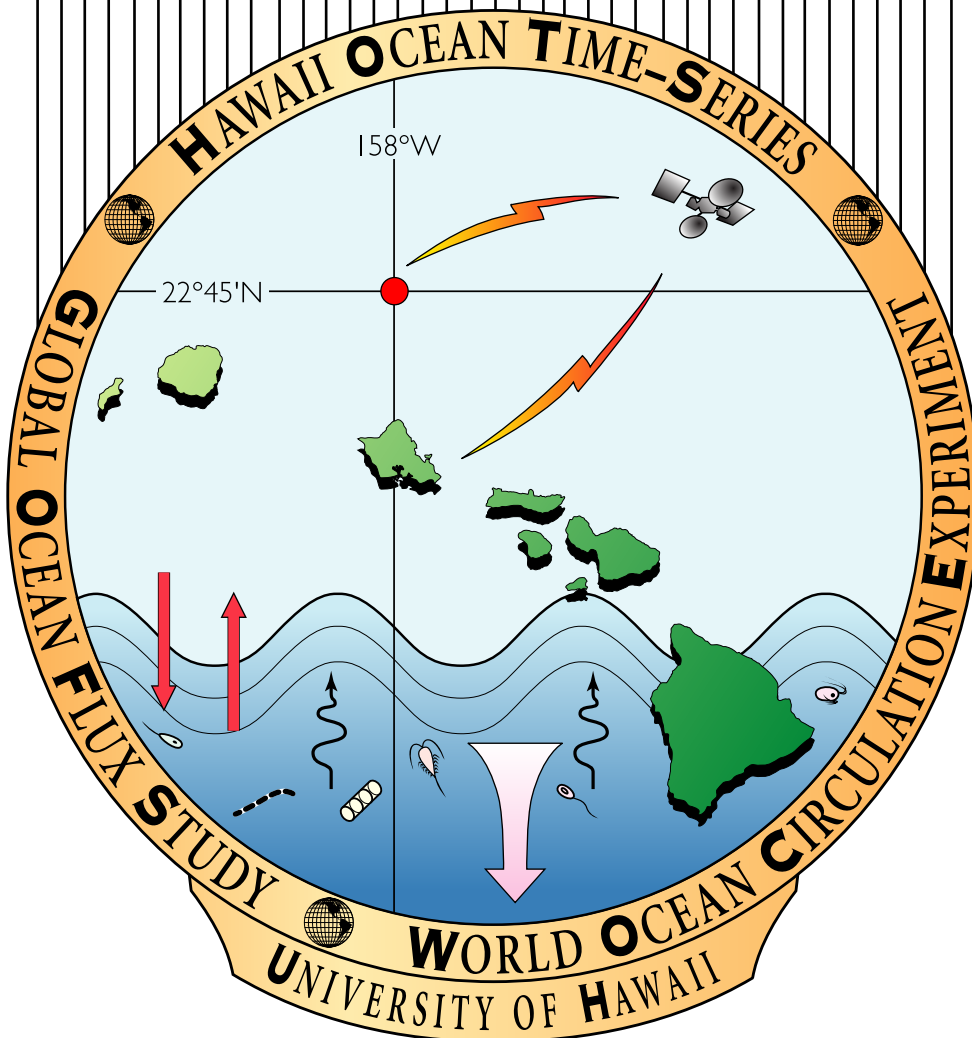


Hawaii Ocean Time-series Program

HOT 223



Hawaii Ocean Time-Series

HOT-223

KAHE Station Data Sheet

Station # 1

Date: 7/7/10 (HST)

Cast # 1

Time: 1315 (HST)

Operator(s): Ah,lf,ds, SC, BU, DV

Rosette Position	Desired Depth	Oxygen	Sample Temp.	Nuts	DIC/Alk	pH	DOC	LLN/LLP	Chl <i>a</i>	FCM	QL
1	1000	1	8.2	1							
2	900	2	8.3	2							
3	900	3	9.3	3							
4	750	4,5,6	9.9	4A-B							
5	700	7	9.0	5							
6	600	8	9.5	6							
7	500	9	10.3	7			7				
8	400	10	11.7	8							
9	350	11	13.2	9A-B			9				
10	300	12	14.8	10							
11	250	13	18.2	11							
12	225	14	18.8	12							
13	200	15	19.6	13			13				X
14	175	16	20.9	14			14		14	14A-B	
15	150	17	21.9	15			15	15	15	15A-B	
16	125	18	22.9	16A-B			16		16	16A-B	X
17	115	19	23.0	17							
18	100	20,21,22	24.0	18			18	18	18A-B	18A-B	X
19	75	23	24.8	19			19		19	19A-B	X
20	60	24	25.5	20							
21	45	25	25.7	21	21	1	21	21	21	21A-B	X
22	25	26	25.7	22	22	2	22		22A-B	22A-B	
23	5	27	25.7	23	23	3	23	23	23	23A-B	X
24	5	QC	25.9								

Notes:

Hawaii Ocean Time-series

HOT- 223

OPEN CAST Data Sheet

Station # 2
 Cast # 1
 Operator(s): SC, BU

Date: 07-08-10 (HST)
 Time: 0000 (HST)

Rosette Position	Desired Depth	DB					
1	5	X					
2	5	X					
3	5	X					
4	5	X					
5	5	X					
6	5	X					
7	5	X					
8	5	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	X					
18	5	X					
19							
20							
21							
22							
23							
24							

Notes:

Hawaii Ocean Time-series

HOT-223

Primary Production Data Sheet

Station # 2
 Cast # 2
 Operator(s): SC, BU

Date: 07-08-10 (HST)
 Time: 0125 (HST)

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

Notes:

Hawaii Ocean Time-series

HOT- 223

OPEN CAST Data Sheet

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

Date: 7/8/10 (HST)
 Time: 0410 (HST)

Rosette Position	Desired Depth	CMORE	DdV				
1	200						
2	125						
3	100						
4	75	X					
5	75	X					
6	75	X					
7	75	X					
8	75	X					
9	45	X					
10	45	X					
11	45	X					
12	45	X					
13	45	X					
14	25	X					
15	25	X					
16	25	X					
17	25	X					
18	25	X					
19	25			X			
20	25			X			
21							
22							
23							
24							

Notes:

Hawaii Ocean Time-series

HOT-223

WOCE Deep Data Sheet

Station # 2 Date: 7/8/10 (HST)
 Cast # 4 Time: 0600 (HST)
 Operator(s): AH,LF,DS

Rosette Position	Desired Depth	Oxygen	Sample Temp.	Nutrient	Refridg. Si	DOC	DIC/Alk	pH
1	4800	28	3.8	1	1			
2	4600	29	4.0	2	2			
3	4500	30,31,32	4.4	3A-B	3A-B	3ABC	3A-B	3ABC
4	4400	33	4.3	4	4			
5	4200	34	4.1	5	5			
6	4000	35,36,146	4.7	6A-B	6A-B	6ABC		
7	3800	38	4.2	7	7			
8	3600	39	4.1	8	8			
9	3400	40	4.0	9	9			
10	3200	41	4.2	10	10			
11	3000	42,43,44	4.5	11A-B	11A-B	11ABC	11	11
12	2800	45	4.4	12	12			
13	2600	46	4.4	13	13			
14	2400	47	4.5	14	14			
15	2200	48	4.6	15	15			
16	2000	49,50,51	5.5	16A-B	16A-B	16ABC	16	16
17	1800	52	4.9	17	17			
18	1600	53	5.1	18	18			
19	1400	54	5.5	19	19			
20	1200	55	6.0	20	20			
21	1000	56	6.3	21	21			
22	750	57	7.2	22	22			
23	500	58	9.3	23	23			
24	5	59	25.2	24				

Notes:

Hawaii Ocean Time-series

HOT-223

PO Shallow Data Sheet

Station # 2
 Cast # 5
 Operator(s): AH,LF,DS

Date: 7/8/10 (HST)
 Time: 1200 (HST)

Rosette Position	Desired Depth	Oxygen	Sample Temp.	Nutrient	Refridg. Si	DIC/Alk	pH	DOC	LB
1	997	147,61,62	7.2	1A-B	1A-B	1	1	1	
2	928	63	6.8	2	2				
3	858	64	7.0	3	3				
4	812	65	7.3	4	4				
5	766	66	7.4	5	5				
6	750	67,68,69	8.4	6	6	6	6	6	
7	704	70	7.6	7	7				
8	658	71	7.9	8	8				
9	624	72	8.1	9	9	9	9	9	
10	581	73	8.5	10	10				
11	543	74	8.9	11A-B	11A-B				
12	508	75	9.5	12	12	12	12	12	
13	469	76,77,78	10.4	13	13				
14	429	79	10.7	14	14				
15	368	80	12.2	15	15	15A-B	15A-B	15	
16	303	81	13.6	16	16				
17	267	82	15.5	17	17	17	17	17	
18	231	83,84,148	17.2	18	18				
19	172	86	18.9	19	19				
20	112	87	20.6	20A-B	20				
21	69	88	22.5	21					
22	56	89	24.4	22					
23	47	90	24.9	23					
24	13	91	25.4	24					

Notes: LB (pb@DCM)

Hawaii Ocean Time-series

HOT- 223

PC/PN Data Sheet

Station # 2 Date: 07-08-10 (HST)
 Cast # 6 Time: 1534 (HST)
 Operator(s): SC, BU Pre-screen mesh size: 202 um
 Blank #'s B1 B2 B3

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

Notes:

Hawaii Ocean Time-series

HOT- 223

Particulate Phosphorus Data Sheet

Station # 2 Date: 07-08-10 (HST)
 Cast # 7 Time: 1806 (HST)
 Operator(s): SC, BU Pre-screen mesh size: 202 um
 Blank #'s B1 B2 B3

Rosette Position	Desired Depth	Carboy #	Total Volume	Sample #	QL	CS	
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	200				X		
8	175	5	10	8			
9	150	6	10	9			
10	150				X		
11	125	7,8	4,4	11A-B			
12	100	9	4	12	X		
13	100					X	
14	75	10	4	14	X		
15	75					X	
16	50					X	
17	45	11	4	17	X		
18	25	12,13	4,4	18A-B			
19	25					X	
20	5	14	4	20	X		
21							
22							
23							
24							

Notes:

Hawaii Ocean Time-series

HOT-223

BEACH Shallow Data Sheet

Station # 2
 Cast # 8
 Operator(s): SC, BU, DV, BW

Date: 07-08-10 (HST)
 Time: 2138 (HST)

Rosette Position	Desired Depth	Oxygen	Sample Temp.	Nutrient	Refridg. Si	DOC	LLN	LLP/LLSi
1	1000	92	8.2					
2	O₂ min	93	9.1					
3	Sal min	94	11.2					
4	200	95	18.5	4	4	4		
5	175	96	19.5	5		5	5	5
6	165	97	19.8				6	
7	150	98	20.0	7		7	7A-B	7
8	130						8	
9	125	99	20.7	9A-B		9	9	9
10	115	100	21.1				10	10
11	110						11	
12	100	101,102,103	21.9	12		12	12A-B	12
13	90						13	
14	85	104	23.0				14	14
15	75	105	22.7	15		15	15	15
16	60			16		16	16	16
17	45	106	24.7	17A-B		17	17	17
18	35			18		18	18	
19	25	107	25.1	19		19	19	19
20	25							
21	15			21		21	21	
22	5	108	25.5	22		22	22A-B	22
23	5							
24								

Notes:

Hawaii Ocean Time-series

HOT-223

BEACH Carbon Data Sheet

Station # 2
 Cast # 8
 Operator(s): SC, BU, DV, BW

Date: 07-08-10 (HST)
 Time: 2138 (HST)

Rosette Position	Desired Depth	DIC/ALK	pH	Quay DIC	Keeling DIC			
1	1000							
2	O₂ min							
3	Sal min							
4	200	4	1					
5	175							
6	165							
7	150	7	2					
8	130							
9	125							
10	115							
11	110							
12	100	12	3					
13	90							
14	85							
15	75	15	4					
16	60							
17	45	17	5					
18	35							
19	25	19	6					
20	25			20				
21	15							
22	5	22A-B	7,8					
23	5			23	23A-B			
24								

Notes: Keeling 23a=2323
Keeling 23b= 2325

Hawaii Ocean Time-series

HOT-223

PUR Data Sheet

Station # 2
 Cast # 9
 Operator(s): SC, BU

Date: 07-09-10 (HST)
 Time: 0030 (HST)

Rosette Position	Desired Depth	Carboy #	Total Volume	PUR	CMORE			
1	1000				X			
2	1000				X			
3	1000				X			
4	1000				X			
5	1000				X			
6	770				X			
7	770				X			
8	770				X			
9	770				X			
10	770				X			
11	500				X			
12	500				X			
13	500				X			
14	500				X			
15	500				X			
16	Sal min							
17	175	1	1	17				
18	150	2	2	18				
19	125	7,8	4,4	19A-B				
20	100	9	4	20				
21	75	10	4	21				
22	45	11,12	4,4	22A-B				
23	25	3	10	23				
24	5	4	10	24				

Notes: PO group will sample niskin #1 for salts before it is drained for CMORE.

Carboy's #1 and #2 were changed in position on the rack to slots without filters loaded. It was only noticed after most of the volume had been filtered through the screen.

Hawaii Ocean Time-series

HOT- 223

Gas Array Experiment Data Sheet

Station # 2
 Cast # 10
 Operator(s): SC, BU, DB, DV

Date: 07-09-10 (HST)
 Time: 0235 (HST)

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

Notes:

Hawaii Ocean Time-series

HOT-223

OPEN CAST Data Sheet

Station # 2
 Cast # 11
 Operator(s): Ah,lf,ds

Date: 7/9/10 (HST)
 Time: 0500 (HST)

Rosette Position	Desired Depth	CMORE	PO				
1	1000		X				
2	1000		X				
3	1000		X				
4	1000		X				
5	1000		X				
6	1000		X				
7	1000		X				
8	1000		X				
9	1000		X				
10	1000		X				
11	1000		X				
12	1000		X				
13	1000		X				
14	Sal min						
15	200	X					
16	200	X					
17	200	X					
18	200	X					
19	200	X					
20	125	X					
21	125	X					
22	125	X					
23	125	X					
24	125	X					

Notes:

Hawaii Ocean Time-series

HOT- 223

Particulate Silica Data Sheet

Station # 2 Date: 7/9/10 (HST)
 Cast # 12 Time: 0800 (HST)
 Operator(s): Ah,lf,ds Pre-screen mesh size: none
 Blank # **B1,B2,B3**

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

Notes:

Hawaii Ocean Time-series

HOT- 223 MIT Data Sheet

Station # 2
 Cast # 13
 Operator(s): Ah,lf,ds

Date: 7/9/10 (HST)
 Time: 1100 (HST)

Rosette Position	Desired Depth	MIT	LB	DV	CS		
1	1000						
2	480						
3	175	1					
4	150	2					
5	DCM		X				
6	125	3		x			
7	100	4		X			
8	85	5					
9	75			X			
10	60	6					
11	45	7		X			
12	25			X			
13	5	8		X			
14	5				X		
15	5				X		
16	5				X		
17	5				X		
18	5				X		
19	5				X		
20	5				X		
21	5				X		
22	5				X		
23	5				X		
24	5				X		

Notes: Spring in niskin #4 broke, no water collected at 150m.

Hawaii Ocean Time-series

HOT- 223 ATP Data Sheet

Station # 2 Date: 07-09-10 (HST)
 Cast # 14 Time: 1430 (HST)
 Operator(s): SC, BU Pre-screen mesh size: 202um
 Blank #'s 28, 29, 30

Rosette Position	Desired Depth	ATP Tube #'s	Volume Filtered	Carboy #	MC	SW	DdV
1	1000					X	
2	900					X	
3	800					X	
4	770				X		
5	700					X	
6	600					X	
7	500				X		
8	500					X	
9	400					X	
10	350	1 - 3	3x2	1			
11	300				X		
12	300					X	
13	250	4 - 6	3x2	2			
14	200				X		
15	200					X	
16	150	7 - 9	3x1	7			
17	125	10 - 12	3x1	8			
18	100	13 - 15	3x1	9			
19	75	16 - 18	3x1	10			
20	45	19 - 21	3x1	11			
21	25						X
22	25						X
23	25	22 - 24	3x1	12			
24	5	25 - 27	3x1	13			

Notes:

Hawaii Ocean Time-series

HOT-223

Phycoerythrin Data Sheet

Station # 2 Date: 07-09-10 (HST)
 Cast # 15 Time: 1700 (HST)
 Operator(s): SC, BU, DV Pre-screen mesh size: None

Rosette Position	Desired Depth	Carboy #	Total Volume	10um	5um	.4um	MC	SW
1	1000							
2	Sal min							
3	175	1	10	1	2	3		
4	175						X	X
5	150	2	10	4	5	6		
6	150						X	X
7	125	3	10	7	8	9		
8	125						X	X
9	100	4	10	10	11	12		
10	100						X	X
11	75	5	10	13	14	15		
12	75						X	X
13	60	6	10	16	17	18		
14	45	7	10	19	20	21		
15	45						X	X
16	35	8	10	22	23	24		
17	35	9	10	25	26	27		
18	25	10	10	28	29	30		
19	25						X	X
20	15	11	10	31	32	33		
21	5	12	10	34	35	36		
22	5						X	X
23								
24								
Blanks				37	38	39		

Notes:

Hawaii Ocean Time-series

HOT-223

HPLC & Chl *a*. Bottle Data Sheet

Station # 2
 Cast # 16
 Operator(s): SC, BU

Date: 07-09-10 (HST)
 Time: 2000 (HST)

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

Notes: DO NOT PRE-SCREEN

Hawaii Ocean Time-series

HOT-223

WOCE Deep 2 Data Sheet

Station # 2

Date: 07-09-10 (HST)

Cast # 17

Time: 2300 (HST)

Operator(s): SC, BU

Rosette Position	Desired Depth	Oxygen	Sample Temp.	MC	DV			
1	4800	109	3.7					
2	4800				X			
3	4750				X			
4	4000	110	3.7					
5	4000			X				
6	3000	111	3.8					
7	3000			X				
8	2000	112	4.1					
9	2000			X				
10	1000			X				
11	O2 min	113	6.5					
12	Sal min	114	9.6					
13	O2 max	115	21.8					
14	5	116	25.2					
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Notes:

Hawaii Ocean Time-series

HOT-223

OPEN CAST Data Sheet

Station # 2
Cast # 18
Operator(s): SC, BU

Date: 07-10-10 (HST)
Time: 1437 (HST)

Rosette Position	Desired Depth	CS	LB	DdV			
1	DCM		X				
2	25	X					
3	25	X					
4	25	X					
5	25	X					
6	25	X					
7	25	X					
8	25	X					
9	25	X					
10	25	X					
11	25	X					
12	25	X					
13	25	X					
14	25	X					
15	25	X					
16	25	X					
17	25	X					
18	25	X					
19	25	X					
20	25	X					
21	25			X			
22	25			X			
23							
24							

Notes:

Hawaii Ocean Time-series

HOT- 223

STATION 52 Data Sheet

Station # 52

Date: 7/10/10 (HST)

Cast # 1

Time: 1130 (HST)

Operator(s): AH,LF,DS

Rosette Position	Desired Depth	QL	LB			
1	200	X				
2	150	X				
3	100	X				
4	100		X			
5	75	X				
6	45		X			
7	45	X				
8	5	X				
9	5		X			
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

Notes:

Hawaii Ocean Time-series

HOT- 223

STATION Kaena Data Sheet

Station # 6
 Cast # 1
 Operator(s): SC, BU

Date: 07-10-10 (HST)
 Time: 2130 (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	10				
10	75	11				
11	45	12				
12	25	13				
13	5	15				
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

Notes:

Hawaii Ocean Time-series

HOT-223

Sediment Trap Data Sheet

Type of traps: PIT Date: 07-07-10
 Operator(s): SC, BU, BW Wind: _____
 Position in: 22°45.067'N 157°56.957'W Sea State: _____

Time in: 150 m X Notes: Traps in water 2306, Array released 2335
 (HST) _____

Operator(s): ah,lf,ds,bw Date: 7/10/10
 Position out: 23° 10.66 N 157° 45.41 W Wind: _____
 Overall sea state: _____ Sea state: _____

Time out: 150 m 0645 Notes:
 (HST) _____
 300 m _____
 500 m _____

Data Sheet for Sediment Trap Volumes

Cruise #: 223

Analyst: AH

- 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	39.0	
B	150	40.0	
C	150	39.5	
D	150	40.5	
E	150	39.4	
F	150	40.4	
G	150	39.8	
H	150	38.6	
I	150	39.9	
J	150	39.7	
K	150	41.0	
L	150	40.6	

Hawaii Ocean Time-series

HOT- 223

In Situ Primary Production Data Sheet

Operator(s):
AH,BW,DS,LF

Date in: 7/8/10
Date out: 07-08-10

Time in: 0545 (HST)
Time out: 2040 (HST)

Incubation Depth	✓
175	
150	
125	
100	
75	
45	
25	
5	

Insertion Depth	Owner
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Position in: 22° 44.8'N 157° 57.7'W
Position out: 22° 54.075'N 157° 52.301'W

Average weather condition during incubation:
1/8 CLOUD COVER
Average sea state during incubation:
2-4 FT SEAS

Notes: Filtering 7-2, funnel was loose, unknown volume lost.

Begin Inoculation _____ End Inoculation _____
Filtration time _____

Hawaii Ocean Time-series HOT-223 In Situ Gas Array Data Sheet

Operator(s): ah,lf,ds,bw

Date in: 7/9/10

Time in: 0440

Position in: 22° 44.873N 157° 56.749 W

Notes:

Operator(s): ah,lf,ds,bw

Date out: 7/10/10

Time out: 0850

Position out: 22° 44.87 N 157° 56.749 W

Notes:

HOT - 223

KM - 1012

CTD Configuration

CTD serial: 850

Deck Unit: 112060

Pressure: 1430

Carousel: 518

T₁: 1416 T₂: 2545C₁: 2218 C₂: 3162O₁: 43918 O₂: 43982Pump₁: 494 Pump₂: 1368

Flurometer: 3096 Altimeter: 7769

Pinger: 2876 ISUS: 97

Bucket Thermometer: 201001

1800

1900

2010

2100

22:10

22:15

Cruise Participants

A. Harlan

D. Saddler

L. Fujieki

J. Snyder

C. Fommar

C. Nasse

S. Corless (OTA)

K. Updike

B. Watkins

D. Viviani

D. Böhler

C. Schwarcz

J. Smith (OTA)

B. Colella (OTA)

P. Lethaby

B. Keopaseu

Didier Dubois (OTA)

Jim Foley

Lydia Zaice

Lydia Li

Bruce Howe

Jennie Mowatt

Kimmin St. John

Daniela de Valle

Brenner Wai

Kiana Kealoha

2245

2257

2302

2306

2311

00:23

00:45

1012

HOT-223

07 - July - 2010

1800 Depart Snug Harbor

1900 Fire and abandon ship drills / Safety brief

2010 CTD Operations Meeting

2100 Arrive @ Station Kahe

Weight Cast in @ Station Kahe

22:10 Installed pH/pCO₂ sensor on rosette for test purposes for Havel Shitashmia

22:15 Hyperpro cast.

UH/PO/Env/144

2245 Start Station 1 Cast 1

2257 Forgot to turn pinger on, recover package & re-deploy; acquisition not stopped.

H
2300
alle

2302 out of water

2306 back in water

ra

2311 pumps turned off; back down to star

08 - July - 2010

00:30 End SIC1

24 marks OK

148 544 errors; 142328 "pressure temperature errors"
on 0001a001.sts

01:45 Transit to ALOHA

Replace:

Kim Wipes

Bottle 525 box 1 - Broken during sampling

Package is 960 lb in Air. using trawl winch.

(*) UPDATE DOCUMENTS ON SEA GOING
LAPTOPS - CONSOLE LOG SHEET.

NO 12KHZ PINGER TRACE
AVAILABLE. KWADSEN DECK UNIT
NOT WORKING.

8:20

8:54

0935

1017

1050

1124

1301

1320

14:08

14:55

1530

1607

HOT-223

08 - July - 2010

8:20 Arrive at Station Aloha

8:54 Deploy sediment traps

09:35 Sediment traps Array deployed
22° 45.067'N 157° 56.957'W

10:17 Start sta 2 Cast 1

10:50 End of Cast. 18 marks OK

11:24 Start sta 2 cast 2

Spike in Secondary Oxygen at 95 dbar downcast.

Winch stopped at 633 dbar to check a possible
overwind on winch drum. - checked out OKT inversion with S. compensation at
360 - 380 dbar

13:01 End of Cast. 22 marks OK

13:20 Transit to 2 miles east of center

14:08 Start S2 C3

14:55 End S2C3 20 marks OK

15:30 Deploy PP array

16:07 Start S2C4 Deep Cast

- Going down @ 40 m/min to 10 when whistles

- Speed up to 60 m/min; winch pressure

1806

2010

2015

2202

2350 F

23:50

1

00:40

00:51

01:04

Relocate to moored profiler for comm
Testing before S206

0134

0213

0257

0354

0526

HOT - 223

08 July 2010

1806 Downcast to 4810 dbar 5 m off bottom

22° 45.001
158 0.057

2010 End SZC4 24 marks OK

2015 Transit to pump tanks

2202 Start SZC5

- 2350 End SZC5 24 marks OK

Niskin Bottles 2, 3, 3, 4
had orange-jelly fish
tentacles on them.

23:59 Start net tow

22° 44.861
157 59.952

9 July 2010

00:40 Hand net tow in - C. Schwarz

00:51 2nd hand net tow in

11:04 All hand net tows done

Ph/CO₂ instrument on rose He.

0134 Start Stn 2 Cast 6

0213 Hydrophone in water

0257 End of Cast. 2 marks missing
from 25 & 5 dbar.

0354 Start Stn 2 Cast 7

0526 End of Cast 20 marks OK

HOT-223

09 July 2010

0645 Primary Production Array recovered.
 22° 54.075'N 157° 52.301'W
 11.5 NM NE of center

Ph/CO₂ instrument installed on rosette

0738 Start Stn 2 Cast 8

0906 End of Cast. 23 marks OK

Gas tank rinse bottle tubes were left on sensor intake. Gas tank was removed but tubes pulled halfway.

0925 Net tow

0955 Net tow

1030 Start Stn 2 Cast 9

1154 End of Cast. 1 mark missing #12 @ 500dbar.

1233 Start Stn 2 Cast 10

13:45 End Stn 2 Cast 10 14 marks OK

14:30 Deploy Gas Array

14:59 Start Stn 2 Cast 11

16:10 End Stn 2 Cast 11 24 marks OK

Out of black ink in Printer

- No black ink cartridge found in Office supplies/Admin. Box.
- Used black ink cart from other printer.
- Need to replace both.

1808

116

1823

1855

2000

2005

2021

2023

2027

2058

2104

2210

1808 Bruce Howe - transducer in the water.

:16

Fully deployed

$22^{\circ} 45.013$
 $157^{\circ} 54.585$

1823 Hydrophone back on board

$22^{\circ} 45.013$
 $157^{\circ} 54.585$

1855 End Stn 2 Cast 12 22 marks OK

2000 Hand net tows in water (2) - for C. Schwarz

2005 Bruce Howe hydrophone in water

$22^{\circ} 44.951$
 $158^{\circ} 1.146$

2021 Howe hydrophone on board

$22^{\circ} 44.794$
 $158^{\circ} 1.209$

2023 Both hand net tows out of water

2027 Net tow (Watkins) in water

$22^{\circ} 44.600$
 $158^{\circ} 1.271$

2053 Net tow on board

$22^{\circ} 44.112$
 $158^{\circ} 1.561$

2104 Start Stn 2 Cast 13

Niskin # 4 - no water; bottom hawd broke

2210 End Stn 2 Cast 13 24 marks OK

HOT-223

09 JULY 2010

1227 Net tow (Watkins) in water.
 $22^{\circ} 44.076' N$ $158^{\circ} 1.433' W$

2254 Net tow on board
 $22^{\circ} 43.739' N$ $158^{\circ} 1.674' W$

2300 Niskin # 4 lanyard replaced

2245 Hyperpro in

23:15 Hyperpro out

2334 ACG in water
 $22^{\circ} 43.609' N$ $158^{\circ} 1.014' W$

10 July 2010

0011 ACG on board
 $22^{\circ} 43.612' N$ $158^{\circ} 0.992' W$

0021 start Stn 2 cast 14

0158 End of cast.

Relocate close to profiler mooring.

Hydrophone in water

Ph/CO₂ instrument installed on rosette

0254 Start Stn 2 cast 15

0404 End of cast.

Transit to pump tanks

0556 Start Stn 2 cast 16

HOT-223

10 JULY 2010

0715 End of Cast.

0800 Net tow

ISUS removed from rosette
 pH/CO₂ instrument installed.

0909 Start Stn 2 Cast 17

1100 5 m off bottom.
 22° 45.040'N 157° 59.998'W
 PWT Temp = 1.100°C

Fluorometer signal dropped +
 at 160 m.

1255 End Stn 2 Cast 17 14 marks OK

1315 Acc^o in the water1354 Acc^o recovery; on deck

16:45 START S.T. RECOVERY
 23° 10.66N 157° 45.41 W

17:13 TRANSIT TO G.A.

18:30 START G.A. RECOVERY
 22° 59.54 N 157° 47.04 W

19:15 TRANSIT TO STA. S2

HOT-223

10 July 2010

2130 Start Stn 52 Cast 1

2147 Start Cycle #1

↓ 30 ↑ 60

21:55 200M

22:00 Start Cycle #2

22:09 200M

22:14 Start Cycle #3

22:22 200M

22:27 Start Cycle #4

22:35 200M

22:40 Start Cycle #5

22:44 200M - fire 8 bottles on upcast

2310 End Stn 52 Cast 1 8 marks ok

2314 Hyperpro in water

22 41.846 157 55.741

2315 AC 9 Deployed

22. 41.85 N 157 55.49 W

11 July 2010

0025 AC 9 onboard

0038 Start Stn 2 Cast 18

01:06 End Stn 2 Cast 18 22 marks ok

01:15 Transit to HPM

0212 22° 45.026'N 158° 1.543'W

Floats off starboard side

Hydrophone in water

New CBird-w won't start up Seawave.
tested for Stn 6, Stn 2

Processing laptop crashed and restarted
during each.

0230

0800

1012

1020

HOT-223

11 July 2010

0230 Transit to KAENA

→

0800 start sta 6 cast 1

8 meters off the bottom - 8:57:00

21 50.776

158 21.800

→

Fluorometer signal dropped out between 400 and 200 dbar on upcast.

1012 End of Cast 13 marks OK

10:20 Transit to Snug

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G100GPS	12L	26.61	CF

- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer
 pH/PCO₂ (Howe)

Day Change →

Station: 1	Cast: 1
Latitude start: 21 20.59	Longitude start: 158 16.39
end: 21 20.59	end: 158 16.39
Depth of water: 1562 meters	Date (GMT): 07/07/2016
Pressure on Deck	Time:
Begin: 0.01	Start Log: 22:45
End: -0.10	In Water: 22:55 pump off 23:06
Max cast pressure: 1020 dbar	Out of Water: 00:38

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	23:40:30	23:41:05	1019	1020	
2		:46:10	900	900]
3		:46:20	901	900	
4		:51:50	750	750	
5		:55:05	700	700	
6		:59:15	600	600	
7		0:04:10	499	500	
8		:08:30	400	400	
9		:10:40	350	350	
10		:13:30	300	300	
11		:16:25	250	250	
12		:18:05	225	225	
13		:19:50	199	200	
14		:21:30	175	175	
15		:23:45	150	150	
16		:25:30	125	125	
17		:26:45	115	115	
18		:28:10	100	100	
19		:29:45	74	75	
20		:31:10	60	60	
21		:32:30	44	45	
22		:34:00	25	25	
23		:35:45	5	5]
24		:35:55	4	5	

Hawaii Ocean Time Series			Station #:	Cast #:
Salinity Sample Log Sheet			Cruise #: HOT- 223	Sampler: DD, BK
Niskin #	Depth	Serial #	Comments	
1	1000	525 966	bottle 525 was broken. Sample taken in 966	
2	900	526		
3	900	527		
4	750	528		
5	700	529		
6	600	530		
7	500	531		
8	400	532		
9	350	533		
10	300	534		
11	250	535		
12	225	536		
13	200	537		
14	175	538		
15	150	539		
16	125	540		
17	115	541		
18	100	542		
19	75	543		
20	50	544		
21	35	545		
22	25	546		
23	5	547		
24	5	548		

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G-1000	12L	25.85	PJL

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

Station: 2	Cast: 1
Latitude start: 22 44.70 end: 22 44.70	Longitude start: 157 56.56 end: 157 56.56
Depth of water: 4725 meters	Date (GMT): 08 / 07 / 10
Pressure on Deck	Time:
Begin: -0.12 End: -0.07	Start Log: 1017 In Water: 1019
Max cast pressure: 200 dbar	Out of Water: 1049

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2		43:15	4	5	
3		43:25	4	5	
4		35	4	5	
5		45	4	5	
6		55	4	5	
7		44:05	4	5	
8		15	4	5	
9		25	4	5	
10		55	4	5	
11		05	4	5	
12		25	4	5	
13		45:40	4	5	
14		55	4	5	
15		46:10	4	5	
16		:20	4	5	
17		:30	4	5	
18		:40	4	5	
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time-Series CONSOLE LOG

Cast type 9-1000	Bottle type 12L	SST 25.75	Operator PJS
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer

Station: 2	Cast: 2
Latitude start: 22 44.71 end: 22 44.70	Longitude start: 157 56.56 end: 157 56.56
Depth of water: 4729 meters	Date (GMT): 08 / 07 / 10
Pressure on Deck	Time:
Begin: -0.13	Start Log: 1124
End: -0.07	In Water: 1131
Max cast pressure: 1020 dbar	Out of Water: 1258

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	12:02:50	12:03:20	1019	1020	
2	12:22:00	22:30	480	480	Salinity minimum
3	12:32:15	12:32:45	176	175	
4	12:35:20	12:35:55	151	150	
5	12:37:50	12:38:20	125	125	}
6		12:38:30	125	125	
7		12:38:40	125	125	
8	12:41:30	12:42:00	100	100	}
9		12:42:10	100	100	
10		12:42:20	100	100	
11	12:46:45	12:45:20	75	75	}
12		12:45:25	75	75	
13		12:45:35	75	75	
14	12:48:60	12:48:30	46	45	}
15		48:40	46	45	
16		48:50	46	45	
17	12:50:50	12:51:20	26	25	}
18		30	26	25	
19		40	26	25	
20		12 56 00	5	5	}
21		20	5	5	
22		30	6	5	
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 2
Salinity Sample Log Sheet			Cruise #: HOT-223	Sampler:
Niskin #	Depth	Serial #	Comments	
1	1020	549		
2	480	550	Sal min	
3	175	551		
4	150	552		
5	125	553		
6	125	554		
7	125	555		
8	100	556		
9	100	557		
10	100	558		
11	75	559		
12	75	560		
13	75	561		
14	45	562		
15	45	563		
16	45	564		
17	25	565		
18	25	566		
19	25	567		
20	5	568		
21	5	569		
22	5	570		
23				
24				

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GPS	12L	25.66	CF

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

Station: 2	Cast: 3
Latitude start: 22 44.84	Longitude start: 157 57.72
end: 22 44.84	end: 157 57.72
Depth of water: 4731 meters	Date (GMT): 07 / 08 / 2010
Pressure on Deck	Time:
Begin: -0.02	Start Log: 14:08
End: -0.13	In Water: 14:14
Max cast pressure: 200 dbar	Out of Water: 14:44

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	14:25:30	14:26:15	199	200	- No Salinity Samples -
2		:29:40	126	125	
3		:31:20	100	100	
4		:33:10	75	75	
5		:20	75	75	
6		:30	75	75	
7		:40	75	75	
8		:50	75	75	
9		:35:50	44	45	
10		:36:00	44	45	
11		:10	45	45	
12		:20	45	45	
13		:30	45	45	
14		:38:20	24	25	
15		:30	25	25	
16		:40	25	25	
17		:50	25	25	
18		39:00	24	25	
19		:10	25	25	
20		:20	24	25	
21					
22					
23					
24					

Hawaii Ocean Time Series		Station #: 2	Cast #: 3
Salinity Sample Log Sheet		Cruise #: HOT-223	Sampler: CV
Niskin #	Depth	Serial #	Comments
1			NO SALT SAMPLES
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G5000 GPS	12L	25.43	CF

- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer
 pH/pCO₂ (Howe)

Station: 2	Cast: 4
Latitude start: 22 45.03 end: 22 45.00	Longitude start: 157 59.48 end: 158 0.057
Depth of water: 4747 meters	Date (GMT): 07 / 08 / 10
Pressure on Deck	Time:
Begin: -0.12 End: -0.23	Start Log: 16:07 In Water: 16:20 Out of Water: 20:02
Max cast pressure: 4810 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
2		:11:10	4599	4600	
3		:14:00	4499	4500	
4		:16:30	4399	4400	
5		:20:30	4200	4200	
6		:24:40	4001	4000	
7		:28:40	3799	3800	
8		:33:00	3599	3600	
9		:37:35	3400	3400	
10		:42:30	3199	3200	
11		:48:05	2999	3000	
12		:53:00	2799	2800	
13		:57:50	2600	2600	
14		19 :02:30	2399	2400	
15		:07:10	2200	2200	
16		:11:50	2000	2000	
17		:16:30	1800	1800	
18		:21:10	1599	1600	
19		:25:45	1400	1400	
20		:30:30	1199	1200	
21		:34:55	1060	1000	
22		:40:30	750	750	
23		:45:50	499	500	
24		20:00:10	6	5	

Jeff + Kiara dried
 Cammy + Craig Samples

Hawaii Ocean Time Series			Station #: 2	Cast #: 4
Salinity Sample Log Sheet			Cruise #: HOT-223	Sampler: CU, CF, JS, 141C
Niskin #	Depth	Serial #	Comments	
1	4800	573		
2	4600	574		
3	4500	575		
4	4400	576		
5	4200	577		
6	4000	578		
7	3800	579		
8	3600	580		
9	3400	581		
10	3200	582		
11	3000	583		
12	2800	584		
13	2600	585		
14	2400	586		
15	2200	587		
16	2000	588		
17	1800	589		
18	1600	590		
19	1400	591		
20	1200	592		
21	1000	593		
22	750	594		
23	500	595		
24	5	596		

Call + Kiore dried
 Cammy + Craig sampled

Hawaii Ocean Time Series			Station #: 2	Cast #: 4 DUPLICATES
Salinity Sample Log Sheet			Cruise #: HOT-223	Sampler: CN, CE, SS, KK
Niskin #	Depth	Serial #	Comments	
1	4800	597	DUPLICATE SAMPLES	
2	4600	598		
3	4500	599		
4	4400	600		
5	4200	601		
6	4000	602		
7	3800	603		
8	3600	604		
9	3400	605		
10	3200	606		
11	3000	607		
12	2800	608		
13	2600	609		
14	2400	610		
15	2200	611		
16	2000	612		
17	1800	613		
18	1600	614		
19	1400	615		
20	1200	616		
21	1000	617		
22	750	618		
23	500	619		
24	5	620	↓	

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000 GPS	12L	25.71	CF

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

Station: 2	Cast: 5
Latitude start: 22 45.004 end: 22 44.977	Longitude start: 157 59.962 end: 157 59.906
Depth of water: 4746 meters	Date (GMT): 07 / 08 / 2010
Pressure on Deck	Time:
Begin: - 0.14 End: - 0.06	Start Log: 22:02 In Water: 22:11 Out of Water: 23:45
Max cast pressure: 1020 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	22:48:53	22:49:10	997	997	
2		:53:00	928	928	
3		:56:40	858	858	
4		:59:30	812	812	
5		23:02:10	766	766	
6		:03:40	750	750	
7		:06:15	704	704	
8		:08:45	657	658	
9		:11:10	624	624	
10		:13:50	581	581	
11		:16:20	542	543	
12		:18:30	508	508	
13		:20:55	470	469	
14		:23:15	429	429	
15		:26:20	368	368	
16		:28:35	303	303	
17		:30:10	266	267	
18		:32:05	231	231	
19		:34:20	172	172	
20		:36:40	110	112	
21		:38:45	70	69	
22		:39:55	56	56	
23		:40:55	47	47	
24		:42:50	13	13	

Station:	<u>2</u>	Cast:	<u>5</u>
Latitude:	<u>22 45.00</u>	Longitude:	<u>157 59.96</u>
Date:	<u>7/8/2010</u>	Time (GMT):	<u>22:03</u>
Operator:	<u>CF</u>		

δ_θ	σ_θ	Depth
700	20.76	_____
650	21.28	_____
600	21.80	_____
550	22.33	_____
500	22.85	_____
450	23.37	<u>13</u>
400	23.90	<u>56</u>
350	24.42	<u>69</u>
300	24.95	<u>112</u>
250	25.47	<u>231</u>
200	26.00	<u>303</u>
180	26.21	<u>368</u>
160	26.42	<u>429</u>
140	26.63	<u>508</u>
130	26.73	<u>543</u>
120	26.84	<u>581</u>
110	26.94	<u>624</u>
100	27.05	<u>658</u>
90	27.16	<u>766</u>
80	27.26	<u>858</u>
70	27.37	<u>997</u>

S _{max}	<u>47</u>
S _{min}	<u>425</u>
S _{max}	_____
S _{min}	_____

O _{max}	<u>70</u>
O _{min}	<u>750</u>
O _{max}	_____
O _{min}	_____
O _{max}	_____

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

Bottle	Depth
1	<u>997</u>
2	<u>928</u>
3	<u>858</u>
4	<u>812</u>
5	<u>766</u>
6	<u>750</u>
7	<u>704</u>
8	<u>658</u>
9	<u>624</u>
10	<u>581</u>
11	<u>543</u>
12	<u>508</u>
13	<u>469</u>
14	<u>429</u>
15	<u>368</u>
16	<u>303</u>
17	<u>267</u>
18	<u>231</u>
19	<u>172</u>
20	<u>112</u>
21	<u>69</u>
22	<u>56</u>
23	<u>47</u>
24	<u>13</u>

craig/comry Sampled
 Jeff dried

Hawaii Ocean Time Series			Station #: 2	Cast #: 5
Salinity Sample Log Sheet			Cruise #: HOT-223	Sampler: CN, JS, CF
Niskin #	Depth	Serial #	Comments	
1	997	621		
2	928	622		
3	858	623		
4	812	624		
5	766	625		
6	756	626		
7	704	627		
8	658	628		
9	624	629		
10	581	630		
11	543	631		
12	508	632		
13	416.9	633		
14	429	634		
15	368	635		
16	303	636		
17	261	637		
18	231	638		
19	172	639		
20	112	640		
21	69	n/a	Bottle has no serial #	
22	56	642		
23	47	643		
24	13	644		

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000GPS	12L	25.80	PL/BK

- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer
 pH/CO₂ (Howe)

Station: 2	Cast: 6
Latitude start: 22 45.22 end: 22 45.22	Longitude start: 158 0.93 end: 158 0.94
Depth of water: 4750 meters	Date (GMT): 07/09/10
Pressure on Deck	Time:
Begin: -0.1 End: -0.06	Start Log: 0134 In Water: 0141 Out of Water: 0255
Max cast pressure: 1020 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	2:11:30	2:12:00	1020	1020	
2	02:23:55	02:24:35	460	460	Sal min
3	27:20	27:50	348	350	}
4		28:00	348	350	
5	02:30:50	02:31:20	249	250	
6	2:33:15	2:33:45	200	200	}
7		:33:55	200	200	
8	2:35:20	2:35:50	175	175	
9	2:37:20	2:37:50	150	150	}
10		38:00	150	150	
11	2:39:30	2:40:00	125	125	
12	2:41:35	2:42:05	99	100	}
13		:15	99	100	
14	2:43:40	2:44:10	75	75	
15	2:45:50	2:46:20	46	45	}
16		:30	46	45	
17	2:48:15	2:49:00	25	25	}
18		:10	25	25	
19	02:50:50	02:51:30	3	5	}
20		52:00	4	5	
21					
22					
23					
24					

Hawaii Ocean Time Series		Station #: 2	Cast #: 6
Salinity Sample Log Sheet		Cruise #: HOT- 223	Sampler: BK, DD, PL
Niskin #	Depth	Serial #	Comments
1	1000	645	Missing bottles didn't get labeled. All depth were sampled that needed to be sampled.
2	460	646	
3	350	647	
4	350	648	
5	250	649	
6			
7	200	651	
8	175	652	
9	150	653	
10			
11	125	655	
12	100	656	
13			
14	75	657	
15			
16	45	660	
17	25	661	
18			
19	5	663	
20			
21			
22			
23			
24			

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G-1000	12L	26.08	PJL / BK

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

Station: 2	Cast: 7
Latitude start: 22 47.51 end: 22 47.49	Longitude start: 157 54.46 end: 157 54.43
Depth of water: 4694 meters	Date (GMT): 07 / 09 / 10
Pressure on Deck	Time:
Begin: -0.10 End: -0.13	Start Log: 0354 In Water: 0406
Max cast pressure: 1032 dbar	Out of Water: 0524

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	04:34:45	04:35:15	1032	1020	
2	46:10	47:20	500	500	Salinity minimum
3	51:45	52:15	350	350	
4		:25	350	350	
5	55:25	55:55	250	250	
6		59:20	200	200	
7		59:30	200	200	
8	05:01:30	05:02:00	174	175	
9	04:00	04:30	149	150	
10		:40	149	150	
11		07:25	125	125	
12	08:55	09:25	100	100	
13		:35	100	100	
14	11:45	12:15	75	75	
15		:25	75	75	
16	14:30	15:15	49	50	
17	16:10	16:40	46	45	
18	18:10	18:50	25	25	
19		19:00	25	25	
20	21:20	21:50	5	5	
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 7
Salinity Sample Log Sheet			Cruise #: HOT-223	Sampler: BK, DD, PL
Niskin #	Depth	Serial #	Comments	
1	1000	664		
2	500	665		
3	350	666		
4	350	667		
5	250	668		
6	200	669		
7				
8	175	670		
9	150	671		
10				
11	125	672		
12	100	673		
13				
14	75	674		
15				
16				
17	45	675		
18	25	676		
19				
20	5	677		
21				
22				
23				
24				

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G-1000	12L	25.80	PJL/BK

- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer
 pH/(O₂ L/Howe)

Station: 2	Cast: 8
Latitude start: 22 49.24	Longitude start: 157 55.97
end: 22 49.25	end: 157 55.97
Depth of water: 4686 meters	Date (GMT): 07 / 09 / 10
Pressure on Deck	Time:
Begin: -0.08	Start Log: 0738
End: -0.10	In Water: 0747
Max cast pressure: 1020 dbar	Out of Water: 0905

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	8:09:10	8:10:20	1020	1020	
2	8:15:30	8:16:15	770	770	Oxygen minimum
3	22:20	22:50	458	460	salinity minimum
4	28:10	28:40	200	200	
5	30:20	30:50	175	175	
6	31:40	32:10	164	165	
7	33:15	33:45	149	150	
8	34:55	35:25	129	130	
9	36:35	37:05	126	125	
10	38:05	39:10	115	115	
11	39:55	40:45	109	110	
12	42:15	42:45	99	100	
13	43:45	44:15	90	90	
14	45:30	46:00	84	85	
15	47:00	47:50	74	75	
16	49:25	50:20	59	60	
17	51:40	52:10	44	45	
18	53:40	54:10	35	35	
19	55:25	55:55	24	25]
20		56:05	24	25	
21	57:20	57:50	14	15	
22	09:00:35	09:01:05	6	5]
23		:15	6	5	
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 8
Salinity Sample Log Sheet			Cruise #: HOT-223	Sampler: BK, DD, PL
Niskin #	Depth	Serial #	Comments	
1	1000	678		
2	770	679		
3	460	680		
4	200	681		
5	175	682		
6	165	683		
7	150	684		
8	130	685		
9	125	686		
10	115	687		
11	110	688		
12	100	689		
13	90	690		
14	85	691		
15	75	692		
16	60	693		
17	45	694		
18	35	695		
19	25	696		
20	25	697		
21	15	698		
22	6	699		
23	5	700		
24				

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G-1000	12L	25.60	PJL / BK

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

Station: 2	Cast: 9
Latitude start: 22 48.29 end: 22 48.29	Longitude start: 157 56.23 end: 157 56.23
Depth of water: 4696 meters	Date (GMT): 07 / 09 / 10
Pressure on Deck	Time:
Begin: -0.08 End: -0.12	Start Log: 1030 In Water: 1032
Max cast pressure: 1020 dbar	Out of Water: 1153

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	10:59:40	11:00:10	1018	1020	
2		:20	1019	1020	
3		:30	1019	1020	
4		:40	1019	1020	
5		:50	1020	1020	
6	11:09:25	11:09:55	770	770	
7		10:05	770	770	
8		:15	770	770	
9		:25	770	770	
10		:35	770	770	
11	19:30	20:00	499	500	
12		10	499	500	- MISSED A MARK
13		20	499	500	
14		30	500	500	
15		40	500	500	
16	23:55	24:25	450	450	Salinity minimum
17	31:55	32:25	175	175	
18	34:30	35:00	150	150	
19	36:55	37:25	124	125	
20	39:30	40:00	100	100	
21	41:40	42:10	75	75	
22	44:00	44:30	45	45	
23	46:20	46:50	26	25	
24	50:40	51:10	5	5	

Hawaii Ocean Time Series		Station #: 2	Cast #: 9
Salinity Sample Log Sheet		Cruise #: HOT-223	Sampler: BK,DD,PL
Niskin #	Depth	Serial #	Comments
1	1000	701	
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16	450	702	
17	175	703	
18	150	704	
19	125	705	
20	100	706	
21	75	707	
22	45	708	
23	25	709	
24	5	710	

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
91000	12L	25.50	PJL/BA/CF

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

Station: 2	Cast: 10
Latitude start: 22 48.25 end: 22 48.25	Longitude start: 157 56.24 end: 157 56.24
Depth of water: 4698 meters	Date (GMT): 07 / 09 / 10
Pressure on Deck	Time:
Begin: -0.11 End: -0.04	Start Log: 1233 In Water: 1237
Max cast pressure: 1020 dbar	Out of Water: 1337

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	13:01:46	13:02:00	1020	1020	
2		15:10	520	520	Salinity minimum
3		24:10	125	125	
4		20	124	125	
5		26:00	100	100	
6		10	100	100	
7		28:00	73	75	
8		10	74	75	
9		30:25	45	45	
10		35	46	45	
11		32:30	25	25	
12		40	24	25	
13		35:30	4	5	
14		40	5	5	
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

711

Hawaii Ocean Time Series		Station #: 2	Cast #: 10
Salinity Sample Log Sheet		Cruise #: HOT- 223	Sampler: CV
Niskin #	Depth	Serial #	Comments
1	1000	711	
2	520	712	Seal m/m
3	125		
4	125		
5	100		
6	100		
7	75		
8	75		
9	45		
10	45		
11	25		
12	25		
13	5		
14	5	713	
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000 GPS	12L	25.64	CF

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

Station: 2	Cast: 11
Latitude start: 22 44.47 end: 22° 44 93	Longitude start: 157 57.71 end: 157° 57.75
Depth of water: 4730 meters	Date (GMT): 07/09/2010
Pressure on Deck	Time:
Begin: -0.06 End: .02	Start Log: 14:59 In Water: 15:06 Out of Water: 16:01
Max cast pressure: 1020 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	15:29:20	15:29:30	1020	1020	}
2		:40	1020	1020	
3		:50	1020	1020	
4		:30 :00	1020	1020	
5		:10	1070	1020	
6		:20	1070	1020	
7		:30	1020	1020	
8		:40	1020	1020	
9		:50	1019	1020	
10		:31 :10	1020	1020	
11		:20	1019	1020	
12		:30	1020	1020	
13		:40	1020	1020	
14		:42:30	456	456	sal min
15		48:30	200	200	}
16		:40	200	200	
17		:50	200	200	
18		49:20	200	200	
19		:10	200	200	
20		52:30	125	125	}
21		40	125	125	
22		50	125	125	
23		53:00	125	125	
24		10	125	125	

Hawaii Ocean Time Series		Station #: 2	Cast #: 11
Salinity Sample Log Sheet		Cruise #: HOT-	Sampler: CN
Niskin #	Depth	Serial #	Comments
1	1000	714	
2	1000		
3	1000		
4	1000		
5	1000		
6	1000		
7	1000		
8	1000		
9	1000		
10	1000		
11	1000		
12	1000		
13	1000		
14	456	715	sal min
15	200		
16	200		
17	200		
18	200		
19	200		
20	125		
21	125		
22	125		
23	125		
24	125		

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G100043	12L	25.78	CF

- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer
 pH/pCO₂ (Howe)

Station: 2	Cast: 12
Latitude start: 22 45.01 end: 22 45.01	Longitude start: 157 54.58 end: 157 54.58
Depth of water: 4712 meters	Date (GMT): 07/09/2010
Pressure on Deck	Time:
Begin: - 0.08 End: - 0.05	Start Log: 17:47 In Water: 17:55 Out of Water: 18:50
Max cast pressure: 1020 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	18:17:25	18:17:40	1020	1020	
2		:29:05	453	453	Sal min (34.00)
3		:34:35	200	200	
4		:36:10	175	175	}
5		:20	175	175	
6		:37:40	149	150	}
7		:50	149	150	
8		:39:10	125	125	}
9		:20	125	125	
10		:40:40	100	100	}
11		:50	99	100	
12		:50:00	99	100	}
13		:42:25	75	75	
14		:35	74	75	}
15		:43:50	46	45	
16		:44:00	46	45	}
17		:10	45	45	
18		:45:40	25	25	}
19		:50	24	25	
20		:48:25	5	5	}
21		:35	5	5	
22		:45	6	5	}
23					
24					

Hawaii Ocean Time Series		Station #: 2	Cast #: 12
Salinity Sample Log Sheet		Cruise #: HOT-223	Sampler: CN, 55
Niskin #	Depth	Serial #	Comments
1	1000	717	
2	453	718	sal min
3	200		
4	175	719	
5	175		
6	150	720	
7	150		
8	125	721	
9	125		
10	100	722	
11	100		
12	100		
13	75	723	
14	50		
15	50		
16	25	724	
17	25		
18	25	725	
19	25		
20	5	726	
21	5		
22	5		
23			
24			

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G1000GPS	Bottle type 12L	SST 25.80	Operator CF
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- Pinger
- Altimeter
- Transmissometer
- BEACH Sea Tech Fluorometer
- OTG Seapoint Fluorometer
- ISUS
- PO Fluorometer
-

Station: 2	Cast: 13
Latitude start: 22 44.107 end: 22 44.102	Longitude start: 158 1.561 end: 158 1.558
Depth of water: 4749 meters	Date (GMT): 07 / 09 / 2010
Pressure on Deck	Time:
Begin: - 0.06 End: - 0.06	Start Log: 21:04 In Water: 21:07
Max cast pressure: 1020 dbar	Out of Water: 22:08

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		21:31:10	1020	1026	
2		:42:30	479	480	sal min
3		:49:15	175	175	
4		:51:00	150	150	
5		:52:40	132	132	DCM
6		:53:40	125	125	
7		:55:15	99	100	
8		:56:30	85	85	
9		:57:40	75	75	
10		:59:00	59	60	
11		22:00:30	45	45	
12		:02:05	25	25	
13		:04:30	5	5	}
14		:40	7	5	
15		:50	6	5	
16		05:00	6	5	
17		:10	6	5	
18		:20	5	5	
19		:30	5	5	
20		:46	5	5	
21		:50	5	5	
22		06:00	6	5	
23		:10	7	5	
24		:20	5	5	

Hawaii Ocean Time Series			Station #: 2	Cast #: 13
Salinity Sample Log Sheet			Cruise #: HOT-223	Sampler: CV
Niskin #	Depth	Serial #	Comments	
1	1000	727		
2	480	728	Sal min	
3	175	729		
4	150	730	Bottle karyard broke, No sample	
5	132		DCM	
6	125	731		
7	100	732		
8	85	733		
9	75			
10	60	734		
11	45	735		
12	25			
13	5	736		
14	5			
15	5			
16	5			
17	5			
18	5			
19	5			
20	5			
21	5			
22	5			
23	5			
24	5			

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G1000 GPS	12L	25.98	CF/BK

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

Station: 2	Cast: 14
Latitude start: 22 43.61	Longitude start: 158 1.002
end: 22 43.62	end: 158 1.02
Depth of water: 4749 meters	Date (GMT): 07 110 110
Pressure on Deck	Time:
Begin: -0.08	Start Log: 00:21
End: -0.11	In Water: 00:26
Max cast pressure: dbar	Out of Water: 0154

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	0:52:20	0:52:50	1021	1020	
2	0:56:50	0:57:20	902	900	
3	1:00:55	1:01:25	799	800	
4	1:03:20	1:03:50	769	770	
5	1:06:55	1:07:25	701	700	
6	1:11:25	1:11:55	600	600	
7	1:17:40	1:18:10	498	500	}
8		:20	498	500	
9	1:21:50	1:22:30	399	400	
10	1:24:50	1:25:20	350	350	
11	1:27:40	1:28:16	300	300	}
12		:26	300	300	
13	1:31:05	1:31:35	250	250	
14	1:34:10	1:34:40	199	200	}
15		:50	199	200	
16	1:37:30	1:38:00	150	150	
17	1:40:15	1:40:45	126	125	
18	1:42:20	1:42:50	100	100	
19	1:44:20	1:44:50	75	75	
20	1:46:30	1:47:00	45	45	
21		49:40	26	25	}
22		49:50	26	25	
23		50:00	26	25	
24		55:00	7	5	

Hawaii Ocean Time Series			Station #: 2	Cast #: 14
Salinity Sample Log Sheet			Cruise #: HOT- 223	Sampler: PK, PL, DD
Niskin #	Depth	Serial #	Comments	
1	1000	737		
2	900			
3	800			
4	770			
5	700			
6	600			
7	500	738	Niskin nearly empty	
8	500			
9	400			
10	350	739		
11	300			
12	300			
13	250	740		
14	200			
15	200			
16	150	741		
17	125	742		
18	100	743		
19	75	744		
20	45	745		
21	25			
22	25			
23	25	746		
24	5	747		

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G-1000	Bottle type 12L	SST 25.97	Operator PSL/BK
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer
 PH/CO₂ instrument. (HOPE)

Station: 2	Cast: 15
Latitude start: 22 44.99 end: 22 44.98	Longitude start: 158 0.00 end: 157 59.97
Depth of water: 4750 meters	Date (GMT): 07 / 10 / 10
Pressure on Deck	Time:
Begin: -0.15 End: -0.10	Start Log: 0254 In Water: 0256
Max cast pressure: 1020 dbar	Out of Water: 0402

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		03:21:30	1020	1020	
2	3:31:30	3:32:00	474	475	Salinity minimum
3	3:37:55	3:38:25	175	175]
4		:35	175	175	
5	3:40:00	3:40:30	150	150]
6		:40	150	150	
7	3:42:05	3:42:35	124	125]
8		:45	124	125	
9	3:44:40	3:45:10	101	100]
10		:20	101	100	
11	3:47:10	3:47:40	75	75]
12		:50	75	75	
13	3:49:10	3:49:40	60	60]
14	3:50:40	3:51:10	45	45	
15		:20	45	45]
16	3:52:30	3:53:00	35	35	
17		:10	35	35]
18	3:54:30	3:55:00	26	25	
19		:10	26	25]
20	3:56:30	3:57:00	15	15	
21	58:50	59:20	7	5]
22		:30	7	5	
23					
24					

Hawaii Ocean Time Series		Station #: 2	Cast #: 15
Salinity Sample Log Sheet		Cruise #: HOT-223	Sampler: BK, PL, DD
Niskin #	Depth	Serial #	Comments
1	1000	748	
2	475	749	
3	175	750	Sampled Niskin 4. Niskin 3 empty
4	175		
5	150	751	sampled * 6. * 5 empty
6	150		
7	125	752	
8	125		
9	100	753	
10	100		
11	75	754	
12	75		
13	60	755	
14	45	756	
15	45		
16	35	757	
17	35	758	
18	25	759	
19	25		
20	15	760	Niskin water was low
21	5	761	
22			
23			
24			

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G-1000	12L	25-85	PSL / BK

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

Station: 2	Cast: 16
Latitude start: 22 45.03 end: 22 45.01	Longitude start: 157 59.97 end: 157 59.96
Depth of water: 474.6 meters	Date (GMT): 07 / 10 / 10
Pressure on Deck	Time:
Begin: -0.07 End: -0.12	Start Log: 0556 In Water: 0559
Max cast pressure: 1020 dbar	Out of Water: 0706

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1	6:23:30	6:24:00	1019	1020	
2	6:34:50	6:34:20	450	450	sal mn
3	6:40:55	6:41:25	174	175]
4		:35	174	175	
5	6:43:15	6:43:45	149	150]
6		:55	149	150	
7	6:45:10	6:45:40	134	135	
8	6:46:40	6:47:10	125	125]
9		:20	125	125	
10	6:48:10	6:48:40	115	115	
11	6:50:00	6:50:30	100	100]
12		:40	100	100	
13	6:51:45	6:52:15	85	85	
14	6:53:30	6:54:00	75	75]
15		:10	75	75	
16	6:55:35	6:56:05	60	60	
17	6:57:20	6:57:50	45	45]
18		58:00	45	45	
19	6:59:25	6:59:55	25	25]
20		7:00:05	25	25	
21	07:02:30	07:03:00	7	5]
22		:10	7	5	
23					
24					

Hawaii Ocean Time Series			Station #: 2	Cast #: 16
Salinity Sample Log Sheet			Cruise #: HOT-223	Sampler: BK, PL, DD
Niskin #	Depth	Serial #	Comments	
1	1000	762		
2	450	763		
3	175	764		
4	175			
5	150	765		
6	150			
7	135	766		
8	125	767		
9	125			
10	115	768		
11	100	769		
12	100			
13	85	770		
14	75	771		
15	75			
16	60	772		
17	45	773		
18	45			
19	25	774		
20	25			
21	5	775		
22	5			
23				
24				

Hawaii Ocean Time-Series CONSOLE LOG

Cast type G-5000	Bottle type 12L	SST 25.77	Operator PJA/BA
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS
 PO Fluorometer
 ph CO2 sensor (HOWE)

Station: 2	Cast: 17
Latitude start: 22 45.06 end: 22 45.07	Longitude start: 157 59.99 end: 157 59.85
Depth of water: 4747 meters	Date (GMT): 07 / 10 / 10
Pressure on Deck	Time:
Begin: -0.07 End: -0.20	Start Log: 0909 In Water: 0917
Max cast pressure: 4810 dbar	Out of Water: 1248

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		11:01:00	4810	4800]
2		11:01:00	4810	4800	
3	11:03:25	11:03:55	4749	4750	
4	11:18:55	11:19:25	3999	4000]
5		:35	3999	4000	
6	11:38:00	11:38:30	3000	3000]
7		:40	3000	3000	
8	11:57:45	11:58:15	2000	2000]
9		:25	2000	2000	
10	12:17:40	12:17:10	1000	1000	
11	12:23:50	12:24:20	771	770	Oxygen minimum
12	12:31:50	12:32:20	450	450	Salinity minimum
13	12:40:30	12:40:50	79	80	Oxygen maximum
14	12:46:50	12:47:10	6	5	
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time Series		Station #: 2	Cast #: 17
Salinity Sample Log Sheet		Cruise #: HOT-223	Sampler: BK, PL, DD
Niskin #	Depth	Serial #	Comments
1	4800	776	
2	4800		
3	4750		
4	6000	777	
5	4000		
6	3000	778	
7	3000		
8	2000	779	
9	2000		
10	1000		
11	770	780	
12	450	781	
13	80	782	
14	5	783	
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G200 GPS	12L	25.99	CF

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

Station: 2	Cast: 18
Latitude start: 22 41.861 end: 22 41.857	Longitude start: 152 55.190 end: 157 55.088
Depth of water: 4743 meters	Date (GMT): 07 / 11 / 10
Pressure on Deck	Time:
Begin: -0.04 End: -0.06	Start Log: 00:38 In Water: 00:41 Out of Water: 01:06
Max cast pressure: 200 dbar	

Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
					- No salinity samples -
1	00:54:50	00:55:10	143	143	DCM
2		1:00	25	25	
3		1:10	25	25	
4		1:20	25	25	
5		1:30	26	25	
6		1:40	26	25	
7		1:50	25	25	
8		2:00	25	25	
9		2:10	25	25	
10		2:20	26	25	
11		2:30	26	25	
12		2:40	26	25	
13		2:50	25	25	
14		3:00	25	25	
15		3:10	26	25	
16		3:20	26	25	
17		3:30	25	25	
18		3:40	25	25	
19		3:50	25	25	
20		4:00	25	25	
21		4:10	25	25	
22		4:20	25	25	
23					
24					

Hawaii Ocean Time-Series CONSOLE LOG

Cast type	Bottle type	SST	Operator
G-200-Y0Y0	12L	26.89	CF

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

* started recording at 21:44, before
down cast.

Station: 52	Cast: 1
Latitude start: 22 41.857	Longitude start: 157 55.717
end: 22 41.836	end: 157 55.740
Depth of water: 4745 meters	Date (GMT): 07 / 10 / 10
Pressure on Deck	Time:
Begin: -0.07	Start Log: 21:30
End: -0.10	In Water: 21:38
Max cast pressure: 200 dbar	Out of Water: 22:03

Trip/ Niskin	Time	Confirm	Pressure	Target Depth	Comments
	stopped	tripped			
1	22:44:50	22:45:10	200	200	- No salinity samples -
2	:48:00	:48:20	150	150	
3	:51:20	:51:40	100	100	
4	:51:20	:51:50	100	100	
5	:54:00	:54:20	75	75	
6	:56:00	:56:20	44	45	
7	:56:00	:56:30	45	45	
8	23:01:00	23:01:20	6	5	
9	23:01:00	:01:30	6	5	
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time-Series CONSOLE LOG

Cast type KAENA	Bottle type 12L	SST 25.61	Operator PJL/BA
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- Pinger
 Altimeter
 Transmissometer
 BEACH Sea Tech Fluorometer
 OTG Seapoint Fluorometer
 ISUS

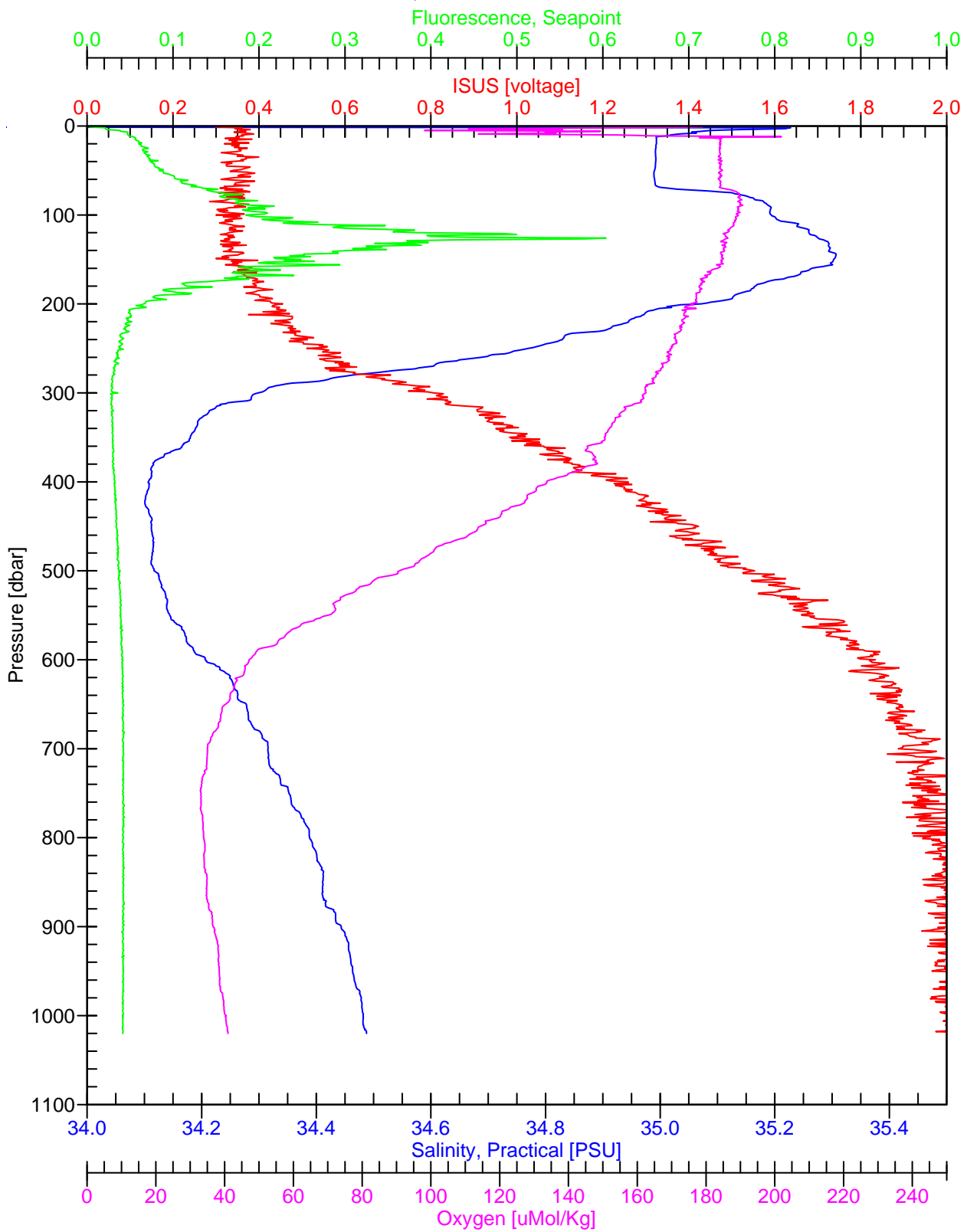
PO Fluorometer
 pH / pCO₂ (Ave)

Station: 6	Cast: 1
Latitude start: 21 50.75 end: 21 50.78	Longitude start: 158 21.84 end: 158 21.80
Depth of water: 2425 meters	Date (GMT): 07 / 11 / 10
Pressure on Deck Begin: -0.14 End:	Time: Start Log: 0800 In Water: 0804 Out of Water: 0806
Max cast pressure: 2442 dbar	

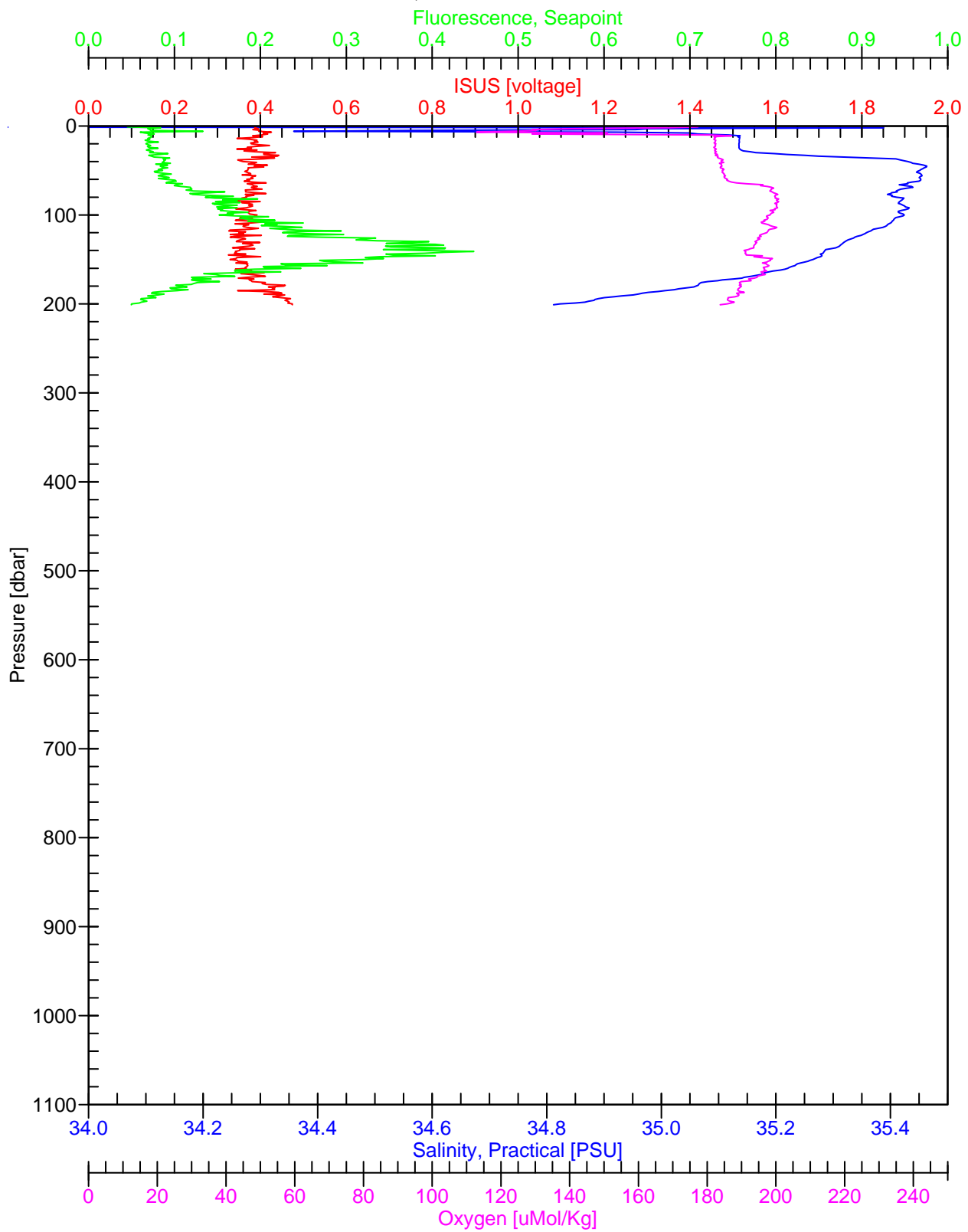
Trip/ Niskin	Time stopped	Confirm tripped	Pressure	Target Depth	Comments
1		8:57:00	2442	2500	
2	9:05:55	9:06:25	2000	2000	
3	9:16:45	9:17:15	1500	1500	
4	9:27:31	9:28:01	1000	1000	
5	9:38:15	9:38:45	500	500	
6	9:45:45	9:46:15	176	175	
7	9:48:10	9:48:40	150	150	
8	9:50:20	9:50:50	127	125	
9	9:52:30	9:53:00	100	100	
10	9:54:45	9:55:15	76	75	
11	9:57:00	9:57:30	44	45	
12	9:58:55	9:59:25	24	25	
13	10 02:05	10:02:35	7	5	
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					

Hawaii Ocean Time Series			Station #: 6	Cast #: 1
Salinity Sample Log Sheet			Cruise #: HOT- 223	Sampler: BK, PL, DD
Niskin #	Depth	Serial #	Comments	
1	2500	784		
2	2000	785		
3	1500	786		
4	1000	787		
5	500	788		
6	175	789		
7	150	790		
8	125	791		
9	100	792		
10	75	793		
11	45	794		
12	25	795		
13	5	796		
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				

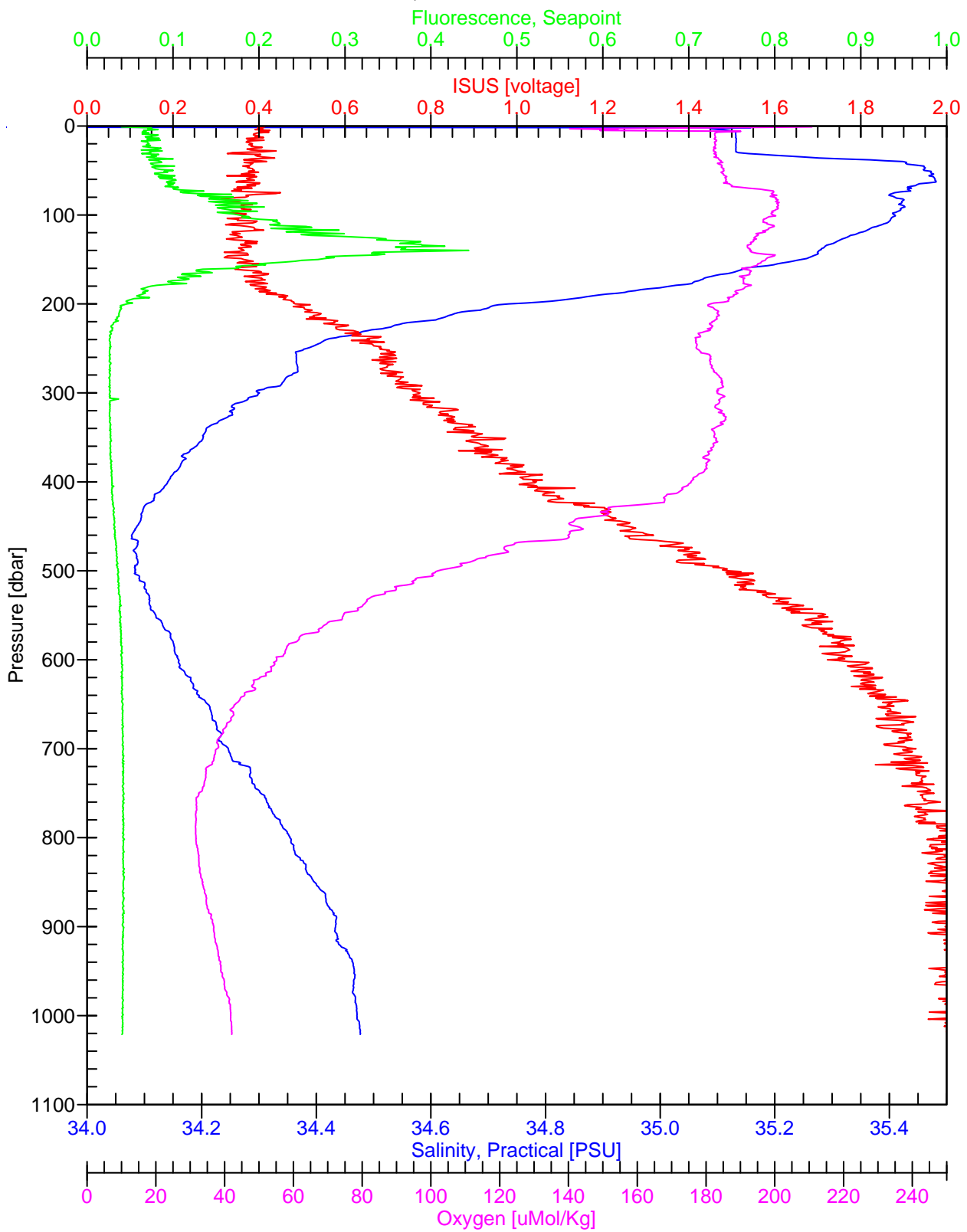
G-1000, hot-223_s1_c1.cnv



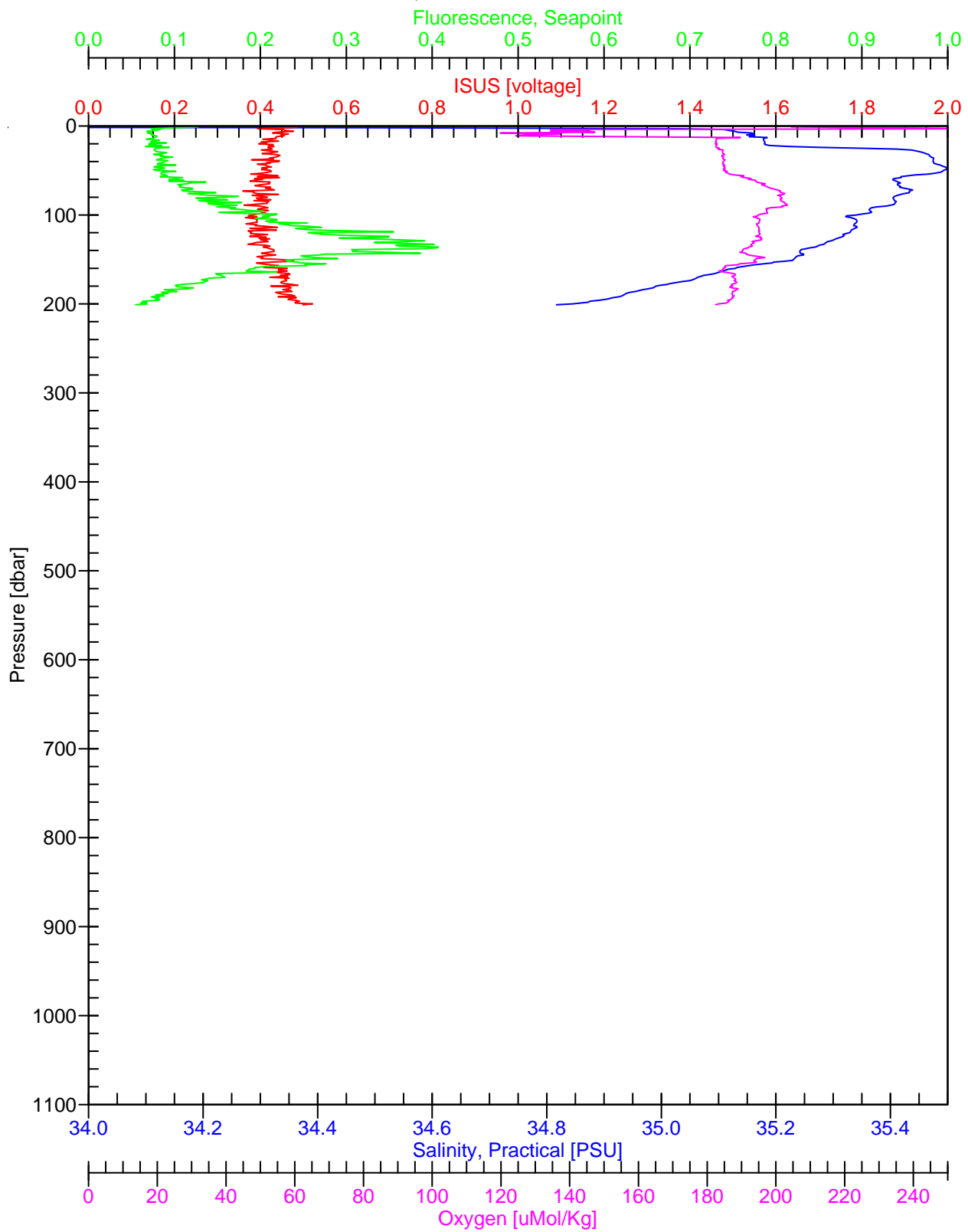
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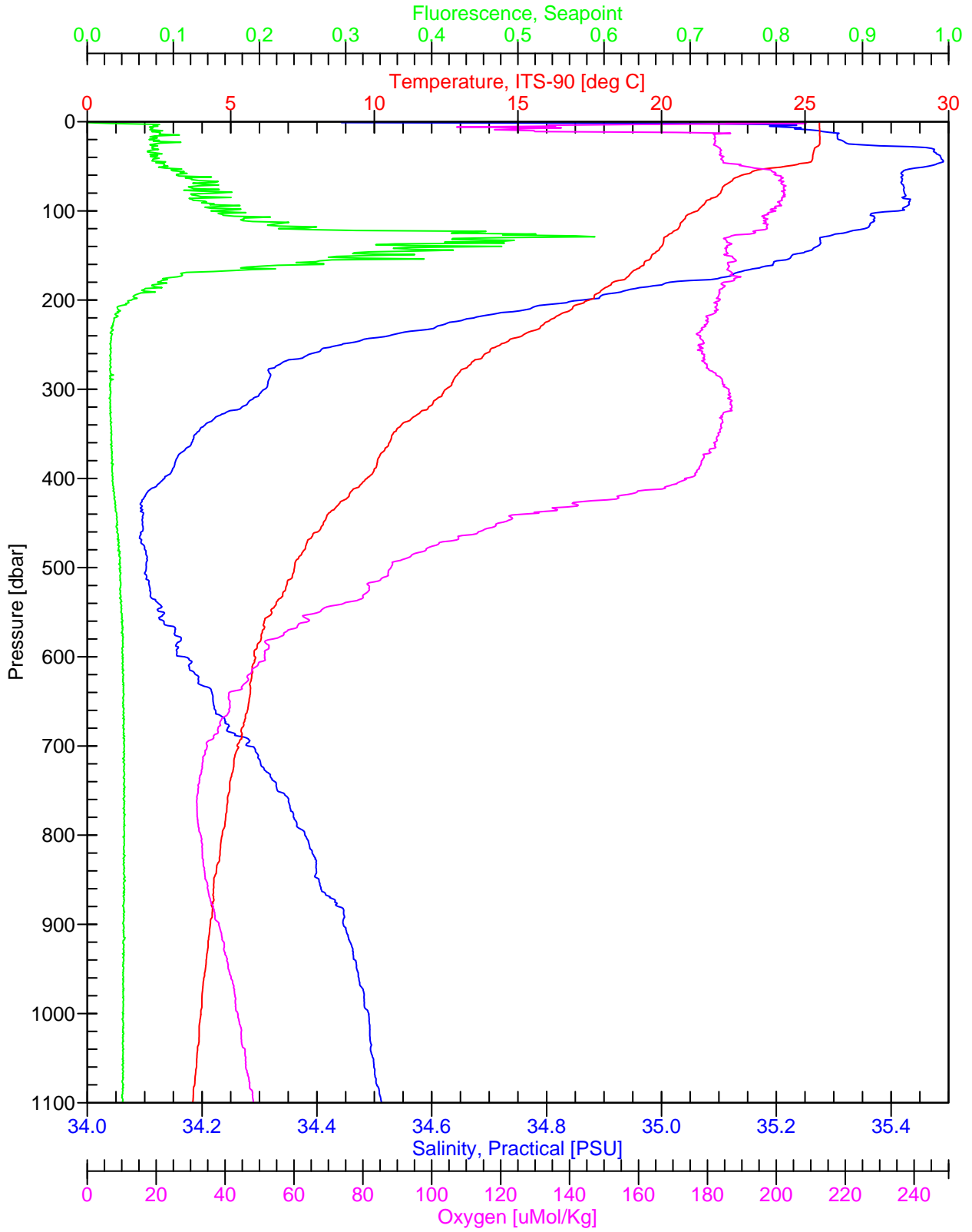
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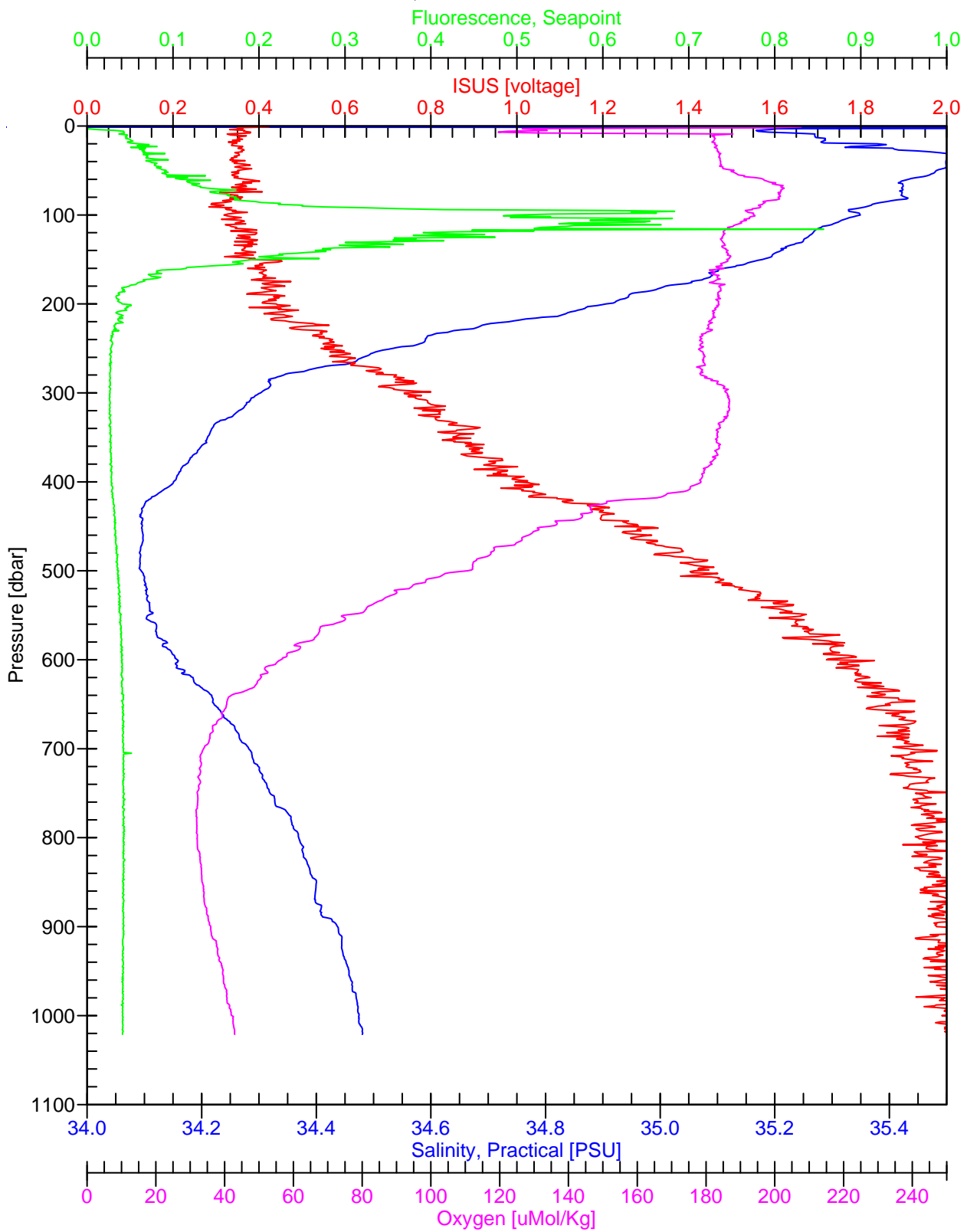
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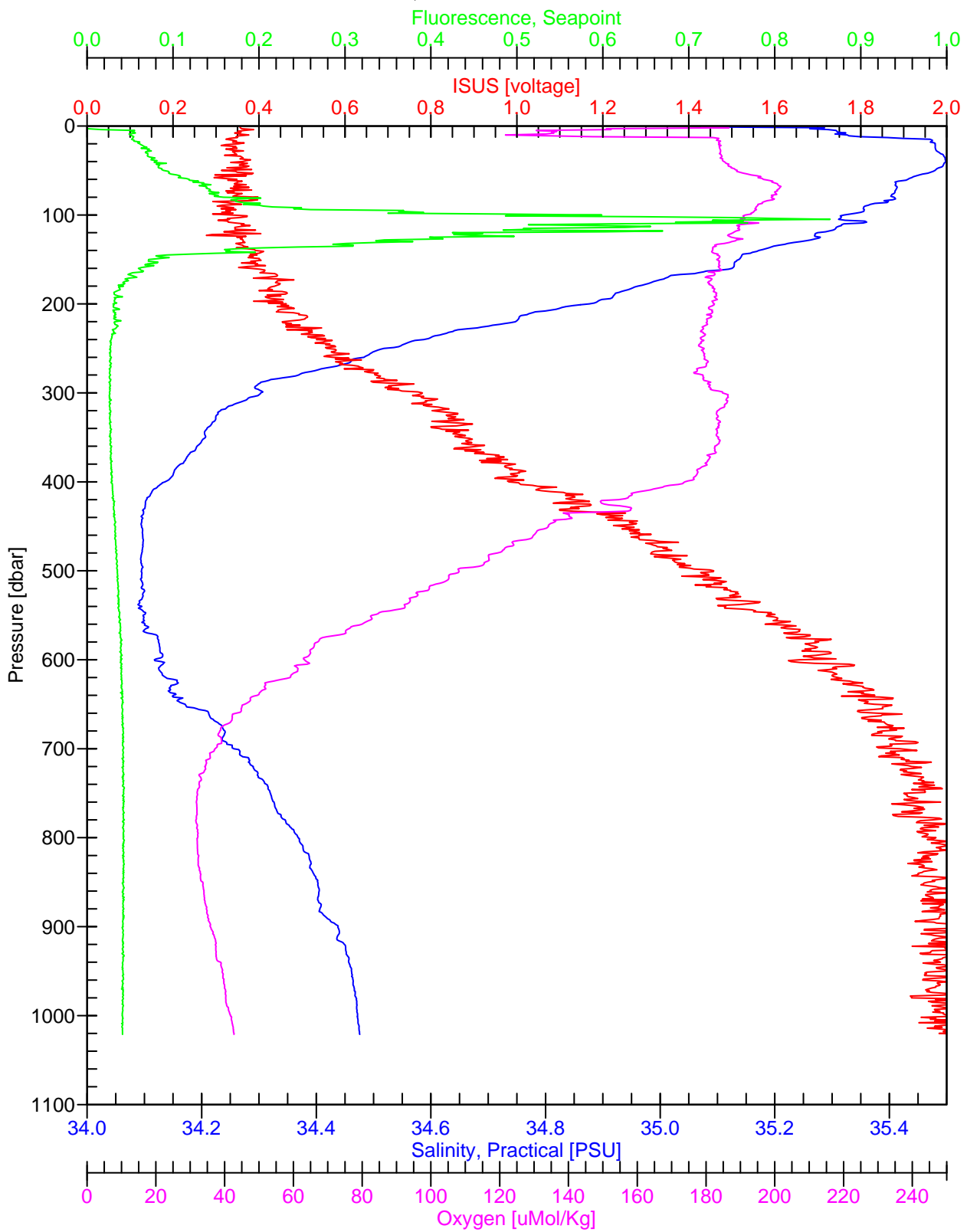
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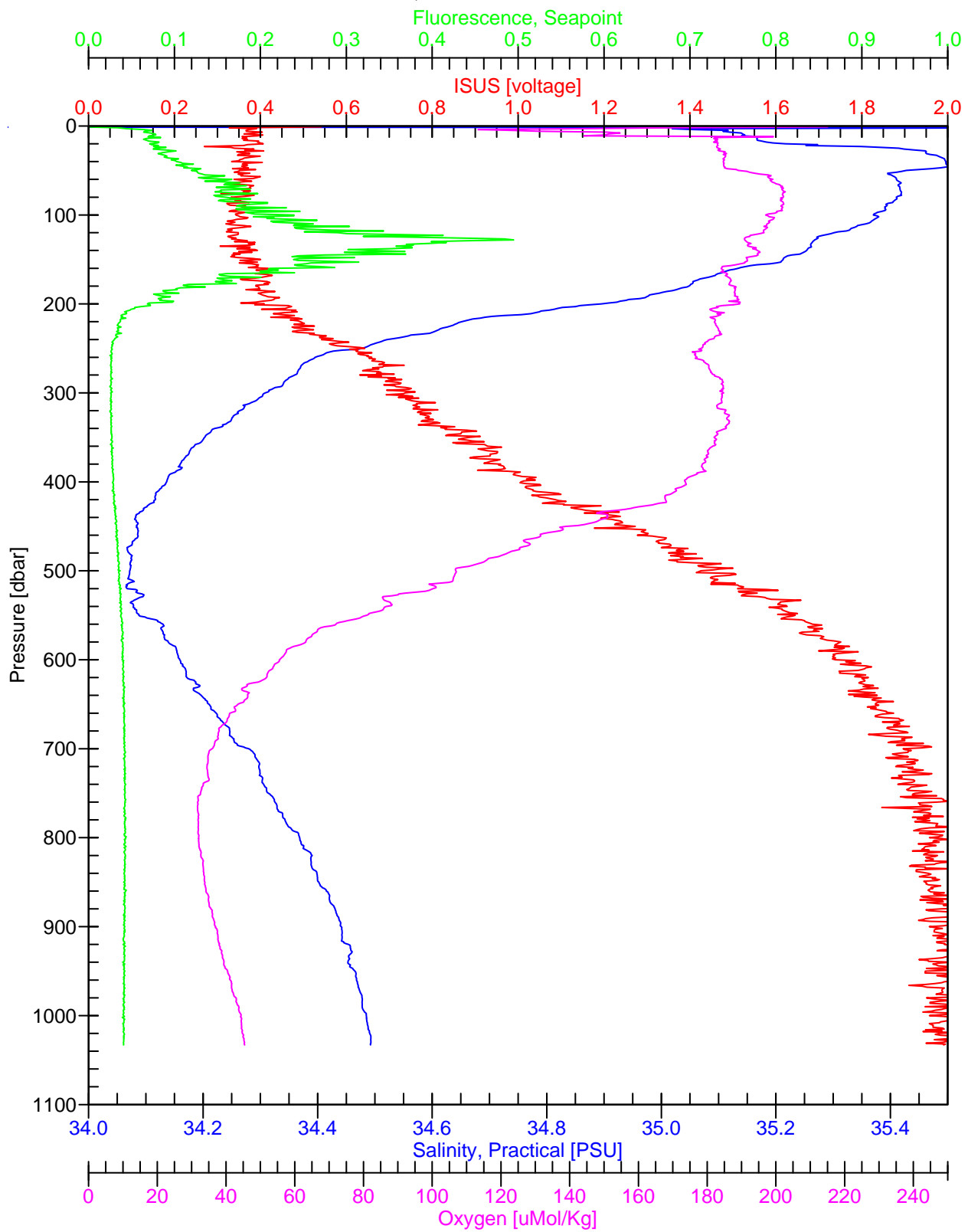
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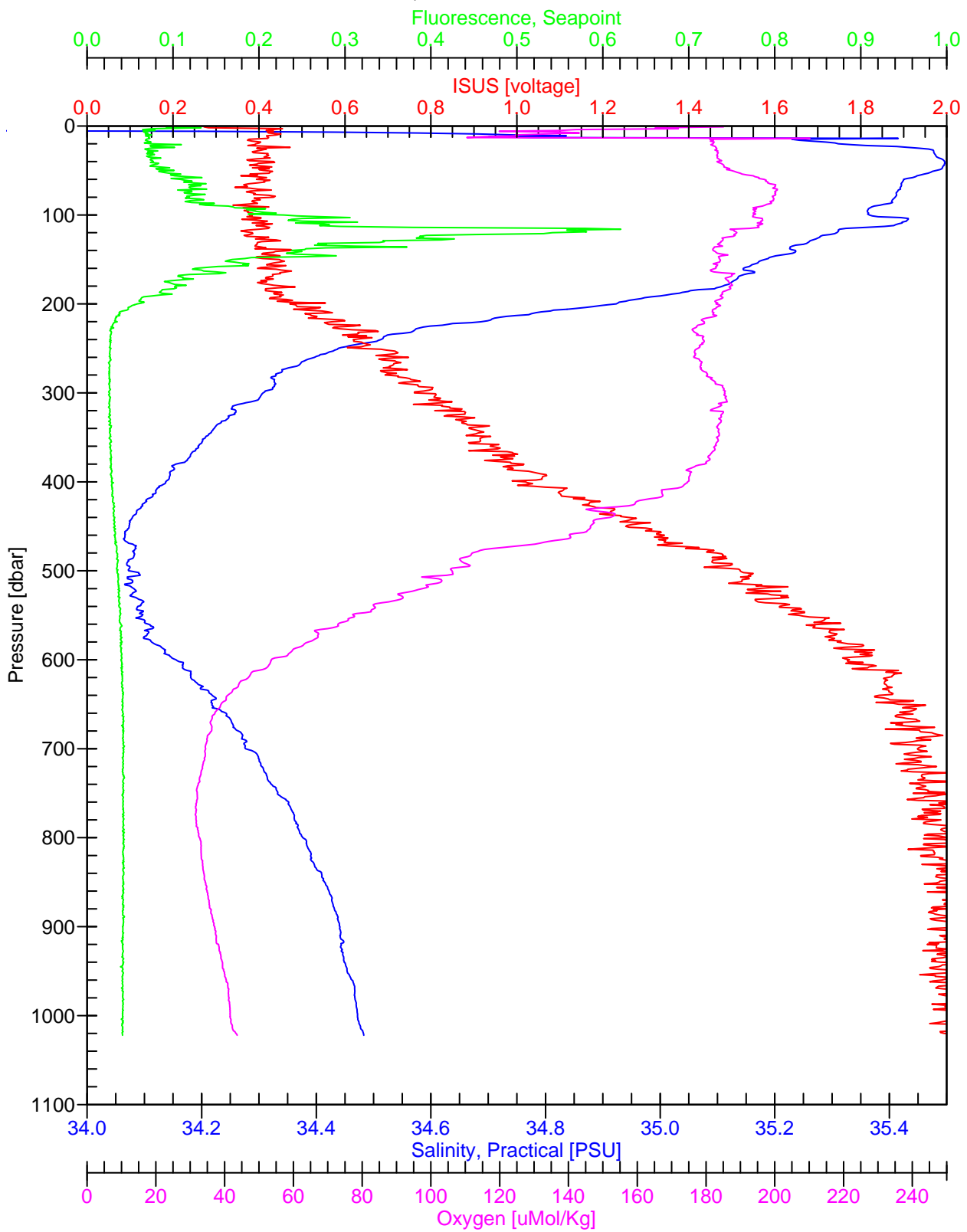
G-1000, hot-223_s2_c6.cnv



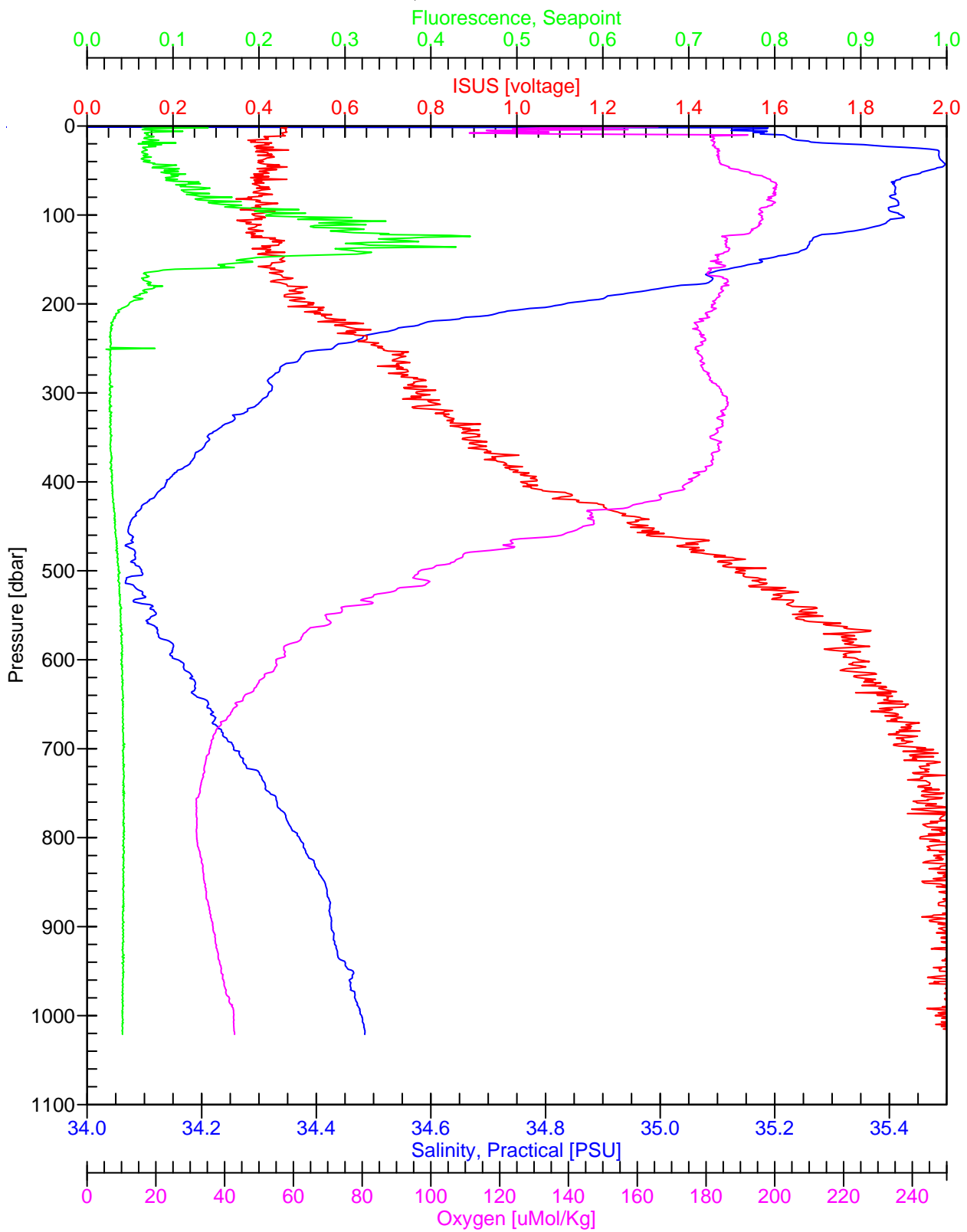
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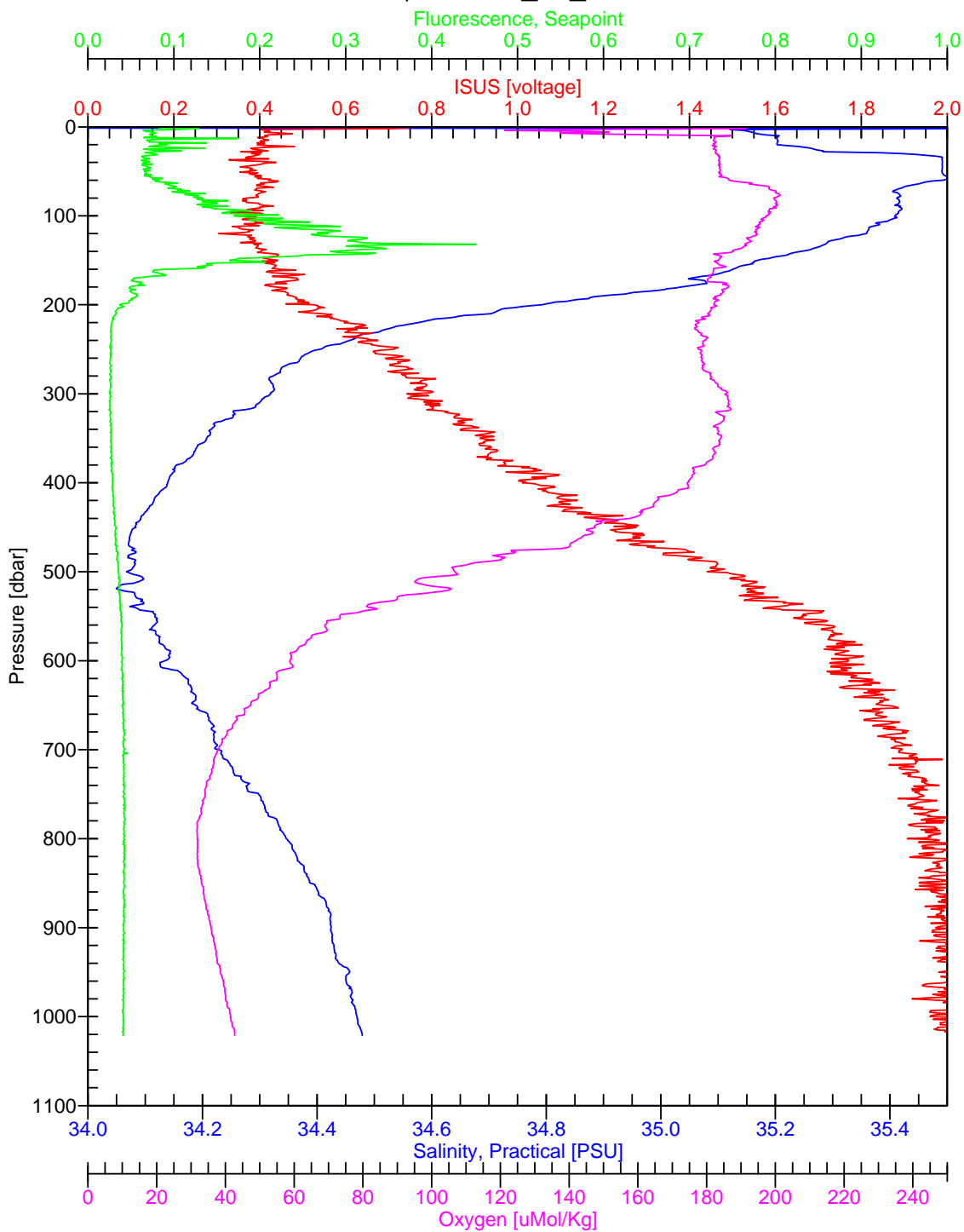
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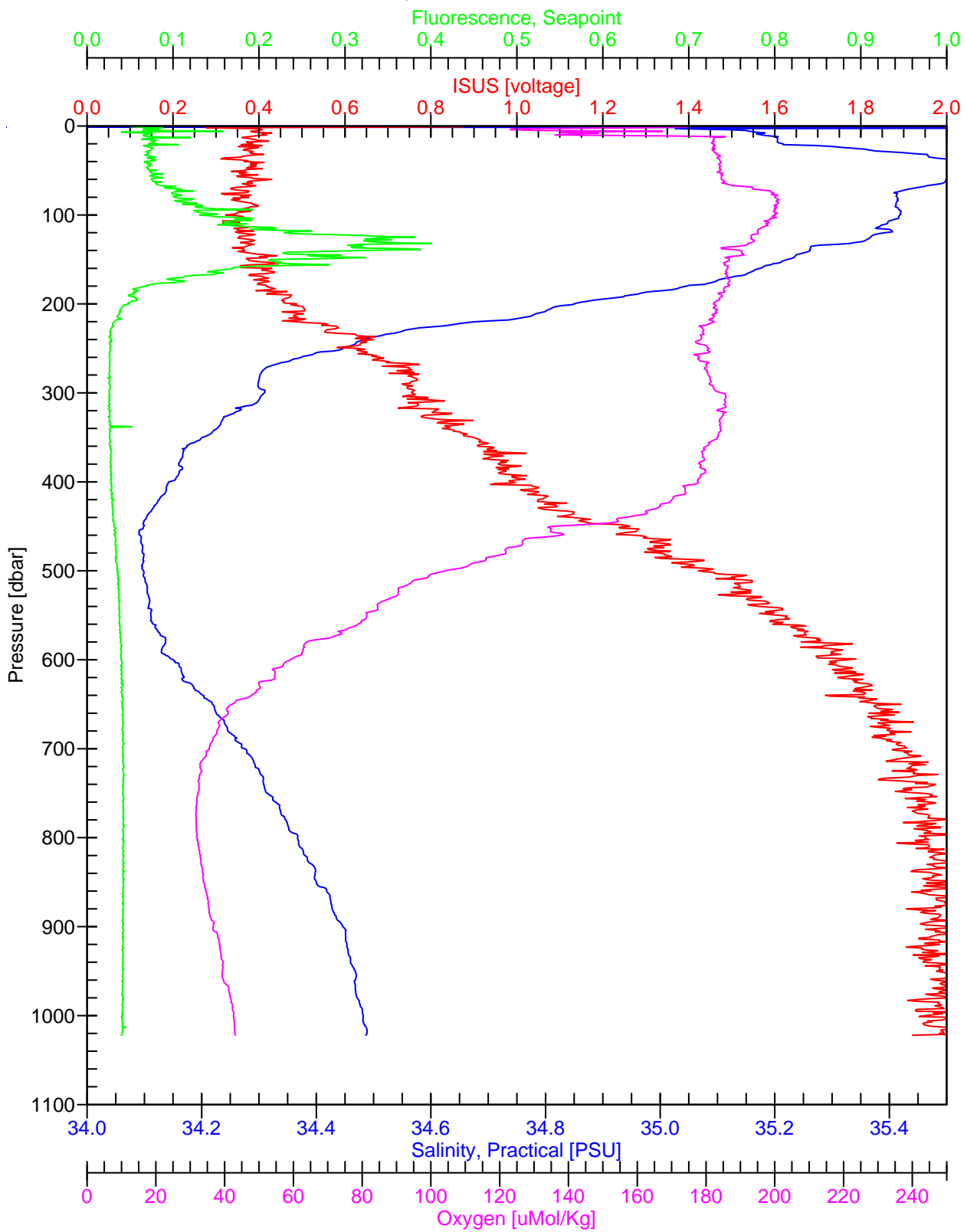
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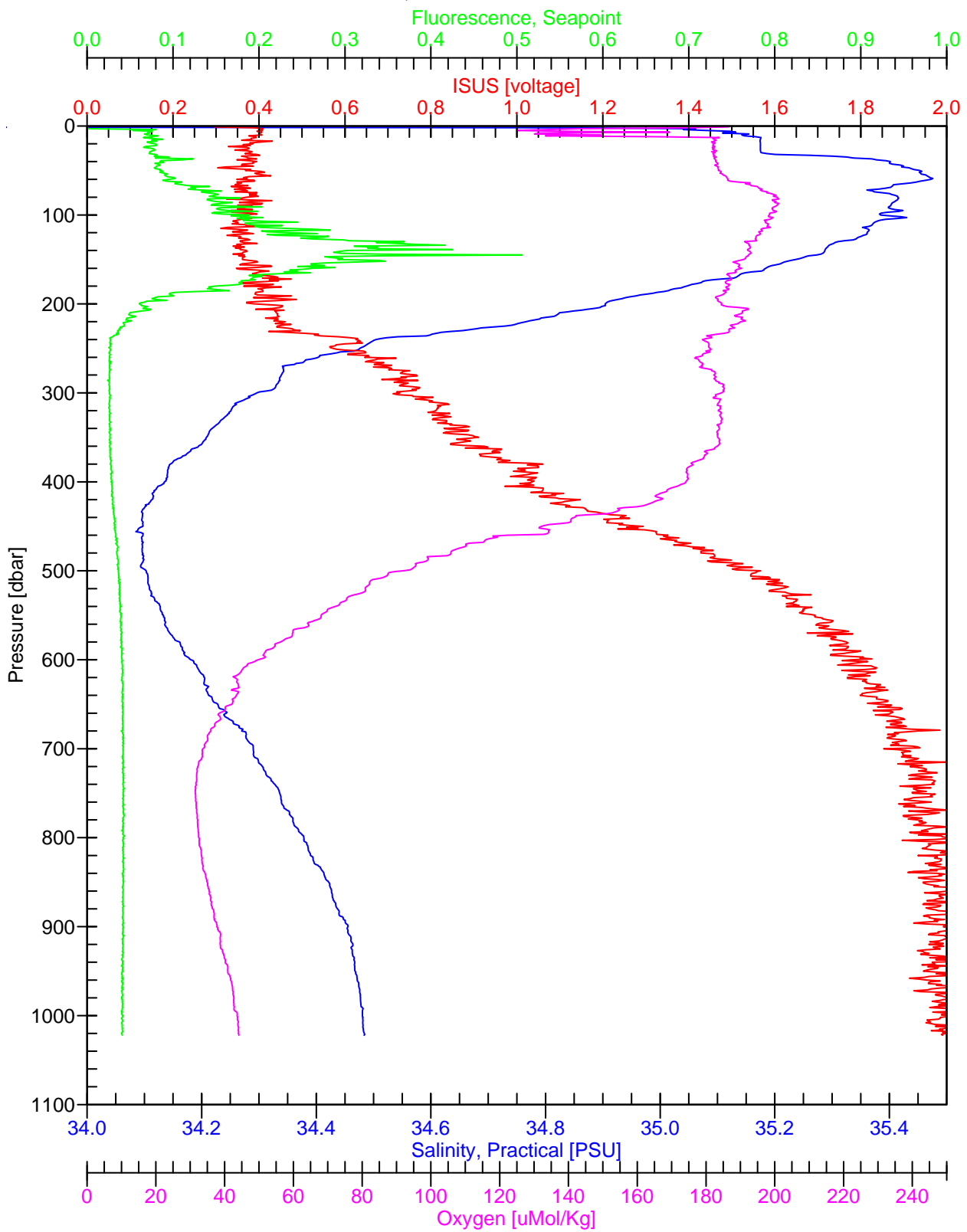
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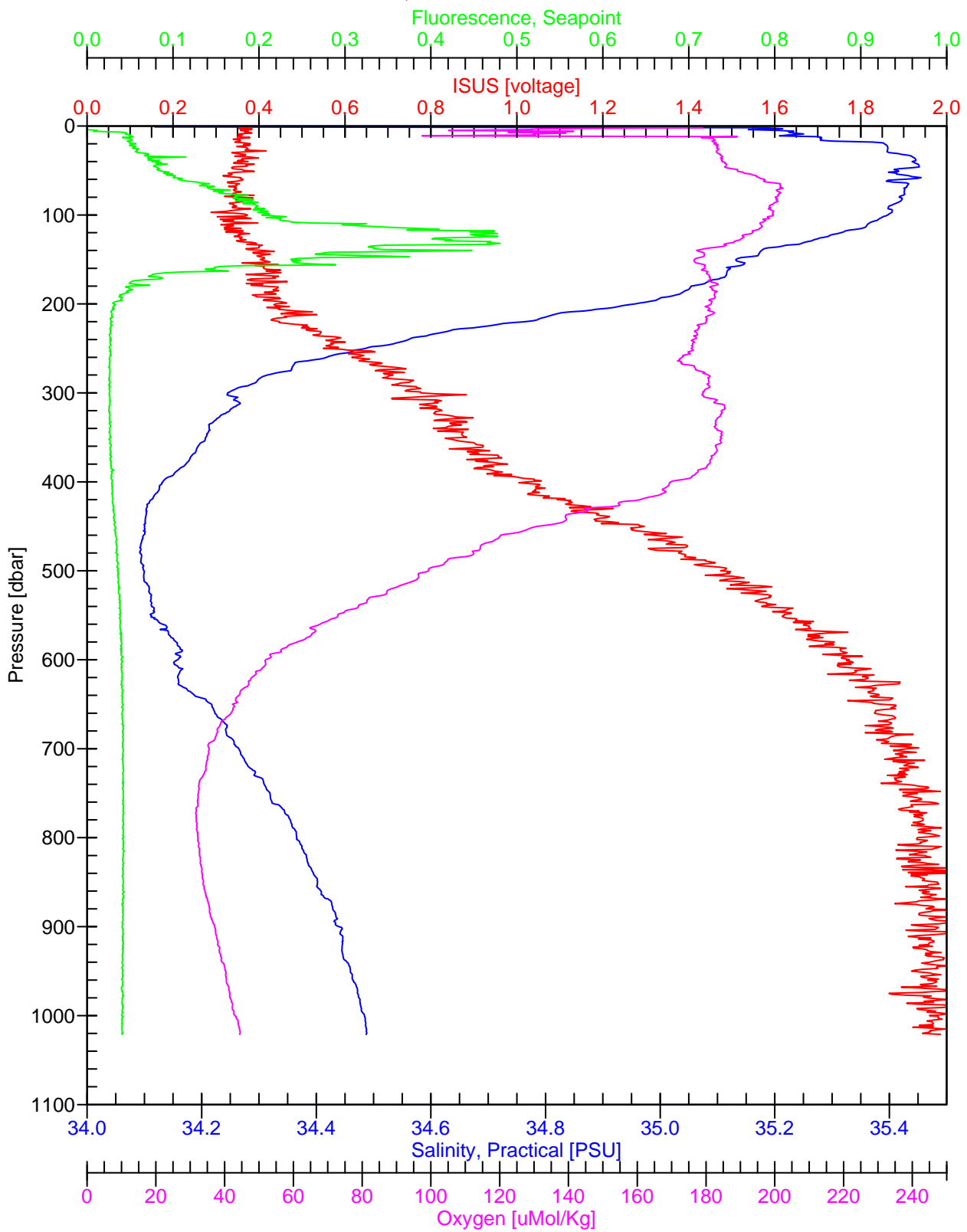
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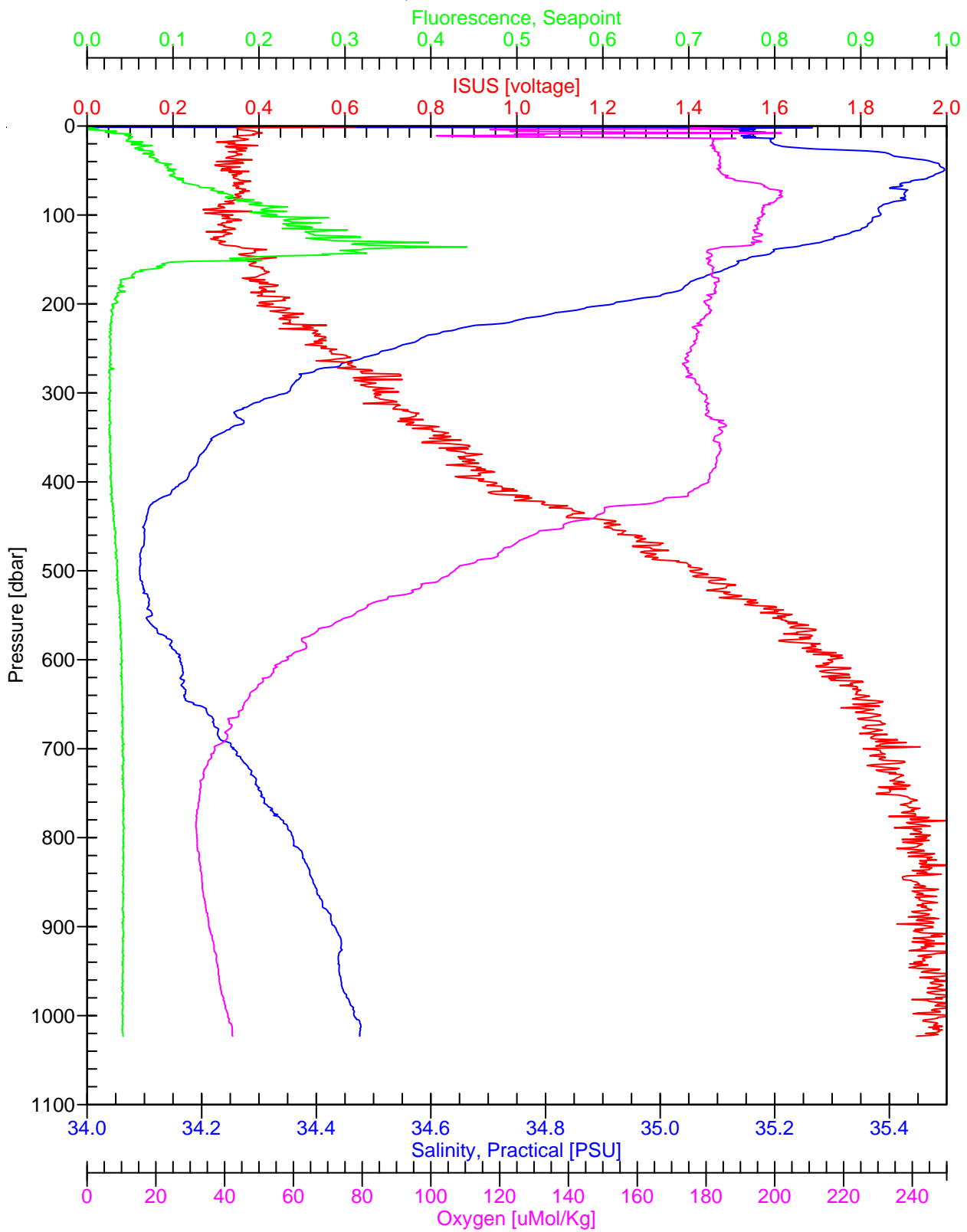
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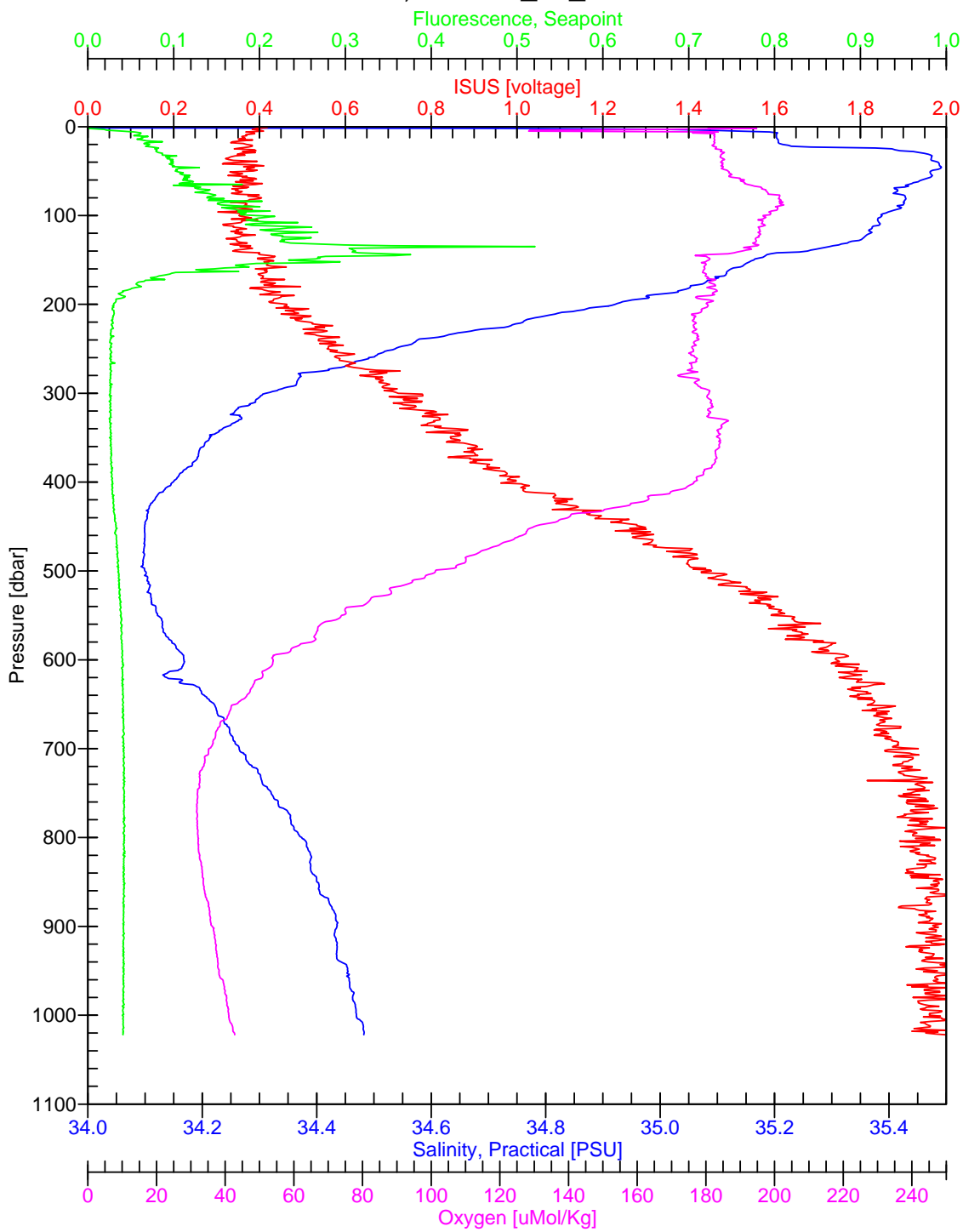
G-1000, hot-223_s2_c13.cnv



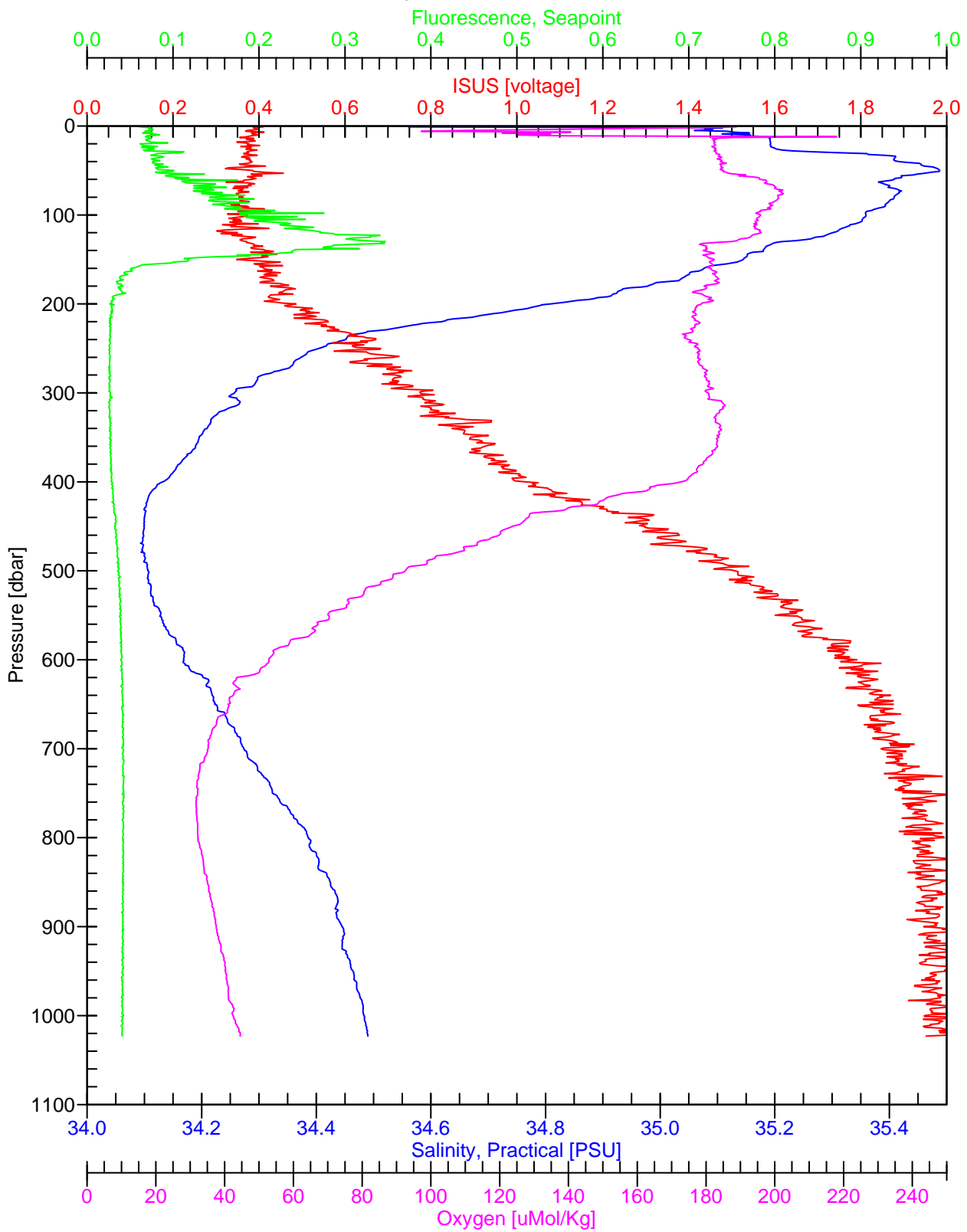
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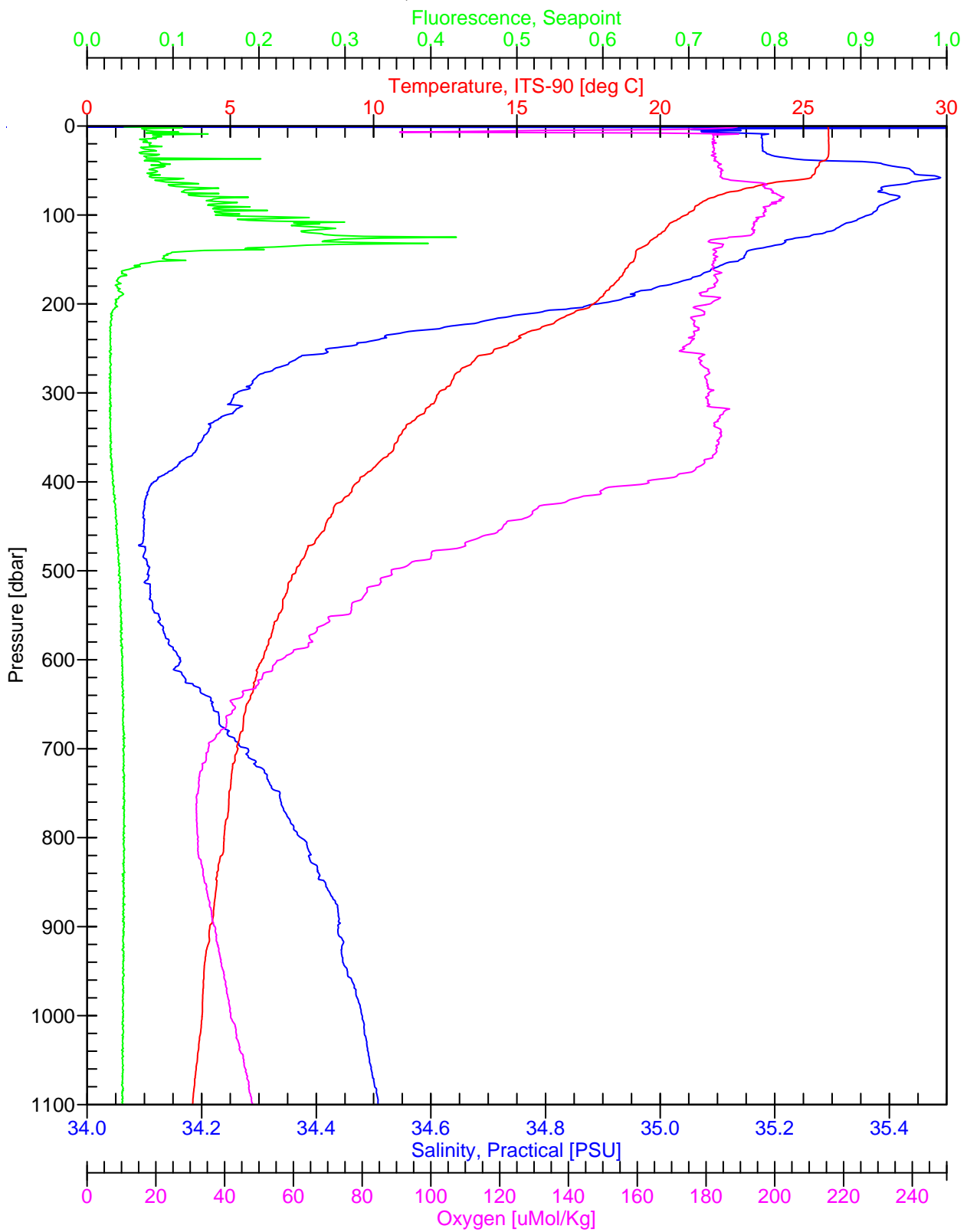
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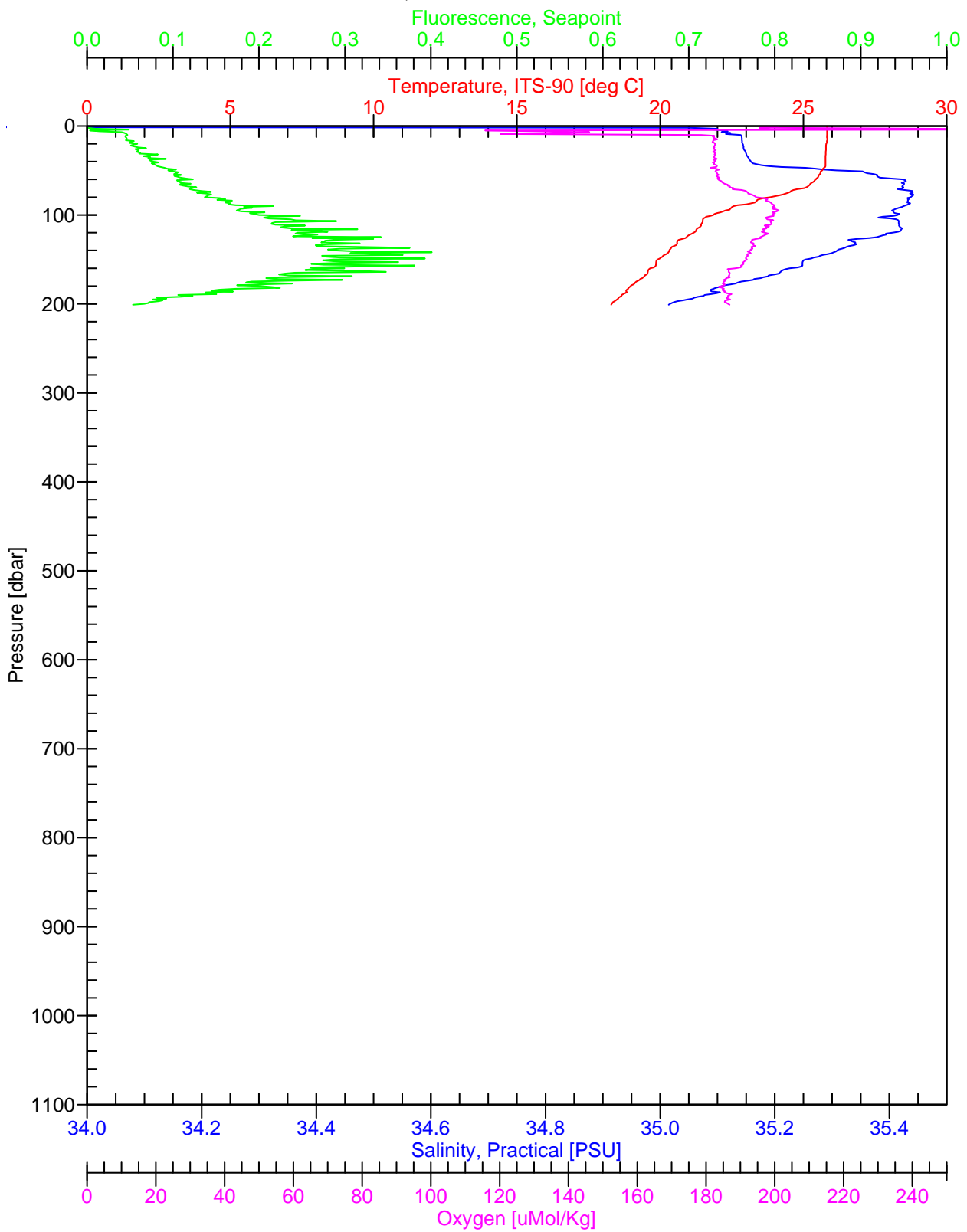
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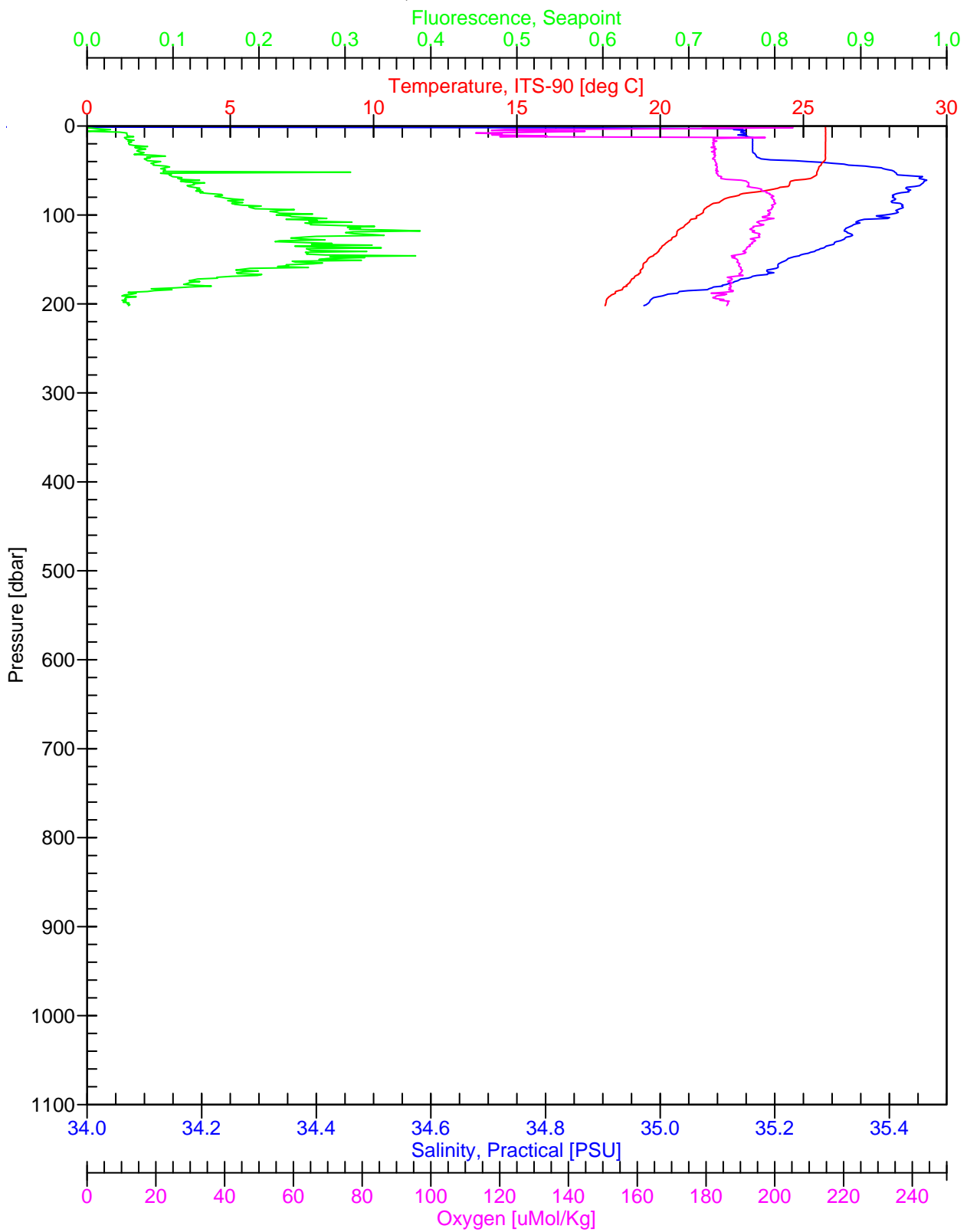
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G-1000, hot-223_s2_c18.cnv



G-1000, hot-223_s52_c1.cnv



G-1000, hot-223_s6_c1.cnv

