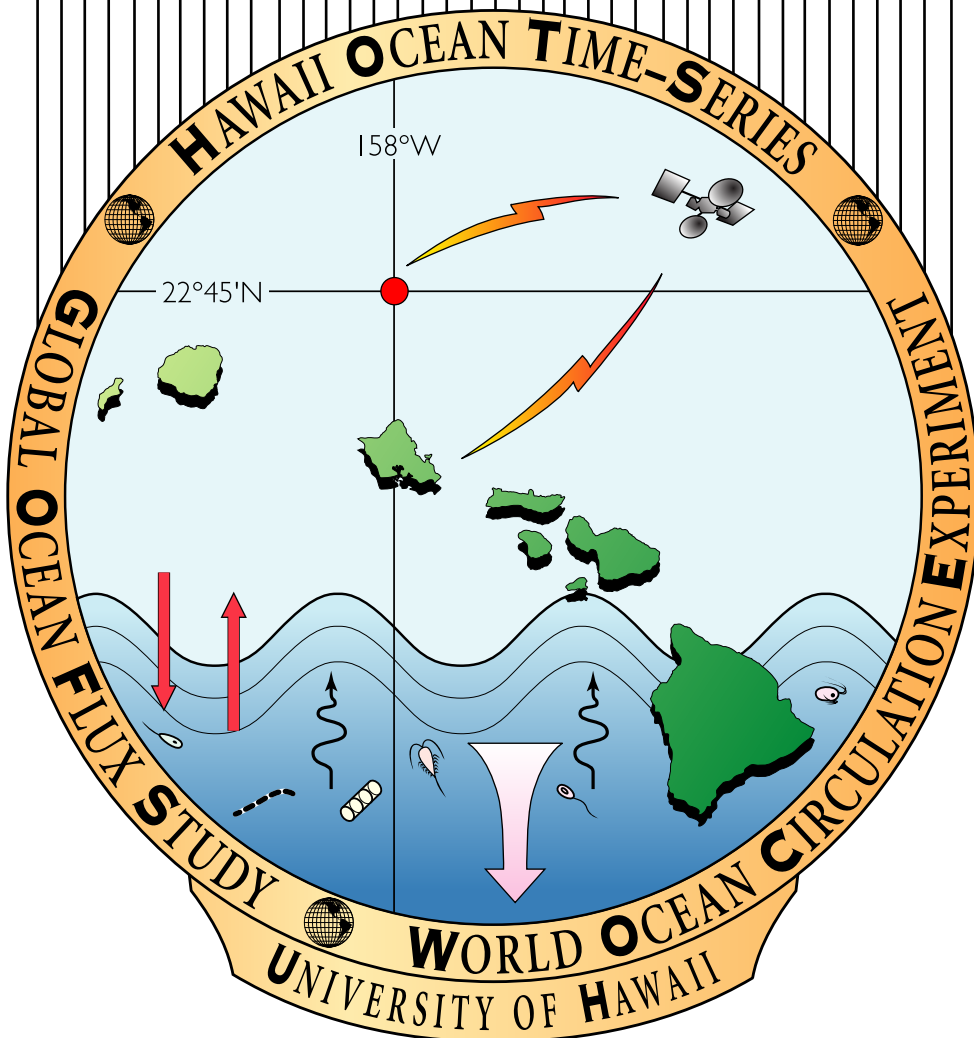


Hawaii Ocean Time-series Program

HOT 268



Hawaii Ocean Time-Series

HOT-268

KAHE Station Data Sheet

Station # 1
 Cast # 1
 Operator(s): SC, ES, AN, BW, LF

Date: 12-15-14 (HST)
 Time: 1400 (HST)

Rosette Position	Desired Depth	Oxygen	Sample Temp.	DIC/Alk	pH	DOC	Nuts	LLN/LLP	Chl <i>a</i>	FCM	
1	1000	1	5.5				1				
2	900	2	5.9				2				
3	800	3	6.7				3				
4	750	4,145,6	5.7				4A-B				
5	700	7	5.5				5				
6	600	8	6.1				6				
7	500	147	7.2			7	7				
8	400	10	8.6				8				
9	350	11	9.8			9	9A-B				
10	300	12	11.3				10				
11	250	13	12.8				11				
12	225	14	15.1				12				
13	200	15	16.6			13	13				
14	175	16	17.9			14	14		14	14A-B	
15	150	17	18.7			15	15	15	15	15A-B	
16	125	18	20.0			16	16A-		16	16A-B	
17	115	19	21.4				17				
18	100	20,21,22	22.4			18	18	18	18A-B	18A-B	
19	75	23	22.5			19	19		19	19A-B	
20	60	24	22.5				20				
21	45	25	22.5	21	1	21	21	21	21	21A-B	
22	25	26	22.6	22	2	22	22		22A-B	22A-B	
23	5	27	22.6	23	3,4,5	23	23	23	23	23A-B	
24	5	QC	22.6								

Notes: Please take duplicate LLN samples for Brenner.

Hawaii Ocean Time-series

HOT-268

Primary Production Data Sheet

Station # 2
 Cast # 1
 Operator(s): SC, BW, ES, AN

Date: 12/16/14 (HST)
 Time: 0200 (HST)

Rosette Position	Desired Depth	Light Bottle	Chl <i>a</i>	FCM	DdV		
1	1000						
2	Sal Min						
3	175		3A-B	3A-B			
4	150		4A-B	4A-B			
5	125	3-1	5	5			
6	125	3-2	6	6			
7	125	3-3	7	7			
8	100	4-1	8	8			
9	100	4-2	9	9			
10	100	4-3	10	10			
11	75	5-1	11	11	X		
12	75	5-2	12	12			
13	75	5-3	13	13			
14	45	6-1	14	14	X		
15	45	6-2	15	15			
16	45	6-3	16	16			
17	25	7-1	17	17	X		
18	25	7-2	18	18			
19	25	7-3	19	19			
20	5	8-1	20	20	X		
21	5	8-2	21	21			
22	5	8-3	22	22			
23							
24							

Notes:

Hawaii Ocean Time-series

HOT-268

WOCE Deep Data Sheet

Station # 2
 Cast # 2
 Operator(s): DS, LF, BM, TC

Date: 12/16/14 (HST)
 Time: 0500 (HST)

Rosette Position	Desired Depth	Oxygen	Sample Temp.	DIC/Alk	pH	DOC	Nutrient	Refrig. Si	RB
1	4800	28	3.2				1	1	1
2	4600	29	3.1				2	2	2
3	4500	30,31,32	3.5	3A-B	1,2,3	3ABC	3A-B	3A-B	3A-B
4	4400	33	3.2				4	4	4
5	4200	34	3.1				5	5	5
6	4000	35,36,37	3.6			6ABC	6A-B	6A-B	6A-B
7	3800	38	3.3				7	7	7
8	3600	39	3.3				8	8	8
9	3400	40	3.3				9	9	9
10	3200	141	3.4				10	10	10
11	3000	42,43,44	3.7	11	4	11ABC	11A-B	11A-B	11A-B
12	2800	45	3.5				12	12	12
13	2600	46	3.6				13	13	13
14	2400	60	3.9				14	14	14
15	2200	48	3.8				15	15	15
16	2000	149,50,51	4.4	16	5	16ABC	16A-B	16A-B	16A-B
17	1800	52	4.1				17	17	17
18	1600	53	4.5				18	18	18
19	1400	54	4.7				19	19	19
20	1200	55	5.1				20	20	20
21	1000	56	5.6				21	21	21
22	750	148	6.1				22	22	22
23	500	58	8.2				23	23	23
24	5	57	23.9				24		24

Notes: RB gets duplicate of nutrient profile.

Hawaii Ocean Time-series

HOT-268

PO Shallow Data Sheet

Station # 2
 Cast # 3
 Operator(s): DS, LF, BM, TC

Date: 12/16/14 (HST)
 Time: 1307 (HST)

Rosette Position	Desired Depth	Oxygen	Sample Temp.	DIC/Alk	pH	DOC	Nutrient	Refrig. Si
1	1020	92,61,62	5.7	1	1	1	1A-B	1A-B
2	1011	63	5.4				2	2
3	847	64	5.7				3	3
4	800	65	5.9				4	4
5	771	66,67,68	7.1	5	2	5	5	5
6	725	69	6.9				6	6
7	693	70	7.1				7	7
8	660	71	7.4				8	8
9	631	72	7.5				9	9
10	581	73	7.9	10	3	10	10	10
11	526	74	8.6				11A-B	11A-B
12	478	75	9.1	12	4	12	12	12
13	460	76	9.6				13	13
14	414	77,78,79	11.9				14	14
15	369	80	10.9				15	15
16	335	81	12.1	16A-B	5,6	16	16	16
17	310	82	13.4				17	17
18	256	83	15.6	18	7	18	18	18
19	225	84,85,86	18.6				19	19
20	204	87	19.3				20	20
21	142	88	21.9				21A-B	
22	125	89	22.6				22	
23	117	90	23.6				23	
24	25	91	24.0				24	

Notes:

Hawaii Ocean Time-series

HOT- 268

PC/PN Data Sheet

Station # 2 Date: 12-16-14 (HST)
 Cast # 4 Time: 1605 (HST)
 Operator(s): SC, AN, BW, ES Pre-screen mesh size: 202 um
 Blank #'s B1 B2 B3

Rosette Position	Desired Depth	Carboy #	Total Volume	Sample #	DNA		
1	1000						
2	Sal min						
3	350	1	10	3			
4	350	2	10	4			
5	250	3	10	5			
6	200	4	10	6			
7	175	5	10	7			
8	150	6	10	8			
9	125	7,8	4,4	9A-B			
10	100	9	4	10			
11	75	10	4	11			
12	75				X		
13	45	11	4	13			
14	45				X		
15	25	12,13	4,4	15A-B			
16	25				X		
17	5	14	4	17			
18	5				X		
19							
20							
21							
22							
23							
24							

Notes:

Hawaii Ocean Time-series

HOT- 268

Particulate Phosphorus Data Sheet

Station # 2 Date: 12-16-14 (HST)
 Cast # 5 Time: 2000 (HST)
 Operator(s): SC, BW, AN, ES Pre-screen mesh size: 202 um
 Blank #'s B1 B2 B3

Rosette Position	Desired Depth	Carboy #	Total Volume	Sample #	SF-S	PKZ	
1	1000					X	
2	1000					X	
3	750					X	
4	750					X	
5	500					X	
6	500					X	
7	Sal min						
8	350	1	10	8			
9	350	2	10	9			
10	250					X	
11	250					X	
12	250	3	10	12			
13	200	4	10	13			
14	175	5	10	14			
15	150	6	10	15			
16	125	7,8	4,4	16A-B			
17	120					X	
18	120					X	
19	100	9	4	19			
20	75	10	4	20			
21	45	11	4	21			
22	25	12,13	4,4	22A-B			
23	25				X		
24	5	14	4	24			

Notes: LOST ~750 mL FROM CARBOY 1 DUE TO FAULTY CAP DURING FILTRATION

Hawaii Ocean Time-series

HOT-268

BEACH Shallow Data Sheet (1/2)

Station # 2
 Cast # 6
 Operator(s): SC, ES, AN, BW

Date: 12-17-14 (HST)
 Time: 2300 (HST)

Rosette Position	Desired Depth	Oxygen	Sample Temp.	DIC/ALK	Quay DIC	Keeling DIC	pH	DOC
1	1000	109	7.1					
2	O₂ min	93	7.6					
3	Sal min	94	9.8					
4	200	95	19.4	4			1	4
5	175	96	20.2					5
6	165	97	20.5					
7	150	98	21.0	7			2	7
8	130							
9	125	99	21.6					9
10	115	100	22.0					
11	110							
12	100	101,102,103	23.6	12			3	12
13	90							
14	85	104	23.6					
15	75	105	23.5	15			4	15
16	60							16
17	45	106	23.6	17			5	17
18	35							18
19	25	107	23.6	19			6	19
20	25				20			
21	25							
22	15							22
23	5	108	23.6	23A-B			7,8	23
24	5				24	24A-B		

Notes: Keeling 24A = 10775 @0057
Keeling 24B = 10776 @0058

Hawaii Ocean Time-series

HOT-268

BEACH Shallow Data Sheet (2/2)

Station # 2
 Cast # 6
 Operator(s): SC, ES, AN, BW

Date: 12-17-14 (HST)
 Time: 2300 (HST)

Rosette Position	Desired Depth	Nutrient	Refrig. Si	LLN	LLP	SF-S	RB	
1	1000							
2	O₂ min							
3	Sal min							
4	200	4	4				4	
5	175	5		5	5		5	
6	165			6				
7	150	7		7A-B	7		7	
8	130			8				
9	125	9A-B		9	9		9A-B	
10	115			10	10			
11	110			11				
12	100	12		12A-B	12		12	
13	90			13				
14	85			14	14			
15	75	15		15	15		15	
16	60	16		16	16		16	
17	45	17A-B		17	17		17A-B	
18	35	18		18			18	
19	25	19		19	19		19	
20	25							
21	25					X		
22	15	22		22			22	
23	5	23		23A-B	23		23	
24	5							

**Notes: RB gets duplicate nutrient profile.
 BW gets duplicate LLN profile.**

Hawaii Ocean Time-series

HOT- 268

Gas Array Experiment Data Sheet

Station # 2
 Cast # 7
 Operator(s): SC, ES, AN, BW

Date: 12-17-14 (HST)
 Time: 0200 (HST)

Rosette Position	Desired Depth	15N2	SF-S	DNA			
1	1000						
2	770			X			
3	770			X			
4	500			X			
5	500			X			
6	Sal Min						
7	400			X			
8	400			X			
9	300			X			
10	300			X			
11	125	X					
12	125	X					
13	100	X					
14	100	X					
15	75	X					
16	75	X					
17	45	X					
18	45	X					
19	25	X					
20	25	X					
21	25		X				
22	5	X					
23	5	X					
24							

Notes:

Hawaii Ocean Time-series

HOT-268

OPEN CAST Data Sheet

Station # 2
 Cast # 8
 Operator(s): DS, LF,KD,GvdE,TD

Date: 12/17/14 (HST)
 Time: 0500 (HST)

Rosette Position	Desired Depth	Salts	SF-S	PKZ	KD		
1	1000	X		X			
2	1000			X			
3	750			X			
4	750			X			
5	500			X			
6	500			X			
7	Sal Min	X					
8	350			X			
9	350			X			
10	145				X		
11	140				X		
12	135				X		
13	130				X		
14	125	X			X		
15	120				X		
16	115				X		
17	110				X		
18	105				X		
19	100			X	X		
20	100			X			
21	95				X		
22	90				X		
23	25		X		X		
24	5	X			X		

Notes:

Hawaii Ocean Time-series

HOT- 268

Particulate Silica Data Sheet

Station # 2 Date: 12/17/14 (HST)
 Cast # 9 Time: 0800 (HST)
 Operator(s): DS, LF, BM, TC Pre-screen mesh size: none
 Blank # **B1, B2, B3**

Rosette Position	Desired Depth	Carboy #	Total Volume	Sample #	DNA	SF-S	KD
1	1000						
2	Sal min						
3	175	7	4	3			X
4	175				X		
5	150	8	4	5			X
6	150				X		
7	140						X
8	135						X
9	130						X
10	125	9,10	4,4	10A-B			X
11	125				X		
12	120						X
13	115						X
14	110						X
15	105						X
16	100	11	4	16			X
17	100				X		
18	95						X
19	90						X
20	75	12	4	20			X
21	45	13	4	21			X
22	25	14,15	4,4	22A-B			
23	25					X	X
24	5	16	4	24			X

Notes:

Hawaii Ocean Time-series

HOT- 268

OPEN Data Sheet

Station # 2
Cast # 10
Operator(s): DS,LF,TC,BM

Date: 12-17-14 (HST)
Time: 1100 (HST)

Rosette Position	Desired Depth	CS	SF-S				
1	1000						
2	Sal Min						
3	175	X					
4	175	X					
5	150	X					
6	150	X					
7	125	X					
8	125	X					
9	100	X					
10	100	X					
11	75	X					
12	75	X					
13	45	X					
14	45	X					
15	25	X					
16	25	X					
17	25		X				
18	5	X					
19	5	X					
20							
21							
22							
23							
24							

Notes:

Hawaii Ocean Time-series

HOT- 268

ATP Data Sheet

Station # 2 Date: 12/17/2014 (HST)
 Cast # 11 Time: 1400 (HST)
 Operator(s): SC, AN, BW, ES Pre-screen mesh size: 202um
 Blank #'s 28, 29, 30

Rosette Position	Desired Depth	ATP Tube #'s	Volume Filtered	Carboy #	DNA	SF-S	KD	
1	1000							
2	Sal min							
3	350	1 – 3	3x2	1				
4	275				X			
5	250	4 – 6	3x2	2				
6	250				X			
7	225				X			
8	200				X		X	
9	150	7 – 9	3x1	7			X	
10	140						X	
11	130						X	
12	125	10 – 12	3x1	8			X	
13	120						X	
14	115						X	
15	110						X	
16	105						X	
17	100	13 – 15	3x1	9			X	
18	95						X	
19	90						X	
20	75	16 – 18	3x1	10			X	
21	45	19 – 21	3x1	11			X	
22	25	22 – 24	3x1	12			X	
23	25					X		
24	5	25 - 27	3x1	13			X	

Notes:

Hawaii Ocean Time-series

HOT-268

OPEN CAST Data Sheet

Station # 2
 Cast # 12
 Operator(s): SC, AN, BW, ES

Date: 12-17-14 (HST)
 Time: 1700 (HST)

Rosette Position	Desired Depth	MC	SW	SF-S	KD		
1	1000						
2	700		X				
3	Sal Min						
4	175	X	X		X		
5	150	X	X		X		
6	145				X		
7	140				X		
8	135				X		
9	130				X		
10	125	X	X		X		
11	120				X		
12	115				X		
13	110				X		
14	105				X		
15	100	X	X		X		
16	95				X		
17	90				X		
18	85				X		
19	80				X		
20	75	X	X		X		
21	45	X	X		X		
22	25	X	X		X		
23	25			X			
24	5	X	X		X		

Notes:

Hawaii Ocean Time-series
HOT-268
HPLC & Chl *a.* Bottle Data Sheet

Station # 2
 Cast # 13
 Operator(s): SC, ES, AN, BW

Date: 12-17-14 (HST)
 Time: 2000 (HST)

Rosette Position	Desired Depth	Carboy #	Total Volume	HPLC	Chl <i>a.</i>	SLIDES	SF-S	
1	1000							
2	Sal min							
3	175	1	10	3	3			
4	175					X		
5	150	2	10	5	5			
6	150					X		
7	135	7	4	7	7A-B			
8	125	8,9	4,4	8A-B	8			
9	125					X		
10	115	10	4	10	10			
11	100	11	4	11	11			
12	100					X		
13	85	12	4	13	13			
14	75	13	4	14	14			
15	75					X		
16	60	14	4	16	16A-B			
17	45	15,16	4,4	17A-B	17			
18	45					X		
19	25	3	10	19	19			
20	25					X		
21	25						X	
22	5	4	10	22	22			
23	5					X		
24								

**Notes: DO NOT PRE-SCREEN
 CARBOY 14 FILTER (268-2-13-16) HAD STRANGE BROWN PARTICLE ON IT,
 MOST LIKELY FROM THE SHELVING**

Hawaii Ocean Time-series

HOT-268

WOCE Deep 2 Data Sheet

Station # 2

Date: 12-17-14 (HST)

Cast # 14

Time: 2300 (HST)

Operator(s): SC, ES, AN, BW

Rosette Position	Desired Depth	Oxygen	Sample Temp.	DNA	Carboy #	Total Volume	PUR	
1	4800	109	3.9					
2	4000	110	3.8					
3	4000			X				
4	3000	111	3.7					
5	3000			X				
6	2000	112	4.3					
7	2000			X				
8	1000			X				
9	O2 min	113	6.2					
10	Sal min	114	9.0					
11	O2 max	115	12.5					
12	175				1	10	12	
13	150				2	10	13	
14	125				7,8	4,4	14A-B	
15	100				9	4	15	
16	75				10	4	16	
17	45				11,12	4,4	17A-B	
18	25				3	10	18	
19	5				4	10	19	
20	5	116	24.0					
21								
22								
23								
24								

Notes:

Hawaii Ocean Time-series

HOT- **268**

STATION 50 Data Sheet

Station # 50
Cast # 1
Operator(s): DS, LF, BM, TC

Date: 12-18-14 (HST)
Time: 1230 (HST)

Rosette Position	Desired Depth	DIC/TA	pH	FCM	OS	
1	200			X		
2	190			X		
3	180			X		
4	170			X		
5	160			X		
6	150			X		
7	145			X		
8	140			X		
9	135			X		
10	130			X		
11	125			X		
12	120			X		
13	115			X		
14	110			X		
15	105			X		
16	100			X		
17	95			X		
18	90			X		
19	85			X		
20	80			X		
21	75			X		
22	45			X		
23	25			X		
24	5	X	X	X		

Notes:

Hawaii Ocean Time-series

HOT- 268

STATION Kaena Data Sheet

Station # 6
 Cast # 1
 Operator(s): SC, AN, BW, ES

Date: 12-18-14 (HST)
 Time: 2045 (HST)

Rosette Position	Desired Depth	Chl a.				
1	2500					
2	2000					
3	1500					
4	1000					
5	500					
6	175	6				
7	150	7				
8	125	8				
9	100	9				
10	75	10				
11	45	11				
12	25	12				
13	5	13				
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

Notes:

Hawaii Ocean Time-series

HOT-268

Sediment Trap Data Sheet

Type of traps: <u>PIT</u>	Date: <u>12-15-14</u>
Operator(s): <u>BW, ES, AN, SC, BW</u>	Wind: <u>25 kts</u>
Position in: <u>22° 44.992' N 158° 3.012' W</u>	Sea State: <u>8-10 ft</u>

Time in: 150 m X	Notes: 2352 traps in water
(HST)	0002 array released 12/16/14

Operator(s): <u>DS, LF, TC, BM, BW</u>	Date: <u>12-18-14</u>
Position out: <u>22° 49.087' N 158° 16.897' W</u>	Wind: <u>20-25kts</u>
Overall sea state: _____	8-10 ft
	Sea state: _____

Time Out: 150 m X****	Notes: 0755 Traps out of water
(HST)	0805 weight on board
_____	****Top hook on sediment trap cross was not
_____	attached to the line, Traps sat at a 45° angle.
_____	*PSi samples went into the -20 freezer 4 hours
_____	after sampling

Data Sheet for Sediment Trap Volumes

Cruise #: 268
 DS, BM, LF,
 Analyst: TC

- Directions: 1) Mark the traps with 2 lines
 a) Line #1 is at the interface
 b) Line #2 is 2" (5 cm) above the interface
 2) Siphon off the top of the trap to Line #2 - 2" above the interface
 3) Measure the distance from the bottom of the trap to Line #2
 2" above the interface and record the result in this table.

Trap Name	Depth (m)	Height (cm) at Line #2 (Top Line)	Volume (L) at top line = (Height in cm x 0.038)
A	150	31.1	
B	150	31.7	
C	150	31.9	
D	150	31.8	
E	150	30.5	
F	150	32.7	
G	150	34.0	
H	150	34.0	
I	150	32.8	
J	150	33.0	
K	150	33.0	
L	150	33.6	

Hawaii Ocean Time-series

HOT-268

In Situ Primary Production Data Sheet

Operators: DS, LF, TC, BM, BW, AN, BW, SC,

Date in: 12/16/2014Time in: 0433 (HST)Date out: 12-16-14Time out: 1838 (HST)

Incubation Depth	✓	Insertion Depth	Owner
<i>175</i>	✓		
<i>150</i>	✓		
<i>125</i>	✓	X	HOT
<i>100</i>	✓	X	HOT
<i>75</i>	✓	X, X-DdV	HOT, DdV
<i>45</i>	✓	X, X-DdV	HOT, DdV
<i>25</i>	✓	X, X-DdV	HOT, DdV
<i>5</i>	✓	X, X-DdV	HOT, DdV

Position in: 22° 45.120 N, 158 ° 1.058 WPosition out: 22° 46.835'N 158° 4.952'W

Average weather condition during incubation: 3/8 cloud cover

Average sea state during incubation: 8-10 ft seas

Begin Inoculation 0400

End Inoculation _____

Filtration time 1850

180 incubation samples added for DdV at 5,25,45,75m

Hawaii Ocean Time-series HOT-268 In Situ Gas Array Data Sheet

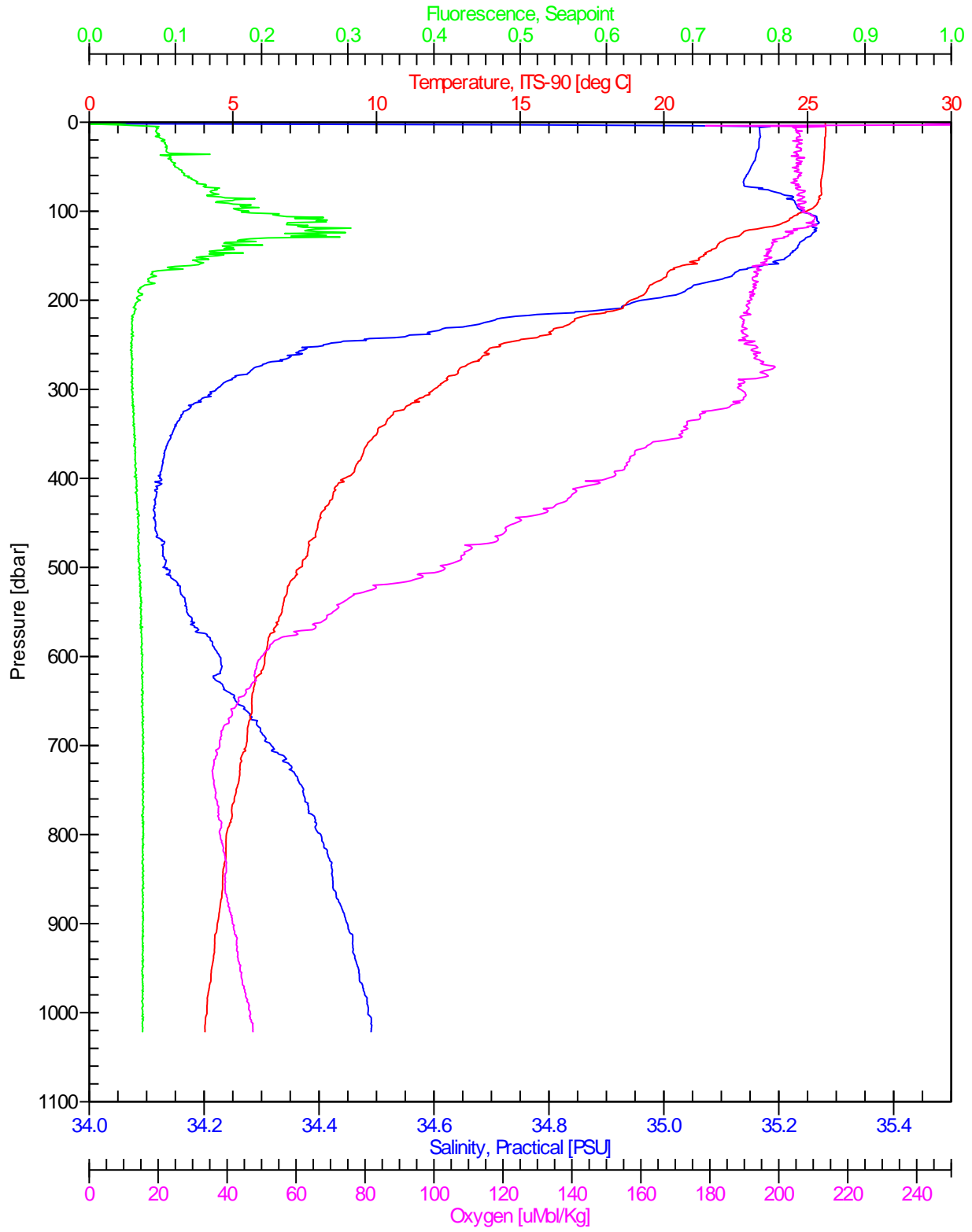
Operators: DS, LF, TC, BM	Operators: DS, LF, TC, BM
Date Deployed: 12/17/14	Date Recovered: 12/18/14
Time (HST): 1405	Time (HST): 0635
Position: 22° 45.003 N; 158° 1.107 W	Position: 22° 47.012 N; 158° 9.935 W

Nitrogen Fixation Sample Processing Sheet

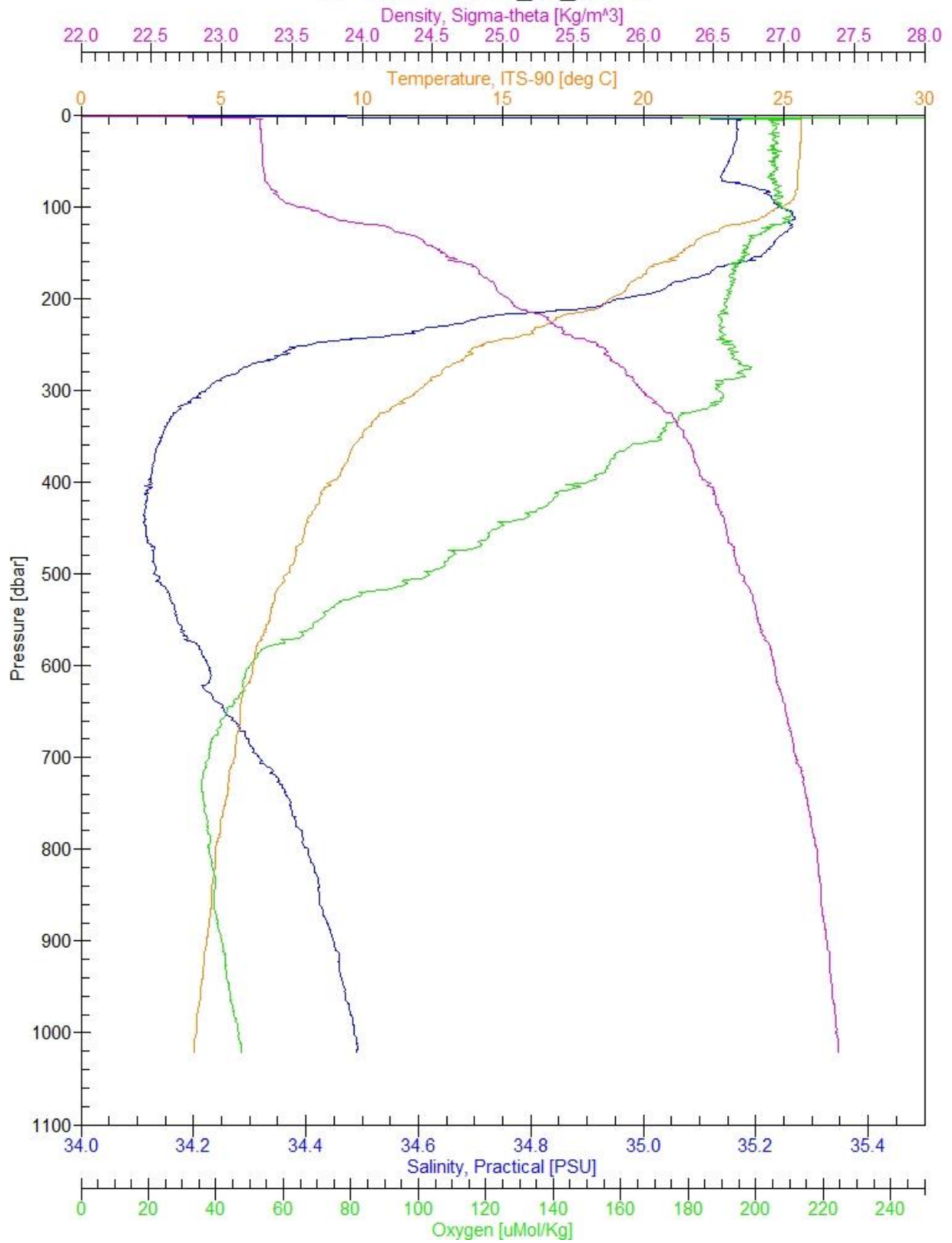
Sample ID	Date Spiked	Time Spiked	Date Filtered	Time Filtered	Comments
3-1	12/17/2014	03:47	12/18/2014	06:45	
3-4	12/17/2014	03:48	12/18/2014	07:45	
4-1	12/17/2014	03:47	12/18/2014	06:45	
4-4	12/17/2014	03:47	12/18/2014	07:45	
5-1	12/17/2014	03:46	12/18/2014	06:45	
5-4	12/17/2014	03:46	12/18/2014	06:45	
6-1	12/17/2014	03:45	12/18/2014	06:45	
6-4	12/17/2014	03:45	12/18/2014	07:45	
7-1	12/17/2014	03:44	12/18/2014	06:45	
7-4	12/17/2014	03:44	12/18/2014	06:45	
8-1	12/17/2014	03:44	12/18/2014	06:45	
8-4	12/17/2014	03:44	12/18/2014	07:45	

Are samples also spiked with C13? Yes No

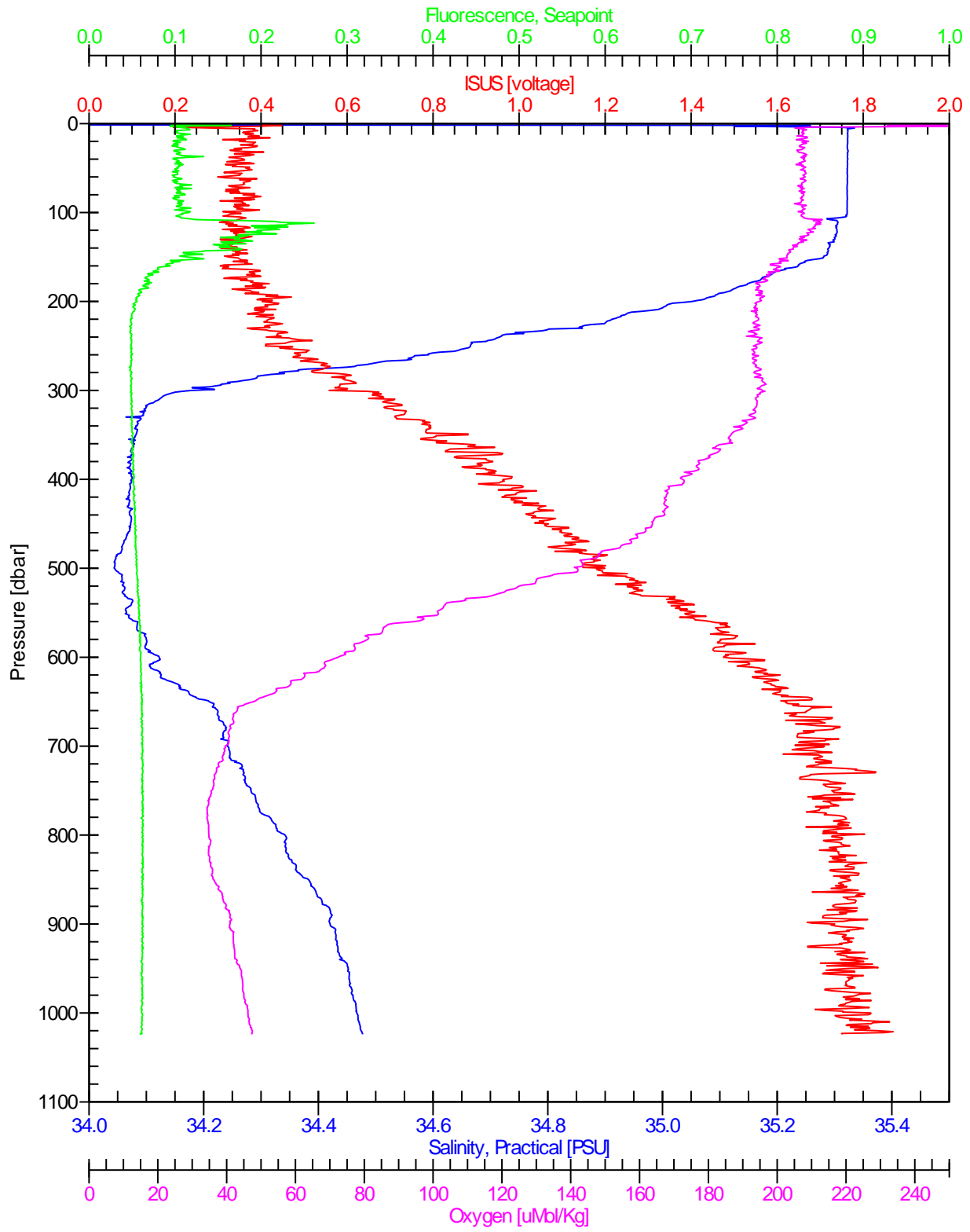
G-1000, hot-268_s1_c1.cnv



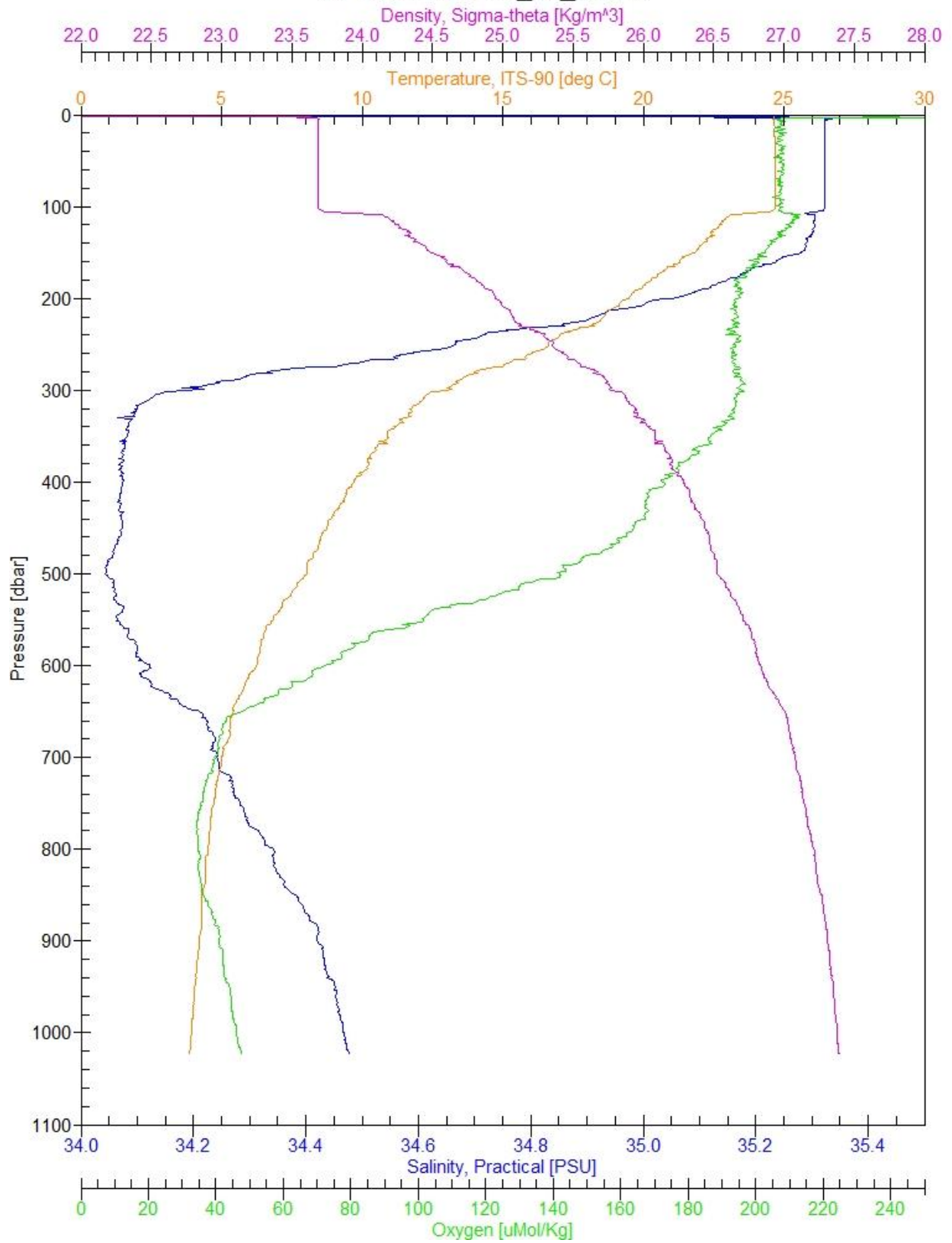
W-1000, hot-268_s1_c1.cnv



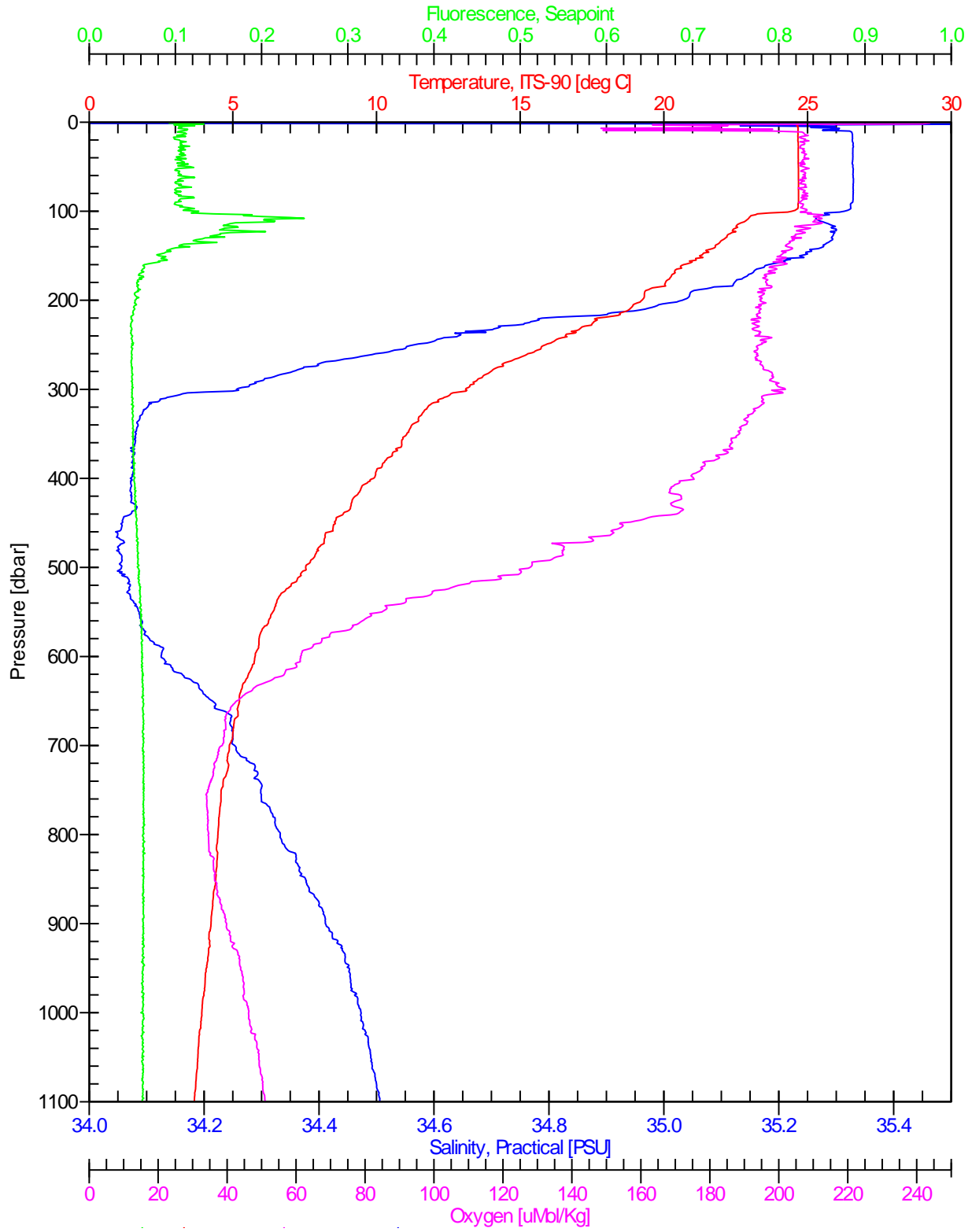
G-1000, hot-268_s2_c1.cnv



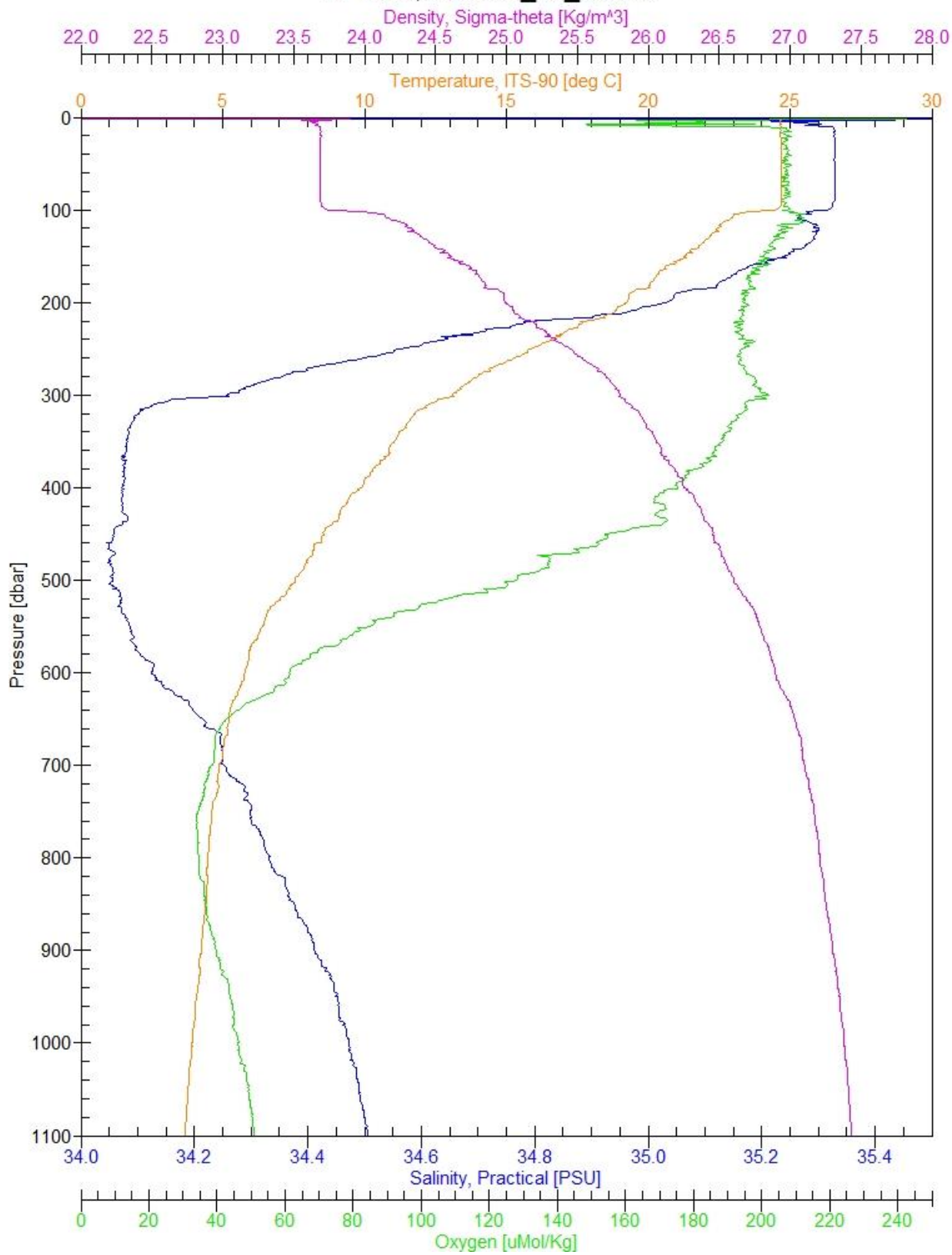
W-1000, hot-268_s2_c1.cnv



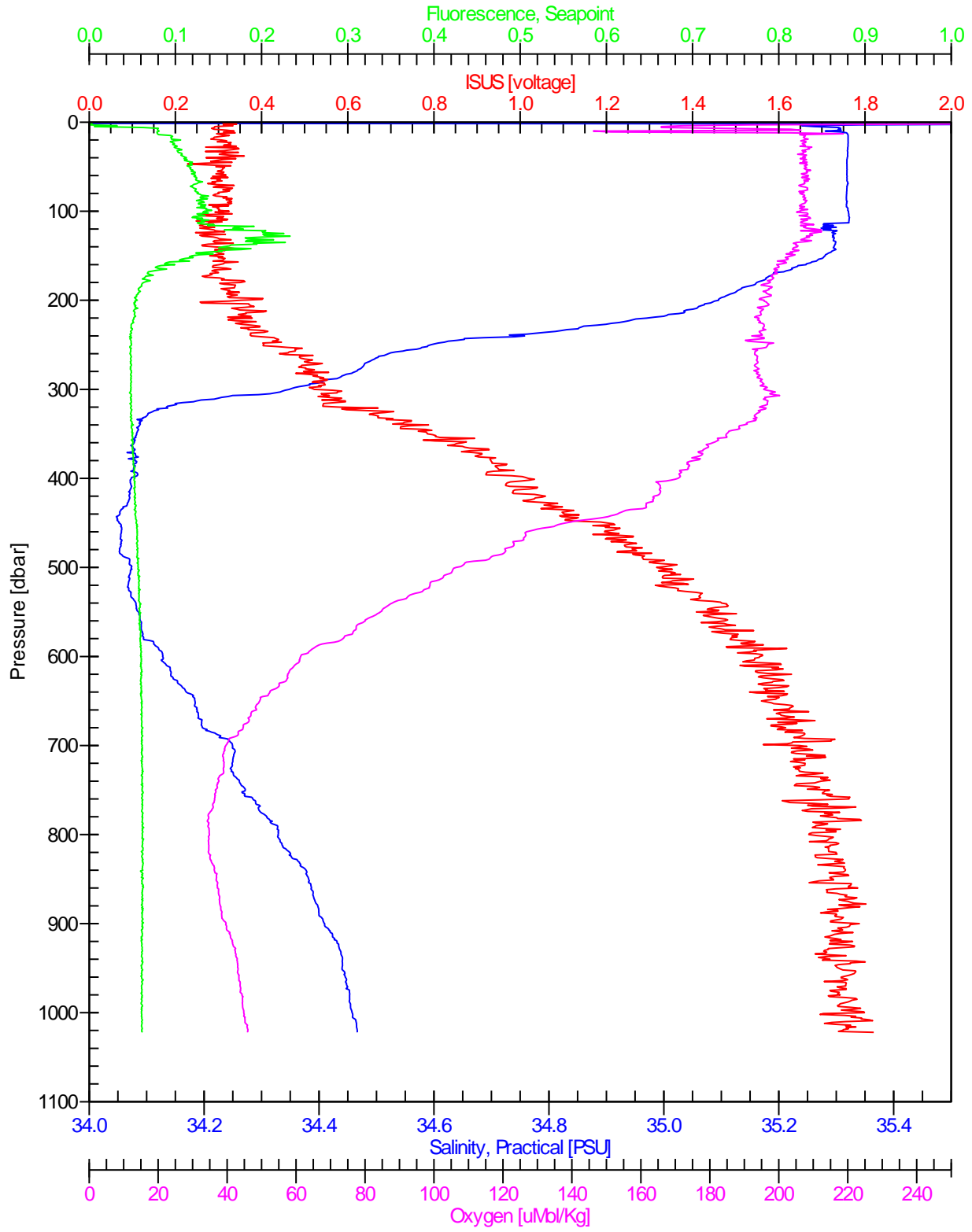
G-1000, hot-268_s2_c2.cnv



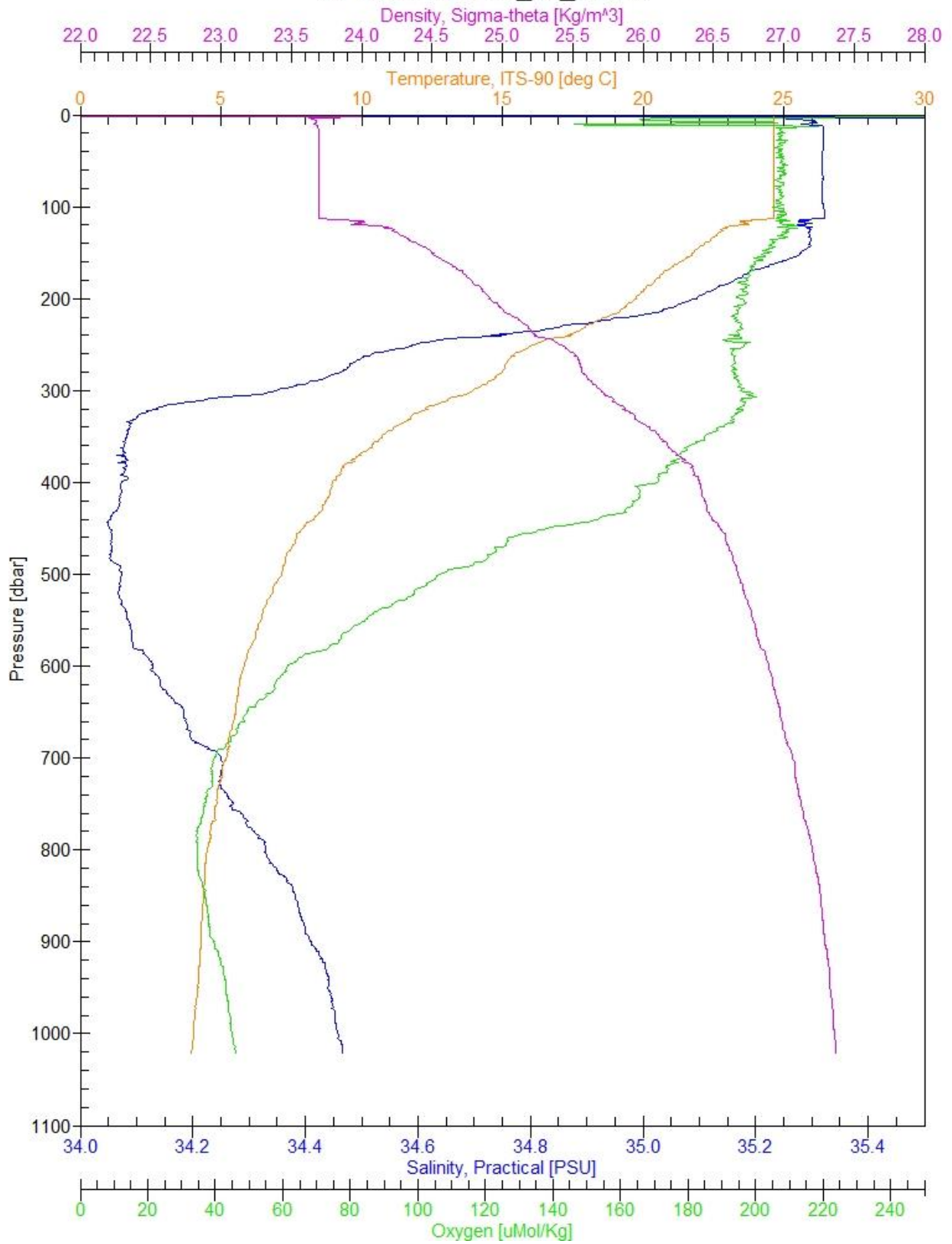
W-1000, hot-268_s2_c2.cnv



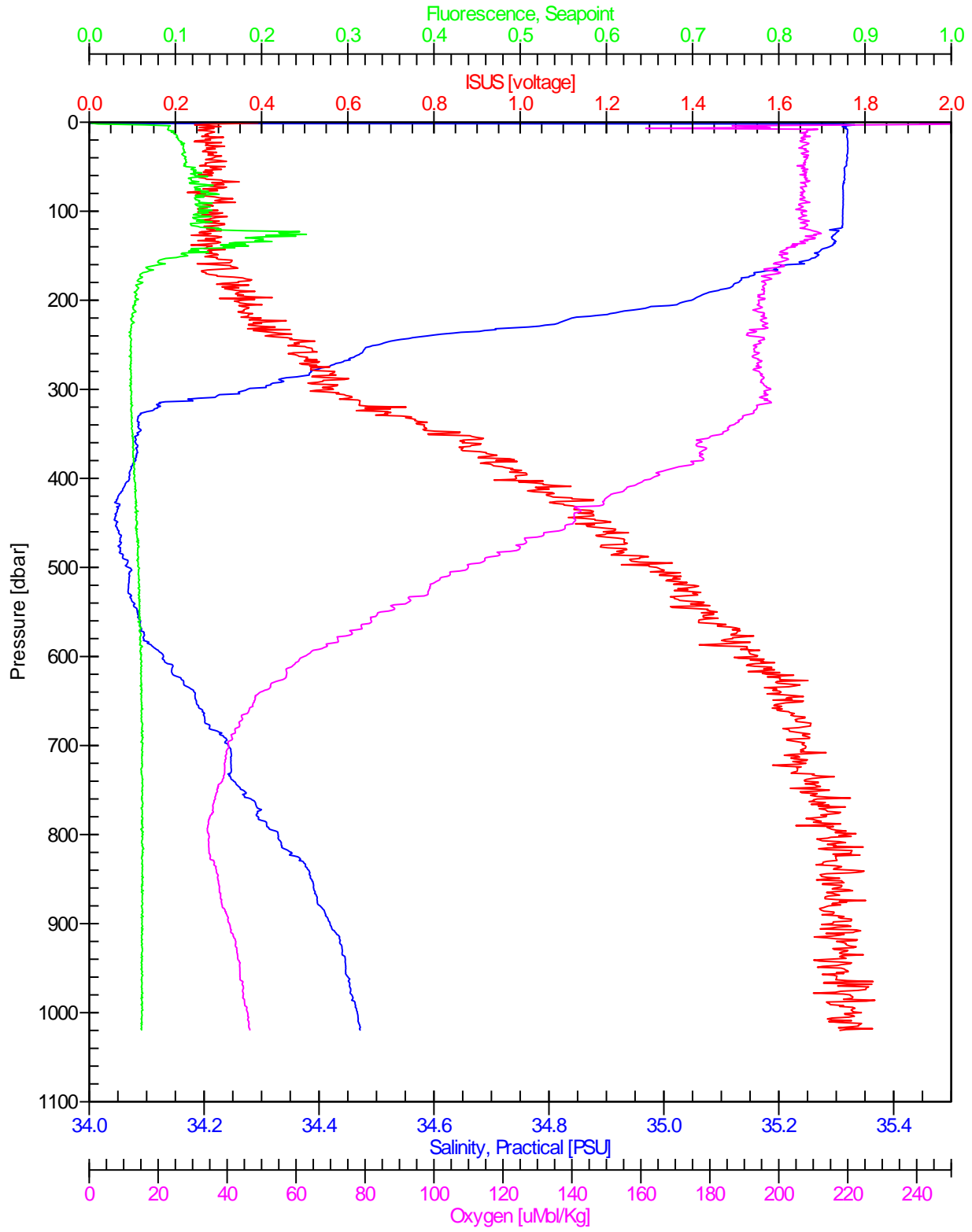
G-1000, hot-268_s2_c3.cnv



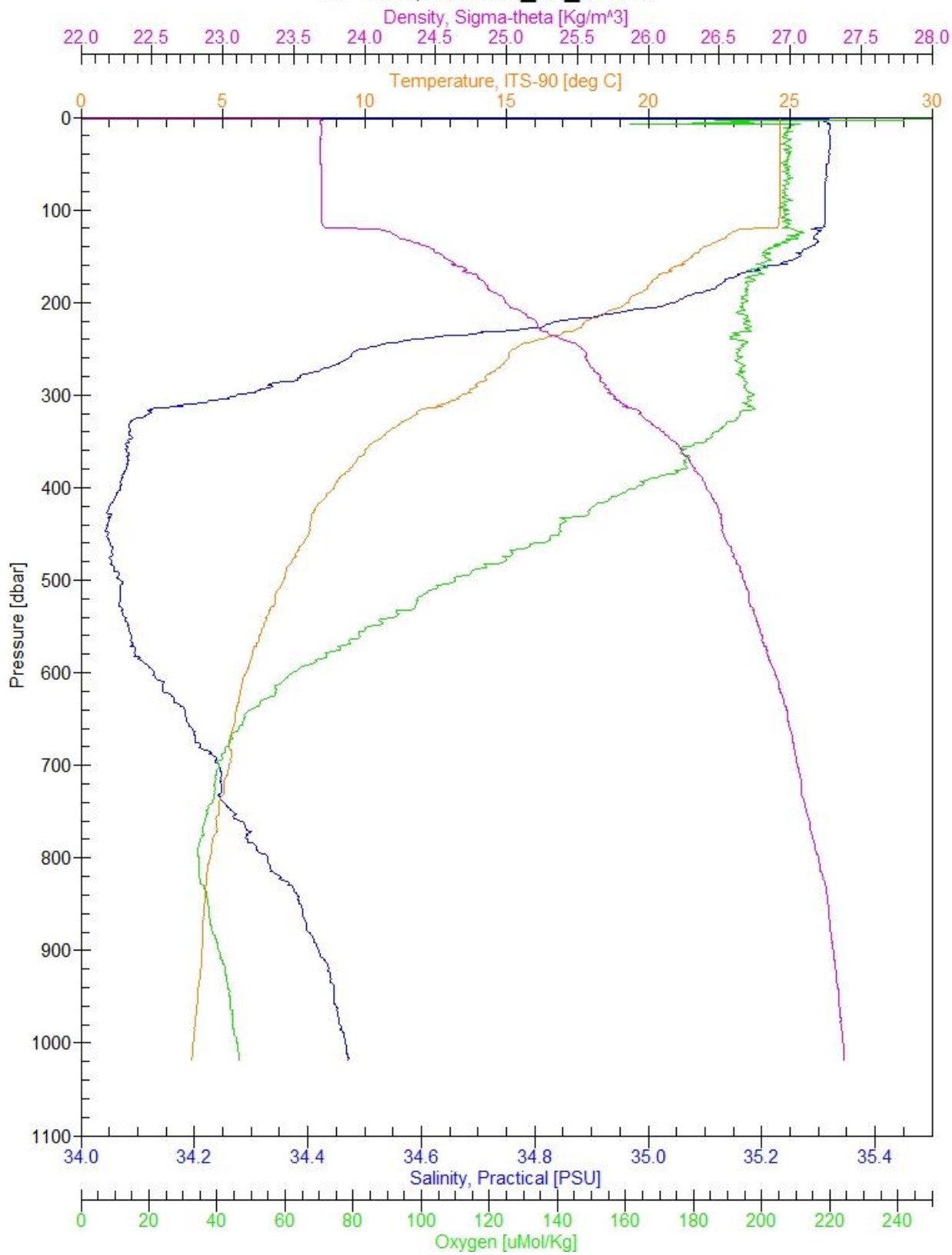
W-1000, hot-268_s2_c3.cnv



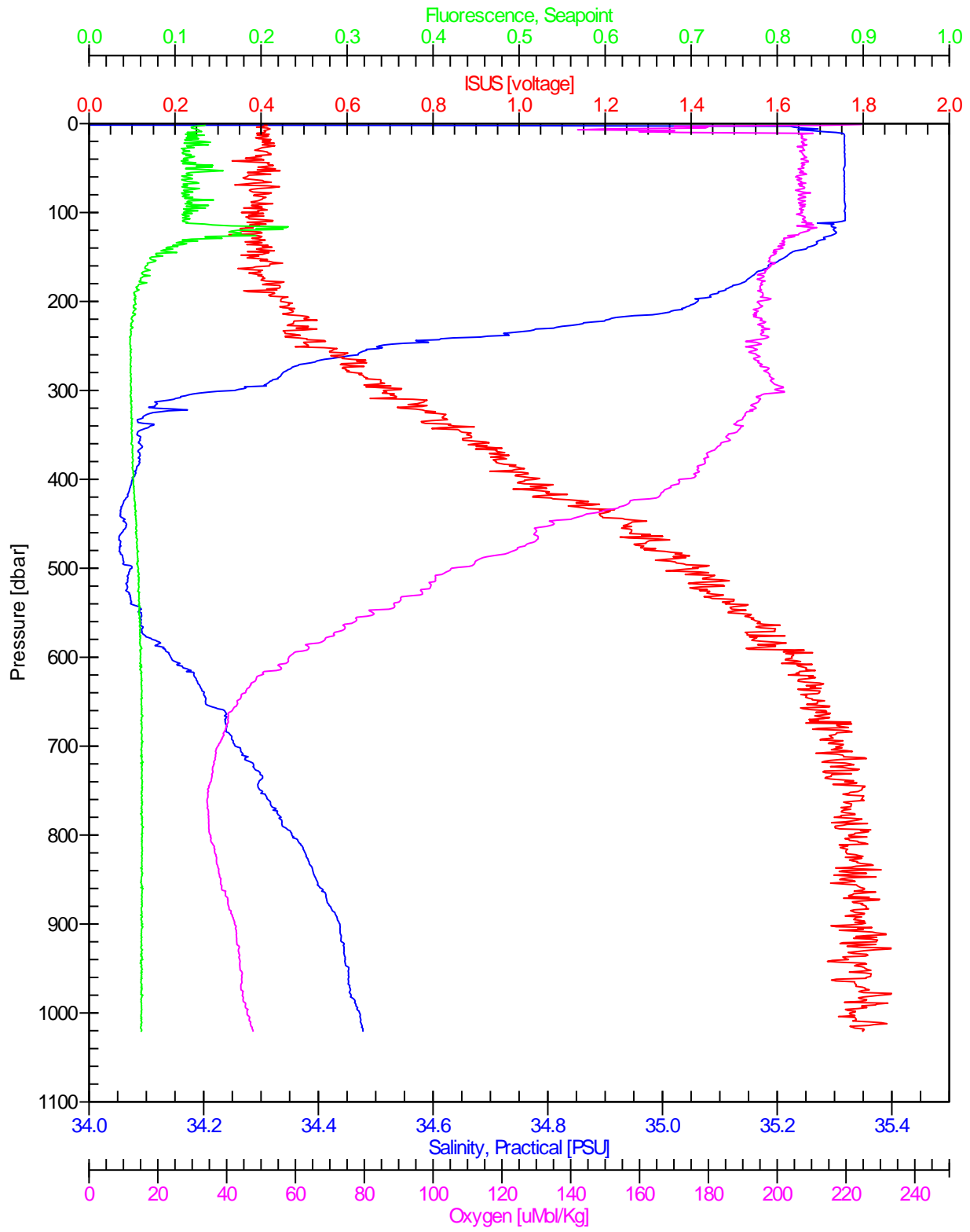
G-1000, hot-268_s2_c4.cnv



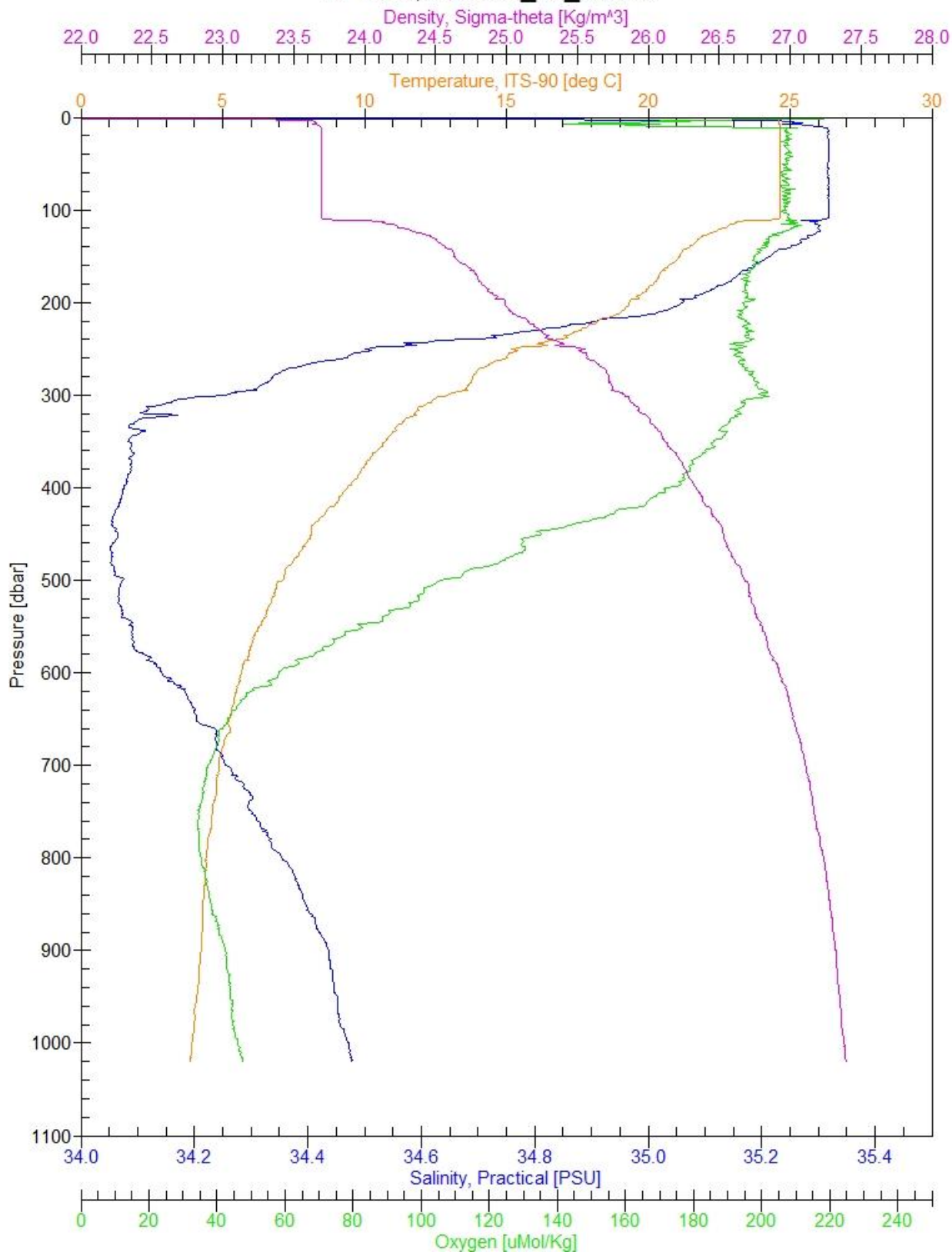
W-1000, hot-268_s2_c4.cnv



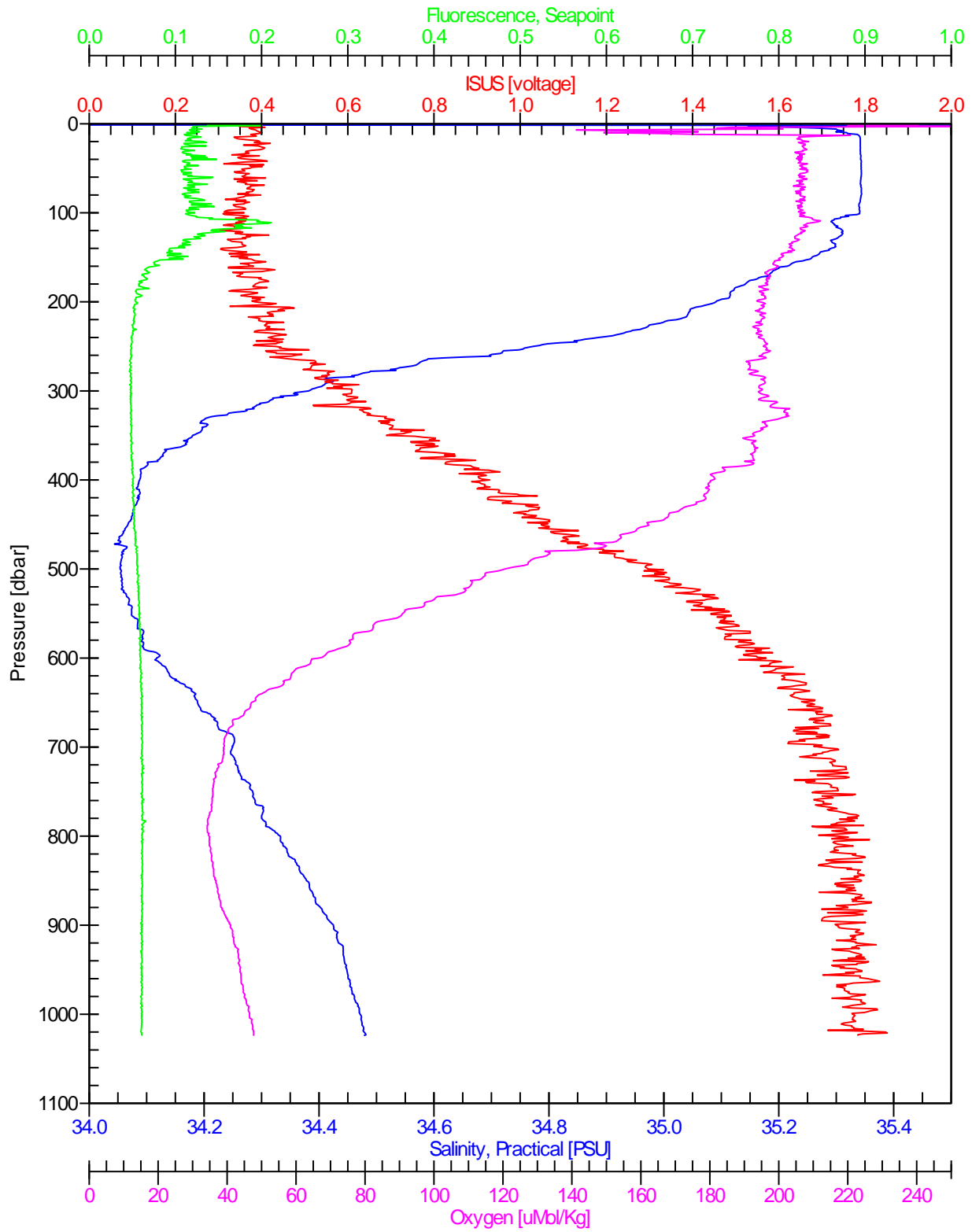
G-1000, hot-268_s2_c5.cnv



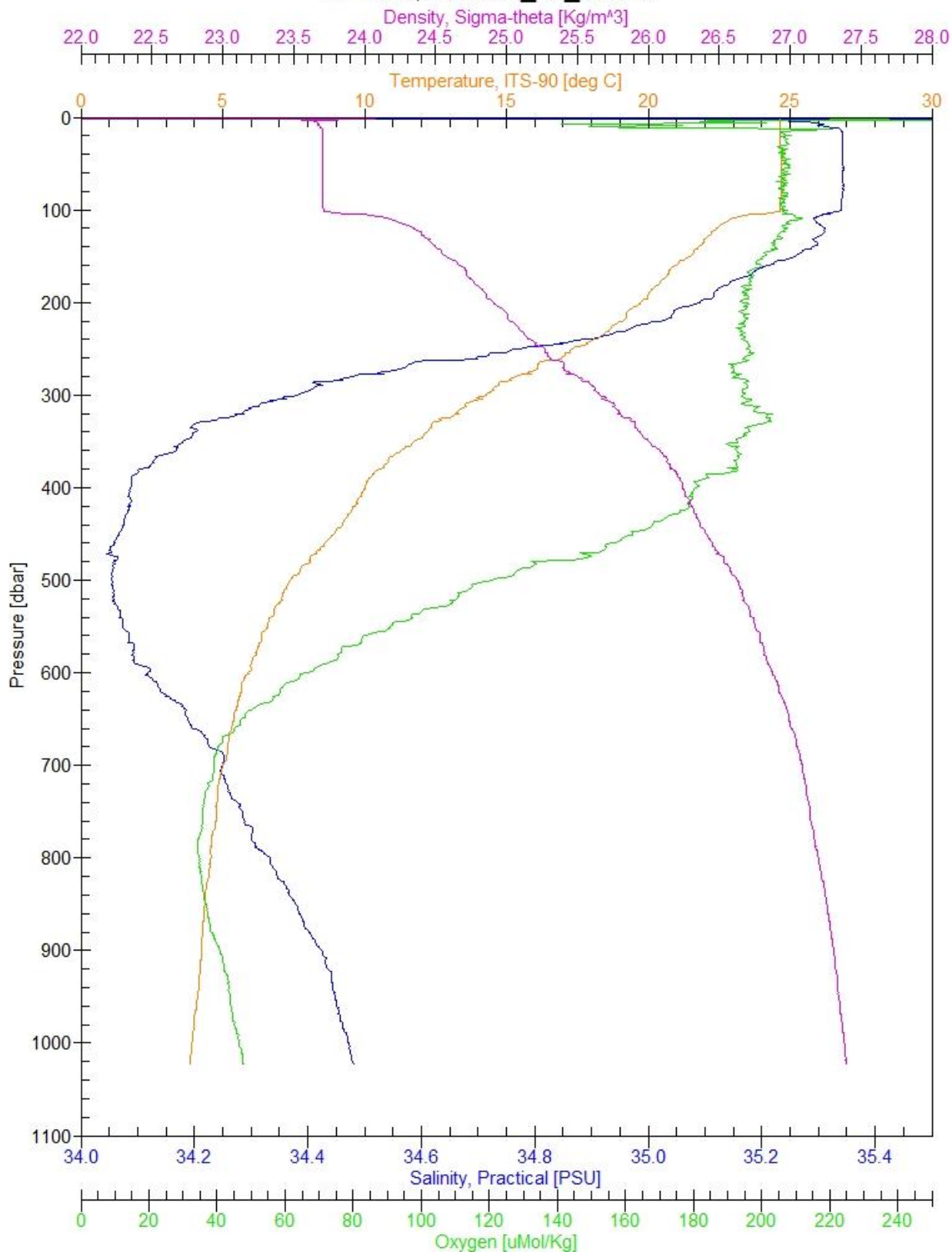
W-1000, hot-268_s2_c5.cnv



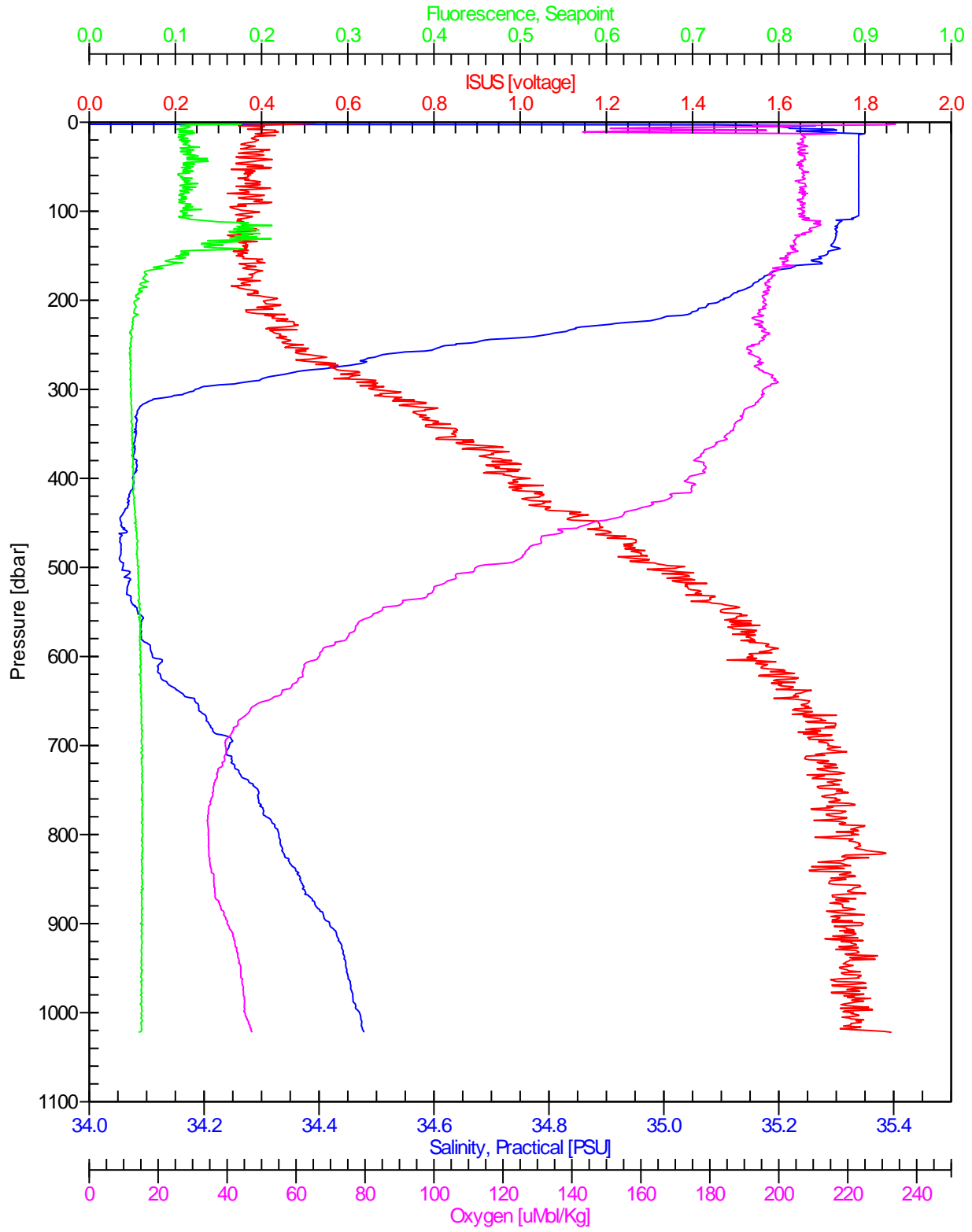
G-1000, hot-268_s2_c6.cnv



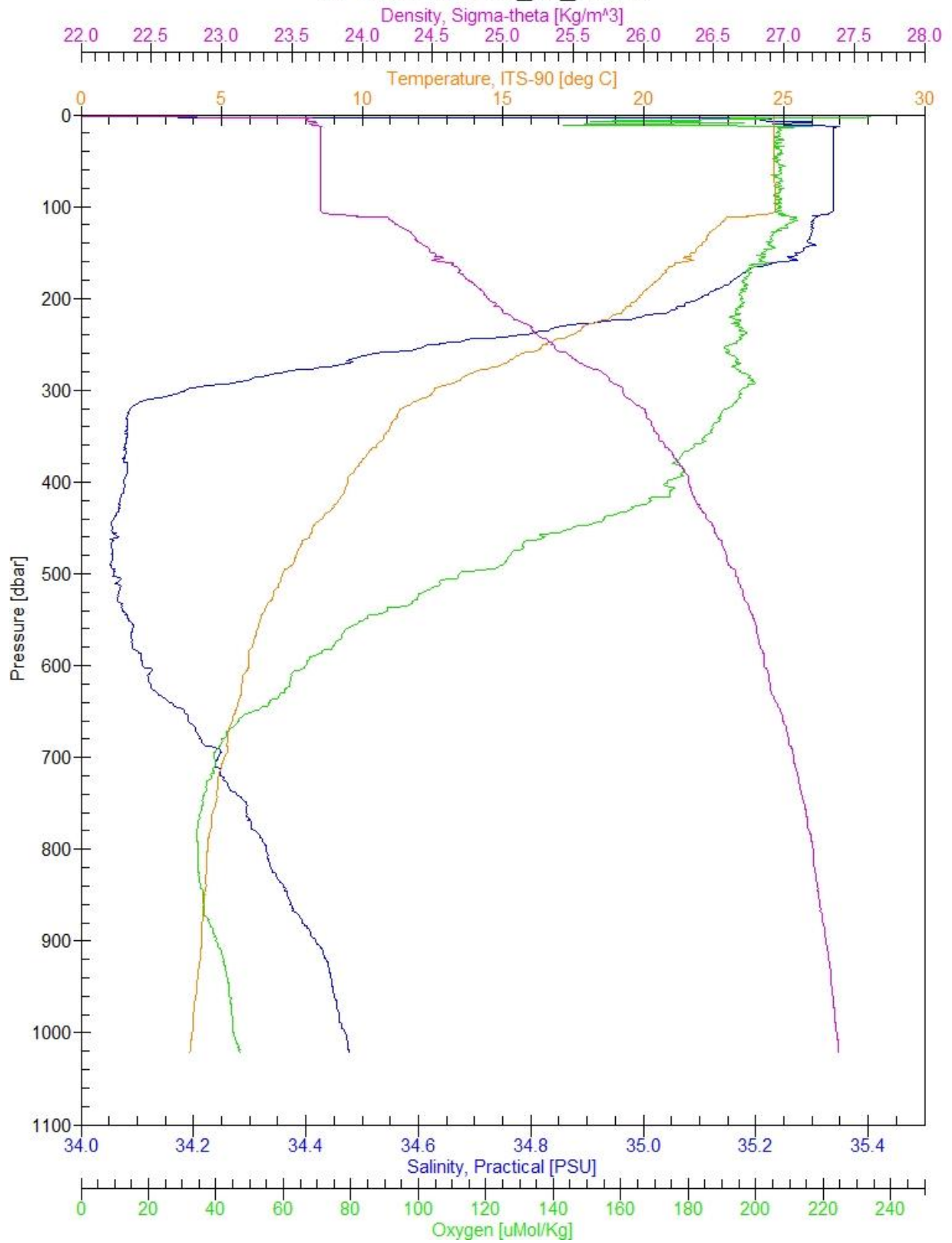
W-1000, hot-268_s2_c6.cnv



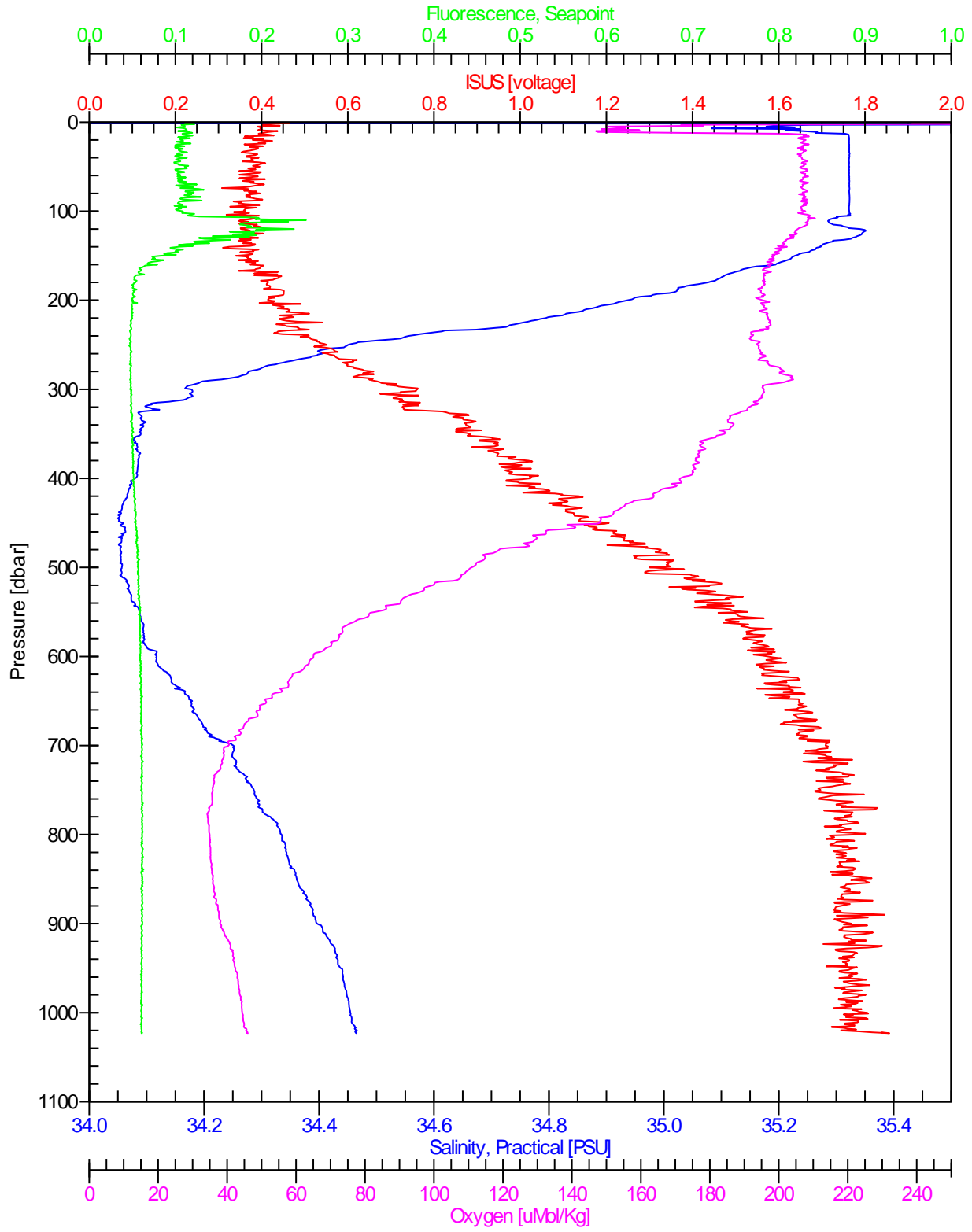
G-1000, hot-268_s2_c7.cnv



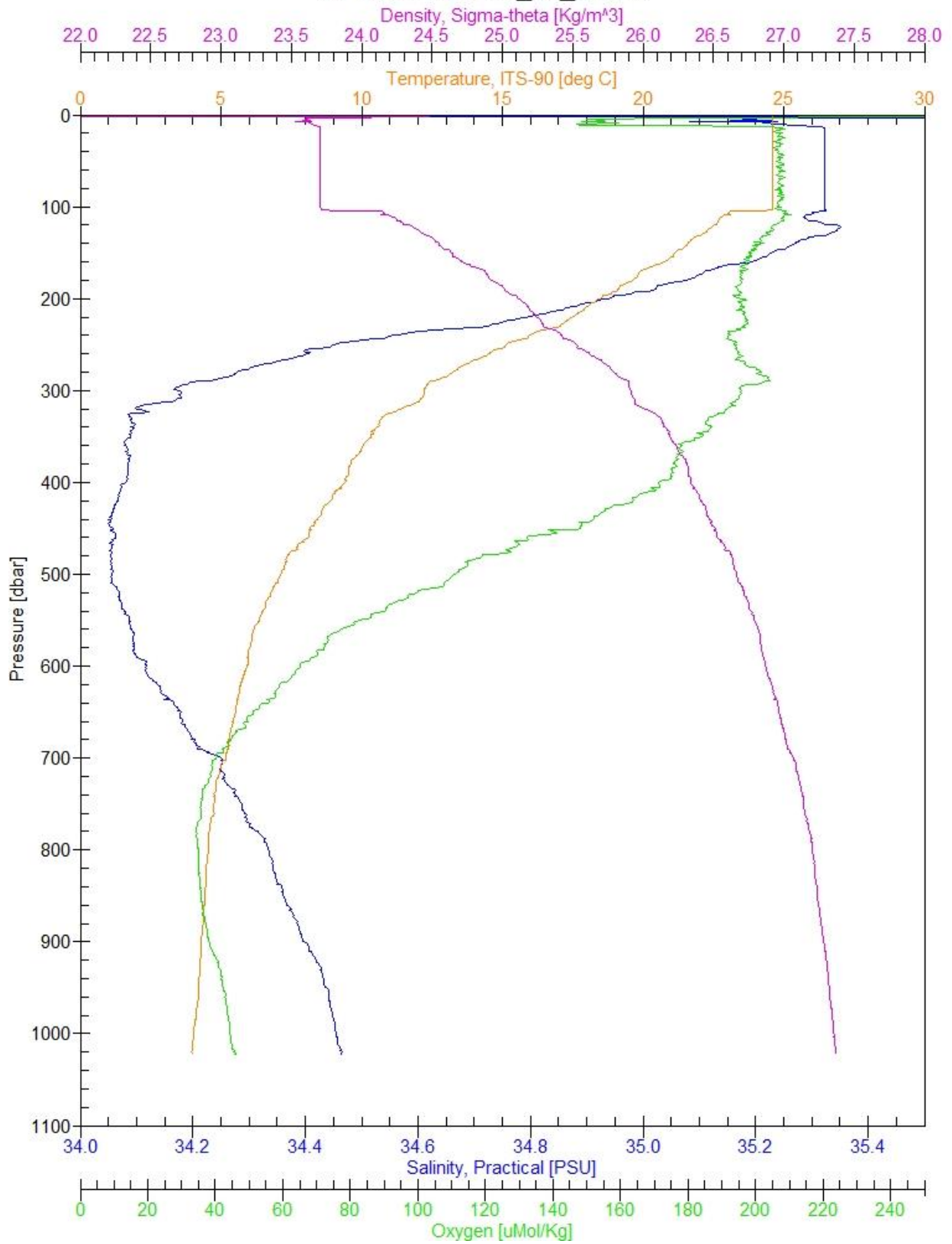
W-1000, hot-268_s2_c7.cnv



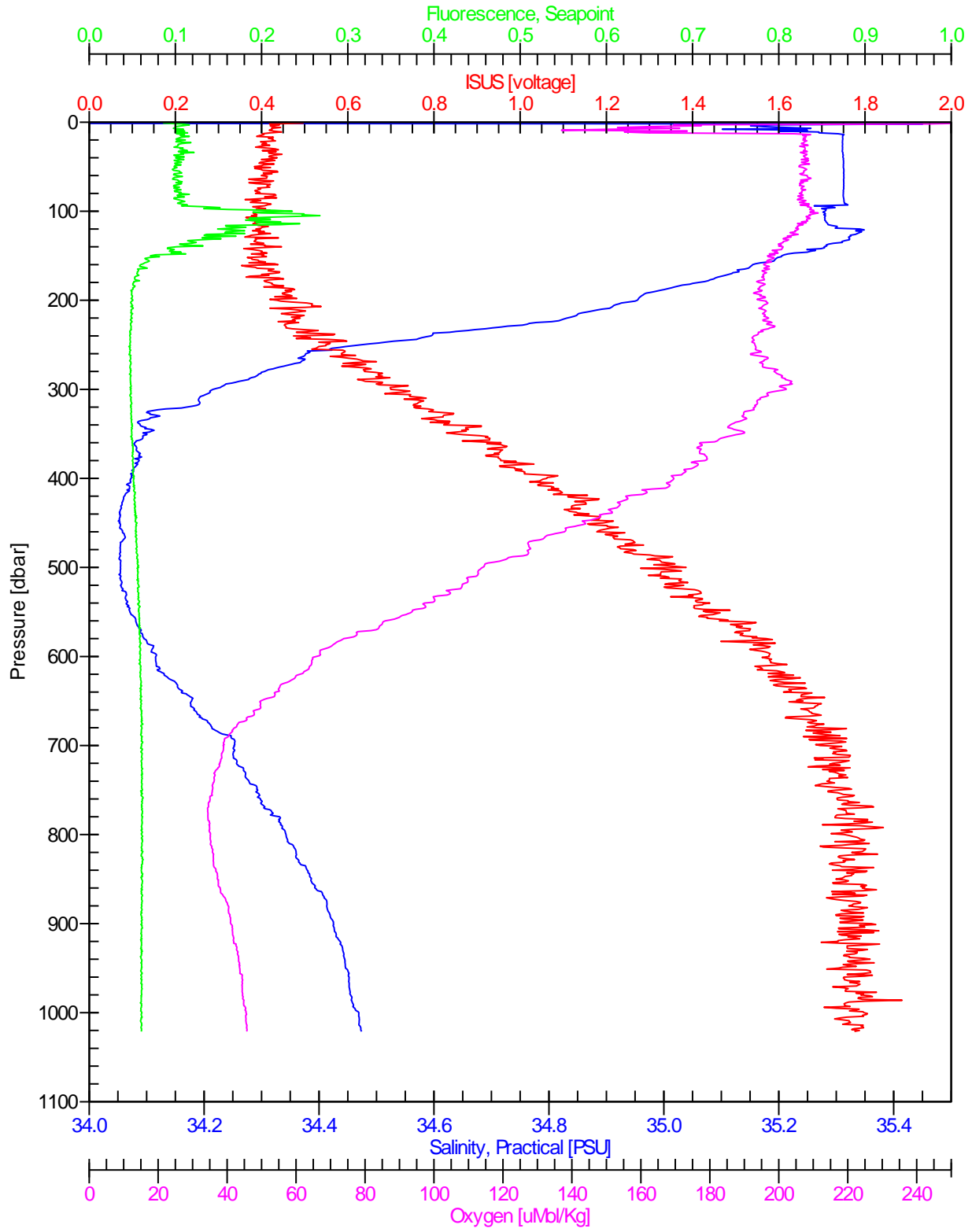
G-1000, hot-268_s2_c8.cnv



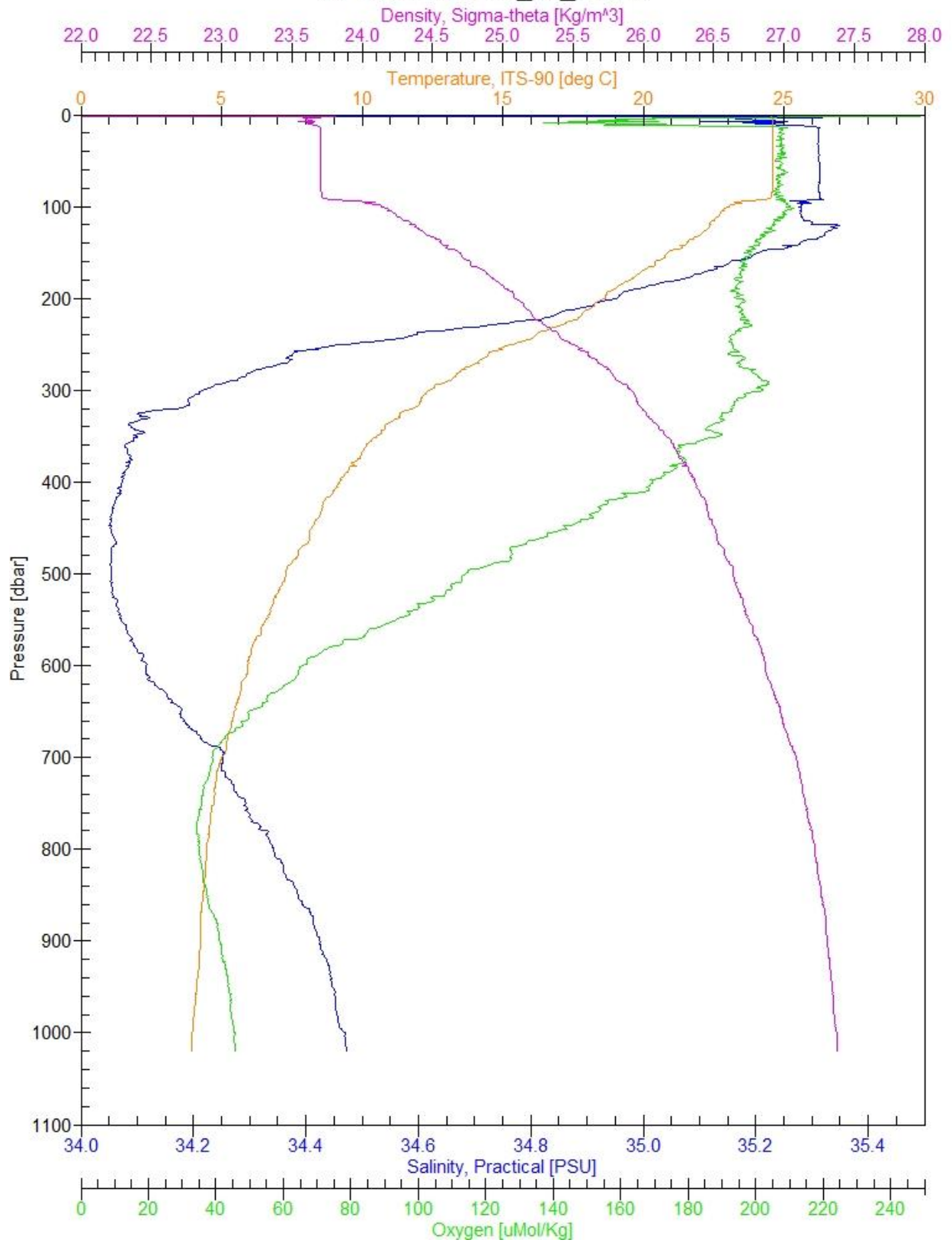
W-1000, hot-268_s2_c8.cnv



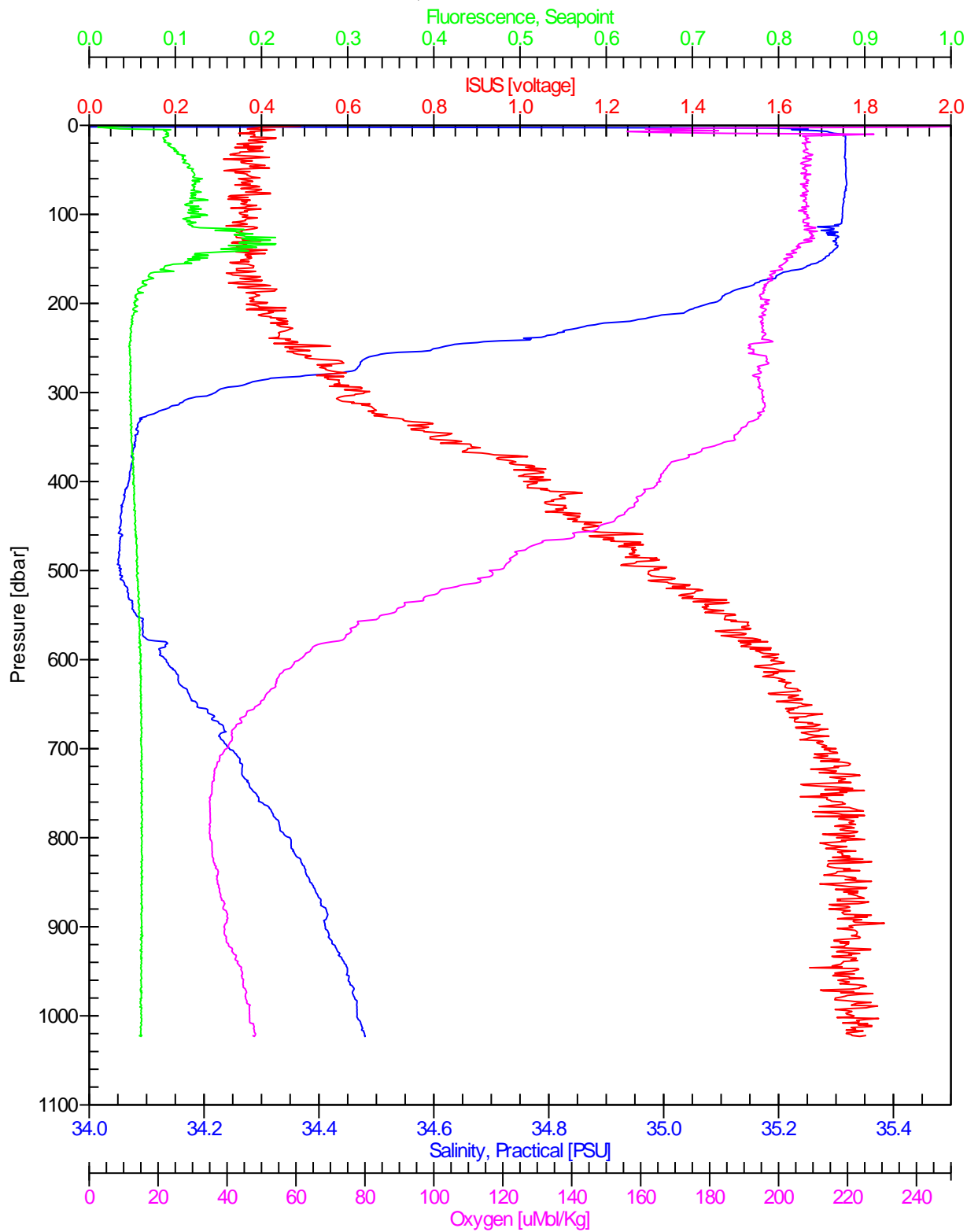
G-1000, hot-268_s2_c9.cnv



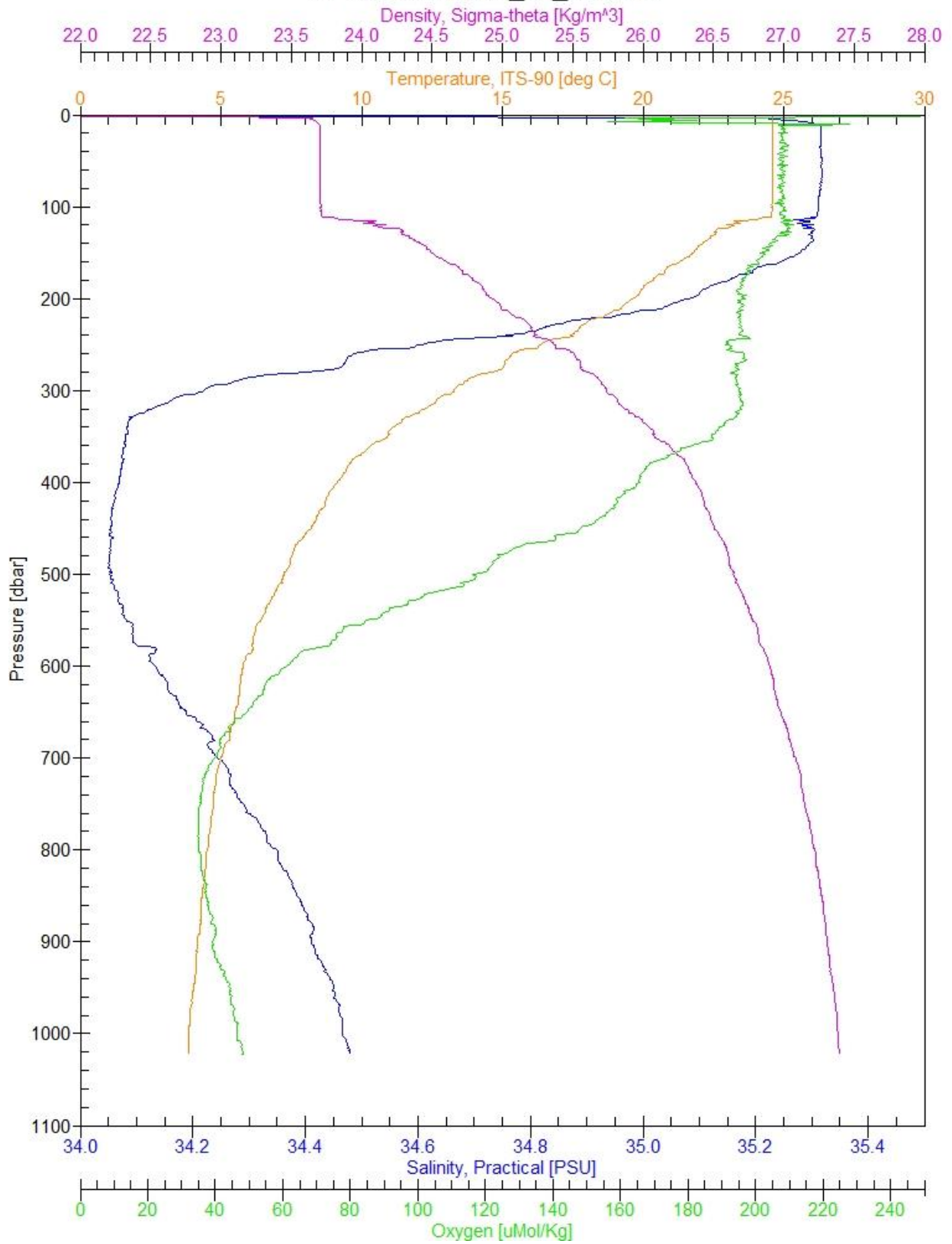
W-1000, hot-268_s2_c9.cnv



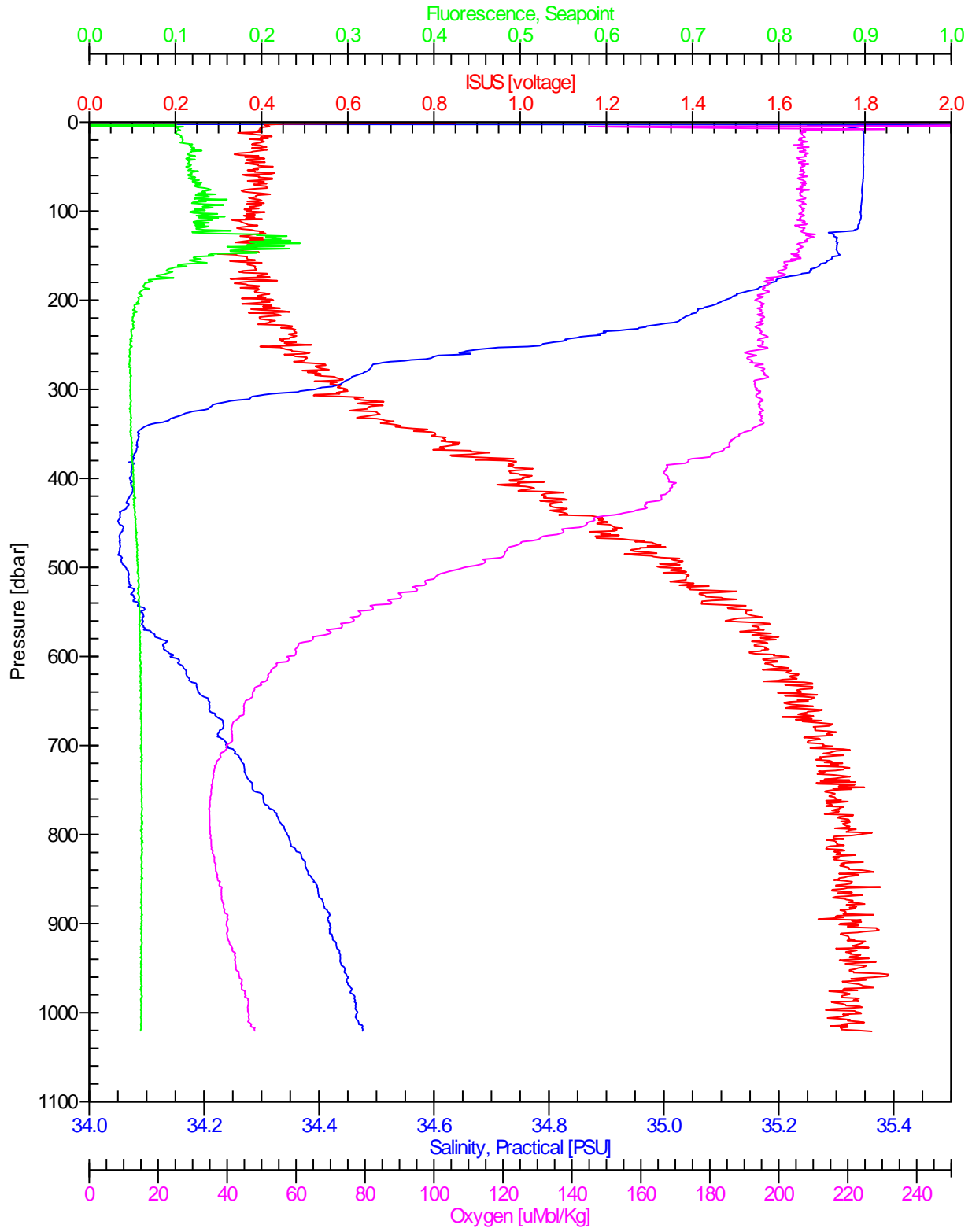
G-1000, hot-268_s2_c10.cnv



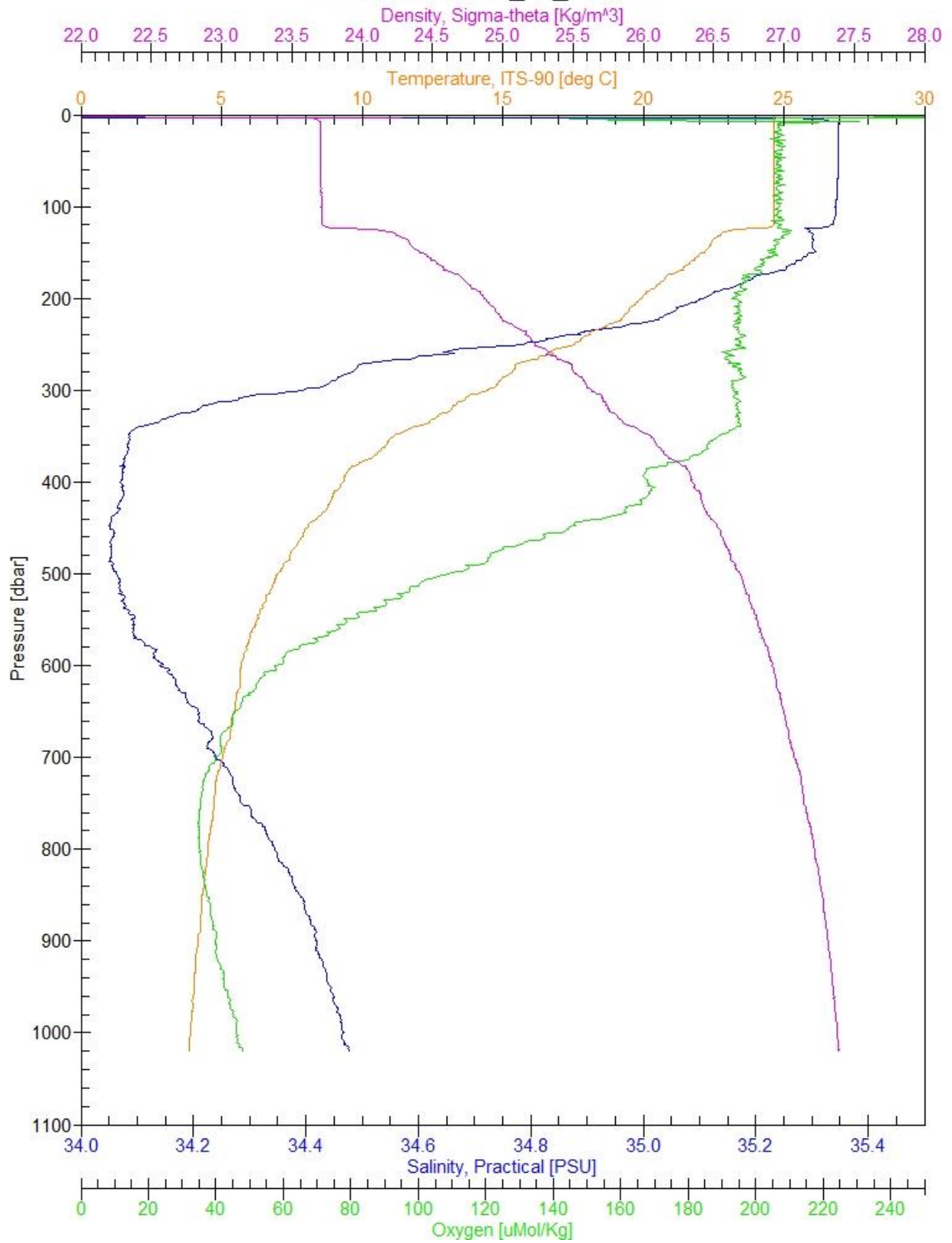
W-1000, hot-268_s2_c10.cnv



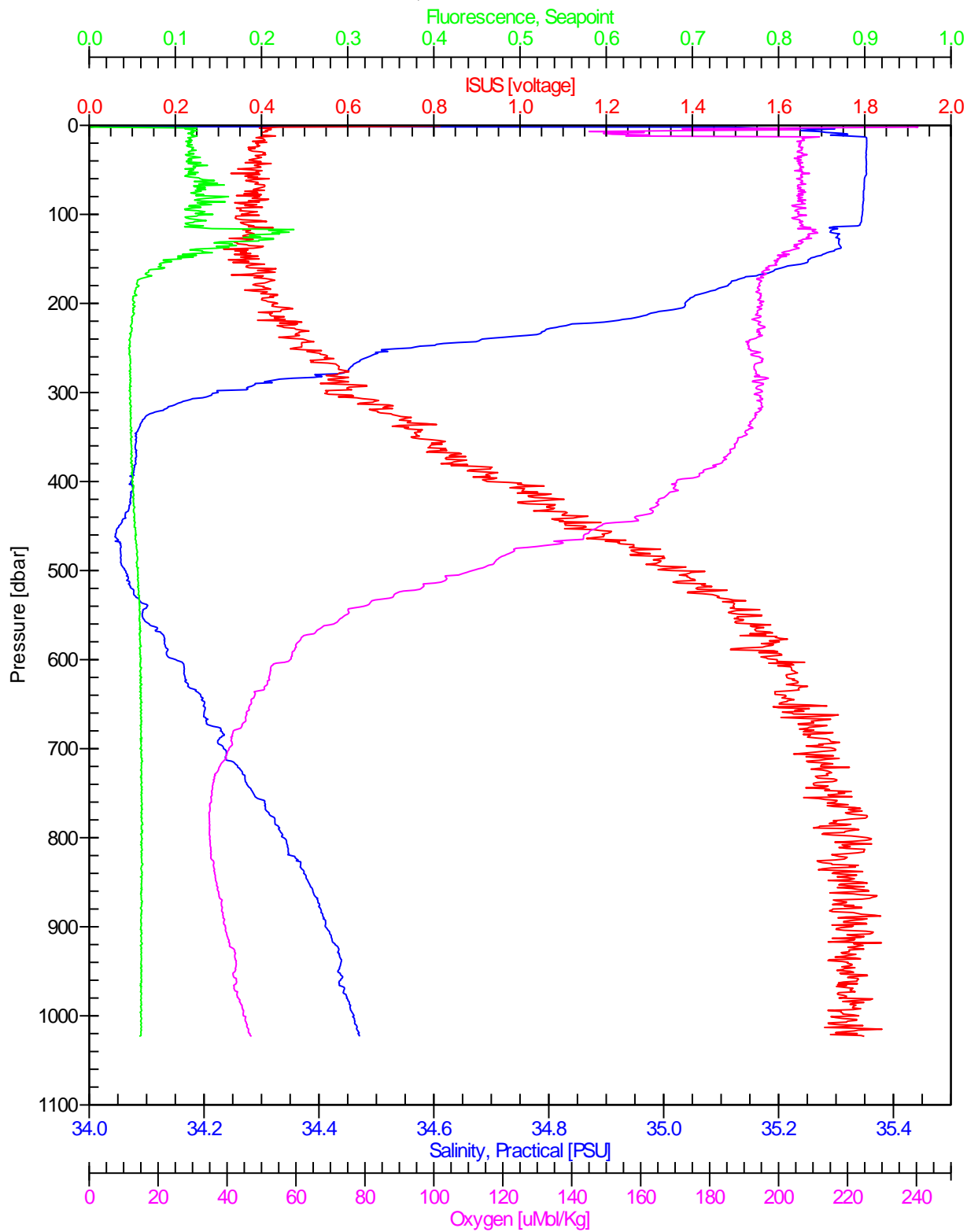
G-1000, hot-268_s2_c11.cnv



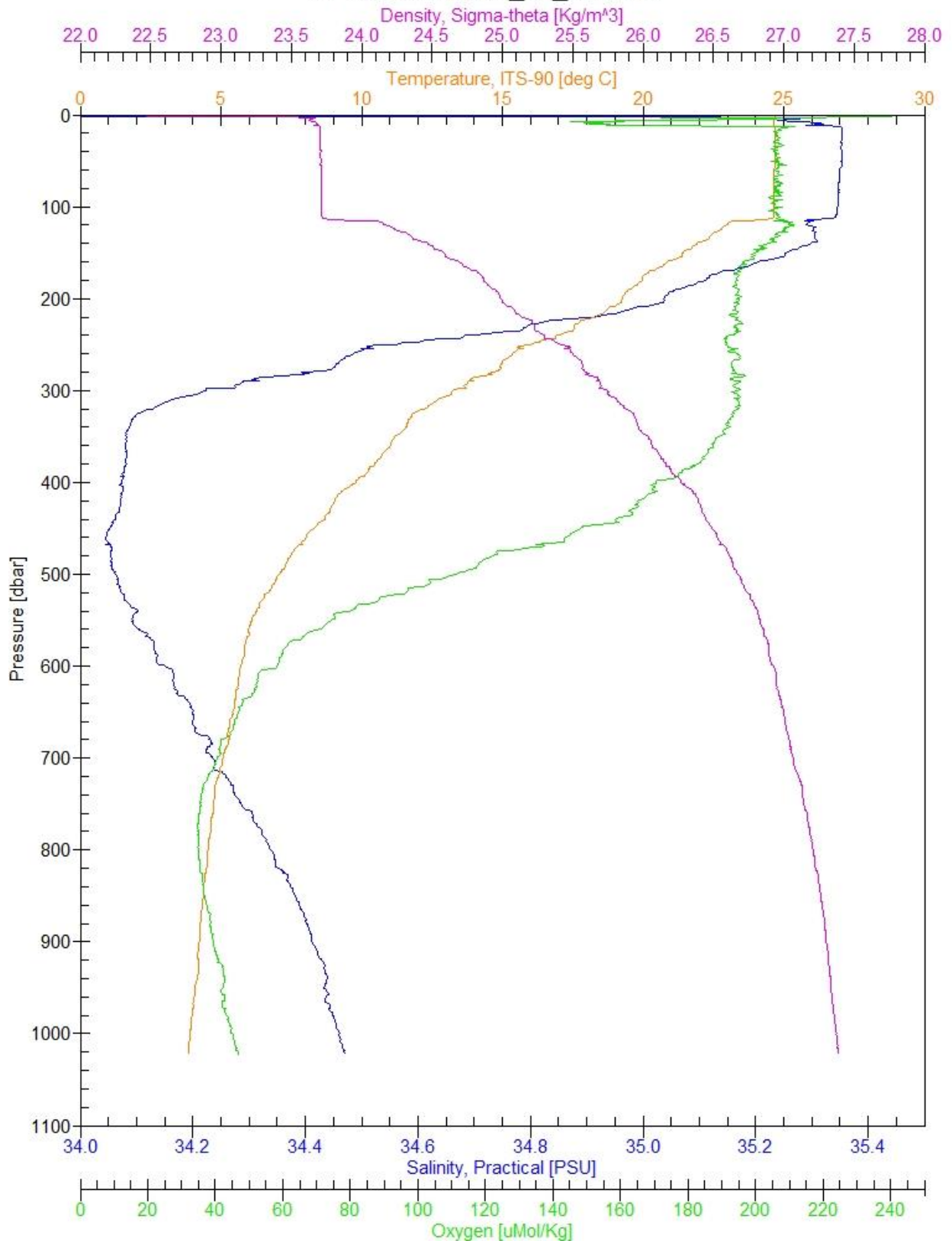
W-1000, hot-268_s2_c11.cnv



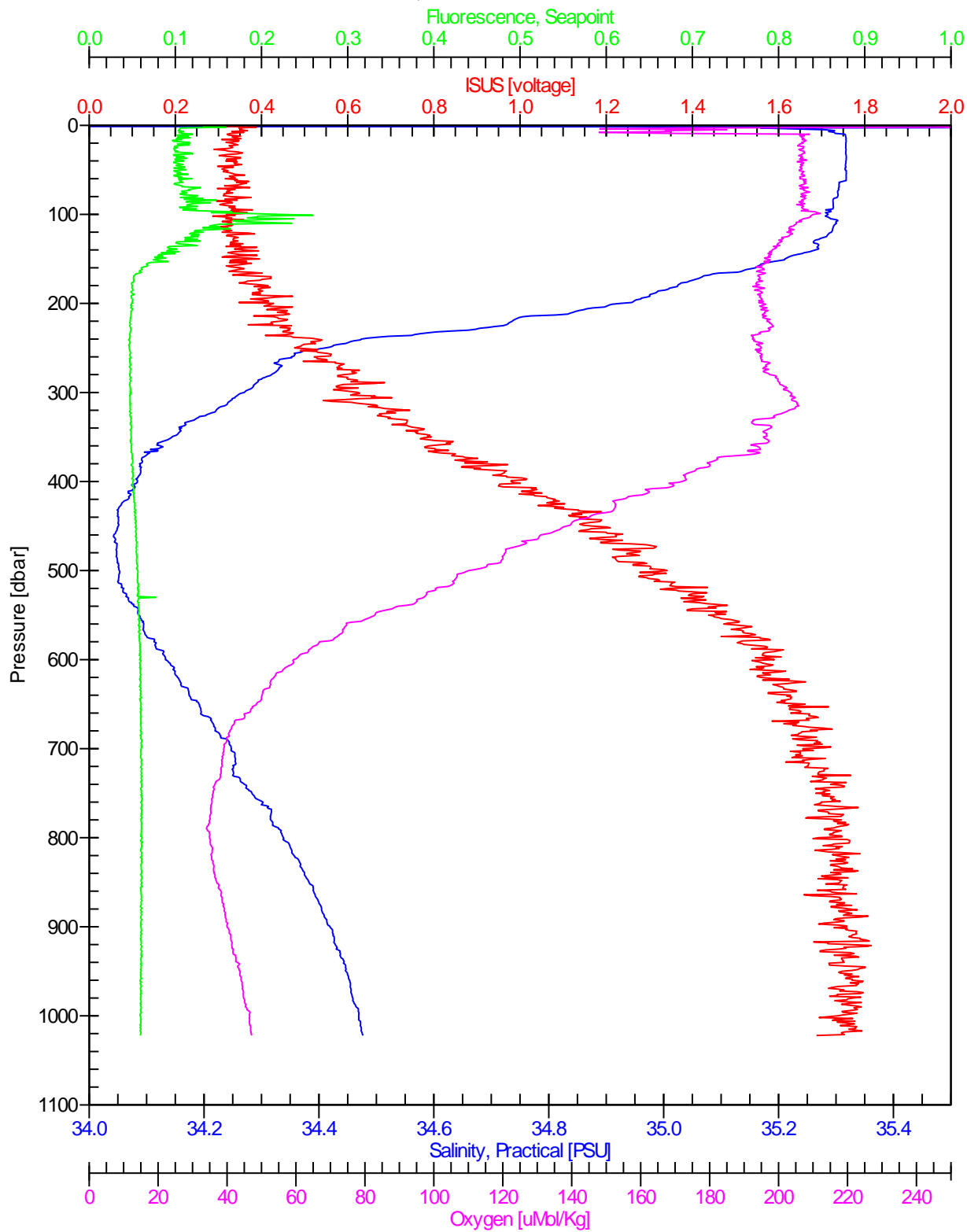
G-1000, hot-268_s2_c12.cnv



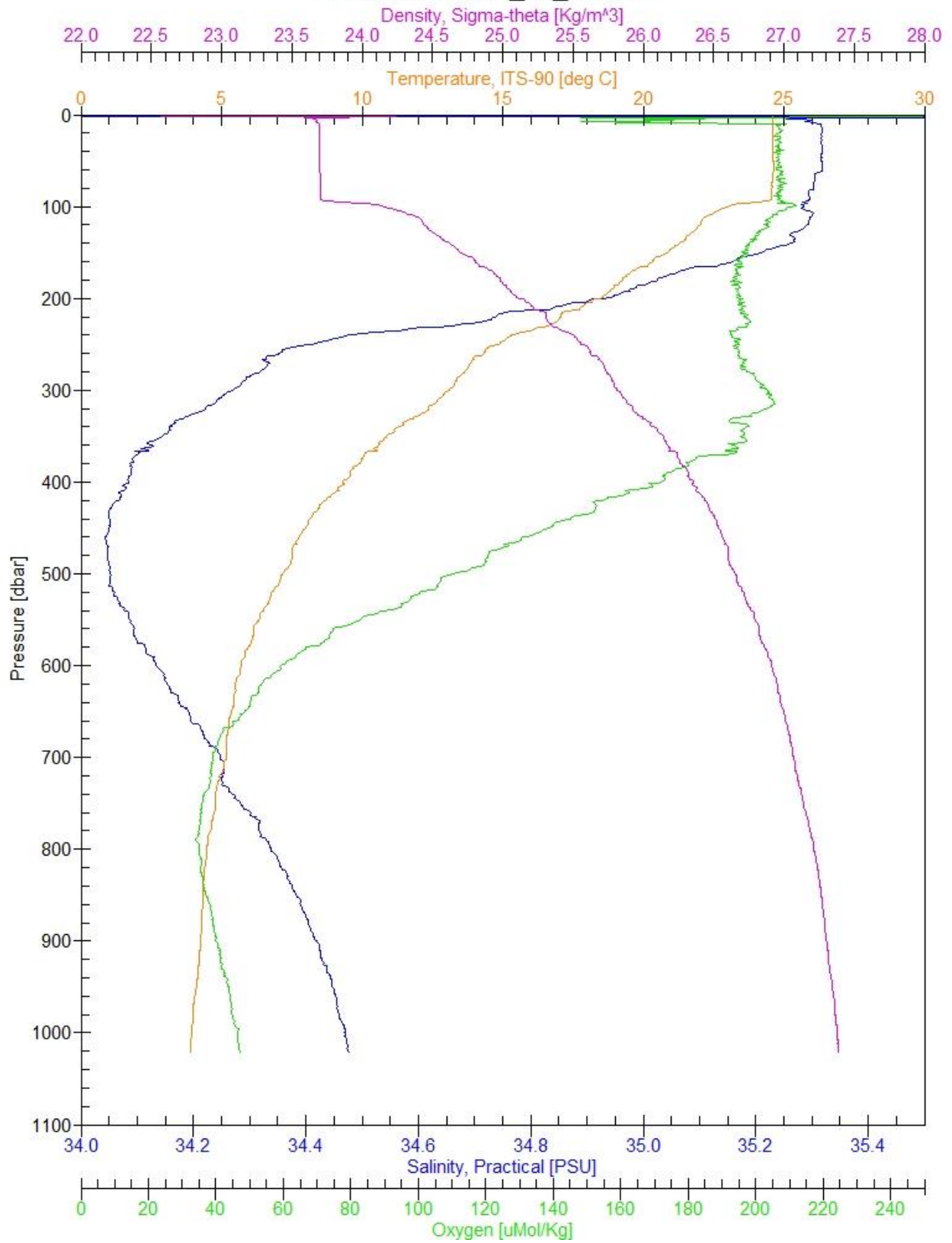
W-1000, hot-268_s2_c12.cnv



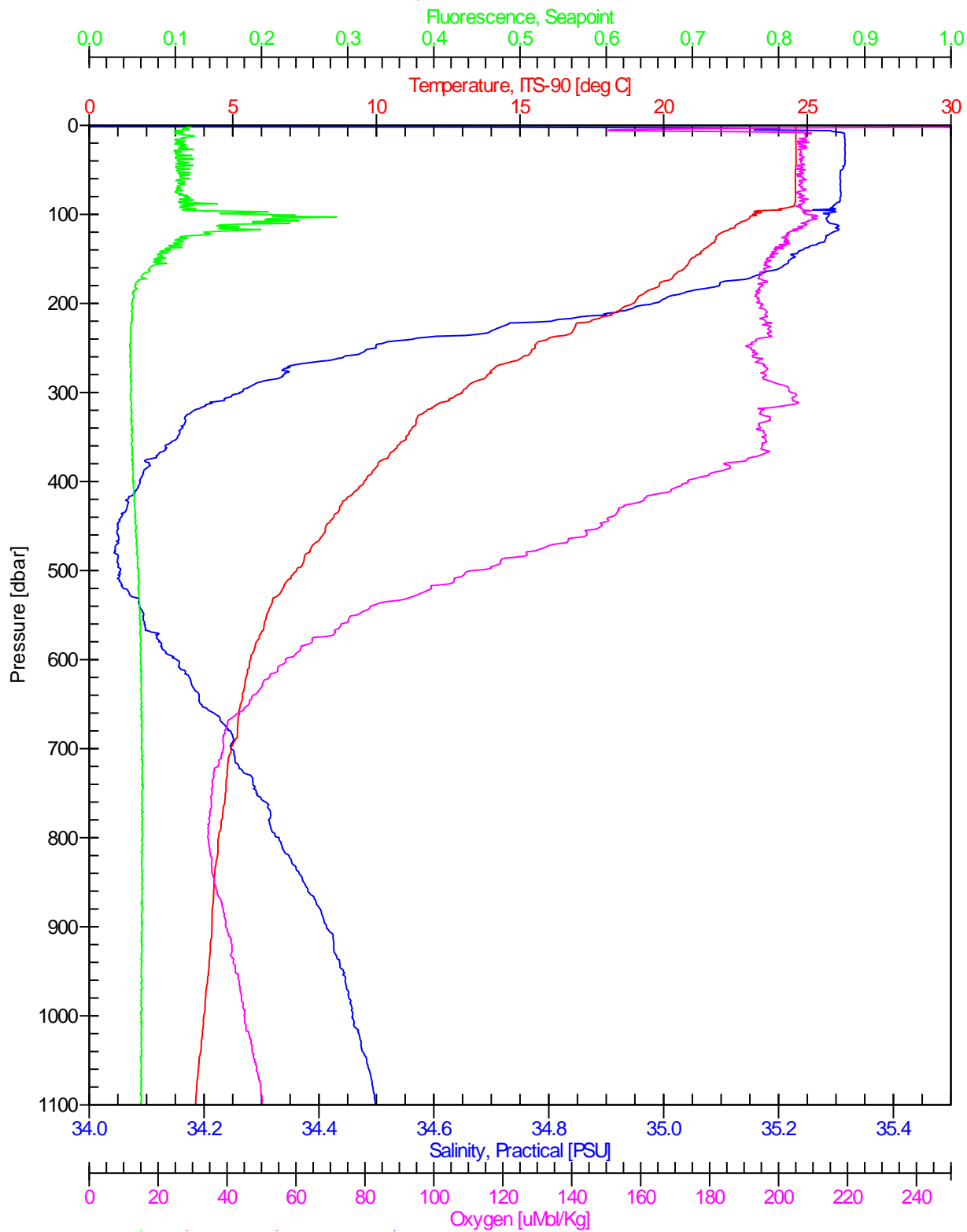
G-1000, hot-268_s2_c13.cnv



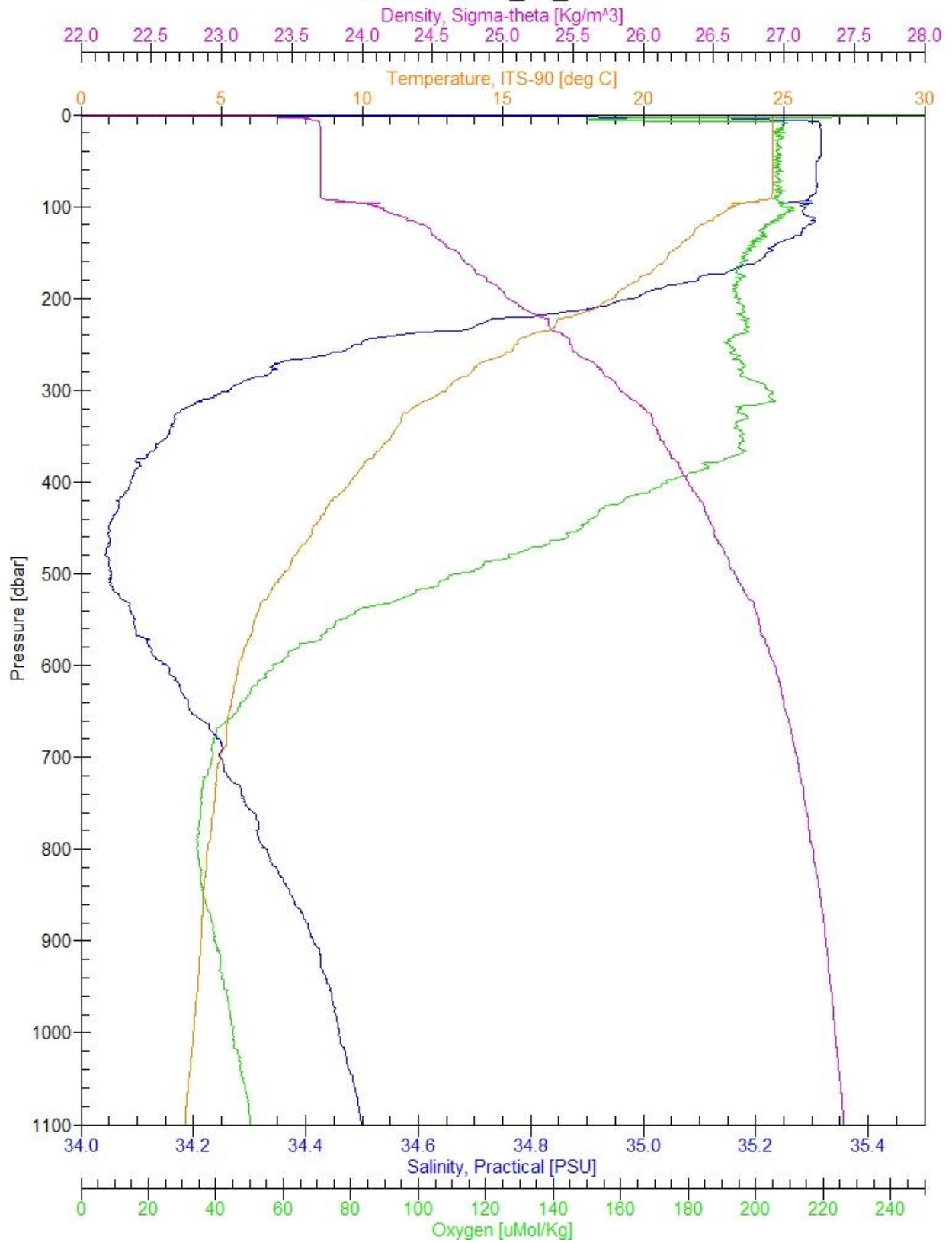
W-1000, hot-268_s2_c13.cnv



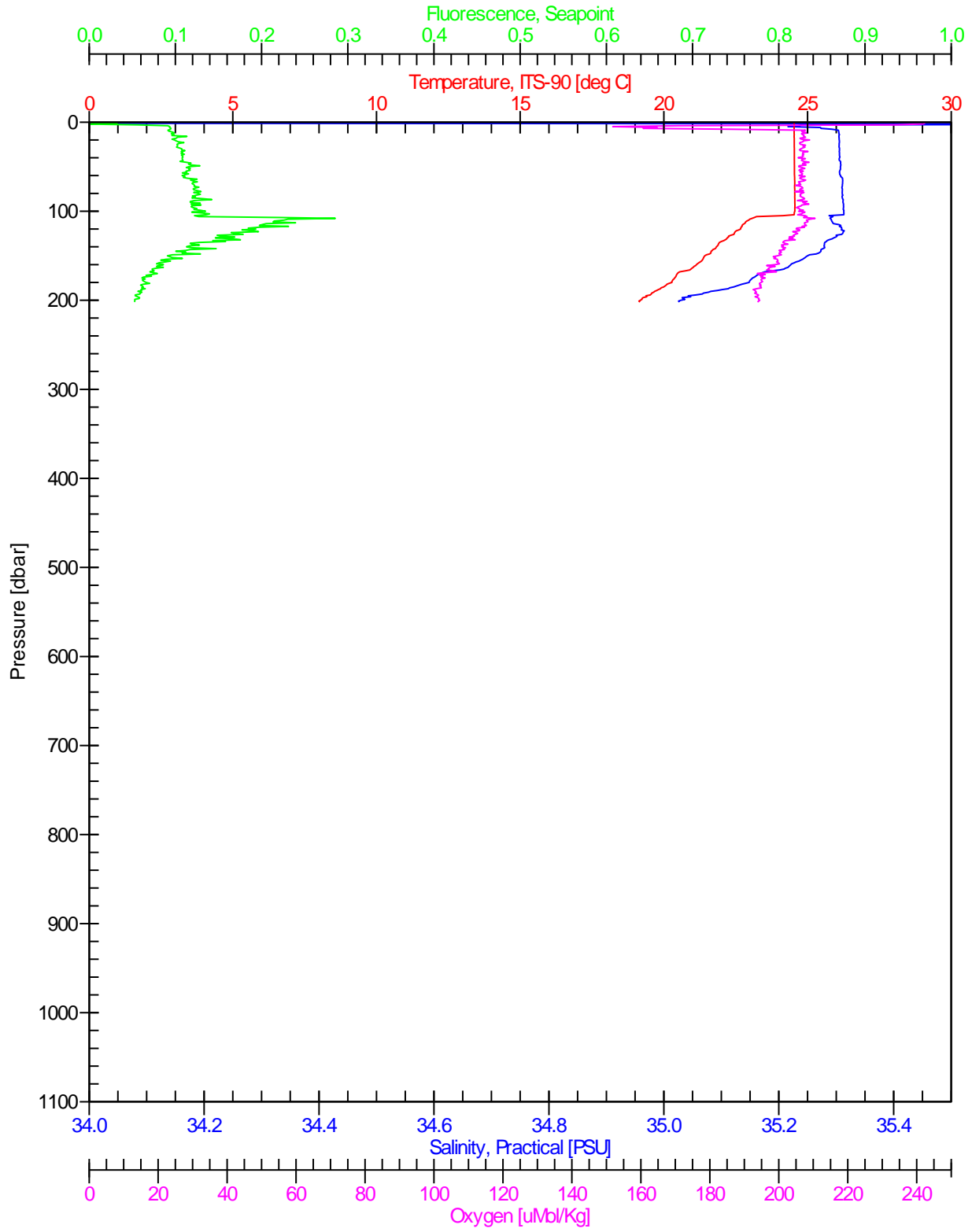
G-1000, hot-268_s2_c14.cnv



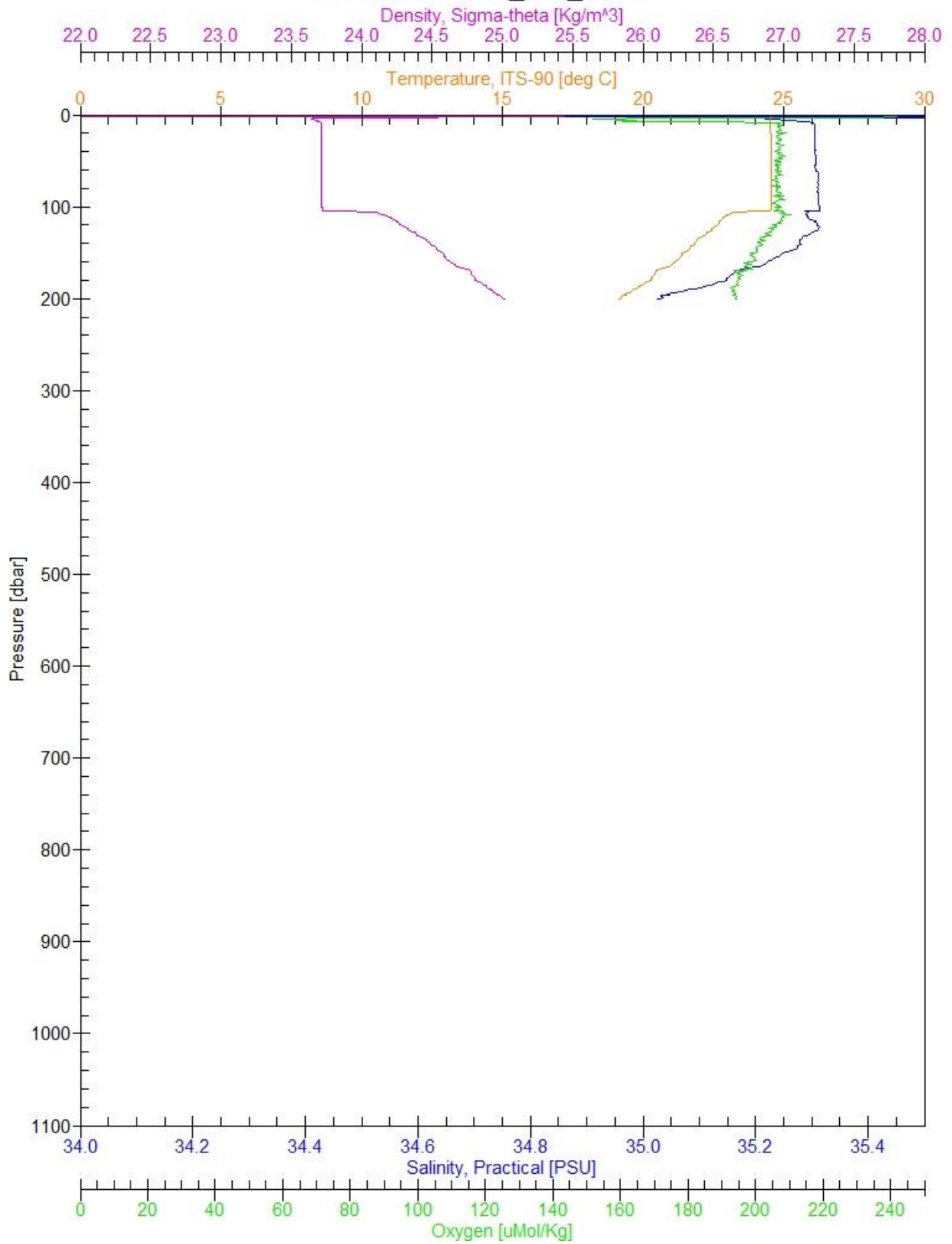
W-1000, hot-268_s2_c14.cnv



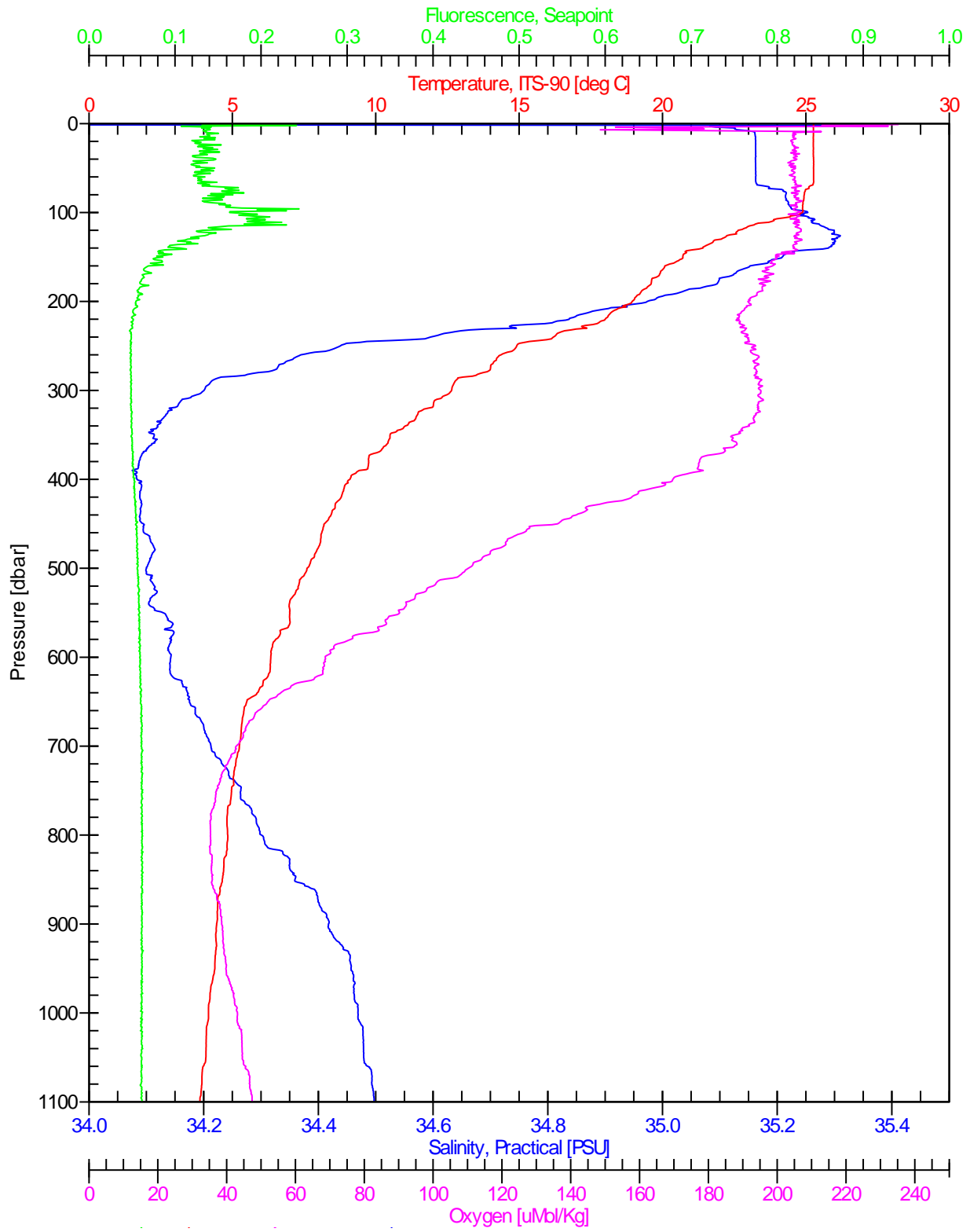
G-1000, hot-268_s50_c1.cnv



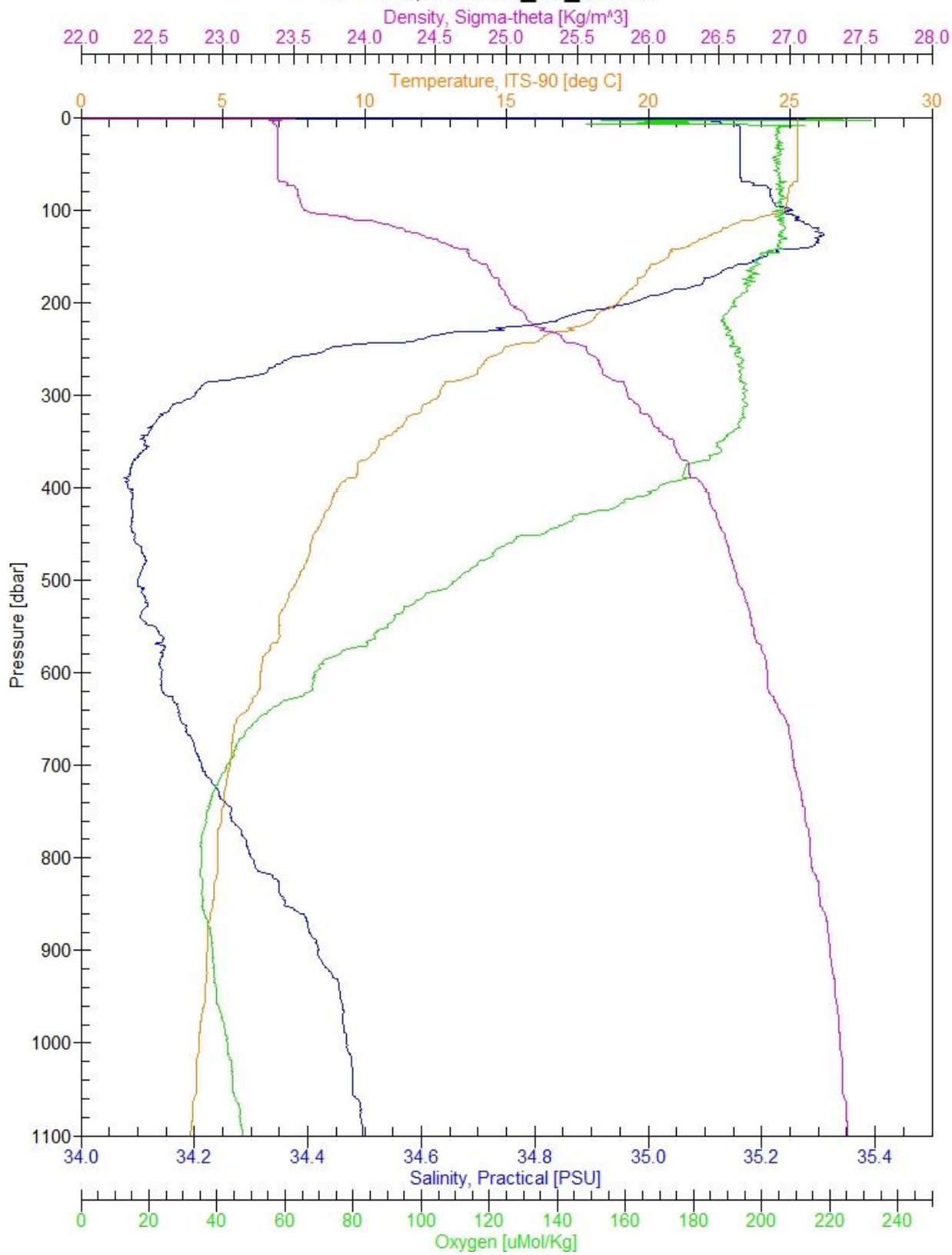
W-1000, hot-268_s50_c1.cnv



G-1000, hot-268_s6_c1.cnv



W-1000, hot-268_s6_c1.cnv



Hawaii Ocean Time-Series CONSOLE LOG

Cast type G1000GPS	Bottle type 12L	SST 25.65	Operator WD/JG
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer
 Sal min: 425 dbar
 mixed: 72 dbar

Station: 1	Cast: 1
Latitude start: 21° 20.642' N end: 21° 20.607' N	Longitude start: 158° 16.404' W end: 158° 16.402' W
Depth of water: 1563 meters	Date (GMT): 12/15/14
Pressure on Deck	Time:
Begin: 0.09 End: 0.05	Start Log: 23:29 In Water: 23:58 <u>12/16/14</u>
Max cast pressure: 1021 dbar	Out of Water: 01:14

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	027:20	027:50	1021	1020	
2	30:58	31:18	901	900	
3	34:05	34:25	799	800	
4	36:00	36:20	749	750	
5	38:08	38:28	701	700	
6	41:10	41:30	600	600	
7	44:05	44:35	500	500	
8	47:00	47:20	401	400	
9	49:05	49:25	349	350	
10	50:50	51:10	300	300	
11	52:40	53:00	251	250	
12	54:10	54:30	224	225	
13	55:35	55:55	200	200	
14	56:55	57:20	173	175	
15	58:30	58:50	150	150	
16	59:50	60:10	123	125	
17	01:01:05	01:01:35	114	115	
18	02:35	03:00	100	100	
19	04:25	04:45	74	75	
20	05:40	06:00	60	60	
21	07:00	07:20	43	45	
22	08:40	09:05	26	25	
23	12:55	13:15	6	[5]	
24		25	6	[5]	

Hawaii Ocean Time Series			Station #: 1	Cast #: 1	Box #: 2
Salinity Sample Log Sheet			Cruise #: HOT-268	Sampler: JG/DM/TK	
Niskin #	Depth	Serial #	Comments		
1	1020	25			
2	900	26			
3	800	27			
4	750	28			
5	700	29			
6	600	30			
7	500	31			
8	400	32			
9	350	33			
10	300	34			
11	250	35			
12	225	36			
13	200	37			
14	175	38			
15	150	39			
16	125	40			
17	115	41			
18	100	42			
19	75	43			
20	60	44			
21	45	45			
22	25	46			
23	5	47			
24	5	48			

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G-1056	Bottle type 12L	SST 24.2	Operator JG/WD
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer

Mixed Layer: 105
 Sal Min: 500
 O₂ Min: 770

Station: 2	Cast: 1
Latitude start: 22° 45.027'N end: 22° 45.038'N	Longitude start: 158° 1.119'W end: 158° 1.129'W
Depth of water: 4745 meters	Date (GMT): 12-16-14
Pressure on Deck	Time:
Begin: 0.05 End: 0.11	Start Log: 11:47 In Water: 11:57 Out of Water: 13:10
Max cast pressure: 1023 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	12:37:25	12:37:45	1018	1020	
2	12:48:05	48:25	500	500	Sal Min
3	55:00	55:20	175	175	
4	56:30	56:50	150	150	
5	57:55	59:15	126	125	
6		:25	126	125	
7		:35	125	125	
8	59:40	13:00:00	100	100	
9		:10	100	100	
10		:20	100	100	
11	13:01:25	01:45	75	75	
12		:55	74	75	
13		02:05	74	75	
14	03:20	03:40	45	45	
15		:50	45	45	
16		04:00	45	45	
17	05:00	05:20	26	25	
18		:30	25	25	
19		:40	25	25	
20	07:35	07:55	7	5	
21		08:05	5	5	
22		:15	6	5	
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 1	Box #: 3
Salinity Sample Log Sheet			Cruise #: HOT-268	Sampler: WD/JS/NF	
Niskin #	Depth	Serial #	Comments		
1	1020	49			
2		50	Sal Min		
3	175	51			
4	150	52			
5	125	53			
6	125	54			
7	125	55			
8	100	56			
9	100	57			
10	100	58			
11	75	59			
12	75	60			
13	75	61			
14	45	62			
15	45	63			
16	45	64			
17	25	65			
18	25	66			
19	25	67			
20	5	68			
21	5	69			
22	5	70			
23					
24					

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G5000GPS	Bottle type 12L	SST 24.51	Operator WD
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer
 sal min: 490
 mixed: 100

Station: 2	Cast: 2
Latitude start: 22°45.017'N end: 22°45.001'N	Longitude start: 158°0.019'W end: 158°0.032'W
Depth of water: 4743 meters	Date (GMT): 12 / 16 / 15
Pressure on Deck	Time:
Begin: 0.07	Start Log: 14:54
End: -0.12 *Deck box error	In Water: 14:58
Max cast pressure: 4804 dbar	Out of Water: 19:12

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		16:53:30	4804	4800	~9 m off → Altimeter not working
2	16:58:25	58:45	4602	4600	
3	17:09:30	17:09:50	4500	4500	
4	12:30	12:50	4399	4400	
5		17:30	4202	4200	
6		22:45	3998	4000	
7		27:45	3801	3800	
8		32:45	3600	3600	
9	36:55	37:15	3400	3400	
10	41:25	41:45	3198	3200	
11	47:20	47:40	3001	3000	
12	54:45	55:05	2799	2800	
13		18:01:15	2600	2600	
14	18:07:00	07:20	2400	2400	
15	12:55	13:15	2201	2200	
16	19:00	19:20	1998	2000	
17	25:05	25:25	1800	1800	
18	30:40	31:00	1601	1600	
19	36:50	37:10	1399	1400	
20	42:50	43:10	1200	1200	
21	48:50	49:10	998	1000	
22	54:15	54:35	750	750	
23	59:45	19:00:05	498	500	
24	11:00	11:20	4	5	

Hawaii Ocean Time Series		Station #: 2	Cast #: 2	Box #: 3/4
Salinity Sample Log Sheet		Cruise #: HOT- 268	Sampler: WD/JS/NF	
Niskin #	Depth	Serial #	Comments	
1	4800	71		
2	4600	72		
3	4500	73		
4	4400	74		
5	4200	75		
6	4000	76		
7	3800	77		
8	3600	78		
9	3400	79		
10	3200	80		
11	3000	81		
12	2800	82		
13	2600	83		
14	2400	84		
15	2200	85		
16	2000	86		
17	1800	87		
18	1600	88		
19	1400	89		
20	1200	90		
21	1000	91		
22	750	92		
23	500	93		
24	5	94		

Hawaii Ocean Time Series			Station #: 2	Cast #: 2	Box #: 4/5
Salinity Sample Log Sheet			Cruise #: HOT- 268	Sampler: VDTS/NF	
Niskin #	Depth	Serial #	Comments		
1	4800	95			
2	4600	96			
3	4500	97			
4	4400	98			
5	4200	99			
6	4000	100			
7	3800	101			
8	3600	102			
9	3400	103			
10	3200	104			
11	3000	105			
12	2800	106			
13	2600	107			
14	2400	108			
15	2200	109			
16	2000	110			
17	1800	111			
18	1600	112			
19	1400	113			
20	1200	114			
21	1000	115			
22	750	116			
23	500	117			
24	5	118			

The signature is written vertically in the right side of the log sheet, overlapping the 'Comments' column. It appears to be a stylized name, possibly 'D. J. ...'.

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G1000GPS	Bottle type 12L	SST 24.53	Operator WD
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer
 mixed: 115
 sal min: 460

Station: 2	Cast: 3
Latitude start: 22° 49.005' N end: 22° 44.992'	Longitude start: 157° 59.989' W end: 157° 59.999'
Depth of water: 4743 meters	Date (GMT): 12 16 14
Pressure on Deck	Time:
Begin: 0.05 End: 0.10	Start Log: 23:05 In Water: 23:07 <u>12/17/14</u> Out of Water: 00:33
Max cast pressure: 1021 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		23:39:30	1021	1020	
2		41:30	1011	1011	
3		45:20	849	847	
4	43 50:30	50:50	801	800	
5	43 52:30	52:50	771	771	
6	55:15	55:35	725	725	
7	56:55	57:15	694	693	
8	59:06	59:26	660	660	
9	00:01:05	00:01:25	631	631	
10	03:10	03:30	580	581	
11	05:10	05:30	527	526	
12	07:25	07:45	478	478	
13	08:50	09:10	460	460	
14	10:55	11:15	414	414	
15	12:55	13:15	369	369	
16	14:45	15:15	335	335	
17	16:30	16:50	310	310	
18	18:25	18:55	256	256	
19	20:25	20:45	224	225	
20	21:50	22:10	205	204	
21	24:10	24:30	141	142	
22	25:35	25:55	125	125	
23	26:45	27:05	118	117	
24	30:45	31:05	26	25	

Station: <u>2</u>	Cast: <u>3</u>
Latitude: <u>22°48'00.5"N</u>	Longitude: <u>157°59'09.9"W</u>
Date: <u>12/16/14</u>	Time (GMT): <u>23:05</u>
Operator: <u>WD</u>	

$\delta\theta$	$\sigma\theta$	Depth
700	20.76	_____
650	21.28	_____
600	21.80	_____
550	22.33	_____
500	22.85	_____
450	23.37	_____
400	23.90	<u>117</u>
350	24.42	<u>142</u>
300	24.95	<u>204</u>
250	25.47	<u>256</u>
200	26.00	<u>335</u>
180	26.21	<u>369</u>
160	26.42	<u>414</u>
140	26.63	<u>478</u>
130	26.73	<u>526</u>
120	26.84	<u>581</u>
110	26.94	<u>631</u>
100	27.05	<u>693</u>
90	27.16	<u>771</u>
80	27.26	<u>847</u>
70	27.37	<u>1011</u>

S _{max}	_____
S _{min}	<u>460</u>
S _{max}	_____
S _{min}	_____

O _{max}	<u>125</u>
O _{min}	<u>260</u>
O _{max}	<u>310</u>
O _{min}	<u>800</u>
O _{max}	_____

F _{max}	_____
F _{min}	_____
F _{max}	_____
F _{min}	_____
F _{max}	_____

Bottle	Depth
1	<u>1020</u>
2	<u>1011</u>
3	<u>847</u>
4	<u>800</u>
5	<u>771</u>
6	<u>725</u>
7	<u>693</u>
8	<u>660</u>
9	<u>631</u>
10	<u>581</u>
11	<u>526</u>
12	<u>478</u>
13	<u>460</u>
14	<u>414</u>
15	<u>389</u>
16	<u>335</u>
17	<u>310</u>
18	<u>256</u>
19	<u>225</u>
20	<u>204</u>
21	<u>142</u>
22	<u>1125</u>
23	<u>117</u>
24	<u>125</u>

560

125

25

Hawaii Ocean Time Series			Station #: 2	Cast #: 3	Box #: 5/6
Salinity Sample Log Sheet			Cruise #: HOT- 268	Sampler:	
Niskin #	Depth	Serial #	Comments		
1	1021	119			
2	1011	120			
3	845	121			
4	800	122			
5	771	123			
6	725	124			
7	693	125			
8	660	126			
9	631	127			
10	581	128			
11	528	129			
12	478	130			
13	460	131			
14	414	132			
15	369	133			
16	335	134			
17	310	135			
18	256	136			
19	225	137			
20	204	138			
21	142	139			
22	125	140			
23	117	141			
24	25	142			

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G1000GPS	Bottle type 12L	SST 24.69	Operator JG
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer

Mixed Layer: 120
 Sal Min: 440
 O₂ Min: 800

Station: 2	Cast: 4
Latitude start: 22 44.974 end: 22 44.974	Longitude start: 157 59.971 end: 157 59.977
Depth of water: 4743 meters	Date (GMT): 12 / 17 / 14
Pressure on Deck	Time:
Begin: -0.05 End: 0.12	Start Log: 1:23 In Water: 02:12 Out of Water: 03:15
Max cast pressure: 1020 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	02:44:50	02:45:10	1018	1020	
2	02:56:15	02:56:35	439	440	Sal Min
3	58:40	59:00	350	350	
4		59:15	350	350	
5	03:01:40	03:02:00	249	250	
6	03:25	03:45	198	200	
7	04:36	04:50	175	175	
8	05:35	05:55	149	150	
9	06:40	07:00	123	125	
10	07:40	08:00	100	100	
11	09:10	09:30	75	75	
12		09:40	74	75	
13	11:00	11:20	44	45	
14		11:30	45	45	
15	12:25	12:45	24	25	
16		12:55	23	25	
17	13:55	14:15	8	5	
18		14:25	7	5	
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 4	Box #: 6/7
Salinity Sample Log Sheet			Cruise #: HOT-268	Sampler: J6/DM	
Niskin #	Depth	Serial #	Comments		
1	1020	143			
2	440	144			
3	350	145			
4	350	146			
5	250	147			
6	200	148			
7	175	149			
8	150	150			
9	125	151			
10	100	152			
11	75	153			
12					
13	45	154			
14					
15	25	155			
16					
17	5	156			
18					
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G1000 G125	Bottle type 12L	SST 24.4	Operator JG
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer

Mixed Layer: 110
 Sal Min: 435
 O₂ Min: 760

Station: 2	Cast: 5
Latitude start: 22 45.027 end: 22 44.972	Longitude start: 158 0.019 end: 158 0.0
Depth of water: 4743 meters	Date (GMT): 12 117 114
Pressure on Deck	Time:
Begin: 0.07 End: 0.07	Start Log: 05:49 In Water: 05:53 Out of Water: 07:05
Max cast pressure: 1020 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	06:21:55	22:15	1020	1020	
2		22:25	1020	1020	
3	29:45	30:05	750	750	
4		30:15	751	750	
5	37:40	38:00	500	500	
6		38:10	499	500	
7	40:40	41:00	434	435	Sal Min
8	43:55	44:15	349	350	
9		44:25	350	350	
10	48:00	48:20	249	250	
11		48:30	249	250	
12		48:40	247	250	
13	50:30	50:50	200	200	
14	52:00	52:20	175	175	
15	53:30	53:50	151	150	
16	55:10	55:30	124	125	
17	56:10	56:30	119	120	
18		56:40	119	120	
19	57:50	58:10	100	100	
20	59:20	59:40	74	75	
21	07:00:50	07:01:10	45	45	
22	02:10	02:30	25	25	
23		02:40	25	25	
24	03:40	04:00	5	5	

Hawaii Ocean Time Series		Station #: 2	Cast #: 5	Box #: 7/8
Salinity Sample Log Sheet		Cruise #: HOT-268	Sampler: JG/DM/TK	
Niskin #	Depth	Serial #	Comments	
1	1020	157		
2				
3				
4				
5				
6				
7	435	158	Sal Min	
8	350	159		
9	350	160		
10				
11				
12	250	161		
13	200	162		
14	175	163		
15	150	164		
16	125	165		
17				
18				
19	100	166		
20	75	167		
21	45	168		
22	25	169		
23				
24	5	170		

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GRS	12L	24.63	JG

- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer

Mixed Layer: 102
 O₂ Min: 790
 Sal Min: 500

Station: 2	Cast: 6
Latitude start: 22 45.150 end: 22 45.167	Longitude start: 157 59.089 end: 157 59.088
Depth of water: 4735 meters	Date (GMT): 12 117 114
Pressure on Deck	Time:
Begin: 0.04 End: 0.02	Start Log: 09:07 In Water: 09:17 Out of Water: 10:32
Max cast pressure: 1021 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2	09:50:30	09:50:50	791	790	O ₂ min
3	09:57:00	09:57:20	500	500	Sal min
4	10:03:55	10:04:15	201	200	
5	06:40	07:00	176	175	
6	08:10	08:30	165	165	
7	09:55	10:15	150	150	
8	11:40	12:00	129	130	
9	13:10	13:30	126	125	
10	14:35	14:55	115	115	
11	15:45	16:05	110	110	
12	17:05	17:25	100	100	
13	18:25	18:45	90	90	
14	19:35	19:55	84	85	
15	21:05	21:25	75	75	
16	22:35	22:55	59	60	
17	24:10	24:30	45	45	
18	25:40	26:00	35	35	
19	27:00	27:20	26	25]
20		30	26	25	
21		40	26	25	
22	28:35	28:55	13	15	
23	30:55	31:15	8	5]
24		25	8	5	

Hawaii Ocean Time Series		Station #: 2	Cast #: 6	Box #: 8/9
Salinity Sample Log Sheet		Cruise #: HOT-268		Sampler: JG/DM/TK
Niskin #	Depth	Serial #	Comments	
1	1020	171		
2	790	172	O ₂ min	
3	500	173	Sal min	
4	200	174		
5	175	175		
6	165	176		
7	150	177		
8	130	178		
9	125	179		
10	115	180		
11	110	181		
12	100	182		
13	90	183		
14	85	184		
15	75	185		
16	60	186		
17	45	187		
18	35	188		
19	25	189		
20	25	190		
21				
22	15	191		
23	5	192		
24	5	193		

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G1000GPS	Bottle type 12L	SST 24.59	Operator JG
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer

Mixed Layer: 108
 Sal Min: 480
 O₂ Min: 800

Station: 2	Cast: 7
Latitude start: 22° 45.200' N end: 22° 45.016' N	Longitude start: 158° 1.253' W end: 158° 1.130' W
Depth of water: 4748 meters	Date (GMT): 12 / 17 / 14
Pressure on Deck	Time:
Begin: 0.04	Start Log: 12:00
End: 0.11	In Water: 12:06
Max cast pressure: 1021 dbar	Out of Water: 13:16

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	12:36:20	12:36:40	1021	1020	
2	43:05	43:25	770	770	
3		:35	770	770	
4	49:45	50:05	498	500	
5		:15	498	500	
6	51:55	52:15	482	480	Sal Min
7	54:45	55:05	398	400	
8		:15	397	400	
9	59:00	58:20	300	300	
10		:30	300	300	
11	13:02:35	13:02:55	125	125	
12		03:05	124	125	
13	04:55	05:15	99	100	
14		:25	99	100	
15	07:05	07:25	74	75	
16		:35	74	75	
17	09:25	09:45	47	45	
18		:55	47	45	
19	11:30	11:50	25	25	
20		12:00	25	25	
21		:10	25	25	
22	15:05	15:25	7	5	
23		:35	7	5	
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 7	Box #: 9
Salinity Sample Log Sheet			Cruise #: HOT-268	Sampler: WD/JS/NF	
Niskin #	Depth	Serial #	Comments		
1	1020	194			
2					
3					
4					
5					
6	480	195	Sal Min		
7					
8					
9					
10					
11	125	196			
12	125	197			
13	100	198			
14	100	199			
15	75	200			
16	75	201			
17	45	202			
18	45	203			
19	25	204			
20	25	205			
21					
22	5	206			
23	5	207			
24					

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G1000 GPS	Bottle type 12L	SST 24.52	Operator WD
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer

mixed: 104
 sal min: 485
 O₂ min: 780

Station: 2	Cast: 8
Latitude start: 22°45.013'N end: 22°45.017'N	Longitude start: 158°0.013'W end: 158°0.015'W
Depth of water: 4743 meters	Date (GMT): 12 / 17 / 14
Pressure on Deck	Time:
Begin: 0.06	Start Log: 14:55
End: 0.11	In Water: 15:03
Max cast pressure: 1022 dbar	Out of Water: 16:15

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
(1)	15:32:35	15:32:55	1022	[1000]	
2		33:05	1021	[1000]	
3	39:05	39:25	749	[750]	
4		:35	750	[750]	
5	45:20	45:40	499	[500]	
6		:50	500	[500]	
(7)	47:00	47:20	485	485	Sal Min
8	50:50	51:10	348	[350]	
9		:20	348	[350]	
10	55:55	56:15	146	145	
11	57:00	57:20	140	140	
12	58:05	58:25	135	135	
13	59:10	59:30	131	130	
(14)	16:00:25	16:00:45	124	125	
15	01:35	01:55	120	120	
16	02:40	03:00	115	115	
17	03:55	04:15	110	110	
18	05:00	05:20	106	105	
19	06:05	06:25	99	[100]	
20		:35	100	[100]	
21	07:20	07:40	94	95	
22	08:25	08:45	90	90	
23	11:45	12:05	24	25	
(24)	13:40	14:00	4	5	

Hawaii Ocean Time Series		Station #: 2	Cast #: 8	Box #: 9
Salinity Sample Log Sheet		Cruise #: HOT-268	Sampler: WD/JS/NF	
Niskin #	Depth	Serial #	Comments	
1	1000	208		
2				
3				
4				
5				
6				
7	485	209		
8				
9				
10				
11				
12				
13				
14	125	210		
15				
16				
17				
18				
19				
20				
21				
22				
23				
24	5	211		

HOT-268

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G10006B	Bottle type 12L	SST 24.70	Operator WD
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer

Sal min: 500
 mixed: 90
 O₂ min: 780

Station: 2	Cast: 9
Latitude start: 22°44.968' N end: 22°45.025' N	Longitude start: 158°0.037' W end: 158°0.021' W
Depth of water: 4743 meters	Date (GMT): 12 / 17 / 14
Pressure on Deck	Time:
Begin: 0.09	Start Log: 17:55
End: 0.05	In Water: 18:00
Max cast pressure: 1020 dbar	Out of Water: 19:11

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	18:28:50	18:29:10	1017	1000	
2	40:45	41:05	499	500	Sal Min
3	49:00	49:20	172	[175]	
4		1:30	173	[175]	
5	51:15	51:35	149	[150]	
6		:45	150	[150]	
7	52:25	52:45	139	140	
8	53:25	53:45	135	135	
9	54:25	54:45	131	130	
10	55:25	55:45	125	[125]	
11		:55	124	[125]	
12	56:40	57:00	120	120	
13	57:45	58:05	115	115	
14	58:55	59:15	110	110	
15	59:50	19:00:10	107	105	
16	19:00:50	01:10	101	[100]	
17		:20	100	[100]	
18	02:10	02:30	95	95	
19	03:10	03:30	89	90	
20	04:35	04:55	74	75	
21	06:40	07:00	47	45	
22	08:30	08:50	24	[25]	
23		09:00	24	[25]	
24	10:15	10:35	5	5	

Hawaii Ocean Time Series		Station #: 2	Cast #: 9	Box #: 9*10
Salinity Sample Log Sheet		Cruise #: HOT-268	Sampler: WD JS NF	
Niskin #	Depth	Serial #	Comments	
①	1000	212		
②	500	213	SalMin	
③	175	214		
4				
⑤	150	215		
6				
7				
8				
9				
⑩	125	216		
11				
12				
13				
14				
15				
⑩	100	217		
17				
18				
19				
⑩	75	218		
⑩	45	219		
⑩	25	220		
23				
⑩	5	221		

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GPS	12L	24.53	WD

- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer

mixed: 110
 Sal min: 490
 O₂ min:

Station: 2	Cast: 10
Latitude start: 22°48.254' N end: 22°48.278	Longitude start: 158°3.247' W end: 158°3.254
Depth of water: 4741 meters	Date (GMT): 12/17/14
Pressure on Deck	Time:
Begin: 0.08	Start Log: 21:16
End: 0.12	In Water: 21:21
Max cast pressure: 1021 dbar	Out of Water: 22:25

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	21:49:35	21:49:55	1019	1000	
2	22:00:10	22:00:30	490	490	Sal Min
3	07:00	07:20	175	[175]	
4		:30	175	[175]	
5	09:10	09:30	151	[150]	
6		:40	151	[150]	
7	11:10	11:30	125	[125]	
8		:40	124	[125]	
9	13:30	13:55	102	[100]	
10		14:05	102	[100]	
11	16:00	16:20	75	[75]	
12		:30	74	[75]	
13	18:20	18:40	45	[45]	
14		:50	46	[45]	* latch for bottle 14 did not release until out of water
15	20:30	20:50	25	[25]	
16		21:00	24	[25]	
17		:10	24	[25]	
18	23:35	23:55	6	[5]	
19		24:05	6	[5]	
20					
21					
22					
23					
24					

Hawaii Ocean Time Series		Station #: 2	Cast #: 10	Box #: 10
Salinity Sample Log Sheet		Cruise #: HOT- 268	Sampler: WD/SS/NF	
Niskin #	Depth	Serial #	Comments	
(1)	1000	222		
(2)	490	223		
3				
4				
(5)	150	224		
6				
7	125			
8	125			
9				
10				
11				
12				
13				
14				
15				
16				
17				
(18)	5	225		
(19)	5			
20				
21				
22				
23				
24				

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G100GAS	Bottle type 12L	SST 24.70	Operator WD/JG
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- Pinger
- Altimeter
- Transmissometer
- BEACH Sea Tech Fluorometer
- OTG Seapoint Fluorometer
- ISUS
- PO Fluorometer
- mixed: 120
- sal min: 480
- O₂ min: 770

12/18/14

Station: 2	Cast: 11
Latitude start: 22°48.332'N end: 22 48.338	Longitude start: 158°2.747'W end: 158 2.744
Depth of water: 4740 meters	Date (GMT): 12/17/14
Pressure on Deck	Time:
Begin: 0.06 End: 0.03	Start Log: 23:51 In Water: 73:58 12/18/14
Max cast pressure: 1020 dbar	Out of Water: 01:15

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
①	00:29:15	00:29:35	1019	1000	
②	41:00	41:20	480	480	Sal Min
③	44:35	44:55	351	350	
4	47:15	47:35	274	275	
⑤	49:10	49:30	249	[250]	
6		49:40	249	[250]	
7	50:55	51:15	225	225	
8	52:35	52:55	200	200	
⑨	54:40	55:00	149	150	
10	55:45	56:05	139	140	
11	57:05	57:25	128	130	
⑫	58:20	58:40	125	125	
13	59:35	59:55	119	120	
14	01:00:45	01:01:05	115	115	
15	02:15	02:35	109	110	
16	03:20	03:40	104	105	
⑬	04:40	05:00	99	100	
18	05:45	06:05	95	95	
19	06:45	07:05	90	90	
⑳	08:10	08:30	75	75	
㉑	10:10	10:30	44	45	
㉒	11:55	12:15	24	[25]	
23		:25	23	[25]	
㉔	13:50	14:10	8	5	

Hawaii Ocean Time Series		Station #: 268	Cast #: 11	Box #: 105
Salinity Sample Log Sheet		Cruise #: HOT- 268		Sampler:
Niskin #	Depth	Serial #	Comments	
(1)	1000	226		
(2)	480	227	sal min	
(3)	350	228		
4				
(5)	250	229		
6				
7				
8				
(9)	150	230		
10				
11				
(12)	125	231		
13				
14				
15				
16				
(17)	100	232		
18				
19				
(20)	75	233		
(21)	45	234		
(22)	25	235		
23				
(24)	5	236		

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GPS	12L	24.67	JG/DM

- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 TSUS
 PO Fluorometer

Mixed Layers: 115
 Sal Min: 455
 O₂ Min: 770

Station: 2	Cast: 12
Latitude start: 22 48.279 end: 22 48.308	Longitude start: 158 2.750 end: 158 2.751
Depth of water: 4739 meters	Date (GMT): 12 / 18 / 14
Pressure on Deck	Time:
Begin: 0.04 End: 0.06	Start Log: 02:53 In Water: 02:56 Out of Water: 04:08
Max cast pressure: 1020 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		03:26:10	1019	1020	
2		03:33:30	699	700	
3		03:39:10	455	455	Sal Min
4	45:05	45:25	176	175	
5	46:35	46:55	149	150	
6	47:30	47:50	144	145	
7	48:25	48:45	139	140	
8	49:40	50:00	135	135	
9	50:40	51:00	129	130	
10	51:40	52:00	124	125	
11	52:40	53:00	118	120	
12	53:35	53:55	114	115	
13	54:35	54:55	110	110	
14	55:40	56:00	104	105	
15	56:40	57:00	98	100	
16	57:50	58:10	94	95	
17	58:50	59:10	90	90	
18	59:50	04:00:10	86	85	
19	00:55	01:15	78	80	
20	01:55	02:15	73	75	
21	03:45	04:05	45	45	
22	05:15	05:35	25	25	[25]
23		05:45	24	25	[25]
24	07:50	08:10	7	5	

Hawaii Ocean Time Series		Station #: 2	Cast #: 12	Box #: 10
Salinity Sample Log Sheet		Cruise #: HOT-268		Sampler: JG/DM/TK
Niskin #	Depth	Serial #	Comments	
1	1020	237		
2				
3	455	238	Sal Min	
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24	5	239		

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G10006PS	Bottle type 12L	SST 24.56	Operator JG
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer

Mixed Layer: 95
 Sal Min: 460
 O₂ Min: 770

Station: 2	Cast: 13
Latitude start: 22 45.275 end: 22 45.019	Longitude start: 158 0.559 end: 157 59.994
Depth of water: 4744 meters	Date (GMT): 12 / 18 / 14
Pressure on Deck	Time:
Begin: 0.06 End: 0.12	Start Log: 05:43 In Water: 06:02 Out of Water: 07:03
Max cast pressure: 1021 dbar	

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	06:31:30	06:31:50	1020	1020	
2	42:55	43:15	460	460	Sal Min
3	49:05	49:25	174	[175]	
4		49:35	175	[175]	
5	50:35	50:55	149	[150]	
6		51:05	148	[150]	
7	51:55	52:15	135	135	
8	52:55	53:15	125	[125]	
9		53:25	126	[125]	
10	54:05	54:25	114	115	
11	55:10	55:30	99	[100]	
12		55:40	99	[100]	
13	56:30	56:50	84	85	
14	57:25	57:45	74	[75]	
15		57:55	74	[75]	
16	58:40	59:00	58	60	
17	06:59:40	07:00:00	44	[45]	
18		00:10	44	[45]	
19	01:05	01:25	24	[25]	
20		01:35	24	[25]	
21		01:45	24	[25]	
22	02:35	02:55	6	[5]	
23		03:05	6	[5]	
24					

Hawaii Ocean Time Series		Station #: 2	Cast #: 13	Box #: 10/11
Salinity Sample Log Sheet		Cruise #: HOT- 268	Sampler: JG/DM/TK	
Niskin #	Depth	Serial #	Comments	
1	1000	240		
2	460	241	Sal Min	
3	175	242		
4	175	243		
5	150	244		
6	150	245		
7	135	246		
8	125	247		
9	125	248		
10	115	249		
11	100	250		
12	100	251		
13	85	252		
14	75	253		
15	75	254		
16	60	255		
17	45	256		
18	45	257		
19	25	258		
20	25	259		
21				
22	5	260		
23	5	261		
24				

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G500GPS	Bottle type 12L	SST 24.57	Operator JG
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- Pinger
- Altimeter
- Transmissometer
- BEACH Sea Tech Fluorometer
- OTG Seapoint Fluorometer
- ISUS
- PO Fluorometer
-

Mixed Layer: 90
 Sal Min: 475
 O₂ Min: 800

Station: 2	Cast: 14
Latitude start: 22 45.009 end: 22 45.003	Longitude start: 158 0.004 end: 158 0.014
Depth of water: 4742 meters	Date (GMT): 12 / 18 / 14
Pressure on Deck	Time:
Begin: 0.07 End: -0.15	Start Log: 08:49 In Water: 09:02 Out of Water: 12:32
Max cast pressure: 4740 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		10:48:50	4740	4800	
2	11:03:35	03:55	4000	4000	
3		44:05	4001	4000	
4	11:22:30	11:22:50	3001	3000	
5		23:00	3001	3000	
6	41:25	41:45	1999	2000	
7		41:55	2000	2000	
8	12:00:25	12:00:45	999	1000	
9	05:30	05:50	800	800	O ₂ min
10	12:05	12:25	473	475	Sal min
11	16:05	16:25	310	310	O ₂ max
12	19:20	19:40	175	175	
13	20:45	21:05	149	150	
14	22:20	22:40	124	125	
15	23:45	24:05	100	100	
16	25:10	25:30	76	75	
17	26:35	26:55	45	45	
18	27:55	28:15	25	25	
19	31:20	31:40	6	5	
20		31:50	6	5	
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 14	Box #: 11/12
Salinity Sample Log Sheet			Cruise #: HOT- 268	Sampler:	
Niskin #	Depth	Serial #	Comments		
1	4800	262			
2	4000	263			
3					
4	3000	264			
5					
6	2000	265			
7					
8					
9	800	266	O ₂ min		
10	475	267	Sal min		
11	310	268	O ₂ max		
12	175	269			
13	150	270			
14	125	271			
15	100	272			
16	75	273			
17	45	274			
18	25	275			
19	5	276			
20	5	277			
21					
22					
23					
24					

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G200GPS	Bottle type 12 L	SST 24.58	Operator WD
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- Pinger
- Altimeter
- Transmissometer
- BEACH Sea Tech Fluorometer
- OTG Seapoint Fluorometer
- ISUS
- PO Fluorometer
- mixed: 107

Station: 50	Cast: 1
Latitude start: 22°45.834'N end: 22°45.744'N	Longitude start: 157°56.675'W end: 157°56.672'W
Depth of water: 4714 meters	Date (GMT): 12 / 18 / 14
Pressure on Deck	Time:
Begin: 0.09	Start Log: 22:24
End: 0.06	In Water: 22:32
Max cast pressure: 200 dbar	Out of Water: 23:45

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	23:17:05	23:17:20	200	200	
2	18:30	18:45	189	190	
3	19:45	20:00	181	180	
4	21:02	21:17	171	170	
5	22:25	22:40	160	160	
6	23:30	23:45	152	150	
7	24:24	24:39	146	145	
8	25:20	25:35	140	140	
9	26:20	26:35	134	135	
10	27:15	27:30	129	130	
11	28:05	28:20	125	125	
12	29:10	29:25	119	120	
13	30:09	30:15	115	115	
14	30:55	31:10	110	110	
15	31:50	32:05	105	105	
16	32:50	33:05	100	100	
17	33:40	32:55	96	95	
18	34:30	34:45	90	90	
19	35:25	35:40	85	85	
20	36:25	36:40	80	80	
21	37:25	37:40	74	75	
22	39:20	39:40	44	45	
23	40:55	40:15	24	25	
24		44:10	3.0	3.0	

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G50006B	Bottle type 12L	SST 25.19	Operator JG
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer

Mixed Layer: 70
Sal Min: 390

Station: 6	Cast: 1
Latitude start: 21 50.776 end: 21 50.818	Longitude start: 158 21.943 end: 158 21.803
Depth of water: 2436 meters	Date (GMT): 12 / 19 / 14
Pressure on Deck	Time:
Begin: 0.09 End: 0.06	Start Log: 06:40 In Water: 06:48 Out of Water: 08:52
Max cast pressure: 2450 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		07:50:30	2449	2500	
2	08:00:50	08:01:16	1999	2000	
3	08:11:55	12:15	1499	1500	
4	22:50	23:10	1000	1000	
5	33:10	33:30	498	500	
6	40:40	41:00	174	175	
7	42:30	42:50	149	150	
8	44:00	44:20	123	125	
9	45:20	45:40	99	100	
10	46:40	47:00	74	75	
11	48:20	48:40	46	45	
12	49:40	50:00	24	25	
13	51:00	51:20	5	5	
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 6	Cast #: 1	Box #: 12/13
Salinity Sample Log Sheet			Cruise #: HOT-258	Sampler: DM/TK	
Niskin #	Depth	Serial #	Comments		
1	2500	278			
2	2000	279			
3	1500	280			
4	1000	281			
5	500	282			
6	175	283			
7	150	284			
8	125	285			
9	100	286			
10	75	287			
11	45	288			
12	25	289			
13	5	290			
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

CTD Configurations

CTD: 850
 Deck Unit: 111361
 Pressure: 1430
 Carousel: 518
 T₁: 1416 T₂: 5519
 C₁: 3984 C₂: 2218
 O₁: ⁴³⁰918 O₂: ⁴³⁰262
 Pump₁: 968 Pump₂: 368
 Fluorometer: 3602
 Altimeter: 9149
 Bucket Thermometer: 201002
 Transmissometer: 1431 DR

Cruise Participant

S. Curless - Chief Sci.

Natalie Farinholz - WH, RA

D. Sadler

Tyler Kueffner - Volunteer

L. Fujieki

B. Maillot

T. Clemente

W. Deppe

T. Young

J. Snyder

J. Smith

B. Wai

A. Nelson

E. Shimabukuro

J. Gum

D. McCoy

B. Watkins

K. Dogget

Jackie Mueller

Ger van den Engh

Prosper Zigah

Randy Bundy

1910

2000

2040 Fin

2155 Wei

2227 Wei

2240 Hyf

2319 Hyf

2329 Sta

0105 Enc

0125 Tra

0132 Arr

0142 Depl

0135 Depi

0107 Rep

0147 Star

0157 Sho

cam

erro

HOT-268

15 December 2014

1910 Depart from Sang Harbor

2000 Safety briefing w/ Captain

2040 Fire/Abandon ship drills

2155 Weight cast to 500 m

2227 Weight cast recovered

2240 Hyperpro deployed - $21^{\circ} 20.631' N$ $158^{\circ} 16.360' W$

2319 Hyperpro recovered

2329 Start Station 1 Cast 1 - G1000 GPS

16 December 2014

inhol + -UH, RA
-Volunteers

0105 End Station 1 Cast 1 - 24 marks okay

0125 Trans + to Station ALOHA

0932 Arrive Sta ALOHA

0942 Deploy Sed Traps at $22^{\circ} 43.92' N$, $158^{\circ} 01' W$

1035 Deploy repetta pump @ $22^{\circ} 44.9' N$ $158^{\circ} 11' 02' W$

1107 Repetta pump recovered

1147 Start Station 2 Cast 1 - G1000 GPS

1157 Shortly after start of cast (bats @ 10db) CTD
came out of water, swung around due to wigh operator
error, CTD reentered water unharmed.

Trawl winch, 0.681 wire used for CTD work.

Weight Cast Stats

- on deck, no tension → 370
- in air, full tension → 1470

CTD Weight

- in air: 1400
- in air (full): 1800

SEA CABLE TESTED O.K., RAW
TEST CABLE TO CTD - NO COMMS
TEST CABLE TO SPARE CTD NO COMMS
FOUND BAD SEA CABLE FUSE - REPLACE
TEST CABLE TO CTD - NO COMMS
TEST CABLE TO SPARE CTD - GOOD COMMS
TEST CABLE TO CTD - NO COMMS
UNPLUS ALTI, TRANS, FLURO, CAROUSEL
TEST CABLE TO CTD - GOOD COMMS
FOUND BAD ALTIMETER - REPLACE
HOOK UP SEA CABLE - GOOD COMMS

1311

14:15

14:20 J

14:54 S

16:53

17:00

17:11 C

18:14 E

19:20 T

20:30 R

21:00 R

22:06 W

23:35 N

HOT-268

16 December 2014

14:11 End Station 2 cast 1 - 22 marks OK

14:15 START P.P. ARRAY DEPLOYMENT
22° 45.07 158° 01.13

14:30 ISus removed

14:54 Start Station 2 Cast 2 - G5000 GPS

16:53 ~ 9m off bottom @

16:55 22° 44.992' N 158° 0.017' W

* Altimeter not working, had to do approach using the Benthos pinger

17:00 STOP AT 4600. WINCH OPERATOR NOTICED A BAD SPOT ON WIRE AT 4800 METERS, OUTER WRAP ON WIRE IS DAMAGED. PICTURES TAKEN.

17:11 CONTINUE CAST

19:14 End Station 2 Cast 2 - 24 marks ok

* Deck box error after CTD out of water & pumps turned off (lost communication)

19:20 Transit to pump tanks

20:30 Repetita Pump deployed

21:00 Repetita Pump recovered

22:06 Watkins Net Tow @ 22° 44.994' N 157° 59.975' W

2305

0034

0045

01:23

Cast delayed due to much operator pulling in slack without tension - cable payed out and then retensioned and brought in.

01:55

Cast in water at 02:12

03:25

CTD hit side of ship upon recovery while spinning, after coming out of water, CTD went back to surface and then brought back out of water. I was had 1st ship/CTD while recovering first time, causing CTD to spin into ship.

4:25

0438

0445

0549

0705

0715

0800

0810

0837

0839

07

HQT-268

16 December 2014

0005 Start Station 2 Cast 3 - 61000 GPS

17 December 2014

0034 End Station 2 cast 3 - 24 marks OK

0045 Hyperpro deployed @ 22°44.987' 157°59.992

0043 Start St. 2 Cast 4 - 61000 GPS

0045 End St. 2 cast 4 - 18 marks okay

03:25 Transit to PP array

03:26 start recovery of PP array

0438 End recovery of PP array at 22°45.83'N
158°41.50'W

0445 Transit pump run

0540 St 4 St 2 Cast 5 - 61000 GPS

0705 End St. 2 Cast 5 - 24 marks OK

0715 Start Repeta pump 22°44.982'N 158°00.00'W

0800 End repeta pump

0810 Net 100 22°45.016'N 158°00.16'W

0837 Net recovered

0839 Net is deployed

planning,
water
at

O-ring for spout on bottle 19 broke while sampling.
replaced with spare o-ring.

09:27

10:32

10:41

12:00

13:18

14:05

14:55

16:16

16:30

17:01

17:55

19:13

19:18

20:10

20:33

20:45

21:13

7 Start Station 2 Cast 6 - G1000GPS

1332 End Station 2 Cast 6 - 24 marks okay

10:41 Transit to pump tanks



1200 Start Station 2 Cast 7 - G1000GPS

1318 End Station 2 Cast 7 - 23 marks OK

1405 Deploy gas array @ $22^{\circ}45.003'N$ $158^{\circ}1.107'W$

1455 Start Station 2 Cast 8 - G1000GPS

1616 End Station 2 Cast 8

16:30 START REPETA PUMP
 $22^{\circ}45.02$ $158^{\circ}00.01$

1701 Repeta pump recovered

1755 Start Station 2 Cast 9 - G1000GPS

1913 End Station 2 Cast 9 - 24 marks OK

1918 Transit to pump tanks

2010 Net Tow $22^{\circ}48.697'N$ $158^{\circ}4.051'W$

2033 Net Tow Recovered

2045 ATE Deployed $22^{\circ}48.249'N$ $158^{\circ}3.247'W$

2113 ATE Recovered

Light

V = 4.55189

AH 0.110750

Dark

V = 0.02686

AH 55.26204

COM port 5 on Proc not gathering data at start
of cast, restarted Proc to fix problem.

HOT-268

17 December 2014

- 17 Start Station 2 Cast 10 - G1000 GPS
- 2227 End Station 2 Cast 10 - 19 marks OK
*Latch for bottle #14 did not fully
release until CTD out of water
- 2244 Deploy Net Tow @ $22^{\circ} 48.267' N$ $158^{\circ} 3.205' W$
- 2315 Net Tow recovered
- 2330 Replaced carousel head with head from
spare in attempt to troubleshoot ^{seen} latch
release problem with bottle #14 ^{recycling/intermittent}
- 2351 Start Station 2 Cast 11 - G1000 GPS
- 01:15 End Station 2 Cast 11 - 24 marks okay 18 December, 2014
- 01:24 Start Repeta Pump
- 02:30 Recovered Repeta Pump
- 02:53 Start Station 2 Cast 12 - G1000 GPS
- 04:08 End Station 2 Cast 12 - 24 marks okay
- 04:14 Transit to pump tanks
- 05:43 Start St. 2 Cast 13 - G1000 GPS
- 07:03 End St. 2 Cast 13 - 23 marks okay
- 07:12 Deploy Repeta Pump

Brass clip on niskin #3 needs replacng

FIXED CLIP SWIVEL - WORKS OK

073

15

0

12:30

13 00

135

1355

144

145:

162

164:

164:

174:

180.

180

180

180

HOT-268

18 December 2014

38 Repetta pump recovered

0757 Deploy Tow Net @ $22^{\circ}44.995'N$, $157^{\circ}59.997'W$

0849 Start st 2 Cast 14 - G5000 GPS.

All stop at 4740 dbar / 4655 m on wire
to take pictures of .680 wire damage

Took bottom depth at 4740 dbar, did not go farther

12:35 End station 2 Cast 14 - 20 marks okay

13:00 AC9 Deployed @ $22^{\circ}44.990'N$ $158^{\circ}0.015'W$

13:50 AC9 Recovered

13:55 AC9 Redeployed

14:45 AC9 Recovered @ $22^{\circ}45.011'N$ $158^{\circ}0.017'W$

14:53 Transit to Gas Array

16:25 Recovering Gas Array @ $22^{\circ}46.754'N$ $158^{\circ}9.954'W$

16:42 Gas Array recovered

16:45 Transit to Sediment Traps

17:48 Recovering Sediment Traps @ $22^{\circ}49.039'N$ $158^{\circ}17.010'W$

18:05 Sediment Trap recovered

18:07 Transit in direction of WHOTS mooring

19:59 Deploy AC9 @ $22^{\circ}45.946'N$ $157^{\circ}57.640'W$

FISHING BOAT NEAR BOWY.
 RADIO CONTACT MADE - VICIOUS CYCLE
 STATED HE HAD SUBSURFACE FISHING
 GEAR IN WATER AROUND BOWY.
 YO-YO CAST PERFORMED 1/2 MILE
 FROM BOWY, FISHING BOAT LEFT
 DURING CAST. KM DID SLOW
 FLY-BY AFTER YO-YO CAST, PICTURES
 TAKEN, NO DAMASE OBSERVED.

20
 21
 22
 22
 22
 23
 23
 000
 00
 13
 64
 64
 07
 08.5
 9

HOT-268

18 December 2014

2050 AC9 recovered

2055 AC9 redeployed

2145 AC9 recovered

2224 Start Station 50 Cast 1 - G200 GPS

2232 Start cycle #1

CLF 2251 Start cycle #2

US 2307 Start cycle #3 - Firing bottles

2347 End Station 50 Cast 1 - 24 marks OK

19 December 2014

RES 0000 Hyperpro Deployed @ $22^{\circ}45.750'N$ $157^{\circ}56.675'W$

0037 Hyperpro recovered

01 Transit to Kaena

02 Arrive at Kaena

03 Start St. 6 Cast 1 - G5000 GPS

0750 15 m off the bottom (2450 dbar) @ $21^{\circ}50.821'N$,
 $158^{\circ}21.798'W$,

08:54 End St. 6 Cast 1 - 13 marks okay

09:00 Transit to Honolulu Harbor