CCE-P1908 MOCNESS tows
R/V Atlantis

August-September 2019
1 m2 frame, 202-µm mesh, SIO Frame
Carl Mattson's new LED strobe (2 rows)

CYCLE AVERAGE
T,S,rho Flr,Trans.

HAUL	CYCLE	TOW	DATE	Event No.	START TIME	END TIME	MAX DEPTH	DEPTH INTERVAL	FIXATIVE	STROBE ON or OFF	COMMENTS	MOCNESS HAUL		Start	Stop	Date-Time (GMT)	Tow Duration (h)	Interval betwn. Tows (d)
1	**1**	1	13-Aug	161	13:12	14:45	464	50	50% FORMALIN 50% ETHANOL	OFF		1	Lat Long	36.0970 122.1260	36.1390 122.1750	13.20 14.75	1.55	
2	**1**	2	13-14 Aug	171	23:49	1:30	465	465	50% FORMALIN 50% ETHANOL	OFF	Only net 0 sample; no nets tripped	2	Lat Long	36.0870 122.2960	36.1380 122.3570	23.82 25.50	1.68	
3	**1**	3	14-Aug	185	12:58	14:50	460	50	100% FORMALIN	OFF		3	Lat Long	36.1406 122.419	36.1907 122.4948	12.97 14.83	1.87	
4	**1**	4	14-15 Aug	193	23:04	0:34	460	50	50% FORMALIN 50% ETHANOL	OFF		4	Lat Long	36.148 122.5063	36.1845 122.5616	23.07 24.57	1.50	
5	**1**	5	15-Aug	205	13:06	16:18	1071	100	50% FORMALIN 50% ETHANOL	ON during ascent	et wash preserved separately	5	Lat Long	36.1 122.5300	36.1590 122.5474	13.10 16.30	3.20	
6	**1**	6	15-16 Aug	211	22:43	0:19	457	50	100% FORMALIN	OFF		6	Lat Long	36.0900 122.5100	36.1000 122.5700	22.72 24.32	1.60	
7	**1**	7	16-Aug	226	21:10	0:13	1059	100	50% FORMALIN 50% ETHANOL	ON during ascent	et wash preserved separately	7	Lat Long	36.0300 122.5100	36.1150 122.6060	21.17 24.22	3.05	
8	**2**	1	18-19 Aug	273	23:13	0:43	466	50	50% FORMALIN 50% ETHANOL	OFF		8	Lat Long	36.1200 122.6300	36.1289 122.6970	23.22 24.72	1.50	
9	**2**	2	19-Aug	287	12:58	14:39	486	50	50% FORMALIN 50% ETHANOL	OFF		9	Lat Long	36.09 122.65	36.13 122.7	12.97 14.65	1.68	
10	**2**	3	19-20 Aug	299	22:48	0:35	479	50	100% FORMALIN	OFF		10	Lat Long	36.07 122.64	36.1058 122.7001	22.80 24.58	1.78	
11	**2**	4	20-Aug	313	13:14	14:49	496	50	100% FORMALIN	OFF		11	Lat Long	36.0700 122.6600	36.1100 122.7200	13.23 14.82	1.58	
12	**2**	5	21-Aug	329	21:16	23:50	1063	100	50% LIVE SORT 50% LIQUID NITROGEN	ON during descent and ascent		12	Lat Long	36 122.69	36.058 122.761	21.27 23.83	2.57	
13	**2**	6	22-Aug	335	13:35	16:17	1110	100	50% FORMALIN 50% ETHANOL	ON during ascent	et wash preserved separately	13	Lat Long	35.99 122.68	36.0400 122.7700	13.58 16.28	2.70	
14	**2**	7	22-23 Aug	340	21:47	0:36	1085	100	50% FORMALIN 50% ETHANOL	ON during ascent	et wash preserved separately	14	Lat Long	35.9800 122.6900	36.0040 122.8025	21.78 24.60	2.82	
15	**3**	1	24-Aug	360	13:46	15:25	487	50	50% FORMALIN 50% ETHANOL	OFF		15	Lat Long	35.6000 122.6800	35.5800 122.6200	13.77 15.42	1.65	
16	**3**	2	24-25 Aug	369	22:46	0:24	462	50	50% FORMALIN 50% ETHANOL	OFF		16	Lat Long	35.5900 122.5900	35.5970 122.6470	22.77 24.40	1.63	
17	**3**	3	25-Aug	381	12:50	16:02	1106	100	50% FORMALIN 50% ETHANOL	ON during ascent	et wash preserved separately	17	Lat Long	35.6000 122.5300	35.6400 122.6500	12.83 16.03	3.20	
18	**3**	4	25-26 Aug	387	22:47	1:44	1034	100	50% FORMALIN 50% ETHANOL	ON during ascent	et wash preserved separately	18	Lat Long	35.6300 122.5100	35.6750 122.6191	22.78 25.73	2.95	
19	**4**	1	30-Aug	495	13:05	15:20	487	50	50% FORMALIN 50% ETHANOL	OFF		19	Lat Long	34.8800 124.7900	34.9200 124.8700	13.08 15.33	2.25	
20	**4**	2	30-31 Aug	506	23:00	0:41	470	50	50% FORMALIN 50% ETHANOL	OFF		20	Lat Long	34.8800 124.8200	34.9125 124.8790	23.00 24.68	1.68	
21	**4**	3	31-Aug	518	12:56	14:36	488	50	100% FORMALIN	OFF		21	Lat Long	34.8700 124.8700	34.9000 124.9300	12.93 14.60	1.67	
22	**4**	4	31 Aug - 1 Sept	526	22:57	0:38	475	50	100% FORMALIN	OFF		22	Lat Long	34.8700 124.9000	34.8989 124.9660	22.95 24.63	1.68	
23	**4**	5	1-Sep	537	12:54	15:38	1091	100	50% FORMALIN 50% ETHANOL	ON during ascent	et wash preserved separately	23	Lat Long	34.8100 125.0000	34.9000 125.0300	12.90 15.63	2.73	
24	**4**	6	1-Sep	545	23:14	2:02	1042	100	50% FORMALIN 50% ETHANOL	ON during ascent	et wash preserved separately	24	Lat Long	34.8000 124.9800	34.8679 125.0793	23.23 26.03	2.80	

Note:
For samples with net wash preserved separately, the bulk of the sample was promptly removed from the cod end and processed quickly (50% preserved in ethanol, 50% in formalin) to perserve the integrity of DNA, prior to the nets being rinsed. The cod ends were replaced, and the portion of the sample recovered during the net wash was subsequently preserved separately in formalin. The 50% split in ethanol and formalin is thus non-quantitative for these tows. The formalin split can be made quantitative by addition of 50% of the net wash sample.

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 13 Aug 2019 Haul # 1 Cycle # 1 Tow # 1

Wind Speed 13 (kts.) Direction 329 (°) Sea State 2-3 (ft.)

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surface
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- ✓ Strobe off

File Name: Processed Cycle1_01.PRO Raw cycle1_01.hex

Start Time 1312 (PDT) **End** Time 1445 (PDT)

Lat 36° 5.81'N Lat 36.139

Long 122° 7.57'W Long -122.175

Event deploy # 20190814.0410.001 Event rec. # 20190814.0413.001

Frame Size 1 m^2

Net Mesh 202 µm

Bottom Depth 1301 (m) Console Operator L. Lilly, M. Ohman

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?	
~~450-350~~	0	13~~45~~12	38.6	424	2128	~~450~~ 0	464	50%	5% Form.	50%	95% EtOH	✓	
456-350	1	1345	46.1	343	1527	450	350		5% Form.		95% EtOH	✓	
350-300	2	1400 (210013)	43.0	198	929	350	300		5% Form.		95% EtOH	✓	stuck open
300-250	3	1408 (210847)	45.7	170	773	300	251		5% Form.		95% EtOH	✓	still stuck open
250-200	4	1415	45.3	152	685	251	200		5% Form.		95% EtOH	✓	still 'resp open'
200-150	5	1421	45.6	163	731	200	151		5% Form.		95% EtOH	✓	"
150-100	6	1427 (2127)	44.4	166	761	151	100		5% Form.		95% EtOH	✓	"
100-50	7	1433 (2133)	49.1	153	642	100	50		5% Form.		95% EtOH	✓	"
50-25	8	1439	46.8	79	346	50	25		5% Form.		95% EtOH		
25-0	9	1442		88	328	25	0		5% Form.		95% EtOH		
	Closed	1445											

Surface Readings:

Pressure (m)	[illegible]	1.4
Temp. (°C)	[illegible]	12.72
Salinity (‰)	~~33.45~~	33.76
O_2 (ml/l)	6.37	
Fluoresc. (v)	9.5	
BeamC (/m)	[illegible]	0.91
Strobe batt.(v)	–	
wire out (m)	8.2	
Time (PDT)	1312	

At Depth Readings:

Pressure (m)	464
Temp. (°C)	6.66
Salinity (‰)	34.24
O_2 (ml/l)	0.498
Fluoresc. (v)	-0.6
BeamC (/m)	0.022
Strobe batt.(v)	–
wire out (m)	806
Time (PDT)	1344

Notes: Using old flowmeter calibration – (No; this is the correct calibration. MDO)

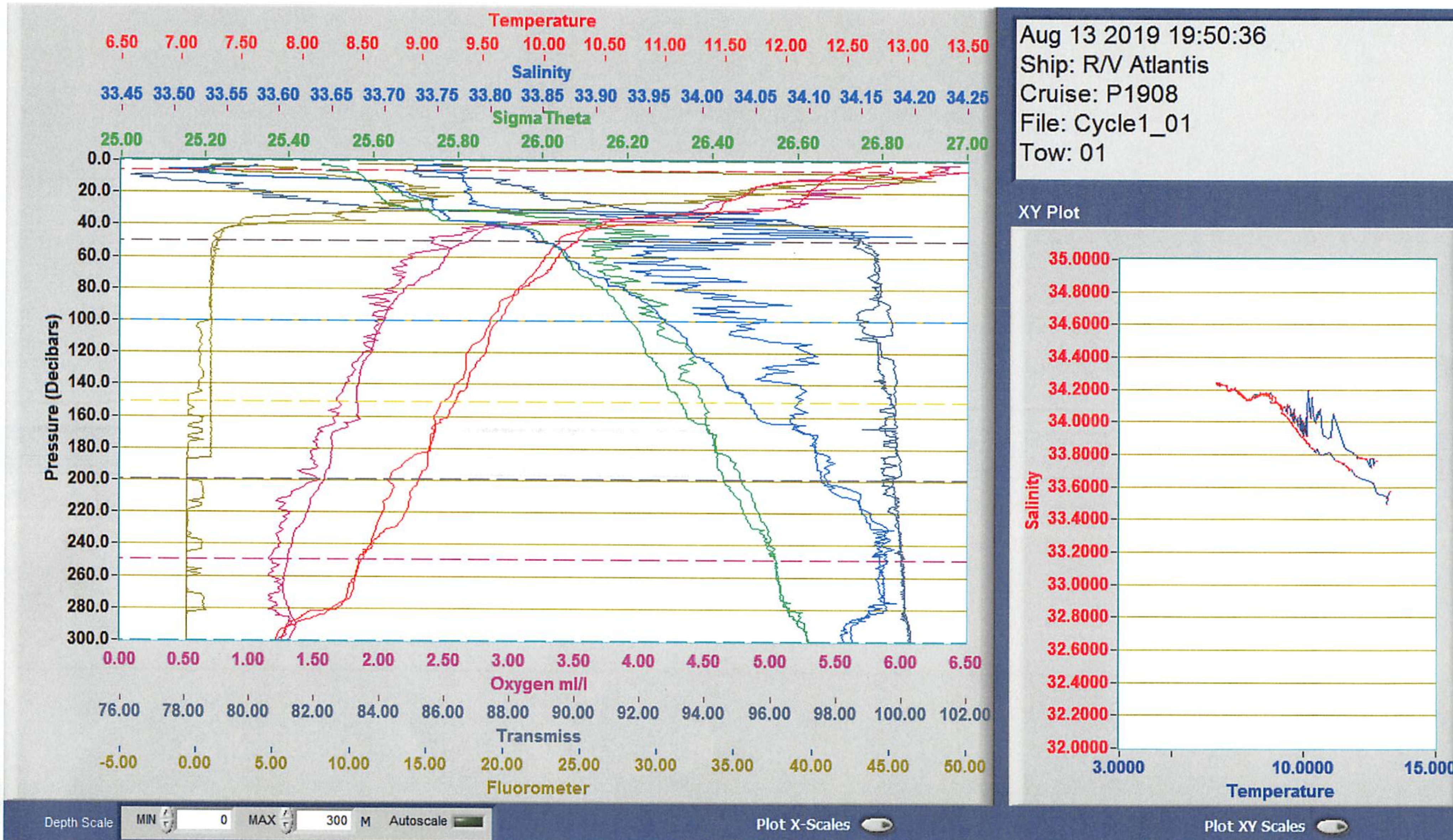
All trip net values will be off by 1

- Trip response ~~triggered~~ stuck open with Net 3 trigger (1408)

- Passing drifter w/ 206 m MOCNESS depth

Net 9 open at surface, so all nets tripped. Carl found that a cable needed replacement and now the net response should confirm.

Plastic slider bars used for cocking left on MOCNESS on descent; 1 came back.


Temperature
6.50 7.00 7.50 8.00 8.50 9.00 9.50 10.00 10.50 11.00 11.50 12.00 12.50 13.00 13.50
Salinity
33.45 33.50 33.55 33.60 33.65 33.70 33.75 33.80 33.85 33.90 33.95 34.00 34.05 34.10 34.15 34.20 34.25
Sigma Theta
25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00
Pressure (Decibars)
0.0 20.0 40.0 60.0 80.0 100.0 120.0 140.0 160.0 180.0 200.0 220.0 240.0 260.0 280.0 300.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50
Oxygen ml/l
76.00 78.00 80.00 82.00 84.00 86.00 88.00 90.00 92.00 94.00 96.00 98.00 100.00 102.00
Transmiss
-5.00 0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00
Fluorometer
Depth Scale
MIN 0
MAX 300 M
Autoscale
Plot X-Scales
Aug 13 2019 19:50:36
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_01
Tow: 01
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Plot XY Scales

TRIP CONTROL

	Trip	RSP	Date Time	Pres	Net Angle	Flow Cnts	Volume
1				0.0	0.0	0	0.0
2			190813 204538	450.1	38.6	424	2044.6
3			190813 210013	350.4	46.1	343	1467.1
4			190813 210847	299.9	43.0	198	892.1
5			190813 211520	250.5	45.7	170	742.4
6			190813 212115	199.5	45.3	152	658.2
7			190813 212716	150.6	45.6	163	702.0
8			190813 213342	100.3	44.4	166	731.2
9			190813 213927	50.2	49.1	153	617.3
10			190813 214226	25.3	46.8	79	332.5

Reset Trip Count

Reset Flow Count

Single Step Motor

MANUAL CONFIRM

TRIP CNT++

TRIP CNT--

CNFM CNT++

CNFM CNT--

UNLOCK

Trip in Progress

Motor ON

RSP

Trip NET

Trip Count 10

Confirms 10

Flow Cnts 88

VOL 315.3

Flow Cnts2 0

VOL 2 0.0

Motor Volts 13.424

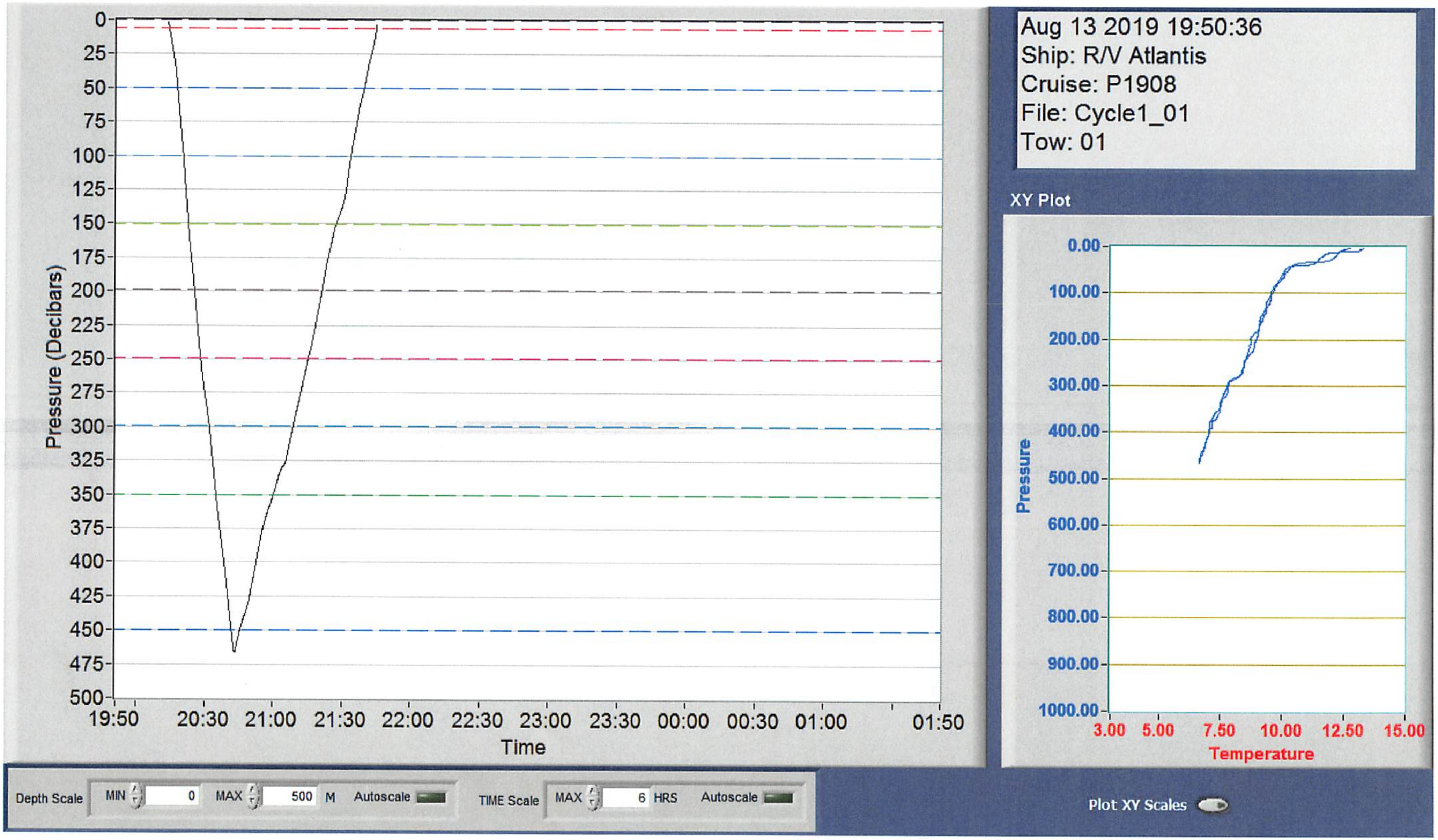
CTD Volts 14.299

CNF TIME 3.167

Modem Data 88,0,10,10,0,1243,1324,0,1,0,0

FM2 Primary

Strobe Box



Aug 13 2019 19:50:36
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_01
Tow: 01
Pressure (Decibars)
0
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
400
425
450
475
500
19:50
20:30
21:00
21:30
22:00
22:30
23:00
23:30
00:00
00:30
01:00
01:50
Time
XY Plot
Pressure
0.00
100.00
200.00
300.00
400.00
500.00
600.00
700.00
800.00
900.00
1000.00
3.00
5.00
7.50
10.00
12.50
15.00
Temperature
Depth Scale
MIN
0
MAX
500
M
Autoscale
TIME Scale
MAX
6
HRS
Autoscale
Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P1908 Date 13 Aug 2019 Haul # 2 Cycle # 1 Tow # 2

Wind Speed 20 (kts.) Direction 320 (°) Sea State 2-3 (ft.)

File Name: Processed Cycle1_02.PRO Raw Cycle1_02.hex

Start Time 2339 (PDT) **End** Time 0130 (PDT)

Lat 36 05.247 Lat 36.13805

Long 122 17.762 Long 122.35757

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surface
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- ~~Strobe~~ NA OFF

Event deploy # 20190814.1749.001 Event rec. # 20190814.1751.001

Frame Size 1 m^2
Net Mesh 202 μm

Bottom Depth 1992 (m) Console Operator SAS

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?
0-450	0	Haul 2				465	0	50%	5% Form.	50%	95% EtOH	
450-350	1	(no file)				449	350		5% Form.		95% EtOH	
350-300	2	only				350	300		5% Form.		95% EtOH	
300-250	3	Net Ø				300	249		5% Form.		95% EtOH	
250-200	4	sample				249	201		5% Form.		95% EtOH	
200-150	5					201	150		5% Form.		95% EtOH	
150-100	6					150	99		5% Form.		95% EtOH	
100-50	7					99	50		5% Form.		95% EtOH	
50-25	8					50	25		5% Form.		95% EtOH	
25-0	9					25	0		5% Form.		95% EtOH	
	Closed											

ONLY NET Ø SAMPLE

Surface Readings:

Pressure (m)	2.4
Temp. (°C)	12.662
Salinity (‰)	33.71
O_2 (ml/l)	5.62
Fluoresc. (v)	19.8
BeamC (/m)	0.75
Strobe batt.(v)	—
wire out (m)	0
Time (PDT)	2339

At Depth Readings:

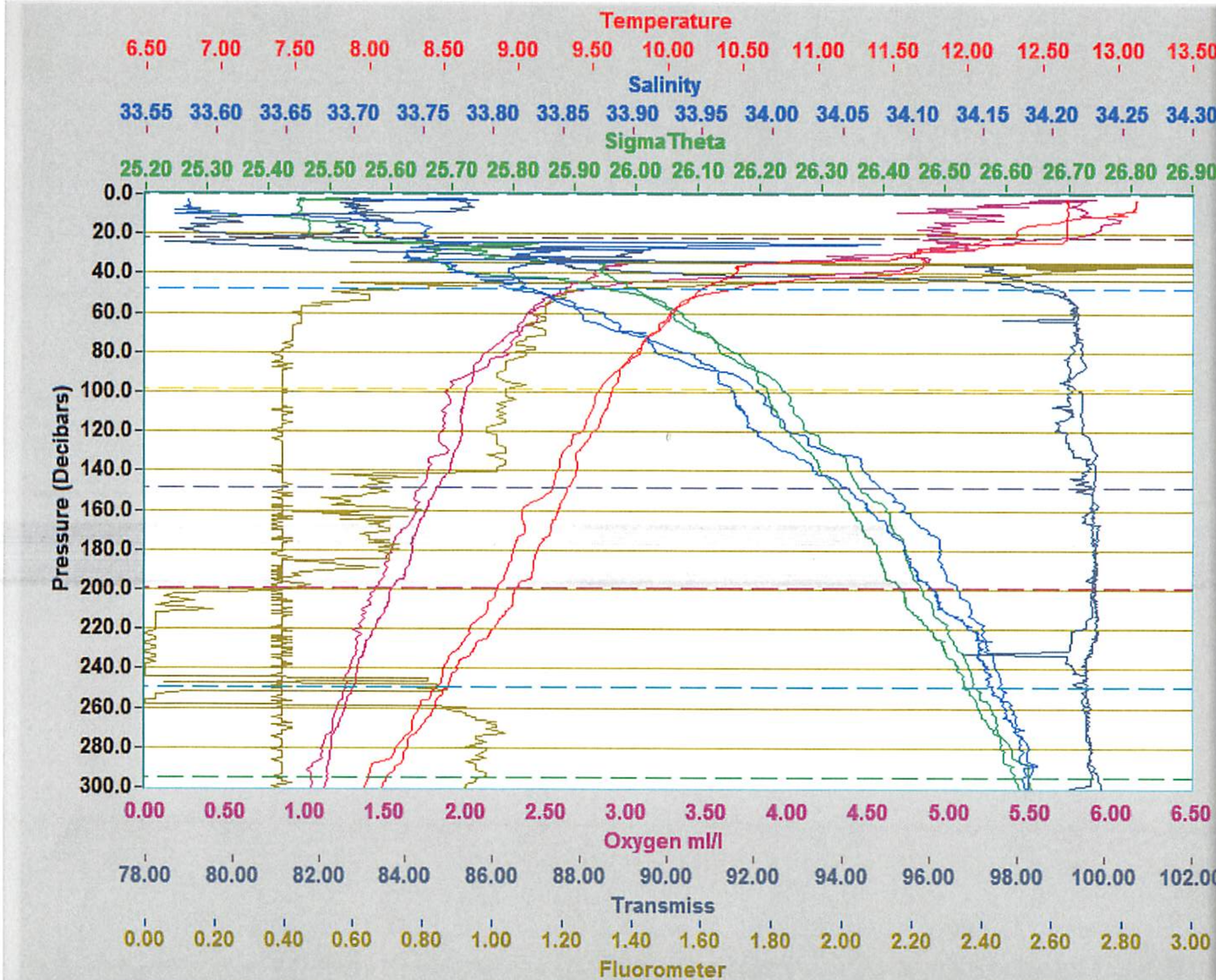
Pressure (m)	465
Temp. (°C)	6.659
Salinity (‰)	34.26
O_2 (ml/l)	0.428
Fluoresc. (v)	0.0
BeamC (/m)	0.01
Strobe batt.(v)	—
wire out (m)	1038
Time (PDT)	0020

Notes:

No net response on net 1. Manually stepped motor 1 step, no response. Manual confirm @ 425 m, volume filtered calculated from here.

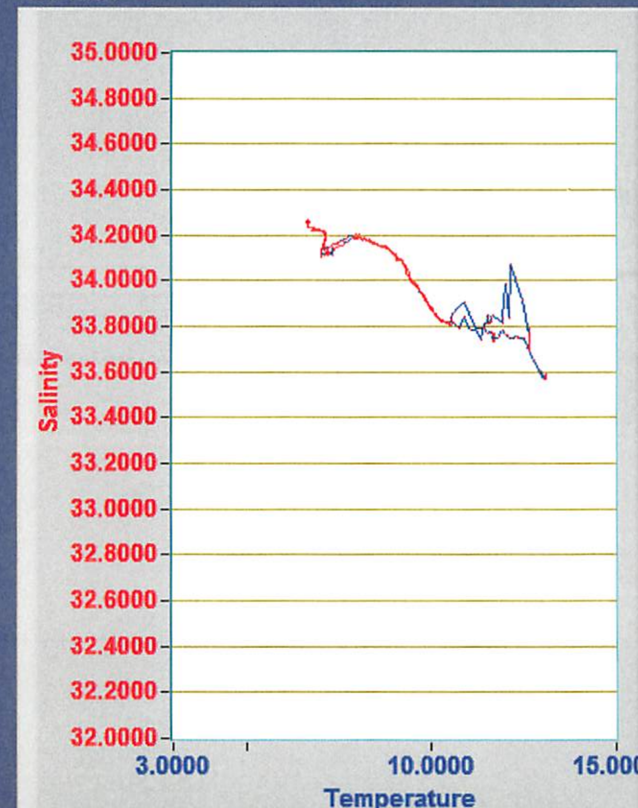
No net response on net 2. Manual confirm.
" " 3. " "
" " 4. " "
" " 5. "
" 6. "
" 7. "
" 8. "
" 9. "

All nets fully cocked on recovery
Net 0 open, saved as single sample.



Aug 14 2019 06:39:23
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_02
Tow: 02

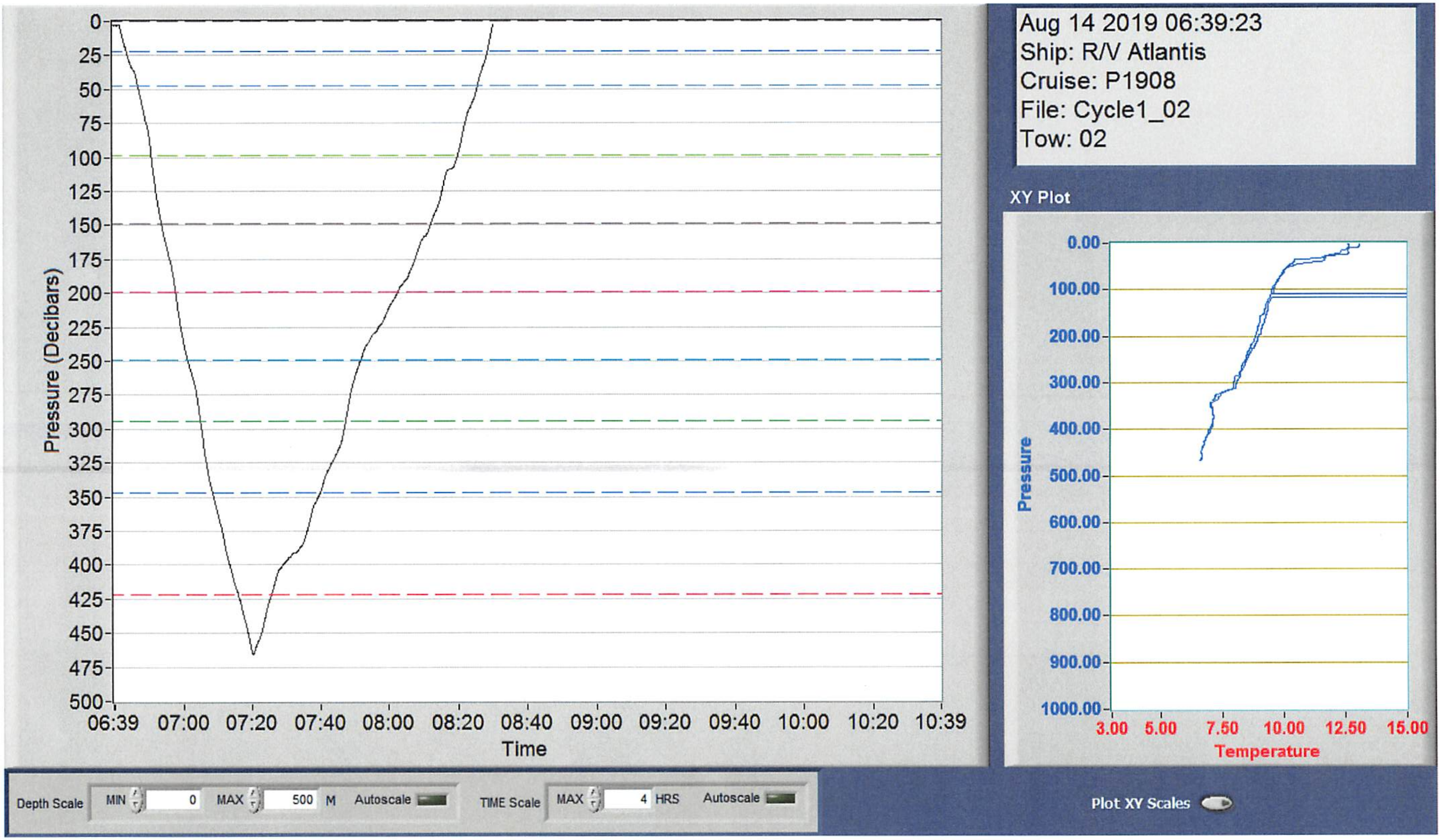
XY Plot



Depth Scale MIN 0 MAX 300 M Autoscale

Plot X-Scales

Plot XY Scales


0
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
400
425
450
475
500
Pressure (Decibars)
06:39
07:00
07:20
07:40
08:00
08:20
08:40
09:00
09:20
09:40
10:00
10:20
10:39
Time
Aug 14 2019 06:39:23
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_02
Tow: 02
XY Plot
0.00
100.00
200.00
300.00
400.00
500.00
600.00
700.00
800.00
900.00
1000.00
Pressure
3.00
5.00
7.50
10.00
12.50
15.00
Temperature
Depth Scale
MIN
0
MAX
500
M
Autoscale
TIME Scale
MAX
4
HRS
Autoscale
Plot XY Scales

TRIP CONTROL

	Trip	RSP	Date Time	Pres	Net Angle	Flow Cnts	Volume
1			190814 072530	422.0	49.9	727	2941.8
2			190814 073959	347.0	49.4	364	1469.0
3			190814 074721	295.3	47.9	186	769.0
4			190814 075154	249.3	49.9	97	385.3
5			190814 080246	199.6	48.9	291	1177.1
6			190814 081216	149.3	45.1	256	1115.1
7			190814 081958	99.0	43.0	201	910.0
8			190814 082537	47.9	40.4	141	664.8
9			190814 082831	22.7	30.6	60	319.7
10				0.0	0.0	0	0.0

Reset Trip Count

Reset Flow Count

Single Step Motor

MANUAL CONFIRM

TRIP CNT++

TRIP CNT--

CNFM CNT++

CNFM CNT--

LOCK

Trip in Progress

Motor ON

RSP

Trip NET

Trip Count 9

Flow Cnts 54

Flow Cnts2 0

Motor Volts 13.327

Confirms 9

VOL 168.4

VOL 2 0.0

CTD Volts 14.288

CNF TIME 17.542

Modem Data 54,0,9,9,0,1234,1323,0,0,0,0

FM2 Primary

Strobe Box

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 14 Aug 2019 Haul # 3 Cycle # 1 Tow # 3

Wind Speed 10 (kts.) Direction 317 (°) Sea State 2-3 (ft.)

File Name: Processed Cycle1-03.PRO Raw Cycle1_03.hex

Start Time 12:58 (PDT) **End** Time 14:53 (PDT)

Lat 36° 8.44' N Lat 36° 11.44' N

Long 122° 25.14' W Long 122° 29.69' W

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surface
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- — Strobe off

Event deploy # 20190824.0131.001 Event rec. # 20190824.0132.001

Frame Size 1 m^2
Net Mesh 202 µm

Bottom Depth 1996 m. (m) Console Operator L. Lilly

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?
0-470	0	1258	45.2	550	2546	460	0		5% Form.		95% EtOH	✓
450-350	1	1338	52.7	338	1325	449.6	350		5% Form.		95% EtOH	✓
350-300	2	1353	50.2	252	1037	350	300		5% Form.		95% EtOH	✓
300-250	3	1404	51.8	118	469	300	249		5% Form.		95% EtOH	✓
250-200	4	1410	47.8	278	1201	249	201		5% Form.		95% EtOH	✓
200-150	5	1421	47.3	182	796	201	149		5% Form.		95% EtOH	✓
150-100	6	1427	44.1	194	899	149	100		5% Form.		95% EtOH	✓
100-50	7	1435	39.2	165	820	100	49		5% Form.		95% EtOH	✓
50-25	8	1442	42.5	62	303	49	24		5% Form.		95% EtOH	✓
25-0	9	1445		82	438	24	0		5% Form.		95% EtOH	
	Closed	1450										

Surface Readings:

Pressure (m)	1.8
Temp. (°C)	13.40
Salinity (‰)	33.66
O_2 (ml/l)	5.85
Fluoresc. (v)	0.6
BeamC (/m)	0.69
Strobe batt.(v)	13.52
wire out (m)	0
Time (PDT)	1258

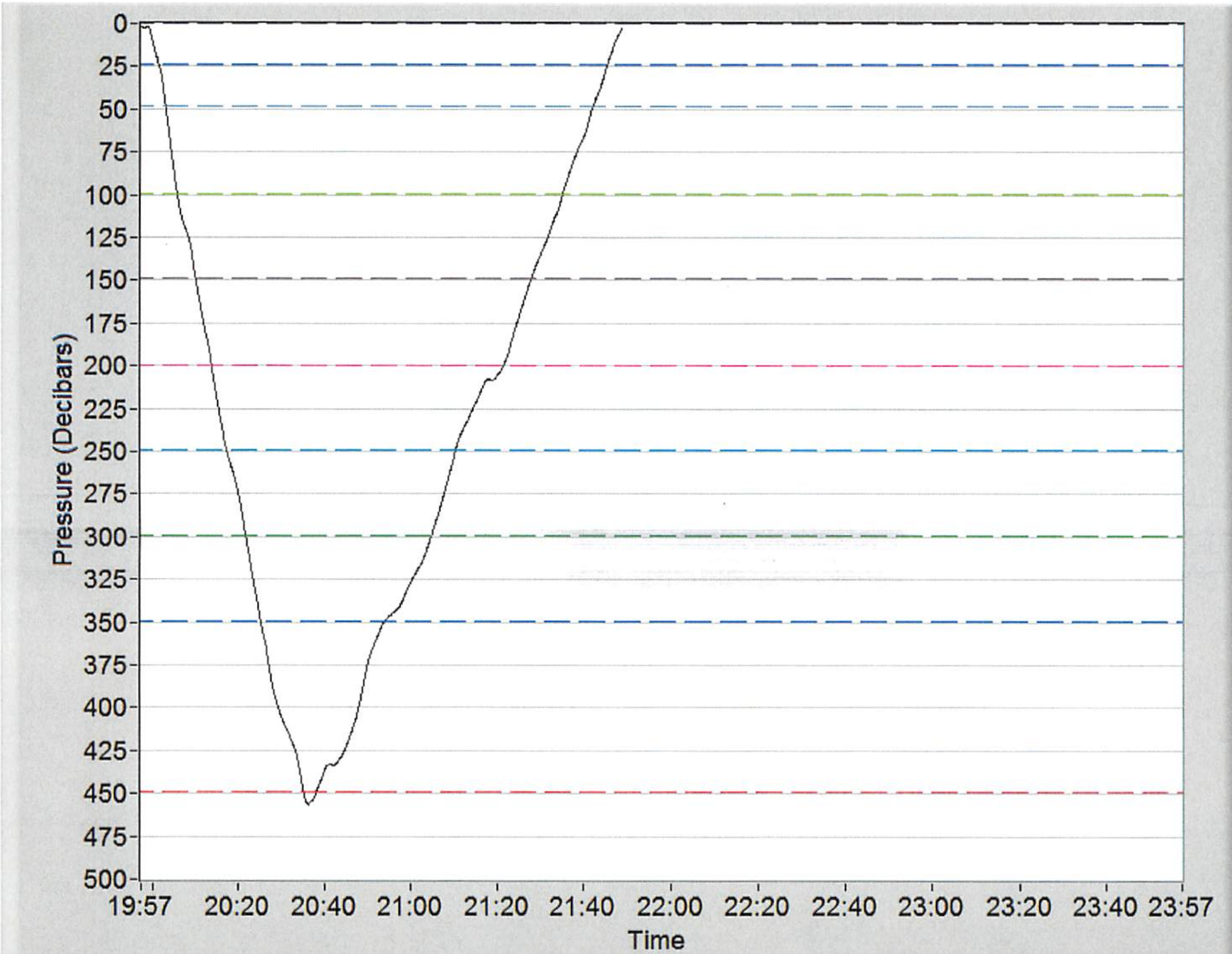
At Depth Readings:

Pressure (m)	447
Temp. (°C)	6.49
Salinity (‰)	34.23
O_2 (ml/l)	0.49
Fluoresc. (v)	0.4
BeamC (/m)	-0.01
Strobe batt.(v)	13.04
wire out (m)	1010
Time (PDT)	1338

Notes: Irregular (and steep: >50°) wire angles coming up from 450 → 300 m. Probably deep velocity shear. Good ship speed (~2 kts) and winch speed (15 m/min)

164 m = closest drifter point (100 yds) depth, 1426 (time)

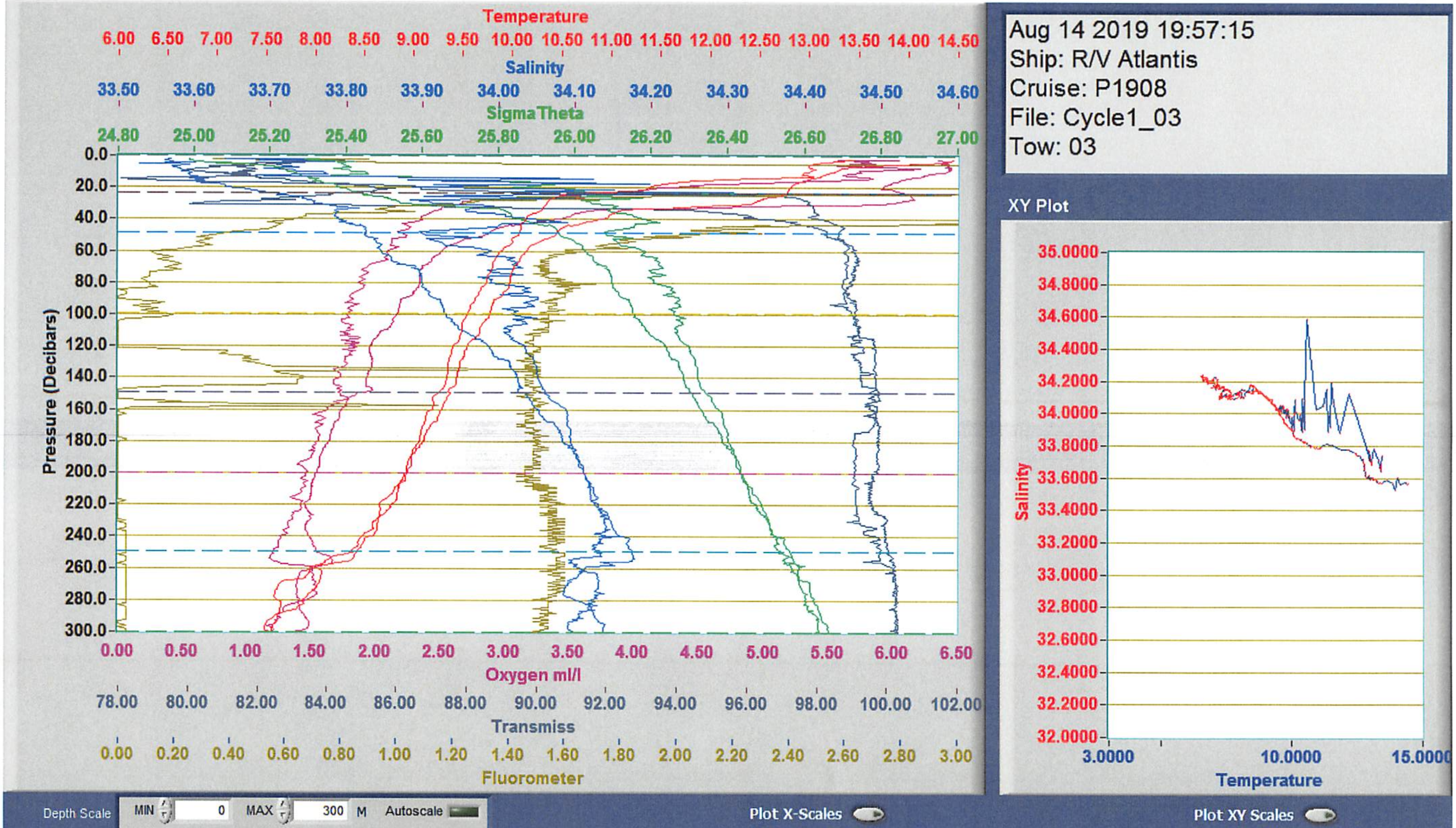
Aug 14 2019 19:57:15
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_03
Tow: 03

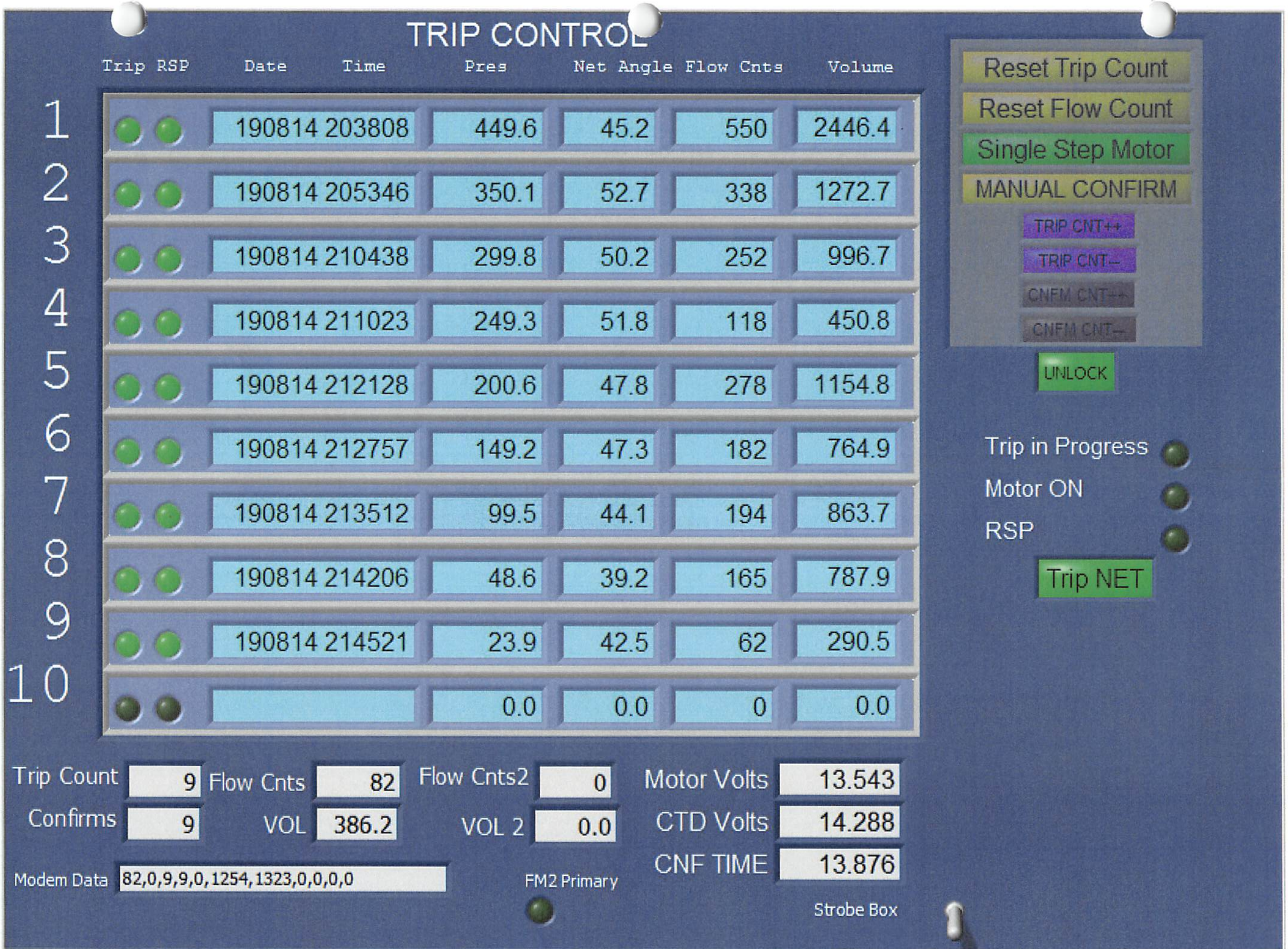


XY Plot

Depth Scale MIN 0 MAX 500 M Autoscale TIME Scale MAX 4 HRS Autoscale

Plot XY Scales


Aug 14 2019 19:57:15
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_03
Tow: 03
Temperature
Salinity
Sigma Theta
Pressure (Decibars)
Oxygen ml/l
Transmiss
Fluorometer
XY Plot
Salinity
Temperature
Depth Scale
MIN 0
MAX 300 M
Autoscale
Plot X-Scales
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190814 203808 449.6 45.2 550 2446.4
2 190814 205346 350.1 52.7 338 1272.7
3 190814 210438 299.8 50.2 252 996.7
4 190814 211023 249.3 51.8 118 450.8
5 190814 212128 200.6 47.8 278 1154.8
6 190814 212757 149.2 47.3 182 764.9
7 190814 213512 99.5 44.1 194 863.7
8 190814 214206 48.6 39.2 165 787.9
9 190814 214521 23.9 42.5 62 290.5
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
TRIP CNT++
TRIP CNT--
CNFM CNT++
CNFM CNT--
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
Trip Count 9
Confirms 9
Flow Cnts 82
VOL 386.2
Flow Cnts2 0
VOL 2 0.0
Motor Volts 13.543
CTD Volts 14.288
CNF TIME 13.876
Modem Data 82,0,9,9,0,1254,1323,0,0,0,0
FM2 Primary
Strobe Box

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 14 Aug. 2019 Haul # 4 Cycle # 1 Tow # 4

Wind Speed 16-18 (kts.) Direction 323 (°) Sea State ____ (ft.)

File Name: Processed Cycle1-04.PRO Raw Cycle1_04.hex

Start Time 2304 (PDT) **End** Time 0034 (PDT)

Lat 36 08 88 N Lat 36.18447

Long 122 30.38 W Long 122.56164

Event deploy # 20190815.1213.001 Event rec. # 20190815.1215.001

Bottom Depth 2032 (m) Console Operator SAS, MPO

Frame Size 1 m^2
Net Mesh 202 µm

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surface
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- ✓ Strobe OFF

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?
0-450	0	2304	41.3	518	2551	460	0	50%	5% Form.	50%	95% EtOH	✓
450-350	1	2338	49.2	204	856	450	~~449~~ 349	↓	5% Form.	↓	95% EtOH	✓
350-300	2	2346	45.9	254	1135	349	300		5% Form.		95% EtOH	✓
300-250	3	2356	47.8	185	798	300	245		5% Form.		95% EtOH	✓
250-200	4	0002	45.8	195	873	245	200		5% Form.		95% EtOH	✓
200-150	5	0010	47.3	131	571	200	150		5% Form.		95% EtOH	✓
150-100	6	0015	45.8	210	940	150	101		5% Form.		95% EtOH	✓
100-50	7	0023	41.1	158	765	101	50		5% Form.		95% EtOH	✓
50-25	8	0029	45.8	60	271	50	25		5% Form.		95% EtOH	✓
25-0	9	0031		92	291	25	0	↓	5% Form.	↓	95% EtOH	
	Closed	0034										

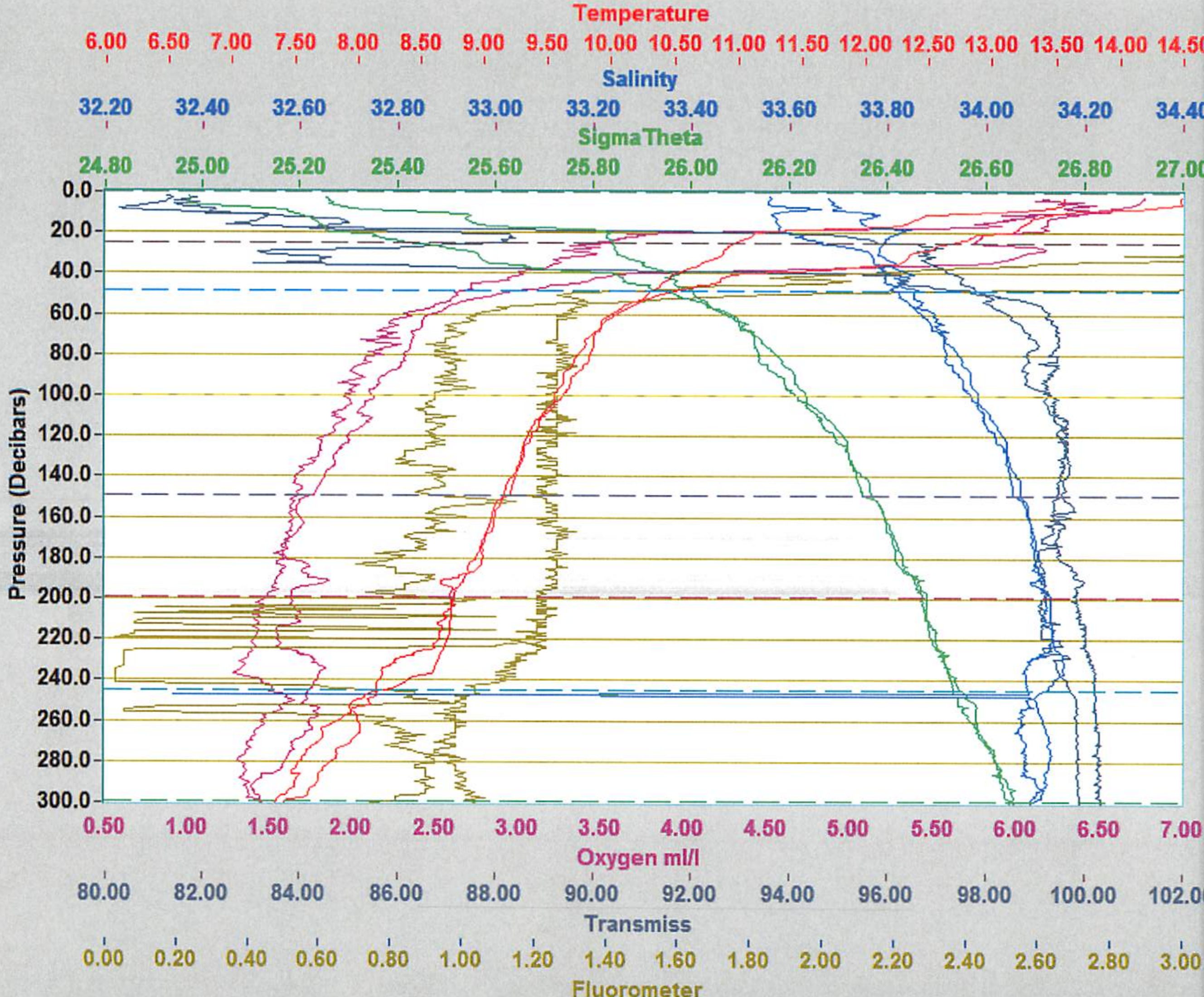
Surface Readings:

Pressure (m)	0.9
Temp. (°C)	13.58
Salinity (‰)	33.68
O_2 (ml/l)	6.63
Fluoresc. (v)	21.3
BeamC (/m)	0.81
Strobe batt.(v)	13.51
wire out (m)	0
Time (PDT)	2304

Notes: Strong horizontal shear btwn 300 - 320 m. net ~~wire~~ angle looks ok (45-48) but stall in vertical MPM.

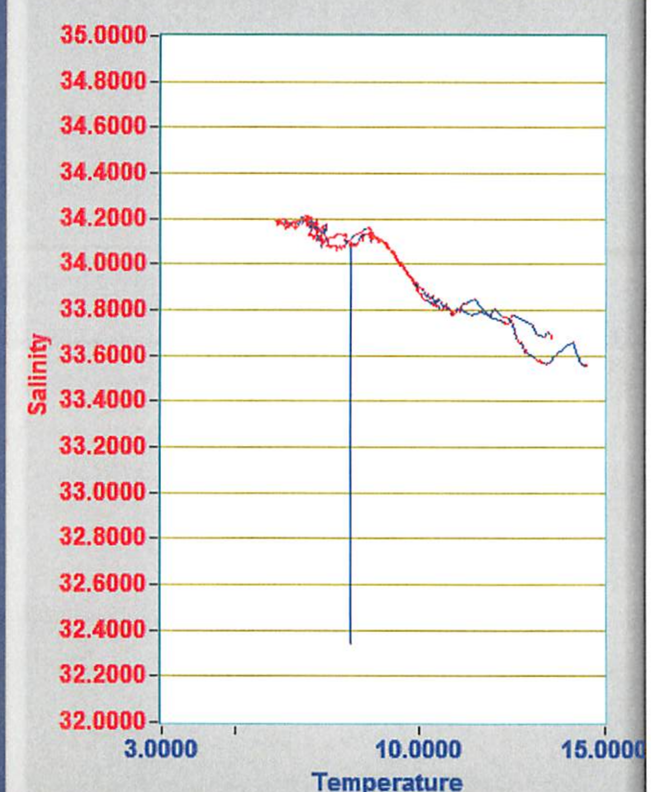
At Depth Readings:

Pressure (m)	464
Temp. (°C)	6.079
Salinity (‰)	34.19
O_2 (ml/l)	0.53
Fluoresc. (v)	0.4
BeamC (/m)	-0.02
Strobe batt.(v)	—
wire out (m)	867
Time (PDT)	23 37



Aug 15 2019 06:02:42
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_04
Tow: 04

XY Plot



Depth Scale MIN 0 MAX 300 M Autoscale

Plot X-Scales

Plot XY Scales

TRIP CONTROL

	Trip	RSP	Date Time	Pres	Net Angle	Flow Cnts	Volume
1			190815 063827	448.5	41.3	518	2451.1
2			190815 064640	349.6	49.2	204	822.0
3			190815 065615	300.1	45.9	254	1090.7
4			190815 070259	245.0	47.8	185	767.0
5			190815 071020	200.3	45.8	195	838.9
6			190815 071515	149.8	47.3	131	548.3
7			190815 072302	100.7	45.8	210	903.0
8			190815 072935	49.5	41.1	158	734.9
9			190815 073154	25.2	45.8	60	260.1
10				0.0	0.0	0	0.0

Reset Trip Count

Reset Flow Count

Single Step Motor

MANUAL CONFIRM

TRIP CNT++

TRIP CNT--

CNFM CNT++

CNFM CNT--

UNLOCK

Trip in Progress

Motor ON

RSP

Trip NET

Trip Count 9 Flow Cnts 92 Flow Cnts2 0 Motor Volts 13.370

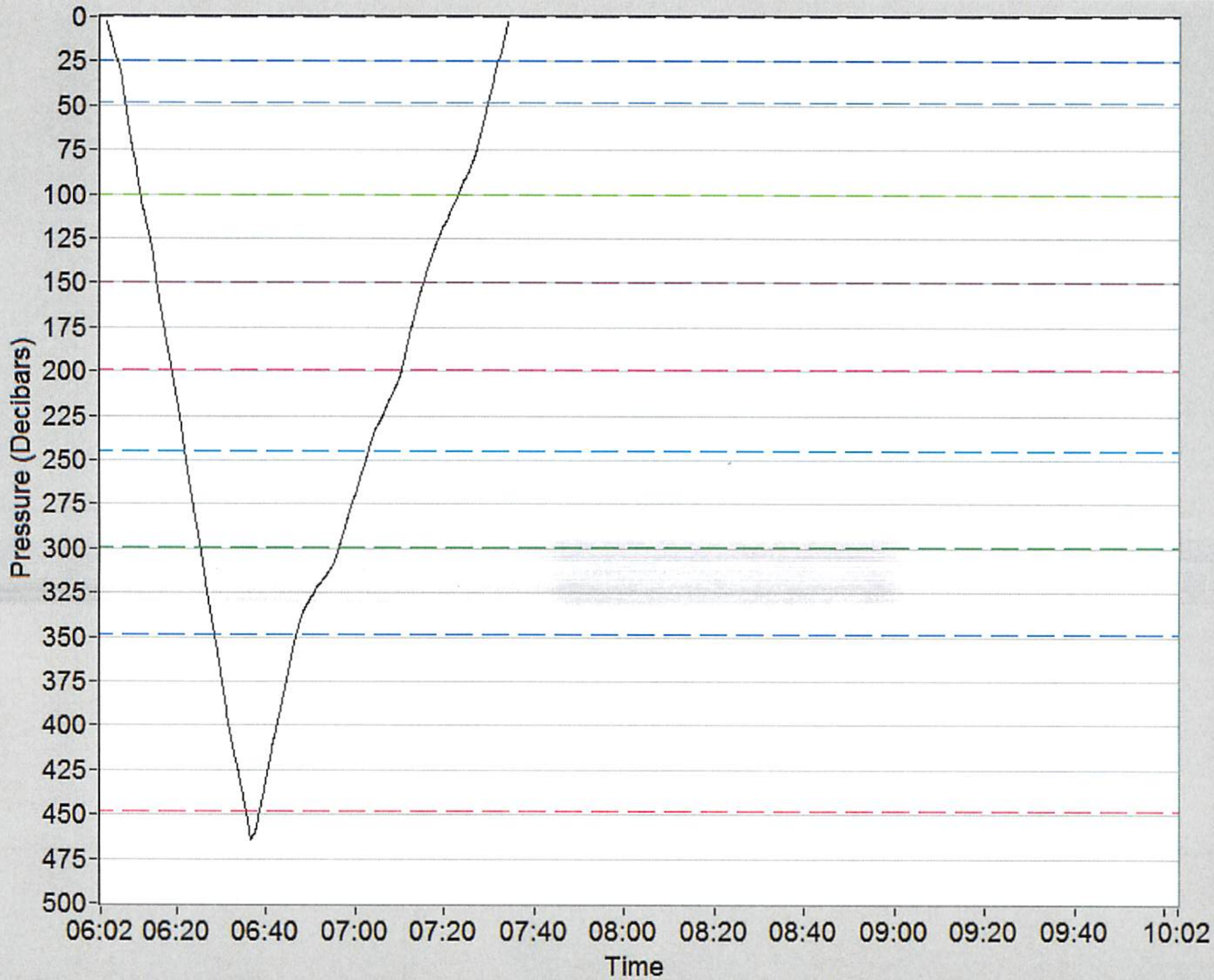
Confirms 9 VOL 279.8 VOL 2 0.0 CTD Volts 14.278

CNF TIME 14.042

Modem Data 92,0,9,9,0,1238,1322,0,0,0,0

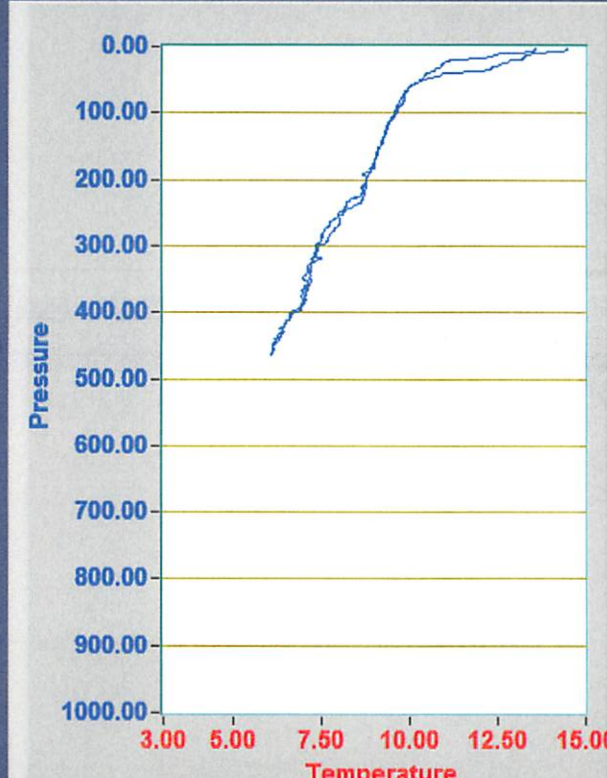
FM2 Primary

Strobe Box



Aug 15 2019 06:02:42
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_04
Tow: 04

XY Plot



Depth Scale MIN 0 MAX 500 M Autoscale

TIME Scale MAX 4 HRS Autoscale

Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 15 Aug 2019 Haul # 5 Cycle # 1 Tow # 5

Wind Speed 9 (kts.) Direction 318 (°) Sea State 2 (ft.)

File Name: Processed Cycle1_05.PRO Raw Cycle1_05.hex

Start Time 1306 (PDT) **End** Time 1618 (PDT)

Lat 36° 06.26N Lat 36.15856

Long 122° 31.77W Long 122.64743

Pre-deployment checks:
- ✓ Flow Meter
- Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surface
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- ✓ Strobe ON 18.0V

Event deploy # 20190824.0128.001 Event rec. # 20190824.0129.001

Frame Size 1 m^2
Net Mesh 202 µm

Bottom Depth 2818 (m) Console Operator L. Lilly

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?	Strobe voltage
0-1020	0	1306	36.2	801	4167	1071	0		5% Form.		95% EtOH	✓	17.4
1000-800	1	1413	47.2	402	1763	998	802		5% Form.		95% EtOH	✓	17.3
800-600	2	1433	48.8	582	2509	802	600		5% Form.		95% EtOH	✓	17.2
600-500	3	1501	48.5	435	1917	600	500		5% Form.		95% EtOH	✓	17.2
500-400	4	1519	46.9	237	1041	500	400		5% Form.		95% EtOH	✓	17.2
400-300	5	1529	42.0	364	1740	400	301		5% Form.		95% EtOH	✓	17.2
300-200	6	1544	41.7	238	1153	301	199		5% Form.		95% EtOH	✓	17.2
200-100	7	1554	38.4	306	1545	199	100		5% Form.		95% EtOH	✓	17.2
100-50	8	1606	48.6	122	608	100	49		5% Form.		95% EtOH	✓	17.2
50-0	9	1612		175	694	49	0		5% Form.		95% EtOH		
	Closed	1618											

Surface Readings:

Pressure (m)	1.3
Temp. (°C)	14.92
Salinity (‰)	33.68
O_2 (ml/l)	
Fluoresc. (v)	3.90
BeamC (/m)	0.54 CTD
Strobe batt.(v)	13.6/14.3
wire out (m)	0
Time (PDT)	1306

At Depth Readings:

Pressure (m)	1071
Temp. (°C)	3.76
Salinity (‰)	34.47
O_2 (ml/l)	0.466
Fluoresc. (v)	1.3
BeamC (/m)	-0.019
Strobe batt.(v)	13.78/14.31
wire out (m)	2065
Time (PDT)	1408

Notes: Strobe off during descent

Winch speed increased to 40 m/min at 222 m depth

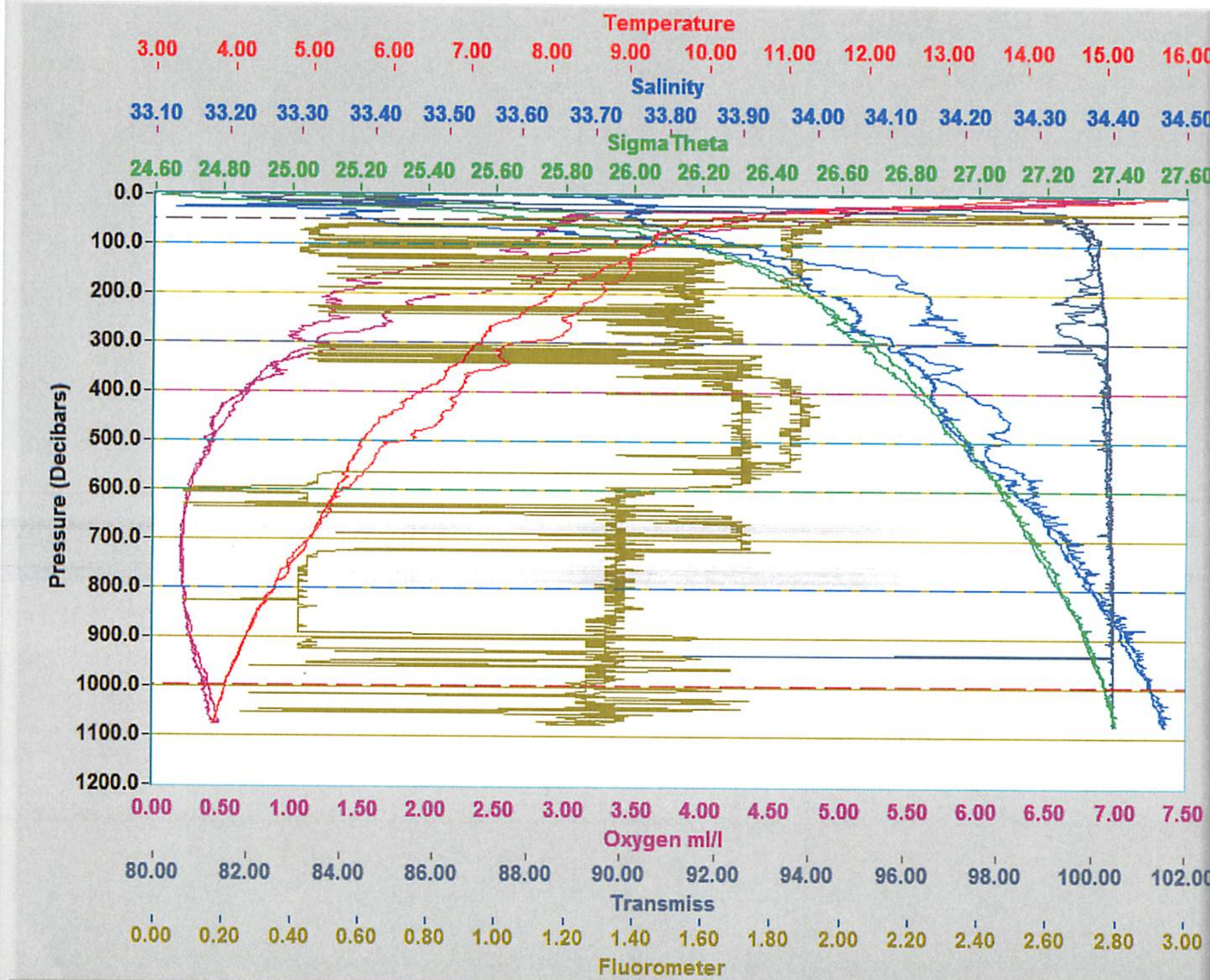
Closest point to drifter: 1356

2109 – Strobe on @
(1409) 1056 dB
- interval 1000 ms
- pulse width 40 m
- intensity 50%
- Strobe volts = ~~[illegible]~~ 17.4V

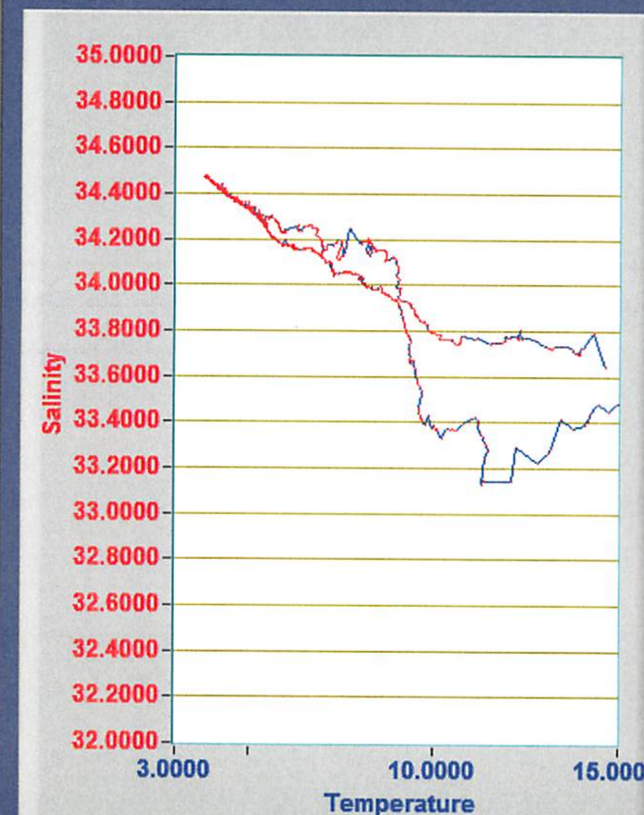
– Flattened out depth at 509 m for 3-5 min
– Increased winch haulback to 20 m/min in

– Preserved: cod end + quick wash as 50/50 EtOH/formalin split
– Net wash as separate 100% formalin
*Nets 5-6 wash combined

Aug 15 2019 20:06:04
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_05
Tow: 05



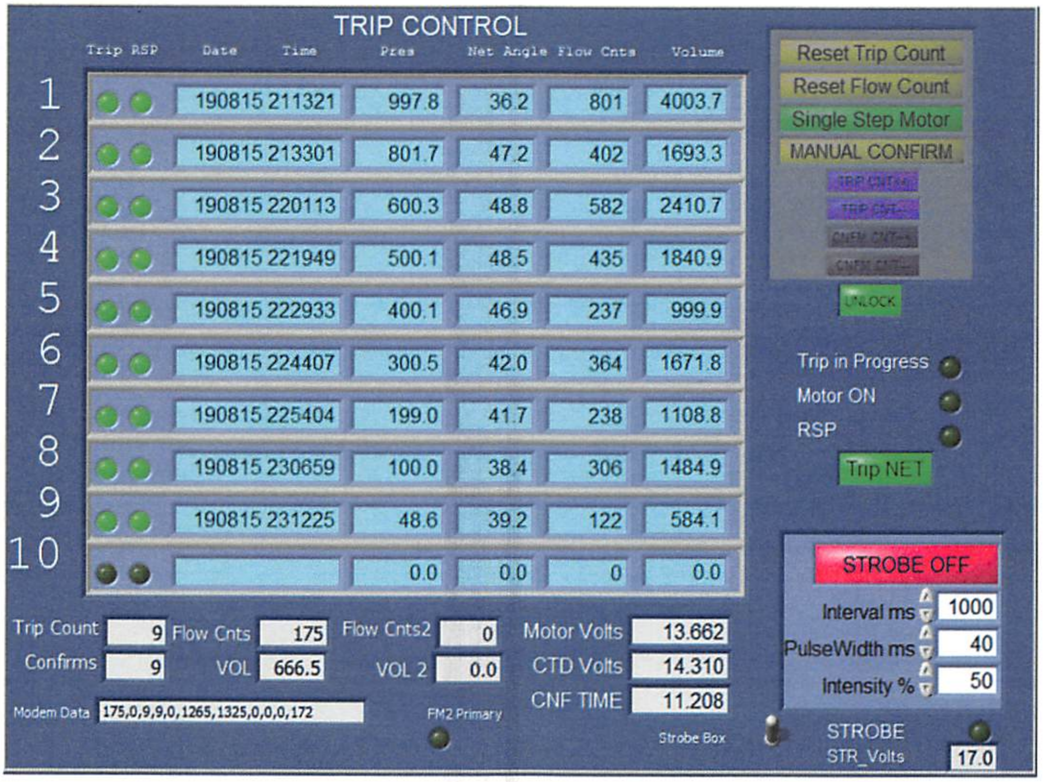
XY Plot

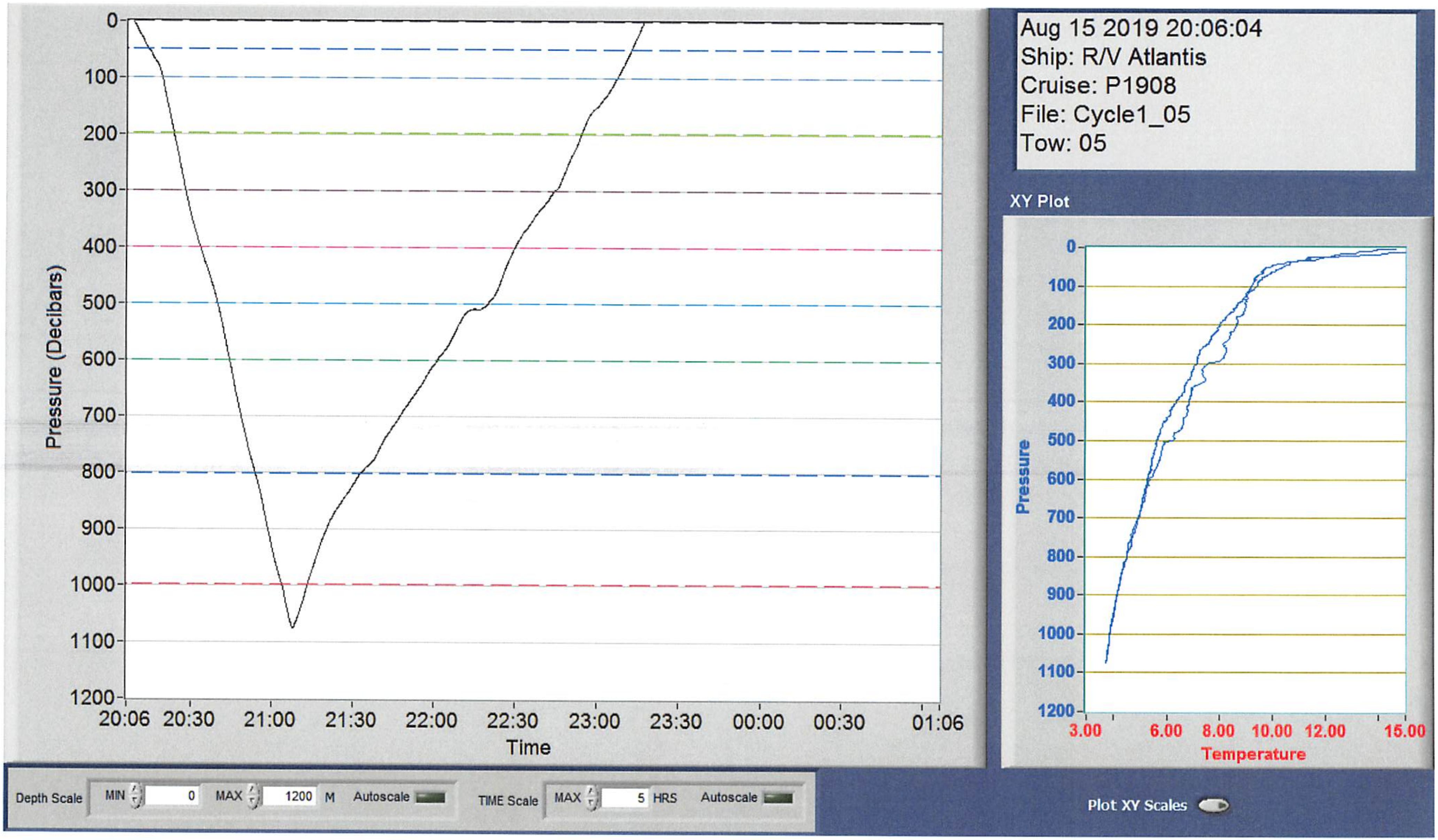


Depth Scale MIN 0 MAX 1200 M Autoscale

Plot X-Scales

Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190815 211321 997.8 36.2 801 4003.7
2 190815 213301 801.7 47.2 402 1693.3
3 190815 220113 600.3 48.8 582 2410.7
4 190815 221949 500.1 48.5 435 1840.9
5 190815 222933 400.1 46.9 237 999.9
6 190815 224407 300.5 42.0 364 1671.8
7 190815 225404 199.0 41.7 238 1108.8
8 190815 230659 100.0 38.4 306 1484.9
9 190815 231225 48.6 39.2 122 584.1
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
STROBE OFF
Interval ms 1000
PulseWidth ms 40
Intensity % 50
Trip Count 9
Flow Cnts 175
Flow Cnts2 0
Motor Volts 13.662
Confirms 9
VOL 666.5
VOL 2 0.0
CTD Volts 14.310
CNF TIME 11.208
Modem Data 175,0,9,9,0,1265,1325,0,0,0,172
FM2 Primary
Strobe Box
STROBE
STR_Volts 17.0


Aug 15 2019 20:06:04
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_05
Tow: 05
Pressure (Decibars)
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
20:06 20:30 21:00 21:30 22:00 22:30 23:00 23:30 00:00 00:30 01:06
Time
XY Plot
Pressure
Temperature
3.00 6.00 8.00 10.00 12.00 15.00
Depth Scale MIN 0 MAX 1200 M Autoscale
TIME Scale MAX 5 HRS Autoscale
Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 15-16 Aug 2019 Haul # 6 Cycle # 1 Tow # 6

Wind Speed 12-15 (kts.) Direction 320° (°) Sea State ~2 (ft.)

Pre-deployment checks:	
✓	Flow Meter
✓	Stepping Motor
✓	Net Response
✓	Clean Optical Surface
✓	Transmissometer
✓	Fluorometer
✓	Oxygen Sensor
	Strobe OFF

File Name: Processed Cycle1_06.PRO Raw Cycle1_06.hex

Start Time 2243 (PDT) **End** Time 0019 (PDT)

Lat 36 05.1 Lat 36.10057

Long 122 30.8 Long 122.57486

Event deploy # 20190824.0125.001 Event rec. # 20190824.0127.001

Frame Size 1 m²

Net Mesh 202 µm

Bottom Depth ~~3,586~~ 2727 (m) Console Operator SAS, MDO

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?
0-450	0	2243	42	484	2374	457	0	100	5% Form.		95% EtOH	✓
450-350	1	2320	48	321	1380	450	350		5% Form.		95% EtOH	✓
360-300	2	2332	41	319	1535	350	300		5% Form.		95% EtOH	✓
300-250	3	2346	43	117	552	300	250		5% Form.		95% EtOH	✓
250-200	4	2351	42	150	735	250	201		5% Form.		95% EtOH	✓
200-150	5	2357	37	148	759	201	150		5% Form.		95% EtOH	✓
150-100	6	0004	35	113	597	150	100		5% Form.		95% EtOH	✓
100-50	7	0010	37	94	490	100	49		5% Form.		95% EtOH	
50-25	8	0014	34	44	239	49	24		5% Form.		95% EtOH	
25-0	9	0017		53	202	24	0		5% Form.		95% EtOH	
	Closed	0019										

Surface Readings:

Pressure (m)	2.2
Temp. (°C)	15.28
Salinity (‰)	33.63
O_2 (ml/l)	✓
Fluoresc. (v)	23.3
BeamC (/m)	0.657
Strobe batt.(v)	13.56
wire out (m)	0
Time (PDT)	2243

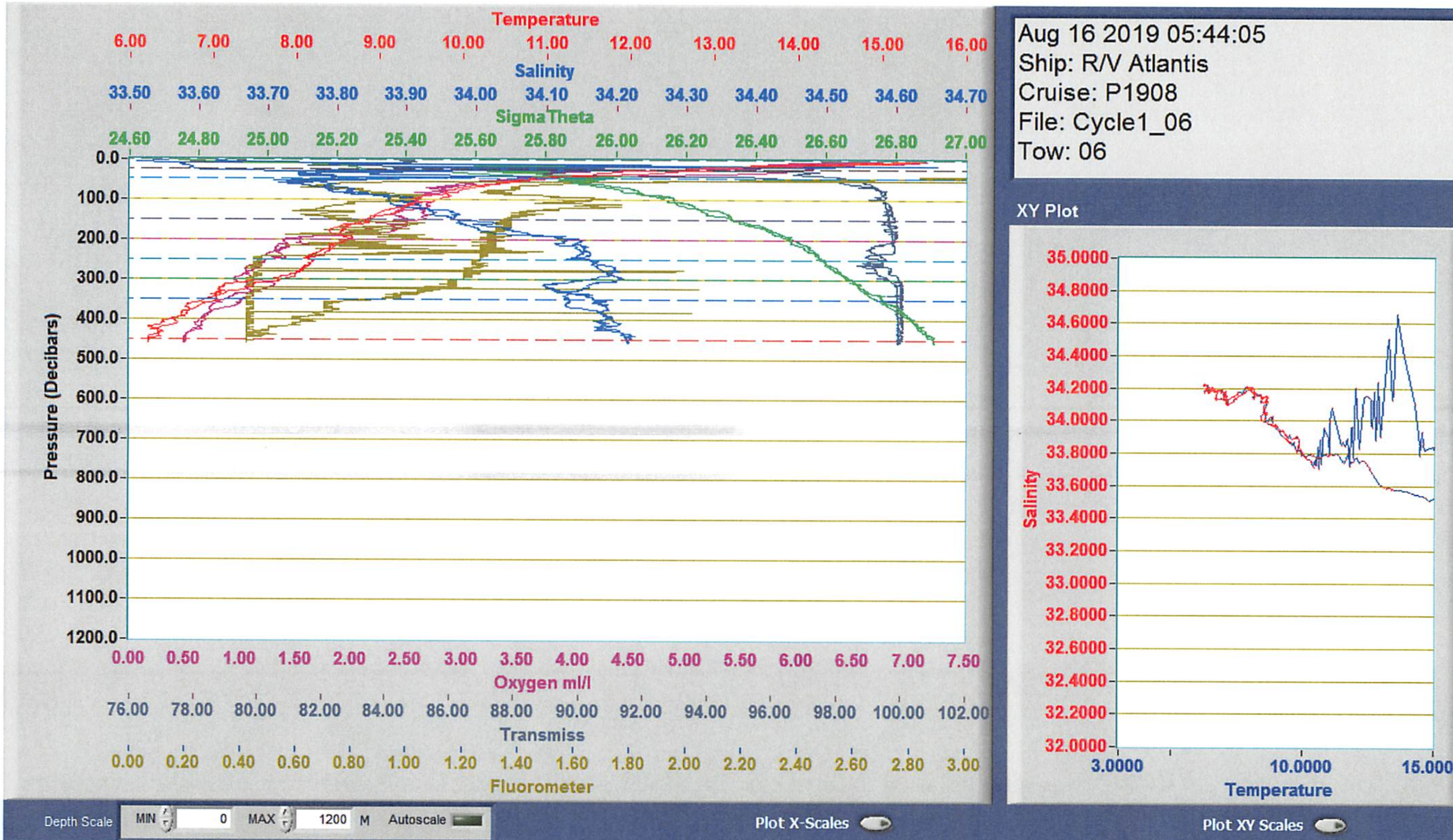
At Depth Readings:

Pressure (m)	457
Temp. (°C)	6.24
Salinity (‰)	34.217
O_2 (ml/l)	0.499
Fluoresc. (v)	0.4
BeamC (/m)	0.003
Strobe batt.(v)	13.75
wire out (m)	899
Time (PDT)	2319

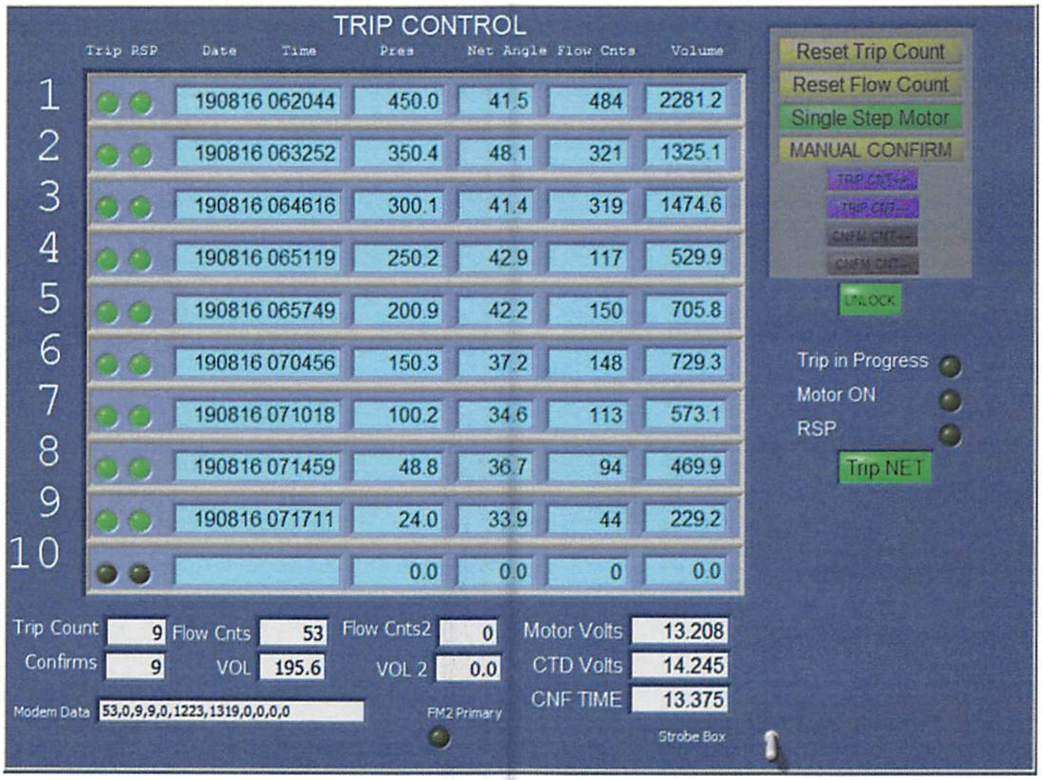
Notes: haul back stalled at ~337 for 3-5 min.

low/steep net angles above 200 but flow through net ~~water~~ already > 2 kts so didn't increase speed.

Nets came up all tangled, but sample in cod ends so presumably tangling happed late in tow

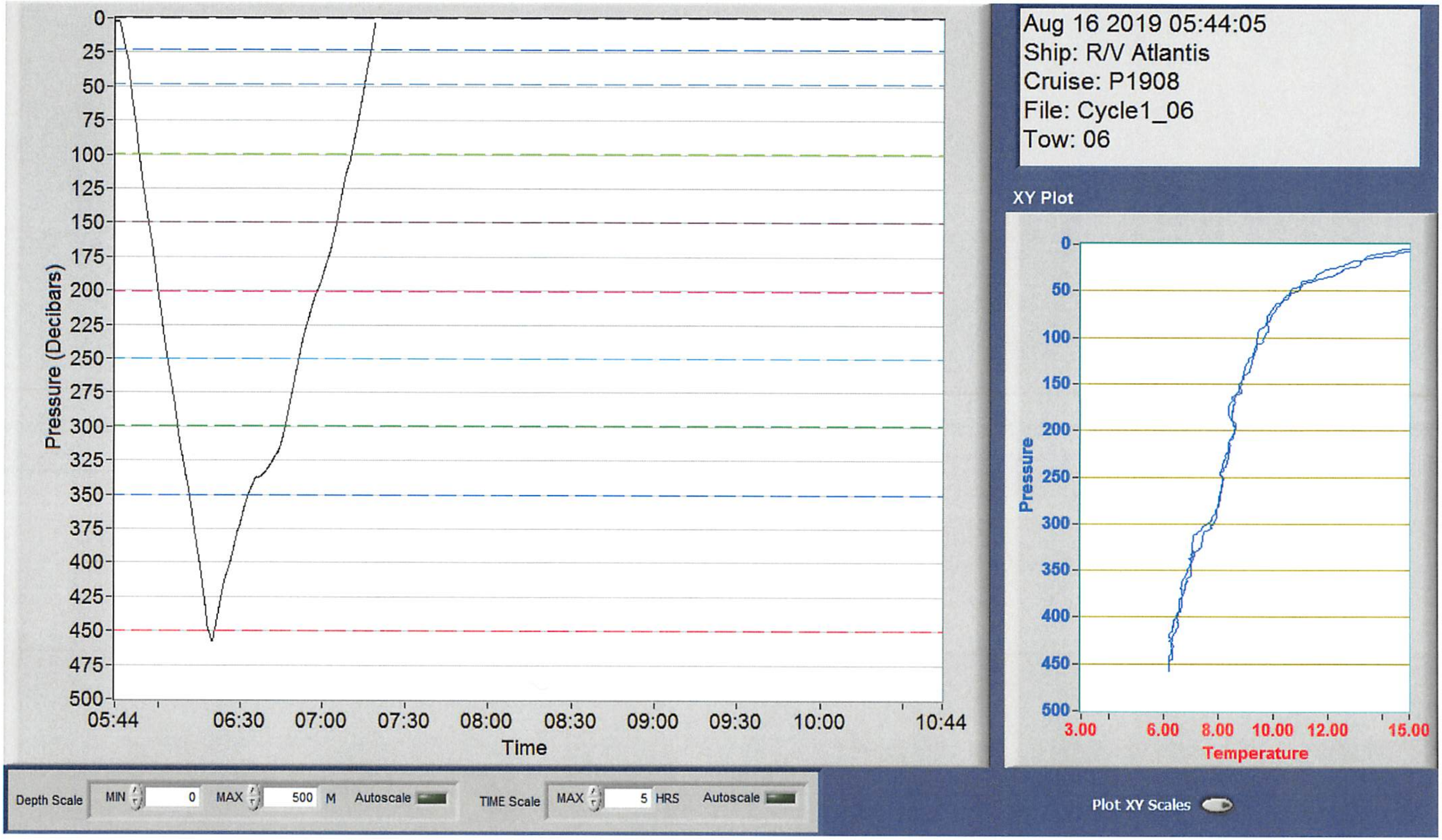


Temperature
6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00
Salinity
33.50 33.60 33.70 33.80 33.90 34.00 34.10 34.20 34.30 34.40 34.50 34.60 34.70
Sigma Theta
24.60 24.80 25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00
Pressure (Decibars)
0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1000.0 1100.0 1200.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50
Oxygen ml/l
76.00 78.00 80.00 82.00 84.00 86.00 88.00 90.00 92.00 94.00 96.00 98.00 100.00 102.00
Transmiss
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00
Fluorometer
Aug 16 2019 05:44:05
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_06
Tow: 06
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 1200 M
Autoscale
Plot X-Scales
Plot XY Scales



TRIP CONTROL

	Trip	RSP	Date Time	Pres	Net Angle	Flow Cnts	Volume
1			190816 062044	450.0	41.5	484	2281.2
2			190816 063252	350.4	48.1	321	1325.1
3			190816 064616	300.1	41.4	319	1474.6
4			190816 065119	250.2	42.9	117	529.9
5			190816 065749	200.9	42.2	150	705.8
6			190816 070456	150.3	37.2	148	729.3
7			190816 071018	100.2	34.6	113	573.1
8			190816 071459	48.8	36.7	94	469.9
9			190816 071711	24.0	33.9	44	229.2
10				0.0	0.0	0	0.0


Aug 16 2019 05:44:05
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_06
Tow: 06
Pressure (Decibars)
Time
05:44
06:30
07:00
07:30
08:00
08:30
09:00
09:30
10:00
10:44
XY Plot
Pressure
Temperature
Depth Scale
MIN 0
MAX 500 M
Autoscale
TIME Scale
MAX 5 HRS
Autoscale
Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 16 Aug. 2019 Haul # 7 Cycle # 1 Tow # 7

Wind Speed 25 (kts.) Direction 319 (°) Sea State 2-3 (ft.)

File Name: Processed Cycle1_07.PRO Raw Cycle1_07.hex

Start Time 2110 (PDT) **End** Time 0013 (PDT)

Lat 36 02.07 Lat 36.11521

Long 122 30.89 Long 122.60606

Event deploy # 20190817.1029.001 Event rec. # 20190817.1030.001

Bottom Depth 3156 (m) Console Operator SAS, MDO

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- ✓ Strobe ON

Frame Size 1 m^2
Net Mesh 202 μm

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?	Strobe Volt.
0-1000	0	2110	39.7	607	3072	1059	0	50%	5% Form.	50%	95% EtOH	✓	18.6
1000-800	1	2210	45.9	391	1747	1000	801		5% Form.		95% EtOH	✓	18.6
800-600	2	2229	49.2	322	1354	801	600		5% Form.		95% EtOH	✓	18.4
600-500	3	2247	44.5	609	2861	608	500		5% Form.		95% EtOH	✓	18.3
500-400	4	2312	43.1	253	1190	500	400		5% Form.		95% EtOH	✓	18.3
400-300	5	2322	45	292	1318	400	310		5% Form.		95% EtOH	✓	18.2
300-200	6	2334	46.9	345	1516	310	199		5% Form.		95% EtOH	✓	
200-100	7	2347	48.7	311	1329	199	101		5% Form.		95% EtOH	✓	18.1
100-50	8	0000	44.3	189	872	101	50		5% Form.		95% EtOH	✓	18.1
50-0	9	0008		109	596	50	0		5% Form.		95% EtOH		
	Closed	0013											

Surface Readings:

Pressure (m)	1.4
Temp. (°C)	14.94
Salinity (‰)	33.166
O_2 (ml/l)	6.52
Fluoresc. (v)	16.1
BeamC (/m)	0.509
Gtd/ Motor volts.(v)	13.64 / 14.28
wire out (m)	0
Time (PDT)	1109

Notes: net stalled at 600m after tripping net 2. Dipped back down to 610m, increased winch speed from 15-25. Net stayed at ~600m for 10min. Decreased winch speed to 15 m/min when net passed 570m.

Cod end + ~1m of net put into bucket in -20°C upon recovery- split 50/50. net wash down retained as seperate formalin sample

~1/4th of net 9 spilled during pres.

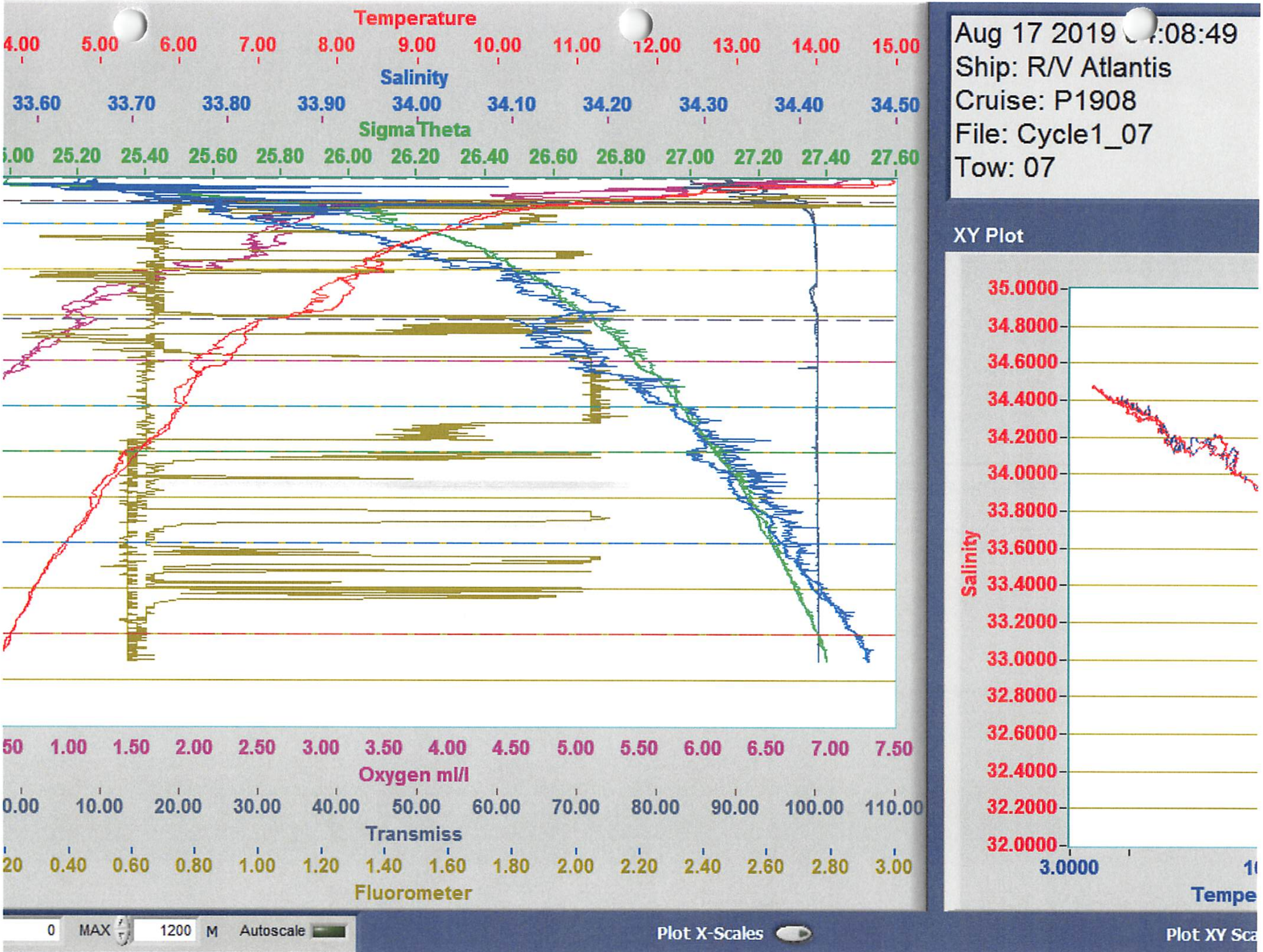
0040 - all into cooler
0120 - net 5
0150 - all out of freezer
0205 - net wash started
0245 - done w/ net wash

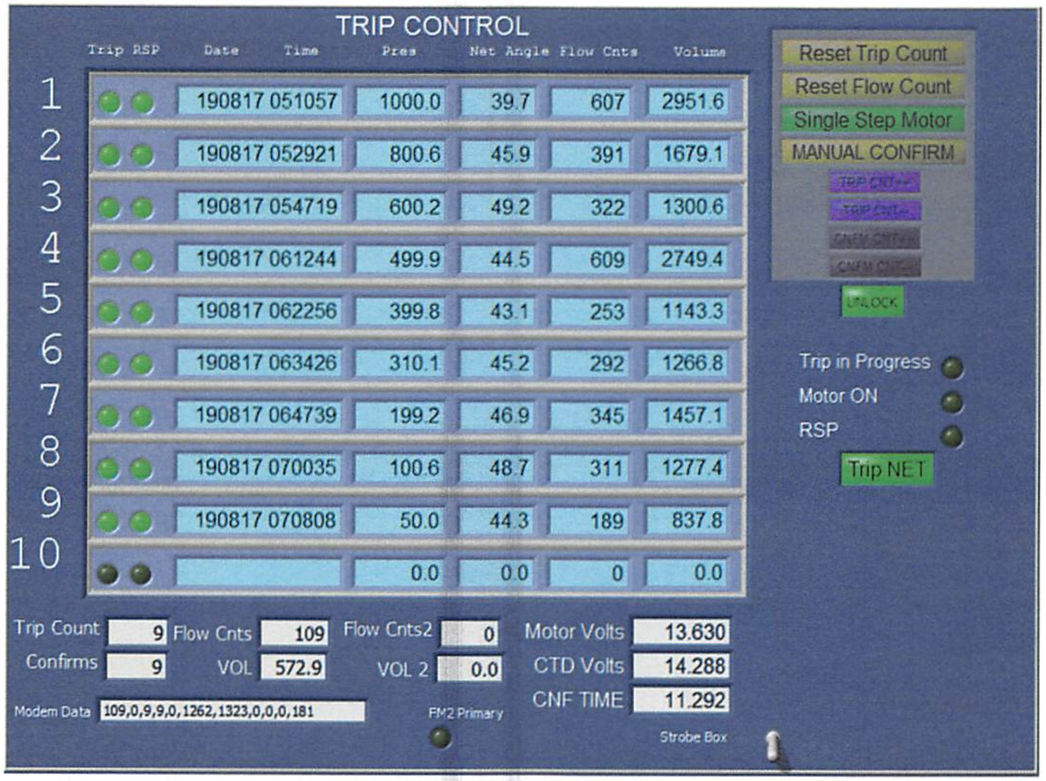
At Depth Readings:

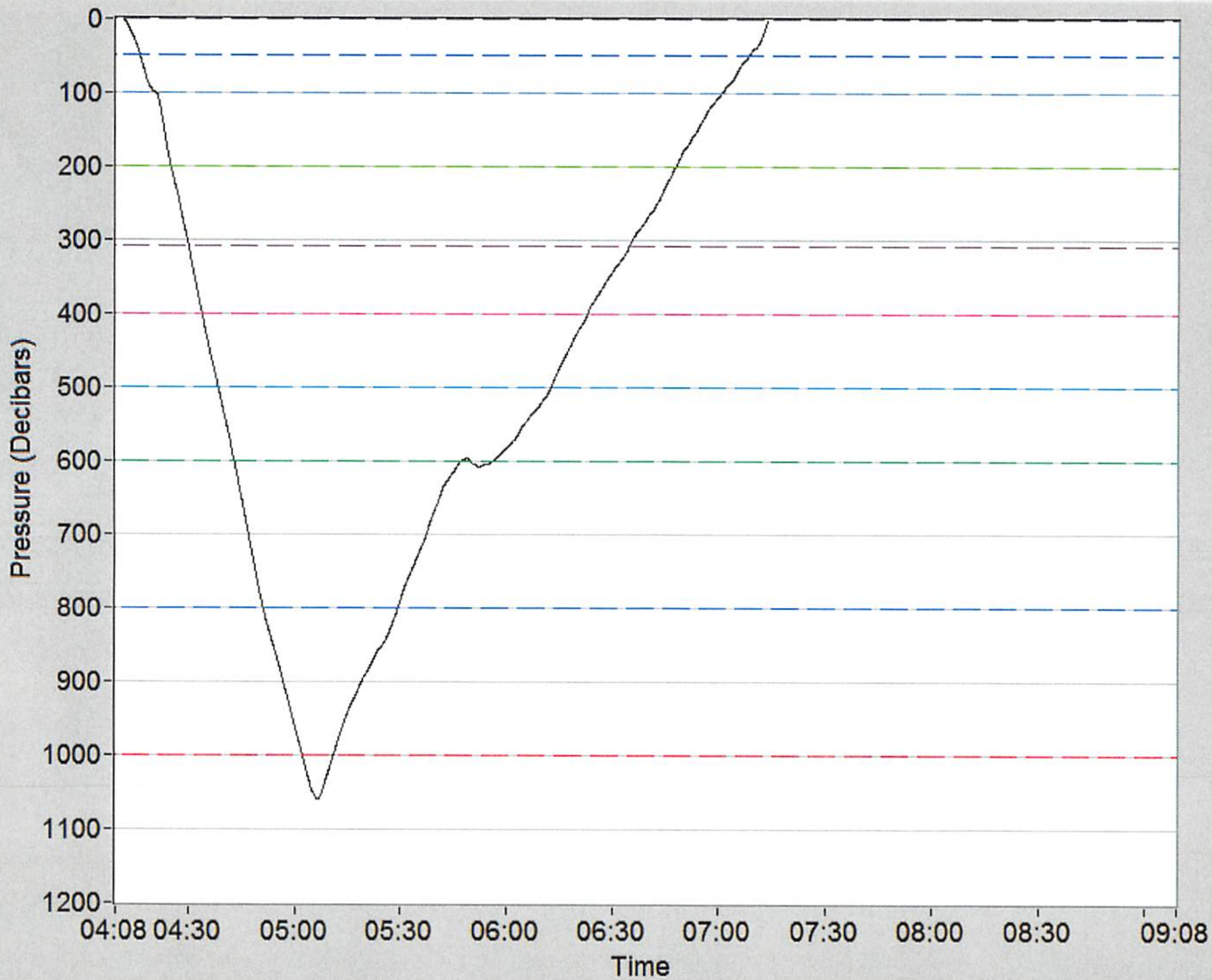
Pressure (m)	1057
Temp. (°C)	3.72
Salinity (‰)	34.47
O_2 (ml/l)	0.466
Fluoresc. (v)	0.6
BeamC (/m)	-0.019
Motor volts.(v)	13.79 / 14.30
wire out (m)	1974
Time (PDT)	2207

Strobe Parameters

Time on/off	2209/0013
Depths on	1057-15m
Interval (ms)	1000
Plse wdth (ms)	40
Intensity (%)	50
Strobe volts	18.8 19.0

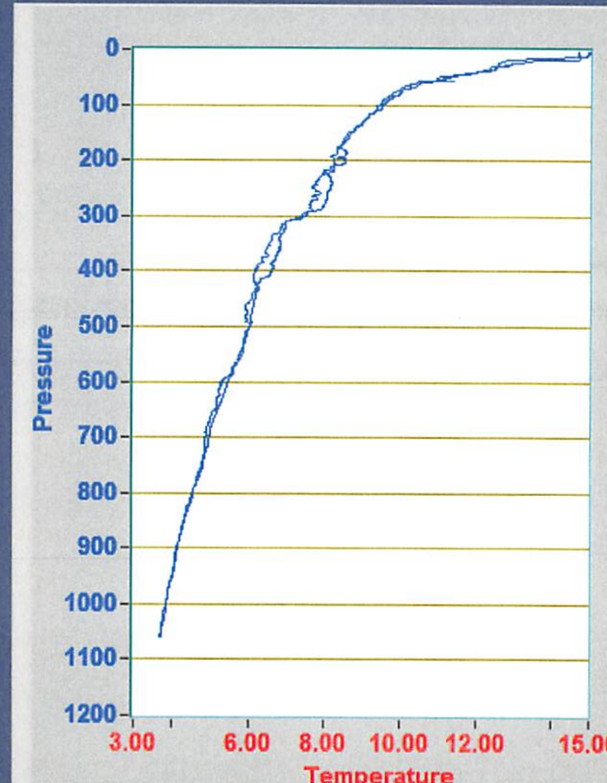

Temperature
4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00
Salinity
33.60 33.70 33.80 33.90 34.00 34.10 34.20 34.30 34.40 34.50
Sigma Theta
25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00 27.20 27.40 27.60
1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50
Oxygen ml/l
10.00 20.00 30.00 40.00 50.00 60.00 70.00 80.00 90.00 100.00 110.00
Transmiss
0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00
Fluorometer
0
MAX
1200
M
Autoscale
Plot X-Scales
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_07
Tow: 07
XY Plot
35.0000
34.8000
34.6000
34.4000
34.2000
34.0000
33.8000
33.6000
33.4000
33.2000
33.0000
32.8000
32.6000
32.4000
32.2000
32.0000
Salinity
3.0000


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190817 051057 1000.0 39.7 607 2951.6
2 190817 052921 800.6 45.9 391 1679.1
3 190817 054719 600.2 49.2 322 1300.6
4 190817 061244 499.9 44.5 609 2749.4
5 190817 062256 399.8 43.1 253 1143.3
6 190817 063426 310.1 45.2 292 1266.8
7 190817 064739 199.2 46.9 345 1457.1
8 190817 070035 100.6 48.7 311 1277.4
9 190817 070808 50.0 44.3 189 837.8
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
Trip Count 9
Confirms 9
Flow Cnts 109
VOL 572.9
Flow Cnts2 0
VOL 2 0.0
Motor Volts 13.630
CTD Volts 14.288
CNF TIME 11.292
Modem Data 109,0,9,9,0,1262,1323,0,0,0,181
FM2 Primary
Strobe Box



Aug 17 2019 04:08:49
Ship: R/V Atlantis
Cruise: P1908
File: Cycle1_07
Tow: 07

XY Plot



Depth Scale MIN 0 MAX 1200 M Autoscale

TIME Scale MAX 5 HRS Autoscale

Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P1908 Date 18 Aug 2019 Haul # 8 Cycle # 2 Tow # 1

Wind Speed 10 (kts.) Direction 316 (°) Sea State 1-2 (ft.)

File Name: Processed Cycle2_01.PRO Raw Cycle2_01.hex

Start Time 2314 (PDT) **End** Time 0043 (PDT)

Lat 36 07.0 Lat 36.12896

Long 122 37.9 Long 122.69706

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- — Strobe OFF

Event deploy # 20190819.1017.001 Event rec. # 20190819.1037.001

Frame Size 1 m^2
Net Mesh 202 µm

Bottom Depth 3372 (m) Console Operator S[redacted] Sommer

Net Tow Information

Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?
0	2313	37.7	530	2770	466	0	50%	5% Form.	60%	95% EtOH	✓
1	2347	45.3	295	1336	449	351	|	5% Form.	|	95% EtOH	✓
2	2359	42.9	200	942	351	301	|	5% Form.	|	95% EtOH	✓
3	0007	44.5	130	596	301	250	|	5% Form.	|	95% EtOH	✓
4	0012	44.4	143	654	250	200	|	5% Form.	|	95% EtOH	✓
5	0017	47.7	153	660	200	150	|	5% Form.	|	95% EtOH	✓
6	0023	48.7	180	763	150	101	|	5% Form.	|	95% EtOH	✓
7	0030	47	193	853	101	50	|	5% Form.	|	95% EtOH	✓
8	0037	43.3	82	389	50	26	|	5% Form.	|	95% EtOH	✓
9	0040		63	317	26	0	↓	5% Form.	↓	95% EtOH	
Closed	0043										

Surface Readings:

Pressure (m)	1.1
Temp. (°C)	15.84
Salinity (‰)	33.64
O_2 (ml/l)	6.83
Fluoresc. (v)	5.7
BeamC (/m)	0.064
CTD/M volts.(v)	14.28/13.64
wire out (m)	0
Time (PDT)	2313

Notes: Rim of ~~formalin~~ clean splitter broke so some splits had messy pours. minimal sample lost.

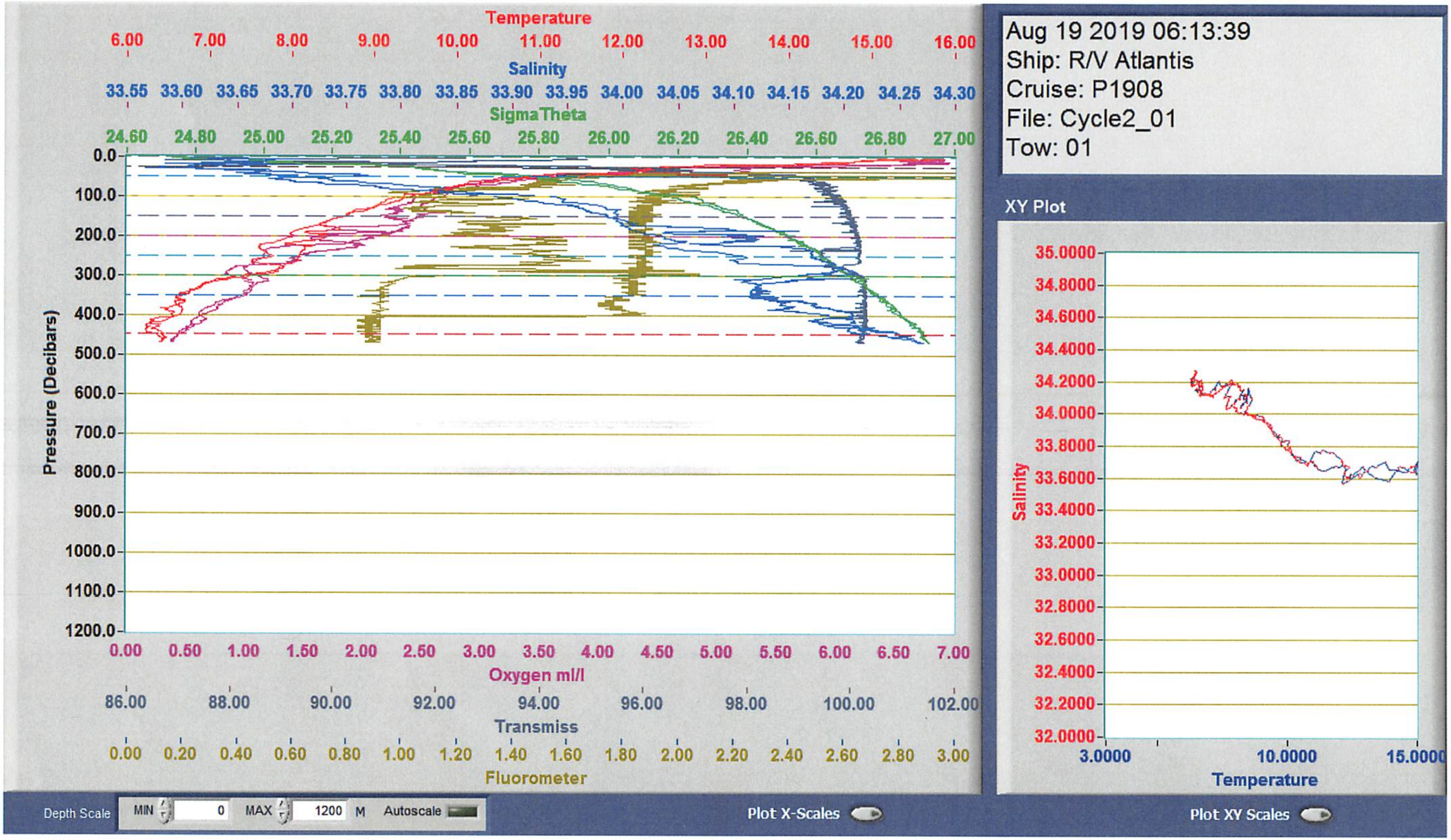
At Depth Readings:

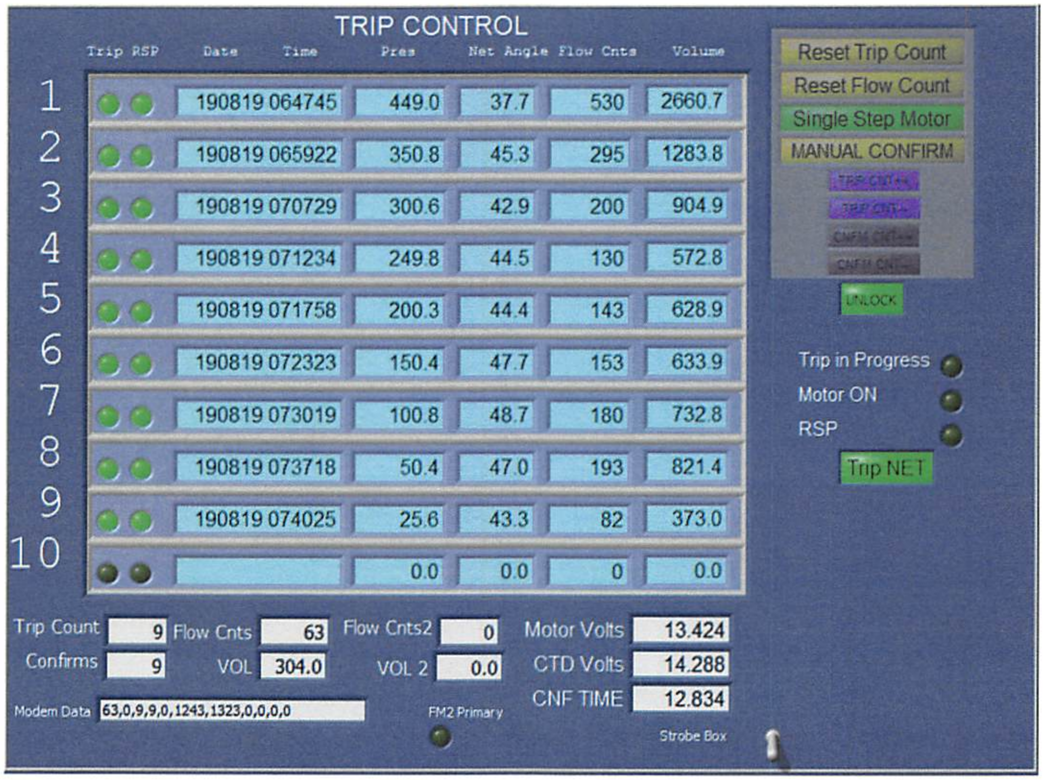
Pressure (m)	466
Temp. (°C)	6.41
Salinity (‰)	34.26
O_2 (ml/l)	0.39
Fluoresc. (v)	0.9
BeamC (/m)	-0.007
CTD/M volts.(v)	14.29 / 13.79
wire out (m)	860
Time (PDT)	2346

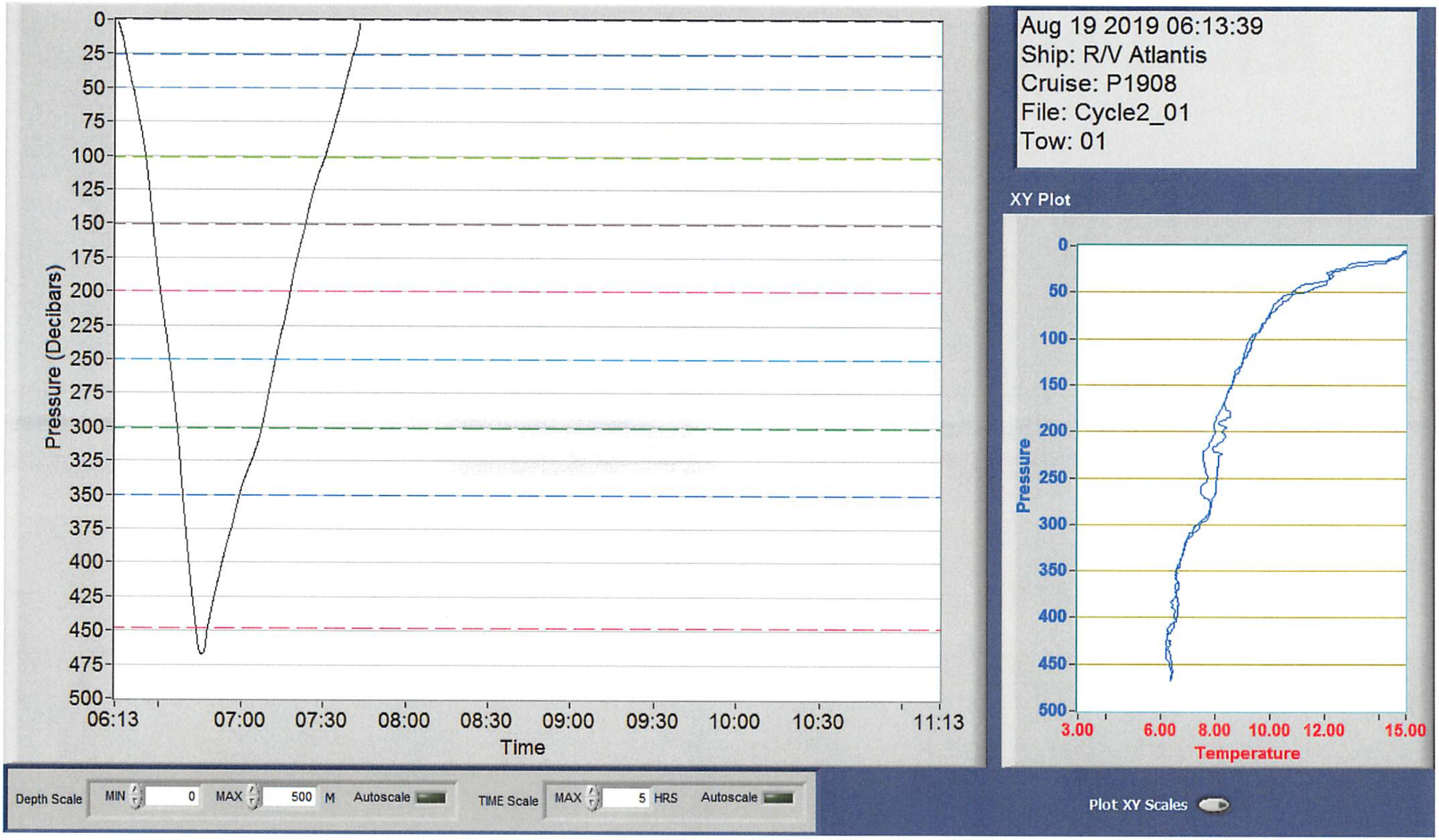
strobe off

Strobe Parameters

Time on/off	—
Depths on	—
Interval (ms)	—
Plse wdth (m)	—
Intensity (%)	—
Strobe volts	—


Temperature
6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00
Salinity
33.55 33.60 33.65 33.70 33.75 33.80 33.85 33.90 33.95 34.00 34.05 34.10 34.15 34.20 34.25 34.30
Sigma Theta
24.60 24.80 25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00
Pressure (Decibars)
0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1000.0 1100.0 1200.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00
Oxygen ml/l
86.00 88.00 90.00 92.00 94.00 96.00 98.00 100.00 102.00
Transmiss
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00
Fluorometer
Aug 19 2019 06:13:39
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_01
Tow: 01
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 1200 M
Autoscale
Plot X-Scales
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190819 064745 449.0 37.7 530 2660.7
2 190819 065922 350.8 45.3 295 1283.8
3 190819 070729 300.6 42.9 200 904.9
4 190819 071234 249.8 44.5 130 572.8
5 190819 071758 200.3 44.4 143 628.9
6 190819 072323 150.4 47.7 153 633.9
7 190819 073019 100.8 48.7 180 732.8
8 190819 073718 50.4 47.0 193 821.4
9 190819 074025 25.6 43.3 82 373.0
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
Trip Count 9
Flow Cnts 63
Flow Cnts2 0
Motor Volts 13.424
Confirms 9
VOL 304.0
VOL 2 0.0
CTD Volts 14.288
CNF TIME 12.834
Modem Data 63,0,9,9,0,1243,1323,0,0,0,0
FM2 Primary
Strobe Box


Aug 19 2019 06:13:39
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_01
Tow: 01
Pressure (Decibars)
0
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
400
425
450
475
500
06:13
07:00
07:30
08:00
08:30
09:00
09:30
10:00
10:30
11:13
Time
XY Plot
Pressure
0
50
100
150
200
250
300
350
400
450
500
3.00
6.00
8.00
10.00
12.00
15.00
Temperature
Depth Scale
MIN
0
MAX
500
M
Autoscale
TIME Scale
MAX
5
HRS
Autoscale
Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P1908 Date 19 Aug 2019 Haul # 9 Cycle # 2 Tow # 2

Wind Speed 3 (kts.) Direction 300 (°) Sea State 1 (ft.)

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surface
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Strobe OFF

File Name: Processed Cycle2_02.PRO Raw Cycle2_02.hex

Start Time 1258 (PDT) **End** Time 1439 (PDT)

Lat 36° 05.22' Lat 36° 7.74'

Long 122° 38.98' Long 122° 42.17'

Net Mesh 202 µm

Event deploy # 20190824.0122.001 Event rec. # 20190824.0123.001 Frame Size 1 m²

Bottom Depth 3383 (m) Console Operator L. Lilly

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	
	0	1258	37.2	370	1930	486	0	50%	5% Form.	50%	95% EtOH	✓
450-350	1	1327	42.8	292	1374	448	350		5% Form.		95% EtOH	✓
350-300	2	1340	43.8	220	1033	350	301		5% Form.		95% EtOH	✓
300-250	3	1349	45.9	174	780	301	251		5% Form.		95% EtOH	✓
250-200	4	1357	44.7	206	948	251	200		5% Form.		95% EtOH	✓
200-150	5	1405	44.9	216	985	200	150		5% Form.		95% EtOH	✓
150-100	6	1414	43.3	221	1034	150	100		5% Form.		95% EtOH	✓
100-50	7	1423	47.2	193	843	100	50		5% Form.		95% EtOH	✓
50-25	8	1430	49.6	114	505	50	25		5% Form.		95% EtOH	✓
25-0	9	1434		133	468	25	0		5% Form.		95% EtOH	
	Closed	1439										

* surface data on back of sheet

At Depth Data

wire out ____ (m)

Time ____ (PDT)

Depth ~~Surface~~ Data

Pressure 486 (m)

Temp. 6.16 (°C)

Salinity 34.27 (‰)

O_2 0.359 (ml/l)

Fluoresc. 1.0 (V)

Beam ~~Trans~~ -0.008 (/m)

Battery 13.77 (v) / CTD: 14.27

Wire 807

Time 1325

Notes:

1359 - CPA to drifter

Surface

pres. 1.0

Temp 16.47

Sal 33.63

O_2 6.81

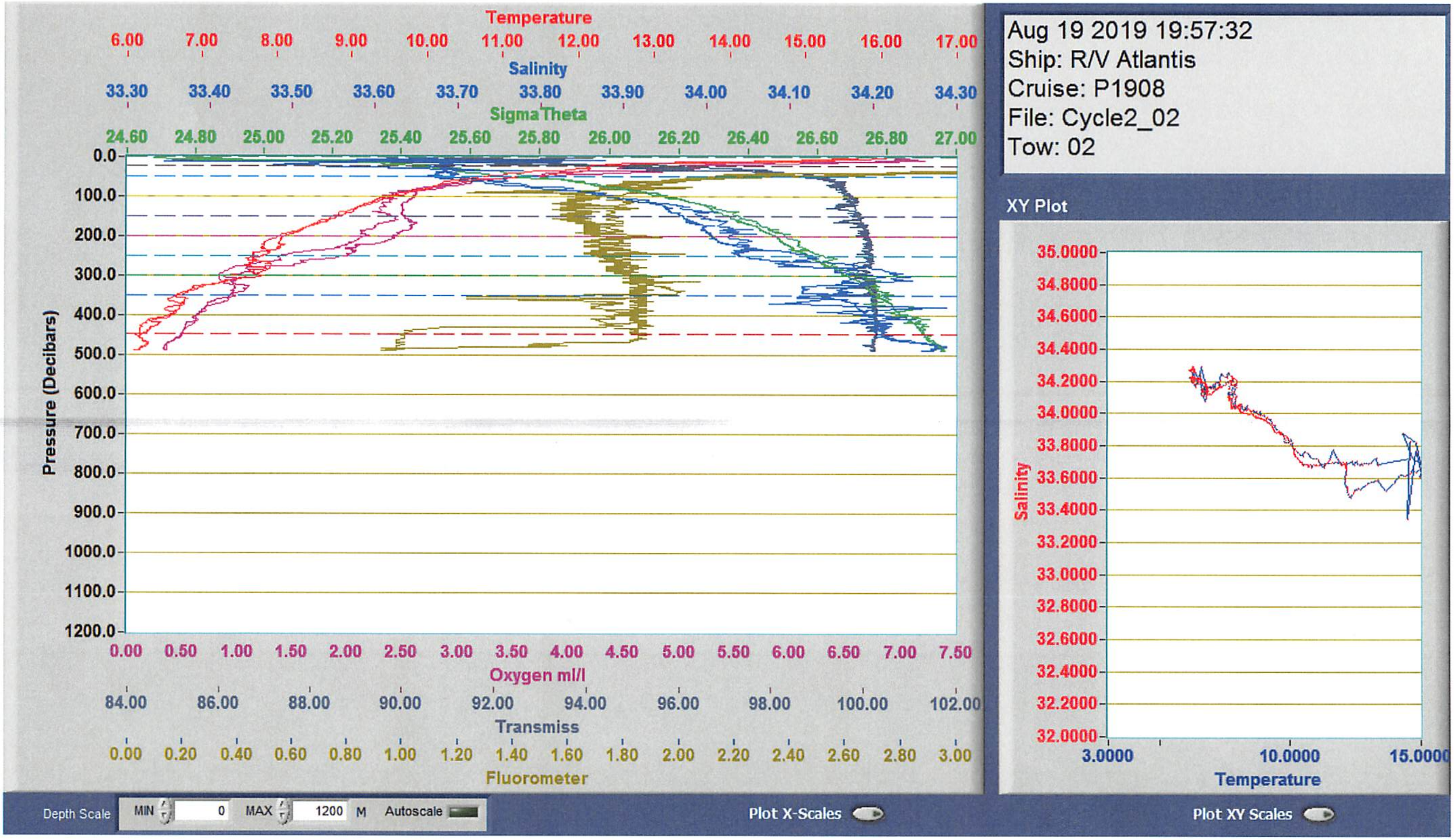
Floor 2.2

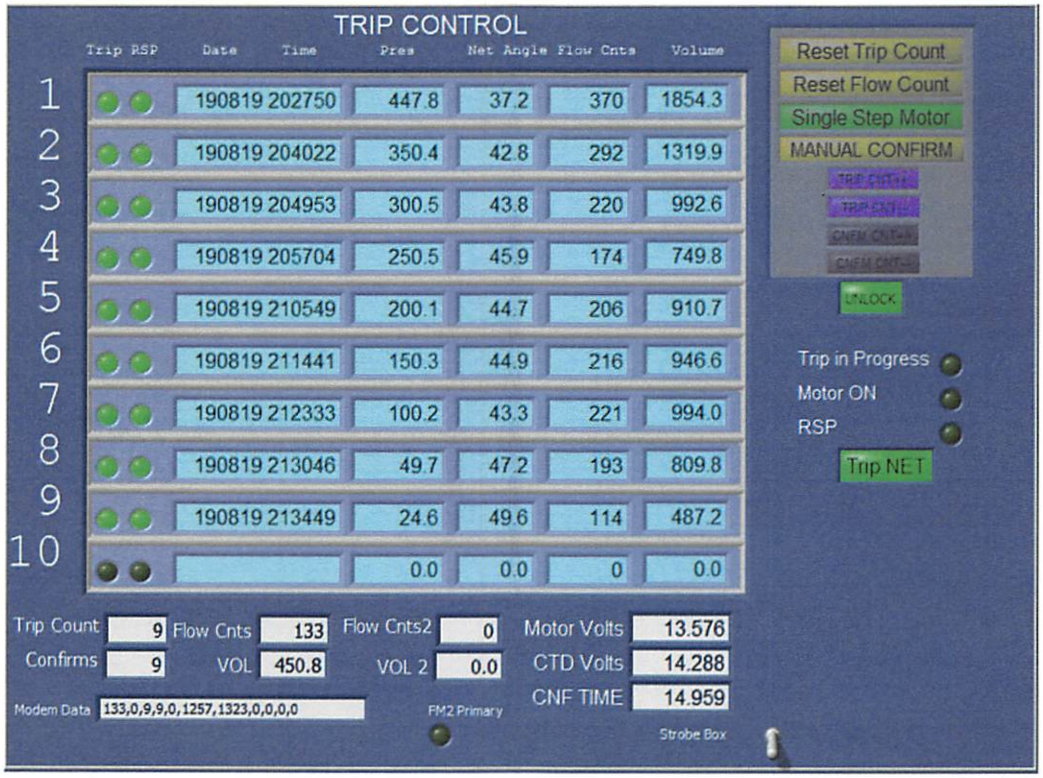
BeamC 0.295

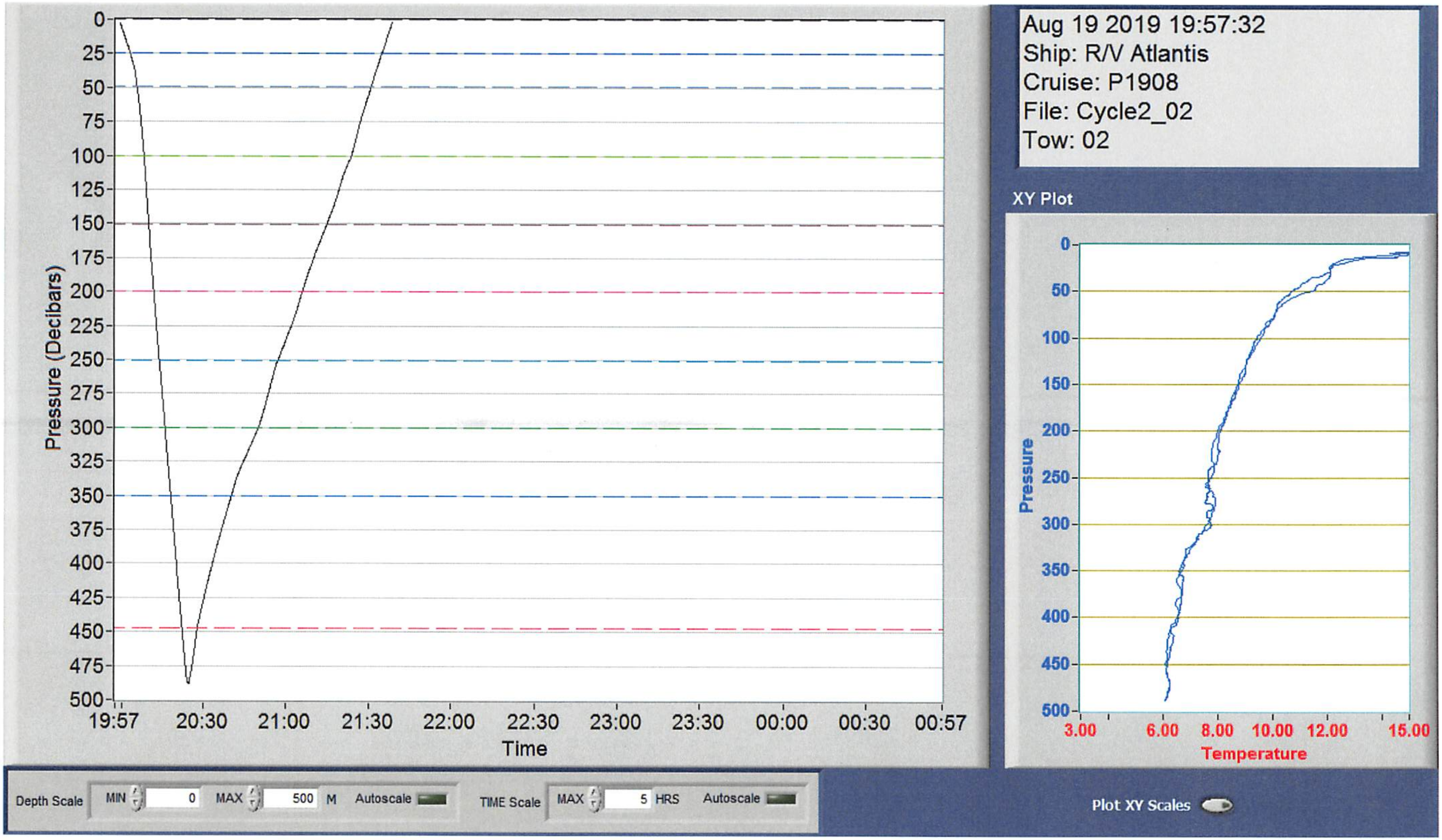
wire 1.2

MV 13.39 / 14.28 CTD

time 1258


Temperature
6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00
Salinity
33.30 33.40 33.50 33.60 33.70 33.80 33.90 34.00 34.10 34.20 34.30
Sigma Theta
24.60 24.80 25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00
Pressure (Decibars)
0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1000.0 1100.0 1200.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50
Oxygen ml/l
84.00 86.00 88.00 90.00 92.00 94.00 96.00 98.00 100.00 102.00
Transmiss
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00
Fluorometer
Aug 19 2019 19:57:32
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_02
Tow: 02
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 1200 M
Autoscale
Plot X-Scales
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190819 202750 447.8 37.2 370 1854.3
2 190819 204022 350.4 42.8 292 1319.9
3 190819 204953 300.5 43.8 220 992.6
4 190819 205704 250.5 45.9 174 749.8
5 190819 210549 200.1 44.7 206 910.7
6 190819 211441 150.3 44.9 216 946.6
7 190819 212333 100.2 43.3 221 994.0
8 190819 213046 49.7 47.2 193 809.8
9 190819 213449 24.6 49.6 114 487.2
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
Trip Count 9
Confirms 9
Flow Cnts 133
VOL 450.8
Flow Cnts2 0
VOL 2 0.0
Motor Volts 13.576
CTD Volts 14.288
CNF TIME 14.959
Modem Data 133,0,9,9,0,1257,1323,0,0,0,0
FM2 Primary
Strobe Box


Aug 19 2019 19:57:32
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_02
Tow: 02
Pressure (Decibars)
0
25
50
75
100
125
150
175
200
225
250
275
300
325
350
375
400
425
450
475
500
19:57
20:30
21:00
21:30
22:00
22:30
23:00
23:30
00:00
00:30
00:57
Time
XY Plot
Pressure
0
50
100
150
200
250
300
350
400
450
500
3.00
6.00
8.00
10.00
12.00
15.00
Temperature
Depth Scale
MIN
0
MAX
500
M
Autoscale
TIME Scale
MAX
5
HRS
Autoscale
Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 19 Aug 2019 Haul # 10 Cycle # 2 Tow # 3

Wind Speed 10 (kts.) Direction 331 (°) Sea State 2-3 (ft.)

File Name: Processed Cycle2_03.PRO Raw Cycle2_03.hex

Start Time (0548) 2248 (PDT) **End** Time (07xx) 0035 (PDT)

Lat 36 09.28 Lat 36.10587

Long 122 38.47 Long 122.70014

Event deploy # 20190820.0934.001 Event rec. # 20190820.0935.001

Bottom Depth 3383 (m) Console Operator S. Sommer

Frame Size 1 m^2
Net Mesh 202 µm

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- — Strobe OFF

Net Tow Information

Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?
0	2248	32.4	439	2403	479	0	100%	5% Form.		95% EtOH	✓
1	2324	41	262	1271	449	351		5% Form.		95% EtOH	✓
2	2336	39.9	214	1053	351	301		5% Form.		95% EtOH	✓
3	2347	42.5	162	789	301	249		5% Form.		95% EtOH	✓
4	2354	42.8	144	678	249	200		5% Form.		95% EtOH	✓
5	0001	43.6	190	884	200	150		5% Form.		95% EtOH	✓
6	0009	46.5	197	872	150	100		5% Form.		95% EtOH	✓
7	0017	46.8	249	1098	100	50		5% Form.		95% EtOH	✓
8	0026	31.7	142	774	50	21		5% Form.		95% EtOH	X
9	0032		42	264	21	0		5% Form.		95% EtOH	
Closed	0035										

Surface Readings:

Pressure (m)	~~0.9~~
Temp. (°C)	16.24
Salinity (‰)	33.62
O_2 (ml/l)	6.97
Fluoresc. (v)	5.8
BeamC (/m)	0.321
CTD/M volts.(v)	14.29 / 13.54
wire out (m)	0
Time (PDT)	2248

At Depth Readings:

Pressure (m)	479
Temp. (°C)	6.117
Salinity (‰)	34.254
O_2 (ml/l)	0.389
Fluoresc. (v)	21
BeamC (/m)	-0.012
CTD/M volts.(v)	13.79 / 14.29
wire out (m)	743
Time (PDT)	2322

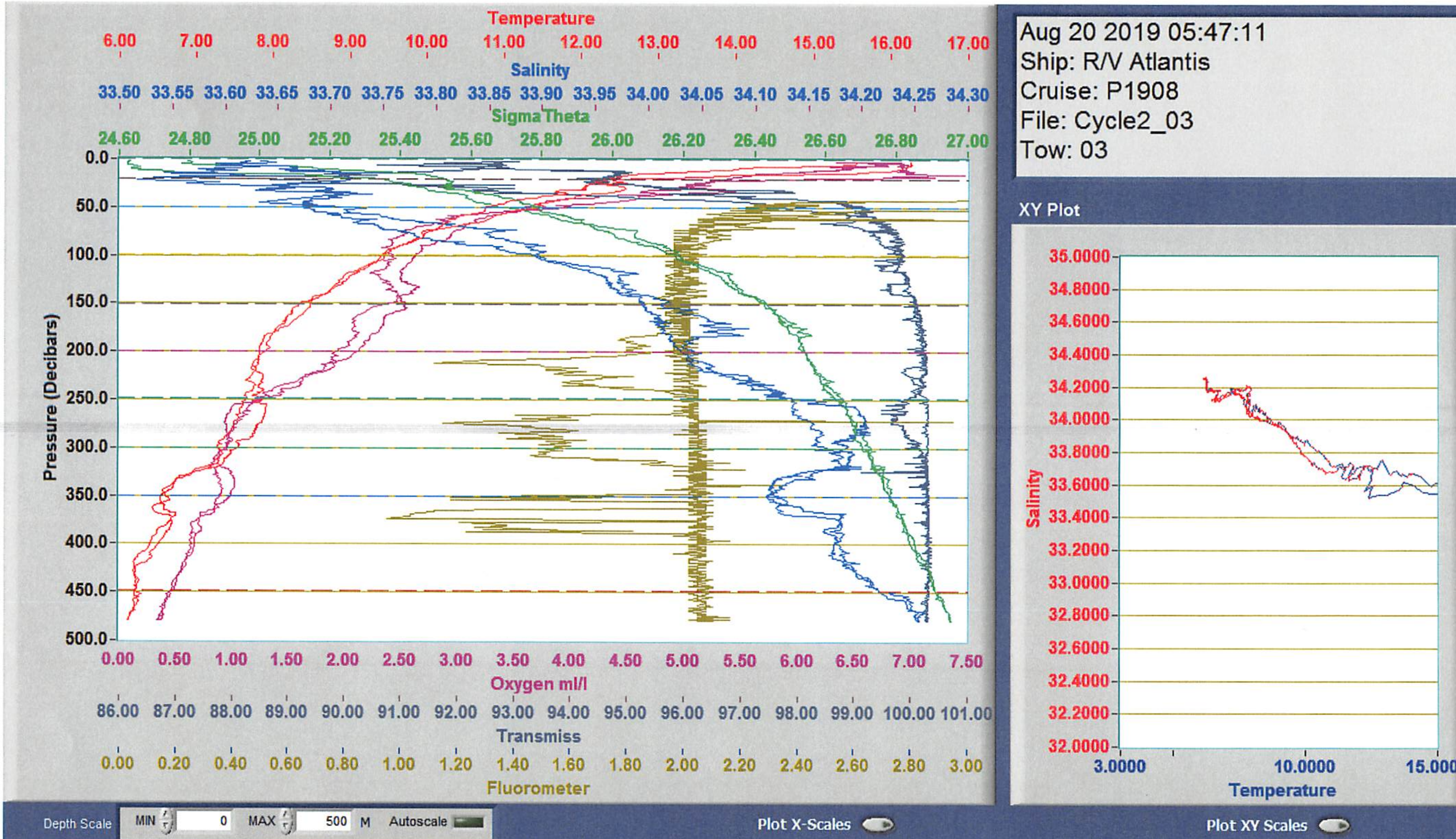
Notes: winch speed 25 m/min & ship speed 1.5-1.7 kts on way down. Net sank quickly so less wire out, but resulted in steep wire angles on way up. Hauled back at 10 m/min

NO net response for net 9. Manually stepped then confirmed
Looks like it tripped OK - all nets had sample in them.
Nets 0-3 may have been contaminated with ammonium formate.
formalin replaced in these samples ~12 hrs later.

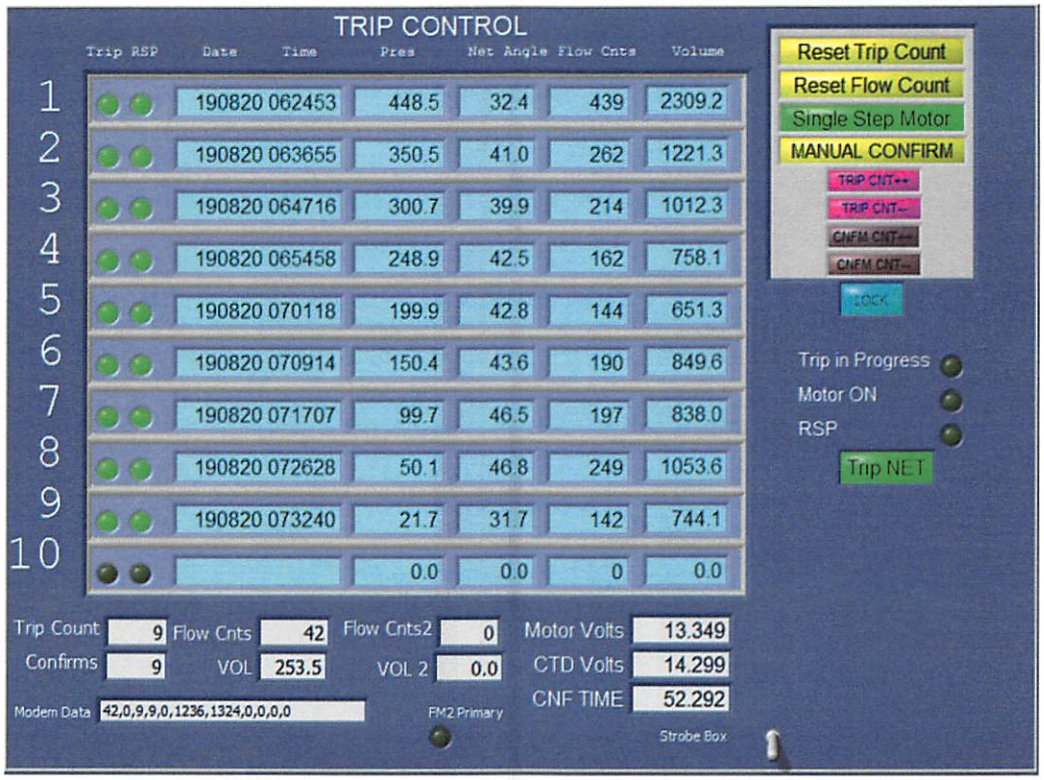
Fluorometer readings not as variable on the way up as on the way down

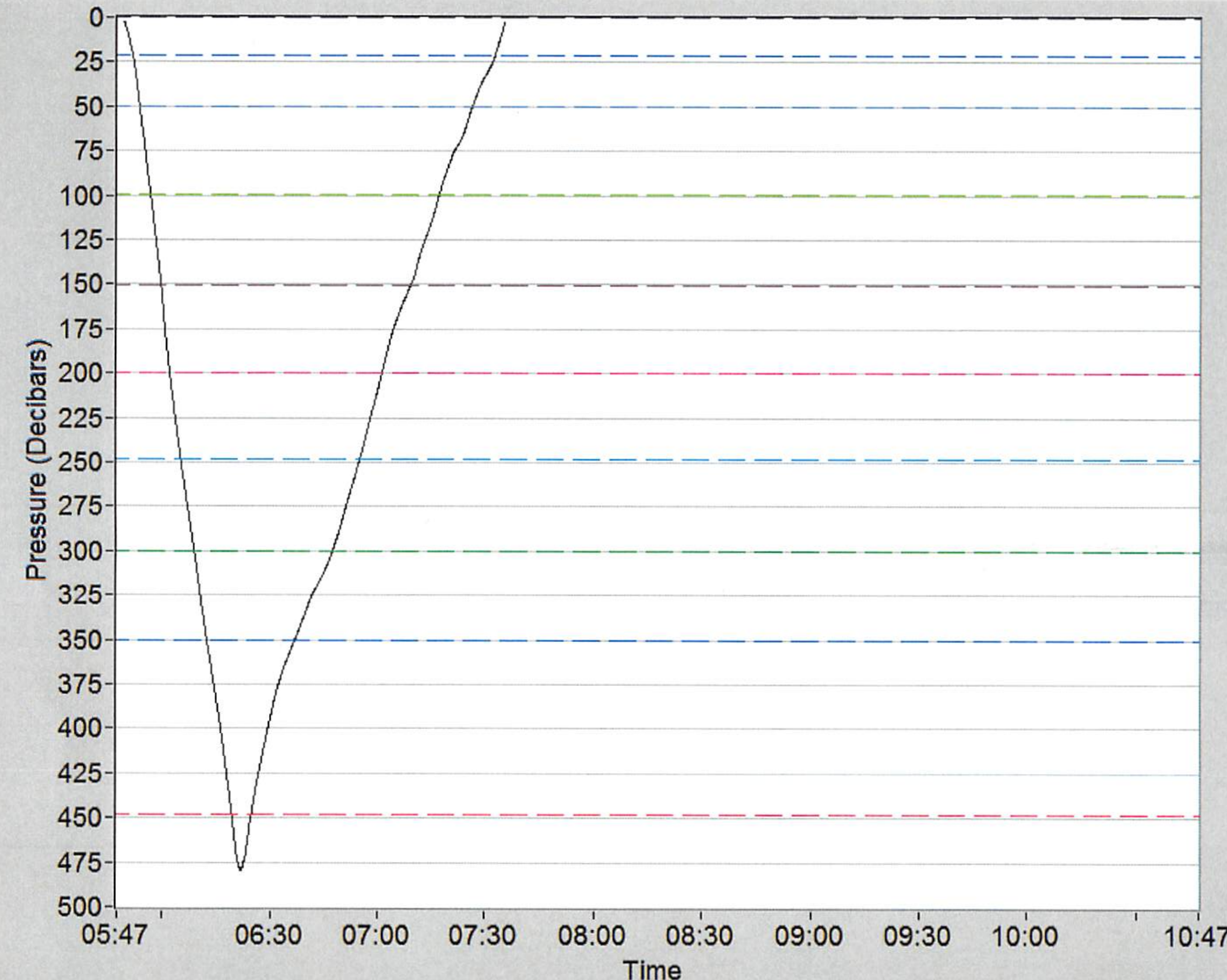
Strobe Parameters

Time on/off	
Depths on	
Interval (ms)	
Plse wdth (m)	
Intensity (%)	
Strobe volts	



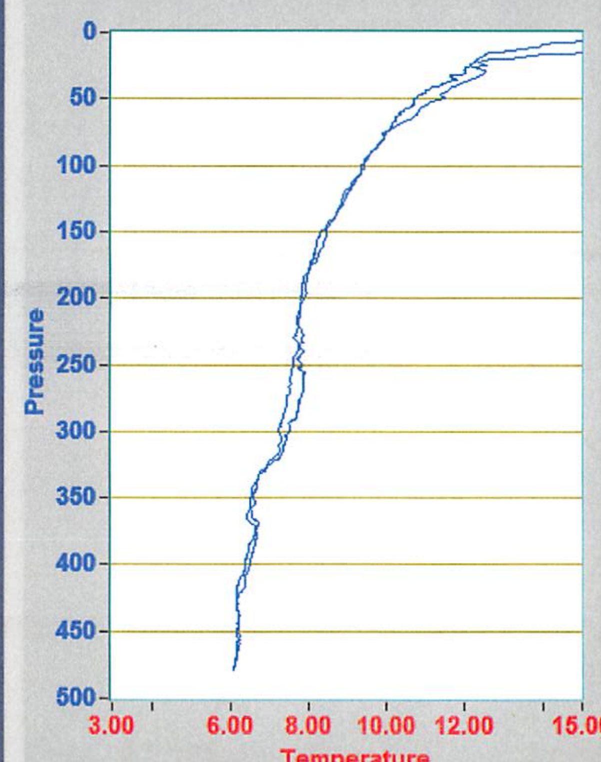
Temperature
6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00
Salinity
33.50 33.55 33.60 33.65 33.70 33.75 33.80 33.85 33.90 33.95 34.00 34.05 34.10 34.15 34.20 34.25 34.30
Sigma Theta
24.60 24.80 25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00
Pressure (Decibars)
0.0 50.0 100.0 150.0 200.0 250.0 300.0 350.0 400.0 450.0 500.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50
Oxygen ml/l
86.00 87.00 88.00 89.00 90.00 91.00 92.00 93.00 94.00 95.00 96.00 97.00 98.00 99.00 100.00 101.00
Transmiss
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00
Fluorometer
Aug 20 2019 05:47:11
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_03
Tow: 03
XY Plot
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
Salinity
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 500 M
Autoscale
Plot X-Scales
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190820 062453 448.5 32.4 439 2309.2
2 190820 063655 350.5 41.0 262 1221.3
3 190820 064716 300.7 39.9 214 1012.3
4 190820 065458 248.9 42.5 162 758.1
5 190820 070118 199.9 42.8 144 651.3
6 190820 070914 150.4 43.6 190 849.6
7 190820 071707 99.7 46.5 197 838.0
8 190820 072628 50.1 46.8 249 1053.6
9 190820 073240 21.7 31.7 142 744.1
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
TRIP CNT++
TRIP CNT--
CNFM CNT++
CNFM CNT--
LOCK
Trip in Progress
Motor ON
RSP
Trip NET
Trip Count 9
Flow Cnts 42
Flow Cnts2 0
Motor Volts 13.349
Confirms 9
VOL 253.5
VOL 2 0.0
CTD Volts 14.299
CNF TIME 52.292
Modem Data 42,0,9,9,0,1236,1324,0,0,0,0
FM2 Primary
Strobe Box



Aug 20 2019 05:47:11
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_03
Tow: 03

XY Plot



Depth Scale MIN 0 MAX 500 M Autoscale

TIME Scale MAX 5 HRS Autoscale

Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 20 Aug 2019 Haul # 11 Cycle # 2 Tow # 4

Wind Speed 12 (kts.) Direction 330 (°) Sea State 2 (ft.)

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- ✓ Strobe OFF

File Name: Processed Cycle2-04.PRO Raw Cycle2_04.hex

Start Time 1314 (PDT) **End** Time 1450 (PDT)

Lat 36° 4.4 N Lat 36° 06.63' N

Long 122° 39.75 W Long 122° 43.29' W

Event deploy # 20190824.0117.001 Event rec. # 20190824.0118.001

Frame Size 1 m²
Net Mesh 202 µm

Bottom Depth ~ ~~3000~~ 3408 (m) Console Operator L. Lilly

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m³)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?
	0	1314	36.7	344	1793	496	0	100%	5% Form.	0	95% EtOH	
450-350	1	1345	46.1	300	1341	449	351	100%	5% Form.	0	95% EtOH	✓
350-300	2	1357	46.3	230	1026	351	300	100%	5% Form.		95% EtOH	✓
300-250	3	1406	48.2	160	685	300	249		5% Form.		95% EtOH	✓
250-200	4	1412	47.1	152	666	249	200		5% Form.		95% EtOH	✓
200-150	5	1418	48.7	168	712	200	151		5% Form.		95% EtOH	✓
150-100	6	1425	48.5	210	892	151	101		5% Form.		95% EtOH	✓
100-50	7	1433	48.6	224	970	101	50		5% Form.		95% EtOH	✓
50-25	8	1442	45.7	95	429	50	25.0		5% Form.		95% EtOH	✓
25-0	9	1446		78	363	25	0		5% Form.		95% EtOH	
	Closed	14~~50~~49										

Surface Readings:

Pressure (m)	1.2
Temp. (°C)	15.92
Salinity (‰)	33.52
O_2 (ml/l)	6.36
Fluoresc. (v)	3.9
BeamC (/m)	0.282
CTD/M volts.(v)	13.44 / CTD: 1427
wire out (m)	0
Time (PDT)	1314

Notes: 1409 - CPA w/ drifter

LED bar bent on deployment; removed prior to tow.

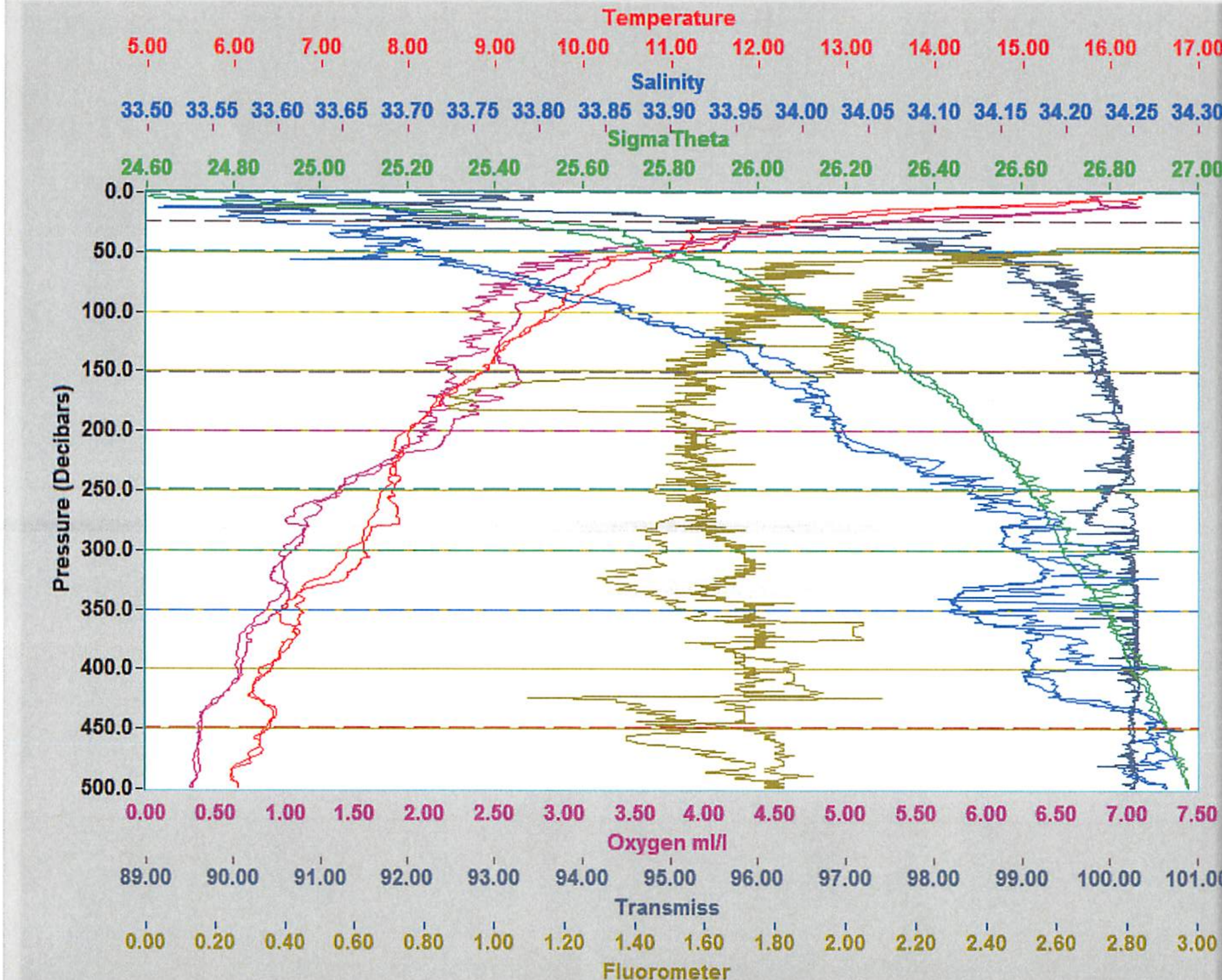
Some seaweed stuck in flowmeter upon recovery

At Depth Readings:

Pressure (m)	496
Temp. (°C)	6.05
Salinity (‰)	34.27
O_2 (ml/l)	0.35
Fluoresc. (v)	1.8
BeamC (/m)	-0.01
CTD/M volts.(v)	13.73 / 14.23 CTD
wire out (m)	850
Time (PDT)	1342

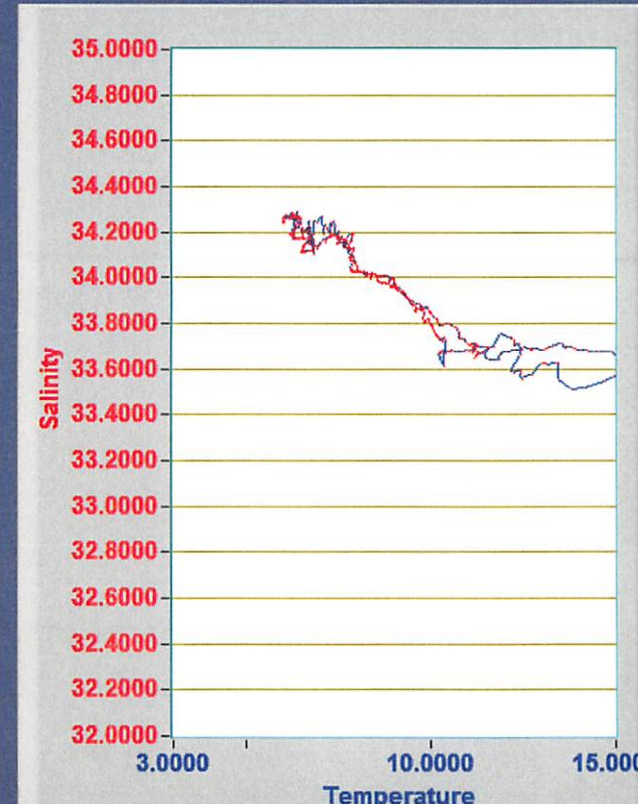
Strobe Parameters

Time on/off	
Depths on	
Interval (ms)	
Plse wdth (m)	
Intensity (%)	
Strobe volts	



Aug 20 2019 20:13:46
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_04
Tow: 04

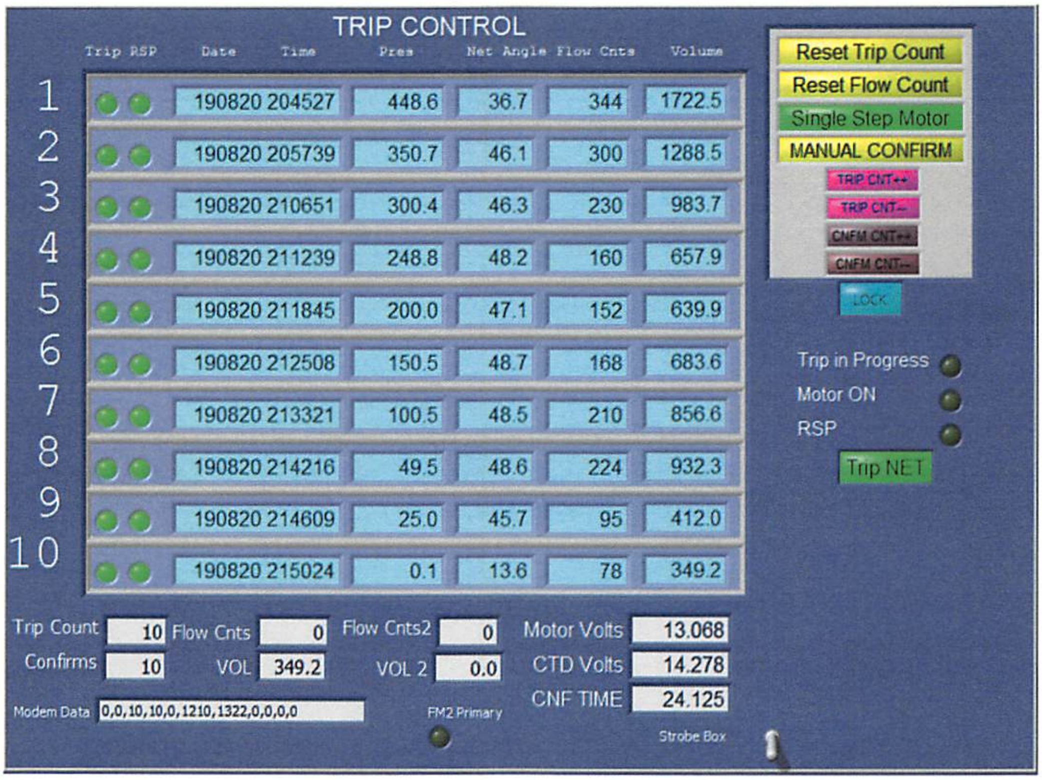
XY Plot

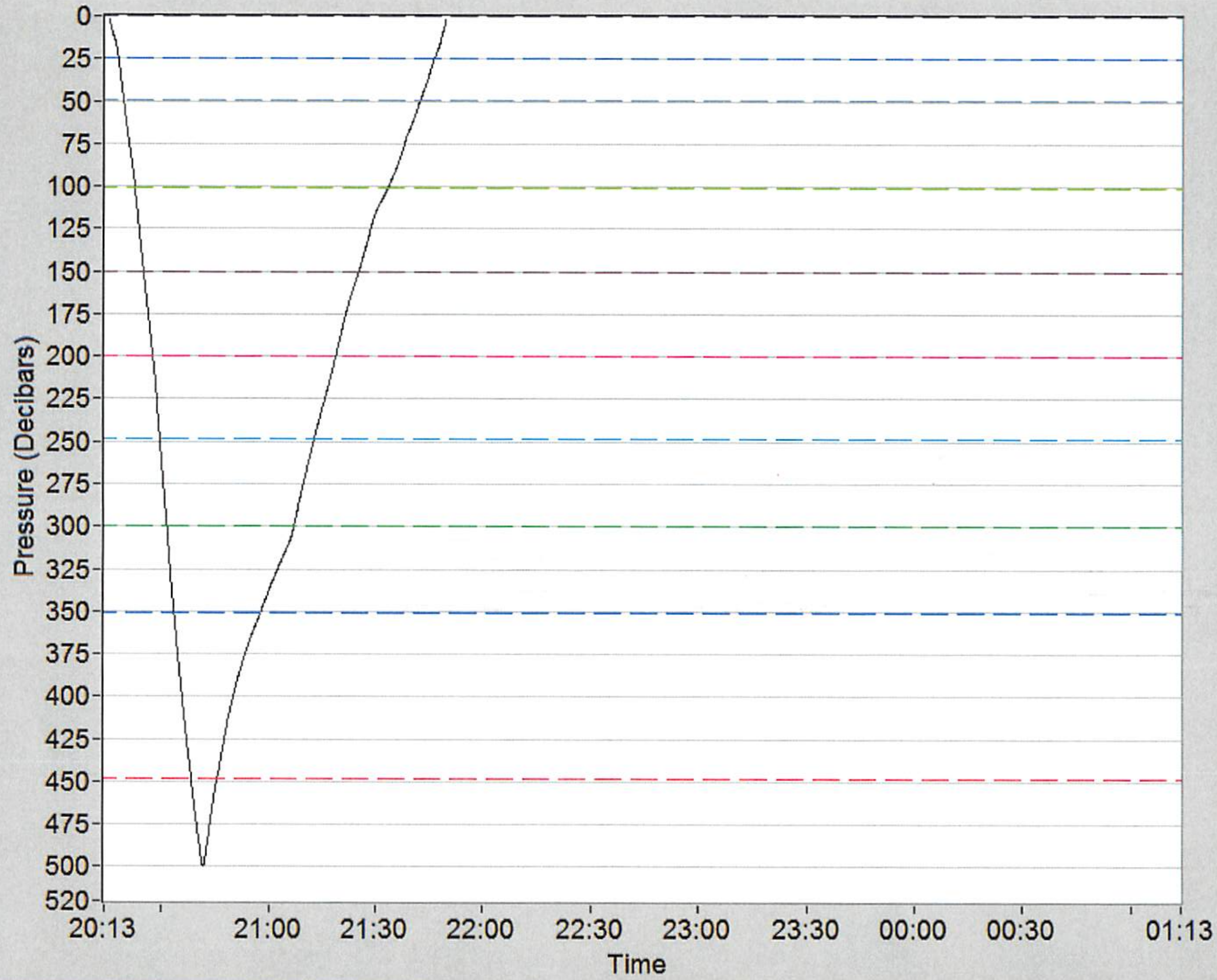


Depth Scale MIN 0 MAX 500 M Autoscale

Plot X-Scales

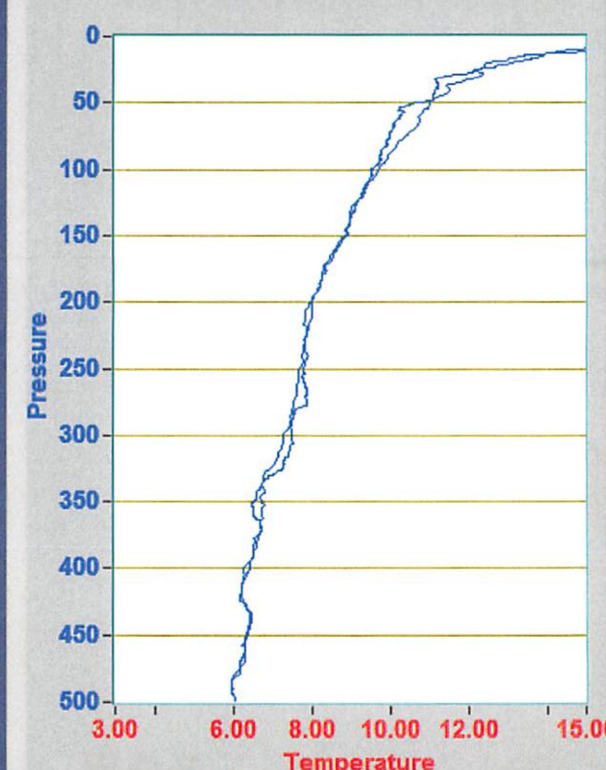
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190820 204527 448.6 36.7 344 1722.5
2 190820 205739 350.7 46.1 300 1288.5
3 190820 210651 300.4 46.3 230 983.7
4 190820 211239 248.8 48.2 160 657.9
5 190820 211845 200.0 47.1 152 639.9
6 190820 212508 150.5 48.7 168 683.6
7 190820 213321 100.5 48.5 210 856.6
8 190820 214216 49.5 48.6 224 932.3
9 190820 214609 25.0 45.7 95 412.0
10 190820 215024 0.1 13.6 78 349.2
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
LOCK
Trip in Progress
Motor ON
RSP
Trip NET
Trip Count 10
Flow Cnts 0
Flow Cnts2 0
Motor Volts 13.068
Confirms 10
VOL 349.2
VOL 2 0.0
CTD Volts 14.278
CNF TIME 24.125
Modem Data 0,0,10,10,0,1210,1322,0,0,0,0
FM2 Primary
Strobe Box



Aug 20 2019 20:13:46
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_04
Tow: 04

XY Plot



Depth Scale MIN 0 MAX 520 M Autoscale

TIME Scale MAX 5 HRS Autoscale

Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P1908 Date 21 Aug 2019 Haul # 12 Cycle # 2 Tow # ~~4~~ 5

Wind Speed 18 (kts.) Direction 322.8 (°) Sea State 5-7 (ft.)

File Name: Processed Cycle2_05.PRO Raw Cycle2_05.hex

Start Time 2116 (PDT) **End** Time 2350 (PDT)

Lat 36 00.03 Lat 36.05868

Long 122 41.372 Long 122.76062

Event deploy # 20190822.2355.001 Event rec. # 20190822-2357.001

Bottom Depth 3472 (m) Console Operator S. Sommer

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor 6.625
- ✓ Strobe ON
- — sliders

Frame Size 1 m^2
Net Mesh 202 μm

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	~~Fixative~~ Live	Split	~~Fixative~~ N2	Net resp?	strobe volts@tip
0-1000	0	2116	38.7	842	4438	1063	0	50%	~~5% Form.~~	50%	95% EtOH	✓	18.1
1000-800	1	2224	46.2	272	1208	999	801	↓	~~5% Form.~~	↓	~~95% EtOH~~	✓	18.1
800-700	2	2239	47.7	182	791	801	701		5% Form.		~~95% EtOH~~	✓	18.0
700-600	3	22~~4~~50	48.4	158	677	701	600		~~5% Form.~~		~~95% EtOH~~	✓	18.0
600-500	4	2259	47.2	258	1134	600	501		5% Form.		95% EtOH	✓	17.9
500-400	5	2310	44.3	232	1070	501	399		~~5% Form.~~		~~95% EtOH~~	✓	17.9
400-300	6	2319	40.8	261	1280	399	300		~~5% Form.~~		~~95% EtOH~~	✓	17.9
300-200	7	2330	40.3	187	918	300	199		~~5% Form.~~		~~95% EtOH~~	✓	17.9
200-100	8	2337	37.9	179	910	199	99		~~5% Form.~~		~~95% EtOH~~	✓	17.8
100-0	9	2344		159	761	99	0	↓	~~5% Form.~~	↓	~~95% EtOH~~		
	Closed	2350											

Surface Readings:

Pressure (m)	1.2
Temp. (°C)	16.54
Salinity (‰)	33.5
O_2 (ml/l)	5.9
Fluoresc. (v)	7.5
BeamC (/m)	~~7~~ 0.2
CTD volts (v)	14.3
M volts (v)	13.54
wire out (m)	1m
Time (PDT)	2116

At Depth Readings:

Pressure (m)	1063
Temp. (°C)	3.685
Salinity (‰)	34.46
O_2 (ml/l)	0.434
Fluoresc. (v)	1.8
BeamC (/m)	-0.018
CTD volts (v)	14.3
M volts (v)	13.79
wire out (m)	2043
Time (PDT)	2221

Notes: strobe visible to at least 33m depth.

forgot to remove plastic sliders upon deployment!!

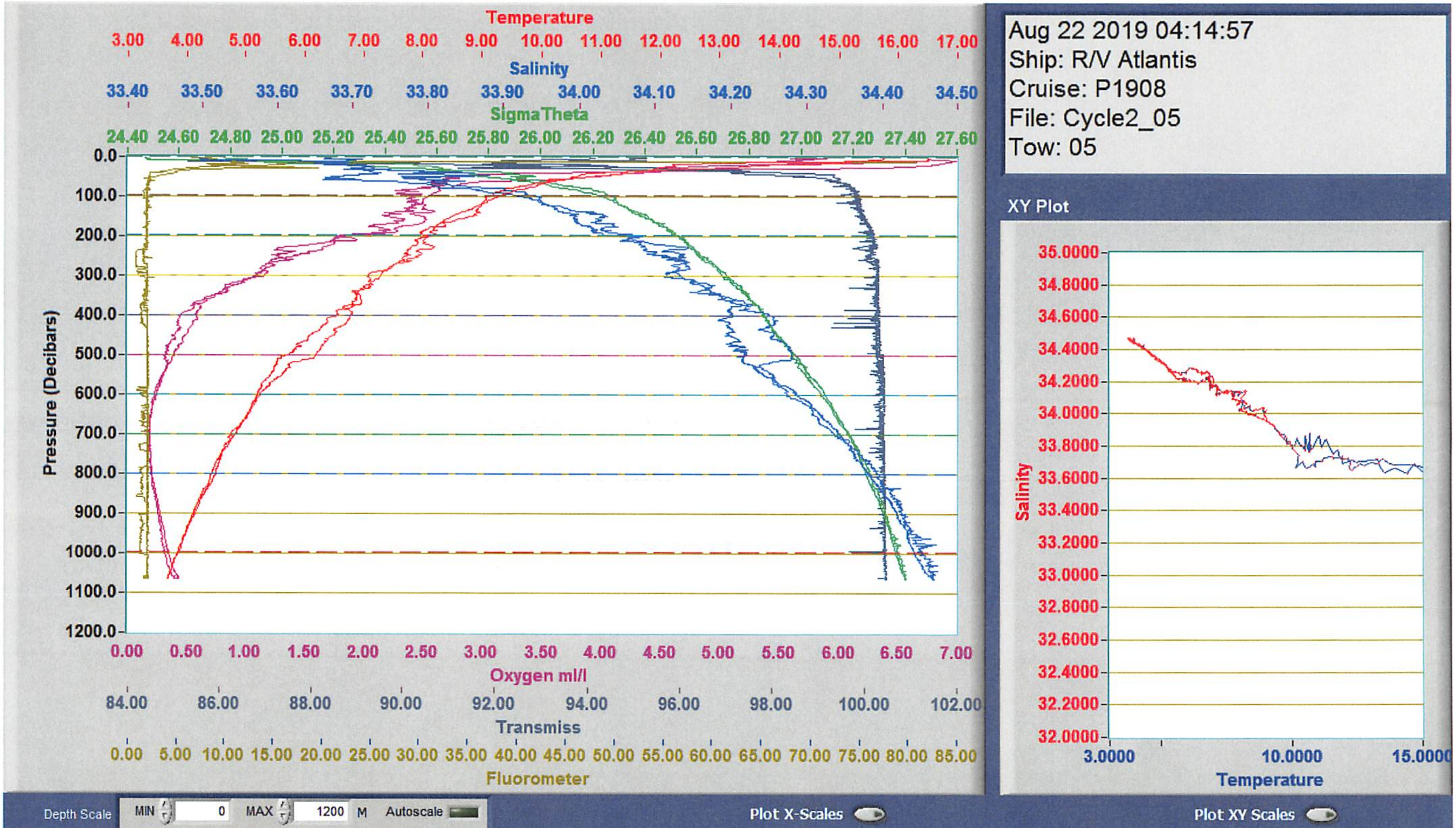
strange fluorometer trace maybe due to strobe.

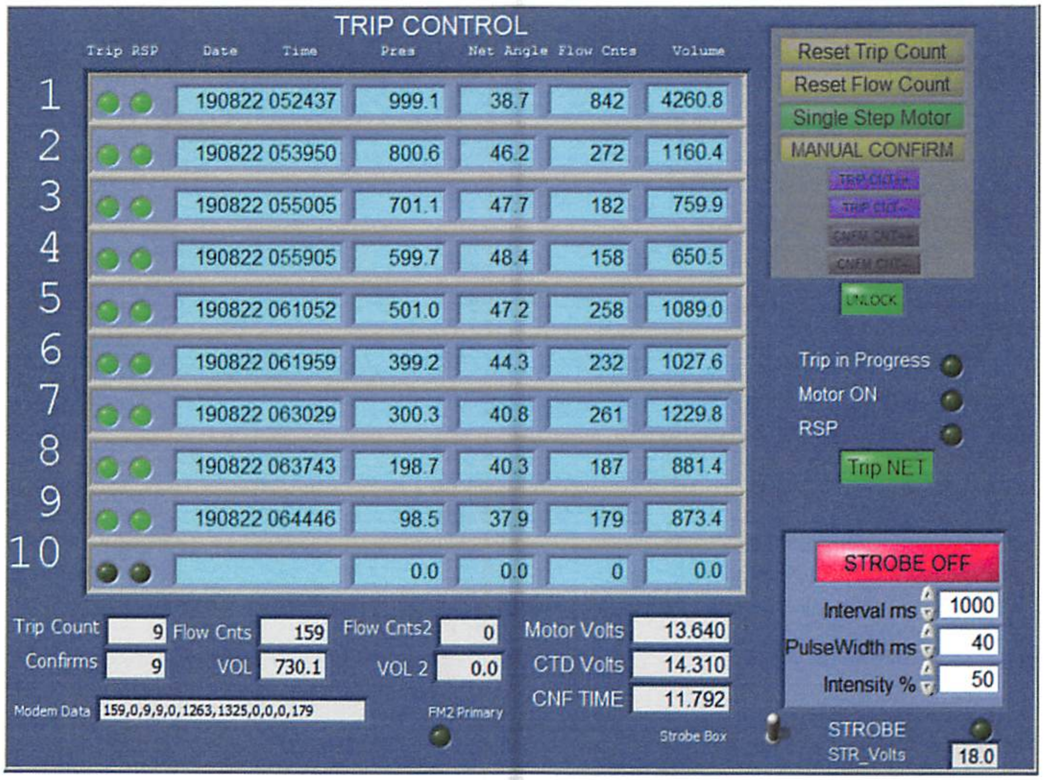
CPA to drifter - 566m depth @ 2301 on way up. Net stalled @ ~524 for a few seconds, in general slow around this depth. T/S boundary @ about 520-525.

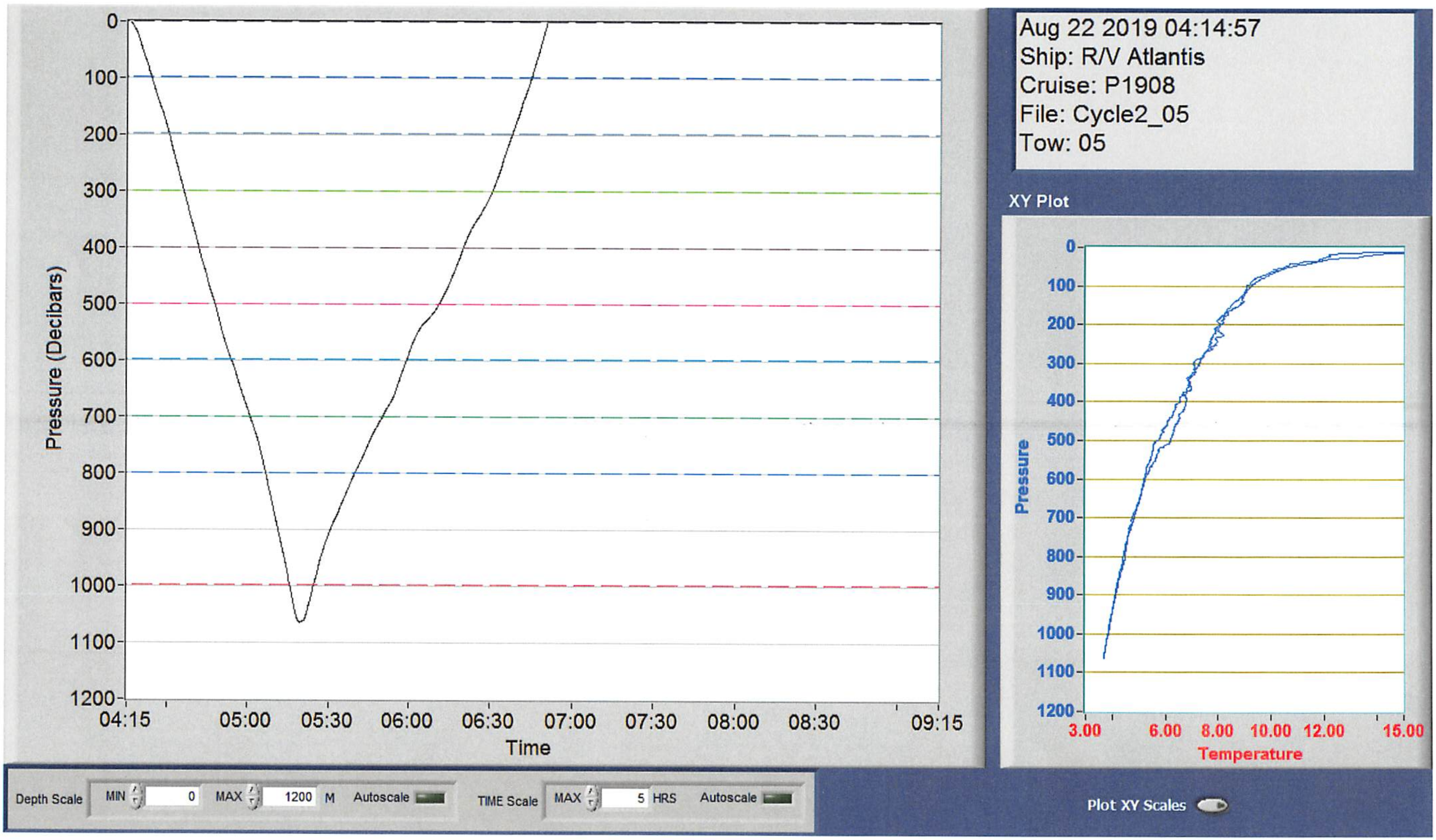
Strobe Parameters

Time on/off	2116-2350
Depths on	0-1063-7m
Interval (ms)	1000
Plse wdth (ms)	40
Intensity (%)	50
Strobe volts	19.0

Samples split 50/50 for live sorting and frozen


Temperature
3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00
Salinity
33.40 33.50 33.60 33.70 33.80 33.90 34.00 34.10 34.20 34.30 34.40 34.50
Sigma Theta
24.40 24.60 24.80 25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00 27.20 27.40 27.60
Pressure (Decibars)
0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1000.0 1100.0 1200.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00
Oxygen ml/l
84.00 86.00 88.00 90.00 92.00 94.00 96.00 98.00 100.00 102.00
Transmiss
0.00 5.00 10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00
Fluorometer
Aug 22 2019 04:14:57
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_05
Tow: 05
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 1200 M
Autoscale
Plot X-Scales
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190822 052437 999.1 38.7 842 4260.8
2 190822 053950 800.6 46.2 272 1160.4
3 190822 055005 701.1 47.7 182 759.9
4 190822 055905 599.7 48.4 158 650.5
5 190822 061052 501.0 47.2 258 1089.0
6 190822 061959 399.2 44.3 232 1027.6
7 190822 063029 300.3 40.8 261 1229.8
8 190822 063743 198.7 40.3 187 881.4
9 190822 064446 98.5 37.9 179 873.4
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
STROBE OFF
Interval ms 1000
PulseWidth ms 40
Intensity % 50
Trip Count 9
Confirms 9
Flow Cnts 159
VOL 730.1
Flow Cnts2 0
VOL 2 0.0
Motor Volts 13.640
CTD Volts 14.310
CNF TIME 11.792
Modem Data 159,0,9,9,0,1263,1325,0,0,0,179
FM2 Primary
Strobe Box
STROBE
STR_Volts 18.0


Aug 22 2019 04:14:57
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_05
Tow: 05
Pressure (Decibars)
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
04:15
05:00
05:30
06:00
06:30
07:00
07:30
08:00
08:30
09:15
Time
XY Plot
Pressure
Temperature
3.00
6.00
8.00
10.00
12.00
15.00
Depth Scale
MIN
0
MAX
1200
M
Autoscale
TIME Scale
MAX
5
HRS
Autoscale
Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 22 Aug 2019 Haul # 13 Cycle # 2 Tow # 6

Wind Speed 21-25 (kts.) Direction 325 (°) Sea State 3-4 (ft.)

File Name: Processed Cycle2_06.PRO Raw Cycle 2_06.hex

Start Time 1325 (PDT) **End** Time 1618 (PDT)

Lat 35° 59.21 N Lat 36° 2.66' N

Long 122° 40.70 W Long 122° 46.40' W

Event deploy # 20190824.0110.001 Event rec. # 20190824.0116.001

Bottom Depth 3475 (m) Console Operator L. Lilly

Pre-deployment checks:

- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- ✓ Strobe ON for ascent

Frame Size 1 m²
Net Mesh 202 µm

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m³)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?	Strobe volts
0-1000	0	1325	32.8	499	2734	1110	0	50	5% Form.	50	95% EtOH	✓	17.9
1000-800	1	1424	41.0	337	1630	1002	801		5% Form.		95% EtOH	✓	17.7
800-600	2	1439	43.5	538	2529	801	602		5% Form.		95% EtOH	✓	17.7
600-500	3	1501	43.5	338	1587	602	502		5% Form.		95% EtOH	✓	17.6
500-400	4	1515	43.0	287	1356	502	401		5% Form.		95% EtOH	✓	17.5
400-300	5	1527	44.8	277	1262	401	301		5% Form.		95% EtOH	✓	17.5
300-200	6	1538	47.4	264	1147	301	201		5% Form.		95% EtOH	✓	17.5
200-100	7	1549	44.7	402	1852	201	99		5% Form.		95% EtOH	✓	17.5
100-50	8	1605	49.4	116	486	99	50		5% Form.		95% EtOH	✓	17.5
50-0	9	1610		218	814	50	0		5% Form.		95% EtOH		
	Closed	1617											

Surface Readings:

- Pressure (m) 1.1
- Temp. (°C) 16.69
- Salinity (‰) 33.51
- O_2 (ml/l) 5.82
- Fluoresc. (v) 3.5
- BeamC (/m) 0.245
- CTD/M volts.(v) 13.50 / CTD: 14.27
- wire out (m) 0
- Time (PDT) 1325

Notes: Fluorometer moved to CTD/MOCNESS controller area (between two big black control cylinders)

~1420 – Strobe on, ~1105 m.

1509 – CPA w/ drifter

152 m (coming up) – slight plateau, so temporarily increased to 20 m/min back wire

– Haulback speed: 15 m/min

~1616 – 2m depth – strobe turned off

At Depth Readings:

- Pressure (m) 1110
- Temp. (°C) 3.55
- Salinity (‰) 34.48
- O_2 (ml/l) 0.491
- Fluoresc. (v) 10.3
- BeamC (/m) -0.019
- CTD/M volts.(v) 13.77/CTD: 14.26
- wire out (m) 1797
- Time (PDT)

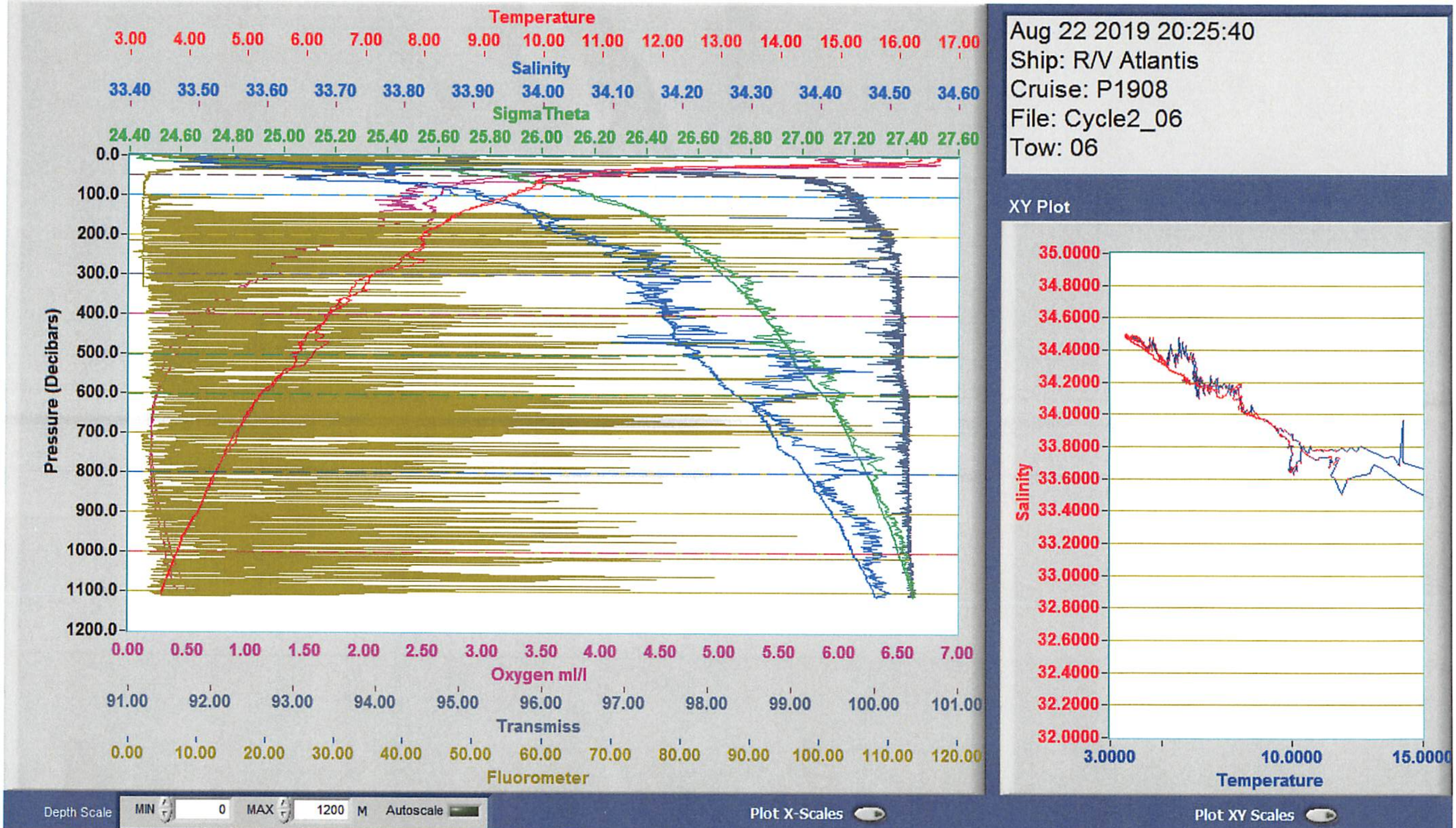
Strobe Parameters

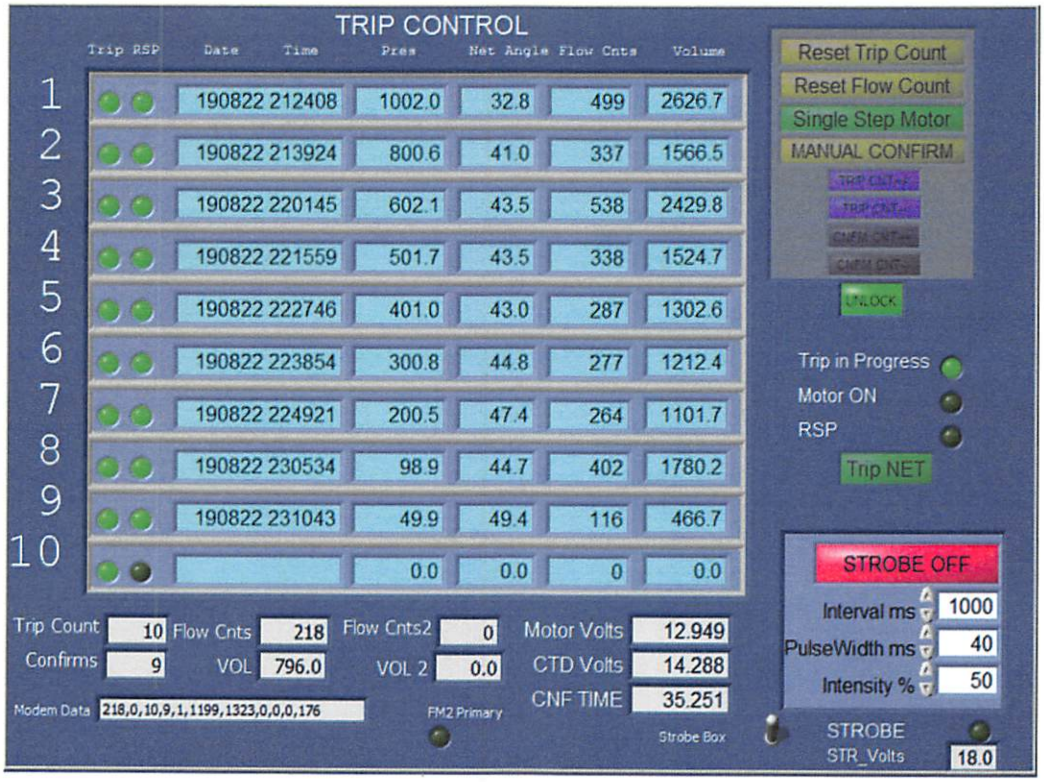
- Time on/off 1418 (on)
- Depths on 1110
- Interval (ms) 1000
- Pulse wdth (m) 40
- Intensity (%) 50
- Strobe volts 18.0

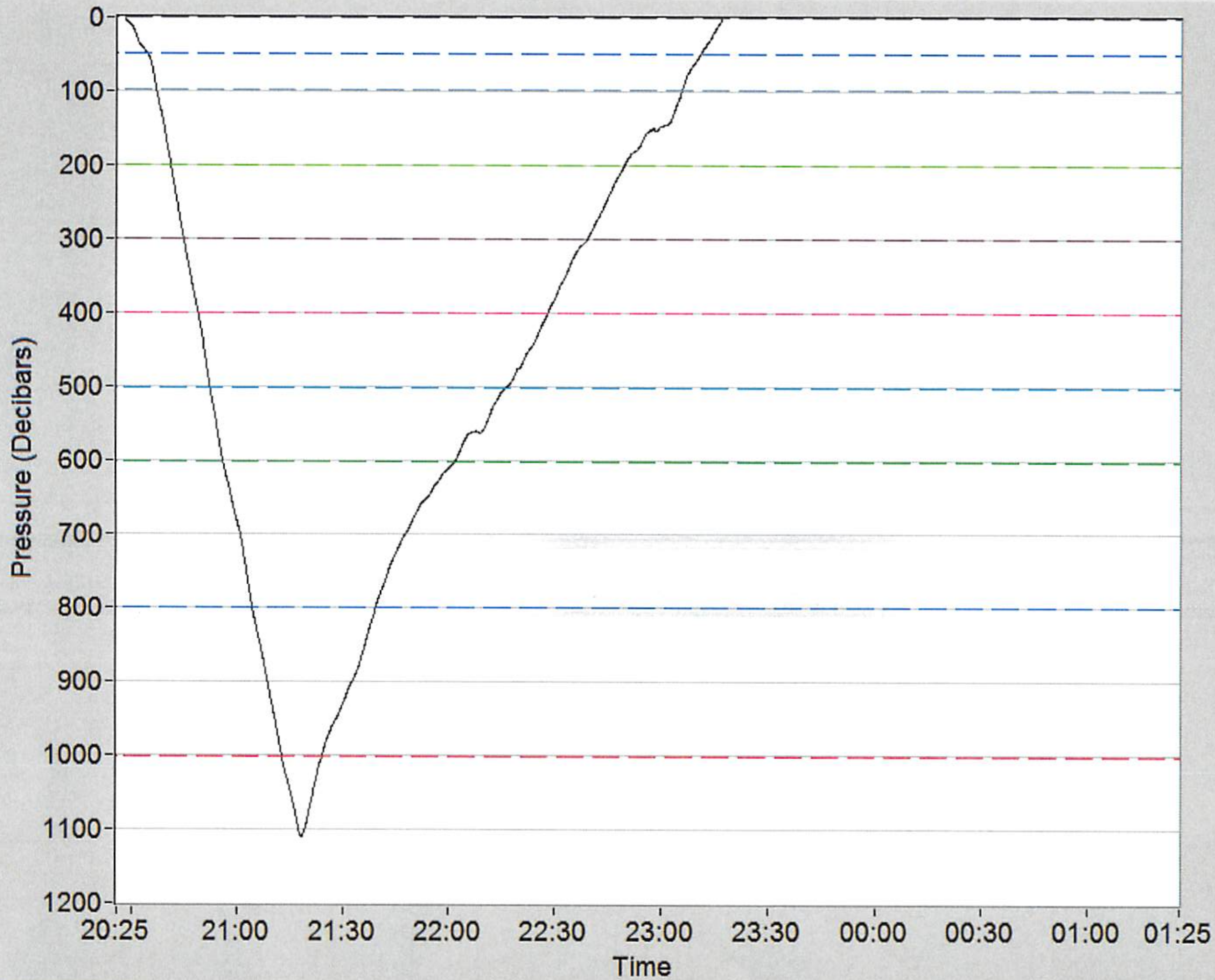
– cod ends split 50/50 for EtOH / formalin

– Net washes preserved only in formalin

– octopus / (vampire squid?) in Net 3 wash!

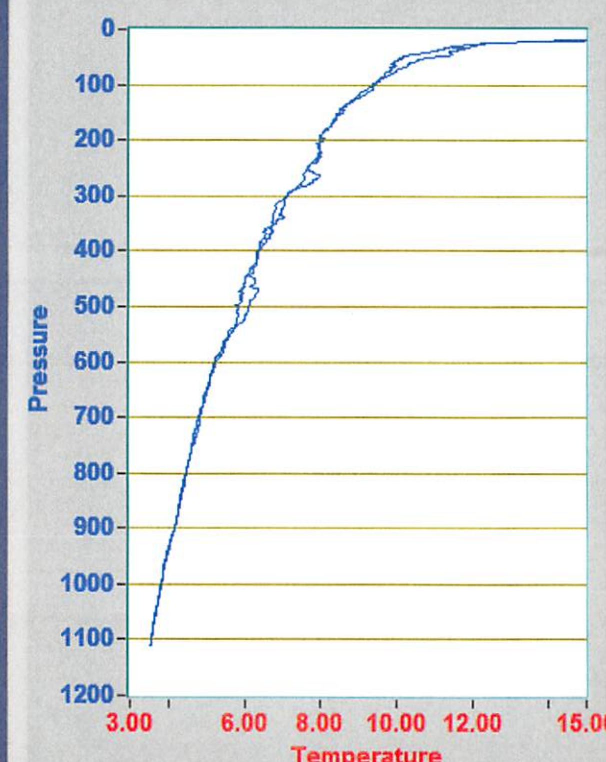

Temperature
3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00
Salinity
33.40 33.50 33.60 33.70 33.80 33.90 34.00 34.10 34.20 34.30 34.40 34.50 34.60
Sigma Theta
24.40 24.60 24.80 25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00 27.20 27.40 27.60
Pressure (Decibars)
0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1000.0 1100.0 1200.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00
Oxygen ml/l
91.00 92.00 93.00 94.00 95.00 96.00 97.00 98.00 99.00 100.00 101.00
Transmiss
0.00 10.00 20.00 30.00 40.00 50.00 60.00 70.00 80.00 90.00 100.00 110.00 120.00
Fluorometer
Aug 22 2019 20:25:40
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_06
Tow: 06
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 1200 M
Autoscale
Plot X-Scales
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190822 212408 1002.0 32.8 499 2626.7
2 190822 213924 800.6 41.0 337 1566.5
3 190822 220145 602.1 43.5 538 2429.8
4 190822 221559 501.7 43.5 338 1524.7
5 190822 222746 401.0 43.0 287 1302.6
6 190822 223854 300.8 44.8 277 1212.4
7 190822 224921 200.5 47.4 264 1101.7
8 190822 230534 98.9 44.7 402 1780.2
9 190822 231043 49.9 49.4 116 466.7
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
STROBE OFF
Interval ms 1000
PulseWidth ms 40
Intensity % 50
Trip Count 10
Confirms 9
Flow Cnts 218
VOL 796.0
Flow Cnts2 0
VOL 2 0.0
Motor Volts 12.949
CTD Volts 14.288
CNF TIME 35.251
Modem Data 218,0,10,9,1,1199,1323,0,0,0,176
FM2 Primary
Strobe Box
STROBE
STR_Volts 18.0



Aug 22 2019 20:25:40
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_06
Tow: 06

XY Plot



Depth Scale MIN 0 MAX 1200 M Autoscale

TIME Scale MAX 5 HRS Autoscale

Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 22 Aug 2019 Haul # 14 Cycle # 2 Tow # 7

Wind Speed ~~15~~ 20-25 (kts.) Direction 327 (°) Sea State 4-6 (ft.)

File Name: Processed Cycle2_07.PRO Raw Cycle2_07.hex

Start Time 2147 (PDT) (0447) **End** Time ~~[illegible]~~ 0036 (PDT)

Lat 35 58.633 Lat 36.00433

Long 122 41.580 Long 122.80250

Event deploy # 20190823.1020.001 Event rec. # 20190823.1021.001

Bottom Depth 3494 (m) Console Operator S. Sommer

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer 0-70
- ✓ Oxygen Sensor 6.84
- ✓ Strobe ON
- ✓ Sliders

Frame Size 1 m^2
Net Mesh 202 µm

Net Tow Information

Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?	Strobe volts
0	2147	43.5	1147	5812	1085	0	50%	5% Form.	50%	95% EtOH	✓	18.6
1	2305	48.7	348	1482	1000	801	↓	5% Form.	↓	95% EtOH	✓	18.4
2	2327	46.1	267	1191	801	701		5% Form.		95% EtOH	✓	18.4
3	2341	45.2	179	814	701	599		5% Form.		95% EtOH	✓	18.3
4	2349	43.1	258	1230	599	501		5% Form.		95% EtOH	✓	18.3
5	0000	43.6	158	738	501	399		5% Form.		95% EtOH	✓	18.2
6	0007	44.4	144	661	399	299		5% Form.		95% EtOH	✓	18.2
7	0014	42.3	205	977	299	201		5% Form.		95% EtOH	✓	18.1
8	0022	28.4	200	1129	201	97		5% Form.		95% EtOH	✓	
9	0031		94	577	97	0		5% Form.		95% EtOH		
Closed	0036											

Surface Readings:

Pressure (m)	6.4
Temp. (°C)	15.501
Salinity (‰)	33.518
O_2 (ml/l)	5.67
Fluoresc. (v)	1.3
BeamC (/m)	0.22
CTD volts (v)	14.28
M volts (v)	13.69
wire out (m)	5m
Time (PDT)	2147

At Depth Readings:

Pressure (m)	1085
Temp. (°C)	3.631
Salinity (‰)	34.477
O_2 (ml/l)	0.479
Fluoresc. (v)	0.1
BeamC (/m)	-0.017
CTD volts (v)	14.13
M volts (v)	13.80
wire out (m)	2411
Time (PDT)	2259

Notes: Large swell knocked cod ends against ship hull during deployment. Cod ends look OK on recovery

New fluorometer - serial number SEF 2756. Changed the con. file for fluorometer.

Shear/net stall @ 717m on way up. ~~[illegible]~~ Net speed increased to 2.7 kts despite no vertical speed and ship speed only 1.5 kts.

@ Net 7 - realized I was following Kristen's depths from last night - wrong! too late to change so depths will be 100m bins at surface.

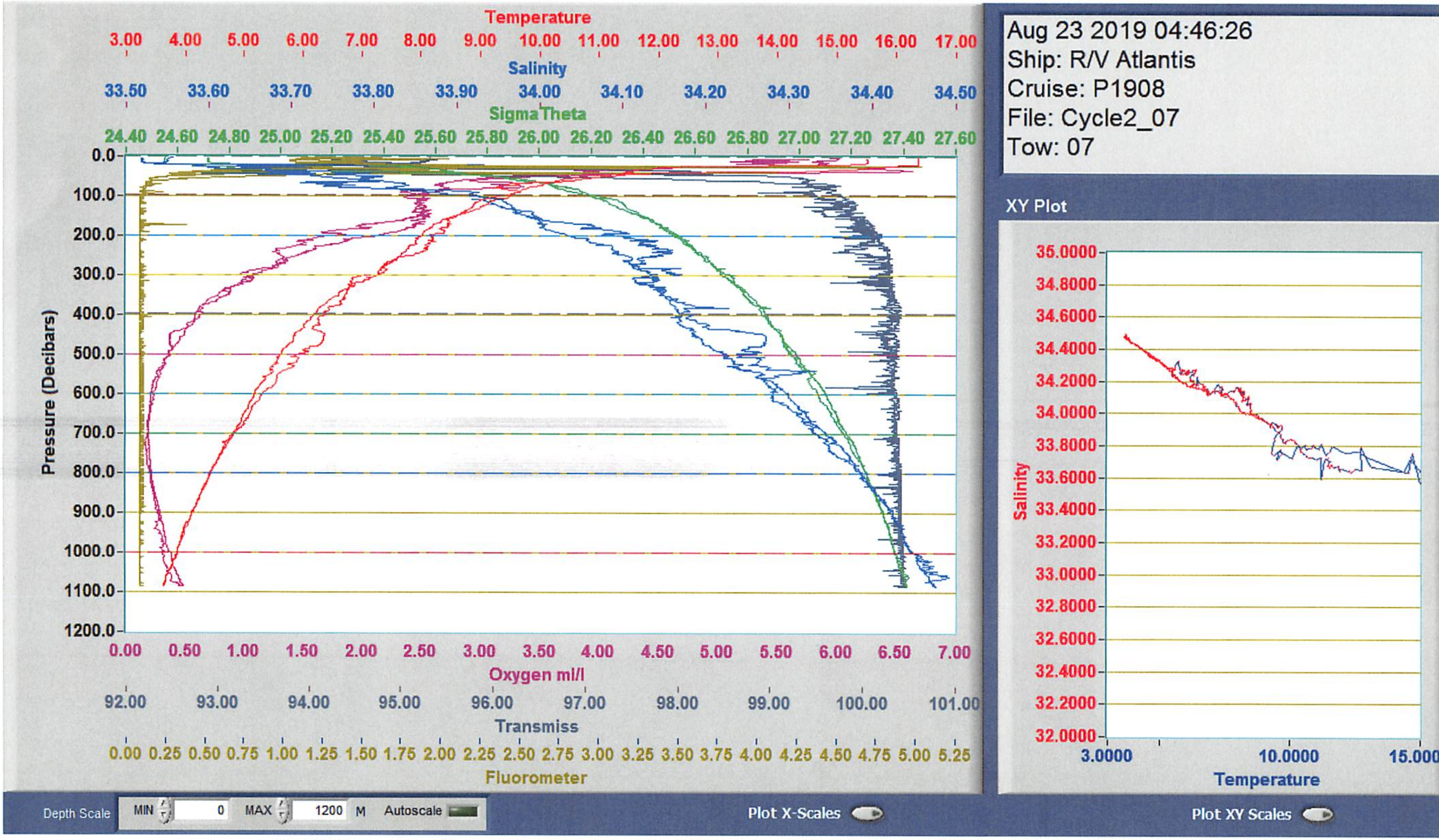
Strobe Parameters

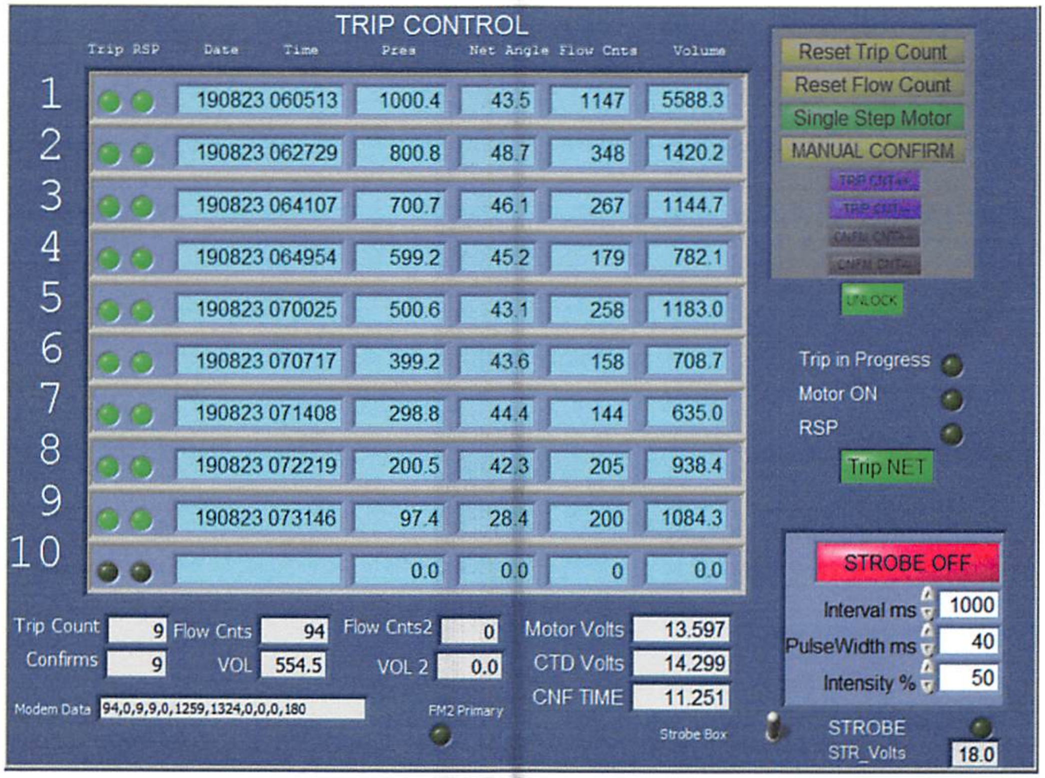
Time on/off	2154
Depths on	70m - 1085 - 10
Interval (ms)	1000
Plse wdth (ms)	40
Intensity (%)	60
Strobe volts	19.2

Net 5 - formalin side ~~[illegible]~~ spilled during preservation. Mostly saved, but not quantitative

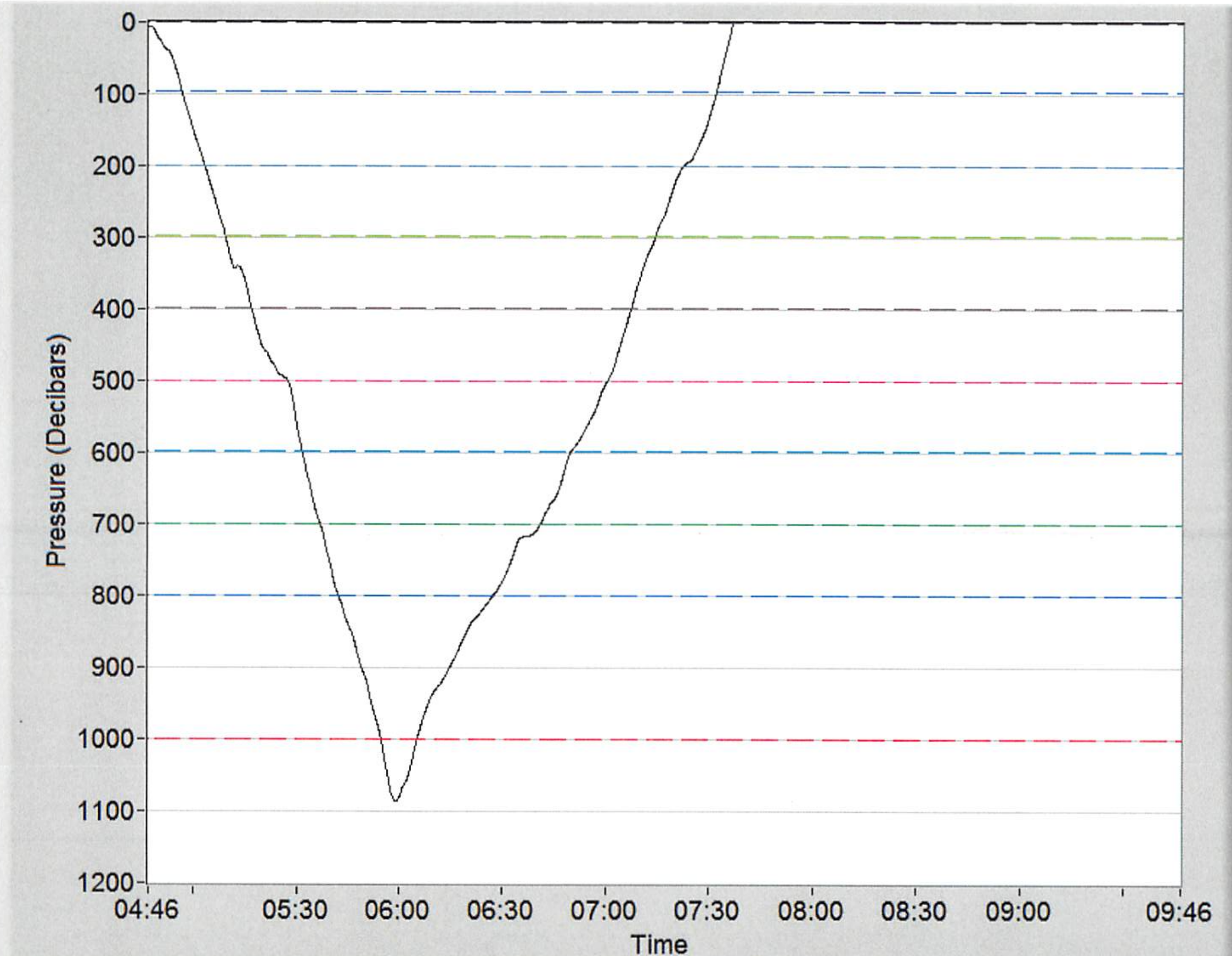
Cod ends split 50/50; net wash saved separately in formalin

Tissue from octopus in net 9 in ethanol taped to box w/ formalin sample. EtOH changed ~18hrs after preservation.

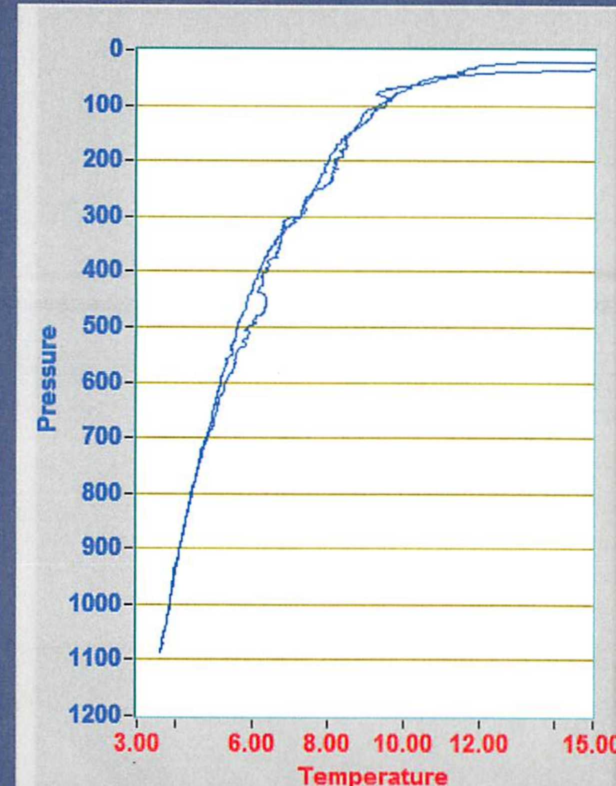

Aug 23 2019 04:46:26
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_07
Tow: 07
Temperature
3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00
Salinity
33.50 33.60 33.70 33.80 33.90 34.00 34.10 34.20 34.30 34.40 34.50
Sigma Theta
24.40 24.60 24.80 25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00 27.20 27.40 27.60
Pressure (Decibars)
0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1000.0 1100.0 1200.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00
Oxygen ml/l
92.00 93.00 94.00 95.00 96.00 97.00 98.00 99.00 100.00 101.00
Transmiss
0.00 0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00 2.25 2.50 2.75 3.00 3.25 3.50 3.75 4.00 4.25 4.50 4.75 5.00 5.25
Fluorometer
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 1200 M
Autoscale
Plot X-Scales
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190823 060513 1000.4 43.5 1147 5588.3
2 190823 062729 800.8 48.7 348 1420.2
3 190823 064107 700.7 46.1 267 1144.7
4 190823 064954 599.2 45.2 179 782.1
5 190823 070025 500.6 43.1 258 1183.0
6 190823 070717 399.2 43.6 158 708.7
7 190823 071408 298.8 44.4 144 635.0
8 190823 072219 200.5 42.3 205 938.4
9 190823 073146 97.4 28.4 200 1084.3
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
STROBE OFF
Interval ms 1000
PulseWidth ms 40
Intensity % 50
Trip Count 9
Confirms 9
Flow Cnts 94
VOL 554.5
Flow Cnts2 0
VOL 2 0.0
Motor Volts 13.597
CTD Volts 14.299
CNF TIME 11.251
Modem Data 94,0,9,9,0,1259,1324,0,0,0,180
FM2 Primary
Strobe Box
STROBE
STR_Volts 18.0

Aug 23 2019 04:46:26
Ship: R/V Atlantis
Cruise: P1908
File: Cycle2_07
Tow: 07



XY Plot



Depth Scale MIN 0 MAX 1200 M Autoscale

TIME Scale MAX 5 HRS Autoscale

Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 24 Aug 2019 Haul # 15 Cycle # 3 Tow # 1

Wind Speed 2-4 (kts.) Direction ____ (°) Sea State 1-2 (ft.)

File Name: Processed Cycle3_01.PRO Raw Cycle3_01.hex

Start Time 1346 (PDT) End Time 1526 (PDT)

Lat 35°36.20N Lat 35°34.84

Long 122°41.04W Long 122°37

Event deploy # 20190825.0359.001 Event rec. # 20190825.0400.001

Bottom Depth 3151 (m) Console Operator L. Lilly

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- ✓ Strobe OFF

sliders RIP - Do we have new ones??

Frame Size 1 m²
Net Mesh 202 µm

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m³)	Max Depth (m)	Min Depth (m)	Split 50	Fixative	Split 50	Fixative	Net resp?
0-487	0	1346	39.3	615	3184	487	0	✓	5% Form.	✓	95% EtOH	✓
450-350	1	1423	47.0	263	1168	453	351	✓	5% Form.	✓	95% EtOH	✓
350-300	2	1434	49.0	214	910	351	301	✓	5% Form.	✓	95% EtOH	✓
300-250	3	1442	49.8	239	1007	301	251	✓	5% Form.	✓	95% EtOH	✓
250-200	4	1452	46.5	217	958	251	200	✓	5% Form.	✓	95% EtOH	✓
200-150	5	1500	44.3	187	858	200	150	✓	5% Form.	✓	95% EtOH	✓
150-100	6	1507	44.9	165	757	150	100	✓	5% Form.	✓	95% EtOH	✓
100-50	7	1514	44.5	153	703	100	50	✓	5% Form.	✓	95% EtOH	✓
50-25	8	1519	43.7	75	349	50	24	✓	5% Form.	✓	95% EtOH	✓
25-0	9	1522		70	318	24	0	✓	5% Form.	✓	95% EtOH	
	Closed	1525										

Surface Readings:

Pressure (m)	1.0
Temp. (°C)	16.91
Salinity (‰)	33.49
O_2 (ml/l)	5.64
Fluoresc. (v)	0.0
BeamC (/m)	0.089
CTD/M volts.(v)	13.39 / CTD 14.29
wire out (m)	0
Time (PDT)	1346

At Depth Readings:

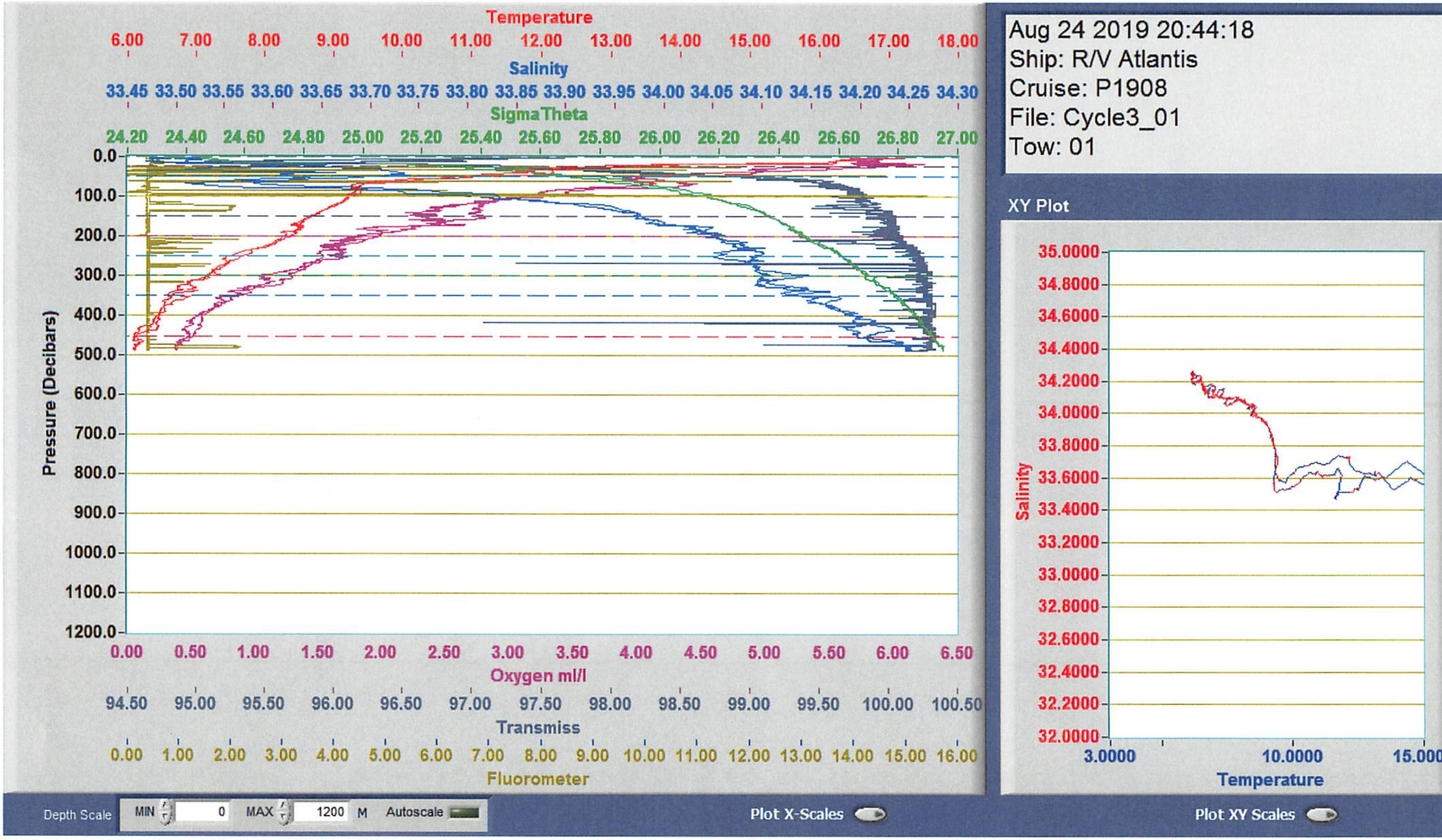
Pressure (m)	487
Temp. (°C)	6.11
Salinity (‰)	34.25
O_2 (ml/l)	0.390
Fluoresc. (v)	0.4
BeamC (/m)	-0.010
CTD/M volts.(v)	13.8 / 14.28
wire out (m)	847
Time (PDT)	1419

Notes: 1447 - CPA to drifter (visual)

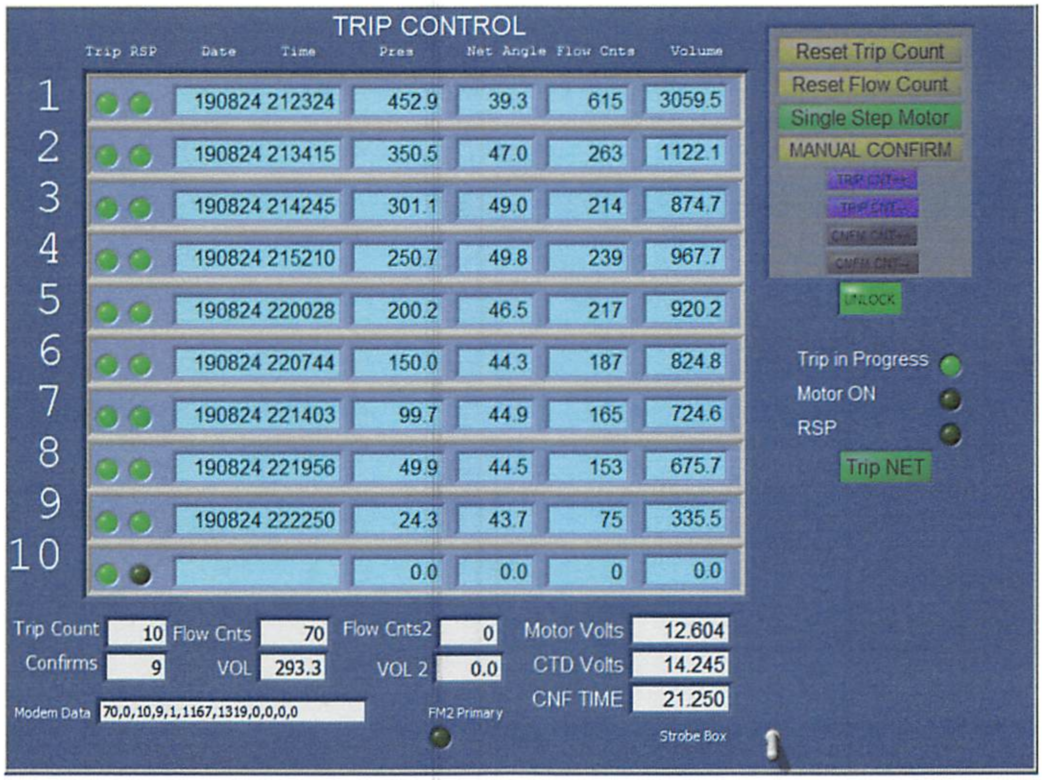
Switched back to Wet Labs fluorometer (from previous casts) because Seapoint was not responding during deck test. Current fluorometer = still reading correctly FLRTD 1156

Strobe Parameters

Time on/off	OFF during cast
Depths on	
Interval (ms)	
Plse wdth (m)	
Intensity (%)	
Strobe volts	

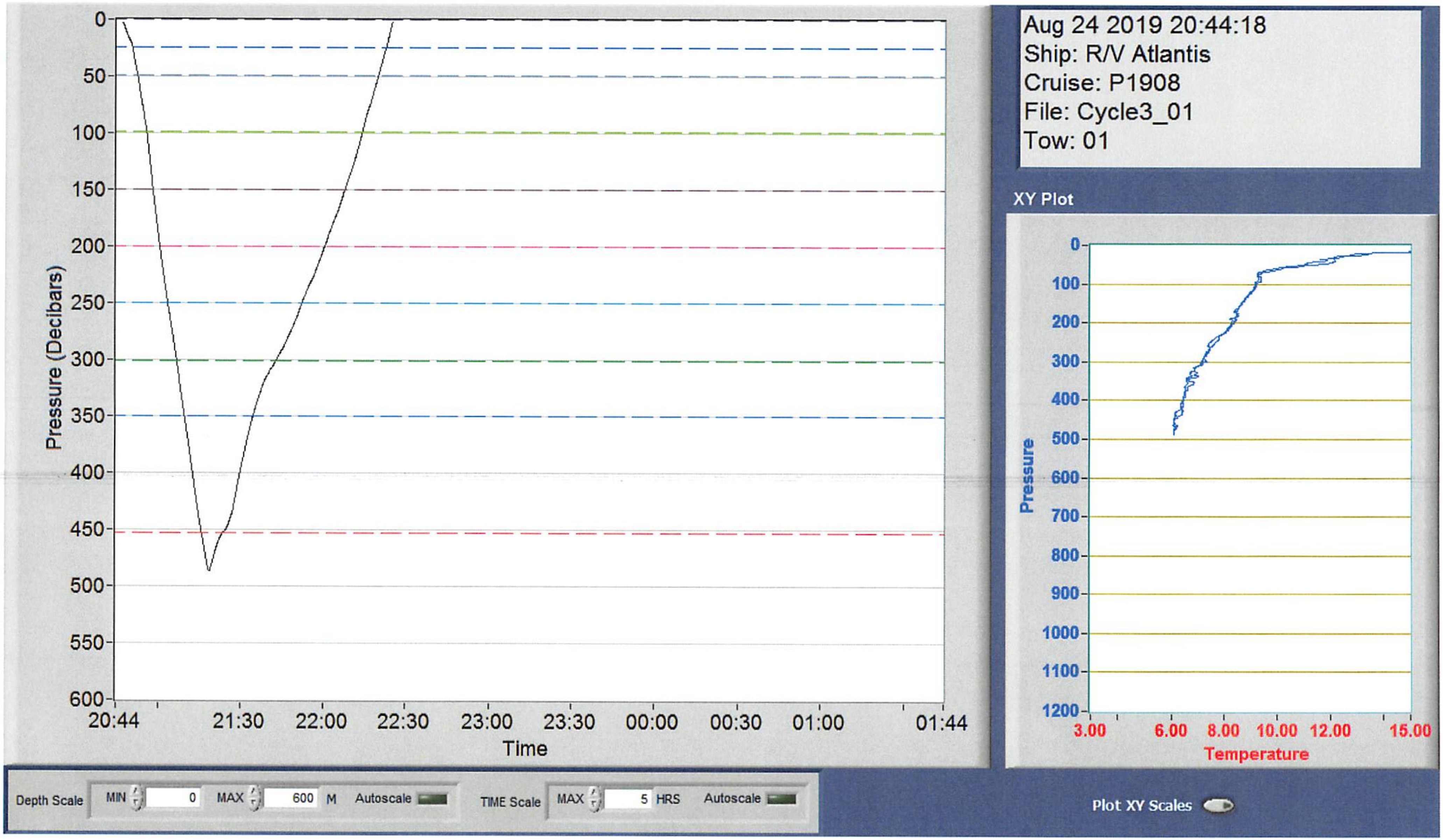


Temperature
6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00
Salinity
33.45 33.50 33.55 33.60 33.65 33.70 33.75 33.80 33.85 33.90 33.95 34.00 34.05 34.10 34.15 34.20 34.25 34.30
SigmaTheta
24.20 24.40 24.60 24.80 25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00
Pressure (Decibars)
0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1000.0 1100.0 1200.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50
Oxygen ml/l
94.50 95.00 95.50 96.00 96.50 97.00 97.50 98.00 98.50 99.00 99.50 100.00 100.50
Transmiss
0.00 1.00 2.00 3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00
Fluorometer
Aug 24 2019 20:44:18
Ship: R/V Atlantis
Cruise: P1908
File: Cycle3_01
Tow: 01
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 1200 M
Autoscale
Plot X-Scales
Plot XY Scales



TRIP CONTROL

	Trip	RSP	Date Time	Pres	Net Angle	Flow Cnts	Volume
1			190824 212324	452.9	39.3	615	3059.5
2			190824 213415	350.5	47.0	263	1122.1
3			190824 214245	301.1	49.0	214	874.7
4			190824 215210	250.7	49.8	239	967.7
5			190824 220028	200.2	46.5	217	920.2
6			190824 220744	150.0	44.3	187	824.8
7			190824 221403	99.7	44.9	165	724.6
8			190824 221956	49.9	44.5	153	675.7
9			190824 222250	24.3	43.7	75	335.5
10				0.0	0.0	0	0.0


Aug 24 2019 20:44:18
Ship: R/V Atlantis
Cruise: P1908
File: Cycle3_01
Tow: 01
Pressure (Decibars)
0
50
100
150
200
250
300
350
400
450
500
550
600
20:44
21:30
22:00
22:30
23:00
23:30
00:00
00:30
01:00
01:44
Time
XY Plot
Pressure
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
3.00
6.00
8.00
10.00
12.00
15.00
Temperature
Depth Scale
MIN
0
MAX
600
M
Autoscale
TIME Scale
MAX
5
HRS
Autoscale
Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 24 Aug 2019 Haul # 16 Cycle # 3 Tow # 2

Wind Speed 0-2 (kts.) Direction 65° (°) Sea State 3-4 (ft.)

File Name: Processed Cycle3_02.PRO Raw Cycle3_02.hex

Start Time (0546) 2246 (PDT) **End** Time 0024 (PDT)

Lat 35 35.103 Lat 35.59743

Long 122 35.110 Long 122.64728

Event deploy # 20190825.0928.001 Event rec. # 20190825.0930.001

Bottom Depth 3284 (m) Console Operator S. Sommer

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor 6.9
- Strobe OFF
- ✓ sliders

Frame Size 1 m²
Net Mesh 202 µm

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?
0-450	0	2246	36.6	604	3132	462	0	50%	5% Form.	50%	95% EtOH	✓
450-350	1	2326	43.2	376	1767	450	350	↓	5% Form.	↓	95% EtOH	✓
350-300	2	2342	44.3	130	597	350	300		5% Form.		95% EtOH	✓
300-250	3	2347	47.3	145	637	300	251		5% Form.		95% EtOH	✓
250-200	4	2353	45.6	179	816	251	201		5% Form.		95% EtOH	✓
200-150	5	0000	44.3	174	798	201	150		5% Form.		95% EtOH	✓
180-100	6	0006	43.4	168	787	150	100		5% Form.		95% EtOH	✓
100-50	7	0013	49.8	145	688	100	50		5% Form.		95% EtOH	✓
50-25	8	0019	42.1	67	324	50	25		5% Form.		95% EtOH	✓
25-0	9	0022		62	325	25	0		5% Form.		95% EtOH	
	Closed	0024										

Surface Readings:

Pressure (m)	1.2
Temp. (°C)	17.53
Salinity (‰)	33.52
O_2 (ml/l)	5.82
Fluoresc. (v)	0.4
BeamC (/m)	0.108
CTD/M volts.(v)	14.29/13.47
wire out (m)	0
Time (PDT)	2246

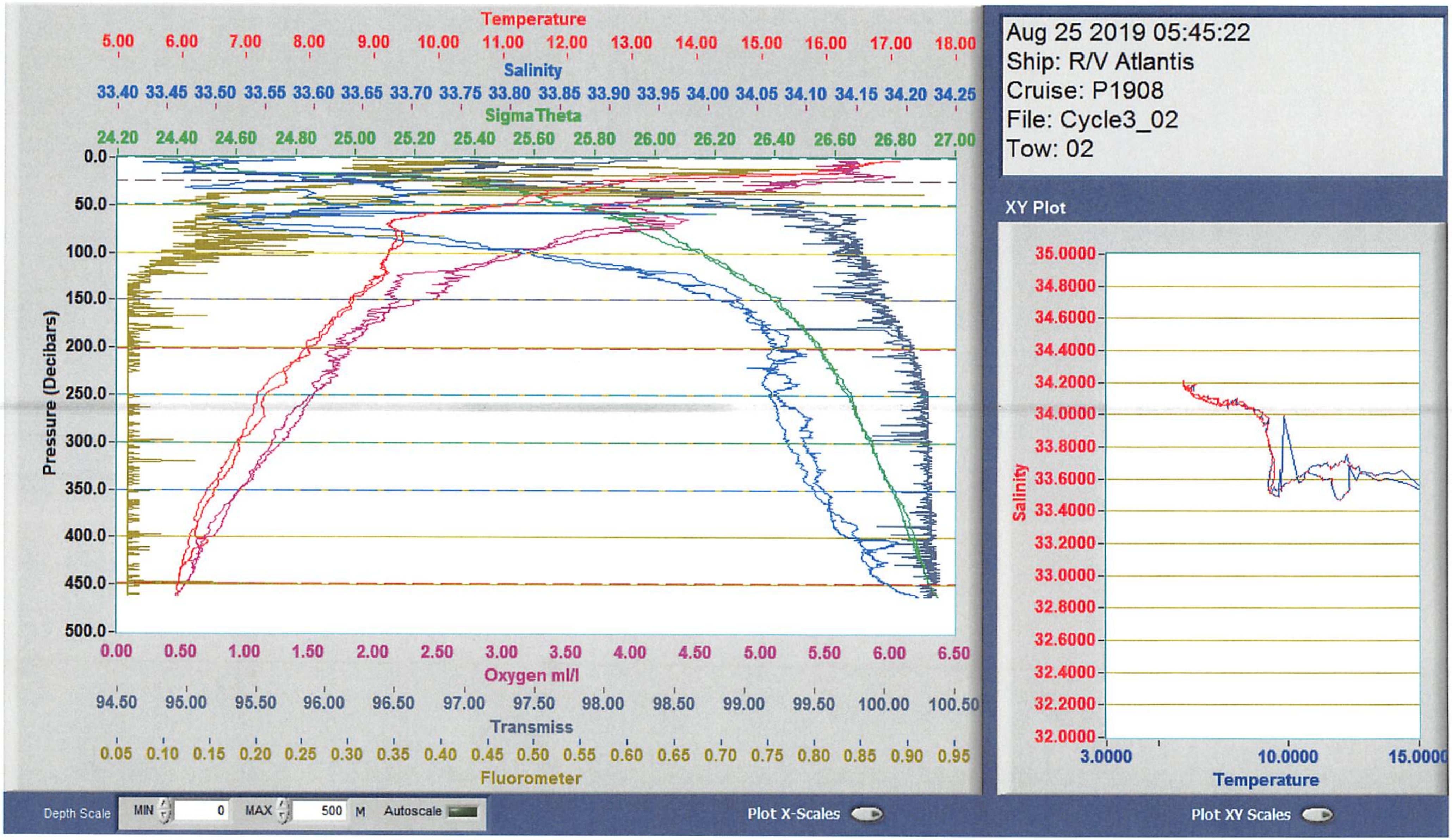
Notes: butterfly landed in sample 9 and possibly 7-8.

At Depth Readings:

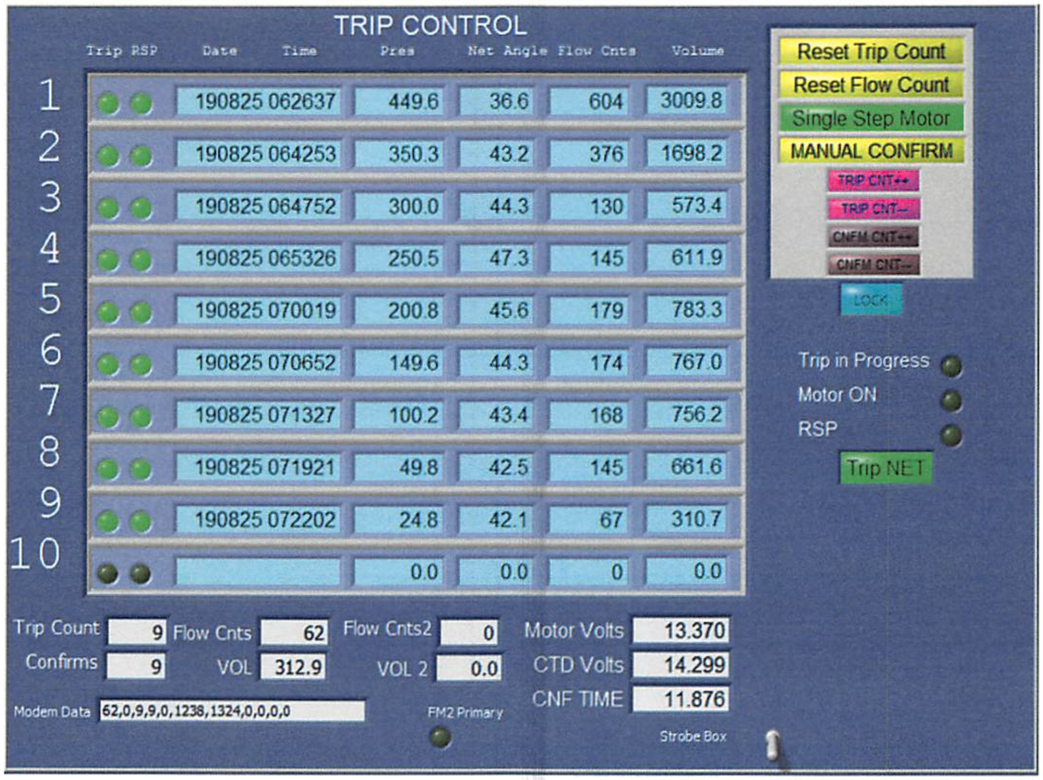
Pressure (m)	462
Temp. (°C)	5.94
Salinity (‰)	34.212
O_2 (ml/l)	0.449
Fluoresc. (v)	0.1
BeamC (/m)	-0.014
CTD/M volts.(v)	14.20/13.79
wire out (m)	862
Time (PDT)	2326

Strobe Parameters OFF

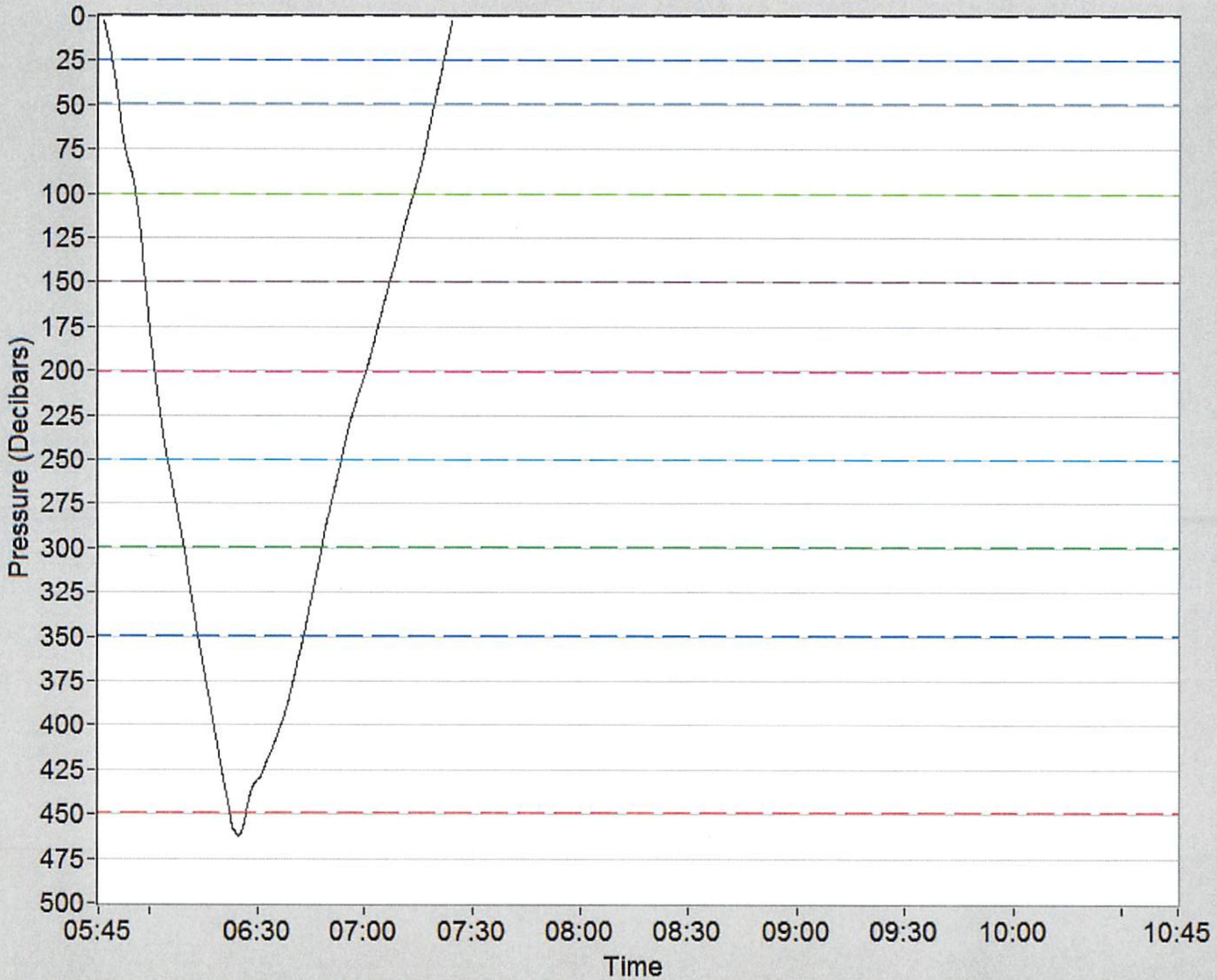
Time on/off	
Depths on	
Interval (ms)	
Plse wdth (m)	
Intensity (%)	
Strobe volts	



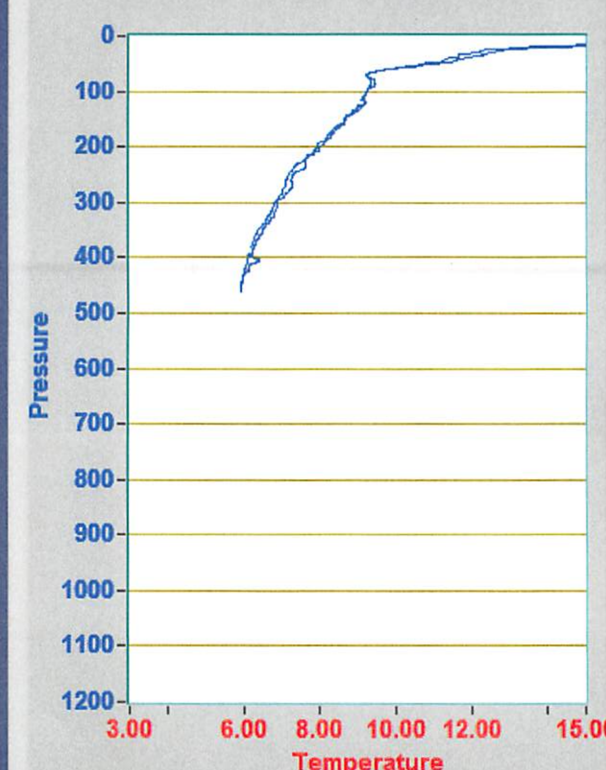
Temperature
5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00
Salinity
33.40 33.45 33.50 33.55 33.60 33.65 33.70 33.75 33.80 33.85 33.90 33.95 34.00 34.05 34.10 34.15 34.20 34.25
Sigma Theta
24.20 24.40 24.60 24.80 25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00
Pressure (Decibars)
0.0 50.0 100.0 150.0 200.0 250.0 300.0 350.0 400.0 450.0 500.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50
Oxygen ml/l
94.50 95.00 95.50 96.00 96.50 97.00 97.50 98.00 98.50 99.00 99.50 100.00 100.50
Transmiss
0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60 0.65 0.70 0.75 0.80 0.85 0.90 0.95
Fluorometer
Aug 25 2019 05:45:22
Ship: R/V Atlantis
Cruise: P1908
File: Cycle3_02
Tow: 02
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 500 M
Autoscale
Plot X-Scales
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190825 062637 449.6 36.6 604 3009.8
2 190825 064253 350.3 43.2 376 1698.2
3 190825 064752 300.0 44.3 130 573.4
4 190825 065326 250.5 47.3 145 611.9
5 190825 070019 200.8 45.6 179 783.3
6 190825 070652 149.6 44.3 174 767.0
7 190825 071327 100.2 43.4 168 756.2
8 190825 071921 49.8 42.5 145 661.6
9 190825 072202 24.8 42.1 67 310.7
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
TRIP CNT++
TRIP CNT--
CNFM CNT++
CNFM CNT--
LOCK
Trip in Progress
Motor ON
RSP
Trip NET
Trip Count 9
Confirms 9
Flow Cnts 62
VOL 312.9
Flow Cnts2 0
VOL 2 0.0
Motor Volts 13.370
CTD Volts 14.299
CNF TIME 11.876
Modem Data 62,0,9,9,0,1238,1324,0,0,0,0
FM2 Primary
Strobe Box

Aug 25 2019 05:45:22
Ship: R/V Atlantis
Cruise: P1908
File: Cycle3_02
Tow: 02



XY Plot



Depth Scale MIN 0 MAX 500 M Autoscale TIME Scale MAX 5 HRS Autoscale

Plot XY Scales

mmm

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 25 Aug 2019 Haul # 17 Cycle # 3 Tow # 3

Wind Speed 5 (kts.) Direction 307 (°) Sea State 1 (ft.)

File Name: Processed Cycle3_03.PRO Raw Cycle3_03.hex

Start Time 1250 (PDT) **End** Time 16:03 (PDT)

Lat 35° 36.16'N Lat 35° 38.20' N

Long 122° 31.74' W Long 122° 39.03' W

Event deploy # 20190826.1108.001 Event rec. # 20190826.1109.001

Bottom Depth 3587 (m) Console Operator L. Lilly

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- ✓ Strobe ON for ascent

Init. V = 17.7

Frame Size 1 m²

Net Mesh 202 µm

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split 50	Fixative	Split 50	Fixative	Net resp?	Strobe volts
0-1100	0	1250	32.9	524	2867	1106	0	✓	5% Form.	✓	95% EtOH	✓	17.5
1000-800	1	1349	42.3	411	1966	1001	801	✓	5% Form.	✓	95% EtOH	✓	17.4
800-600	2	1407	44.1	791	3678	801	600	✓	5% Form.	✓	95% EtOH	✓	17.3
600-500	3	1441	45.8	245	1119	600	501	✓	5% Form.	✓	95% EtOH	✓	17.2
500-400	4	1451	46.3	386	1712	501	401	✓	5% Form.	✓	95% EtOH	✓	17.1
400-300	5	1507	48.0	327	1419	401	301	✓	5% Form.	✓	95% EtOH	✓	
300-200	6	1519	45.4	461	2102	301	200	✓	5% Form.	✓	95% EtOH	✓	17.1
200-100	7	1537	44.4	339	1558	200	100	✓	5% Form.	✓	95% EtOH	✓	17.1
100-50	8	1550	43.0	168	791	100	49	✓	5% Form.		95% EtOH	✓	17.2
50-0	9	1556		160	671	49	0		5% Form.		95% EtOH		
	Closed	1602											

Surface Readings:

Pressure (m)	1.4
Temp. (°C)	16.86
Salinity (‰)	33.38
O_2 (ml/l)	5.92
Fluoresc. (v)	0.1
BeamC (/m)	0.080
CTD/M volts.(v)	13.50 / CTD: 14.28
wire out (m)	0
Time (PDT)	1250

Notes: Now using Seapoint fluorometer again. Seems to be reading fine.

Strobe on for ascent

- Wire speed increased to 15 m/min in at ~660 m depth because some slowing/leveling off of net (even though angle holding @ 42°)

1450 - CPA w/ drifter

Strobe off at 2.6 m on ascent.

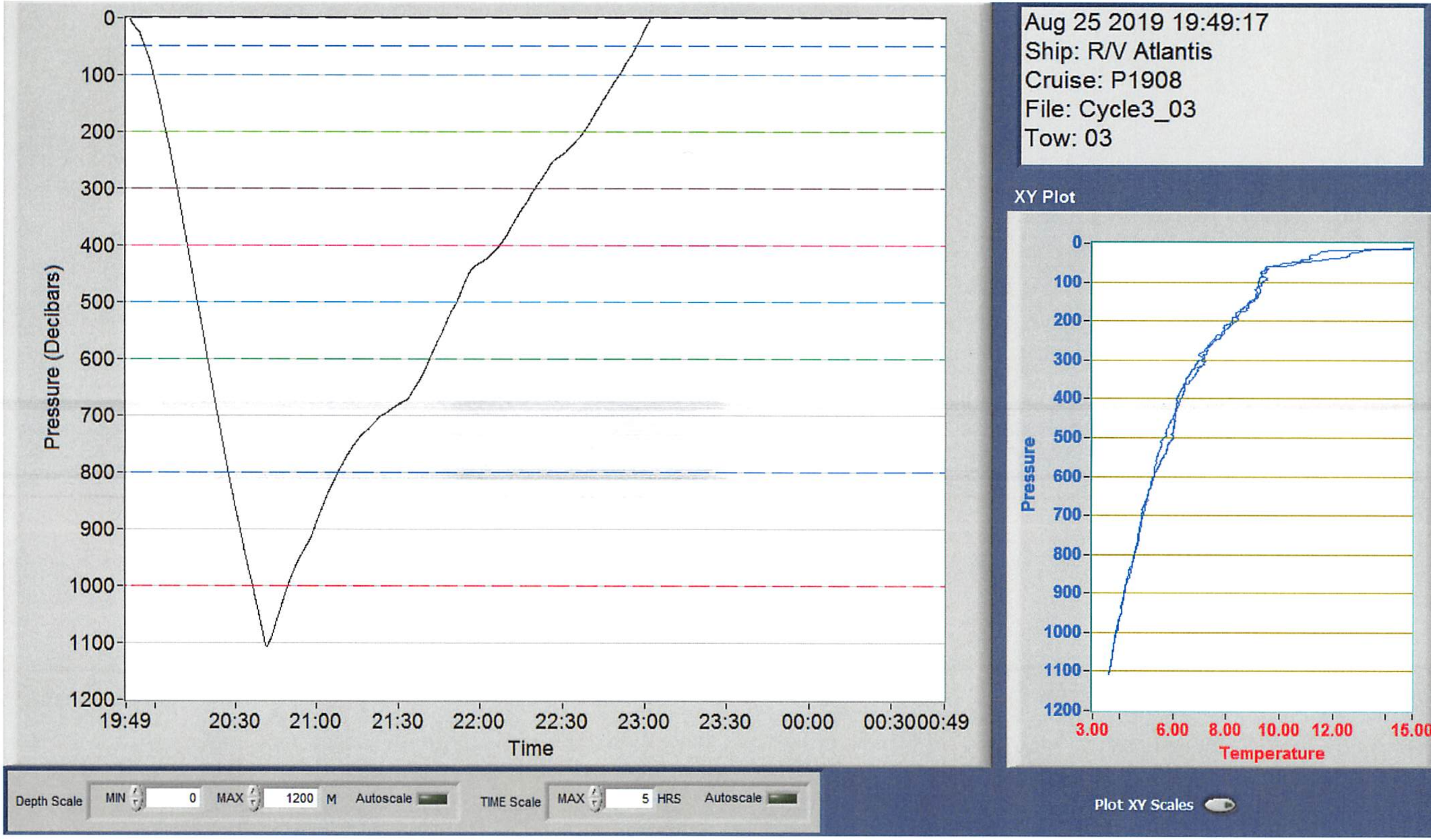
At Depth Readings:

Pressure (m)	1106
Temp. (°C)	3.63
Salinity (‰)	34.48
O_2 (ml/l)	0.529
Fluoresc. (v)	0.1
BeamC (/m)	-0.018
CTD/M volts.(v)	13.79 / 14.30
wire out (m)	1814
Time (PDT)	1342

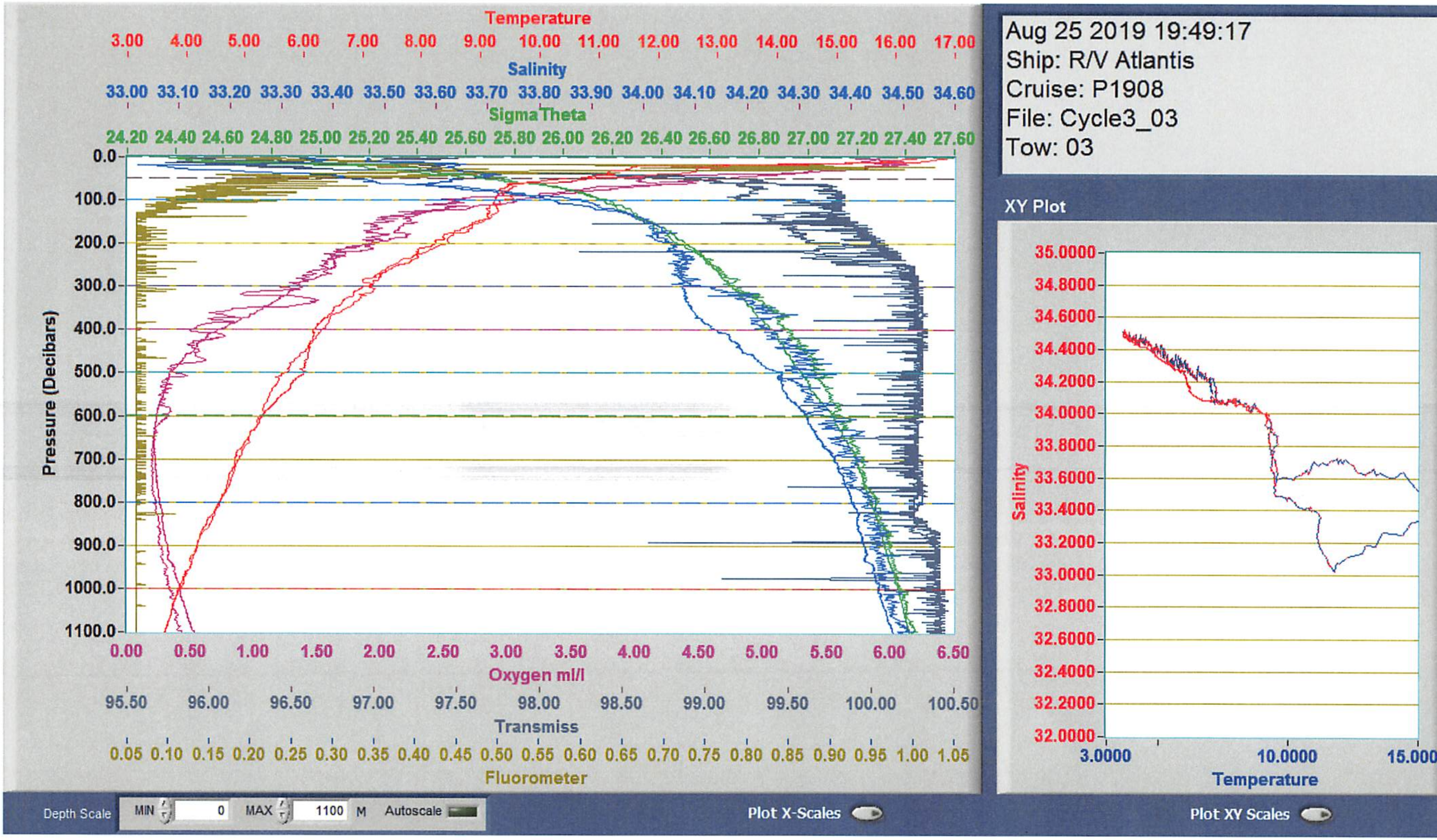
Strobe Parameters

Time on/off	1342
Depths on	1106 - 0
Interval (ms)	1000
Pulse wdth (m)	40
Intensity (%)	50
Strobe volts	17.5

Vampire squid in Net 2 - stowed in formalin plus ear sample in EtOH


Aug 25 2019 19:49:17
Ship: R/V Atlantis
Cruise: P1908
File: Cycle3_03
Tow: 03
Pressure (Decibars)
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
19:49
20:30
21:00
21:30
22:00
22:30
23:00
23:30
00:00
00:30
00:49
Time
XY Plot
Pressure
Temperature
3.00
6.00
8.00
10.00
12.00
15.00
Depth Scale
MIN
0
MAX
1200
M
Autoscale
TIME Scale
MAX
5
HRS
Autoscale
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190825 204913 1000.7 32.9 524 2755.4
2 190825 210742 800.8 42.3 411 1888.2
3 190825 214130 600.1 44.1 791 3533.7
4 190825 215121 500.8 45.8 245 1075.1
5 190825 220705 400.6 46.3 386 1645.0
6 190825 221955 300.6 48.0 327 1362.0
7 190825 223744 200.4 45.4 461 2021.0
8 190825 225028 100.3 44.4 339 1496.7
9 190825 225650 49.3 43.0 168 760.3
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
STROBE OFF
Interval ms 1000
PulseWidth ms 40
Intensity % 50
Trip Count 10
Flow Cnts 160
Flow Cnts2 0
Motor Volts 13.079
Confirms 9
VOL 644.8
VOL 2 0.0
CTD Volts 14.321
CNF TIME 34.667
Modem Data 160,0,10,9,1,1211,1326,0,0,0,172
FM2 Primary
Strobe Box
STROBE
STR_Volts 17.2



Temperature
3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00
Salinity
33.00 33.10 33.20 33.30 33.40 33.50 33.60 33.70 33.80 33.90 34.00 34.10 34.20 34.30 34.40 34.50 34.60
Sigma Theta
24.20 24.40 24.60 24.80 25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00 27.20 27.40 27.60
Pressure (Decibars)
0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1000.0 1100.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50
Oxygen ml/l
95.50 96.00 96.50 97.00 97.50 98.00 98.50 99.00 99.50 100.00 100.50
Transmiss
0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60 0.65 0.70 0.75 0.80 0.85 0.90 0.95 1.00 1.05
Fluorometer
Aug 25 2019 19:49:17
Ship: R/V Atlantis
Cruise: P1908
File: Cycle3_03
Tow: 03
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 1100 M
Autoscale
Plot X-Scales
Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P1908 Date 25 Aug 2019 Haul # 18 Cycle # 3 Tow # 4

Wind Speed 10-12 (kts.) Direction 323 (°) Sea State 0-2 (ft.)

File Name: Processed Cycle3_04.PRO Raw Cycle3_04.hex

Start Time 2247 (PDT) **End** Time 0144 (PDT)

Lat 35 37.68 Lat 35.67576

Long 122 30.86 Long 122.61906

Event deploy # 20190826.1110.001 Event rec. # 20190826.1111.001

Bottom Depth 3588 (m) Console Operator S. Sommer

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor 7.06
- ✓ Strobe ON
- ✓ sliders

Frame Size 1 m^2
Net Mesh 202 µm

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?	Strobe volts
0-1000	0	2247	31.3	528	2946	1034	0	50%	5% Form.	50%	95% EtOH	✓	19.1
1000-800	1	2344	44.1	416	1916	1000	800	↓	5% Form.	↓	95% EtOH	✓	18.9
800-600	2	0002	45.4	593	2716	800	601		5% Form.		95% EtOH	✓	18.7
600-500	3	0026	46.2	310	1424	601	500		5% Form.		95% EtOH	✓	18.6
500-400	4	0038	44.6	322	1470	500	400		5% Form.		95% EtOH	✓	18.6
400-300	5	0051	44.4	402	1851	400	300		5% Form.		95% EtOH	✓	
300-200	6	0107	44	345	1615	300	200		5% Form.		95% EtOH	✓	18.4
200-100	7	0120	46.4	308	1364	200	100		5% Form.		95% EtOH	✓	18.4
100-50	8	0131	35.1	196	1042	100	49		5% Form.		95% EtOH	✓	
50-0	9	0139		66	401	49	0	↓	5% Form.	↓	95% EtOH		
	Closed	0144											

Surface Readings:

Pressure (m)	1.3
Temp. (°C)	16.38
Salinity (‰)	33.41
O_2 (ml/l)	5.852
Fluoresc. (v)	0.3
BeamC (/m)	0.122
CTD/M volts.(v)	14.28 / 13.46
wire out (m)	0
Time (PDT)	2247

At Depth Readings:

Pressure (m)	1034
Temp. (°C)	3.81
Salinity (‰)	34.46
O_2 (ml/l)	0.435
Fluoresc. (v)	0.1
BeamC (/m)	-0.015
CTD/M volts.(v)	14.27 / 13.77
wire out (m)	1863
Time (PDT)	2343

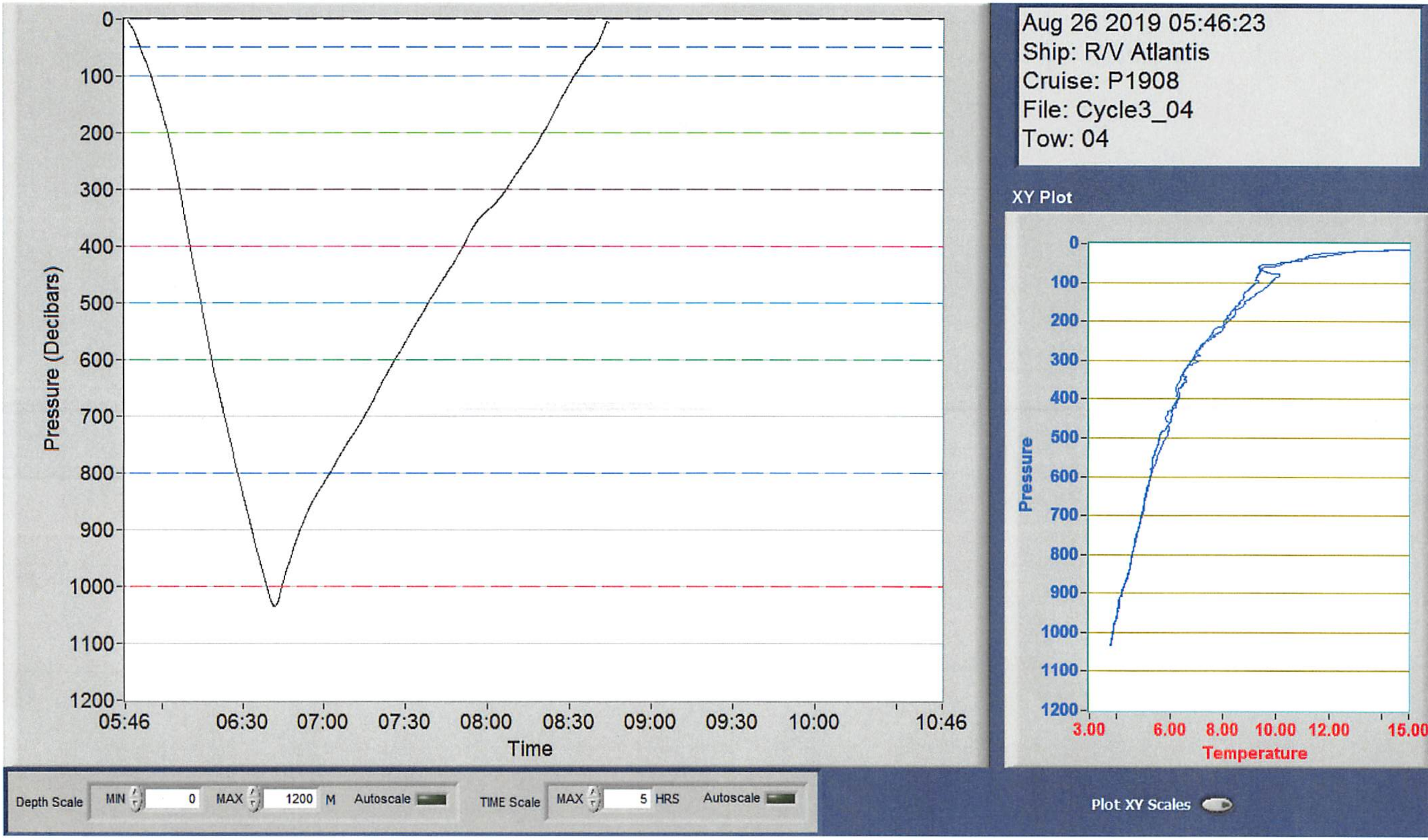
Notes: down @ 40 mpm

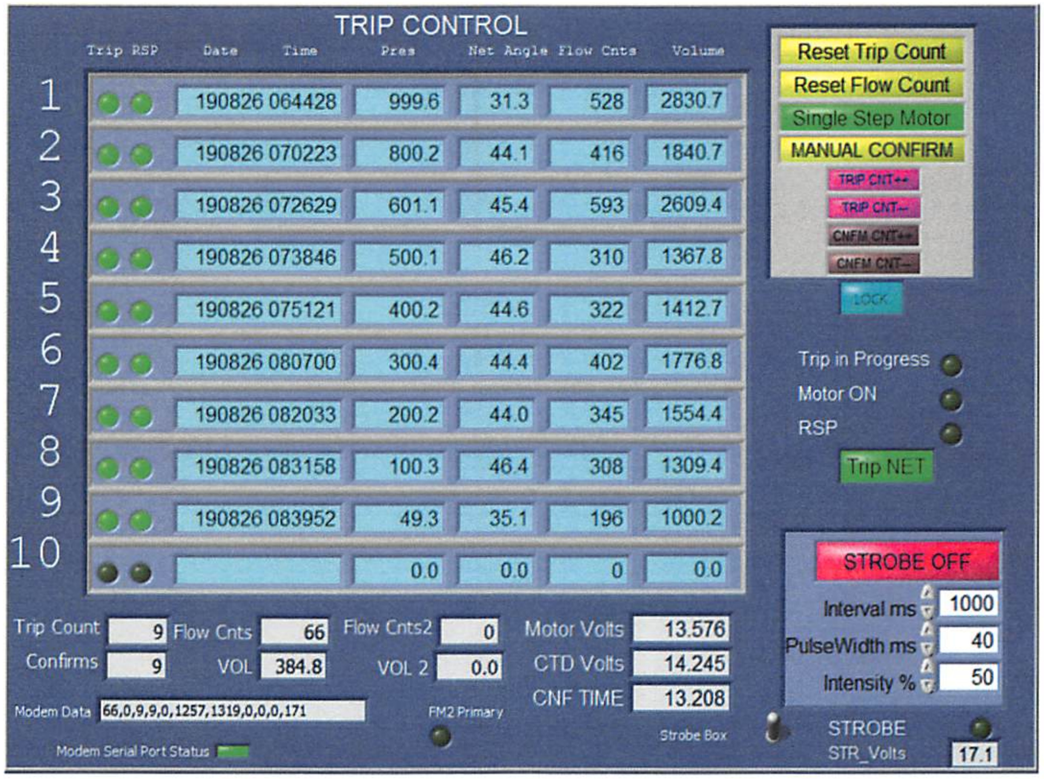
Strobes on for ascent ~3-5 min

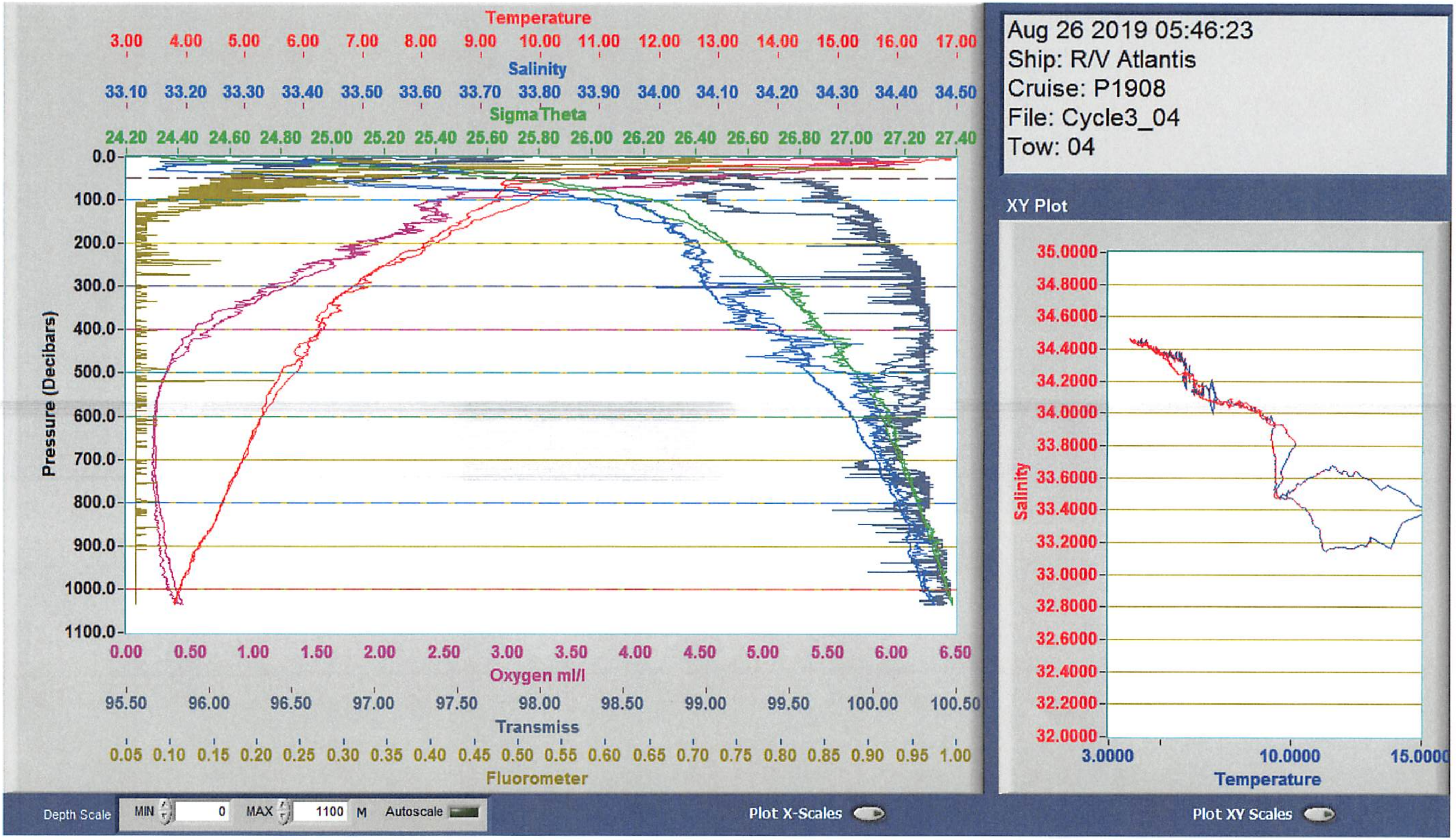
Net held @ ~2m while strobes turned off - initial strobe off command turned lights on solid; had to shut down and restart LVpki to shut down strobes.

Strobe Parameters

Time on/off	2343
Depths on	1034-
Interval (ms)	1000
Plse wdth (m)	40
Intensity (%)	50
Strobe volts	19.1 @ on


Aug 26 2019 05:46:23
Ship: R/V Atlantis
Cruise: P1908
File: Cycle3_04
Tow: 04
Pressure (Decibars)
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
05:46
06:30
07:00
07:30
08:00
08:30
09:00
09:30
10:00
10:46
Time
XY Plot
Pressure
Temperature
3.00
6.00
8.00
10.00
12.00
15.00
Depth Scale
MIN 0
MAX 1200 M
Autoscale
TIME Scale
MAX 5 HRS
Autoscale
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190826 064428 999.6 31.3 528 2830.7
2 190826 070223 800.2 44.1 416 1840.7
3 190826 072629 601.1 45.4 593 2609.4
4 190826 073846 500.1 46.2 310 1367.8
5 190826 075121 400.2 44.6 322 1412.7
6 190826 080700 300.4 44.4 402 1776.8
7 190826 082033 200.2 44.0 345 1554.4
8 190826 083158 100.3 46.4 308 1309.4
9 190826 083952 49.3 35.1 196 1000.2
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
TRIP CNT++
TRIP CNT--
CNFM CNT++
CNFM CNT--
LOCK
Trip in Progress
Motor ON
RSP
Trip NET
STROBE OFF
Interval ms 1000
PulseWidth ms 40
Intensity % 50
Trip Count 9
Flow Cnts 66
Flow Cnts2 0
Motor Volts 13.576
Confirms 9
VOL 384.8
VOL 2 0.0
CTD Volts 14.245
CNF TIME 13.208
Modem Data 66,0,9,9,0,1257,1319,0,0,0,171
FM2 Primary
Strobe Box
STROBE
STR_Volts 17.1
Modem Serial Port Status


Temperature
3.00 4.00 5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00
Salinity
33.10 33.20 33.30 33.40 33.50 33.60 33.70 33.80 33.90 34.00 34.10 34.20 34.30 34.40 34.50
Sigma Theta
24.20 24.40 24.60 24.80 25.00 25.20 25.40 25.60 25.80 26.00 26.20 26.40 26.60 26.80 27.00 27.20 27.40
Pressure (Decibars)
0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1000.0 1100.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50
Oxygen ml/l
95.50 96.00 96.50 97.00 97.50 98.00 98.50 99.00 99.50 100.00 100.50
Transmiss
0.05 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.55 0.60 0.65 0.70 0.75 0.80 0.85 0.90 0.95 1.00
Fluorometer
Aug 26 2019 05:46:23
Ship: R/V Atlantis
Cruise: P1908
File: Cycle3_04
Tow: 04
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 1100 M
Autoscale
Plot X-Scales
Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P1908 Date 30 Aug 2019 Haul # 19 Cycle # 4 Tow # 1

Wind Speed 9 (kts.) Direction 309 (°) Sea State 2 (ft.)

File Name: Processed Cycle4_001.PRO Raw Cycle 4_01.hex

Start Time 1305 (PDT) **End** Time 1520 (PDT)

Lat 34° 53.05N Lat 34° 55.32' N

Long 124° 47.21W Long 124° 52.31' W

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- X Strobe OFF
- X sliders RIP

Event deploy # 20190831.0942.001 Event rec. # 20190831.0943.001

Frame Size 1 m²

Net Mesh 202 µm

Bottom Depth 4408 (m) Console Operator L. Lilly

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split 50	Fixative	Split 50	Fixative	Net resp?
	0	1305	45.6	779	3529	487	0	✓	5% Form.	✓	95% EtOH	✓
450-350	1	1348	47.9	634	2764	452	351	✓	5% Form.	✓	95% EtOH	✓
350-300	2	1412	45.6	321	1448	351	301	✓	5% Form.	✓	95% EtOH	✓
300-250	3	1424	47.2	247	1085	301	252	✓	5% Form.	✓	95% EtOH	✓
250-200	4	1433	46.2	268	1198	252	201	✓	5% Form.	✓	95% EtOH	✓
200-150	5	1443	45.0	272	1237	201	151	✓	5% Form.	✓	95% EtOH	✓
150-100	6	1453	43.2	250	1168	151	101	✓	5% Form.	✓	95% EtOH	✓
100-50	7	1503	42.3	218	1038	101	50	✓	5% Form.	✓	95% EtOH	✓
50-25	8	1512	43.4	96	451	50	25	✓	5% Form.	✓	95% EtOH	✓
25-0	9	1516		122	443	25	0		5% Form.		95% EtOH	
	Closed	1520										

Surface Readings:

Pressure (m)	2.1
Temp. (°C)	20.88
Salinity (‰)	33.15
O_2 (ml/l)	5.008
Fluoresc. (v)	0.0
BeamC (/m)	6.059
CTD/M volts.(v)	13.25 / CTD: 14.28
wire out (m)	0
Time (PDT)	1305

Notes: Only SeaPoint fluorometer attached (no WET Labs)

(*) Flowmeter calibration changed to 7/29/19 numbers starting with this cast

* No speed through water readings during tow, so we based speed on SOG + net speed

1403 – CPA w/ drift array

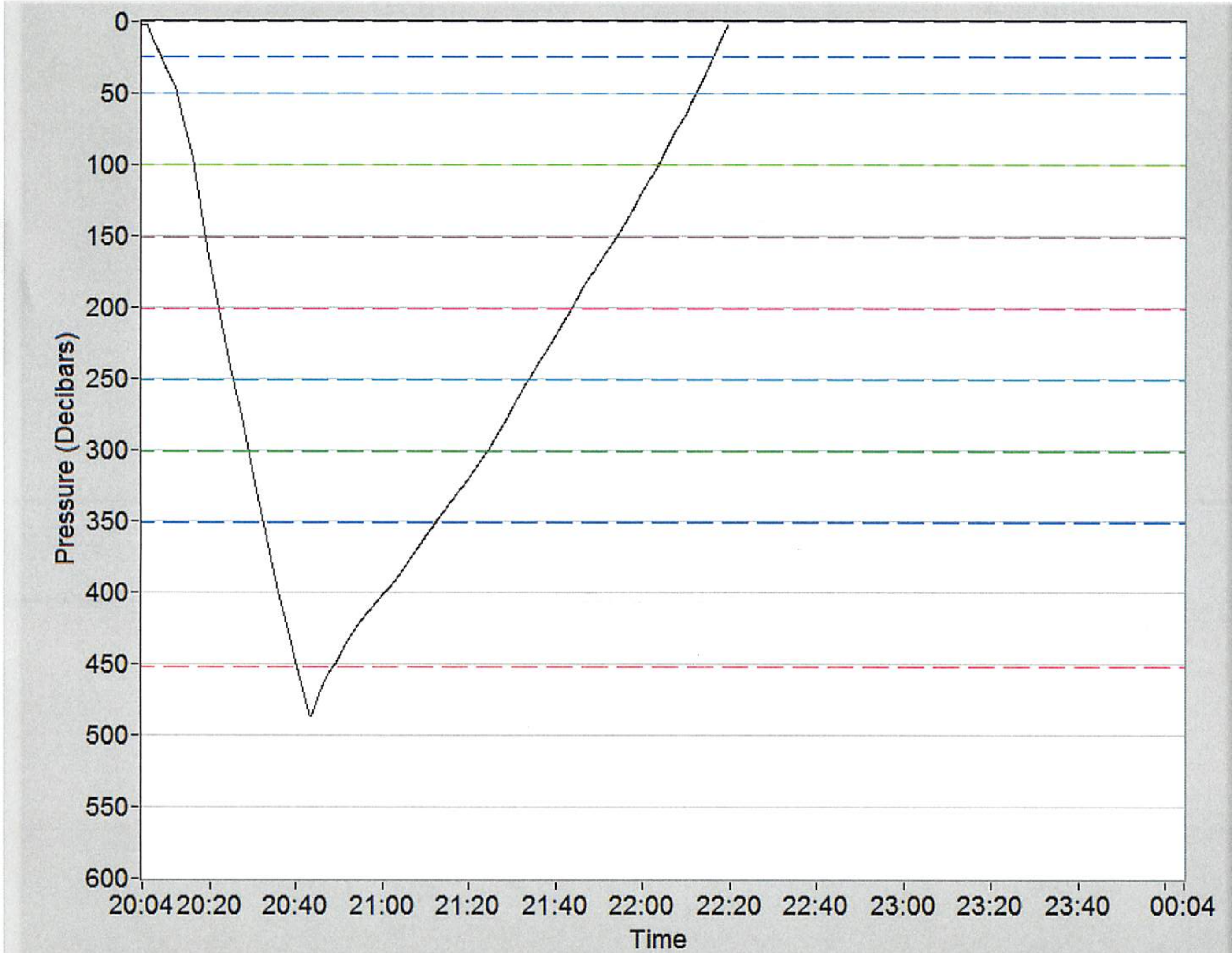
At Depth Readings:

Pressure (m)	487
Temp. (°C)	5.78
Salinity (‰)	34.21
O_2 (ml/l)	0.418
Fluoresc. (v)	0.1
BeamC (/m)	-0.014
CTD/M volts.(v)	13.78/CTD 14.29
wire out (m)	981
Time (PDT)	1344

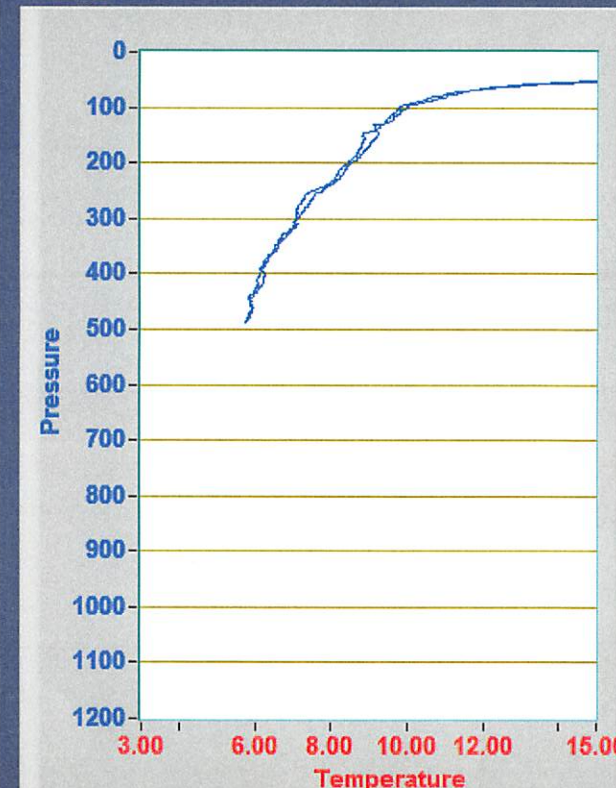
Strobe Parameters OFF

Time on/off	
Depths on	
Interval (ms)	
Plse wdth (m)	
Intensity (%)	
Strobe volts	

Aug 30 2019 20:04:01
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_01
Tow: 01



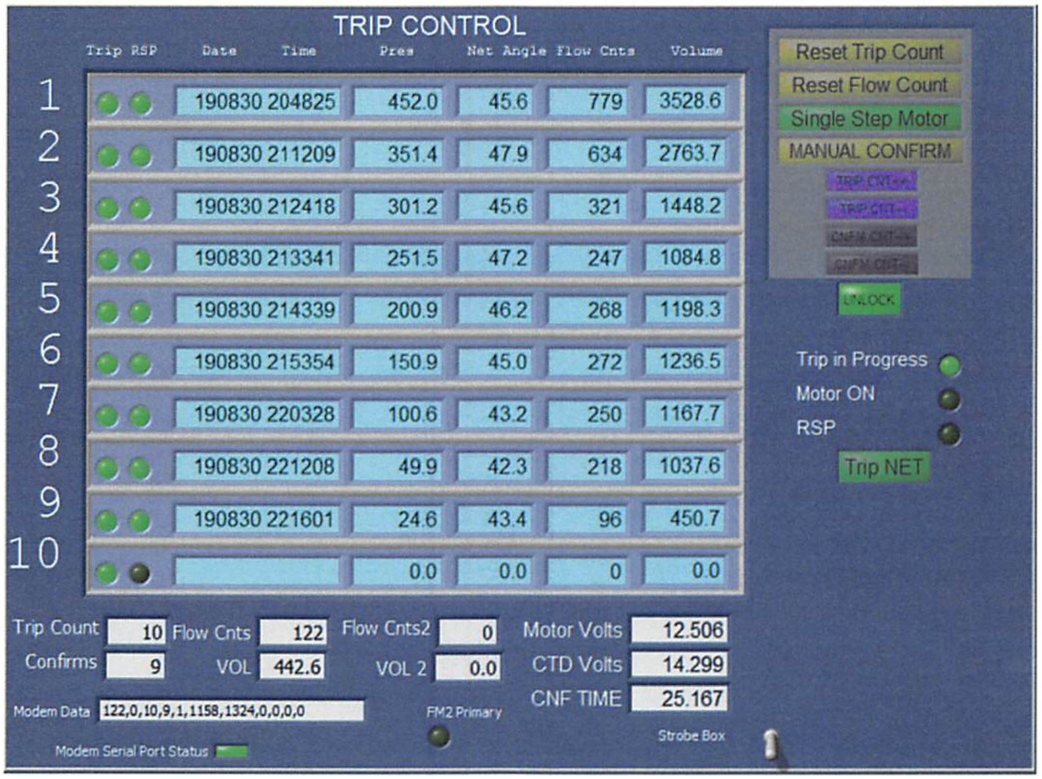
XY Plot

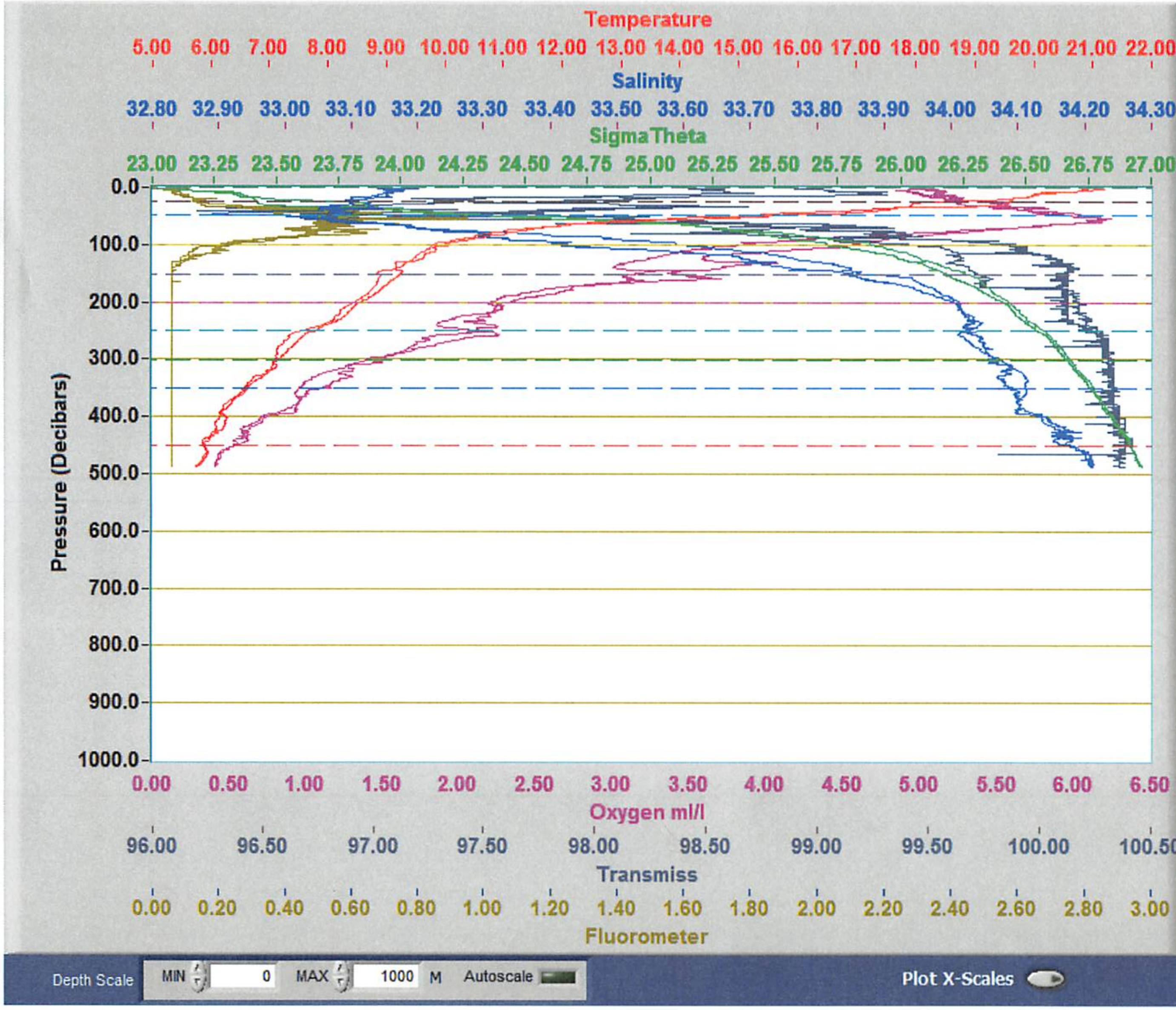


Depth Scale MIN 0 MAX 600 M Autoscale

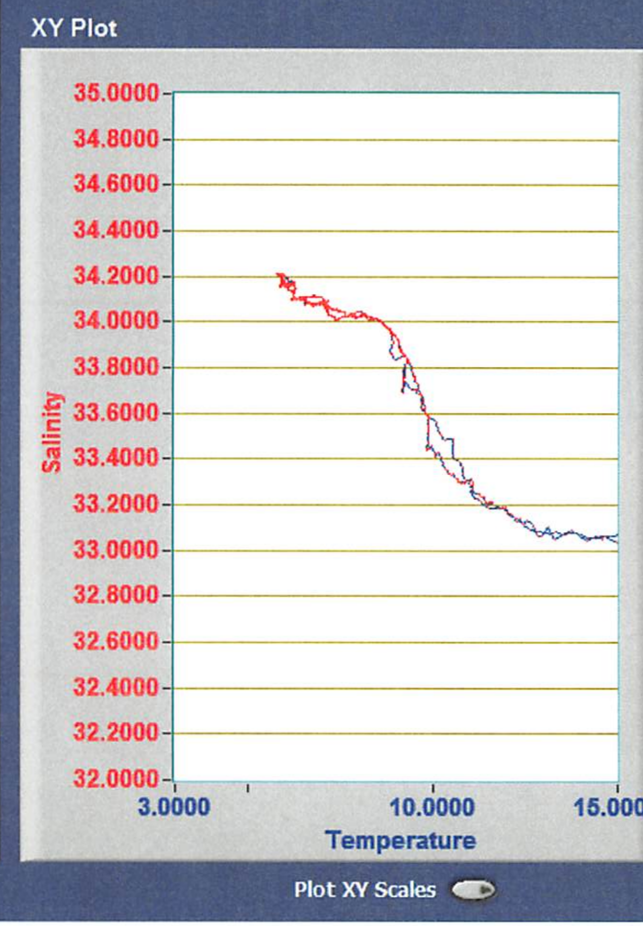
TIME Scale MAX 4 HRS Autoscale

Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190830 204825 452.0 45.6 779 3528.6
2 190830 211209 351.4 47.9 634 2763.7
3 190830 212418 301.2 45.6 321 1448.2
4 190830 213341 251.5 47.2 247 1084.8
5 190830 214339 200.9 46.2 268 1198.3
6 190830 215354 150.9 45.0 272 1236.5
7 190830 220328 100.6 43.2 250 1167.7
8 190830 221208 49.9 42.3 218 1037.6
9 190830 221601 24.6 43.4 96 450.7
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
Trip in Progress
Motor ON
RSP
Trip NET
Trip Count 10
Flow Cnts 122
Flow Cnts2 0
Motor Volts 12.506
Confirms 9
VOL 442.6
VOL 2 0.0
CTD Volts 14.299
CNF TIME 25.167
Modem Data 122,0,10,9,1,1158,1324,0,0,0,0
FM2 Primary
Strobe Box
Modem Serial Port Status



Aug 30 2019 20:04:01
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_01
Tow: 01



MOCNESS Data Sheet

Cruise CCE-P 1908 Date 30 Aug 2019 Haul # 20 Cycle # 4 Tow # 2

Wind Speed 8-12 (kts.) Direction 335 (°) Sea State 1-2 (ft.)

File Name: Processed ~~[illegible]~~ Raw Cycle4_02.hex

Start Time 2300 (PDT) **End** Time 0041 (PDT)

Lat 34 52.97 Lat 34.91253

Long 124 48.982 Long 124.87988

Event deploy # 20190831_0940.001 Event rec. # 20190831_0941_001

Bottom Depth 4416 (m) Console Operator S. Sommer

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor 6.06
- ✗ Strobe OFF
- ✓ sliders

Frame Size 1 m^2
Net Mesh 202 µm

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?
	0	2300	40.4	714	3504	470	0	50%	5% Form.	50%	95% EtOH	✓
450-350	1	2343	45.6	380	1717	449	351		5% Form.		95% EtOH	✓
350-300	2	2358	46	180	805	351	301		5% Form.		95% EtOH	✓
300-250	3	0005	45.4	182	826	301	250		5% Form.		95% EtOH	✓
250-200	4	0012	44.2	168	772	250	200		5% Form.		95% EtOH	✓
200-150	5	0018	44.8	154	703	200	150		5% Form.		95% EtOH	✓
150-100	6	0024	44	162	750	150	100		5% Form.		95% EtOH	✓
100-50	7	0030	41.7	139	671	100	51		5% Form.		95% EtOH	✓
50-25	8	0036	43.1	66	311	51	25		5% Form.		95% EtOH	✓
25-0	9	0039		64	351	25	0	↓	5% Form.	↓	95% EtOH	
	Closed	0041										

Surface Readings:

Pressure (m)	1.6
Temp. (°C)	20.95
Salinity (‰)	33.16
O_2 (ml/l)	5.0
Fluoresc. (v)	0.2
BeamC (/m)	0.045
CTD/M volts.(v)	14.29 / 13.62
wire out (m)	0
Time (PDT)	2300

At Depth Readings:

Pressure (m)	470
Temp. (°C)	
Salinity (‰)	34.203
O_2 (ml/l)	0.464
Fluoresc. (v)	0.1
BeamC (/m)	-0.012
CTD/M volts.(v)	14.30 / 13.79
wire out (m)	~900 ??
Time (PDT)	

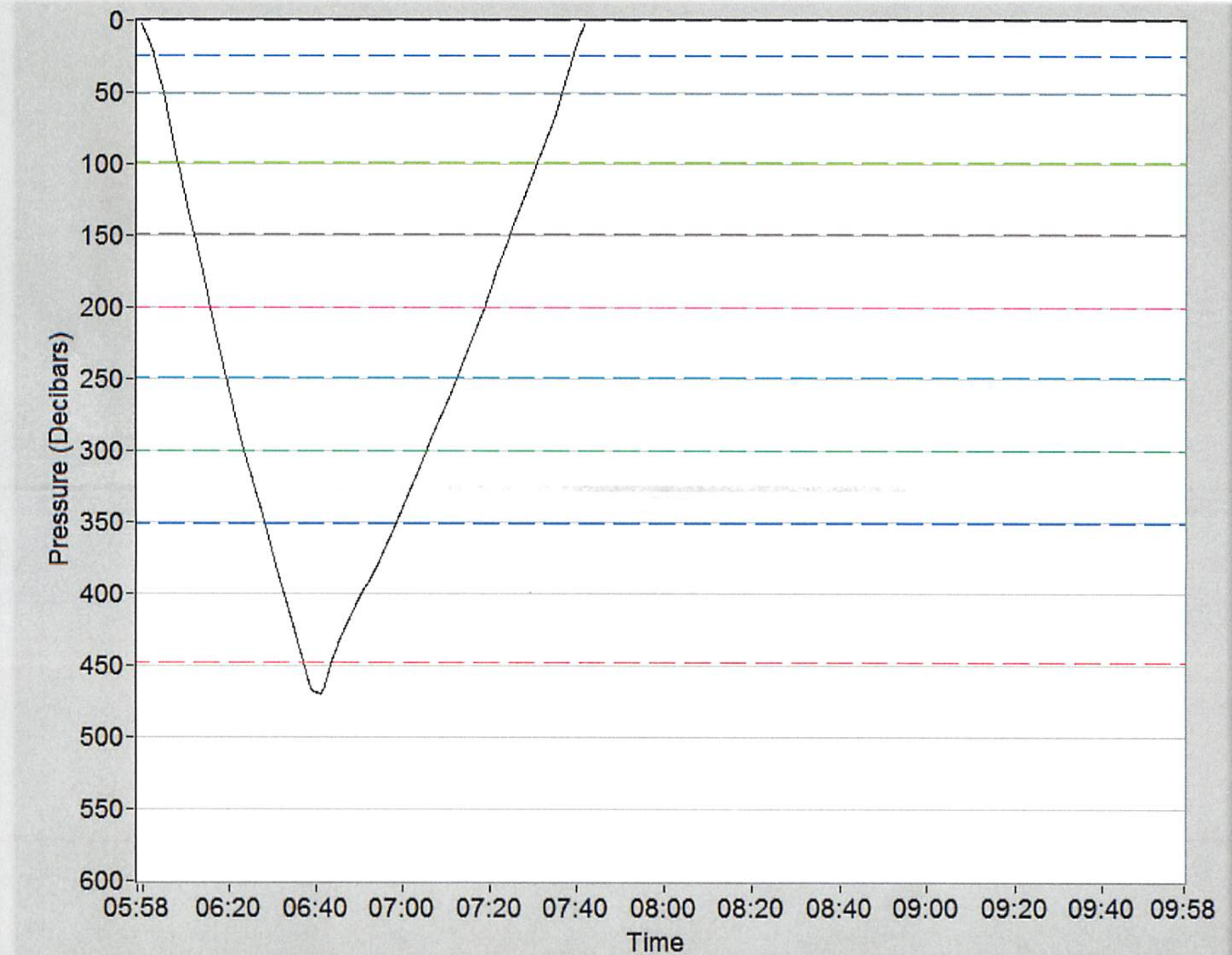
Notes: spikes in salinity near surface - maybe pyros stuck in sensor.

Cable found loose after recovery - salinity and temp spikes due to cable; not real.

Pyros mostly in net 9. none below net 7, only a few in n7.

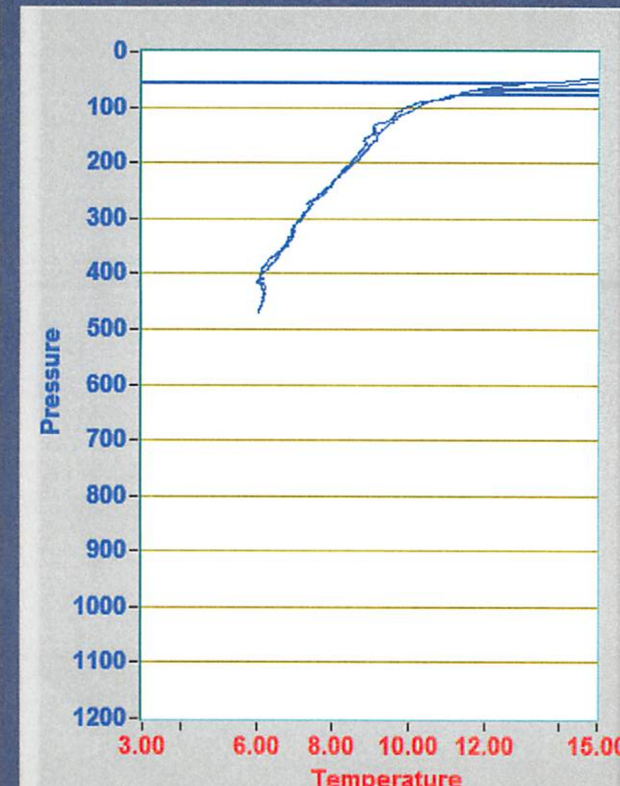
Strobe Parameters

Time on/off	
Depths on	
Interval (ms)	
Plse wdth (m)	
Intensity (%)	
Strobe volts	



Aug 31 2019 05:58:32
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_02
Tow: 02

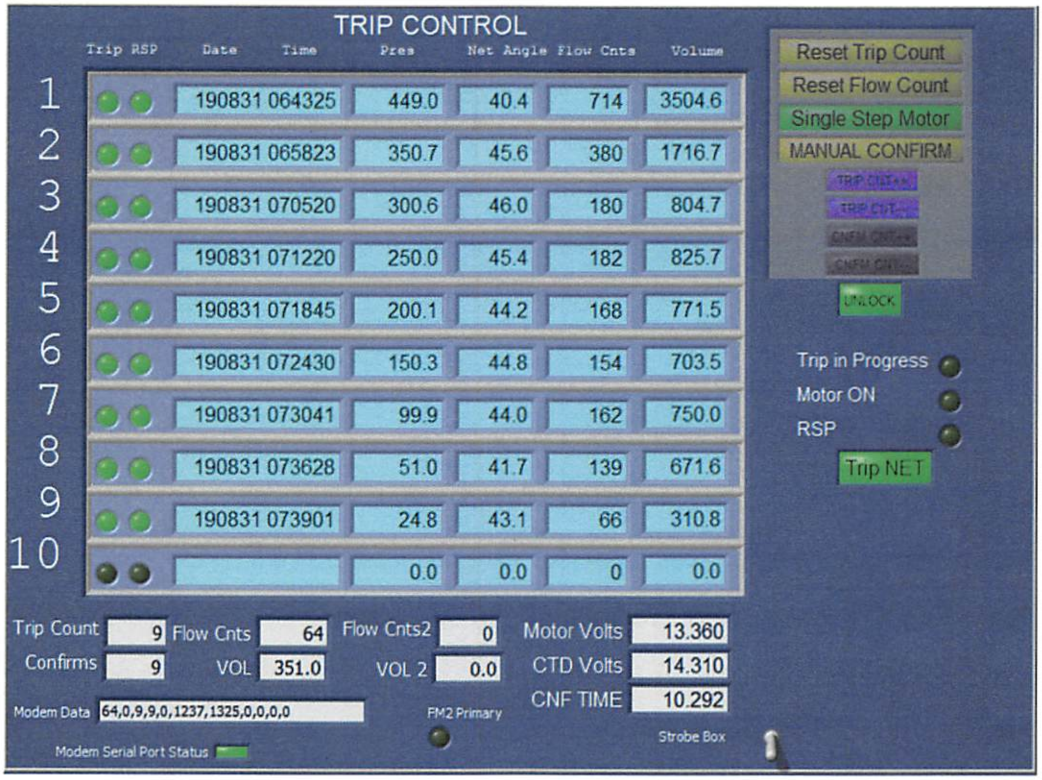
XY Plot

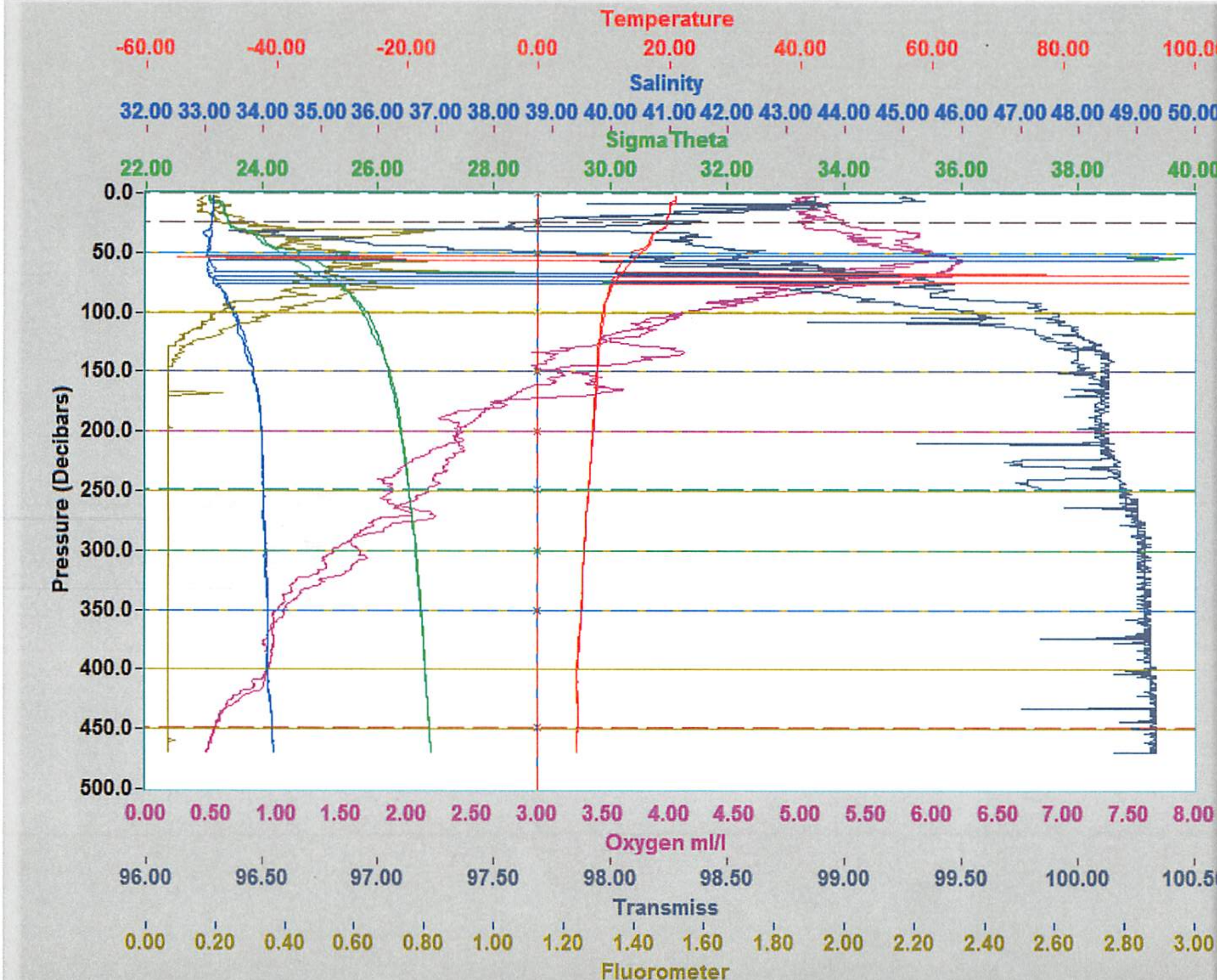


Depth Scale MIN 0 MAX 600 M Autoscale

TIME Scale MAX 4 HRS Autoscale

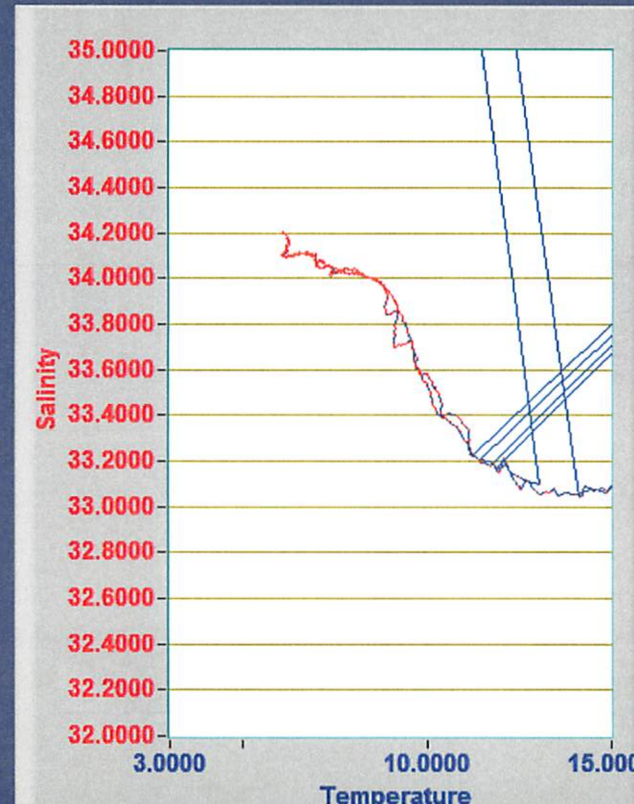
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190831 064325 449.0 40.4 714 3504.6
2 190831 065823 350.7 45.6 380 1716.7
3 190831 070520 300.6 46.0 180 804.7
4 190831 071220 250.0 45.4 182 825.7
5 190831 071845 200.1 44.2 168 771.5
6 190831 072430 150.3 44.8 154 703.5
7 190831 073041 99.9 44.0 162 750.0
8 190831 073628 51.0 41.7 139 671.6
9 190831 073901 24.8 43.1 66 310.8
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
Trip Count 9
Confirms 9
Flow Cnts 64
VOL 351.0
Flow Cnts2 0
VOL 2 0.0
Motor Volts 13.360
CTD Volts 14.310
CNF TIME 10.292
Modem Data 64,0,9,9,0,1237,1325,0,0,0,0
FM2 Primary
Strobe Box
Modem Serial Port Status



Aug 31 2019 05:58:32
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_02
Tow: 02

XY Plot



Depth Scale MIN 0 MAX 500 M Autoscale

Plot X-Scales

Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 31 Aug 2019 Haul # 21 Cycle # 4 Tow # 3

Wind Speed 7 (kts.) Direction 309 (°) Sea State 2 (ft.)

File Name: Processed Cycle4_04.hex Raw Cycle4_03.hex

Start Time 1256 (PDT) **End** Time 1436 (PDT)

Lat 34° 52.25N Lat 34° 54.02' N

Long 124° 52.18W Long 124° 55.86' W

Event deploy # 20190901-1047.001 Event rec. # 20190901.1048.001

Bottom Depth 4439 (m) Console Operator L. Lilly

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor
- X Strobe OFF

X sliders RIP !! - (we never use the reds)

Frame Size 1 m^2
Net Mesh 202 μm

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?
0 - bottom	0	1256	36.7	530	2731	488	0	100%	5% Form.	X 0%	95% EtOH	✓
450-350	1	1332	45.6	399	1802	451	351	100	5% Form.	0%	95% EtOH	✓
350-300	2	1349	44.4	210	970	351	300	100	5% Form.	0%	95% EtOH	✓
300-250	3	1358	45.2	168	759	300	250	100	5% Form.	0	95% EtOH	✓
250-200	4	1404	46.1	174	774	250	200	100	5% Form.	0	95% EtOH	✓
200-150	5	1411	44.1	180	828	200	151	100	5% Form.	0	95% EtOH	✓
150-100	6	1418	42.5	168	798	151	100	100	5% Form.	0	95% EtOH	✓
100-50	7	1424	40.5	128	631	100	49	100	5% Form.	0	95% EtOH	✓
50-25	8	1430	40.5	48	238.5	49	24	100	5% Form.	0	95% EtOH	✓
25-0	9	1433		79	222	24	0	100	5% Form.	0	95% EtOH	✓
	Closed	1436										

Surface Readings:

Pressure (m)	1.9
Temp. (°C)	20.98
Salinity (‰)	33.16
O_2 (ml/l)	4.94
Fluoresc. (v)	0.0
BeamC (/m)	0.023
CTD/M volts.(v)	13.36 / CTD 14.29
wire out (m)	0
Time (PDT)	1256

At Depth Readings:

Pressure (m)	488
Temp. (°C)	5.80
Salinity (‰)	34.23
O_2 (ml/l)	0.368
Fluoresc. (v)	0.1
BeamC (/m)	-0.013
CTD/M volts.(v)	13.78 / CTD 14.28
wire out (m)	810
Time (PDT)	1328

Notes: No Strobe
only Seapoint fluor.

Pyro-mania! Net 7
All other nets = no mania

Winch speed up:
- 5 m/min - 487 → 370 m
- 10 m/min - 370 → 300?
- 15 m/min - 300? → surface

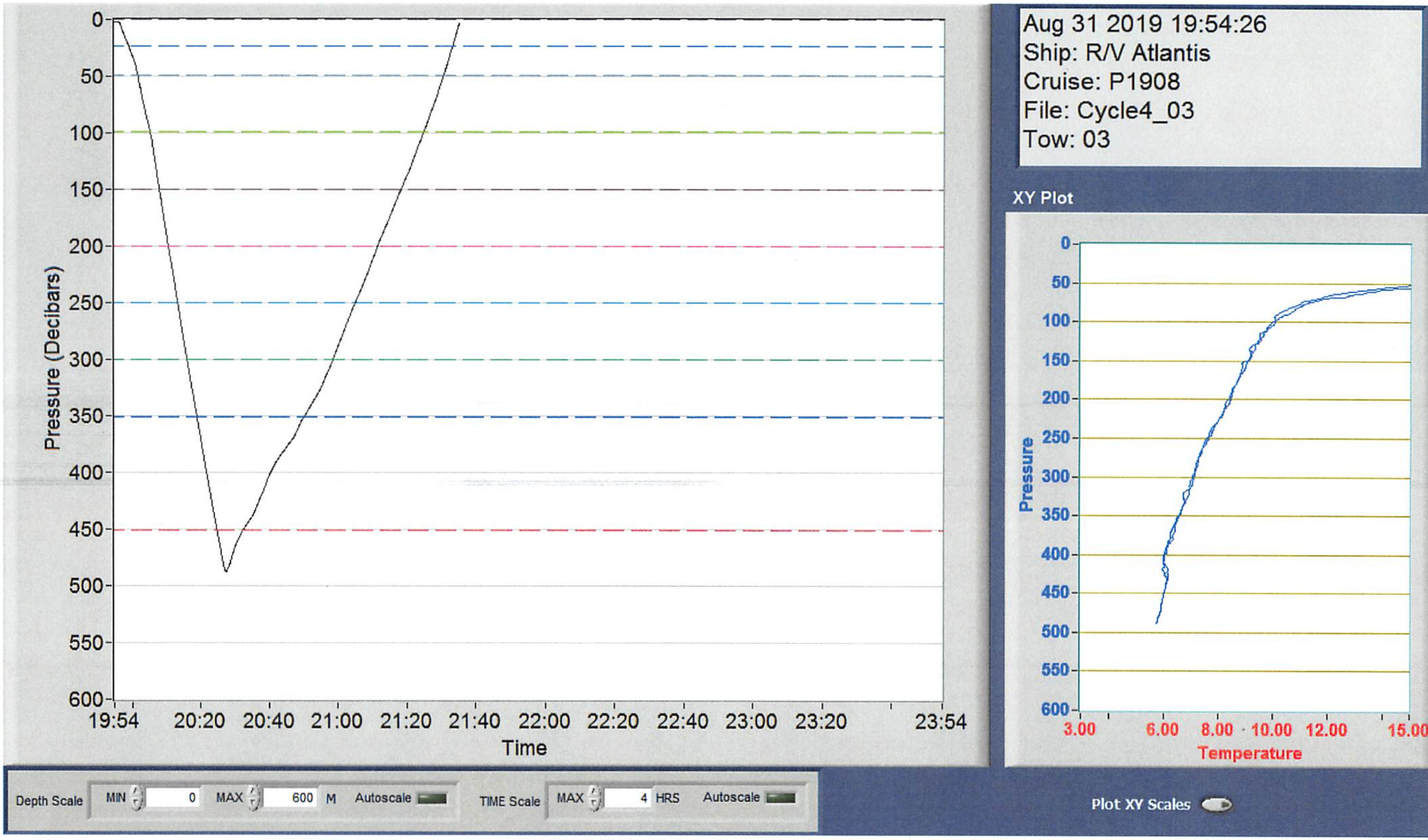
. Net speed ≈ 3 kts (too fast?) → but variable down to 1.9 kts
came down to ~2.5 kts for most of haulback
angle = very close to 45°

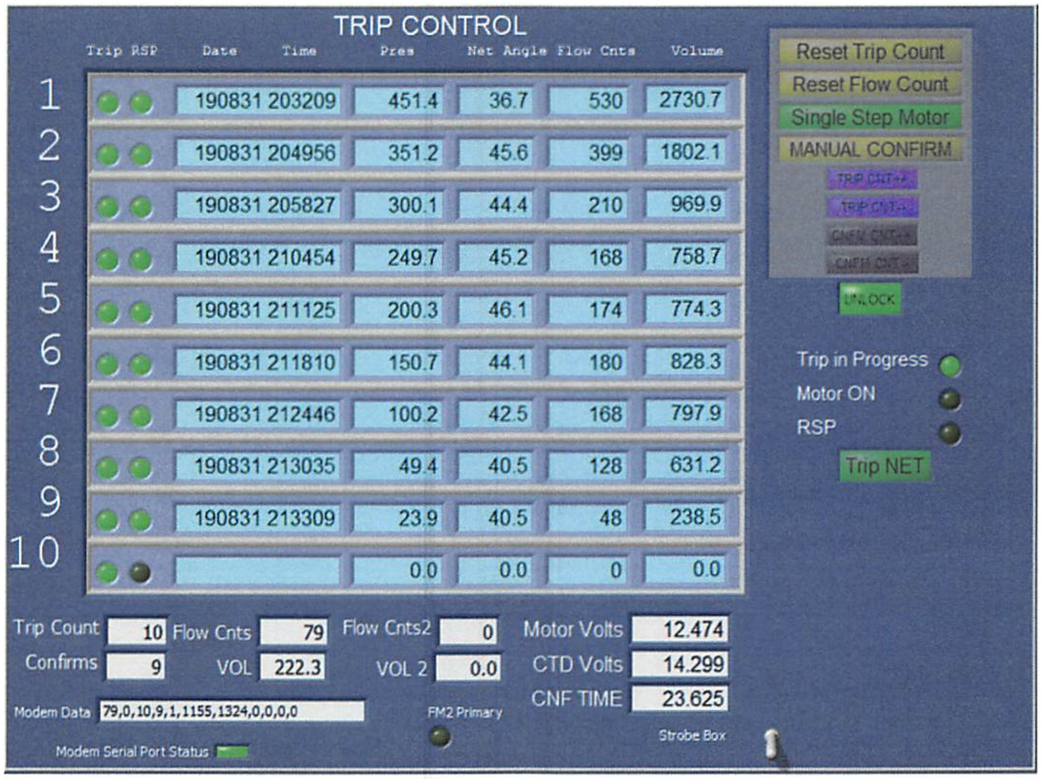
1409 - CPA w/ drifter

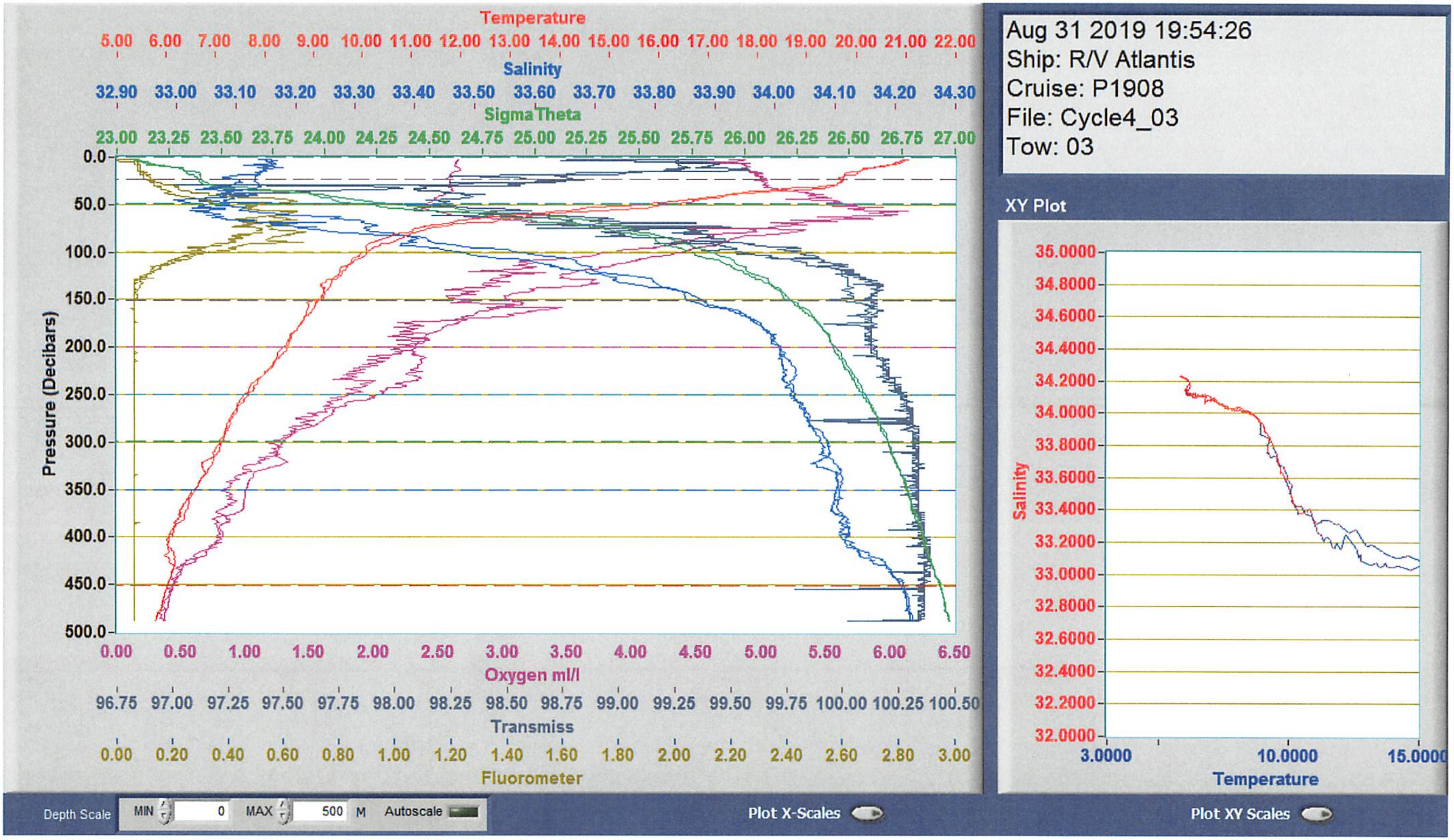
-Angle got a little shallow from ~60 m - surface, but I didn't change speed (too late)

Strobe Parameters

Time on/off	OFF for cast
Depths on	
Interval (ms)	
Plse wdth (m)	
Intensity (%)	
Strobe volts	


Aug 31 2019 19:54:26
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_03
Tow: 03
Pressure (Decibars)
0
50
100
150
200
250
300
350
400
450
500
550
600
19:54
20:20
20:40
21:00
21:20
21:40
22:00
22:20
22:40
23:00
23:20
23:54
Time
XY Plot
Pressure
Temperature
3.00
6.00
8.00
10.00
12.00
15.00
Depth Scale
MIN
0
MAX
600
M
Autoscale
TIME Scale
MAX
4
HRS
Autoscale
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190831 203209 451.4 36.7 530 2730.7
2 190831 204956 351.2 45.6 399 1802.1
3 190831 205827 300.1 44.4 210 969.9
4 190831 210454 249.7 45.2 168 758.7
5 190831 211125 200.3 46.1 174 774.3
6 190831 211810 150.7 44.1 180 828.3
7 190831 212446 100.2 42.5 168 797.9
8 190831 213035 49.4 40.5 128 631.2
9 190831 213309 23.9 40.5 48 238.5
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
Trip Count 10
Flow Cnts 79
Flow Cnts2 0
Motor Volts 12.474
Confirms 9
VOL 222.3
VOL 2 0.0
CTD Volts 14.299
CNF TIME 23.625
Modem Data 79,0,10,9,1,1155,1324,0,0,0,0
FM2 Primary
Strobe Box
Modem Serial Port Status



Temperature
5.00 6.00 7.00 8.00 9.00 10.00 11.00 12.00 13.00 14.00 15.00 16.00 17.00 18.00 19.00 20.00 21.00 22.00
Salinity
32.90 33.00 33.10 33.20 33.30 33.40 33.50 33.60 33.70 33.80 33.90 34.00 34.10 34.20 34.30
Sigma Theta
23.00 23.25 23.50 23.75 24.00 24.25 24.50 24.75 25.00 25.25 25.50 25.75 26.00 26.25 26.50 26.75 27.00
Pressure (Decibars)
0.0 50.0 100.0 150.0 200.0 250.0 300.0 350.0 400.0 450.0 500.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50
Oxygen ml/l
96.75 97.00 97.25 97.50 97.75 98.00 98.25 98.50 98.75 99.00 99.25 99.50 99.75 100.00 100.25 100.50
Transmiss
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00
Fluorometer
Aug 31 2019 19:54:26
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_03
Tow: 03
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 500 M
Autoscale
Plot X-Scales
Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 31 Aug 2019 Haul # 22 Cycle # 4 Tow # 4

Wind Speed 10-12 (kts.) Direction 337 (°) Sea State 1-3 (ft.)

File Name: Processed Cycle4_04.PRO Raw Cycle4_04.hex

Start Time 2257 (PDT) **End** Time 0038 (PDT)

Lat 34 52.054 Lat 34.89897

Long 124° 54.283 Long 124.96638

Event deploy # 20190901.1049.001 Event rec. # 20190901.1051.001

Bottom Depth 4443 (m) Console Operator S. Sommer

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer
- ✓ Oxygen Sensor 6.41
- X Strobe OFF

X sliders

Frame Size 1 m^2
Net Mesh 202 µm

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?	
	0	2257	41.0	715	3565	475	0	100%	5% Form.		95% EtOH	✓	
450-350	1	2341	45.2	313	1414	450	350		5% Form.		95% EtOH	✓	
350-300	2	2353	45.7	163	731	350	300		5% Form.		95% EtOH	✓	
300-250	3	2359	45.9	184	823	300	250		5% Form.		95% EtOH	✓	
250-200	4	0006	45.4	180	810	250	201		5% Form.		95% EtOH	✓	
200-150	5	0013	45	190	875	201	150		5% Form.		95% EtOH		no net response
150-100	6	0021	45.3	348	1581	150	100		5% Form.		95% EtOH	✓	
100-50	7	0026	43.6	158	736	100	51		5% Form.		95% EtOH	✓	
50-25	8	0032	44.1	76	353	51	25		5% Form.		95% EtOH	✓	
25-0	9	0035		65	311	25	0		5% Form.		95% EtOH		
	Closed	0038											

Surface Readings:

Pressure (m)	1.8
Temp. (°C)	20.9
Salinity (‰)	33.16
O_2 (ml/l)	4.89
Fluoresc. (v)	0.2
BeamC (/m)	0.03
CTD volts (v)	14.3
M volts (v)	13.68
wire out (m)	0
Time (PDT)	2257

At Depth Readings:

Pressure (m)	475
Temp. (°C)	6.005
Salinity (‰)	33.888
O_2 (ml/l)	0.420
Fluoresc. (v)	0.1
BeamC (/m)	-0.013
CTD volts (v)	14.3
M volts (v)	13.8
wire out (m)	892
Time (PDT)	2339

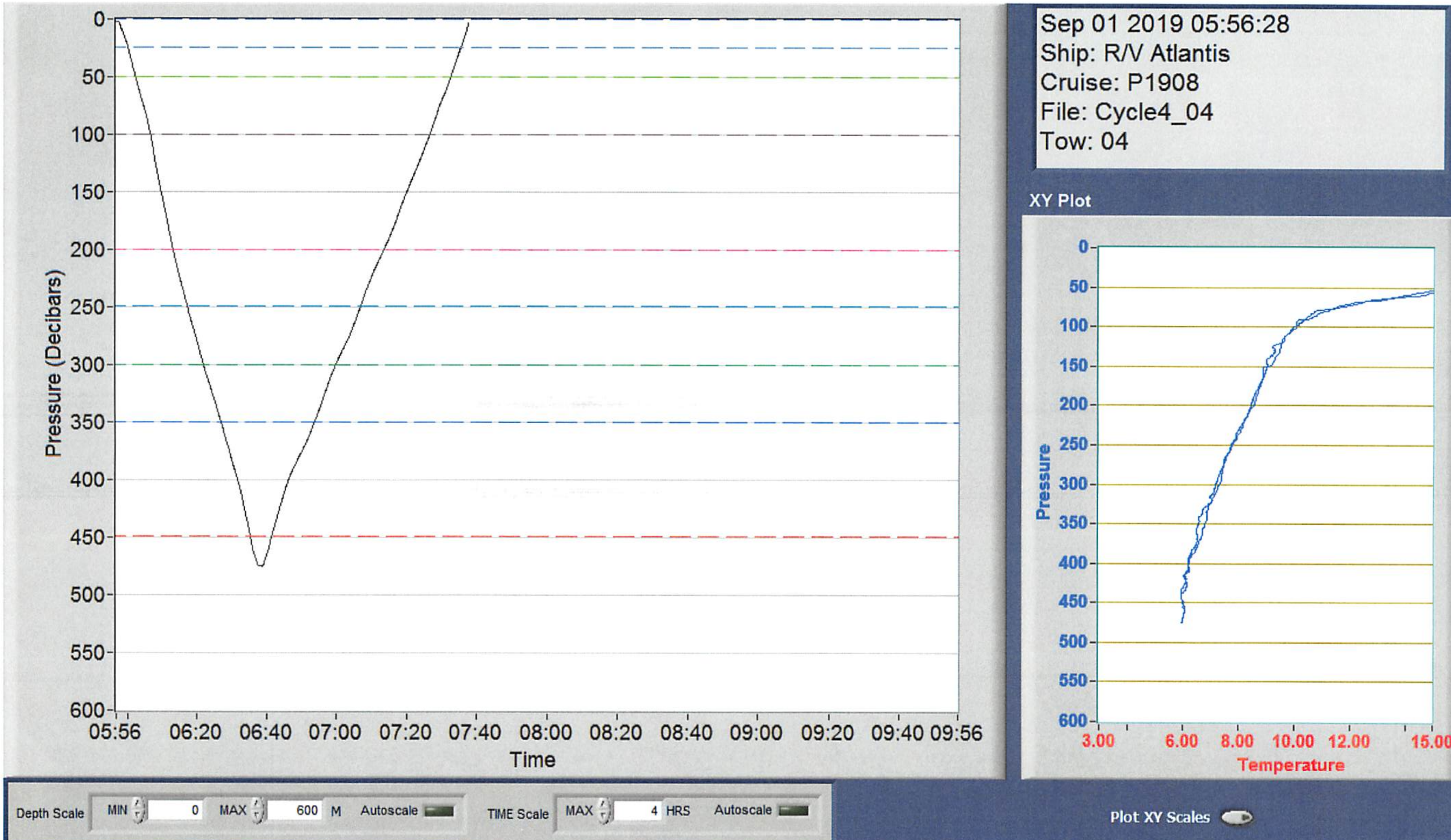
Notes: Test file saved as cycle2_42 as cycle2_04 ~~as~~ already existed

Seapoint → fluor } both fluorometers on Moc
Wetlabs → fluor2 } now - two channels.

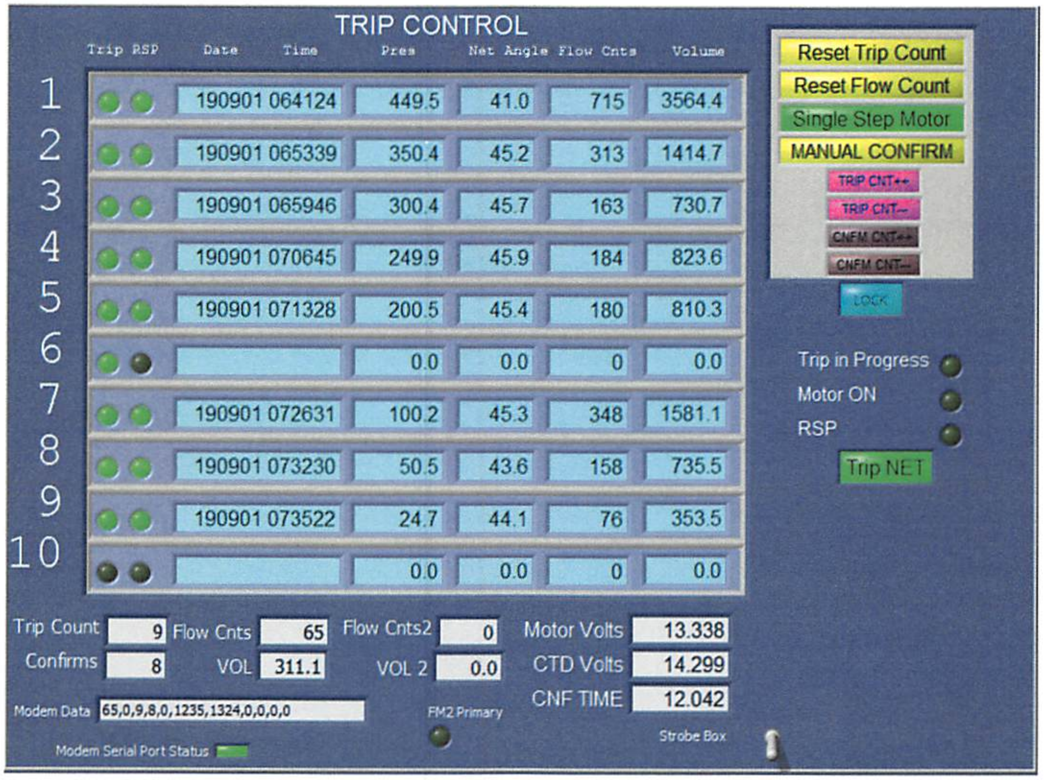
Using _2F format file

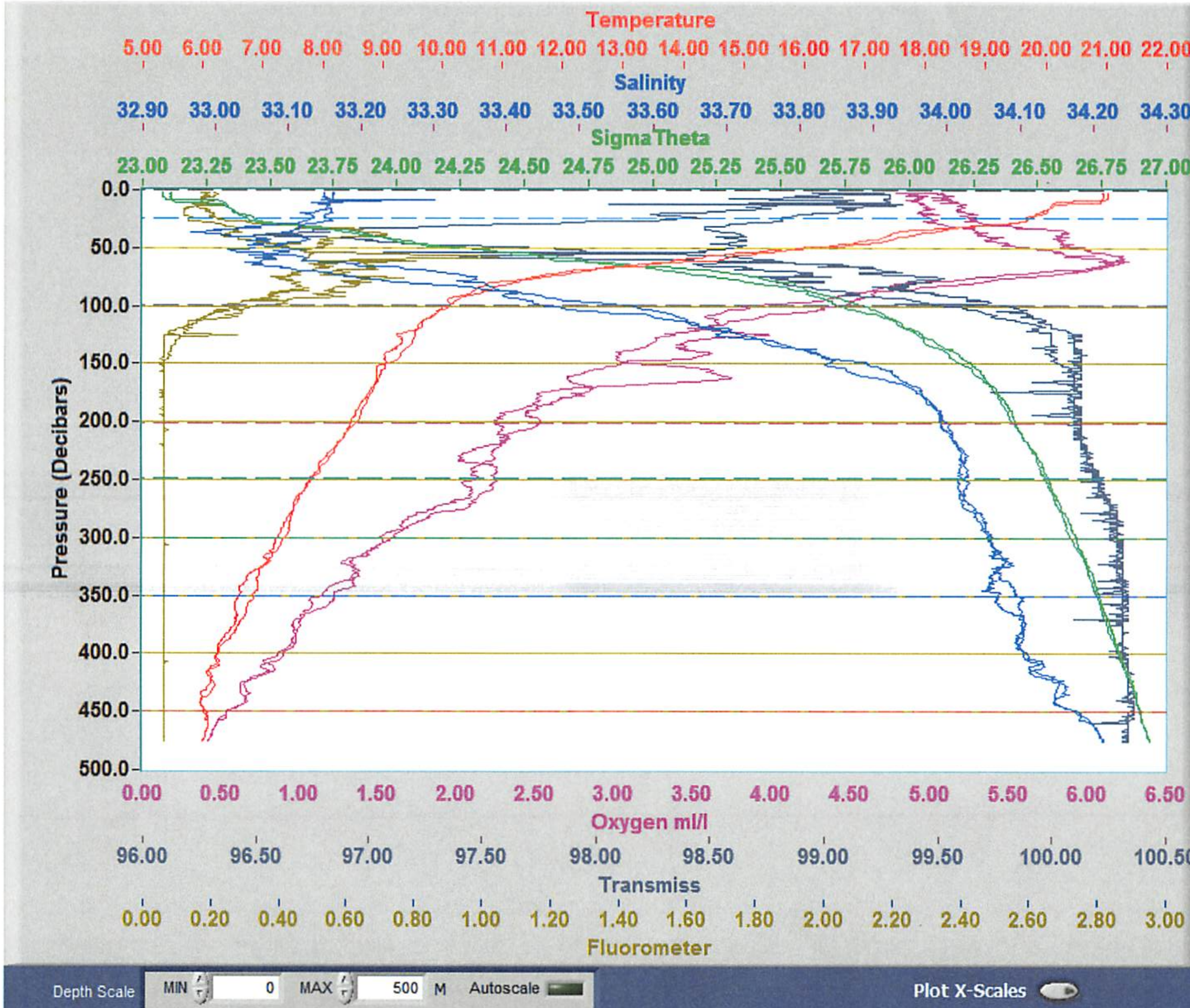
Net 5 numbers written manually upon no net response. net 6 numbers ~~[illegible]~~ reflect ~~[illegible]~~ nets 5 + 6 - should subtract net 5 for accurate volume.

Strobe Parameters
Time on/off
Depths on
Interval (ms)
Plse wdth (m)
Intensity (%)
Strobe volts

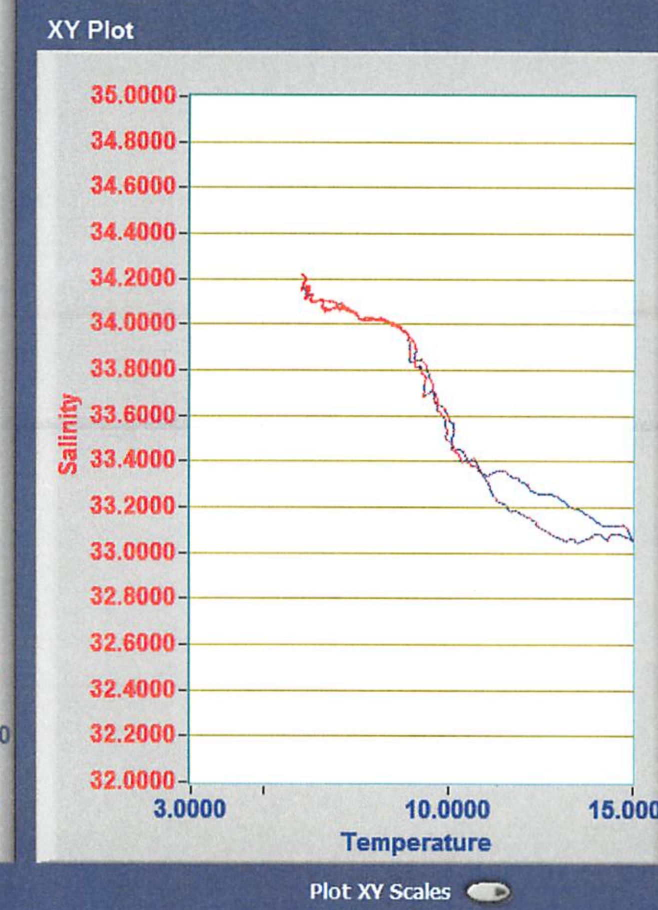


Sep 01 2019 05:56:28
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_04
Tow: 04
Pressure (Decibars)
0
50
100
150
200
250
300
350
400
450
500
550
600
05:56 06:20 06:40 07:00 07:20 07:40 08:00 08:20 08:40 09:00 09:20 09:40 09:56
Time
XY Plot
Pressure
Temperature
3.00 6.00 8.00 10.00 12.00 15.00
Depth Scale MIN 0 MAX 600 M Autoscale
TIME Scale MAX 4 HRS Autoscale
Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190901 064124 449.5 41.0 715 3564.4
2 190901 065339 350.4 45.2 313 1414.7
3 190901 065946 300.4 45.7 163 730.7
4 190901 070645 249.9 45.9 184 823.6
5 190901 071328 200.5 45.4 180 810.3
6 0.0 0.0 0 0.0
7 190901 072631 100.2 45.3 348 1581.1
8 190901 073230 50.5 43.6 158 735.5
9 190901 073522 24.7 44.1 76 353.5
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
TRIP CNT++
TRIP CNT--
CNFM CNT++
CNFM CNT--
LOCK
Trip in Progress
Motor ON
RSP
Trip NET
Trip Count 9
Flow Cnts 65
Flow Cnts2 0
Motor Volts 13.338
Confirms 8
VOL 311.1
VOL 2 0.0
CTD Volts 14.299
CNF TIME 12.042
Modem Data 65,0,9,8,0,1235,1324,0,0,0,0
FM2 Primary
Strobe Box
Modem Serial Port Status



Sep 01 2019 05:56:28
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_04
Tow: 04



MOCNESS Data Sheet

Cruise CCE-P 1908 Date 1 Sep 2019 Haul # 23 Cycle # 4 Tow # 5

Wind Speed 13 (kts.) Direction 344 (°) Sea State 3 (ft.)

File Name: Processed Cycle4_05.PRO Raw Cycle 4_05.hex

Start Time 1254 (PDT) **End** Time 1538 (PDT)

Lat 34° 48.31'N Lat 34° 53.76' N

Long 124° 59.88'W Long 125° 1.70' W

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer — 2 fluoros
- ✓ Oxygen Sensor
- ✓ Strobe ON for ascent

Event deploy # 20190902.1116.001 Event rec. # 20190902.1117.001

Frame Size 1 m²
Net Mesh 202 µm

Bottom Depth 4477 (m) Console Operator L. Lilly

Net Tow Information

	Net	Time Open	Angle	Flow Counts	Volume Filtered (m³)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?	Strobe volts
0-1091	0	1254	35.1	627	3324	1091	0	50%	5% Form.	50%	95% EtOH	✓	19.0
1000-800	1	1355	44.7	504	2306	1003	801	↓	5% Form.	↓	95% EtOH	✓	18.9
800-600	2	1418	46.3	364	1641	801	601		5% Form.		95% EtOH	✓	18.7
600-500	3	1437	47.3	196	856	601	501		5% Form.		95% EtOH	✓	18.6
500-400	4	1446	46.9	249	1095	501	400		5% Form.		95% EtOH	✓	18.5
400-300	5	1457	46.5	265	1191	400	301		5% Form.		95% EtOH	✓	18.5
300-200	6	1508	46.1	266	1193	301	200		5% Form.		95% EtOH	✓	18.4
200-100	7	1518	46.0	242	1082	200	100		5% Form.		95% EtOH	✓	18.3
100-50	8	1527	48.3	101	435.6	100	50		5% Form.		95% EtOH	✓	18.3
50-0	9	1532		166	448	50	0	↓	5% Form.	↓	95% EtOH	✓	18.3
	Closed	1538											

Surface Readings:
- Pressure (m) 2.5
- Temp. (°C) 20.92
- Salinity (‰) 33.15
- O_2 (ml/l) 4.99
- Fluoresc. (v) 0.1, 0.0
- BeamC (/m) 0.040
- CTD/M volts.(v) 13.34/CTD=14.28
- wire out (m) 0
- Time (PDT) 1254

Notes: Both Fluorometers (Seapoint, Wetlabs) on MOCNESS – we are using '-2F.xmlcon' file

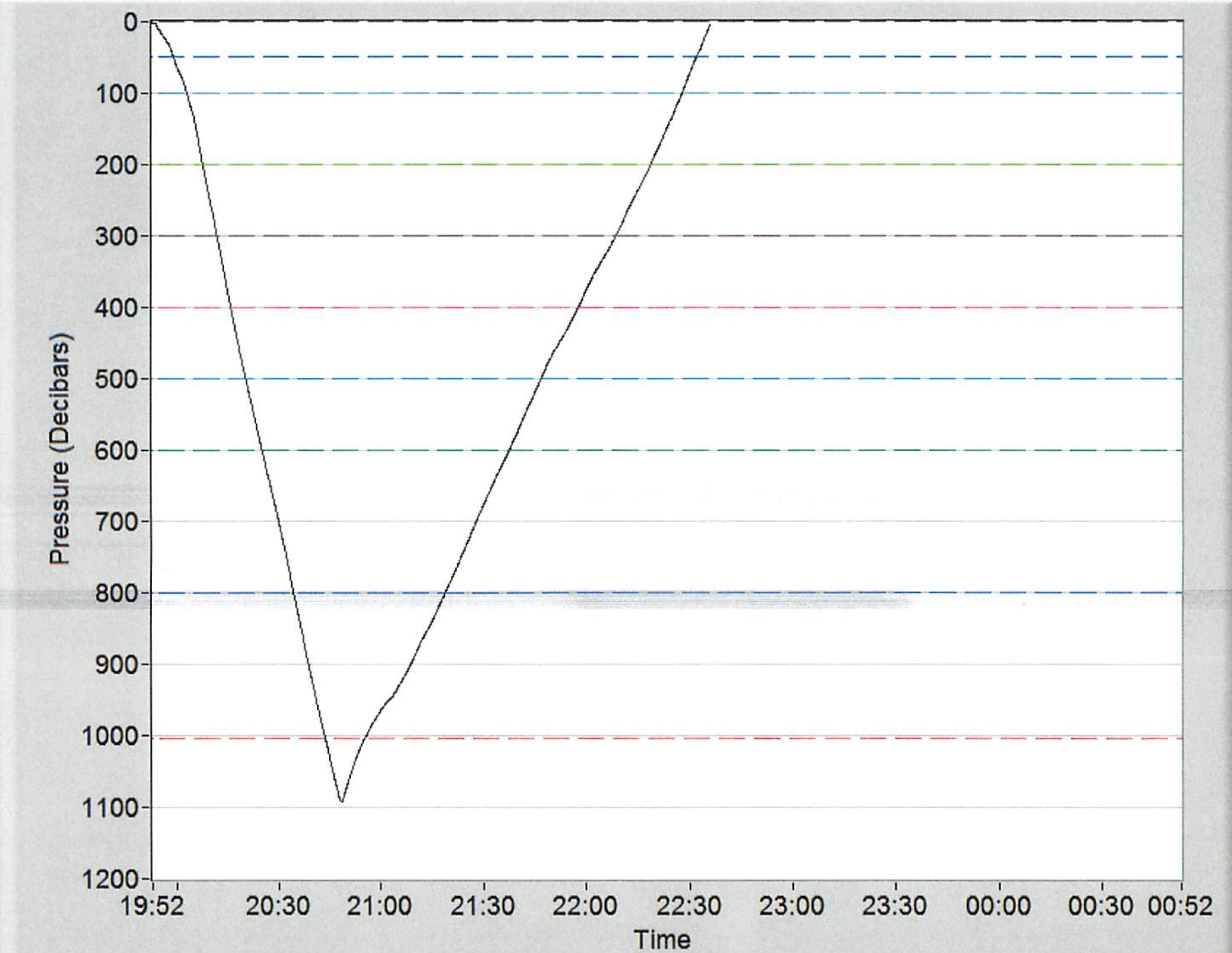
strobe off for descent, on for ascent

Strobe (turned) off at ~1.8 m below surface

Some pyros in Net 8 (100-50m), but not as many as C4, D51-2

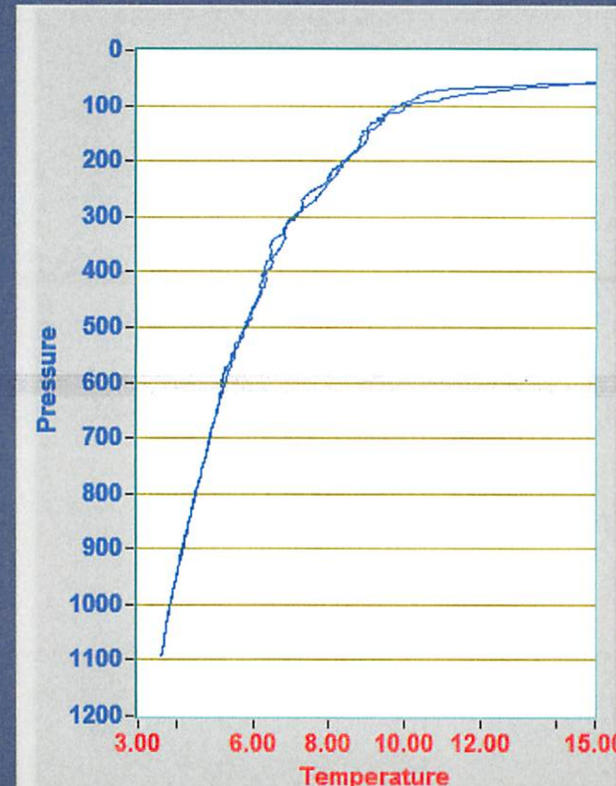
At Depth Readings:
- Pressure (m) 1091
- Temp. (°C) 3.63
- Salinity (‰) 34.48
- O_2 (ml/l) 0.498
- Fluoresc. (v) 0.1, 0.1
- BeamC (/m) -0.013
- CTD/M volts.(v) ~~14.~~ 13.78/
- wire out (m) 1950 14.30
- Time (PDT) 1350

Strobe Parameters
- Time on/off 1350
- Depths on 1091
- Interval (ms) 1000
- Plse wdth (m) 40
- Intensity (%) 50
- Strobe volts 19.0



Sep 01 2019 19:52:44
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_05
Tow: 05

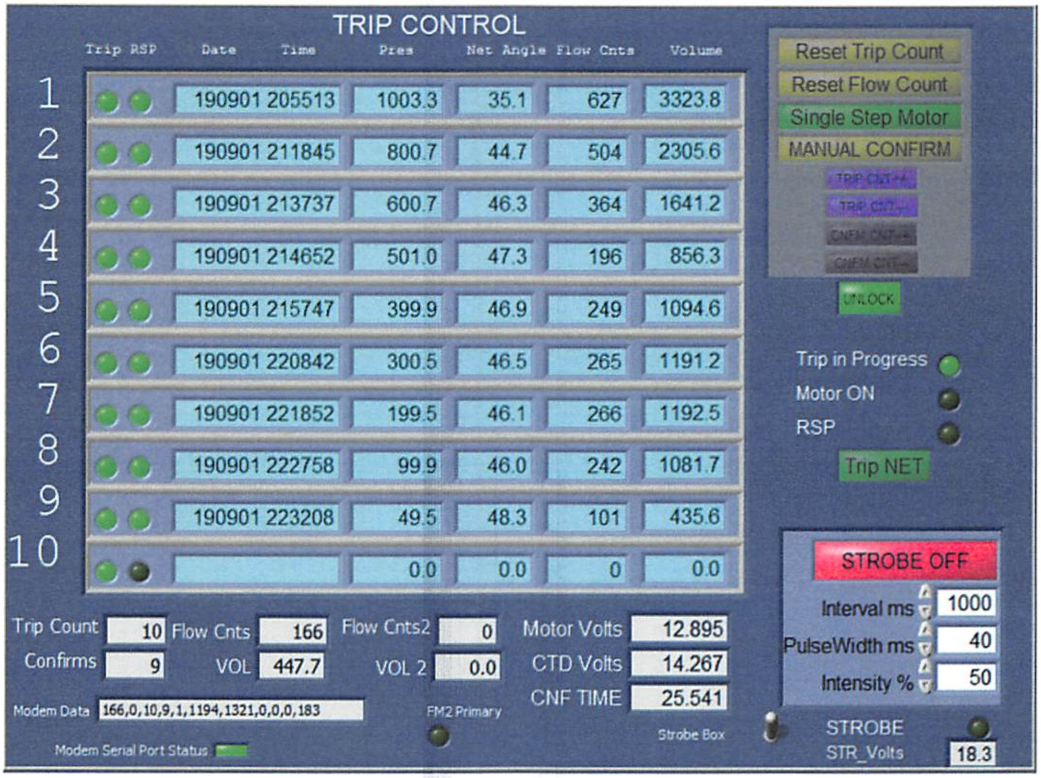
XY Plot

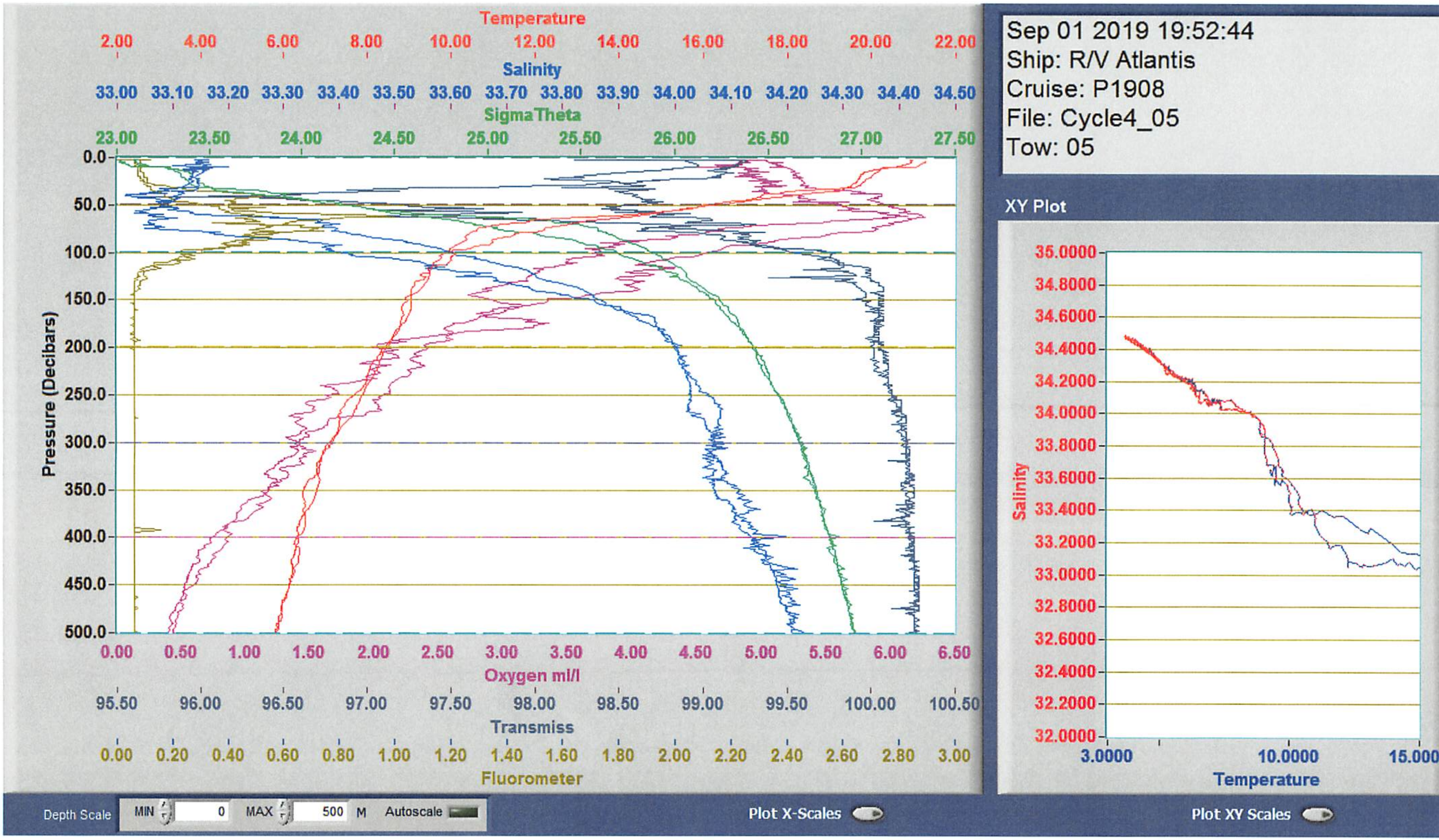


Depth Scale MIN 0 MAX 1200 M Autoscale

TIME Scale MAX 5 HRS Autoscale

Plot XY Scales


TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190901 205513 1003.3 35.1 627 3323.8
2 190901 211845 800.7 44.7 504 2305.6
3 190901 213737 600.7 46.3 364 1641.2
4 190901 214652 501.0 47.3 196 856.3
5 190901 215747 399.9 46.9 249 1094.6
6 190901 220842 300.5 46.5 265 1191.2
7 190901 221852 199.5 46.1 266 1192.5
8 190901 222758 99.9 46.0 242 1081.7
9 190901 223208 49.5 48.3 101 435.6
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
STROBE OFF
Interval ms 1000
PulseWidth ms 40
Intensity % 50
Trip Count 10
Flow Cnts 166
Flow Cnts2 0
Motor Volts 12.895
Confirms 9
VOL 447.7
VOL 2 0.0
CTD Volts 14.267
CNF TIME 25.541
Modem Data 166,0,10,9,1,1194,1321,0,0,0,183
FM2 Primary
Strobe Box
STROBE
STR_Volts 18.3
Modem Serial Port Status



Temperature
Salinity
SigmaTheta
Pressure (Decibars)
Oxygen ml/l
Transmiss
Fluorometer
Sep 01 2019 19:52:44
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_05
Tow: 05
XY Plot
Salinity
Temperature
Depth Scale
MIN 0
MAX 500 M
Autoscale
Plot X-Scales
Plot XY Scales

MOCNESS Data Sheet

Cruise CCE-P 1908 Date 1 Sept 2019 Haul # 24 Cycle # 4 Tow # 6/7

Wind Speed 13-15 (kts.) Direction 346 (°) Sea State 3-5 (ft.)

File Name: Processed Cycle4_07.PRO Raw Cycle4_~~06~~ 7.hex

start - reflect initial deployment

Start Time ~~2359~~ 2314 (PDT) **End** Time 0202 (PDT)

Lat 34 48.269 Lat 34.86792

Long 124 59.019 Long 125.07926

Pre-deployment checks:
- ✓ Flow Meter
- ✓ Stepping Motor
- ✓ Net Response
- ✓ Clean Optical Surfaces
- ✓ Transmissometer
- ✓ Fluorometer 2 fluorometers
- ✓ Oxygen Sensor 6.56
- ✓ Strobe ON for ascent

Event deploy # 20190902.1119.001 Event rec. # 20190902.1120.001

Frame Size 1 m^2

Net Mesh 202 µm

Bottom Depth 4469 (m) Console Operator S. Sommer

Net Tow Information

Depth range	Net	Time Open	Angle	Flow Counts	Volume Filtered (m^3)	Max Depth (m)	Min Depth (m)	Split	Fixative	Split	Fixative	Net resp?	Strobe volts
	0	2314	36.3	825	4333	1042	0	50%	5% Form.	50%	95% EtOH	✓	18.2
1000-800	1	0023	45.4	424	1918	1003	802		5% Form.		95% EtOH	✓	18.0
800-600	2	0043	44.1	552	2567	802	601		5% Form.		95% EtOH	✓	17.9
600-500	3	0106	43.6	266	1246	601	500		5% Form.		95% EtOH	✓	17.8
500-400	4	0116	43.0	258	1212	500	400		5% Form.		95% EtOH	✓	17.8
400-300	5	0127	44.2	244	1124	400	300		5% Form.		95% EtOH	✓	16.9
300-200	6	0136	40.0	258	1277	300	200		5% Form.		95% EtOH	✓	~~18~~ 17.7
200-100	7	0146	40.6	196	959	200	100		5% Form.		95% EtOH	✓	17.7
100-50	8	0154	43.1	102	482	100	49		5% Form.		95% EtOH	✓	17.7
50-0	9	0158		68	434	49	0	↓	5% Form.	↓	95% EtOH		
	Closed	0202											

Surface Readings:
- Pressure (m) ~~5.2~~ 4.8
- Temp. (°C) 20.946
- Salinity (‰) 33.143
- O_2 (ml/l) / 4.9677
- Fluoresc. (v) 0.1 / 0.2
- BeamC (/m) 0.032
- CTD/M volts.(v) 14.30/13.84
- wire out (m) 0
- Time (PDT) 2314

Notes: Strobes off for descent.

(1) File saved as tow7 b/c initial deployment flowmeter blocked by pyros. net pulled back @ 50m depth, flowmeter cleaned and net redeployed. Net 0 not quantitative - includes sample from 1st deployment.

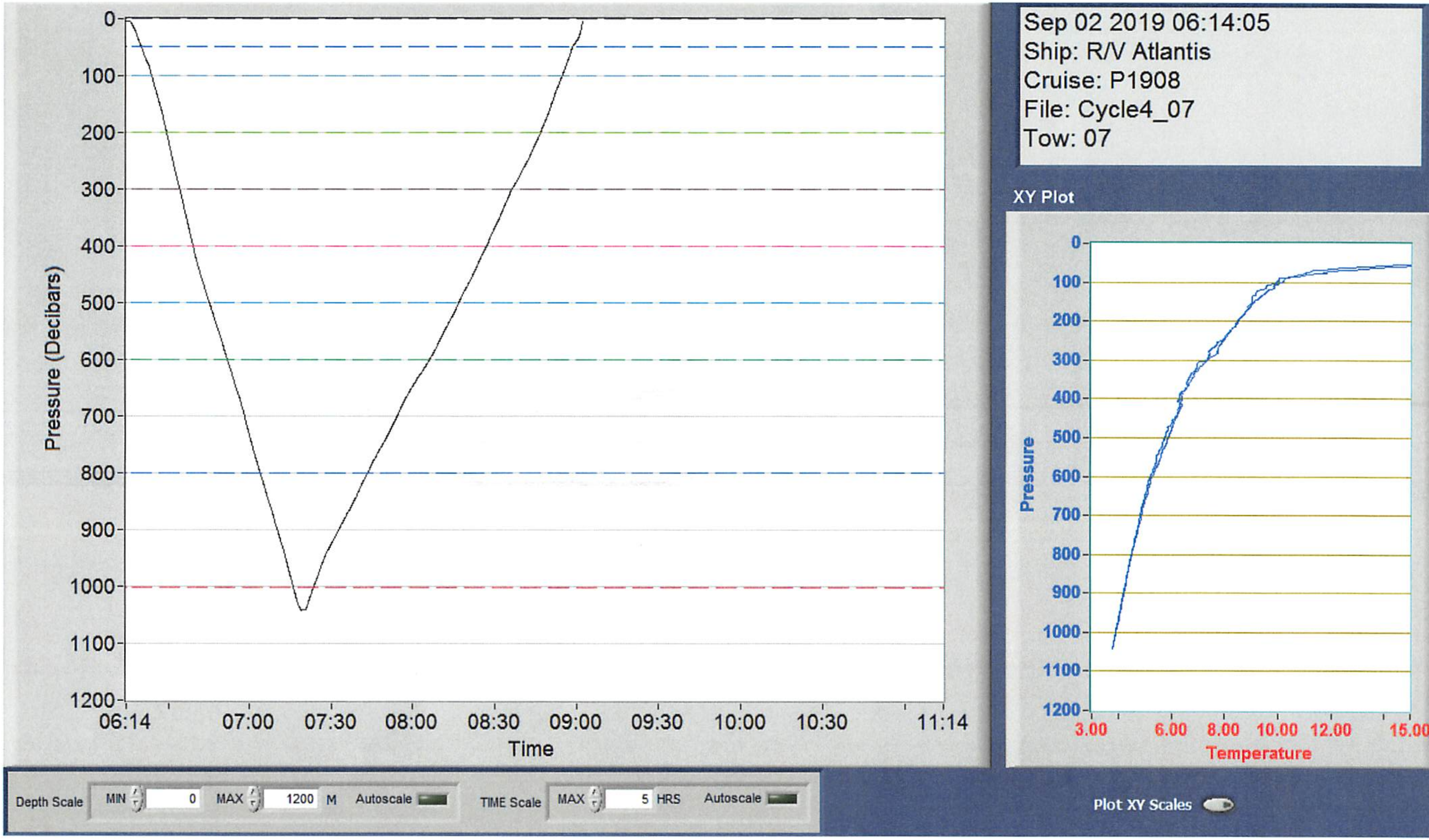
both fluorometers - _2F.xmlcon file

Pyros mostly in Net 9, some in N8 but few

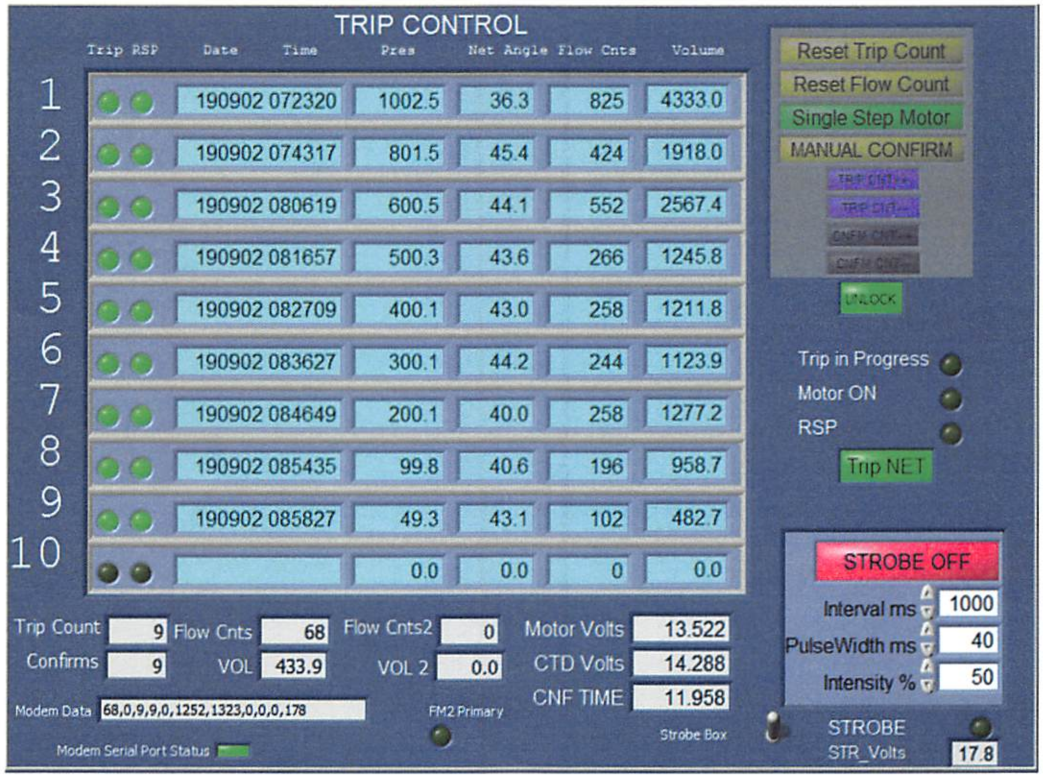
At Depth Readings:
- Pressure (m) 1041.8
- Temp. (°C) 3.79
- Salinity (‰) 34.458
- O_2 (ml/l) 0.388
- Fluoresc. (v) 0.1 / 0.1
- BeamC (/m) -0.013
- CTD/M volts.(v) 14.30 / 13.80
- wire out (m) 2068
- Time (PDT) 0020

Strobe Parameters
- Time on/off 0020 / 0202
- Depths on 1038 - 10m
- Interval (ms) 1000
- Plse wdth (m) 40
- Intensity (%) 50
- Strobe volts 18.4

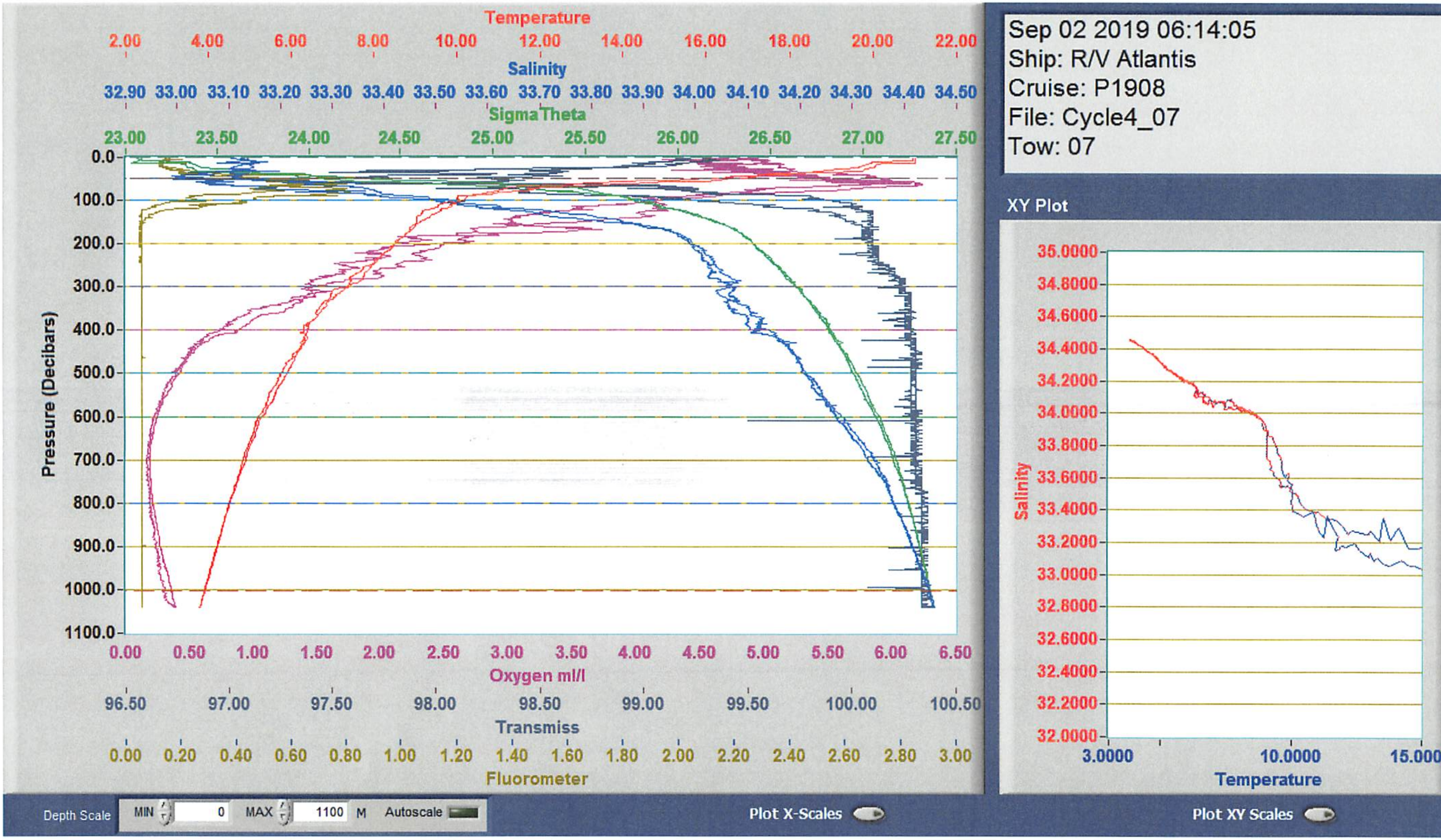
Cod ends split 50/50 formalin/ethanol, net wash saved as separate formalin sample.



Sep 02 2019 06:14:05
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_07
Tow: 07
Pressure (Decibars)
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
06:14
07:00
07:30
08:00
08:30
09:00
09:30
10:00
10:30
11:14
Time
XY Plot
Pressure
3.00
6.00
8.00
10.00
12.00
15.00
Temperature
Depth Scale
MIN
0
MAX
1200
M
Autoscale
TIME Scale
MAX
5
HRS
Autoscale
Plot XY Scales



TRIP CONTROL
Trip RSP Date Time Pres Net Angle Flow Cnts Volume
1 190902 072320 1002.5 36.3 825 4333.0
2 190902 074317 801.5 45.4 424 1918.0
3 190902 080619 600.5 44.1 552 2567.4
4 190902 081657 500.3 43.6 266 1245.8
5 190902 082709 400.1 43.0 258 1211.8
6 190902 083627 300.1 44.2 244 1123.9
7 190902 084649 200.1 40.0 258 1277.2
8 190902 085435 99.8 40.6 196 958.7
9 190902 085827 49.3 43.1 102 482.7
10 0.0 0.0 0 0.0
Reset Trip Count
Reset Flow Count
Single Step Motor
MANUAL CONFIRM
UNLOCK
Trip in Progress
Motor ON
RSP
Trip NET
STROBE OFF
Interval ms 1000
PulseWidth ms 40
Intensity % 50
Trip Count 9
Flow Cnts 68
Flow Cnts2 0
Motor Volts 13.522
Confirms 9
VOL 433.9
VOL 2 0.0
CTD Volts 14.288
CNF TIME 11.958
Modem Data 68,0,9,9,0,1252,1323,0,0,0,178
FM2 Primary
Strobe Box
STROBE
STR_Volts 17.8
Modem Serial Port Status


Temperature
2.00 4.00 6.00 8.00 10.00 12.00 14.00 16.00 18.00 20.00 22.00
Salinity
32.90 33.00 33.10 33.20 33.30 33.40 33.50 33.60 33.70 33.80 33.90 34.00 34.10 34.20 34.30 34.40 34.50
Sigma Theta
23.00 23.50 24.00 24.50 25.00 25.50 26.00 26.50 27.00 27.50
Pressure (Decibars)
0.0 100.0 200.0 300.0 400.0 500.0 600.0 700.0 800.0 900.0 1000.0 1100.0
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50
Oxygen ml/l
96.50 97.00 97.50 98.00 98.50 99.00 99.50 100.00 100.50
Transmiss
0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.20 2.40 2.60 2.80 3.00
Fluorometer
Sep 02 2019 06:14:05
Ship: R/V Atlantis
Cruise: P1908
File: Cycle4_07
Tow: 07
XY Plot
Salinity
35.0000 34.8000 34.6000 34.4000 34.2000 34.0000 33.8000 33.6000 33.4000 33.2000 33.0000 32.8000 32.6000 32.4000 32.2000 32.0000
3.0000 10.0000 15.0000
Temperature
Depth Scale
MIN 0
MAX 1100 M
Autoscale
Plot X-Scales
Plot XY Scales