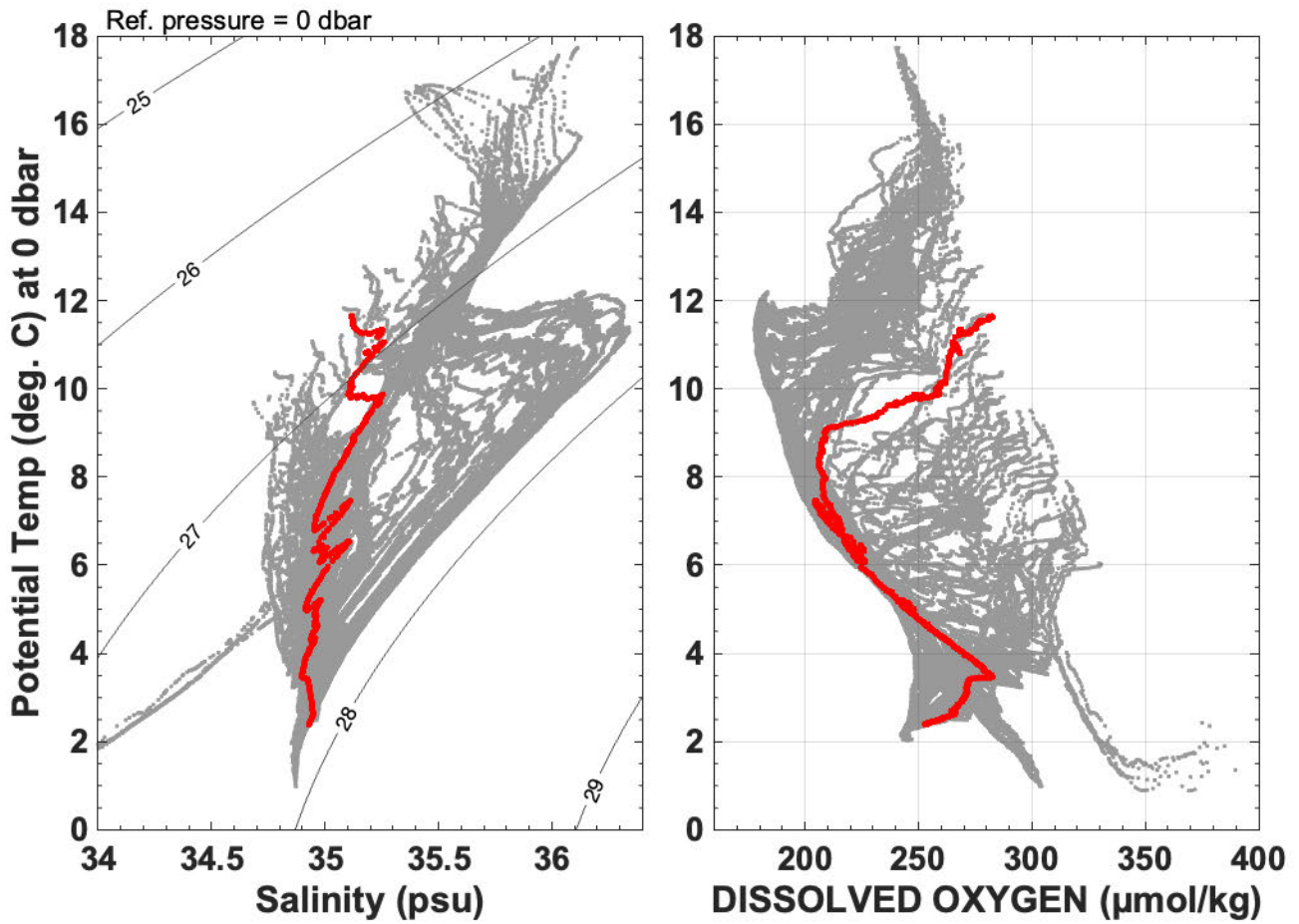
# STATION 45



Cruise : BOCATS 2021  
 Station : 46  
 Date : 11/06/2021  
 Depth : 3282  
 Position : N 51 23.94  
           W 23 28.83

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	11.630	35.118	282.5	11.630
10	11.630	35.118	281.4	11.629
20	11.548	35.122	278.6	11.545
30	11.527	35.121	277.0	11.523
40	11.483	35.122	276.0	11.478
50	11.374	35.135	275.4	11.367
100	10.311	35.132	262.2	10.299
150	9.827	35.121	253.1	9.810
200	9.800	35.188	250.8	9.777
250	9.866	35.249	248.0	9.837
300	9.408	35.188	231.5	9.374
350	8.894	35.122	208.7	8.856
400	8.129	35.040	207.8	8.087
450	7.234	34.969	212.2	7.190
500	7.125	35.023	211.6	7.076
550	6.451	34.973	224.8	6.401
600	6.137	34.978	225.5	6.083
650	5.861	34.990	228.6	5.804
700	5.112	34.915	245.3	5.054
750	5.089	34.962	244.3	5.027
800	4.918	34.963	248.5	4.853
850	4.774	34.955	252.2	4.705
900	4.702	34.964	254.1	4.629
950	4.486	34.943	259.6	4.411
1000	4.398	34.941	261.9	4.318
1100	4.305	34.947	264.7	4.217
1200	3.996	34.915	272.7	3.902
1300	3.877	34.910	275.7	3.776
1400	3.766	34.905	278.9	3.658
1500	3.707	34.903	279.8	3.590
1600	3.628	34.898	282.3	3.503
1700	3.591	34.900	281.8	3.458
1800	3.591	34.909	278.0	3.449
1900	3.583	34.919	274.4	3.432
2000	3.542	34.926	271.8	3.381
2100	3.462	34.928	271.9	3.293
2200	3.396	34.931	271.2	3.219
2300	3.307	34.934	271.4	3.121
2400	3.228	34.937	270.6	3.034
2500	3.167	34.939	269.6	2.964
2600	3.086	34.942	268.4	2.875
2700	2.997	34.944	266.4	2.778
2800	2.913	34.946	264.8	2.685
2900	2.872	34.948	265.7	2.635
3000	2.831	34.946	263.5	2.584
3100	2.803	34.942	261.1	2.546
3200	2.756	34.939	258.9	2.490
3300	2.698	34.933	254.3	2.423
3300	2.698	34.933	254.3	2.423

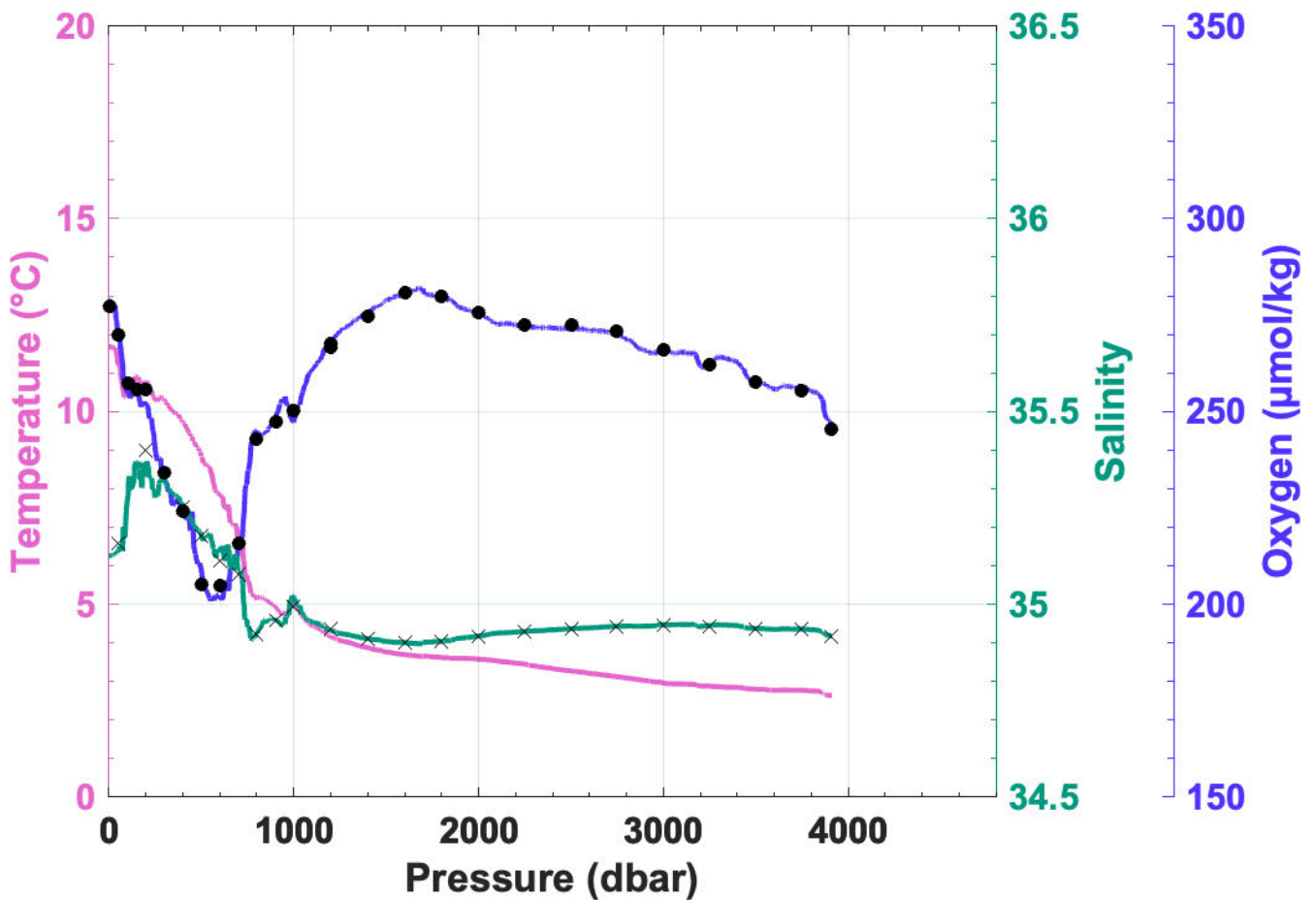
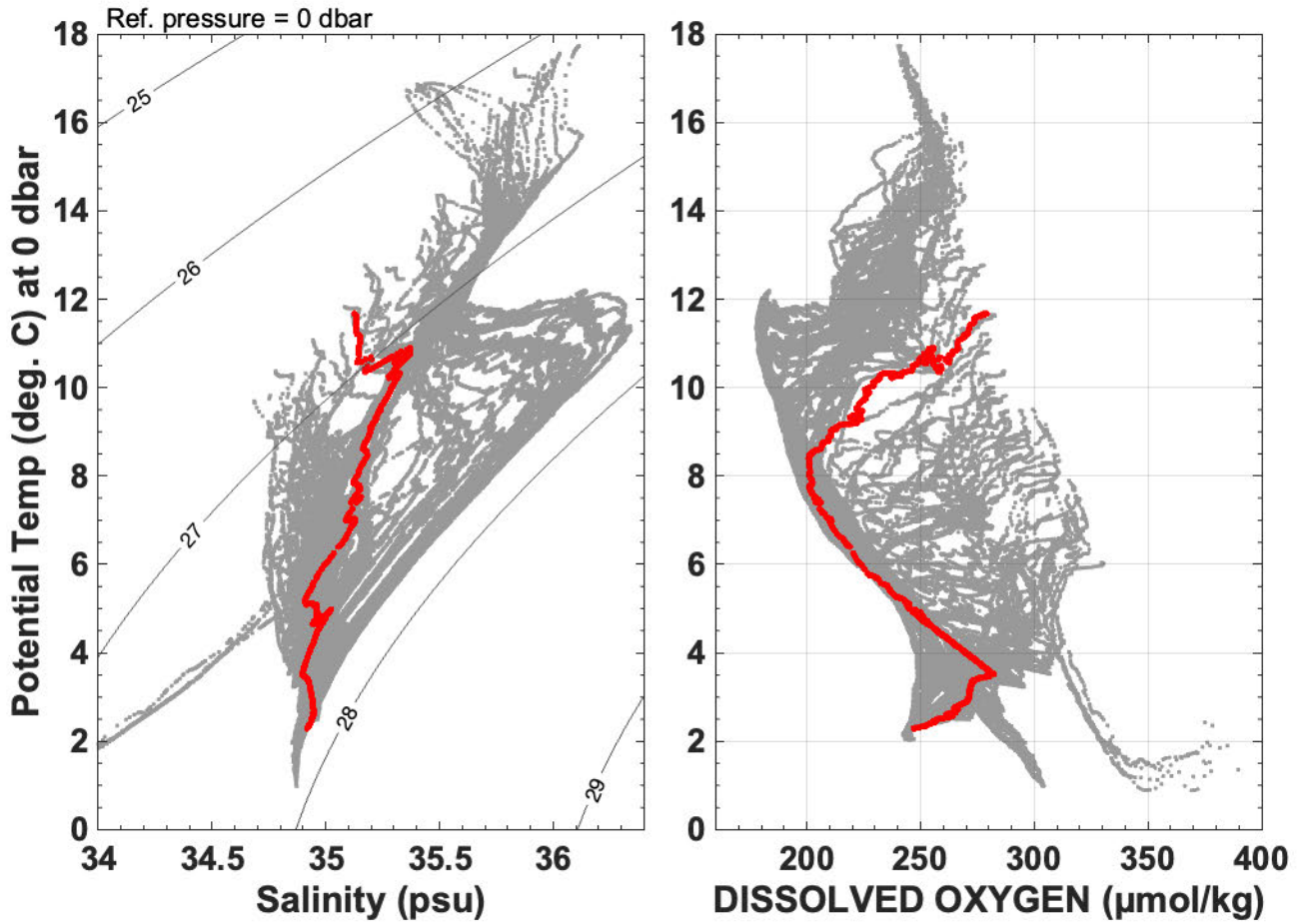
# STATION 46



Cruise : BOCATS 2021  
 Station : 47  
 Date : 12/06/2021  
 Depth : 3857  
 Position : N 51 46.22  
 W 23 46.68

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	11.676	35.126	278.7	11.676
10	11.673	35.126	278.3	11.672
20	11.667	35.127	278.4	11.664
30	11.646	35.131	277.4	11.642
40	11.575	35.134	273.6	11.570
50	11.217	35.138	270.6	11.210
100	10.640	35.269	255.7	10.627
150	10.895	35.368	255.1	10.877
200	10.696	35.346	252.0	10.671
250	10.288	35.280	240.4	10.258
300	10.310	35.321	232.2	10.275
350	9.985	35.284	225.7	9.944
400	9.735	35.259	224.1	9.689
450	9.334	35.222	224.1	9.283
500	8.841	35.178	208.9	8.786
550	8.457	35.176	200.8	8.398
600	7.859	35.143	201.8	7.797
650	7.469	35.136	204.3	7.403
700	6.672	35.087	215.1	6.605
750	5.624	34.943	233.7	5.559
800	5.180	34.925	244.6	5.113
850	5.107	34.956	244.9	5.036
900	4.947	34.964	248.4	4.873
950	4.759	34.954	252.9	4.681
1000	5.037	35.018	247.4	4.952
1100	4.456	34.955	260.9	4.367
1200	4.153	34.932	268.4	4.058
1300	4.012	34.921	272.3	3.910
1400	3.878	34.911	275.9	3.768
1500	3.763	34.903	278.9	3.645
1600	3.701	34.901	280.2	3.576
1700	3.655	34.900	281.5	3.521
1800	3.618	34.903	279.8	3.475
1900	3.600	34.912	277.0	3.448
2000	3.578	34.918	274.9	3.417
2100	3.530	34.925	272.6	3.360
2200	3.475	34.928	272.5	3.296
2300	3.404	34.931	271.9	3.216
2400	3.339	34.934	271.7	3.143
2500	3.272	34.937	271.6	3.068
2600	3.206	34.939	271.2	2.993
2700	3.154	34.942	270.7	2.931
2800	3.090	34.944	268.8	2.858
2900	3.023	34.944	265.7	2.782
3000	2.960	34.947	266.3	2.710
3100	2.936	34.948	265.3	2.676
3200	2.885	34.942	261.6	2.616
3300	2.865	34.947	264.1	2.585
3400	2.846	34.945	262.9	2.556
3500	2.800	34.938	257.9	2.500
3600	2.774	34.935	255.8	2.463
3700	2.773	34.936	256.4	2.451
3800	2.754	34.934	255.1	2.421
3900	2.635	34.919	247.5	2.295
3900	2.635	34.919	247.5	2.295

# STATION 47

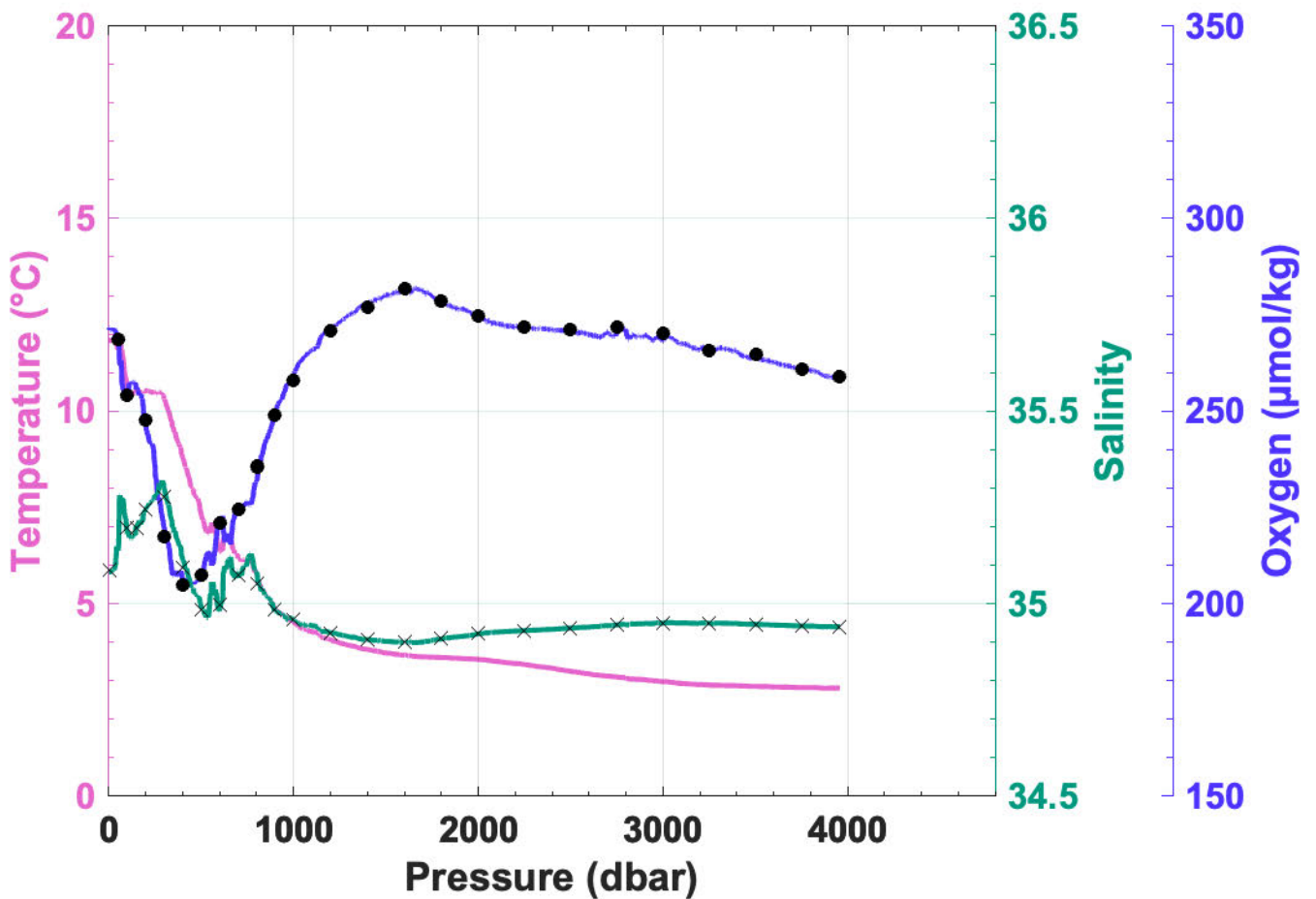
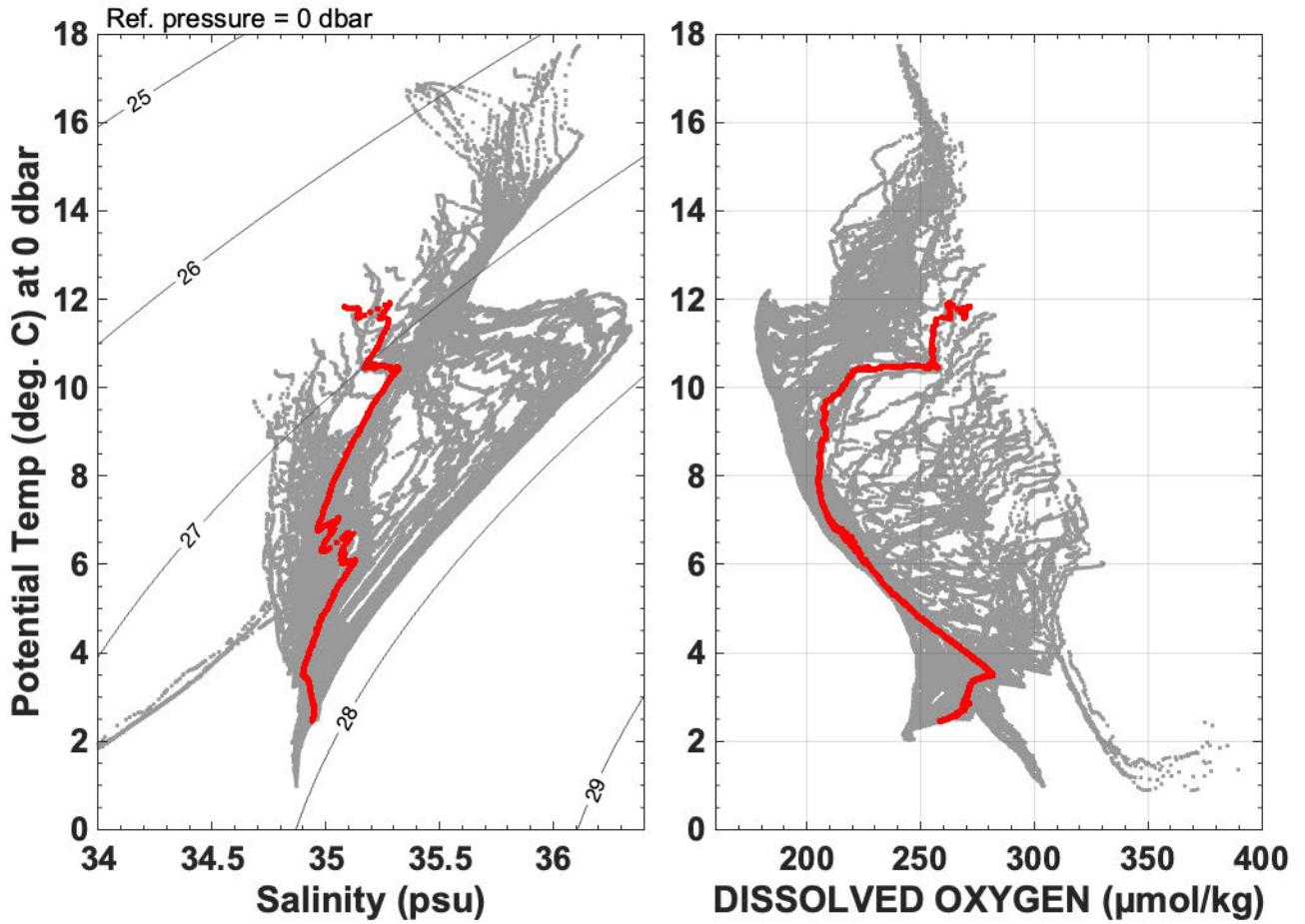


Cruise : BOCATS 2021  
 Station : 48  
 Date : 12/06/2021  
 Depth : 3903  
 Position : N 52 8.85  
           W 24 4.30

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	11.830	35.083	271.5	11.830
10	11.829	35.083	271.2	11.828
20	11.822	35.085	271.5	11.820
30	11.819	35.088	271.1	11.815
40	11.800	35.125	269.9	11.795
50	11.589	35.140	269.5	11.582
100	10.600	35.184	255.3	10.588
150	10.516	35.198	256.0	10.498
200	10.526	35.245	246.4	10.502
250	10.505	35.281	235.7	10.475
300	10.311	35.296	219.7	10.275
350	9.554	35.198	207.3	9.514
400	8.794	35.114	206.4	8.751
450	8.010	35.043	205.3	7.964
500	7.315	34.993	207.8	7.266
550	7.002	35.026	211.3	6.949
600	6.364	34.984	221.4	6.309
650	6.730	35.115	216.4	6.669
700	6.168	35.066	224.4	6.105
750	6.113	35.110	226.5	6.045
800	5.773	35.082	231.8	5.702
850	5.223	35.020	242.4	5.151
900	4.857	34.979	249.9	4.783
950	4.673	34.970	255.0	4.596
1000	4.508	34.959	259.5	4.427
1100	4.272	34.943	265.9	4.185
1200	4.060	34.925	271.1	3.966
1300	3.915	34.914	275.0	3.814
1400	3.807	34.907	278.0	3.698
1500	3.720	34.902	280.1	3.603
1600	3.668	34.901	281.0	3.543
1700	3.617	34.900	281.4	3.483
1800	3.599	34.908	278.4	3.456
1900	3.578	34.914	276.4	3.426
2000	3.553	34.921	274.3	3.392
2100	3.501	34.926	272.6	3.332
2200	3.443	34.929	271.8	3.265
2300	3.386	34.931	271.6	3.199
2400	3.325	34.933	271.2	3.129
2500	3.245	34.936	270.5	3.041
2600	3.175	34.939	269.8	2.962
2700	3.120	34.943	270.5	2.898
2800	3.062	34.945	270.7	2.831
2900	3.025	34.948	269.5	2.785
3000	2.976	34.949	268.1	2.726
3100	2.928	34.950	267.5	2.668
3200	2.901	34.950	266.1	2.631
3300	2.881	34.949	266.3	2.601
3400	2.870	34.948	265.5	2.580
3500	2.852	34.946	263.6	2.551
3600	2.839	34.945	262.5	2.527
3700	2.827	34.943	261.4	2.503
3800	2.822	34.942	260.5	2.488
3900	2.808	34.941	259.0	2.463
3950	2.811	34.940	258.8	2.460



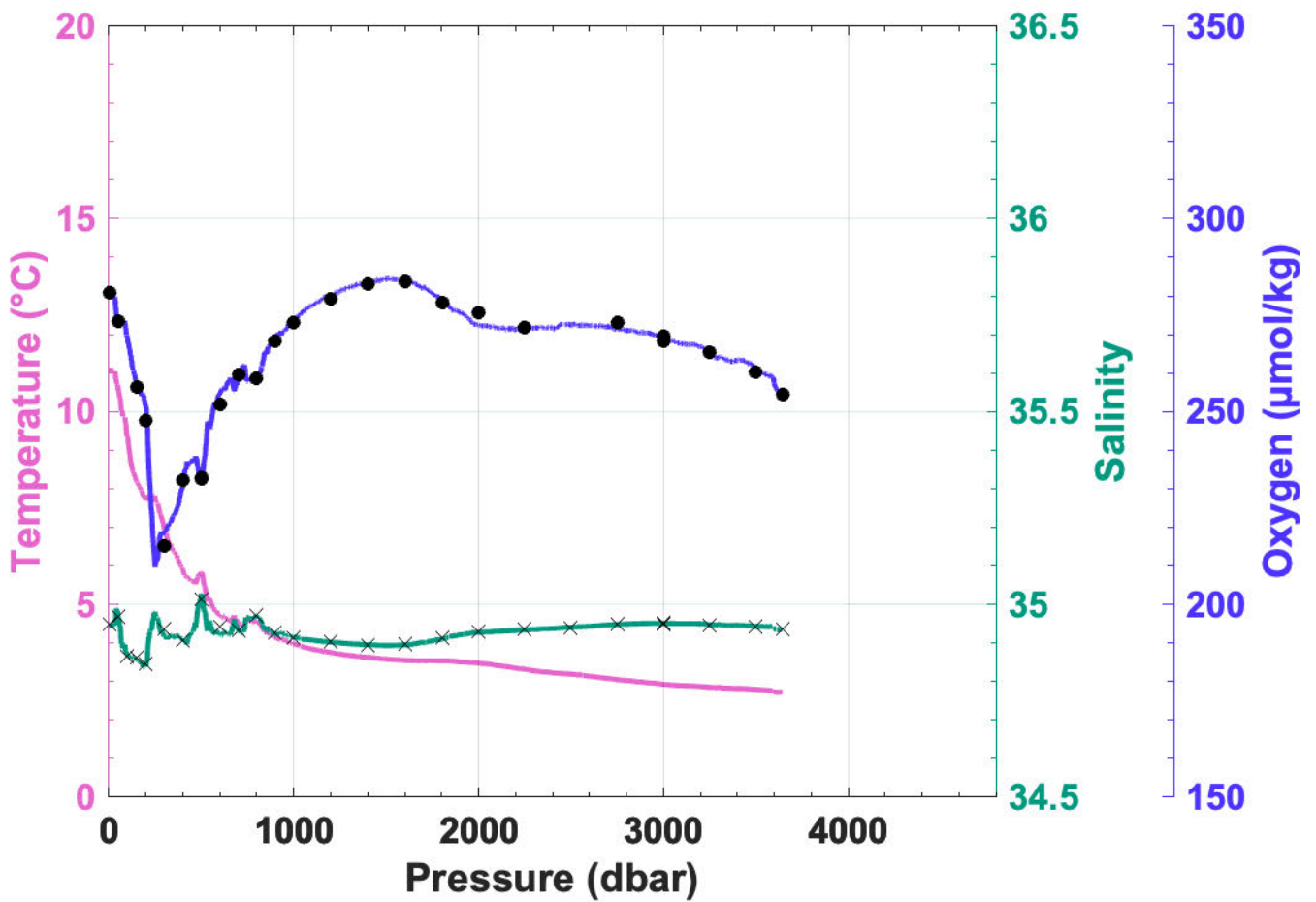
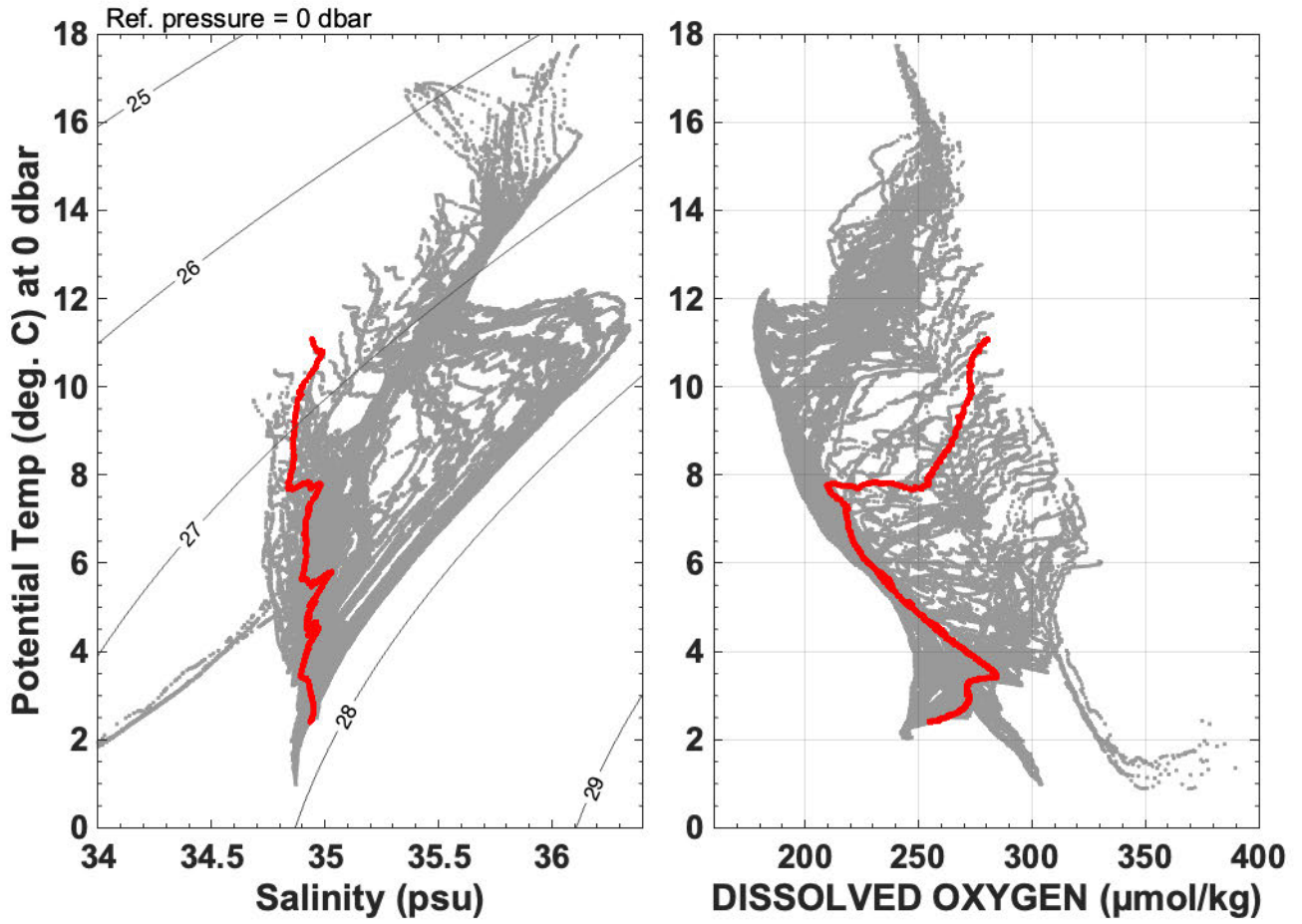
# STATION 48



Cruise : BOCATS 2021  
Station : 49  
Date : 12/06/2021  
Depth : 3600  
Position : N 52 31.22  
W 24 21.69

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	11.071	34.944	280.5	11.071
10	11.071	34.944	280.3	11.070
20	11.065	34.945	279.9	11.062
30	11.040	34.946	279.8	11.037
40	10.805	34.989	275.4	10.800
50	10.610	34.971	273.4	10.604
100	9.334	34.870	269.2	9.323
150	8.177	34.857	257.6	8.162
200	7.710	34.839	251.3	7.690
250	7.787	34.980	209.6	7.762
300	6.945	34.915	219.1	6.917
350	6.374	34.916	223.1	6.342
400	5.899	34.910	230.9	5.864
450	5.607	34.927	237.3	5.569
500	5.844	35.028	232.5	5.801
550	5.064	34.945	246.4	5.019
600	4.712	34.922	254.8	4.664
650	4.582	34.923	258.2	4.532
700	4.498	34.932	259.5	4.444
750	4.603	34.966	258.0	4.543
800	4.530	34.966	258.8	4.467
850	4.315	34.943	264.9	4.249
900	4.136	34.923	269.5	4.067
950	4.080	34.923	271.0	4.007
1000	3.971	34.914	274.1	3.895
1100	3.846	34.908	277.5	3.762
1200	3.753	34.902	280.2	3.662
1300	3.677	34.898	282.2	3.578
1400	3.624	34.895	283.4	3.517
1500	3.581	34.894	284.3	3.466
1600	3.543	34.895	284.2	3.419
1700	3.537	34.901	282.2	3.404
1800	3.532	34.910	279.1	3.390
1900	3.507	34.921	275.6	3.356
2000	3.476	34.927	272.4	3.317
2100	3.409	34.930	271.7	3.241
2200	3.347	34.932	271.3	3.170
2300	3.276	34.935	271.7	3.091
2400	3.223	34.938	271.8	3.029
2500	3.187	34.940	272.5	2.984
2600	3.137	34.943	272.2	2.924
2700	3.076	34.947	272.0	2.855
2800	3.025	34.949	271.0	2.795
2900	2.974	34.951	270.3	2.734
3000	2.929	34.951	268.7	2.679
3100	2.894	34.950	267.4	2.635
3200	2.870	34.950	266.8	2.601
3300	2.844	34.948	264.1	2.565
3400	2.818	34.946	263.3	2.529
3500	2.793	34.943	261.0	2.493
3600	2.729	34.937	257.2	2.420
3645	2.729	34.936	255.5	2.415

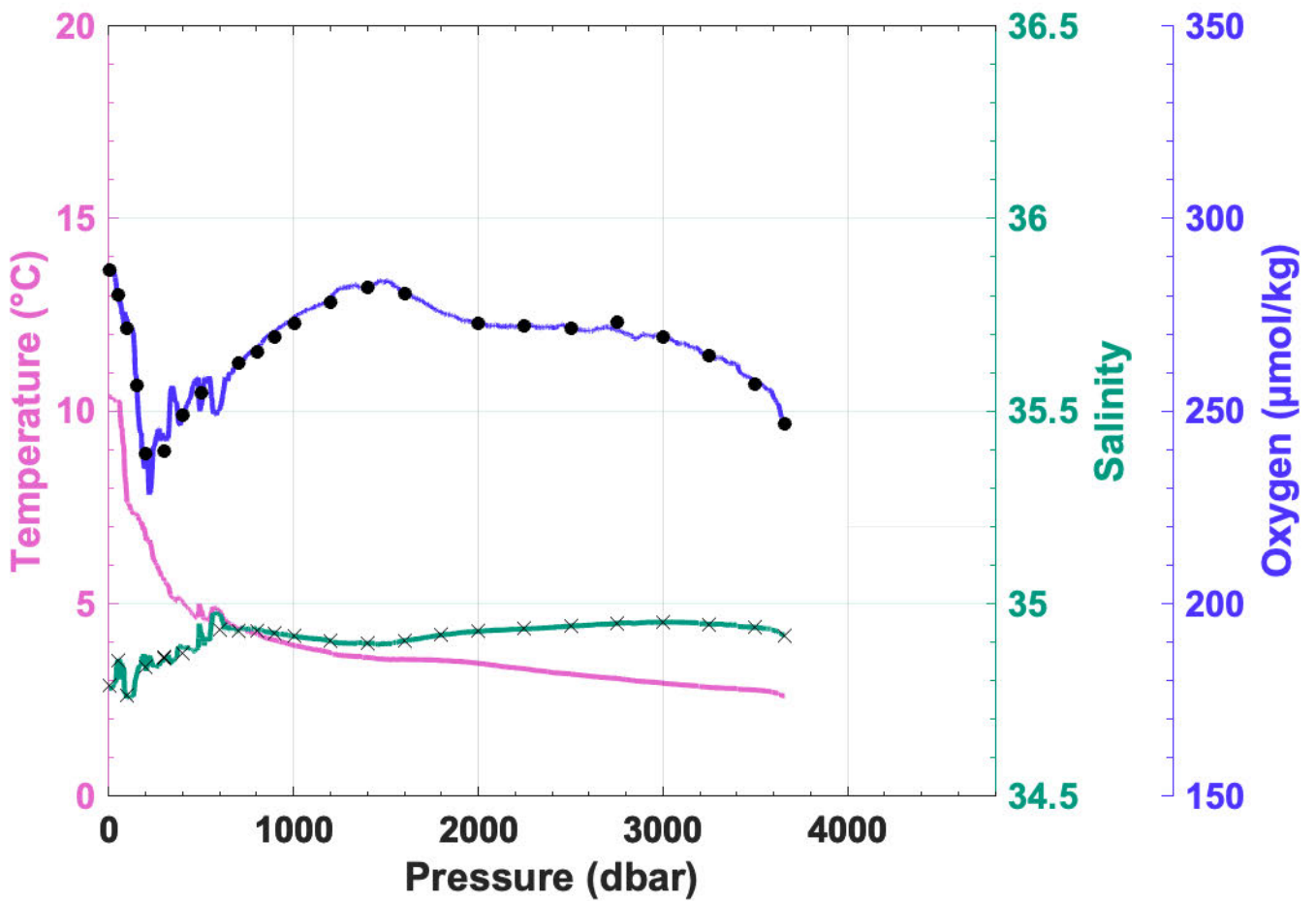
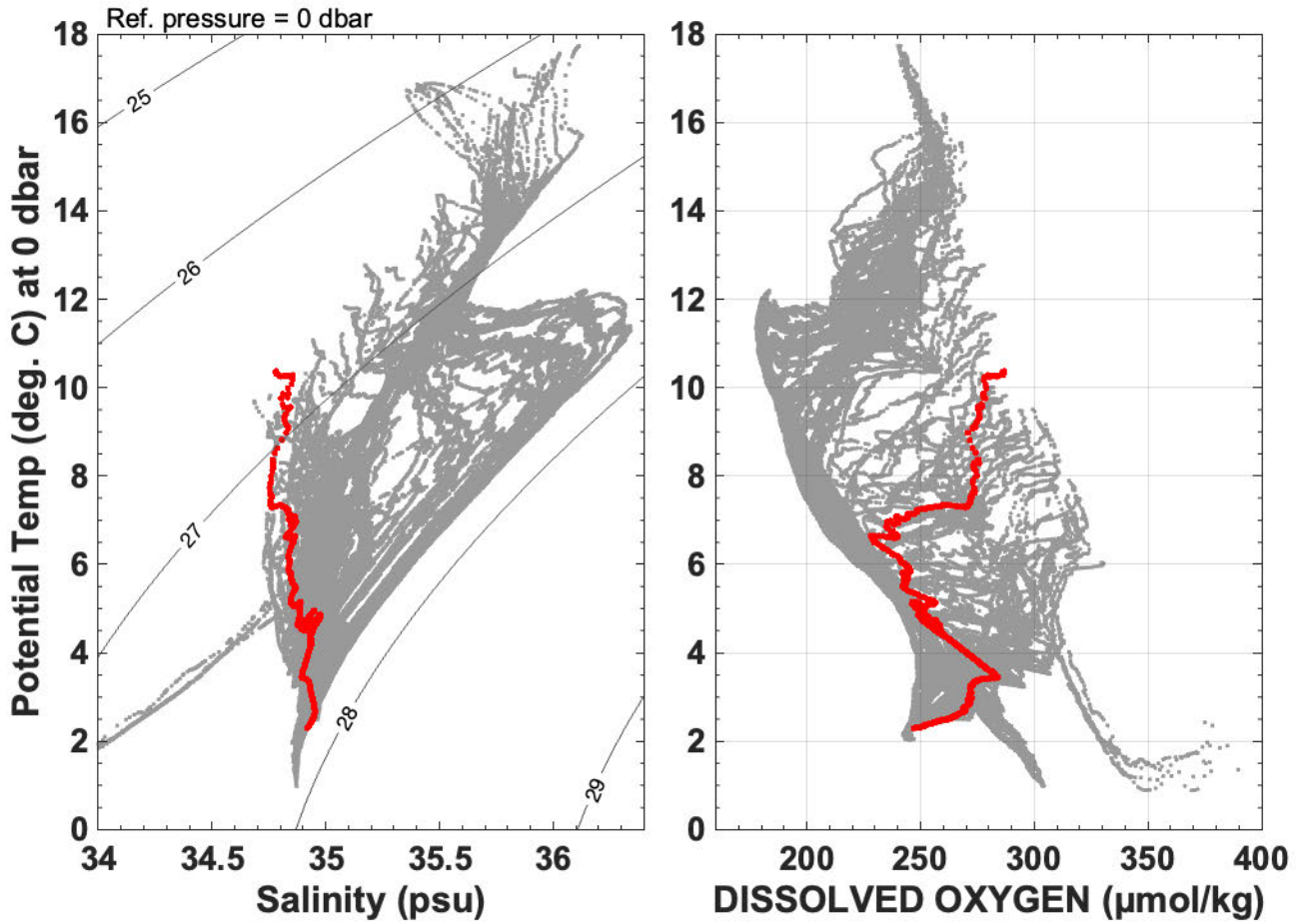
# STATION 49



Cruise : BOCATS 2021  
Station : 50  
Date : 12/06/2021  
Depth : 3609  
Position : N 52 53.49  
W 24 39.82

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	10.372	34.781	286.7	10.372
10	10.362	34.781	286.4	10.361
20	10.344	34.781	286.4	10.342
30	10.288	34.791	285.6	10.285
40	10.259	34.810	283.0	10.255
50	10.288	34.855	279.8	10.283
100	7.636	34.755	273.5	7.627
150	7.325	34.814	257.3	7.311
200	6.755	34.840	237.9	6.736
250	6.089	34.841	241.3	6.067
300	5.603	34.853	243.3	5.578
350	5.124	34.850	255.3	5.096
400	5.057	34.888	247.7	5.025
450	4.753	34.881	255.3	4.718
500	4.840	34.924	251.5	4.800
550	4.662	34.926	257.1	4.619
600	4.820	34.974	250.4	4.772
650	4.454	34.930	259.6	4.404
700	4.346	34.929	262.9	4.293
750	4.293	34.934	264.3	4.235
800	4.220	34.934	266.0	4.159
850	4.113	34.927	269.2	4.048
900	4.051	34.923	270.8	3.983
950	3.991	34.920	272.5	3.919
1000	3.916	34.915	274.3	3.840
1100	3.822	34.909	276.8	3.739
1200	3.725	34.904	279.4	3.634
1300	3.644	34.897	282.0	3.545
1400	3.609	34.898	282.6	3.502
1500	3.558	34.895	283.6	3.443
1600	3.551	34.904	280.8	3.427
1700	3.543	34.911	278.5	3.411
1800	3.526	34.919	275.7	3.384
1900	3.500	34.925	273.8	3.350
2000	3.451	34.928	272.8	3.292
2100	3.388	34.931	272.3	3.220
2200	3.334	34.933	271.8	3.158
2300	3.276	34.936	272.2	3.091
2400	3.212	34.938	271.7	3.018
2500	3.174	34.942	271.5	2.971
2600	3.120	34.944	271.0	2.908
2700	3.076	34.947	271.8	2.855
2800	3.031	34.950	270.0	2.800
2900	2.978	34.951	269.6	2.738
3000	2.934	34.952	269.1	2.685
3100	2.893	34.952	267.5	2.634
3200	2.846	34.948	265.8	2.578
3300	2.817	34.947	263.8	2.538
3400	2.793	34.944	262.1	2.504
3500	2.758	34.938	258.0	2.459
3600	2.694	34.930	253.5	2.385
3650	2.611	34.920	247.8	2.299

# STATION 50

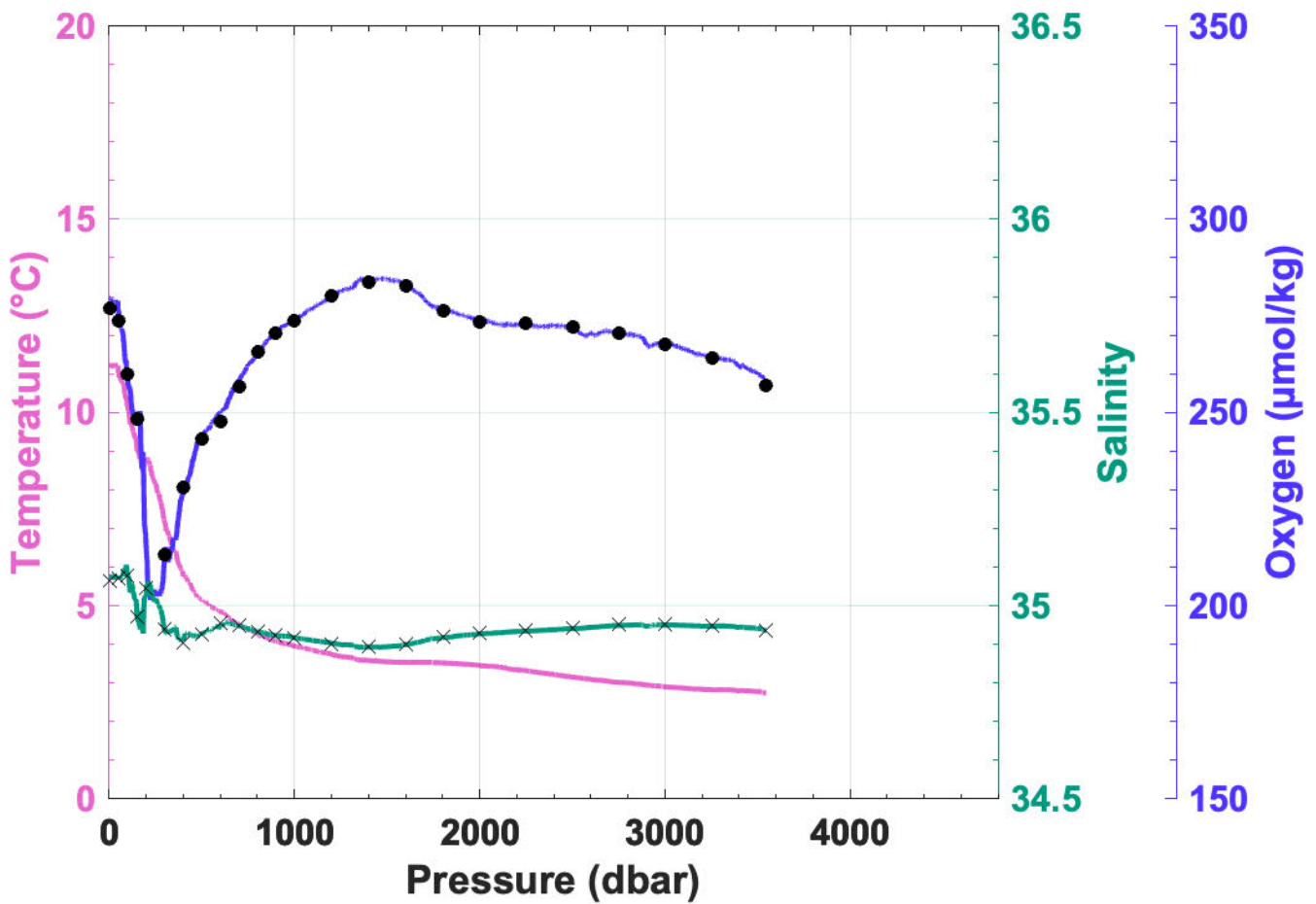
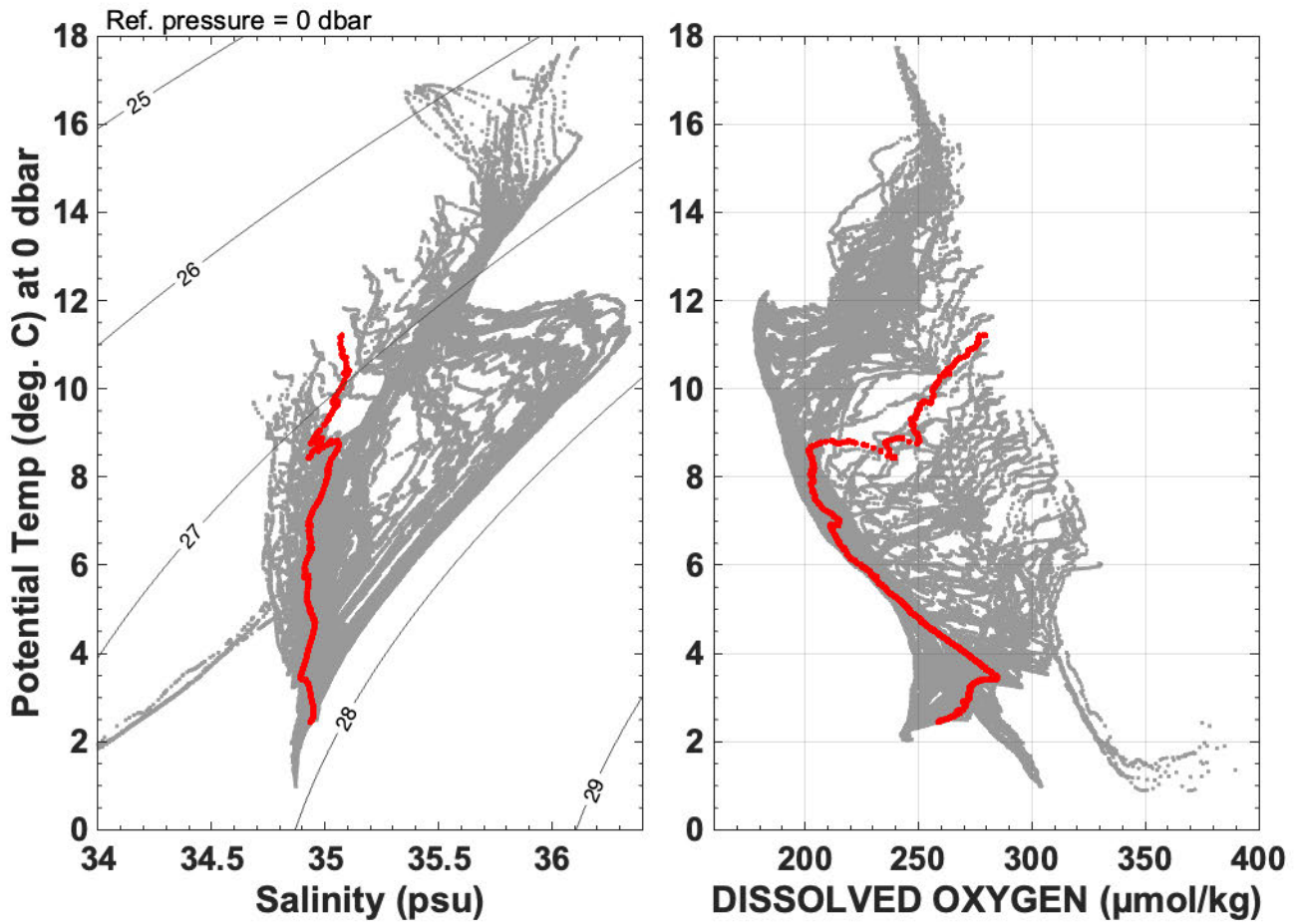


Cruise : BOCATS 2021  
 Station : 51  
 Date : 12/06/2021  
 Depth : 3505  
 Position : N 53 15.60  
           W 24 56.98

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	11.212	35.075	279.5	11.212
10	11.211	35.075	279.1	11.210
20	11.211	35.074	278.8	11.208
30	11.215	35.074	279.1	11.211
40	11.214	35.074	278.9	11.209
50	11.070	35.070	276.5	11.064
100	10.128	35.079	258.5	10.117
150	9.079	34.978	247.9	9.063
200	8.781	35.027	215.1	8.759
250	8.177	35.019	203.0	8.152
300	7.145	34.937	212.7	7.116
350	6.419	34.942	217.5	6.387
400	5.786	34.909	230.1	5.751
450	5.400	34.922	237.9	5.362
500	5.151	34.928	243.7	5.110
550	4.972	34.936	246.9	4.928
600	4.840	34.945	250.3	4.792
650	4.682	34.955	253.7	4.631
700	4.520	34.948	258.0	4.466
750	4.379	34.940	262.4	4.321
800	4.248	34.933	265.7	4.187
850	4.163	34.927	268.5	4.098
900	4.078	34.923	271.0	4.009
950	4.022	34.921	272.7	3.950
1000	3.960	34.918	274.1	3.884
1100	3.848	34.910	277.0	3.765
1200	3.744	34.904	279.5	3.653
1300	3.660	34.898	282.2	3.561
1400	3.581	34.893	284.1	3.475
1500	3.550	34.894	284.4	3.435
1600	3.532	34.899	283.0	3.408
1700	3.534	34.909	279.5	3.401
1800	3.519	34.918	276.6	3.377
1900	3.495	34.923	275.2	3.344
2000	3.451	34.927	273.9	3.292
2100	3.418	34.930	272.8	3.250
2200	3.343	34.933	272.9	3.166
2300	3.287	34.935	272.3	3.102
2400	3.221	34.938	272.5	3.027
2500	3.150	34.941	271.7	2.948
2600	3.095	34.944	270.6	2.883
2700	3.037	34.948	271.0	2.817
2800	3.002	34.949	270.3	2.772
2900	2.945	34.947	267.4	2.706
3000	2.899	34.950	267.9	2.651
3100	2.866	34.949	266.5	2.608
3200	2.834	34.947	264.9	2.566
3300	2.824	34.947	264.0	2.545
3400	2.800	34.944	261.8	2.511
3500	2.777	34.941	260.1	2.477
3546	2.743	34.936	NaN	2.440



# STATION 51

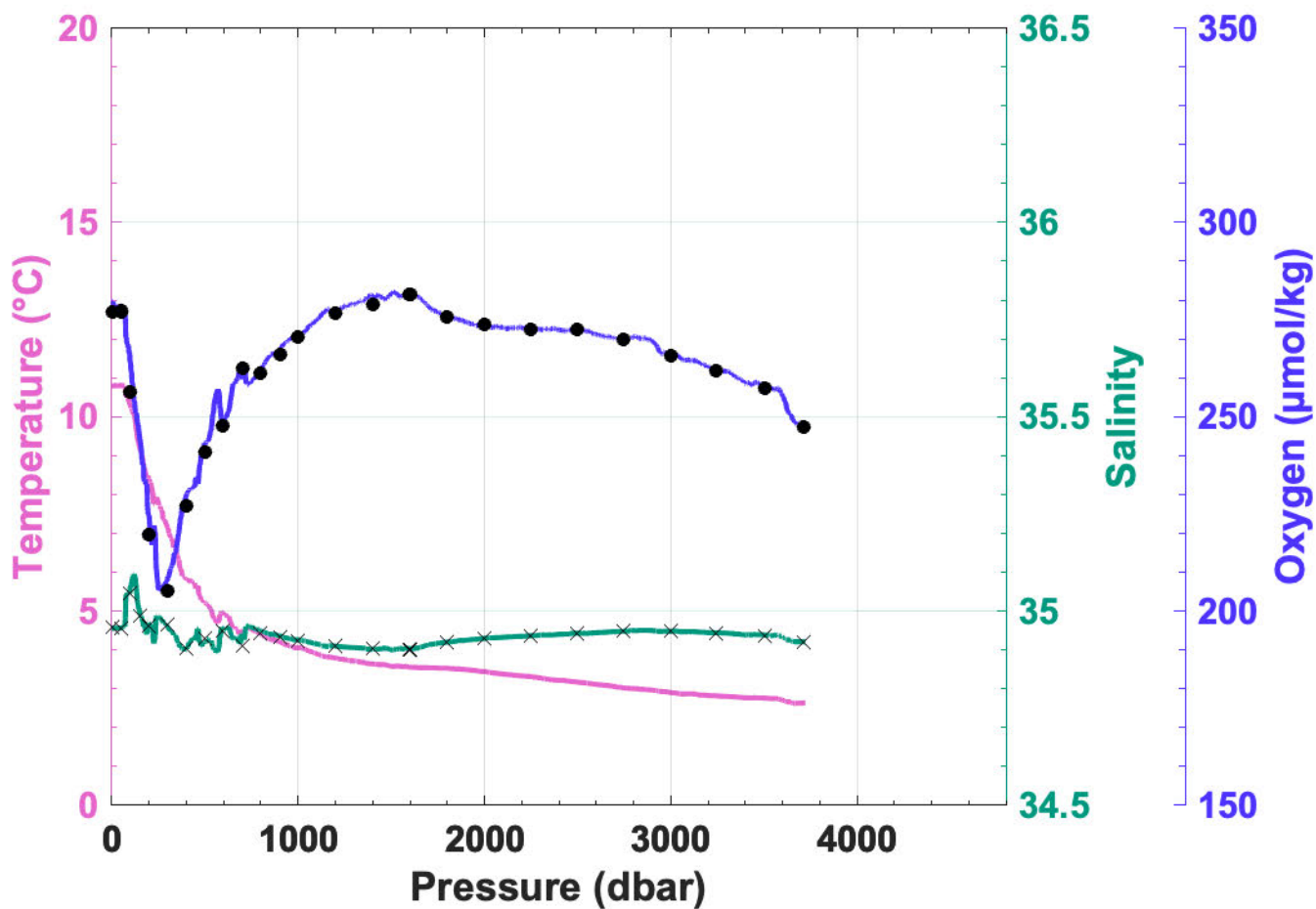
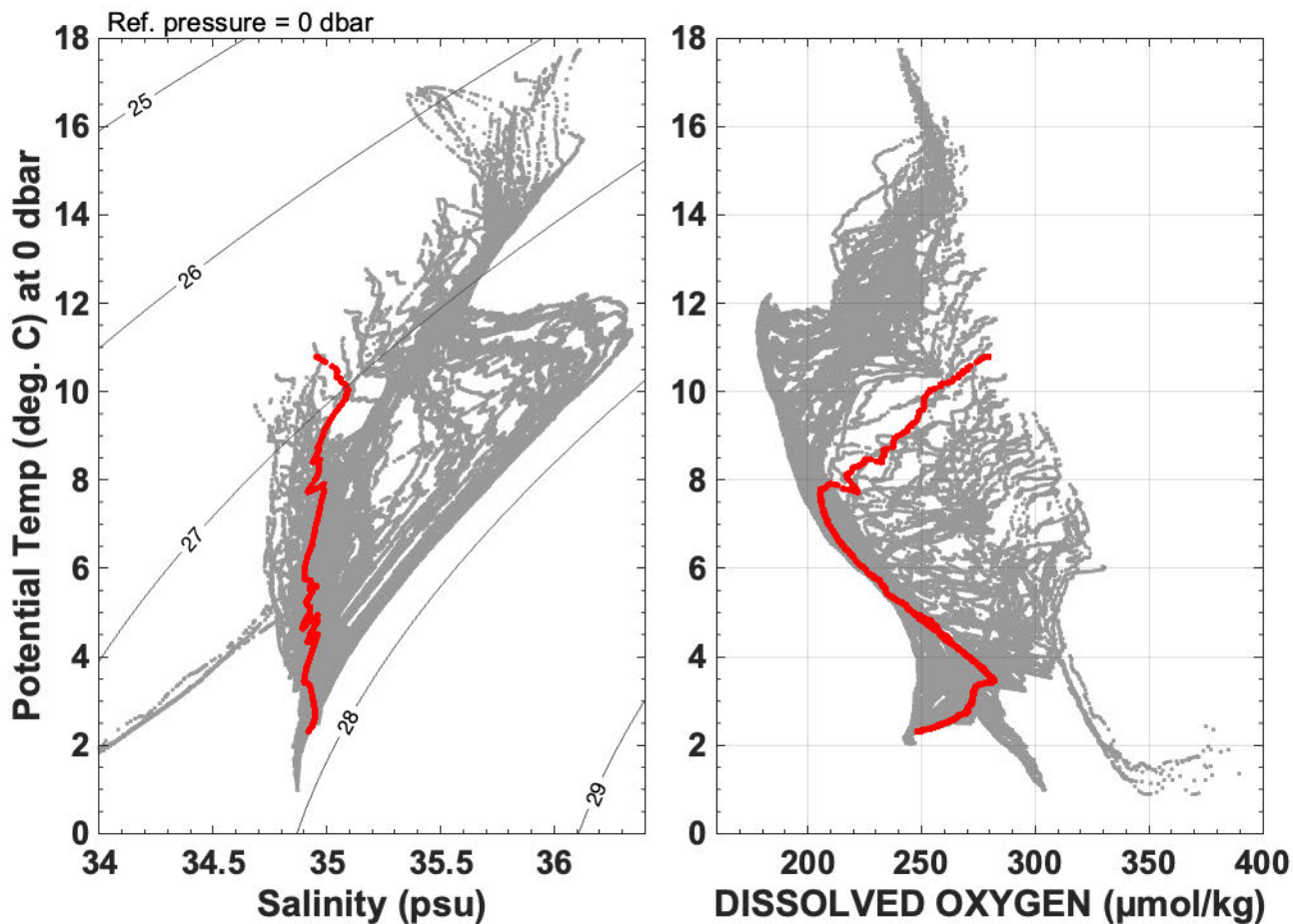




Cruise : BOCATS 2021  
 Station : 52  
 Date : 14/06/2021  
 Depth : 3667  
 Position : N 53 37.97  
           W 25 13.95

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	10.789	34.956	279.6	10.789
10	10.792	34.956	279.0	10.791
20	10.798	34.956	278.5	10.795
30	10.796	34.956	278.4	10.793
40	10.798	34.956	278.5	10.793
50	10.801	34.957	278.4	10.795
100	10.290	35.063	263.8	10.278
150	9.218	34.998	244.6	9.201
200	8.409	34.965	224.4	8.388
250	7.812	34.988	205.4	7.787
300	7.137	34.960	208.4	7.108
350	6.440	34.926	217.5	6.408
400	5.806	34.902	229.8	5.772
450	5.590	34.923	233.8	5.552
500	5.206	34.916	243.1	5.165
550	4.795	34.899	253.2	4.751
600	4.947	34.955	248.6	4.898
650	4.566	34.927	258.3	4.515
700	4.516	34.941	259.7	4.461
750	4.517	34.958	259.1	4.458
800	4.401	34.949	262.1	4.338
850	4.271	34.940	265.8	4.205
900	4.204	34.936	267.5	4.135
950	4.115	34.929	269.6	4.042
1000	4.054	34.926	271.2	3.978
1100	3.902	34.915	275.1	3.818
1200	3.790	34.910	277.3	3.699
1300	3.717	34.906	278.9	3.618
1400	3.640	34.903	281.1	3.533
1500	3.577	34.900	281.9	3.462
1600	3.552	34.902	281.2	3.428
1700	3.540	34.913	278.2	3.407
1800	3.529	34.920	276.0	3.387
1900	3.492	34.925	274.4	3.342
2000	3.441	34.929	273.5	3.282
2100	3.381	34.932	272.9	3.214
2200	3.331	34.935	272.9	3.154
2300	3.276	34.938	272.7	3.090
2400	3.215	34.940	272.4	3.021
2500	3.170	34.943	271.7	2.967
2600	3.110	34.944	271.3	2.898
2700	3.056	34.947	270.1	2.835
2800	3.002	34.950	270.5	2.772
2900	2.965	34.950	269.5	2.726
3000	2.904	34.948	266.1	2.655
3100	2.869	34.947	264.5	2.611
3200	2.825	34.944	262.9	2.557
3300	2.804	34.943	261.6	2.526
3400	2.766	34.938	258.6	2.477
3500	2.760	34.938	258.1	2.461
3600	2.707	34.932	255.3	2.398
3700	2.632	34.921	248.1	2.314
3700	2.632	34.921	248.1	2.314

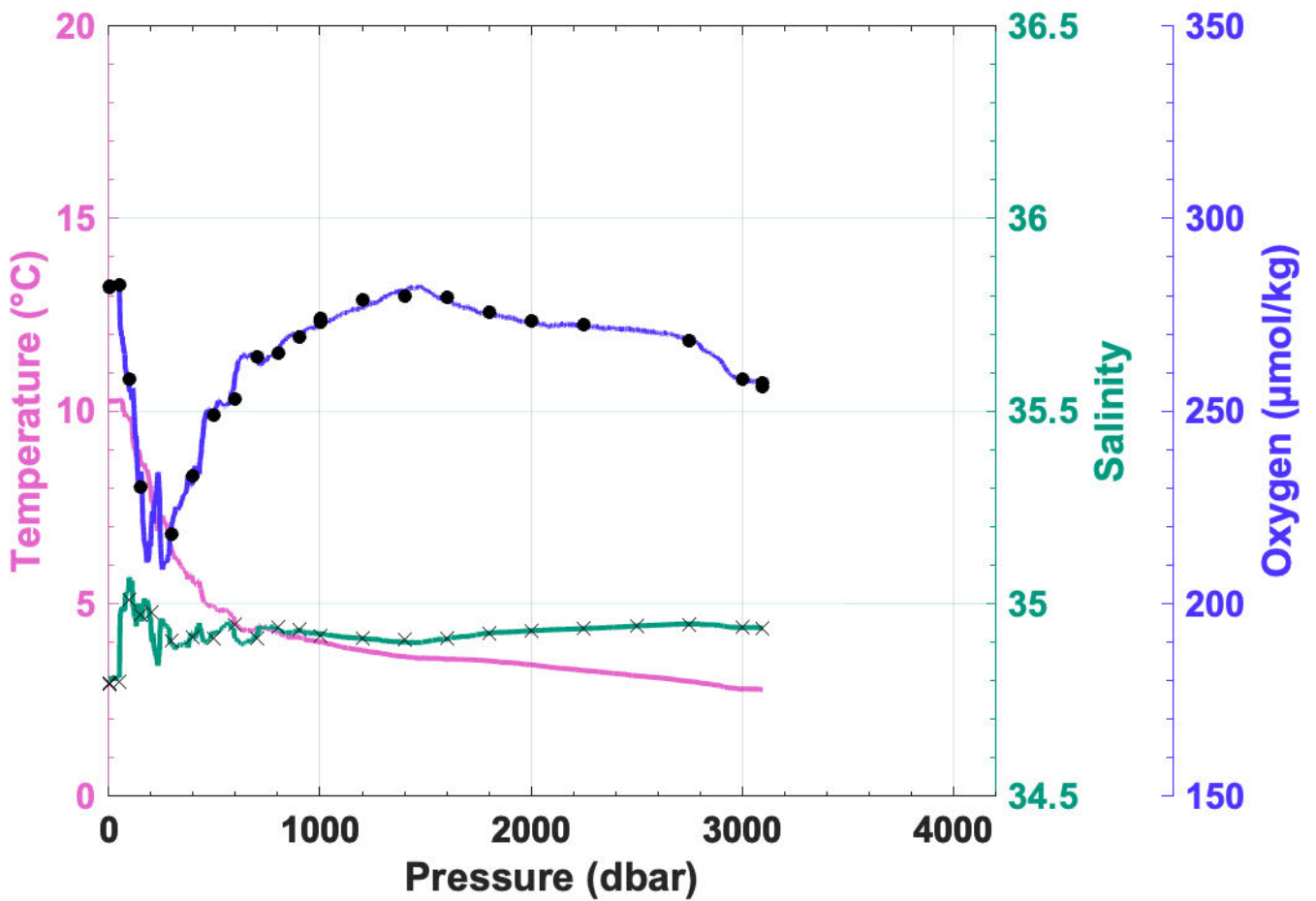
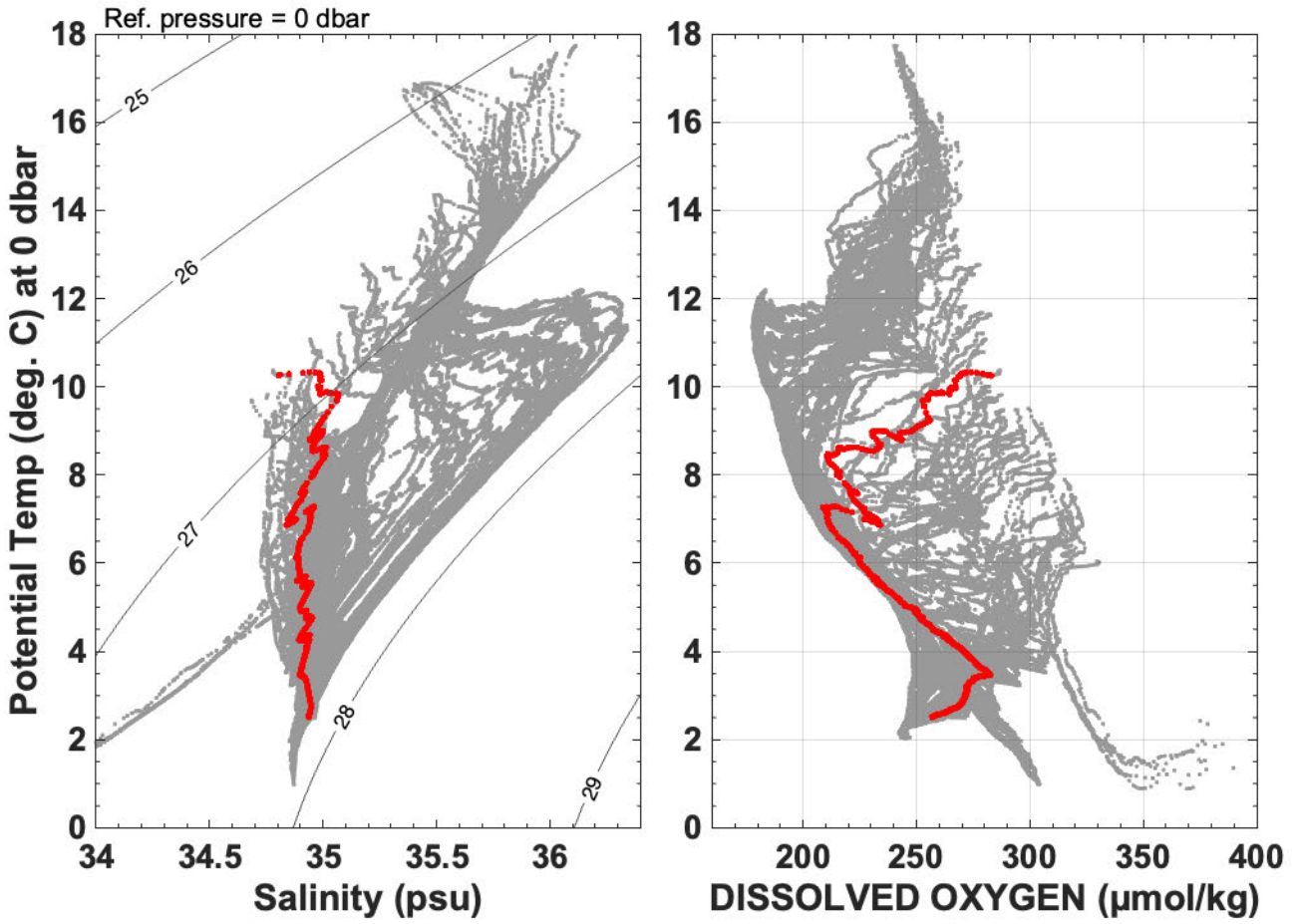
# STATION 52



Cruise : BOCATS 2021  
 Station : 53  
 Date : 14/06/2021  
 Depth : 3063  
 Position : N 54 0.89  
           W 25 31.96

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	10.253	34.806	282.8	10.253
10	10.260	34.806	282.5	10.259
20	10.262	34.806	282.2	10.259
30	10.262	34.806	282.4	10.258
40	10.264	34.806	282.0	10.260
50	10.275	34.812	281.2	10.269
100	9.788	35.067	254.9	9.777
150	8.713	34.960	234.1	8.697
200	7.837	34.929	218.2	7.817
250	7.295	34.963	210.7	7.271
300	6.361	34.892	221.0	6.334
350	5.909	34.894	227.5	5.879
400	5.553	34.911	233.6	5.520
450	5.052	34.900	246.2	5.016
500	4.911	34.925	250.1	4.871
550	4.833	34.946	251.2	4.790
600	4.465	34.909	259.9	4.418
650	4.329	34.900	264.3	4.279
700	4.291	34.912	264.6	4.238
750	4.341	34.936	263.5	4.283
800	4.265	34.936	265.9	4.203
850	4.138	34.925	269.2	4.073
900	4.130	34.930	269.5	4.061
950	4.052	34.924	271.5	3.980
1000	4.007	34.922	272.1	3.931
1100	3.878	34.914	275.0	3.794
1200	3.784	34.910	276.9	3.693
1300	3.700	34.904	279.7	3.600
1400	3.628	34.901	281.1	3.521
1500	3.586	34.902	281.4	3.470
1600	3.558	34.908	279.6	3.434
1700	3.547	34.916	277.0	3.414
1800	3.514	34.923	275.1	3.372
1900	3.471	34.927	274.3	3.321
2000	3.418	34.930	273.0	3.259
2100	3.346	34.933	272.2	3.179
2200	3.296	34.934	272.5	3.120
2300	3.247	34.937	272.0	3.063
2400	3.183	34.939	271.4	2.990
2500	3.128	34.942	271.1	2.926
2600	3.080	34.945	270.2	2.869
2700	3.015	34.947	269.3	2.795
2800	2.946	34.947	267.2	2.717
2900	2.857	34.943	263.1	2.619
3000	2.786	34.938	257.9	2.540
3098	2.773	34.936	NaN	2.517
3098	2.773	34.936	NaN	2.517

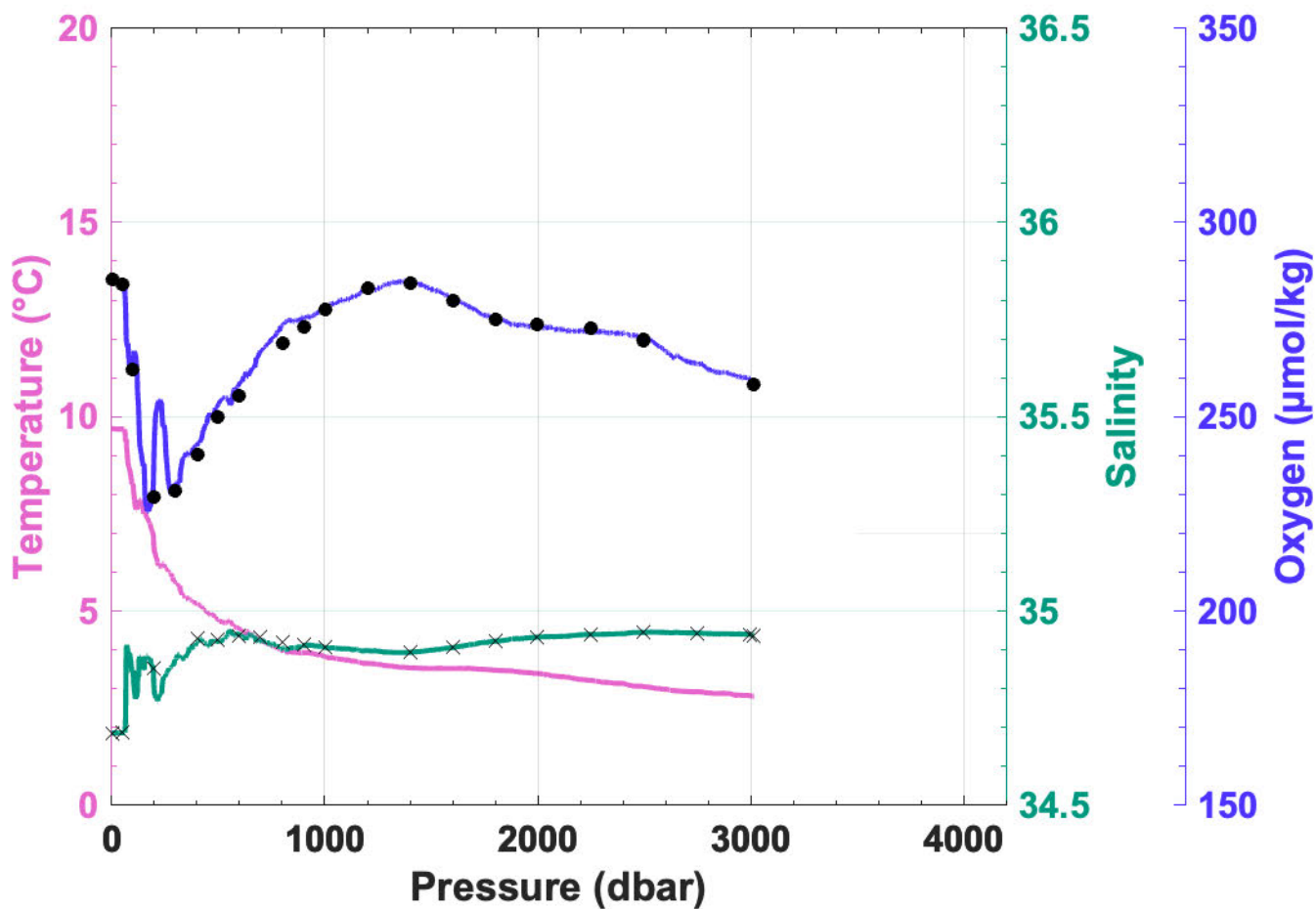
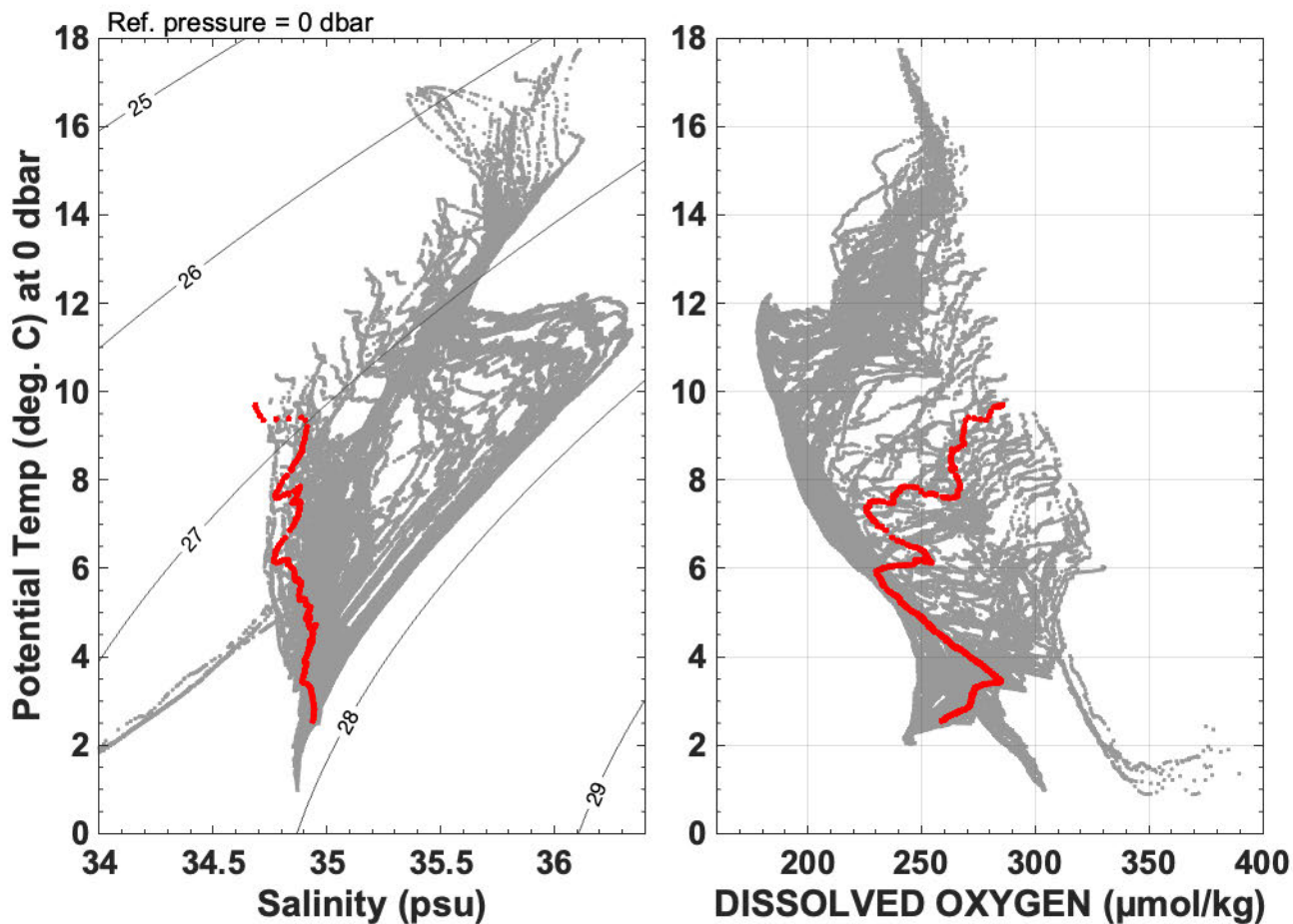
# STATION 53



Cruise : BOCATS 2021  
Station : 54  
Date : 14/06/2021  
Depth : 2980  
Position : N 54 23.10  
W 25 49.21

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	9.692	34.686	285.6	9.692
10	9.690	34.686	285.4	9.689
20	9.680	34.686	285.0	9.677
30	9.680	34.686	284.2	9.677
40	9.681	34.686	284.0	9.676
50	9.680	34.686	283.7	9.675
100	8.267	34.847	262.9	8.256
150	7.505	34.850	237.8	7.491
200	6.548	34.791	243.8	6.530
250	6.106	34.830	246.0	6.085
300	5.714	34.875	232.8	5.689
350	5.321	34.886	240.7	5.292
400	5.197	34.918	242.4	5.164
450	4.938	34.910	249.5	4.903
500	4.777	34.922	253.0	4.737
550	4.756	34.948	253.8	4.713
600	4.544	34.940	258.5	4.498
650	4.419	34.938	261.4	4.369
700	4.224	34.922	267.0	4.171
750	4.112	34.915	270.1	4.056
800	3.983	34.903	273.6	3.924
850	3.940	34.905	274.5	3.876
900	3.932	34.911	275.2	3.865
950	3.899	34.911	276.2	3.827
1000	3.821	34.905	278.2	3.746
1100	3.741	34.903	280.2	3.658
1200	3.652	34.898	282.4	3.562
1300	3.590	34.894	284.1	3.492
1400	3.538	34.894	284.9	3.432
1500	3.523	34.899	282.7	3.408
1600	3.522	34.906	280.3	3.398
1700	3.514	34.914	277.8	3.382
1800	3.478	34.922	275.1	3.337
1900	3.441	34.929	273.5	3.291
2000	3.393	34.933	273.2	3.234
2100	3.313	34.934	272.7	3.147
2200	3.239	34.939	272.1	3.064
2300	3.170	34.940	271.9	2.986
2400	3.134	34.942	271.4	2.941
2500	3.045	34.945	270.0	2.844
2600	2.986	34.944	266.8	2.776
2700	2.929	34.944	264.2	2.711
2800	2.893	34.942	262.2	2.665
2900	2.876	34.941	261.1	2.638
3000	2.822	34.940	259.8	2.575
3000	2.822	34.940	259.8	2.575

# STATION 54

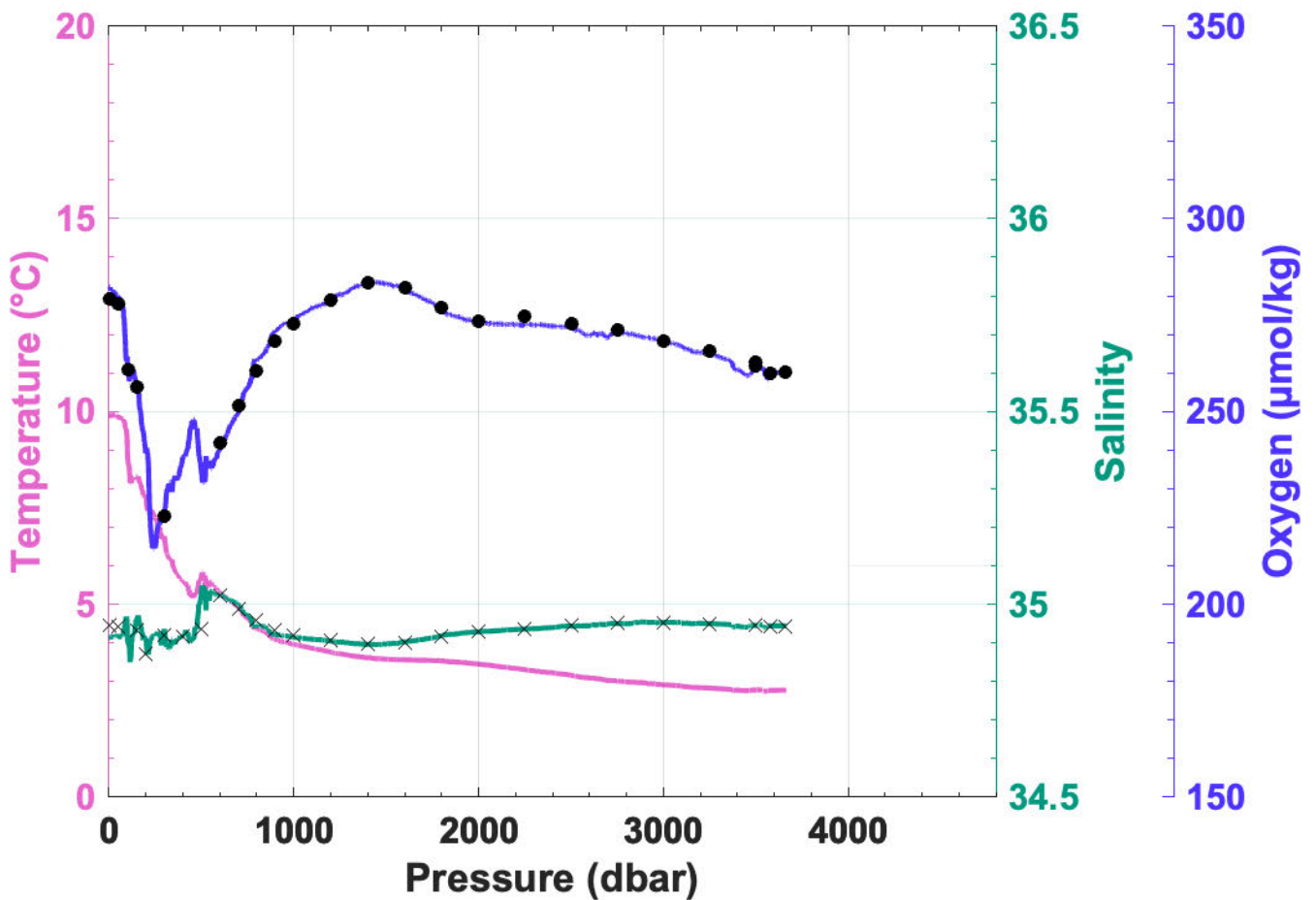
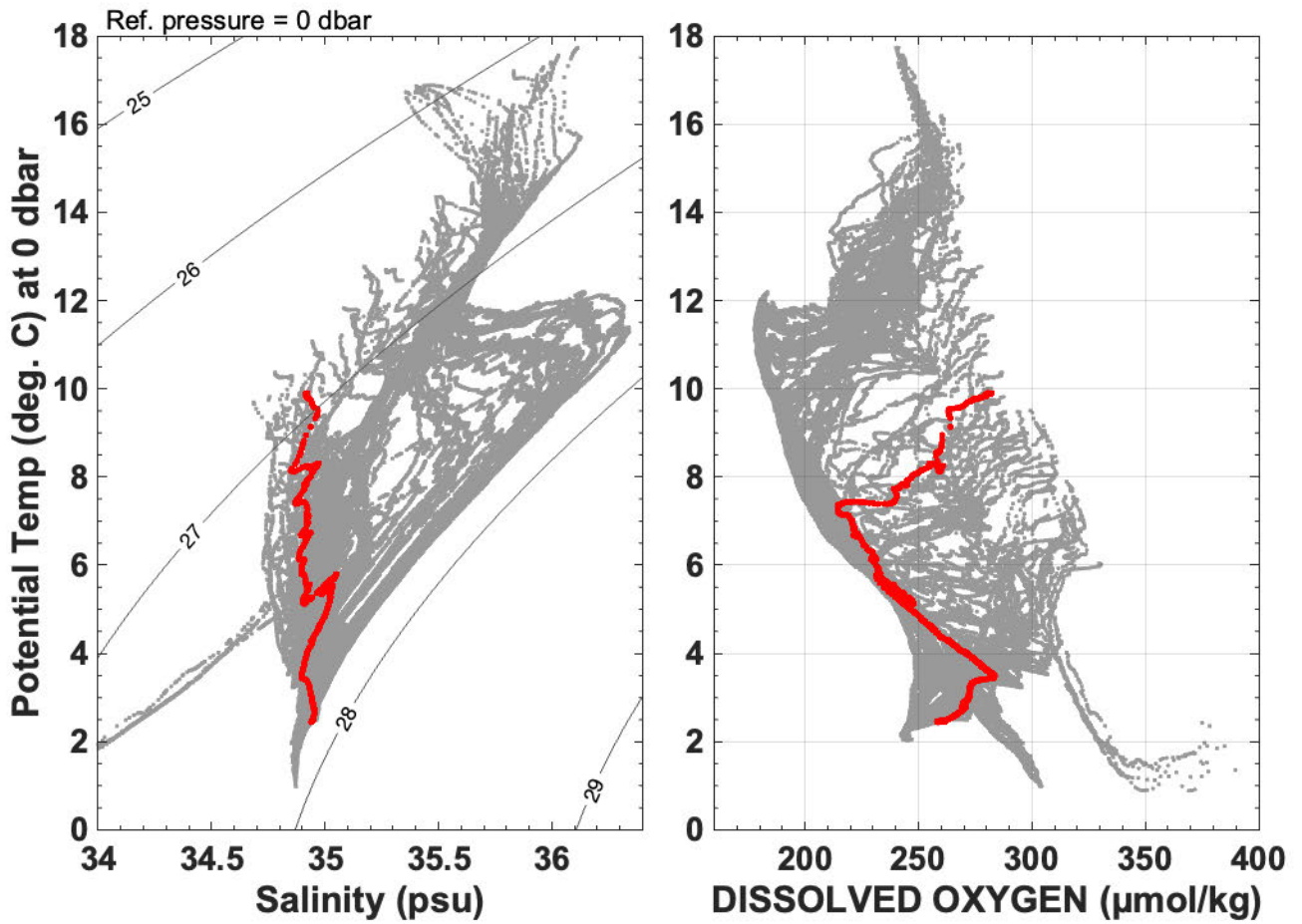


Cruise : BOCATS 2021  
 Station : 55  
 Date : 16/06/2021  
 Depth : 3610  
 Position : N 54 45.74  
           W 26 7.51

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	9.891	34.913	282.3	9.891
10	9.897	34.915	281.8	9.896
20	9.899	34.915	281.3	9.896
30	9.903	34.918	281.1	9.900
40	9.861	34.917	279.9	9.857
50	9.852	34.916	279.6	9.847
100	8.960	34.915	260.5	8.949
150	8.300	34.962	257.5	8.285
200	7.750	34.911	239.1	7.730
250	7.242	34.923	215.0	7.219
300	6.767	34.937	222.6	6.739
350	5.977	34.898	232.3	5.946
400	5.584	34.918	238.3	5.551
450	5.190	34.904	247.5	5.153
500	5.719	35.026	234.5	5.676
550	5.581	35.035	235.7	5.534
600	5.329	35.026	240.2	5.278
650	5.089	35.011	245.6	5.036
700	4.925	35.001	249.6	4.868
750	4.640	34.974	256.1	4.580
800	4.344	34.944	263.4	4.282
850	4.243	34.938	265.9	4.177
900	4.090	34.922	271.0	4.021
950	4.021	34.919	272.8	3.948
1000	3.961	34.915	274.1	3.885
1100	3.856	34.909	276.8	3.772
1200	3.759	34.905	278.9	3.668
1300	3.674	34.899	281.4	3.575
1400	3.616	34.897	283.2	3.509
1500	3.576	34.897	283.1	3.461
1600	3.559	34.903	281.3	3.435
1700	3.550	34.909	279.2	3.417
1800	3.532	34.918	276.3	3.390
1900	3.496	34.925	274.4	3.346
2000	3.447	34.929	273.3	3.288
2100	3.391	34.932	272.7	3.223
2200	3.335	34.935	272.6	3.159
2300	3.274	34.937	272.5	3.089
2400	3.221	34.940	272.2	3.027
2500	3.162	34.944	271.8	2.959
2600	3.090	34.944	269.7	2.879
2700	3.027	34.949	269.3	2.806
2800	2.987	34.950	270.1	2.757
2900	2.962	34.954	269.2	2.722
3000	2.912	34.953	268.2	2.663
3100	2.873	34.951	267.0	2.614
3200	2.837	34.951	265.4	2.568
3300	2.814	34.949	264.1	2.535
3400	2.776	34.943	260.8	2.487
3500	2.778	34.945	261.0	2.478
3600	2.769	34.944	260.0	2.458
3650	2.775	34.945	260.3	2.459



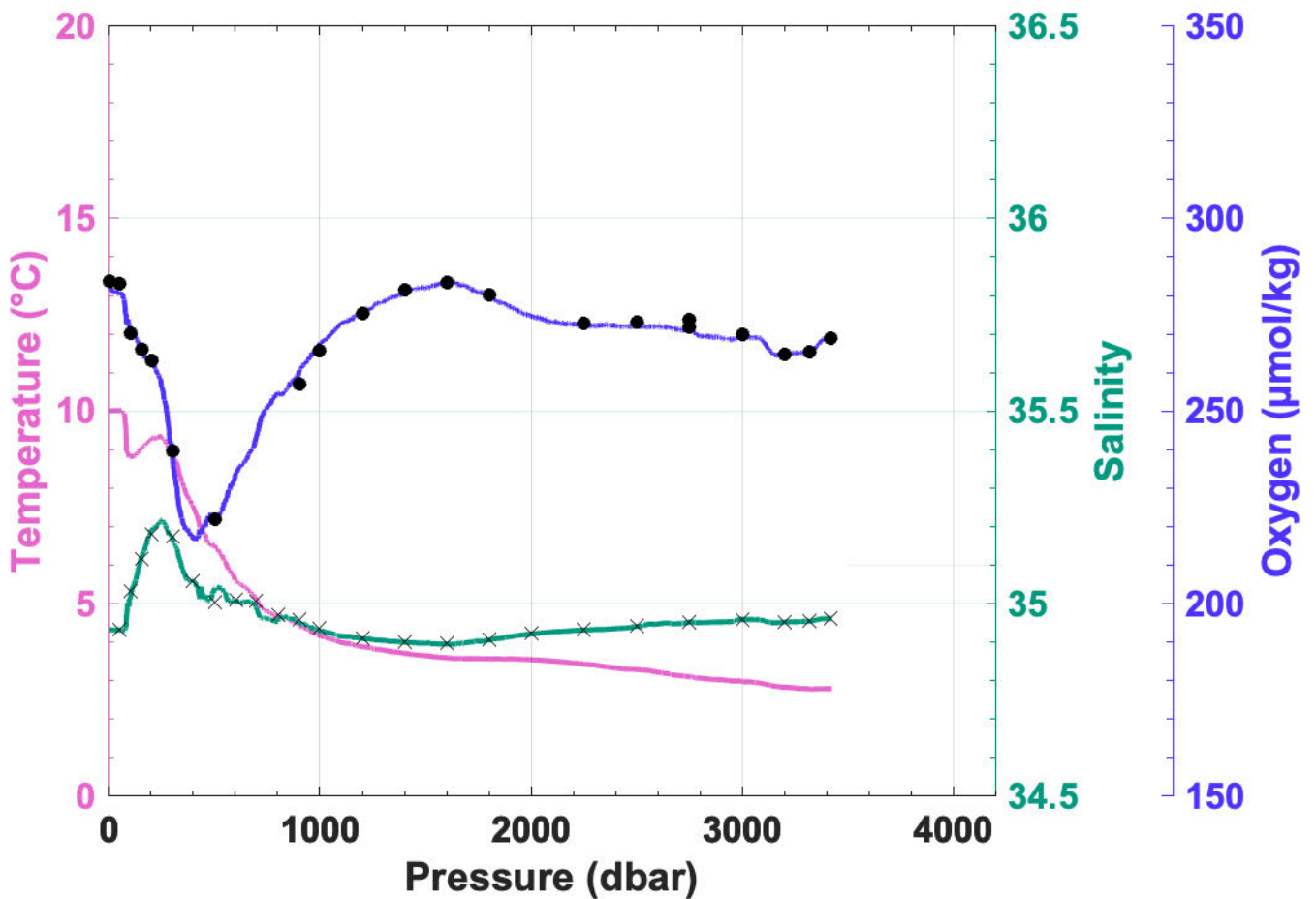
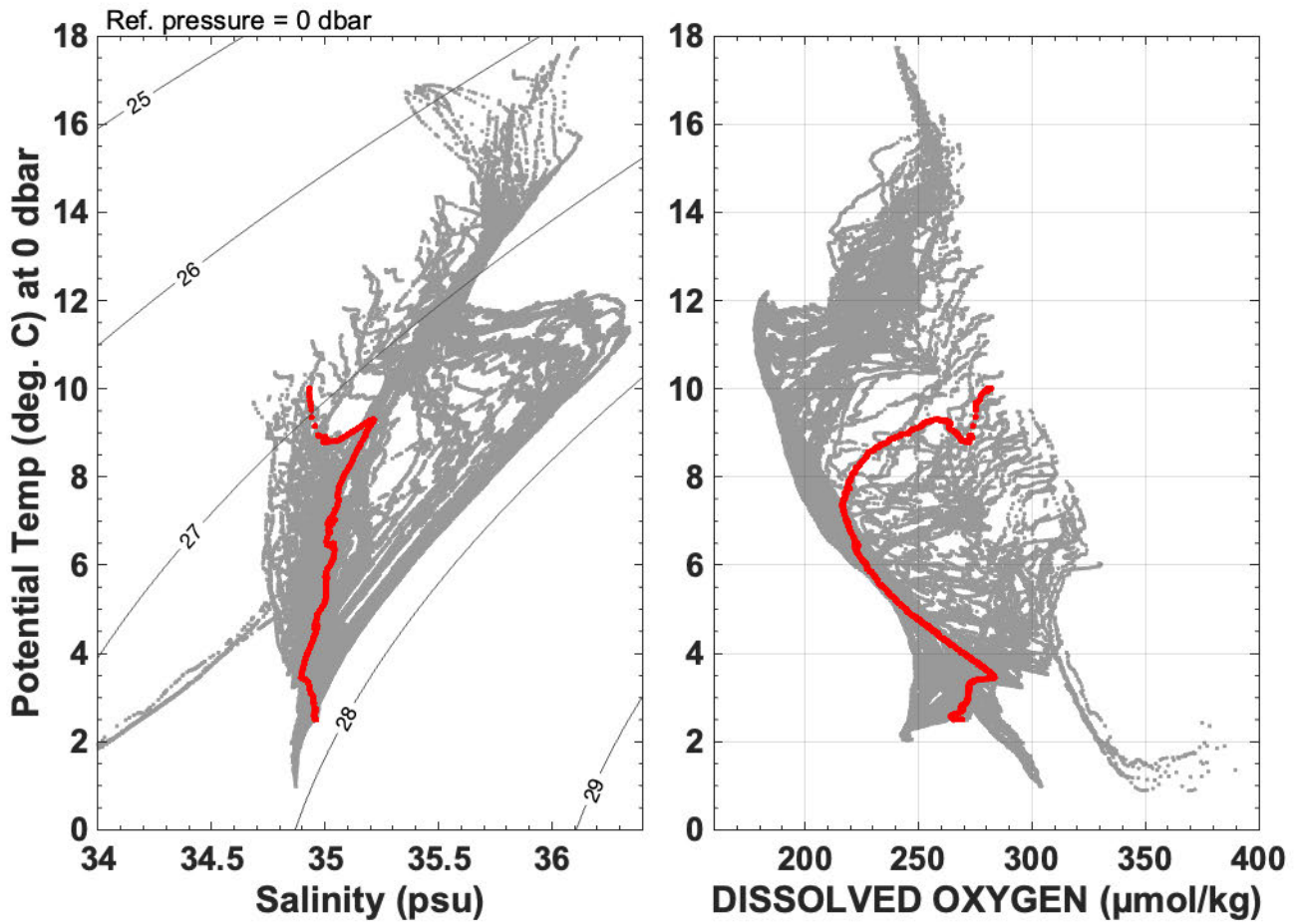
# STATION 55



Cruise : BOCATS 2021  
 Station : 56  
 Date : 17/06/2021  
 Depth : 3380  
 Position : N 55 8.92  
           W 26 23.91

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	10.007	34.932	281.7	10.007
10	10.008	34.932	282.0	10.006
20	10.010	34.932	280.9	10.008
30	10.010	34.932	281.1	10.006
40	10.012	34.932	280.5	10.008
50	10.013	34.932	280.6	10.007
100	8.824	35.011	271.6	8.814
150	9.014	35.113	266.4	8.998
200	9.280	35.190	263.4	9.258
250	9.319	35.216	256.3	9.291
300	8.913	35.172	239.2	8.880
350	8.122	35.089	221.2	8.086
400	7.499	35.062	216.7	7.460
450	6.820	35.013	220.0	6.778
500	6.525	35.041	221.7	6.478
550	6.109	35.030	226.3	6.060
600	5.599	35.004	233.8	5.547
650	5.412	35.004	237.2	5.357
700	5.106	34.987	243.5	5.048
750	4.789	34.961	251.0	4.729
800	4.648	34.953	254.8	4.584
850	4.608	34.963	256.0	4.540
900	4.427	34.948	259.9	4.356
950	4.286	34.938	264.2	4.212
1000	4.166	34.930	267.5	4.089
1100	3.988	34.915	272.9	3.903
1200	3.882	34.910	276.0	3.790
1300	3.791	34.904	278.3	3.690
1400	3.710	34.900	280.7	3.602
1500	3.648	34.897	282.0	3.532
1600	3.593	34.895	283.3	3.468
1700	3.574	34.899	282.3	3.441
1800	3.565	34.905	279.9	3.423
1900	3.564	34.914	277.0	3.413
2000	3.543	34.921	274.6	3.382
2100	3.511	34.926	272.9	3.341
2200	3.457	34.930	272.5	3.278
2300	3.407	34.933	272.1	3.219
2400	3.329	34.935	272.1	3.133
2500	3.289	34.941	271.9	3.084
2600	3.219	34.948	271.8	3.005
2700	3.137	34.948	271.1	2.914
2800	3.064	34.951	269.3	2.833
2900	3.026	34.952	269.0	2.785
3000	2.975	34.959	269.7	2.724
3100	2.922	34.956	268.1	2.662
3200	2.825	34.952	264.6	2.556
3300	2.794	34.955	265.4	2.516
3400	2.792	34.961	268.8	2.503
3400	2.792	34.961	268.8	2.503

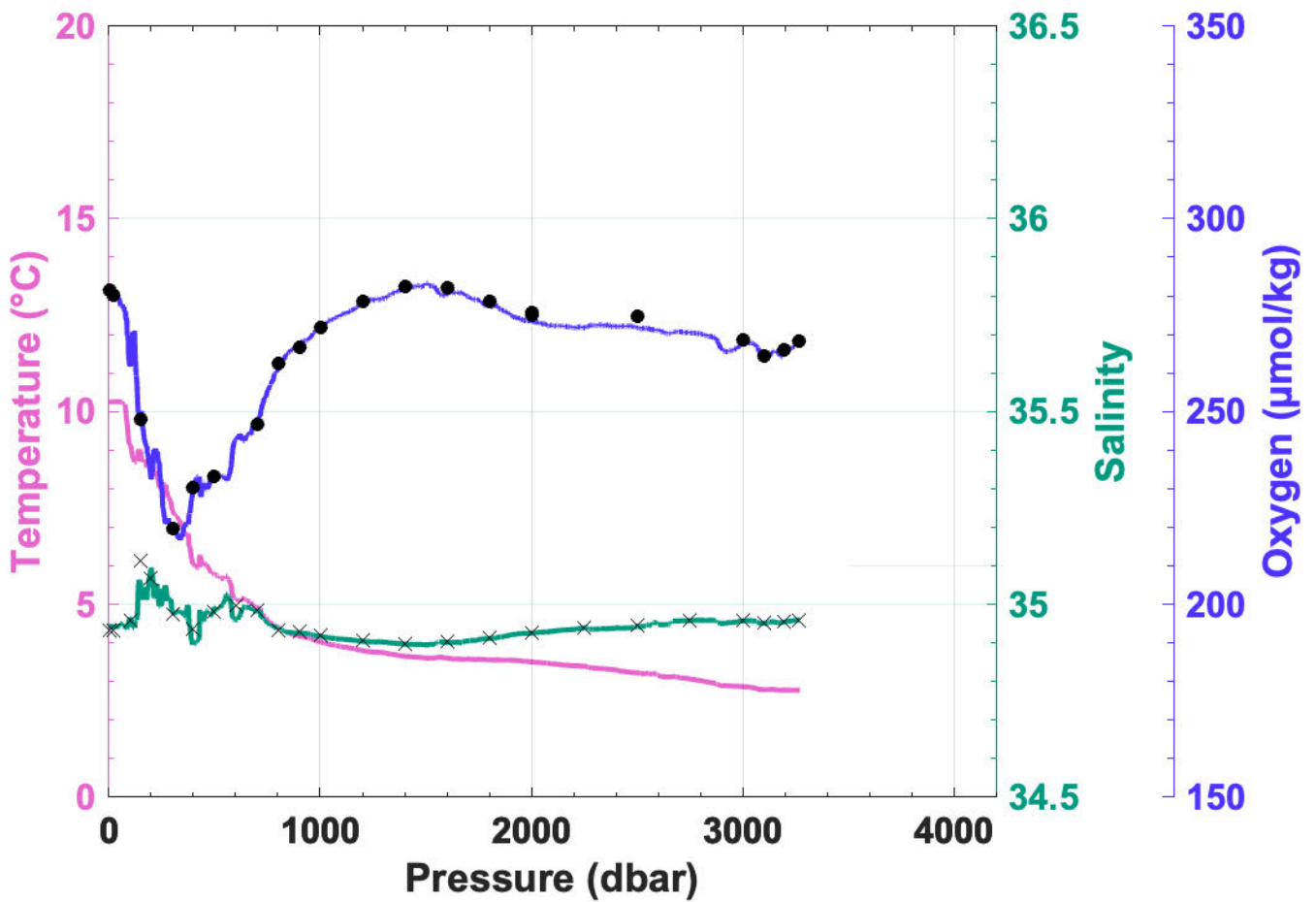
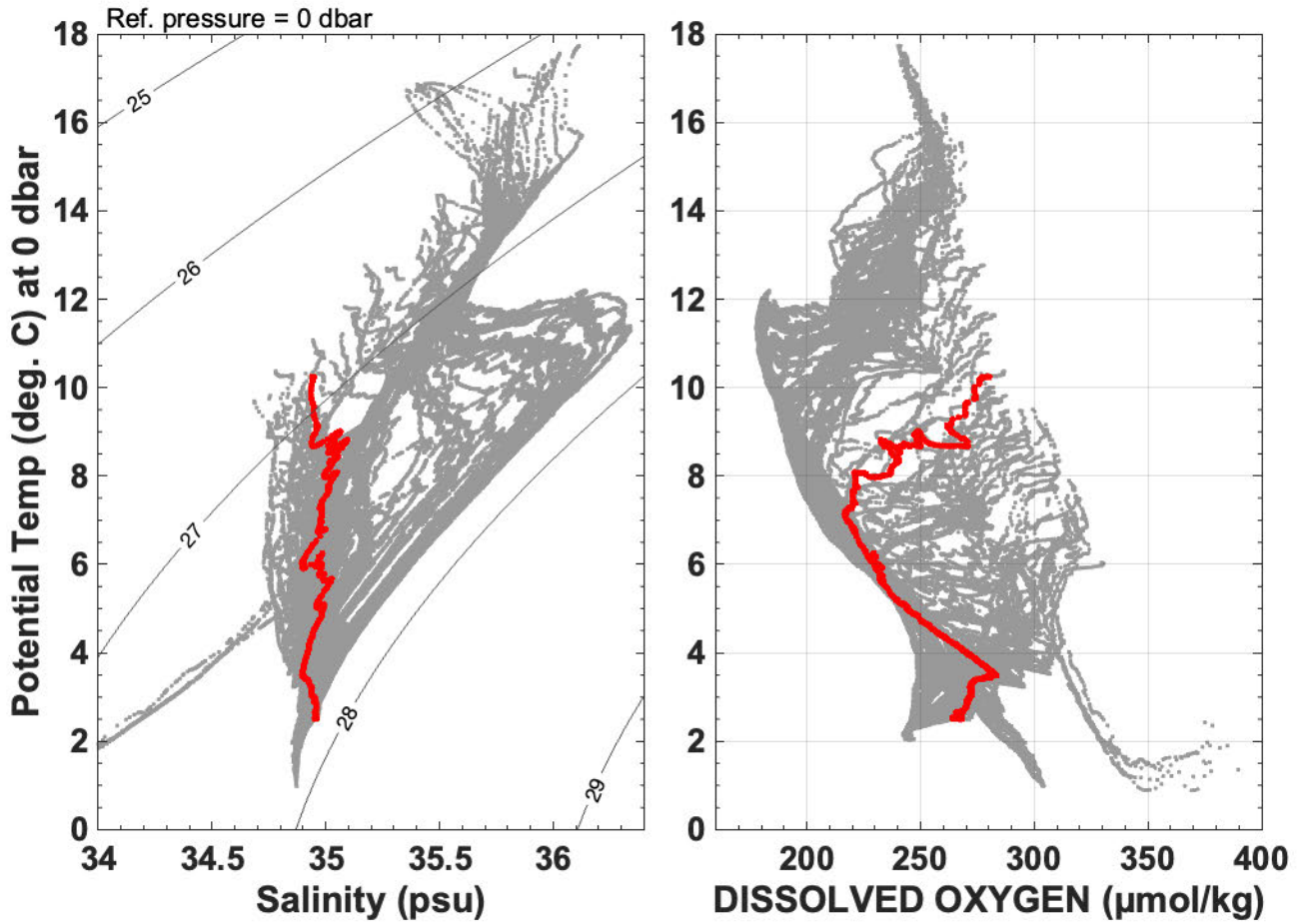
# STATION 56



Cruise : BOCATS 2021  
 Station : 57  
 Date : 17/06/2021  
 Depth : 3225  
 Position : N 55 30.30  
           W 26 42.51

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	10.246	34.943	280.0	10.246
10	10.246	34.942	280.2	10.245
20	10.252	34.942	280.0	10.250
30	10.254	34.942	279.7	10.250
40	10.253	34.943	279.7	10.249
50	10.254	34.942	279.2	10.248
100	9.153	34.966	261.7	9.142
150	8.953	35.056	247.2	8.936
200	8.834	35.093	232.6	8.813
250	7.993	35.003	230.0	7.968
300	7.460	34.983	220.6	7.430
350	7.004	34.984	218.5	6.971
400	6.067	34.903	230.3	6.032
450	5.998	34.960	231.4	5.958
500	5.818	34.993	232.1	5.775
550	5.684	35.013	233.0	5.636
600	5.128	34.960	242.8	5.079
650	5.095	34.992	243.6	5.041
700	4.910	34.983	248.1	4.853
750	4.590	34.949	255.3	4.530
800	4.422	34.941	260.6	4.360
850	4.258	34.928	265.4	4.193
900	4.178	34.925	267.3	4.108
950	4.123	34.924	268.9	4.050
1000	4.033	34.918	271.4	3.957
1100	3.906	34.910	275.0	3.822
1200	3.799	34.904	278.0	3.707
1300	3.749	34.902	279.3	3.650
1400	3.654	34.897	282.2	3.547
1500	3.609	34.895	283.0	3.494
1600	3.608	34.902	280.3	3.483
1700	3.582	34.905	279.7	3.448
1800	3.561	34.911	277.5	3.419
1900	3.552	34.920	275.1	3.400
2000	3.508	34.926	273.5	3.348
2100	3.455	34.931	272.4	3.286
2200	3.410	34.935	271.8	3.232
2300	3.347	34.936	272.4	3.160
2400	3.299	34.939	272.1	3.103
2500	3.228	34.943	271.8	3.023
2600	3.156	34.949	271.3	2.943
2700	3.103	34.957	270.7	2.881
2800	3.022	34.959	270.2	2.792
2900	2.895	34.951	266.3	2.657
3000	2.870	34.957	267.4	2.621
3100	2.789	34.951	264.1	2.532
3200	2.778	34.955	265.2	2.511
3250	2.773	34.959	267.0	2.501

# STATION 57

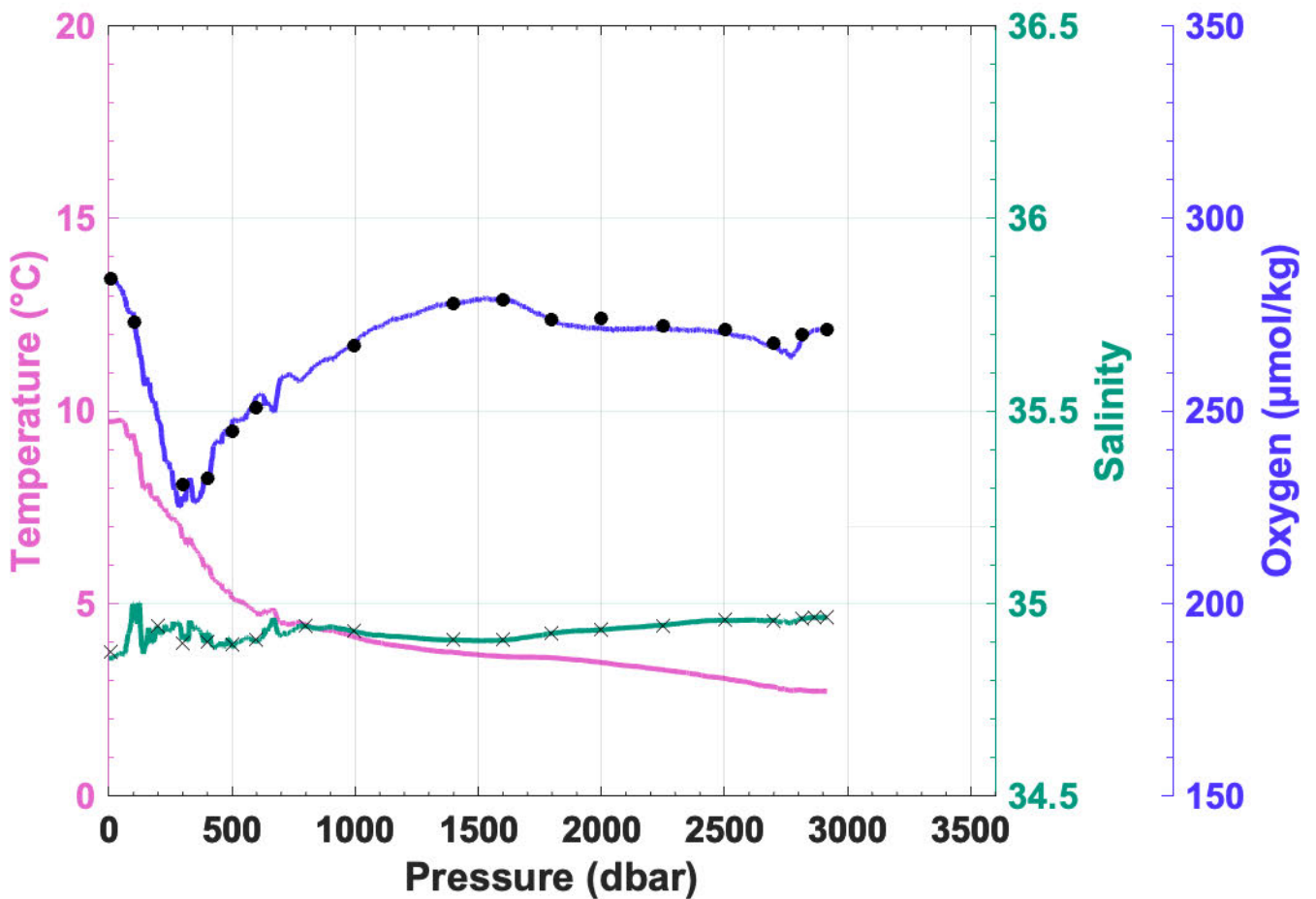
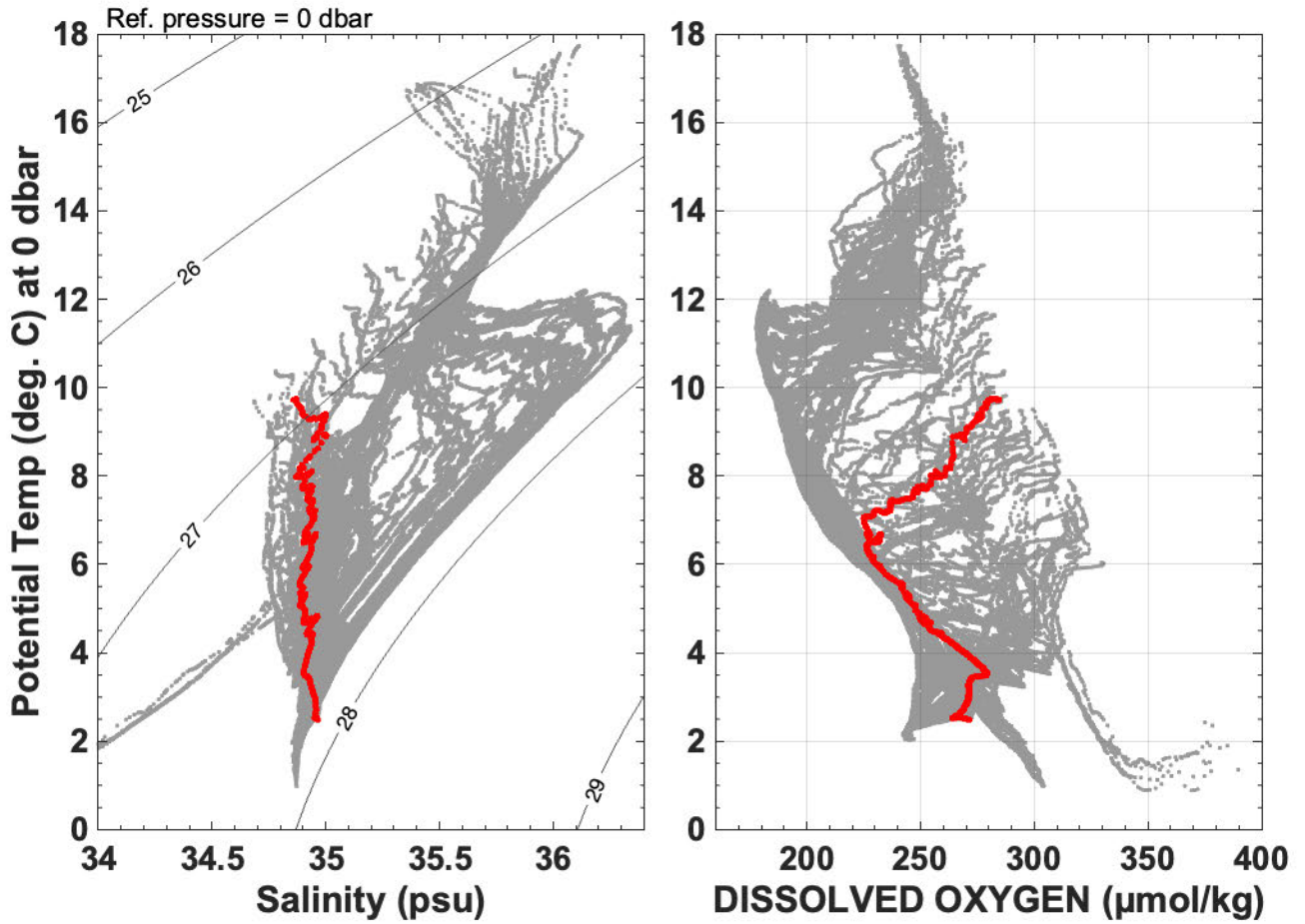


Cruise : BOCATS 2021  
 Station : 58  
 Date : 17/06/2021  
 Depth : 2883  
 Position : N 55 53.03  
           W 26 59.87

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	9.726	34.859	284.3	9.726
10	9.727	34.859	284.5	9.726
20	9.730	34.861	283.8	9.728
30	9.743	34.866	283.4	9.739
40	9.753	34.869	282.7	9.748
50	9.757	34.870	281.5	9.751
100	9.376	35.000	275.1	9.365
150	8.000	34.893	258.3	7.985
200	7.709	34.940	247.5	7.689
250	7.206	34.930	234.8	7.182
300	6.686	34.907	227.9	6.658
350	6.426	34.936	226.4	6.395
400	5.999	34.925	231.9	5.964
450	5.508	34.896	242.0	5.470
500	5.135	34.888	246.5	5.094
550	5.027	34.909	247.8	4.983
600	4.740	34.903	254.0	4.693
650	4.793	34.937	251.7	4.742
700	4.493	34.918	258.7	4.439
750	4.483	34.932	258.6	4.425
800	4.451	34.941	259.2	4.388
850	4.350	34.935	262.3	4.283
900	4.305	34.939	263.8	4.235
950	4.224	34.934	265.6	4.150
1000	4.137	34.928	268.1	4.059
1100	3.986	34.919	271.9	3.901
1200	3.882	34.913	274.6	3.790
1300	3.795	34.908	276.8	3.695
1400	3.737	34.906	277.7	3.628
1500	3.675	34.904	278.9	3.559
1600	3.627	34.905	278.8	3.502
1700	3.613	34.913	276.6	3.480
1800	3.597	34.923	273.4	3.454
1900	3.542	34.929	272.0	3.390
2000	3.472	34.932	271.5	3.312
2100	3.390	34.937	271.1	3.222
2200	3.320	34.942	271.4	3.143
2300	3.242	34.947	271.2	3.057
2400	3.145	34.954	271.1	2.953
2500	3.059	34.956	270.4	2.858
2600	2.949	34.957	269.0	2.740
2700	2.840	34.957	267.5	2.623
2800	2.763	34.959	266.4	2.538
2900	2.727	34.965	271.2	2.492
2900	2.727	34.965	271.2	2.492



# STATION 58

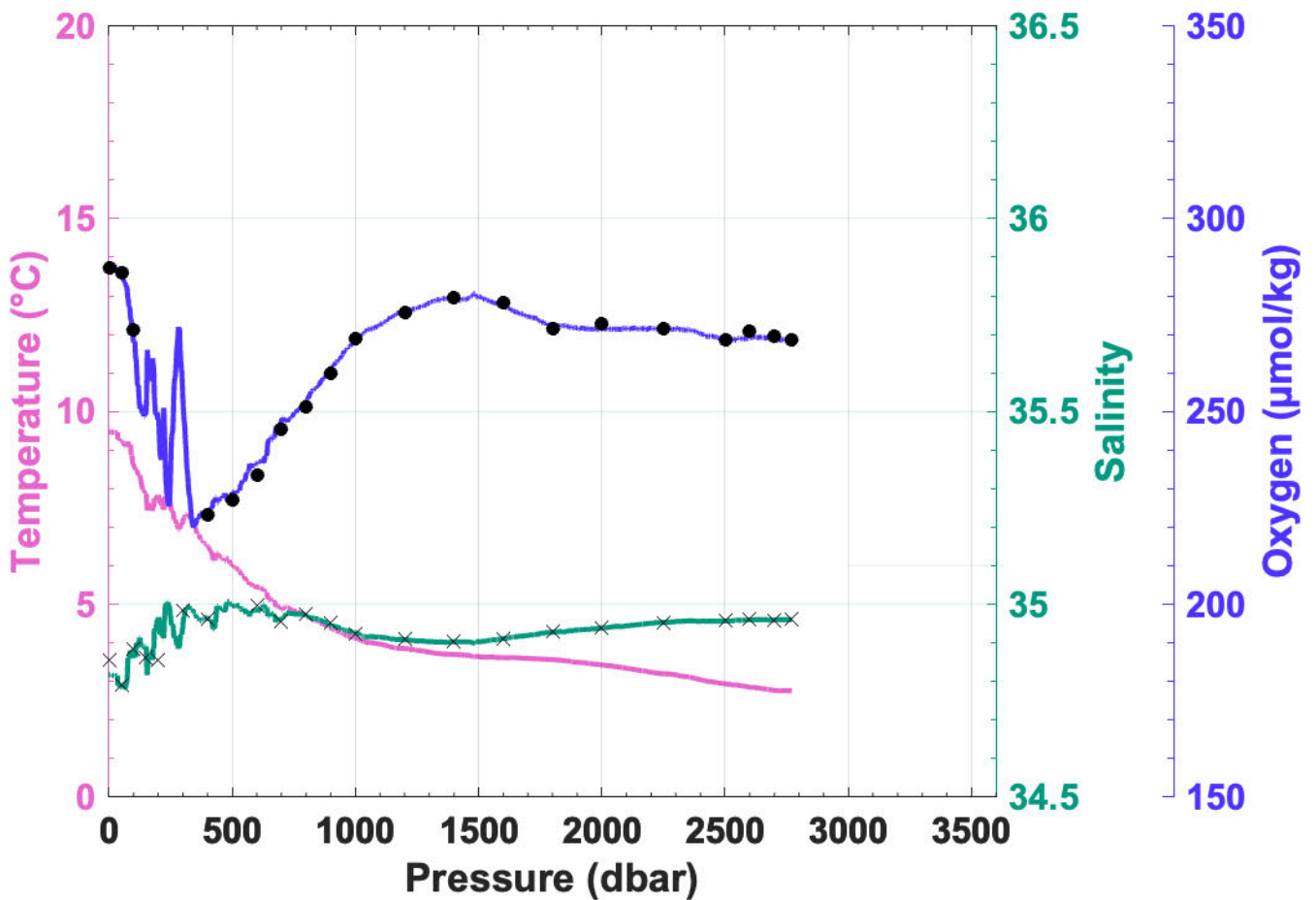
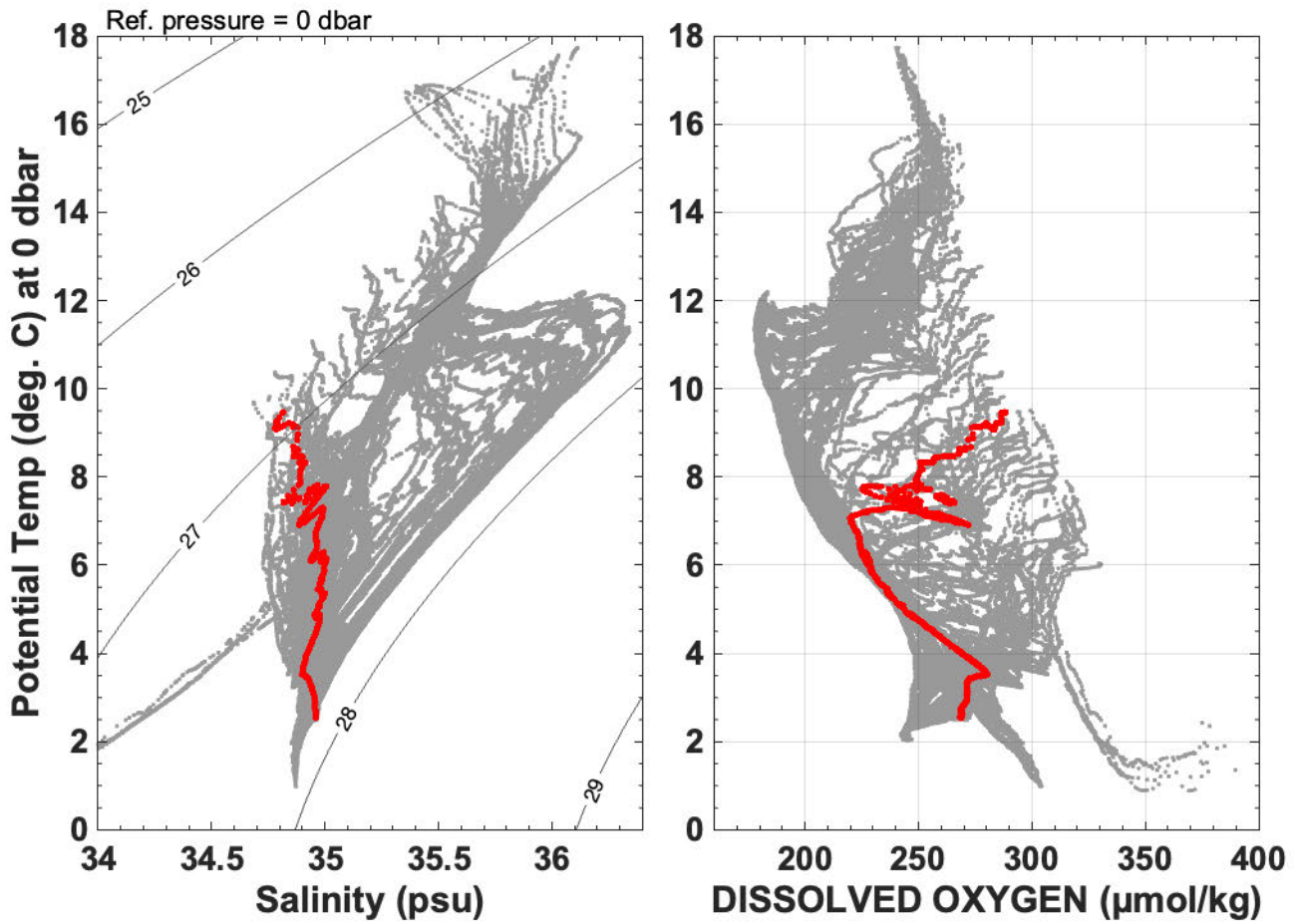




Cruise : BOCATS 2021  
 Station : 59  
 Date : 17/06/2021  
 Depth : 2741  
 Position : N 56 15.09  
           W 27 17.51

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	9.471	34.817	288.2	9.471
10	9.456	34.815	288.0	9.455
20	9.460	34.815	287.6	9.458
30	9.455	34.815	287.3	9.452
40	9.297	34.791	286.5	9.292
50	9.228	34.785	285.1	9.223
100	8.639	34.881	267.9	8.628
150	7.873	34.890	249.4	7.858
200	7.805	34.960	247.8	7.785
250	7.568	34.970	233.5	7.543
300	7.144	34.942	253.6	7.115
350	7.004	34.975	220.3	6.971
400	6.511	34.964	224.0	6.474
450	6.238	34.991	227.3	6.198
500	6.002	34.995	229.0	5.958
550	5.727	34.990	231.8	5.679
600	5.449	34.985	236.5	5.398
650	5.118	34.968	242.9	5.065
700	4.876	34.961	247.7	4.820
750	4.832	34.975	249.5	4.772
800	4.724	34.972	252.5	4.660
850	4.565	34.962	256.7	4.497
900	4.377	34.945	261.2	4.306
950	4.230	34.934	264.9	4.156
1000	4.123	34.926	268.1	4.046
1100	3.970	34.915	272.7	3.886
1200	3.853	34.908	275.4	3.761
1300	3.757	34.903	278.1	3.658
1400	3.702	34.903	279.1	3.594
1500	3.642	34.903	279.4	3.526
1600	3.617	34.911	277.2	3.493
1700	3.600	34.919	274.6	3.466
1800	3.566	34.927	272.6	3.423
1900	3.494	34.933	271.7	3.343
2000	3.425	34.939	271.3	3.266
2100	3.343	34.945	271.3	3.176
2200	3.238	34.951	271.6	3.063
2300	3.171	34.956	271.4	2.987
2400	3.045	34.956	270.2	2.854
2500	2.939	34.957	268.8	2.740
2600	2.854	34.960	269.4	2.647
2700	2.768	34.959	268.4	2.552
2750	2.761	34.960	268.7	2.541

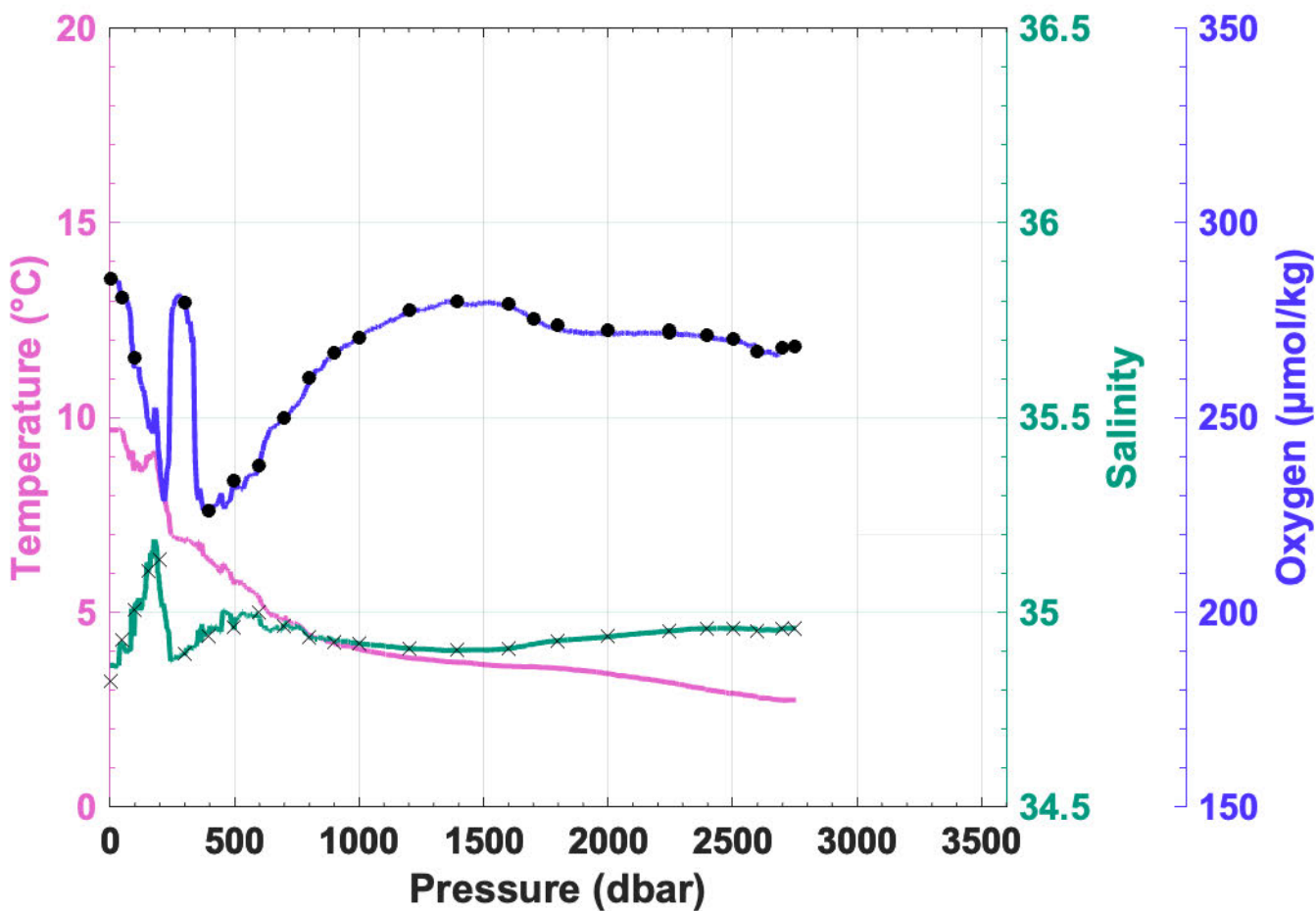
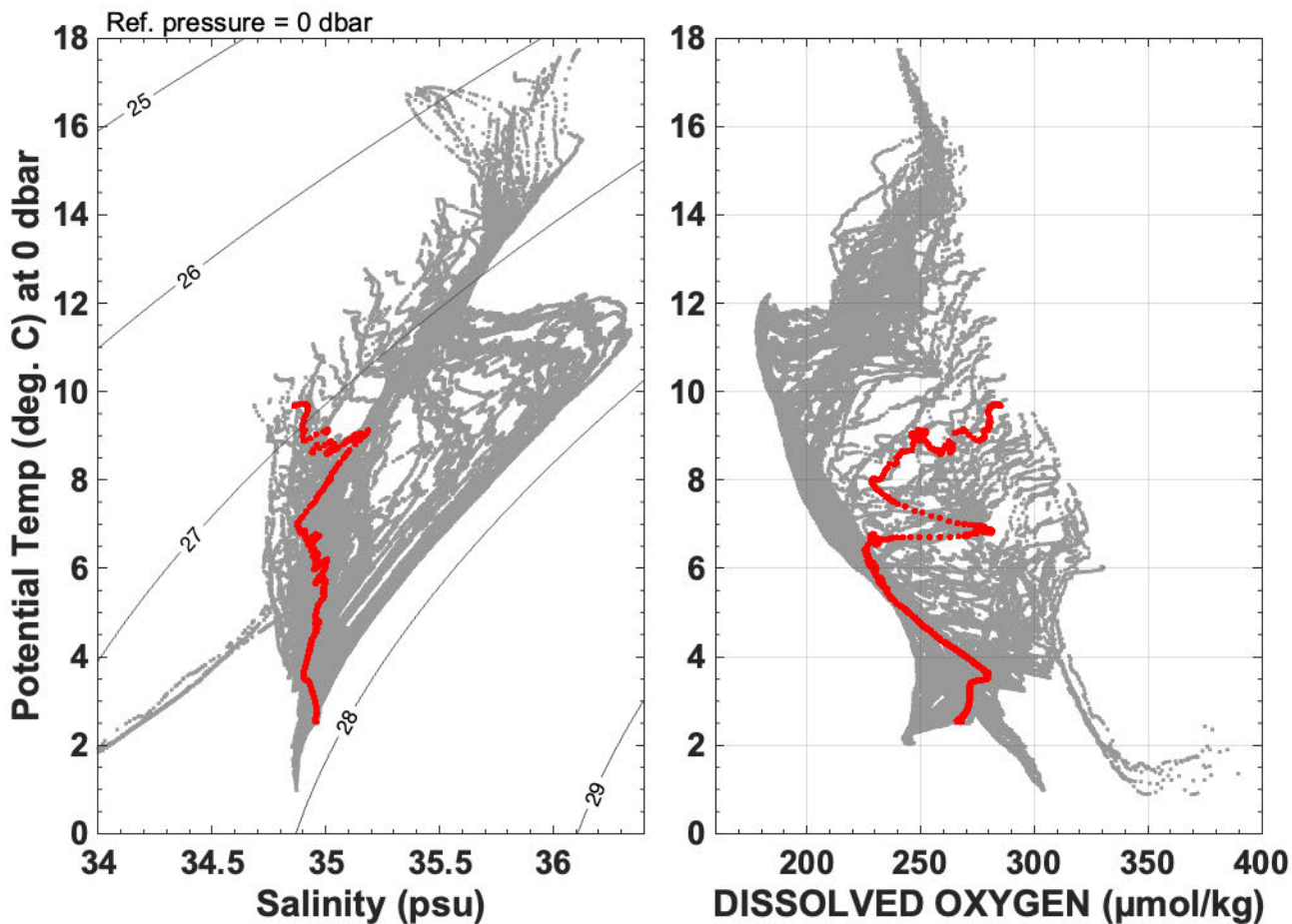
# STATION 59



Cruise : BOCATS 2021  
Station : 60  
Date : 17/06/2021  
Depth : 2720  
Position : N 56 37.60  
W 27 34.83

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	9.681	34.864	285.1	9.681
10	9.682	34.864	285.1	9.681
20	9.679	34.862	285.0	9.677
30	9.681	34.862	285.0	9.677
40	9.717	34.913	282.3	9.712
50	9.643	34.921	280.4	9.638
100	8.852	35.012	262.7	8.841
150	9.044	35.129	249.6	9.027
200	8.367	35.054	238.7	8.346
250	6.971	34.878	277.5	6.948
300	6.837	34.892	280.6	6.810
350	6.708	34.925	230.5	6.676
400	6.345	34.957	226.6	6.309
450	6.153	34.983	229.3	6.113
500	5.766	34.972	233.2	5.723
550	5.596	34.989	234.7	5.549
600	5.357	34.985	237.8	5.306
650	4.937	34.953	247.5	4.884
700	4.859	34.972	249.2	4.802
750	4.694	34.963	253.0	4.634
800	4.430	34.936	259.0	4.367
850	4.328	34.935	262.8	4.262
900	4.198	34.927	266.4	4.128
950	4.142	34.926	268.5	4.069
1000	4.050	34.920	270.8	3.973
1100	3.935	34.914	273.9	3.851
1200	3.833	34.907	277.0	3.741
1300	3.775	34.905	278.3	3.675
1400	3.717	34.902	279.6	3.609
1500	3.661	34.904	279.4	3.544
1600	3.616	34.907	278.7	3.492
1700	3.605	34.918	275.1	3.471
1800	3.562	34.927	272.9	3.420
1900	3.502	34.933	271.6	3.351
2000	3.427	34.937	271.6	3.269
2100	3.336	34.944	271.5	3.169
2200	3.249	34.950	271.7	3.073
2300	3.142	34.955	271.2	2.959
2400	3.008	34.958	270.7	2.818
2500	2.922	34.959	269.5	2.724
2600	2.826	34.957	267.9	2.620
2700	2.747	34.958	267.2	2.532
2750	2.750	34.959	268.0	2.530

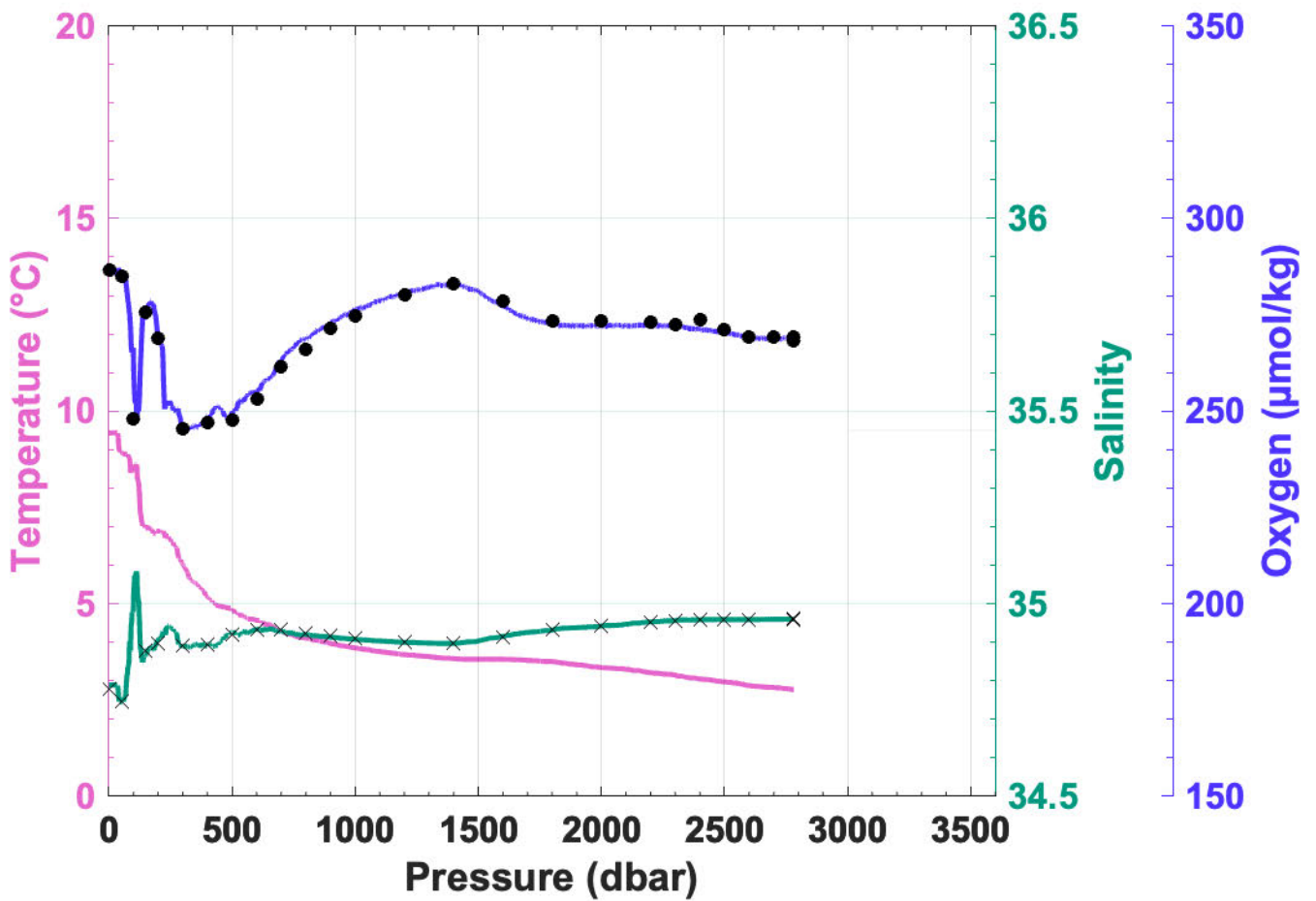
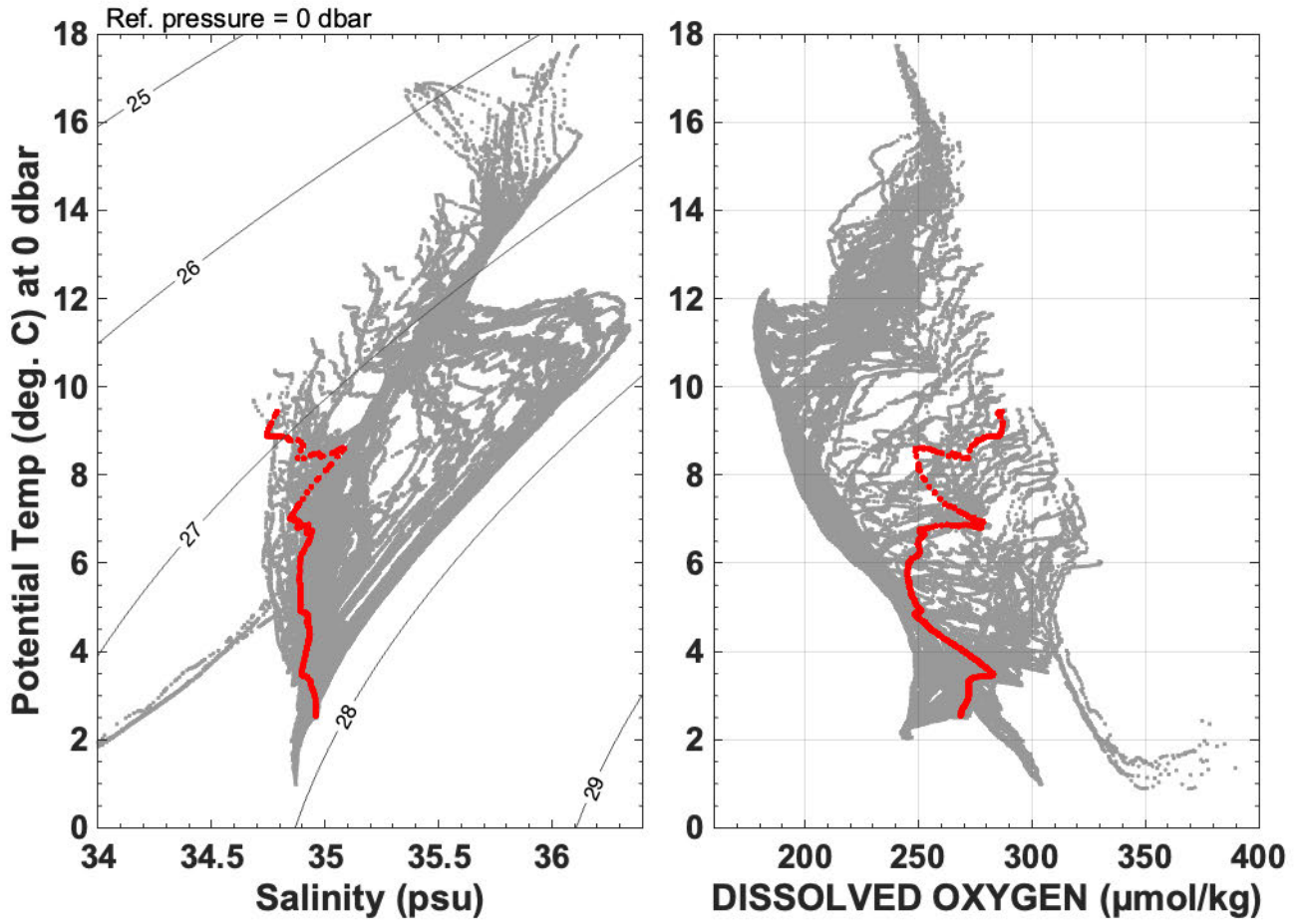
# STATION 60



Cruise : BOCATS 2021  
 Station : 61  
 Date : 18/06/2021  
 Depth : 2750  
 Position : N 57 0.25  
           W 27 52.81

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	9.432	34.789	286.7	9.432
10	9.433	34.789	286.4	9.432
20	9.434	34.789	286.1	9.432
30	9.433	34.789	286.3	9.430
40	9.102	34.757	287.1	9.097
50	8.918	34.746	286.1	8.913
100	8.440	34.993	263.3	8.430
150	6.966	34.868	274.6	6.952
200	6.883	34.908	269.3	6.864
250	6.669	34.938	252.1	6.646
300	6.043	34.890	245.7	6.017
350	5.546	34.893	246.0	5.517
400	5.186	34.894	248.3	5.154
450	4.936	34.900	250.7	4.900
500	4.809	34.923	249.6	4.769
550	4.669	34.927	252.7	4.626
600	4.570	34.933	255.3	4.523
650	4.450	34.934	258.4	4.399
700	4.296	34.929	263.0	4.243
750	4.182	34.923	266.4	4.125
800	4.110	34.920	268.8	4.049
850	4.044	34.916	270.8	3.980
900	3.965	34.913	273.0	3.897
950	3.905	34.910	274.8	3.834
1000	3.853	34.907	276.2	3.778
1100	3.757	34.903	278.6	3.675
1200	3.678	34.900	280.9	3.587
1300	3.628	34.898	282.1	3.530
1400	3.574	34.897	282.7	3.467
1500	3.557	34.904	281.1	3.442
1600	3.556	34.915	277.2	3.433
1700	3.530	34.926	274.0	3.398
1800	3.498	34.932	272.8	3.357
1900	3.417	34.938	272.2	3.268
2000	3.342	34.943	272.3	3.184
2100	3.299	34.947	272.1	3.132
2200	3.207	34.953	272.2	3.033
2300	3.146	34.956	271.9	2.963
2400	3.048	34.958	271.3	2.857
2500	2.971	34.959	270.3	2.771
2600	2.875	34.959	269.2	2.667
2700	2.826	34.959	268.8	2.609
2750	2.797	34.960	268.9	2.576

# STATION 61

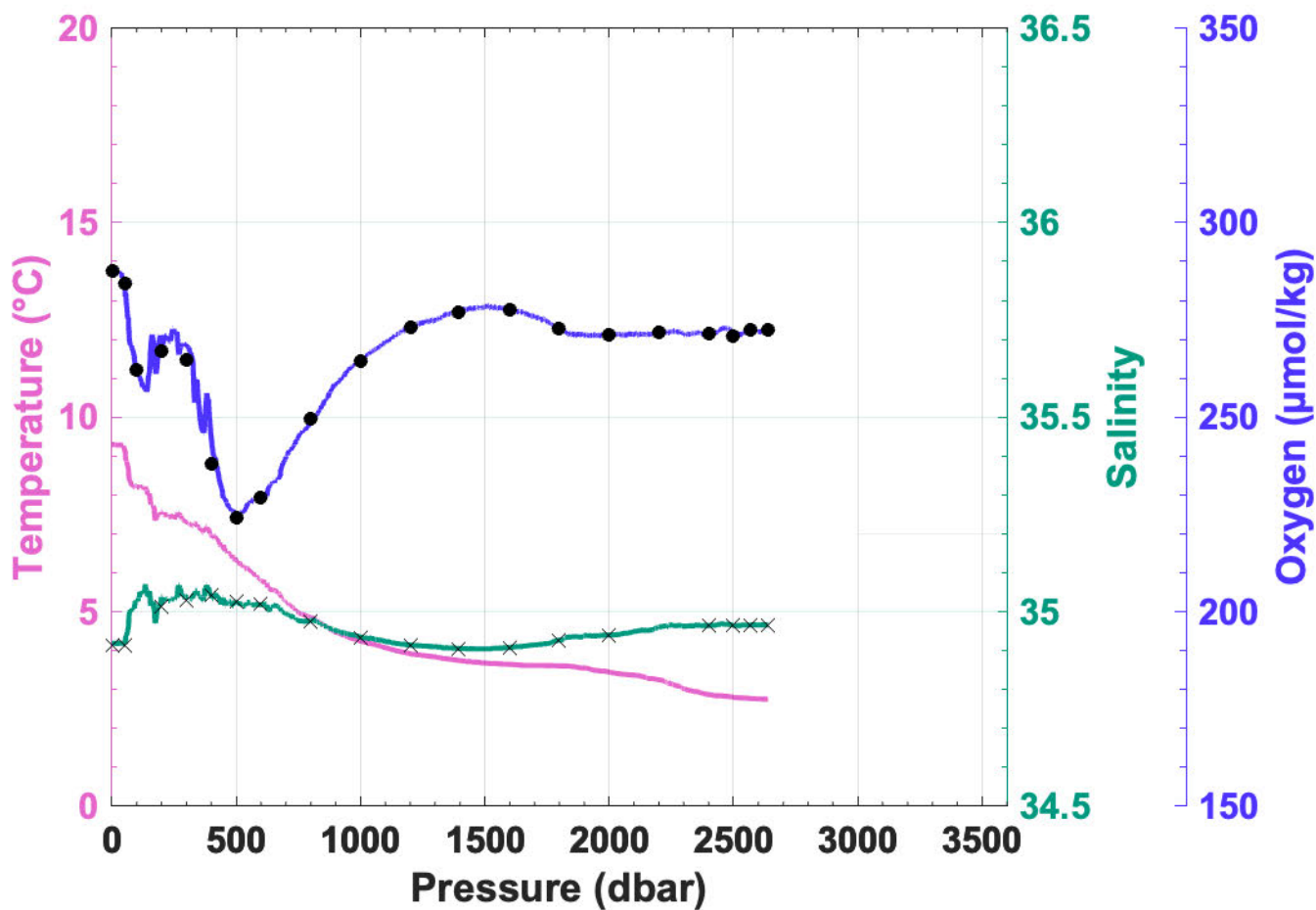
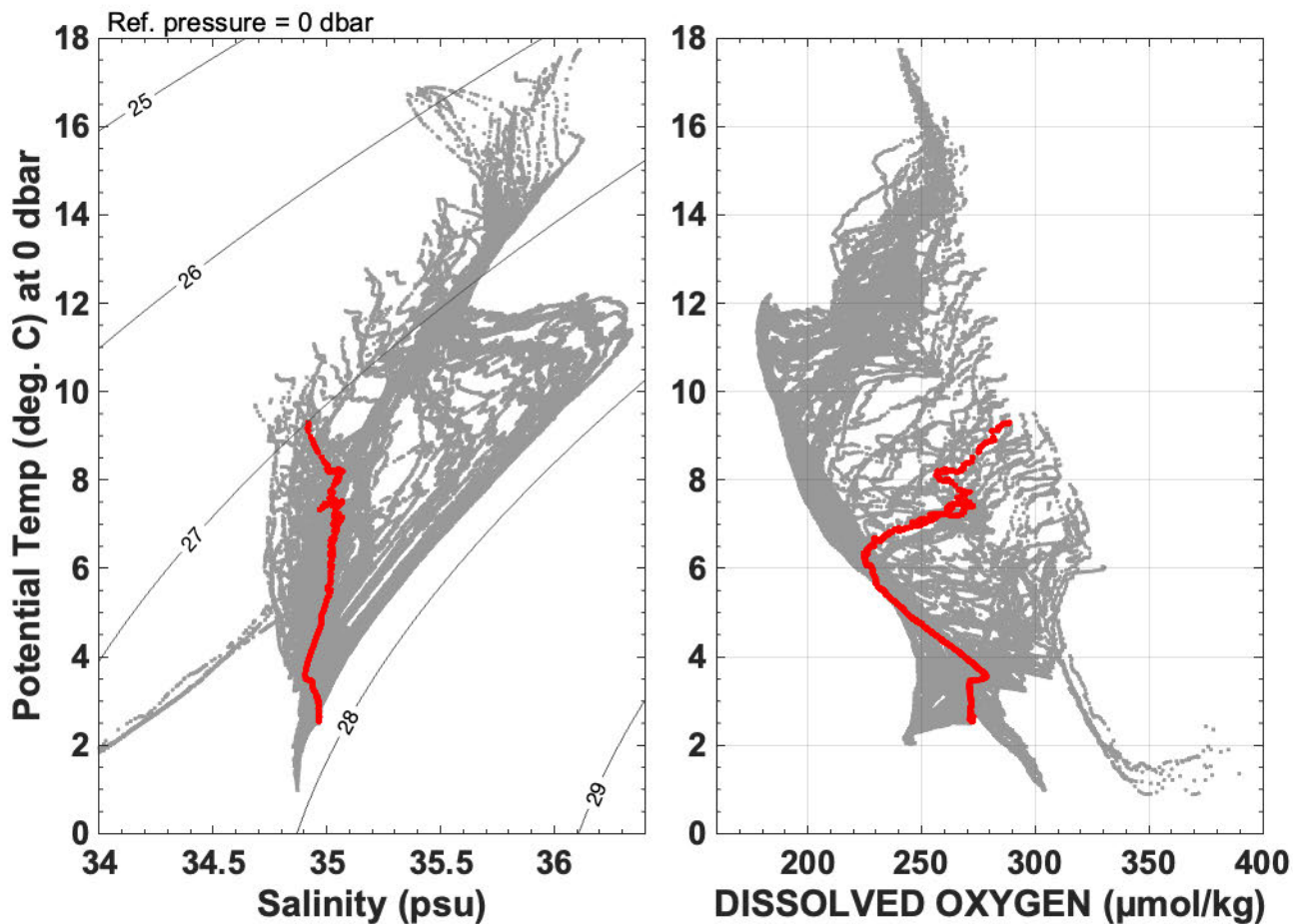


Cruise : BOCATS 2021  
 Station : 62  
 Date : 18/06/2021  
 Depth : 2610  
 Position : N 57 22.60  
           W 28 10.58

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	9.295	34.919	288.6	9.295
10	9.296	34.919	288.4	9.295
20	9.282	34.919	287.8	9.279
30	9.281	34.919	287.0	9.278
40	9.279	34.919	286.3	9.275
50	9.196	34.917	283.7	9.191
100	8.216	35.028	261.6	8.206
150	8.033	35.053	261.2	8.017
200	7.566	35.038	269.1	7.546
250	7.432	35.033	272.3	7.408
300	7.304	35.038	268.7	7.275
350	7.164	35.042	253.3	7.130
400	6.968	35.041	244.7	6.930
450	6.661	35.028	229.5	6.619
500	6.314	35.026	224.7	6.268
550	6.096	35.024	227.9	6.047
600	5.796	35.018	230.0	5.743
650	5.569	35.017	233.3	5.513
700	5.244	34.994	239.7	5.185
750	4.978	34.977	244.9	4.916
800	4.850	34.978	248.8	4.785
850	4.679	34.967	253.3	4.611
900	4.470	34.951	258.5	4.399
950	4.343	34.942	262.0	4.269
1000	4.242	34.935	264.7	4.164
1100	4.073	34.924	269.2	3.988
1200	3.921	34.914	273.1	3.828
1300	3.839	34.910	275.0	3.738
1400	3.738	34.905	277.5	3.630
1500	3.679	34.904	278.4	3.563
1600	3.644	34.908	277.7	3.519
1700	3.616	34.915	275.8	3.482
1800	3.605	34.927	272.5	3.462
1900	3.555	34.938	271.0	3.404
2000	3.448	34.940	271.1	3.289
2100	3.370	34.949	271.3	3.203
2200	3.250	34.960	271.6	3.075
2300	3.027	34.963	271.3	2.845
2400	2.869	34.965	271.5	2.681
2500	2.798	34.964	271.7	2.602
2600	2.758	34.966	272.0	2.552
2600	2.758	34.966	272.0	2.552



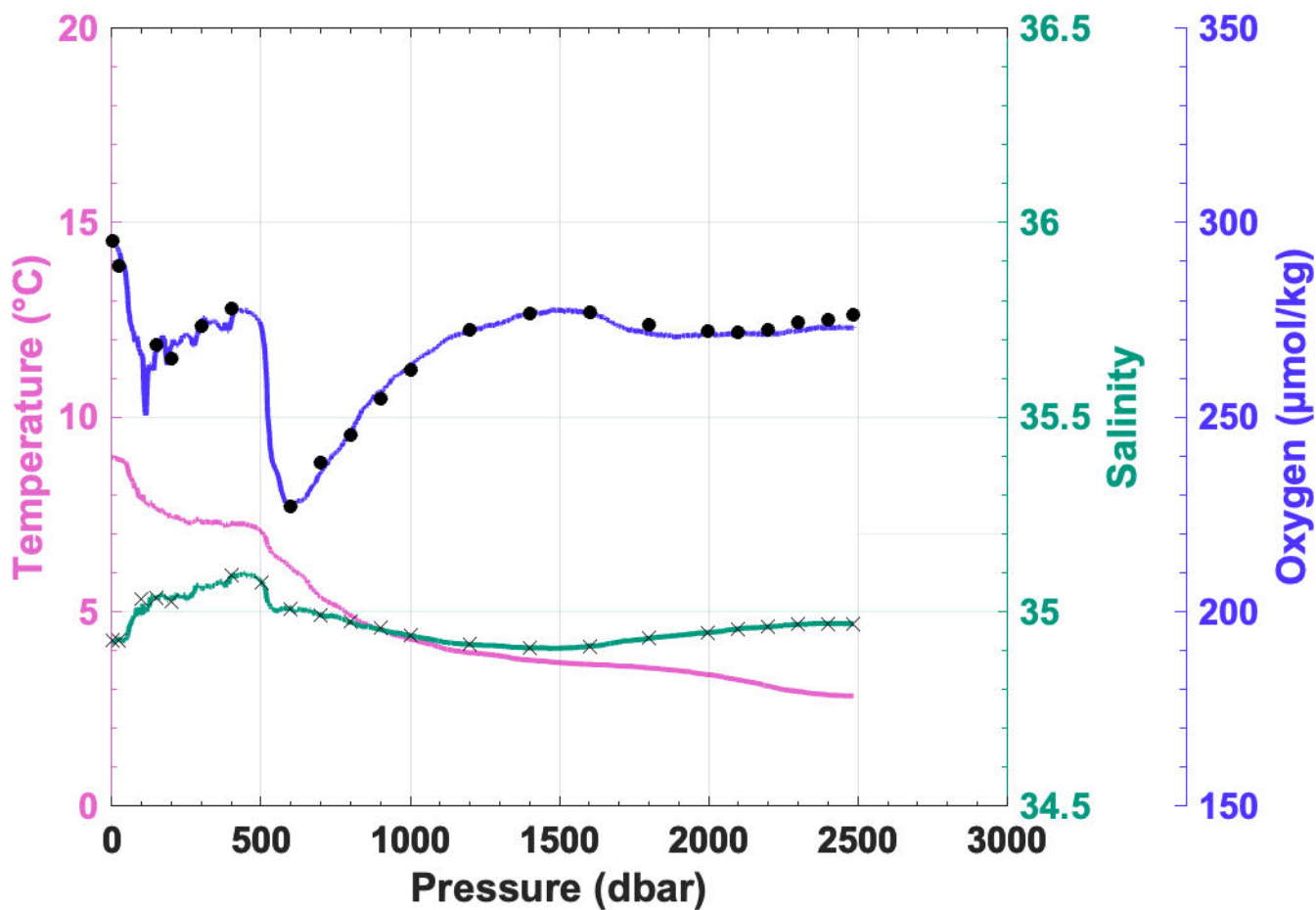
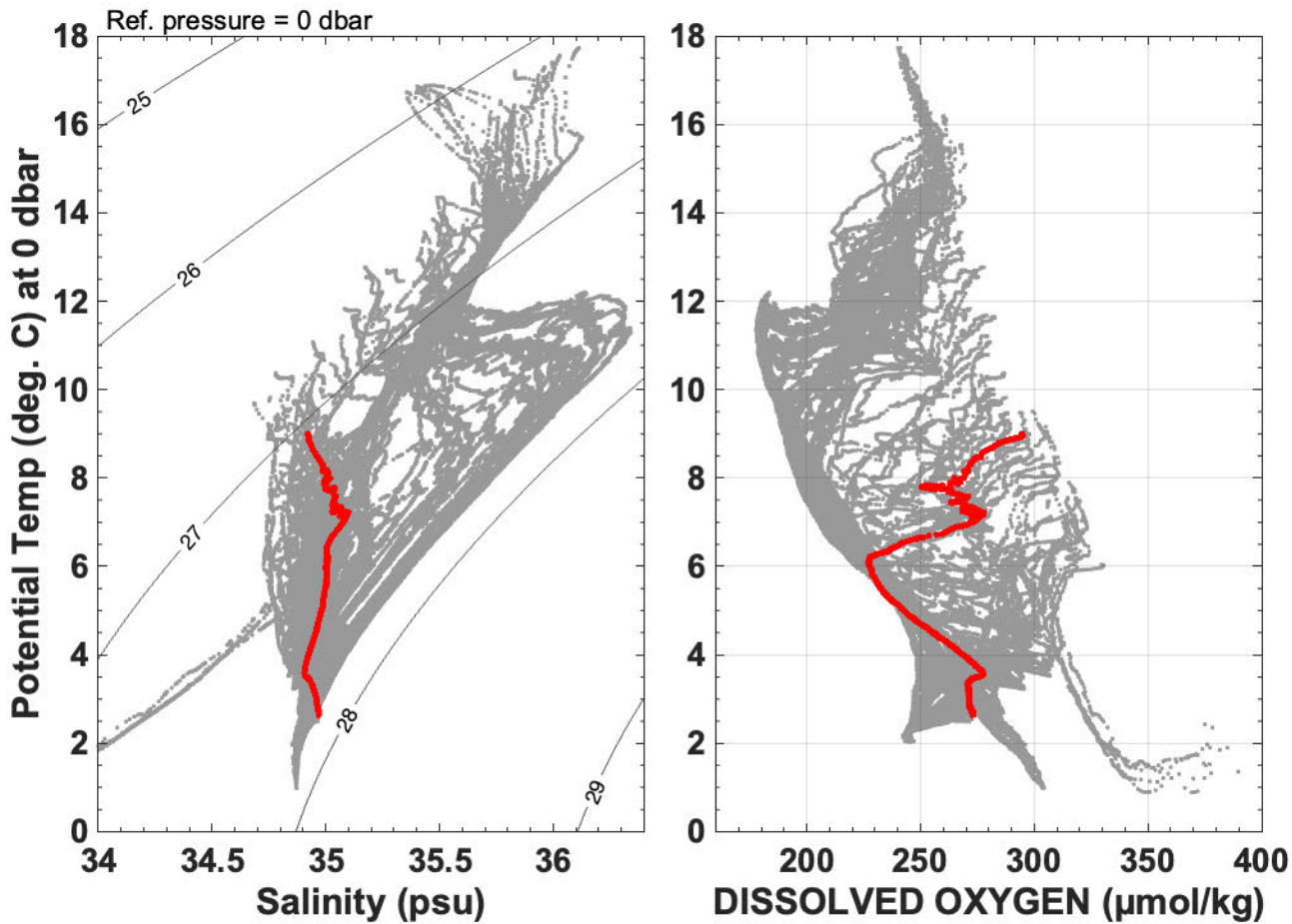
# STATION 62



Cruise : BOCATS 2021  
Station : 63  
Date : 18/06/2021  
Depth : 2464  
Position : N 57 40.41  
W 28 43.94

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	8.963	34.922	295.0	8.963
10	8.942	34.923	294.4	8.940
20	8.923	34.928	293.2	8.921
30	8.893	34.927	290.9	8.890
40	8.873	34.926	289.3	8.869
50	8.770	34.934	283.8	8.765
100	7.878	34.991	266.1	7.868
150	7.638	35.036	266.6	7.623
200	7.460	35.035	268.2	7.440
250	7.283	35.033	271.2	7.259
300	7.310	35.061	274.8	7.281
350	7.310	35.072	274.4	7.276
400	7.270	35.093	274.4	7.231
450	7.225	35.093	277.5	7.181
500	7.061	35.077	273.5	7.013
550	6.419	35.003	236.4	6.369
600	6.138	35.009	227.2	6.084
650	5.837	35.005	229.3	5.780
700	5.370	34.991	235.7	5.311
750	5.166	34.988	240.9	5.103
800	4.906	34.973	246.7	4.840
850	4.688	34.962	252.6	4.619
900	4.541	34.954	256.4	4.469
950	4.402	34.945	260.3	4.326
1000	4.293	34.938	263.4	4.215
1100	4.087	34.924	268.9	4.002
1200	3.944	34.916	272.3	3.852
1300	3.863	34.912	274.0	3.762
1400	3.755	34.907	276.6	3.646
1500	3.692	34.906	277.4	3.575
1600	3.647	34.912	276.5	3.522
1700	3.604	34.922	273.3	3.470
1800	3.553	34.931	271.5	3.411
1900	3.482	34.940	270.7	3.332
2000	3.379	34.946	271.1	3.220
2100	3.243	34.955	271.3	3.078
2200	3.086	34.961	271.4	2.914
2300	2.947	34.967	272.3	2.768
2400	2.858	34.969	272.9	2.670
2450	2.836	34.969	273.0	2.644

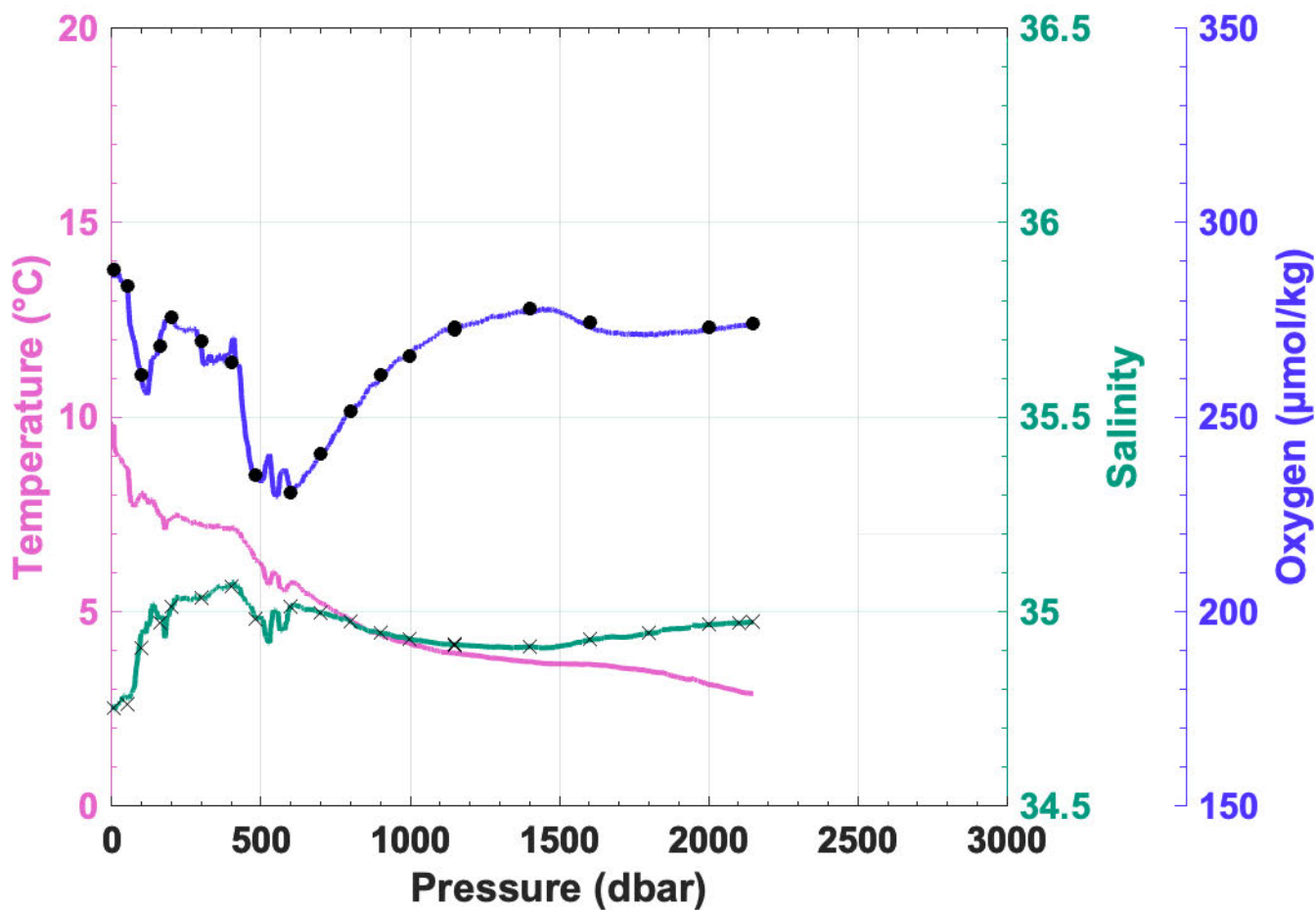
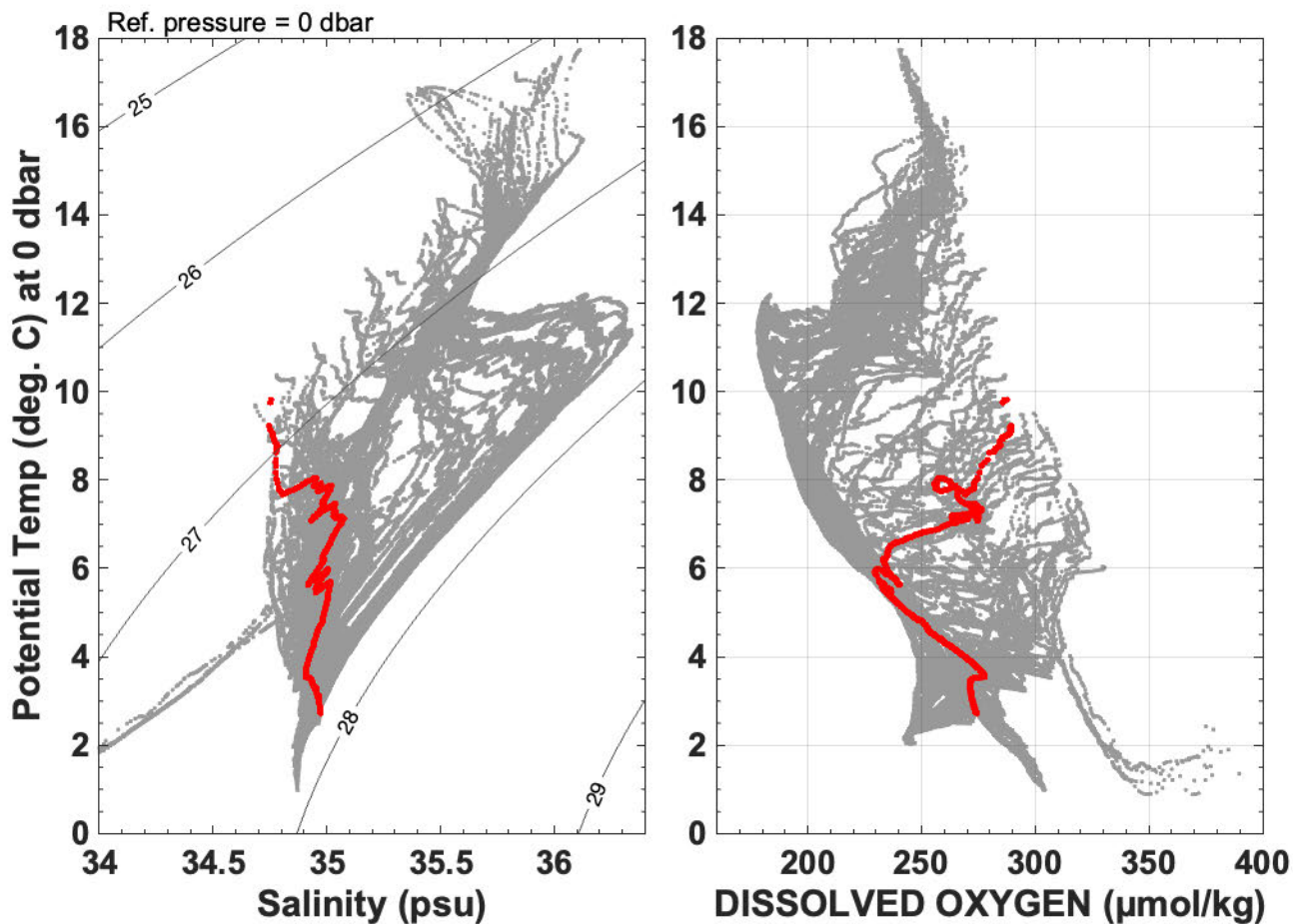
# STATION 63



Cruise : BOCATS 2021  
 Station : 64  
 Date : 18/06/2021  
 Depth : 2135  
 Position : N 57 58.25  
           W 29 17.05

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	9.816	34.756	287.6	9.816
10	9.204	34.748	288.9	9.203
20	9.020	34.763	287.5	9.018
30	8.938	34.767	285.7	8.934
40	8.781	34.785	284.2	8.777
50	8.706	34.780	282.4	8.701
100	8.044	34.943	259.7	8.034
150	7.656	35.000	265.9	7.641
200	7.395	35.009	275.3	7.376
250	7.373	35.034	272.2	7.348
300	7.242	35.037	267.6	7.213
350	7.197	35.061	264.3	7.164
400	7.134	35.069	267.4	7.095
450	6.742	35.025	244.4	6.700
500	6.243	34.989	233.0	6.198
550	5.953	35.000	229.5	5.904
600	5.744	35.016	231.4	5.691
650	5.469	35.006	235.6	5.414
700	5.223	34.998	240.6	5.164
750	5.007	34.987	245.8	4.945
800	4.798	34.975	251.5	4.733
850	4.547	34.954	255.8	4.479
900	4.414	34.945	259.7	4.343
950	4.260	34.936	264.2	4.186
1000	4.175	34.930	266.5	4.098
1100	3.968	34.917	272.0	3.883
1200	3.886	34.913	273.8	3.794
1300	3.796	34.909	275.9	3.695
1400	3.715	34.910	277.0	3.607
1500	3.659	34.911	277.0	3.543
1600	3.649	34.927	273.2	3.524
1700	3.566	34.934	271.6	3.433
1800	3.478	34.945	271.3	3.337
1900	3.307	34.956	271.8	3.159
2000	3.125	34.966	272.6	2.971
2100	2.956	34.971	273.5	2.795
2150	2.890	34.972	274.5	2.726

# STATION 64

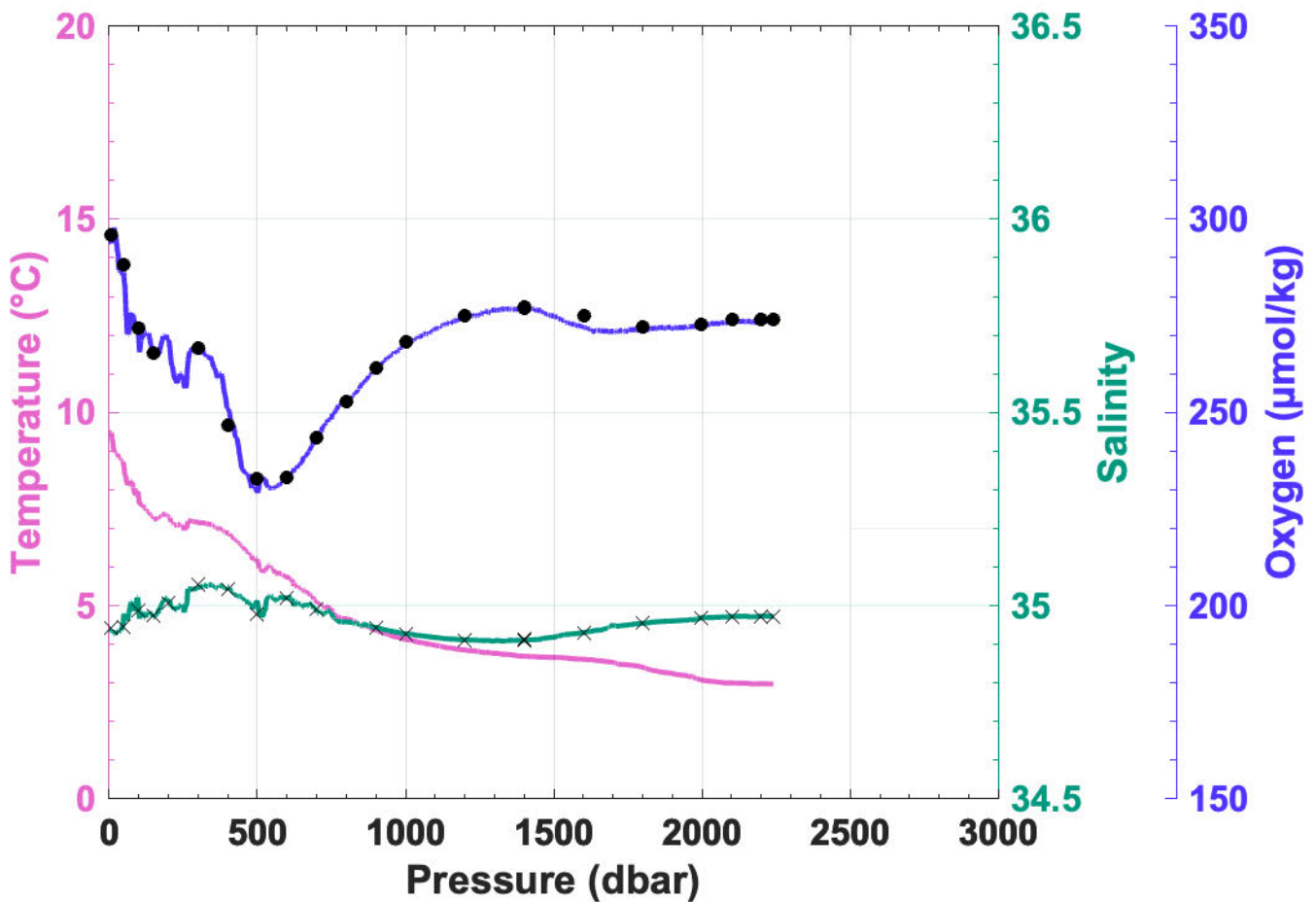
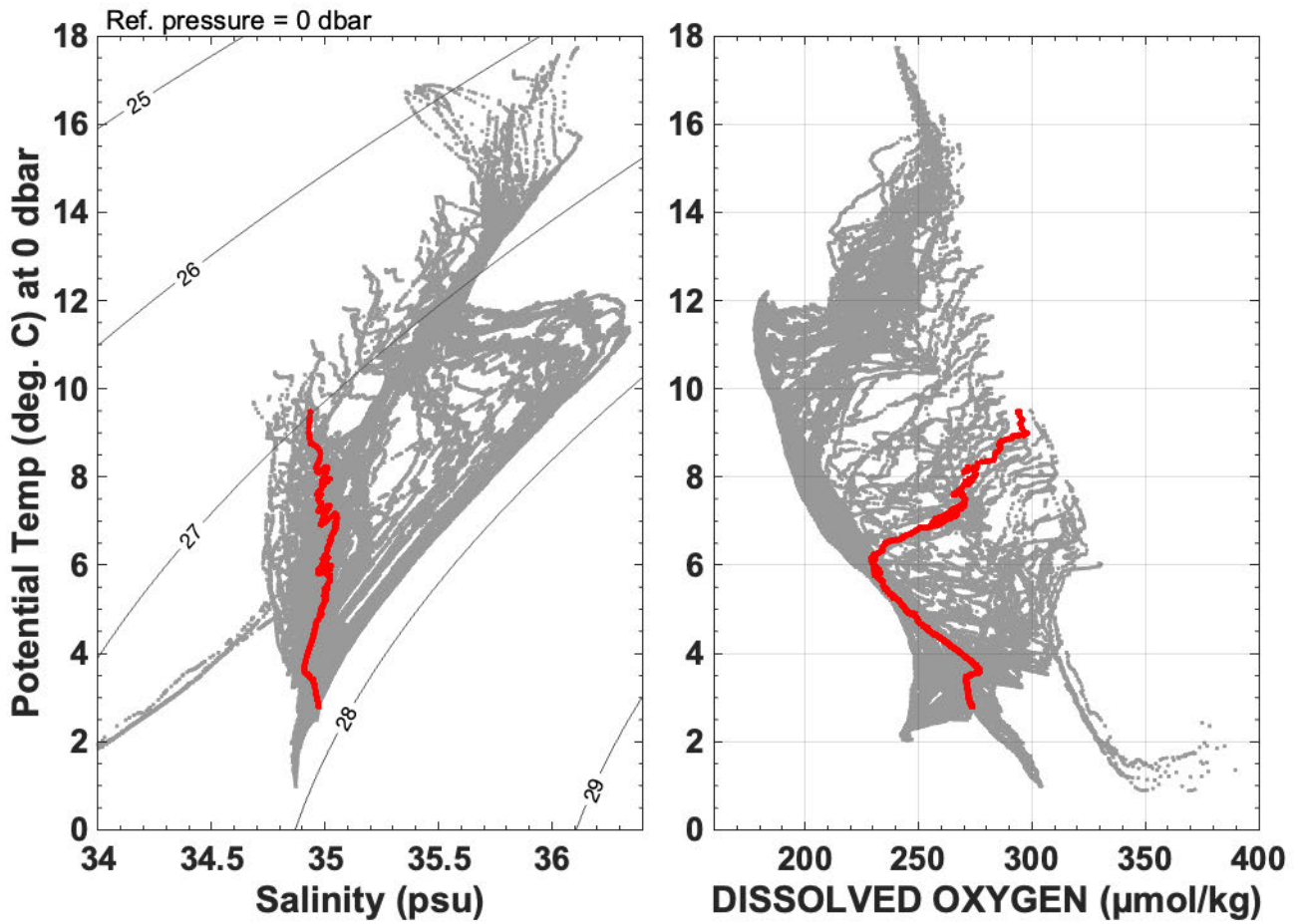


Cruise : BOCATS 2021  
 Station : 65  
 Date : 18/06/2021  
 Depth : 2224  
 Position : N 58 12.39  
           W 29 43.77

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	9.477	34.936	294.1	9.477
10	9.318	34.933	295.4	9.317
20	8.957	34.929	296.1	8.955
30	8.890	34.933	291.4	8.887
40	8.778	34.935	286.0	8.774
50	8.580	34.978	284.9	8.575
100	7.761	34.986	269.0	7.751
150	7.249	34.971	265.4	7.235
200	7.308	35.015	268.7	7.289
250	7.084	35.003	258.9	7.060
300	7.153	35.047	266.2	7.124
350	7.071	35.051	262.5	7.038
400	6.892	35.049	250.9	6.854
450	6.537	35.021	235.3	6.496
500	6.203	35.012	229.1	6.158
550	5.963	35.021	230.7	5.915
600	5.732	35.020	233.1	5.680
650	5.417	35.001	237.2	5.362
700	5.126	34.990	243.7	5.068
750	4.919	34.981	248.5	4.858
800	4.659	34.958	253.1	4.595
850	4.485	34.947	257.1	4.418
900	4.364	34.943	261.3	4.294
950	4.224	34.934	264.8	4.151
1000	4.125	34.927	267.6	4.048
1100	3.973	34.918	271.5	3.889
1200	3.854	34.912	274.3	3.762
1300	3.766	34.909	276.5	3.666
1400	3.691	34.910	276.7	3.584
1500	3.662	34.919	274.9	3.545
1600	3.613	34.930	272.1	3.488
1700	3.535	34.949	271.0	3.402
1800	3.407	34.955	271.5	3.267
1900	3.244	34.960	271.7	3.097
2000	3.073	34.968	272.8	2.919
2100	3.003	34.972	273.4	2.841
2200	2.978	34.973	273.5	2.807
2241	2.966	34.972	273.8	2.791



# STATION 65

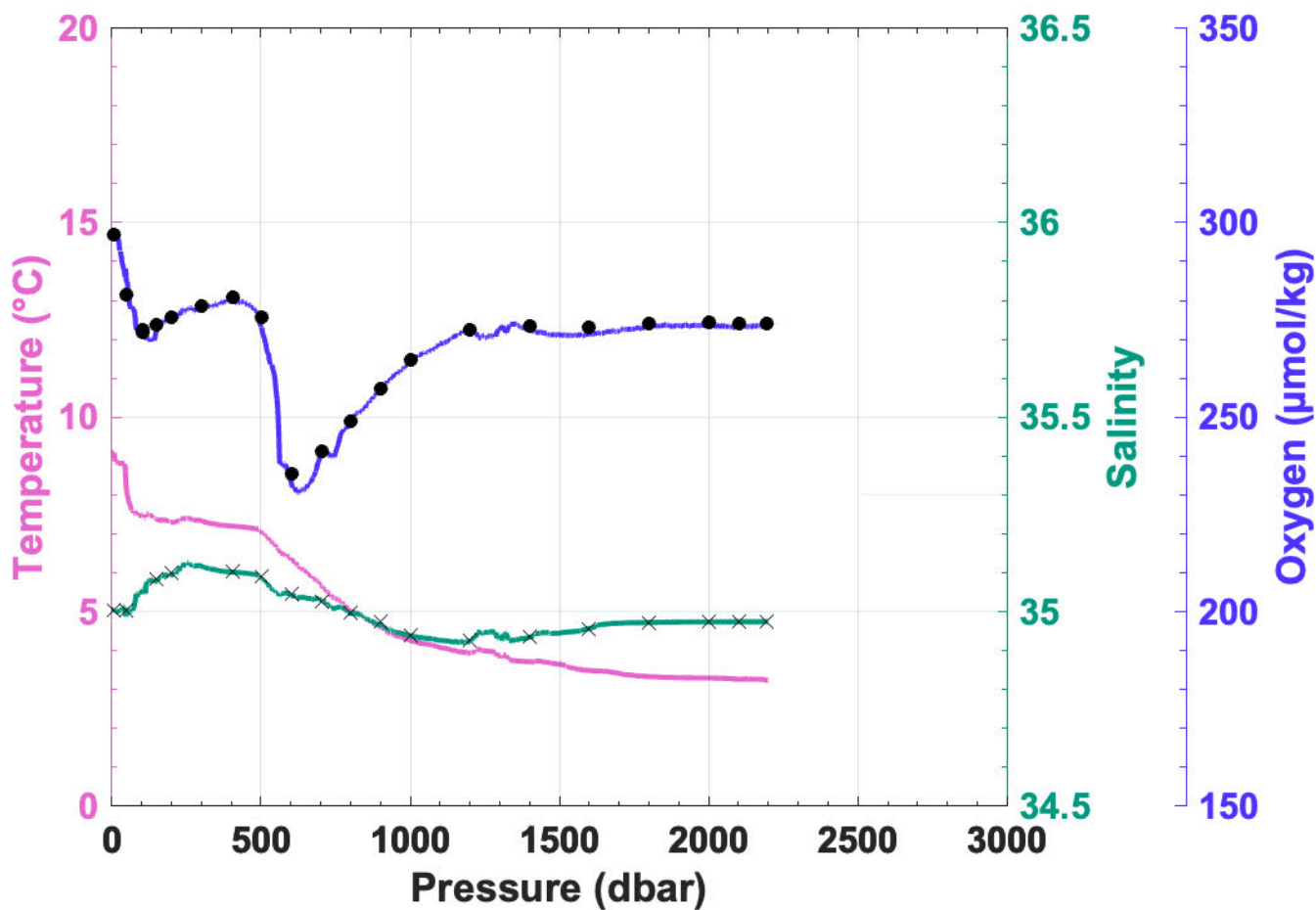
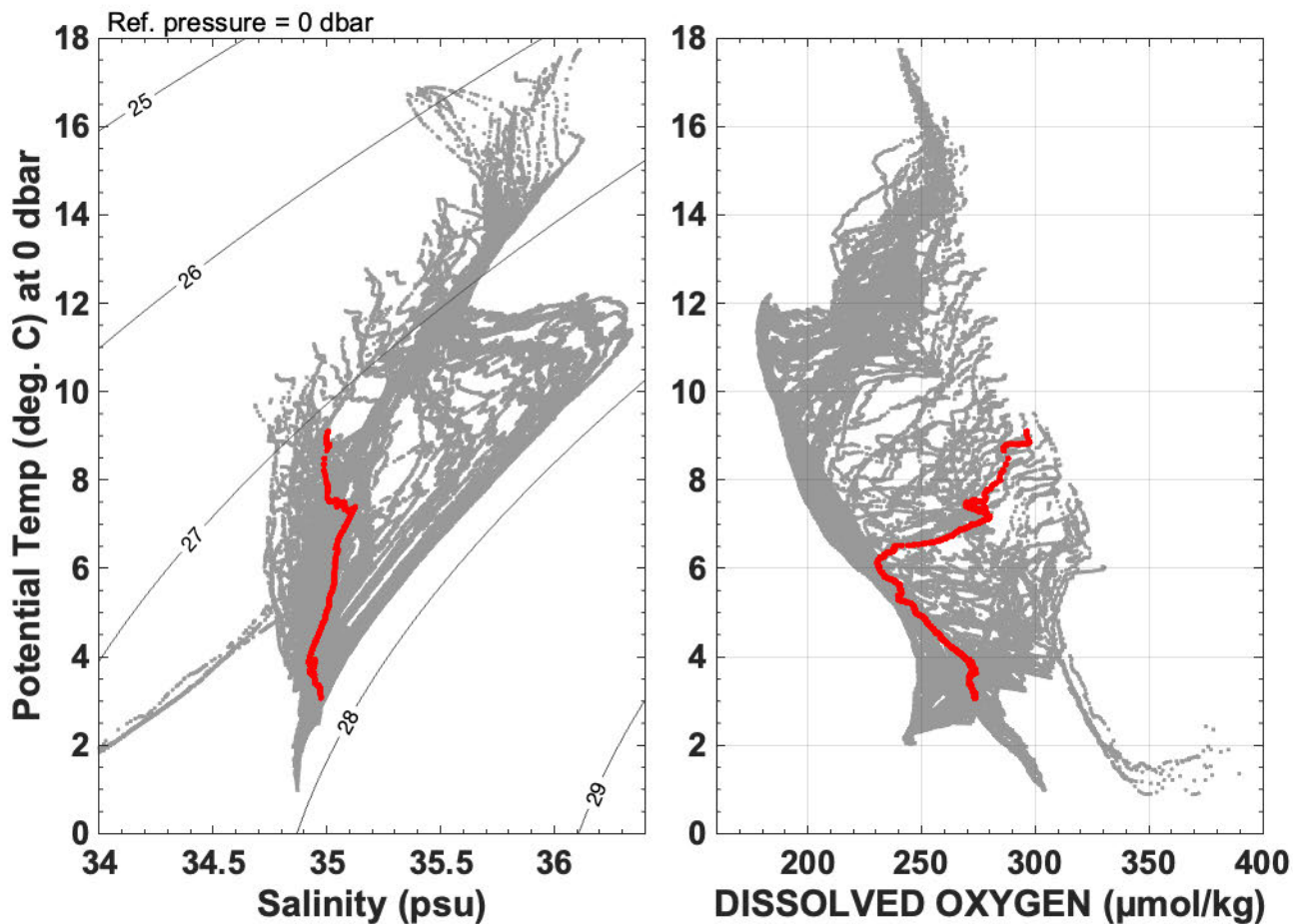




Cruise : BOCATS 2021  
 Station : 66  
 Date : 19/06/2021  
 Depth : 2180  
 Position : N 58 24.50  
           W 30 6.75

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	9.099	35.005	296.3	9.099
10	8.924	34.999	296.9	8.923
20	8.829	35.000	296.1	8.827
30	8.810	35.004	292.2	8.807
40	8.808	35.013	288.0	8.804
50	8.078	34.995	284.5	8.073
100	7.486	35.055	272.1	7.477
150	7.371	35.078	272.7	7.356
200	7.296	35.095	275.4	7.277
250	7.396	35.121	277.6	7.372
300	7.340	35.117	277.6	7.311
350	7.247	35.107	278.9	7.213
400	7.198	35.102	279.6	7.159
450	7.169	35.099	279.1	7.126
500	7.047	35.087	273.2	6.999
550	6.673	35.049	256.9	6.622
600	6.333	35.041	233.6	6.278
650	6.049	35.036	231.6	5.991
700	5.689	35.031	240.5	5.628
750	5.330	35.009	241.0	5.267
800	5.015	34.996	249.1	4.949
850	4.820	34.981	252.5	4.751
900	4.611	34.967	257.2	4.539
950	4.387	34.947	261.1	4.312
1000	4.260	34.938	264.1	4.181
1100	4.079	34.926	269.0	3.994
1200	3.938	34.923	272.4	3.845
1300	3.887	34.938	272.2	3.786
1400	3.715	34.935	272.8	3.607
1500	3.648	34.945	271.2	3.531
1600	3.486	34.957	271.4	3.363
1700	3.415	34.970	272.1	3.283
1800	3.331	34.972	273.3	3.192
1900	3.303	34.973	273.4	3.155
2000	3.296	34.974	273.4	3.139
2100	3.266	34.974	273.3	3.100
2199	3.244	34.975	273.4	3.069
2199	3.244	34.975	273.4	3.069

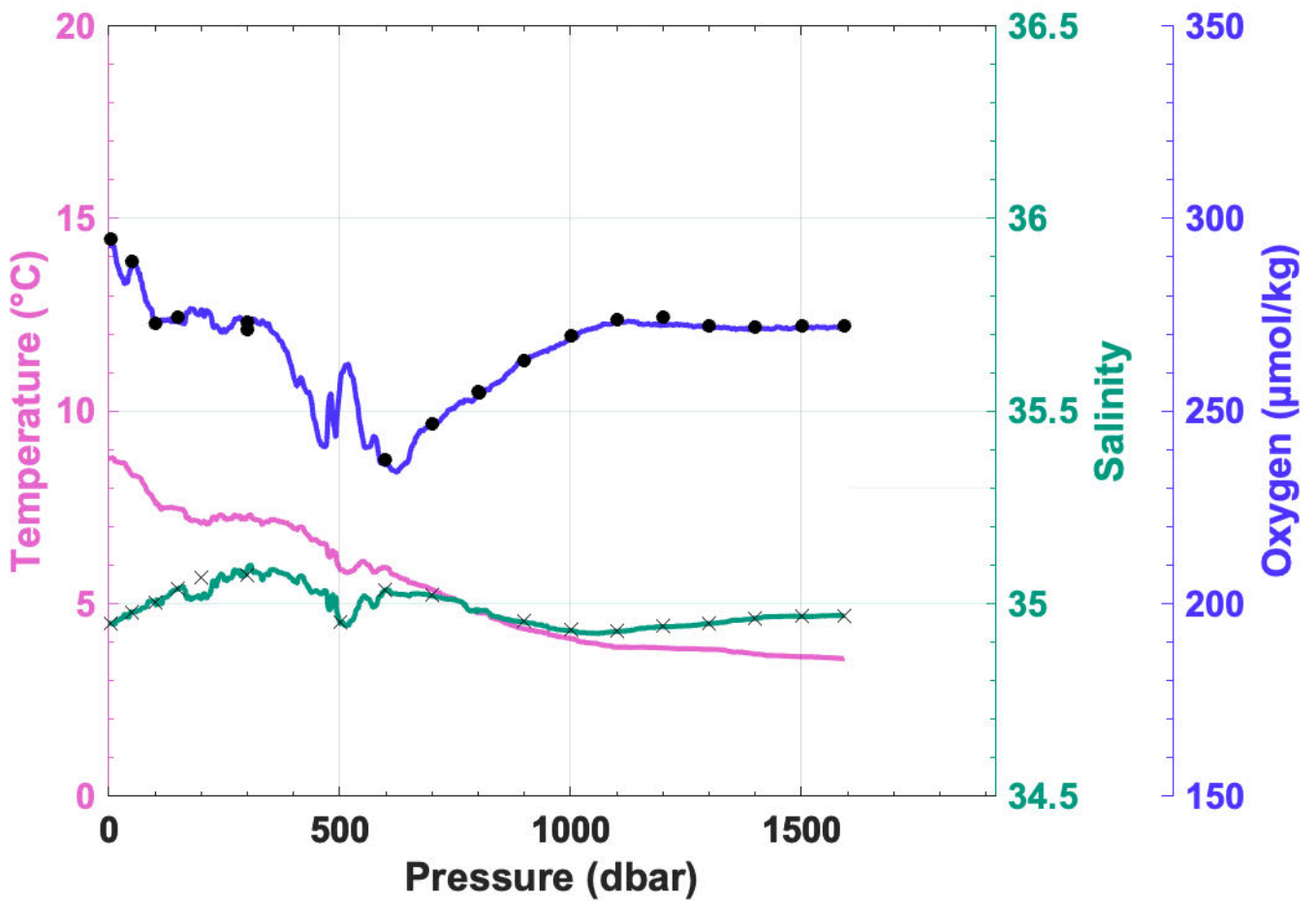
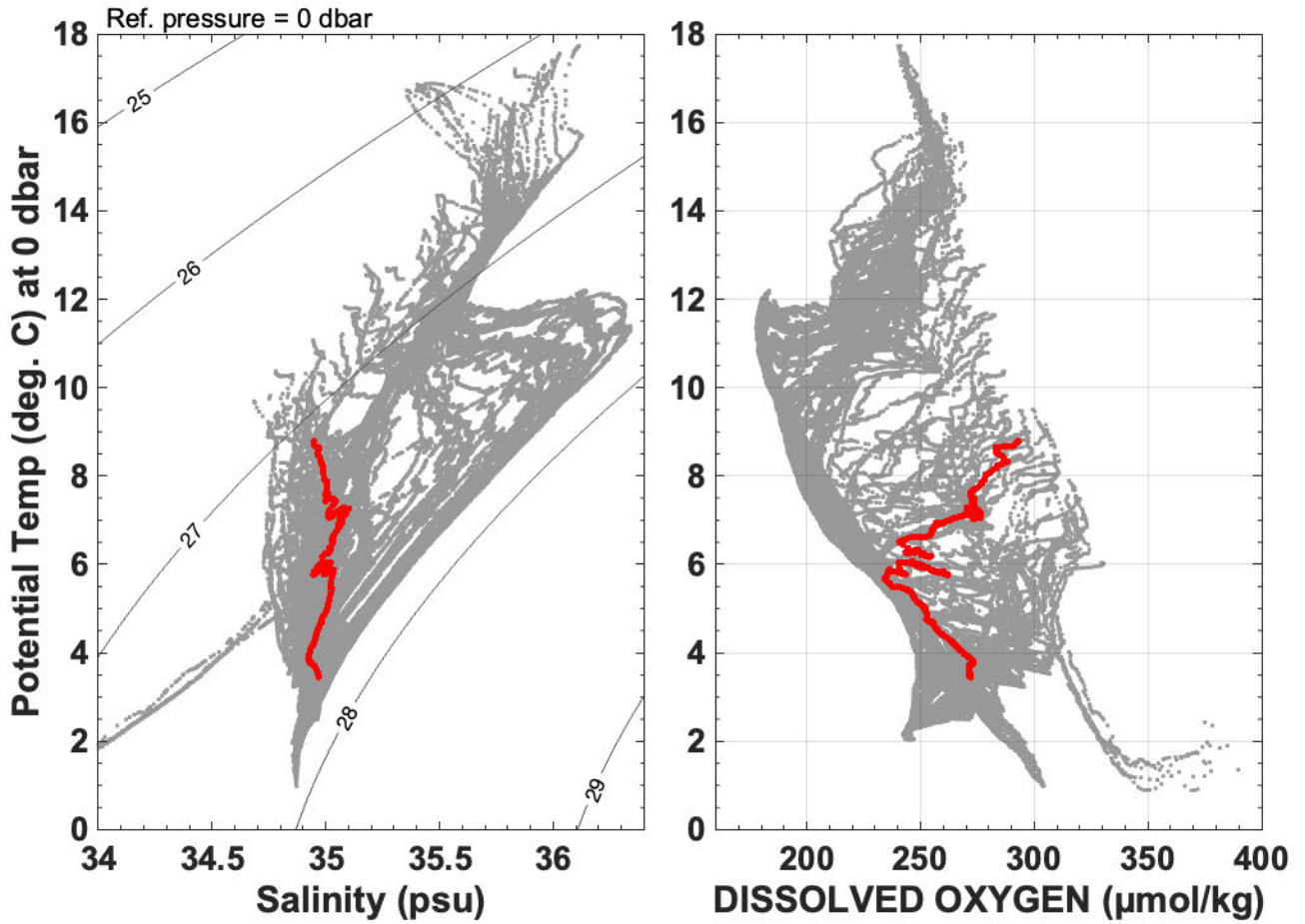
# STATION 66



Cruise : BOCATS 2021  
 Station : 67  
 Date : 19/06/2021  
 Depth : 1586  
 Position : N 58 32.97  
           W 30 22.10

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	8.776	34.949	292.9	8.776
10	8.776	34.948	292.8	8.775
20	8.675	34.957	287.5	8.673
30	8.659	34.964	284.6	8.656
40	8.520	34.965	283.4	8.515
50	8.334	34.978	287.8	8.329
100	7.652	35.002	272.0	7.642
150	7.465	35.038	273.4	7.451
200	7.087	35.012	276.3	7.068
250	7.229	35.066	271.0	7.205
300	7.256	35.090	273.4	7.227
350	7.182	35.087	271.2	7.149
400	6.961	35.059	259.1	6.924
450	6.652	35.034	245.3	6.610
500	5.910	34.953	255.9	5.866
550	6.096	35.017	242.8	6.047
600	5.938	35.036	236.1	5.885
650	5.549	35.020	237.7	5.493
700	5.366	35.020	246.4	5.307
750	5.115	35.010	251.1	5.053
800	4.778	34.984	254.5	4.713
850	4.555	34.963	257.9	4.487
900	4.346	34.952	263.3	4.275
950	4.235	34.941	265.5	4.161
1000	4.096	34.930	268.6	4.019
1100	3.871	34.928	273.3	3.788
1200	3.851	34.940	272.3	3.759
1300	3.813	34.948	271.7	3.713
1400	3.689	34.962	271.4	3.581
1500	3.623	34.967	271.6	3.507
1593	3.577	34.969	272.2	3.453
1593	3.577	34.969	272.2	3.453

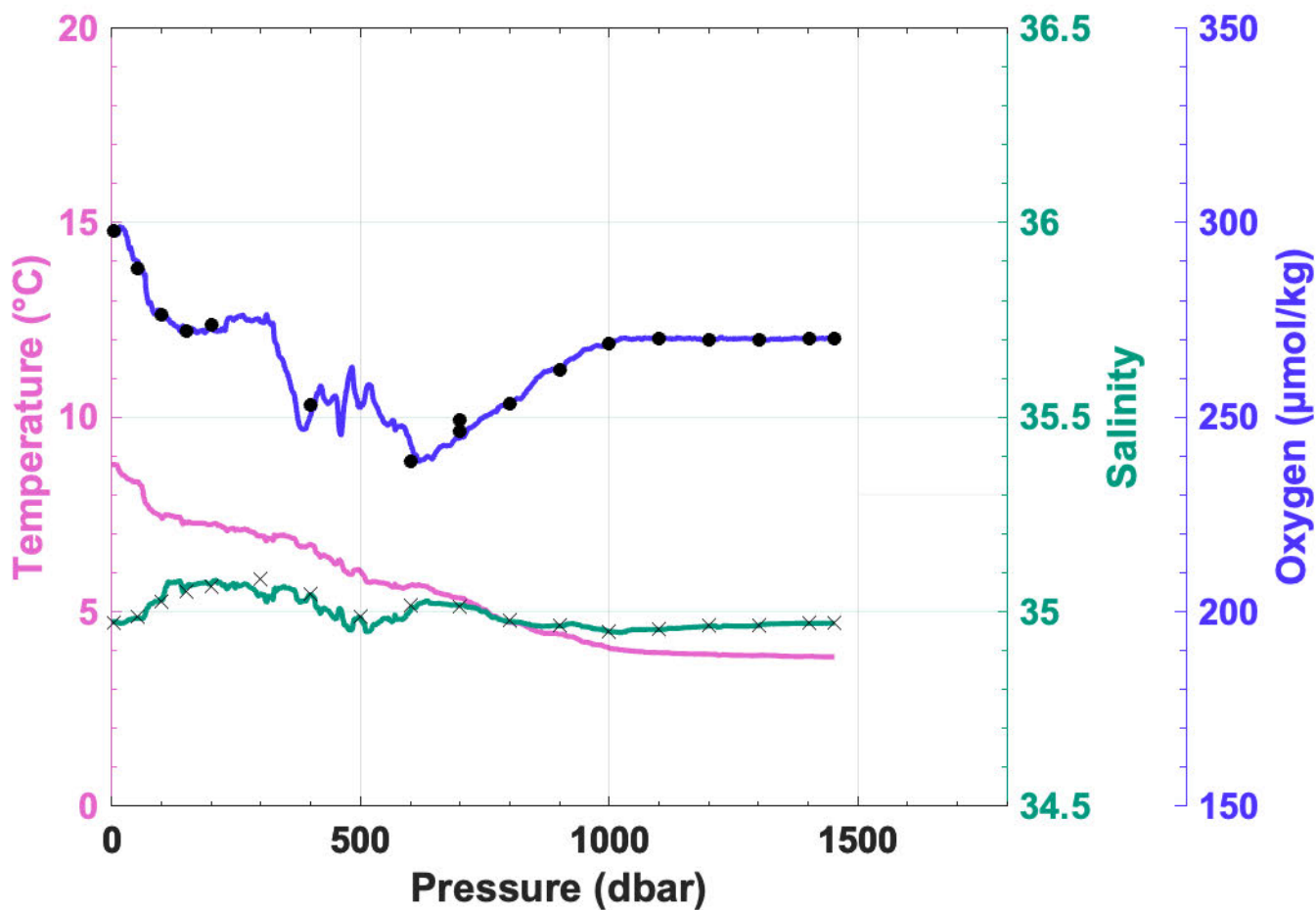
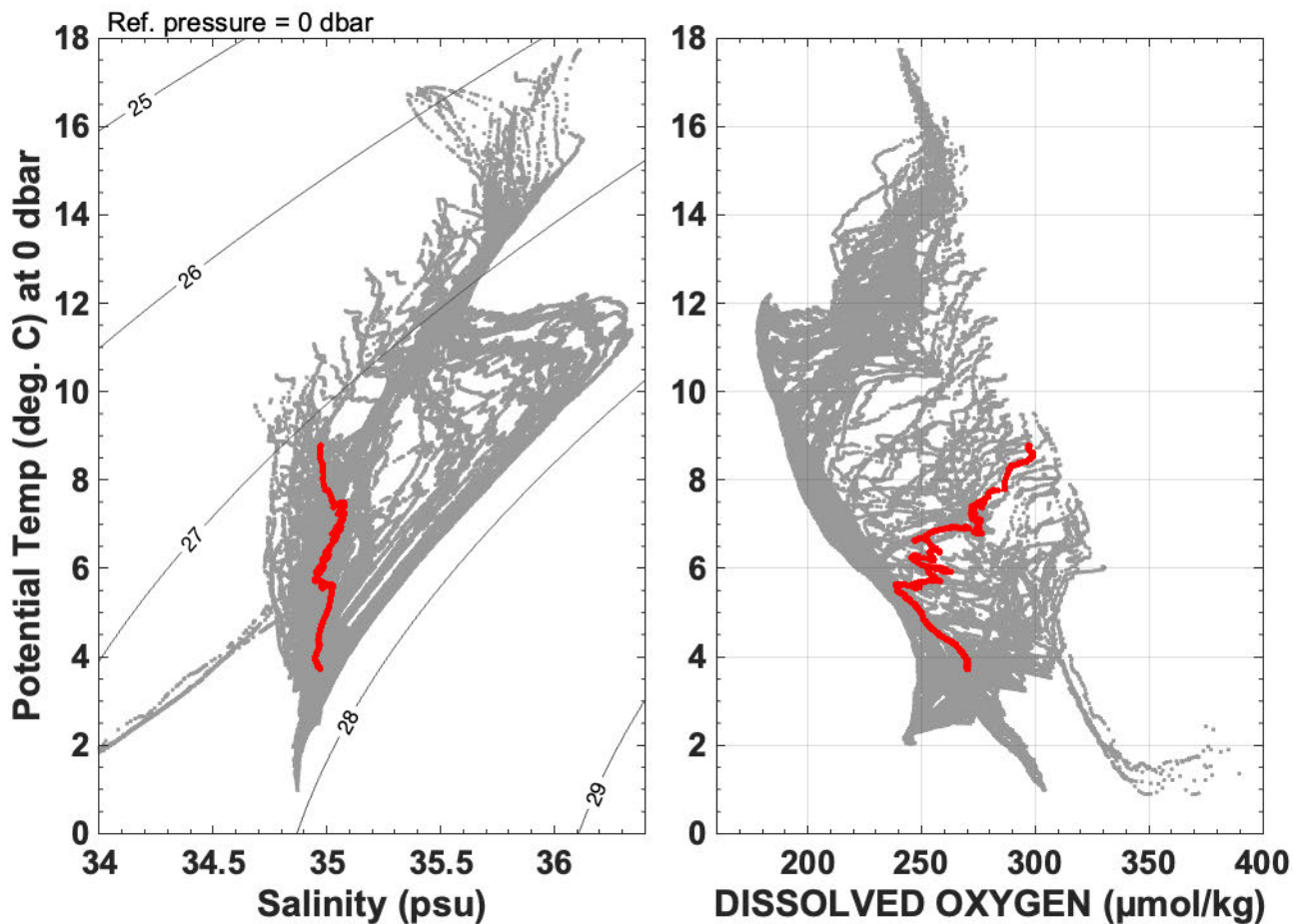
# STATION 67



Cruise : BOCATS 2021  
Station : 68  
Date : 19/06/2021  
Depth : 1450  
Position : N 58 43.54  
W 30 42.19

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	8.781	34.974	297.2	8.781
10	8.774	34.974	297.6	8.773
20	8.532	34.969	298.9	8.529
30	8.432	34.976	296.4	8.429
40	8.368	34.981	292.4	8.364
50	8.337	34.983	290.0	8.332
100	7.418	35.031	276.6	7.408
150	7.281	35.062	272.0	7.267
200	7.230	35.072	272.7	7.211
250	7.128	35.071	275.3	7.104
300	6.954	35.046	274.4	6.926
350	6.944	35.061	261.9	6.911
400	6.731	35.043	250.5	6.694
450	6.233	34.982	255.4	6.193
500	6.049	34.983	252.5	6.004
550	5.725	34.982	248.3	5.677
600	5.675	35.003	243.4	5.623
650	5.503	35.021	240.6	5.448
700	5.351	35.016	244.7	5.292
750	5.053	35.000	250.2	4.991
800	4.726	34.975	254.2	4.662
850	4.524	34.964	259.2	4.457
900	4.423	34.963	262.8	4.351
950	4.218	34.961	267.5	4.144
1000	4.064	34.949	269.2	3.987
1100	3.948	34.954	270.6	3.863
1200	3.907	34.963	270.0	3.815
1300	3.873	34.964	270.1	3.772
1400	3.850	34.970	270.3	3.740
1450	3.840	34.971	270.3	3.726

# STATION 68

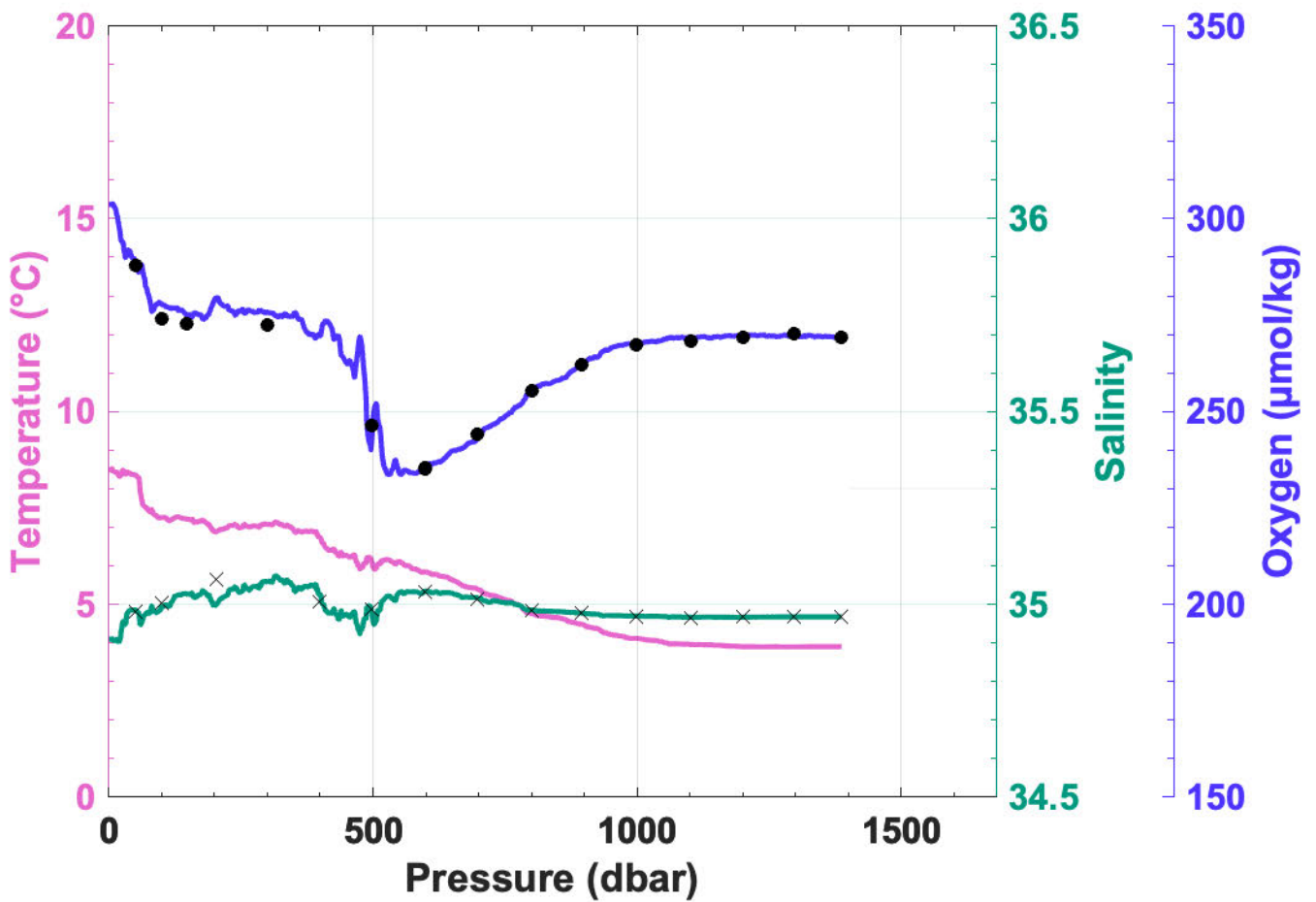
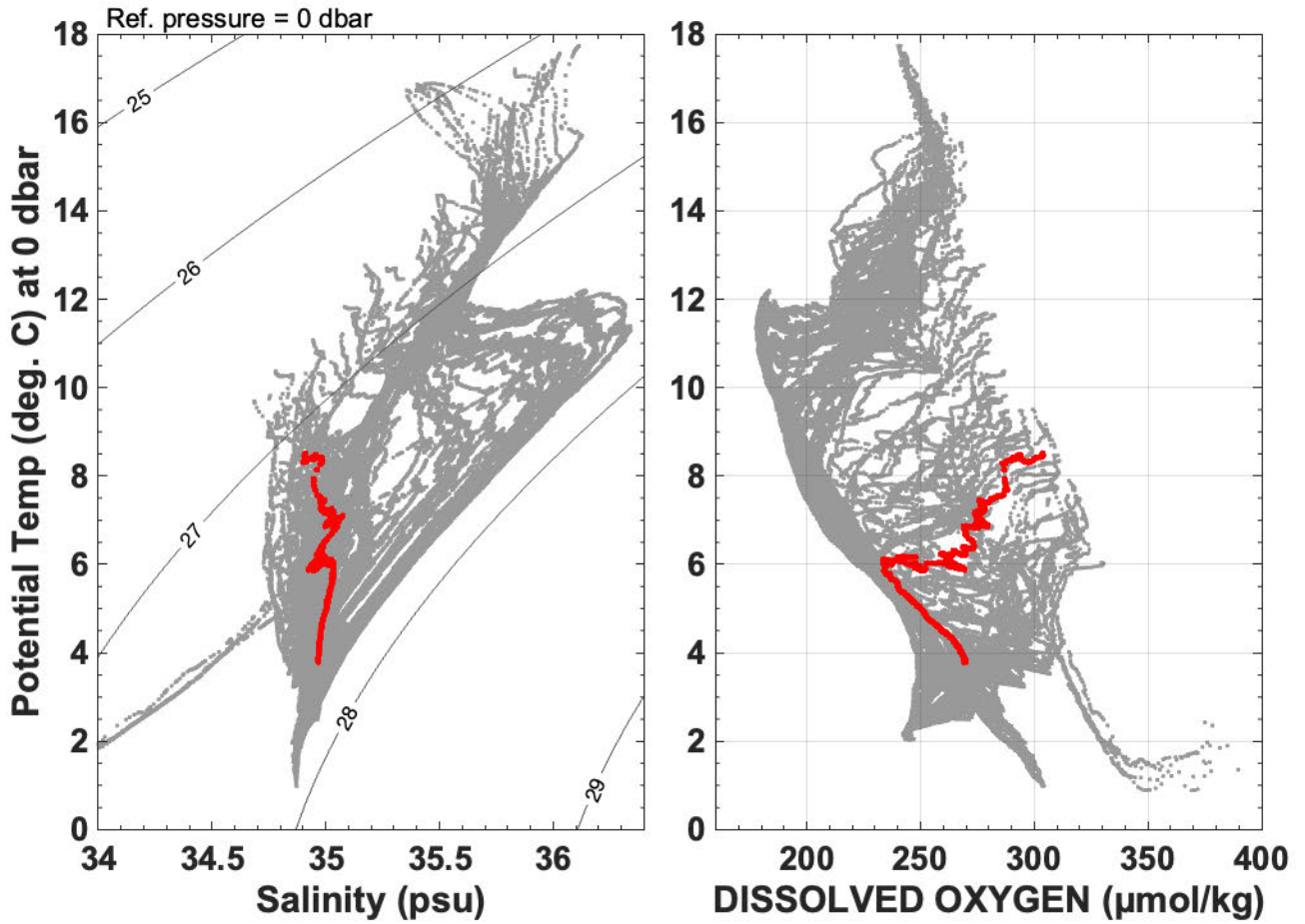


Cruise : BOCATS 2021  
Station : 69  
Date : 19/06/2021  
Depth : 1385  
Position : N 58 50.59  
          W 31 16.66

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	8.492	34.910	303.7	8.492
10	8.439	34.906	303.1	8.438
20	8.311	34.904	297.4	8.309
30	8.392	34.948	290.9	8.389
40	8.396	34.984	291.4	8.392
50	8.352	34.985	288.8	8.347
100	7.255	34.993	277.9	7.246
150	7.205	35.027	275.0	7.191
200	6.901	35.000	278.8	6.883
250	6.997	35.034	276.1	6.973
300	7.073	35.058	275.7	7.044
350	6.924	35.042	275.2	6.891
400	6.734	35.026	269.6	6.697
450	6.275	34.975	262.6	6.234
500	5.969	34.957	247.5	5.925
550	6.108	35.031	233.9	6.058
600	5.837	35.035	236.2	5.784
650	5.634	35.029	239.7	5.577
700	5.374	35.015	243.4	5.314
750	5.123	35.004	248.7	5.060
800	4.768	34.986	255.3	4.703
850	4.654	34.981	258.1	4.585
900	4.461	34.977	262.4	4.390
950	4.214	34.971	266.5	4.140
1000	4.116	34.970	267.4	4.039
1100	3.961	34.967	269.4	3.876
1200	3.903	34.966	269.6	3.810
1300	3.899	34.968	269.5	3.798
1350	3.903	34.968	269.4	3.797



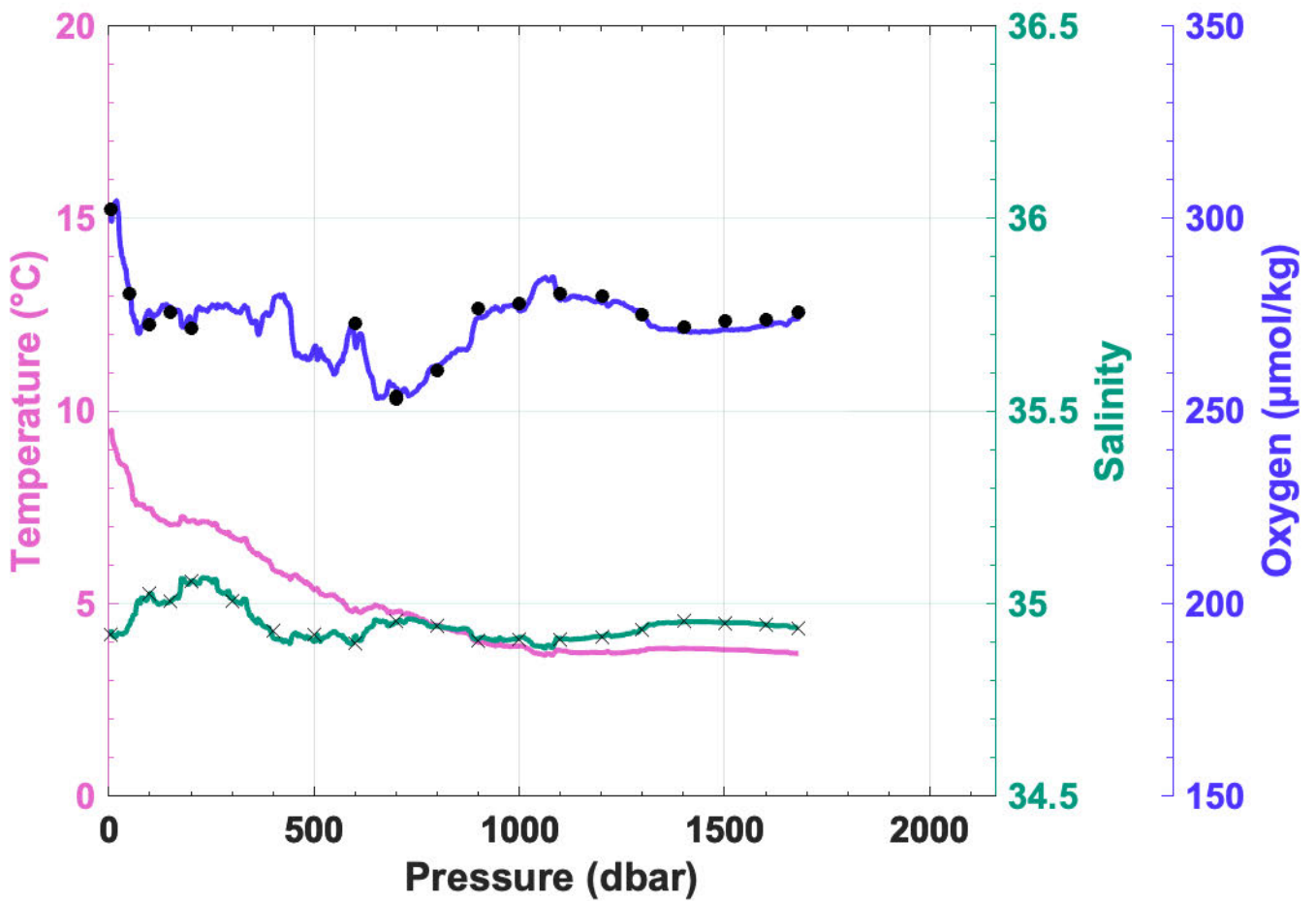
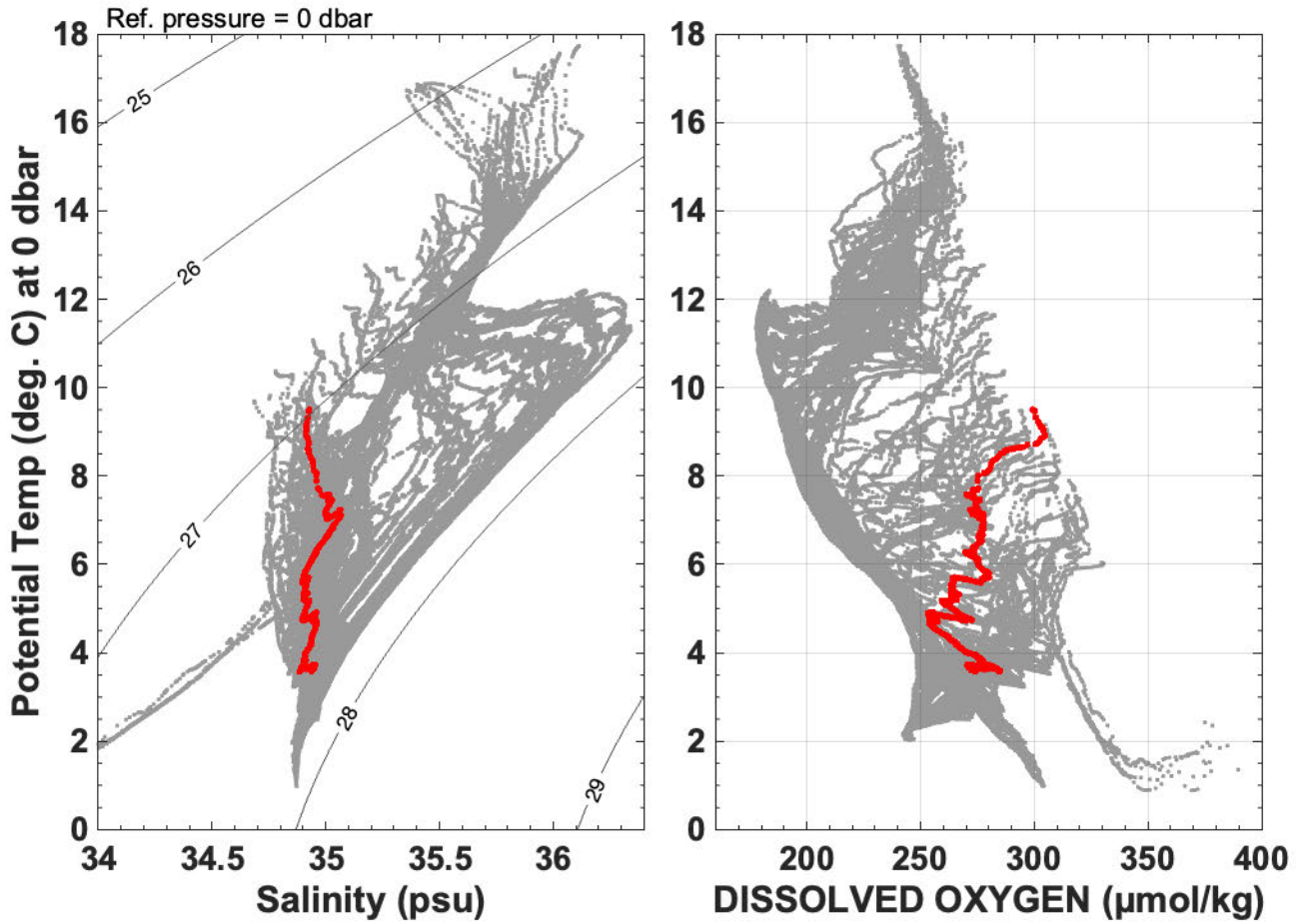
# STATION 69



Cruise : BOCATS 2021  
 Station : 70  
 Date : 19/06/2021  
 Depth : 1673  
 Position : N 58 54.59  
           W 31 55.19

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	9.462	34.926	300.3	9.462
10	9.201	34.918	302.0	9.200
20	8.888	34.918	304.1	8.886
30	8.635	34.922	291.8	8.632
40	8.572	34.924	286.9	8.568
50	8.284	34.944	281.1	8.278
100	7.474	35.026	275.9	7.464
150	7.045	35.005	277.2	7.031
200	7.156	35.059	273.6	7.137
250	7.086	35.062	276.9	7.062
300	6.757	35.017	276.3	6.729
350	6.357	34.961	272.8	6.326
400	5.879	34.911	278.2	5.844
450	5.729	34.920	267.2	5.691
500	5.358	34.902	266.5	5.316
550	5.208	34.928	259.5	5.163
600	4.877	34.917	267.2	4.829
650	4.960	34.958	254.4	4.907
700	4.790	34.952	256.0	4.734
750	4.658	34.957	255.3	4.598
800	4.440	34.942	261.7	4.377
850	4.267	34.933	266.0	4.202
900	4.005	34.909	274.2	3.937
950	3.940	34.910	276.3	3.868
1000	3.907	34.913	276.0	3.832
1100	3.785	34.910	278.8	3.702
1200	3.731	34.915	278.1	3.640
1300	3.786	34.934	274.7	3.686
1400	3.837	34.953	270.6	3.727
1500	3.805	34.951	271.1	3.687
1600	3.762	34.945	272.2	3.636
1650	3.745	34.943	272.2	3.614

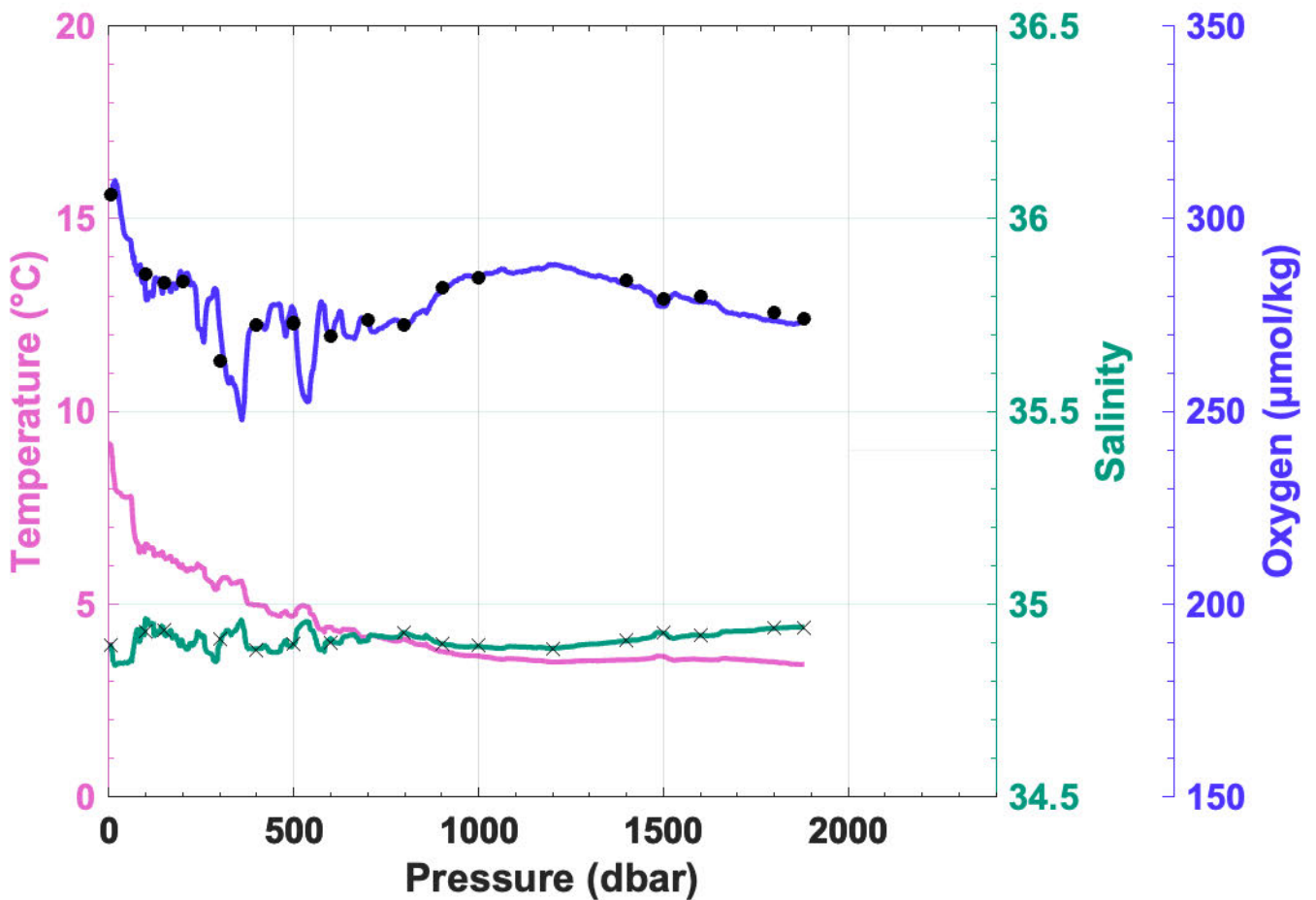
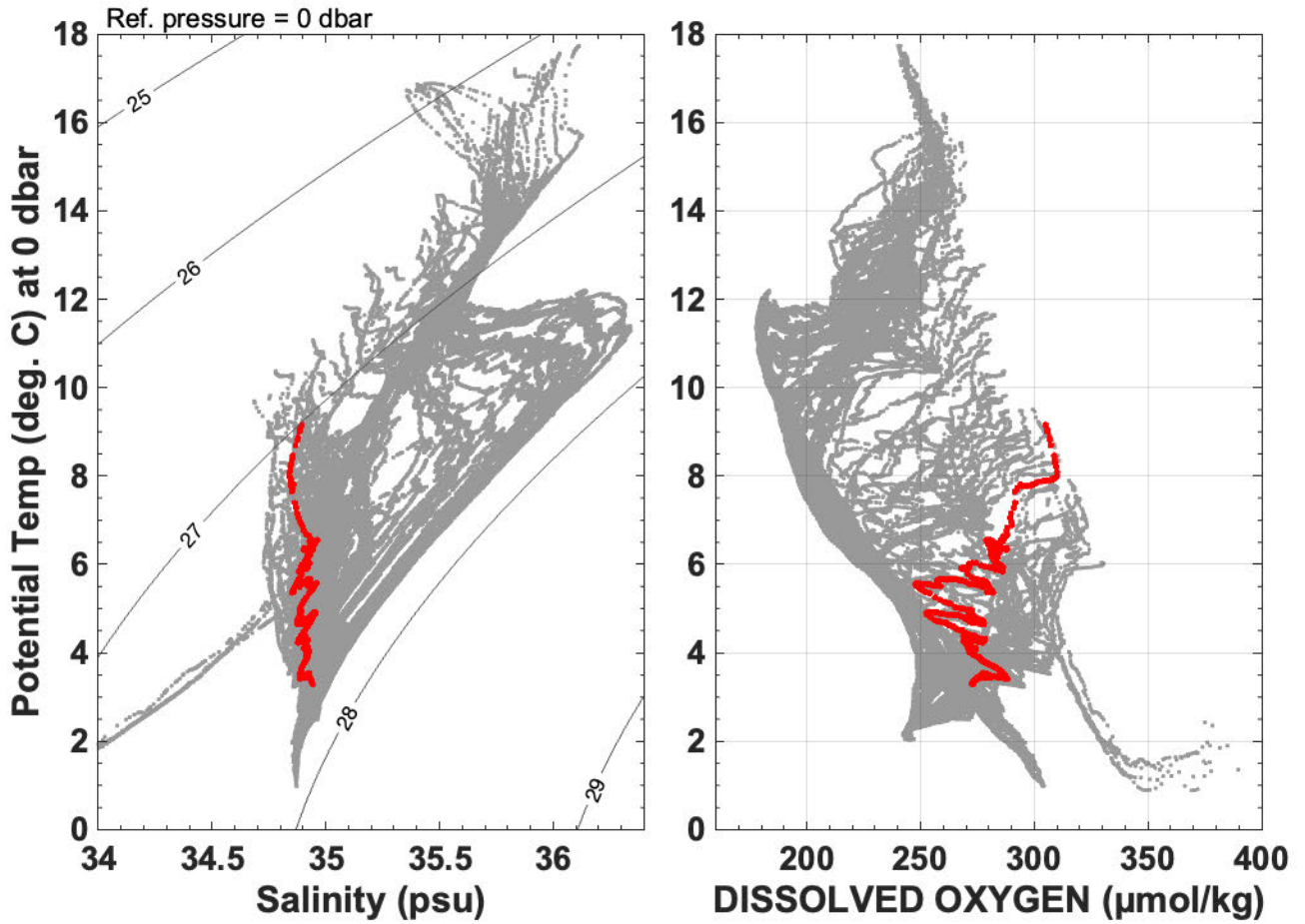
# STATION 70



Cruise : BOCATS 2021  
Station : 71  
Date : 19/06/2021  
Depth : 1870  
Position : N 58 58.39  
          W 32 34.16

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	9.159	34.893	305.0	9.159
10	8.694	34.867	307.3	8.693
20	7.950	34.844	308.7	7.948
30	7.881	34.848	303.3	7.878
40	7.784	34.848	296.8	7.780
50	7.771	34.848	294.9	7.766
100	6.564	34.962	279.4	6.555
150	6.228	34.924	283.1	6.215
200	5.957	34.896	284.7	5.940
250	5.955	34.917	271.3	5.933
300	5.587	34.896	271.8	5.562
350	5.588	34.946	252.1	5.559
400	4.985	34.885	272.6	4.953
450	4.729	34.876	277.7	4.694
500	4.709	34.896	276.5	4.670
550	4.731	34.932	260.5	4.688
600	4.419	34.912	268.8	4.373
650	4.350	34.919	269.4	4.300
700	4.138	34.906	274.2	4.086
750	4.104	34.915	272.3	4.048
800	4.093	34.926	271.8	4.032
850	3.942	34.913	276.2	3.878
900	3.776	34.898	281.6	3.709
950	3.684	34.890	284.5	3.615
1000	3.660	34.891	284.8	3.587
1100	3.586	34.890	286.0	3.505
1200	3.505	34.886	288.1	3.416
1300	3.537	34.897	285.2	3.439
1400	3.559	34.905	282.8	3.453
1500	3.647	34.925	277.3	3.531
1600	3.567	34.919	278.4	3.443
1700	3.575	34.931	275.3	3.441
1800	3.505	34.938	273.5	3.364
1850	3.449	34.941	272.6	3.304

# STATION 71

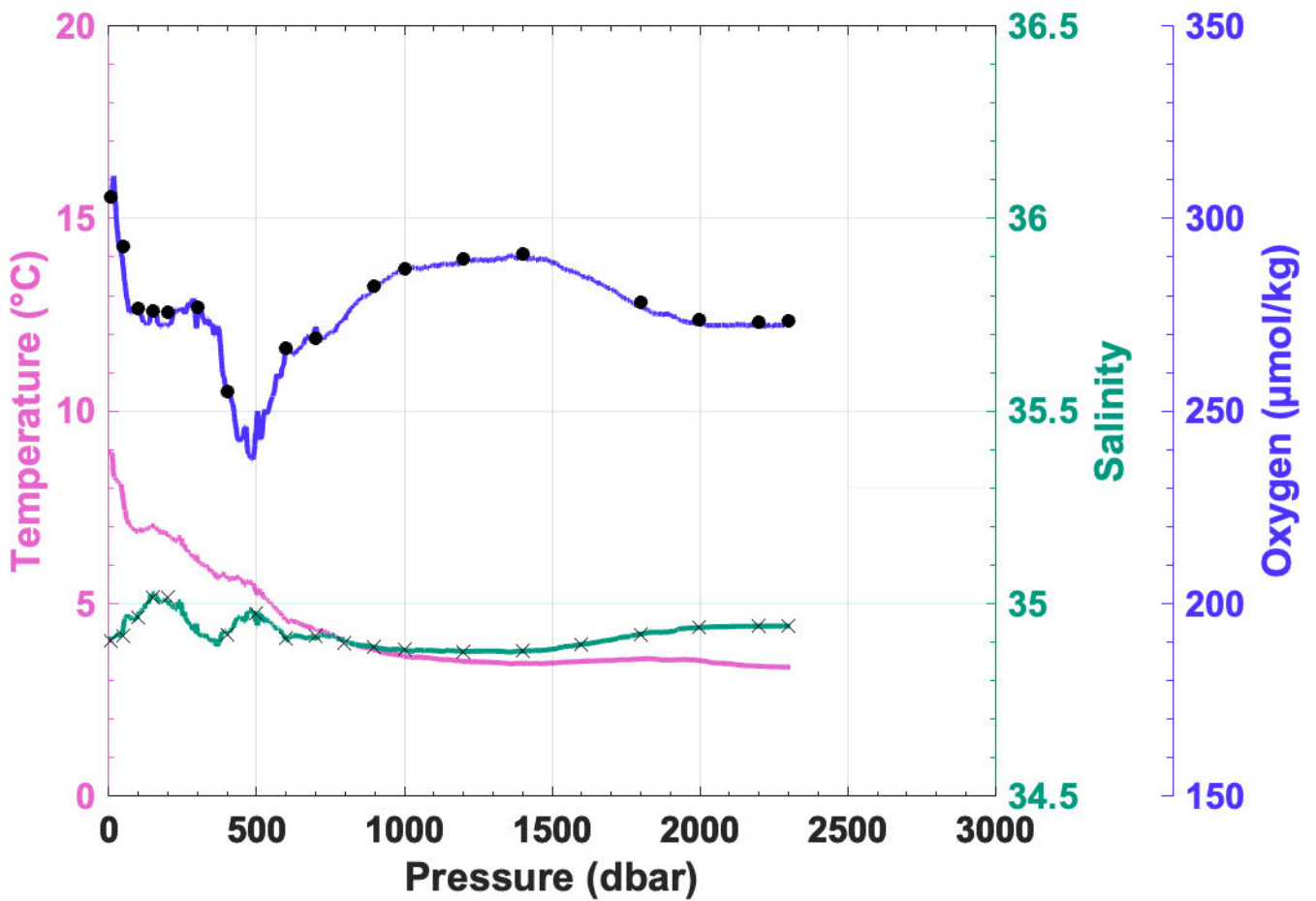
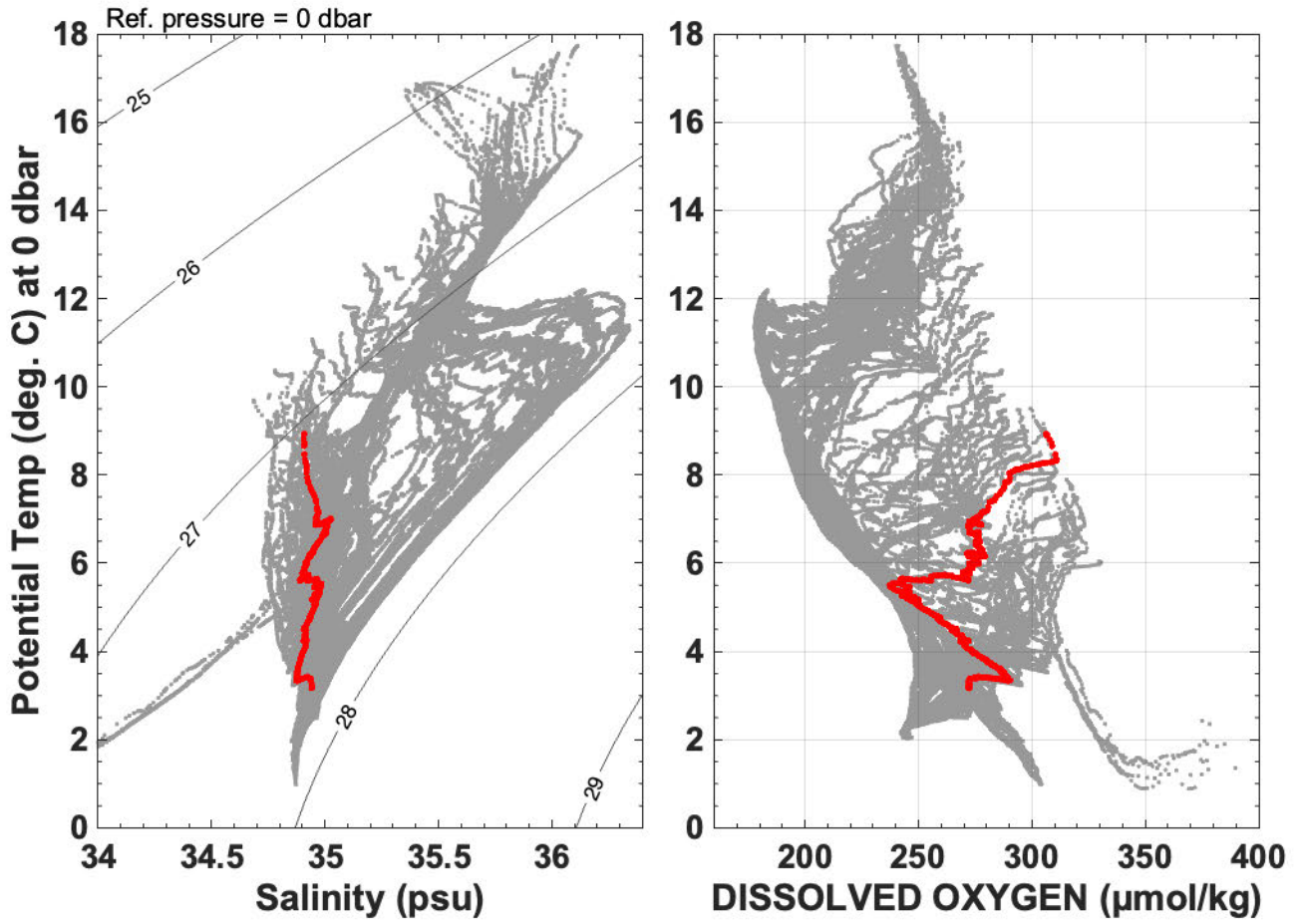


Cruise : BOCATS 2021  
Station : 72  
Date : 19/06/2021  
Depth : 2284  
Position : N 59 2.39  
W 33 12.75

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	8.930	34.908	306.4	8.930
10	8.925	34.908	306.3	8.924
20	8.277	34.916	306.3	8.275
30	8.174	34.919	296.3	8.171
40	8.116	34.918	292.5	8.112
50	7.632	34.942	286.3	7.627
100	6.897	34.972	276.7	6.888
150	7.019	35.026	275.9	7.005
200	6.814	35.008	272.2	6.796
250	6.523	34.972	276.7	6.501
300	6.114	34.924	274.1	6.088
350	5.797	34.900	272.7	5.767
400	5.672	34.923	255.3	5.638
450	5.607	34.960	243.4	5.569
500	5.265	34.949	246.9	5.224
550	4.997	34.949	253.0	4.952
600	4.561	34.906	266.2	4.514
650	4.467	34.915	266.8	4.417
700	4.289	34.906	271.9	4.236
750	4.192	34.914	270.4	4.135
800	4.049	34.903	273.9	3.989
850	3.889	34.892	279.1	3.826
900	3.795	34.887	281.8	3.728
950	3.703	34.881	284.6	3.633
1000	3.631	34.878	286.3	3.558
1100	3.579	34.878	287.8	3.498
1200	3.503	34.875	289.0	3.414
1300	3.479	34.877	289.2	3.382
1400	3.451	34.877	289.8	3.346
1500	3.462	34.882	288.5	3.348
1600	3.504	34.895	285.0	3.381
1700	3.526	34.906	281.5	3.394
1800	3.566	34.921	277.0	3.424
1900	3.538	34.928	274.9	3.387
2000	3.519	34.938	272.5	3.359
2100	3.438	34.941	272.4	3.269
2200	3.379	34.942	272.2	3.202
2300	3.355	34.942	272.3	3.168
2300	3.355	34.942	272.3	3.168



# STATION 72

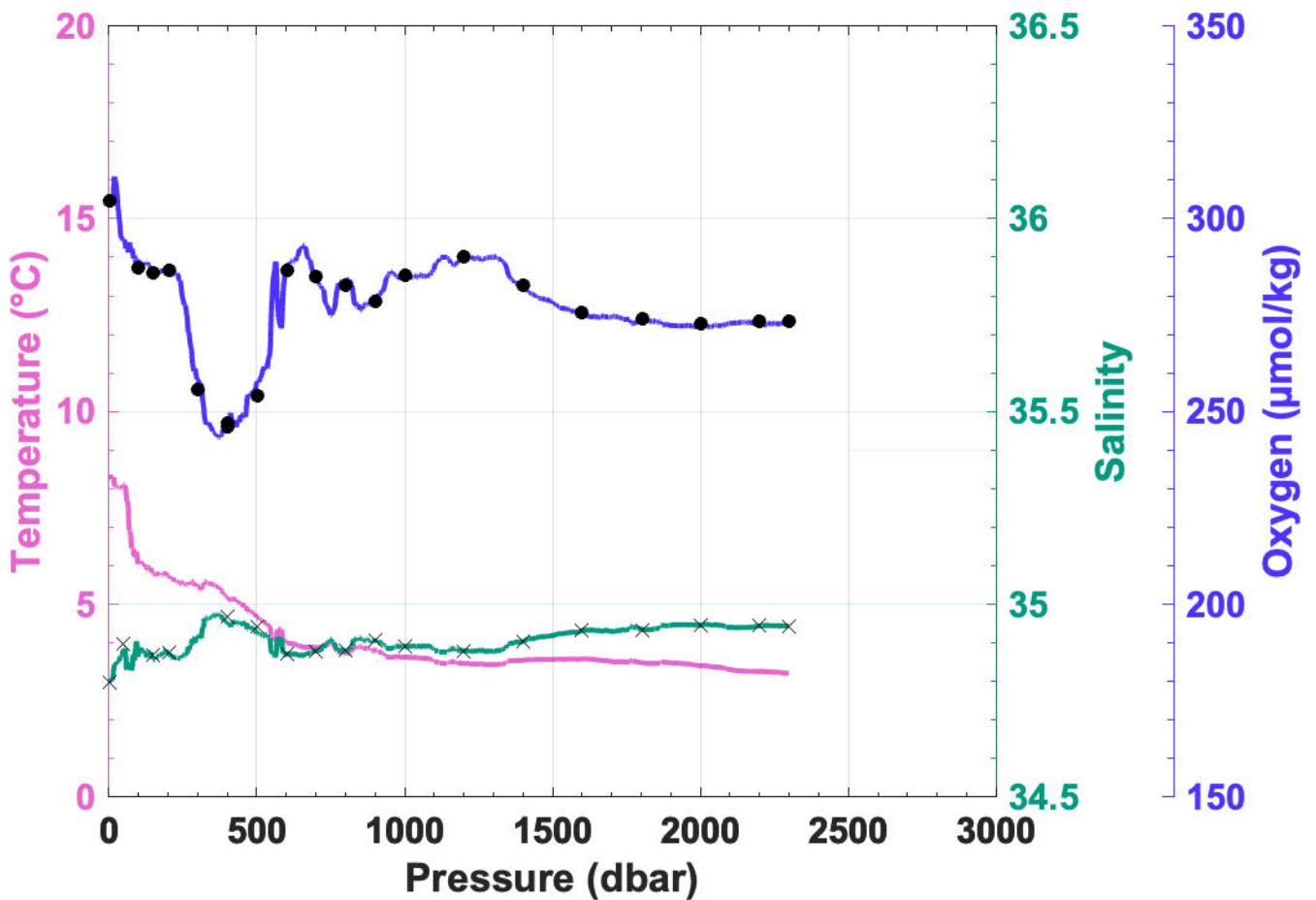
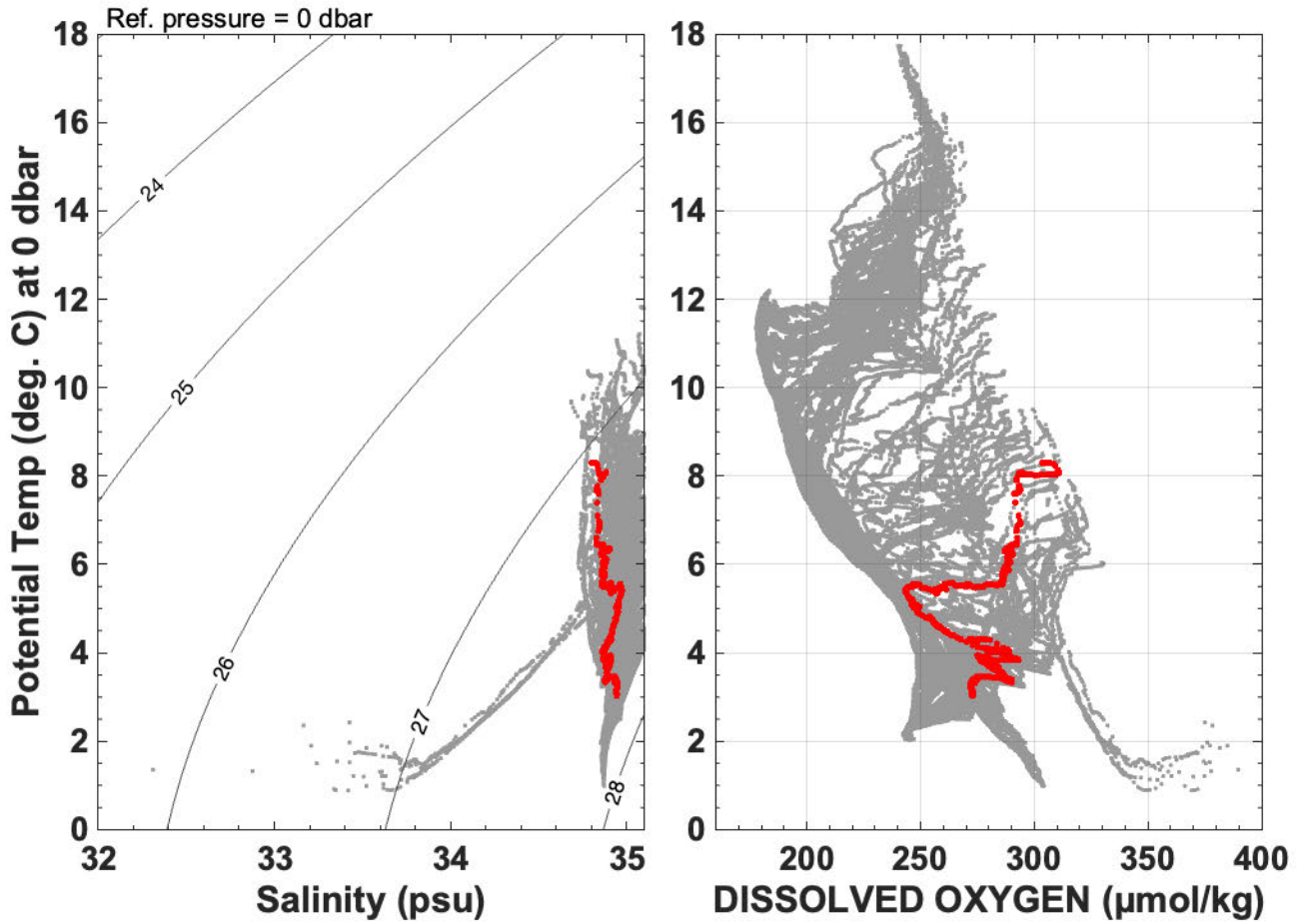




Cruise : BOCATS 2021  
 Station : 73  
 Date : 20/06/2021  
 Depth : 2279  
 Position : N 59 6.09  
           W 33 51.05

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	8.299	34.802	304.1	8.299
10	8.299	34.803	304.3	8.298
20	8.067	34.844	310.7	8.065
30	8.032	34.851	303.7	8.029
40	8.033	34.864	295.7	8.029
50	8.087	34.882	294.7	8.082
100	6.067	34.872	289.3	6.058
150	5.787	34.857	286.6	5.774
200	5.760	34.875	286.4	5.743
250	5.567	34.868	279.2	5.546
300	5.468	34.913	258.3	5.443
350	5.523	34.970	244.9	5.494
400	5.196	34.954	246.5	5.163
450	4.984	34.949	249.1	4.948
500	4.651	34.923	257.5	4.612
550	4.157	34.873	276.7	4.116
600	4.029	34.871	286.4	3.985
650	3.911	34.868	292.3	3.863
700	3.882	34.880	283.9	3.831
750	4.002	34.909	274.9	3.946
800	3.741	34.879	284.1	3.683
850	3.916	34.915	276.2	3.853
900	3.808	34.906	279.3	3.741
950	3.624	34.885	285.9	3.555
1000	3.633	34.891	285.0	3.560
1100	3.530	34.883	287.3	3.449
1200	3.466	34.880	289.3	3.377
1300	3.435	34.878	289.9	3.339
1400	3.546	34.904	282.5	3.440
1500	3.571	34.919	278.3	3.456
1600	3.585	34.932	275.1	3.461
1700	3.514	34.930	274.5	3.382
1800	3.491	34.936	273.2	3.349
1900	3.480	34.946	272.3	3.330
2000	3.408	34.946	272.3	3.249
2100	3.306	34.940	273.0	3.139
2200	3.259	34.944	272.7	3.084
2299	3.216	34.944	272.9	3.032
2299	3.216	34.944	272.9	3.032

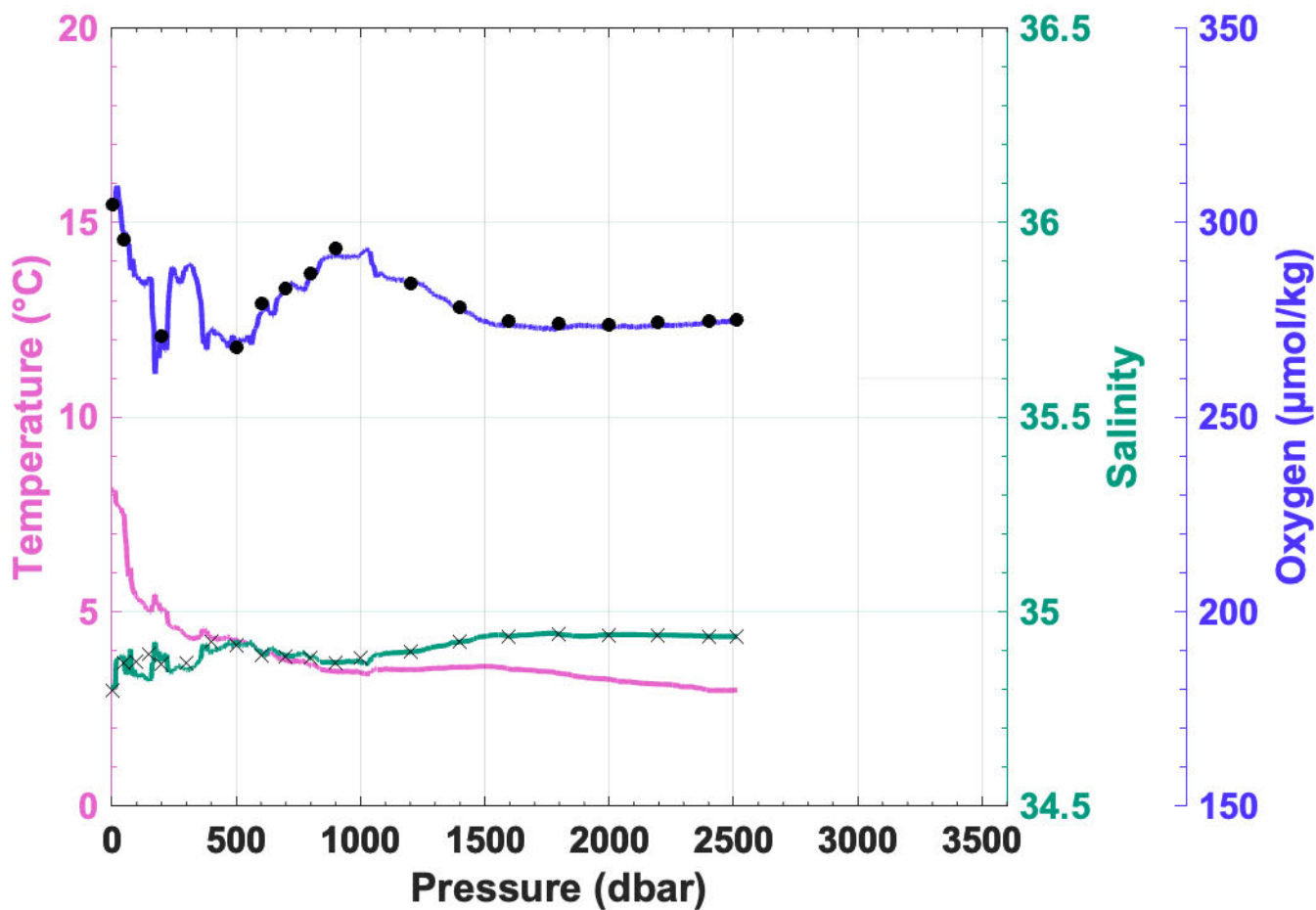
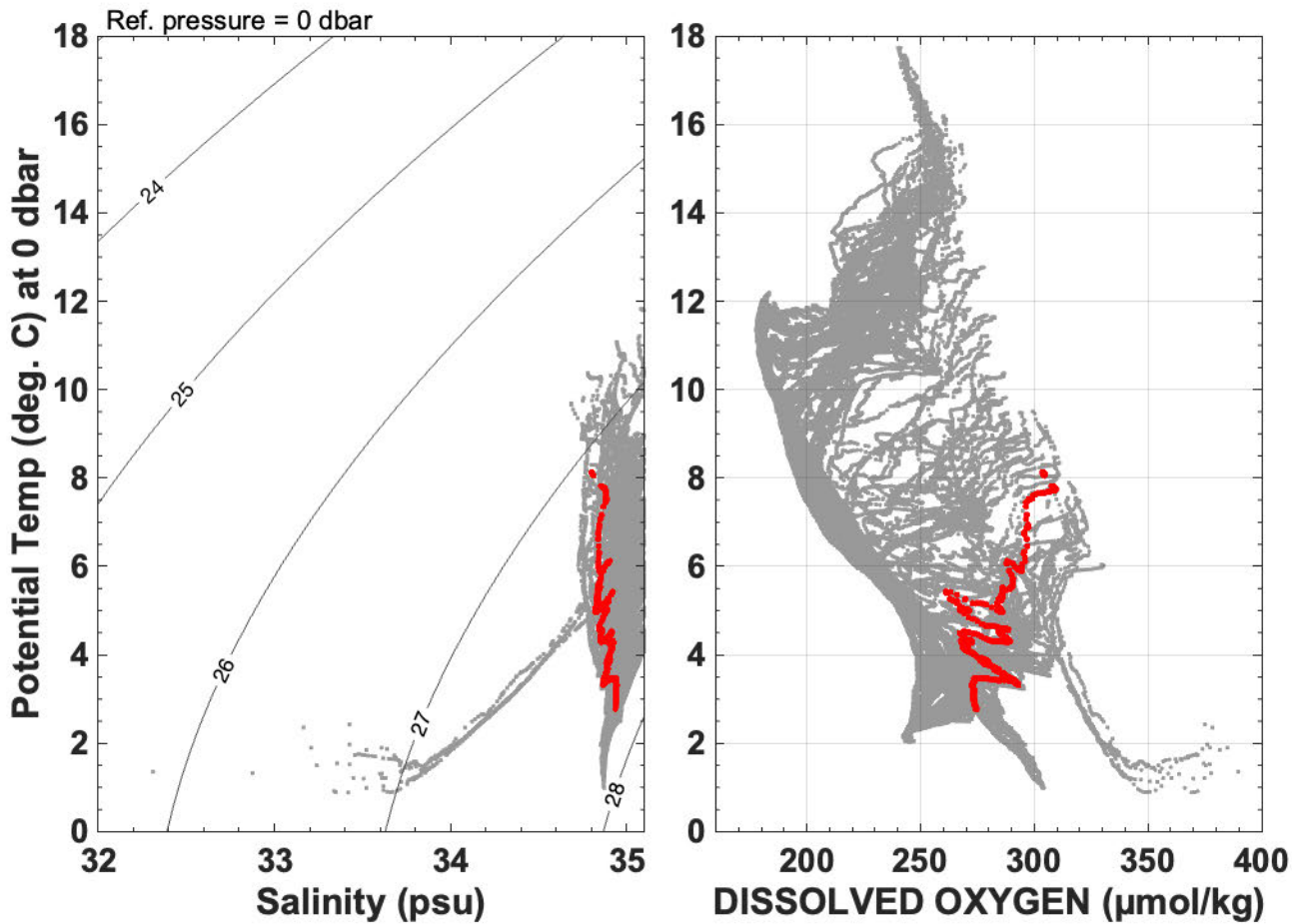
# STATION 73



Cruise : BOCATS 2021  
Station : 74  
Date : 20/06/2021  
Depth : 2490  
Position : N 59 9.75  
          W 34 30.16

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	8.121	34.804	304.0	8.121
10	8.131	34.802	303.7	8.130
20	7.766	34.876	309.4	7.764
30	7.682	34.883	305.5	7.680
40	7.610	34.884	299.5	7.606
50	7.450	34.879	296.2	7.445
100	5.369	34.836	286.0	5.361
150	5.010	34.823	285.7	4.998
200	5.013	34.872	271.3	4.997
250	4.586	34.851	287.8	4.567
300	4.353	34.850	288.9	4.331
350	4.340	34.873	282.1	4.314
400	4.343	34.897	272.3	4.313
450	4.326	34.912	269.6	4.293
500	4.321	34.927	268.2	4.284
550	4.186	34.915	270.9	4.145
600	3.968	34.897	276.8	3.924
650	3.925	34.906	276.1	3.878
700	3.747	34.887	283.2	3.697
750	3.735	34.891	282.8	3.681
800	3.619	34.881	286.9	3.562
850	3.503	34.870	290.9	3.442
900	3.467	34.869	291.5	3.403
950	3.462	34.872	291.3	3.393
1000	3.433	34.870	291.6	3.361
1100	3.524	34.893	286.0	3.444
1200	3.513	34.897	284.7	3.424
1300	3.546	34.910	281.5	3.448
1400	3.574	34.922	277.7	3.468
1500	3.594	34.937	274.6	3.478
1600	3.521	34.936	273.8	3.397
1700	3.488	34.942	273.1	3.356
1800	3.416	34.942	272.9	3.276
1900	3.320	34.937	273.5	3.172
2000	3.265	34.941	273.2	3.108
2100	3.183	34.941	273.2	3.018
2200	3.138	34.940	273.6	2.965
2300	3.070	34.939	273.8	2.888
2400	2.978	34.936	274.5	2.789
2500	2.979	34.936	274.6	2.780
2500	2.979	34.936	274.6	2.780

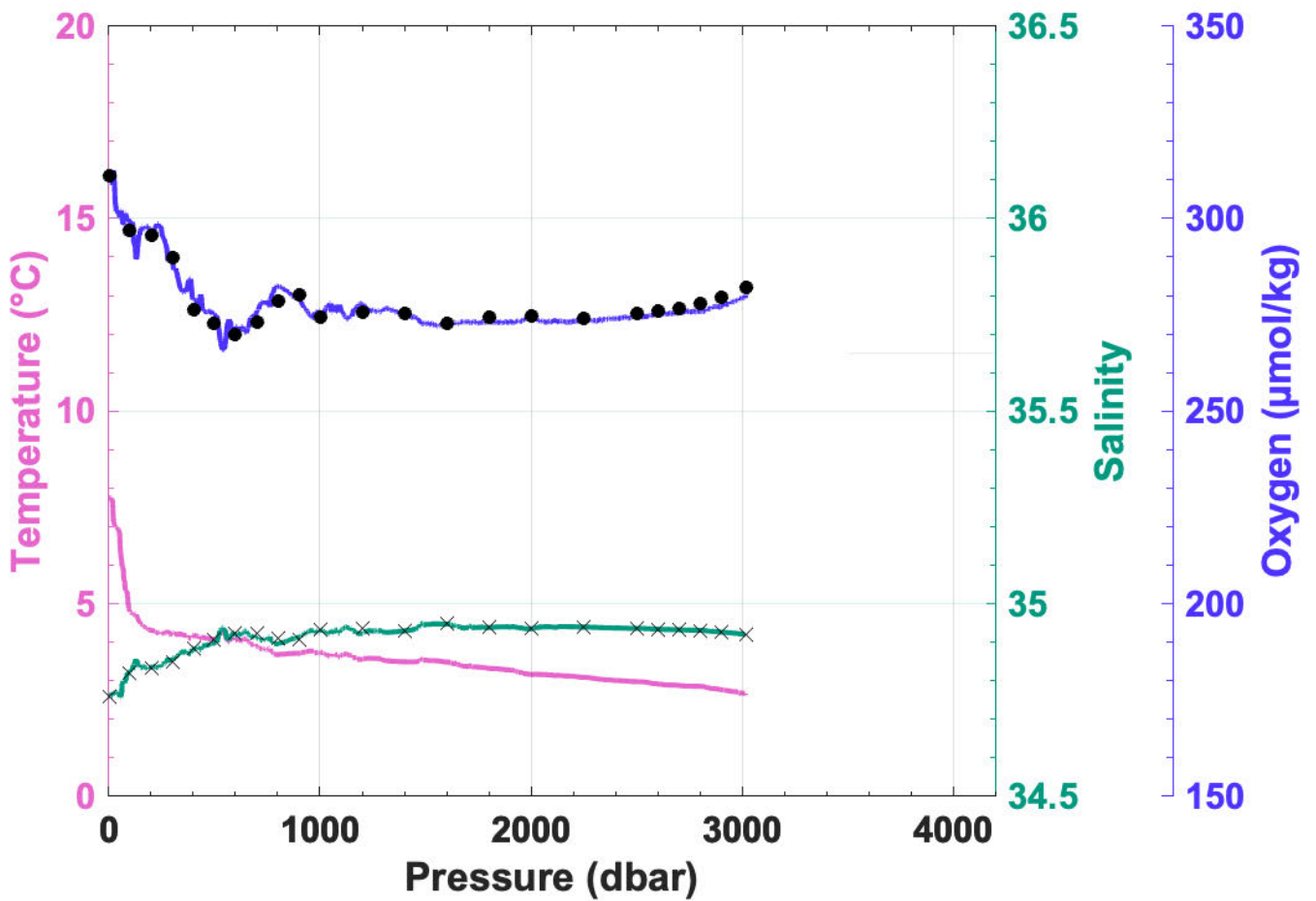
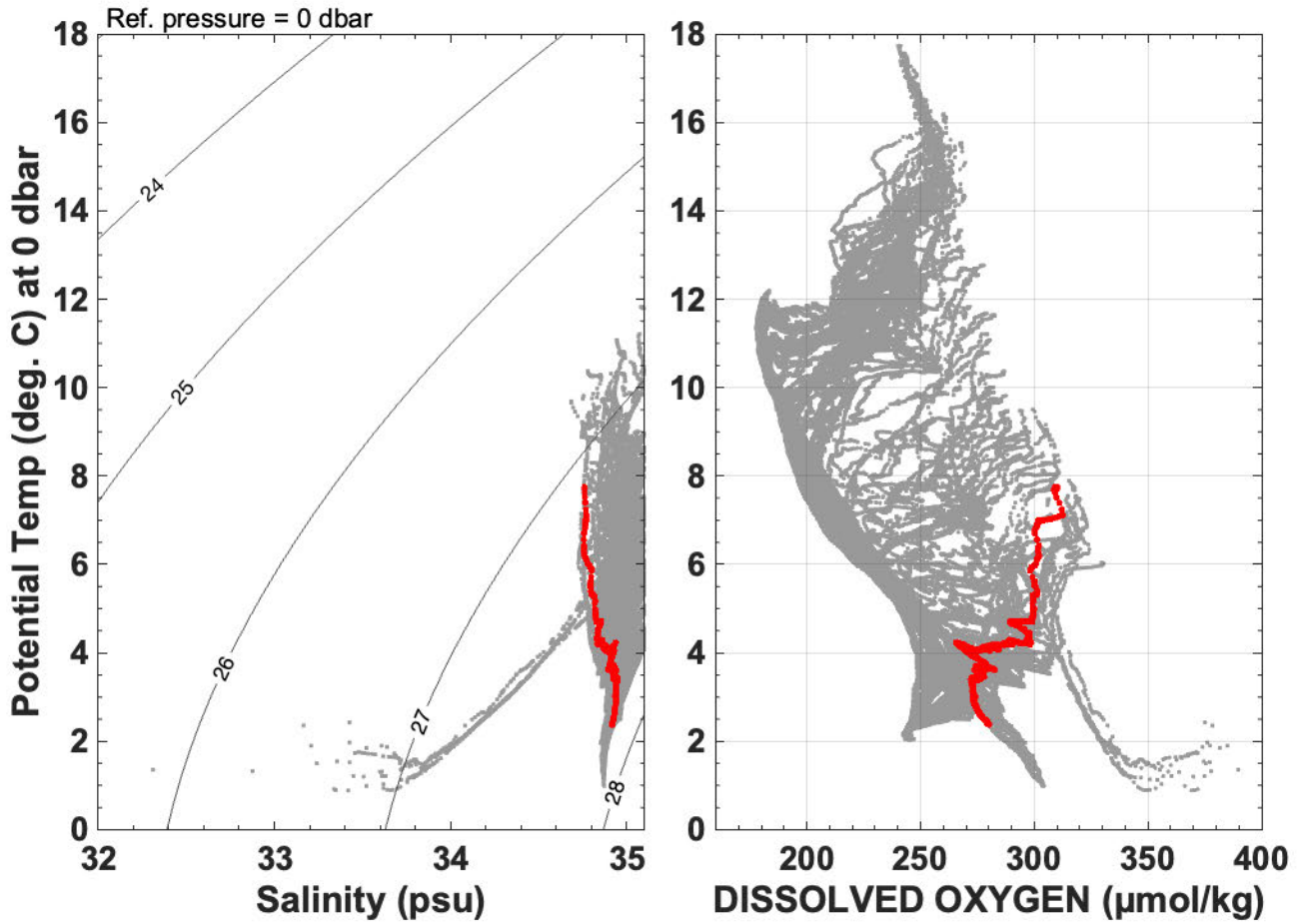
# STATION 74



Cruise : BOCATS 2021  
Station : 75  
Date : 20/06/2021  
Depth : 2983  
Position : N 59 13.86  
W 35 9.24

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	7.745	34.762	310.1	7.745
10	7.750	34.762	309.3	7.749
20	7.399	34.766	311.1	7.397
30	7.005	34.768	304.3	7.002
40	6.972	34.769	301.7	6.969
50	6.839	34.763	300.9	6.834
100	4.788	34.826	299.2	4.780
150	4.473	34.835	296.9	4.462
200	4.314	34.835	296.7	4.299
250	4.240	34.842	296.9	4.222
300	4.203	34.852	289.5	4.182
350	4.192	34.875	280.9	4.167
400	4.174	34.883	279.0	4.145
450	4.118	34.891	276.1	4.085
500	4.075	34.898	275.2	4.039
550	4.202	34.930	267.0	4.161
600	4.053	34.917	271.8	4.009
650	4.074	34.928	270.3	4.026
700	3.898	34.911	275.8	3.847
750	3.805	34.907	278.4	3.751
800	3.677	34.896	282.4	3.619
850	3.701	34.904	281.0	3.639
900	3.711	34.913	279.1	3.645
950	3.769	34.929	274.9	3.698
1000	3.725	34.930	275.8	3.651
1100	3.661	34.932	276.1	3.579
1200	3.555	34.923	277.8	3.466
1300	3.537	34.927	276.5	3.439
1400	3.494	34.929	275.2	3.388
1500	3.532	34.946	272.7	3.417
1600	3.484	34.947	272.4	3.361
1700	3.372	34.938	273.2	3.242
1800	3.319	34.938	273.2	3.180
1900	3.275	34.939	273.2	3.128
2000	3.164	34.935	273.9	3.009
2100	3.147	34.940	273.3	2.983
2200	3.117	34.940	273.3	2.944
2300	3.063	34.939	273.5	2.881
2400	3.007	34.937	274.0	2.817
2500	2.976	34.936	274.4	2.777
2600	2.915	34.934	275.0	2.707
2700	2.879	34.932	275.4	2.661
2800	2.854	34.931	275.9	2.627
2900	2.769	34.926	277.1	2.533
3000	2.683	34.921	279.3	2.439
3000	2.683	34.921	279.3	2.439

# STATION 75

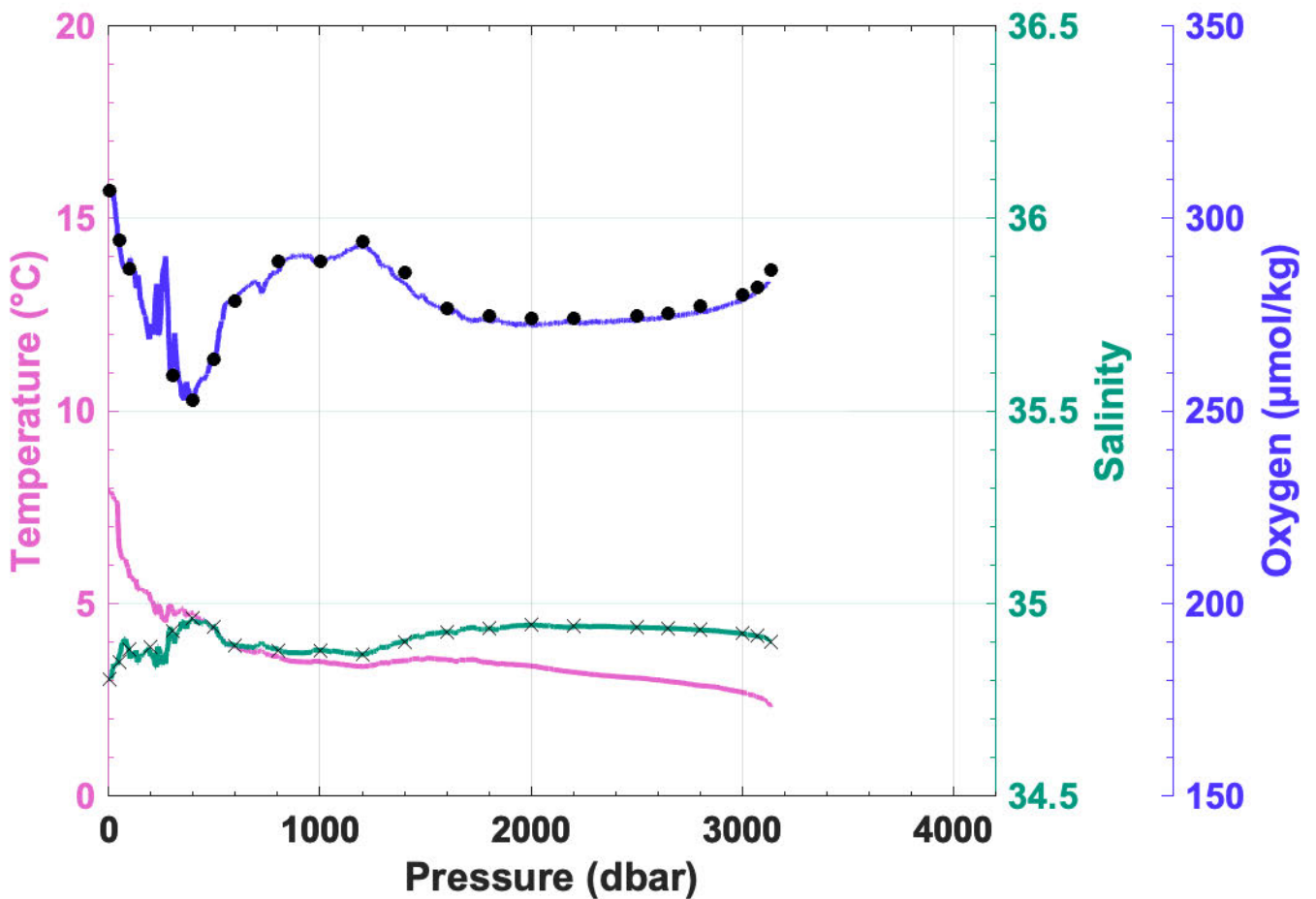
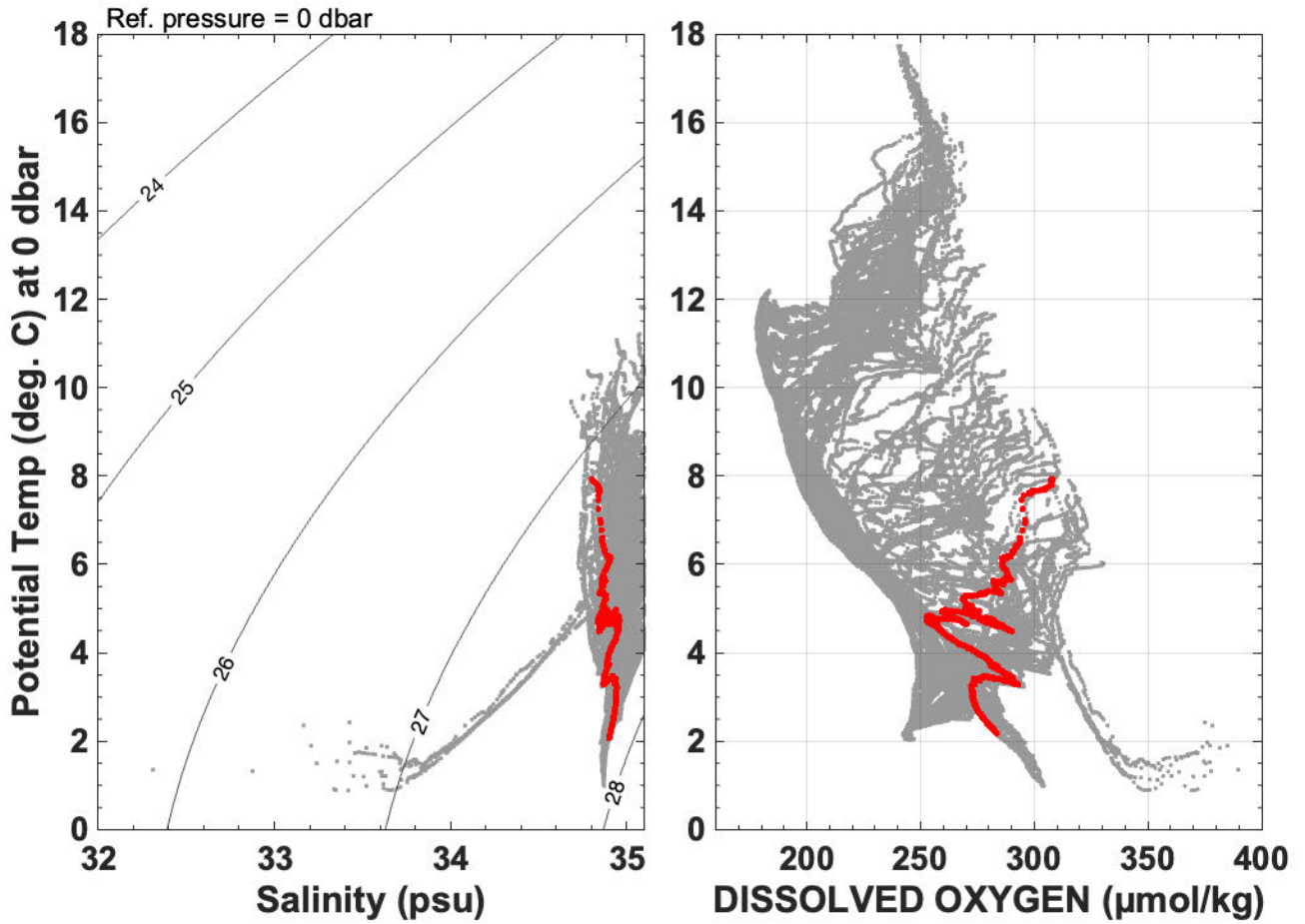


Cruise : BOCATS 2021  
 Station : 76  
 Date : 20/06/2021  
 Depth : 3100  
 Position : N 59 17.83  
           W 35 48.16

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	7.918	34.805	308.2	7.918
10	7.926	34.804	307.6	7.925
20	7.797	34.832	307.3	7.795
30	7.681	34.842	302.7	7.678
40	7.618	34.844	297.8	7.614
50	6.461	34.866	292.8	6.457
100	5.672	34.858	289.4	5.664
150	5.399	34.866	278.9	5.387
200	5.087	34.864	272.1	5.071
250	4.702	34.851	279.6	4.683
300	4.881	34.924	262.2	4.857
350	4.861	34.953	253.3	4.834
400	4.749	34.959	253.0	4.718
450	4.583	34.955	257.9	4.549
500	4.367	34.940	263.6	4.330
550	3.970	34.894	277.4	3.930
600	3.889	34.892	279.5	3.846
650	3.783	34.887	282.2	3.736
700	3.749	34.890	283.3	3.699
750	3.684	34.887	284.1	3.630
800	3.633	34.883	286.1	3.575
850	3.519	34.873	289.5	3.459
900	3.496	34.872	290.3	3.431
950	3.482	34.873	290.4	3.414
1000	3.496	34.879	288.3	3.423
1100	3.424	34.874	290.5	3.344
1200	3.371	34.868	292.7	3.284
1300	3.461	34.887	287.8	3.365
1400	3.520	34.903	283.2	3.414
1500	3.576	34.920	279.1	3.460
1600	3.548	34.926	275.9	3.424
1700	3.546	34.937	273.9	3.413
1800	3.480	34.936	273.6	3.339
1900	3.424	34.941	272.8	3.274
2000	3.383	34.945	272.3	3.225
2100	3.300	34.941	272.7	3.134
2200	3.220	34.940	273.1	3.046
2300	3.160	34.941	273.1	2.976
2400	3.110	34.940	273.3	2.918
2500	3.072	34.938	273.7	2.870
2600	3.019	34.937	274.1	2.809
2700	2.955	34.935	274.9	2.736
2800	2.872	34.932	275.7	2.645
2900	2.804	34.928	277.0	2.568
3000	2.697	34.922	278.7	2.453
3100	2.537	34.913	281.9	2.286
3100	2.537	34.913	281.9	2.286



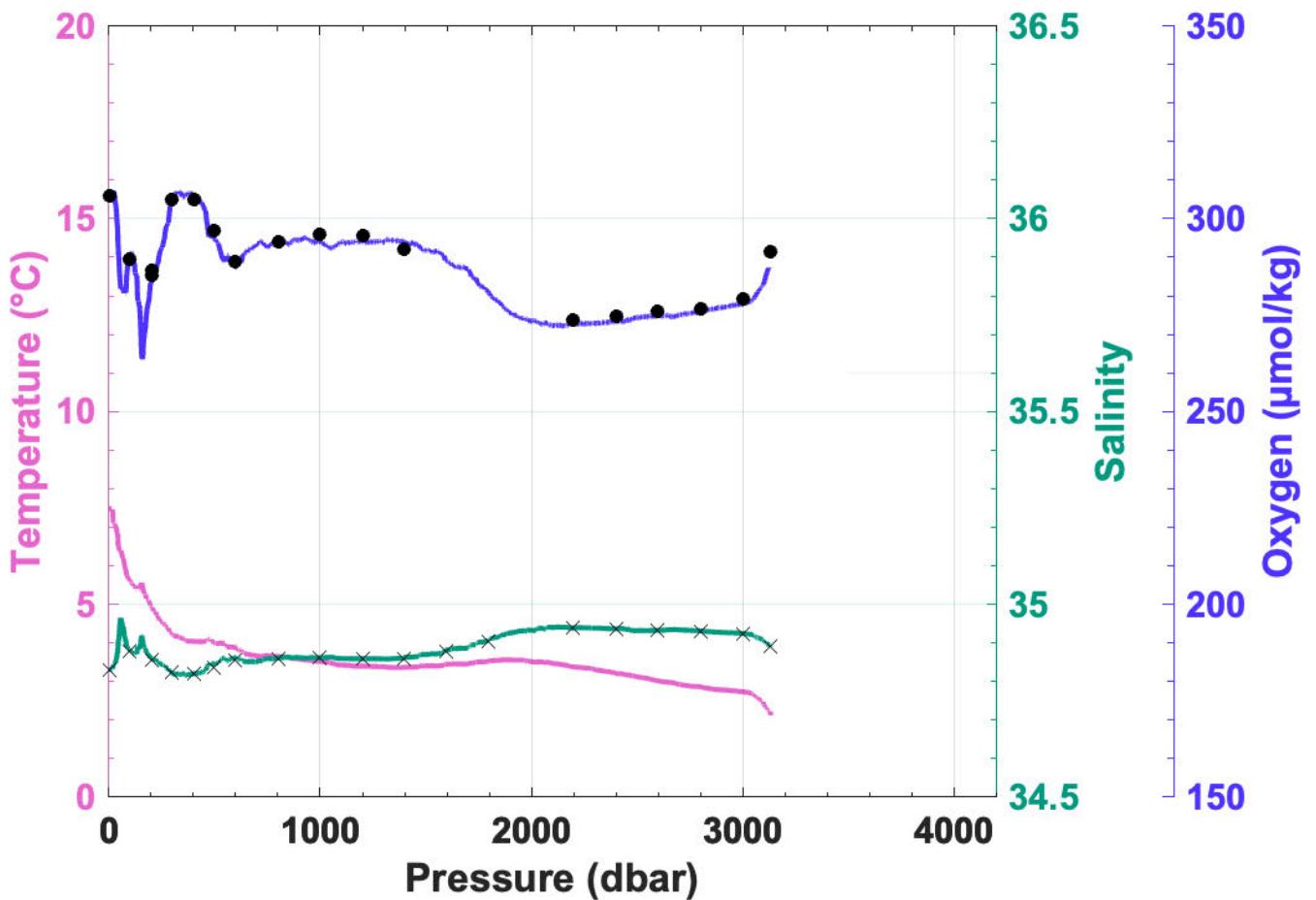
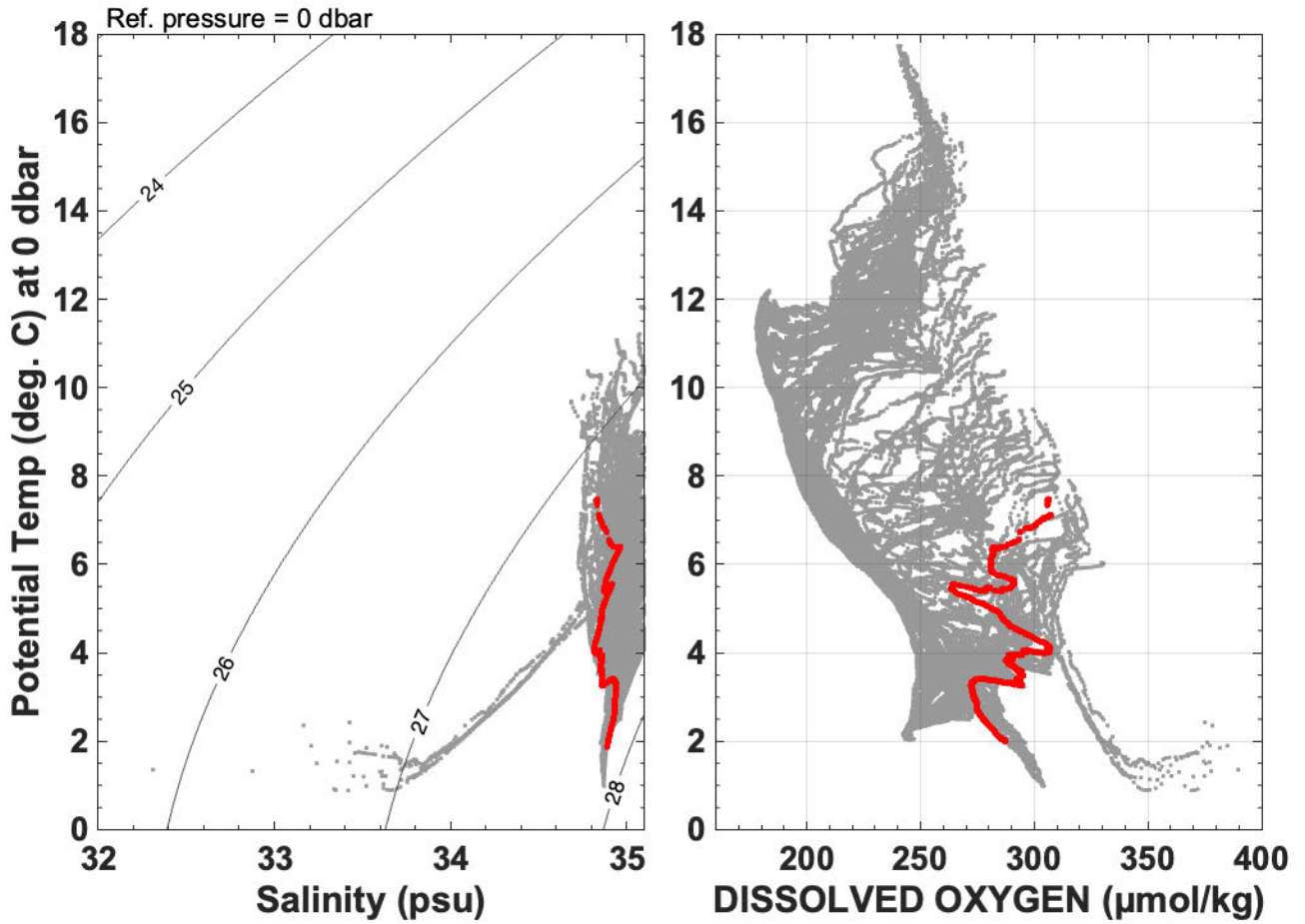
# STATION 76



Cruise : BOCATS 2021  
 Station : 77  
 Date : 20/06/2021  
 Depth : 3092  
 Position : N 59 20.85  
           W 36 26.55

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	7.476	34.831	306.0	7.476
10	7.467	34.831	306.2	7.466
20	7.126	34.842	307.2	7.124
30	7.054	34.847	304.2	7.052
40	6.831	34.872	298.3	6.827
50	6.406	34.934	286.4	6.401
100	5.627	34.884	291.1	5.619
150	5.481	34.900	272.2	5.468
200	4.963	34.860	283.5	4.947
250	4.552	34.845	292.5	4.533
300	4.213	34.821	305.4	4.191
350	4.106	34.820	305.7	4.081
400	4.041	34.820	306.5	4.013
450	4.035	34.825	302.9	4.002
500	4.007	34.845	294.8	3.971
550	3.947	34.857	289.1	3.907
600	3.870	34.862	287.4	3.827
650	3.712	34.852	291.2	3.666
700	3.659	34.852	293.4	3.609
750	3.670	34.859	292.5	3.616
800	3.648	34.861	293.6	3.591
850	3.620	34.863	293.4	3.558
900	3.585	34.862	294.4	3.520
950	3.546	34.861	294.3	3.477
1000	3.521	34.862	294.1	3.449
1100	3.424	34.860	293.8	3.344
1200	3.395	34.859	294.1	3.307
1300	3.384	34.859	294.0	3.288
1400	3.366	34.862	294.0	3.262
1500	3.402	34.870	291.9	3.289
1600	3.444	34.881	288.9	3.322
1700	3.453	34.887	287.0	3.322
1800	3.529	34.909	280.6	3.387
1900	3.556	34.926	275.6	3.404
2000	3.515	34.933	273.5	3.355
2100	3.467	34.940	272.3	3.298
2200	3.379	34.939	272.8	3.201
2300	3.308	34.938	272.9	3.123
2400	3.212	34.936	273.3	3.018
2500	3.124	34.932	274.3	2.921
2600	3.014	34.933	274.9	2.804
2700	2.927	34.934	275.1	2.709
2800	2.863	34.931	275.8	2.636
2900	2.782	34.927	276.9	2.546
3000	2.733	34.925	277.9	2.488
3100	2.408	34.904	283.3	2.160
3100	2.408	34.904	283.3	2.160

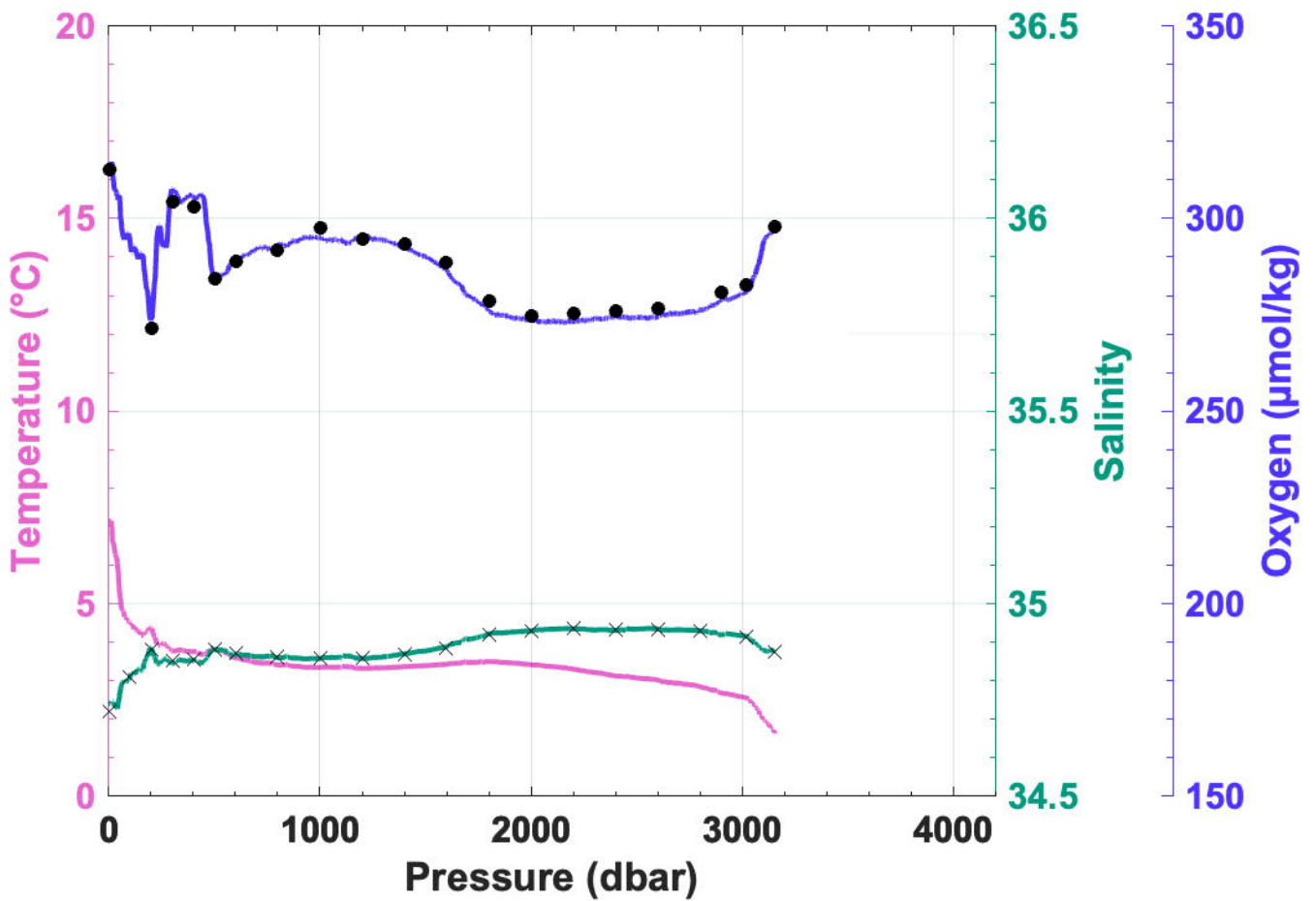
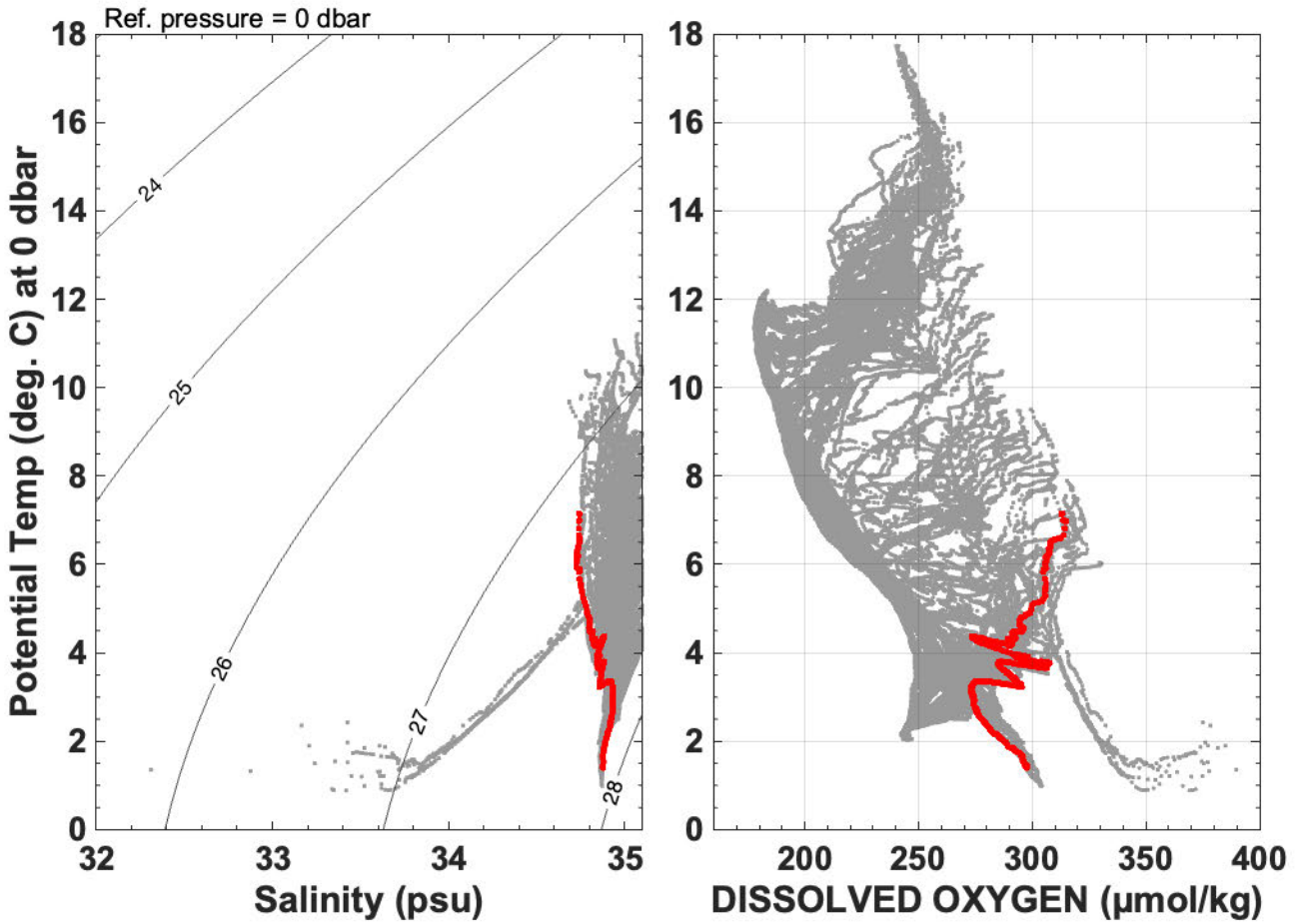
# STATION 77



Cruise : BOCATS 2021  
Station : 78  
Date : 21/06/2021  
Depth : 3115  
Position : N 59 25.44  
W 37 5.88

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	7.144	34.741	313.1	7.144
10	7.149	34.741	313.3	7.148
20	6.581	34.745	310.7	6.579
30	6.302	34.731	307.7	6.300
40	6.074	34.727	306.2	6.071
50	5.386	34.757	305.5	5.382
100	4.491	34.809	294.1	4.483
150	4.195	34.825	290.9	4.185
200	4.369	34.884	273.7	4.354
250	3.967	34.853	294.5	3.949
300	3.782	34.845	307.7	3.761
350	3.780	34.852	304.8	3.756
400	3.752	34.853	305.9	3.724
450	3.691	34.848	305.2	3.659
500	3.807	34.881	285.2	3.772
550	3.738	34.877	285.8	3.699
600	3.592	34.868	288.7	3.550
650	3.536	34.866	290.5	3.490
700	3.475	34.863	292.1	3.426
750	3.461	34.864	292.0	3.408
800	3.409	34.860	293.2	3.353
850	3.401	34.861	293.2	3.341
900	3.372	34.859	294.3	3.309
950	3.350	34.857	295.0	3.283
1000	3.344	34.858	294.9	3.273
1100	3.343	34.860	294.5	3.264
1200	3.320	34.858	295.2	3.232
1300	3.337	34.862	294.4	3.242
1400	3.365	34.870	292.3	3.261
1500	3.391	34.877	290.0	3.278
1600	3.424	34.888	286.7	3.302
1700	3.479	34.908	280.1	3.347
1800	3.498	34.922	275.9	3.357
1900	3.466	34.926	274.4	3.316
2000	3.413	34.930	273.6	3.255
2100	3.370	34.934	273.2	3.202
2200	3.303	34.935	273.2	3.127
2300	3.213	34.932	274.0	3.028
2400	3.124	34.931	274.5	2.931
2500	3.071	34.934	274.2	2.870
2600	3.020	34.934	274.4	2.810
2700	2.934	34.932	275.3	2.716
2800	2.847	34.930	276.2	2.620
2900	2.686	34.920	278.8	2.452
3000	2.582	34.917	280.3	2.341
3100	1.993	34.879	293.5	1.755
3150	1.694	34.877	297.1	1.457

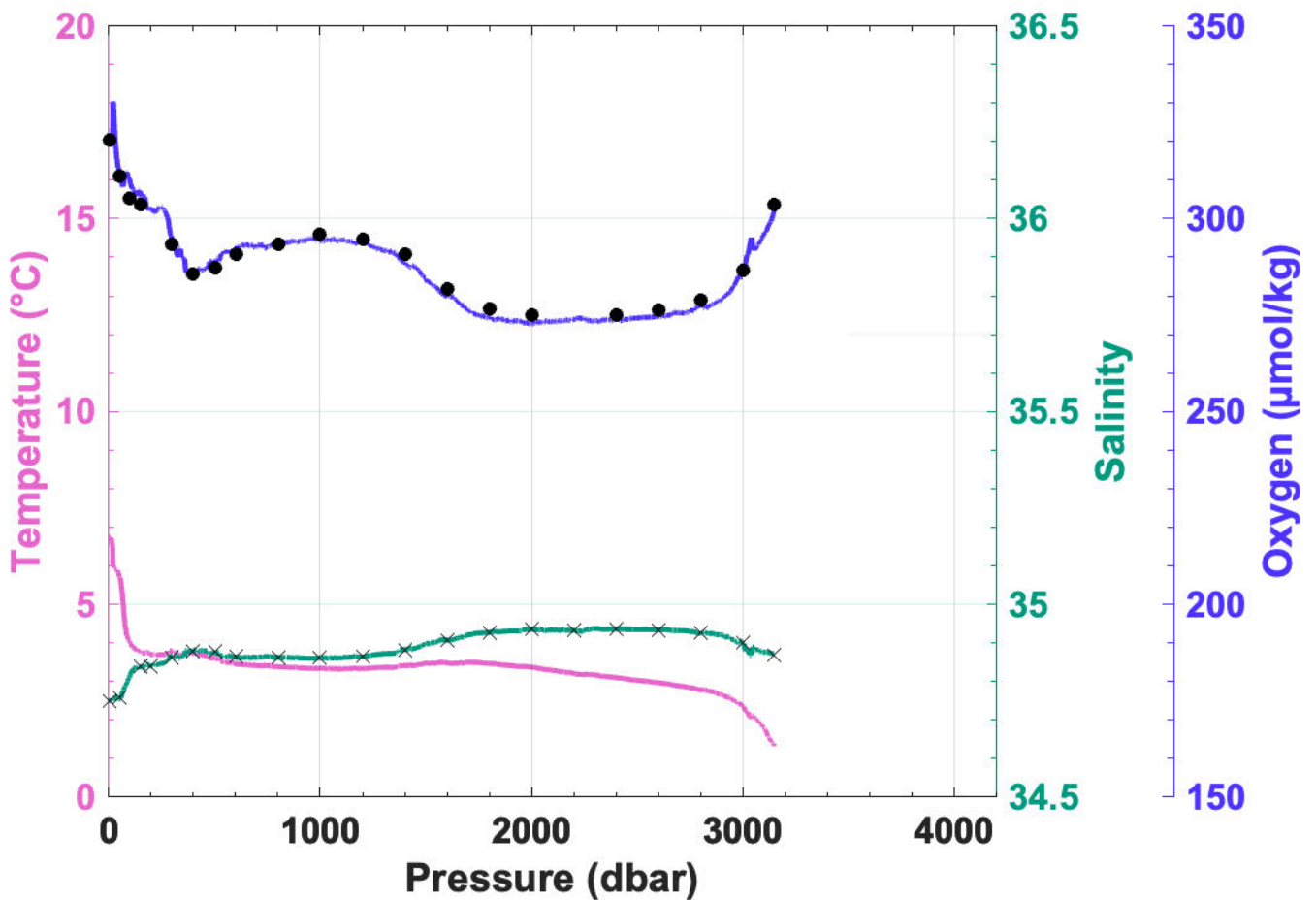
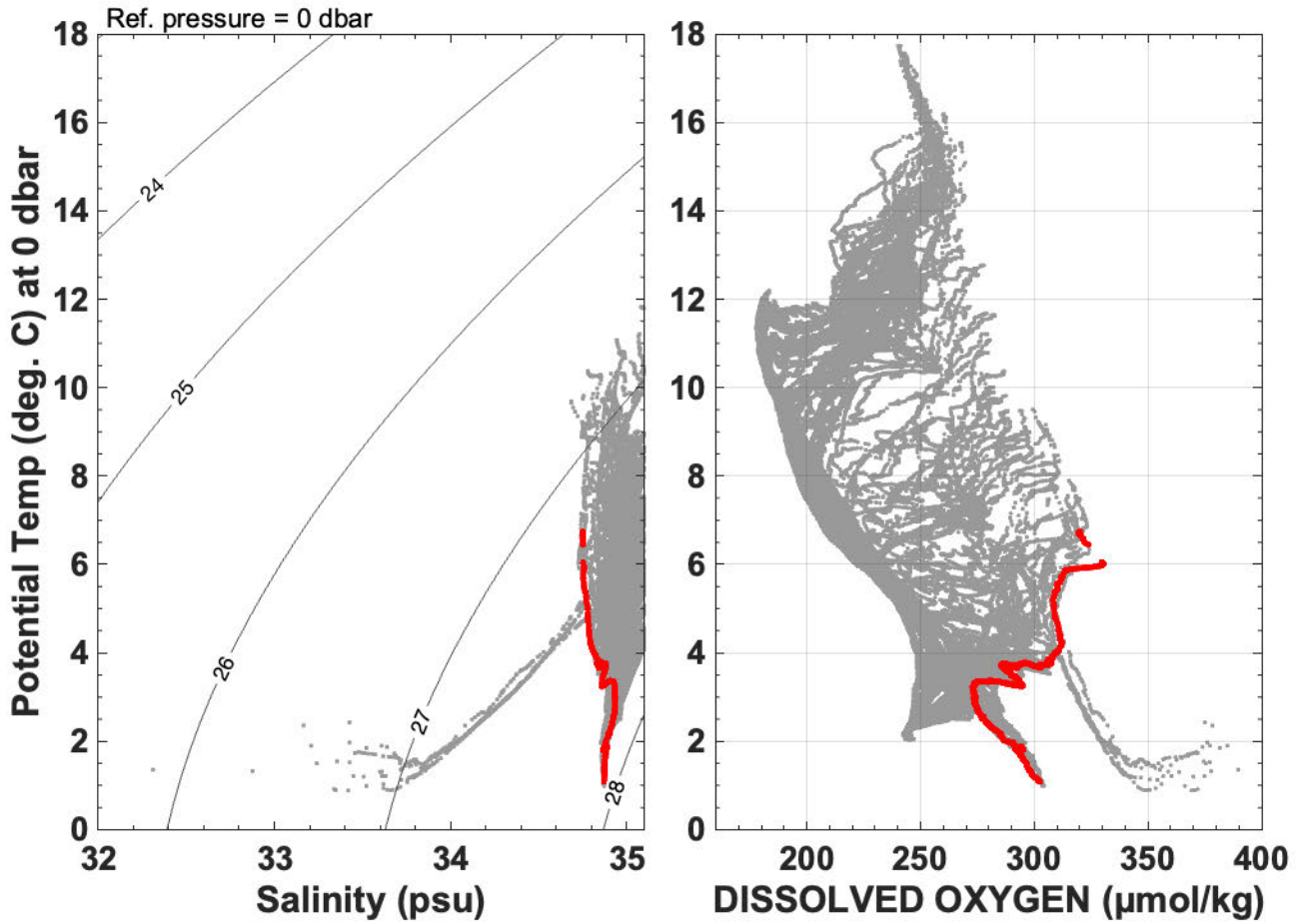
# STATION 78



Cruise : BOCATS 2021  
 Station : 79  
 Date : 21/06/2021  
 Depth : 3110  
 Position : N 59 29.22  
           W 37 44.86

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	6.745	34.751	320.1	6.745
10	6.697	34.752	320.0	6.696
20	6.022	34.754	330.4	6.020
30	5.918	34.757	320.2	5.916
40	5.880	34.757	314.8	5.877
50	5.707	34.755	311.8	5.703
100	4.005	34.816	309.7	3.998
150	3.785	34.839	305.8	3.774
200	3.702	34.840	302.4	3.688
250	3.696	34.847	302.9	3.679
300	3.781	34.865	294.8	3.760
350	3.694	34.864	290.0	3.670
400	3.737	34.881	285.6	3.710
450	3.675	34.879	286.8	3.643
500	3.602	34.874	288.6	3.568
550	3.505	34.865	291.1	3.467
600	3.455	34.862	292.3	3.414
650	3.432	34.862	293.3	3.387
700	3.413	34.862	292.7	3.364
750	3.411	34.865	292.7	3.358
800	3.384	34.863	293.2	3.328
850	3.369	34.862	293.9	3.309
900	3.351	34.861	294.1	3.288
950	3.338	34.860	294.7	3.271
1000	3.343	34.862	294.4	3.271
1100	3.322	34.861	294.5	3.243
1200	3.334	34.864	293.8	3.247
1300	3.364	34.872	291.7	3.268
1400	3.413	34.884	288.5	3.309
1500	3.467	34.897	284.5	3.353
1600	3.473	34.907	280.1	3.350
1700	3.495	34.920	276.2	3.362
1800	3.463	34.927	274.4	3.322
1900	3.411	34.931	273.4	3.262
2000	3.370	34.936	272.8	3.212
2100	3.287	34.933	273.4	3.121
2200	3.212	34.933	273.8	3.037
2300	3.170	34.937	273.4	2.986
2400	3.100	34.936	273.7	2.908
2500	3.031	34.934	274.2	2.830
2600	2.966	34.934	274.7	2.757
2700	2.887	34.932	275.5	2.669
2800	2.778	34.924	277.5	2.553
2900	2.655	34.919	279.1	2.422
3000	2.379	34.902	285.0	2.142
3100	1.789	34.876	295.8	1.555
3149	1.321	34.871	302.5	1.093

# STATION 79

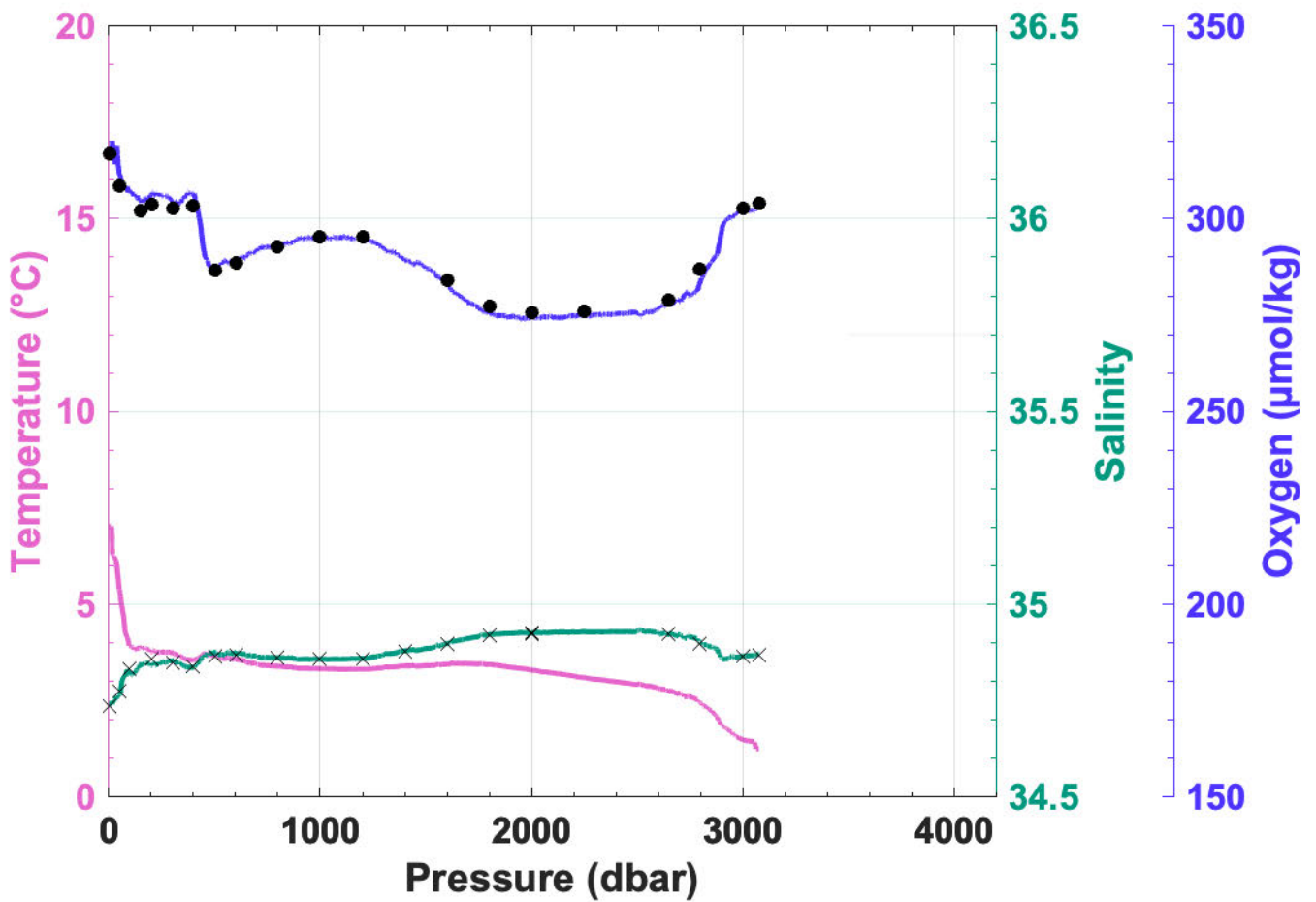
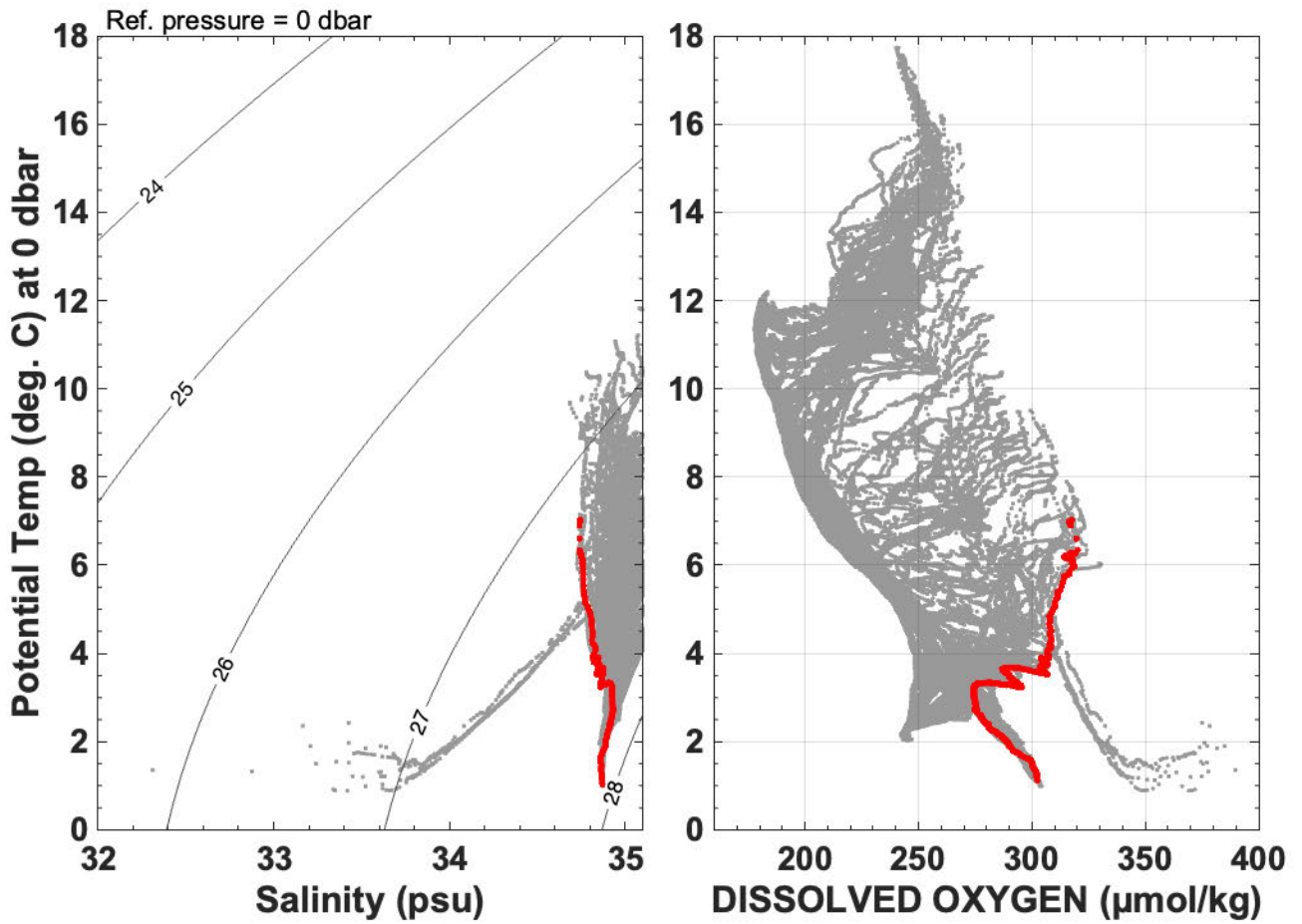




Cruise : BOCATS 2021  
 Station : 80  
 Date : 21/06/2021  
 Depth : 3040  
 Position : N 59 33.10  
           W 38 23.89

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	7.021	34.743	317.5	7.021
10	7.023	34.743	317.3	7.022
20	6.270	34.747	318.6	6.268
30	6.181	34.753	314.3	6.178
40	5.862	34.760	316.5	5.859
50	5.396	34.766	311.3	5.392
100	3.932	34.821	307.1	3.925
150	3.890	34.843	304.6	3.879
200	3.765	34.841	306.4	3.752
250	3.762	34.849	306.0	3.745
300	3.741	34.853	304.6	3.720
350	3.616	34.842	305.1	3.592
400	3.552	34.836	306.5	3.525
450	3.709	34.868	291.6	3.677
500	3.683	34.875	287.0	3.648
550	3.596	34.870	289.1	3.557
600	3.575	34.873	289.4	3.533
650	3.500	34.868	290.4	3.454
700	3.454	34.865	291.7	3.405
750	3.412	34.862	292.6	3.360
800	3.396	34.862	293.1	3.340
850	3.378	34.861	293.5	3.318
900	3.341	34.858	294.9	3.277
950	3.333	34.858	295.0	3.265
1000	3.331	34.858	294.8	3.260
1100	3.318	34.858	295.1	3.239
1200	3.317	34.860	294.5	3.230
1300	3.363	34.870	292.4	3.267
1400	3.402	34.880	289.3	3.298
1500	3.413	34.886	287.1	3.300
1600	3.446	34.898	283.3	3.323
1700	3.459	34.911	278.3	3.327
1800	3.443	34.922	275.5	3.302
1900	3.370	34.925	274.5	3.222
2000	3.295	34.926	274.5	3.138
2100	3.218	34.927	274.4	3.053
2200	3.144	34.928	274.8	2.971
2300	3.060	34.928	275.1	2.879
2400	2.991	34.929	275.4	2.801
2500	2.928	34.931	275.6	2.729
2600	2.822	34.925	276.7	2.616
2700	2.694	34.921	278.8	2.480
2800	2.445	34.900	283.7	2.226
2900	1.862	34.861	296.8	1.646
3000	1.499	34.866	302.0	1.282
3050	1.446	34.868	302.1	1.225

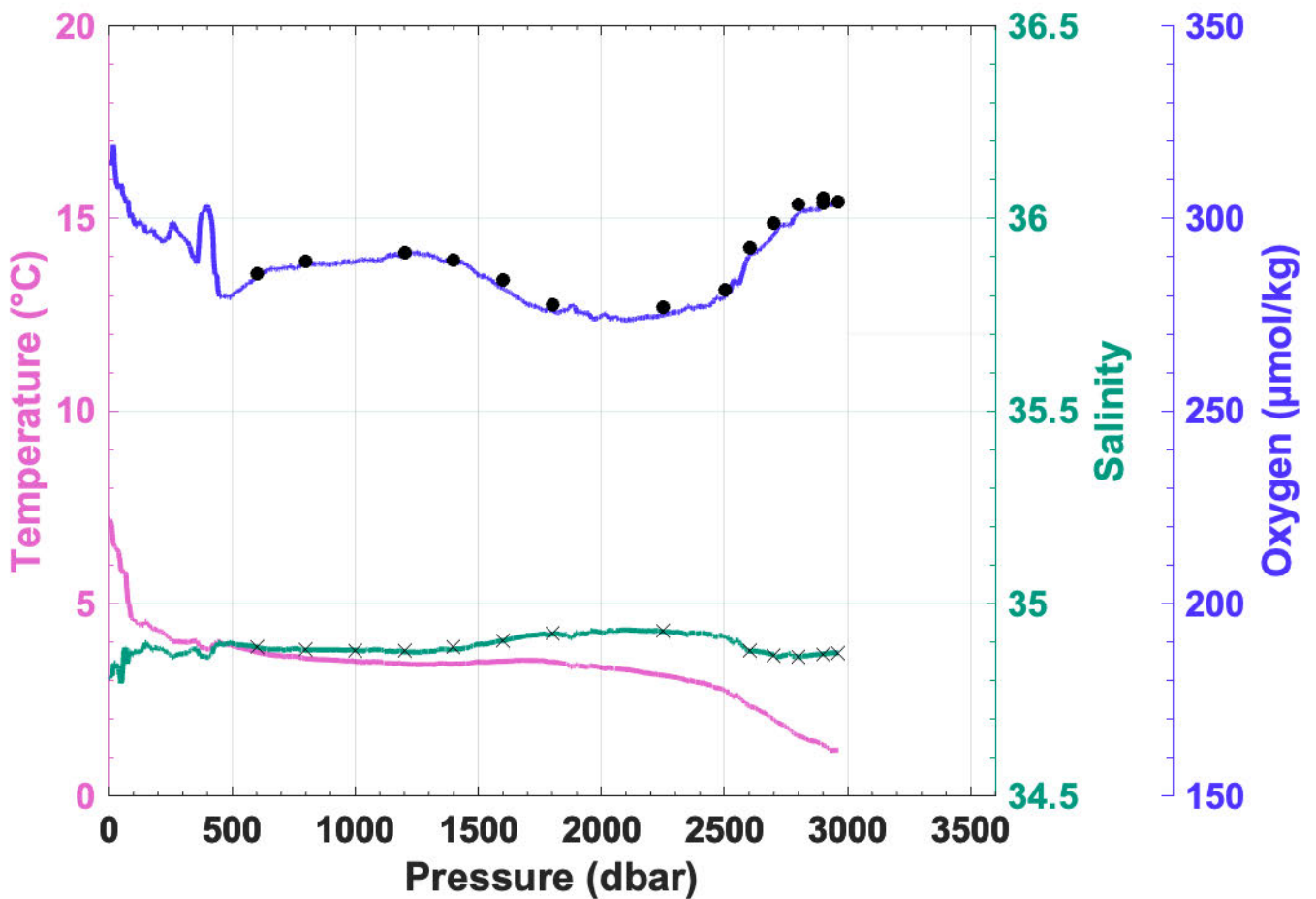
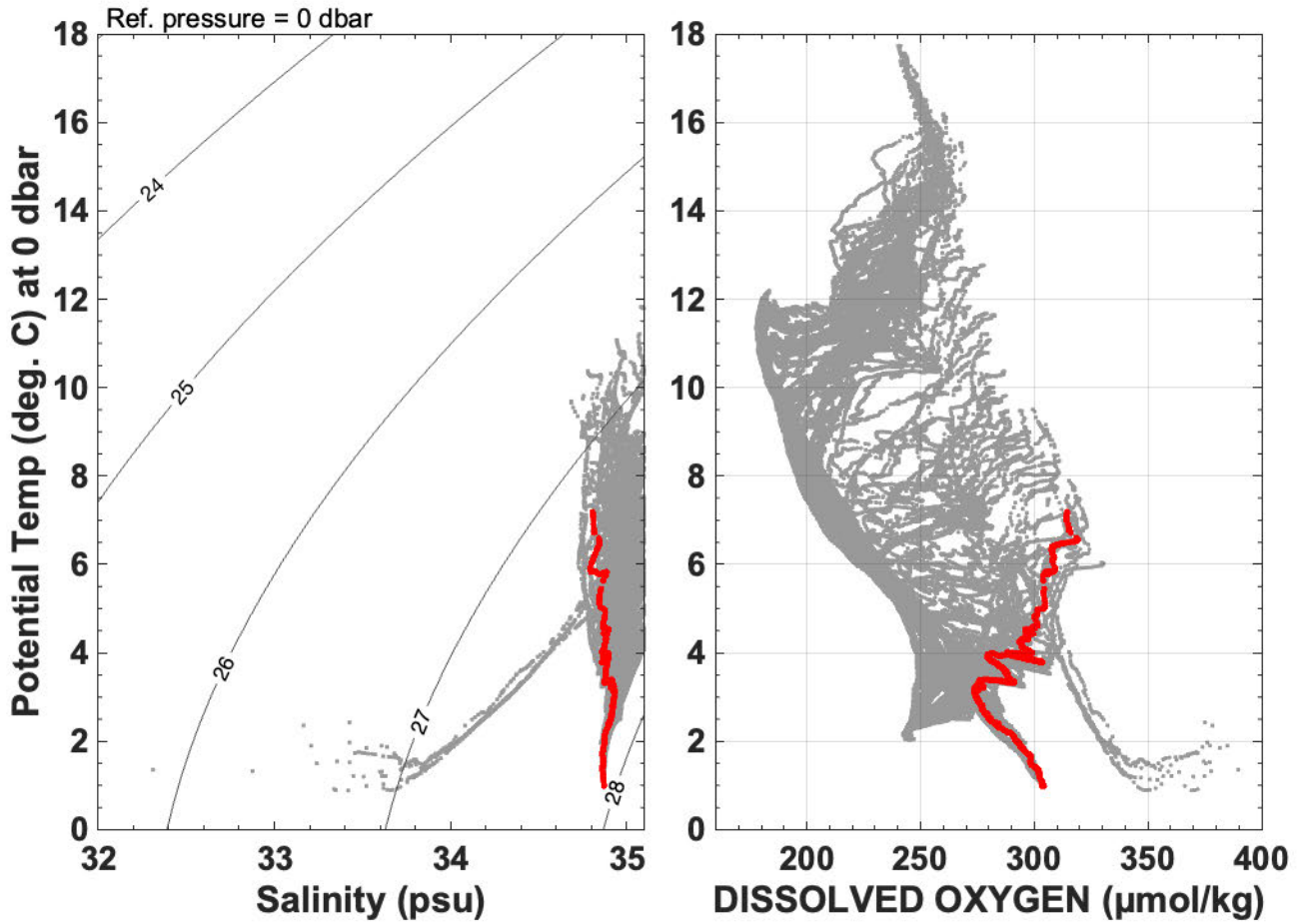
# STATION 80



Cruise : BOCATS 2021  
 Station : 81  
 Date : 21/06/2021  
 Depth : 2928  
 Position : N 59 36.59  
           W 39 3.31

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	7.187	34.806	314.5	7.187
10	7.051	34.812	314.3	7.050
20	6.524	34.844	318.2	6.522
30	6.440	34.843	309.5	6.438
40	6.324	34.829	308.0	6.320
50	5.873	34.794	309.0	5.868
100	4.576	34.870	299.8	4.568
150	4.539	34.899	296.3	4.528
200	4.294	34.882	295.1	4.280
250	4.084	34.866	297.0	4.066
300	4.004	34.870	295.1	3.983
350	4.026	34.882	289.3	4.001
400	3.817	34.861	303.5	3.789
450	4.000	34.897	279.7	3.968
500	3.914	34.897	279.9	3.878
550	3.823	34.891	282.4	3.784
600	3.745	34.887	284.7	3.703
650	3.673	34.881	287.0	3.627
700	3.646	34.881	287.2	3.596
750	3.630	34.883	287.1	3.577
800	3.574	34.879	288.4	3.517
850	3.554	34.880	288.1	3.494
900	3.540	34.880	288.0	3.475
950	3.517	34.879	288.6	3.448
1000	3.502	34.879	288.8	3.429
1100	3.489	34.880	289.1	3.408
1200	3.435	34.875	290.7	3.347
1300	3.426	34.876	290.7	3.329
1400	3.433	34.881	289.0	3.328
1500	3.488	34.894	285.3	3.374
1600	3.502	34.903	281.9	3.379
1700	3.526	34.917	277.8	3.394
1800	3.489	34.921	276.1	3.348
1900	3.421	34.926	275.3	3.271
2000	3.340	34.925	274.6	3.183
2100	3.285	34.932	273.6	3.119
2200	3.181	34.930	274.3	3.007
2300	3.085	34.925	275.6	2.903
2400	2.950	34.923	277.0	2.761
2500	2.752	34.916	279.5	2.557
2600	2.350	34.877	290.2	2.153
2700	1.994	34.868	295.6	1.795
2800	1.566	34.862	301.4	1.366
2900	1.330	34.869	302.9	1.126
2950	1.194	34.872	304.1	0.988

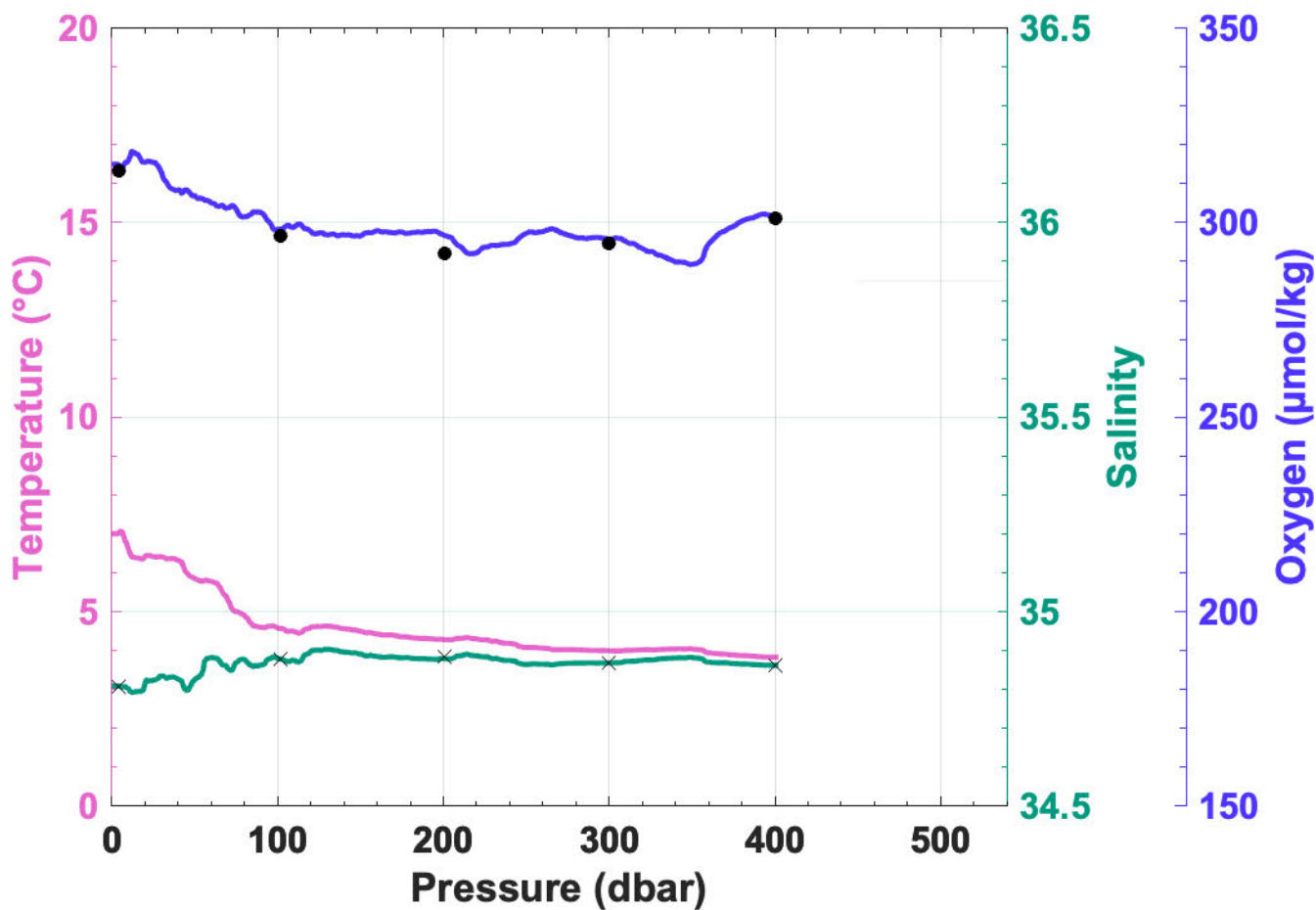
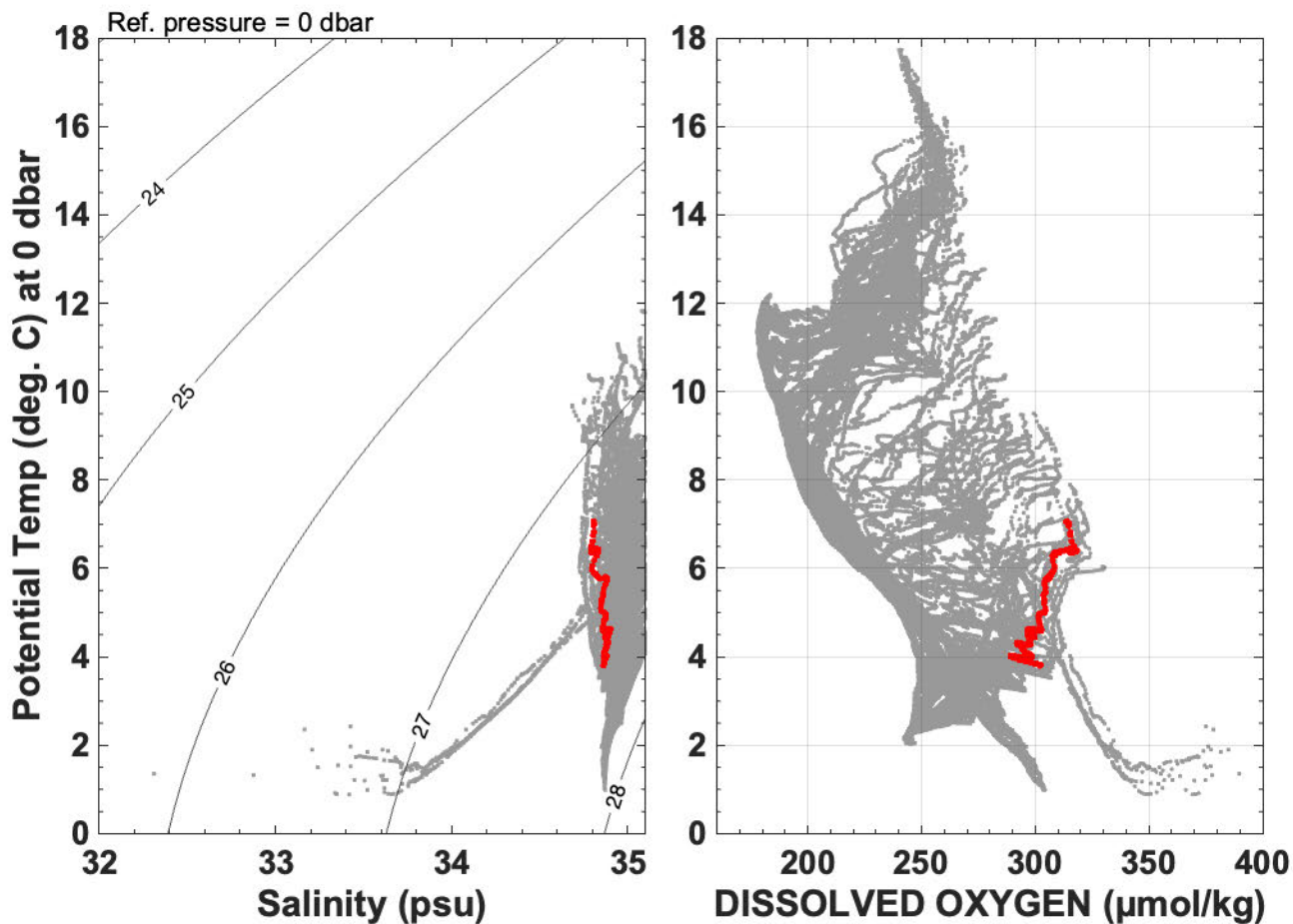
# STATION 81



Cruise : BOCATS 2021  
Station : 81 cast 2 (92)  
Date : 21/06/2021  
Depth : 2928  
Position : N 59 36.66  
W 39 3.22

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	7.002	34.809	315.0	7.002
10	6.611	34.802	315.9	6.610
20	6.413	34.815	315.6	6.412
30	6.406	34.834	312.8	6.404
40	6.322	34.827	308.4	6.319
50	5.847	34.825	307.0	5.843
100	4.581	34.880	298.2	4.573
150	4.502	34.891	296.5	4.491
200	4.283	34.879	296.8	4.268
250	4.081	34.864	297.2	4.063
300	3.996	34.868	295.7	3.974
350	4.044	34.882	289.3	4.019
400	3.832	34.862	302.0	3.803

# STATION 81 CAST 2

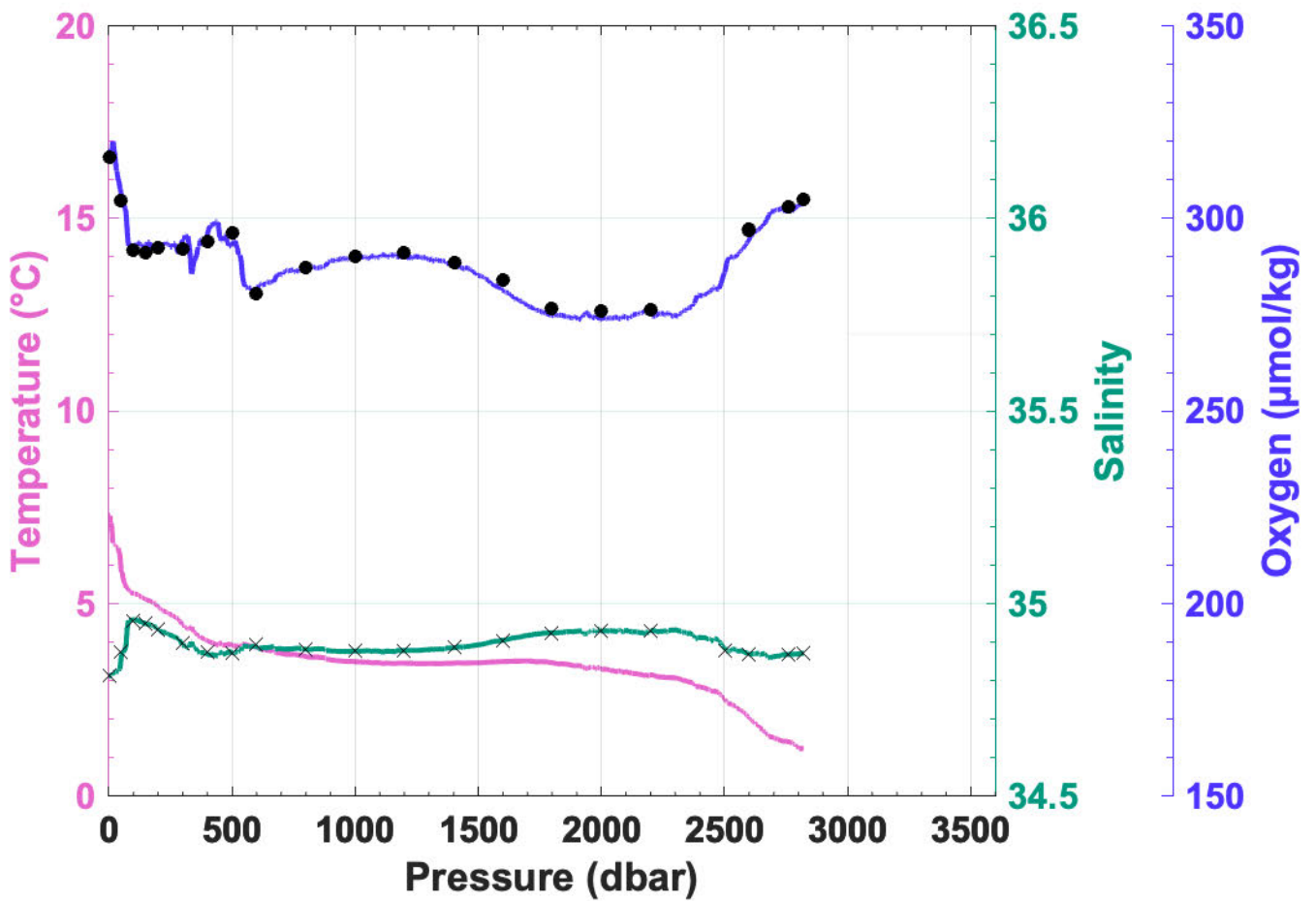
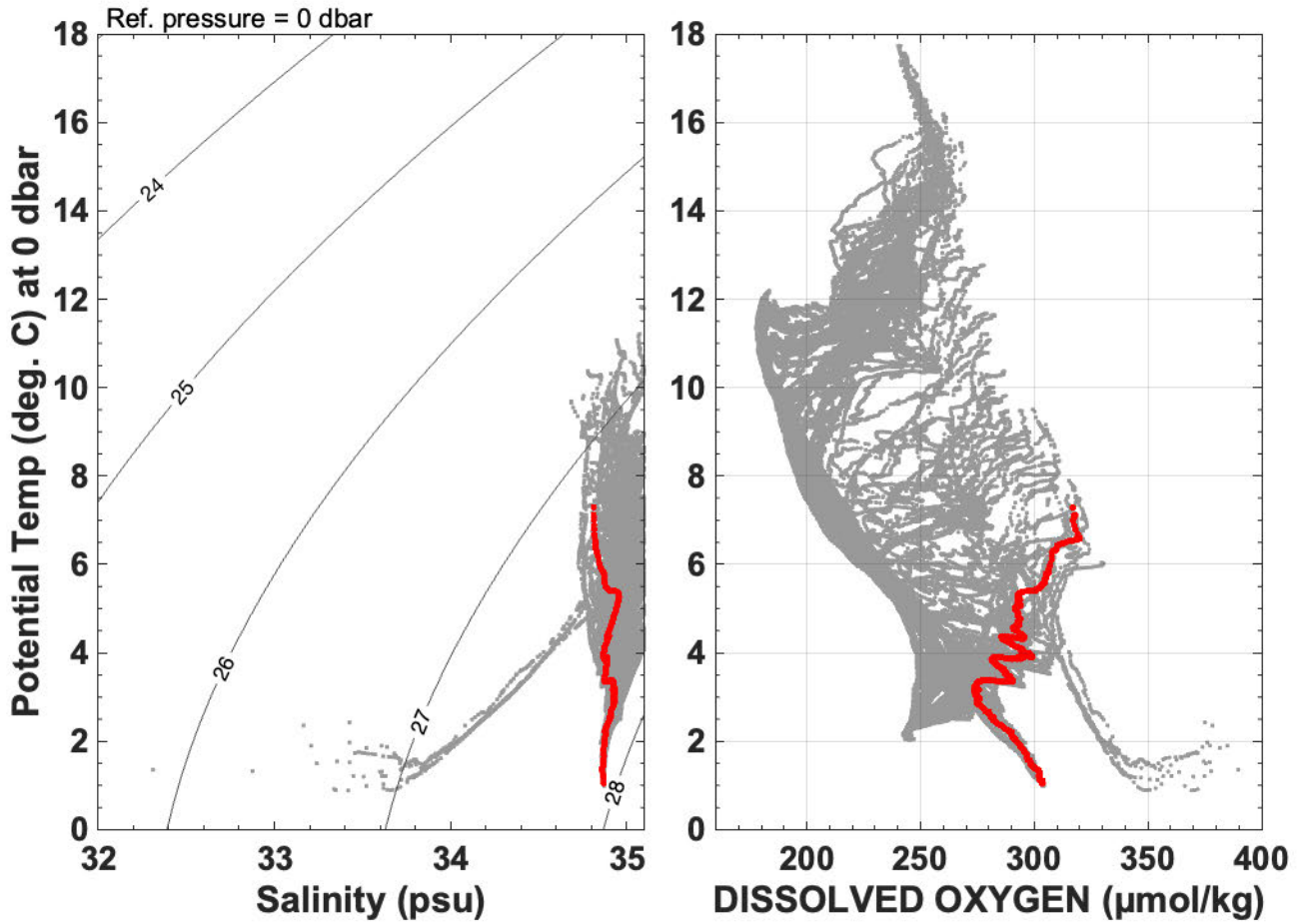


Cruise : BOCATS 2021  
 Station : 82  
 Date : 21/06/2021  
 Depth : 2783  
 Position : N 59 41.57  
           W 39 43.01

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen (µmol/kg)	Potential Temperature (°C)
0	7.290	34.813	317.0	7.290
10	7.078	34.813	317.5	7.077
20	6.563	34.821	318.6	6.562
30	6.485	34.823	312.7	6.482
40	6.368	34.824	309.7	6.365
50	5.872	34.860	306.3	5.867
100	5.273	34.958	293.0	5.265
150	5.113	34.948	293.2	5.101
200	4.917	34.933	292.9	4.902
250	4.722	34.919	292.6	4.703
300	4.441	34.892	294.4	4.419
350	4.259	34.887	289.3	4.234
400	4.040	34.869	295.7	4.011
450	3.969	34.872	295.5	3.936
500	3.927	34.874	293.3	3.891
550	3.945	34.890	282.8	3.905
600	3.865	34.888	281.7	3.822
650	3.786	34.887	283.3	3.740
700	3.711	34.883	285.4	3.661
750	3.682	34.883	286.5	3.629
800	3.634	34.882	287.1	3.576
850	3.612	34.883	287.1	3.550
900	3.541	34.878	288.9	3.477
950	3.510	34.876	289.5	3.442
1000	3.495	34.877	289.5	3.423
1100	3.463	34.876	290.2	3.382
1200	3.455	34.878	290.1	3.367
1300	3.447	34.881	289.3	3.351
1400	3.454	34.886	288.0	3.349
1500	3.466	34.893	285.3	3.352
1600	3.498	34.905	281.5	3.375
1700	3.513	34.917	277.2	3.380
1800	3.467	34.925	274.8	3.326
1900	3.391	34.928	274.2	3.242
2000	3.310	34.930	273.8	3.153
2100	3.229	34.930	274.3	3.064
2200	3.152	34.930	275.4	2.979
2300	3.072	34.932	274.8	2.890
2400	2.845	34.912	279.9	2.657
2500	2.535	34.888	286.0	2.344
2600	2.034	34.870	294.6	1.843
2700	1.518	34.863	301.9	1.328
2800	1.285	34.870	303.3	1.090
2800	1.285	34.870	303.3	1.090



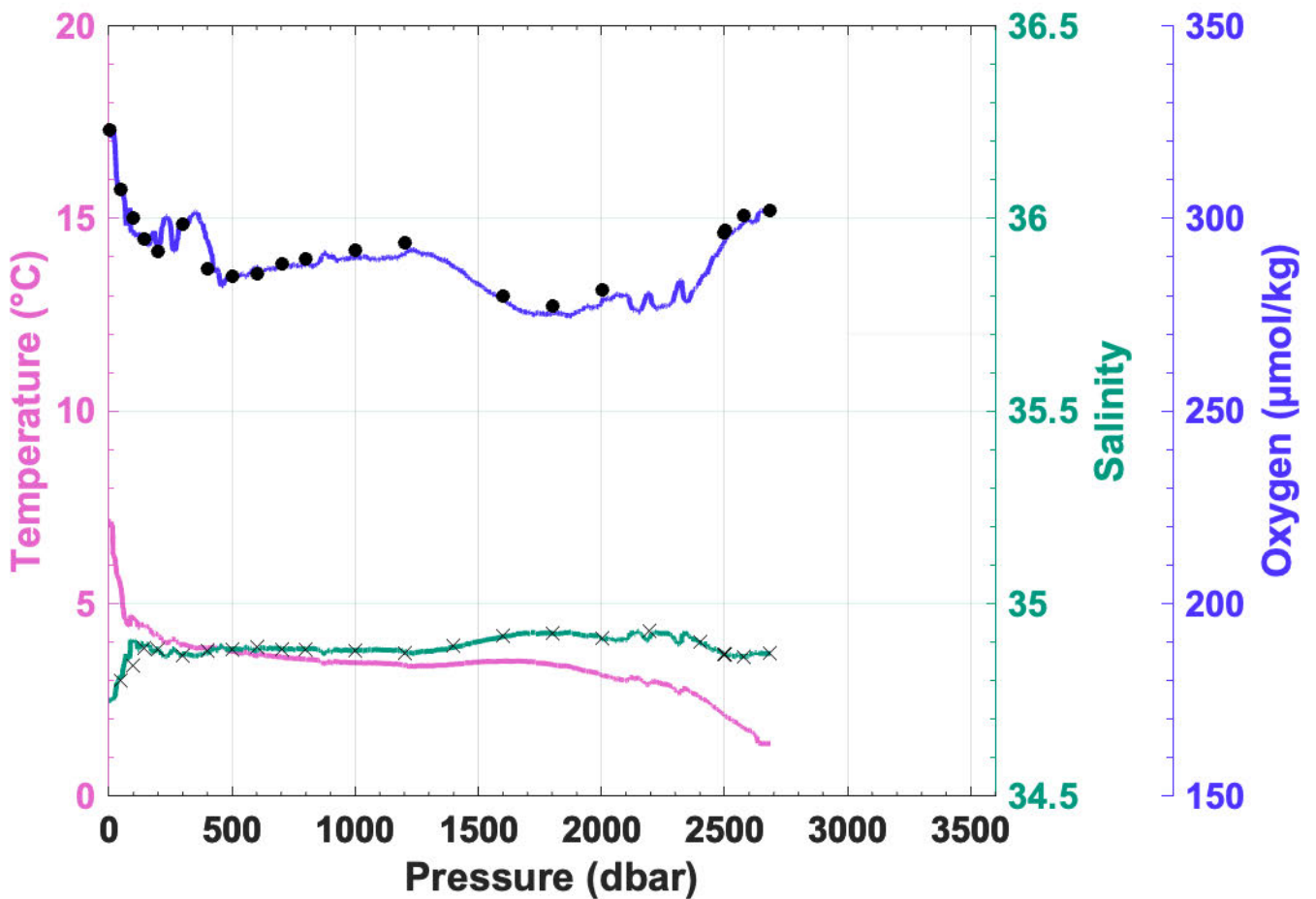
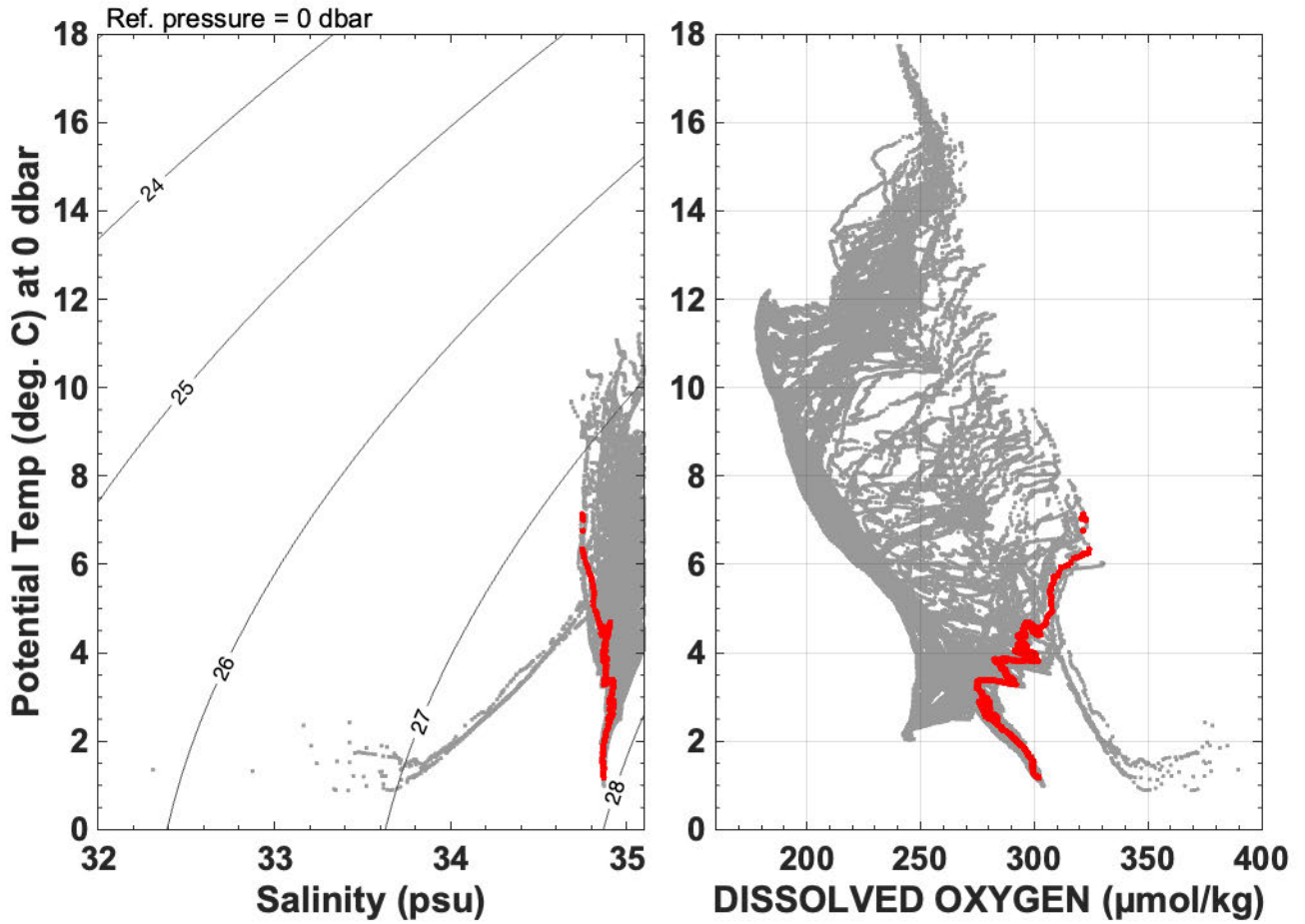
# STATION 82



Cruise : BOCATS 2021  
Station : 83  
Date : 22/06/2021  
Depth : 2658  
Position : N 59 42.71  
W 40 23.60

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	7.131	34.749	321.5	7.131
10	7.096	34.749	321.5	7.095
20	6.250	34.756	322.2	6.248
30	5.931	34.780	311.7	5.928
40	5.648	34.802	308.6	5.645
50	5.393	34.814	306.8	5.389
100	4.626	34.901	296.5	4.618
150	4.387	34.888	294.8	4.376
200	4.203	34.882	292.7	4.189
250	4.020	34.871	298.4	4.002
300	3.940	34.870	297.9	3.919
350	3.851	34.864	301.7	3.826
400	3.842	34.871	294.3	3.814
450	3.884	34.889	284.0	3.852
500	3.760	34.882	285.1	3.725
550	3.742	34.886	285.0	3.703
600	3.649	34.878	287.2	3.607
650	3.649	34.884	286.8	3.603
700	3.624	34.884	287.1	3.574
750	3.574	34.881	287.9	3.521
800	3.555	34.882	287.9	3.498
850	3.523	34.881	288.6	3.463
900	3.477	34.876	289.8	3.413
950	3.475	34.879	289.7	3.407
1000	3.467	34.879	289.8	3.395
1100	3.455	34.880	289.4	3.374
1200	3.393	34.874	290.9	3.305
1300	3.386	34.876	290.8	3.290
1400	3.425	34.886	287.6	3.320
1500	3.485	34.902	283.0	3.371
1600	3.507	34.914	278.9	3.383
1700	3.500	34.924	275.5	3.368
1800	3.420	34.923	275.2	3.280
1900	3.317	34.921	275.6	3.169
2000	3.143	34.909	278.1	2.988
2100	3.002	34.905	280.1	2.840
2200	2.946	34.915	280.0	2.775
2300	2.752	34.904	280.8	2.576
2400	2.566	34.899	283.6	2.383
2500	2.102	34.869	294.0	1.919
2600	1.711	34.867	299.7	1.526
2650	1.367	34.871	301.9	1.184

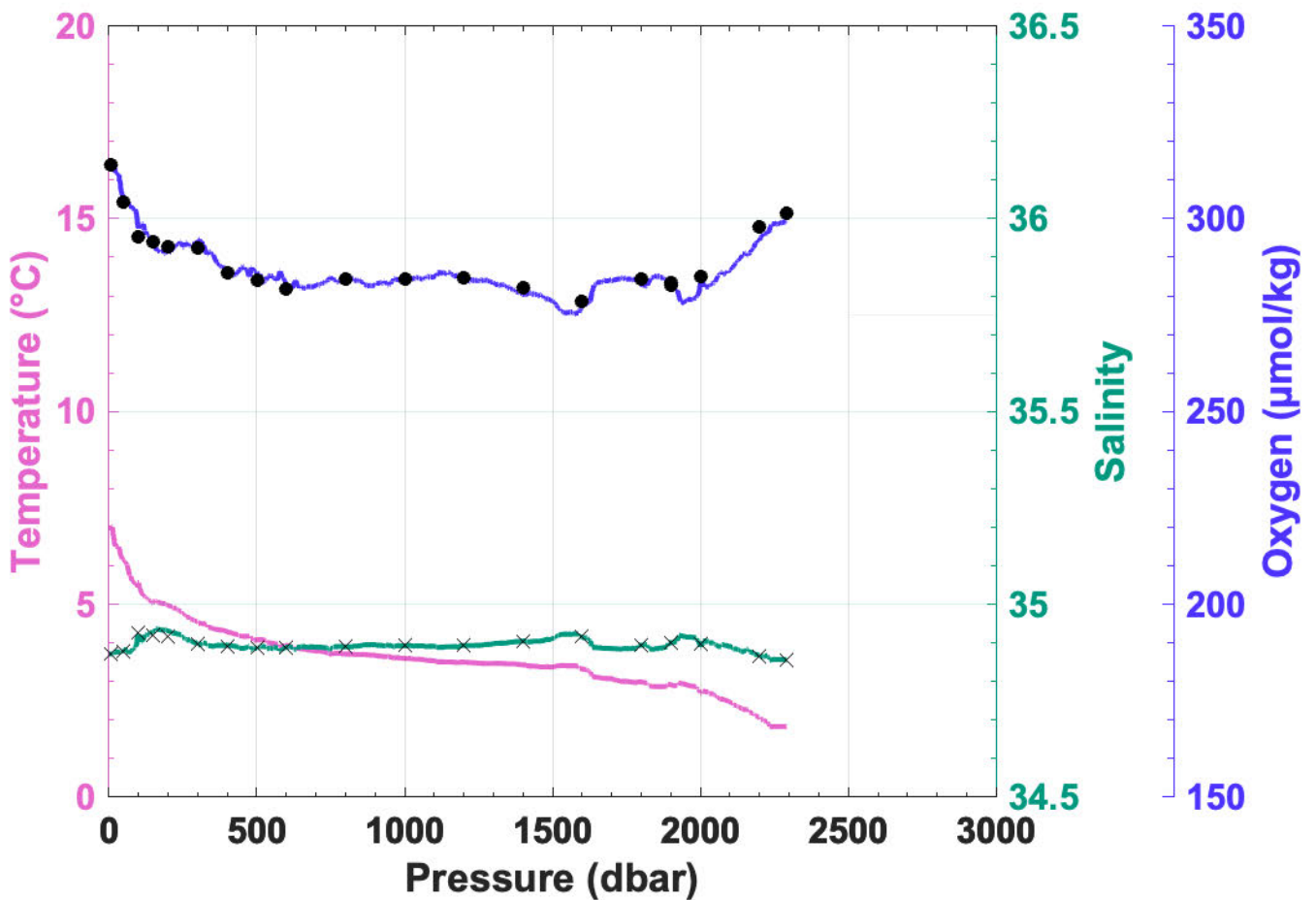
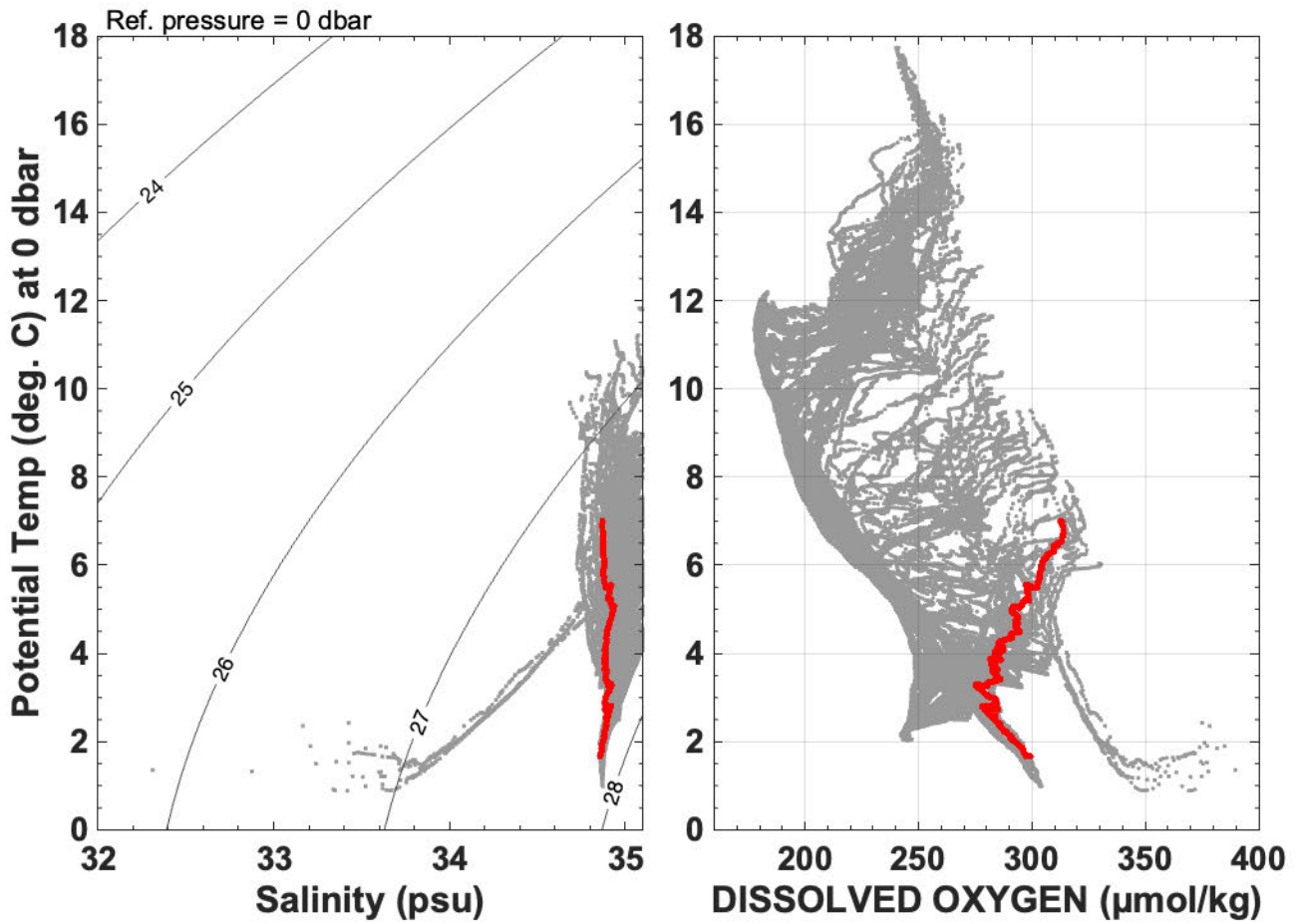
# STATION 83



Cruise : BOCATS 2021  
 Station : 84  
 Date : 22/06/2021  
 Depth : 2270  
 Position : N 59 44.56  
           W 41 4.17

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	6.980	34.872	313.3	6.980
10	6.993	34.871	312.7	6.992
20	6.526	34.875	312.8	6.524
30	6.501	34.877	311.4	6.498
40	6.267	34.877	307.7	6.264
50	6.145	34.880	305.5	6.141
100	5.563	34.920	297.5	5.555
150	5.069	34.930	293.8	5.058
200	4.970	34.931	291.4	4.954
250	4.761	34.914	292.6	4.741
300	4.547	34.898	294.1	4.525
350	4.382	34.892	290.7	4.356
400	4.290	34.894	285.9	4.260
450	4.174	34.886	287.3	4.141
500	4.074	34.886	286.1	4.037
550	3.990	34.886	285.1	3.950
600	3.929	34.889	282.5	3.886
650	3.846	34.890	282.3	3.799
700	3.792	34.889	282.6	3.741
750	3.714	34.885	284.7	3.660
800	3.711	34.890	284.4	3.653
850	3.696	34.892	284.1	3.634
900	3.677	34.895	282.8	3.612
950	3.640	34.894	282.9	3.571
1000	3.596	34.892	284.4	3.523
1100	3.536	34.891	285.0	3.455
1200	3.499	34.893	284.0	3.411
1300	3.466	34.898	283.2	3.369
1400	3.433	34.905	280.4	3.328
1500	3.377	34.911	278.7	3.264
1600	3.317	34.914	277.3	3.196
1700	3.072	34.886	283.9	2.946
1800	2.985	34.894	282.9	2.851
1900	2.913	34.901	282.1	2.771
2000	2.696	34.889	283.0	2.548
2100	2.469	34.891	286.6	2.316
2200	2.059	34.868	294.5	1.904
2291	1.829	34.856	299.3	1.670
2291	1.829	34.856	299.3	1.670

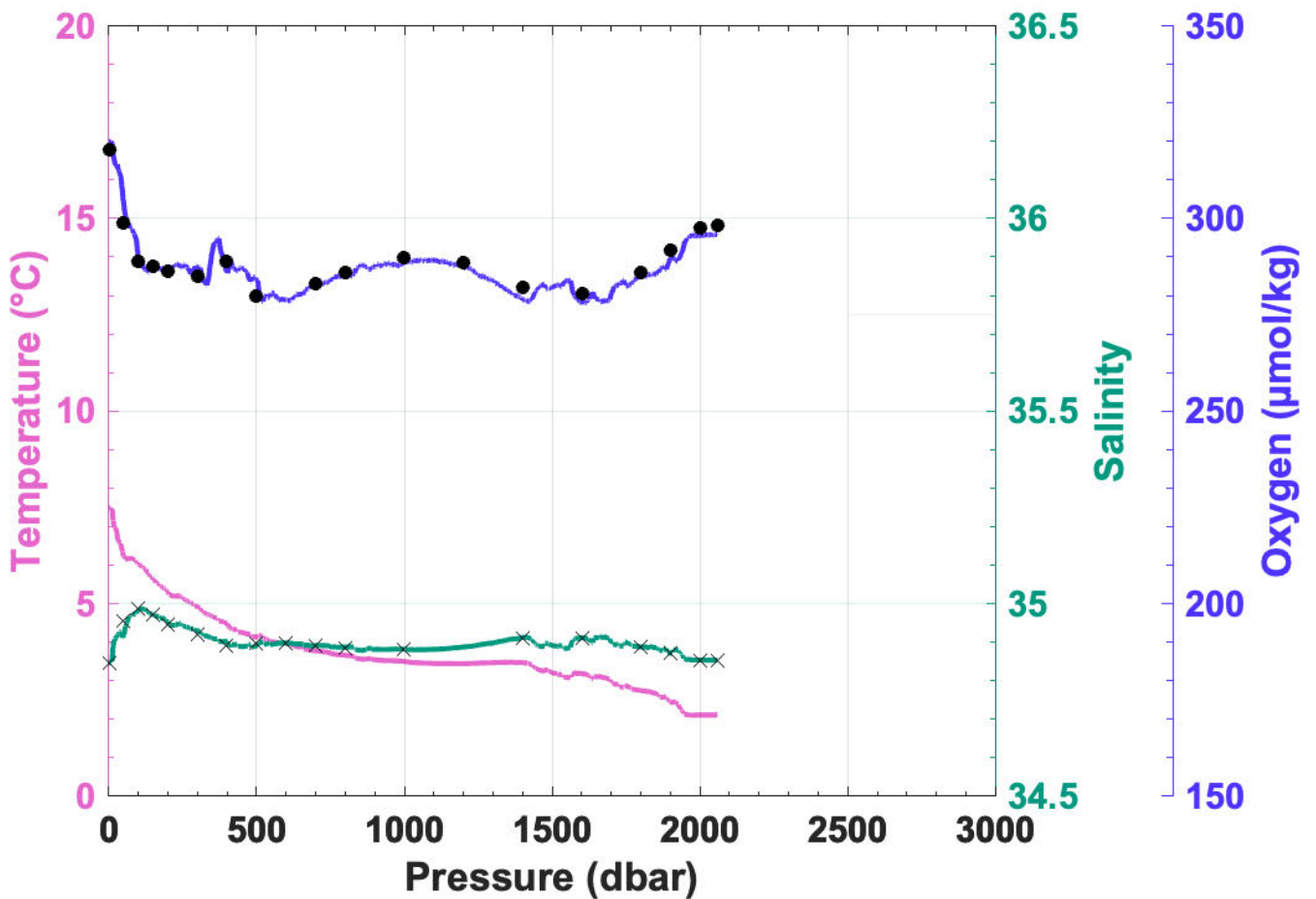
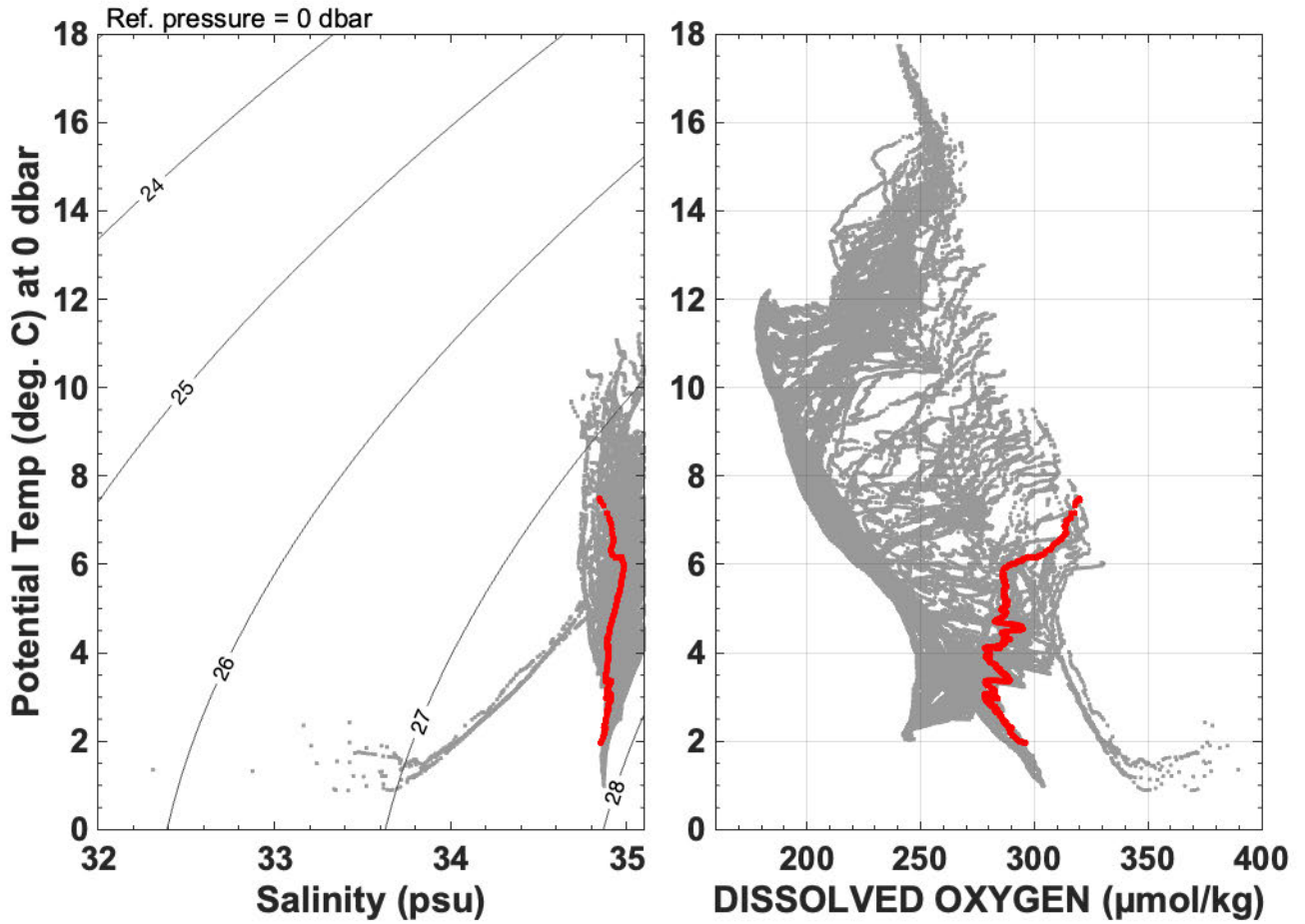
# STATION 84



Cruise : BOCATS 2021  
Station : 85  
Date : 22/06/2021  
Depth : 2035  
Position : N 59 45.50  
W 41 28.88

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	7.491	34.847	319.9	7.491
10	7.449	34.852	319.8	7.448
20	6.995	34.906	314.3	6.993
30	6.692	34.920	313.5	6.689
40	6.553	34.927	311.0	6.550
50	6.233	34.918	304.1	6.229
100	6.015	34.984	290.0	6.007
150	5.624	34.971	286.9	5.611
200	5.307	34.954	286.8	5.291
250	5.129	34.942	287.5	5.109
300	4.920	34.929	287.4	4.896
350	4.669	34.911	291.4	4.642
400	4.496	34.903	286.0	4.466
450	4.247	34.888	287.1	4.214
500	4.138	34.891	284.0	4.102
550	4.014	34.894	280.5	3.973
600	3.969	34.898	278.8	3.925
650	3.877	34.895	280.4	3.829
700	3.774	34.891	283.0	3.723
750	3.709	34.888	284.1	3.655
800	3.658	34.887	285.1	3.601
850	3.568	34.879	287.6	3.507
900	3.541	34.881	287.4	3.476
950	3.520	34.881	288.2	3.451
1000	3.500	34.882	288.2	3.428
1100	3.448	34.882	289.1	3.368
1200	3.441	34.888	287.2	3.353
1300	3.468	34.898	284.0	3.371
1400	3.473	34.913	278.8	3.367
1500	3.204	34.891	282.1	3.093
1600	3.182	34.912	278.4	3.062
1700	2.962	34.899	280.5	2.837
1800	2.741	34.887	284.8	2.610
1900	2.443	34.871	289.6	2.307
2000	2.109	34.854	295.4	1.970
2050	2.110	34.853	295.8	1.967

# STATION 85

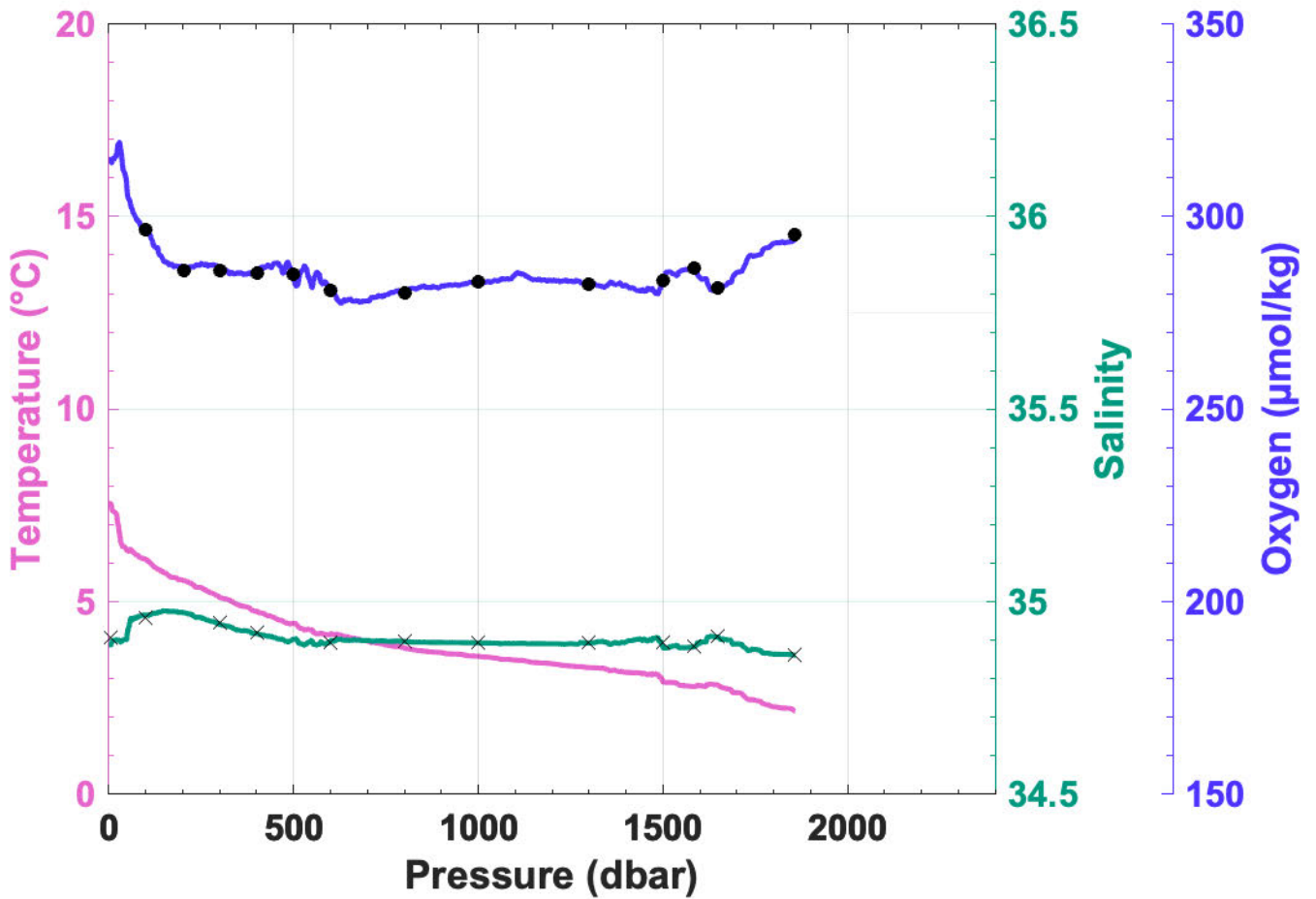
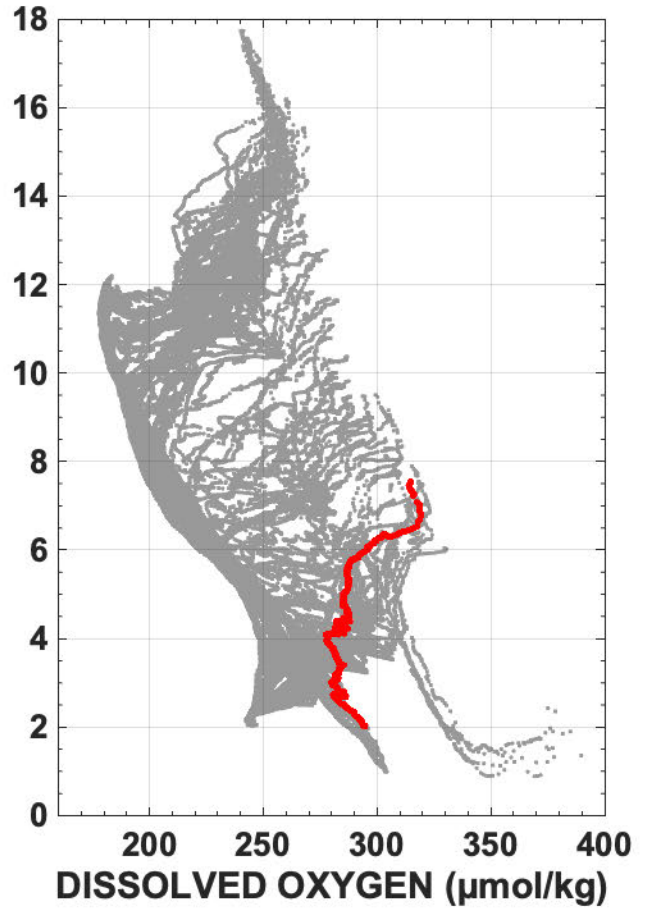
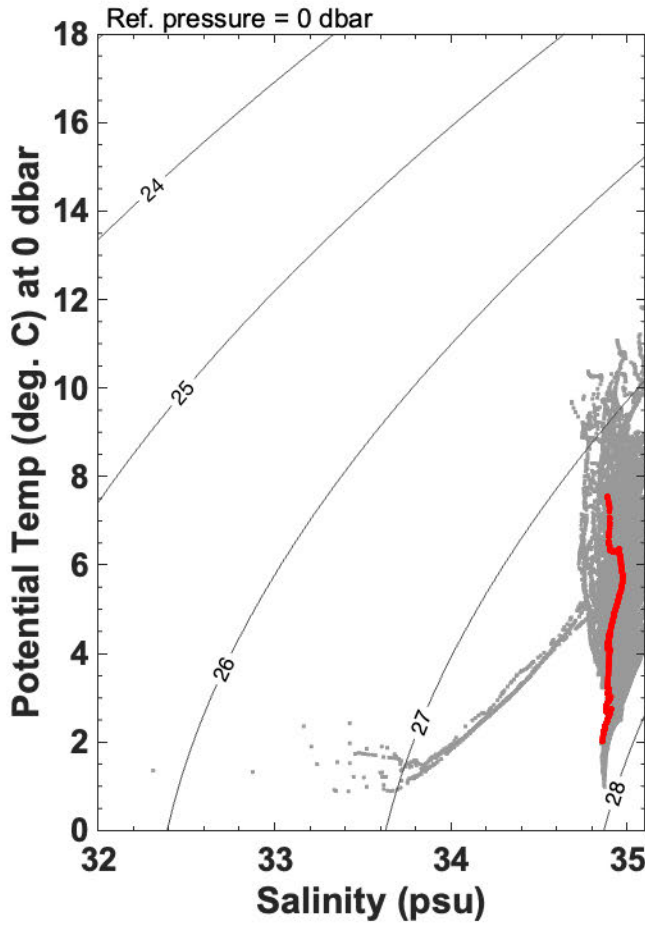




Cruise : BOCATS 2021  
Station : 86  
Date : 22/06/2021  
Depth : 1845  
Position : N 59 46.03  
          W 41 56.08

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	7.553	34.888	314.8	7.553
10	7.355	34.899	314.9	7.354
20	7.275	34.900	316.1	7.274
30	6.694	34.899	318.8	6.692
40	6.428	34.901	311.8	6.425
50	6.303	34.918	306.1	6.299
100	6.099	34.965	296.3	6.091
150	5.751	34.976	288.3	5.738
200	5.561	34.972	287.1	5.545
250	5.365	34.959	287.8	5.344
300	5.114	34.941	286.9	5.090
350	4.921	34.926	285.2	4.893
400	4.751	34.917	285.9	4.720
450	4.581	34.907	287.9	4.547
500	4.438	34.903	283.9	4.400
550	4.277	34.899	281.5	4.236
600	4.158	34.897	281.0	4.114
650	4.068	34.900	278.5	4.019
700	3.978	34.899	278.2	3.926
750	3.880	34.898	279.6	3.825
800	3.802	34.897	280.9	3.743
850	3.722	34.895	281.9	3.660
900	3.676	34.894	281.9	3.611
950	3.636	34.894	282.2	3.567
1000	3.582	34.893	282.8	3.509
1100	3.484	34.892	284.9	3.403
1200	3.391	34.891	283.3	3.303
1300	3.289	34.893	282.4	3.194
1400	3.164	34.896	282.2	3.062
1500	2.928	34.881	283.5	2.821
1600	2.818	34.892	284.2	2.703
1700	2.641	34.891	285.4	2.520
1800	2.272	34.864	293.1	2.148
1850	2.210	34.863	293.6	2.082

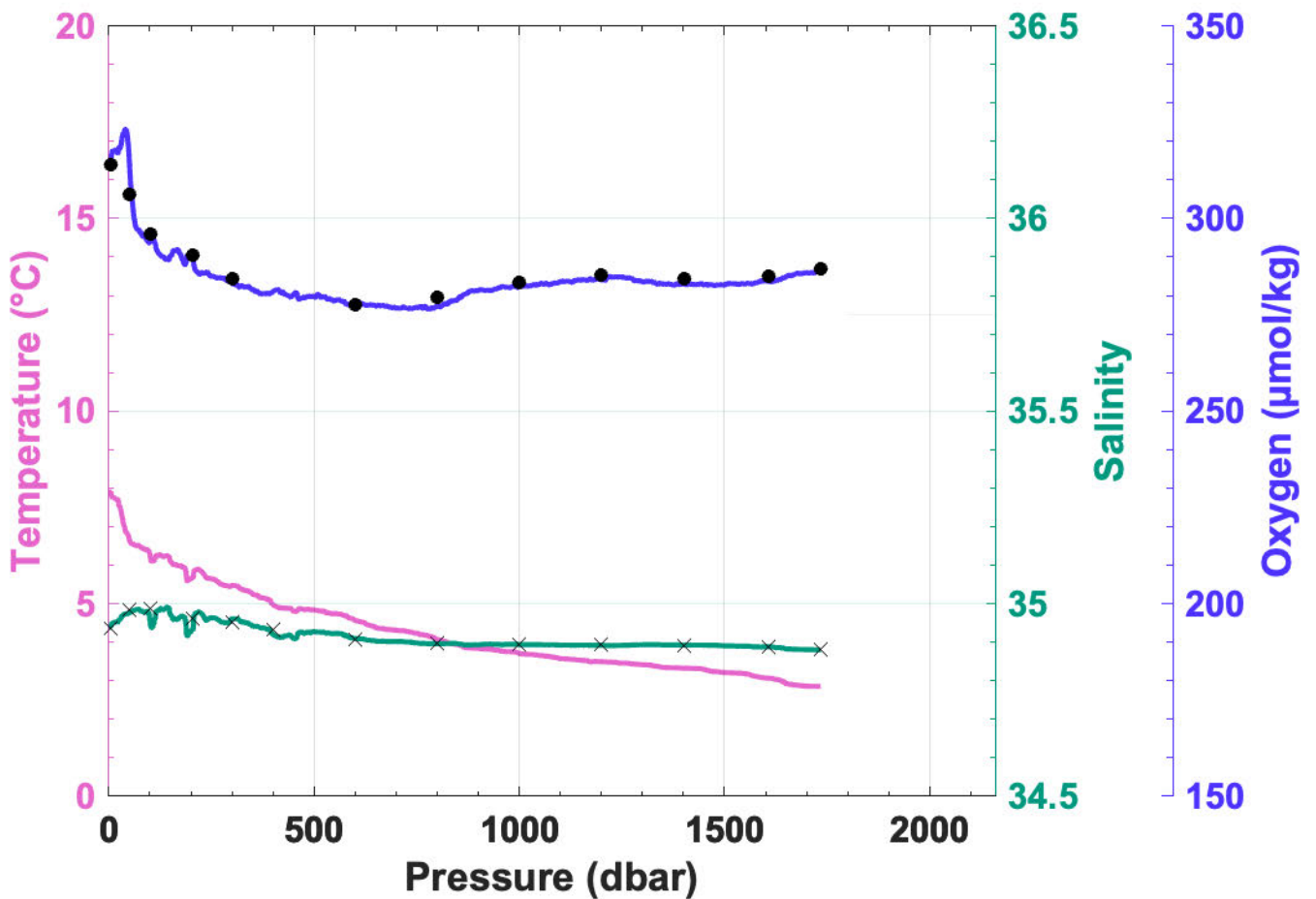
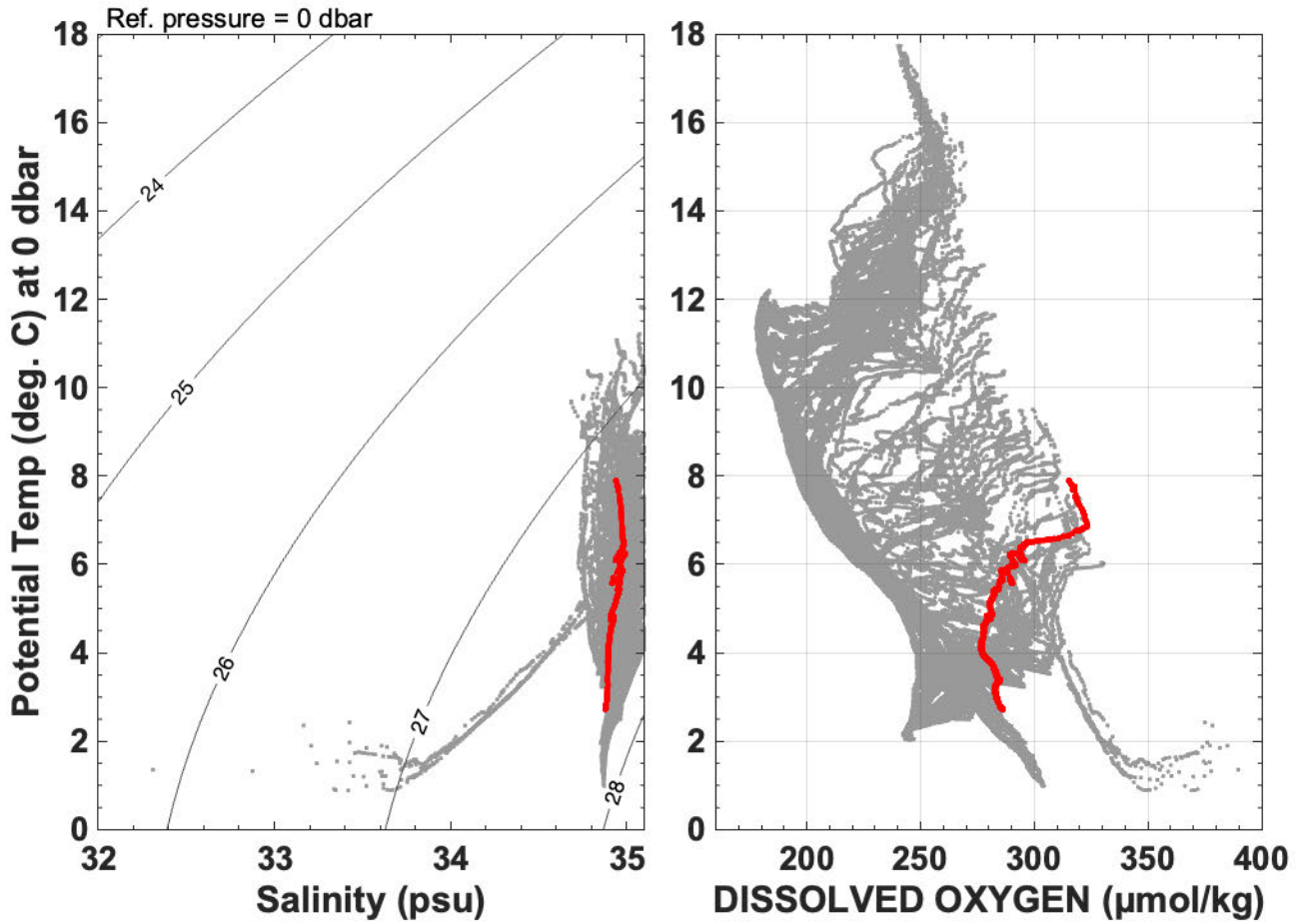
# STATION 86



Cruise : BOCATS 2021  
Station : 87  
Date : 22/06/2021  
Depth : 1723  
Position : N 59 46.88  
W 42 13.53

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	7.893	34.940	315.2	7.893
10	7.757	34.950	317.7	7.756
20	7.702	34.952	317.1	7.700
30	7.401	34.963	319.2	7.398
40	6.884	34.973	323.1	6.880
50	6.650	34.976	314.9	6.646
100	6.271	34.959	293.9	6.263
150	6.100	34.970	290.4	6.087
200	5.654	34.930	289.6	5.637
250	5.644	34.964	285.0	5.624
300	5.471	34.960	283.1	5.446
350	5.253	34.942	281.5	5.225
400	4.973	34.920	280.9	4.941
450	4.808	34.910	280.2	4.773
500	4.835	34.927	279.6	4.795
550	4.741	34.922	278.6	4.698
600	4.569	34.909	277.9	4.522
650	4.380	34.902	277.3	4.330
700	4.312	34.902	276.6	4.259
750	4.230	34.898	277.0	4.173
800	4.071	34.895	277.2	4.011
850	3.933	34.895	278.9	3.869
900	3.838	34.893	281.3	3.771
950	3.788	34.894	282.0	3.718
1000	3.703	34.893	282.5	3.629
1100	3.574	34.892	283.6	3.493
1200	3.492	34.892	284.1	3.403
1300	3.416	34.893	283.6	3.320
1400	3.326	34.893	283.0	3.222
1500	3.210	34.891	282.7	3.099
1600	3.070	34.888	283.9	2.952
1700	2.857	34.880	285.9	2.733
1700	2.857	34.880	285.9	2.733

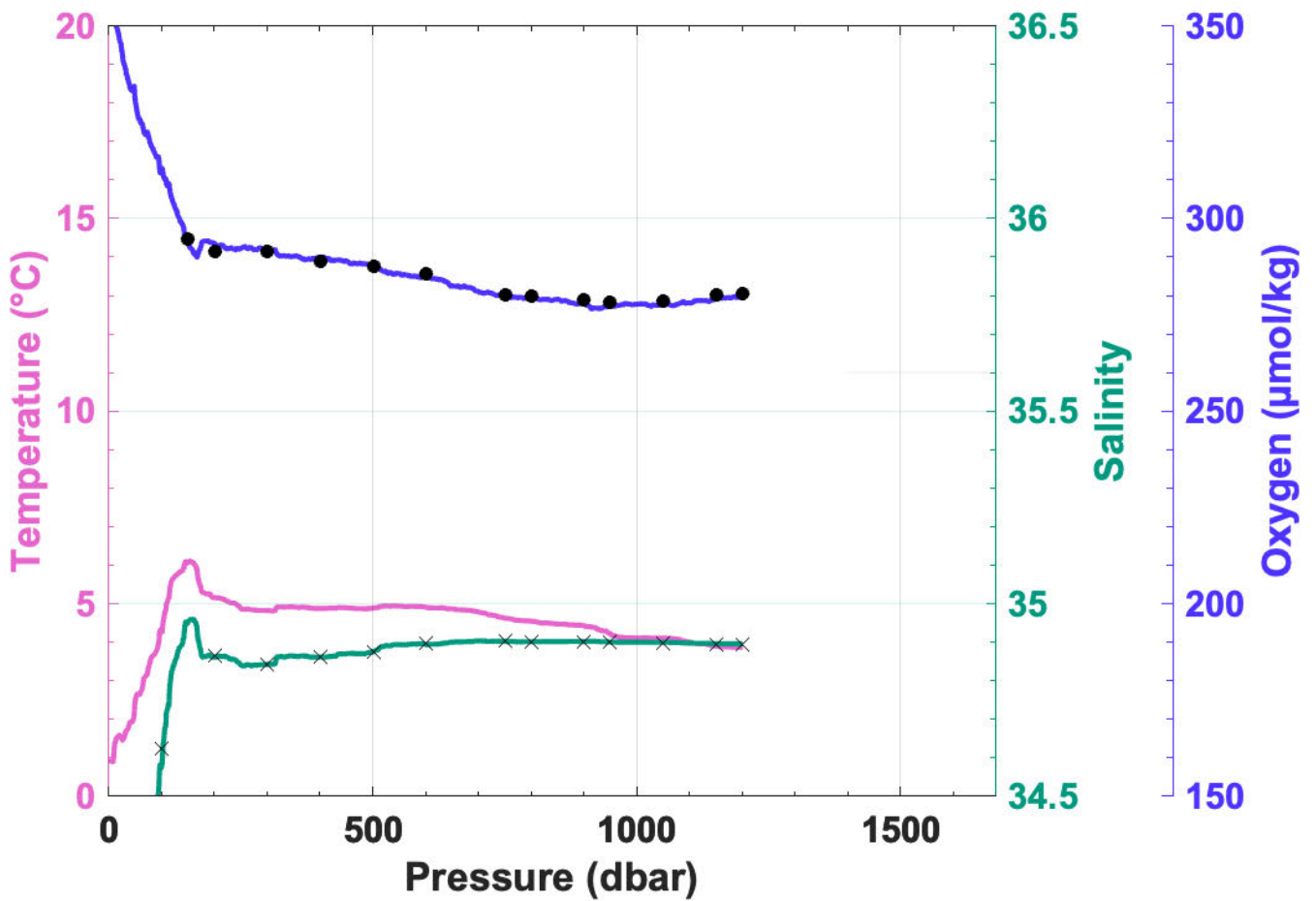
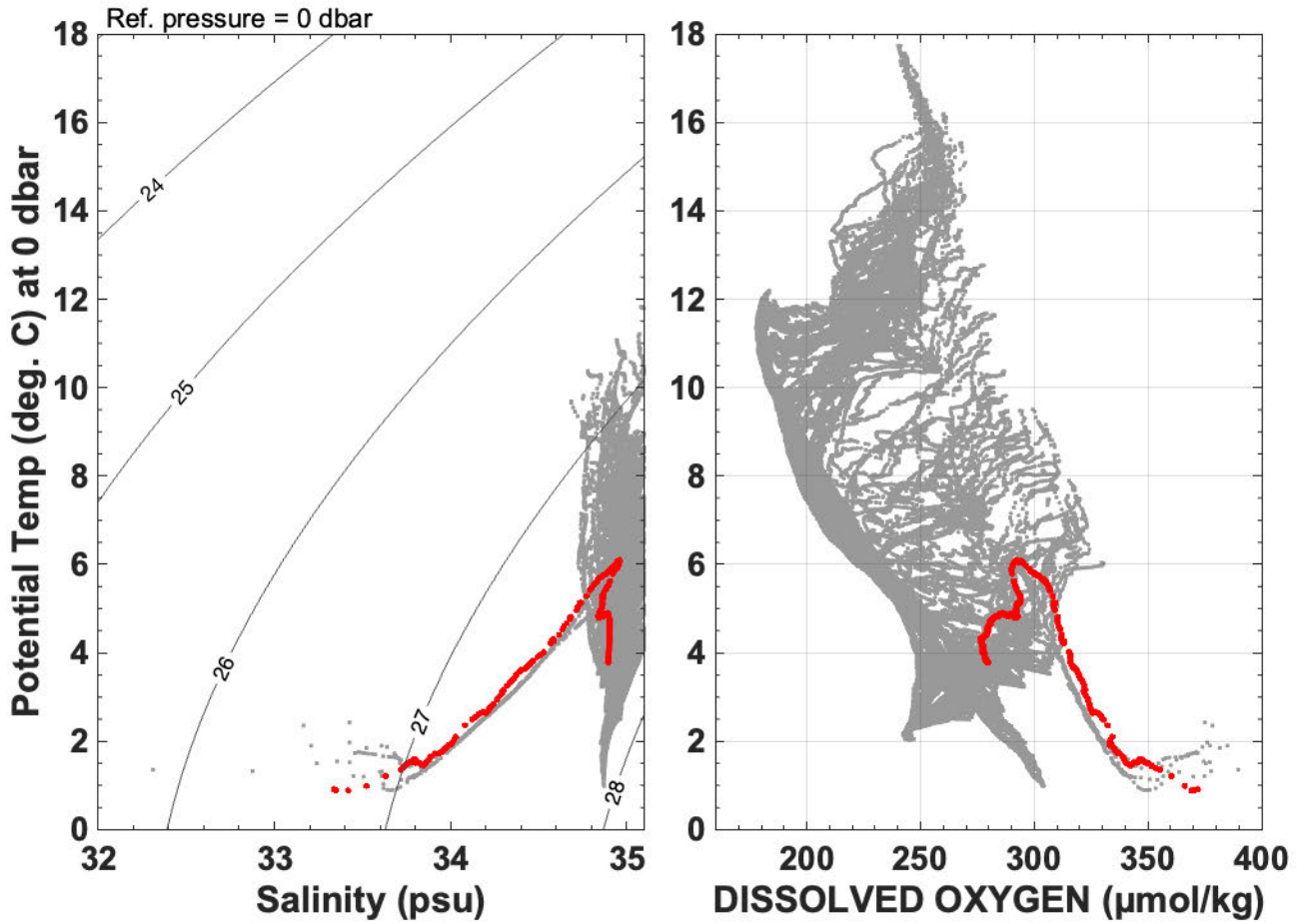
# STATION 87



Cruise : BOCATS 2021  
Station : 88  
Date : 22/06/2021  
Depth : 1200  
Position : N 59 47.41  
W 42 28.12

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	0.915	33.340	371.9	0.915
10	1.214	33.632	360.3	1.213
20	1.593	33.796	346.6	1.592
30	1.578	33.874	339.6	1.577
40	1.922	33.991	333.9	1.920
50	2.496	34.123	330.5	2.493
100	4.257	34.575	312.9	4.250
150	6.068	34.951	293.4	6.055
200	5.160	34.862	293.5	5.144
250	4.882	34.842	292.2	4.862
300	4.821	34.843	291.9	4.797
350	4.914	34.864	290.2	4.886
400	4.878	34.862	289.7	4.846
450	4.891	34.870	289.0	4.855
500	4.883	34.875	287.9	4.843
550	4.936	34.894	285.6	4.892
600	4.910	34.894	284.6	4.862
650	4.865	34.900	282.4	4.813
700	4.788	34.903	281.1	4.732
750	4.623	34.902	279.6	4.563
800	4.546	34.901	279.6	4.483
850	4.474	34.902	279.0	4.407
900	4.434	34.902	278.0	4.363
950	4.208	34.900	277.6	4.134
1000	4.109	34.900	277.7	4.032
1100	4.001	34.898	278.1	3.916
1200	3.871	34.896	279.6	3.779
1200	3.871	34.896	279.6	3.779

# STATION 88

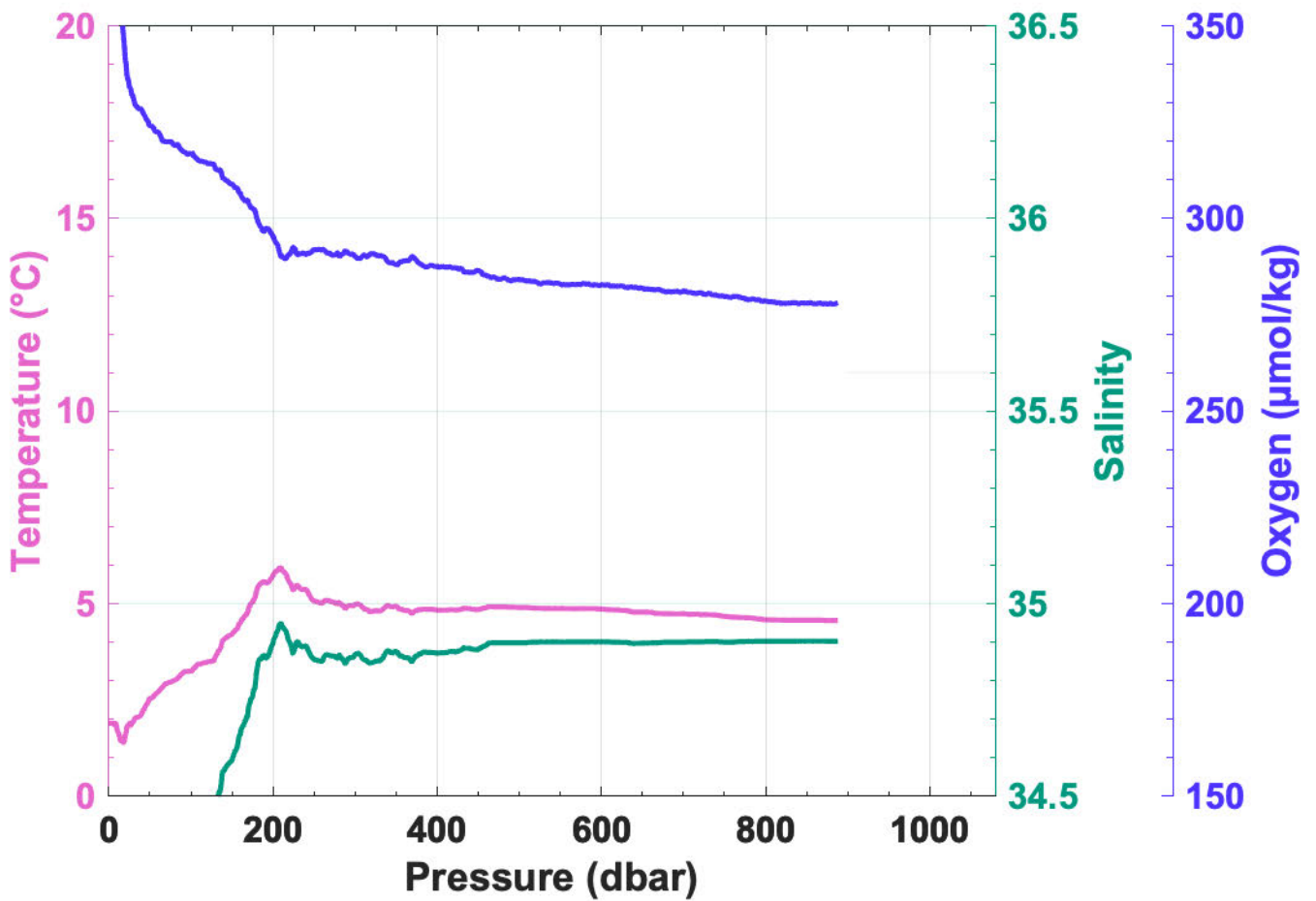
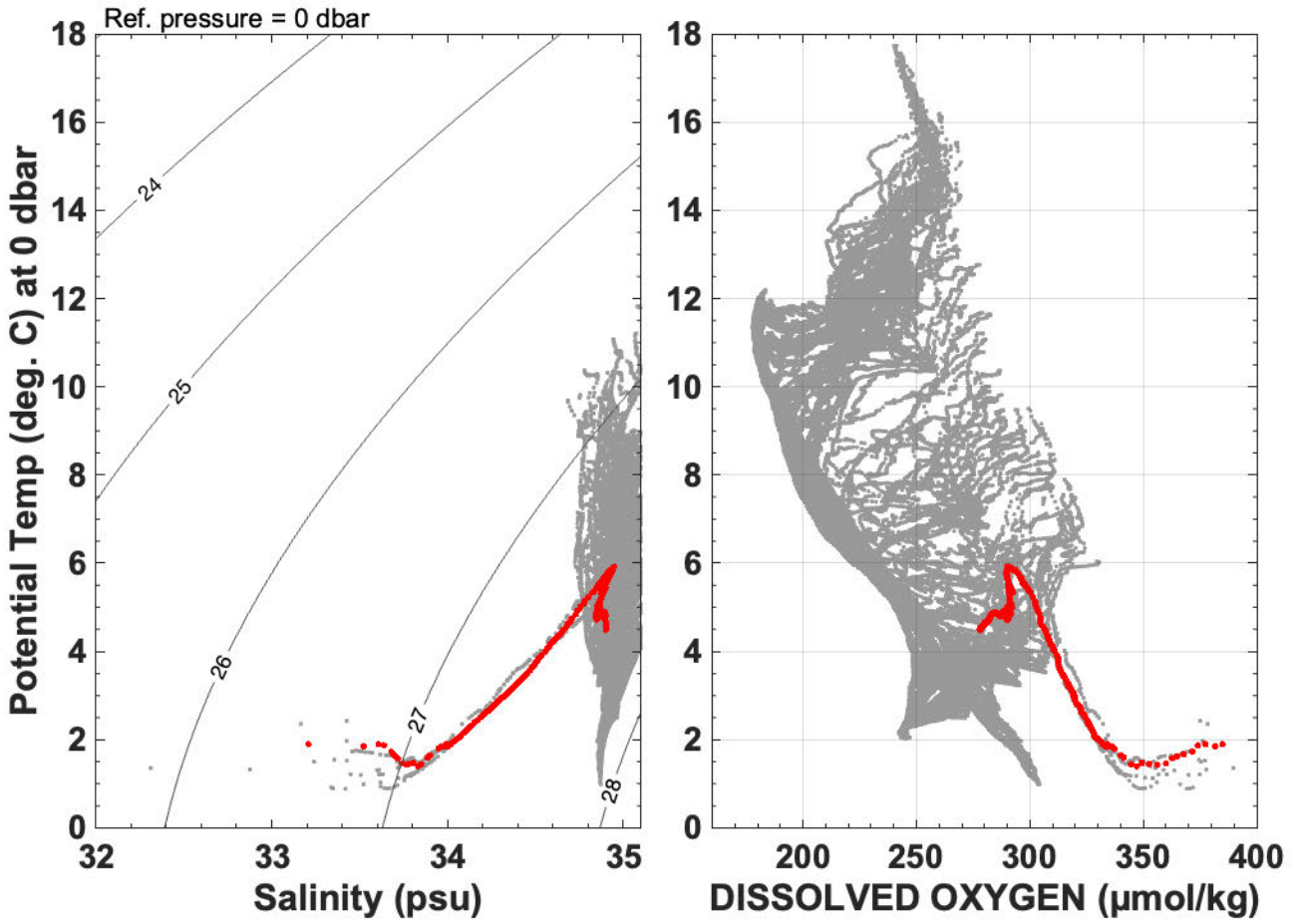


Cruise : BOCATS 2021  
Station : 89  
Date : 23/06/2021  
Depth : 892  
Position : N 59 47.77  
          W 42 30.75

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	1.900	33.209	384.9	1.900
10	1.727	33.681	371.6	1.727
20	1.595	33.887	341.4	1.594
30	1.954	34.035	331.2	1.952
40	2.154	34.091	328.1	2.152
50	2.544	34.198	323.9	2.541
100	3.251	34.391	316.7	3.245
150	4.206	34.594	308.9	4.196
200	5.723	34.898	295.4	5.707
250	5.062	34.854	291.9	5.042
300	4.984	34.868	290.0	4.960
350	4.927	34.876	288.0	4.900
400	4.835	34.872	287.6	4.803
450	4.849	34.882	286.4	4.813
500	4.903	34.899	284.1	4.864
550	4.874	34.900	283.0	4.831
600	4.862	34.901	282.8	4.814
650	4.782	34.897	281.9	4.730
700	4.738	34.900	281.2	4.682
750	4.670	34.900	279.7	4.611
800	4.584	34.902	278.6	4.521
850	4.572	34.903	278.0	4.504



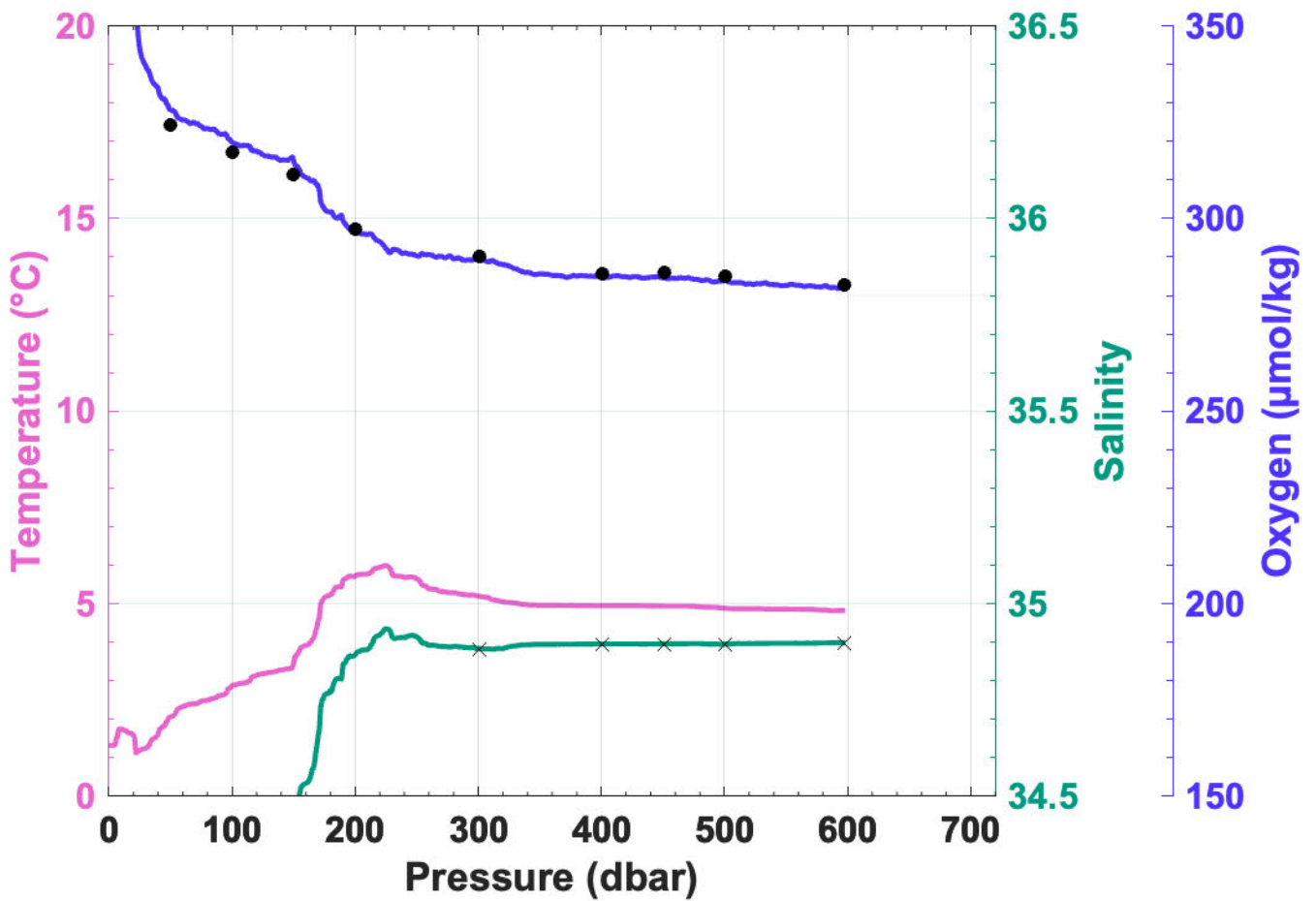
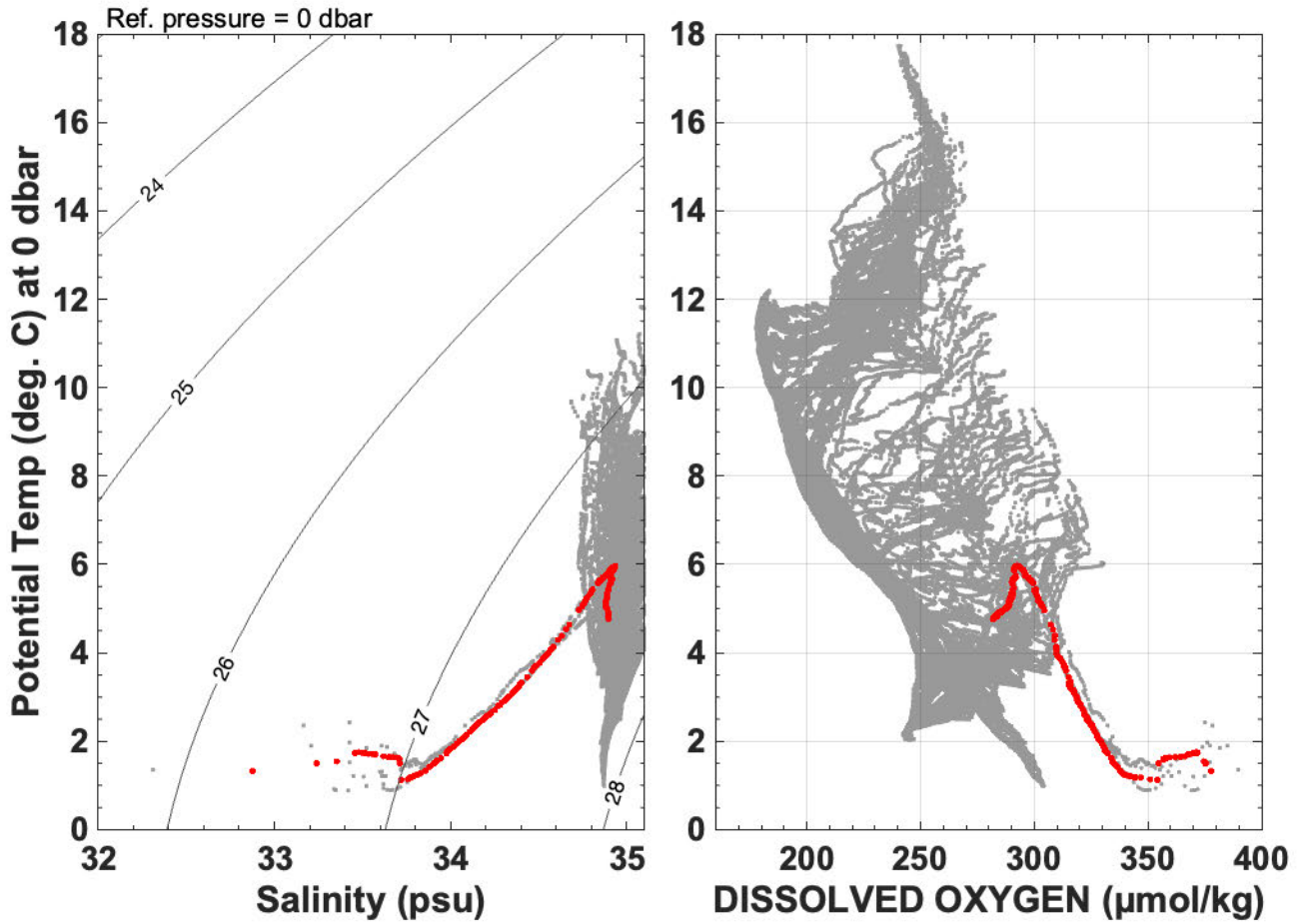
# STATION 89



Cruise : BOCATS 2021  
Station : 90  
Date : 23/06/2021  
Depth : 605  
Position : N 59 47.82  
          W 42 33.04

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	1.324	32.876	377.8	1.324
10	1.743	33.496	370.6	1.742
20	1.593	33.710	356.7	1.592
30	1.248	33.815	339.5	1.247
40	1.617	33.947	333.9	1.615
50	2.063	34.067	328.2	2.060
100	2.873	34.290	319.7	2.867
150	3.454	34.436	315.2	3.444
200	5.709	34.866	297.2	5.692
250	5.640	34.913	290.4	5.619
300	5.201	34.884	289.2	5.177
350	4.959	34.894	285.6	4.932
400	4.947	34.896	284.9	4.915
450	4.938	34.896	284.6	4.903
500	4.883	34.895	283.9	4.843
550	4.859	34.897	282.6	4.815
598	4.822	34.898	282.3	4.774

# STATION 90



Cruise : BOCATS 2021  
Station : 91  
Date : 24/06/2021  
Depth : 223  
Position : N 59 46.90  
W 42 46.05

Pressure (dbar)	Temperature (°C)	Salinity (psu)	Dissolved Oxygen ( $\mu\text{mol/kg}$ )	Potential Temperature (°C)
0	1.357	32.312	389.7	1.357
10	1.215	33.448	374.8	1.215
20	0.934	33.697	346.5	0.934
30	1.364	33.853	337.8	1.362
40	1.695	33.928	335.5	1.693
50	1.805	33.979	333.7	1.803
100	2.493	34.182	323.5	2.487
150	3.314	34.402	316.3	3.305
200	4.741	34.755	297.1	4.726

# STATION 91

