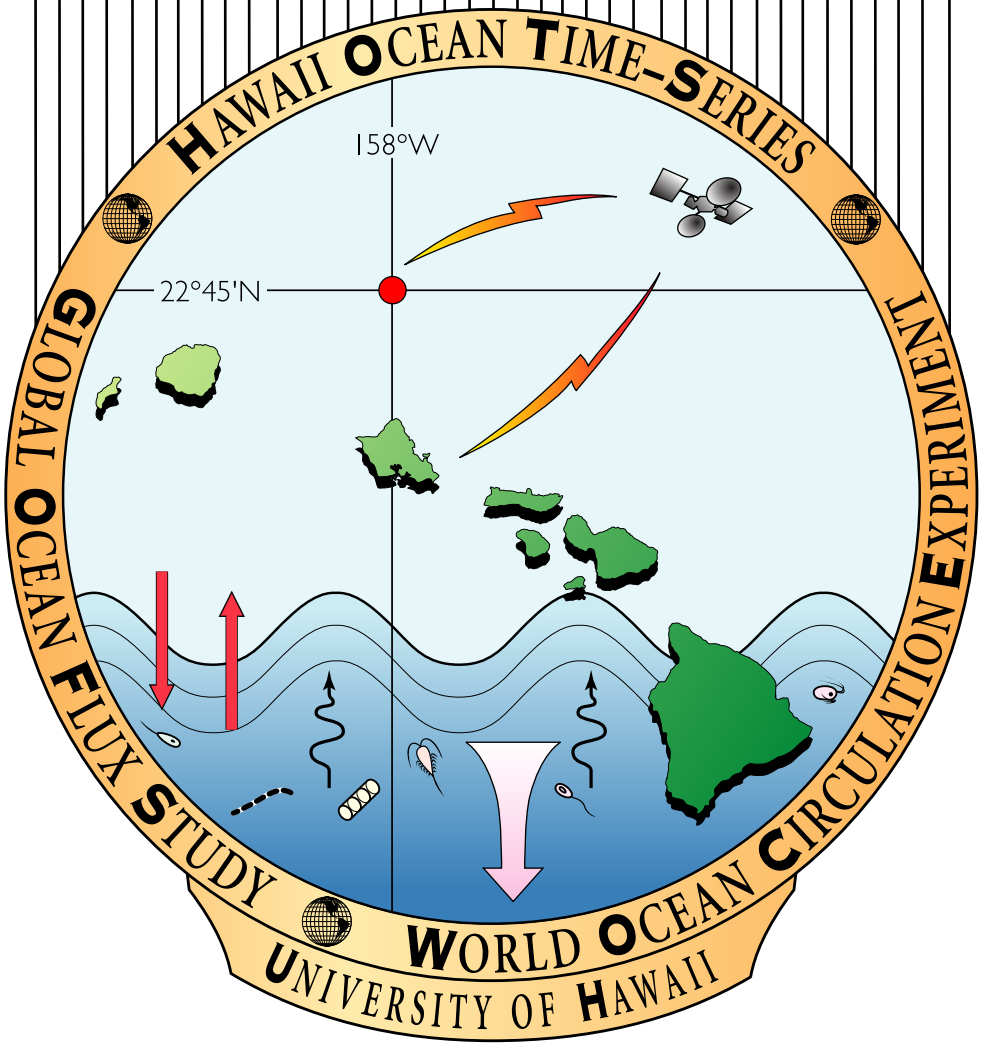
Hawaii Ocean Time-series Program

HOT 261



Hawaii Ocean Time-Series
HOT-**261**
KAHE Station Data Sheet

Station # 1 Date: 3/4/14 (HST)
Cast # 1 Time: 1420 (HST)
Operator(s): SC, BU, SG, LF, DS

Rosette Position	Desired Depth	Oxygen	Sample Temp.	DIC/ Alk	pH	DOC	Nuts	LLN/ LLP	Chl *a*	FCM
1	**1000**	1	6.3				1			
2	**900**	2	6.5				2			
3	**900**	3	6.5				3			
4	**750**	4,5,6	7.4				4A-B			
5	**700**	7	7.2				5			
6	**600**	8	7.6				6			
7	**500**	9	8.6			7	7			
8	**400**	10	9.8				8			
9	**350**	11	10.6			9	9A-B			
10	**300**	12	12.3				10			
11	**250**	13	13.7				11			
12	**225**	14	15.4				12			
13	**200**	15	17.1			13	13			
14	**175**	16	18.1			14	14		14	14A-B
15	**150**	17	19.4			15	15	15	15	15A-B
16	**125**	18	20.2			16	16A-B		16	16A-B
17	**115**	19	20.8				17			
18	**100**	20,21,22	22.0			18	18	18	18A-B	18A-B
19	**75**	23	23.4			19	19		19	19A-B
20	**60**	24	23.9				20			
21	**45**	25	24.0	21	1	21	21	21	21	21A-B
22	**25**	26	24.1	22	2	22	22		22A-B	22A-B
23	**5**	27	24.2	23	3,4,5	23	23	23	23	23A-B
24	**5**	QC	24.4							

Notes: Vents were open on niskins 20, 21, and 22
Oxygen samples not resuspended until 6:00p

Hawaii Ocean Time-series
HOT-**261**
Primary Production Data Sheet

Station # 2 Date: 03-05-14 (HST)
Cast # 1 Time: 0200 (HST)
Operator(s): SC, BU

Rosette Position	Desired Depth	Light Bottle	Chl *a*	FCM			
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			
12	**75**	5-2	12	12			
13	**75**	5-3	13	13			
14	**45**	6-1	14	14			
15	**45**	6-2	15	15			
16	**45**	6-3	16	16			
17	**25**	7-1	17	17			
18	**25**	7-2	18	18			
19	**25**	7-3	19	19			
20	**5**	8-1	20	20			
21	**5**	8-2	21	21			
22	**5**	8-3	22	22			
23							
24							

Notes:

Hawaii Ocean Time-series
HOT-**261**
WOCE Deep Data Sheet

Station # 2 Date: 3/5/14 (HST)
Cast # 2 Time: 0500 (HST)
Operator(s): Ah,lf,ds,SG

Rosette Position	Desired Depth	Oxygen	Sample Temp.	DIC/ Alk	pH	DOC	Nutrient	Refridg. Si
1	**4800**	28	2.9				1	1
2	**4600**	29	2.7				2	2
3	**4500**	30,31,32	3.1	3A-B	1,2,3	3ABC	3A-B	3A-B
4	**4400**	33	2.8				4	4
5	**4200**	34	2.8				5	5
6	**4000**	35,36,37	3.4			6ABC	6A-B	6A-B
7	**3800**	38	2.9				7	7
8	**3600**	39	3.0				8	8
9	**3400**	40	3.0				9	9
10	**3200**	141	3.0				10	10
11	**3000**	42,43,44	3.4	11	4	11ABC	11A-B	11A-B
12	**2800**	45	3.4				12	12
13	**2600**	46	3.3				13	13
14	**2400**	47	3.5				14	14
15	**2200**	48	3.7				15	15
16	**2000**	149,50,51	3.7	16	5	16ABC	16A-B	16A-B
17	**1800**	52	4.0				17	17
18	**1600**	53	4.2				18	18
19	**1400**	54	4.7				19	19
20	**1200**	55	4.9				20	20
21	**1000**	56	5.4				21	21
22	**750**	57	5.7				22	22
23	**500**	58	7.8				23	23
24	**5**	59	22.6				24	

Notes:

Hawaii Ocean Time-series
HOT-**261**
PO Shallow Data Sheet

Station #	2	Date:	3/5/14 (HST)
Cast #	3	Time:	1200 (HST)
Operator(s):	AH,LF,DS		

Rosette Position	Desired Depth	Oxygen	Sample Temp.	DIC/ Alk	pH	DOC	Nutrient	Refridg. Si
1	**1020**	60,61,62	6.4	1	1	1	1A-B	1A-B
2	**971**	63	6.2				2	2
3	**896**	64	6.7				3	3
4	**859**	65	6.8				4	4
5	**821**	66	6.5				5	5
6	**779**	67,68,69	6.9				6	6
7	**736**	70	6.9	7	2	7	7	7
8	**720**	71	6.9				8	8
9	**665**	72	7.2				9	9
10	**611**	73	7.6	10	3	10	10	10
11	**569**	74	7.9				11A-B	11A-B
12	**520**	75	8.5	12	4	12	12	12
13	**478**	76,77,78	9.4				13	13
14	**440**	79	9.6				14	14
15	**402**	80	10.1				15	15
16	**352**	81	10.4	16A-B	5,6	16	16	16
17	**304**	82	12.5				17	17
18	**240**	83,84,85	15.7	18	7	18	18	18
19	**202**	86	17.9				19	19
20	**164**	87	20.1				20	20
21	**125**	88	22.3				21A-B	
22	**83**	89	23.0				22	
23	**41**	90	23.6				23	
24	**5**	91	23.8				24	

Notes: JF to pb@8 Oxygen depths

Hawaii Ocean Time-series

HOT- **261**

PC/PN Data Sheet

Station #	2	Date:	03-05-14	(HST)
Cast #	4	Time:	1439	(HST)
Operator(s):	SC, BU, SG	Pre-screen mesh size:	202 um	
Blank #'s	**___B1___**	**___B2___**	**___B3___**	

Rosette Position	Desired Depth	Carboy #	Total Volume	Sample #			
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~~			
9	**100**	7,8	4,4	9A-B			
10	**75**	9	4	10			
11	**45**	10	4	11			
12	**25**	11,12	4,4	12A-B			
13	**5**	13	4	13			

Notes: PO console did not fire a bottle at 125m.

Hawaii Ocean Time-series

HOT- **261**

Particulate Phosphorus Data Sheet

Station #	2		Date:	03-05-14	(HST)
Cast #	5		Time:	1731	(HST)
Operator(s):	SC, BU, SG	Pre-screen mesh size:		202 um	
Blank #'s	**___B1___**	**___B2___**	**___B3___**		

Rosette Position	Desired Depth	Carboy #	Total Volume	Sample #	SF-S		
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	**45**	11	4	12			
13	**25**	12,13	4,4	13A-B			
14	**25**				X		
15	**5**	14	4	15			
16							
17							
18							
19							
20							
21							
22							
23							
24							

Notes:

Hawaii Ocean Time-series
HOT-**261**
BEACH Shallow Data Sheet (1/2)

Station # 2 Date: 03-05-14 (HST)
Cast # 6 Time: 2000 (HST)
Operator(s): SC, BU, SG

Rosette Position	Desired Depth	Oxygen	Sample Temp.	DIC/ ALK	Quay DIC	Keeling DIC	pH	DOC
1	**1000**	92	6.3					
2	**O_2 min**	93	6.8					
3	**Sal min**	94	8.9					
4	**200**	95	18.4	4			1	4
5	**175**	96	19.8					5
6	**165**	97	20.4					
7	**150**	98	20.8	7			2	7
8	**130**							
9	**125**	99	21.3					9
10	**115**	100	21.6					
11	**110**							
12	**100**	101,102,103	22.2	12			3	12
13	**90**							
14	**85**	104	22.7					
15	**75**	105	22.8	15			4	15
16	**60**							16
17	**45**	106	23.1	17			5	17
18	**35**							18
19	**25**	107	23.5	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 R10761 = 2140
Keeling 24B R10762 = 2143

Hawaii Ocean Time-series
HOT-**261**
BEACH Shallow Data Sheet (2/2)

Station # 2 Date: 03-05-14 (HST)
Cast # 6 Time: 2000 (HST)
Operator(s): SC, BU, SG

Rosette Position	Desired Depth	Nutrient	Refridg. Si	LLN	LLP	SF-S		
1	**1000**							
2	**O_2 min**							
3	**Sal min**							
4	**200**	4	4					
5	**175**	5		5	5			
6	**165**			6				
7	**150**	7		7A-B	7			
8	**130**			8				
9	**125**	9A-B		9	9			
10	**115**			10	10			
11	**110**			11				
12	**100**	12		12A-B	12			
13	**90**			13				
14	**85**			14	14			
15	**75**	15		15	15			
16	**60**	16		16	16			
17	**45**	17A-B		17	17			
18	**35**	18		18				
19	**25**	19		19	19			
20	**25**							
21	**25**					X		
22	**15**	22		22				
23	**5**	23		23A-B	23			
24	**5**							

Notes:

Hawaii Ocean Time-series
HOT-**261**
PUR Data Sheet

Station # 2 Date: 03-05-14 (HST)
Cast # 7 Time: 2300 (HST)
Operator(s): SC, BU

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

Notes:

Hawaii Ocean Time-series

HOT- **261**

Gas Array Experiment Data Sheet

Station # 2 Date: 03-06-14 (HST)

Cast # 8 Time: 0200 (HST)

Operator(s): SC, BU

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

Notes:

Hawaii Ocean Time-series
HOT-**261**
OPEN CAST Data Sheet

Station # 2 Date: 3/6/14 (HST)
Cast # 9 Time: 0500 (HST)
Operator(s): Ah,ds,lf

Rosette Position	Desired Depth	Salts	Salinity Std	SF-S			
1	**1000**	X	X				
2	**Sal Min**	X					
3	**25**			X			
4	**5**	X					
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

Notes:

Hawaii Ocean Time-series

HOT- **261**

Particulate Silica Data Sheet

Station #	2		Date:	3/6/14	(HST)
Cast #	10		Time:	0810	(HST)
Operator(s):	Ah,lf,ds	Pre-screen mesh size:		none	
Blank #	**B1, B2, B3**				

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

Notes:

Hawaii Ocean Time-series
HOT- **261**
OPEN Data Sheet

Station # 2 Date: 3/6/14 (HST)
Cast # 11 Time: 1100 (HST)
Operator(s): Ah,lf,ds, SG

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- **261**
ATP Data Sheet

Station # 2 Date: 3/6/14 (HST)
Cast # 12 Time: 1400 (HST)
Operator(s): SC, BU, SG Pre-screen mesh size: 202um
Blank #'s 28, 29, 30

Rosette Position	Desired Depth	ATP Tube #'s	Volume Filtered	Carboy #	MC	SW	SF-S
1	**1000**						
2	**770**				X		
3	**700**					X	
4	**500**				X		
5	**Sal min**						
6	**350**	1 – 3	3x2	1			
7	**300**				X		
8	**250**	4 – 6	3x2	2			
9	**200**				X		
10	**150**	7 – 9	3x1	7			
11	**125**	10 – 12	3x1	8			
12	**100**	13 – 15	3x1	9			
13	**75**	16 – 18	3x1	10			
14	**45**	19 – 21	3x1	11			
15	**25**	22 – 24	3x1	12			
16	**25**						X
17	**5**	25 - 27	3x1	13			
18							
19							
20							
21							
22							
23							
24							

Notes:

Hawaii Ocean Time-series
HOT-**261**
OPEN CAST Data Sheet

Station #	2	Date:	03-06-14 (HST)
Cast #	13	Time:	1700 (HST)
Operator(s):	SC, BU, SG		

Rosette Position	Desired Depth	MC	SW	SF-S			
1	**1000**						
2	**700**		X				
3	**Sal Min**						
4	**175**	X	X				
5	**150**	X	X				
6	**125**	X	X				
7	**100**	X	X				
8	**75**	X	X				
9	**45**	X	X				
10	**25**	X	X				
11	**25**			X			
12	**5**	X	X				
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

Notes:

Hawaii Ocean Time-series
HOT-**261**
HPLC & Chl *a*. Bottle Data Sheet

Station # 2 Date: 03-06-14 (HST)
Cast # 14 Time: 2000 (HST)
Operator(s): SC, BU, SG

Rosette Position	Desired Depth	Carboy #	Total Volume	HPLC	Chl *a*.	SLIDES		
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	**5**	4	10	21	21			
22	**5**					X		
23								
24								

Notes: DO NOT PRE-SCREEN

Hawaii Ocean Time-series

HOT-**261**

WOCE Deep 2 Data Sheet

Station # 2 Date: 03-06-14 (HST)

Cast # 15 Time: 2300 (HST)

Operator(s): SC, BU

Rosette Position	Desired Depth	Oxygen	Sample Temp.	MC				
1	**4800**	109	3.1					
2	**4000**	110	3.3					
3	**4000**			X				
4	**3000**	111	4.0					
5	**3000**			X				
6	**2000**	112	3.9					
7	**2000**			X				
8	**1000**			X				
9	**O2 min**	113	5.6					
10	**Sal min**	114	7.8					
11	**O2 max**	115	22.5					
12	**5**	116	23.2					
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Notes:

Hawaii Ocean Time-series
HOT- **261**
STATION 52 Data Sheet

Station #	52	Date:	3/7/14	(HST)
Cast #	1	Time:	1250	(HST)
Operator(s):	AH,LF,DS.SG,BU			

Rosette Position	Desired Depth	DIC/TA	pH	RG	OS	SG	WM
1	**250**					X	
2	**250**					X	
3	**250**					X	
4	**125**				X		
5	**125**				X		
6	**125**				X		
7	**125**				X		
8	**25**						X
9	**5**			X			
10	**5**			X			
11	**5**			X			
12	**5**			X			
13	**5**					X	
14	**5**					X	
15	**5**					X	
16	**5**					X	
17	**5**	17AB	1,2,3				
18							
19							
20							
21							
22							
23							
24							

Notes:

Hawaii Ocean Time-series

HOT- **261**

STATION Kaena Data Sheet

Station #	6	Date:	03-07-14 (HST)
Cast #	1	Time:	2020 (HST)
Operator(s):	SC, BU		

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-261
Sediment Trap Data Sheet

Type of traps:	PIT	Date:	03-05-14
Operator(s):	SC, BU, BW	Wind:	
Position in:	22º45.126'N 158º2.157'W	Sea State:	

Time in: (HST)	150 m	X	Notes: 0020 Traps in water; 0035 array released.

Operator(s):	AH,LF,DS,BW	Date:	3/7/14
Position out:	22 52.320 158 14.561	Wind:	
Overall sea state:		Sea state:	

Time Out: (HST)	150 m	0740	Notes:

Data Sheet for Sediment Trap Volumes

Cruise #: 261
Analyst: DS

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	39.2	
B	150	36.5	
C	150	36.5	
D	150	36.0	
E	150	36.0	
F	150	35.2	
G	150	37.0	
H	150	37.2	
I	150	36.6	
J	150	37.1	
K	150	35.7	
L	150	37.0	

Hawaii Ocean Time-series
HOT-261
In Situ Primary Production Data Sheet

Operators: BW, DS, LF, AH, SC, BU, SG

Date in: 3/5/14 Time in: 0450 (HST)

Date out: 03-05-14 Time out: 1915 (HST)

Incubation Depth	✓	Insertion Depth	Owner
175	✓		
150	✓		
125	✓		
100	✓		
75	✓		
45	✓		
25	✓		
5	✓		

Position in: 22 45.057 158 0.980

Position out: 22º48.312'N 158º4.923'W

Average weather condition during incubation:

Average sea state during incubation:

Begin Inoculation _____ End Inoculation _____

Filtration time _____

Hawaii Ocean Time-series
HOT-261
In Situ Gas Array Data Sheet

Operators: AH,LF,BW,DS	**Operators: AH,LF,DS,BW**
Date Deployed: 3/6/14	**Date Recovered: 3/7/14**
Time (HST): 0420	**Time (HST): 0620**
Position: 22 44.876 158 1.158	**Position: 22 50.034N 158 8.859W**

***Used 50ml pipette**
#1 =fraction
#4 = whole

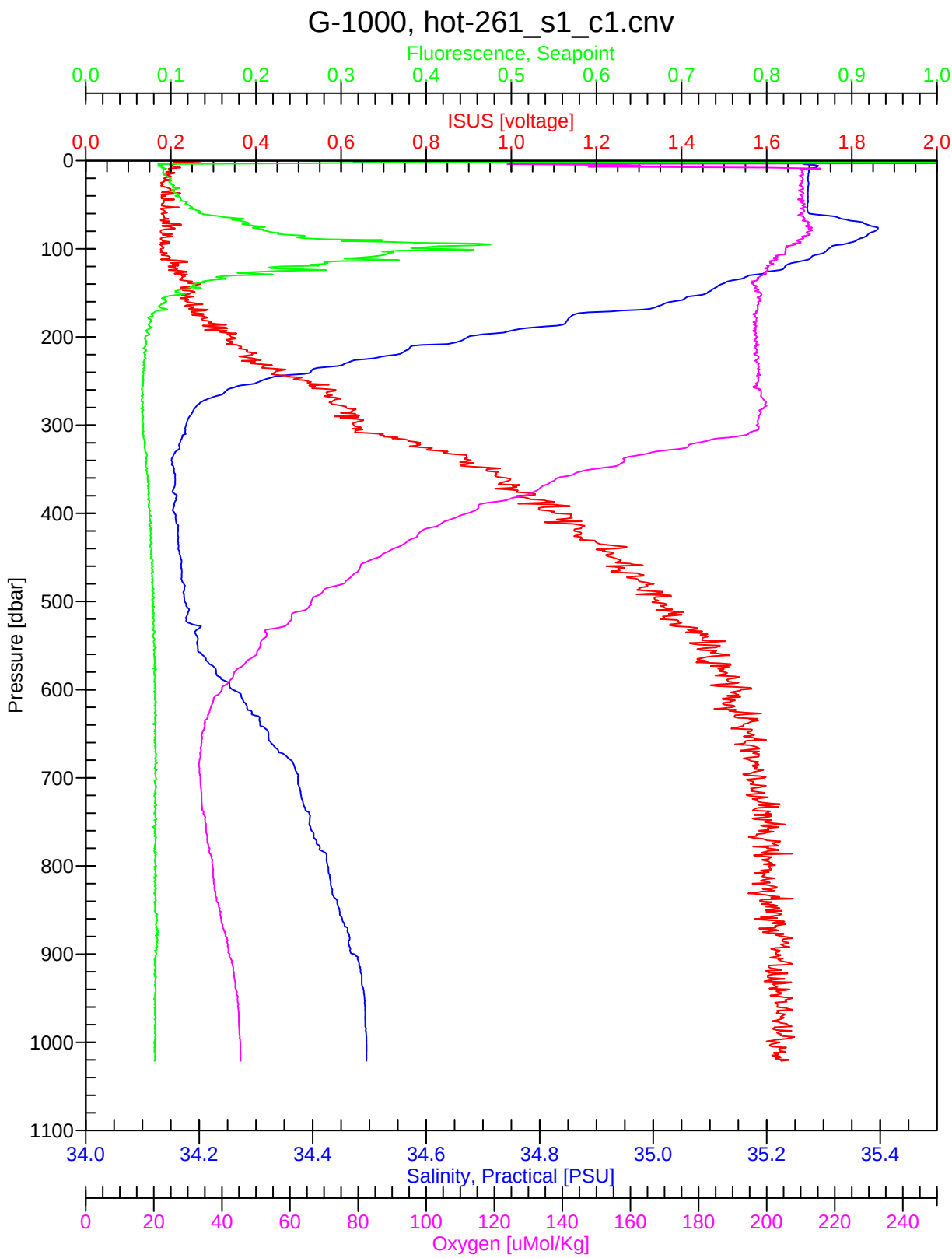
Nitrogen Fixation Sample Processing Sheet

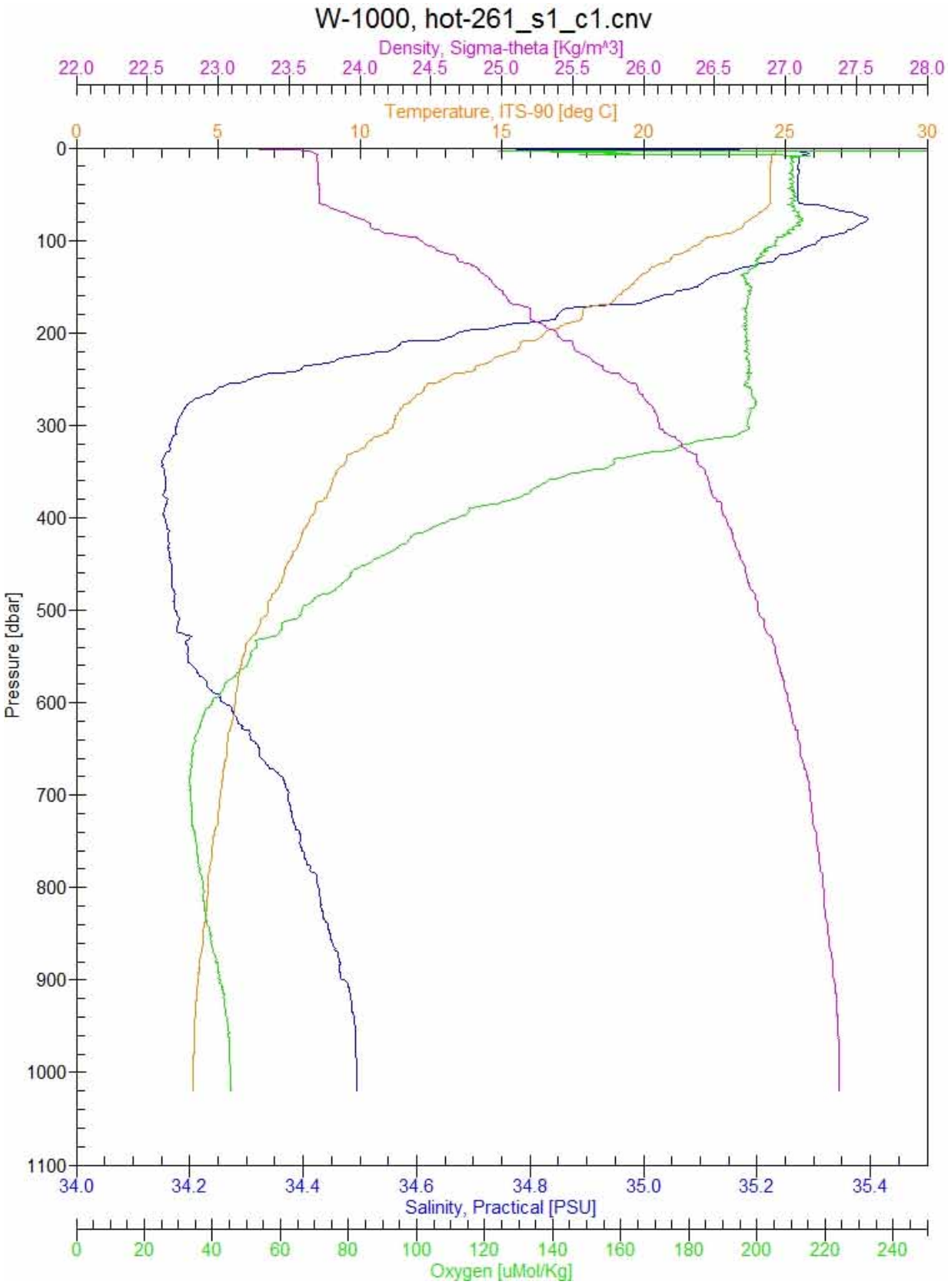
Sample ID	Date Spiked	Time Spiked	Date Filtered	Time Filtered	Comments
3-1	3/6/14	0343	3/7/14	0710	
3-4	3/6/14	0344	3/7/14	0800	
4-1	3/6/14	0346	3/7/14	0710	
4-4	3/6/14	0345	3/7/14	0710	
5-1	3/6/14	0336	3/7/14	0710	*
5-4	3/6/14	0337	3/7/14	0710	*
6-1	3/6/14	0339	3/7/14	0710	
6-4	3/6/14	0340	3/7/14	0800	
7-1	3/6/14	0339	3/7/14	0710	*
7-4	3/6/14	0341	3/7/14	0800	*
8-1	3/6/14	0341	3/7/14	0710	
8-4	3/6/14	0342	3/7/14	0800	

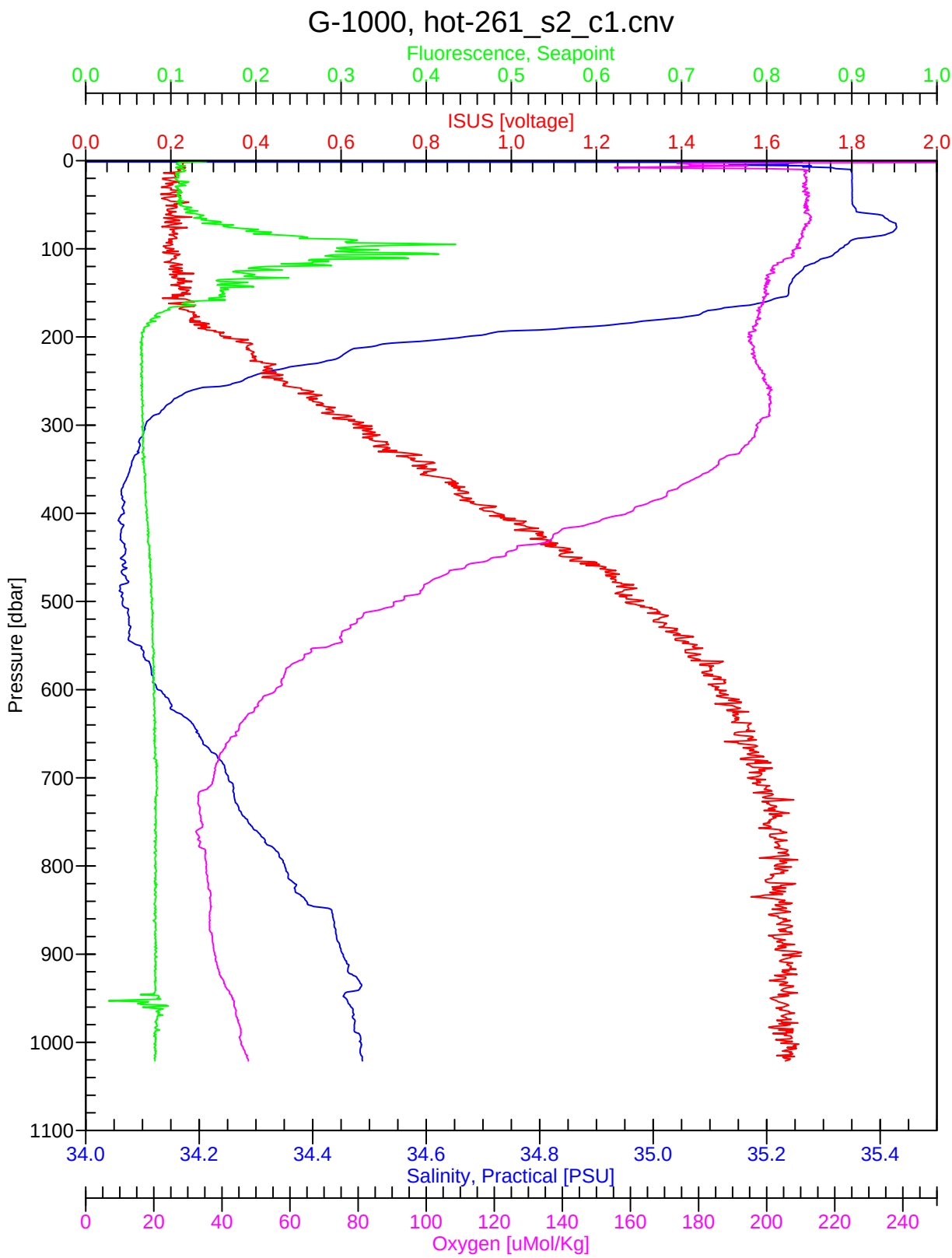
Are samples also spiked with C13? ___ Yes _X_ No

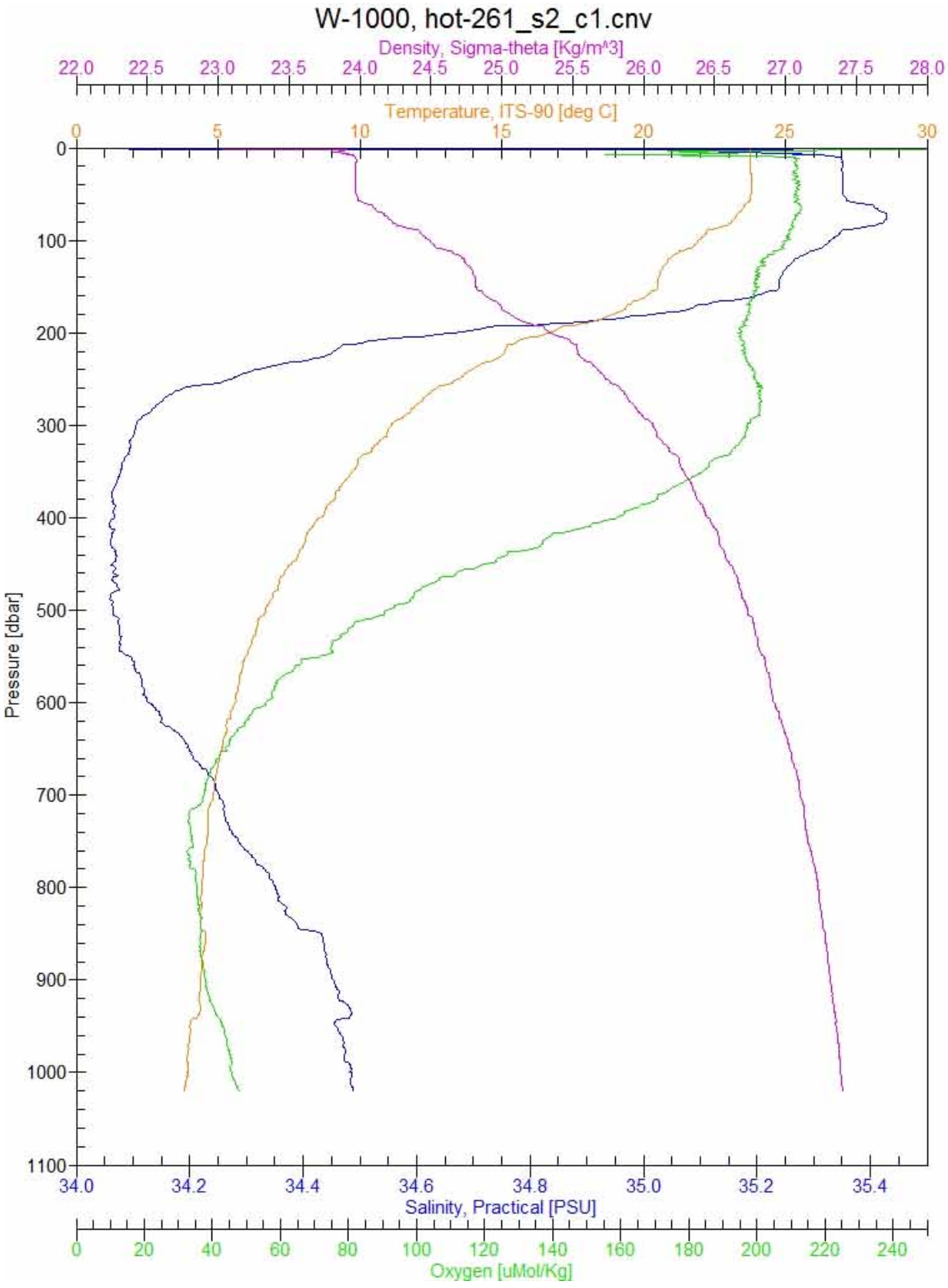
Hawaii Ocean Time-series
HOT 261
Chlorophyll Grab Sample Sheet

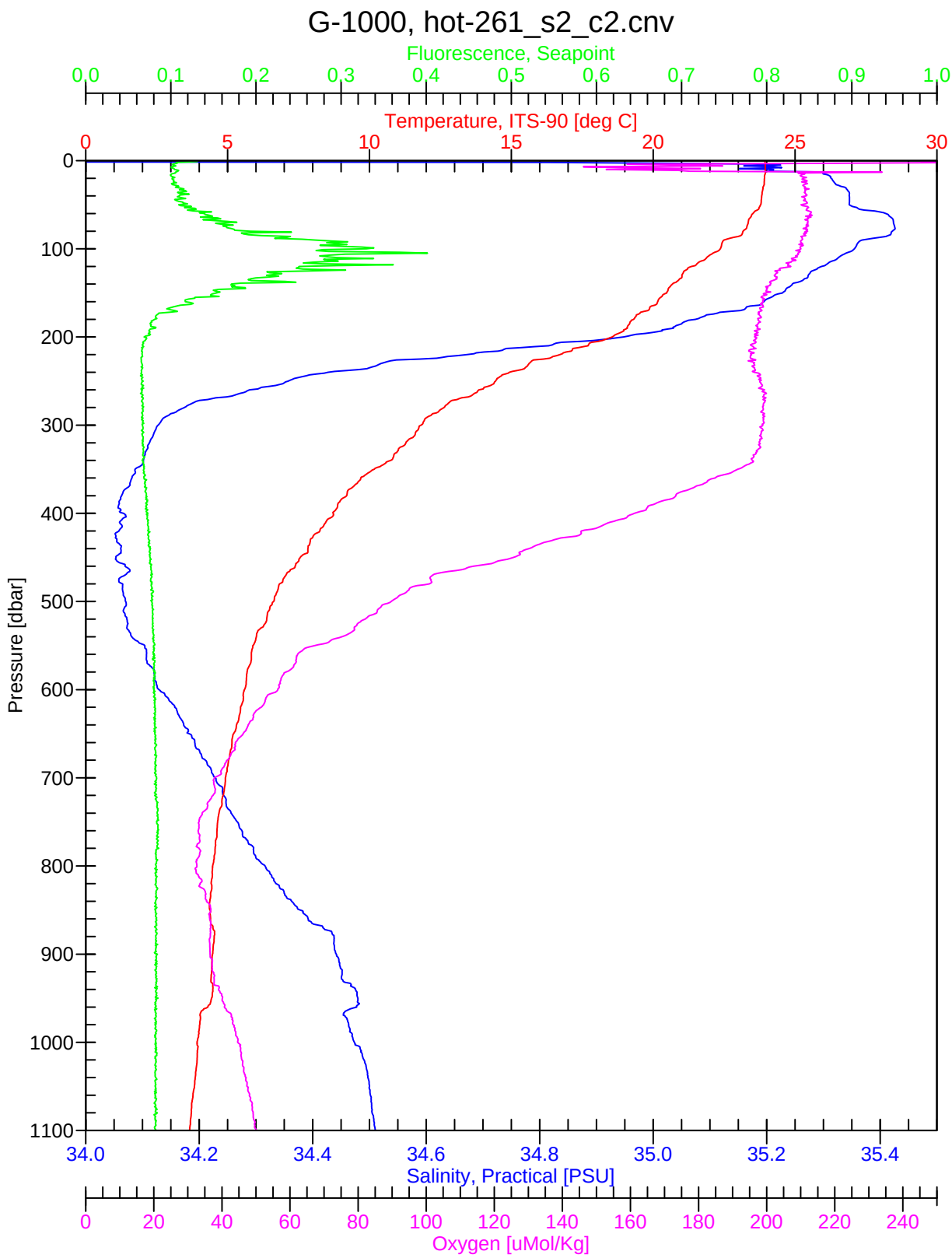
Date	Time (HST)	Location	GS #
03-04-14	1630	Transit ALOHA	1
03-04-14	2357	ALOHA	2
03-05-14	0830	ALOHA	3
03-05-14	1530	ALOHA	4
03-05-14	2215	ALOHA	5
03-06-14	0420	ALOHA	6
03-06-14	1200	ALOHA	7
03-06-14	1831	ALOHA	8
03-07-14	0700	Transit Sed Traps	9
03-07-14	1517	Transit Kaena	10

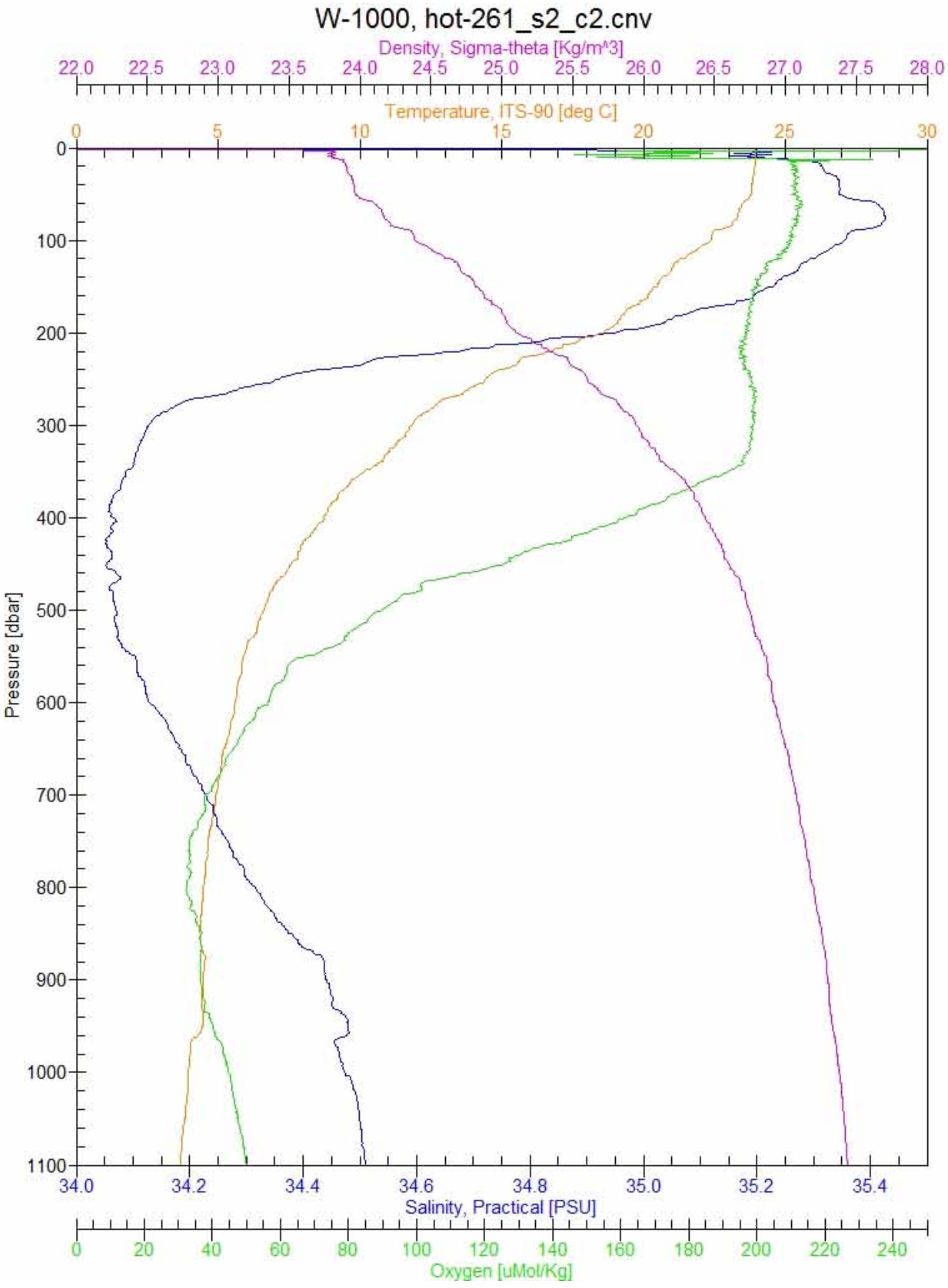

G-1000, hot-261_s1_c1.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]

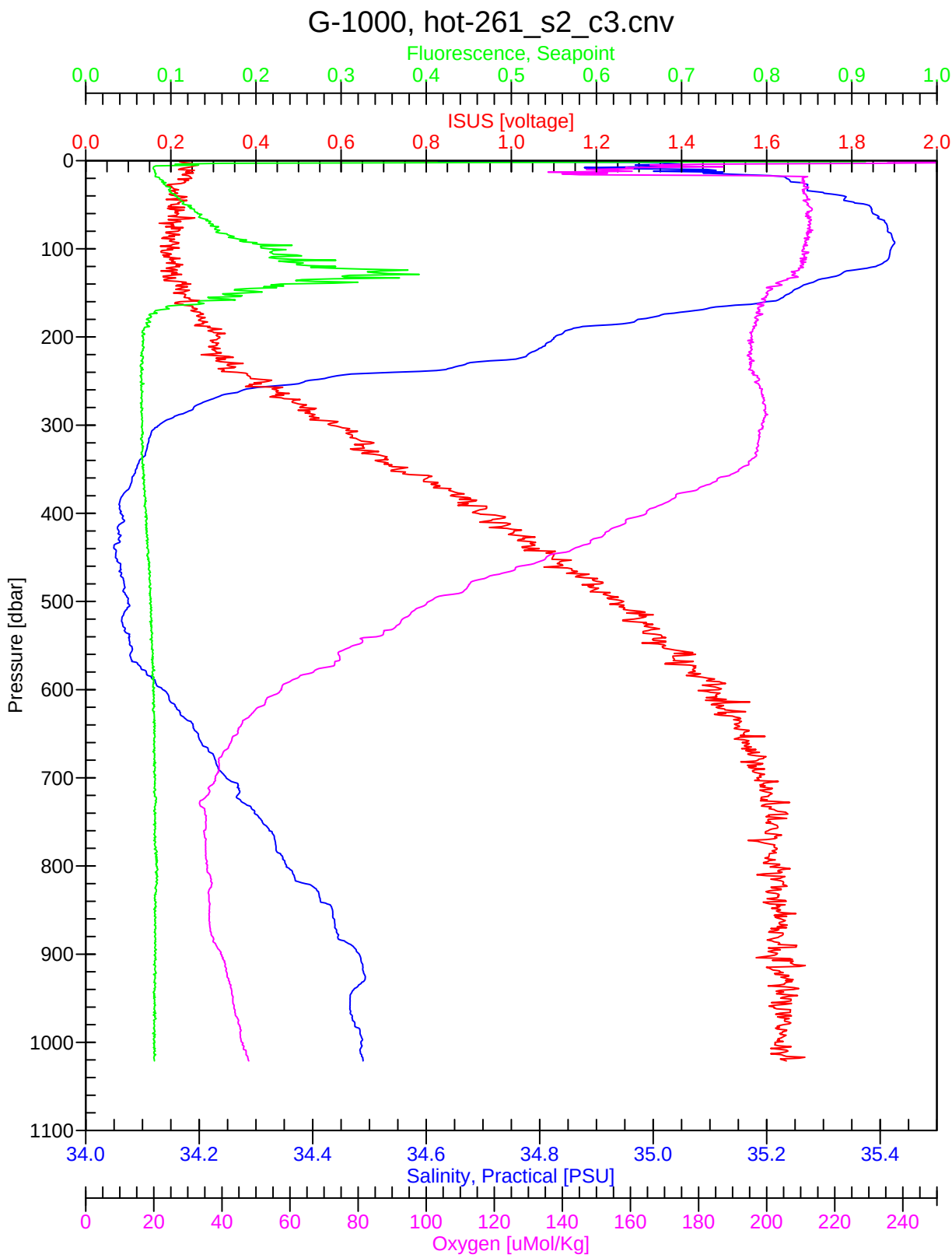

W-1000, hot-261_s1_c1.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]

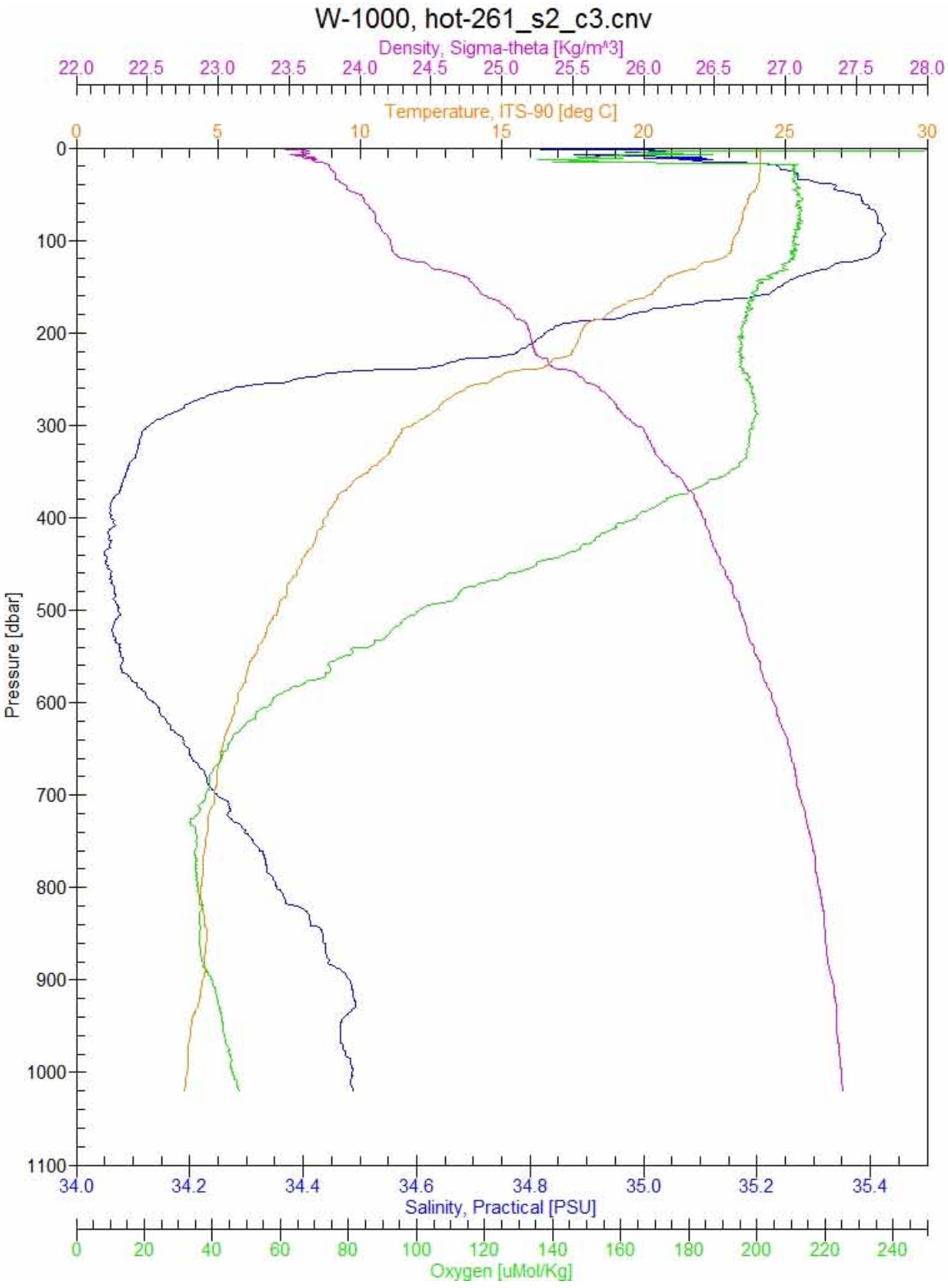

G-1000, hot-261_s2_c1.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]


W-1000, hot-261_s2_c1.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]


G-1000, hot-261_s2_c2.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Temperature, ITS-90 [deg C]
0
5
10
15
20
25
30
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]


W-1000, hot-261_s2_c2.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]


G-1000, hot-261_s2_c3.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]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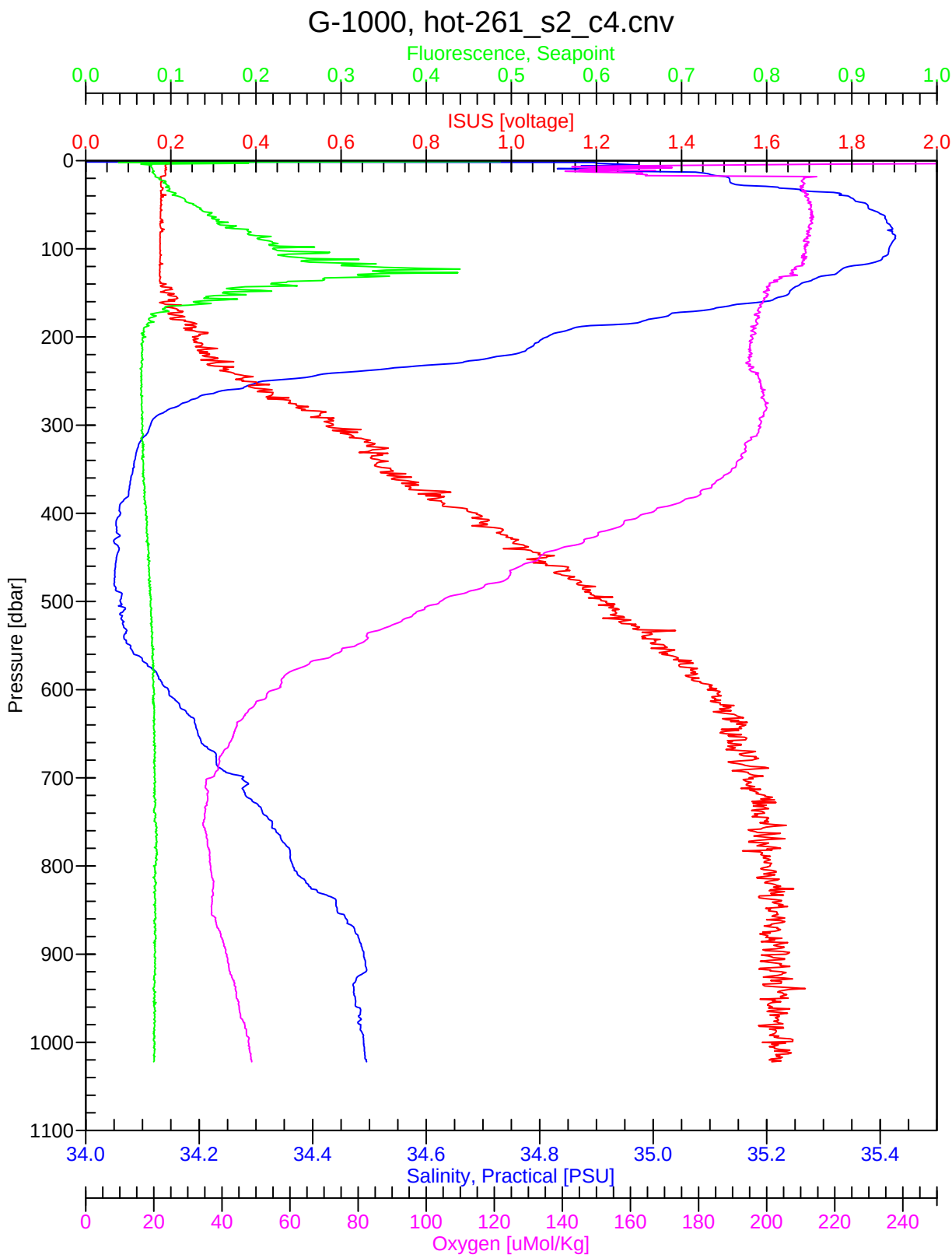
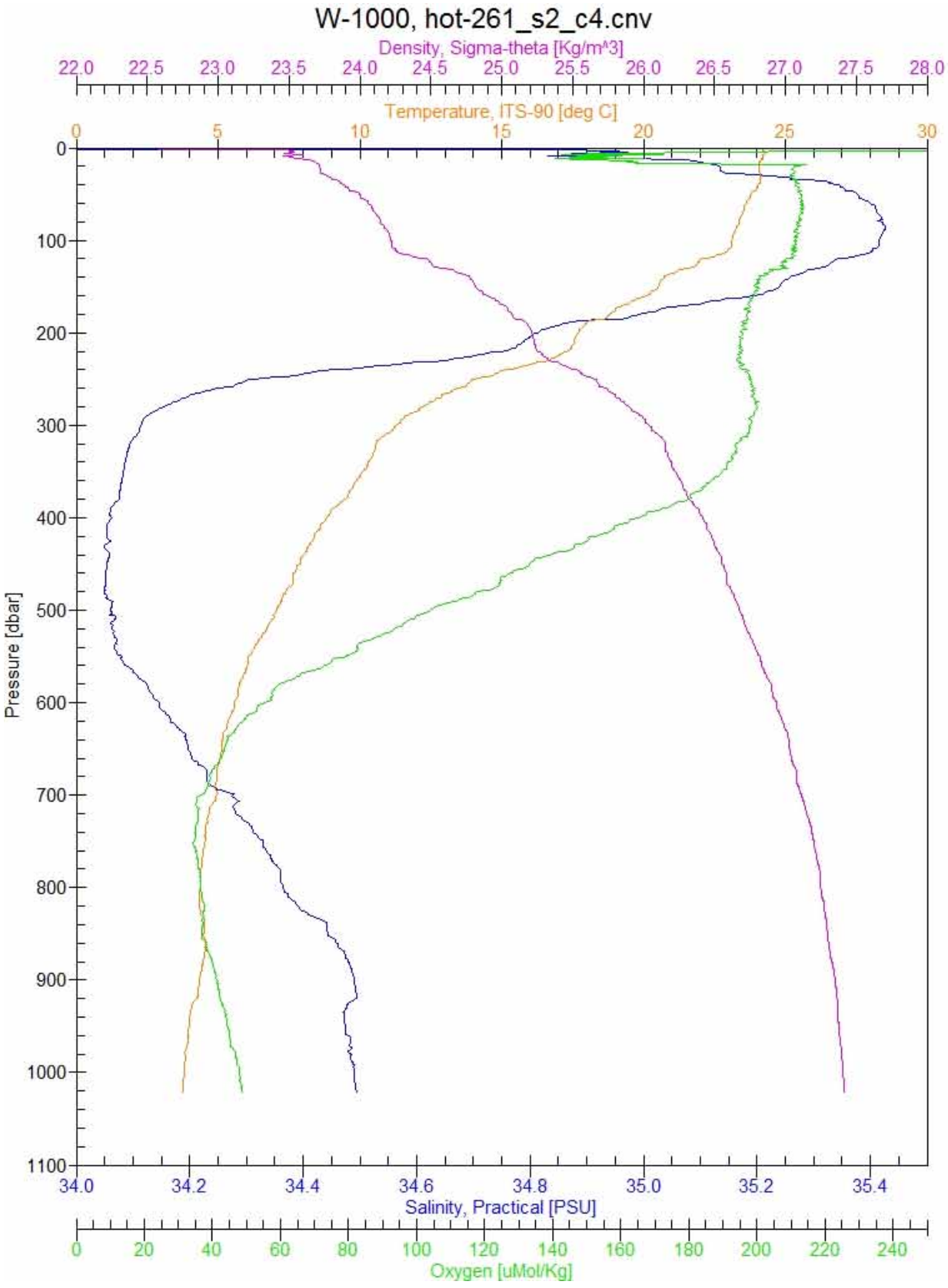
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]


G-1000, hot-261_s2_c4.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]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Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
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Pressure [dbar]
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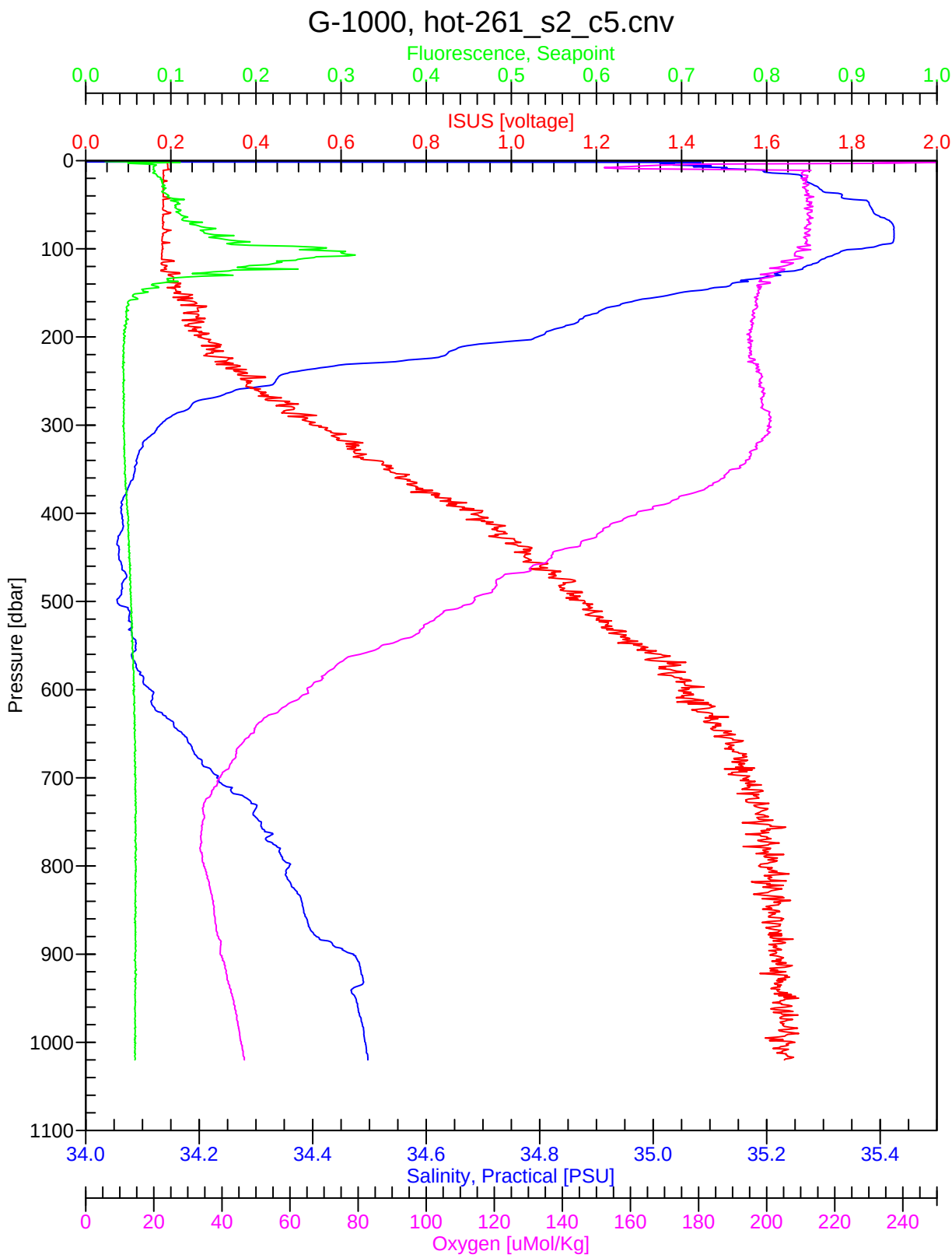
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]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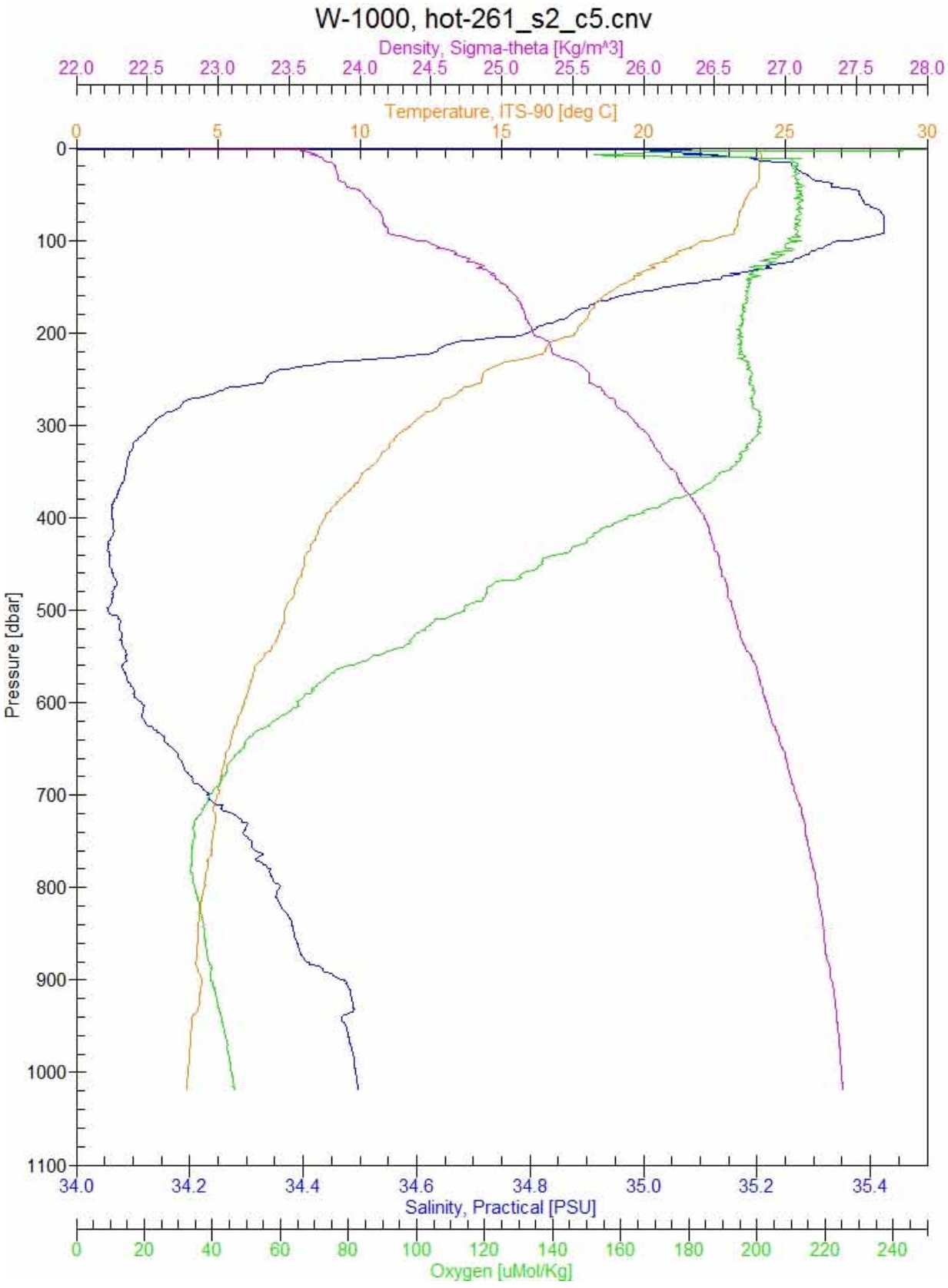
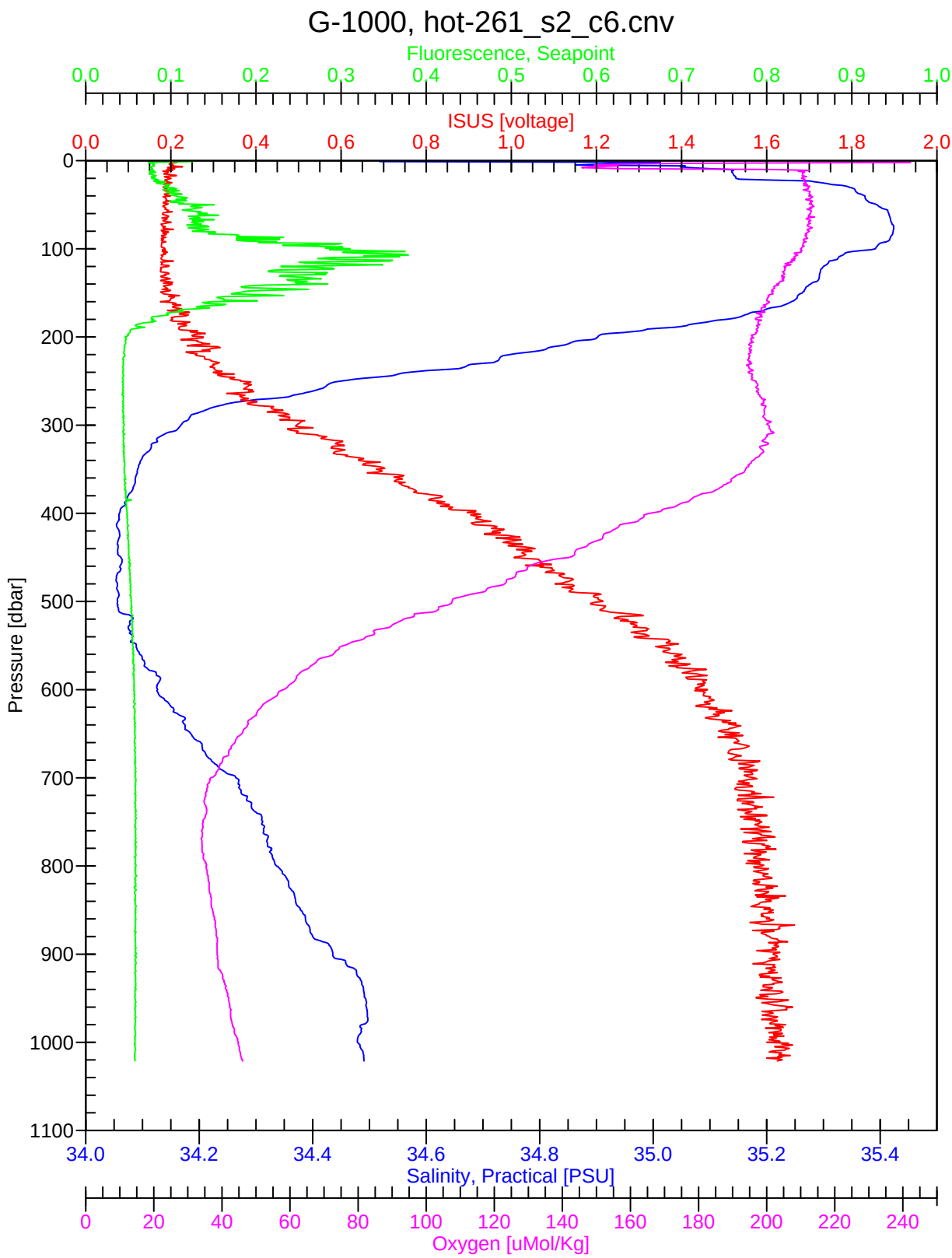
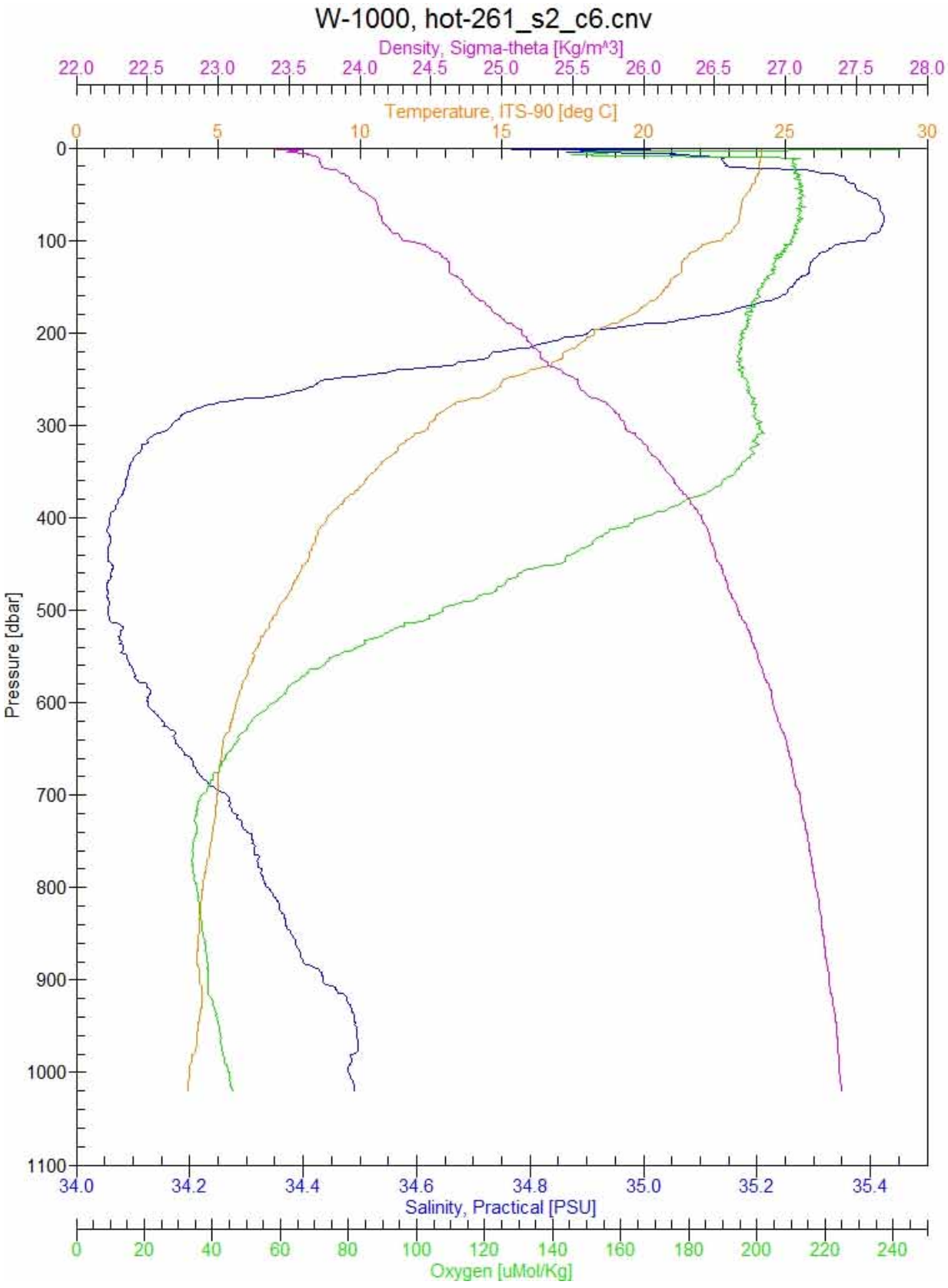
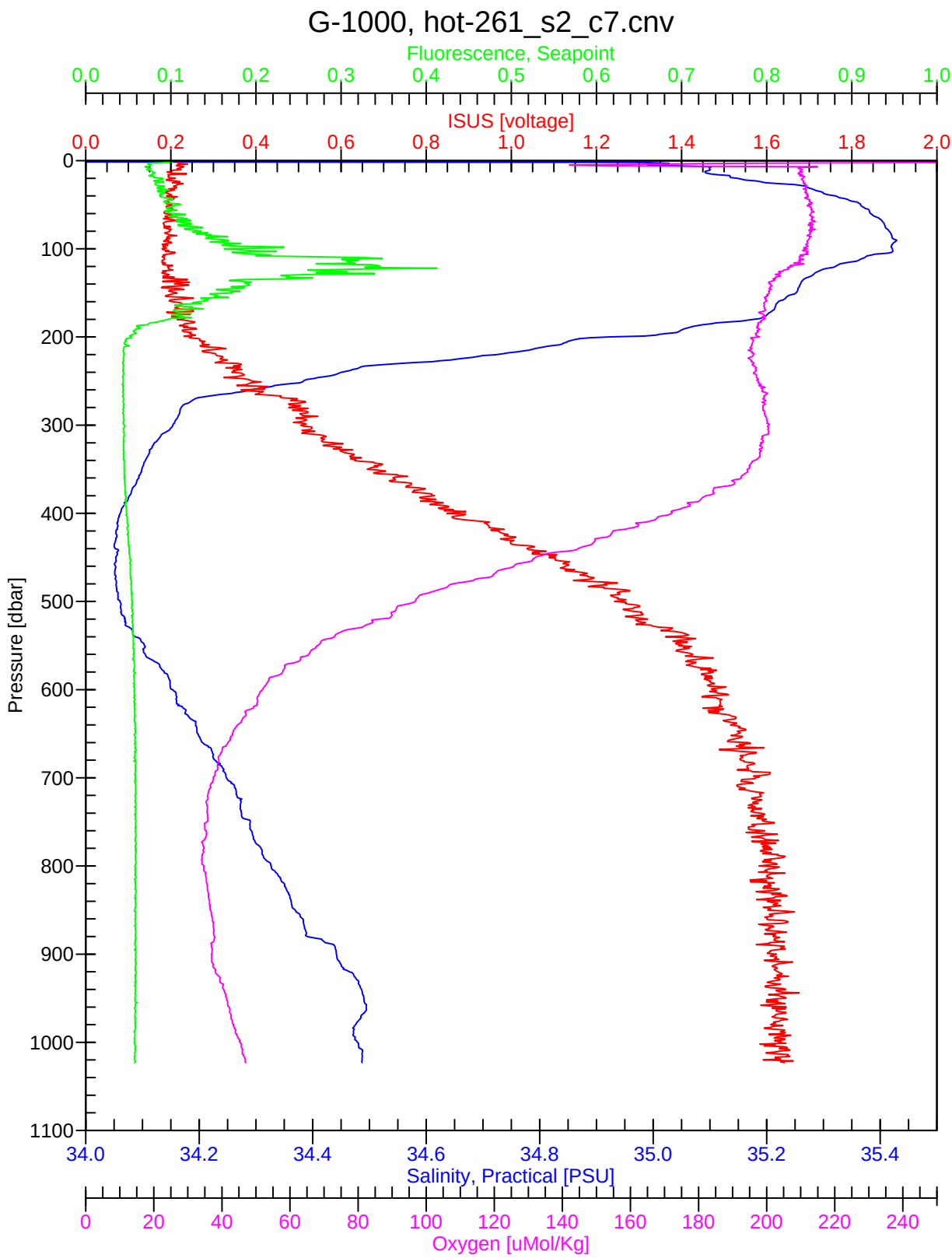
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]


W-1000, hot-261_s2_c5.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]


G-1000, hot-261_s2_c6.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]


W-1000, hot-261_s2_c6.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]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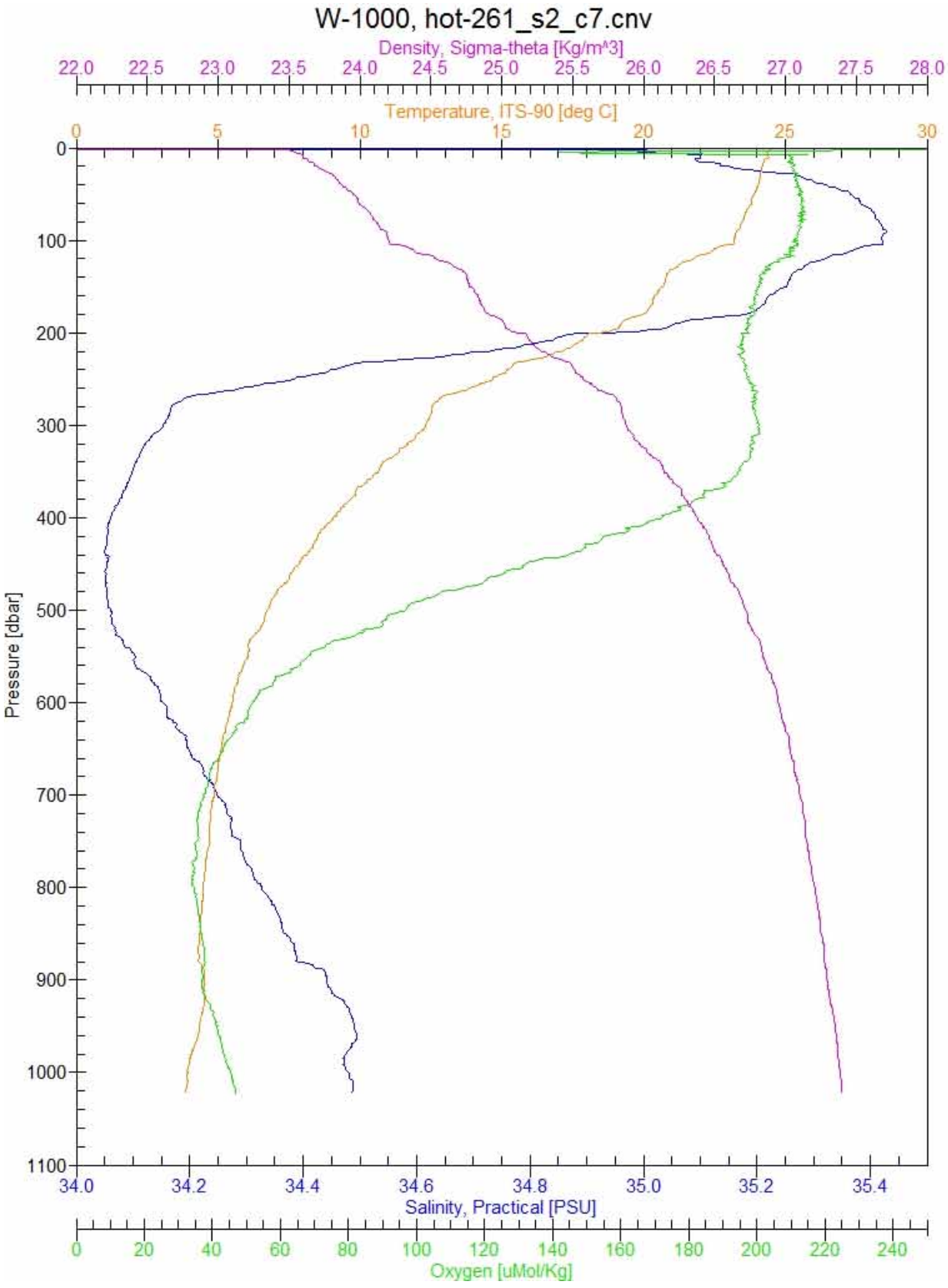
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]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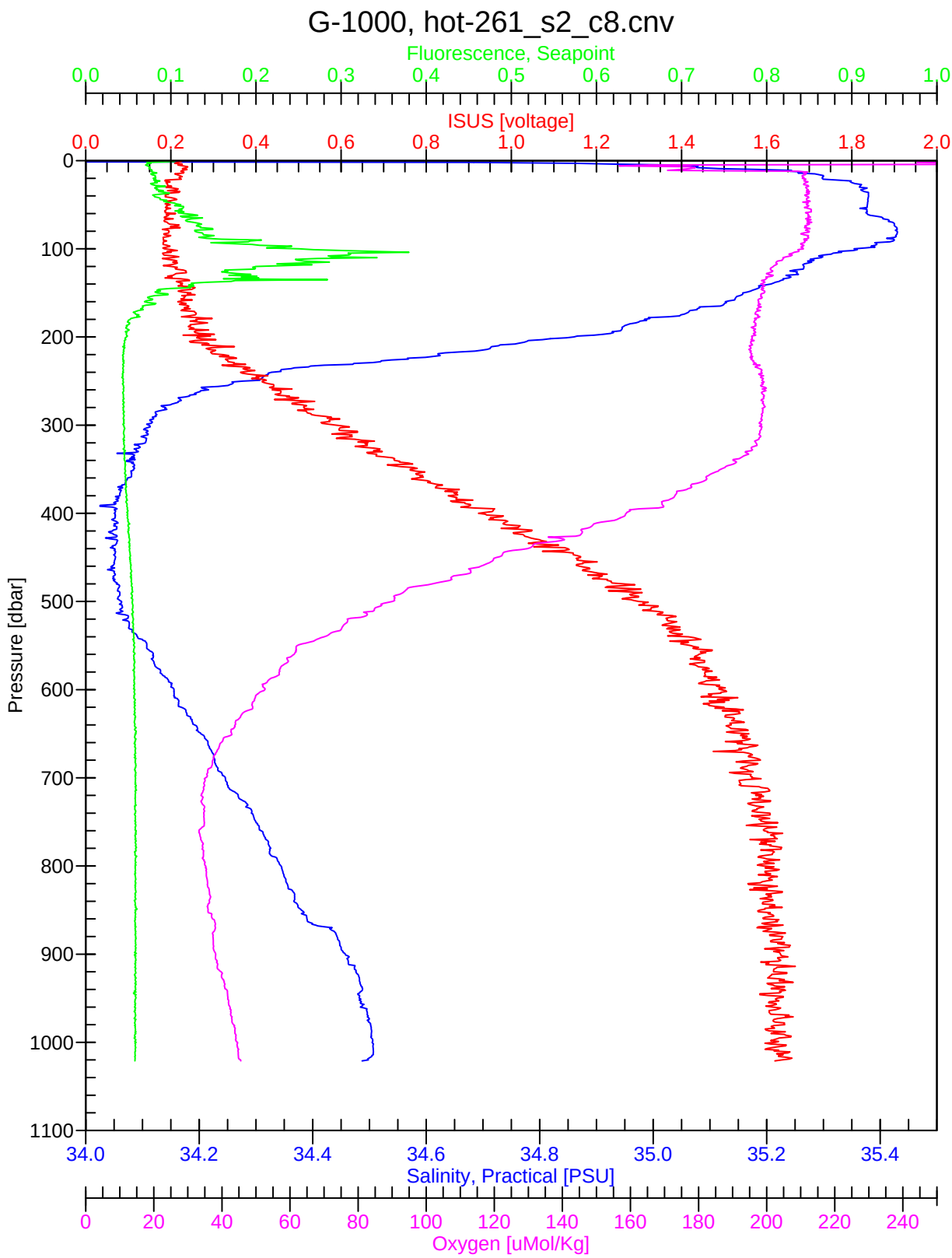
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
Salinity, Practical [PSU]
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Oxygen [uMol/Kg]
0 20 40 60 80 100 120 140 160 180 200 220 240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Fluorescence, Seapoint
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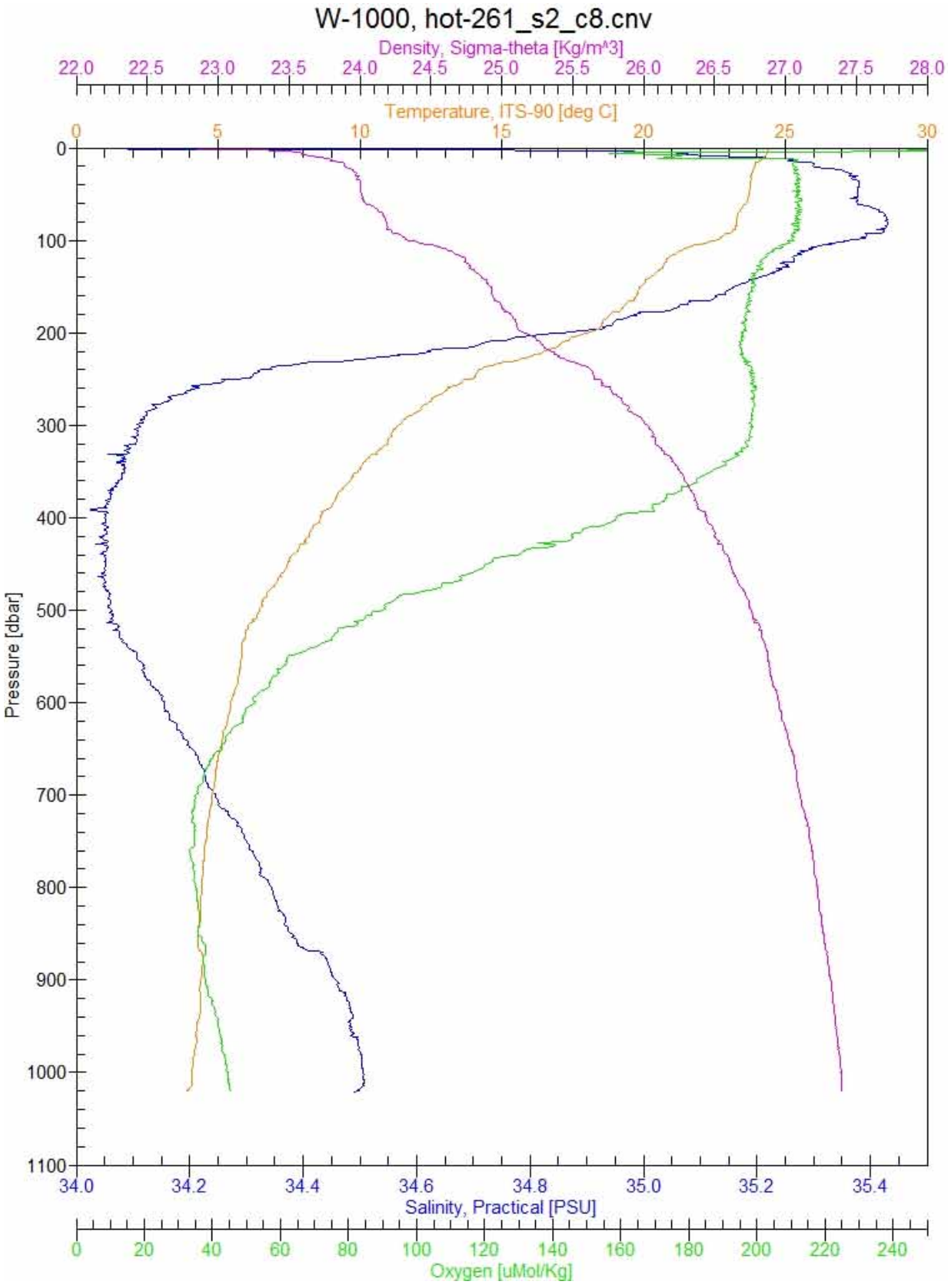
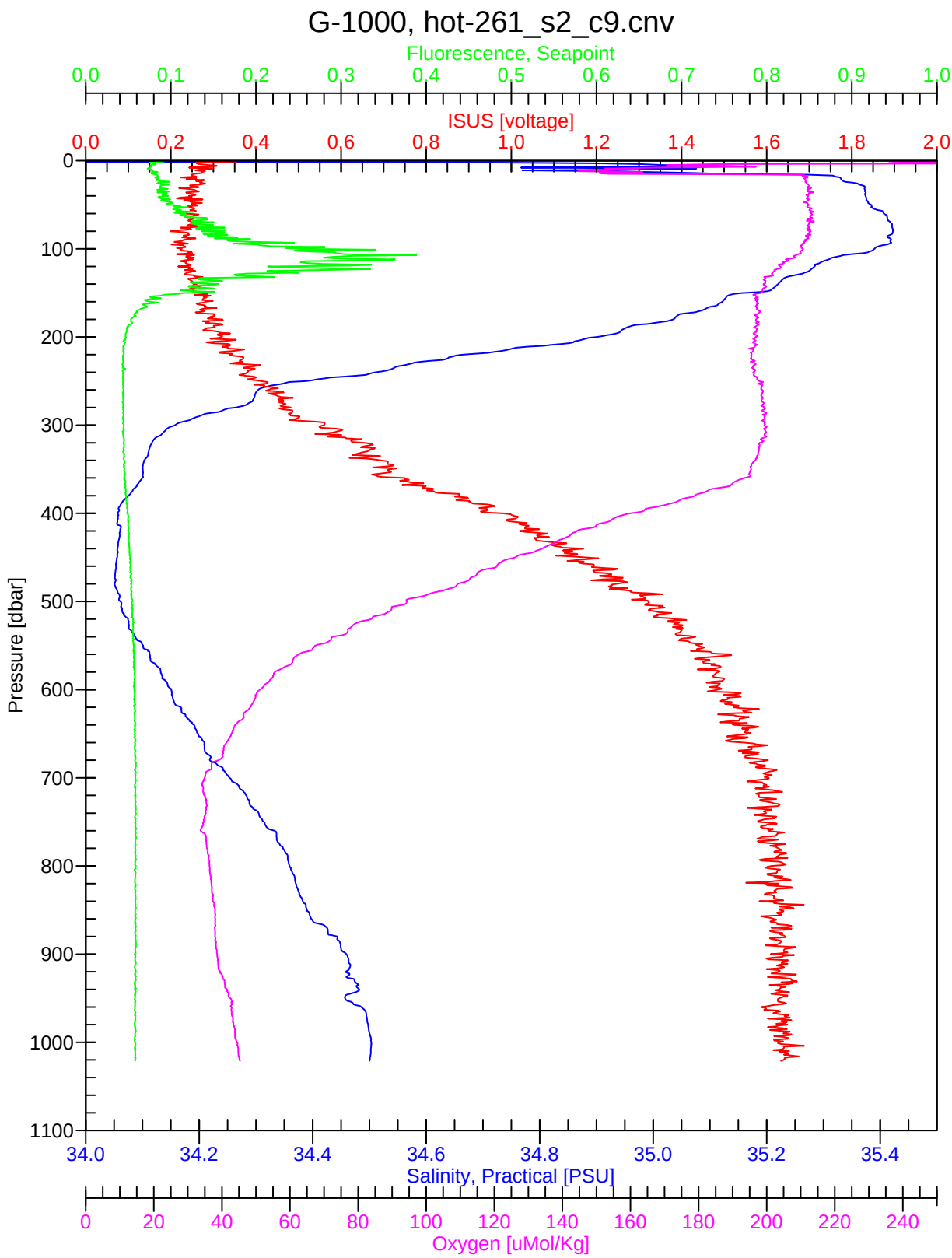
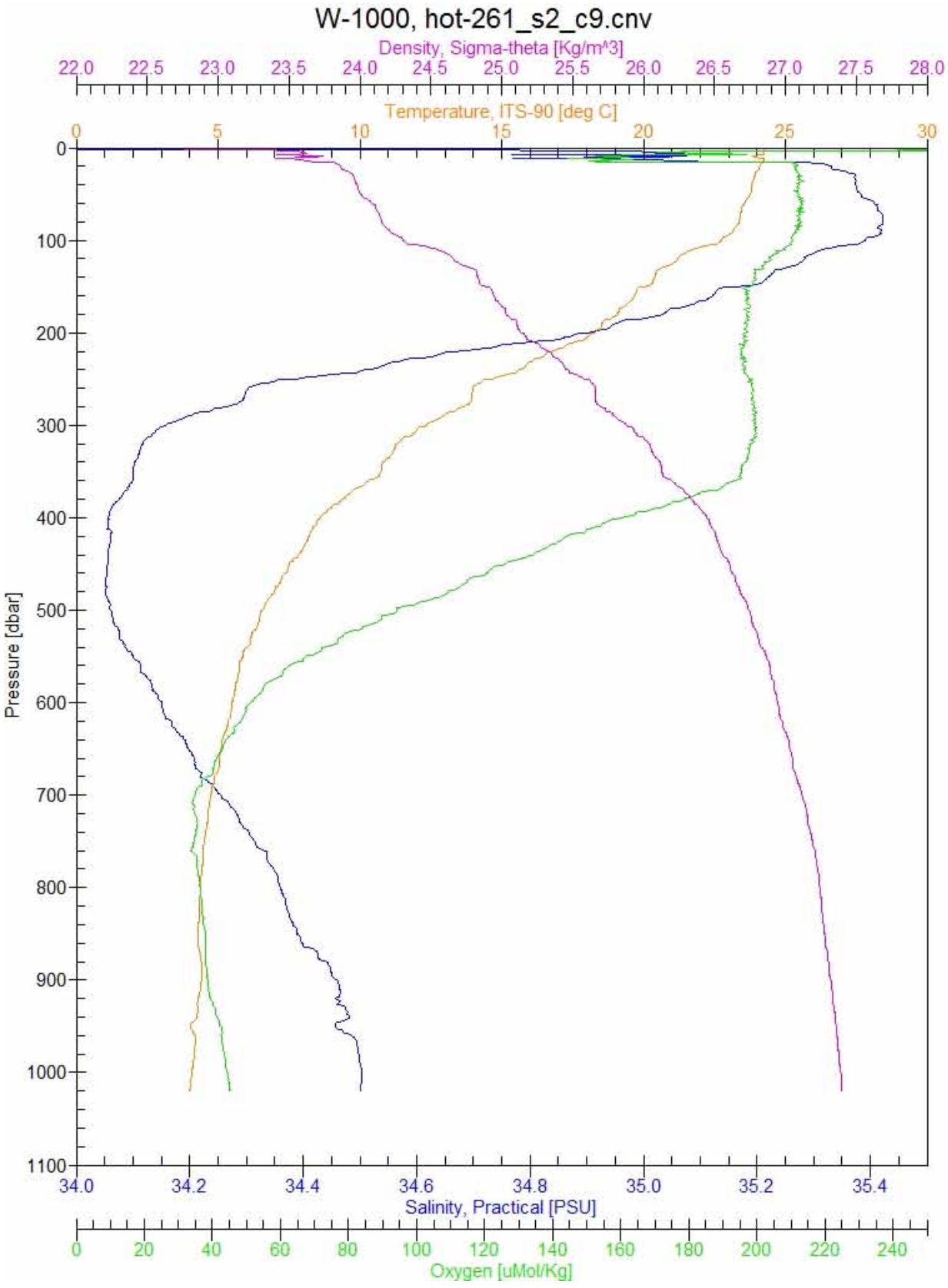
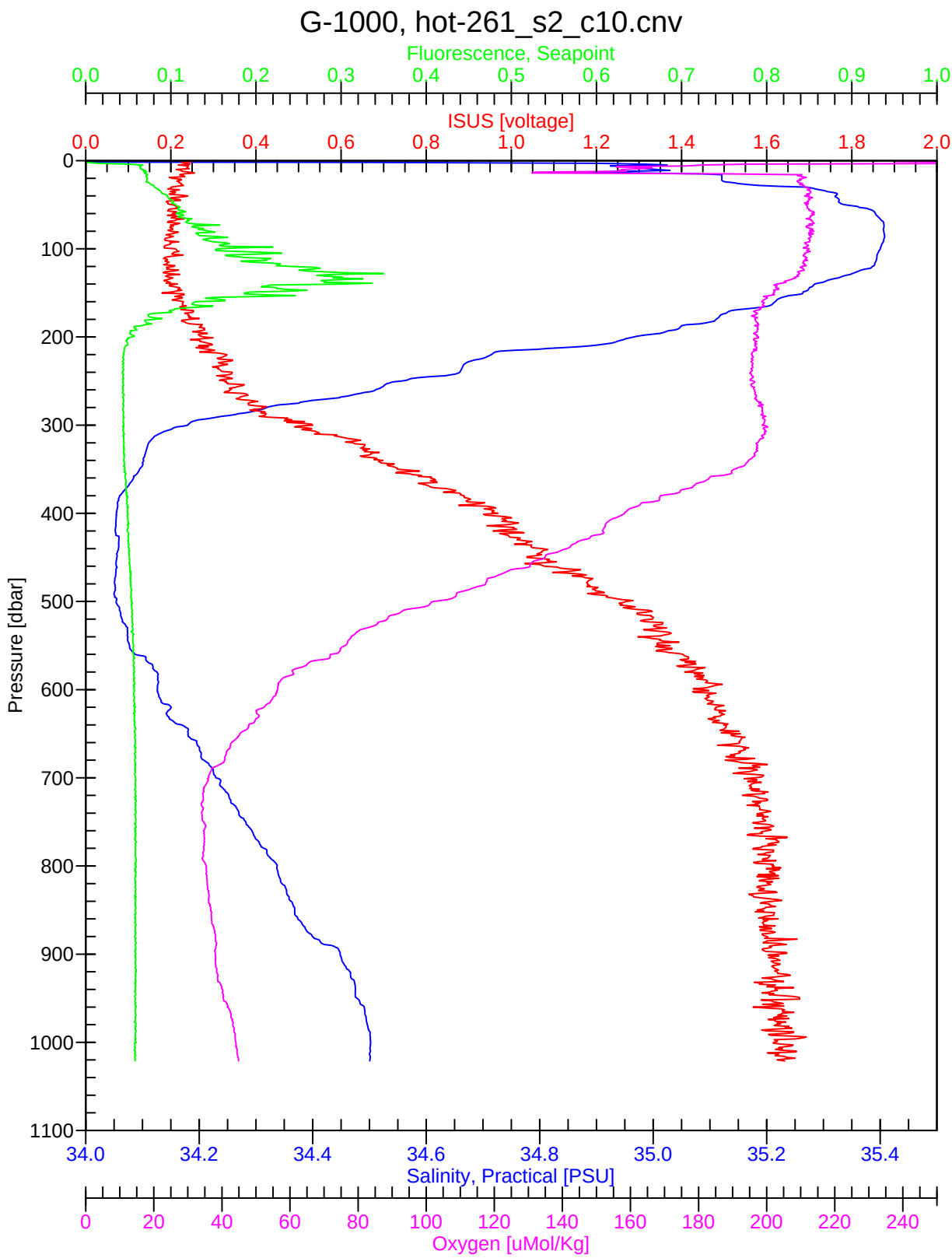
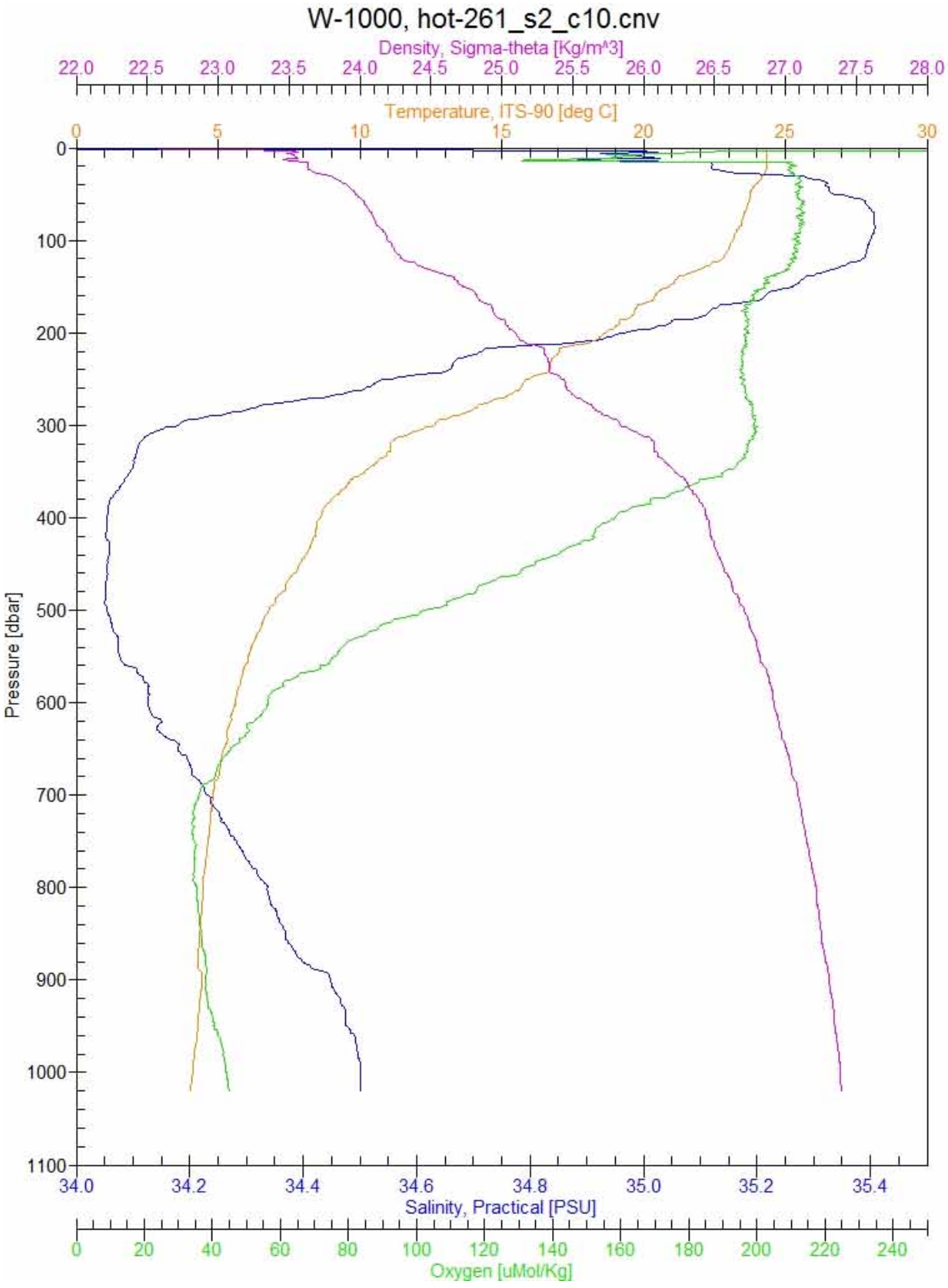
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]

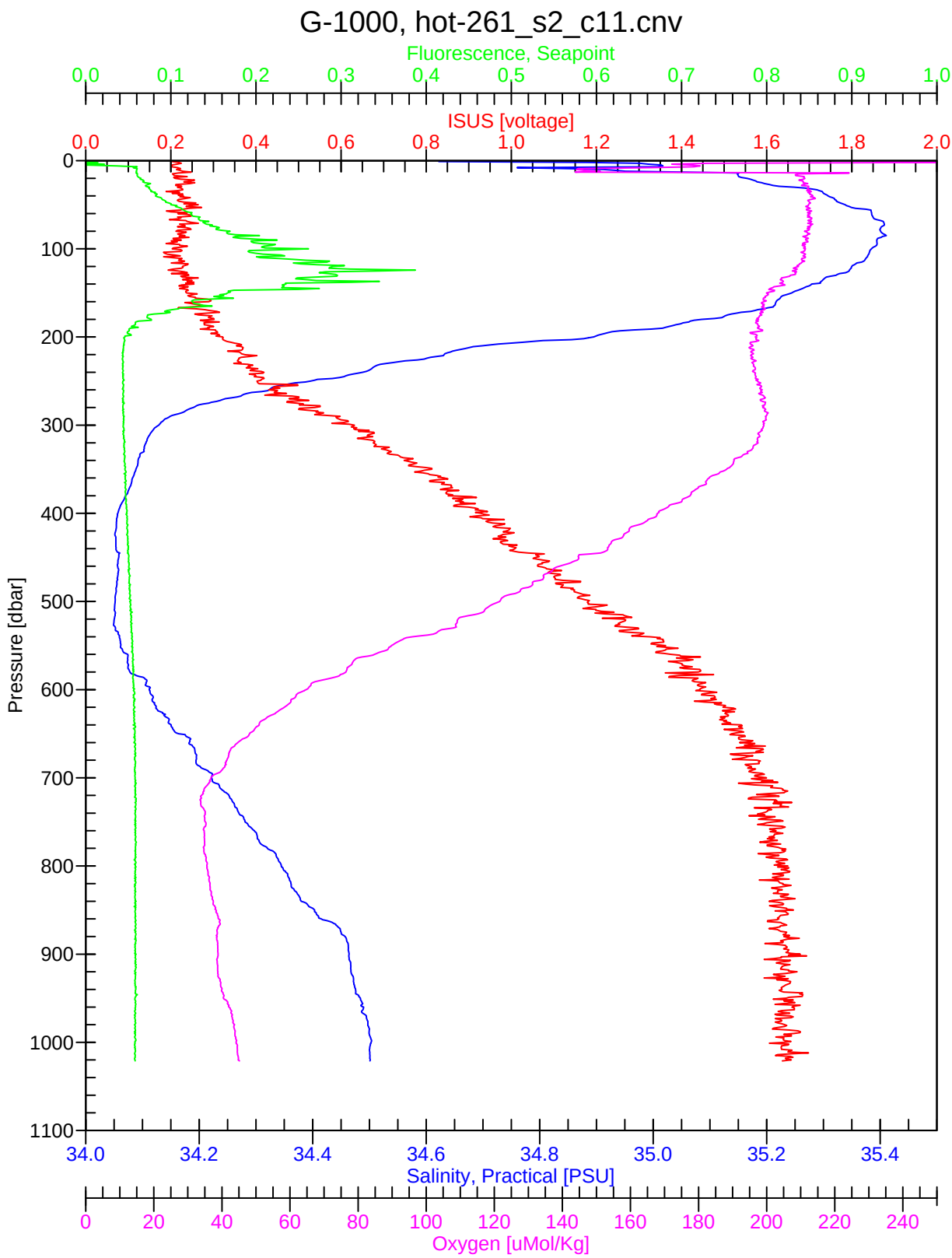

W-1000, hot-261_s2_c8.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]

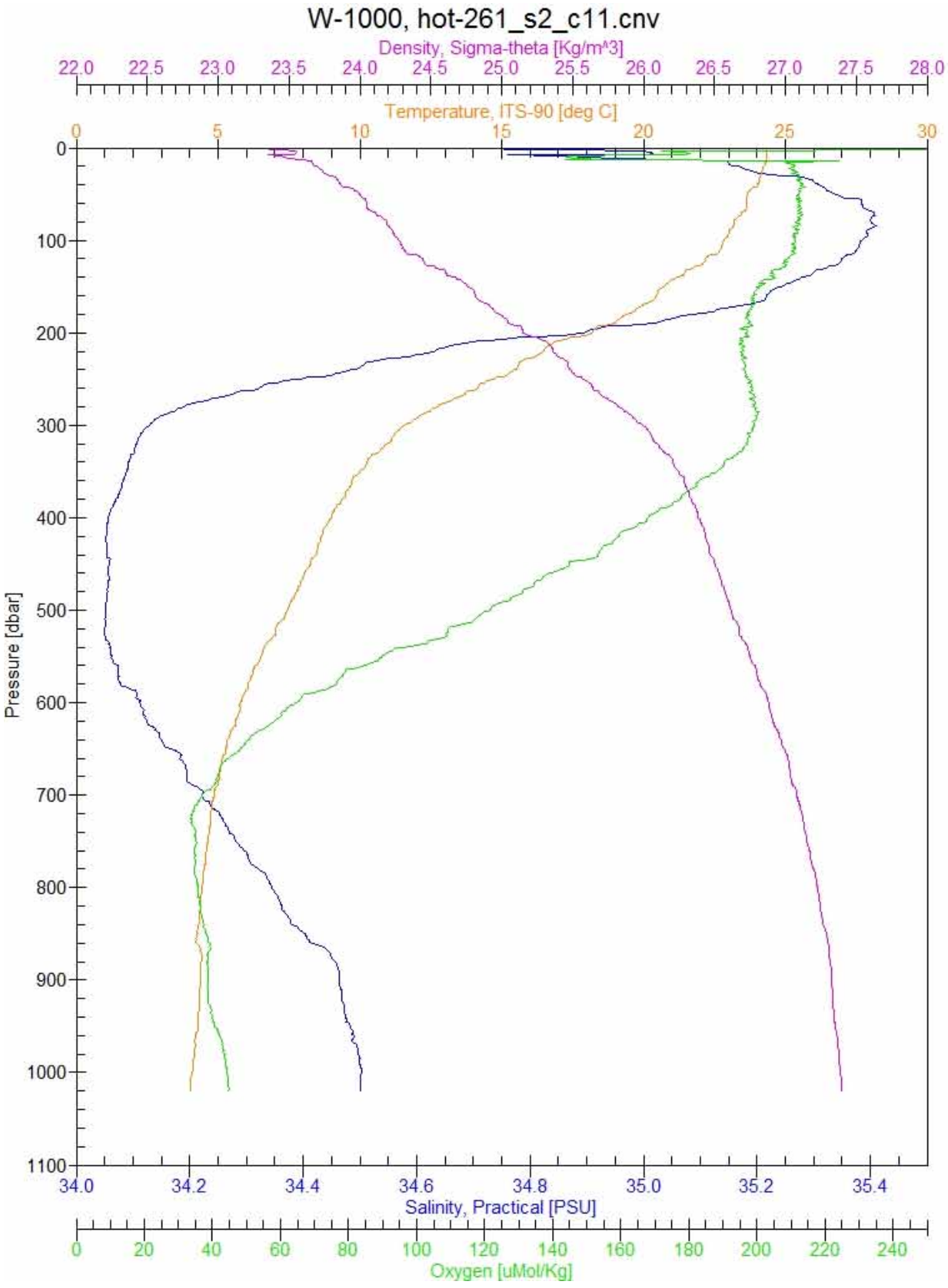

G-1000, hot-261_s2_c9.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]

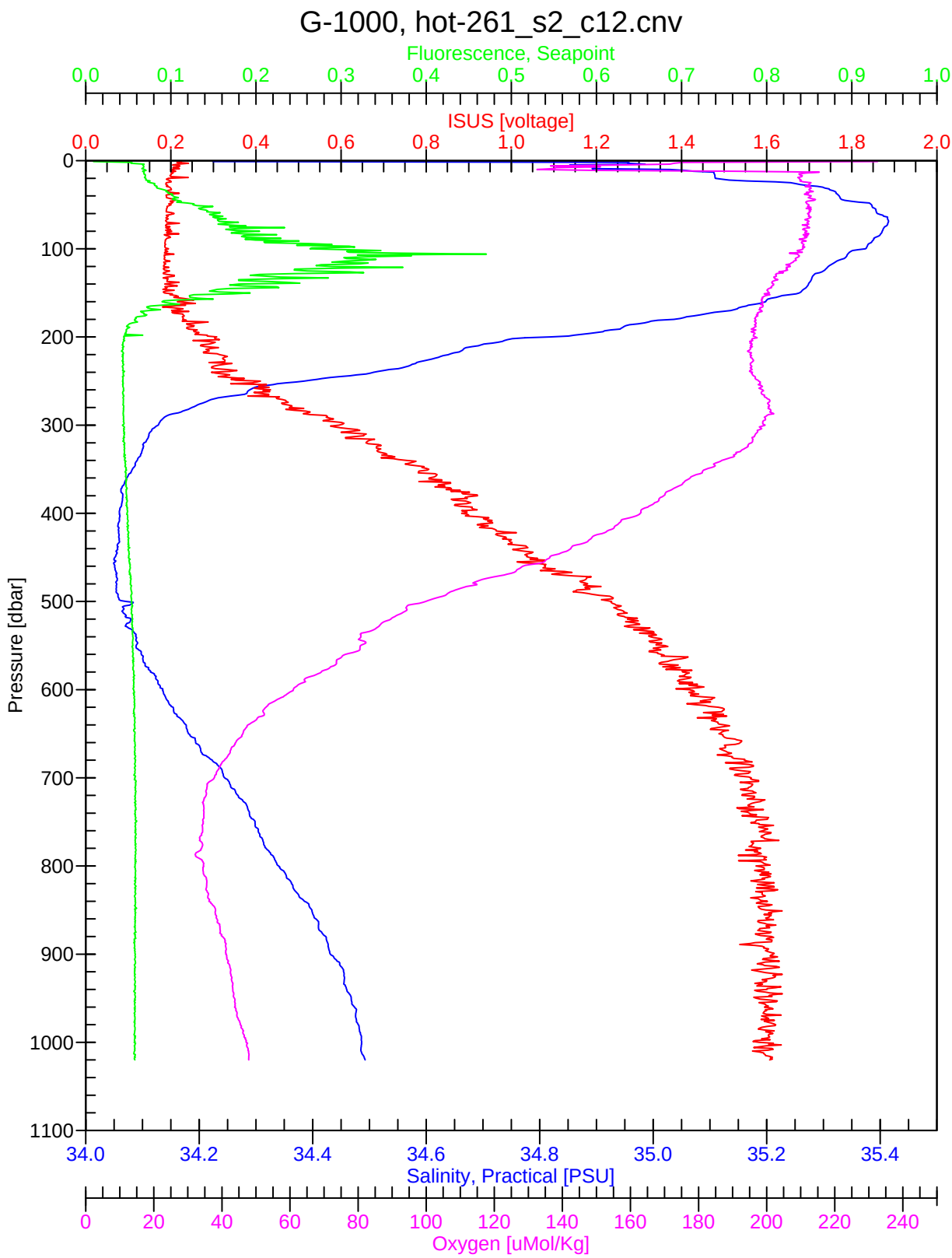

W-1000, hot-261_s2_c9.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]

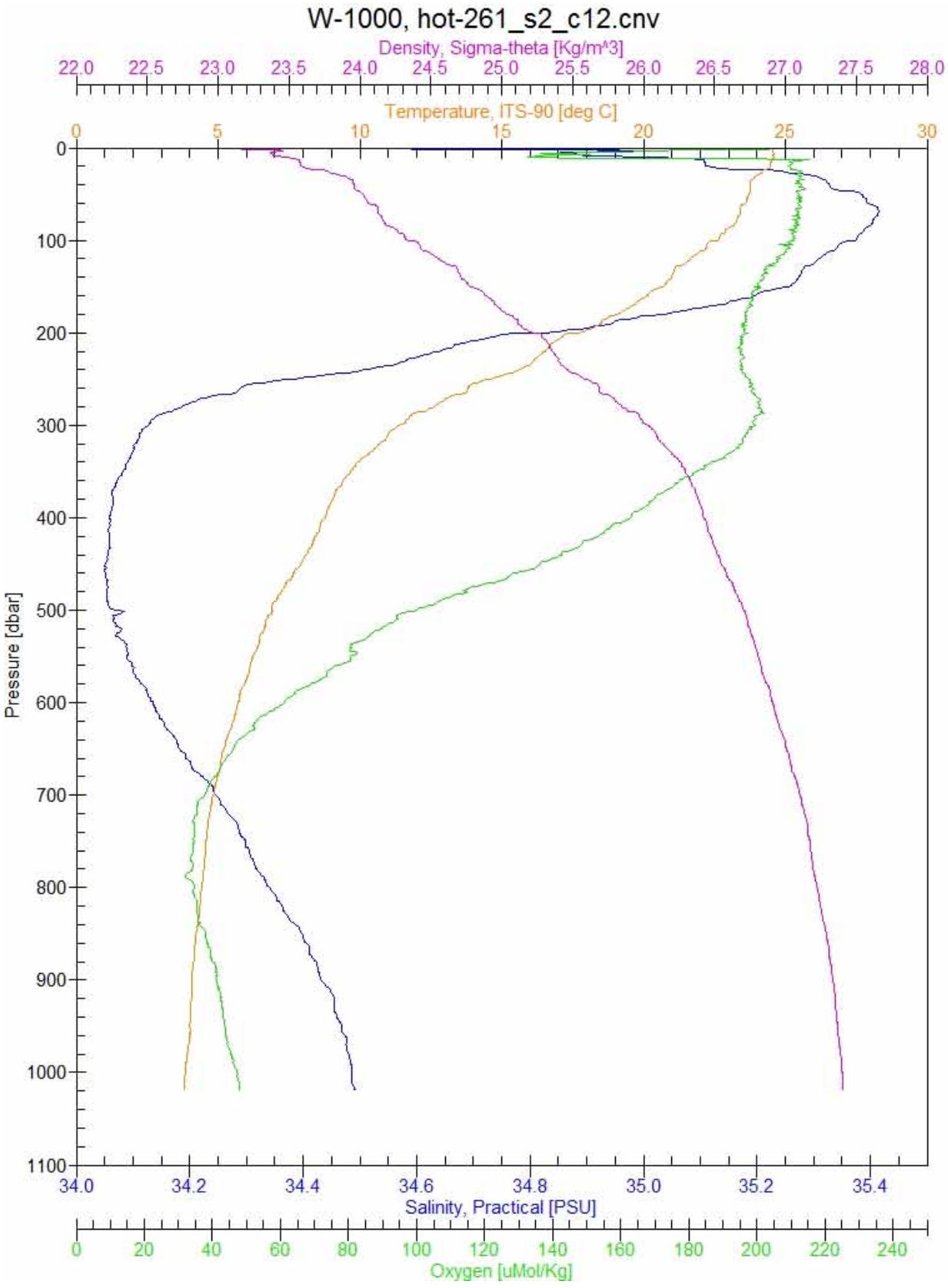

G-1000, hot-261_s2_c10.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]

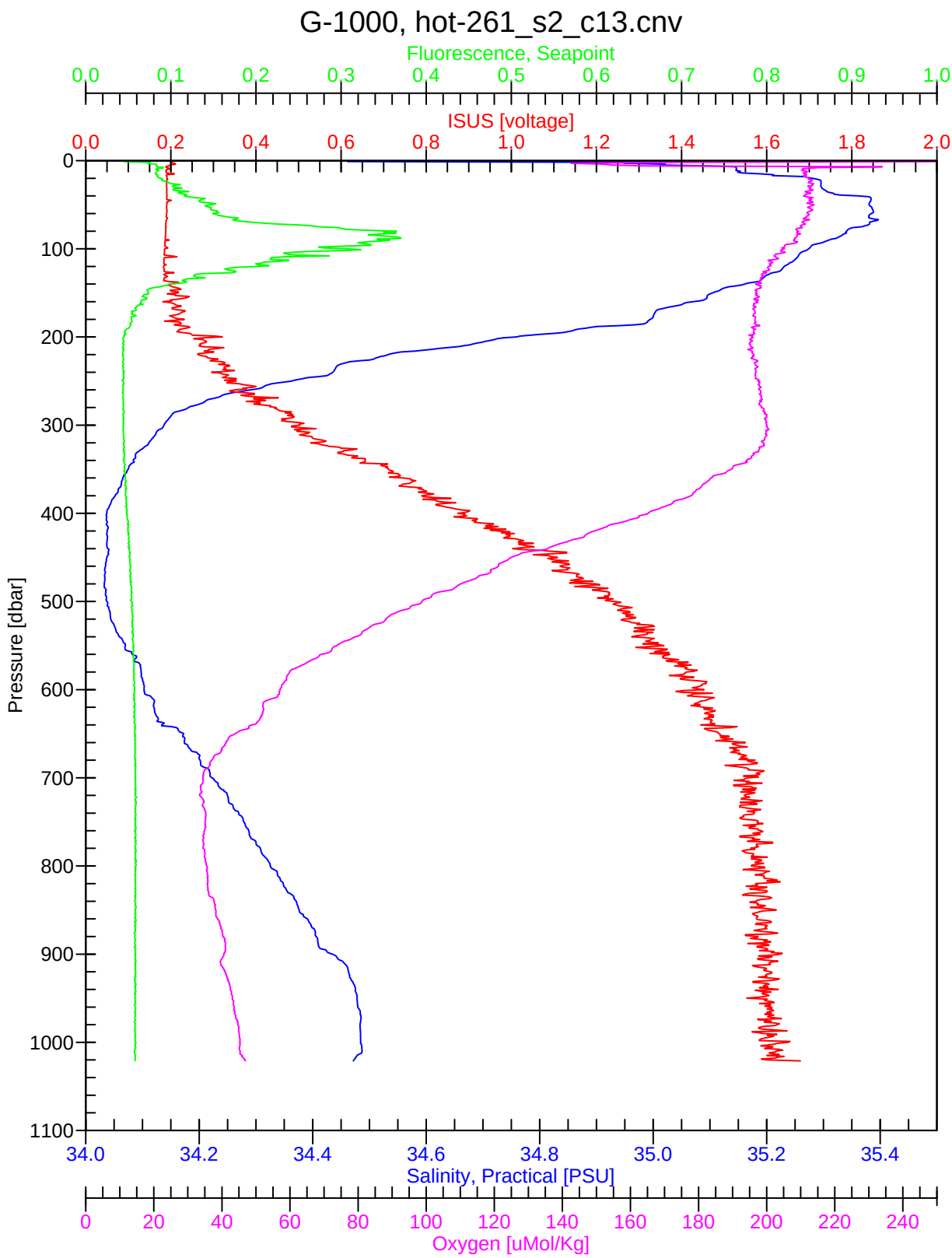

W-1000, hot-261_s2_c10.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]

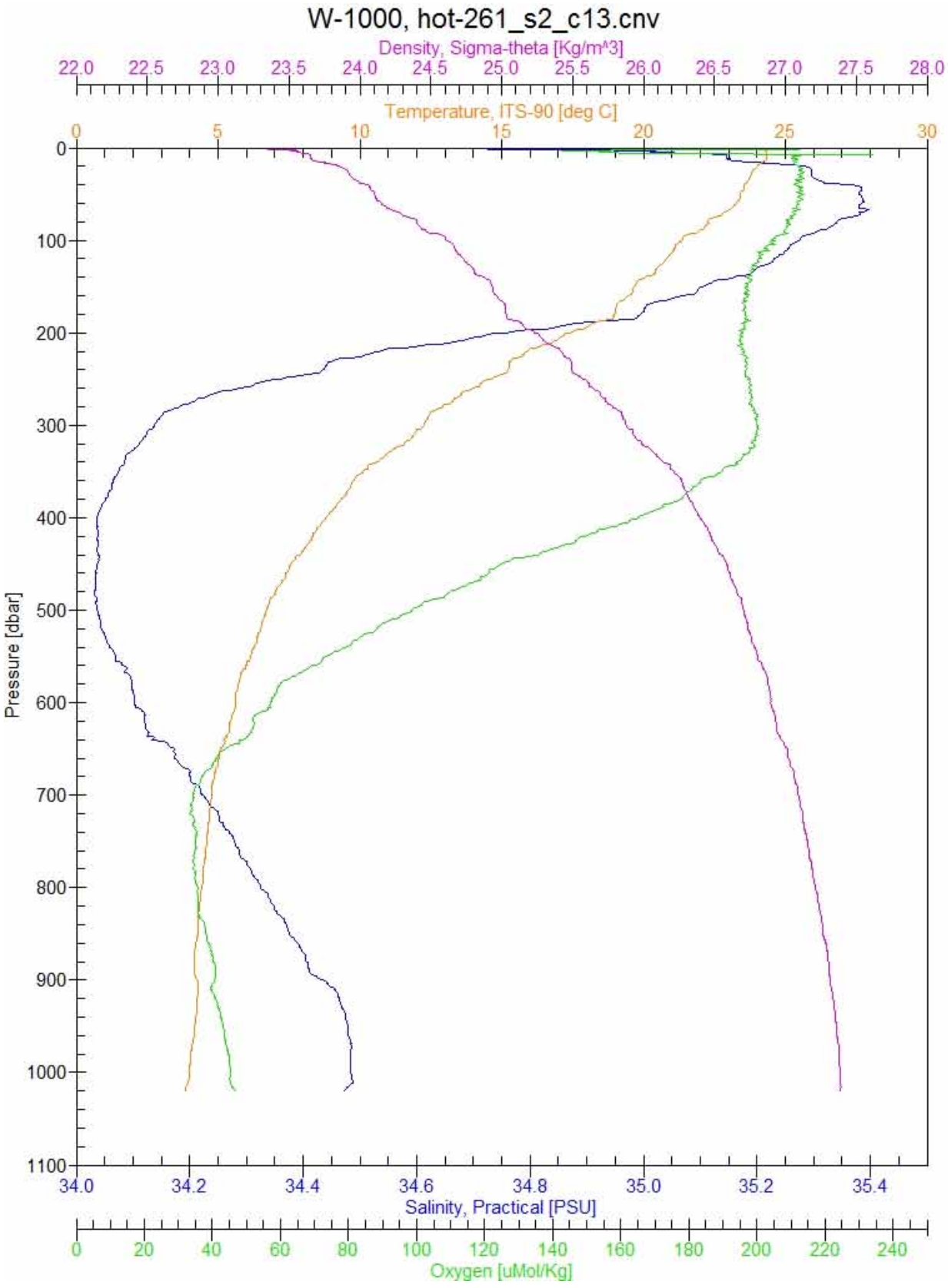

G-1000, hot-261_s2_c11.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]

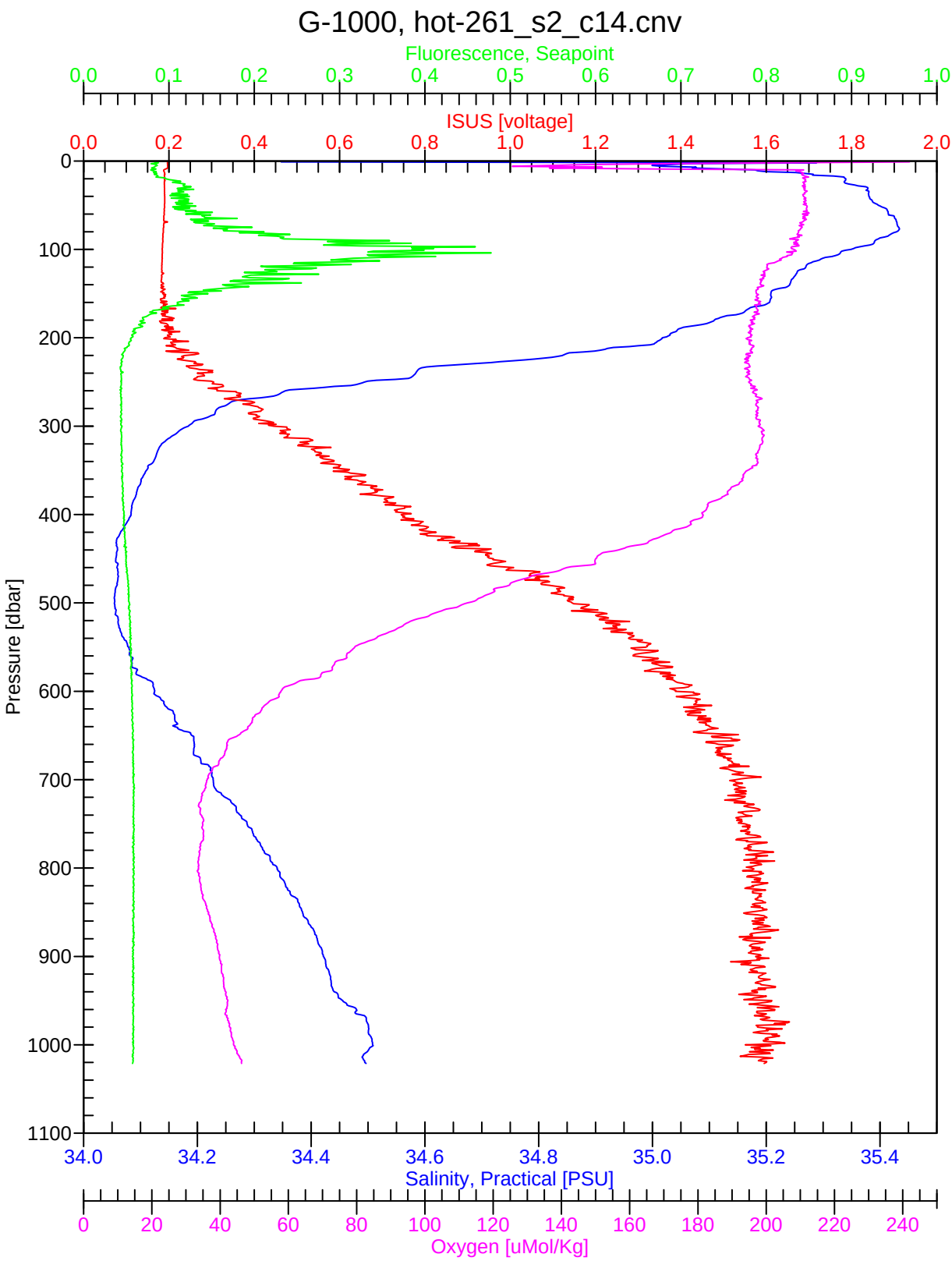

W-1000, hot-261_s2_c11.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]

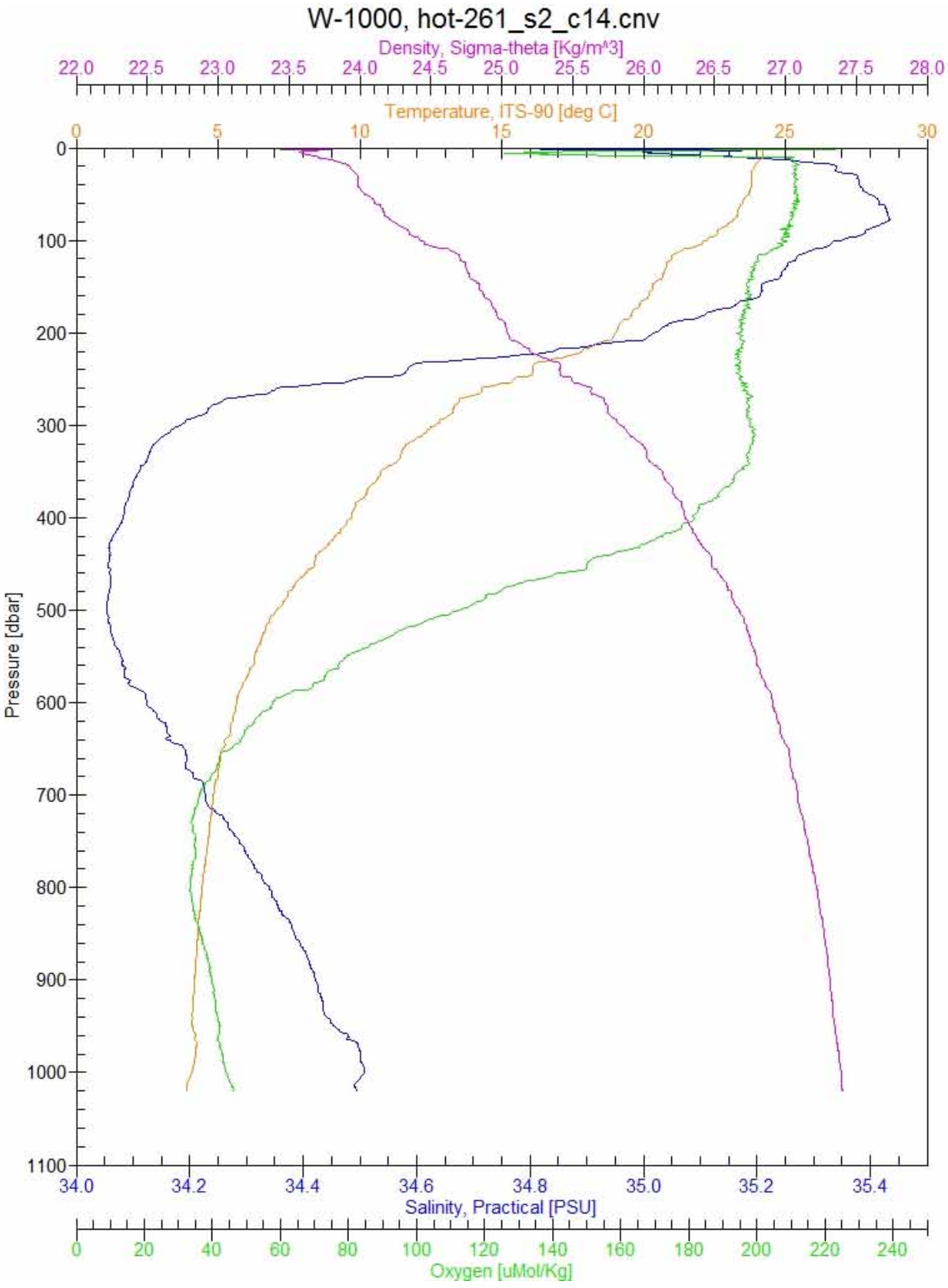

G-1000, hot-261_s2_c12.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]

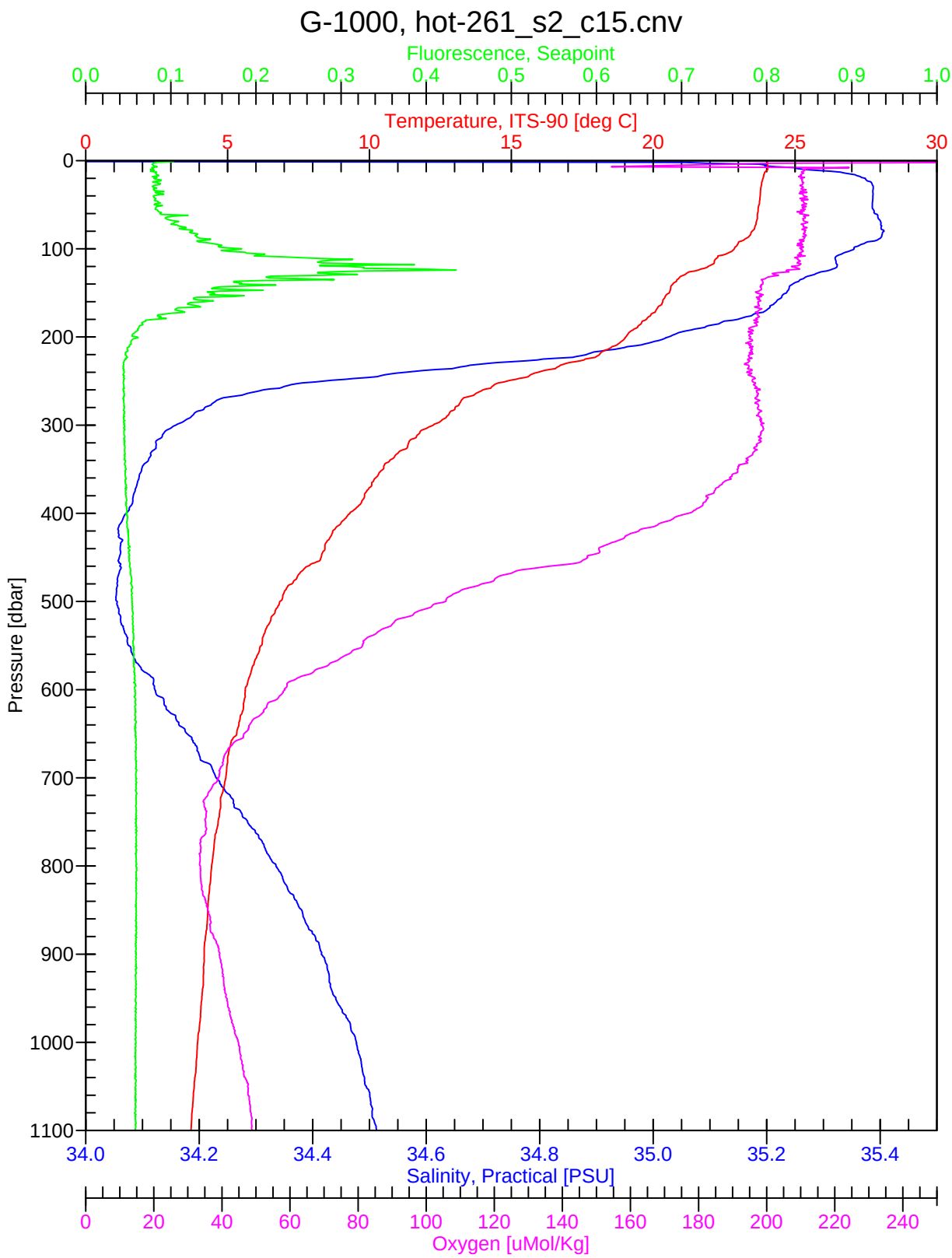

W-1000, hot-261_s2_c12.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]

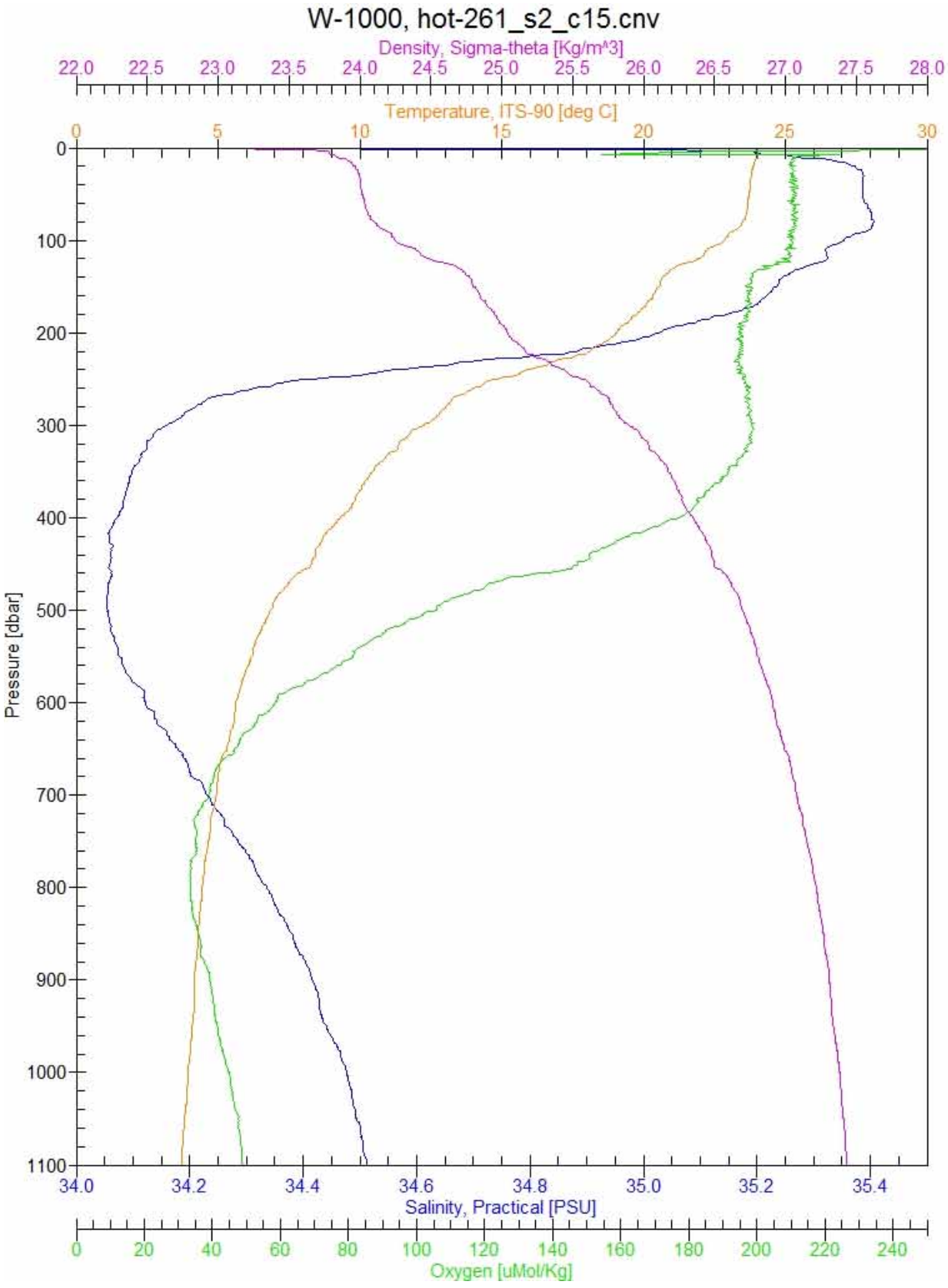

G-1000, hot-261_s2_c13.cnv
Fluorescence, Seapoint
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0
ISUS [voltage]
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]

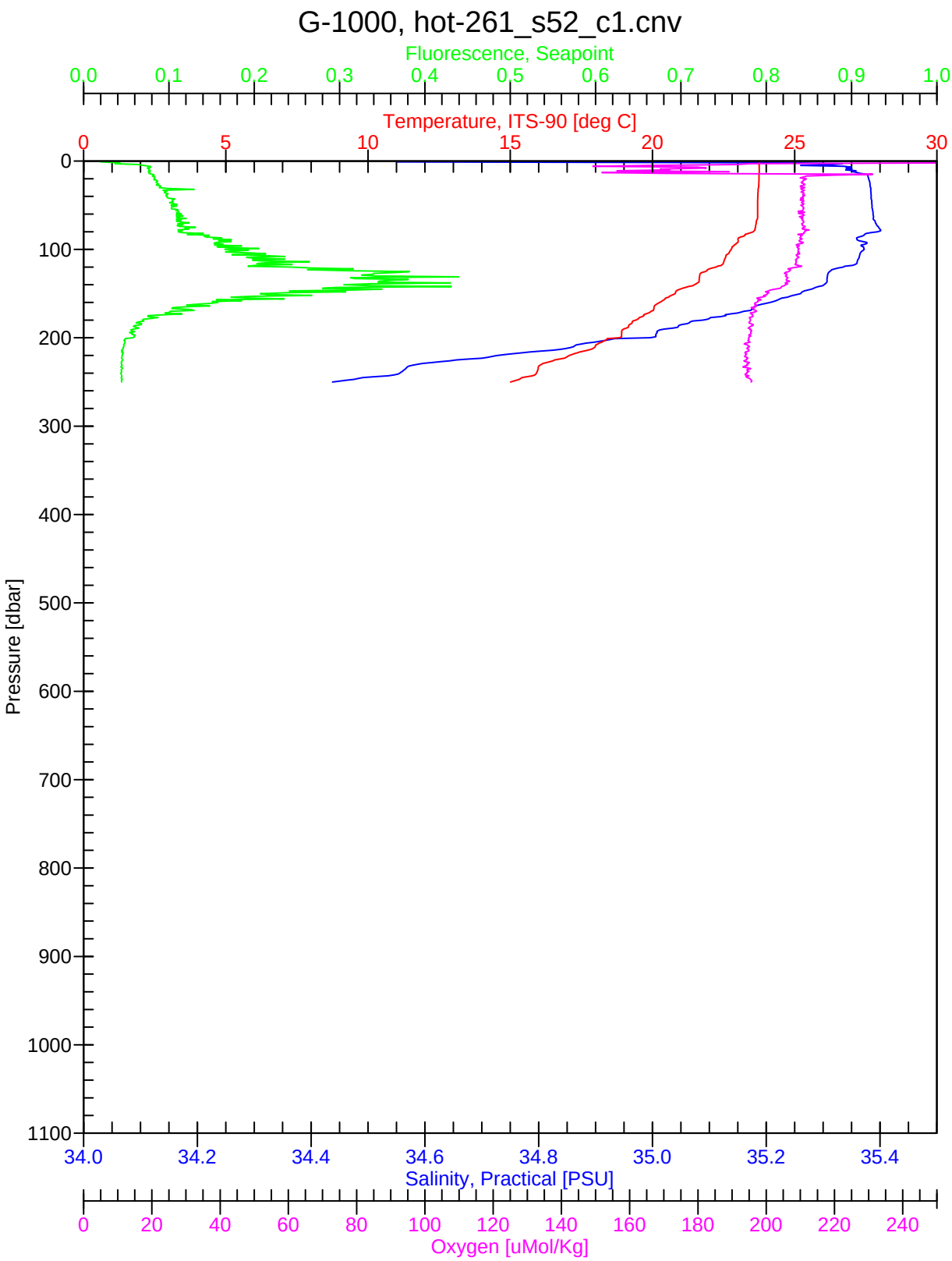

W-1000, hot-261_s2_c13.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]

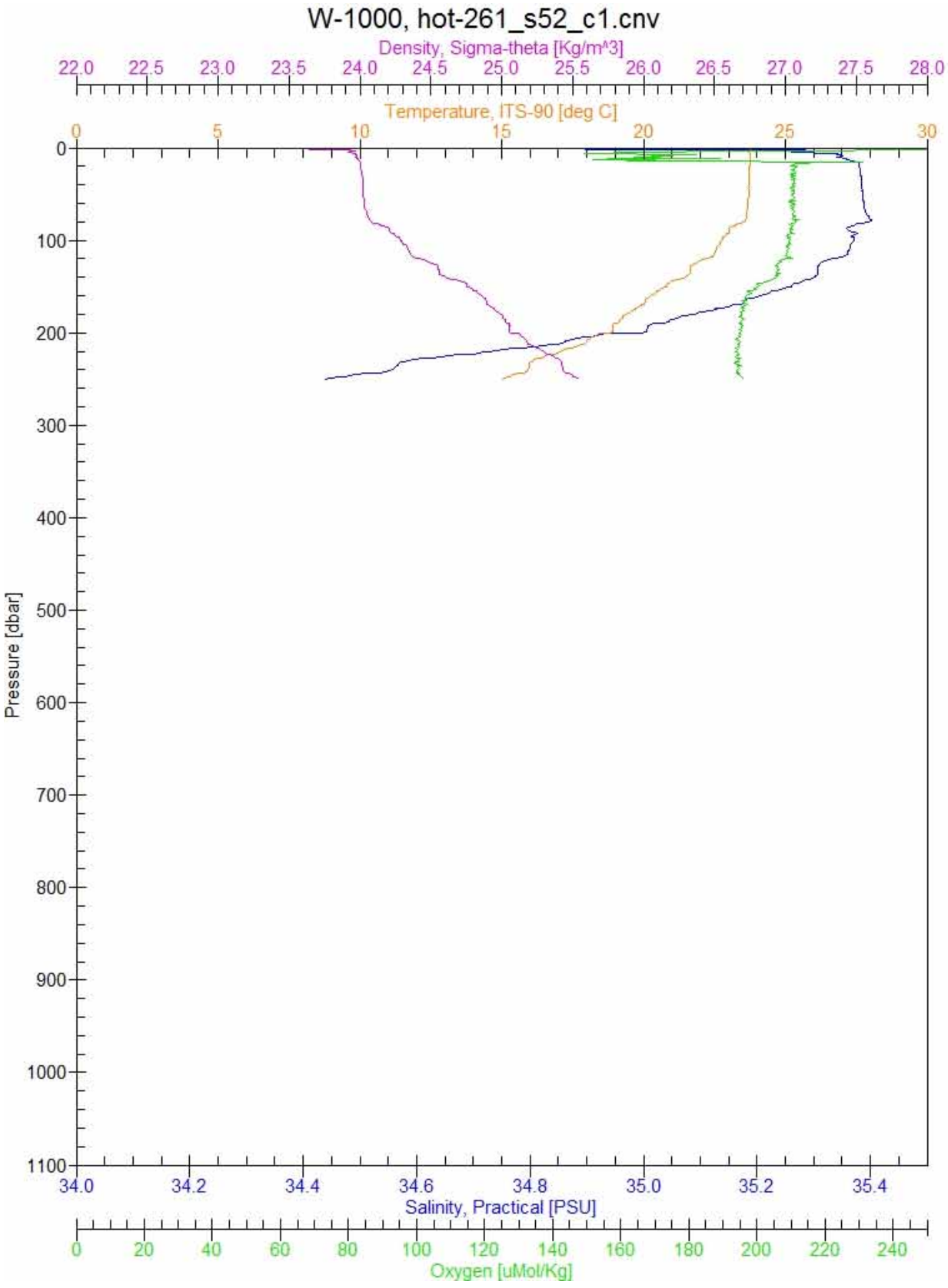

G-1000, hot-261_s2_c14.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
ISUS [voltage]
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]

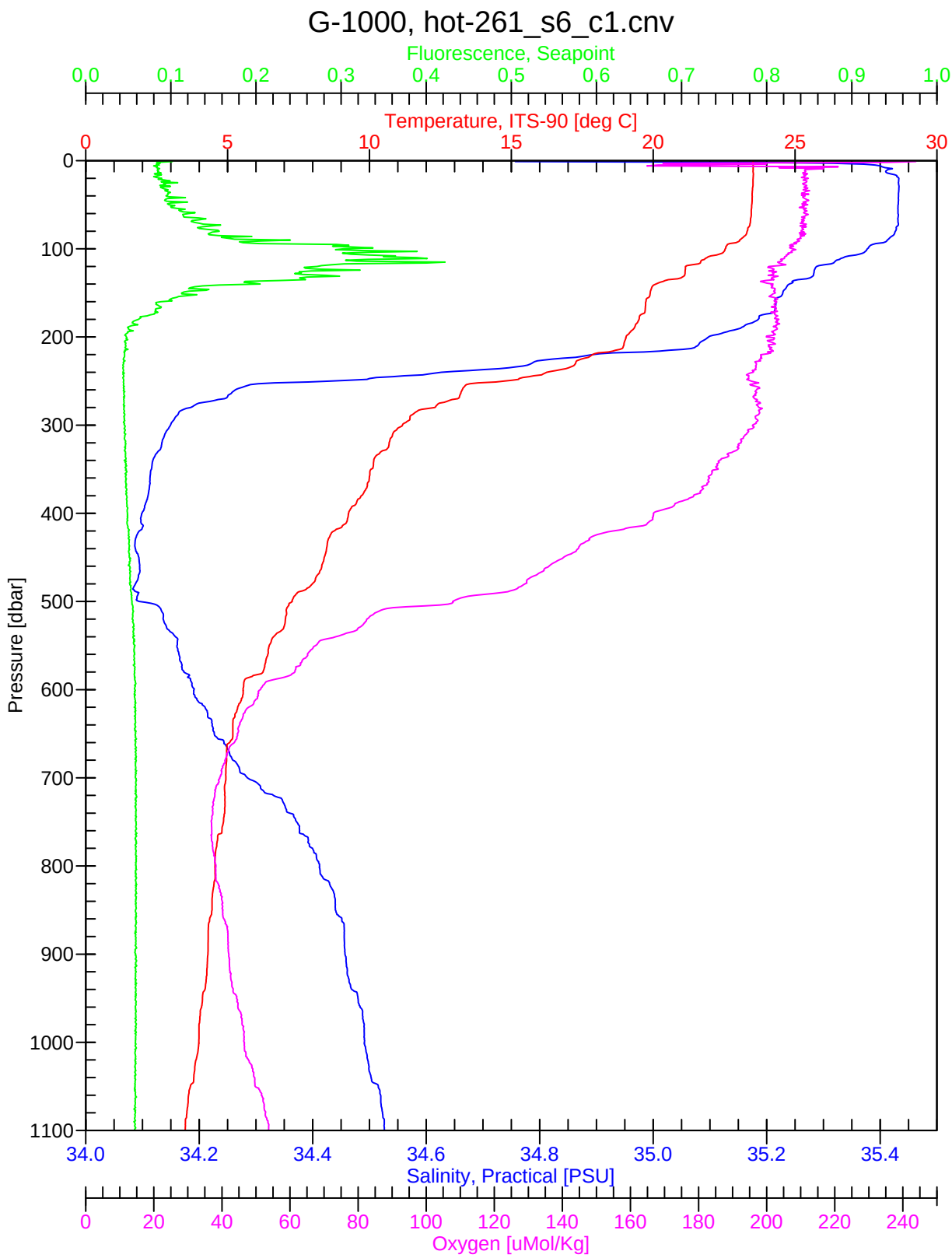

W-1000, hot-261_s2_c14.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]

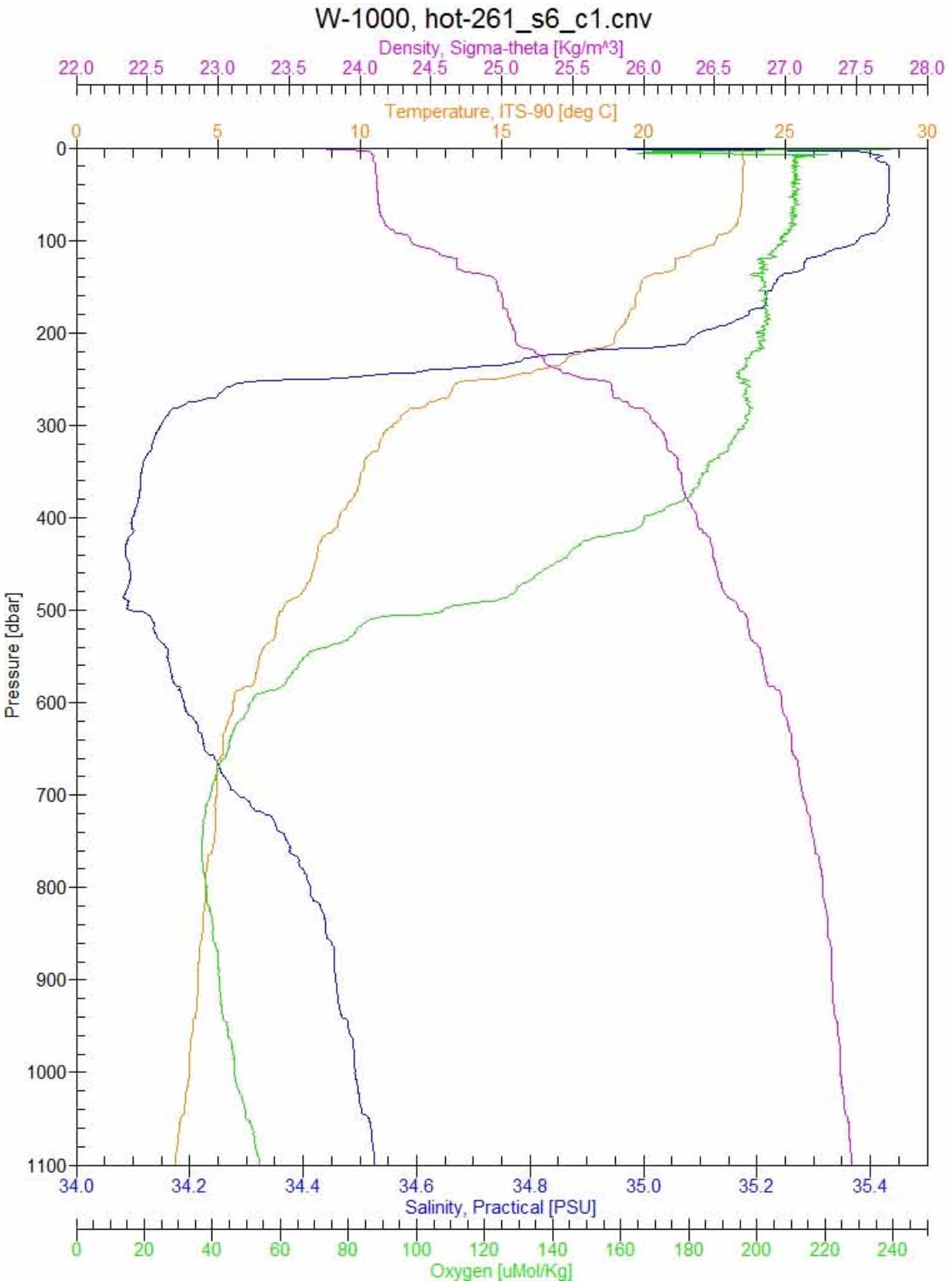

G-1000, hot-261_s2_c15.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Temperature, ITS-90 [deg C]
0
5
10
15
20
25
30
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]


W-1000, hot-261_s2_c15.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]


G-1000, hot-261_s52_c1.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Temperature, ITS-90 [deg C]
0
5
10
15
20
25
30
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]


W-1000, hot-261_s52_c1.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
Salinity, Practical [PSU]
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Oxygen [uMol/Kg]
0 20 40 60 80 100 120 140 160 180 200 220 240


G-1000, hot-261_s6_c1.cnv
Fluorescence, Seapoint
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Temperature, ITS-90 [deg C]
0
5
10
15
20
25
30
Pressure [dbar]
0
100
200
300
400
500
600
700
800
900
1000
1100
34.0
34.2
34.4
34.6
34.8
35.0
35.2
35.4
Salinity, Practical [PSU]
0
20
40
60
80
100
120
140
160
180
200
220
240
Oxygen [uMol/Kg]


W-1000, hot-261_s6_c1.cnv
Density, Sigma-theta [Kg/m^3]
22.0 22.5 23.0 23.5 24.0 24.5 25.0 25.5 26.0 26.5 27.0 27.5 28.0
Temperature, ITS-90 [deg C]
0 5 10 15 20 25 30
Pressure [dbar]
0 100 200 300 400 500 600 700 800 900 1000 1100
34.0 34.2 34.4 34.6 34.8 35.0 35.2 35.4
Salinity, Practical [PSU]
0 20 40 60 80 100 120 140 160 180 200 220 240
Oxygen [uMol/Kg]

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GPS	12L	24.54	CF/DM

- ☑ Pinger
- ☑ Altimeter
- ☐ Transmissometer
- ☐ BEACH Sea Tech Fluorometer
- ☐ OTG Seapoint Fluorometer
- ☑ ISUS
- ☐ PO Fluorometer
- ☐ mixed: 60 dbar
  5-min: 330 dbar

Station: 1	Cast: 1
Latitude start: 21 20.617 end: 21 20.654	Longitude start: 158 16.439 end: 158 16.400
Depth of water: 1586 meters	Date (GMT): 03 / 05 / 14
Pressure on Deck	Time:
Begin: -0.43 End: -0.44	Start Log: 00:09 In Water: 00:16
Max cast pressure: 1021 dbar	Out of Water: 01:28

Xmiss spike at 700 dbar
No fluorometer data after 870 (upcast)

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	00:44:45	00:45:45	1021	1020	
2	49:40	50:00	900	900	
3		:10	901	900	
4	53:40	54:00	750	750	
5	55:50	55:20	699	700	
6	59:00	59:20	599	600	
7	01:01:50	01:02:20	500	500	
8	04:40	05:00	400	400	
9	06:50	07:10	349	350	
10	08:40	09:00	300	300	
11	11:20	11:40	249	250	
12	13:10	13:30	224	225	
13	14:35	14:55	200	200	
14	15:45	16:15	176	175	
15	17:00	17:20	149	150	
16	18:10	18:30	126	125	
17	19:10	19:30	114	115	
18	20:15	20:35	99	100	
19	21:40	22:00	75	75	
20	22:50	23:10	59	60	
21	23:50	24:10	44	45	
22	25:15	25:35	25	25	
23	26:55	27:15	7	5	
24		30	9	5	

Hawaii Ocean Time Series			Station #: 1	Cast #: 1	Box #: 2
Salinity Sample Log Sheet			Cruise #: HOT- 261	Sampler: DM/FSM/DR/SM	
Niskin #	Depth	Serial #	Comments		
1	1020	25			
2	900	26			
3	900	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			

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Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000 GPS	12L	23.63	DM

- [x] Pinger
- [x] Altimeter
- [x] Transmissometer
- [ ] BEACH Sea Tech Fluorometer
- [ ] OTG Seapoint Fluorometer
- [x] ISUS
- [x] PO Fluorometer
- [ ] S-min 4/10
  mixed 60

Station: 2	Cast: 1
Latitude start: 22 45.023 end: 22 45.013	Longitude start: 158 1.071 end: 158 1.105
Depth of water: 4745 meters	Date (GMT): 3 / 5 / 14
Pressure on Deck	Time:
Begin: −0.47 End: −0.45	Start Log: 1151 In Water: 1204
Max cast pressure: 1020 dbar	Out of Water: 1323

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	12:38.30	12:38:50	1020	1020	
2	55:15	55:45	410	4/10	S-min
3	13:04:30	13:05:00	174	175	
4		07:15	150	150	
5		09:30	124	125	
6		:40	124	125	
7		:50	124	125	
8		12:00	100	100	
9		:10	100	100	
10		:20	100	100	
11		14:30	75	75	
12		:40	75	75	
13		:50	74	75	
14		17:05	46	45	
15		:15	45	45	
16		:25	44	45	
17		20:10	22	25	
18		:20	24	25	
19		:30	24	25	
20		22:30	7	5	
21		:46	7	5	
22		:50	7	5	
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 1	Box #: 3
Salinity Sample Log Sheet			Cruise #: HOT- 261	Sampler: JS/RT/CF	
Niskin #	Depth	Serial #	Comments		
1	1020	49			
2	410	50	5-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					

HOT- 261

Hawaii Ocean Time-Series CONSOLE LOG - DEEP CAST -

Cast type	Bottle type	SST	Operator
G5000GPS	12L	23.72	CF

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

4750 61 : 4811
4800 141 : 4814
4809, 6

15:50 Rain during cast

mixed: weak, 25 dbar
Salmin: 450

Station: 2	Cast: 2
Latitude start: 22 45.010 end: 22 45.389	Longitude start: 158 0.030 end: 157 59.806
Depth of water: 4742 meters	Date (GMT): 03 / 05 / 14
Pressure on Deck	Time:
Begin: -0.50 End: -0.61	Start Log: 1508 In Water: 1518
Max cast pressure: 4809 dbar	Out of Water: 1935

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	16:56:20	16:56:30	4809	4800	6 m off bottom
2		17:03:40	4604	4600	[22 44.996 N; 157 59.434 W]
3		09:45	4507	4500	(large grand swell)
4		17:30	4400	4400	
5		:26:00	4210	4200	
6		:34:45	4000	4000	
7		:42:00	3801	3800	
8		:49:00	3601	3600	
9		:56:30	3402	3400	
10		18:04:10	3202	3200	
11		:11:30	2999	3000	
12		17:30	2802	2800	
13		23:20	2600	2600	
14		28:45	2400	2400	
15		33:55	2200	2200	
16		43:40	2000	2000	
17		49:30	1799	1800	
18		55:00	1600	1600	
19		19:01:15	1399	1400	
20		06:30	1199	1200	
21		11:40	1000	1000	
22		18:20	750	750	
23		24:15	500	500	
24		34:45	6	5	

-DEEP CAST-

Hawaii Ocean Time Series			Station #: 2	Cast #: 2	Box #: 4
Salinity Sample Log Sheet			Cruise #: HOT- 261	Sampler:	
Niskin #	Depth	Serial #	Comments		
1	4800	73			
2	4600	74			
3	4500	75			
4	4400	76			
5	4200	77			
6	4000	78			
7	3800	79			
8	3600	80			
9	3400	81			
10	3200	82			
11	3000	83			
12	2800	84			
13	2600	85			
14	2400	86			
15	2200	87			
16	2000	88			
17	1800	89			
18	1600	90			
19	1400	91			
20	1200	92			
21	1000	93			
22	750	94			
23	500	95			
24	5	96			

-DUPLICATES-

Hawaii Ocean Time Series			Station #: 2	Cast #: 2	Box #: 6
Salinity Sample Log Sheet			Cruise #: HOT- 261	Sampler:	
Niskin #	Depth	Serial #	Comments		
1	4800	121			
2	4600	122			
3	4500	123			
4	4400	124			
5	4200	125			
6	4000	126			
7	3800	127			
8	3600	128			
9	3400	129			
10	3200	130			
11	3000	131			
12	2800	132			
13	2600	133			
14	2400	134			
15	2200	135			
16	2000	136			
17	1800	137			
18	1600	138			
19	1400	139			
20	1200	140			
21	1000	141			
22	750	142			
23	500	143			
24	5	144			

HOT- 261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GPS	12L	23.65	CF

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

sal min 440
mixed weak to 30

Station: 2	Cast: 3
Latitude start: 22 45.000 end: 22 44.974	Longitude start: 157 59.965 end: 158 0.205
Depth of water: 4744 meters	Date (GMT): 03 / 05 / 14
Pressure on Deck	Time:
Begin: −0.52 End: −0.50	Start Log: 2151 In Water: 2158
Max cast pressure: 1020 dbar	Out of Water: 2320

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	22:27:00	22:28:00	1020	1020	
2		31:10	971	971	
3		34:15	896	896	
4		36:15	859	859	
5		38:40	820	821	
6		41:00	779	779	
7		43:00	736	736	
8		44:15	720	720	
9		46:40	665	665	
10		49:00	611	611	
11		51:15	569	569	
12		53:40	520	520	
13		55:50	478	478	
14		58:00	439	440	
15		59:40	402	402	
16		23:01:40	352	352	
17		04:00	304	304	
18		06:20	239	240	
19		68:00	203	202	
20		10:00	164	164	
21		12:00	125	125	
22		13:45	82	83	
23		15:50	42	41	
24		18:06	7	5	

Hawaii Ocean Time-Series

HOT - 261

Station:	2	Cast:	3
Latitude:	22 45.000	Longitude:	157 59.965
Date:	3/5/14	Time (GMT):	21:58
Operator:	CF		

δ_θ	σ_θ	Depth
700	20.76	
650	21.28	
600	21.80	
550	22.33	
500	22.85	
450	23.37	
400	23.90	41
350	24.42	125
300	24.95	164
250	25.47	240
200	26.00	304
180	26.21	352
160	26.42	402
140	26.63	478
130	26.73	520
120	26.84	569
110	26.94	611
100	27.05	665
90	27.16	736
80	27.26	821
70	27.37	971

S_{max}	
S_{min}	440
S_{max}	
S_{min}	

O_{max}	100
O_{min}	720
O_{max}	
O_{min}	
O_{max}	

F_{max}	130 ✓
F_{min}	
F_{max}	
F_{min}	
F_{max}	

Bottle	Depth
1	1020
2	971
3	896
4	859
5	821
6	779
7	736
8	720
9	665
10	611
11	569
12	520
13	478
14	440
15	402
16	352
17	304
18	240
19	202
20	164
21	125
22	83
23	41
24	5

Hawaii Ocean Time Series			Station #: 2	Cast #: 3	Box #: 7
Salinity Sample Log Sheet			Cruise #: HOT-261	Sampler:	
Niskin #	Depth	Serial #	Comments		
1	1020	145			
2	971	146			
3	896	147			
4	859	148			
5	821	149			
6	779	150			
7	736	151			
8	720	152			
9	665	153			
10	611	154			
11	569	155			
12	520	156			
13	478	157			
14	440	158			
15	402	159			
16	352	160			
17	304	161			
18	240	162			
19	202	163			
20	164	164			
21	125	165			
22	83	166			
23	41	167			
24	5	168			

HOT- 261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GPS	12 L	24.68	CF

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

mixed: weak, 25 dbar
Salmin 480 dbar

Station: 2	Cast: 4
Latitude start: 22 45.447 end: 22 45.439	Longitude start: 158 0.173 end: 158 0.151
Depth of water: 4742 meters	Date (GMT): 3 / 6 / 14
Pressure on Deck	Time:
Begin: -0.55 End: -0.45	Start Log: 00:34 In Water: 00:39
Max cast pressure: 1020 dbar	Out of Water: 0143

Beam attenuation off the charts.

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	01:06:30	01:07:00	1019	1020	
2	19:10	19:30	480	480	sal min
3	22:30	22:50	350	350	]
4		23:00	350	350	]
5	25:30	26:00	250	250	
6	27:40	28:00	199	200	
7	29:00	29:20	176	175	
8	30:40	31:00	149	150	← NO 125 dbar.
9	33:10	33:30	99	100	
10	34:50	35:10	76	75	
11	36:15	36:35	46	45	
12	37:40	38:00	25	25	
13	39:10	39:30	6	5	
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 4	Box #: 8
Salinity Sample Log Sheet			Cruise #: HOT- 261	Sampler: DM/ESM/SM/DR	
Niskin #	Depth	Serial #	Comments		
1	1020	169			
2	sal min	170			
3	350	171			
4	350	172			
5	250	173			
6	200	174			
7	175	175			
8	150	176			
~~9~~	X	177	Wasn't sampled.		
~~10~~ 9	100	178			
~~11~~ 10	75	179			
~~12~~ 11	45	180			
~~13~~ 12	25	181			
~~14~~ 13	5	182			
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GPS	12L	24.55	DM

- ☑ Pinger
- ☐ Altimeter
- ☑ Transmissometer
- ☐ BEACH Sea Tech Fluorometer
- ☐ OTG Seapoint Fluorometer
- ☑ ISUS
- ☑ PO Fluorometer
- ☐ 5-min 500

mixed: temp only to 15m, no sali

high S/T intrusion @ 900 - 930 dbar

Package came out, pumps stayed on.

Station: 2	Cast: 5
Latitude start: 22 47.351 end: 22 47.341	Longitude start: 158 3.722 end: 158 3.737
Depth of water: 4746 meters	Date (GMT): 3 / 6 / 14
Pressure on Deck	Time:
Begin: -0.47 End: -0.47	Start Log: 0325 In Water: 0331
Max cast pressure: 1019 dbar	Out of Water: 0437

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	04:00:50	04:01:20	1018	1020	
2	15:20	15:40	500	500	5-min
3	20:00	20:20	351	[350	
4		:30	350	350]	
5	23:45	24:05	249	250	
6	25:35	25:55	201	200	
7	26:40	27:00	174	175	
8	27:50	28:10	150	150	
9	29:05	29:25	124	125	
10	30:20	30:40	100	100	
11	31:40	32:00	75	75	
12	32:55	33:15	44	45	
13	34:05	34:25	25	[25	
14		:35	25	25]	
15	35:50	36:10	7	5	
16					
17					
18					
19					
20					
21					
22					
23					
24					

975/20 947/20 844/20 824/20

Hawaii Ocean Time Series			Station #: 2	Cast #: 5	Box #: 8, 9
Salinity Sample Log Sheet			Cruise #: HOT- 261	Sampler: DM/SM/DR	
Niskin #	Depth	Serial #	Comments		
X 1	1020	183			
X 2	500	184	5-min		
X 3	350	185			
X 4	350	186			
X 5	250	187			
X 6	200	188			
X 7	175	189			
X 8	150	190			
X 9	125	191			
X 10	100	192			
X 11	75	193			
X 12	45	194			
X 13	25	195			
~~14~~					
X 15	5	196			
16					
17					
18					
19					
20					
21					
22					
23					
24					

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000 GPS	12L	24.18	DM

- ☑ Pinger
- ☑ Altimeter
- ☑ Transmissometer
- ☐ BEACH Sea Tech Fluorometer
- ☐ OTG Seapoint Fluorometer
- ☑ ISUS
- ☐ PO Fluorometer
- ☐ S-min: 500
  mixed: 20

Spikes in X-miss below 980 dbar

Station: 2	Cast: 6
Latitude start: 22 47.606 end: 22 47.712	Longitude start: 158 2.586 end: 158 2.423
Depth of water: 4741 meters	Date (GMT): 3 / 6 / 14
Pressure on Deck	Time:
Begin: −0.48 End: −0.46	Start Log: 0553 In Water: 0606
Max cast pressure: 1020 dbar	Out of Water: 0714

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	06:36:10	06:36:30	1019	1020	
2	43:50	44:10	780	780	O_2 - min
3	49:30	49:50	501	500	S-min
4	55:30	55:50	200	200	
5	56:55	57:15	174	175	
6	57:55	57:15	165	165	
7	59:00	59:20	150	150	
8	07:00:10	07:00:30	129	130	
9	01:00	01:20	125	125	
10	02:00	02:20	115	115	
11	03:00	03:20	109	110	
12	04:00	04:20	100	100	
13	05:00	05:20	91	90	
14	05:50	06:10	85	85	
15	06:50	07:10	75	75	
16	08:00	08:20	60	60	
17	09:05	09:25	45	45	
18	10:05	10:25	35	35	
19	11:10	11:30	25	25	
20		:40	25	25	
21		:50	25	25	
22	12:55	13:15	15	15	
23	14:05	14:25	6	5	
24		:35		5	

06:28:30 '664' 06:29:00 '690' = 50 m/min

Hawaii Ocean Time Series			Station #: 2	Cast #: 6	Box #: 9, 10
Salinity Sample Log Sheet			Cruise #: HOT- 261	Sampler: DM/FSM/DR	
Niskin #	Depth	Serial #	Comments		
1	1020	197			
2	700	198			
3	500	199			
4	200	200			
5	175	201			
6	165	202			
7	150	203			
8	130	204			
9	125	205			
10	115	206			
11	110	207			
12	100	208			
13	90	209			
14	85	210			
15	75	211			
16	60	212			
17	45	213			
18	35	214			
19	25	215			
20	25	216			
21	25	217			
22	15	218			
23	5	219			
24	5	220			

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000 GPS	12L	23.92	DM

- ☑ Pinger
- ☑ Altimeter
- ☑ Transmissometer
- ☐ BEACH Sea Tech Fluorometer
- ☐ OTG Seapoint Fluorometer
- ☑ ISUS
- ☑ PO Fluorometer
- ☐ S-min: 440
  mixed: none, maybe 10m for temp

Station: 2	Cast: 7
Latitude start: 22 46.756 end: 22 46.790	Longitude start: 158 1.484 end: 158 1.418
Depth of water: 4739 meters	Date (GMT): 3 / 6 / 14
Pressure on Deck	Time:
Begin: -0.46 End: -0.42	Start Log: 0858 In Water: 0907
Max cast pressure: 1023 dbar	Out of Water: 1012

Huge errors in x-missometer data

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	09:37:50	09:38:10	1023	1020	
2	50:50	51 10	439	440	S-min
3	58:30	58:50	174	175	
4	10:00:20	10:00:40	150	150	
5	01:45	02:05	124	125	
6	03:00	03:20	102	100	
7	04:30	04:50	74	75	
8	06:10	06:30	48	45	
9	07:45	08:05	25	25	
10		:15	25	25	
11	09:20	09:40	8	5	
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

09:39:20 1000 09:40:50 979 $\frac{953}{20} \cdot \frac{928}{50} \cdot 50$

Hawaii Ocean Time Series			Station #: 2	Cast #: 7	Box #: 10
Salinity Sample Log Sheet			Cruise #: HOT-261	Sampler: DM/FSM/DR	
Niskin #	Depth	Serial #	Comments		
x 1	1020	221			
✓ 2		222	5-min		
3	175	223			
4	150	224			
5	125	225			
6	100	226			
7	75	227			
8	45	228			
9	25	229			
10					
11	5	230			
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
61000 GPS	12L	24.25	DM

- ☑ Pinger
- ☑ Altimeter
- ☑ Transmissometer
- ☐ BEACH Sea Tech Fluorometer
- ☐ OTG Seapoint Fluorometer
- ☑ ISUS
- ☑ PO Fluorometer
- ☐ s-min 450
  mixed: none for S, 10m for T

Small spikes in Sal after 300 dbar (down)
Transmissometer data sporatic, bad.

Station: 2	Cast: 8
Latitude start: 22 44.984 end: 22 45.007	Longitude start: 158 1.146 end: 158 1.117
Depth of water: 4747 meters	Date (GMT): 3 / 6 / 14
Pressure on Deck	Time:
Begin: -0.47 End: -0.48	Start Log: 1156 In Water: 1205
Max cast pressure: 1020 dbar	Out of Water: 1307

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	12:35:50	12:36:10	1020	1020	
2	47:50	48:10	450	450	s-min
3		56:00	125	[125	
4		:10	125	125]	
5		57:45	100	[100	
6		:55	99	100]	
7		59:20	75	[75	
8		:30	75	75]	
9		13:01:45	44	[45	
10		:55	44	45]	
11		03:10	24	[25	
12		:20	24	25	
13		:30	24	25]	
14		05:45	5	[5	
15		:55	5	5]	
16					
17					
18					
19					
20					
21					
22					
23					
24					

12:13:30 / 54 — 12:14:00 / 58 — 12:19:30 / 245 — 12:20:00 / 269

740/10 — 715/40 = 50

Hawaii Ocean Time Series			Station #: 2	Cast #: 8	Box #: 10, 11
Salinity Sample Log Sheet			Cruise #: HOT- 261	Sampler: JS / CF / RT	
Niskin #	Depth	Serial #	Comments		
1	1020	231			
2	450	232	5-min		
3	125	233			
4	125	234			
5	100	235			
6	100	236			
7	~~75~~	237			
8	75	238			
9	45	239			
10	45	240	(hand bot)		
11	25	241			
12	25	242			
13			skipped 243 - no need sample		
14	5	244			
15	5	245			
16					
17					
18					
19					
20					
21					
22					
23					
24					

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000EPS	12L	24.26	CF

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

Station: 2	Cast: 9
Latitude start: 22 45.018 end: 22 45.016	Longitude start: 157 59.923 end: 157 59.917
Depth of water: 4743 meters	Date (GMT): 3 / 6 / 14
Pressure on Deck	Time:
Begin: -0.50	Start Log: 1456
End: -0.44	In Water: 1504
Max cast pressure: 1020 dbar	Out of Water: 1553

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	15:30:20	15:30:50	1020	1020	x
2		41:30	469	470	x sal min
3		51:30	25	25	x
4		52:55	4	5	x
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 9	Box #: 11
Salinity Sample Log Sheet			Cruise #: HOT-261	Sampler:	
Niskin #	Depth	Serial #	Comments		
1	1020	246			
2	470	247			
3	25	248			
4	5	249			
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
Glocusaps	12 L	24.37	CF

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

mixed : 40

Station: 2	Cast: 10
Latitude start: 22 45.054 end: 22 45.270	Longitude start: 158 0.028 end: 158 0.334
Depth of water: 4739 meters	Date (GMT): 3 / 6 / 14
Pressure on Deck	Time:
Begin: -0.45 End: -0.44	Start Log: 1758 In Water: 1812
Max cast pressure: 1020 dbar	Out of Water: 1910

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	18:37:15	18:37:45	1020	1020	×
2		49:40	500	500	× sal min
3		57:30	175	175	×
4		:40	174	175	
5		59:20	149	150	×
6		:30	149	150	
7		19:01:00	124	125	×
8		:10	124	125	
9		02:30	99	100	×
10		:40	100	100	
11		04:20	75	75	×
12		:30	74	75	
13		06:10	45	45	×
14		:20	45	45	
15		07:40	24	25	×
16		50	24	25	
17		08:00	24	25	
18		09:20	5	5	×
19		:30	6	5	
20					
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 10	Box #: 11
Salinity Sample Log Sheet			Cruise #: HOT-261	Sampler:	
Niskin #	Depth	Serial #	Comments		
1	1020	250			
2	salmin	251			
3	175	252			
4					
5	150	253			
6					
7	125	254			
8					
9	100	255			
10					
11	75	256			
12					
13	45	257			
14					
15	25	258			
16					
17					
18	5	259			
19					
20					
21					
22					
23					
24					

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GPS	12 L	24.34	CF

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

Station: 2	Cast: 11
Latitude start: 22 44.928 end: 22 44.938	Longitude start: 157 59.976 end: 157 59.917
Depth of water: 4744 meters	Date (GMT): 3 / 6 / 14
Pressure on Deck	Time:
Begin: -0.44 End: -0.45	Start Log: 2112 In Water: 2115
Max cast pressure: 1020 dbar	Out of Water: 2211

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		21:38:00	1020	1020	X
2		50:00	500	500	✓
3		57:00	174	175	
4		:10	174	175	
5		58:40	150	150	
6		:50	150	150	
7		22:00:10	125	125	
8		:20	125	125	
9		01:45	99	100	
10		:55	100	100	
11		03:30	75	75	
12		:40	75	75	
13		05:15	44	45	
14		:25	44	45	
15		06:40	26	25	
16		:50	26	25	
17		07:00	26	25	
18		09:00	6	5	
19		:10	5	5	X
20					
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 11	Box #: 11
Salinity Sample Log Sheet			Cruise #: HOT- 261	Sampler:	
Niskin #	Depth	Serial #	Comments		
1	1020	260			
2	500	261			
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19	5	262			
20					
21					
22					
23					
24					

HOT- 261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GPS	12L	24.49	CF/DM

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

mixed · ~20
sal min : 475

NOTE: Day 0 →

Station: 2	Cast: 12
Latitude start: 22 49.166 end: 22 49.171	Longitude start: 157 59.635 end: 157 59.574
Depth of water: 4707 meters	Date (GMT): 3 / 6 / 14
Pressure on Deck	Time:
Begin: -0.44 End: -0.51	Start Log: 2356 In Water: 00:04
Max cast pressure: 1020 dbar	Out of Water: 3/7/14 0113

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	00:31:20	00:31:50	1019	1020	
2		37:40	770	770	
3		40:15	700	700	
4		45:10	499	500	
5		47:00	475	475	
6		50:15	350	350	
7	53:10	53:30	299	300	
8	55:10	55:30	250	250	
9	57:45	58:05	200	200	
10	1:00:00	1:00:30	149	150	
11	01:55	02:15	125	125	
12	03:45	04:05	100	100	
13	05:30	05:50	75	75	
14	07:20	07:40	44	45	
15	09:10	09:30	24	[25	
16		:40	25	25]	
17	11:00	11:20	5	5	
18					
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 12	Box #: 11/12
Salinity Sample Log Sheet			Cruise #: HOT-261	Sampler: DM/DR/SM	
Niskin #	Depth	Serial #	Comments		
1	1000	263			
2					
3					
4					
5	475	264	sal min		
6	350	265			
7					
8	250	266			
9					
10	150	267			
11	125	268			
12	100	269			
13	75	270			
14	45	271			
15	25	272			
16					
17	5	273			
18					
19					
20					
21					
22					
23					
24					

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G10006FS	12L	24.38	DM

- ☐ Pinger
- ☑ Altimeter
- ☑ Transmissometer
- ☐ BEACH Sea Tech Fluorometer
- ☐ OTG Seapoint Fluorometer
- ☑ ISUS
- ☑ PO Fluorometer
- ☐ 5-min: 480
  mixed: weak, 15m

high Δ conductivity (over 1.0m)

Pumps off after package came out.

Station: 2	Cast: 13
Latitude start: 22 45.000 end: 22 45.037	Longitude start: 158 0.000 end: 157 59.908
Depth of water: 4744 meters	Date (GMT): 3 / 7 / 14
Pressure on Deck	Time:
Begin: -0.50 End: -0.45	Start Log: 0251 In Water: 0303
Max cast pressure: 1020 dbar	Out of Water: 0408

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	03:32:35	03:32:55	1020	1020	
2	43:05	43:25	699	700	
3	48:55	49:15	479	480	5-min
4	56:40	57:00	175	175	
5	58:10	58:30	150	150	
6	59:45	04:00:05	125	125	
7	04:01:05	04:01:25	100	100	
8	02:25	02:45	74	75	
9	03:65	04:15	45	45	
10	05:05	05:25	25	[25	
11		:35	25	25]	
12	06:50	07:10	4	5	
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

3:41:10 / 685 — 3:44:40 / 663 = 45 — 45:00 / 646 — 46:00 / 600 : 45

Hawaii Ocean Time Series			Station #: 2	Cast #: 13	Box #: 12
Salinity Sample Log Sheet			Cruise #: HOT- 261	Sampler: DM/DR/SM	
Niskin #	Depth	Serial #	Comments		
x 1	1020	274			
2					
x 3	5-min	275			
4					
5					
6					
7					
8					
9					
10					
11					
x 12	5	276			
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GPS	12L	24.18	DM

- [x] Pinger
- [x] Altimeter
- [x] Transmissometer
- [ ] BEACH Sea Tech Fluorometer
- [ ] OTG Seapoint Fluorometer
- [x] ISUS
- [x] PO Fluorometer
- [ ] sal min: 500
  mixed: 15, weak

Station: 2	Cast: 14
Latitude start: 22 45.002 end: 22 45.036	Longitude start: 157 59.995 end: 158 0.095
Depth of water: 4744 meters	Date (GMT): 3 / 7 / 14
Pressure on Deck	Time:
Begin: -0.52 End: -0.44	Start Log: 0547 In Water: 0558
Max cast pressure: 1020 dbar	Out of Water: 0707

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	06:31:25	06:31:45	1019	1020	
2	42:55	43:15	500	500	S-min
3	49:15	49:35	175	[175	
4		:45	174	175]	
5	51:10	51:30	149	[150	
6		:40	149	150]	
7	52:25	52:45	135	135	
8	53:25	53:45	125	[125	
9		:55	125	125]	
10	54:50	55:10	115	115	
11	56:10	56:30	99	[100	
12		:40	100	100]	
13	57:40	58:00	84	85	
14	58:45	59:05	74	[75	
15		:15	74	75]	
16	07:00:10	07:00:30	59	60	
17	01:20	01:40	46	[45	
18		:50	45	45]	
19	03:00	03:20	24	[25	
20		:30	24	25]	
21	05:15	05:35	4	[5	
22		:45	4	5]	
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 14	Box #: 12, 14
Salinity Sample Log Sheet			Cruise #: HOT- 261	Sampler: DM / FSM / DR	
Niskin #	Depth	Serial #	Comments		
1	1020	277			
2	500	278	5-min		
3	175	279			
4	175	280			
5	150	281			
6	150	282			
7	135	283			
8	125	284			
9	125	285			
10	115	286			
11	100	287			
12	100	288			
13	85	313			
14	75	314			
15	75	315			
16	60	316			
17	45	317			
18	45	318			
19	25	319			
20	25	320			
21	5	321			
22	5	322			
23					
24					

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G5000 GPS	12L	23.92	DM

- [x] Pinger
- [x] Altimeter
- [x] Transmissometer
- [ ] BEACH Sea Tech Fluorometer
- [ ] OTG Seapoint Fluorometer
- [ ] ISUS – Removed
- [x] PO Fluorometer
- [ ] S-min 500 mixed 10m,

altimeter	decibar
61	4750
33	4780
	4800
	4807

Station: 2	Cast: 15
Latitude start: 22 45.073 end: 22 44.997	Longitude start: 158 0.002 end: 157 59.961
Depth of water: 4742 meters	Date (GMT): 3 / 7 / 14
Pressure on Deck	Time:
Begin: -0.47 End: -0.71	Start Log: 0910 In Water: 0916 Out of Water: 1250
Max cast pressure: 4807 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		11:13:	4807	4800	★ check mrk file for time.
2	11:29:35	11:30:05	3999	4000	
3		:15	3999	4000	
4	48:40	49:00	3000	3000	
5		:10	3000	3000	
6	12:07:00	12:07:30	1999	2000	
7		40	2000	2000	
8	25:50	26:10	1000	1000	
9	30:50	31:10	799	800	O_2-min
10	36:55	37:15	500	500	S-min
11	45:20	45:40	80	80	O_2-max
12	49:20	49:40	5	5	
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

$\frac{19:00}{4593}$ $\frac{20:00}{4539}$ = 55 m/min

Hawaii Ocean Time Series			Station #: 2	Cast #: 15	Box #: 14
Salinity Sample Log Sheet			Cruise #: HOT-261	Sampler: JS/CF/RT	
Niskin #	Depth	Serial #	Comments		
1 x	4800	323			
2 x	4000	324			
3					
4 x	3000	325			
5					
6 x	2000	326			
7					
8					
9 x	800	327	O_2-min		
10 x	500	328	5-min		
11 x	80	329	O_2-max		
12 x	5	330			
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

HOT- 261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
CTDCYOYO	12L	23.72	CF

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

Rain right before cast.
mixed layer: ~80

Station: 52	Cast: 1
Latitude start: 22 41.904 end: 22 41.906	Longitude start: 157 58.015 end: 157 58.013
Depth of water: 4743 meters	Date (GMT): 3 / 7 / 14
Pressure on Deck	Time:
Begin: −0.44	Start Log: 2210
End: −0.42	In Water: 2215
Max cast pressure: 250 dbar	Out of Water: 2311

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	22:58:15	22:58:45	250	250	
2		:55	250	250	
3		:05	249	250	
4		23:07:30	124	125	
5		:40	124	125	
6		:50	124	125	
7		03:00	124	125	
8		07:40	4	5	
9		:50	4	5	
10		:00	5	5	
11		:10	5	5	
12		:20	4	5	
13		:30	4	5	
14		:40	4	5	
15		:50	4	5	
16		:00	4	5	
17		10:15	2	1	
18					
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 52	Cast #: 1	Box #: —
Salinity Sample Log Sheet			Cruise #: HOT-	Sampler:	
Niskin #	Depth	Serial #	Comments		
1					
2					
3			— NO SALTS —		
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

HOT-261

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G5000GPS	12L	23.51	Day

- ☑ Pinger
- ☑ Altimeter
- ☑ Transmissometer
- ☐ BEACH Sea Tech Fluorometer
- ☐ OTG Seapoint Fluorometer
- ☐ ISUS - removed
- ☑ PO Fluorometer
- ☑ S-Min: 440
  Mixed 10

dbar	alti
2400	68
2440	28
2450	19

Station: 6	Cast: 1
Latitude start: 21 50.831 end: 21 50.796	Longitude start: 158 21.800 end: 158 21.790
Depth of water: 2440 meters	Date (GMT): 3 / 8 / 14
Pressure on Deck	Time:
Begin: -0.49 End: -0.52	Start Log: 0601 In Water: 0613
Max cast pressure: 2461 dbar	Out of Water: 0812

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		07:13:40	2460	2500	10m off (2460) @ 21°50.833'N 158°
2	07 24:35	07:24:55	1999	2000	21.748'W
3	34:00	54:20	1498	1500	
4	07:43:40	07:44:00	1000	1000	
5	54:00	54:30	500	500	
6	08:00:30	08:00:50	175	175	
7	02:10	02:30	150	150	
8	03:30	03:50	125	125	
9	04:50	05:10	100	100	
10	08:06:00	08:06:20	75	75	
11	07:50	07:50	45	45	
12	08:45	09:05	20	25	
13	10:45	11:05	5	5	
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 6	Cast #: 1 | Box 14, 15
Salinity Sample Log Sheet			Cruise #: HOT-261	Sampler: DM/DR/FSM
Niskin #	Depth	Serial #	Comments	
1	2500	331		
2	2000	332		
3	1500	333		
4	1000	334		
5	500	335		
6	175	336		
7	150	337		
8	125	338		
9	100	339		
10	75	340		
11	45	341		
12	25	342		
13	5	343		
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				

331

HOT 261 KM 1408

CTD Configurations

CTD: 850

Deck Unit: 111361

Pressure: 1430

Carousel: 518

T_1: 1416 T_2: 5519

C_1: 2218 C_2: 2959

O_1: 918 O_2: 1601

$Pump_1$: 968 $Pump_2$: 368

Fluorometer: 3199 → 3095 (on 3/6/14 before S2C5)

Altimeter: 9149

Bucket Thermometer: 201002

Transmissometer: CST-1192 → SN1431DR (on 3/6/14 before S2C9)

Cruise Participants

A. Harlan

D. Sadler

L. Fujieki

J. Snyder

C. Fumar

B. Updyke

S. Curless

D McCoy

F. Santiago-Mandujano

D. Rosbrough

S. Goldberg

B. Watkins

B. Wai

W. McQuiston

T. Young -OTG

J. Koch -OTG

Ryan Tabata - PO Volunteer

Sheuli Molla - PO Volunteer

1900 Depar

1945 Safet

2000 Aband

22:00 ST

22:55 End

2305 Star

0000 End

0009 Start

Fluoro

loss

0130 End S

Bottles

0140 D

0955 Arriv

1033 Sed

1151 Start

M 1408

HOT-261

March 04, 2014

1900 Depart Snug Harbor

1945 Safety Brief / Science Meeting

2000 Abandon ship drills ; transit to Kahe

22:00 START 1000 METER WEIGHT CAST.

fore) 22:55 End weight Cast

2305 start Hyperpro

efore 0000 End Hyperpro

March 05, 2014

0009 Start Station 1 Cast 1 - G1000GPS

upcast

Fluorometer drop out at 920 dbar ↑ Total signal loss @ 870 dbar (upcast). Returns @ 70 dbar

0130 End Station 1 cast 1 - 24 marks Ok

Bottles 20-24 Valves found open on recovery.

0440 Depart to Sta ALOHA

0955 Arrive ALOHA, begin deploy sediment traps

1033 Sed traps deployed @ 22°45.237'N 158°2.156'W

1151 Start Station 2 cast 1 - G1000GPS

Wire Reading: 9,774.5 m
288 ohm

In air weight: 1100 lbs
In air weight (full): 1700 lbs

make sure to write down bottom depth (in dbar) for deep casts

Fluorometer dropout from 750 dbar to 120 dbar during upcast of S2C2 →
CTD LANDED HARD ON CART TWICE DURING RECOVERY of S2C2 →

Fluo
Sig
Sig

Tran
on
5

High
dbar

1330 End

1430 Star

1447 End
[22°

1508 Sta
- D

1550 Hea

1656 480
[22°

1837 Had
207

1943 End

2000 Pum

HOT-261 March 5, 2014

Fluorometer spikes @ 950 dbar (downcast)
Signal remains fuzzy til 980 dbar (downcast) where signal returns.

Transmissometer data looks unusually variable on the downcast. Upcast data starting point is much different than downcast data.

High salinity / high temp intrusion from 850 - 950 dbar.

1330 End station 2 cast 1 - 22 marks ok

1430 start PP Array Deployment

1447 End PP Array Deployment ; transit to center [22° 45.012 'N ; 158° 1.073 'W]

1508 start station 2 Cast 2 - G5000GPS - DEEP CAST

1550 Heavy rain during cast

1656 4809 dbar ; 6 m off bottom [22° 44.996 'N ; 157 59.934 'W]

1837 Had to stop to adjust wire gap @ 2070 dbar

1943 End station 2 cast 2 - 24 marks ok

2000 Pump Run

2C2

Transmissometer Cal*

Dark offset:

volts: 0.68059

atten: 26.21194

Light offset:

volts: 4.61229

atten: 0.02898

* AFTER TRANSMISSOMETER SHIFT DURING ST. 2 CAST 3.

Cast sheet didn't match console depths. No bottle fired @ 125 dbar. Re-labeled bottles. ←

20:30 STA

21:45 END

2

RES

CON

COW

21:51 star

Trans

Fluoro

up

2325 End St

2335 Start

0030 End

0034 start

Transm

Fluoro

Data

0146 End ←

MI

0155 Trans

HOT-261 March 5, 2014

20:30 START NET TOW

21:45 END NET TOW
22° 47.86 158° 04.31

RESEAT AND CLEAN FLUOROMETER CONNECTOR AND CTD BULKHEAD CONNECTOR

21:51 start Station 2 Cast 3 - G1000GPS

Transmissometer off-scale and noisy

Fluorometer spikes near bottom during up cast, dropped out until 160 dbar

2325 End Station 2 Cast 3 - 24 marks ok

2335 Start Hyperpro

March 6, 2014

0030 End Hyperpro

0034 start Station 2 Cast 4 - G1000GPS

Transmissometer off scale and noisy

Fluorometer spikes after 930 dbar (upcast). Data drop out from 910 dbar - 165 dbar (upcast)

0146 End Station 2 cast 4 - 13 marks OK
← Missed firing bottle at 125 dbar.
0155 - Transit pump run

0240 Replo

0325 Start
- trav

- fluor

0443 End S

0510 Begin

Ch
sc
p
v

0553 Star
- spi

0718 End

0800 1st

0829 End

0858 Sta

1014 En

1156 Sta
←
-
-

INSPECTED T-C DUCT AFTER CAST. NOTICED THAT IT WAS LOOSE, WHICH COULD CAUSE THE SALINITY SPIKES ON C_2. →

0240 Replaced fluorometer SN 3199 w/ SN 3095

0325 Start Station 2 cast 5 - G1000 GPS
- transmissometer data suspicious - off scale
- fluorometer data much higher quality -

0443 End Station 2 cast 5 - 15 marks Ok

0510 Begin recovery of PP array @ 22°48.312'N 158°4.923'W
Changed transmissometer screen plot off scale. Scale changed after package landed hard during sea recovery.

0553 Start Station 2 cast 6 - G1000 GPS
- spikes in transmissometer data below 980 dbar -

0718 End Station 2 cast 6 - 24 marks Ok

0800 1st net tow @ 22°47.267'N 158°2.074'W

0829 End net tow

0858 Start Station 2 cast 7 - G1000 GPS

1014 End Station 2 cast 7 - 11 marks Ok

NOTICED CAUSE

1156 Start Station 2 cast 8 - G1000 GPS
- transmissometer data bad -
- primary/secondary salinity around s-minimum is noisy with small spikes

Swapped Transmissometer out before S2C9. SN1431DR

Factory Calibrations

V_d	0.007 V	0 counts
V_{air}	4.831 V	15843 counts
V_{rat}	4.703 V	15424 counts

Biological matter draped over transmissometer and on lanyards directly above transmissometer.

1310 End

1400 Star

1417 End
(22° 44.

1456 Start

1556 End

1600 Pump

1758 Star-

1917 End

2000 Start

2029 End

2030 Star

2110 End

2112 Star

TR
D

2217 End

HOT-261 March 6, 2014

1310 End Station 2 cast 8 - 15 marks ok

1400 Start Gas Array Deployment

1417 End Gas Array Deployment
[22° 44.881 'N ; 158° 1.149 'W]

1456 Start station 2 Cast 9 - G1000GPS

1556 End station 2 Cast 9 - 4 marks ok

1600 Pump Run

1758 start station 2 Cast 10 - G1000GPS

1917 End station 2 Cast 10 - 19 marks ok.

2000 Start Net Tow

2029 End Net Tow

2030 Start ATE

2110 End ATE

2112 Start station 2 Cast 11 - G1000GPS

TRANSMISSOMETER SPIKES AT 850 dbars
DURING DOWNCAST

2217 End station 2 Cast 11 - 19 marks ok

HOT-261 March 6, 2014

2230 start Net Tow

2300 End Net Tow

2356 start station 2 Cast 12 – G1000GPS

March 7, 2014

0118 End Station 2 cast 12 - 17 ok

0121 Transit pump run

0251 start Station 2 cast 13 - G1000GPS

Large conductivity differences ~0.002
Salinity diff. ~ 0.2 downcast
↳ diffs started after 20 dbar

0413 End Station 2 cast 13 - 12 ok

Raining/drizzle on station since about 01:00

0515 Swapping primary conductivity (SN 2218) w/ conductivity sensor SN 4398. Ran UPDCON for both computers

0557 Start station 2 cast 14 - G1000GPS

0708 End Station 2 cast 14 – 22 marks ok

0716 Transit pump run

Removed ISUS from Rosette

HOT-261 March 7, 2014

0805 Net tow in water @ 22°50.771'N 157°59.629'W

0831 Net tow finished @ 22°50.277'N 157°59.747'W

0910 start Station 2 cast 15 - G50006PS
- 2nd DEEP CAST -

1113 8m off (4807 dbar) @ 22°44.976'N 157°59.970'W

1255 End Station 2 cast 15 - 12 marks ok

1315 start ACA

1501 End ACA; transit to Gas Array

1610 Start Gas Array Recovery
[22° 50.076'N ; 158° 8.625'W]

1628 End Gas Array Recovery; transit to Sed. Traps

1726 start Sed Traps Recovery
22°52.37 158°14.41

1745 End Sed Traps Recovery
[22°52.342'N ; 158°14.494'W]

1750 Transit to WHOTS mooring

2020 START ACA
72° 41.8 157°58.02

2200 End ACA

21:30 Rain on station before ⟶
S52 C1

X-missometer Calibrations

Dark Offset

Voltage = 0.01832

beam atten = 55.262

Light offset

Voltage = 4.79609

beam atten = -0.08857

2210 start
- wH

2219 start cy
2234 " "
2243 " "
2252 " "

2314 End

2322 Start

00:00 END

0045 Dep

0600 Arrive

0601 Start

0713 10m off

0813 End S

0815 Transit

1745 Arrive

HOT-261 March 7, 2014

2210 start station 52 Cast 1 - G200 GPS
- WHOTS CAST -

2219 start cycle #1 - 200 dbar
2234 " " #2 - " "
2243 " " #3 - " "
2252 " " #4 - 250 dbar - fire 17 bottles

2314 End station 52 Cast 1 - 17 marks ok

2322 start Hyperpro

MARCH 8, 2014

00:00 END HYPERPRO

0045 Depart to Kaena Sta.

0600 Arrive Ka'ena Station. Drizzling rain

0601 Start Station 6 cast 1 - G5000 GPS

0713 10m off (2460 dbar) @ 21° 50.833'N 158° 21.742'W

0813 End Station 6 cast 1 - 13 marks Ok

0815 Transit to Snug

1745 Arrive at Snug Harbor