

## CCE-P0605 MOCNESS tows

May-June 2006  
1 m2 frame, 202- $\mu$ m mesh

CYCLE AVERAGE  
T,S,rho Flr,O2,Trans.

| HAUL | CYCLE | TOW | DATE          | Event No. | START TIME | END TIME | MAX DEPTH | DEPTH INTERVAL | FIXATIVE     | COMMENTS  | T,S,rho | Flr,O2,Trans. |
|------|-------|-----|---------------|-----------|------------|----------|-----------|----------------|--------------|---|---------|---------------|
| ✓ 1  | 1     | 1   | 10-11 May     | 51        | 2340       | 0115     | 451       | 50             | Formalin     | no O2; Flr, Trans. ?                              | ✓       |               |
| ✓ 2  | 1     | 2   | 11-May        | 73        | 1443       | 1603     | 445       | 50             | Formalin     | no O2; Flr, Trans. ?                              | ✓       |               |
| 3    | 1     | 3   | 12-13 May     | 122       | 2320       | 0055     | 450       | 50             | Formalin     | spurious Trans. Value<br>ca. 78 m.                | ✓       | ✓             |
| 4    | 1     | 4   | 13 May        | 158       | 1307       | 1444     | 450       | 50             | Formalin     |   | ✓       | ✓             |
| 5    | 1     | 5   | 14-May        | 198       | 1346       | 1448     | 225       | 25             | Formalin     |   | ✓       | ✓             |
| 6    | 1     | 6   | 14-15 May     | 215       | 2323       | 0035     | 225       | 25             | Formalin     |   | ✓       | ✓             |
| 7    | 2     | 1   | 15-16 May     | 234       | 2240       | 0010     | 448       | 50             | Formalin     |   | ✓       | ✓             |
| 8    | 2     | 2   | 16-May        | 260       | 1411       | 1545     | 450       | 50             | Formalin     |   | ✓       | ✓             |
| 9    | 2     | 3   | 17-18 May     | 305       | 2325       | 0049     | 450       | 50             | Formalin     |   | ✓       | ✓             |
| 10   | 2     | 4   | 18-May        | 323       | 1552       | 1736     | 447       | 50             | Formalin     |   | ✓       | ✓             |
| 11   | 2     | 5   | 19-May        | 354       | 1309       | 1612     | 1002      | 100            | 95 % Ethanol | Etoh changed after 24 h                           | ✓       | ✓             |
| 12   | 2     | 6   | 20-May        | 388       | 1344       | 1503     | 225       | 25             | Formalin     |   | ✓       | ✓             |
| 13   | 2     | 7   | 20-21 May     | 402       | 2328       | 0032     | 225       | 25             | Formalin     |   | ✓       | ✓             |
| 14   | 3     | 1   | 22-May        | 417       | 0019       | 0055     | 80        | 10             | Formalin     |   | ✓       | ✓             |
| 15   | 3     | 2   | 22-May        | 431       | 1307       | 1333     | 50        | 10             | Formalin     |   | ✓       | ✓             |
| 16   | 3     | 3   | 24-May        | 512       | 1308       | 1401     | 120       | 10             | Formalin     | step structure in profiles                        | ✓       | ✓             |
| 17   | 3     | 4   | 25-May        | 527       | 0053       | 0142     | 118       | 10             | Formalin     |   | ✓       | ✓             |
| 18   | 4     | 1   | 27-May        | 565       | 1443       | 1626     | 448       | 50             | Formalin     |   | ✓       | ✓             |
| 19   | 4     | 2   | 27-May        | 578       | 2349       | 0121     | 448       | 50             | Formalin     |   | ✓       | ✓             |
| 20   | 4     | 3   | 30-May        | 640       | 1449       | 1551     | 450       | 50             | Formalin     | No Fluor, O2,Trans.<br>options module failed      | ✓       |               |
| 21   | 4     | 4   | 31-May        | 662       | 0011       | 0137     | 450       | 50             | Formalin     | No Fluor, O2,Trans.                               | ✓       |               |
| 22   | 5     | 1   | 31 May-1 June | 671       | 2344       | 0107     | 450       | 50             | Formalin     | No Fluor, O2,Trans.                               | ✓       |               |
| 23   | 5     | 2   | 1-Jun         | 689       | 1230       | 1419     | 450       | 50             | Formalin     | No Fluor, O2,Trans.                               | ✓       |               |
| 24   | 5     | 3   | 3-Jun         | 752       | 1256       | 1433     | 450       | 50             | Formalin     | No Fluor, O2,Trans.                               | ✓       |               |
| 25   | 5     | 4   | 3-4 June      | 764       | 2343       | 0112     | 447       | 50             | Formalin     | No Fluor, O2,Trans.                               | ✓       |               |
| 26   | 5     | 5   | 4-Jun         | 781       | 1442       | 1625     | 300       | 25             | Formalin     | No Fluor, O2,Trans.<br>Net 1 used for live expts. | ✓       |               |
| 27   | 5     | 6   | 4-5 June      | 807       | 2339       | 0045     | 225       | 25             | Formalin     | No Fluor, O2,Trans.                               | ✓       |               |

95 % Ethanol - (net 0 only)

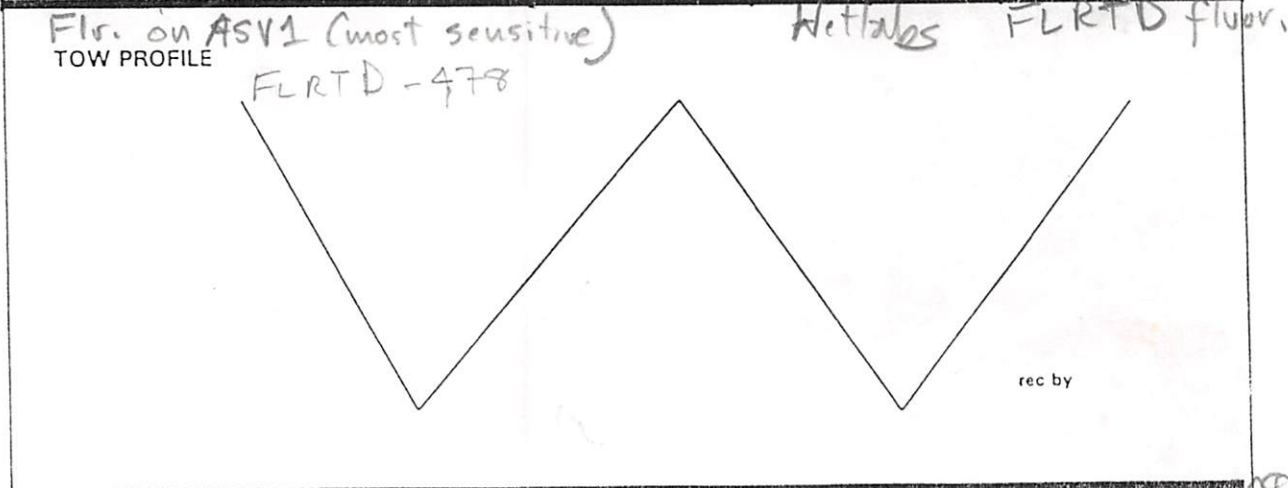
Event No. 51

202- $\mu$ m mesh (black) nets,  
newly glued 202- $\mu$ m cod ends  
URT MOCNESS frame

Start: 1361123

|                    |         |                 |                |                      |                           |
|--------------------|---------|-----------------|----------------|----------------------|---------------------------|
| MOCNESS DATA SHEET |         |                 |                |                      | Revised 10/94             |
| CRUISE             | STATION | Cycle 1<br>HAUL | DATE           | PDT<br>(DST EST GMT) | R/V Knorr<br>MOCNESS TYPE |
| CCE-P0605          | Cycle 1 | Tow 1           | 10-11 May 2006 |                      | 1/4M (1M) 10M             |

|   | START         | END      |            | TIME  | DEPTH | VOL<br>M <sup>3</sup><br>FILTER | MESH<br>SIZE |
|---|---------------|----------|------------|-------|-------|---------------------------------|--------------|
| LATITUDE  | 34.3062       | 34.3234  | NET 0 OPEN | 23:40 | 450   | 840                             | 202 $\mu$ m  |
| LONGITUDE   | 120.7978      | 120.8490 | NET 1 OPEN | 00:12 | 451   | 294                             |              |
| DEPTH   | $\sim$ 800 m. |          | NET 2 OPEN | 00:21 | 400   | 207                             |              |
| COMMENTS<br>Desired depth: 450 m.<br>Intended vol. filt. $\sim$ 250 m <sup>3</sup><br>Faulty O <sub>2</sub> (read @ 1.13 ml/L)<br>Faulty Fluor (read 0.3080 V)<br>Start bat. 20.9 V.<br>End Battery 20.5 V. |               |          | NET 3 OPEN | 00:26 | 347   | 136                             |              |
|   |               |          | NET 4 OPEN | 00:30 | 298   | 353                             |              |
|   |               |          | NET 5 OPEN | 00:39 | 248   | 302                             |              |
|   |               |          | NET 6 OPEN | 00:47 | 199   | 354                             |              |
|   |               |          | NET 7 OPEN | 00:54 | 150   | 271                             |              |
|   |               |          | NET 8 OPEN | 01:01 | 100   | 299                             |              |
|   |               |          | NET 9 OPEN | 01:09 | 50    | 265                             |              |
|   |               |          | SURFACE    | 01:15 | 0     | 265                             |              |



File names: .pro .raw .tab

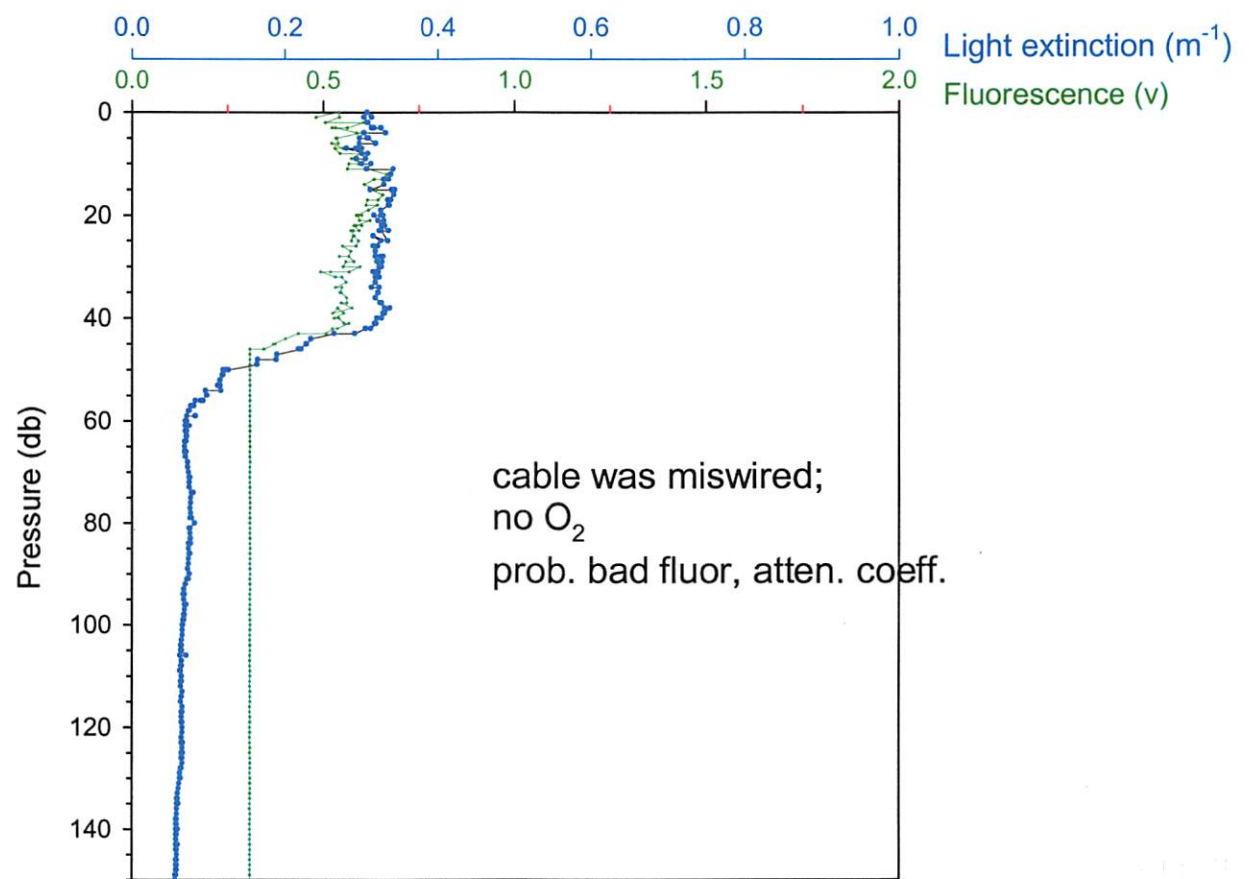
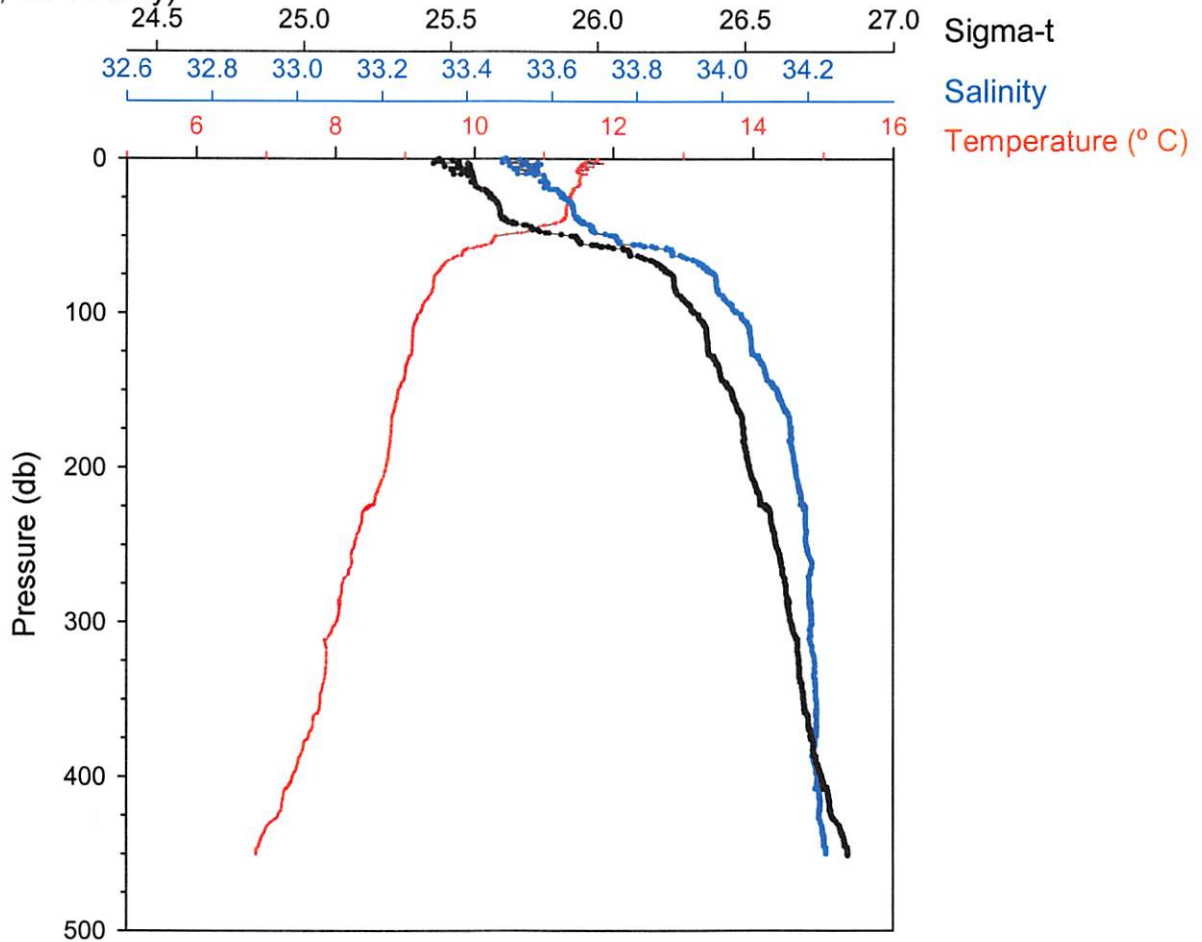
initially down @ 10 m min<sup>-1</sup>  
then 20 " "  
then 30 " "

target vertical velocity  $\sim$  1-6 m/min

MOCNESS  
VE

# MOCNESS - Tow 1

(cycle 1 (2340-0115, 10-11 May))



M-01-001  
08/05/06  
RV Knorr

## MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.7 | 450.5 | 182.7 | 06.9 | 12.8 | 06.9 | 06.8  | 12.8  | 06.9  | 00.01 | 34.32 | 27.10 |
| 1    | -00.8 | 448.6 | 97.8  | 06.9 | 13.0 | 01.7 | 06.8  | 13.0  | 01.7  | 00.01 | 34.24 | 07.96 |
| 2    | 347.6 | 398.4 | 376.0 | 07.4 | 07.8 | 07.6 | 07.4  | 07.8  | 07.6  | 34.21 | 34.22 | 34.22 |
| 3    | 298.4 | 346.0 | 321.1 | 07.8 | 08.0 | 07.9 | 07.8  | 08.0  | 07.9  | 34.20 | 34.22 | 34.21 |
| 4    | 248.4 | 297.3 | 281.8 | 08.0 | 08.3 | 08.1 | 08.0  | 08.3  | 08.1  | 34.20 | 34.21 | 34.21 |
| 5    | 199.1 | 246.7 | 223.8 | 08.3 | 08.7 | 08.5 | 08.3  | 08.7  | 08.5  | 34.17 | 34.20 | 34.19 |
| 6    | 150.3 | 198.1 | 174.3 | 08.7 | 08.9 | 08.8 | 08.7  | 08.9  | 08.8  | 34.13 | 34.17 | 34.16 |
| 7    | 100.1 | 149.5 | 126.1 | 08.9 | 09.2 | 09.1 | 08.9  | 09.2  | 09.0  | 34.03 | 34.13 | 34.08 |
| 8    | 49.6  | 98.6  | 71.3  | 09.2 | 10.3 | 09.7 | 09.2  | 10.3  | 09.7  | 33.74 | 34.03 | 33.92 |

| net# | simin  | simax | siavg | cmin  | cmax  | cavg  | fmin  | fmax  | favg  | oxmin    | oxmax    | oxavg    |
|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|----------|
|      |        |       |       |       |       | cavg  | fmin  | fmax  | favg  | irradmin | irradmax | irradavg |
| 0    | -00.59 | 26.85 | 21.03 | 00.04 | 01.53 | 00.08 | 00.31 | 03.23 | 00.27 | -01.3    | -01.1    | -00.9    |
| 1    | -00.60 | 26.85 | 06.23 | 00.04 | 06.14 | 00.01 | 00.31 | 03.22 | 00.07 | 00.0     | 00.0     | 00.0     |
| 2    | 26.70  | 26.75 | 26.73 | 00.04 | 00.05 | 00.05 | 00.31 | 00.31 | 00.31 | -01.2    | -01.2    | -01.2    |
| 3    | 26.65  | 26.70 | 26.68 | 00.05 | 00.06 | 00.05 | 00.31 | 00.31 | 00.31 | 00.0     | 00.0     | 00.0     |
| 4    | 26.60  | 26.65 | 26.64 | 00.05 | 00.06 | 00.05 | 00.31 | 00.31 | 00.31 | -01.2    | -01.1    | -01.1    |
| 5    | 26.52  | 26.60 | 26.56 | 00.05 | 00.06 | 00.05 | 00.31 | 00.31 | 00.31 | 00.0     | 00.0     | 00.0     |
| 6    | 26.45  | 26.51 | 26.49 | 00.05 | 00.06 | 00.05 | 00.31 | 00.31 | 00.31 | -01.1    | -01.1    | -01.1    |
| 7    | 26.33  | 26.45 | 26.39 | 00.06 | 00.07 | 00.06 | 00.31 | 00.31 | 00.31 | 00.0     | 00.0     | 00.0     |
| 8    | 25.92  | 26.32 | 26.16 | 00.07 | 00.12 | 00.08 | 00.31 | 00.31 | 00.31 | -01.1    | -01.1    | -01.1    |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 46.0 | 26.1 | 00.0  | 01.9  | 00.5  | -51.7 | 01.2  | -11.8 | 00570 | 00840 |
| 1    | 00.0 | 41.0 | 08.0 | 00.0  | 01.4  | 00.3  | -01.0 | 13.8  | 01.4  | 00529 | 00294 |
| 2    | 29.0 | 42.0 | 34.4 | 00.9  | 01.4  | 01.2  | 04.1  | 12.9  | 08.5  | 00088 | 00207 |
| 3    | 33.0 | 41.0 | 37.0 | 01.2  | 01.6  | 01.4  | 09.4  | 17.0  | 13.5  | 00055 | 00136 |
| 4    | 38.0 | 46.0 | 40.8 | 01.1  | 01.9  | 01.4  | -02.7 | 15.8  | 05.5  | 00132 | 00353 |
| 5    | 40.0 | 46.0 | 42.6 | 01.2  | 01.8  | 01.5  | -01.2 | 13.9  | 06.4  | 00113 | 00302 |
| 6    | 41.0 | 47.0 | 43.6 | 01.4  | 01.8  | 01.5  | 01.8  | 12.3  | 05.9  | 00126 | 00354 |
| 7    | 43.0 | 48.0 | 44.6 | 01.5  | 01.8  | 01.6  | 05.7  | 11.7  | 08.0  | 00094 | 00271 |
| 8    | 40.0 | 48.0 | 44.3 | 01.4  | 01.9  | 01.6  | 01.2  | 11.5  | 07.2  | 00104 | 00299 |



Environmental Parameters

Time 04:15:41  
 Pressure -0.9 m  
 Temp 11.74 C  
 Salinity 31.39 o/oo  
 Density 23.833  
 Oxygen -1.08 ml/l  
 Fluoresc. 0.5034 V  
 LightXmis 3.5387 /m  
 Irradiance

Net Operation

Net\_Num 9  
 OpenTime 6.7 min  
 Vol\_Filtered 264.8 m3  
 Angle 24 deg  
 Flow\_Counts 132  
 Hor\_Vel 1.2 kts  
 Vert\_Vel 7.0 m/min  
 Battery 20.5 V

Net - Ship Position

Latitude 34N 19.406  
 Longitude 120W 50.94  
 Net\_Dist 378.8 m  
 Total\_Dist 5126.1 m

Program Settings

Reset  
 Baud Rate 2400  
 Sample Rate 4.0 sec  
 Printer Off

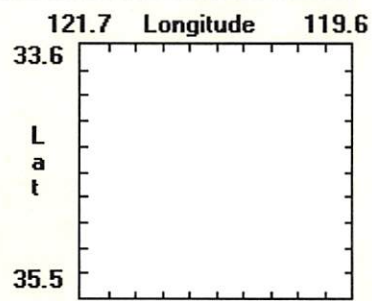
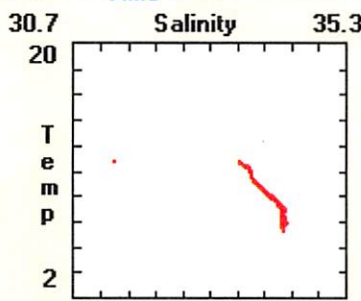
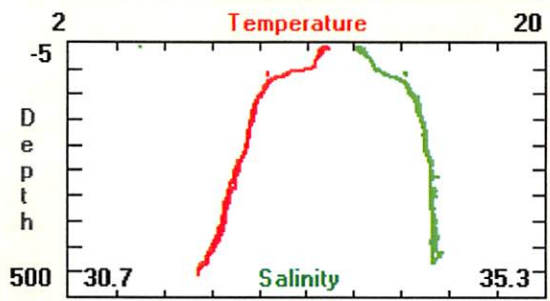
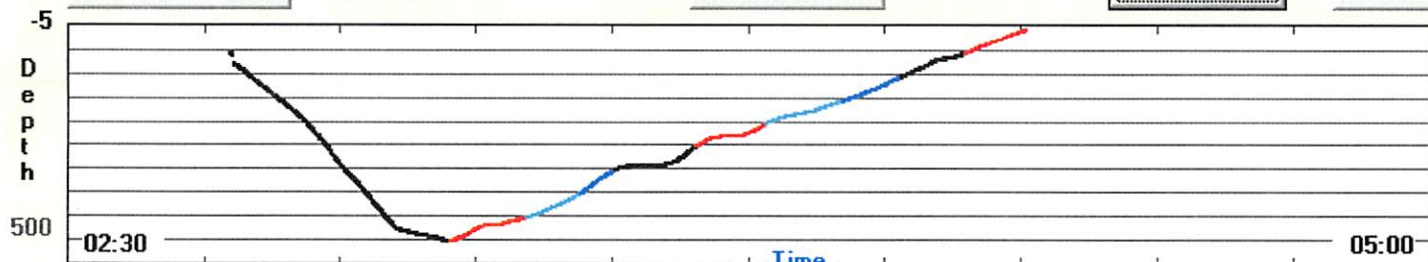
Processed File Name C:\MOCNESS\MOCDATA\KNORRT0W1.PRO  
 Raw File Name C:\MOCNESS\MOCDATA\KNORRT0W1.raw  
 Acquisition Ended. trys = 0

Step Net

Increment Net#

Pause Acqui

End Acqui



Event No 73 - should be 72 SD

Start: 136.7375

MOCNESS DATA SHEET Revised 10/94

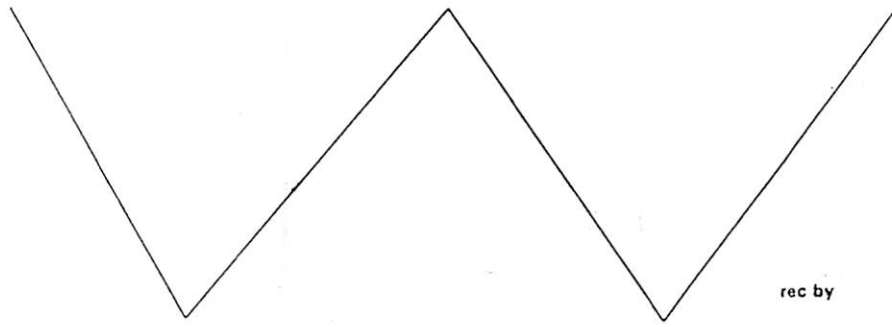
| CRUISE    | STATION | HAUL | DATE (DST EST GMT) | MOCNESS TYPE       |
|-----------|---------|------|--------------------|--------------------|
| CCE-P0605 | Cycle 1 | 2    | 11 May 2006        | 1/4M <u>1M</u> 10M |

|           | START    | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE |
|-----------|----------|----------|------------|-------|-------|------------|-----------|
| LATITUDE  | 34.3191  | 34.3441  | NET 0 OPEN | 1443  | 445   | 820.7      | 202 $\mu$ |
| LONGITUDE | 120.7889 | 120.8240 | NET 1 OPEN | 1514  | 445   | 123        |           |
| DEPTH     | 800m.    |          | NET 2 OPEN | 1520  | 396.3 | 278        |           |
|           |          |          | NET 3 OPEN | 1526  | 348   | 264        |           |
|           |          |          | NET 4 OPEN | 1533  | 300   | 254        |           |
|           |          |          | NET 5 OPEN | 1540  | 248   | 151        |           |
|           |          |          | NET 6 OPEN | 1544  | 197   | 289        |           |
|           |          |          | NET 7 OPEN | 1551  | 152   | 247        |           |
|           |          |          | NET 8 OPEN | 15:58 | 99    | 182        |           |
|           |          |          | NET 9 OPEN | 16:03 | 50    | 250        |           |
|           |          |          | SURFACE    |       |       |            |           |

COMMENTS  
 In air: O<sub>2</sub>: -1.16 -1.29  
 Fluor: 0.4422 0.3682  
 Trans: 0.4377 0.0414

Start batt. 20.5 v.

Flu. on ASV 1 (most sensitive)  
 TOW PROFILE



File names: .pro .raw .tab

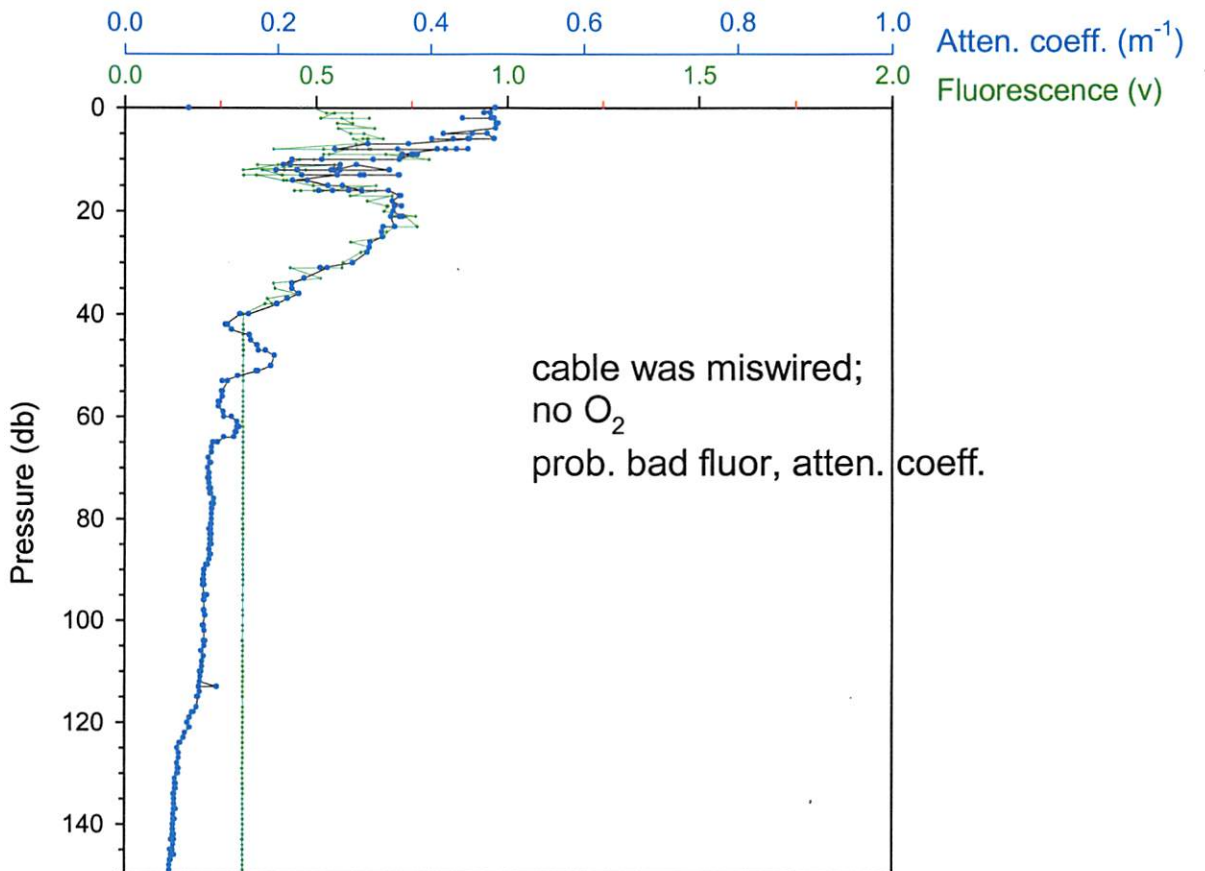
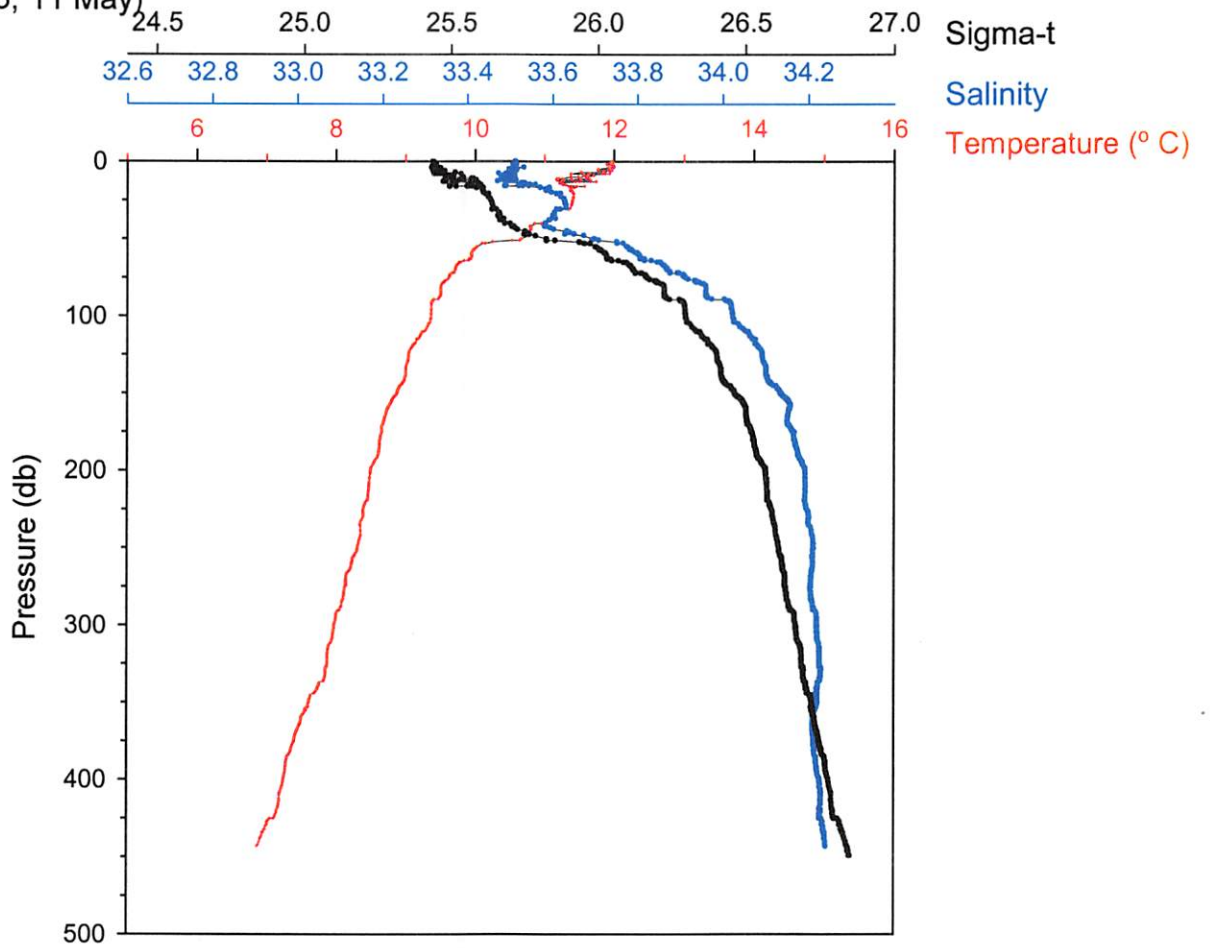
15:10 - At 460 m.

After the tow, checked fluorometer because fluorometer seems to have too low sensitivity. So changed to ASV 1 (most sensitive) using terminal emulator. Found was already on most sensitive scale.

ASV1 (most sensitive - 0-4,000 cts.) ASV 2 (mid-range - 0-8,000 cts.) ASV 4 (entire range, 0-16,000 cts.)

$$I = I_{oe} \textcircled{127}$$

MOCNESS - Tow 2  
Cycle 1 (1514-1603, 11 May)





M-01-002  
08/05/06  
RV Knorr

## MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.7 | 460.4 | 241.5 | 06.8 | 50.0 | 08.3 | 06.7  | 50.0  | 08.3  | 00.03 | 34.37 | 32.65 |
| 1    | -00.5 | 444.4 | 402.9 | 06.9 | 16.0 | 07.2 | 06.8  | 16.0  | 07.1  | 00.05 | 34.24 | 33.03 |
| 2    | 348.7 | 394.5 | 369.1 | 07.3 | 07.6 | 07.4 | 07.2  | 07.6  | 07.4  | 34.21 | 34.22 | 34.21 |
| 3    | 301.0 | 347.6 | 324.3 | 07.6 | 08.0 | 07.9 | 07.6  | 07.9  | 07.8  | 34.22 | 34.23 | 34.22 |
| 4    | 249.2 | 300.4 | 273.6 | 08.0 | 08.3 | 08.1 | 07.9  | 08.3  | 08.1  | 34.20 | 34.22 | 34.21 |
| 5    | 198.1 | 247.9 | 222.6 | 08.3 | 08.5 | 08.4 | 08.3  | 08.5  | 08.4  | 34.19 | 34.21 | 34.20 |
| 6    | 152.5 | 196.5 | 172.5 | 08.5 | 08.8 | 08.7 | 08.5  | 08.8  | 08.7  | 34.14 | 34.19 | 34.16 |
| 7    | 99.4  | 152.0 | 131.4 | 08.9 | 09.4 | 09.0 | 08.8  | 09.4  | 09.0  | 34.02 | 34.14 | 34.09 |
| 8    | 50.5  | 98.0  | 74.8  | 09.4 | 10.6 | 09.7 | 09.4  | 10.6  | 09.7  | 33.69 | 34.02 | 33.90 |

| net# | simin  | simax | siavg | cmin   | cmax  | cavg  | fmin  | fmax  | favg  | oxmin    | oxmax    | oxavg    |
|------|--------|-------|-------|--------|-------|-------|-------|-------|-------|----------|----------|----------|
|      |        |       |       |        |       | cavg  | fmin  | fmax  | favg  | irradmin | irradmax | irradavg |
| 0    | -11.91 | 26.88 | 25.32 | -00.04 | 08.59 | 00.19 | 00.00 | 00.66 | 00.31 | -01.3    | -00.8    | -01.2    |
| 1    | -01.02 | 26.85 | 25.84 | 00.04  | 00.52 | 00.05 | 00.31 | 00.31 | 00.30 | 00.0     | 00.0     | 00.0     |
| 2    | 26.72  | 26.77 | 26.74 | 00.05  | 00.06 | 00.05 | 00.31 | 00.31 | 00.31 | -01.3    | -01.3    | -01.3    |
| 3    | 26.67  | 26.72 | 26.69 | 00.05  | 00.05 | 00.05 | 00.31 | 00.31 | 00.31 | 00.0     | 00.0     | 00.0     |
| 4    | 26.61  | 26.67 | 26.64 | 00.05  | 00.06 | 00.05 | 00.31 | 00.31 | 00.31 | -01.3    | -01.3    | -01.3    |
| 5    | 26.57  | 26.61 | 26.58 | 00.05  | 00.06 | 00.05 | 00.31 | 00.31 | 00.31 | 00.0     | 00.0     | 00.0     |
| 6    | 26.48  | 26.56 | 26.52 | 00.06  | 00.07 | 00.06 | 00.31 | 00.31 | 00.31 | -01.3    | -01.2    | -01.2    |
| 7    | 26.30  | 26.47 | 26.40 | 00.06  | 00.12 | 00.07 | 00.31 | 00.31 | 00.31 | 00.0     | 00.0     | 00.0     |
| 8    | 25.82  | 26.30 | 26.15 | 00.10  | 00.17 | 00.12 | 00.31 | 00.31 | 00.31 | -01.2    | -01.2    | -01.2    |

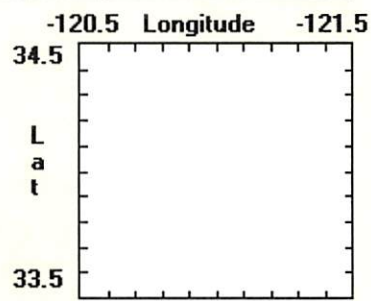
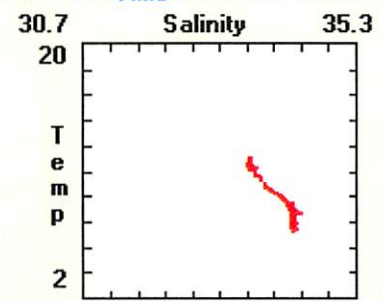
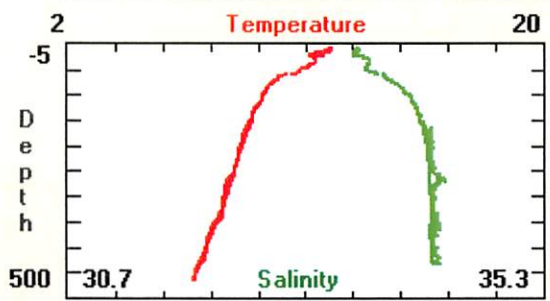
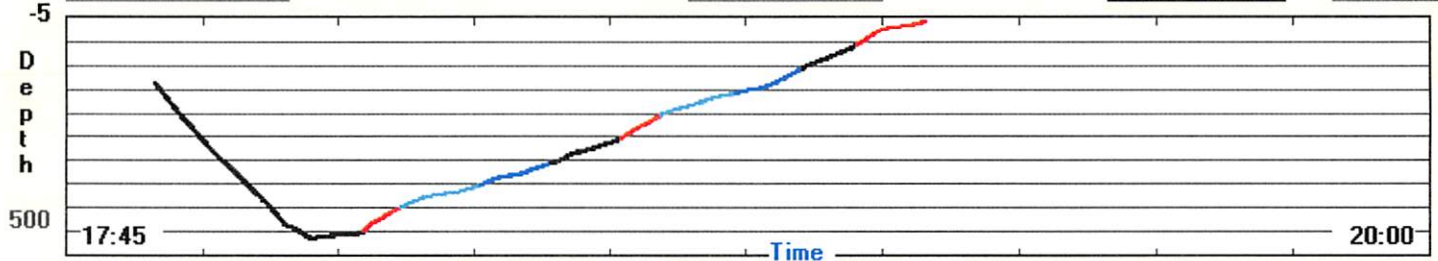
  

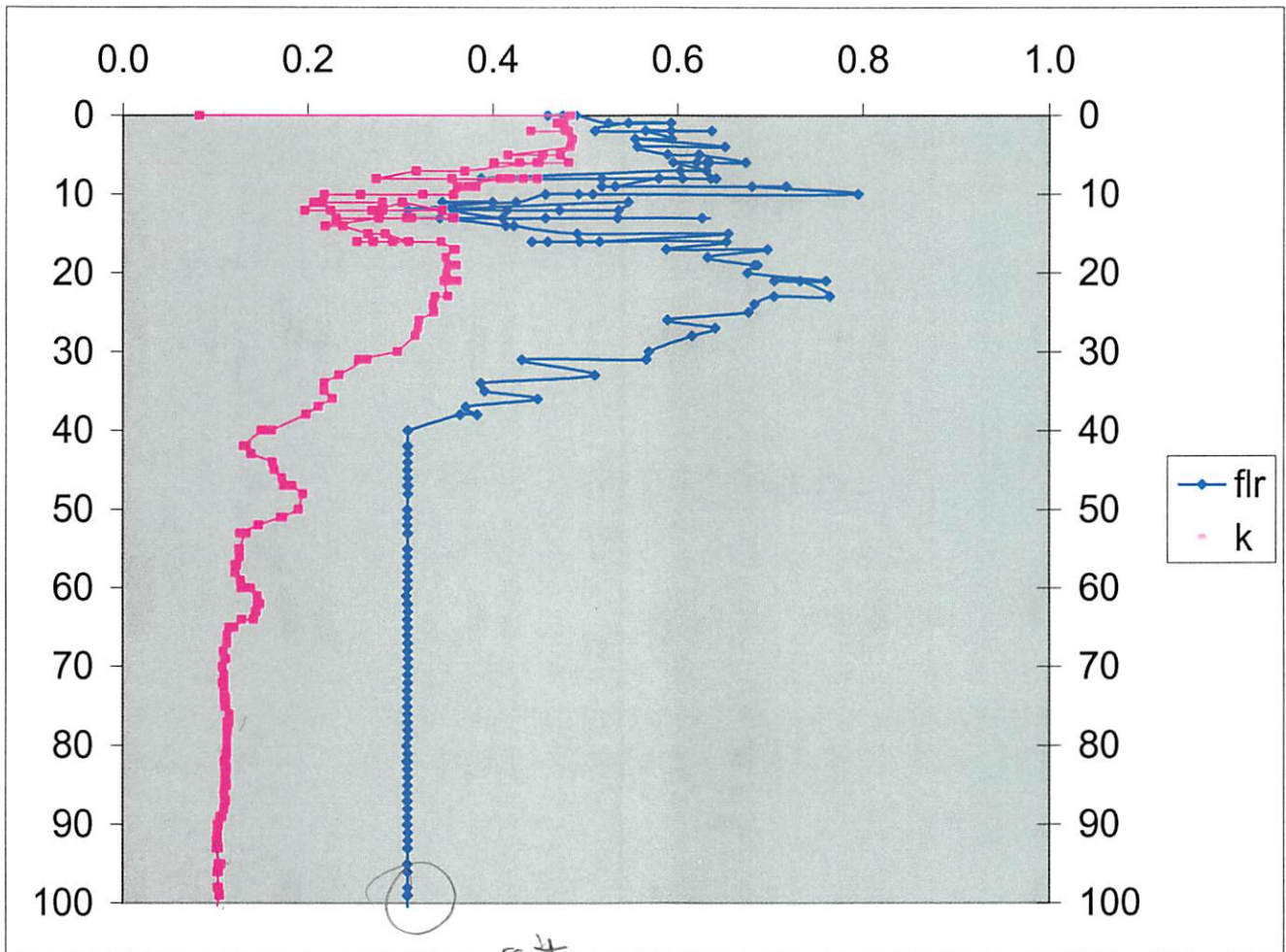
| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 48.0 | 31.6 | 00.0  | 04.2  | 00.6  | -86.4 | 11.5  | -14.4 | 00469 | 00821 |
| 1    | 00.0 | 33.0 | 27.6 | 00.0  | 01.4  | 01.1  | -00.3 | 20.9  | 13.3  | 00057 | 00123 |
| 2    | 30.0 | 41.0 | 34.2 | 00.9  | 01.4  | 01.1  | 01.0  | 11.3  | 06.0  | 00117 | 00282 |
| 3    | 34.0 | 45.0 | 38.7 | 01.1  | 01.5  | 01.3  | 01.7  | 10.5  | 06.8  | 00105 | 00269 |
| 4    | 35.0 | 42.0 | 38.2 | 01.1  | 01.5  | 01.3  | 03.7  | 12.1  | 07.5  | 00101 | 00254 |
| 5    | 35.0 | 43.0 | 38.9 | 01.4  | 01.6  | 01.5  | 09.0  | 15.2  | 12.6  | 00059 | 00151 |
| 6    | 40.0 | 44.0 | 42.3 | 01.4  | 01.6  | 01.5  | 01.8  | 14.2  | 06.5  | 00108 | 00289 |
| 7    | 32.0 | 42.0 | 36.5 | 01.1  | 01.5  | 01.3  | 00.4  | 14.2  | 07.8  | 00097 | 00248 |
| 8    | 21.0 | 34.0 | 26.7 | 00.8  | 01.4  | 01.0  | 06.4  | 13.5  | 09.2  | 00080 | 00182 |

**Environmental Parameters      Net Operation      Net - Ship Position      Program Settings**

|            |            |              |           |                             |                             |             |
|------------|------------|--------------|-----------|-----------------------------|-----------------------------|-------------|
| Time       | 19:10:12   | Net_Num      | 9         | Latitude                    | 34N 20.644                  | Reset       |
| Pressure   | -0.5 m     | OpenTime     | 6.7 min   | Longitude                   | 120W 49.43                  | Baud Rate   |
| Temp       | 11.98 C    | Vol_Filtered | 249.8 m3  | Net_Dist                    | 300.1 m                     | 2400        |
| Salinity   | 33.51 o/oo | Angle        | 45 deg    | Total_Dist                  | 4101.3 m                    | Sample Rate |
| Density    | 25.438     | Flow_Counts  | 121       | Processed File Name         | C:\MOCNESS\MOCDATA\TOW2.PRO | 4.0 sec     |
| Oxygen     | -1.16 ml/l | Hor_Vel      | 1.4 kts   | Raw File Name               | C:\MOCNESS\MOCDATA\TOW2.raw | Printer     |
| Fluoresc.  | 0.4760 V   | Vert_Vel     | 4.7 m/min | Acquisition Ended. trys = 0 |                             | Off         |
| LightXmis  | 0.0827 /m  | Battery      | 20.1 V    |                             |                             |             |
| Irradiance |            |              |           |                             |                             |             |

Step Net       Increment Net#       **Pause Acqui**      End Acqui





Event 12.2

Start: 132.9726

Revised 10/94

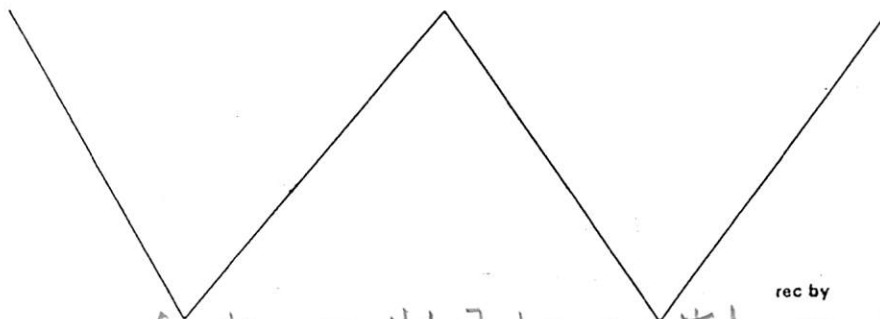
**MOCNESS DATA SHEET**

| CRUISE    | STATION | HAUL | DATE (DST EST GMT) | MOCNESS TYPE       |
|-----------|---------|------|--------------------|--------------------|
| CCE-P0605 | Cycle 1 | 3    | 12-13 May          | 1/4M <u>1M</u> 10M |

|   | START   | END     |            | TIME  | DEPTH | VOL FILTER       | MESH SIZE    |
|---|---------|---------|------------|-------|-------|------------------|--------------|
| LATITUDE  | 34.2645 | 34.2753 | NET 0 OPEN | 23:20 |       | 641 <sup>m</sup> | 202- $\mu$ m |
| LONGITUDE   | 120.889 | 120.936 | NET 1 OPEN | 23:50 | 450   | 285              |              |
| DEPTH   | 1950m   |         | NET 2 OPEN | 00:00 | 396   | 263              |              |
| Begin COMMENTS<br>Surface Water:<br>O <sub>2</sub> : 5.61<br>Fluor: 1.07<br>Trans. 0.6572<br>Temp: 12.47<br>Sal: 33.60<br>Start: 20.1 V<br>End: 19.9 V<br>End Near-surface:<br>5.81<br>0.9884<br>0.5311 |         |         | NET 3 OPEN | 00:09 | 347   | 206              |              |
|   |         |         | NET 4 OPEN | 00:16 | 300   | 266              |              |
|   |         |         | NET 5 OPEN | 00:24 | 250   | 230              |              |
|   |         |         | NET 6 OPEN | 00:32 | 200   | 230              |              |
|   |         |         | NET 7 OPEN | 00:40 | 145   | 260              |              |
|   |         |         | NET 8 OPEN | 00:48 | 101   | 245              |              |
|   |         |         | NET 9 OPEN | 00:55 | 50    | 262              |              |
|   |         |         | SURFACE    |       |       |                  |              |

manual increment Net #

TOW PROFILE



add ~20m<sup>3</sup> to estimated volume.

Did not receive confirmation on Net 7 trip so waited ~20 m<sup>3</sup> and then advanced stepping motor 1 step.

rec by

File names: .pro .raw .tab

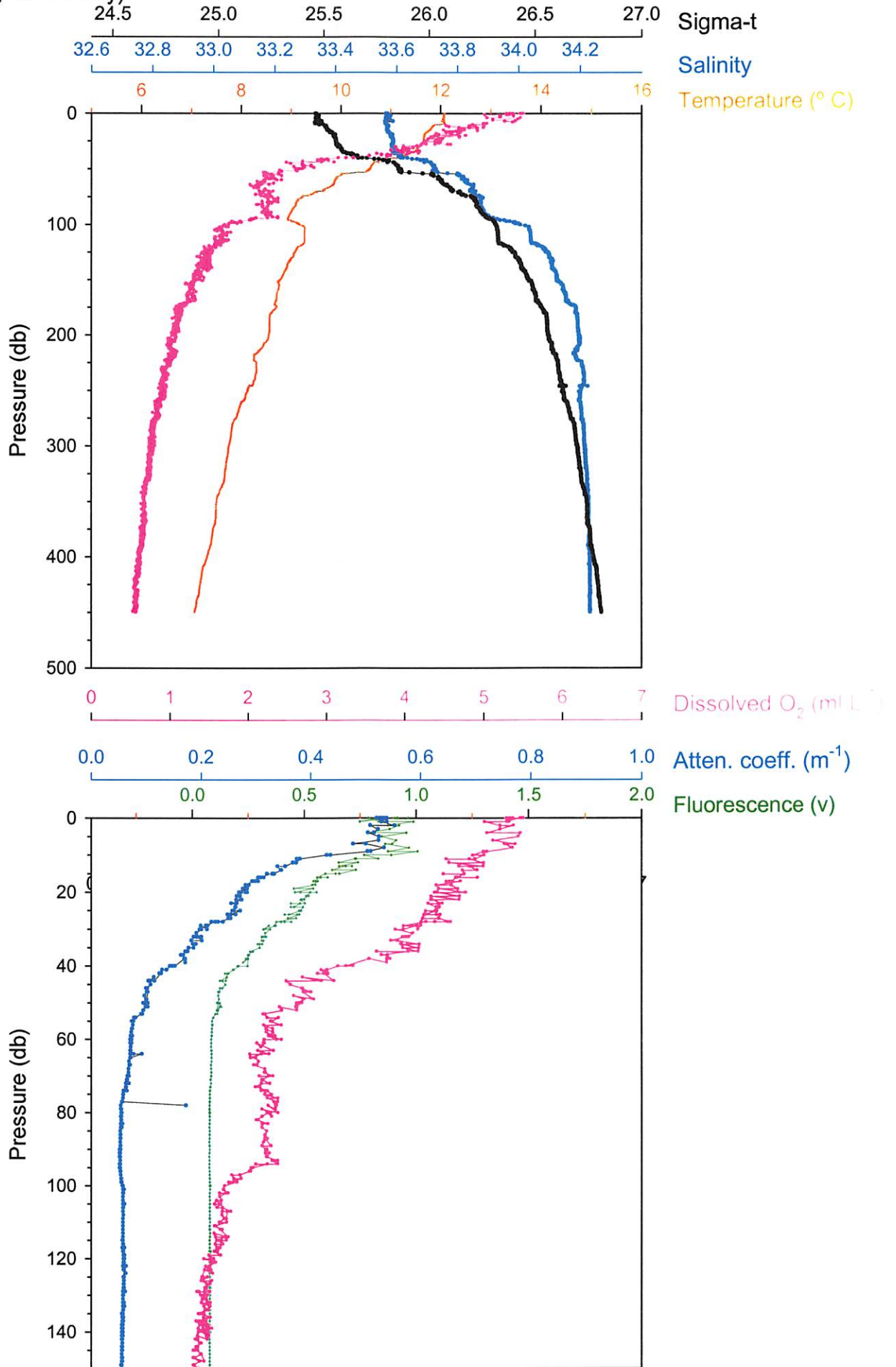
ship speed through water ~1.3 Kts

MDO + JE



# MOCNESS - Tow 3

(cycle 1 (2350-0055, 12-13 May))



M-01-003  
 08/05/06  
 RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -01.0 | 460.7 | 214.4 | 06.9 | 50.0 | 08.7 | 06.9  | 50.0  | 08.6  | 00.02 | 34.30 | 32.19 |
| 1    | -00.7 | 449.1 | 414.3 | 07.1 | 13.2 | 07.2 | 07.0  | 13.2  | 07.2  | 00.02 | 34.23 | 33.75 |
| 2    | 348.1 | 396.2 | 376.2 | 07.3 | 07.5 | 07.4 | 07.3  | 07.5  | 07.4  | 34.22 | 34.23 | 34.23 |
| 3    | 300.6 | 346.0 | 318.9 | 07.5 | 07.7 | 07.7 | 07.5  | 07.7  | 07.7  | 34.22 | 34.23 | 34.22 |
| 4    | 249.6 | 300.5 | 274.1 | 07.8 | 08.1 | 07.9 | 07.7  | 08.1  | 07.9  | 34.20 | 34.22 | 34.21 |
| 5    | 200.7 | 249.5 | 226.4 | 08.1 | 08.5 | 08.3 | 08.1  | 08.5  | 08.3  | 34.18 | 34.22 | 34.20 |
| 7    | 102.0 | 141.7 | 124.6 | 08.9 | 09.3 | 09.1 | 08.9  | 09.3  | 09.1  | 34.03 | 34.12 | 34.08 |
| 0    | -01.0 | 460.7 | 214.4 | 06.9 | 50.0 | 08.7 | 06.9  | 50.0  | 08.6  | 00.02 | 34.30 | 32.19 |
| 8    | 50.9  | 101.0 | 75.7  | 08.9 | 10.5 | 09.4 | 08.9  | 10.5  | 09.4  | 33.72 | 34.02 | 33.87 |

| net# | simin  | simax | siavg | cmin  | cmax  | cavg  | fmin  | fmax  | favg  | oxmin    | oxmax | oxavg |
|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|
|      |        |       |       |       |       | cavg  | fmin  | fmax  | favg  | irradmin |       |       |
|      |        |       |       |       |       |       |       |       |       | irradmax |       |       |
|      |        |       |       |       |       |       |       |       |       | irradavg |       |       |
| 0    | -11.92 | 26.86 | 24.91 | 00.00 | 00.69 | 00.14 | 00.00 | 01.17 | 00.20 | 00.5     | 13.2  | 02.0  |
| 1    | -00.63 | 26.81 | 26.41 | 00.04 | 00.62 | 00.05 | 00.07 | 00.08 | 00.08 | 00.5     | 07.4  | 00.6  |
| 2    | 26.74  | 26.77 | 26.76 | 00.05 | 00.07 | 00.05 | 00.08 | 00.08 | 00.08 | 00.6     | 00.7  | 00.7  |
| 3    | 26.70  | 26.74 | 26.71 | 00.05 | 00.27 | 00.05 | 00.08 | 00.08 | 00.08 | 00.6     | 00.8  | 00.7  |
| 4    | 26.63  | 26.70 | 26.67 | 00.05 | 00.06 | 00.05 | 00.08 | 00.08 | 00.08 | 00.7     | 00.9  | 00.8  |
| 5    | 26.56  | 26.64 | 26.60 | 00.05 | 00.06 | 00.05 | 00.08 | 00.08 | 00.08 | 00.9     | 01.1  | 01.0  |
| 7    | 26.32  | 26.45 | 26.39 | 00.06 | 00.06 | 00.06 | 00.08 | 00.08 | 00.08 | 01.3     | 01.8  | 01.5  |
| 0    | -11.92 | 26.86 | 24.91 | 00.00 | 00.69 | 00.14 | 00.00 | 01.17 | 00.20 | 00.5     | 13.2  | 02.0  |
| 8    | 25.86  | 26.32 | 26.16 | 00.05 | 00.17 | 00.06 | 00.08 | 00.12 | 00.08 | 01.7     | 02.6  | 02.2  |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 44.0 | 27.2 | 00.0  | 01.1  | 00.4  | -33.0 | 08.8  | -14.2 | 00478 | 00641 |
| 1    | 00.0 | 30.0 | 23.6 | 00.0  | 01.1  | 00.8  | -00.4 | 10.5  | 05.5  | 00142 | 00285 |
| 2    | 18.0 | 28.0 | 22.2 | 00.5  | 01.1  | 00.8  | -01.2 | 16.2  | 05.3  | 00133 | 00263 |
| 3    | 20.0 | 32.0 | 25.8 | 00.8  | 01.1  | 00.9  | 02.1  | 16.6  | 07.3  | 00101 | 00206 |
| 4    | 21.0 | 32.0 | 26.2 | 00.8  | 01.1  | 00.9  | 02.1  | 09.4  | 06.0  | 00125 | 00266 |
| 5    | 21.0 | 30.0 | 24.7 | 00.7  | 01.1  | 00.9  | 02.0  | 09.4  | 06.6  | 00110 | 00229 |
| 7    | 27.0 | 31.0 | 29.1 | 00.8  | 01.1  | 00.9  | 00.4  | 08.6  | 05.0  | 00120 | 00267 |
| 0    | 00.0 | 44.0 | 27.2 | 00.0  | 01.1  | 00.4  | -33.0 | 08.8  | -14.2 | 00478 | 00641 |
| 8    | 23.0 | 31.0 | 26.8 | 00.8  | 01.1  | 01.0  | 03.7  | 10.5  | 07.1  | 00106 | 00242 |

Environmental Parameters

Time 01:04:16  
 Pressure -0.3 m  
 Temp 12.08 C  
 Salinity 33.57 o/oo  
 Density 25.463  
 Oxygen 5.37 ml/l  
 Fluoresc. 0.9178 V  
 LightXmis 0.5378 /m  
 Irradiance

Net Operation

Net\_Num 9  
 OpenTime 8.6 min  
 Vol\_Filtered 261.9 m3  
 Angle 31 deg  
 Flow\_Counts 101  
 Hor\_Vel 0.5 kts  
 Vert\_Vel 2.5 m/min  
 Battery 19.8 V

Net - Ship Position

Latitude 34N 16.5151  
 Longitude 120W 56.16  
 Net\_Dist 336.2 m  
 Total\_Dist 4952.6 m

Program Settings

Reset  
 Baud Rate 2400  
 Sample Rate 4.0 sec  
 Printer Off

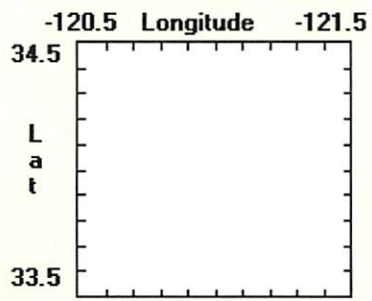
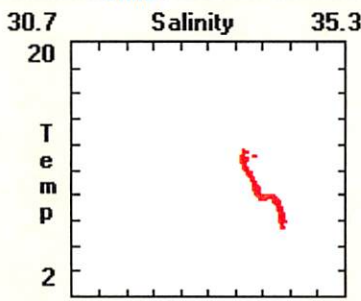
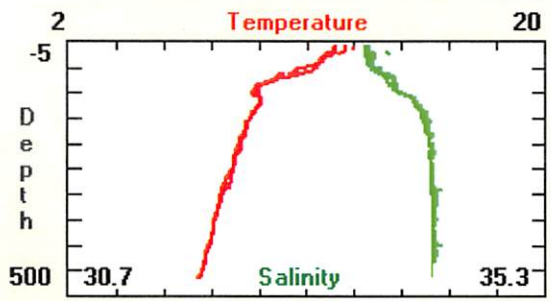
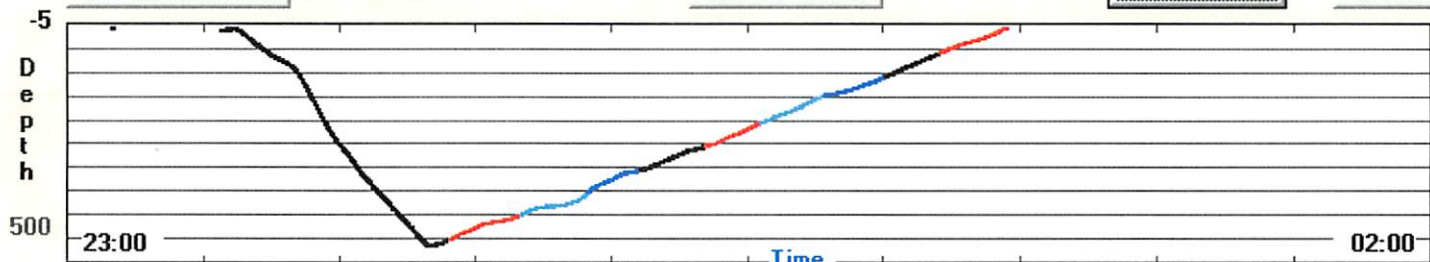
Processed File Name C:\MOCNESS\MOCDATA\TOW3.PRO  
 Raw File Name C:\MOCNESS\MOCDATA\TOW3.raw  
 Acquisition Ended. trys = 0

Step Net

Increment Net#

Pause Acqui

End Acqui



Event No: 158

Start: 133.548

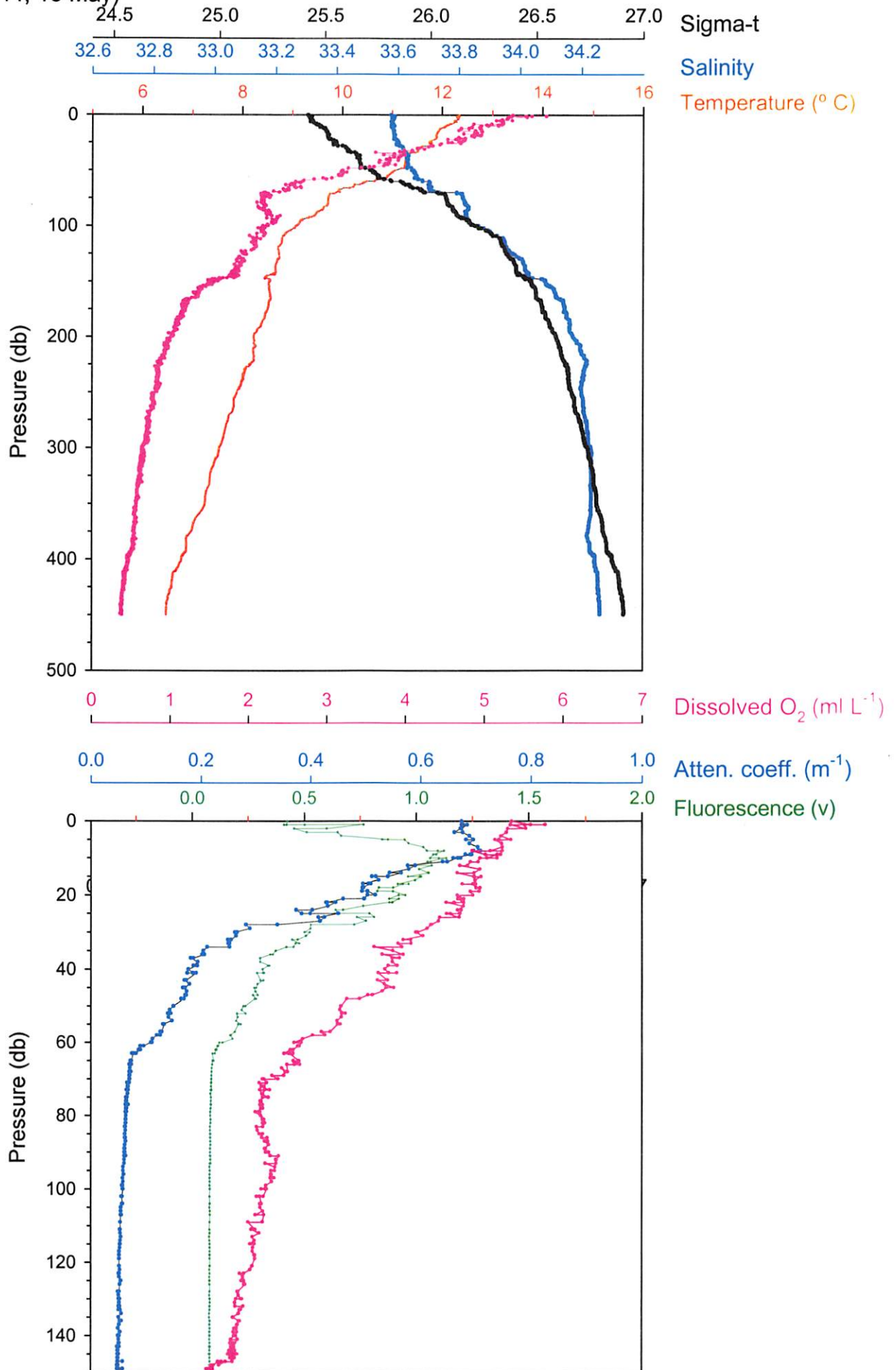
| MOCNESS DATA SHEET  |          |          |             |               | Revised 10/94 |            |              |  |  |  |
|---|----------|----------|-------------|---------------|---------------|------------|--------------|--|--|--|
| CRUISE  | STATION  | HAUL     | DATE        | (DST EST GMT) | MOCNESS TYPE  |            |              |  |  |  |
| CCE-P0605   | Cycle 1  | 4        | 13 May      | PDT           | 1/4M          | (1M)       | 10M          |  |  |  |
|   | START    | END      |             | TIME          | DEPTH         | VOL FILTER | MESH SIZE    |  |  |  |
| LATITUDE  | 34.2517  | 34.2639  | NET 0 OPEN  | 13:07         |               | 944        | 202- $\mu$ m |  |  |  |
| LONGITUDE   | 120.9729 | 121.0275 | NET 1 OPEN  | 13:41         | 450           | 275        |              |  |  |  |
| DEPTH   | ~1,050   |          | NET 2 OPEN  | 13:49         | 400           | 207        |              |  |  |  |
| COMMENTS<br>Surface Water:<br>O <sub>2</sub> : 6.01<br>Fluor : 0.69<br>Trans: 0.244<br>Temp : 12.46<br>Sal. : 33.49<br>Start: 20.1 v. |          |          | NET 3 OPEN  | 13:55         | 347           | 286        |              |  |  |  |
|   |          |          | NET 4 OPEN  | 14:03         | 299           | 263        |              |  |  |  |
|   |          |          | NET 5 OPEN  | 14:10         | 248           | 284        |              |  |  |  |
|   |          |          | NET 6 OPEN  | 14:18         | 199           | 249        |              |  |  |  |
|   |          |          | NET 7 OPEN  | 14:24         | 150           | 252        |              |  |  |  |
|   |          |          | NET 8 OPEN  | 14:32         | 98            | 251        |              |  |  |  |
|   |          |          | NET 9 OPEN  | 14:38         | 50            | 242        |              |  |  |  |
|   |          |          | SURFACE     | 14:44         | 0             |            |              |  |  |  |
|   |          |          | TOW PROFILE |               |               |            |              |  |  |  |
|   |          |          |             |               |               |            |              |  |  |  |
| File names: Tow 4 .pro Tow 4 .raw Tow 4 .tab  |          |          |             |               |               |            |              |  |  |  |

Ship's speed ~1.5 kts,  
 Moc Log Horiz. Vel. ~0.9 kts.

MJD  
 +JE



MOCNESS - Tow 4  
Cycle 1 (1341-1444, 13 May)



M-01-004  
08/05/06  
RV Knorr

## MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.9 | 460.5 | 203.0 | 06.4 | 50.0 | 08.4 | 06.4  | 50.0  | 08.4  | 00.03 | 34.31 | 31.92 |
| 1    | -00.5 | 449.4 | 418.5 | 06.5 | 18.5 | 06.7 | 06.4  | 18.5  | 06.7  | 00.03 | 34.26 | 33.97 |
| 2    | 347.7 | 399.6 | 378.4 | 06.8 | 07.3 | 07.0 | 06.8  | 07.2  | 06.9  | 34.22 | 34.24 | 34.23 |
| 3    | 300.0 | 345.8 | 318.9 | 07.3 | 07.6 | 07.4 | 07.2  | 07.5  | 07.4  | 34.23 | 34.23 | 34.23 |
| 4    | 248.5 | 299.2 | 276.0 | 07.6 | 07.9 | 07.7 | 07.5  | 07.9  | 07.7  | 34.20 | 34.22 | 34.21 |
| 5    | 199.9 | 248.1 | 227.8 | 07.9 | 08.3 | 08.1 | 07.9  | 08.3  | 08.1  | 34.17 | 34.22 | 34.20 |
| 6    | 151.1 | 197.9 | 171.5 | 08.2 | 08.6 | 08.5 | 08.2  | 08.6  | 08.5  | 34.08 | 34.17 | 34.13 |
| 7    | 100.4 | 150.5 | 132.8 | 08.4 | 09.1 | 08.7 | 08.4  | 09.1  | 08.7  | 33.86 | 34.08 | 34.00 |
| 8    | 48.1  | 99.0  | 74.4  | 09.1 | 11.2 | 09.9 | 09.1  | 11.2  | 09.9  | 33.63 | 33.85 | 33.77 |

| net# | simin  | simax | siavg | cmin   | cmax  | cavg  | fmin  | fmax  | favg  | oxmin    | oxmax    | oxavg    |
|------|--------|-------|-------|--------|-------|-------|-------|-------|-------|----------|----------|----------|
|      |        |       |       |        |       | cavg  | fmin  | fmax  | favg  | irradmin | irradmax | irradavg |
| 0    | -11.87 | 26.93 | 24.72 | -00.01 | 09.35 | 00.27 | 00.00 | 01.38 | 00.18 | 00.4     | 09.2     | 01.9     |
| 1    | -01.47 | 26.91 | 26.65 | 00.04  | 00.42 | 00.05 | 00.06 | 00.08 | 00.08 | 00.4     | 06.6     | 00.5     |
| 2    | 26.78  | 26.86 | 26.82 | 00.04  | 00.05 | 00.04 | 00.08 | 00.08 | 00.08 | 00.4     | 00.6     | 00.5     |
| 3    | 26.74  | 26.78 | 26.76 | 00.04  | 00.11 | 00.05 | 00.08 | 00.08 | 00.08 | 00.6     | 00.7     | 00.6     |
| 4    | 26.66  | 26.73 | 26.70 | 00.05  | 00.07 | 00.05 | 00.08 | 00.08 | 00.08 | 00.6     | 00.8     | 00.7     |
| 5    | 26.59  | 26.66 | 26.64 | 00.05  | 00.06 | 00.05 | 00.08 | 00.08 | 00.08 | 00.8     | 01.0     | 00.9     |
| 6    | 26.48  | 26.59 | 26.52 | 00.05  | 00.06 | 00.05 | 00.08 | 00.08 | 00.08 | 01.0     | 01.5     | 01.2     |
| 7    | 26.22  | 26.48 | 26.39 | 00.05  | 00.06 | 00.05 | 00.08 | 00.08 | 00.08 | 01.5     | 02.2     | 01.9     |
| 8    | 25.67  | 26.20 | 26.00 | 00.06  | 00.17 | 00.08 | 00.08 | 00.29 | 00.11 | 02.1     | 03.4     | 02.4     |

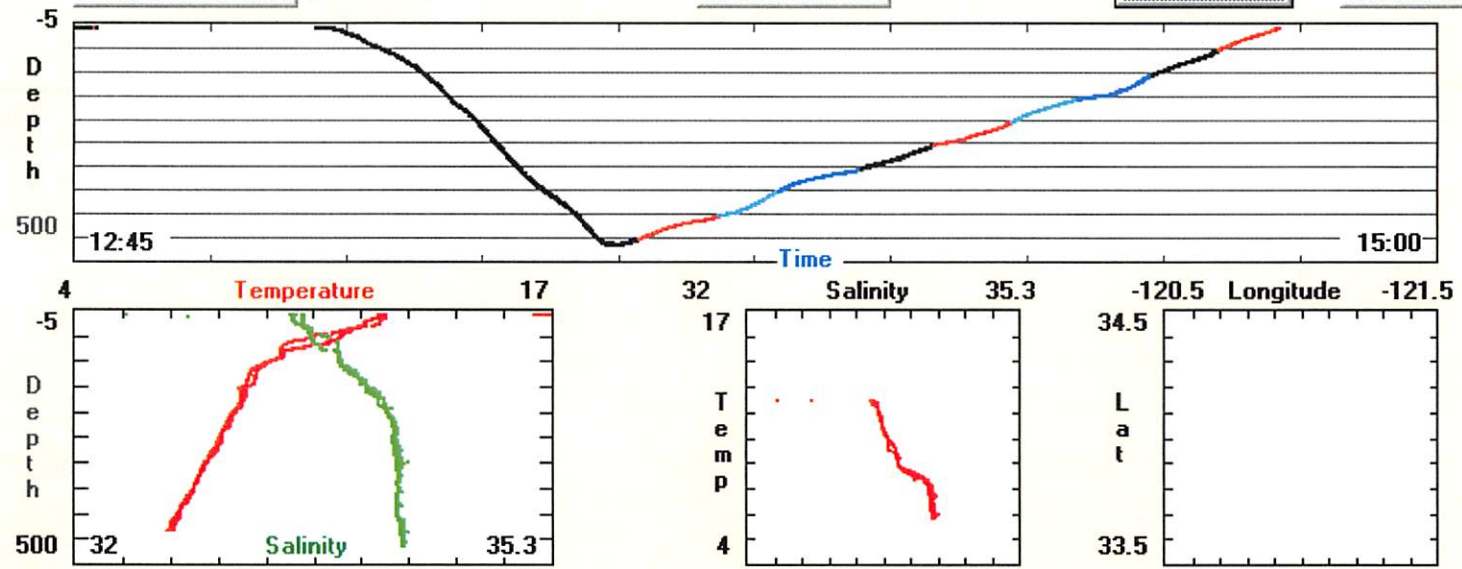
  

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 55.0 | 35.2 | 00.0  | 01.9  | 00.6  | -26.4 | 10.5  | -13.5 | 00505 | 00944 |
| 1    | 00.0 | 40.0 | 34.6 | 00.0  | 01.2  | 01.1  | 00.0  | 09.5  | 06.2  | 00121 | 00275 |
| 2    | 30.0 | 39.0 | 33.8 | 00.9  | 01.4  | 01.2  | 02.1  | 14.2  | 08.8  | 00087 | 00207 |
| 3    | 33.0 | 40.0 | 35.5 | 01.1  | 01.4  | 01.2  | 01.9  | 12.7  | 06.0  | 00120 | 00286 |
| 4    | 33.0 | 41.0 | 36.0 | 01.1  | 01.4  | 01.2  | 03.9  | 10.3  | 07.0  | 00107 | 00262 |
| 5    | 34.0 | 41.0 | 37.1 | 01.1  | 01.4  | 01.2  | 02.5  | 11.9  | 06.3  | 00115 | 00284 |
| 6    | 36.0 | 42.0 | 38.4 | 01.2  | 01.5  | 01.3  | 03.7  | 12.9  | 07.6  | 00097 | 00249 |
| 7    | 34.0 | 43.0 | 38.0 | 01.1  | 01.6  | 01.3  | -00.2 | 14.0  | 06.8  | 00109 | 00282 |
| 8    | 36.0 | 44.0 | 39.3 | 01.2  | 01.5  | 01.4  | 05.1  | 12.9  | 08.0  | 00096 | 00251 |

**Environmental Parameters      Net Operation      Net - Ship Position      Program Settings**

|            |            |              |           |                             |                             |             |
|------------|------------|--------------|-----------|-----------------------------|-----------------------------|-------------|
| Time       | 14:44:32   | Net_Num      | 9         | Latitude                    | 34N 15.8330                 | Reset       |
| Pressure   | -0.7 m     | OpenTime     | 6.1 min   | Longitude                   | 121W 1.647                  | Baud Rate   |
| Temp       | 12.34 C    | Vol_Filtered | 241.8 m3  | Net_Dist                    | 352.3 m                     | 2400        |
| Salinity   | 24.84 o/oo | Angle        | 44 deg    | Total_Dist                  | 5513.5 m                    | Sample Rate |
| Density    | 18.657     | Flow_Counts  | 125       | Processed File Name         | C:\MOCNESS\MOCDATA\TOW4.PRO | 4.0 sec     |
| Oxygen     | 6.18 ml/l  | Hor_Vel      | 1.4 kts   | Raw File Name               | C:\MOCNESS\MOCDATA\TOW4.raw | Printer     |
| Floresc.   | 0.5406 V   | Vert_Vel     | 5.3 m/min | Acquisition Ended. trys = 0 |                             | Off         |
| LightXmis  | -0.1443 /m | Battery      | 19.9 V    |                             |                             |             |
| Irradiance |            |              |           |                             |                             |             |

Step Net       Increment Net#       **Pause Acqui**      End Acqui



Event No. 198

Start: 134.5751

Revised 10/94

**MOCNESS DATA SHEET**

| CRUISE    | STATION | HAUL | DATE (DST EST GMT) | MOCNESS TYPE  |
|-----------|---------|------|--------------------|---------------|
| CCE-P0605 | Cycle 1 | 5    | 14 May 2006        | 1/4M (1M) 10M |

|  | START    | END      |            | TIME | DEPTH | VOL FILTER       | MESH SIZE |
|--|----------|----------|------------|------|-------|------------------|-----------|
| LATITUDE   | 34.2463  | 34.2576  | NET 0 OPEN | 1346 | 0     | 813 <sup>m</sup> | 202 μm    |
| LONGITUDE  | 121.0262 | 121.0627 | NET 1 OPEN | 1413 | 225   | 136              |           |
| DEPTH  | 1033 m   |          | NET 2 OPEN | 1417 | 201   |                  |           |
| <b>COMMENTS</b><br>Surface Water: <span style="float: right;">230 m</span><br>O <sub>2</sub> : 638                      0.91<br>Fluor. 0.9016                      0.081<br>Turb. 0.8686                      0.0426<br>Temp 12.83                      8.0<br>Sal : 33.41                      34.18<br><br>Start V: 20.2 v |          |          | NET 3 OPEN | 1419 | 190   | 230              |           |
|  |          |          | NET 4 OPEN | 1426 | 150   | 187              |           |
|  |          |          | NET 5 OPEN | 1431 | 126   | 148              |           |
|  |          |          | NET 6 OPEN | 1435 | 100   | 144              |           |
|  |          |          | NET 7 OPEN | 1439 | 73    | 217              |           |
|  |          |          | NET 8 OPEN | 1445 | 50    | 127              |           |
|  |          |          | NET 9 OPEN | 1448 | 24    |                  |           |
|  |          |          | SURFACE    |      |       |                  |           |

**TOW PROFILE**

\* Deck box inadvertently triggered off, then reset while Net # 2 was open. Did not record entire volume filtered. Must estimate from elapsed time.

rec by

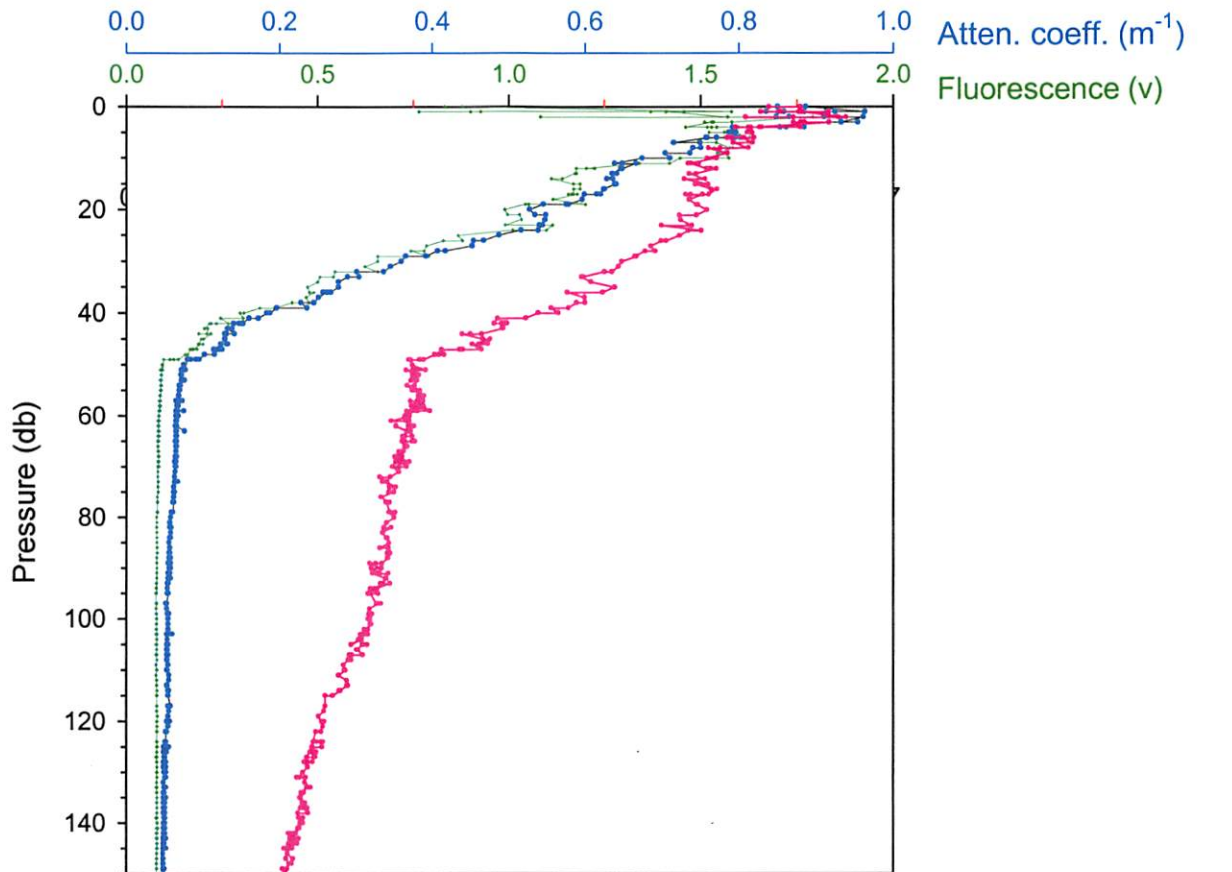
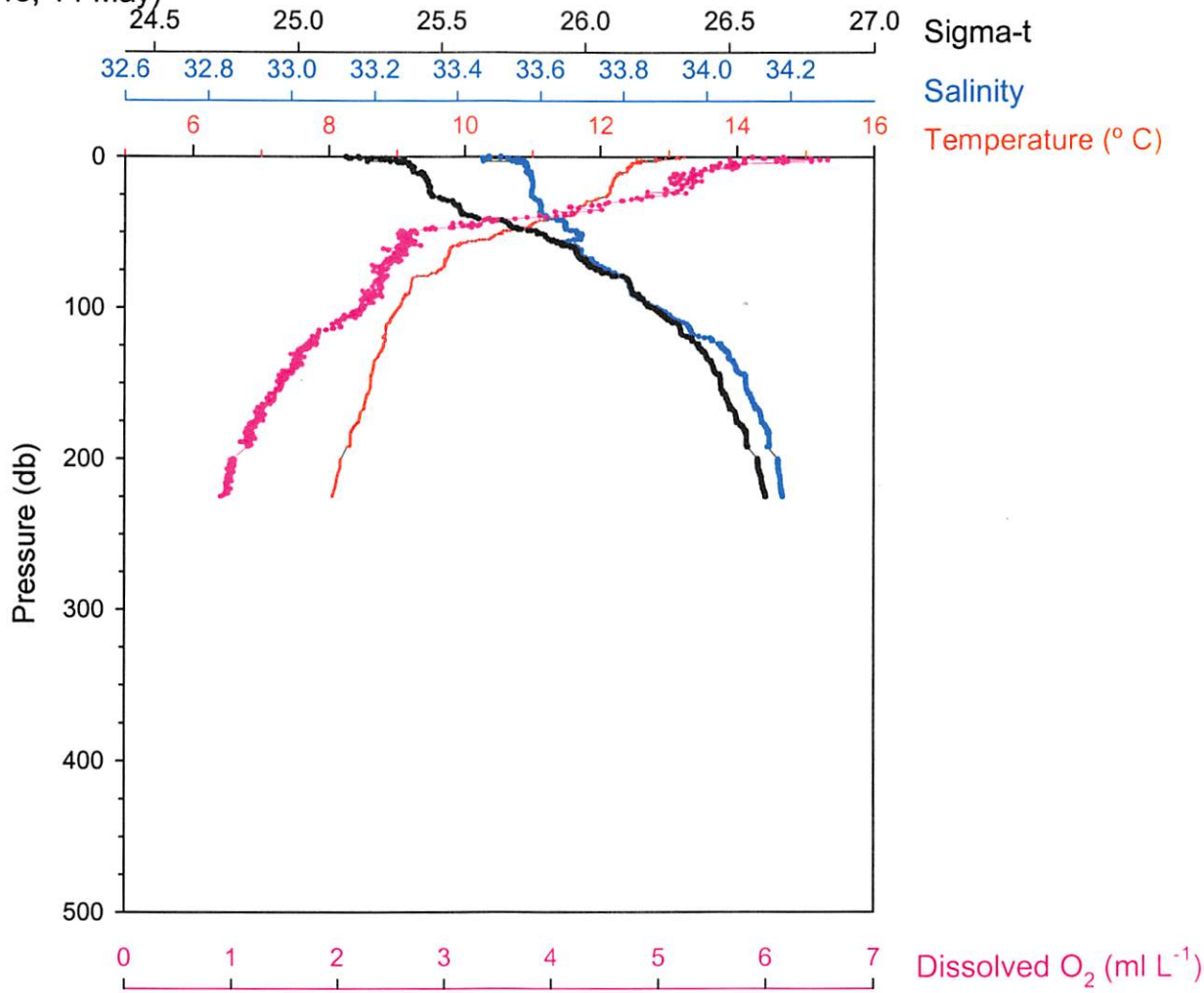
Intended depth: 225 m.

File names:                                      .pro                                      .raw                                      .tab

MDO  
TJE



MOCNESS - Tow 5  
Cycle 1 (1413-1448, 14 May)



M-01-005  
08/05/06  
RV Knorr

## MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.5 | 241.3 | 135.5 | 07.9 | 16.6 | 08.9 | 07.9  | 16.6  | 08.9  | 00.01 | 34.20 | 32.16 |
| 1    | -00.2 | 224.5 | 200.2 | 08.1 | 15.4 | 08.0 | 08.0  | 15.4  | 08.0  | 00.02 | 34.18 | 32.47 |
| 2    | 190.4 | 200.0 | 193.3 | 08.2 | 08.3 | 08.3 | 08.2  | 08.3  | 08.3  | 34.15 | 34.17 | 34.15 |
| 3    | 149.9 | 189.9 | 175.3 | 08.3 | 08.6 | 08.4 | 08.3  | 08.6  | 08.4  | 34.09 | 34.15 | 34.13 |
| 4    | 125.7 | 148.6 | 137.9 | 08.6 | 08.8 | 08.7 | 08.6  | 08.8  | 08.7  | 34.04 | 34.09 | 34.07 |
| 5    | 99.6  | 125.8 | 111.8 | 08.8 | 09.0 | 08.9 | 08.8  | 09.0  | 08.9  | 33.87 | 34.04 | 33.95 |
| 6    | 72.8  | 98.8  | 86.9  | 09.1 | 09.7 | 09.3 | 09.0  | 09.7  | 09.2  | 33.74 | 33.86 | 33.82 |
| 7    | 50.1  | 71.7  | 61.6  | 09.7 | 10.5 | 09.9 | 09.7  | 10.5  | 09.9  | 33.66 | 33.74 | 33.70 |
| 8    | 24.3  | 49.4  | 39.0  | 10.6 | 12.1 | 11.4 | 10.6  | 12.1  | 11.4  | 33.58 | 33.69 | 33.63 |

| net# | simin  | simax | siavg | cmin  | cmax  | cavg  | fmin  | fmax  | favg  | oxmin    | oxmax    | oxavg    |
|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|----------|
|      |        |       |       |       |       | cavg  | fmin  | fmax  | favg  | irradmin | irradmax | irradavg |
| 0    | -01.05 | 26.66 | 24.84 | 00.00 | 04.68 | 00.15 | 00.00 | 01.47 | 00.21 | -01.3    | 07.5     | 02.3     |
| 1    | -00.95 | 26.63 | 25.26 | 00.04 | 00.71 | 00.05 | 00.06 | 00.08 | 00.08 | 00.0     | 00.0     | 00.0     |
| 2    | 26.56  | 26.60 | 26.57 | 00.04 | 00.05 | 00.05 | 00.08 | 00.08 | 00.08 | 00.9     | 07.1     | 01.1     |
| 3    | 26.47  | 26.56 | 26.53 | 00.04 | 00.05 | 00.05 | 00.08 | 00.08 | 00.08 | 00.0     | 00.0     | 00.0     |
| 4    | 26.40  | 26.47 | 26.44 | 00.05 | 00.05 | 00.05 | 00.08 | 00.08 | 00.08 | 01.0     | 01.2     | 01.1     |
| 5    | 26.23  | 26.40 | 26.31 | 00.05 | 00.06 | 00.05 | 00.08 | 00.08 | 00.08 | 00.0     | 00.0     | 00.0     |
| 6    | 26.02  | 26.22 | 26.15 | 00.05 | 00.07 | 00.06 | 00.08 | 00.08 | 00.08 | 01.1     | 01.5     | 01.2     |
| 7    | 25.84  | 26.02 | 25.95 | 00.06 | 00.08 | 00.07 | 00.08 | 00.09 | 00.09 | 00.0     | 00.0     | 00.0     |
| 8    | 25.46  | 25.83 | 25.64 | 00.08 | 00.52 | 00.22 | 00.10 | 01.01 | 00.39 | 01.4     | 01.7     | 01.6     |
|      |        |       |       |       |       |       |       |       |       | 00.0     | 00.0     | 00.0     |
|      |        |       |       |       |       |       |       |       |       | 01.7     | 02.2     | 02.0     |
|      |        |       |       |       |       |       |       |       |       | 00.0     | 00.0     | 00.0     |
|      |        |       |       |       |       |       |       |       |       | 02.2     | 02.5     | 02.3     |
|      |        |       |       |       |       |       |       |       |       | 00.0     | 00.0     | 00.0     |
|      |        |       |       |       |       |       |       |       |       | 02.3     | 02.8     | 02.6     |
|      |        |       |       |       |       |       |       |       |       | 00.0     | 00.0     | 00.0     |
|      |        |       |       |       |       |       |       |       |       | 02.6     | 05.1     | 03.8     |
|      |        |       |       |       |       |       |       |       |       | 00.0     | 00.0     | 00.0     |

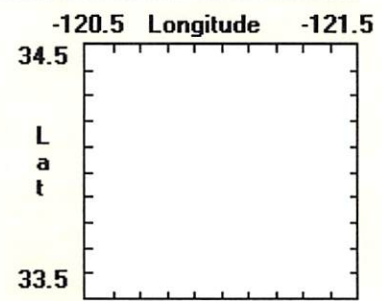
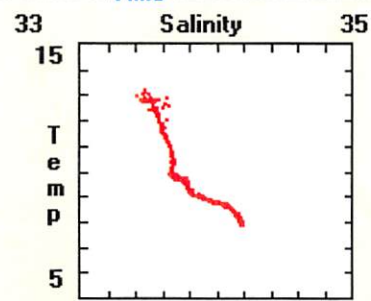
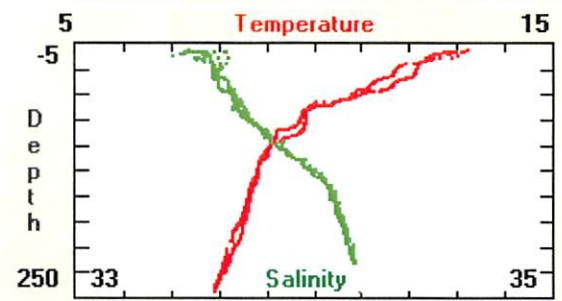
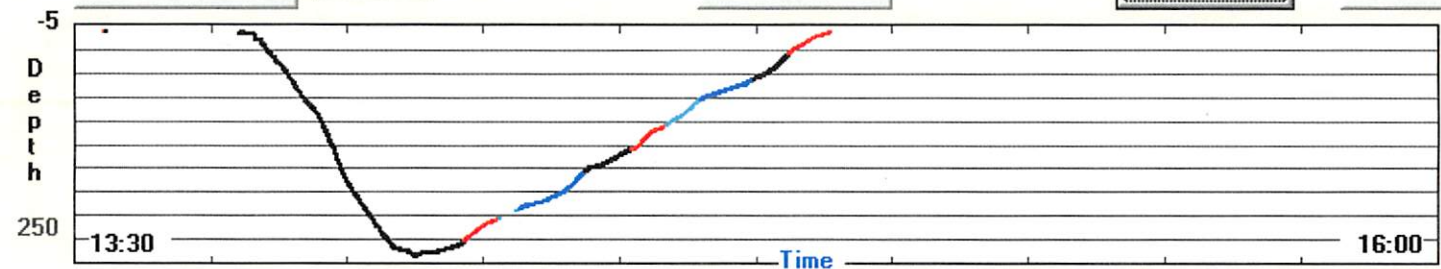
  

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 51.0 | 34.2 | 00.0  | 01.2  | 00.7  | -26.4 | 06.8  | -08.6 | 00395 | 00813 |
| 1    | 00.0 | 43.0 | 37.5 | 00.1  | 01.4  | 01.2  | -00.4 | 09.1  | 06.2  | 00060 | 00136 |
| 2    | 38.0 | 40.0 | 38.9 | -43.1 | 01.2  | -33.1 | 04.1  | 19.0  | 15.2  | 00009 | 00014 |
| 3    | 34.0 | 42.0 | 38.0 | 01.1  | 01.5  | 01.2  | 01.2  | 12.3  | 05.5  | 00106 | 00260 |
| 4    | 35.0 | 42.0 | 38.0 | 01.1  | 01.4  | 01.2  | 01.2  | 10.5  | 05.0  | 00075 | 00187 |
| 5    | 36.0 | 42.0 | 38.8 | 01.1  | 01.5  | 01.3  | 01.9  | 12.9  | 06.6  | 00057 | 00148 |
| 6    | 37.0 | 43.0 | 39.5 | 01.2  | 01.5  | 01.4  | 04.1  | 09.9  | 07.2  | 00055 | 00144 |
| 7    | 36.0 | 44.0 | 39.6 | 01.1  | 01.5  | 01.2  | 01.0  | 08.0  | 03.9  | 00087 | 00217 |
| 8    | 33.0 | 39.0 | 35.5 | 01.1  | 01.4  | 01.2  | 04.3  | 10.7  | 06.8  | 00054 | 00127 |

**Environmental Parameters      Net Operation      Net - Ship Position      Program Settings**

|            |            |              |           |                             |                             |             |
|------------|------------|--------------|-----------|-----------------------------|-----------------------------|-------------|
| Time       | 14:53:14   | Net_Num      | 9         | Latitude                    | 34N 15.457                  | Reset       |
| Pressure   | -0.2 m     | OpenTime     | 4.5 min   | Longitude                   | 121W 3.761                  | Baud Rate   |
| Temp       | 13.23 C    | Vol_Filtered | 163.4 m3  | Net_Dist                    | 270.4 m                     | Sample Rate |
| Salinity   | 33.48 o/oo | Angle        | 45 deg    | Total_Dist                  | 3551.3 m                    | Printer     |
| Density    | 25.168     | Flow_Counts  | 83        | Processed File Name         | C:\MOCNESS\MOCDATA\TOW5.PRO |             |
| Oxygen     | 5.87 ml/l  | Hor_Vel      | 1.2 kts   | Raw File Name               | C:\MOCNESS\MOCDATA\TOW5.raw |             |
| Fluoresc.  | 0.8324 V   | Vert_Vel     | 2.9 m/min | Acquisition Ended. trys = 1 |                             |             |
| LightXmis  | 0.8502 /m  | Battery      | 19.9 V    |                             |                             |             |
| Irradiance |            |              |           |                             |                             |             |

Step Net       Increment Net#       **Pause Acqui**      End Acqui



Event No: 215

0-225 m

25 m depth intervals

Start: 134.9742

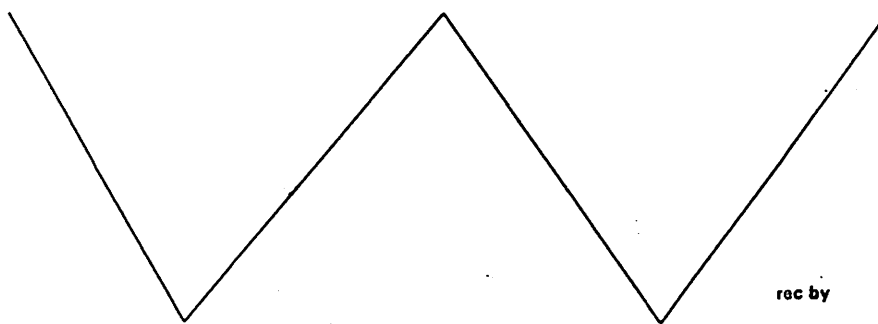
Revised 10/94

MOCNESS DATA SHEET

| CRUISE    | STATION | HAUL | DATE (DST EST GMT) | MOCNESS TYPE  |
|-----------|---------|------|--------------------|---------------|
| CCE-P0605 | Cycle 1 | 6    | 14-15 May          | 1/4M (1M) 10M |

|   | START               | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE |
|---|---------------------|----------|------------|-------|-------|------------|-----------|
| LATITUDE  | 34° 16.7" (34.2756) | 34.2587  | NET 0 OPEN | 23:23 |       | 1017       | 202 μm    |
| LONGITUDE   | (121.0720)          | 121.0609 | NET 1 OPEN | 23:48 | 225   | 181        |           |
|   | 171° 04.5"          |          | NET 2 OPEN | 23:53 | 200   | 229        |           |
| DEPTH   | 1,200 m             |          | NET 3 OPEN | 23:59 | 172   | 98         |           |
| COMMENTS<br><u>Surface waters:</u><br>O <sub>2</sub> : 6.14<br>Fluor: 1.217<br>Trans: 0.7321<br>Temp: 12.3<br>Sal: 34.59<br>Battery Volts: 20 |                     |          | NET 4 OPEN | 00:02 | 149   | 293        |           |
|   |                     |          | NET 5 OPEN | 00:09 | 127   | 249        |           |
|   |                     |          | NET 6 OPEN | 00:14 | 100   | 253        |           |
|   |                     |          | NET 7 OPEN | 00:20 | 76    | 189        |           |
|   |                     |          | NET 8 OPEN | 00:25 | 50    | 140        |           |
|   |                     |          | NET 9 OPEN | 00:29 | 24    | 215        |           |
|   |                     |          | SURFACE    | 00:35 | 0     |            |           |

TOW PROFILE



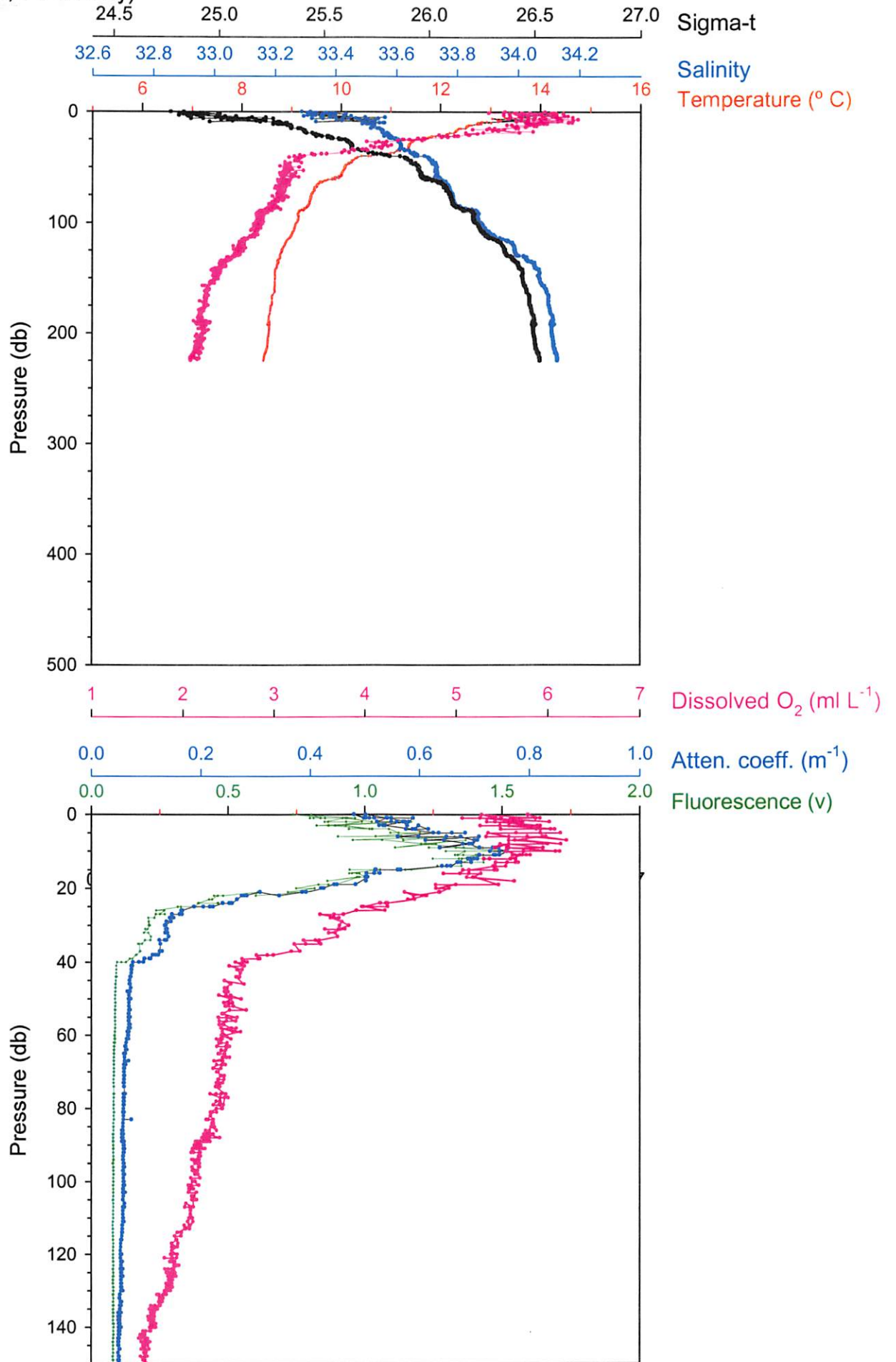
rec by

File names: .pro .raw .tab



# MOCNESS - Tow 6

Cycle 1 (2348-0035, 14-15 May)



TOW6.TAB

M-01-006  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|
| 0    | -00.8 | 240.0 | 125.5 | 08.2 | 50.0 | 09.1 | 08.2  | 50.0  | 09.0  | 00.01 | 34.16 |
| 1    | -00.6 | 224.3 | 209.4 | 08.4 | 13.7 | 08.6 | 08.4  | 13.7  | 08.6  | 00.01 | 34.13 |
| 2    | 173.3 | 199.7 | 188.9 | 08.5 | 08.6 | 08.6 | 08.5  | 08.6  | 08.5  | 34.10 | 34.12 |
| 3    | 149.2 | 172.2 | 159.1 | 08.6 | 08.7 | 08.7 | 08.6  | 08.7  | 08.6  | 34.07 | 34.10 |
| 4    | 127.3 | 148.3 | 137.6 | 08.7 | 08.8 | 08.7 | 08.7  | 08.8  | 08.7  | 33.99 | 34.07 |
| 5    | 100.9 | 126.8 | 115.5 | 08.8 | 09.1 | 08.9 | 08.8  | 09.1  | 08.9  | 33.88 | 33.99 |
| 6    | 76.1  | 100.0 | 88.4  | 09.1 | 09.4 | 09.2 | 09.1  | 09.4  | 09.2  | 33.78 | 33.87 |
| 7    | 49.3  | 75.5  | 62.5  | 09.4 | 10.1 | 09.7 | 09.4  | 10.1  | 09.7  | 33.73 | 33.78 |
| 8    | 24.0  | 48.7  | 36.3  | 10.1 | 11.7 | 10.9 | 10.1  | 11.7  | 10.9  | 33.58 | 33.73 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|
| 0    |       |       |       |      |      |      |      |      |      |       |       |
| 1    |       |       |       |      |      |      |      |      |      |       |       |
| 2    |       |       |       |      |      |      |      |      |      |       |       |
| 3    |       |       |       |      |      |      |      |      |      |       |       |
| 4    |       |       |       |      |      |      |      |      |      |       |       |
| 5    |       |       |       |      |      |      |      |      |      |       |       |
| 6    |       |       |       |      |      |      |      |      |      |       |       |
| 7    |       |       |       |      |      |      |      |      |      |       |       |
| 8    |       |       |       |      |      |      |      |      |      |       |       |

irradmax

| irradavg |        |       |       |       |       |       |       |       |       |      |      |
|----------|--------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 0        | -11.65 | 26.58 | 24.95 | 00.00 | 01.26 | 00.12 | 00.00 | 01.42 | 00.18 | 01.1 | 07.3 |
| 1        |        |       |       |       |       |       |       |       |       | 00.0 | 00.0 |
| 2        |        |       |       |       |       |       |       |       |       | 01.2 | 07.3 |
| 3        |        |       |       |       |       |       |       |       |       | 00.0 | 00.0 |
| 4        |        |       |       |       |       |       |       |       |       | 01.3 | 01.5 |
| 5        |        |       |       |       |       |       |       |       |       | 00.0 | 00.0 |
| 6        |        |       |       |       |       |       |       |       |       | 01.4 | 01.6 |
| 7        |        |       |       |       |       |       |       |       |       | 00.0 | 00.0 |
| 8        |        |       |       |       |       |       |       |       |       | 01.5 | 01.9 |
| 9        |        |       |       |       |       |       |       |       |       | 00.0 | 00.0 |
| 10       |        |       |       |       |       |       |       |       |       | 01.8 | 02.2 |
| 11       |        |       |       |       |       |       |       |       |       | 00.0 | 00.0 |
| 12       |        |       |       |       |       |       |       |       |       | 02.1 | 02.5 |
| 13       |        |       |       |       |       |       |       |       |       | 00.0 | 00.0 |
| 14       |        |       |       |       |       |       |       |       |       | 02.3 | 02.7 |

## TOW6.TAB

|       |       |       |       |       |       |       |       |       |       |       |      |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 00.0  |       |       |       |       |       |       |       |       |       | 00.0  | 00.0 |
| 8     | 25.54 | 25.95 | 25.75 | 00.07 | 00.25 | 00.12 | 00.09 | 00.46 | 00.18 | 02.5  | 04.2 |
| 03.2  |       |       |       |       |       |       |       |       |       |       |      |
| 00.0  |       |       |       |       |       |       |       |       |       | 00.0  | 00.0 |
| net#  | amin  | amax  | aaavg | spmin | spmax | spavg | armin | armax | aravg | #obs  |      |
| vol   |       |       |       |       |       |       |       |       |       |       |      |
| 0     | 00.0  | 55.0  | 39.2  | 00.0  | 05.3  | 01.0  | -19.5 | 07.6  | -08.6 | 00395 |      |
| 01018 |       |       |       |       |       |       |       |       |       |       |      |
| 1     | 00.0  | 49.0  | 38.2  | 00.1  | 01.4  | 01.2  | -00.2 | 06.8  | 05.0  | 00074 |      |
| 00181 |       |       |       |       |       |       |       |       |       |       |      |
| 2     | 36.0  | 47.0  | 40.4  | 01.1  | 01.5  | 01.3  | -03.3 | 10.5  | 04.2  | 00091 |      |
| 00229 |       |       |       |       |       |       |       |       |       |       |      |
| 3     | 38.0  | 46.0  | 41.9  | 01.4  | 01.9  | 01.5  | 06.4  | 14.4  | 09.9  | 00037 |      |
| 00098 |       |       |       |       |       |       |       |       |       |       |      |
| 4     | 42.0  | 49.0  | 44.7  | 01.4  | 01.6  | 01.5  | 00.4  | 07.0  | 03.1  | 00105 |      |
| 00293 |       |       |       |       |       |       |       |       |       |       |      |
| 5     | 42.0  | 50.0  | 45.4  | 01.4  | 01.8  | 01.6  | 00.4  | 09.2  | 05.1  | 00077 |      |
| 00218 |       |       |       |       |       |       |       |       |       |       |      |
| 6     | 42.0  | 52.0  | 45.5  | 01.4  | 01.6  | 01.5  | -00.2 | 06.8  | 04.0  | 00091 |      |
| 00253 |       |       |       |       |       |       |       |       |       |       |      |
| 7     | 34.0  | 45.0  | 40.3  | 01.1  | 01.5  | 01.3  | 03.1  | 07.8  | 05.3  | 00073 |      |
| 00189 |       |       |       |       |       |       |       |       |       |       |      |
| 8     | 28.0  | 37.0  | 31.4  | 00.9  | 01.2  | 01.1  | 04.5  | 08.4  | 06.4  | 00060 |      |
| 00140 |       |       |       |       |       |       |       |       |       |       |      |

**Environmental Parameters**

Time 00:35:51  
 Pressure 0.4 m  
 Temp 14.27 C  
 Salinity 33.32 o/oo  
 Density 24.832  
 Oxygen 5.78 ml/l  
 Fluoresc. 0.8032 V  
 LightXmis 0.5010 /m  
 Irradiance

**Net Operation**

Net\_Num 9  
 OpenTime 6.4 min  
 Vol\_Filtered 215.4 m3  
 Angle 27 deg  
 Flow\_Counts 82  
 Hor\_Vel 0.7 kts  
 Vert\_Vel 1.2 m/min  
 Battery 19.8 V

**Net - Ship Position**

Latitude 34N 15.5221  
 Longitude 121W 3.653  
 Net\_Dist 298.3 m  
 Total\_Dist 2789.4 m

**Program Settings**

Reset  
 Baud Rate 2400  
 Sample Rate 4.0 sec  
 Printer Off

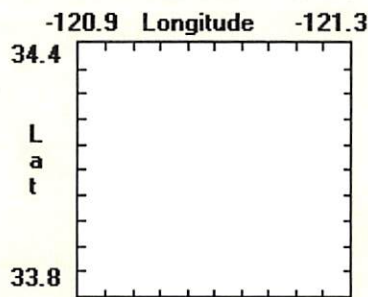
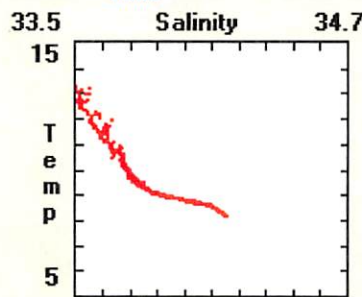
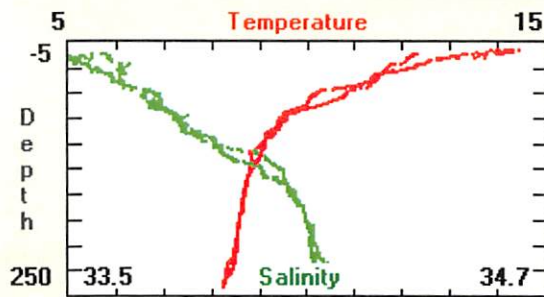
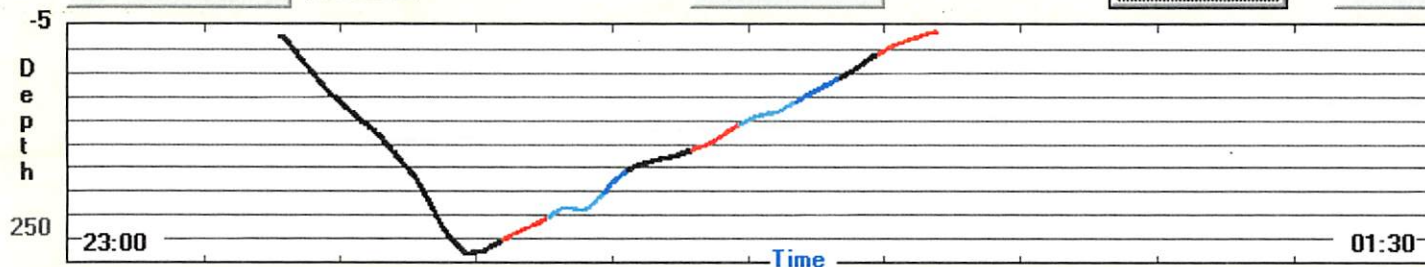
Processed File Name C:\MOCNESS\MOCDATA\TOW6.PRO  
 Raw File Name C:\MOCNESS\MOCDATA\TOW6.raw  
 Acquisition Ended. trys = 0

Step Net

Increment Net#

Pause Acqui

End Acqui





Event No. 234

Labels  
Cycle 2  
Tow 1

Start: 135,9445

MOCNESS DATA SHEET Revised 10/94

| CRUISE    | STATION | HAUL | DATE (DST EST GMT) | MOCNESS TYPE  |
|-----------|---------|------|--------------------|---------------|
| CCE-P0605 | Cycle 2 | 7    | 15-16 May          | 1/4M (1M) 10M |

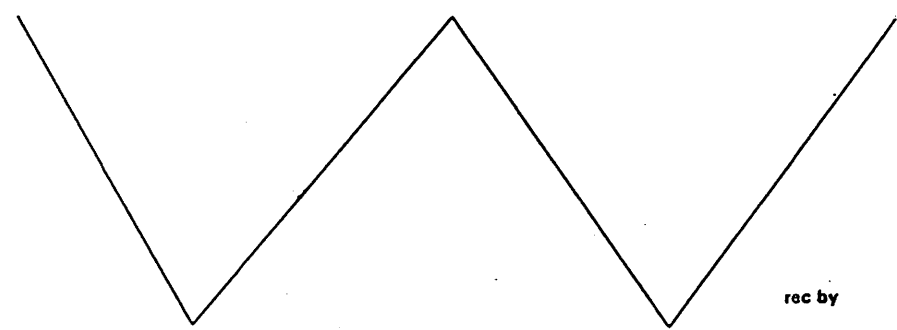
|           | START    | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE |
|-----------|----------|----------|------------|-------|-------|------------|-----------|
| LATITUDE  | 33.6611  | 33.6898  | NET 0 OPEN | 22:40 | 0     | 564        | 202 μm    |
|           |          |          | NET 1 OPEN | 23:07 | 448   | 156        |           |
| LONGITUDE | 122.1891 | 122.2166 | NET 2 OPEN | 23:13 | 400   | 218        |           |
| DEPTH     | ~3900 m  |          | NET 3 OPEN | 23:20 | 350   | 295        |           |
|           |          |          | NET 4 OPEN | 23:28 | 299   | 281        |           |
|           |          |          | NET 5 OPEN | 23:36 | 250   | 250        |           |
|           |          |          | NET 6 OPEN | 23:43 | 200   | 239        |           |
|           |          |          | NET 7 OPEN | 23:50 | 150   | 262        |           |
|           |          |          | NET 8 OPEN | 23:57 | 100   | 256        |           |
|           |          |          | NET 9 OPEN | 00:04 | 50    | 241        |           |
|           |          |          | SURFACE    | 00:10 |       |            |           |

COMMENTS  
Surface water:  
 O<sub>2</sub>: 5.53  
 Fluor: 0.1056  
 Trans: 0.1264  
 Temp: 14.27  
 Sal: 32.83  
 Battery volts: 21.54

Depth:  
 ~ 1.15  
 .0772  
 .0330  
 6.2  
 34.03

questionable →

TOW PROFILE

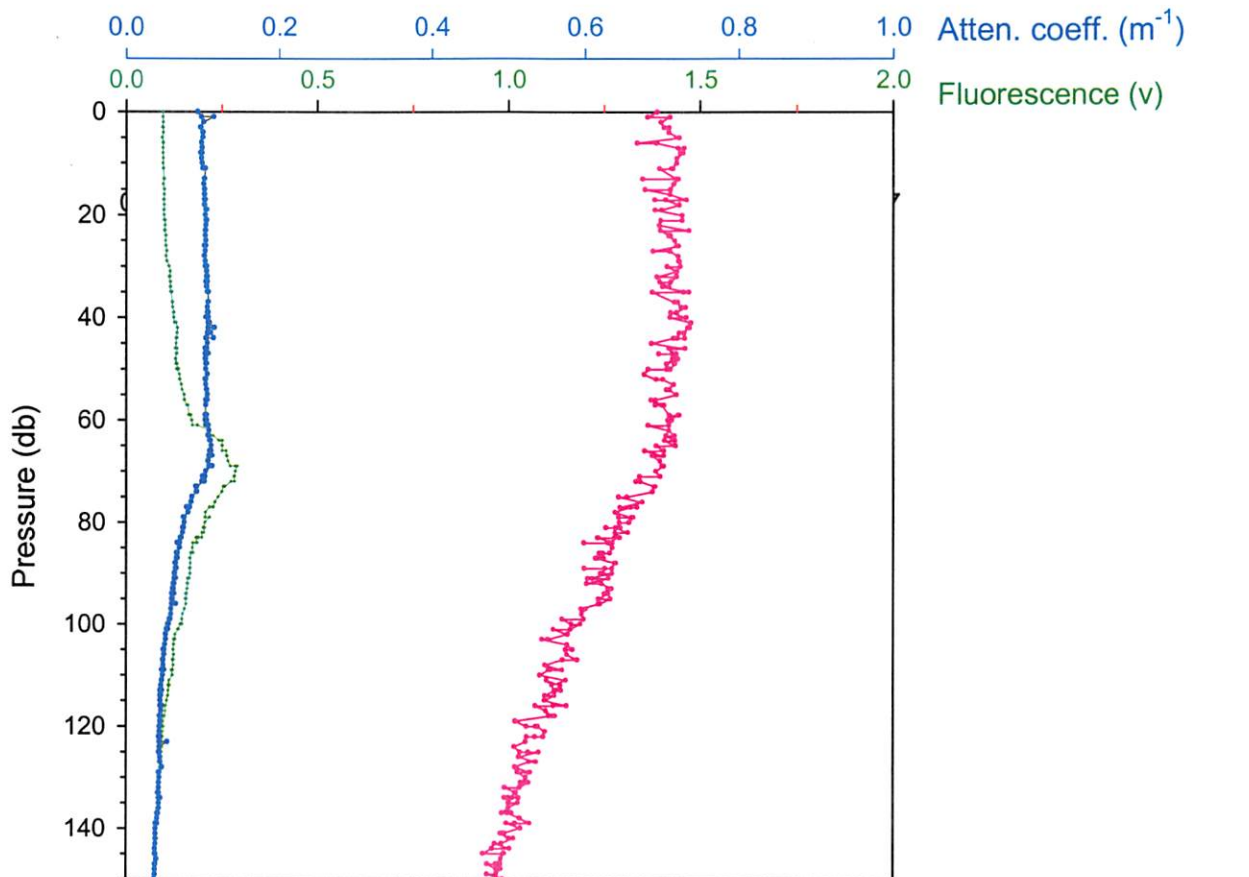
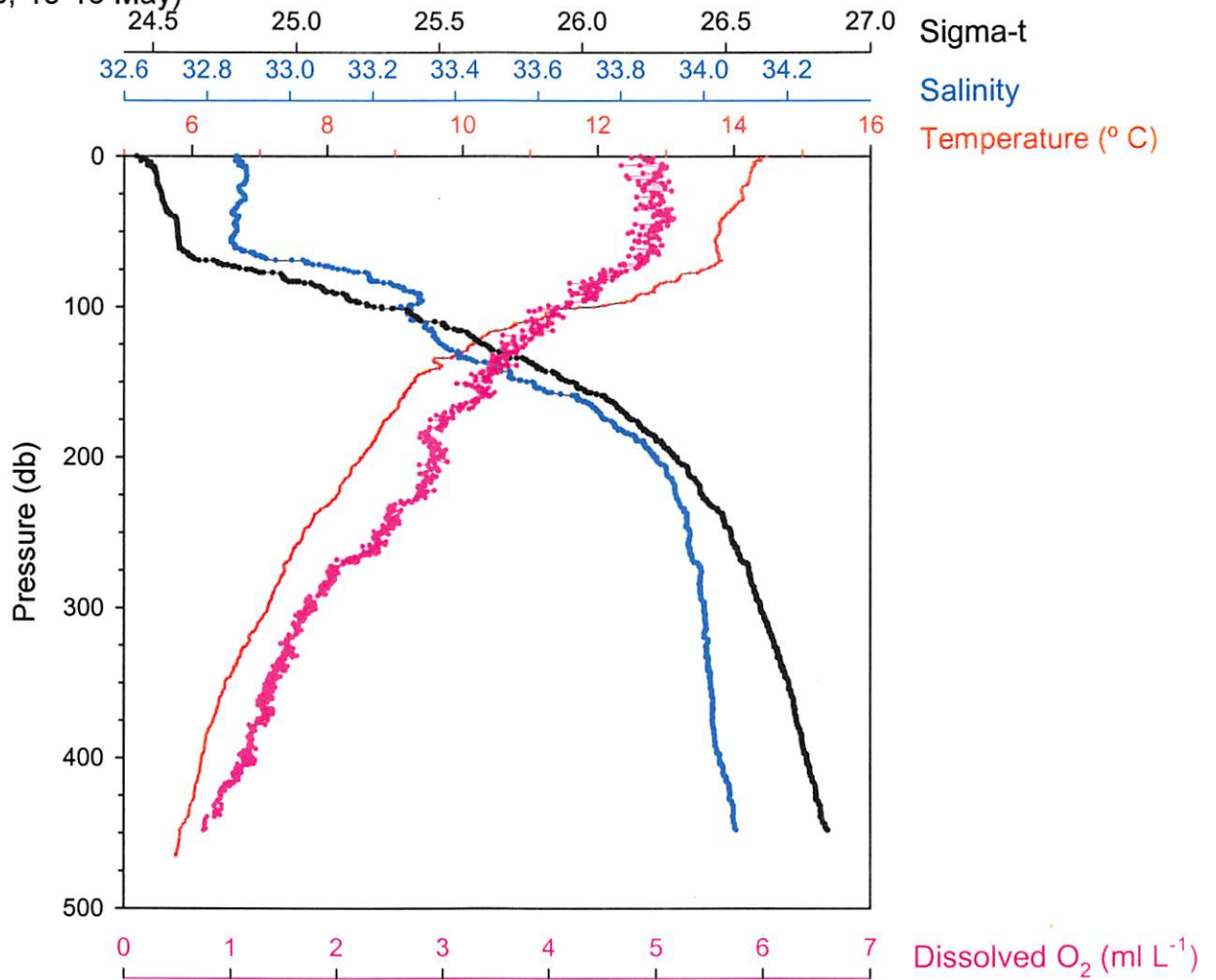


rec by

File names: .pro .raw .tab

intended depth 450 m.

MOCNESS - Tow 7  
Cycle 2 (2307-0010, 15-16 May)



TOW7.TAB

M-02-001  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.9 | -00.5 | -00.7 | 15.1 | 15.4 | 15.2 | 15.1  | 15.4  | 15.2  | 00.01 | 00.07 | 00.02 |
| 1    | -00.8 | 465.6 | 203.8 | 05.8 | 16.0 | 09.9 | 05.7  | 16.0  | 09.9  | 00.01 | 34.15 | 32.23 |
| 2    | 400.5 | 446.7 | 416.1 | 05.8 | 06.1 | 06.1 | 05.8  | 06.1  | 06.0  | 34.04 | 34.08 | 34.05 |
| 3    | 349.9 | 399.8 | 373.9 | 06.1 | 06.5 | 06.3 | 06.1  | 06.5  | 06.3  | 34.02 | 34.04 | 34.03 |
| 4    | 299.4 | 349.2 | 328.4 | 06.5 | 07.1 | 06.8 | 06.5  | 07.1  | 06.7  | 34.00 | 34.02 | 34.01 |
| 5    | 249.9 | 298.4 | 273.8 | 07.1 | 07.7 | 07.4 | 07.1  | 07.6  | 07.4  | 33.96 | 34.00 | 33.98 |
| 6    | 199.9 | 249.3 | 228.2 | 07.7 | 08.5 | 08.0 | 07.6  | 08.5  | 08.0  | 33.88 | 33.97 | 33.94 |
| 7    | 150.2 | 198.3 | 174.6 | 08.5 | 09.3 | 08.9 | 08.5  | 09.3  | 08.9  | 33.59 | 33.88 | 33.76 |
| 8    | 99.7  | 149.4 | 126.4 | 09.3 | 11.9 | 10.2 | 09.3  | 11.9  | 10.2  | 33.25 | 33.56 | 33.40 |
| 9    | 50.1  | 98.6  | 76.4  | 12.1 | 13.8 | 13.3 | 12.1  | 13.8  | 13.2  | 32.86 | 33.32 | 33.11 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|

| irradavg | irradmin | irradmax |
|----------|----------|----------|
| 0        | -00.95   | 07.1     |
| 1        | -01.05   | 07.2     |
| 2        | 26.78    | 07.2     |
| 3        | 26.72    | 07.2     |
| 4        | 26.62    | 07.2     |
| 5        | 26.52    | 07.2     |
| 6        | 26.32    | 07.2     |
| 7        | 25.97    | 07.2     |
| 8        | 25.27    | 07.2     |
| 9        | 24.59    | 07.2     |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 00.0 | 00.0 | 00.0  | 00.4  | 00.1  | -00.4 | 01.4  | 00.4  | 00024 | 00013 |
| 1    | 00.0 | 49.0 | 28.5 | 00.0  | 01.2  | 00.4  | -29.7 | 11.9  | -15.7 | 00433 | 00564 |
| 2    | 17.0 | 27.0 | 21.9 | 00.7  | 00.9  | 00.8  | 00.9  | 17.5  | 08.8  | 00084 | 00158 |
| 3    | 21.0 | 31.0 | 26.0 | 00.7  | 01.1  | 00.9  | 02.5  | 12.3  | 07.1  | 00104 | 00218 |
| 4    | 28.0 | 39.0 | 33.1 | 00.8  | 01.4  | 01.1  | 02.5  | 11.3  | 05.9  | 00126 | 00295 |
| 5    | 34.0 | 40.0 | 36.9 | 01.1  | 01.4  | 01.2  | 03.7  | 09.2  | 06.3  | 00116 | 00281 |
| 6    | 34.0 | 40.0 | 36.4 | 01.1  | 01.4  | 01.2  | 03.3  | 11.9  | 07.3  | 00101 | 00249 |
| 7    | 33.0 | 38.0 | 35.8 | 01.1  | 01.4  | 01.2  | 06.1  | 10.9  | 07.7  | 00097 | 00238 |
| 8    | 35.0 | 40.0 | 37.7 | 01.1  | 01.4  | 01.3  | 04.9  | 10.3  | 07.2  | 00104 | 00262 |
| 9    | 36.0 | 41.0 | 38.1 | 01.2  | 01.5  | 01.3  | 03.9  | 10.4  | 07.2  | 00102 | 00258 |

**Environmental Parameters**

Time: 0:10:11  
 Pressure: -0.6 m  
 Temp: 14.62 C  
 Salinity: 32.86 o/oo  
 Density: 24.403  
 Oxygen: 4.90 ml/l  
 Fluoresc.: 0.0968 V  
 LightXmis: 0.0885 /m  
 Irradiance:

**Net Operation**

Net\_Num: 10  
 OpenTime: 6.2 min  
 Vol\_Filtered: 241.3 m3  
 Angle: 46 deg  
 Flow\_Counts: 123  
 Hor\_Vel: 1.6 kts  
 Vert\_Vel: 10.6 m/min  
 Battery: 20.9 V

**Net - Ship Position**

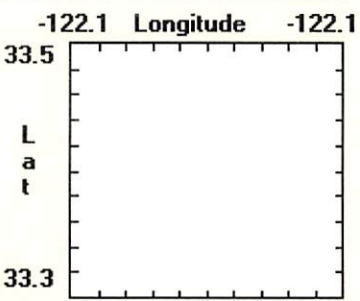
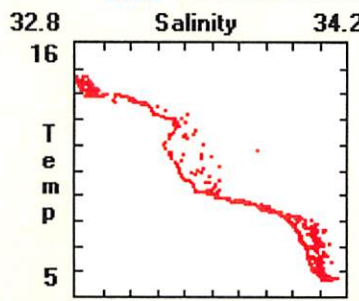
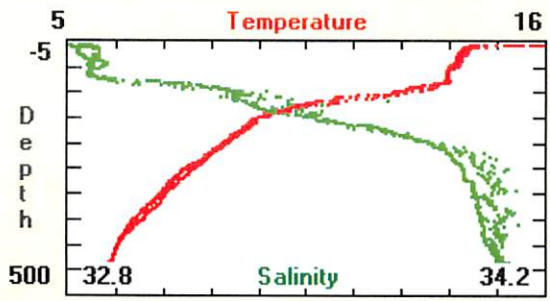
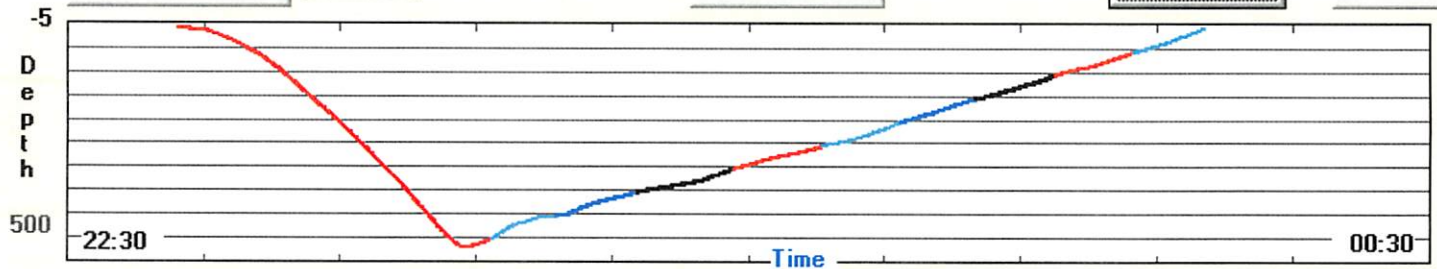
Latitude: 33N 41.389  
 Longitude: 122W 12.99  
 Net\_Dist: 305.5 m  
 Total\_Dist: 4362.1 m

**Program Settings**

Reset  
 Baud Rate: 2400  
 Sample Rate: 4.0 sec  
 Printer: Off

Processed File Name: C:\MOCNESS\MOCDATA\TOW7.PRO  
 Raw File Name: C:\MOCNESS\MOCDATA\TOW7.RAW  
 Acquisition Ended. trys = 0

Step Net:  Increment Net#:  Pause Acqui:  End Acqui:





Event No: 260

Labels  
Cycle 2  
Tow 2 50

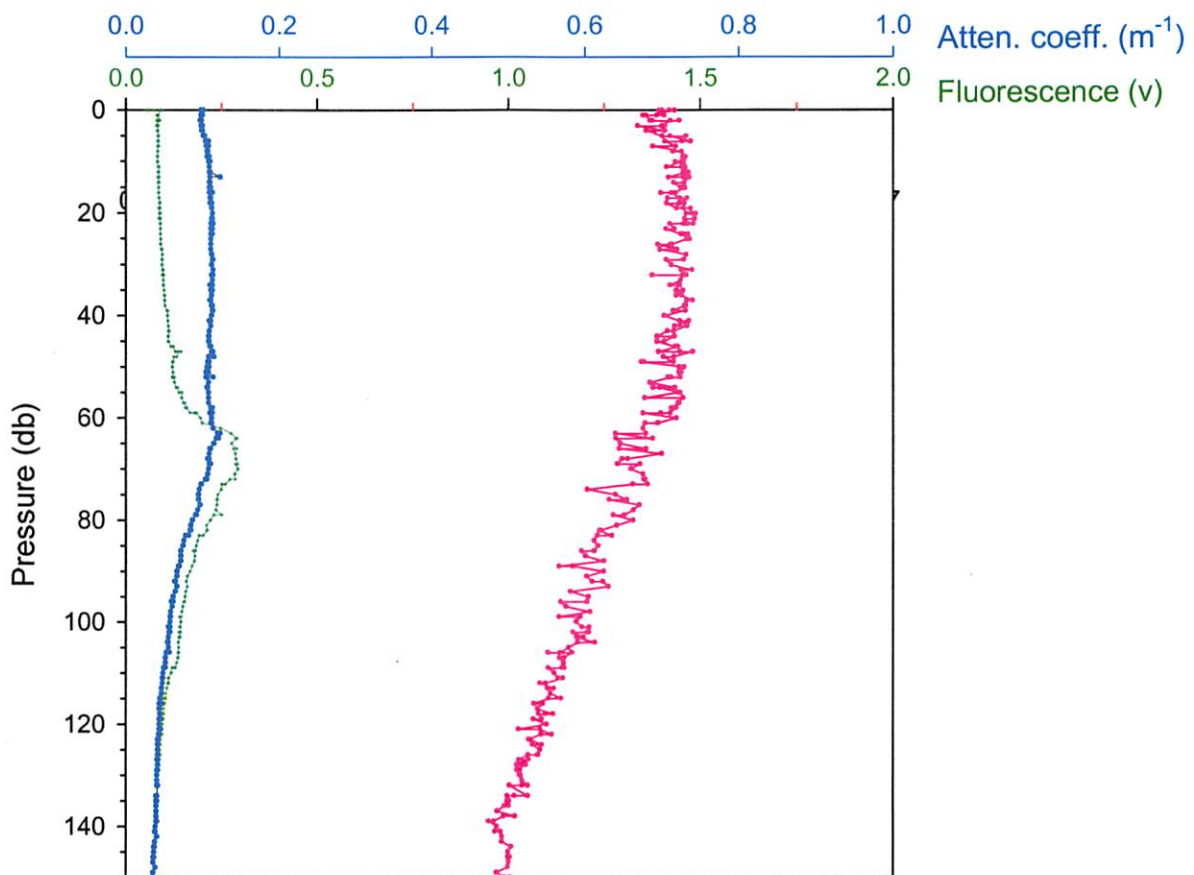
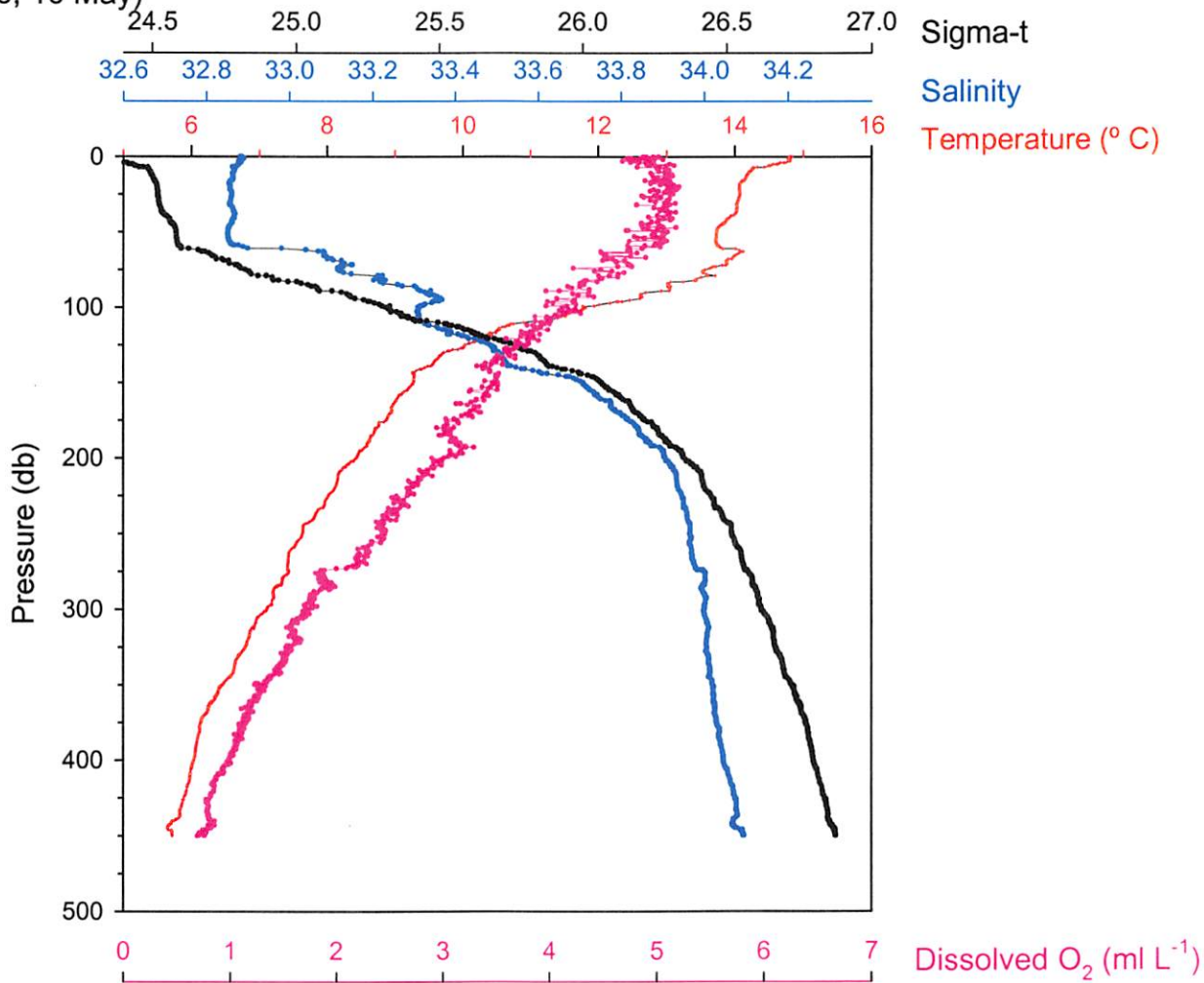
Start: 136,5748

| MOCNESS DATA SHEET   |                      |      |             |               | Revised 10/94 |            |             |  |  |  |
|--|----------------------|------|-------------|---------------|---------------|------------|-------------|--|--|--|
| CRUISE   | STATION              | HAUL | DATE        | (DST EST GMT) | MOCNESS TYPE  |            |             |  |  |  |
| CCE-P0605  | Cycle 2 <sup>1</sup> | 8    | 16 May      | PDT           | 1/4M          | 1M         | 10M         |  |  |  |
|  | START                | END  |             | TIME          | DEPTH         | VOL FILTER | MESH SIZE   |  |  |  |
| LATITUDE   | 33 36.8              |      | NET 0 OPEN  | 1411          | 0             | 933        | 202 $\mu$ m |  |  |  |
| LONGITUDE  | 122 8.1              |      | NET 1 OPEN  | 1443          | 450           | 176        |             |  |  |  |
| DEPTH  | 3990 m               |      | NET 2 OPEN  | 14:49         | 399           | ~250       |             |  |  |  |
| COMMENTS<br>O <sub>2</sub> 5.39<br>Flu. 0.099<br>Light. 0.1250<br>Temp 14.61<br>sal 32.76<br>Start batt: 20.8 v. |                      |      | NET 3 OPEN  | 1456          | 350           | 357        |             |  |  |  |
|  |                      |      | NET 4 OPEN  | 15:04         | 293           | 369        |             |  |  |  |
|  |                      |      | NET 5 OPEN  | 15:13         | 250           | 257        |             |  |  |  |
|  |                      |      | NET 6 OPEN  | 15:19         | 200           | 230        |             |  |  |  |
|  |                      |      | NET 7 OPEN  | 15:24         | 149           | 244        |             |  |  |  |
|  |                      |      | NET 8 OPEN  | 15:30         | 99            | 250        | *           |  |  |  |
|  |                      |      | NET 9 OPEN  | 15:36         | 47            | 278        |             |  |  |  |
|  |                      |      | SURFACE     | 1544          |               |            |             |  |  |  |
|  |                      |      | TOW PROFILE |               |               |            |             |  |  |  |
|  |                      |      |             |               |               |            |             |  |  |  |
| File names: .pro .raw .tab   |                      |      |             |               |               |            |             |  |  |  |

\* Net didn't register (Increment @ 40m)  
 Frame retrieved w/ Net 9 open - so seems to have triggered correctly.

MOCNESS - Tow 8  
Cycle 2 (1449-1545, 16 May)

3



TOW8.TAB

M-02-002  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg   | tmin | tmax | tavg   | thmin | thmax | thavg  | smin  | smax  | savg  |
|------|-------|-------|--------|------|------|--------|-------|-------|--------|-------|-------|-------|
| 0    | -00.7 | 467.1 | 192.4  | 05.6 | 18.5 | 08.4   | 05.5  | 18.5  | 08.4   | 00.01 | 34.23 | 29.41 |
| 1    | -00.6 | 449.6 | 326.3  | 05.7 | 18.1 | 04.6   | 05.6  | 18.1  | 04.6   | 00.01 | 34.09 | 25.94 |
| 2    | -00.2 | 398.4 | 361.5  | 06.1 | 18.3 | 06.2   | 06.0  | 18.3  | 06.2   | 00.01 | 34.05 | 33.09 |
| 3    | -00.5 | 351.0 | 233.3  | 06.4 | 18.4 | 05.0   | 06.4  | 18.4  | 05.0   | 00.01 | 34.02 | 24.46 |
| 4    | -00.8 | 293.0 | 103.4  | 07.2 | 18.3 | 02.8   | 07.2  | 18.3  | 02.8   | 00.01 | 34.01 | 12.67 |
| 5    | 200.2 | 250.2 | 226.1  | 07.6 | 08.4 | 08.0   | 07.6  | 08.4  | 08.0   | 33.91 | 33.97 | 33.95 |
| 6    | 149.5 | 199.5 | 175.2  | 08.4 | 09.3 | 08.8   | 08.4  | 09.3  | 08.8   | 33.71 | 33.91 | 33.81 |
| 7    | 100.0 | 147.8 | 122.9  | 09.3 | 11.8 | 10.3   | 09.2  | 11.8  | 10.3   | 33.31 | 33.69 | 33.45 |
| 9    | -00.9 | 37.4  | 1684.4 | 14.0 | 14.8 | 1498.1 | 14.0  | 14.8  | 1497.9 | 32.85 | 32.89 |       |

3450.93

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg   | oxmin    | oxmax    | oxavg |
|------|-------|-------|-------|------|------|------|------|------|--|----------|----------|-------|
|      |       |       |       |      |      | cavg | fmin | fmax | favg <td>irradmin</td> <td>irradmax</td> <td></td> | irradmin | irradmax |       |

irradavg

|   |        |       |         |        |       |       |       |       |       |       |      |      |
|---|--------|-------|---------|--------|-------|-------|-------|-------|-------|-------|------|------|
| 0 | -01.48 | 27.00 | 22.65   | -00.13 | 11.11 | 00.26 | 00.00 | 04.94 | 00.11 | -01.2 | 06.7 | 02.8 |
| 1 | -01.42 | 26.88 | 20.43   | 00.03  | 01.14 | 00.04 | 00.06 | 00.08 | 00.06 | 00.0  | 00.0 | 00.0 |
| 2 | -01.44 | 26.80 | 26.01   | 00.03  | 01.14 | 00.04 | 00.06 | 00.08 | 00.08 | 00.7  | 06.7 | 00.7 |
| 3 | -01.46 | 26.73 | 19.17   | 00.03  | 01.16 | 00.03 | 00.06 | 00.08 | 00.06 | 00.0  | 00.0 | 00.0 |
| 4 | -01.45 | 26.61 | 09.90   | 00.03  | 01.68 | 00.02 | 00.06 | 04.94 | 00.03 | 01.0  | 06.7 | 01.2 |
| 5 | 26.35  | 26.52 | 26.45   | 00.03  | 00.04 | 00.03 | 00.07 | 00.08 | 00.08 | 00.0  | 00.0 | 00.0 |
| 6 | 26.07  | 26.35 | 26.22   | 00.03  | 00.04 | 00.04 | 00.07 | 00.08 | 00.07 | 00.0  | 00.0 | 00.0 |
| 7 | 25.31  | 26.05 | 25.69   | 00.04  | 00.06 | 00.05 | 00.07 | 00.14 | 00.10 | 01.2  | 06.7 | 01.1 |
| 9 | 24.38  | 24.54 | 2570.78 | 00.10  | 00.27 | 11.57 | 00.06 | 04.94 | 14.14 | 00.0  | 00.0 | 00.0 |

| net# | amin | amax | aavg   | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 56.0 | 33.0   | 00.0  | 04.3  | 00.7  | -29.9 | 06.6  | -13.3 | 00509 | 00933 |
| 1    | 00.0 | 35.0 | 23.3   | 00.0  | 01.2  | 00.8  | -00.8 | 14.4  | 06.8  | 00109 | 00176 |
| 2    | 00.0 | 40.0 | 35.4   | 00.0  | 01.4  | 01.1  | -00.8 | 10.7  | 06.7  | 00109 | 00251 |
| 3    | 00.0 | 49.0 | 32.1   | 00.0  | 01.9  | 01.1  | -00.8 | 10.1  | 04.7  | 00178 | 00351 |
| 4    | 00.0 | 51.0 | 18.0   | 00.0  | 01.9  | 00.6  | -01.4 | 11.1  | 01.9  | 00338 | 00369 |
| 5    | 45.0 | 48.0 | 46.8   | 01.6  | 01.9  | 01.8  | 07.2  | 09.9  | 08.8  | 00087 | 00251 |
| 6    | 45.0 | 48.0 | 45.6   | 01.6  | 01.9  | 01.7  | 07.4  | 11.7  | 09.4  | 00080 | 00230 |
| 7    | 40.0 | 45.0 | 43.3   | 01.4  | 01.8  | 01.6  | 06.6  | 10.7  | 08.4  | 00088 | 00244 |
| 9    | 37.0 | 48.0 | 4574.0 | 01.4  | 01.6  | 152.0 | 03.5  | 09.0  | 596.5 | 00105 | 00278 |

**Environmental Parameters**

**Net Operation**

**Net - Ship Position**

**Program Settings**

Time: 15:44:33  
 Pressure: -0.9 m  
 Temp: 14.82 C  
 Salinity: 32.88 o/oo  
 Density: 24.38  
 Oxygen: 5.37 ml/l  
 Fluoresc.: 0.0788 V  
 LightXmis: 0.2726 /m  
 Irradiance:

Net\_Num: 9  
 OpenTime: 7.1 min  
 Vol\_Filtered: 277.8 m3  
 Angle: 37 deg  
 Flow\_Counts: 141  
 Hor\_Vel: 1.4 kts  
 Vert\_Vel: 3.5 m/min  
 Battery: 20.3 V

Latitude: 33N 36.840  
 Longitude: 122W 11.70  
 Net\_Dist: 392.9 m  
 Total\_Dist: 5236.6 m

Reset  
 Baud Rate: 2400  
 Sample Rate: 4.0 sec  
 Printer: Off

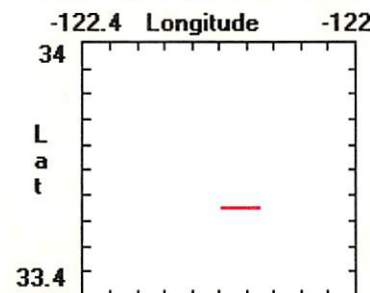
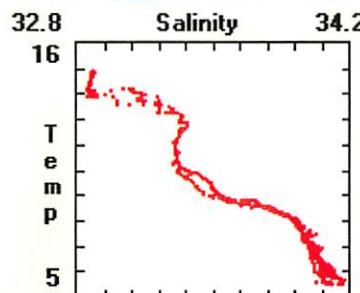
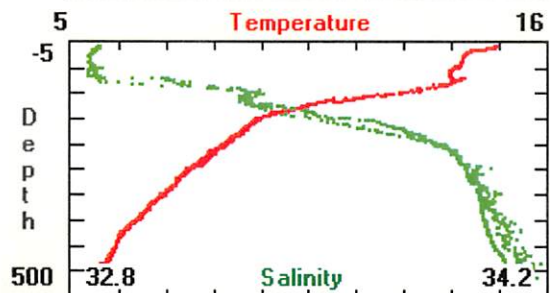
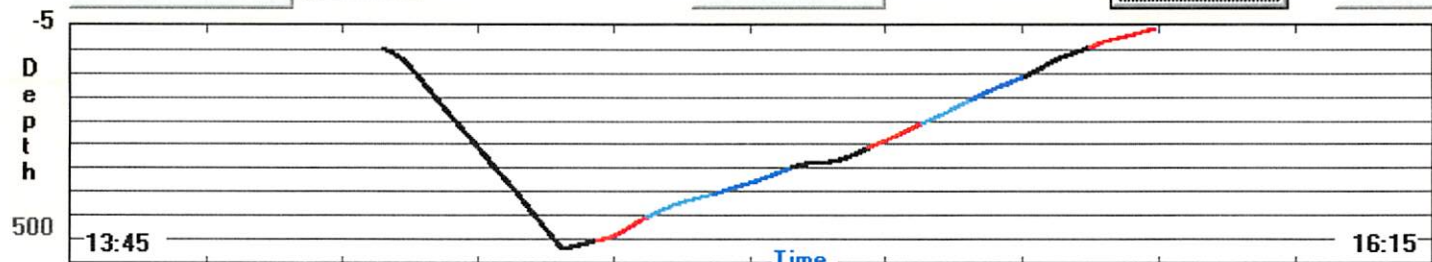
Processed File Name: C:\MOCNESS\MOCDATA\TOW8.PRO  
 Raw File Name: C:\MOCNESS\MOCDATA\TOW8.raw  
 Acquisition Ended. trys = 0

Step Net

Increment Net#

Pause Acqui

End Acqui





Event No. 305

Labels  
 Cycle 2  
 Tow 3  
 50

Start: 137.9758

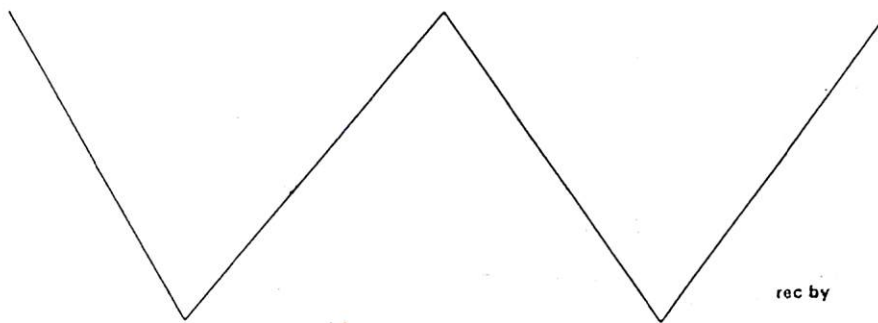
Revised 10/94

MOCNESS DATA SHEET

| CRUISE    | STATION | HAUL | DATE (DST EST GMT) | MOCNESS TYPE |
|-----------|---------|------|--------------------|--------------|
| CCE-P0605 | Cycle 2 | 9    | 17-18 May          | 1/4M 1M 10M  |

|   | START                 | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE   |
|---|-----------------------|----------|------------|-------|-------|------------|-------------|
| LATITUDE  | 33° 25.6'<br>33.4258  | 33.422   | NET 0 OPEN | 23:25 | 450   | 1235       | 202 $\mu$ m |
| LONGITUDE   | 122° 6.3'<br>122.1041 | 122.1572 | NET 1 OPEN | 23:58 | 450   | 258        |             |
| DEPTH   | 4168 m                |          | NET 2 OPEN | 00:05 | 399   | 317        |             |
| COMMENTS<br><u>Surface</u><br>O <sub>2</sub> 5.01<br>Fluor 0.1004<br>T <sub>ms</sub> 0.1402<br>Temp 14.52<br>Sal 32.86<br><br>B.A. 20.2 v |                       |          | NET 3 OPEN | 00:13 | 349   | 261        |             |
|   |                       |          | NET 4 OPEN | 00:19 | 300   | 231        |             |
|   |                       |          | NET 5 OPEN | 00:25 | 249   | 250        |             |
|   |                       |          | NET 6 OPEN | 00:31 | 197   | 210        |             |
|   |                       |          | NET 7 OPEN | 00:37 | 147   | 180?       |             |
|   |                       |          | NET 8 OPEN | 00:41 | 97    | 321        |             |
|   |                       |          | NET 9 OPEN | 00:49 | 48    | 268        |             |
|   |                       |          | SURFACE    |       |       |            |             |

TOW PROFILE



rec by

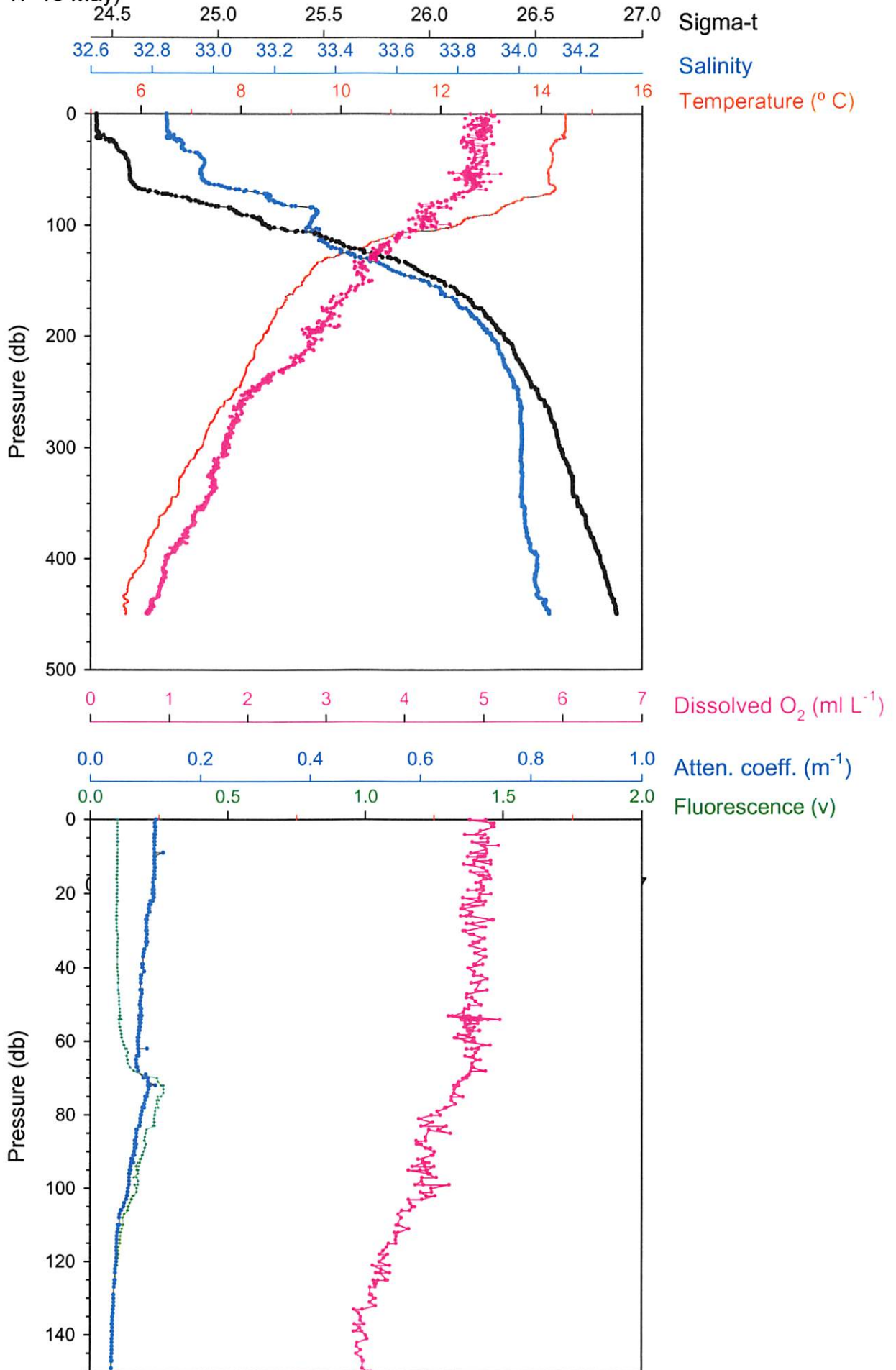
File names: .pro .raw .tab

Expect no confirmation; confirmation switch magnet seems worn out.

Net 6 - no response

784

MOCNESS - Tow 9  
cycle 2 (2358-0049, 17-18 May)



TOW9.TAB

M-02-003  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg   | tmin | tmax | tavg   | thmin | thmax | thavg  | smin  | smax  | savg  |
|------|-------|-------|--------|------|------|--------|-------|-------|--------|-------|-------|-------|
| 0    | -00.9 | 458.5 | 181.5  | 05.6 | 14.7 | 07.9   | 05.6  | 14.7  | 07.9   | 00.01 | 34.13 | 28.00 |
| 1    | -00.8 | 449.5 | 354.5  | 05.7 | 14.4 | 04.9   | 05.6  | 14.4  | 04.9   | 00.01 | 50.00 | 28.15 |
| 2    | -00.9 | 397.7 | 102.9  | 06.1 | 14.5 | 01.8   | 06.0  | 14.5  | 01.8   | 00.01 | 50.00 | 09.41 |
| 3    | 300.2 | 348.7 | 326.9  | 06.6 | 07.2 | 06.8   | 06.6  | 07.2  | 06.8   | 34.01 | 34.01 | 34.01 |
| 4    | 249.1 | 299.3 | 274.1  | 07.2 | 07.9 | 07.5   | 07.2  | 07.8  | 07.5   | 34.00 | 34.01 | 34.01 |
| 6    | 146.9 | 196.6 | 179.8  | 08.5 | 09.3 | 08.7   | 08.5  | 09.3  | 08.7   | 33.65 | 33.90 | 33.83 |
| 7    | 96.9  | 145.0 | 119.7  | 09.3 | 12.4 | 10.6   | 09.3  | 12.4  | 10.6   | 33.30 | 33.63 | 33.42 |
| 8    | 48.2  | 95.6  | 68.5   | 12.4 | 14.3 | 13.8   | 12.4  | 14.3  | 13.8   | 32.96 | 33.34 | 33.10 |
| 9    | -00.4 | 47.1  | 2035.5 | 14.2 | 14.5 | 1408.0 | 14.2  | 14.5  | 1407.7 | 32.85 | 32.97 |       |

| net# | simin  | simax | siavg        | cmin  | cmax  | cavg  | fmin  | fmax  | favg   | oxmin    | oxmax    | oxavg    |
|------|--------|-------|--------------|-------|-------|-------|-------|-------|--|----------|----------|----------|
|      |        |       |              |       |       | cavg  | fmin  | fmax  | favg <td>irradmin</td> <td>irradmax</td> <td></td> | irradmin | irradmax |          |
|      |        |       |              |       |       |       |       |       |  |          |          | irradavg |
| 0    | -00.84 | 26.89 | 21.57        | 00.00 | 03.39 | 00.06 | 00.00 | 00.27 | 00.08  | -01.4    | 07.3     | 02.6     |
| 1    | -00.81 | 37.80 | 22.18        | 00.04 | 03.29 | 00.06 | 00.08 | 00.08 | 00.06  | 00.0     | 00.0     | 00.0     |
| 2    | -00.81 | 37.88 | 07.40        | 00.04 | 06.37 | 00.02 | 00.05 | 00.16 | 00.02  | 00.7     | 07.3     | 00.8     |
| 3    | 26.62  | 26.70 | 26.66        | 00.04 | 00.04 | 00.04 | 00.07 | 00.08 | 00.08  | 00.0     | 00.0     | 00.0     |
| 4    | 26.51  | 26.61 | 26.57        | 00.04 | 00.06 | 00.04 | 00.07 | 00.08 | 00.08  | 00.9     | 07.4     | 00.4     |
| 6    | 26.02  | 26.33 | 26.25        | 00.04 | 00.04 | 00.04 | 00.07 | 00.08 | 00.07  | 00.0     | 00.0     | 00.0     |
| 7    | 25.21  | 25.99 | 25.62        | 00.04 | 00.07 | 00.05 | 00.08 | 00.17 | 00.11  | 00.0     | 00.0     | 00.0     |
| 8    | 24.58  | 25.21 | 24.77        | 00.07 | 00.12 | 00.09 | 00.10 | 00.27 | 00.16  | 00.0     | 00.0     | 00.0     |
| 9    | 24.42  | 24.58 | 2398.5600.09 | 00.09 | 00.13 | 10.74 | 00.09 | 00.10 | 09.69  | 00.0     | 00.0     | 00.0     |

| net# | amin | amax | aavg   | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 61.0 | 37.3   | 00.0  | 01.6  | 00.8  | -25.6 | 07.6  | -11.3 | 00597 | 01236 |
| 1    | 00.0 | 45.0 | 33.0   | 00.0  | 01.6  | 01.1  | -00.6 | 13.2  | 06.2  | 00120 | 00256 |
| 2    | 00.0 | 55.0 | 12.2   | 00.0  | 10.2  | 00.4  | -02.5 | 12.5  | 01.8  | 00416 | 00317 |
| 3    | 42.0 | 49.0 | 44.7   | 01.4  | 01.9  | 01.6  | 02.3  | 13.8  | 07.5  | 00096 | 00262 |
| 4    | 42.0 | 49.0 | 45.2   | 01.5  | 01.9  | 01.7  | 06.8  | 11.7  | 09.3  | 00082 | 00231 |
| 6    | 38.0 | 48.0 | 40.4   | 01.2  | 01.6  | 01.5  | 01.0  | 18.3  | 09.1  | 00081 | 00213 |
| 7    | 36.0 | 44.0 | 38.5   | 01.2  | 01.6  | 01.4  | 06.2  | 15.4  | 10.2  | 00074 | 00191 |
| 8    | 37.0 | 46.0 | 41.4   | 01.2  | 01.6  | 01.4  | -01.3 | 10.9  | 06.1  | 00118 | 00325 |
| 9    | 39.0 | 48.0 | 4282.0 | 01.4  | 01.8  | 151.7 | 03.5  | 12.7  | 727.1 | 00098 | 00268 |

Environmental Parameters

Net Operation

Net - Ship Position

Program Settings

Time 00:56:27  
 Pressure -0.4 m  
 Temp 14.47 C  
 Salinity 32.85 o/oo  
 Density 24.425  
 Oxygen 5.03 ml/l  
 Fluoresc. 0.0972 V  
 LightXmis 0.1194 /m  
 Irradiance

Net\_Num 9  
 OpenTime 6.6 min  
 Vol\_Filtered 267.7 m3  
 Angle 47 deg  
 Flow\_Counts 141  
 Hor\_Vel 1.5 kts  
 Vert\_Vel 7.8 m/min  
 Battery 19.9 V

Latitude 33N 25.320  
 Longitude 122W 9.431  
 Net\_Dist 364.4 m  
 Total\_Dist 4956.0 m

Reset  
 Baud Rate 2400  
 Sample Rate 4.0 sec  
 Printer Off

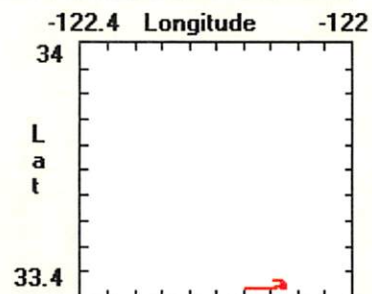
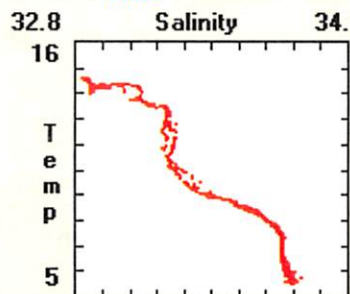
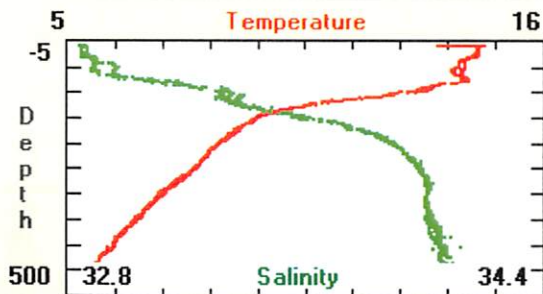
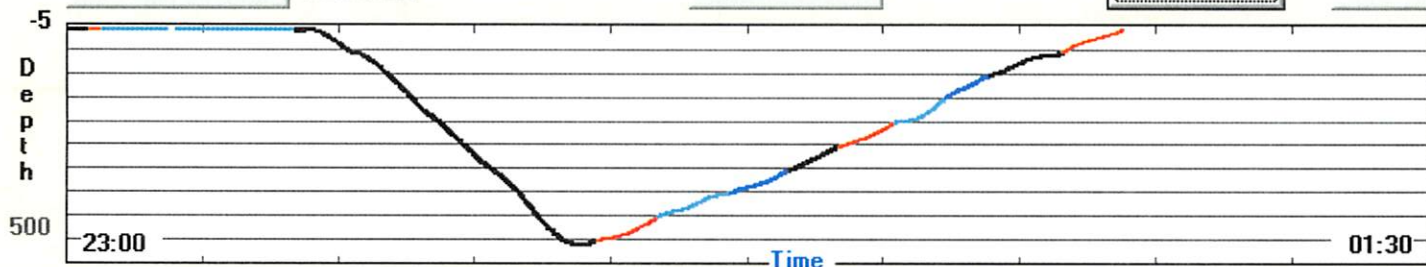
Processed File Name C:\MOCNESS\MOCDATA\TOW9.PRO  
 Raw File Name C:\MOCNESS\MOCDATA\TOW9.raw  
 Acquisition Ended. trys = 0

Step Net

Increment Net#

Pause Acqui

End Acqui



Event No: 323

Labels  
cycle 2  
Tow 4 SD

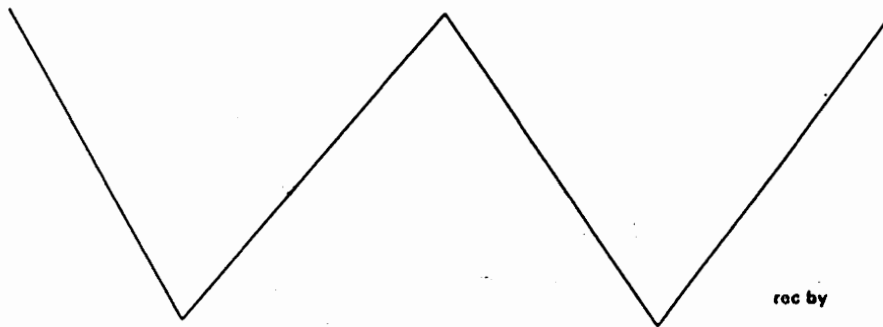
Start: 138.6619

MOCNESS DATA SHEET Revised 10/94

| CRUISE    | STATION | HAUL | DATE (DST EST GMT) | MOCNESS TYPE |
|-----------|---------|------|--------------------|--------------|
| CCE-P0605 | Cycle 2 | 10   | 18 May PDT         | 1/4M 1M 10M  |

|  | START                 | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE |
|--|-----------------------|----------|------------|-------|-------|------------|-----------|
| LATITUDE   | 33 28.14<br>33.4691   | 33.4785  | NET 0 OPEN | 15:52 |       | 1306       |           |
| LONGITUDE  | 122 09.80<br>122.1629 | 122.2201 | NET 1 OPEN | 16:32 | 447   | 202        |           |
| DEPTH  | 4,200                 |          | NET 2 OPEN | 16:40 | 378   | 300        |           |
| COMMENTS<br>Surface<br>O <sub>2</sub> 5.20<br>Fluor 0.0906<br>Ext. 0.1050<br>T 14.80<br>S 32.92<br><br>Start Voltage: 20.1 V |                       |          | NET 3 OPEN | 16:47 | 350   | 282        |           |
|  |                       |          | NET 4 OPEN | 16:54 | 299   | 351        |           |
|  |                       |          | NET 5 OPEN | 17:02 | 250   | 280        |           |
|  |                       |          | NET 6 OPEN | 17:10 | 196   | 279        |           |
|  |                       |          | NET 7 OPEN | 17:16 | 146   | 286        |           |
|  |                       |          | NET 8 OPEN | 17:22 | 99    | 278        |           |
|  |                       |          | NET 9 OPEN | 17:29 | 47    | 258        |           |
|  |                       |          | SURFACE    | 17:36 | 0     |            |           |

TOW PROFILE

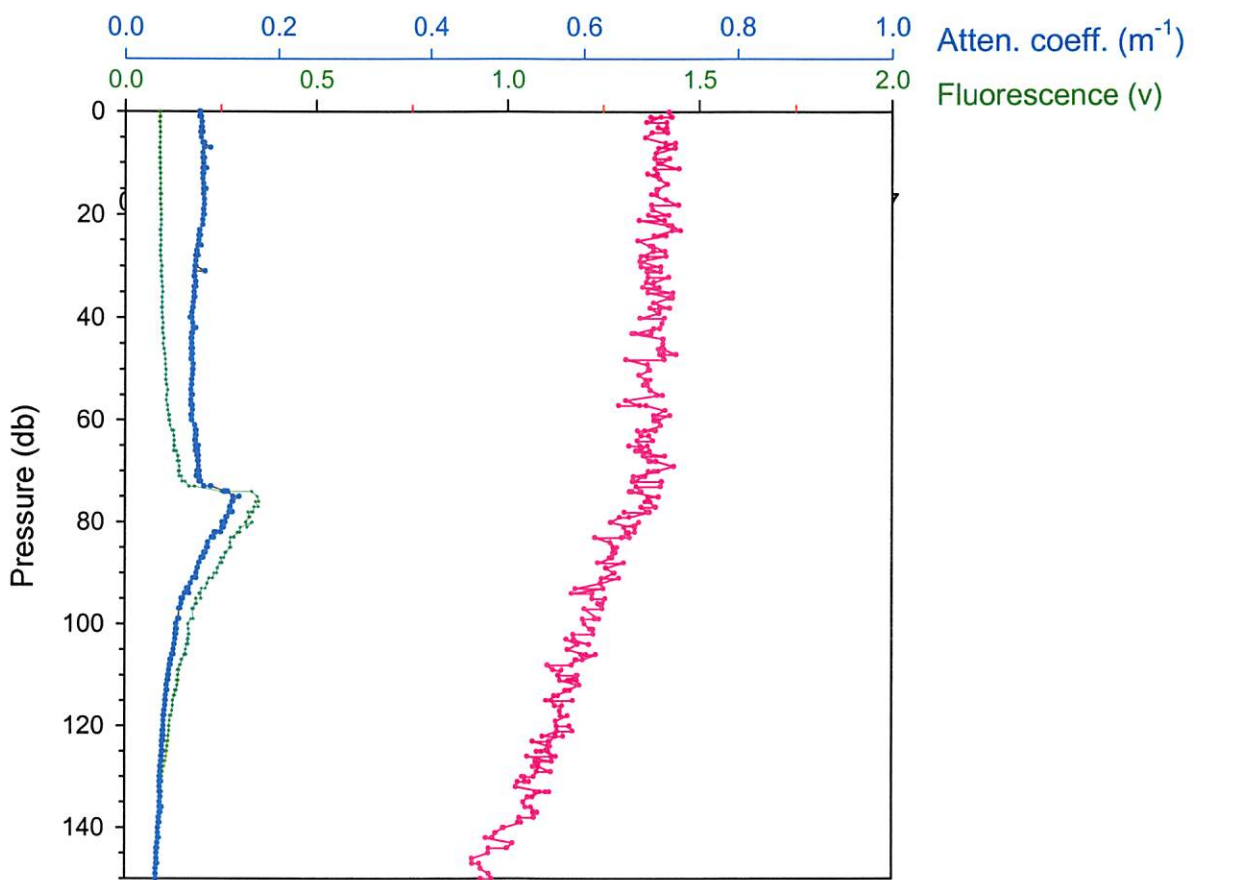
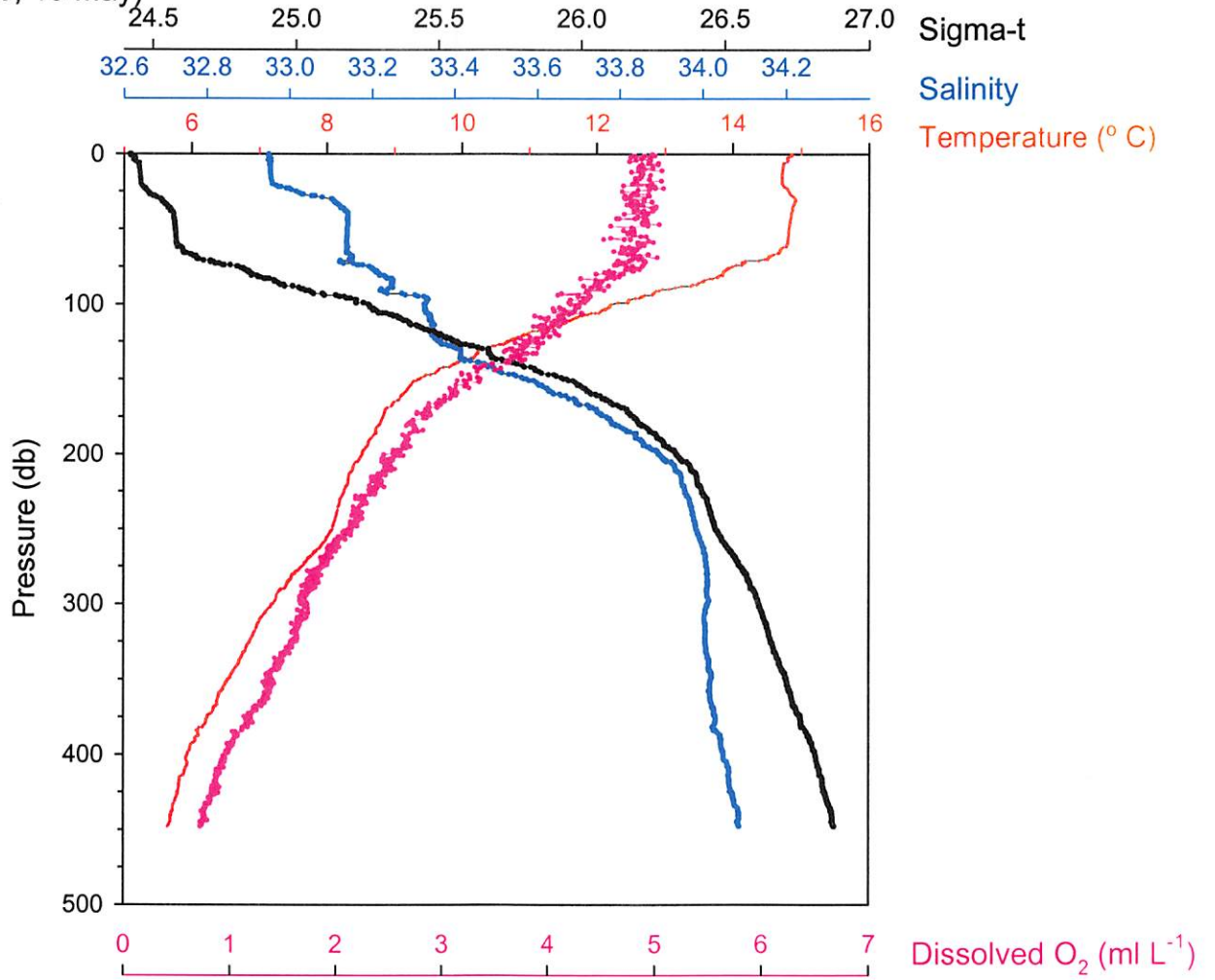


File names: .pro .raw .tab

Net 6 no response  
 Net 7 no response  
 Net 8 no response  
 Net 9 no response



MOCNESS - Tow 10  
Cycle 2 (1632-1736, 18 May)



TOW10.TAB

M-02-004  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg   | tmin | tmax | tavg   | thmin | thmax | thavg  | smin  | smax  | savg  |
|------|-------|-------|--------|------|------|--------|-------|-------|--------|-------|-------|-------|
| 0    | -00.7 | 463.4 | 236.4  | 05.6 | 16.4 | 08.3   | 05.5  | 16.4  | 08.3   | 00.01 | 34.11 | 31.01 |
| 1    | -00.5 | 447.4 | 401.2  | 05.7 | 50.0 | 05.7   | 05.6  | 50.0  | 05.6   | 00.01 | 34.09 | 32.22 |
| 2    | 350.1 | 398.1 | 371.9  | 06.0 | 06.6 | 06.3   | 05.9  | 06.5  | 06.3   | 34.02 | 34.05 | 34.03 |
| 3    | 299.6 | 349.5 | 328.3  | 06.6 | 07.2 | 06.8   | 06.5  | 07.2  | 06.8   | 34.00 | 34.02 | 34.01 |
| 4    | 250.7 | 297.8 | 274.6  | 07.2 | 08.1 | 07.6   | 07.2  | 08.0  | 07.6   | 33.99 | 34.02 | 34.01 |
| 6    | 146.0 | 196.4 | 171.6  | 08.6 | 09.6 | 08.9   | 08.5  | 09.6  | 08.9   | 33.51 | 33.87 | 33.73 |
| 7    | 98.8  | 144.4 | 121.2  | 09.7 | 12.4 | 11.0   | 09.6  | 12.4  | 10.9   | 33.33 | 33.50 | 33.38 |
| 8    | 48.2  | 97.5  | 72.8   | 12.5 | 14.8 | 14.1   | 12.5  | 14.8  | 14.1   | 33.12 | 33.34 | 33.19 |
| 9    | -01.0 | 47.3  | 2152.2 | 14.7 | 14.9 | 1407.4 | 14.7  | 14.9  | 1407.1 | 32.65 | 33.14 |       |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|

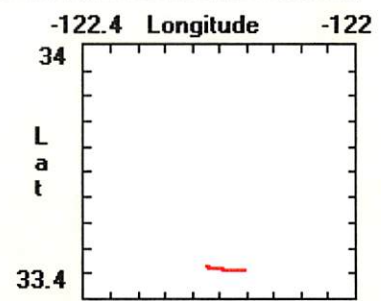
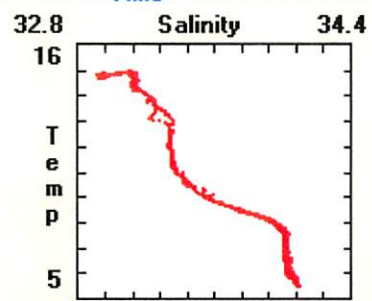
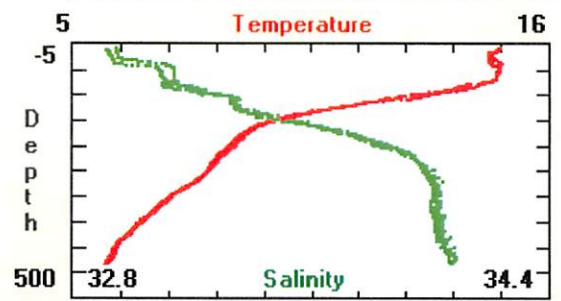
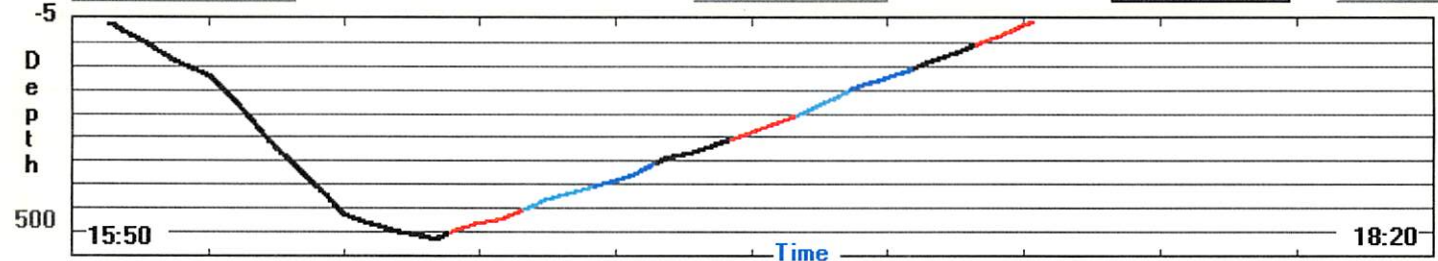
| irradavg | irradmin | irradmax |         |       |       |       |       |       |       |       |      |       |
|----------|----------|----------|---------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 0        | -01.11   | 26.90    | 23.95   | 00.00 | 00.49 | 00.05 | 00.00 | 00.33 | 00.09 | -01.3 | 06.6 | 02.6  |
| 1        | -11.88   | 26.88    | 25.37   | 00.04 | 13.12 | 00.05 | 00.06 | 00.09 | 00.07 | 00.7  | 06.5 | 00.8  |
| 2        | 26.71    | 26.81    | 26.75   | 00.04 | 00.04 | 00.04 | 00.07 | 00.08 | 00.08 | 01.0  | 01.4 | 01.2  |
| 3        | 26.62    | 26.71    | 26.67   | 00.04 | 00.04 | 00.04 | 00.07 | 00.08 | 00.08 | 01.3  | 01.7 | 01.5  |
| 4        | 26.47    | 26.62    | 26.55   | 00.04 | 00.04 | 00.04 | 00.07 | 00.08 | 00.08 | 01.7  | 02.1 | 01.9  |
| 6        | 25.86    | 26.31    | 26.14   | 00.04 | 00.04 | 00.04 | 00.07 | 00.08 | 00.08 | 02.6  | 03.4 | 02.9  |
| 7        | 25.21    | 25.84    | 25.52   | 00.04 | 00.07 | 00.05 | 00.08 | 00.18 | 00.12 | 03.3  | 04.3 | 03.9  |
| 8        | 24.58    | 25.21    | 24.77   | 00.07 | 00.15 | 00.10 | 00.11 | 00.35 | 00.19 | 04.1  | 05.0 | 04.7  |
| 9        | 24.19    | 24.58    | 2326.84 | 00.09 | 09.81 | 31.06 | 00.09 | 00.10 | 08.93 | 04.6  | 05.6 | 465.2 |

| net# | amin | amax | aaavg  | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 51.0 | 34.7   | 00.0  | 02.3  | 00.7  | -24.4 | 10.1  | -10.9 | 00622 | 01306 |
| 1    | 00.0 | 44.0 | 36.7   | 00.0  | 01.5  | 01.2  | -00.9 | 10.5  | 05.7  | 00129 | 00302 |
| 2    | 39.0 | 46.0 | 42.2   | 01.4  | 01.6  | 01.4  | 04.1  | 11.5  | 06.5  | 00113 | 00300 |
| 3    | 42.0 | 48.0 | 45.1   | 01.4  | 01.9  | 01.6  | 03.7  | 11.9  | 07.4  | 00101 | 00282 |
| 4    | 45.0 | 49.0 | 46.9   | 01.5  | 01.9  | 01.7  | 02.9  | 10.3  | 06.1  | 00121 | 00351 |
| 6    | 42.0 | 47.0 | 43.0   | 01.5  | 01.8  | 01.6  | 07.4  | 11.3  | 09.2  | 00082 | 00229 |
| 7    | 40.0 | 47.0 | 42.5   | 01.4  | 01.6  | 01.5  | 03.3  | 10.9  | 06.7  | 00105 | 00286 |
| 8    | 40.0 | 48.0 | 42.4   | 01.4  | 01.6  | 01.5  | 04.9  | 10.0  | 07.4  | 00101 | 00278 |
| 9    | 41.0 | 53.0 | 4136.0 | 01.5  | 01.8  | 147.9 | 04.3  | 10.2  | 751.7 | 00095 | 00258 |

**Environmental Parameters      Net Operation      Net - Ship Position      Program Settings**

|            |            |              |           |                             |                              |             |         |
|------------|------------|--------------|-----------|-----------------------------|------------------------------|-------------|---------|
| Time       | 17:36:07   | Net_Num      | 9         | Latitude                    | 33N 28.708                   | Reset       |         |
| Pressure   | -1.0 m     | OpenTime     | 6.4 min   | Longitude                   | 122W 13.20                   | Baud Rate   | 2400    |
| Temp       | 14.88 C    | Vol_Filtered | 257.9 m3  | Net_Dist                    | 328.2 m                      | Sample Rate | 4.0 sec |
| Salinity   | 32.65 o/oo | Angle        | 44 deg    | Total_Dist                  | 5426.6 m                     | Printer     | Off     |
| Density    | 24.188     | Flow_Counts  | 137       | Processed File Name         | C:\MOCNESS\MOCDATA\TOW10.PRO |             |         |
| Oxygen     | 5.60 ml/l  | Hor_Vel      | 1.5 kts   | Raw File Name               | C:\MOCNESS\MOCDATA\TOW10.raw |             |         |
| Fluoresc.  | 0.0906 V   | Vert_Vel     | 4.5 m/min | Acquisition Ended. trys = 0 |                              |             |         |
| LightXmis  | 1.3828 /m  | Battery      | 19.7 V    |                             |                              |             |         |
| Irradiance |            |              |           |                             |                              |             |         |

Step Net       Increment Net#      **Pause Acqui**      End Acqui



Event No. 354

To 1,000 m.

Labels  
cycle 2  
Tow 5 SD

Start. 139.5485

Fixed in Etoh;

95%  
changed  
24 h. later

Revised 10/94

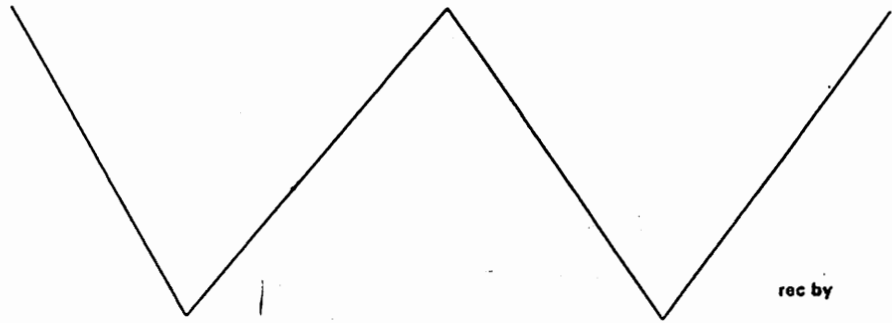
### MOCNESS DATA SHEET

CCE-P0605

| CRUISE | STATION | HAUL | DATE   | (DST EST GMT) | MOCNESS TYPE  |
|--------|---------|------|--------|---------------|---------------|
|        | Cycle 2 | 11   | 19 May | PD            | 1/4M (1M) 10M |

|  | START                | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE   |
|--|----------------------|----------|------------|-------|-------|------------|-------------|
| LATITUDE   | 33.1133<br>33.5552   | 33.5417  | NET 0 OPEN | 13:09 |       | 1657       | 202 $\mu$ m |
| LONGITUDE  | 122.4254<br>122.0874 | 122.1906 | NET 1 OPEN | 14:15 | 1002  | 776        |             |
| DEPTH  | 4,000                |          | NET 2 OPEN | 14:37 | 800   | 440        |             |
| COMMENTS<br>O <sub>2</sub> 5.08<br>Fluor 0.0922<br>Ext. 0.0997<br>Tem 14.88<br>Sal. 32.93<br>S.W. 19.8 |                      |          | NET 3 OPEN | 14:49 | 699   | 504        |             |
|  |                      |          | NET 4 OPEN | 15:01 | 599   | 579        |             |
|  |                      |          | NET 5 OPEN | 15:17 | 500   | 451        |             |
|  |                      |          | NET 6 OPEN | 15:28 | 399   | 523        |             |
|  |                      |          | NET 7 OPEN | 15:40 | 300   | 549        |             |
|  |                      |          | NET 8 OPEN | 15:52 | 200   | 450        |             |
|  |                      |          | NET 9 OPEN | 16:02 | 99    | 400        |             |
|  |                      |          | SURFACE    | 16:12 |       |            |             |

#### TOW PROFILE



rec by

File names:

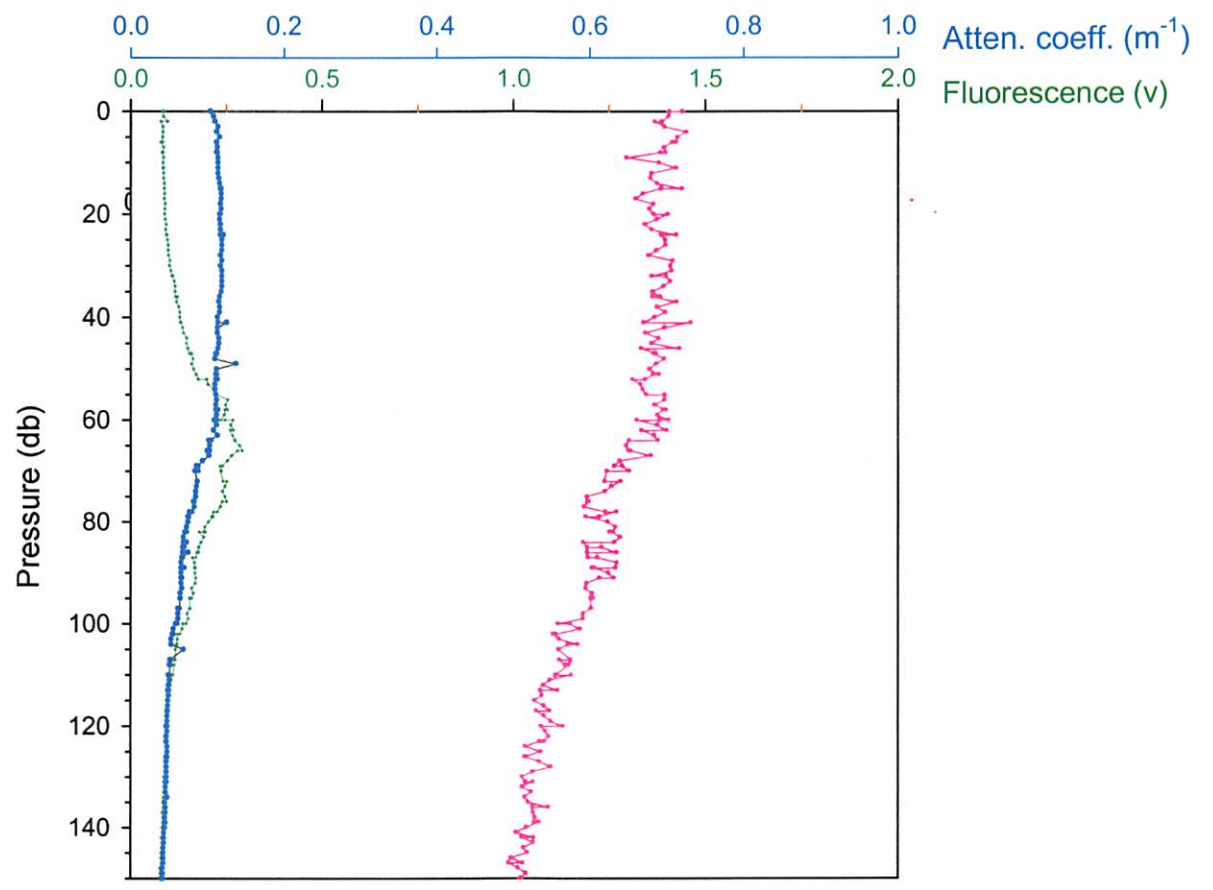
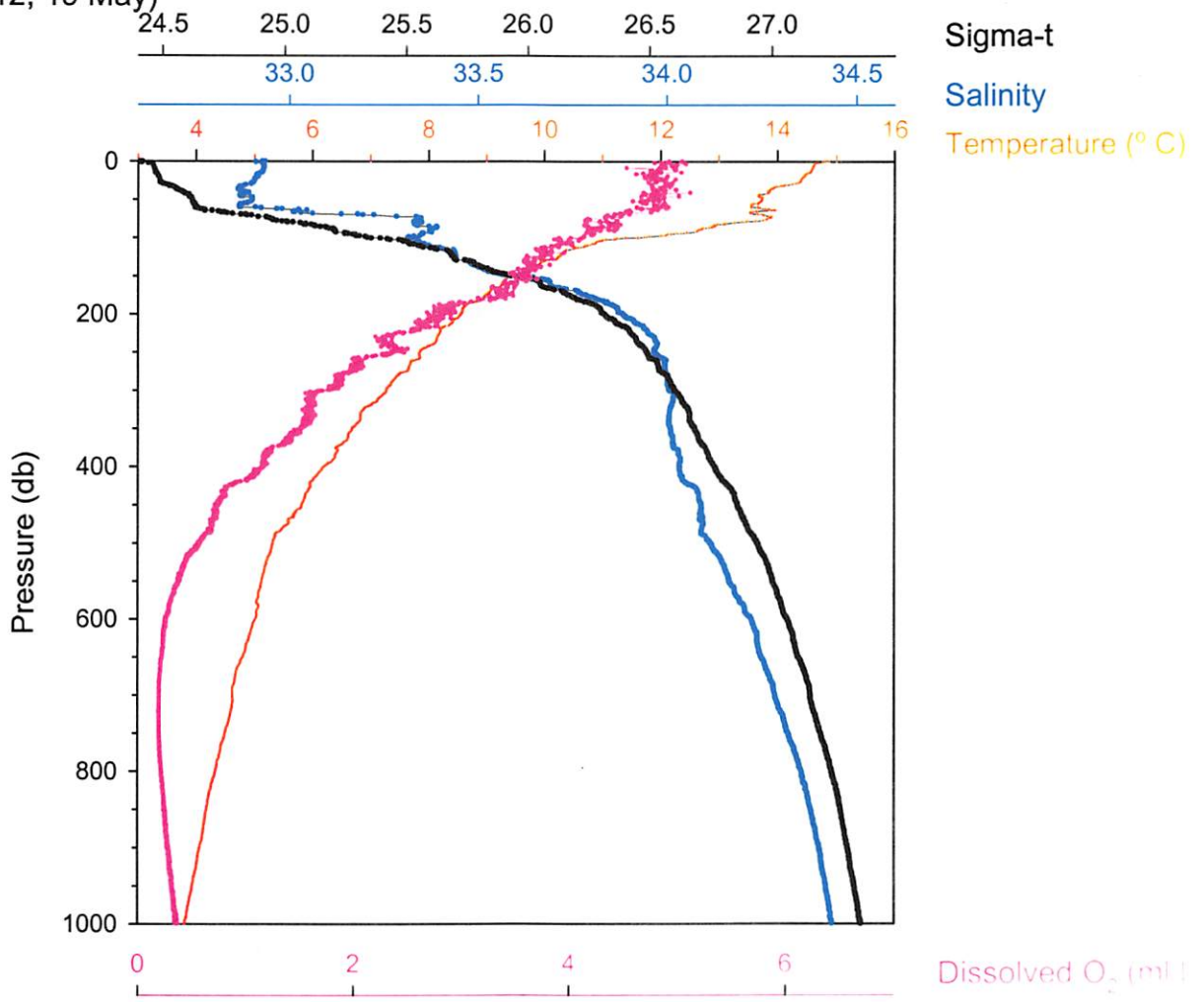
.pro

.raw

.tab

max depth dip ~1020 m

MOCNESS - Tow 11  
Cycle 2 (1415-1612, 19 May)





M-02-005  
08/05/06  
RV Knorr

## MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax   | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|--------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.6 | 1023.4 | 478.1 | 03.8 | 20.2 | 06.8 | 03.7  | 20.2  | 06.8  | 00.01 | 34.46 | 32.67 |
| 1    | -00.4 | 1001.5 | 892.3 | 03.8 | 50.0 | 04.1 | 03.7  | 50.0  | 04.1  | 00.01 | 34.44 | 34.09 |
| 2    | 700.2 | 799.0  | 751.8 | 04.3 | 04.6 | 04.5 | 04.3  | 04.6  | 04.4  | 34.29 | 34.36 | 34.32 |
| 3    | 599.3 | 698.6  | 648.1 | 04.6 | 05.0 | 04.8 | 04.6  | 05.0  | 04.8  | 34.22 | 34.29 | 34.25 |
| 4    | 501.2 | 599.3  | 542.0 | 05.0 | 05.3 | 05.2 | 05.0  | 05.3  | 05.1  | 34.12 | 34.22 | 34.16 |
| 5    | 399.0 | 500.3  | 454.1 | 05.3 | 06.2 | 05.7 | 05.3  | 06.2  | 05.7  | 34.03 | 34.12 | 34.08 |
| 6    | 300.8 | 397.0  | 343.0 | 06.3 | 07.3 | 06.8 | 06.2  | 07.2  | 06.8  | 34.01 | 34.04 | 34.02 |
| 7    | 200.8 | 299.9  | 251.5 | 07.3 | 08.6 | 07.9 | 07.3  | 08.5  | 07.9  | 33.89 | 34.01 | 33.97 |
| 8    | 99.5  | 200.1  | 155.4 | 08.6 | 11.6 | 09.5 | 08.5  | 11.6  | 09.5  | 33.31 | 33.88 | 33.64 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
| 0    |       |       |       |      |      |      |      |      |      |       |       |       |
| 1    |       |       |       |      |      |      |      |      |      |       |       |       |
| 2    |       |       |       |      |      |      |      |      |      |       |       |       |
| 3    |       |       |       |      |      |      |      |      |      |       |       |       |
| 4    |       |       |       |      |      |      |      |      |      |       |       |       |
| 5    |       |       |       |      |      |      |      |      |      |       |       |       |
| 6    |       |       |       |      |      |      |      |      |      |       |       |       |
| 7    |       |       |       |      |      |      |      |      |      |       |       |       |
| 8    |       |       |       |      |      |      |      |      |      |       |       |       |

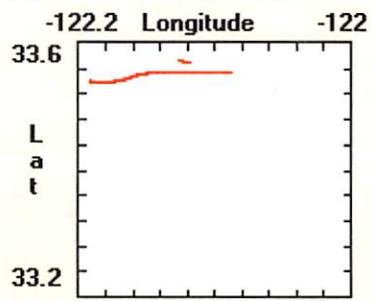
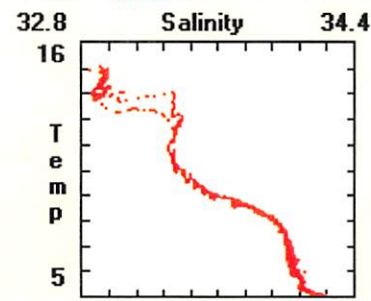
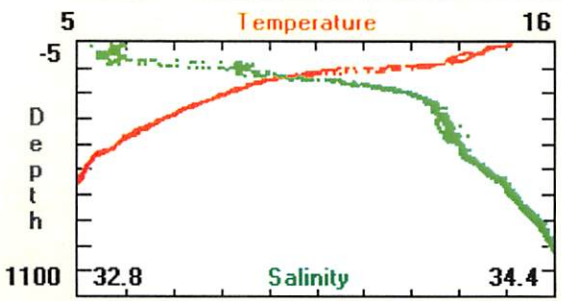
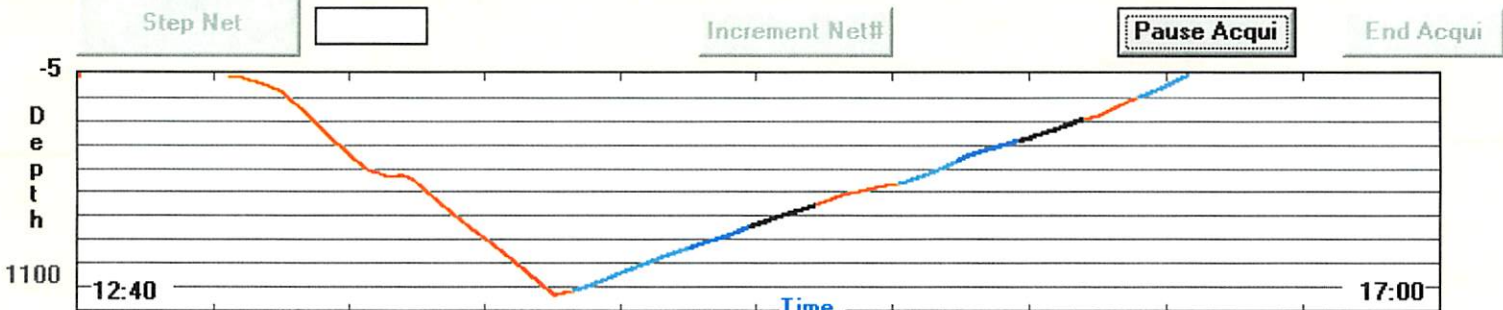
  

| net# | irradavg | irradmin | irradmax |
|------|----------|----------|----------|
| 0    |          |          |          |
| 1    |          |          |          |
| 2    |          |          |          |
| 3    |          |          |          |
| 4    |          |          |          |
| 5    |          |          |          |
| 6    |          |          |          |
| 7    |          |          |          |
| 8    |          |          |          |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 58.0 | 33.8 | 00.0  | 01.6  | 00.6  | -25.2 | 07.6  | -14.8 | 01020 | 01651 |
| 1    | 00.0 | 42.0 | 34.1 | 00.3  | 01.4  | 01.2  | -00.7 | 13.5  | 08.9  | 00337 | 00776 |
| 2    | 37.0 | 44.0 | 40.5 | 01.4  | 01.6  | 01.4  | 06.2  | 12.1  | 08.8  | 00169 | 00440 |
| 3    | 40.0 | 48.0 | 43.6 | 01.4  | 01.8  | 01.6  | 06.1  | 10.5  | 08.1  | 00185 | 00504 |
| 4    | 44.0 | 50.0 | 47.4 | 01.6  | 01.9  | 01.7  | 02.2  | 10.5  | 06.4  | 00233 | 00679 |
| 5    | 46.0 | 49.0 | 47.3 | 01.6  | 01.9  | 01.8  | 04.1  | 12.3  | 09.2  | 00164 | 00481 |
| 6    | 46.0 | 49.0 | 47.5 | 01.6  | 02.0  | 01.8  | 05.7  | 14.3  | 08.4  | 00177 | 00523 |
| 7    | 47.0 | 49.0 | 48.1 | 01.6  | 01.9  | 01.8  | 04.7  | 10.9  | 08.1  | 00184 | 00549 |
| 8    | 44.0 | 48.0 | 45.4 | 01.6  | 02.0  | 01.8  | 03.3  | 13.9  | 09.9  | 00151 | 00450 |

| Environmental Parameters |            | Net Operation |           | Net - Ship Position         |                              | Program Settings |         |
|--------------------------|------------|---------------|-----------|-----------------------------|------------------------------|------------------|---------|
| Time                     | 16:12:8    | Net_Num       | 10        | Latitude                    | 33N 32.504                   | Reset            |         |
| Pressure                 | -1.1 m     | OpenTime      | 9.4 min   | Longitude                   | 122W 11.43                   | Baud Rate        | 2400    |
| Temp                     | 14.99 C    | Vol_Filtered  | 400.2 m3  | Net_Dist                    | 499.9 m                      | Sample Rate      | 4.0 sec |
| Salinity                 | 32.95 o/oo | Angle         | 52 deg    | Total_Dist                  | 9563.9 m                     | Printer          | Off     |
| Density                  | 24.394     | Flow_Counts   | 228       | Processed File Name         | None                         |                  |         |
| Oxygen                   | 5.25 ml/l  | Hor_Vel       | 1.5 kts   | Raw File Name               | C:\MOCNESS\MOCDATA\TOW11.RAW |                  |         |
| Fluoresc.                | 0.1238 V   | Vert_Vel      | 8.2 m/min | Acquisition Ended. trys = 0 |                              |                  |         |
| LightXmis                | 0.3550 /m  | Battery       | 19.2 V    |                             |                              |                  |         |
| Irradiance               |            |               |           |                             |                              |                  |         |



Event No. 388

To: 225 m.

Labels  
Cycle 2  
Tow 6

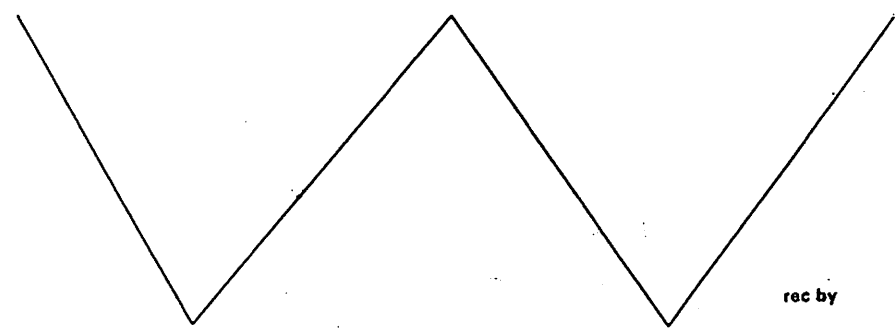
Start; 140.5719

MOCNESS DATA SHEET Revised 10/94

| CRUISE    | STATION               | HAUL | DATE (DST EST GMT) | MOCNESS TYPE |
|-----------|-----------------------|------|--------------------|--------------|
| CCE-P0605 | Cycle 2 <sup>10</sup> | 12   | 20 May             | 1/4M 1M 10M  |

|  | START                | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE |
|--|----------------------|----------|------------|-------|-------|------------|-----------|
| LATITUDE   | 33° 25.2<br>33.4203  | 33.4299  | NET 0 OPEN | 13:44 |       | 1159       |           |
| LONGITUDE  | 122° 1.5<br>122.0248 | 122.0731 | NET 1 OPEN | 14:11 | 225   | 276        |           |
| DEPTH  | 3979                 |          | NET 2 OPEN | 14:18 | 200   | 226        |           |
| COMMENTS <u>Surface</u><br>02: 5.12<br>Fluct 0.0982<br>Ext. 0.1072<br>T 15.30<br>S 32.94<br>Start 21.0 |                      |          | NET 3 OPEN | 14:24 | 172   | 376        |           |
|  |                      |          | NET 4 OPEN | 14:33 | 149   | 117        |           |
|  |                      |          | NET 5 OPEN | 14:36 | 123   | 245        |           |
|  |                      |          | NET 6 OPEN | 14:41 | 100   | 272        |           |
|  |                      |          | NET 7 OPEN | 14:48 | 75    | 185        |           |
|  |                      |          | NET 8 OPEN | 14:52 | 55    | 264        |           |
|  |                      |          | NET 9 OPEN | 14:58 | 25    | 218        |           |
|  |                      |          | SURFACE    | 15:03 |       |            |           |

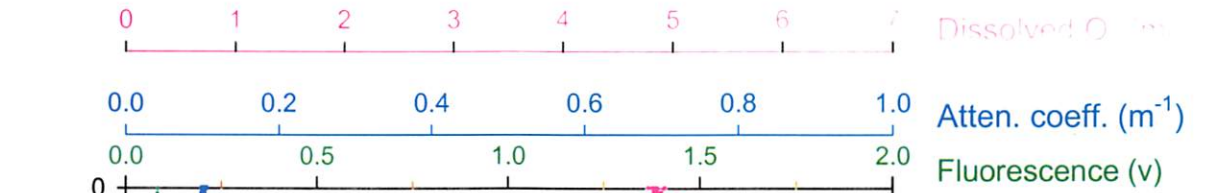
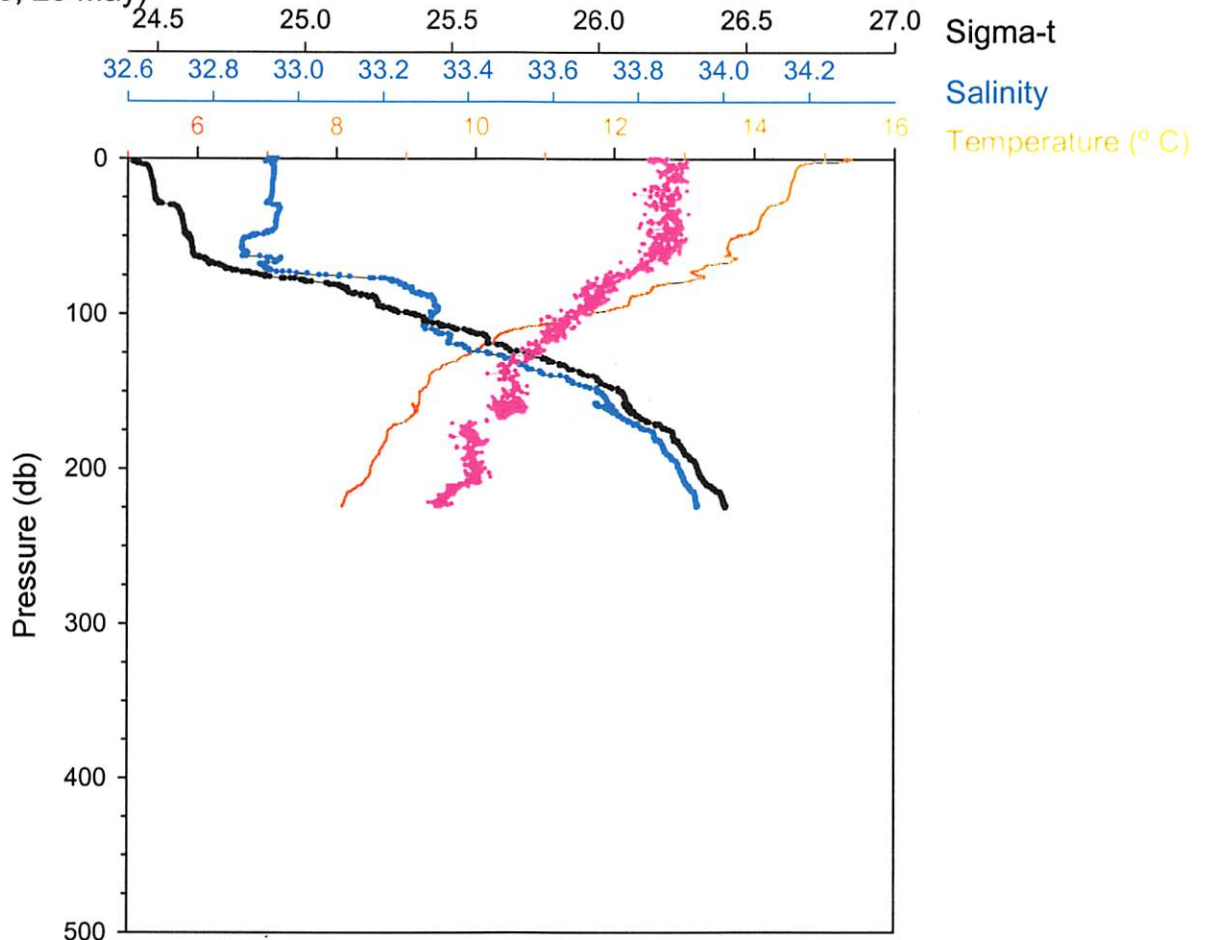
TOW PROFILE



rec by

File names: .pro .raw .tab

MOCNESS - Tow 12  
Cycle 2 (1411-1503, 20 May)



M-02-006  
08/05/06  
RV Knorr

## MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.8 | 235.8 | 112.9 | 07.9 | 19.9 | 10.7 | 07.9  | 19.9  | 10.7  | 00.01 | 33.96 | 31.69 |
| 1    | -00.6 | 225.2 | 195.9 | 08.1 | 17.9 | 07.8 | 08.1  | 17.9  | 07.7  | 00.01 | 33.94 | 31.15 |
| 2    | 171.4 | 200.2 | 187.3 | 08.5 | 08.8 | 08.6 | 08.5  | 08.8  | 08.6  | 33.80 | 33.90 | 33.86 |
| 3    | 149.7 | 170.8 | 160.0 | 08.9 | 09.2 | 09.1 | 08.9  | 09.2  | 09.1  | 33.70 | 33.79 | 33.73 |
| 4    | 123.8 | 149.2 | 136.6 | 09.2 | 10.0 | 09.5 | 09.2  | 10.0  | 09.5  | 33.40 | 33.71 | 33.57 |
| 5    | 99.9  | 122.6 | 110.6 | 10.1 | 11.6 | 10.7 | 10.0  | 11.6  | 10.7  | 33.30 | 33.40 | 33.33 |
| 6    | 75.6  | 99.9  | 88.3  | 11.6 | 13.3 | 12.4 | 11.6  | 13.3  | 12.4  | 33.10 | 33.33 | 33.29 |
| 7    | 55.3  | 75.2  | 64.4  | 13.1 | 13.8 | 13.5 | 13.1  | 13.8  | 13.5  | 32.87 | 33.07 | 32.91 |
| 8    | 25.3  | 54.8  | 41.3  | 13.6 | 14.5 | 14.0 | 13.6  | 14.5  | 14.0  | 32.87 | 32.96 | 32.93 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|

| irradavg | irradmin | irradmax | irradavg | irradmin | irradmax | irradavg | irradmin | irradmax | irradavg | irradmin | irradmax | irradavg |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0        | -01.76   | 26.48    | 24.14    | 00.04    | 09.30    | 00.07    | 00.01    | 00.33    | 00.11    | 02.6     | 06.8     | 03.9     |
| 1        | -01.37   | 26.43    | 24.22    | 00.04    | 00.30    | 00.04    | 00.06    | 00.08    | 00.07    | 02.7     | 06.8     | 02.8     |
| 2        | 26.21    | 26.34    | 26.29    | 00.04    | 00.05    | 00.04    | 00.07    | 00.08    | 00.08    | 03.0     | 03.3     | 03.2     |
| 3        | 26.07    | 26.19    | 26.10    | 00.04    | 00.04    | 00.04    | 00.07    | 00.08    | 00.08    | 03.1     | 03.7     | 03.5     |
| 4        | 25.70    | 26.07    | 25.91    | 00.04    | 00.05    | 00.04    | 00.08    | 00.09    | 00.08    | 03.3     | 03.8     | 03.5     |
| 5        | 25.37    | 25.70    | 25.53    | 00.05    | 00.07    | 00.05    | 00.09    | 00.14    | 00.11    | 03.6     | 04.2     | 03.9     |
| 6        | 24.87    | 25.37    | 25.19    | 00.06    | 00.09    | 00.07    | 00.13    | 00.23    | 00.16    | 04.0     | 04.6     | 04.3     |
| 7        | 24.62    | 24.85    | 24.68    | 00.09    | 00.12    | 00.11    | 00.15    | 00.33    | 00.23    | 04.4     | 05.1     | 04.8     |
| 8        | 24.49    | 24.62    | 24.58    | 00.11    | 00.13    | 00.11    | 00.10    | 00.15    | 00.12    | 04.7     | 05.1     | 04.9     |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 58.0 | 44.5 | 00.0  | 02.7  | 01.1  | -19.7 | 05.8  | -07.6 | 00446 | 01159 |
| 1    | 00.0 | 50.0 | 42.4 | 00.0  | 01.6  | 01.4  | -00.6 | 05.4  | 03.3  | 00110 | 00276 |
| 2    | 44.0 | 49.0 | 45.8 | 01.4  | 01.6  | 01.5  | 03.3  | 08.2  | 05.2  | 00081 | 00226 |
| 3    | 38.0 | 50.0 | 44.7 | 01.2  | 01.8  | 01.4  | -04.3 | 09.9  | 02.5  | 00135 | 00376 |
| 4    | 38.0 | 44.0 | 40.2 | 01.4  | 01.6  | 01.4  | 05.3  | 10.5  | 08.2  | 00045 | 00119 |
| 5    | 40.0 | 47.0 | 43.3 | 01.4  | 01.6  | 01.4  | 02.7  | 09.2  | 04.6  | 00079 | 00215 |
| 6    | 43.0 | 50.0 | 45.9 | 01.5  | 01.8  | 01.5  | 02.2  | 06.6  | 03.7  | 00095 | 00272 |
| 7    | 46.0 | 51.0 | 47.8 | 01.6  | 01.8  | 01.7  | 03.1  | 06.6  | 04.8  | 00064 | 00185 |
| 8    | 45.0 | 50.0 | 47.3 | 01.6  | 01.8  | 01.7  | 02.7  | 07.6  | 04.9  | 00090 | 00264 |



**Environmental Parameters      Net Operation      Net - Ship Position      Program Settings**

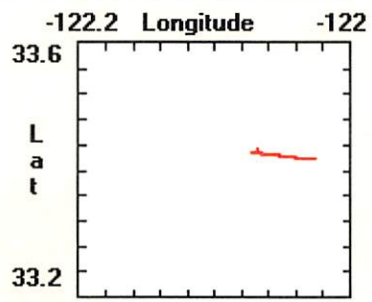
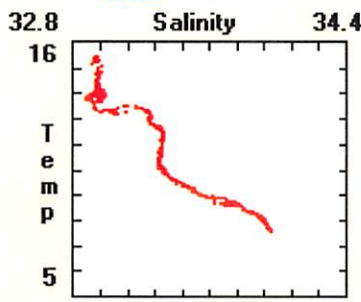
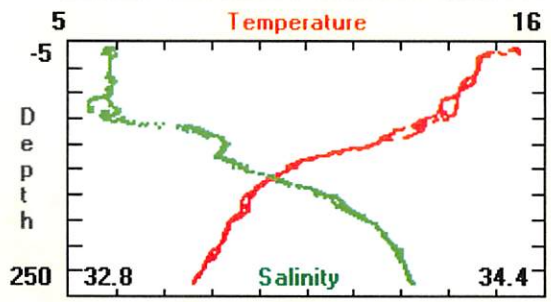
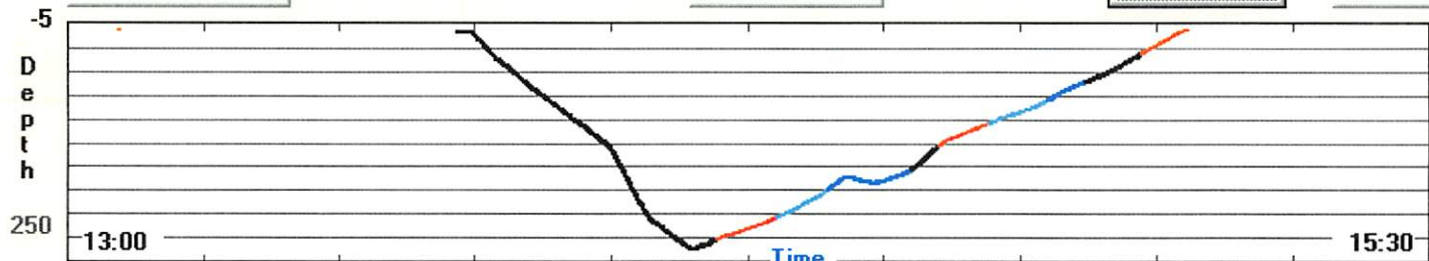
|            |            |              |           |                             |                              |             |
|------------|------------|--------------|-----------|-----------------------------|------------------------------|-------------|
| Time       | 15:03:33   | Net_Num      | 9         | Latitude                    | 33N 25.791!                  | Reset       |
| Pressure   | -1.0 m     | OpenTime     | 5.2 min   | Longitude                   | 122W 4.383                   | Baud Rate   |
| Temp       | 15.42 C    | Vol_Filtered | 218.3 m3  | Net_Dist                    | 301.0 m                      | 2400        |
| Salinity   | 32.94 o/oo | Angle        | 47 deg    | Total_Dist                  | 5762.4 m                     | Sample Rate |
| Density    | 24.297     | Flow_Counts  | 120       | Processed File Name         | C:\MOCNESS\MOCDATA\TOW12.PRO | 4.0 sec     |
| Oxygen     | 4.97 ml/l  | Hor_Vel      | 1.4 kts   | Raw File Name               | C:\MOCNESS\MOCDATA\TOW12.raw | Printer     |
| Fluoresc.  | 0.0802 V   | Vert_Vel     | 2.0 m/min | Acquisition Ended. trys = 0 |                              | Off         |
| LightXmis  | 0.7840 /m  | Battery      | 20.5 V    |                             |                              |             |
| Irradiance |            |              |           |                             |                              |             |

Step Net

Increment Net#

Pause Acqui

End Acqui



Event No# 402

Labels  
Cycle 2  
Tow 7 80

Start: 140.979

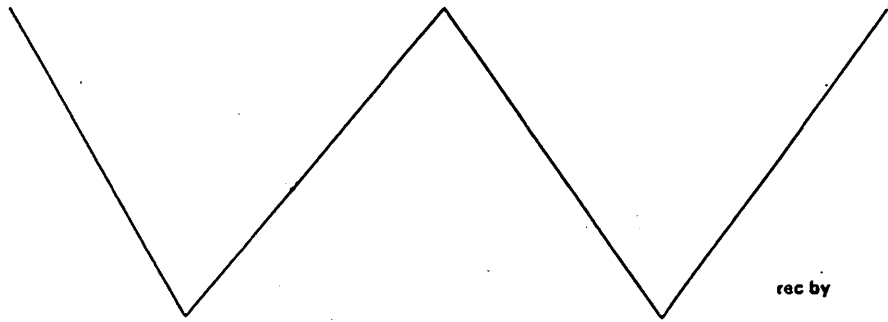
Revised 10/94

**MOCNESS DATA SHEET**

| CRUISE    | STATION  | HAUL | DATE      | (DST EST GMT)<br>PDT | MOCNESS TYPE  |
|-----------|----------|------|-----------|----------------------|---------------|
| CCE-P0605 | Cycle 21 | 13   | 20-21 May |                      | 1/4M (1M) 10M |

|  | START             | END      | TIME       | DEPTH | VOL FILTER | MESH SIZE |
|--|-------------------|----------|------------|-------|------------|-----------|
| LATITUDE   | 33.23<br>33.3870  | 33.3874  | 23:26      |       | 628        | 202 μm    |
| LONGITUDE  | 122.5<br>122.0877 | 122.0548 | 23:49      | 225   | 173        |           |
| DEPTH  | 409               |          | 23:59      | 200   | 183        |           |
| COMMENTS<br><br>O <sub>2</sub> - 3.82<br>fluor - 0.097<br>EPT - .1102<br>T - 15.0<br>S - 3.095<br>Start - 20.4 V |                   |          | NET 3 OPEN | 23:59 | 175        | 168       |
|  |                   |          | NET 4 OPEN | 00:04 | 150        | 153       |
|  |                   |          | NET 5 OPEN | 00:09 | 125        | 146       |
|  |                   |          | NET 6 OPEN | 00:13 | 100        | 149       |
|  |                   |          | NET 7 OPEN | 00:17 | 75         | 225       |
|  |                   |          | NET 8 OPEN | 00:21 | 50         | 141       |
|  |                   |          | NET 9 OPEN | 00:28 | 24         | 163       |
|  |                   |          | SURFACE    | 00:32 | ∅          |           |

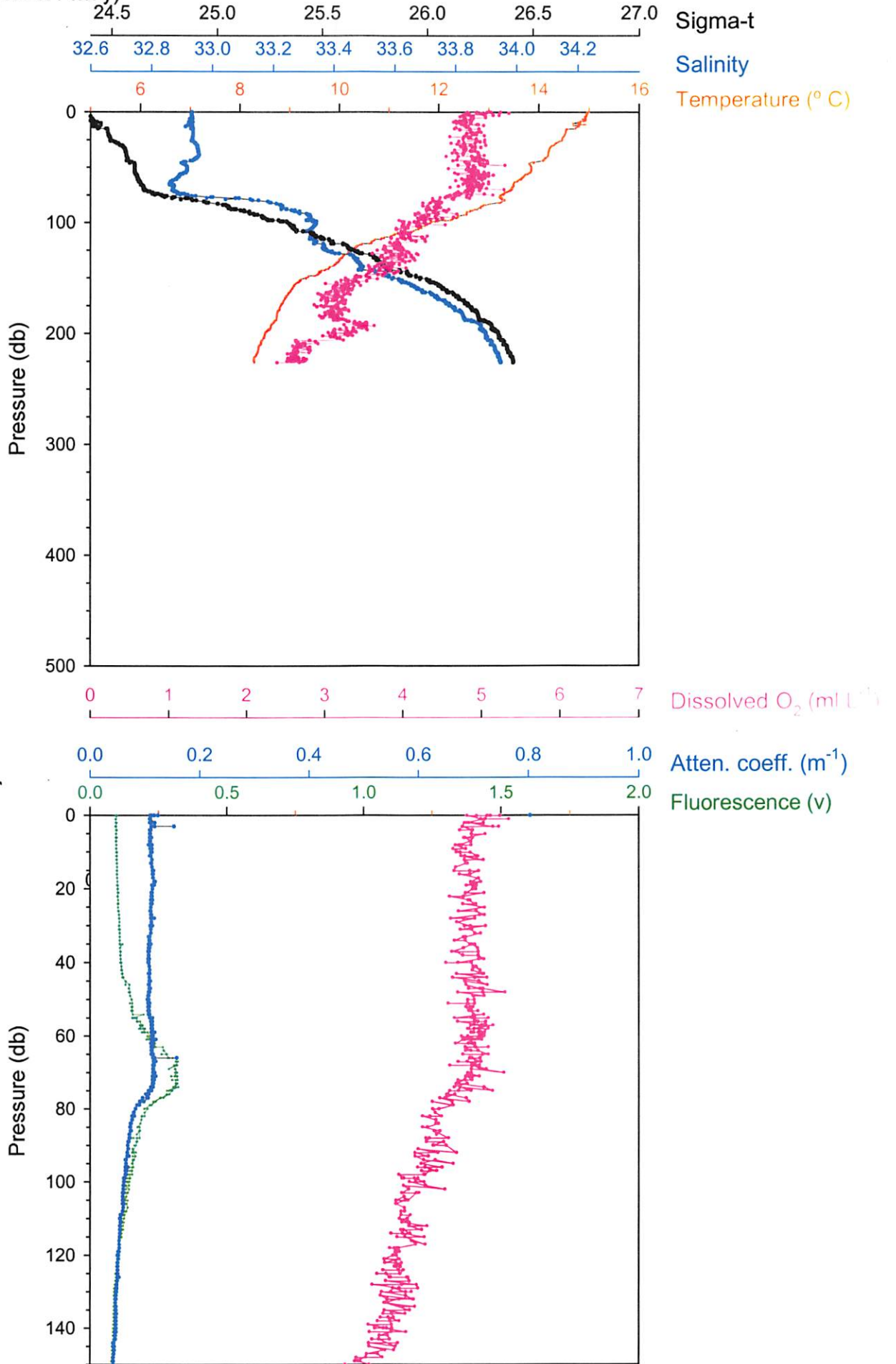
TOW PROFILE



rec by

File names: .pro .raw .tab

MOCNESS - Tow 13  
cycle 2 (2349-0032, 20-21 May)



M-02-007  
08/05/06  
RV Knorr

TOW13.TAB

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | 01.3  | 240.8 | 127.3 | 08.1 | 15.1 | 11.2 | 08.0  | 15.1  | 11.2  | 32.87 | 33.99 | 33.45 |
| 1    | 199.4 | 226.4 | 214.9 | 08.3 | 08.5 | 08.4 | 08.3  | 08.5  | 08.3  | 33.90 | 33.95 | 33.93 |
| 2    | 175.5 | 199.6 | 186.8 | 08.5 | 08.8 | 08.7 | 08.5  | 08.8  | 08.7  | 33.79 | 33.90 | 33.84 |
| 3    | 150.4 | 175.2 | 163.0 | 08.8 | 09.3 | 09.0 | 08.8  | 09.3  | 09.0  | 33.59 | 33.79 | 33.70 |
| 4    | 125.3 | 149.5 | 136.8 | 09.4 | 10.2 | 09.9 | 09.4  | 10.2  | 09.9  | 33.38 | 33.58 | 33.49 |
| 5    | 100.3 | 125.2 | 113.1 | 10.3 | 11.8 | 11.0 | 10.3  | 11.8  | 11.0  | 33.31 | 33.37 | 33.34 |
| 6    | 75.2  | 99.4  | 88.1  | 11.9 | 13.3 | 12.7 | 11.9  | 13.3  | 12.7  | 32.91 | 33.34 | 33.22 |
| 7    | 50.6  | 74.9  | 62.5  | 13.3 | 13.9 | 13.6 | 13.3  | 13.8  | 13.6  | 32.86 | 32.92 | 32.89 |
| 8    | 24.3  | 49.7  | 37.7  | 13.8 | 14.5 | 14.1 | 13.8  | 14.5  | 14.1  | 32.90 | 32.96 | 32.94 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|

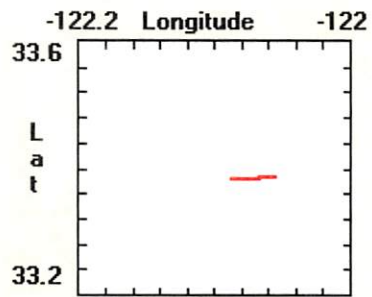
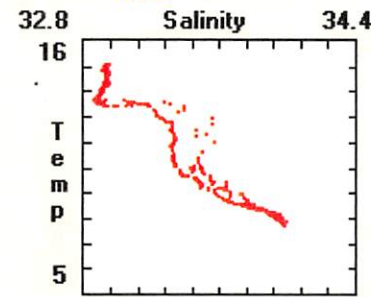
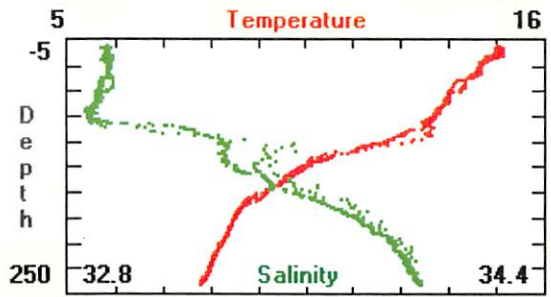
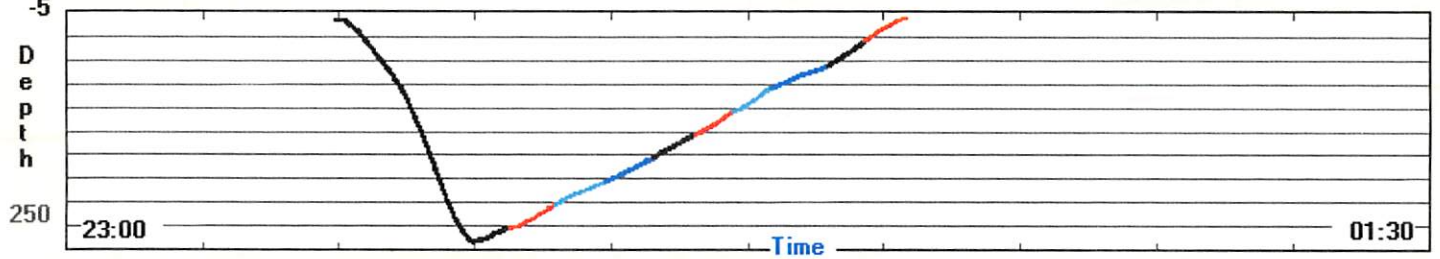
| irradavg | irradmin | irradmax |       |       |       |       |       |       |       |       |      |      |
|----------|----------|----------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 0        | 24.36    | 26.48    | 25.50 | 00.00 | 00.16 | 00.08 | 00.08 | 00.61 | 00.11 | -01.1 | 05.6 | 04.1 |
| 1        | 26.34    | 26.41    | 26.38 | 00.04 | 00.04 | 00.04 | 00.08 | 00.08 | 00.08 | 00.0  | 00.0 | 00.0 |
| 2        | 26.20    | 26.34    | 26.26 | 00.04 | 00.04 | 00.04 | 00.07 | 00.08 | 00.08 | 02.5  | 03.4 | 02.7 |
| 3        | 25.97    | 26.20    | 26.11 | 00.04 | 00.05 | 00.04 | 00.07 | 00.08 | 00.08 | 00.0  | 00.0 | 00.0 |
| 4        | 25.65    | 25.95    | 25.79 | 00.04 | 00.05 | 00.05 | 00.08 | 00.10 | 00.09 | 02.9  | 03.6 | 03.2 |
| 5        | 25.33    | 25.64    | 25.49 | 00.05 | 00.06 | 00.06 | 00.09 | 00.14 | 00.12 | 00.0  | 00.0 | 00.0 |
| 6        | 24.73    | 25.33    | 25.07 | 00.06 | 00.11 | 00.08 | 00.14 | 00.30 | 00.19 | 00.0  | 00.0 | 00.0 |
| 7        | 24.61    | 24.72    | 24.64 | 00.11 | 00.16 | 00.11 | 00.15 | 00.32 | 00.24 | 03.9  | 04.8 | 04.4 |
| 8        | 24.49    | 24.61    | 24.57 | 00.11 | 00.12 | 00.11 | 00.10 | 00.15 | 00.12 | 00.0  | 00.0 | 00.0 |
|          |          |          |       |       |       |       |       |       |       | 04.6  | 05.3 | 04.9 |
|          |          |          |       |       |       |       |       |       |       | 00.0  | 00.0 | 00.0 |
|          |          |          |       |       |       |       |       |       |       | 04.5  | 05.3 | 04.9 |
|          |          |          |       |       |       |       |       |       |       | 00.0  | 00.0 | 00.0 |

| net# | amin | amax | aaavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 28.0 | 51.0 | 37.8  | 00.3  | 03.7  | 00.8  | -27.1 | 07.4  | -11.8 | 00288 | 00628 |
| 1    | 28.0 | 43.0 | 33.0  | 00.9  | 01.1  | 01.0  | 01.1  | 09.1  | 05.0  | 00075 | 00173 |
| 2    | 25.0 | 37.0 | 30.3  | 00.8  | 01.1  | 01.0  | 02.1  | 08.0  | 04.5  | 00081 | 00183 |
| 3    | 23.0 | 34.0 | 27.5  | 00.8  | 01.2  | 00.9  | 02.1  | 07.8  | 04.9  | 00075 | 00168 |
| 4    | 25.0 | 33.0 | 28.6  | 00.8  | 01.1  | 01.0  | 03.1  | 07.6  | 05.5  | 00068 | 00153 |
| 5    | 26.0 | 37.0 | 31.0  | 00.8  | 01.2  | 01.0  | 02.9  | 08.6  | 05.8  | 00063 | 00146 |
| 6    | 31.0 | 42.0 | 34.9  | 00.9  | 01.4  | 01.2  | 03.1  | 09.2  | 06.1  | 00061 | 00149 |
| 7    | 31.0 | 41.0 | 35.5  | 00.9  | 01.4  | 01.1  | 01.6  | 06.3  | 03.9  | 00092 | 00225 |
| 8    | 29.0 | 36.0 | 31.8  | 00.9  | 01.2  | 01.1  | 04.5  | 07.8  | 06.4  | 00059 | 00140 |



| Environmental Parameters |            | Net Operation |           | Net - Ship Position         |                              | Program Settings |         |
|--------------------------|------------|---------------|-----------|-----------------------------|------------------------------|------------------|---------|
| Time                     | 00:32:34   | Net_Num       | 9         | Latitude                    | 33N 23.245                   | Reset            |         |
| Pressure                 | -0.6 m     | OpenTime      | 4.5 min   | Longitude                   | 122W 3.287                   | Baud Rate        | 2400    |
| Temp                     | 14.96 C    | Vol_Filtered  | 163.0 m3  | Net_Dist                    | 229.3 m                      | Sample Rate      | 4.0 sec |
| Salinity                 | 32.93 o/oo | Angle         | 47 deg    | Total_Dist                  | 3062.7 m                     | Printer          | Off     |
| Density                  | 24.386     | Flow_Counts   | 71        | Processed File Name         | C:\MOCNESS\MOCDATA\TOW13.PRO |                  |         |
| Oxygen                   | 4.91 ml/l  | Hor_Vel       | 1.1 kts   | Raw File Name               | C:\MOCNESS\MOCDATA\TOW13.raw |                  |         |
| Fluoresc.                | 0.0968 V   | Vert_Vel      | 1.4 m/min | Acquisition Ended. trys = 0 |                              |                  |         |
| LightXmis                | 0.3489 /m  | Battery       | 20.2 V    |                             |                              |                  |         |
| Irradiance               |            |               |           |                             |                              |                  |         |

Step Net  Increment Net#  **Pause Acqui** End Acqui



Event No: 417

Start: 192.0127

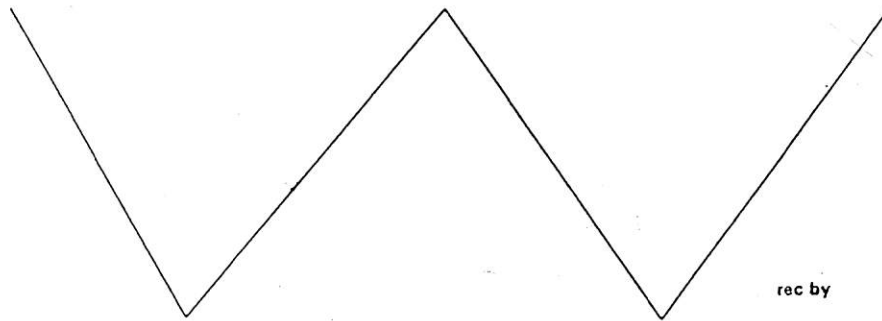
Revised 10/94

MOCNESS DATA SHEET

| CRUISE    | STATION | HAUL | DATE (DST EST GMT) | MOCNESS TYPE  |
|-----------|---------|------|--------------------|---------------|
| CCE-P0605 | Cycle 3 | 14   | 22 May             | 1/4M (1M) 10M |

|   | START       | END      | TIME     | DEPTH | VOL FILTER | MESH SIZE |
|---|-------------|----------|----------|-------|------------|-----------|
| LATITUDE  | 34° 37.29'  | 34.6079  | 00:19:18 |       | 421        | 202µm     |
| LONGITUDE   | 120° 46.69' | 120.7791 | 00:30    | 80    | 73         |           |
| DEPTH   | 104 m.      |          | 00:32    | 70    | 114        |           |
| COMMENTS<br>O <sub>2</sub> 5.57<br>Fluor 1.0966<br>Trans. 0.6647<br>Temp 13.18<br>Sal. 33.33<br>Start v: 20.3 |             |          | 00:35    | 62    | 151        |           |
|   |             |          | 00:39    | 50    | 107        |           |
|   |             |          | 00:42    | 40    | 145        |           |
|   |             |          | 00:46    | 30    | 80         |           |
|   |             |          | 00:49    | 20    | 88         |           |
|   |             |          | 00:51    | 10    | 140        |           |
|   |             |          | 00:55    |       |            |           |
|   |             |          |          |       |            |           |
|   |             |          |          |       |            |           |
|   |             |          |          |       |            |           |

TOW PROFILE



rec by

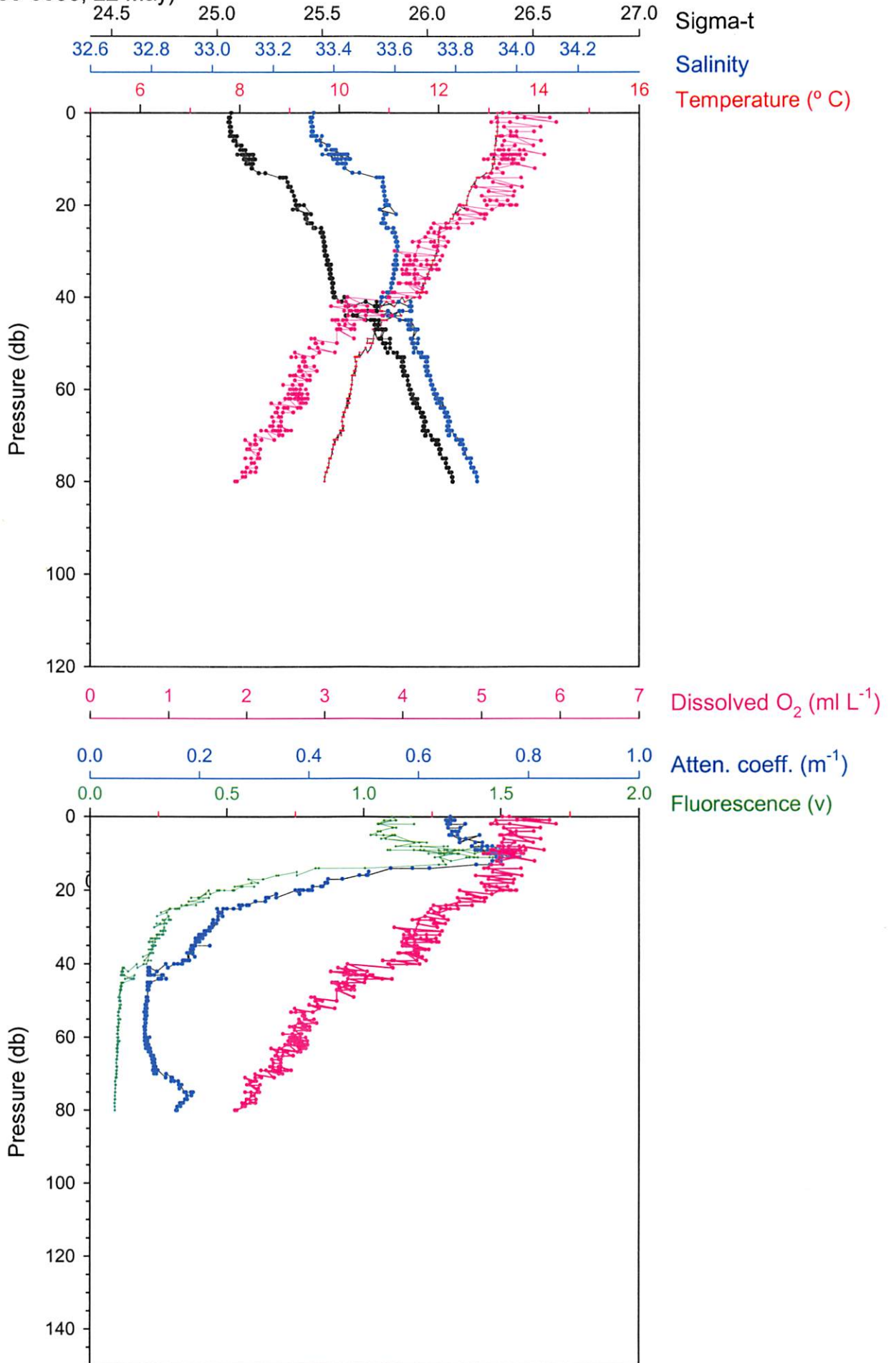
File names: .pro .raw .tab

Did Not need to close Net 9

NO NET 9

# MOCNESS - Tow 14

Cycle 3, Tow 1 (0030-0055, 22 May)



M-03-001  
08/05/06  
RV Knorr

## MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax | pavg | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.9 | 88.2 | 44.9 | 09.6 | 13.4 | 10.4 | 09.5  | 13.4  | 10.4  | 00.01 | 33.93 | 31.45 |
| 1    | -01.0 | 79.6 | 67.7 | 09.7 | 13.3 | 09.4 | 09.7  | 13.3  | 09.3  | 00.01 | 33.87 | 30.76 |
| 2    | 60.8  | 69.7 | 65.3 | 10.0 | 10.2 | 10.1 | 10.0  | 10.2  | 10.1  | 33.74 | 33.78 | 33.76 |
| 3    | 50.2  | 62.1 | 57.4 | 10.2 | 10.7 | 10.3 | 10.2  | 10.7  | 10.3  | 33.66 | 33.74 | 33.71 |
| 4    | 40.2  | 50.0 | 44.2 | 10.6 | 11.5 | 10.9 | 10.6  | 11.5  | 10.9  | 33.55 | 33.68 | 33.63 |
| 5    | 30.1  | 39.9 | 34.3 | 11.6 | 12.0 | 11.8 | 11.6  | 12.0  | 11.8  | 33.57 | 33.61 | 33.60 |
| 6    | 20.0  | 30.4 | 24.7 | 12.0 | 12.5 | 12.2 | 12.0  | 12.5  | 12.2  | 33.55 | 33.61 | 33.59 |
| 7    | 09.5  | 20.0 | 13.9 | 12.6 | 13.1 | 12.9 | 12.6  | 13.1  | 12.9  | 33.39 | 33.58 | 33.49 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
| 0    |       |       |       |      |      |      |      |      |      |       |       |       |
| 1    |       |       |       |      |      |      |      |      |      |       |       |       |
| 2    |       |       |       |      |      |      |      |      |      |       |       |       |
| 3    |       |       |       |      |      |      |      |      |      |       |       |       |
| 4    |       |       |       |      |      |      |      |      |      |       |       |       |
| 5    |       |       |       |      |      |      |      |      |      |       |       |       |
| 6    |       |       |       |      |      |      |      |      |      |       |       |       |
| 7    |       |       |       |      |      |      |      |      |      |       |       |       |

| irradavg | simin  | simax | siavg | cmin  | cmax  | cavg  | fmin  | fmax  | favg  | oxmin | oxmax | oxavg |
|----------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0        | -00.66 | 26.19 | 24.02 | 00.00 | 09.00 | 00.34 | 00.00 | 01.26 | 00.35 | 01.8  | 06.9  | 03.4  |
| 1        | -00.65 | 26.12 | 23.68 | 00.12 | 01.59 | 00.20 | 00.07 | 00.10 | 00.09 | 01.9  | 06.7  | 02.1  |
| 2        | 25.93  | 25.99 | 25.97 | 00.10 | 00.12 | 00.11 | 00.10 | 00.10 | 00.10 | 02.2  | 02.8  | 02.5  |
| 3        | 25.79  | 25.93 | 25.90 | 00.10 | 00.11 | 00.10 | 00.10 | 00.11 | 00.10 | 02.5  | 03.1  | 02.7  |
| 4        | 25.56  | 25.82 | 25.73 | 00.10 | 00.16 | 00.11 | 00.10 | 00.20 | 00.13 | 02.8  | 04.1  | 03.4  |
| 5        | 25.51  | 25.56 | 25.54 | 00.17 | 00.22 | 00.19 | 00.19 | 00.28 | 00.23 | 03.7  | 04.5  | 04.1  |
| 6        | 25.36  | 25.52 | 25.46 | 00.22 | 00.40 | 00.28 | 00.23 | 00.49 | 00.34 | 04.1  | 05.4  | 04.7  |
| 7        | 25.12  | 25.38 | 25.25 | 00.40 | 00.78 | 00.62 | 00.52 | 01.47 | 01.01 | 04.9  | 05.7  | 05.3  |

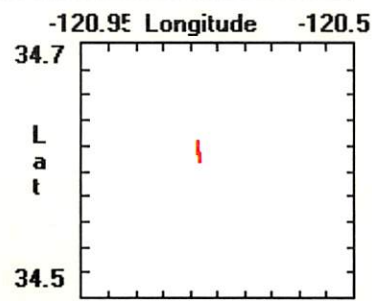
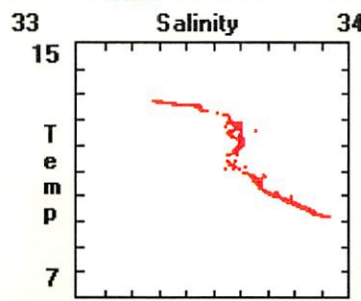
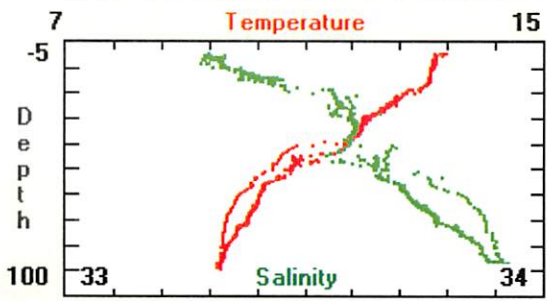
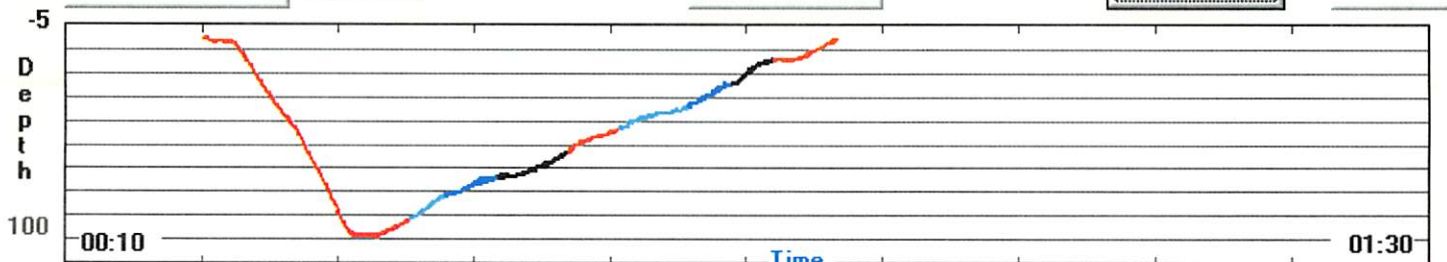
| net# | amin | amax | aaavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 67.0 | 37.6  | 00.0  | 01.1  | 00.8  | -17.4 | 05.1  | -06.3 | 00196 | 00421 |
| 1    | 00.0 | 42.0 | 31.5  | 00.1  | 01.2  | 01.0  | -00.6 | 06.8  | 04.7  | 00033 | 00072 |
| 2    | 34.0 | 52.0 | 39.5  | 01.1  | 01.4  | 01.2  | 00.2  | 05.4  | 02.8  | 00045 | 00114 |
| 3    | 35.0 | 46.0 | 39.5  | 01.1  | 01.4  | 01.2  | -01.0 | 06.0  | 02.7  | 00060 | 00151 |
| 4    | 36.0 | 46.0 | 39.8  | 01.1  | 01.4  | 01.2  | 00.8  | 08.8  | 03.4  | 00044 | 00107 |
| 5    | 33.0 | 46.0 | 39.8  | 00.9  | 01.4  | 01.2  | -00.8 | 05.3  | 02.4  | 00059 | 00146 |
| 6    | 23.0 | 39.0 | 29.7  | 00.8  | 01.1  | 00.9  | 01.8  | 06.6  | 04.1  | 00037 | 00080 |
| 7    | 24.0 | 49.0 | 36.6  | 00.8  | 01.4  | 01.1  | 00.0  | 07.8  | 04.4  | 00036 | 00088 |



**Environmental Parameters      Net Operation      Net - Ship Position      Program Settings**

|            |            |              |           |                             |                              |             |
|------------|------------|--------------|-----------|-----------------------------|------------------------------|-------------|
| Time       | 0:55:21    | Net_Num      | 9         | Latitude                    | 34N 36.4731                  | Reset       |
| Pressure   | 0.1 m      | OpenTime     | 3.7 min   | Longitude                   | 120W 46.44                   | Baud Rate   |
| Temp       | 13.18 C    | Vol_Filtered | 140.4 m3  | Net_Dist                    | 158.2 m                      | Sample Rate |
| Salinity   | 33.34 o/oo | Angle        | 37 deg    | Total_Dist                  | 1903.7 m                     | Printer     |
| Density    | 25.069     | Flow_Counts  | 65        | Processed File Name         | None                         |             |
| Oxygen     | 5.36 ml/l  | Hor_Vel      | 1.2 kts   | Raw File Name               | C:\MOCNESS\MOCDATA\TOW14.RAW |             |
| Fluoresc.  | 1.1726 V   | Vert_Vel     | 3.9 m/min | Acquisition Ended. trys = 0 |                              |             |
| LightXmis  | 0.6578 /m  | Battery      | 20.1 V    |                             |                              |             |
| Irradiance |            |              |           |                             |                              |             |

Step Net       Increment Net#       **Pause Acqui**      End Acqui





Event NO.: 431

Start: 142.5454

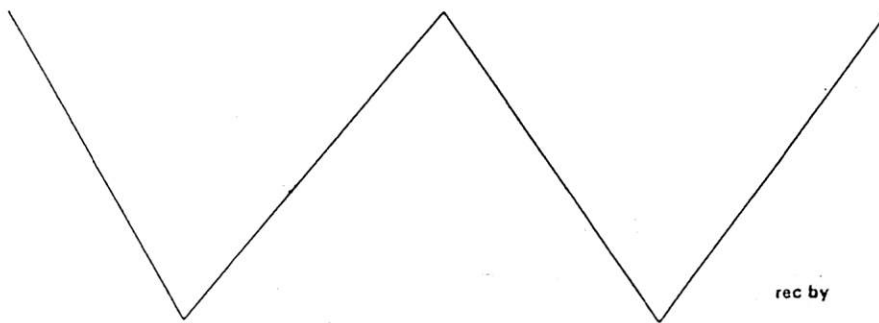
Revised 10/94

MOCNESS DATA SHEET

|           |         |      |        |                 |               |
|-----------|---------|------|--------|-----------------|---------------|
| CRUISE    | STATION | HAUL | DATE   | ( DST EST GMT ) | MOCNESS TYPE  |
| CCE-P0605 | Cycle 3 | 15   | 22 May | PDT             | 1/4M (1M) 10M |

|   | START    | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE   |
|---|----------|----------|------------|-------|-------|------------|-------------|
| LATITUDE  | 34.6678  | 34.6783  | NET 0 OPEN | 13:07 | 0     | 392        | 202 $\mu$ m |
| LONGITUDE   | 120.7733 | 120.7855 | NET 1 OPEN | 13:15 | 50    | 162        |             |
| DEPTH   | 90m      |          | NET 2 OPEN | 13:19 | 40    | 124        |             |
| COMMENTS<br>O <sub>2</sub> 6.6<br>Fluor 0.7832<br>Light 1.25<br>T 13.93<br>S 33.35<br>20.2V |          |          | NET 3 OPEN | 13:23 | 30    | 135        |             |
|   |          |          | NET 4 OPEN | 13:27 | 20    | 99         |             |
|   |          |          | NET 5 OPEN | 13:29 | 9     | 107        |             |
|   |          |          | NET 6 OPEN | 13:53 | 1     |            |             |
|   |          |          | NET 7 OPEN |       |       |            |             |
|   |          |          | NET 8 OPEN |       |       |            |             |
|   |          |          | NET 9 OPEN |       |       |            |             |
|   |          |          | SURFACE    |       |       |            |             |

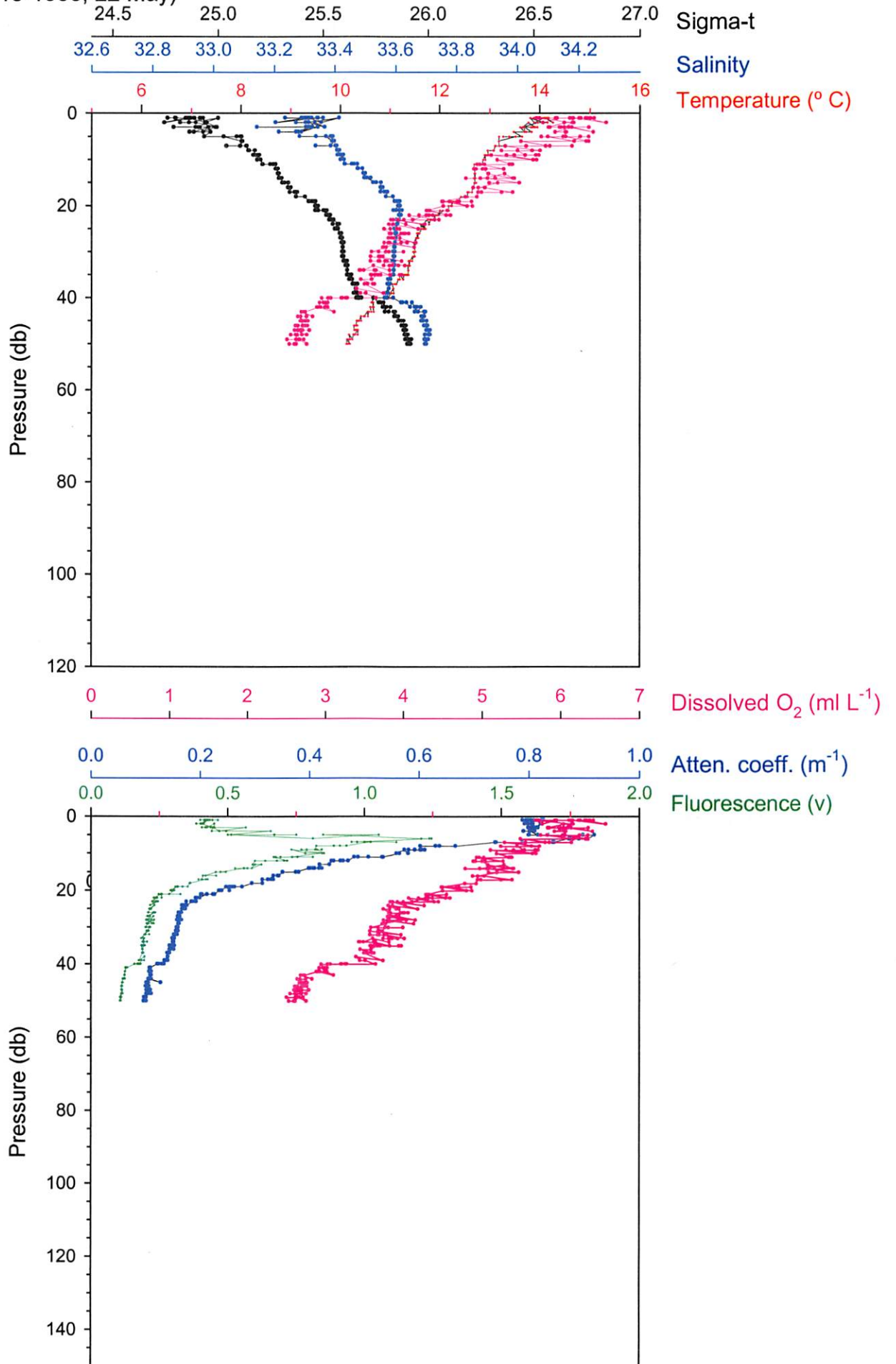
TOW PROFILE



File names: .pro .raw .tab

# MOCNESS - Tow 15

Cycle 3, Tow 2 (1315-1333, 22 May)



TOW15.TAB

M-03-002  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax | pavg | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.4 | 60.0 | 22.1 | 09.9 | 50.0 | 06.7 | 09.9  | 50.0  | 06.7  | 00.01 | 33.77 | 19.18 |
| 1    | -00.3 | 50.3 | 43.8 | 10.1 | 21.6 | 10.4 | 10.1  | 21.6  | 10.4  | 00.01 | 33.71 | 32.65 |
| 2    | 30.2  | 39.7 | 34.7 | 11.0 | 11.5 | 11.3 | 11.0  | 11.5  | 11.3  | 33.57 | 33.60 | 33.59 |
| 3    | 20.0  | 29.9 | 24.9 | 11.5 | 12.2 | 11.7 | 11.5  | 12.2  | 11.7  | 33.59 | 33.62 | 33.60 |
| 4    | 09.1  | 20.1 | 14.4 | 12.2 | 12.9 | 12.6 | 12.2  | 12.9  | 12.6  | 33.42 | 33.62 | 33.52 |
| 5    | 01.1  | 09.2 | 04.2 | 12.9 | 14.3 | 13.6 | 12.9  | 14.3  | 13.6  | 33.14 | 33.42 | 33.34 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|

| irradavg | irradmin | irradmax |       |       |       |       |       |       |       |       |      |      |
|----------|----------|----------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 0        | -11.53   | 25.98    | 14.57 | 00.00 | 01.26 | 00.19 | 00.00 | 03.12 | 00.18 | -01.2 | 07.0 | 02.3 |
| 1        | -02.13   | 25.92    | 25.02 | 00.10 | 00.27 | 00.11 | 00.06 | 00.17 | 00.12 | 00.0  | 00.0 | 00.0 |
| 2        | 25.59    | 25.67    | 25.62 | 00.13 | 00.16 | 00.15 | 00.17 | 00.22 | 00.19 | 02.5  | 06.3 | 02.8 |
| 3        | 25.46    | 25.60    | 25.56 | 00.16 | 00.24 | 00.18 | 00.20 | 00.33 | 00.23 | 00.0  | 00.0 | 00.0 |
| 4        | 25.19    | 25.47    | 25.32 | 00.25 | 00.58 | 00.40 | 00.29 | 00.85 | 00.54 | 03.3  | 04.0 | 03.6 |
| 5        | 24.74    | 25.19    | 24.99 | 00.59 | 00.92 | 00.79 | 00.38 | 01.25 | 00.64 | 00.0  | 00.0 | 00.0 |

| net# | amin | amax | aaavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 52.0 | 21.7  | 00.0  | 02.0  | 00.6  | -13.7 | 04.6  | -02.9 | 00270 | 00392 |
| 1    | 00.0 | 49.0 | 40.6  | 00.0  | 01.4  | 01.2  | -00.6 | 04.6  | 02.4  | 00065 | 00162 |
| 2    | 40.0 | 48.0 | 42.7  | 01.2  | 01.5  | 01.3  | 01.1  | 05.8  | 02.9  | 00048 | 00124 |
| 3    | 32.0 | 46.0 | 39.5  | 01.1  | 01.4  | 01.2  | 00.9  | 04.6  | 02.7  | 00056 | 00135 |
| 4    | 32.0 | 40.0 | 36.3  | 01.1  | 01.1  | 01.1  | 01.9  | 05.6  | 03.6  | 00043 | 00099 |
| 5    | 12.0 | 39.0 | 29.9  | 00.5  | 01.1  | 00.9  | -00.2 | 04.1  | 02.5  | 00053 | 00107 |

Environmental Parameters

Time: 13:33:38  
 Pressure: 0.6 m  
 Temp: 14.34 C  
 Salinity: 33.29 o/oo  
 Density: 24.794  
 Oxygen: 6.24 ml/l  
 Fluoresc.: 0.4278 V  
 LightXmis: 0.8218 /m  
 Irradiance:

Net Operation

Net\_Num: 6  
 OpenTime: 0.1 min  
 Vol\_Filtered: 3.5 m3  
 Angle: 12 deg  
 Flow\_Counts: 1  
 Hor\_Vel: 0.7 kts  
 Vert\_Vel: 1.9 m/min  
 Battery: 20.1 V

Net - Ship Position

Latitude: 34N 40.699'  
 Longitude: 120W 47.13  
 Net\_Dist: 8.3 m  
 Total\_Dist: 2755.3 m

Program Settings

Reset  
 Baud Rate: 2400  
 Sample Rate: 4.0 sec  
 Printer: Off

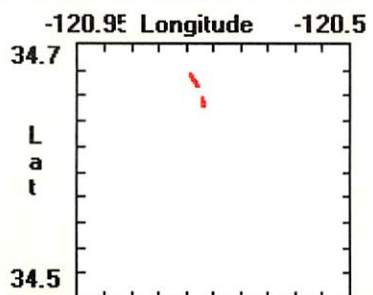
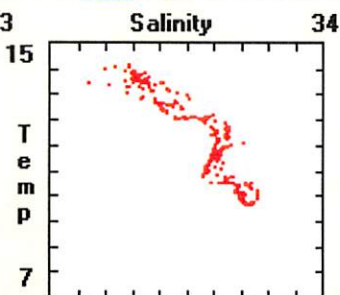
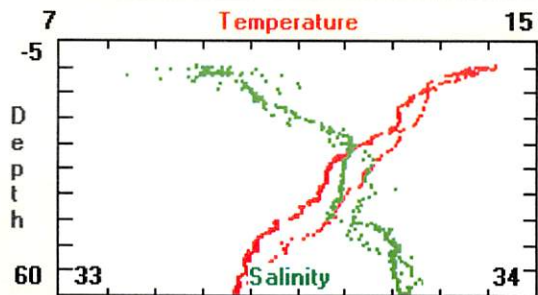
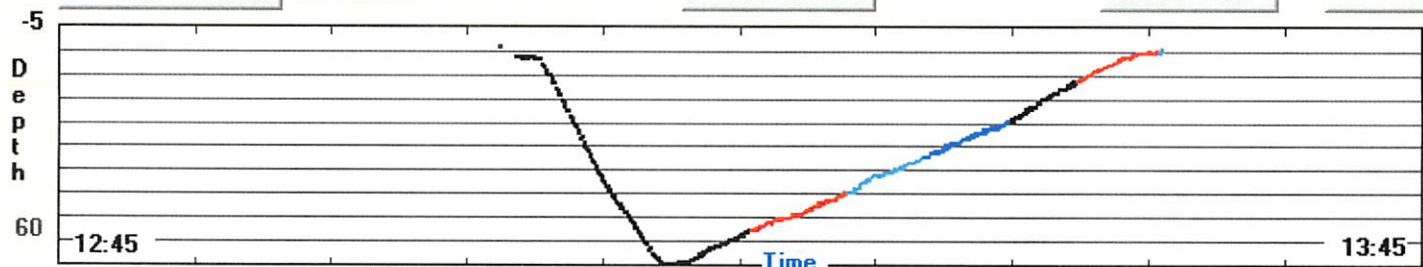
Processed File Name: C:\MOCNESS\MOCDATA\TOW15.PRO  
 Raw File Name: C:\MOCNESS\MOCDATA\TOW15.raw  
 Acquisition Ended. trys = 2

Step Net

Increment Net#

Pause Acqui

End Acqui





Event No. 512

Start: 144,533

Revised 10/94

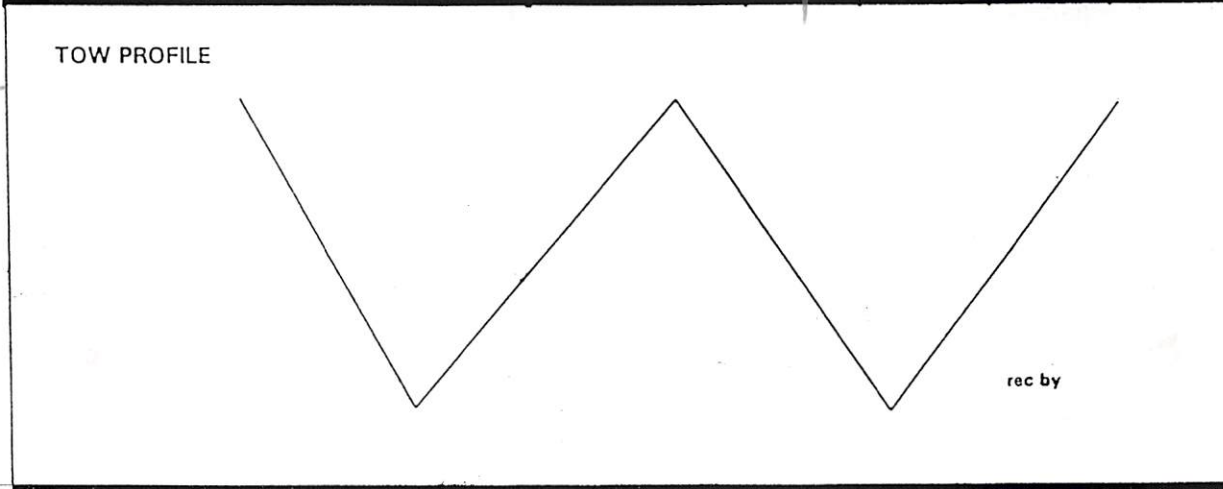
MOCNESS DATA SHEET

| CRUISE    | STATION | HAUL | DATE   | ( DST EST GMT ) | MOCNESS TYPE  |
|-----------|---------|------|--------|-----------------|---------------|
| CCE-P0605 | Cycle 3 | 16   | 24 May | PDT             | 1/4M (1M) 10M |

|  | START             | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE |
|--|-------------------|----------|------------|-------|-------|------------|-----------|
| LATITUDE   | 34.523<br>34.5716 | 34.8631  | NET 0 OPEN | 13:08 |       | 767        | 202µm     |
| LONGITUDE  | 120.8199          | 120.8463 | NET 1 OPEN | 13:23 | 120   | 386        |           |
| DEPTH  | 133               |          | NET 2 OPEN | 13:33 | 80    | 172        |           |
| COMMENTS<br>O <sub>2</sub> 5.83<br>F 0.4302<br>Light 0.6737<br>T 13.62<br>S 33.45<br>Volt 20.2 |                   |          | NET 3 OPEN | 13:37 | 69    | 63         |           |
|  |                   |          | NET 4 OPEN | 13:38 | 60    | 201        |           |
|  |                   |          | NET 5 OPEN | 13:43 | 48    | 57         |           |
|  |                   |          | NET 6 OPEN | 13:45 | 39    | 86         |           |
|  |                   |          | NET 7 OPEN | 13:47 | 30    | 133        |           |
|  |                   |          | NET 8 OPEN | 13:50 | 20    | 176        |           |
|  |                   |          | NET 9 OPEN | 13:55 | 8     | 144        |           |
|  |                   |          | SURFACE    | 13:59 | 0     |            |           |

Intended trip

120  
80  
70  
60  
50  
40  
30  
20  
10



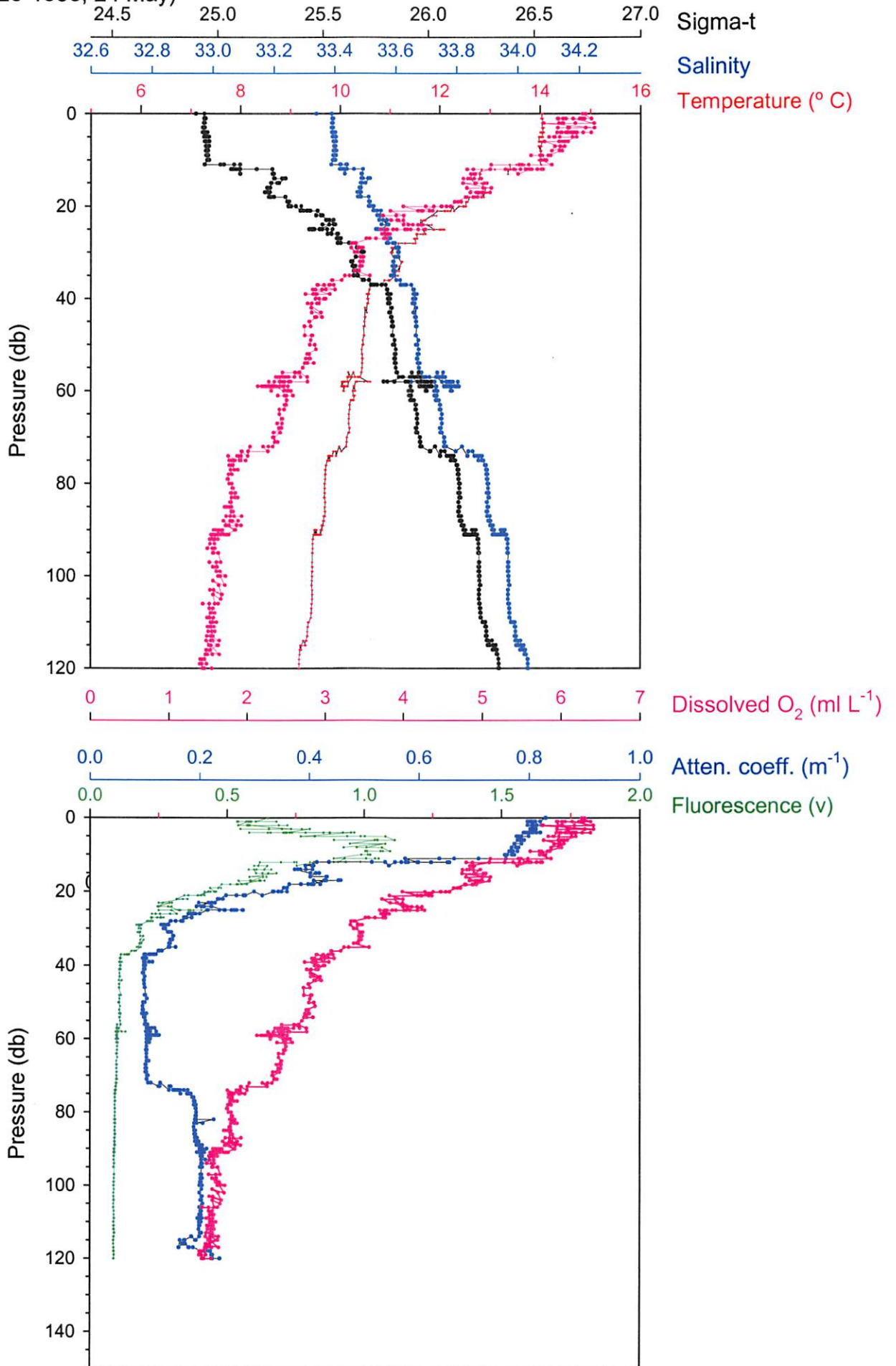
File names: .pro .raw .tab

PD



# MOCNESS - Tow 16

Cycle 3, Tow 3 (1323-1358, 24 May)



TOW16.TAB

M-03-003  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.7 | 127.1 | 50.8 | 09.1 | 50.0 | 10.8 | 09.1  | 50.0  | 10.8  | 00.01 | 34.07 | 30.70 |
| 1    | -00.6 | 119.6 | 97.9 | 09.2 | 17.9 | 09.5 | 09.2  | 17.9  | 09.4  | 00.01 | 34.04 | 33.55 |
| 2    | 69.4  | 79.0  | 74.4 | 09.7 | 10.2 | 09.8 | 09.7  | 10.2  | 09.8  | 33.75 | 33.90 | 33.86 |
| 3    | 59.1  | 68.7  | 63.4 | 10.2 | 10.3 | 10.2 | 10.2  | 10.3  | 10.2  | 33.73 | 33.75 | 33.74 |
| 4    | 48.4  | 59.7  | 56.9 | 10.0 | 10.6 | 10.2 | 10.0  | 10.6  | 10.2  | 33.64 | 33.81 | 33.74 |
| 5    | 39.2  | 47.5  | 42.5 | 10.5 | 10.6 | 10.5 | 10.5  | 10.6  | 10.5  | 33.66 | 33.67 | 33.66 |
| 6    | 29.9  | 39.4  | 35.4 | 10.5 | 11.3 | 10.9 | 10.5  | 11.3  | 10.9  | 33.58 | 33.67 | 33.62 |
| 7    | 20.4  | 29.8  | 25.1 | 11.0 | 12.3 | 11.7 | 11.0  | 12.3  | 11.7  | 33.53 | 33.61 | 33.57 |
| 8    | 08.6  | 20.2  | 14.2 | 12.5 | 14.0 | 13.1 | 12.5  | 14.0  | 13.1  | 33.39 | 33.52 | 33.46 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin    | oxmax    | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|----------|----------|-------|
|      |       |       |       |      |      | cavg | fmin | fmax | favg | irradmin | irradmax |       |

| irradavg |        |       |       |       |       |       |       |       |       |       |      |      |
|----------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 0        | -11.77 | 26.37 | 23.33 | 00.00 | 00.69 | 00.32 | 00.00 | 00.90 | 00.28 | -01.3 | 06.8 | 03.5 |
| 1        | -01.37 | 26.34 | 25.91 | 00.16 | 00.32 | 00.20 | 00.06 | 00.09 | 00.09 | 00.0  | 00.0 | 00.0 |
| 2        | 25.95  | 26.15 | 26.09 | 00.10 | 00.19 | 00.16 | 00.09 | 00.10 | 00.09 | 01.4  | 06.8 | 01.6 |
| 3        | 25.91  | 25.95 | 25.93 | 00.10 | 00.11 | 00.10 | 00.10 | 00.10 | 00.10 | 00.0  | 00.0 | 00.0 |
| 4        | 25.79  | 26.02 | 25.93 | 00.10 | 00.13 | 00.11 | 00.09 | 00.13 | 00.10 | 01.7  | 02.4 | 01.9 |
| 5        | 25.81  | 25.83 | 25.82 | 00.10 | 00.11 | 00.10 | 00.11 | 00.12 | 00.11 | 00.0  | 00.0 | 00.0 |
| 6        | 25.64  | 25.82 | 25.73 | 00.10 | 00.16 | 00.12 | 00.11 | 00.20 | 00.15 | 02.3  | 02.6 | 02.5 |
| 7        | 25.39  | 25.69 | 25.54 | 00.13 | 00.31 | 00.21 | 00.17 | 00.43 | 00.29 | 00.0  | 00.0 | 00.0 |
| 8        | 24.94  | 25.35 | 25.18 | 00.33 | 00.78 | 00.51 | 00.43 | 01.09 | 00.72 | 02.1  | 02.9 | 02.5 |
|          |        |       |       |       |       |       |       |       |       | 00.0  | 00.0 | 00.0 |
|          |        |       |       |       |       |       |       |       |       | 02.7  | 03.0 | 02.9 |
|          |        |       |       |       |       |       |       |       |       | 00.0  | 00.0 | 00.0 |
|          |        |       |       |       |       |       |       |       |       | 02.7  | 03.6 | 03.2 |
|          |        |       |       |       |       |       |       |       |       | 00.0  | 00.0 | 00.0 |
|          |        |       |       |       |       |       |       |       |       | 03.3  | 04.4 | 03.8 |
|          |        |       |       |       |       |       |       |       |       | 00.0  | 00.0 | 00.0 |
|          |        |       |       |       |       |       |       |       |       | 04.3  | 05.9 | 05.1 |
|          |        |       |       |       |       |       |       |       |       | 00.0  | 00.0 | 00.0 |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 59.0 | 35.6 | 00.0  | 13.8  | 01.3  | -22.5 | 08.9  | -07.8 | 00234 | 00767 |
| 1    | 00.0 | 44.0 | 34.6 | 00.0  | 01.2  | 01.1  | -02.6 | 09.1  | 03.6  | 00164 | 00386 |
| 2    | 37.0 | 44.0 | 40.2 | 01.1  | 01.5  | 01.3  | -00.2 | 06.4  | 03.4  | 00045 | 00121 |
| 3    | 40.0 | 47.0 | 43.3 | 01.4  | 01.5  | 01.4  | 03.1  | 08.4  | 06.3  | 00024 | 00063 |
| 4    | 34.0 | 49.0 | 42.0 | 01.2  | 01.6  | 01.3  | -03.3 | 07.8  | 02.0  | 00073 | 00201 |
| 5    | 35.0 | 42.0 | 37.8 | 01.1  | 01.4  | 01.3  | 03.1  | 10.9  | 06.9  | 00021 | 00051 |
| 6    | 35.0 | 42.0 | 38.4 | 01.1  | 01.4  | 01.2  | 01.4  | 07.0  | 03.8  | 00034 | 00086 |
| 7    | 41.0 | 46.0 | 43.0 | 01.2  | 01.5  | 01.3  | 00.8  | 05.6  | 02.9  | 00051 | 00133 |
| 8    | 36.0 | 45.0 | 42.3 | 01.1  | 01.5  | 01.3  | 00.0  | 05.5  | 02.5  | 00068 | 00176 |

**Environmental Parameters**

**Net Operation**

**Net - Ship Position**

**Program Settings**

Time   
 Pressure   
 Temp   
 Salinity   
 Density   
 Oxygen   
 Fluoresc.   
 LightXmis   
 Irradiance

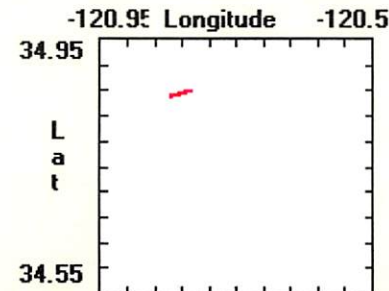
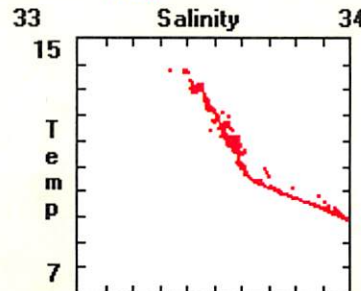
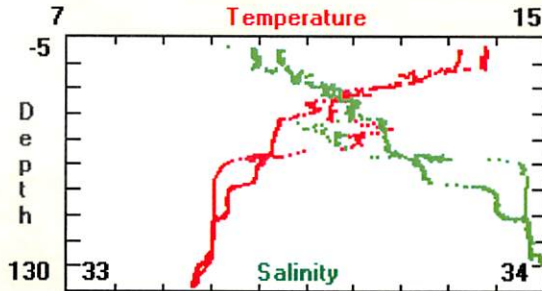
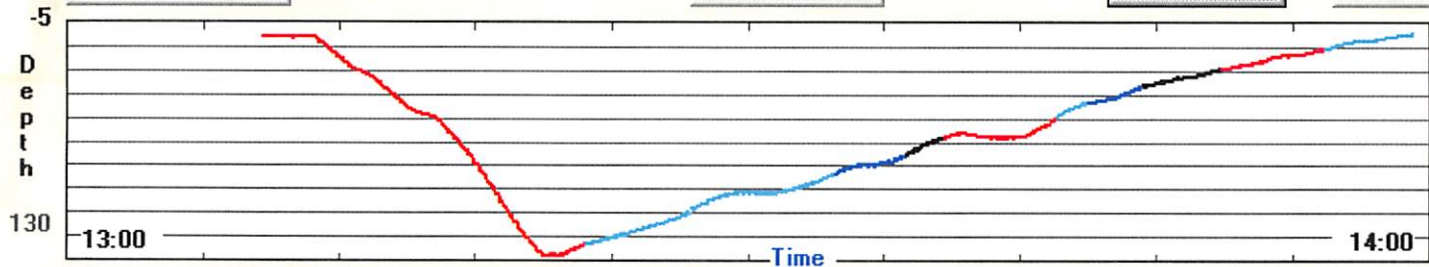
Net\_Num   
 OpenTime   
 Vol\_Filtered   
 Angle   
 Flow\_Counts   
 Hor\_Vel   
 Vert\_Vel   
 Battery

Latitude   
 Longitude   
 Net\_Dist   
 Total\_Dist

Baud Rate   
 Sample Rate   
 Printer

Processed File Name   
 Raw File Name   
 Acquisition Ended. trys = 0

Step Net



Event No. 527

Start: 145,0371

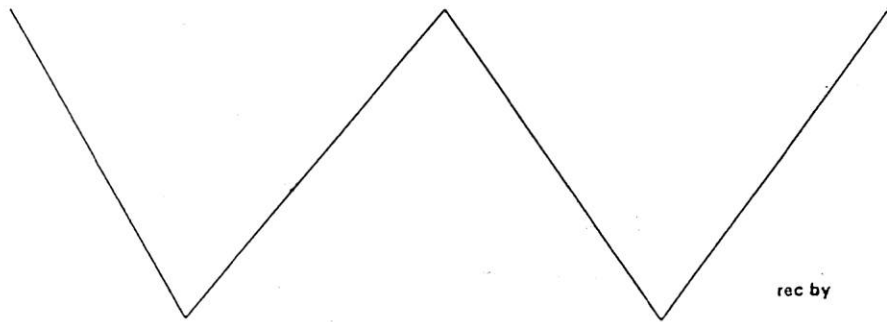
Revised 10/94

MOCNESS DATA SHEET  
TOW 4

| CRUISE     | STATION | HAUL | DATE   | ( DST EST GMT ) | MOCNESS TYPE  |
|------------|---------|------|--------|-----------------|---------------|
| CC-E-P0605 | Cycle 3 | 17   | 25 May | PDT             | 1/4M (1M) 10M |

|   | START      | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE   |  |  |
|---|------------|----------|------------|-------|-------|------------|-------------|--|--|
| LATITUDE  | 34° 49.2'  |          | NET 0 OPEN | 00:53 |       |            | 202 $\mu$ m |  |  |
|   | 34.8209    | 34.8213  | NET 1 OPEN | 01:09 | 118   | 824        |             |  |  |
| LONGITUDE   | 120° 49.8' |          | NET 2 OPEN | 01:18 | 76    | 347        |             |  |  |
|   | 120.8297   | 120.8592 | NET 3 OPEN | 01:23 | 66    | 174        |             |  |  |
| DEPTH   | 141        |          | NET 4 OPEN | 01:27 | 60    | 172        |             |  |  |
| COMMENTS<br>O <sub>2</sub> : 5.94<br>Flu: 0.6442<br>Trms: 0.5000<br>Temp: 13.53<br>Sal: 33.48<br>Batt: 20.0 |            |          | NET 5 OPEN | 01:29 | 49    | 96         |             |  |  |
|   |            |          | NET 6 OPEN | 01:32 | 40    | 105        |             |  |  |
|   |            |          | NET 7 OPEN | 01:36 | 30    | 115        |             |  |  |
|   |            |          | NET 8 OPEN | 01:39 | 20    | 108        |             |  |  |
|   |            |          | NET 9 OPEN | 01:42 | 9     | 106        |             |  |  |
|   |            |          | SURFACE    |       |       |            |             |  |  |

TOW PROFILE



120  
 80  
 70  
 60  
 50  
 40  
 30  
 20  
 10

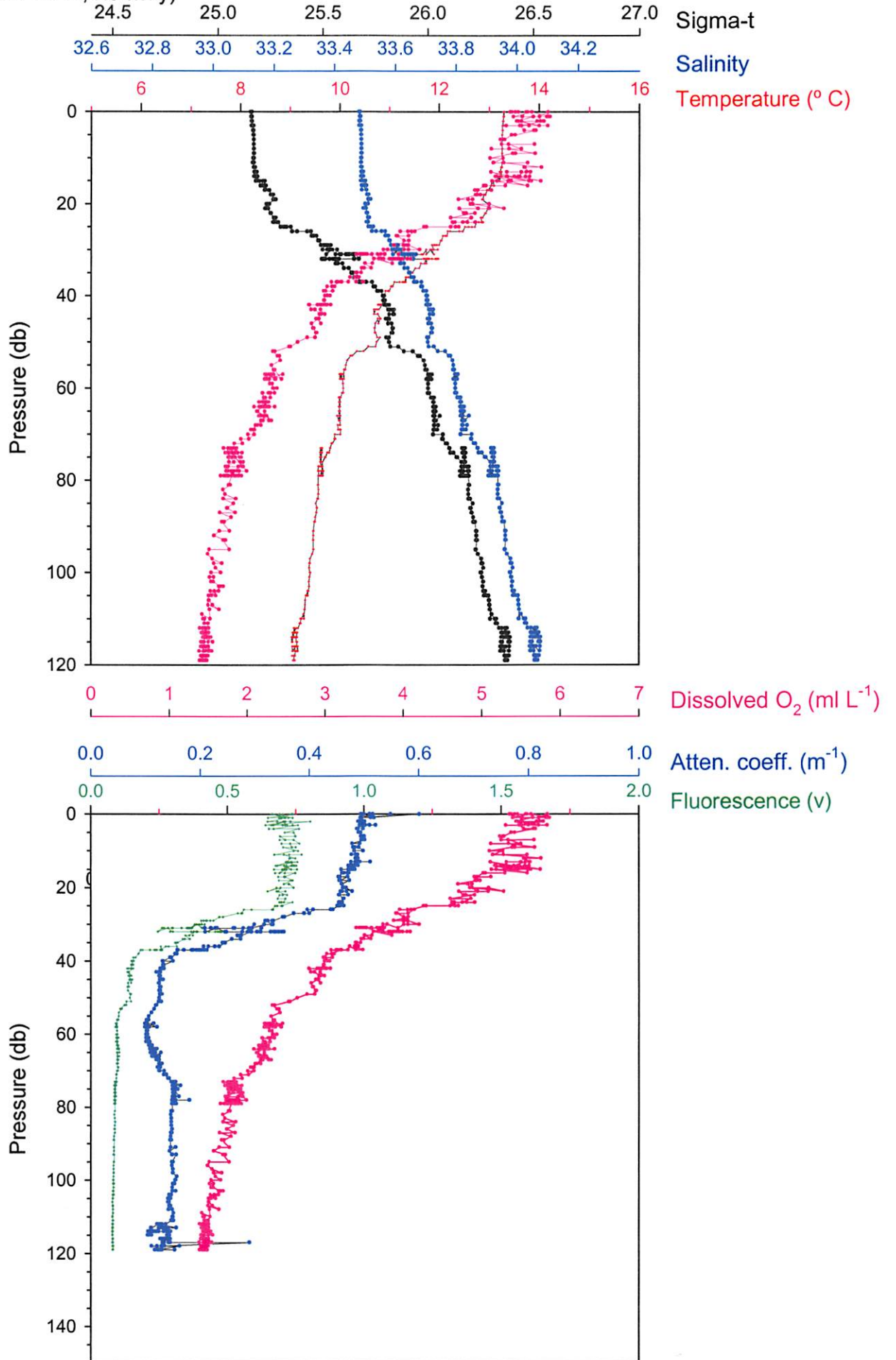
File names: .pro .raw .tab

JE



# MOCNESS - Tow 17

Cycle 3, Tow 4 (0109-0142, 25 May)





M-03-004  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg  | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 0    | -00.8 | 129.3 | 53.4  | 08.9 | 14.1 | 09.5  | 08.8  | 14.1  | 09.5  | 00.01 | 34.11 | 29.37 |
| 1    | -00.8 | 119.4 | 70.9  | 09.0 | 14.1 | 06.2  | 09.0  | 14.1  | 06.2  | 00.01 | 34.08 | 22.53 |
| 2    | 69.7  | 79.3  | 75.8  | 09.6 | 10.0 | 09.7  | 09.6  | 10.0  | 09.7  | 33.82 | 33.94 | 33.91 |
| 3    | 59.6  | 69.0  | 64.2  | 10.0 | 10.1 | 10.0  | 09.9  | 10.1  | 10.0  | 33.80 | 33.84 | 33.82 |
| 4    | 49.0  | 58.9  | 55.7  | 10.0 | 10.8 | 10.2  | 10.0  | 10.8  | 10.2  | 33.71 | 33.81 | 33.78 |
| 5    | 39.7  | 48.1  | 43.0  | 10.7 | 10.9 | 10.8  | 10.7  | 10.9  | 10.8  | 33.70 | 33.73 | 33.71 |
| 7    | 20.1  | 30.9  | 25.8  | 11.7 | 13.0 | 12.4  | 11.7  | 13.0  | 12.4  | 33.50 | 33.63 | 33.55 |
| 0    | -00.8 | 129.3 | 53.4  | 08.9 | 14.1 | 09.5  | 08.8  | 14.1  | 09.5  | 00.01 | 34.11 | 29.37 |
| 8    | 09.4  | 19.5  | 14.3  | 12.9 | 13.3 | 13.1  | 12.9  | 13.3  | 13.1  | 33.49 | 33.52 | 33.50 |
| 10   | -00.2 | 08.4  | 131.0 | 13.3 | 13.3 | 597.7 | 13.3  | 13.3  | 597.7 | 33.48 | 33.49 |       |

| net#     | simin  | simax | siavg  | cmin  | cmax  | cavg  | fmin  | fmax  | favg  | oxmin    | oxmax    | oxavg |
|----------|--------|-------|--------|-------|-------|-------|-------|-------|-------|----------|----------|-------|
|          |        |       |        |       |       | cavg  | fmin  | fmax  | favg  | irradmin | irradmax |       |
| irradavg |        |       |        |       |       |       |       |       |       |          |          |       |
| 0        | -00.76 | 26.45 | 22.45  | 00.00 | 01.13 | 00.23 | 00.00 | 00.85 | 00.25 | -01.4    | 05.9     | 02.9  |
| 1        | -00.76 | 26.39 | 17.42  | 00.10 | 01.15 | 00.10 | 00.07 | 00.09 | 00.05 | 00.0     | 00.0     | 00.0  |
| 2        | 26.03  | 26.20 | 26.16  | 00.12 | 00.16 | 00.15 | 00.09 | 00.10 | 00.09 | 01.4     | 05.9     | 01.0  |
| 3        | 26.00  | 26.06 | 26.03  | 00.10 | 00.13 | 00.11 | 00.09 | 00.11 | 00.10 | 00.0     | 00.0     | 00.0  |
| 4        | 25.80  | 26.02 | 25.97  | 00.10 | 00.13 | 00.11 | 00.09 | 00.15 | 00.10 | 00.0     | 00.0     | 00.0  |
| 5        | 25.79  | 25.84 | 25.81  | 00.12 | 00.15 | 00.13 | 00.13 | 00.16 | 00.15 | 01.7     | 02.1     | 01.8  |
| 7        | 25.23  | 25.58 | 25.39  | 00.29 | 00.48 | 00.40 | 00.36 | 00.74 | 00.58 | 00.0     | 00.0     | 00.0  |
| 0        | -00.76 | 26.45 | 22.45  | 00.00 | 01.13 | 00.23 | 00.00 | 00.85 | 00.25 | 00.0     | 00.0     | 00.0  |
| 8        | 25.17  | 25.28 | 25.20  | 00.45 | 00.51 | 00.48 | 00.67 | 00.77 | 00.72 | 02.0     | 02.4     | 02.2  |
| 10       | 25.16  | 25.17 | 1132.4 | 00.48 | 00.60 | 22.54 | 00.64 | 00.80 | 31.88 | 00.0     | 00.0     | 00.0  |

| net# | amin | amax | aaavg  | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 67.0 | 33.8   | 00.0  | 11.4  | 01.0  | -17.0 | 10.7  | -06.9 | 00260 | 00824 |
| 1    | 00.0 | 45.0 | 24.2   | 00.0  | 01.4  | 00.7  | -03.5 | 12.9  | 02.7  | 00219 | 00347 |
| 2    | 32.0 | 43.0 | 37.2   | 00.9  | 01.4  | 01.1  | -08.8 | 08.2  | 01.8  | 00069 | 00174 |
| 3    | 39.0 | 49.0 | 43.5   | 01.1  | 01.5  | 01.3  | -00.4 | 07.0  | 02.3  | 00065 | 00172 |
| 4    | 38.0 | 46.0 | 41.9   | 01.2  | 01.5  | 01.4  | -02.0 | 10.3  | 03.9  | 00036 | 00096 |
| 5    | 42.0 | 48.0 | 45.1   | 01.4  | 01.6  | 01.5  | -01.4 | 09.5  | 03.6  | 00039 | 00105 |
| 7    | 40.0 | 49.0 | 44.6   | 01.2  | 01.5  | 01.4  | 00.0  | 05.7  | 03.3  | 00045 | 00115 |
| 0    | 00.0 | 67.0 | 33.8   | 00.0  | 11.4  | 01.0  | -17.0 | 10.7  | -06.9 | 00260 | 00824 |
| 8    | 29.0 | 43.0 | 34.5   | 00.9  | 01.2  | 01.1  | 00.2  | 05.9  | 03.2  | 00047 | 00108 |
| 10   | 25.0 | 42.0 | 1584.0 | 00.8  | 01.2  | 46.6  | -00.2 | 06.6  | 143.7 | 00045 | 00106 |

Environmental Parameters

Time 01:45:35  
 Pressure -0.2 m  
 Temp 13.31 C  
 Salinity 33.48 o/oo  
 Density 25.157  
 Oxygen 5.36 ml/l  
 Fluoresc. 0.6602 V  
 LightXmis 0.5483 /m  
 Irradiance

Net Operation

Net\_Num 10  
 OpenTime 3.1 min  
 Vol\_Filtered 105.6 m3  
 Angle 37 deg  
 Flow\_Counts 44  
 Hor\_Vel 1.1 kts  
 Vert\_Vel 0.8 m/min  
 Battery 19.8 V

Net - Ship Position

Latitude 34N 49.277  
 Longitude 120W 51.55  
 Net\_Dist 166.7 m  
 Total\_Dist 3637.5 m

Program Settings

Reset  
 Baud Rate 2400  
 Sample Rate 4.0 sec  
 Printer Off

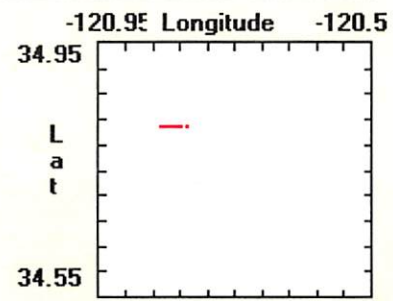
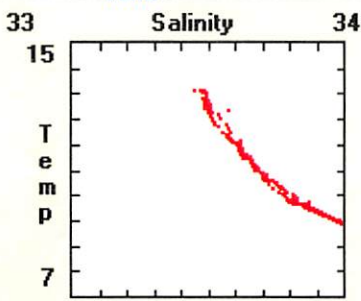
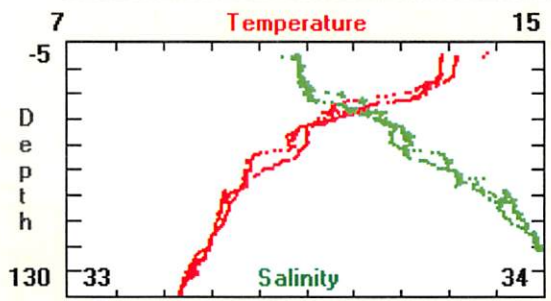
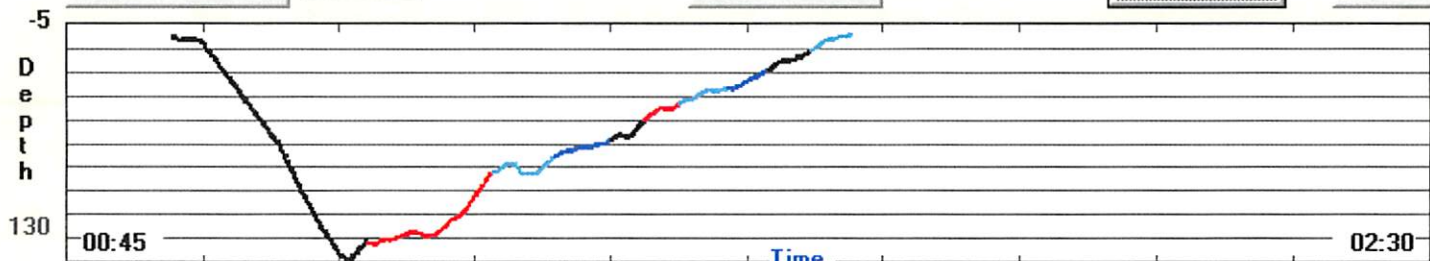
Processed File Name C:\MOCNESS\MOCDATA\TOW17.PRO  
 Raw File Name C:\MOCNESS\MOCDATA\TOW17.raw  
 Acquisition Ended. trys = 0

Step Net

Increment Net#

Pause Acqui

End Acqui



stat: 147.6132 <sup>Tow 1</sup> of cycle 4

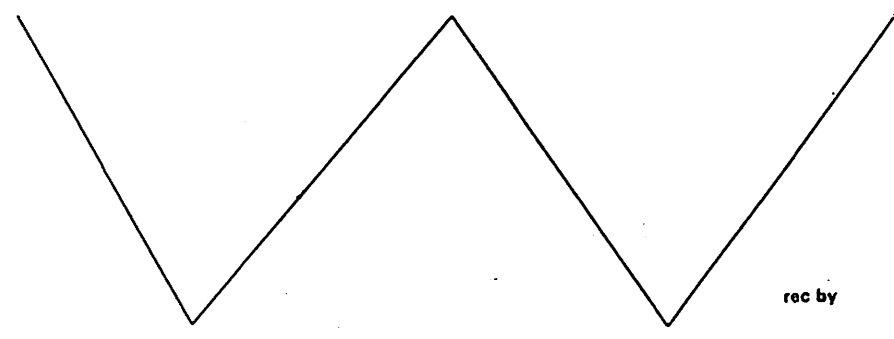
5/27/06 #565

(147.6382) Revised 10/94  
**MOCNESS DATA SHEET**

| CRUISE | STATION | HAUL | DATE (DST EST GMT) | MOCNESS TYPE  |
|--------|---------|------|--------------------|---------------|
| 0605   | cycle 4 | FB   | 5/27/06 PDT        | 1/4M (1M) 10M |

|   | START                   | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE   |
|---|-------------------------|----------|------------|-------|-------|------------|-------------|
| LATITUDE  | 33.9994<br>33°N 59.9'   | 33.9941  | NET 0 OPEN | 14:43 |       | 1025       | 202 $\mu$ m |
| LONGITUDE   | 121.5044<br>121°W 30.4' | 121.5670 | NET 1 OPEN | 15:19 | 448   | 279        |             |
| DEPTH   | 3389m                   |          | NET 2 OPEN | 15:27 | 397   | 267        |             |
| <b>COMMENTS</b><br>T 14.77<br>S 33.2<br>O <sub>2</sub> 5.36<br>F .2248<br>Light .3554<br>Volt 20.1<br>found missing sample SD 4/15/06 |                         |          | NET 3 OPEN | 15:34 | 350   | 355        |             |
|   |                         |          | NET 4 OPEN | 15:43 | 299   | 318        |             |
|   |                         |          | NET 5 OPEN | 15:51 | 250   | 261        |             |
|   |                         |          | NET 6 OPEN | 15:58 | 199   | 310        |             |
|   |                         |          | NET 7 OPEN | 16:05 | 149   | 310        |             |
|   |                         |          | NET 8 OPEN | 16:13 | 100   | 215        |             |
|   |                         |          | NET 9 OPEN | 16:19 | 51    | 268        |             |
|   |                         |          | SURFACE    | 16:26 | 0     |            |             |

TOW PROFILE



rec by

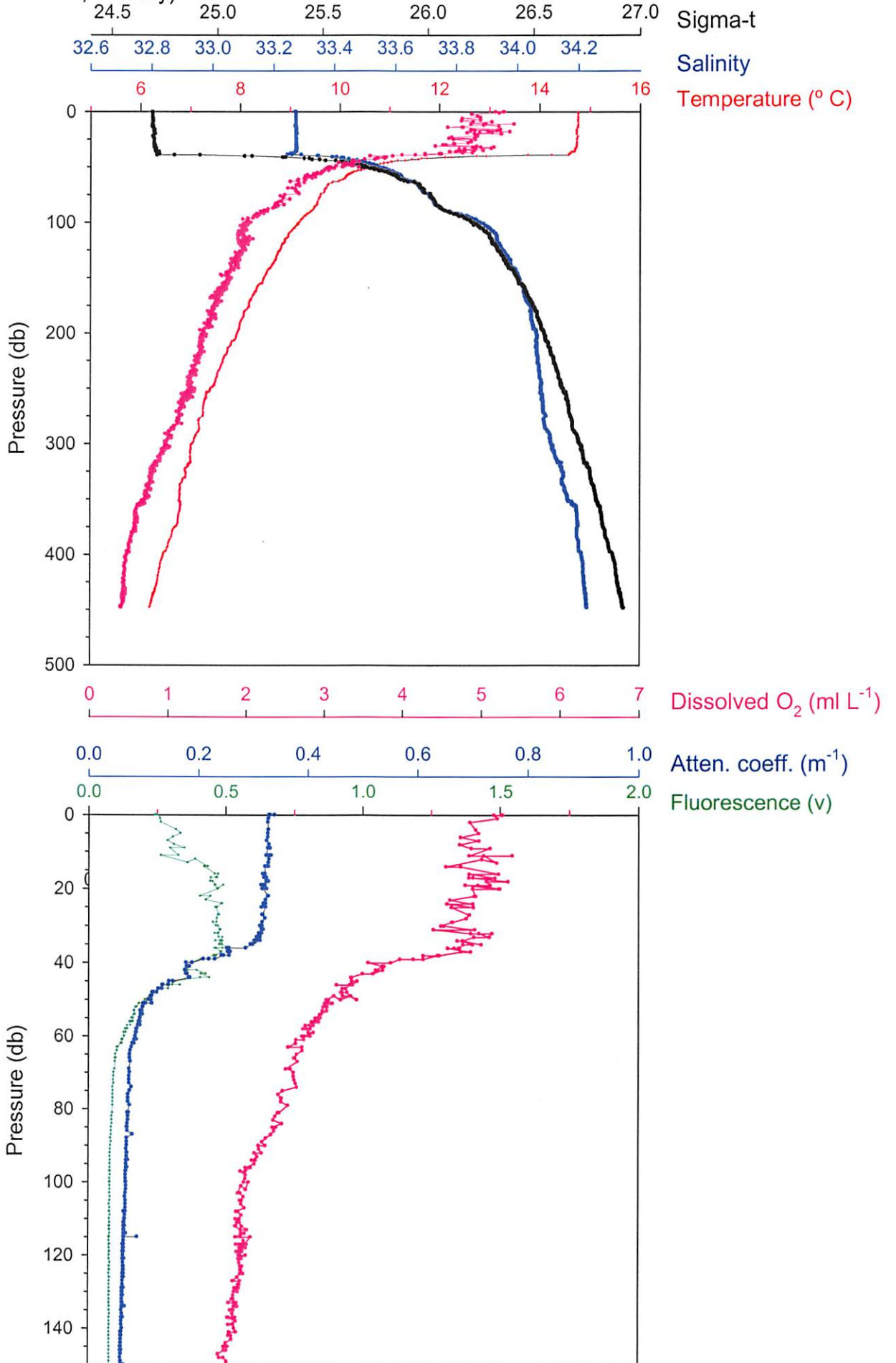
File names: .pro .raw .tab

wind speed 22-24 knots

PD

# MOCNESS - Tow 18

Cycle 4, Tow 1 (1519-1626, 27 May)



TOW18.TAB

M-04-001  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.9 | 465.4 | 232.7 | 06.1 | 15.5 | 08.1 | 06.1  | 15.5  | 08.1  | 00.01 | 50.00 | 31.74 |
| 1    | -01.1 | 448.1 | 129.2 | 06.2 | 15.4 | 01.9 | 06.2  | 15.4  | 01.9  | 00.01 | 50.00 | 10.28 |
| 2    | 349.8 | 396.8 | 364.4 | 06.5 | 06.8 | 06.7 | 06.5  | 06.8  | 06.7  | 34.16 | 34.20 | 34.19 |
| 3    | 299.1 | 349.6 | 324.2 | 06.8 | 07.1 | 06.9 | 06.8  | 07.0  | 06.9  | 34.11 | 34.17 | 34.14 |
| 4    | 250.1 | 297.8 | 266.2 | 07.1 | 07.4 | 07.3 | 07.0  | 07.4  | 07.2  | 34.08 | 34.11 | 34.09 |
| 5    | 199.7 | 250.1 | 224.2 | 07.4 | 07.9 | 07.7 | 07.4  | 07.9  | 07.7  | 34.06 | 34.08 | 34.07 |
| 6    | 149.2 | 198.3 | 173.4 | 08.0 | 08.5 | 08.2 | 07.9  | 08.5  | 08.2  | 34.00 | 34.06 | 34.03 |
| 7    | 100.1 | 148.1 | 123.6 | 08.5 | 09.2 | 08.8 | 08.5  | 09.2  | 08.8  | 33.87 | 34.00 | 33.95 |
| 8    | 50.8  | 99.1  | 71.0  | 09.2 | 10.5 | 09.8 | 09.2  | 10.5  | 09.8  | 33.55 | 33.87 | 33.68 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|

| irradavg | irradmin | irradmax |       |        |       |       |       |       |       |       |      |      |
|----------|----------|----------|-------|--------|-------|-------|-------|-------|-------|-------|------|------|
| 0        | -00.96   | 37.49    | 24.60 | 00.00  | 01.93 | 00.09 | 00.00 | 00.54 | 00.14 | -01.4 | 06.8 | 01.8 |
| 1        | -00.96   | 37.83    | 08.08 | -00.08 | 11.18 | 00.02 | 00.01 | 04.94 | 00.02 | 00.0  | 00.0 | 00.0 |
| 2        | 26.79    | 26.86    | 26.82 | 00.04  | 00.05 | 00.05 | 00.08 | 00.08 | 00.08 | 00.4  | 06.9 | 00.1 |
| 3        | 26.71    | 26.79    | 26.76 | 00.04  | 00.06 | 00.04 | 00.08 | 00.08 | 00.08 | 00.0  | 00.0 | 00.0 |
| 4        | 26.64    | 26.71    | 26.66 | 00.04  | 00.05 | 00.05 | 00.08 | 00.08 | 00.08 | 00.0  | 00.0 | 00.0 |
| 5        | 26.55    | 26.64    | 26.59 | 00.05  | 00.05 | 00.05 | 00.08 | 00.08 | 00.08 | 00.0  | 00.0 | 00.0 |
| 6        | 26.42    | 26.55    | 26.49 | 00.05  | 00.07 | 00.06 | 00.08 | 00.08 | 00.08 | 00.5  | 00.7 | 00.6 |
| 7        | 26.21    | 26.42    | 26.33 | 00.06  | 00.09 | 00.06 | 00.08 | 00.08 | 00.08 | 00.0  | 00.0 | 00.0 |
| 8        | 25.73    | 26.20    | 25.96 | 00.07  | 00.10 | 00.08 | 00.08 | 00.19 | 00.11 | 00.0  | 00.0 | 00.0 |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 60.0 | 35.6 | 00.0  | 03.5  | 00.7  | -30.6 | 09.0  | -13.0 | 00521 | 01025 |
| 1    | 00.0 | 51.0 | 11.6 | 00.0  | 07.9  | 00.4  | -07.4 | 19.7  | 01.9  | 00390 | 00280 |
| 2    | 37.0 | 48.0 | 40.6 | 01.1  | 01.6  | 01.3  | -02.4 | 16.4  | 07.0  | 00107 | 00267 |
| 3    | 38.0 | 51.0 | 42.8 | 01.2  | 01.6  | 01.4  | 01.0  | 11.3  | 05.5  | 00134 | 00355 |
| 4    | 40.0 | 52.0 | 43.4 | 01.2  | 01.6  | 01.4  | -01.2 | 14.4  | 06.0  | 00121 | 00318 |
| 5    | 41.0 | 47.0 | 43.2 | 01.4  | 01.6  | 01.5  | 02.3  | 11.7  | 07.5  | 00100 | 00261 |
| 6    | 42.0 | 48.0 | 44.1 | 01.4  | 01.6  | 01.5  | 03.1  | 10.5  | 06.6  | 00114 | 00310 |
| 7    | 39.0 | 46.0 | 42.8 | 01.4  | 01.6  | 01.5  | 00.6  | 11.7  | 06.3  | 00115 | 00310 |
| 8    | 39.0 | 47.0 | 42.7 | 01.4  | 01.9  | 01.6  | 03.7  | 15.0  | 09.4  | 00079 | 00215 |



**Environmental Parameters**

Time   
 Pressure   
 Temp   
 Salinity   
 Density   
 Oxygen   
 Fluoresc.   
 LightXmis   
 Irradiance

**Net Operation**

Net\_Num   
 OpenTime   
 Vol\_Filtered   
 Angle   
 Flow\_Counts   
 Hor\_Vel   
 Vert\_Vel   
 Battery

**Net - Ship Position**

Latitude   
 Longitude   
 Net\_Dist   
 Total\_Dist

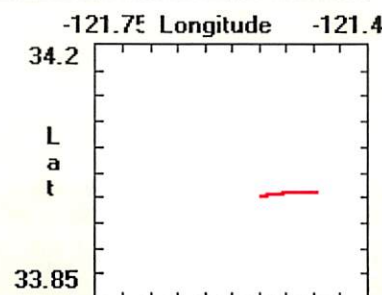
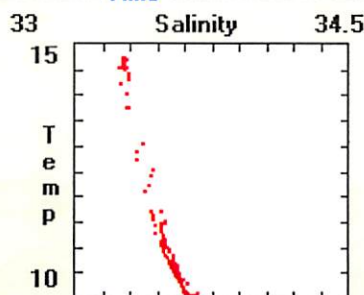
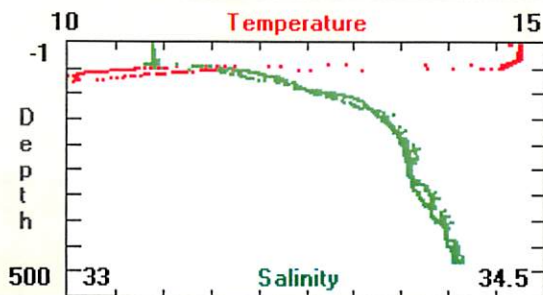
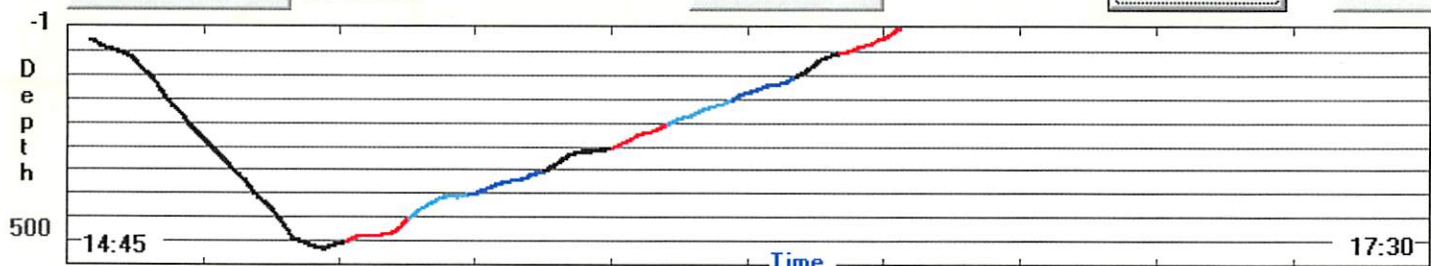
**Program Settings**

Baud Rate   
 Sample Rate   
 Printer

Processed File Name   
 Raw File Name   
 Acquisition Ended. trys = 0

Step Net

Increment Net#



Event No. ~~565~~ 578

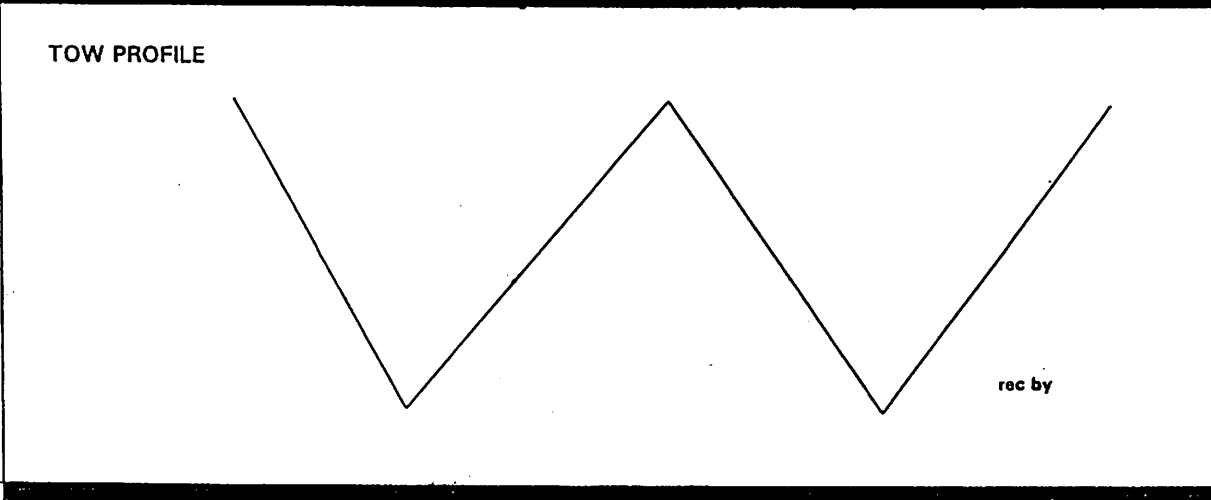
Start: 147,9932

Revised 10/94

**MOCNESS DATA SHEET**

| CRUISE    | STATION                   | HAUL | DATE (DST EST GMT) | MOCNESS TYPE  |
|-----------|---------------------------|------|--------------------|---------------|
| CCE-P0605 | Cycle 4, <sup>Tow 2</sup> | 19   | 5/27/06 23:49 PDT  | 1/4M (1M) 10M |

|  | START                        | END      | TIME       | DEPTH | VOL FILTER | MESH SIZE |
|--|------------------------------|----------|------------|-------|------------|-----------|
| LATITUDE   | 33° 21' 59.5" N<br>33.3665   | 34.0015  | NET 0 OPEN |       | 1521       | 202 μm    |
| LONGITUDE  | 121° 21' 24.0" W<br>121.5667 | 121.6199 | NET 1 OPEN | 00:21 | 448        | 203       |
| DEPTH  | 3469                         |          | NET 2 OPEN | 00:27 | 400        | 181       |
| <b>COMMENTS</b><br>O <sub>2</sub> 6.33<br>I 0.5166<br>Light 0.2925<br>Temp 14.68<br>S 33.27<br>Volt 19.2 |                              |          | NET 3 OPEN | 00:35 | 348        | 258       |
|  |                              |          | NET 4 OPEN | 00:42 | 297        | 262       |
|  |                              |          | NET 5 OPEN | 00:49 | 249        | 248       |
|  |                              |          | NET 6 OPEN | 00:55 | 199        | 294       |
|  |                              |          | NET 7 OPEN | 01:03 | 147        | 200       |
|  |                              |          | NET 8 OPEN | 01:08 | 100        | 313       |
|  |                              |          | NET 9 OPEN | 01:16 | 49         | 455       |
|  |                              |          | SURFACE    | 01:21 | 0          |           |

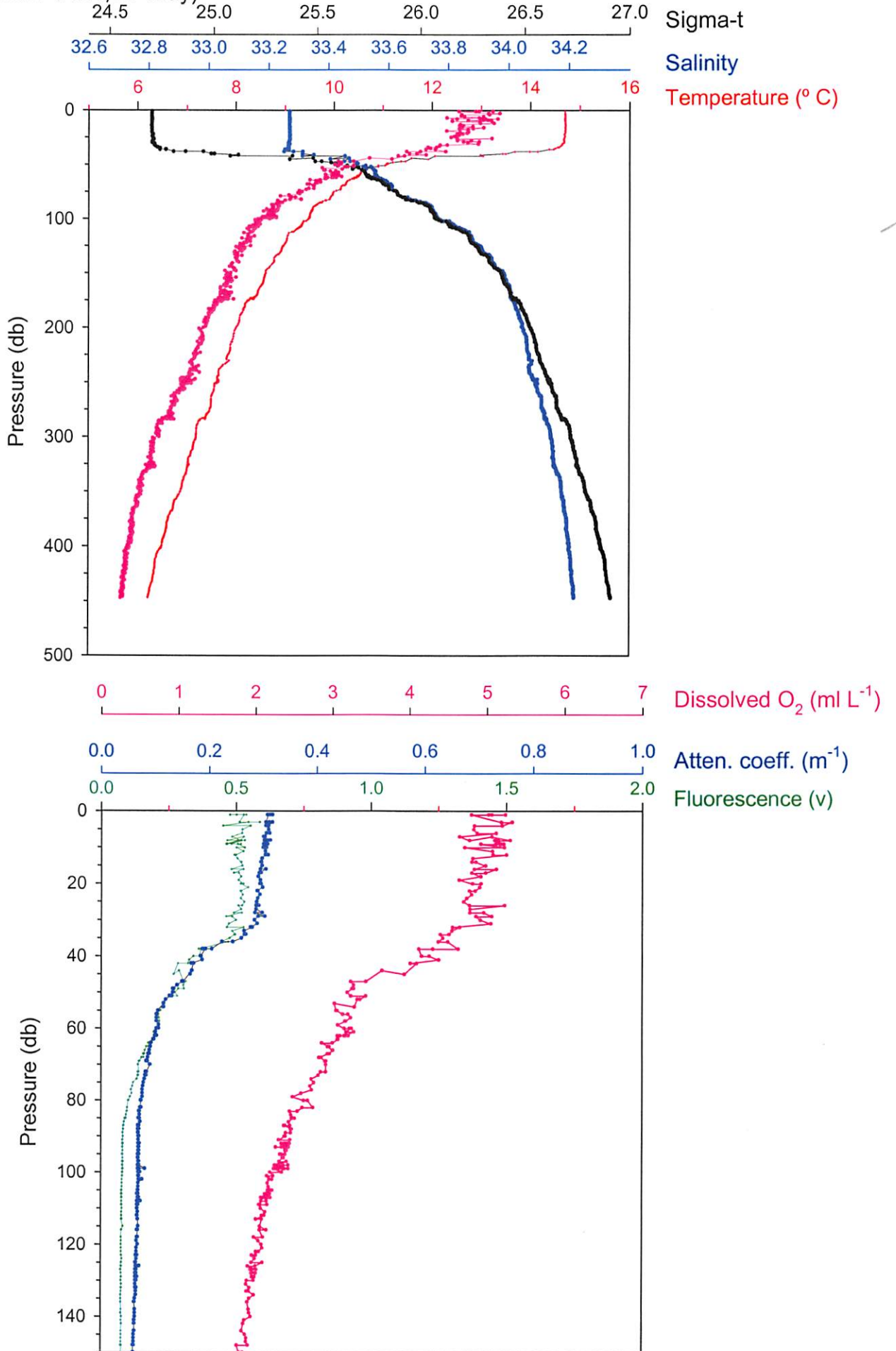


File names: .pro .raw .tab

Wind speed: 22-25

# MOCNESS - Tow 19

Cycle 4, Tow 2 (0021-0121, 27 May)





Environmental Parameters

Time: 01:21:46  
 Pressure: -1.0 m  
 Temp: 12.99 C  
 Salinity: 0.21 o/oo  
 Density: -0.454  
 Oxygen: 6.20 ml/l  
 Fluoresc.: 0.0786 V  
 LightXmis: 0.2185 /m  
 Irradiance:

Net Operation

Net\_Num: 9  
 OpenTime: 5.8 min  
 Vol\_Filtered: 455.2 m3  
 Angle: 8 deg  
 Flow\_Counts: 189  
 Hor\_Vel: 13.3 kts  
 Vert\_Vel: 0.4 m/min  
 Battery: 19.6 V

Net - Ship Position

Latitude: 34N .0891'  
 Longitude: 121W 37.19  
 Net\_Dist: 344.7 m  
 Total\_Dist: 5677.3 m

Program Settings

Reset  
 Baud Rate: 2400  
 Sample Rate: 4.0 sec  
 Printer: Off

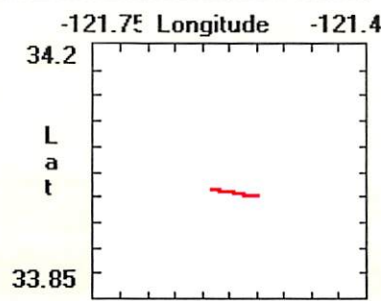
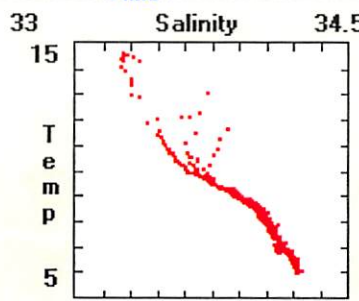
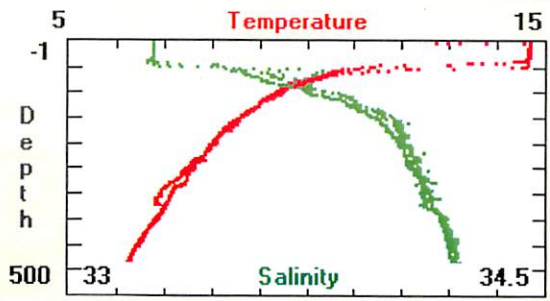
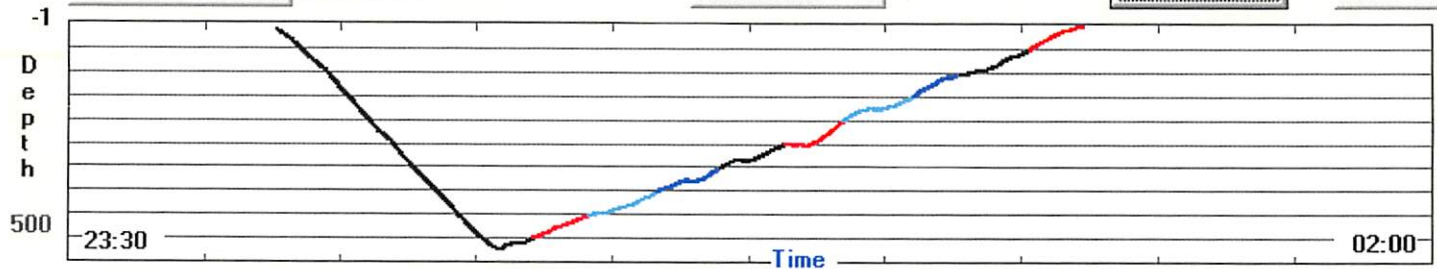
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 Raw File Name: C:\MOCNESS\MOCDATA\TOW19.raw  
 Acquisition Ended. trys = 0

Step Net

Increment Net#

Pause Acqui

End Acqui



TOW19.TAB

M-04-002  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.8 | 471.3 | 224.0 | 06.0 | 14.7 | 08.1 | 06.0  | 14.7  | 08.1  | 00.01 | 50.00 | 31.29 |
| 1    | -00.7 | 446.4 | 409.5 | 06.2 | 13.7 | 06.3 | 06.2  | 13.7  | 06.2  | 00.01 | 34.22 | 33.11 |
| 2    | 348.5 | 399.8 | 379.5 | 06.5 | 06.9 | 06.6 | 06.5  | 06.9  | 06.6  | 34.18 | 34.20 | 34.19 |
| 3    | 298.5 | 346.9 | 325.7 | 06.9 | 07.2 | 07.0 | 06.9  | 07.2  | 07.0  | 34.14 | 34.18 | 34.16 |
| 4    | 249.4 | 296.7 | 275.2 | 07.2 | 07.6 | 07.4 | 07.2  | 07.6  | 07.4  | 34.09 | 34.14 | 34.12 |
| 5    | 199.3 | 250.9 | 236.6 | 07.6 | 08.0 | 07.7 | 07.6  | 08.0  | 07.7  | 34.04 | 34.10 | 34.08 |
| 6    | 148.0 | 197.1 | 171.7 | 08.0 | 08.6 | 08.4 | 08.0  | 08.6  | 08.3  | 33.98 | 34.05 | 34.01 |
| 7    | 100.1 | 146.7 | 119.1 | 08.6 | 09.5 | 09.1 | 08.6  | 09.5  | 09.1  | 33.76 | 33.97 | 33.87 |
| 8    | 49.3  | 99.2  | 79.1  | 09.5 | 11.1 | 10.0 | 09.5  | 11.1  | 09.9  | 33.50 | 33.76 | 33.67 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|

| irradavg | irradmin | irradmax |       |       |       |       |       |       |       |       |      |      |
|----------|----------|----------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| 0        | -00.72   | 37.91    | 24.23 | 00.00 | 01.26 | 00.09 | 00.00 | 00.56 | 00.15 | -01.4 | 07.4 | 01.9 |
| 1        | -00.70   | 26.91    | 26.01 | 00.04 | 01.25 | 00.06 | 00.07 | 00.08 | 00.08 | 00.0  | 00.0 | 00.0 |
| 2        | 26.79    | 26.86    | 26.84 | 00.04 | 00.05 | 00.04 | 00.08 | 00.08 | 00.08 | 00.4  | 07.3 | 00.5 |
| 3        | 26.72    | 26.79    | 26.76 | 00.04 | 00.05 | 00.04 | 00.08 | 00.08 | 00.08 | 00.0  | 00.0 | 00.0 |
| 4        | 26.62    | 26.72    | 26.67 | 00.04 | 00.05 | 00.04 | 00.08 | 00.08 | 00.08 | 00.5  | 00.7 | 00.6 |
| 5        | 26.52    | 26.63    | 26.59 | 00.05 | 00.06 | 00.05 | 00.08 | 00.08 | 00.08 | 00.0  | 00.0 | 00.0 |
| 6        | 26.38    | 26.52    | 26.45 | 00.05 | 00.06 | 00.06 | 00.08 | 00.08 | 00.08 | 00.6  | 00.9 | 00.8 |
| 7        | 26.07    | 26.37    | 26.22 | 00.06 | 00.08 | 00.07 | 00.08 | 00.08 | 00.08 | 00.0  | 00.0 | 00.0 |
| 8        | 25.59    | 26.07    | 25.92 | 00.07 | 00.14 | 00.08 | 00.08 | 00.29 | 00.13 | 00.0  | 00.0 | 00.0 |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 62.0 | 32.0 | 00.0  | 38.1  | 01.0  | -25.8 | 11.9  | -13.2 | 00512 | 01524 |
| 1    | 00.0 | 44.0 | 33.8 | 00.0  | 01.4  | 01.1  | -00.6 | 12.3  | 07.7  | 00093 | 00204 |
| 2    | 33.0 | 43.0 | 37.5 | 01.1  | 01.6  | 01.3  | 00.0  | 14.2  | 06.6  | 00113 | 00281 |
| 3    | 37.0 | 45.0 | 39.9 | 01.1  | 01.6  | 01.4  | -05.7 | 14.2  | 07.4  | 00101 | 00257 |
| 4    | 38.0 | 45.0 | 40.7 | 01.1  | 01.6  | 01.4  | -04.1 | 14.0  | 07.2  | 00102 | 00262 |
| 5    | 37.0 | 48.0 | 40.7 | 01.1  | 01.8  | 01.4  | -06.0 | 20.7  | 07.5  | 00096 | 00248 |
| 6    | 37.0 | 44.0 | 39.6 | 01.1  | 01.6  | 01.3  | -01.9 | 17.2  | 06.6  | 00114 | 00294 |
| 7    | 37.0 | 45.0 | 40.6 | 01.4  | 01.6  | 01.5  | 01.2  | 18.5  | 09.6  | 00076 | 00199 |
| 8    | 34.0 | 46.0 | 41.6 | 01.2  | 01.6  | 01.5  | -01.9 | 13.9  | 06.6  | 00113 | 00313 |



Actual depth, after recalculation  
 14:49 → 77.5 min op  
 Start

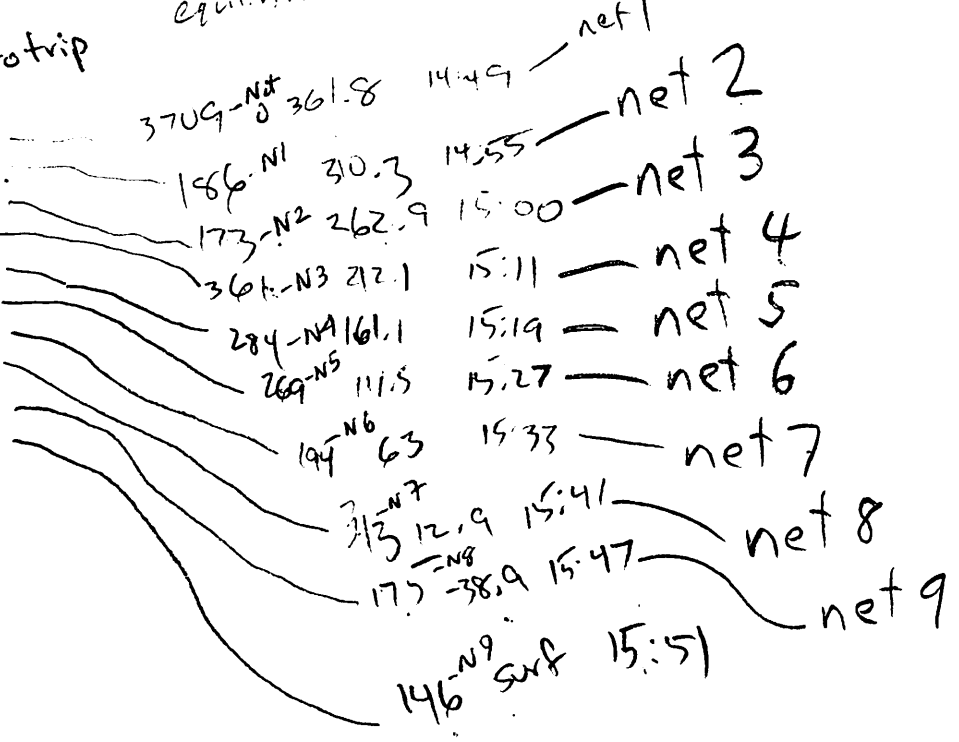
equilibrate @ MOC P = 375

Intended trip depth MOC pressure to trip

149-3  
 398  
 350  
 300  
 249  
 200  
 151  
 100  
 50  
 0

450  
 400  
 350  
 300  
 250  
 200  
 150  
 100  
 50  
 0

362.6  
 312.6  
 262.6  
 212.6  
 162.6  
 112.6  
 62.6  
 12.6  
 -37.4  
 -87.4



Event No: ~~622~~ 640

No Floor, O<sub>2</sub>, beam transmissometer readings from this tow  
 Start: 150.5732

Not in vicinity of drifts.  
 No position since 0100

Revised 10/94

MOCNESS DATA SHEET

| CRUISE    | STATION | HAUL | DATE   | (DST EST GMT) | MOCNESS TYPE  |
|-----------|---------|------|--------|---------------|---------------|
| CCE-P0605 | Cycle 4 | 20   | 30 May | PDT           | 1/4M (1M) 10M |

Corrected Pressure, after replay of tow  
 ↓

|           | START | END | TIME    | DEPTH (Moc. Pressure) | VOL FILTER M | MESH SIZE |
|-----------|-------|-----|---------|-----------------------|--------------|-----------|
| LATITUDE  |       |     |         | NET 0 OPEN            | 3709         | 202 μm    |
| LONGITUDE |       |     | 14:49   | 361.8                 | 186          | 440 μm    |
|           |       |     | 14:55   | 318.3                 | 173          | 398 μm    |
| DEPTH     |       |     | 15:00   | 262.9                 | 361          | 350       |
|           |       |     | 15:11   | 212.1                 | 294          | 300       |
| COMMENTS  |       |     | 15:17   | 161.1                 | 269          | 249       |
|           |       |     | 15:29   | 111.5                 | 194          | 200       |
|           |       |     | 15:33   | 63                    | 133          | 151       |
|           |       |     | 15:41   | 12.9                  | 113          | 100       |
|           |       |     | 15:47   | -38.9                 | 135          | 50        |
|           |       |     | 15:51   | Surf                  | 146          | 0         |
|           |       |     | SURFACE |                       |              |           |

Pressure: -87.4 @ surface  
 COMMENTS  
 O<sub>2</sub> - Not reporting  
 Floor. - N.r.  
 Light. - N.r.  
 Temp. - 14.68  
 Sal. - 33.34  
 Bat. Voltage : 21.7

TOW PROFILE

\* Reported in pressure units read directly from MOCNESS acquisition software.  
 Found that the correct pressure seems to be (Moc pressure + 87.4).

N.B. Reprocessed Tow 20 Mocness file w/ estimated calibration for pressure sensor, based on +87.4 db offset.  
 Use "Tow20re.pro" for reprocessed  
 Created a <sup>roc by</sup> ~~filter~~ sensor "127", instead of 167, w/ 87.4 db offset.

PD+JE

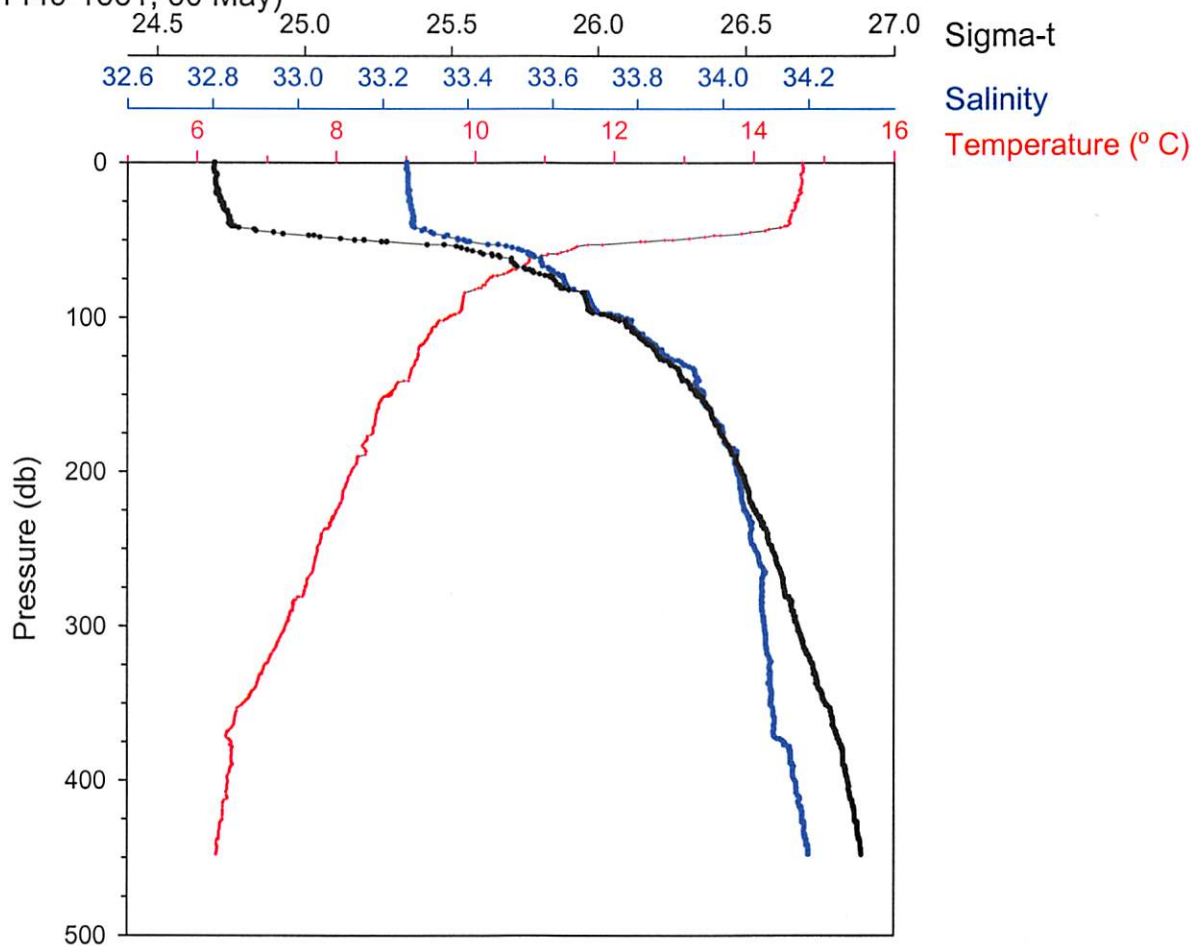
File names: Tow20RE2.pro .raw .tab

Wind speed 22-25 kts.  
 depth sensor off

Substituted SIO deck unit for VRI deck unit. Had to replace fuse.  
 Options module not reporting - no O<sub>2</sub>, floor, transmissometer.  
 Pressure has -87.4 db offset; add 87.4 to obtain true

# MOCNESS - Tow 20

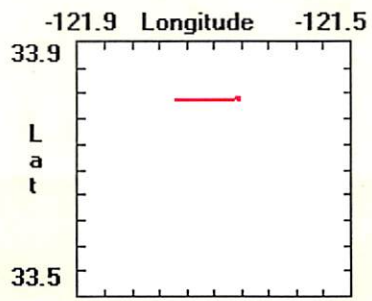
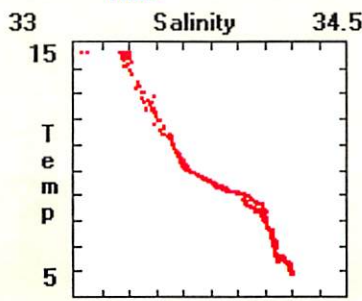
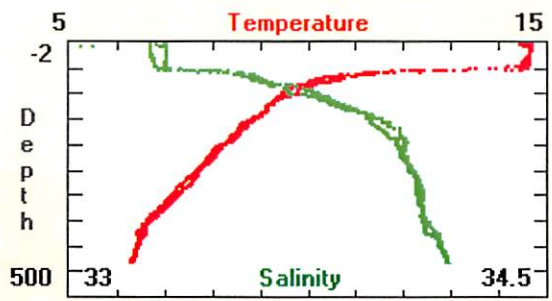
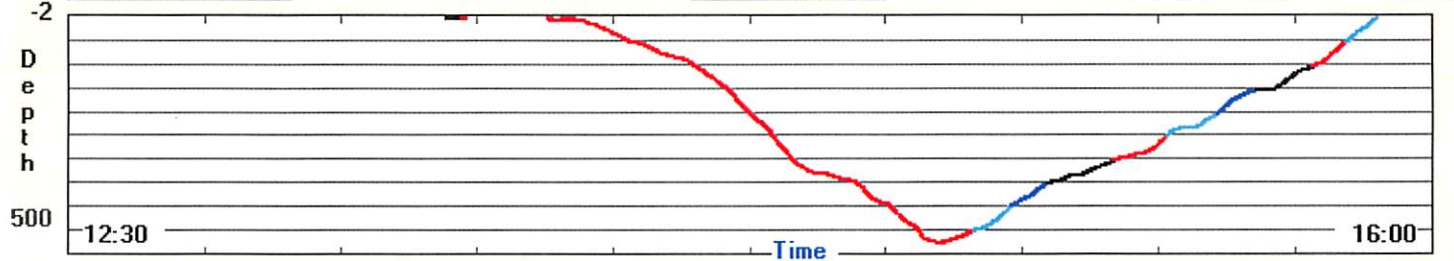
Cycle 4, Tow 3 (1449-1551, 30 May)



Environmental Parameters Net Operation Net - Ship Position Program Settings

|            |            |              |           |                             |                              |             |
|------------|------------|--------------|-----------|-----------------------------|------------------------------|-------------|
| Time       | 15:51:33   | Net_Num      | 10        | Latitude                    | 33N 48.772                   | Reset       |
| Pressure   | -0.4 m     | OpenTime     | 4.7 min   | Longitude                   | 121W 45.29                   | Baud Rate   |
| Temp       | 14.69 C    | Vol_Filtered | 146.0 m3  | Net_Dist                    | 274.6 m                      | Sample Rate |
| Salinity   | 33.26 o/oo | Angle        | 57 deg    | Total_Dist                  | 8523.2 m                     | Printer     |
| Density    | 24.696     | Flow_Counts  | 100       | Processed                   | None                         |             |
| Oxygen     |            | Hor_Vel      | 1.9 kts   | File Name                   |                              |             |
| Fluoresc.  |            | Vert_Vel     | 7.4 m/min | Raw File                    | C:\MOCNESS\MOCDATA\TOW20.RAW |             |
| LightXmis  |            | Battery      | 21.1 V    | Name                        |                              |             |
| Irradiance |            |              |           | Acquisition Ended. trys = 0 |                              |             |

Step Net  Increment Net#  Pause Acqui  End Acqui



Replayed Tow 20 Re 2  
w/ correct calibs.  
for sensor 127.

Use only file  
 "Tow20Re2"  
 for Tow 20

TOW20RE2.TAB

M-04-004  
 08/05/06  
 RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.8 | -00.1 | -00.4 | 15.7 | 16.1 | 15.9 | 15.7  | 16.1  | 15.9  | 00.01 | 50.00 | 44.29 |
| 1    | -00.3 | 473.6 | 223.2 | 05.9 | 16.0 | 09.1 | 05.9  | 16.0  | 09.1  | 00.05 | 50.00 | 33.99 |
| 2    | 396.7 | 447.8 | 428.4 | 06.3 | 06.4 | 06.3 | 06.2  | 06.4  | 06.3  | 34.16 | 34.20 | 34.19 |
| 3    | 349.7 | 395.4 | 374.1 | 06.4 | 06.7 | 06.5 | 06.4  | 06.6  | 06.5  | 34.11 | 34.17 | 34.14 |
| 4    | 299.8 | 349.1 | 327.5 | 06.7 | 07.3 | 07.0 | 06.7  | 07.2  | 06.9  | 34.10 | 34.12 | 34.11 |
| 5    | 249.0 | 298.8 | 281.7 | 07.3 | 07.7 | 07.5 | 07.2  | 07.7  | 07.4  | 34.07 | 34.10 | 34.09 |
| 6    | 200.1 | 247.3 | 225.1 | 07.8 | 08.2 | 08.0 | 07.7  | 08.2  | 08.0  | 34.03 | 34.07 | 34.06 |
| 7    | 151.5 | 198.3 | 169.8 | 08.2 | 08.7 | 08.5 | 08.2  | 08.7  | 08.5  | 33.95 | 34.03 | 33.99 |
| 8    | 101.0 | 151.5 | 131.4 | 08.7 | 09.6 | 09.1 | 08.7  | 09.5  | 09.0  | 33.77 | 33.95 | 33.89 |
| 9    | 51.0  | 100.3 | 79.2  | 09.6 | 12.4 | 10.3 | 09.6  | 12.4  | 10.3  | 33.40 | 33.76 | 33.64 |

| net#     | simin  | simax | siavg | cmin  | cmax  | cavg  | fmin  | fmax  | favg   | oxmin    | oxmax    | oxavg |
|----------|--------|-------|-------|-------|-------|-------|-------|-------|--|----------|----------|-------|
|          |        |       |       |       |       | cavg  | fmin  | fmax  | favg <td>oxmin</td> <td>oxmax</td> <td>oxavg</td>  | oxmin    | oxmax    | oxavg |
|          |        |       |       |       |       |       | fmin  | fmax  | favg <td>irradmin</td> <td>irradmax</td> <td></td> | irradmin | irradmax |       |
|          |        |       |       |       |       |       |       |       | <td></td> <td></td> <td></td>                      |          |          |       |
| irradavg |        |       |       |       |       |       |       |       | <td></td> <td></td> <td></td>                      |          |          |       |
| 0        | -01.05 | 37.40 | 32.98 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00  | 00.0     | 00.0     | 00.0  |
| 1        | -01.01 | 37.72 | 26.27 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00  | 00.0     | 00.0     | 00.0  |
| 2        | 26.84  | 26.89 | 26.87 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00  | 00.0     | 00.0     | 00.0  |
| 3        | 26.77  | 26.84 | 26.81 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00  | 00.0     | 00.0     | 00.0  |
| 4        | 26.68  | 26.77 | 26.73 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00  | 00.0     | 00.0     | 00.0  |
| 5        | 26.59  | 26.67 | 26.65 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00  | 00.0     | 00.0     | 00.0  |
| 6        | 26.49  | 26.58 | 26.54 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00  | 00.0     | 00.0     | 00.0  |
| 7        | 26.35  | 26.48 | 26.40 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00  | 00.0     | 00.0     | 00.0  |
| 8        | 26.07  | 26.34 | 26.24 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00  | 00.0     | 00.0     | 00.0  |
| 9        | 25.26  | 26.05 | 25.83 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00  | 00.0     | 00.0     | 00.0  |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 00.0 | 00.0 | 00.0  | 01.9  | 00.2  | -01.0 | 01.4  | 00.1  | 00035 | 00062 |
| 1    | 00.0 | 75.0 | 51.8 | 00.5  | 47.3  | 01.5  | -24.1 | 08.9  | -06.9 | 00972 | 03708 |
| 2    | 48.0 | 55.0 | 50.7 | 01.2  | 01.8  | 01.5  | 01.9  | 15.5  | 08.6  | 00086 | 00186 |
| 3    | 50.0 | 56.0 | 52.5 | 01.4  | 01.9  | 01.6  | 03.3  | 14.1  | 09.2  | 00078 | 00173 |
| 4    | 53.0 | 59.0 | 55.8 | 01.4  | 01.9  | 01.6  | -01.2 | 09.7  | 04.8  | 00154 | 00361 |
| 5    | 54.0 | 58.0 | 55.4 | 01.4  | 01.9  | 01.6  | 01.0  | 14.7  | 06.0  | 00122 | 00284 |
| 6    | 53.0 | 56.0 | 54.5 | 01.4  | 01.9  | 01.6  | -03.5 | 16.5  | 06.2  | 00118 | 00269 |
| 7    | 53.0 | 58.0 | 55.4 | 01.6  | 01.9  | 01.8  | 03.7  | 14.7  | 08.9  | 00083 | 00194 |
| 8    | 56.0 | 60.0 | 57.3 | 01.4  | 02.0  | 01.8  | -04.1 | 13.0  | 05.7  | 00130 | 00313 |
| 9    | 52.0 | 57.0 | 53.9 | 01.5  | 01.9  | 01.7  | 03.3  | 16.3  | 09.6  | 00076 | 00175 |



replayed in corrected m

obs

M-04-003  
08/05/06  
RV Knorr

TOW20RE.TAB

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.8 | -00.1 | -00.5 | 15.7 | 16.1 | 15.9 | 15.7  | 16.1  | 15.9  | 00.01 | 50.00 | 44.29 |
| 1    | -00.4 | 475.3 | 224.0 | 05.9 | 16.0 | 09.1 | 05.9  | 16.0  | 09.1  | 00.05 | 50.00 | 33.99 |
| 2    | 397.8 | 449.3 | 429.7 | 06.3 | 06.4 | 06.3 | 06.2  | 06.4  | 06.3  | 34.16 | 34.20 | 34.19 |
| 3    | 350.5 | 396.5 | 375.1 | 06.4 | 06.7 | 06.5 | 06.4  | 06.6  | 06.5  | 34.11 | 34.17 | 34.14 |
| 4    | 300.2 | 349.9 | 328.1 | 06.7 | 07.3 | 07.0 | 06.7  | 07.2  | 06.9  | 34.10 | 34.12 | 34.11 |
| 5    | 249.1 | 299.3 | 282.0 | 07.3 | 07.7 | 07.5 | 07.2  | 07.7  | 07.4  | 34.07 | 34.10 | 34.09 |
| 6    | 199.9 | 247.5 | 225.1 | 07.8 | 08.2 | 08.0 | 07.7  | 08.2  | 08.0  | 34.03 | 34.07 | 34.06 |
| 7    | 151.0 | 198.2 | 169.4 | 08.2 | 08.7 | 08.5 | 08.2  | 08.7  | 08.5  | 33.95 | 34.03 | 33.99 |
| 8    | 100.2 | 151.0 | 130.8 | 08.7 | 09.6 | 09.1 | 08.7  | 09.5  | 09.0  | 33.77 | 33.96 | 33.89 |
| 9    | 49.9  | 99.5  | 78.3  | 09.6 | 12.4 | 10.3 | 09.6  | 12.4  | 10.3  | 33.40 | 33.76 | 33.64 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|

| irradavg | irradmin | irradmax | irradavg | irradmin | irradmax | irradavg | irradmin | irradmax | irradavg | irradmin | irradmax | irradavg |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0        | -01.05   | 37.40    | 32.98    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.0     | 00.0     | 00.0     |
| 1        | -01.01   | 37.72    | 26.26    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.0     | 00.0     | 00.0     |
| 2        | 26.84    | 26.89    | 26.87    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.0     | 00.0     | 00.0     |
| 3        | 26.77    | 26.84    | 26.81    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.0     | 00.0     | 00.0     |
| 4        | 26.67    | 26.77    | 26.73    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.0     | 00.0     | 00.0     |
| 5        | 26.59    | 26.67    | 26.64    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.0     | 00.0     | 00.0     |
| 6        | 26.49    | 26.58    | 26.54    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.0     | 00.0     | 00.0     |
| 7        | 26.35    | 26.48    | 26.40    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.0     | 00.0     | 00.0     |
| 8        | 26.07    | 26.35    | 26.24    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.0     | 00.0     | 00.0     |
| 9        | 25.26    | 26.05    | 25.83    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.00    | 00.0     | 00.0     | 00.0     |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 00.0 | 00.0 | 00.0  | 01.9  | 00.2  | -01.0 | 01.6  | 00.1  | 00035 | 00062 |
| 1    | 00.0 | 75.0 | 51.8 | 00.5  | 47.3  | 01.5  | -24.2 | 09.0  | -07.0 | 00972 | 03709 |
| 2    | 48.0 | 55.0 | 50.7 | 01.2  | 01.8  | 01.5  | 01.9  | 15.6  | 08.6  | 00086 | 00185 |
| 3    | 50.0 | 56.0 | 52.5 | 01.4  | 01.9  | 01.6  | 03.3  | 14.2  | 09.3  | 00078 | 00173 |
| 4    | 53.0 | 59.0 | 55.8 | 01.4  | 01.9  | 01.6  | -01.2 | 09.8  | 04.8  | 00154 | 00360 |
| 5    | 54.0 | 58.0 | 55.4 | 01.4  | 01.9  | 01.6  | 01.0  | 14.8  | 06.0  | 00122 | 00284 |
| 6    | 53.0 | 56.0 | 54.5 | 01.4  | 01.9  | 01.6  | -03.5 | 16.6  | 06.3  | 00118 | 00269 |
| 7    | 53.0 | 58.0 | 55.4 | 01.6  | 01.9  | 01.8  | 03.7  | 14.8  | 08.9  | 00083 | 00194 |
| 8    | 56.0 | 60.0 | 57.3 | 01.4  | 02.0  | 01.8  | -04.1 | 13.1  | 05.8  | 00130 | 00313 |
| 9    | 52.0 | 57.0 | 53.9 | 01.5  | 01.9  | 01.7  | 03.3  | 16.4  | 09.7  | 00076 | 00175 |

30 May

PRES127.DAT

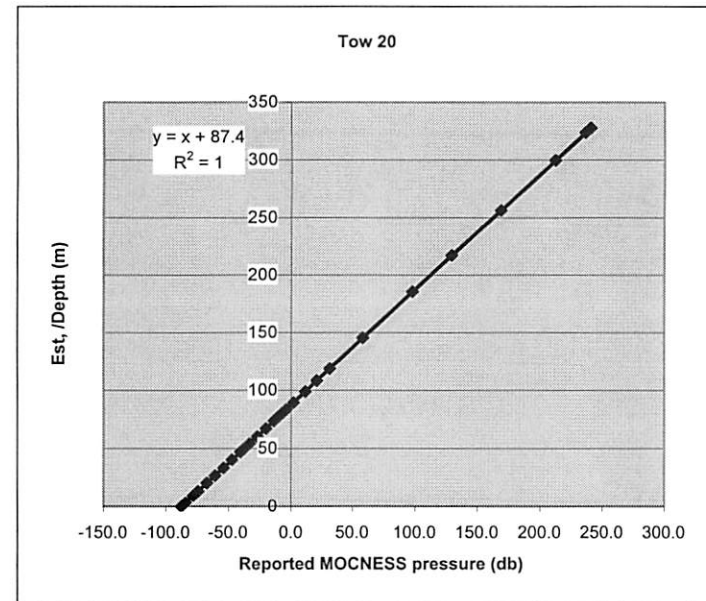
-189.5012  
-7.773628E-04  
.1038694  
1.326056E-08  
1.608858E-08  
-1.258364E-12

Our approximation of calib. constants

CHECK OF MOCNESS PRESSURE SENSOR OFFSET ON DESCENT, TOW 20

-87.4

| Winch<br>mwo | Reported<br>MOC<br>Pressure | est angle | est depth | MOCNESS<br>corrected<br>depth (+ 87.4) | Intended<br>trip depth | MOC<br>pressure |
|--------------|-----------------------------|-----------|-----------|--|------------------------|-----------------|
| 0            | -87.4                       | 45        | 0.0       | 0                                      | 450                    | 362.6           |
| 10           | -84.0                       | 45        | 5.3       | 3.4                                    | 400                    | 312.6           |
| 20           | -78.0                       | 45        | 10.5      | 9.4                                    | 350                    | 262.6           |
| 30           | -74.0                       | 45        | 15.8      | 13.4                                   | 300                    | 212.6           |
| 40           | -67.0                       | 45        | 21.0      | 20.4                                   | 250                    | 162.6           |
| 51           | -60.7                       | 45        | 26.8      | 26.7                                   | 200                    | 112.6           |
| 60           | -54.0                       | 45        | 31.5      | 33.4                                   | 150                    | 62.6            |
| 70           | -47.1                       | 45        | 36.8      | 40.3                                   | 100                    | 12.6            |
| 80           | -40.5                       | 45        | 42.0      | 46.9                                   | 50                     | -37.4           |
| 90           | -37.8                       | 45        | 47.3      | 49.6                                   | 0                      | -87.4           |
| 100          | -33.3                       | 45        | 52.5      | 54.1                                   |                        |                 |
| 110          | -27.1                       | 45        | 57.8      | 60.3                                   |                        |                 |
| 120          | -20.1                       | 45        | 63.0      | 67.3                                   |                        |                 |
| 130          | -13.5                       | 45        | 68.3      | 73.9                                   |                        |                 |
| 140          | -10.0                       | 45        | 73.5      | 77.4                                   |                        |                 |
| 150          | -6.6                        | 45        | 78.8      | 80.8                                   |                        |                 |
| 160          | -3.9                        | 45        | 84.1      | 83.5                                   |                        |                 |
| 170          | 2.1                         | 45        | 89.3      | 89.5                                   |                        |                 |
| 180          | 11.7                        | 45        | 94.6      | 99.1                                   |                        |                 |
| 190          | 20.9                        | 45        | 99.8      | 108.3                                  |                        |                 |
| 200          | 31.5                        | 45        | 105.1     | 118.9                                  |                        |                 |
| 250          | 58.3                        | 45        | 131.3     | 145.7                                  |                        |                 |
| 300          | 98.1                        | 45        | 157.6     | 185.5                                  |                        |                 |
| 350          | 129.5                       | 45        | 183.9     | 216.9                                  |                        |                 |
| 400          | 168.8                       | 45        | 210.1     | 256.2                                  |                        |                 |
| 450          | 212.2                       | 45        | 236.4     | 299.6                                  |                        |                 |
| 500          | 236.3                       | 45        | 262.7     | 323.7                                  |                        |                 |
| 550          | 240.5                       |           |           | 327.9                                  |                        |                 |
| 600          |                             |           |           |  |                        |                 |



Tow 20

30 May 2006 - v1400

Approximate  
Calibration of MOC 20  
pressure sensor

| <u>MWO</u> | <u>Reported<br/>Press</u> | <u>MWO</u> | <u>Reported<br/>Pressure</u> |
|------------|---------------------------|------------|------------------------------|
| 0          | -87.4                     | 350        | 129.5                        |
| 10         | -84.0                     | 400        | 168.8                        |
| 20         | -78                       | 450        | 212.2                        |
| 30         | -74                       | 500        | 236.3                        |
| 40         | -67                       | 550        | 240.5                        |
| 50         | -60.7                     | 600        | 251.8                        |
| 60         | -54                       |            |                              |
| 70         | -47.1                     |            |                              |
| 80         | -40.5                     |            |                              |
| 90         | -37.8                     |            |                              |
| 100        | -33.3                     |            |                              |
| 110        | -27.1                     |            |                              |
| 120        | -20.1                     |            | -276.9012                    |
| 130        | -13.5                     |            | +87.1                        |
| 140        | -10.0                     |            | <hr/>                        |
| 150        | -6.6                      |            | -189.5012                    |
| 160        | -3.9                      |            |                              |
| 170        | +2.1                      |            |                              |
| 180        | 11.7                      |            |                              |
| 190        | 20.9                      |            |                              |
| 200        | 31.5                      |            |                              |
| 210        |                           |            |                              |
| 220        |                           |            |                              |
| 250        | 58.3                      |            |                              |
| 300        | 98.1                      |            |                              |

Environmental Parameters

Net Operation

Net - Ship Position

Program Settings

Time: 15:51:33  
 Pressure: -89.2 m  
 Temp: 14.69 C  
 Salinity: 33.29 o/oo  
 Density: 24.72  
 Oxygen:   
 Fluoresc.:   
 LightXmis:   
 Irradiance:

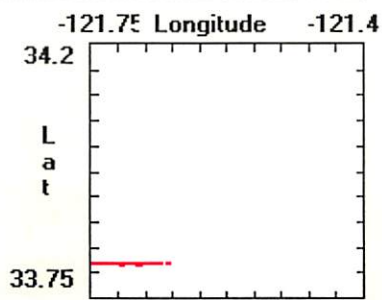
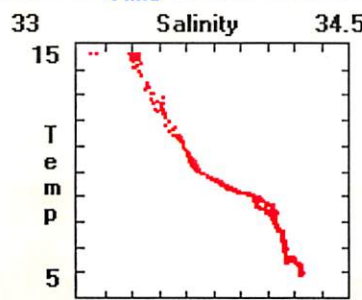
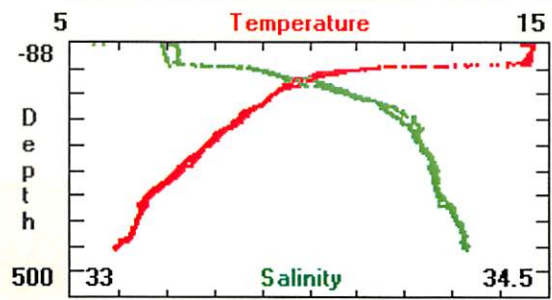
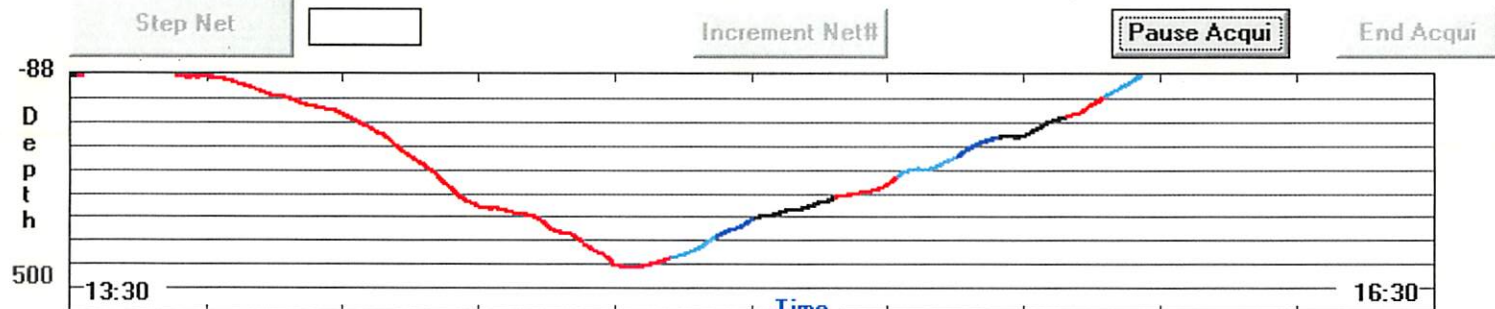
Net\_Num: 10  
 OpenTime: 4.7 min  
 Vol\_Filtered: 145.7 m3  
 Angle: 57 deg  
 Flow\_Counts: 100  
 Hor\_Vel: 1.9 kts  
 Vert\_Vel: 7.4 m/min  
 Battery: 21.1 V

Latitude: 33N 48.772  
 Longitude: 121W 45.29  
 Net\_Dist: 274.6 m  
 Total\_Dist: 8523.2 m

Reset  
 Baud Rate: 2400  
 Sample Rate: 4.0 sec  
 Printer: Off

Processed File Name: None  
 Raw File Name: C:\MOCNESS\MOCDATA\TOW20.RAW  
 Acquisition Ended. trys = 0

*Original  
 "Moc meters"  
 w/ -87.4 offset  
 db*



*0/05  
 TOW 20*



original  
in Moc meters

obs

TOW20.TAB

M-04-003  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -88.2 | 387.9 | 132.6 | 05.9 | 16.1 | 08.8 | 05.9  | 16.1  | 08.8  | 00.01 | 50.00 | 32.92 |
| 1    | -87.7 | 361.9 | 329.8 | 06.3 | 16.0 | 06.3 | 06.2  | 16.0  | 06.3  | 00.05 | 50.00 | 33.26 |
| 2    | 263.1 | 309.1 | 287.7 | 06.4 | 06.7 | 06.5 | 06.4  | 06.6  | 06.5  | 34.15 | 34.21 | 34.18 |
| 3    | 212.8 | 262.5 | 240.7 | 06.7 | 07.3 | 07.0 | 06.7  | 07.2  | 06.9  | 34.14 | 34.16 | 34.15 |
| 4    | 161.7 | 211.9 | 194.6 | 07.3 | 07.7 | 07.5 | 07.3  | 07.7  | 07.4  | 34.12 | 34.14 | 34.13 |
| 5    | 112.5 | 160.1 | 137.7 | 07.8 | 08.2 | 08.0 | 07.7  | 08.2  | 08.0  | 34.08 | 34.11 | 34.10 |
| 6    | 63.6  | 110.8 | 82.0  | 08.2 | 08.7 | 08.5 | 08.2  | 08.7  | 08.5  | 33.99 | 34.08 | 34.03 |
| 7    | 12.8  | 63.6  | 43.4  | 08.7 | 09.6 | 09.1 | 08.7  | 09.6  | 09.1  | 33.81 | 34.00 | 33.93 |
| 8    | -37.5 | 12.1  | -09.1 | 09.6 | 12.4 | 10.3 | 09.6  | 12.5  | 10.3  | 33.43 | 33.80 | 33.67 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin    | oxmax    | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|----------|----------|-------|
|      |       |       |       |      |      | cavg | fmin | fmax | favg | irradmin | irradmax |       |

| irradavg | net# | simin  | simax | siavg | cmin  | cmax  | cavg  | fmin  | fmax  | favg  | oxmin | oxmax | oxavg |
|----------|------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0        | 0    | -01.05 | 37.72 | 25.44 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 1        | 1    | -01.01 | 37.35 | 26.13 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 2        | 2    | 26.80  | 26.87 | 26.84 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 3        | 3    | 26.71  | 26.80 | 26.76 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 4        | 4    | 26.62  | 26.71 | 26.68 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 5        | 5    | 26.52  | 26.61 | 26.57 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 6        | 6    | 26.38  | 26.51 | 26.43 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 7        | 7    | 26.10  | 26.38 | 26.27 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 8        | 8    | 25.29  | 26.08 | 25.86 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 75.0 | 50.2 | 00.0  | 47.3  | 01.4  | -24.2 | 99.0  | -06.7 | 01003 | 03709 |
| 1    | 00.0 | 55.0 | 49.0 | 01.2  | 01.8  | 01.4  | -00.6 | 15.6  | 08.3  | 00089 | 00185 |
| 2    | 50.0 | 56.0 | 52.5 | 01.4  | 01.9  | 01.6  | 03.3  | 14.2  | 09.3  | 00078 | 00173 |
| 3    | 53.0 | 59.0 | 55.8 | 01.4  | 01.9  | 01.6  | -01.2 | 09.8  | 04.8  | 00154 | 00360 |
| 4    | 54.0 | 58.0 | 55.4 | 01.4  | 01.9  | 01.6  | 01.0  | 14.8  | 06.0  | 00122 | 00284 |
| 5    | 53.0 | 56.0 | 54.5 | 01.4  | 01.9  | 01.6  | -03.5 | 16.6  | 06.3  | 00118 | 00269 |
| 6    | 53.0 | 58.0 | 55.4 | 01.6  | 01.9  | 01.8  | 03.7  | 14.8  | 08.9  | 00083 | 00194 |
| 7    | 56.0 | 60.0 | 57.3 | 01.4  | 02.0  | 01.8  | -04.1 | 13.1  | 05.8  | 00130 | 00313 |
| 8    | 52.0 | 57.0 | 53.9 | 01.5  | 01.9  | 01.7  | 03.3  | 16.4  | 09.7  | 00076 | 00175 |

Event No: 062

Start: 151.0069

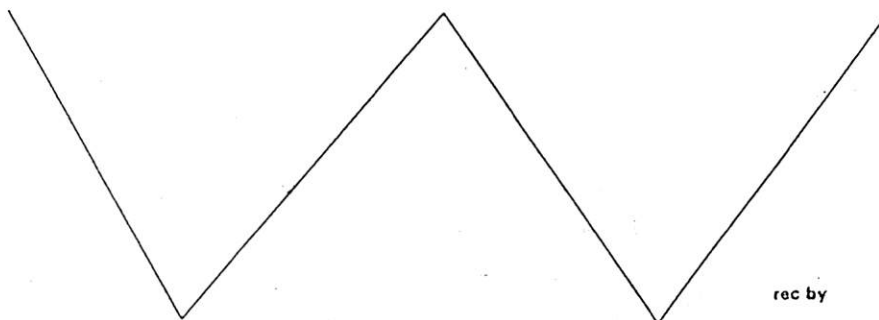
Revised 10/94

MOCNESS DATA SHEET

| CRUISE   | STATION                   | HAUL | DATE (DST EST GMT) | MOCNESS TYPE  |
|----------|---------------------------|------|--------------------|---------------|
| CCE-0605 | Cycle 4, <sup>tow 4</sup> | 21   | 30-31 May 2006 PDT | 1/4M (1M) 10M |

|  | START                                | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE |
|--|--------------------------------------|----------|------------|-------|-------|------------|-----------|
| LATITUDE   | 33.7528<br>33 <sup>N</sup><br>45.174 | 33.7580  | NET 0 OPEN | 00:11 | 6     | 1253       | 202µm     |
| LONGITUDE  | 121.6972<br>41.9                     | 121.7526 | NET 1 OPEN | 00:41 | 447   | 222        |           |
| DEPTH  | 3608m                                |          | NET 2 OPEN | 00:49 | 400   | 272        |           |
| COMMENTS<br>Surface Temp 14.45<br>Sal 33.33<br><br>Batt. voltage: 21.2 |                                      |          | NET 3 OPEN | 00:57 | 350   | 207        |           |
|  |                                      |          | NET 4 OPEN | 01:04 | 300   | 217        |           |
|  |                                      |          | NET 5 OPEN | 01:11 | 259   | 231        |           |
|  |                                      |          | NET 6 OPEN | 01:18 | 200   | 198        |           |
|  |                                      |          | NET 7 OPEN | 01:24 | 148   | 161        |           |
|  |                                      |          | NET 8 OPEN | 01:30 | 97    | 250        |           |
|  |                                      |          | NET 9 OPEN | 01:37 | 50    | 207        |           |
|  |                                      |          | SURFACE    |       |       |            |           |

TOW PROFILE



rec by

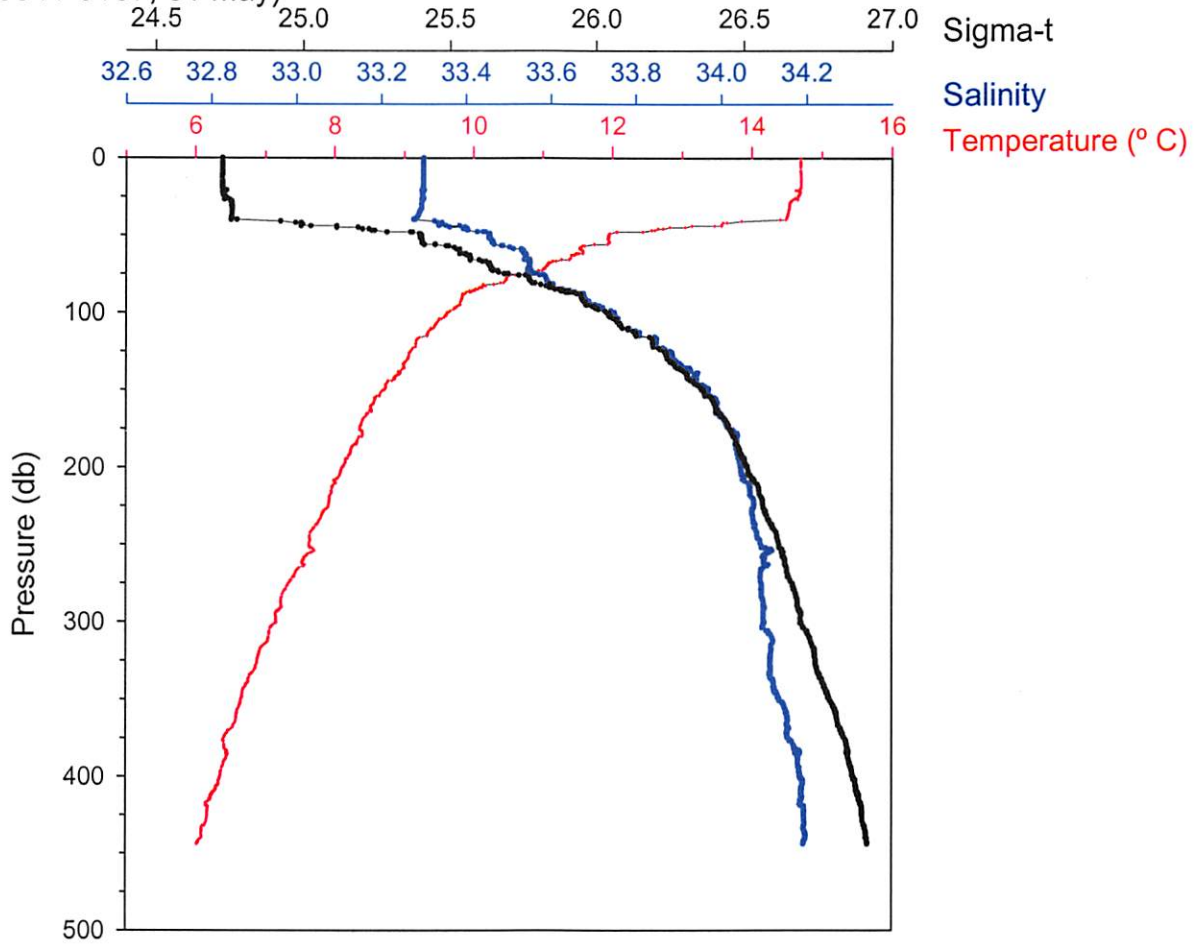
TOW21RE

File names: .pro .raw .tab

Wind speed: ~ 25 kts. @ 330° T

# MOCNESS - Tow 21

Cycle 4, Tow 4 (0041-0137, 31 May)



Environmental Parameters

Time 1:44:6  
 Pressure 0.4 m  
 Temp 14.7 C  
 Salinity 33.3 o/oo  
 Density 24.727  
 Oxygen  
 Fluoresc.  
 LightXmis  
 Irradiance

Net Operation

Net\_Num 9  
 OpenTime 6.3 min  
 Vol\_Filtered 206.9 m3  
 Angle 60 deg  
 Flow\_Counts 133  
 Hor\_Vel 1.6 kts  
 Vert\_Vel 13.4 m/min  
 Battery 20.8 V

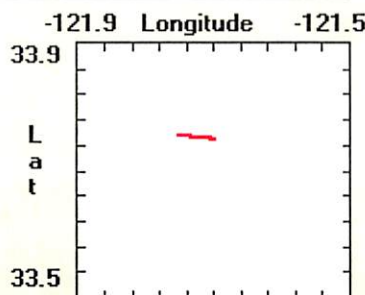
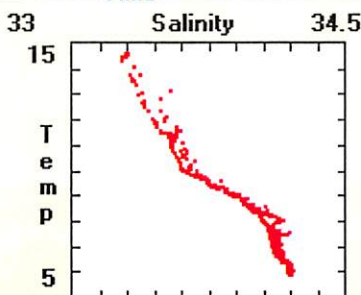
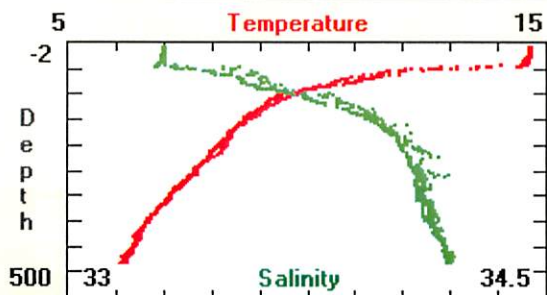
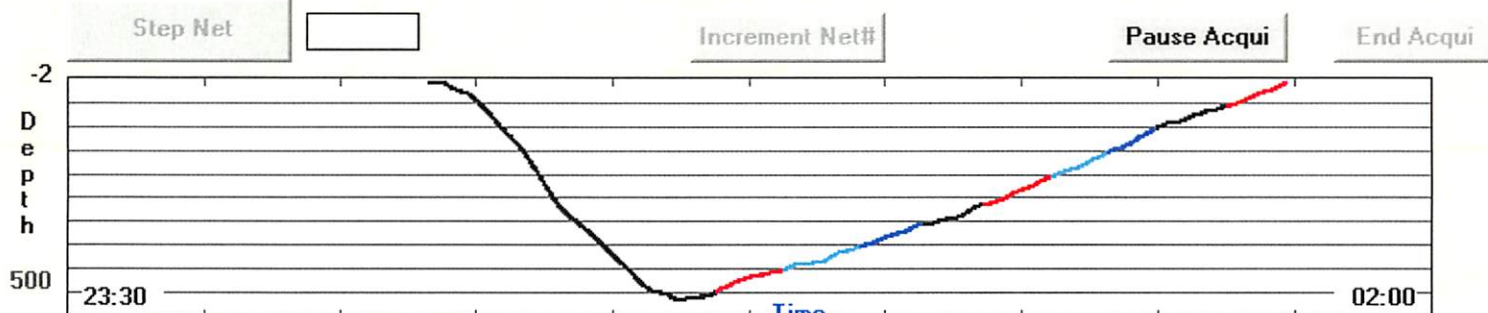
Net - Ship Position

Latitude 33N 45.4811  
 Longitude 121W 45.15  
 Net\_Dist 326.6 m  
 Total\_Dist 5166.6 m

Program Settings

Reset  
 Baud Rate 2400  
 Sample Rate 4.0 sec  
 Printer Off

Processed File Name None *Tow21 Re. pro*  
 Raw File Name C:\MOCNESS\MOCDATA\TOW21.RAW  
 Acquisition Ended. tries = 0



*Tow 21 Re*  
 (31 May - reprocessed  
 w/ correct sensors  
 calibs. for pressure  
 sensor 127)

M-04-004  
08/05/06  
RV Knorr

TOW21RE.TAB

reprocessed 31 May  
w/ correct sensor  
calibs for #127

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | 00.4  | 462.9 | 258.6 | 05.9 | 50.0 | 08.7 | 05.9  | 50.0  | 08.7  | 33.30 | 50.00 | 33.99 |
| 1    | 399.2 | 443.4 | 416.9 | 06.0 | 06.4 | 06.2 | 06.0  | 06.3  | 06.2  | 34.18 | 34.20 | 34.19 |
| 2    | 348.4 | 398.8 | 374.7 | 06.4 | 06.7 | 06.5 | 06.3  | 06.6  | 06.5  | 34.13 | 34.19 | 34.17 |
| 3    | 300.2 | 347.7 | 325.0 | 06.7 | 07.2 | 06.9 | 06.6  | 07.1  | 06.9  | 34.10 | 34.13 | 34.12 |
| 4    | 259.7 | 300.9 | 284.2 | 07.1 | 07.6 | 07.3 | 07.1  | 07.5  | 07.3  | 34.09 | 34.11 | 34.10 |
| 5    | 200.1 | 259.6 | 231.6 | 07.6 | 08.1 | 07.8 | 07.5  | 08.1  | 07.8  | 34.05 | 34.12 | 34.08 |
| 6    | 149.9 | 199.6 | 176.7 | 08.1 | 08.7 | 08.4 | 08.1  | 08.7  | 08.4  | 33.97 | 34.05 | 34.02 |
| 7    | 97.1  | 148.7 | 125.6 | 08.7 | 09.7 | 09.1 | 08.7  | 09.7  | 09.1  | 33.72 | 33.97 | 33.87 |
| 8    | 51.3  | 96.6  | 73.5  | 09.7 | 12.0 | 10.8 | 09.7  | 12.0  | 10.8  | 33.45 | 33.72 | 33.58 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin    | oxmax    | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|----------|----------|-------|
|      |       |       |       |      |      | cavg | fmin | fmax | favg | irradmin | irradmax |       |

| irradavg | net# | simin | simax | siavg | cmin  | cmax  | cavg  | fmin  | fmax  | favg  | oxmin | oxmax | oxavg |
|----------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0        | 0    | 24.68 | 26.95 | 26.31 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 1        | 1    | 26.87 | 26.92 | 26.89 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 2        | 2    | 26.79 | 26.87 | 26.84 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 3        | 3    | 26.69 | 26.79 | 26.74 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 4        | 4    | 26.64 | 26.69 | 26.67 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 5        | 5    | 26.51 | 26.64 | 26.58 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 6        | 6    | 26.36 | 26.51 | 26.45 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 7        | 7    | 26.00 | 26.35 | 26.21 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |
| 8        | 8    | 25.40 | 26.00 | 25.70 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0  | 00.0  | 00.0  |

| net# | amin | amax | aaavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 36.0 | 78.0 | 47.1  | 00.1  | 31.4  | 01.2  | -33.6 | 11.8  | -14.2 | 00473 | 01253 |
| 1    | 46.0 | 56.0 | 49.5  | 01.1  | 01.5  | 01.3  | 01.9  | 13.3  | 06.3  | 00111 | 00228 |
| 2    | 49.0 | 58.0 | 51.7  | 01.1  | 01.6  | 01.4  | -02.6 | 13.0  | 05.9  | 00126 | 00272 |
| 3    | 50.0 | 56.0 | 52.1  | 01.2  | 01.6  | 01.5  | 03.1  | 13.0  | 07.4  | 00099 | 00207 |
| 4    | 50.0 | 55.0 | 52.2  | 01.2  | 01.8  | 01.4  | -01.9 | 14.3  | 06.0  | 00101 | 00217 |
| 5    | 51.0 | 55.0 | 52.2  | 01.4  | 01.6  | 01.5  | 02.1  | 12.4  | 08.0  | 00109 | 00231 |
| 6    | 49.0 | 54.0 | 50.3  | 01.4  | 01.6  | 01.4  | 03.7  | 11.4  | 08.1  | 00092 | 00198 |
| 7    | 46.0 | 50.0 | 47.9  | 01.1  | 01.6  | 01.4  | 02.9  | 15.3  | 09.7  | 00079 | 00162 |
| 8    | 49.0 | 58.0 | 52.7  | 01.1  | 01.6  | 01.5  | -00.9 | 10.9  | 06.2  | 00115 | 00250 |



M-04-004  
08/05/06  
RV Knorr

TOW21.TAB

Obs  
later replayed w/  
correct calib.  
for sensor 127.

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.2 | 464.9 | 259.6 | 05.9 | 50.0 | 08.7 | 05.9  | 50.0  | 08.7  | 33.30 | 50.00 | 33.99 |
| 1    | 400.5 | 445.2 | 418.4 | 06.0 | 06.4 | 06.2 | 06.0  | 06.3  | 06.2  | 34.18 | 34.20 | 34.19 |
| 2    | 349.3 | 400.1 | 375.8 | 06.4 | 06.7 | 06.5 | 06.3  | 06.6  | 06.5  | 34.13 | 34.19 | 34.17 |
| 3    | 300.8 | 348.6 | 325.7 | 06.7 | 07.2 | 06.9 | 06.6  | 07.1  | 06.9  | 34.10 | 34.13 | 34.12 |
| 4    | 259.9 | 301.4 | 284.6 | 07.1 | 07.6 | 07.3 | 07.1  | 07.5  | 07.3  | 34.09 | 34.11 | 34.10 |
| 5    | 199.9 | 259.8 | 231.7 | 07.6 | 08.1 | 07.8 | 07.5  | 08.1  | 07.8  | 34.05 | 34.12 | 34.08 |
| 6    | 149.5 | 199.5 | 176.4 | 08.1 | 08.7 | 08.4 | 08.1  | 08.7  | 08.4  | 33.97 | 34.05 | 34.02 |
| 7    | 96.3  | 148.2 | 124.9 | 08.7 | 09.7 | 09.1 | 08.7  | 09.7  | 09.1  | 33.72 | 33.97 | 33.87 |
| 8    | 50.2  | 95.8  | 72.6  | 09.7 | 12.0 | 10.8 | 09.7  | 12.0  | 10.8  | 33.45 | 33.72 | 33.58 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|

| irradavg | irradmin | irradmax |       |       |       |       |       |       |       |      |      |      |
|----------|----------|----------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| 0        | 24.68    | 26.95    | 26.31 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 1        | 26.87    | 26.92    | 26.89 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 2        | 26.79    | 26.87    | 26.83 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 3        | 26.69    | 26.79    | 26.74 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 4        | 26.64    | 26.69    | 26.67 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 5        | 26.51    | 26.64    | 26.58 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 6        | 26.36    | 26.51    | 26.45 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 7        | 26.00    | 26.35    | 26.21 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 8        | 25.40    | 26.00    | 25.70 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |

| net# | amin | amax | aaavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 36.0 | 78.0 | 47.1  | 00.1  | 31.4  | 01.2  | -33.8 | 11.9  | -14.3 | 00473 | 01253 |
| 1    | 46.0 | 56.0 | 49.5  | 01.1  | 01.5  | 01.3  | 01.9  | 13.4  | 06.4  | 00111 | 00227 |
| 2    | 49.0 | 58.0 | 51.7  | 01.1  | 01.6  | 01.4  | -02.6 | 13.1  | 05.9  | 00126 | 00272 |
| 3    | 50.0 | 56.0 | 52.1  | 01.2  | 01.6  | 01.5  | 03.1  | 13.1  | 07.4  | 00099 | 00207 |
| 4    | 50.0 | 55.0 | 52.2  | 01.2  | 01.8  | 01.4  | -02.0 | 14.4  | 06.1  | 00101 | 00217 |
| 5    | 51.0 | 55.0 | 52.2  | 01.4  | 01.6  | 01.5  | 02.1  | 12.5  | 08.1  | 00109 | 00231 |
| 6    | 49.0 | 54.0 | 50.3  | 01.4  | 01.6  | 01.4  | 03.7  | 11.5  | 08.1  | 00092 | 00198 |
| 7    | 46.0 | 50.0 | 47.9  | 01.1  | 01.6  | 01.4  | 02.9  | 15.4  | 09.8  | 00079 | 00161 |
| 8    | 49.0 | 58.0 | 52.7  | 01.1  | 01.6  | 01.5  | -01.0 | 10.9  | 06.2  | 00115 | 00250 |

Event No: 671

Start: 151.989

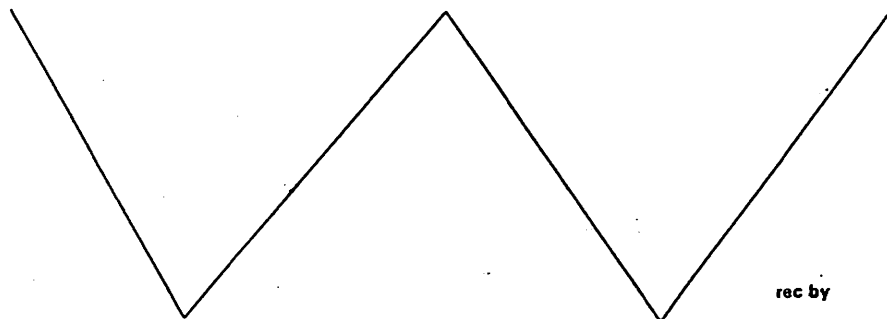
Revised 10/94

MOCNESS DATA SHEET

| CRUISE    | STATION        | HAUL | DATE (DST EST GMT)  | MOCNESS TYPE  |
|-----------|----------------|------|---------------------|---------------|
| CCF-P0605 | Cycle 5, Tow 1 | 22   | 31 May - 1 June PDT | 1/4M (1M) 10M |

|   | START         | END |            | TIME  | DEPTH | VOL FILTER | MESH SIZE   |
|---|---------------|-----|------------|-------|-------|------------|-------------|
| LATITUDE  | 32N<br>49.96  |     | NET 0 OPEN | 23:44 |       | 483        | 202 $\mu$ m |
| LONGITUDE   | 173W<br>58.24 |     | NET 1 OPEN | 00:11 | 449   | 157        |             |
| DEPTH   | 4308          |     | NET 2 OPEN | 00:17 | 399   | 245        |             |
| COMMENTS<br>T - 16.13<br>S - 33.08<br><br>V 20.8<br><br>missing sample SD 615loc (Lost sample when cod ends fell off) |               |     | NET 3 OPEN | 00:24 | 350   | 233        |             |
|   |               |     | NET 4 OPEN | 00:32 | 300   | 300        |             |
|   |               |     | NET 5 OPEN | 00:41 | 250   | 197        |             |
|   |               |     | NET 6 OPEN | 00:47 | 200   | 195        |             |
|   |               |     | NET 7 OPEN | 00:53 | 159   | 242        |             |
|   |               |     | NET 8 OPEN | 01:01 | 100   | 214        |             |
|   |               |     | NET 9 OPEN | 01:07 | 49    | [203]      |             |
|   |               |     | SURFACE    |       |       |            |             |

TOW PROFILE



File names: .pro .raw .tab

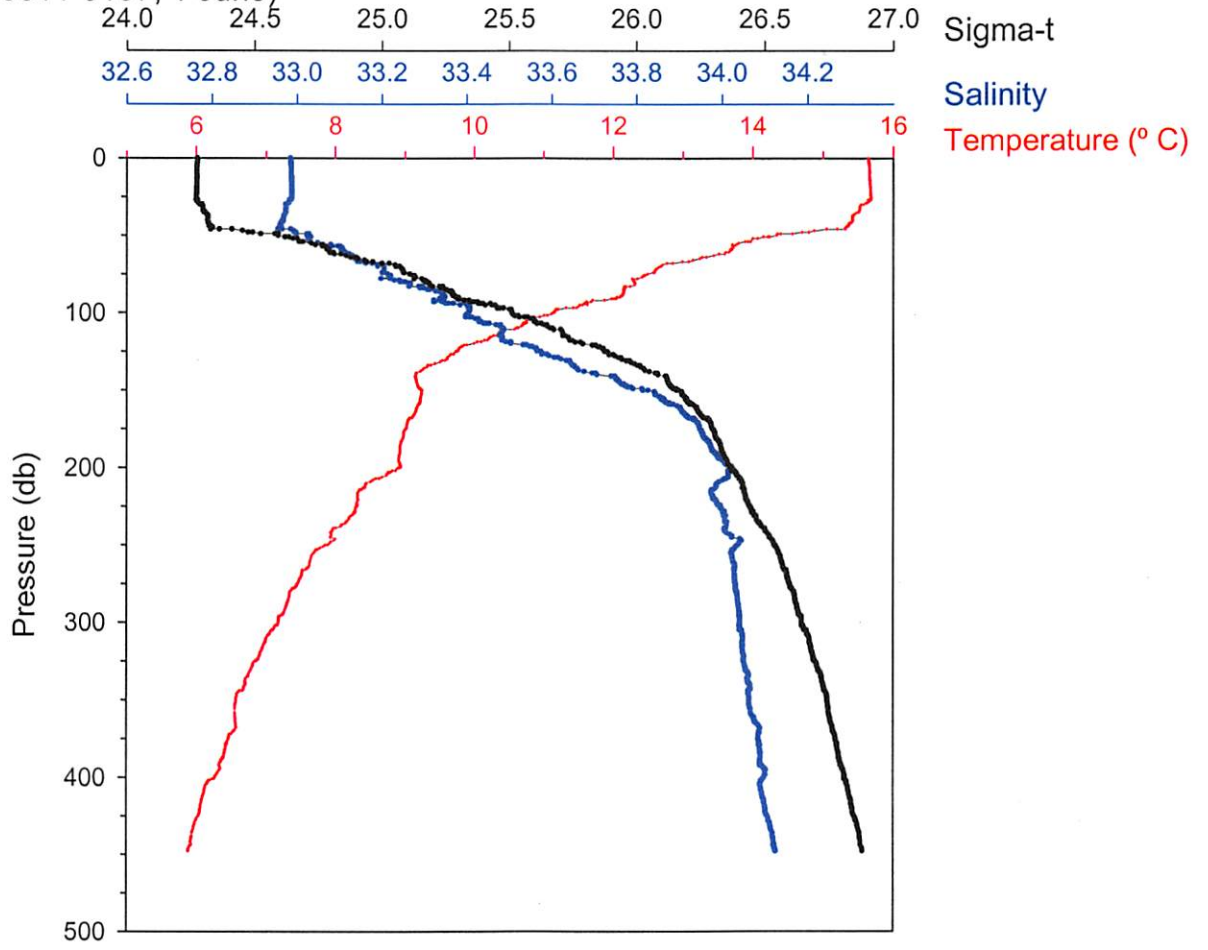
net 3 did not trigger

Winds: ~15 kts.

LOST COD END #6

# MOCNESS - Tow 22

Cycle 5, Tow 1 (0011-0107, 1 June)



M-05-001  
08/05/06  
RV Knorr

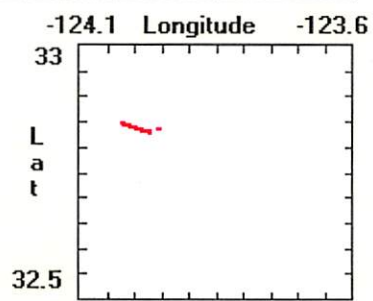
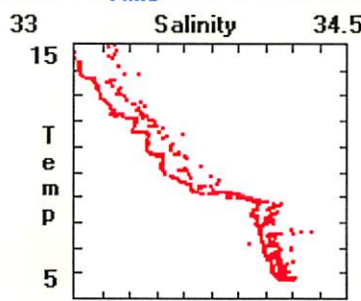
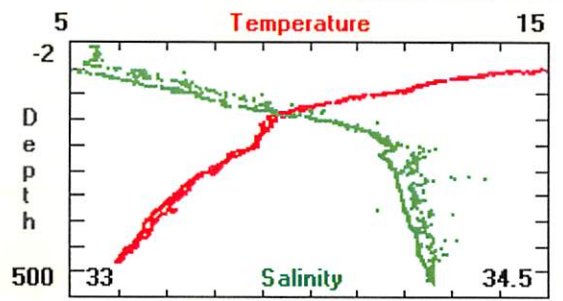
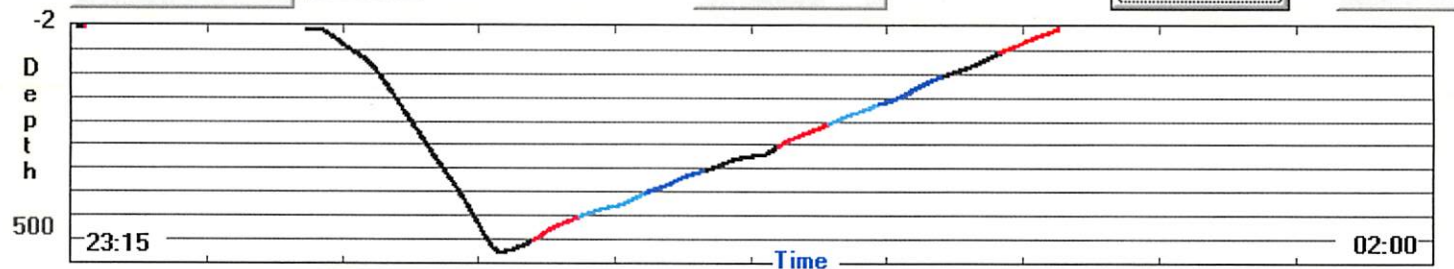
MOCNESS STATISTICAL SUMMARY

| net#     | pmin   | pmax  | pavg  | tmin  | tmax  | tavg  | thmin | thmax | thavg | smin     | smax     | savg  |
|----------|--------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|-------|
| 0        | -02.1  | 474.5 | 224.5 | 05.8  | 16.1  | 09.4  | 05.7  | 16.1  | 09.4  | 00.01    | 50.00    | 32.61 |
| 1        | 398.8  | 447.8 | 420.7 | 05.9  | 06.3  | 06.1  | 05.9  | 06.2  | 06.0  | 34.09    | 34.13    | 34.10 |
| 3        | 300.2  | 346.8 | 322.9 | 06.6  | 07.2  | 06.9  | 06.6  | 07.2  | 06.9  | 34.04    | 34.07    | 34.05 |
| 0        | -02.1  | 474.5 | 224.5 | 05.8  | 16.1  | 09.4  | 05.7  | 16.1  | 09.4  | 00.01    | 50.00    | 32.61 |
| 4        | 250.0  | 299.5 | 275.7 | 07.2  | 07.9  | 07.4  | 07.2  | 07.9  | 07.4  | 34.02    | 34.04    | 34.03 |
| 5        | 200.9  | 248.5 | 223.3 | 07.9  | 08.9  | 08.3  | 07.9  | 08.9  | 08.3  | 33.97    | 34.05    | 34.00 |
| 6        | 159.6  | 200.1 | 180.2 | 08.9  | 09.2  | 09.0  | 08.9  | 09.2  | 09.0  | 33.89    | 34.02    | 33.96 |
| 7        | 99.9   | 158.7 | 131.4 | 09.1  | 11.1  | 09.8  | 09.1  | 11.1  | 09.7  | 33.40    | 33.88    | 33.64 |
| 8        | 50.4   | 99.5  | 77.3  | 11.2  | 14.3  | 12.5  | 11.1  | 14.3  | 12.5  | 33.02    | 33.41    | 33.24 |
| net#     | simin  | simax | siavg | cmin  | cmax  | cavg  | fmin  | fmax  | favg  | oxmin    | oxmax    | oxavg |
|          |        |       |       |       |       | cavg  | fmin  | fmax  | favg  | irradmin | irradmax |       |
| irradavg |        |       |       |       |       |       |       |       |       |          |          |       |
| 0        | -00.99 | 37.45 | 25.07 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0  |
| 1        | 26.81  | 26.88 | 26.84 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0  |
| 3        | 26.64  | 26.74 | 26.69 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0  |
| 0        | -00.99 | 37.45 | 25.07 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0  |
| 4        | 26.54  | 26.64 | 26.60 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0  |
| 5        | 26.37  | 26.53 | 26.45 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0  |
| 6        | 26.23  | 26.37 | 26.31 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0  |
| 7        | 25.51  | 26.21 | 25.93 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0  |
| 8        | 24.59  | 25.51 | 25.12 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0  |
| net#     | amin   | amax  | aavg  | spmin | spmax | spavg | armin | armax | aravg | #obs     | vol      |       |
| 0        | 00.0   | 47.0  | 31.3  | 00.0  | 01.2  | 00.4  | -34.0 | 11.2  | -15.8 | 00429    | 00483    |       |
| 1        | 35.0   | 45.0  | 40.1  | 00.8  | 01.2  | 01.1  | 04.8  | 14.7  | 08.9  | 00083    | 00157    |       |
| 3        | 48.0   | 55.0  | 51.4  | 01.2  | 01.6  | 01.4  | 03.8  | 09.5  | 06.7  | 00107    | 00234    |       |
| 0        | 00.0   | 47.0  | 31.3  | 00.0  | 01.2  | 00.4  | -34.0 | 11.2  | -15.8 | 00429    | 00483    |       |
| 4        | 52.0   | 56.0  | 53.9  | 01.4  | 01.8  | 01.5  | 01.2  | 11.8  | 05.6  | 00131    | 00300    |       |
| 5        | 50.0   | 53.0  | 51.2  | 01.4  | 01.8  | 01.5  | 05.2  | 11.8  | 08.2  | 00090    | 00197    |       |
| 6        | 47.0   | 52.0  | 49.9  | 01.4  | 01.6  | 01.4  | 04.1  | 08.7  | 06.8  | 00089    | 00195    |       |
| 7        | 44.0   | 50.0  | 46.4  | 01.2  | 01.5  | 01.3  | 03.5  | 11.0  | 07.8  | 00115    | 00242    |       |
| 8        | 40.0   | 49.0  | 43.8  | 01.1  | 01.4  | 01.2  | 03.5  | 11.4  | 07.2  | 00103    | 00214    |       |

**Environmental Parameters      Net Operation      Net - Ship Position      Program Settings**

|            |            |              |           |                             |                              |             |         |
|------------|------------|--------------|-----------|-----------------------------|------------------------------|-------------|---------|
| Time       | 01:14:54   | Net_Num      | 9         | Latitude                    | 32N 51.004;                  | Reset       |         |
| Pressure   | 0.1 m      | OpenTime     | 7.0 min   | Longitude                   | 124W 1.374                   | Baud Rate   | 2400    |
| Temp       | 15.65 C    | Vol_Filtered | 202.6 m3  | Net_Dist                    | 404.3 m                      | Sample Rate | 4.0 sec |
| Salinity   | 32.98 o/oo | Angle        | 41 deg    | Total_Dist                  | 6611.6 m                     | Printer     | Off     |
| Density    | 24.277     | Flow_Counts  | 104       | Processed File Name         | C:\MOCNESS\MOCDATA\TOW22.PRO |             |         |
| Oxygen     |            | Hor_Vel      | 0.9 kts   | Raw File Name               | C:\MOCNESS\MOCDATA\TOW22.raw |             |         |
| Fluoresc.  |            | Vert_Vel     | 6.1 m/min | Acquisition Ended. trys = 0 |                              |             |         |
| LightXmis  |            | Battery      | 20.5 V    |                             |                              |             |         |
| Irradiance |            |              |           |                             |                              |             |         |

Step Net       Increment Net#       **Pause Acqui**      End Acqui





Stat: 15'2.5212

Event # 6897

"MOCNESS Recovered"  
 "no event log for"  
 "MOCNESS deployed"

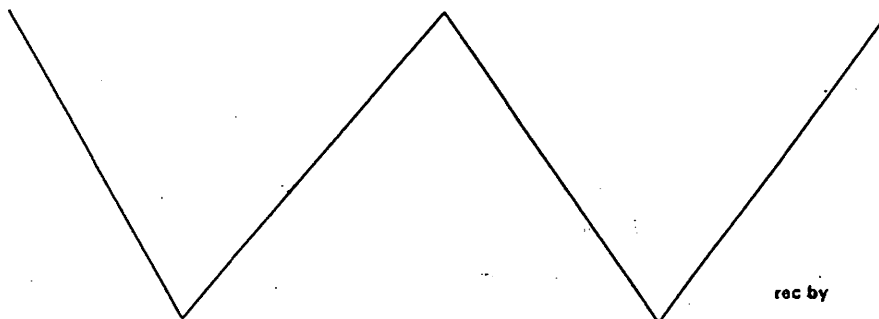
Revised 10/94

MOCNESS DATA SHEET

| CRUISE | STATION         | HAUL | DATE (DST EST GMT) | MOCNESS TYPE  |
|--------|-----------------|------|--------------------|---------------|
| 0605   | 1002<br>Cycle 5 | 23   | 1-June 2006        | 1/4M (1M) 10M |

|  | START         | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE |
|--|---------------|----------|------------|-------|-------|------------|-----------|
| LATITUDE   | 32°<br>48.57  | 32.8075  | NET 0 OPEN | 12:30 |       | 1469       |           |
| LONGITUDE  | 123°<br>59.06 | 124.0507 | NET 1 OPEN | 13:11 | 450   | 416        |           |
| DEPTH  | 4354          |          | NET 2 OPEN | 13:23 | 399   | 252        |           |
| COMMENTS<br><br>T 16.37<br>S 33.15<br><br>V = 20.6 |               |          | NET 3 OPEN | 13:30 | 350   | 251        |           |
|  |               |          | NET 4 OPEN | 13:38 | 296   | 186        |           |
|  |               |          | NET 5 OPEN | 13:44 | 249   | 207        |           |
|  |               |          | NET 6 OPEN | 13:50 | 200   | 208        |           |
|  |               |          | NET 7 OPEN | 13:57 | 150   | 203        |           |
|  |               |          | NET 8 OPEN | 14:04 | 101   | 254        |           |
|  |               |          | NET 9 OPEN | 14:13 | 50    | 194        |           |
|  |               |          | SURFACE    | 14:19 |       |            |           |

TOW PROFILE



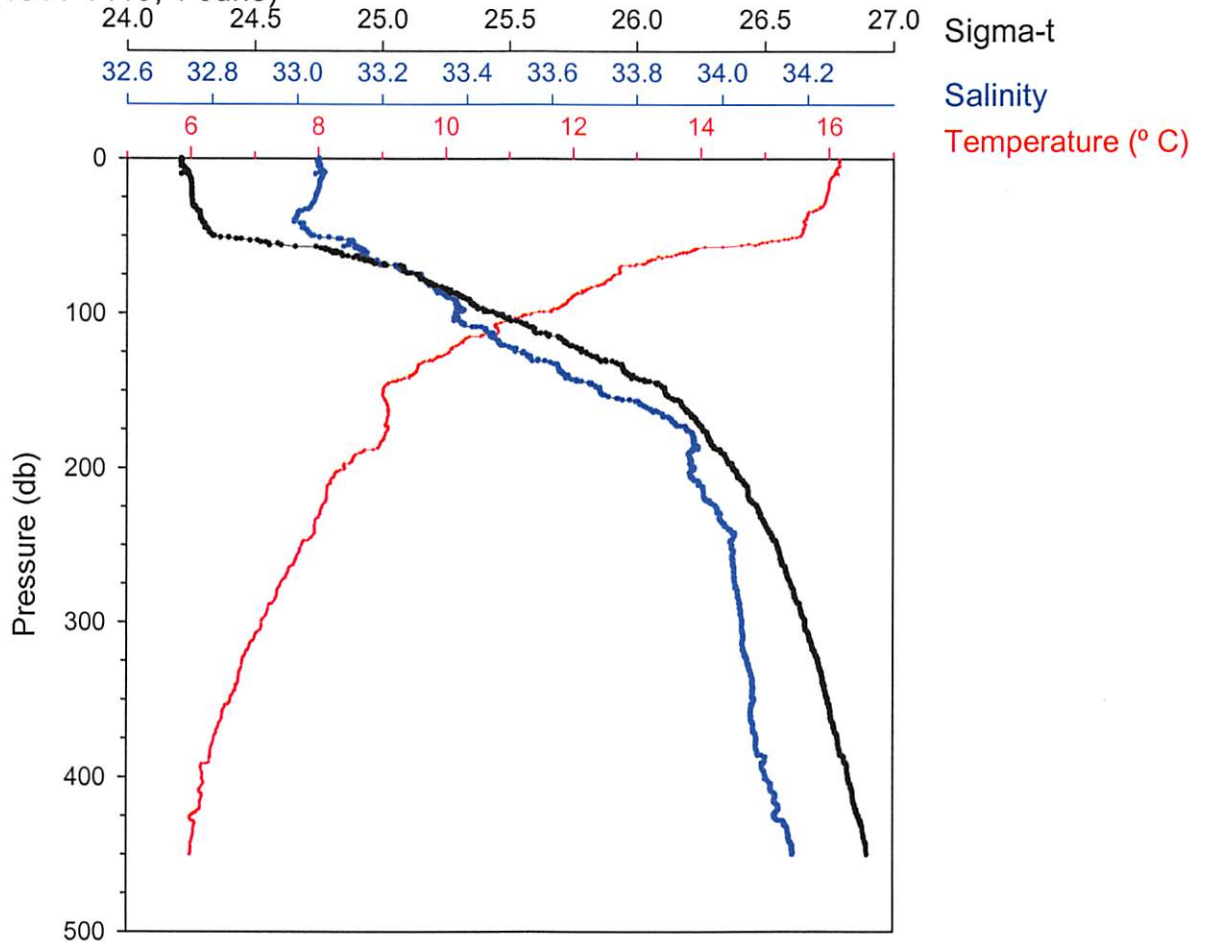
rec by

File names: .pro .raw .tab

wind 15 knots 335°

# MOCNESS - Tow 23

Cycle 5, Tow 2 (1311-1419, 1 June)



TOW23.TAB

M-05-002  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -02.2 | 460.5 | 243.0 | 05.9 | 50.0 | 08.7 | 05.8  | 50.0  | 08.7  | 00.02 | 50.00 | 32.00 |
| 1    | -00.2 | 449.7 | 423.3 | 06.0 | 20.1 | 06.2 | 06.0  | 20.1  | 06.1  | 34.10 | 50.00 | 34.23 |
| 2    | 350.7 | 398.5 | 371.5 | 06.2 | 06.6 | 06.4 | 06.1  | 06.6  | 06.4  | 34.07 | 34.10 | 34.08 |
| 3    | 296.3 | 350.0 | 326.5 | 06.6 | 07.2 | 06.8 | 06.6  | 07.1  | 06.8  | 34.05 | 34.08 | 34.06 |
| 4    | 249.8 | 294.8 | 271.0 | 07.2 | 07.7 | 07.5 | 07.2  | 07.7  | 07.5  | 34.02 | 34.04 | 34.03 |
| 5    | 200.6 | 248.2 | 223.9 | 07.7 | 08.4 | 08.1 | 07.7  | 08.4  | 08.1  | 33.92 | 34.03 | 33.98 |
| 6    | 149.7 | 199.8 | 175.7 | 08.4 | 09.1 | 08.9 | 08.4  | 09.1  | 08.9  | 33.71 | 33.95 | 33.88 |
| 7    | 100.8 | 149.3 | 125.2 | 09.0 | 11.3 | 10.1 | 09.0  | 11.3  | 10.0  | 33.37 | 33.71 | 33.53 |
| 8    | 50.3  | 100.3 | 76.6  | 11.4 | 15.5 | 12.8 | 11.3  | 15.5  | 12.8  | 33.04 | 33.39 | 33.26 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin    | oxmax    | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|----------|----------|-------|
|      |       |       |       |      |      | cavg | fmin | fmax | favg | irradmin | irradmax |       |

| irradavg |        |       |       |       |       |       |       |       |       |      |      |      |
|----------|--------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| 0        | -11.71 | 37.01 | 24.67 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 1        | 26.82  | 36.21 | 26.92 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 2        | 26.75  | 26.82 | 26.78 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 3        | 26.65  | 26.75 | 26.71 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 4        | 26.55  | 26.65 | 26.59 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 5        | 26.38  | 26.55 | 26.46 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 6        | 26.11  | 26.38 | 26.26 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 7        | 25.46  | 26.11 | 25.80 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 8        | 24.34  | 25.45 | 25.08 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |

| net# | amin | amax | aaavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 64.0 | 49.4  | 00.0  | 04.2  | 01.0  | -22.0 | 06.1  | -10.2 | 00668 | 01469 |
| 1    | 00.0 | 62.0 | 58.2  | 00.0  | 01.9  | 01.7  | -00.4 | 09.9  | 04.2  | 00178 | 00416 |
| 2    | 56.0 | 59.0 | 57.0  | 01.6  | 01.9  | 01.8  | 03.5  | 10.6  | 07.4  | 00100 | 00232 |
| 3    | 49.0 | 58.0 | 53.0  | 01.4  | 01.6  | 01.5  | 04.1  | 11.0  | 07.0  | 00112 | 00251 |
| 4    | 47.0 | 52.0 | 48.9  | 01.2  | 01.6  | 01.4  | 05.0  | 12.2  | 08.0  | 00088 | 00186 |
| 5    | 44.0 | 50.0 | 46.4  | 01.1  | 01.4  | 01.3  | 05.2  | 09.3  | 07.4  | 00099 | 00207 |
| 6    | 40.0 | 46.0 | 42.7  | 01.1  | 01.4  | 01.2  | 05.0  | 09.7  | 07.4  | 00101 | 00208 |
| 7    | 38.0 | 44.0 | 41.2  | 01.1  | 01.2  | 01.1  | 05.0  | 09.9  | 07.4  | 00101 | 00203 |
| 8    | 36.0 | 43.0 | 39.4  | 00.9  | 01.2  | 01.0  | 03.7  | 08.4  | 05.9  | 00127 | 00254 |

Environmental Parameters

Time 14:19:45  
 Pressure -1.6 m  
 Temp 16.05 C  
 Salinity 9.73 o/oo  
 Density 6.394  
 Oxygen  
 Fluoresc.  
 LightXmis  
 Irradiance

Net Operation

Net\_Num 10  
 OpenTime 6.8 min  
 Vol\_Filtered 194.3 m3  
 Angle 31 deg  
 Flow\_Counts 93  
 Hor\_Vel 1.5 kts  
 Vert\_Vel 7.4 m/min  
 Battery 20.3 V

Net - Ship Position

Latitude 32N 48.4500  
 Longitude 124W 3.049  
 Net\_Dist 335.6 m  
 Total\_Dist 4804.7 m

Program Settings

Reset  
 Baud Rate 2400  
 Sample Rate 4.0 sec  
 Printer Off

Processed

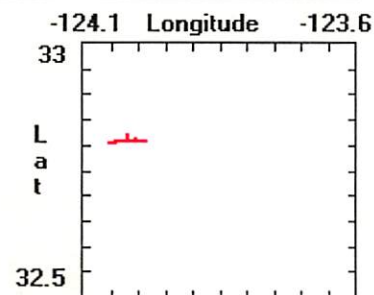
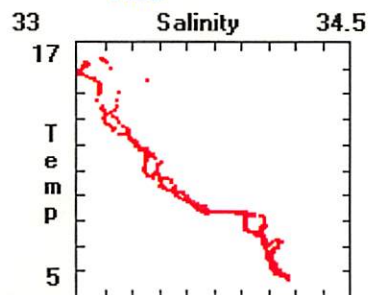
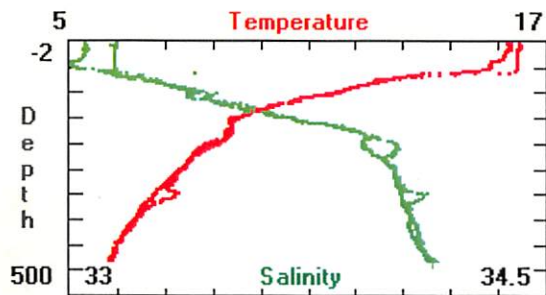
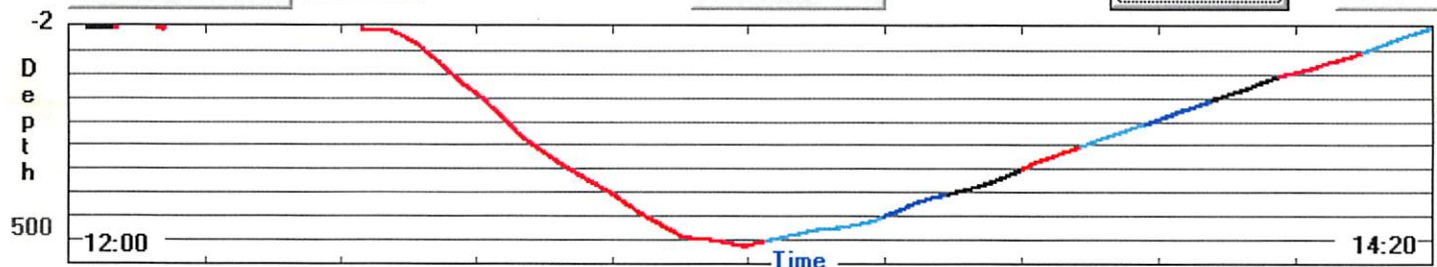
File Name None  
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 Acquisition Ended. trys = 0

Step Net

Increment Net#

Pause Acqui

End Acqui



Event No: 752

Stat: 154.5397

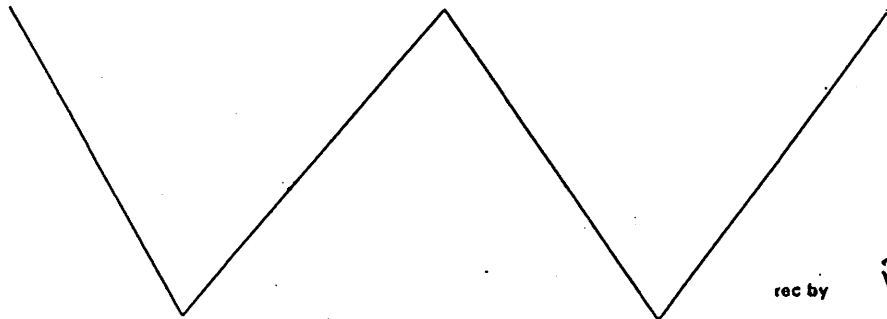
Revised 10/94

MOCNESS DATA SHEET

| CRUISE    | STATION        | HAUL | DATE (DST EST GMT) | MOCNESS TYPE  |
|-----------|----------------|------|--------------------|---------------|
| CCE-P0605 | Cycle 5, tow 3 | 24   | 3 June 2006 PDT    | 1/4M (1M) 10M |

|  | START                         | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE |
|--|-------------------------------|----------|------------|-------|-------|------------|-----------|
| LATITUDE                                     | 32°N<br>35.605<br>32.5935     | 32.6108  | NET 0 OPEN | 12:56 | ∅     | 1208       | 202 μm    |
| LONGITUDE                                    | 124°W<br>124.1164<br>124.1945 | 124.2597 | NET 1 OPEN | 13:30 | 448   | 233        |           |
| DEPTH  | 4295                          |          | NET 2 OPEN | 13:37 | 399   | 230        |           |
| COMMENTS<br>T 16.53<br>S 33.12<br><br>✓ 20.5 |                               |          | NET 3 OPEN | 13:44 | 350   | 248        |           |
|  |                               |          | NET 4 OPEN | 13:51 | 299   | 260        |           |
|  |                               |          | NET 5 OPEN | 13:58 | 248   | 215        |           |
|  |                               |          | NET 6 OPEN | 14:04 | 200   | 277        |           |
|  |                               |          | NET 7 OPEN | 14:12 | 151   | 258        |           |
|  |                               |          | NET 8 OPEN | 14:19 | 100   | 252        |           |
|  |                               |          | NET 9 OPEN | 14:26 | 51    | 233        |           |
|  |                               |          | SURFACE    | 14:33 | 0     |            |           |

TOW PROFILE



rec by

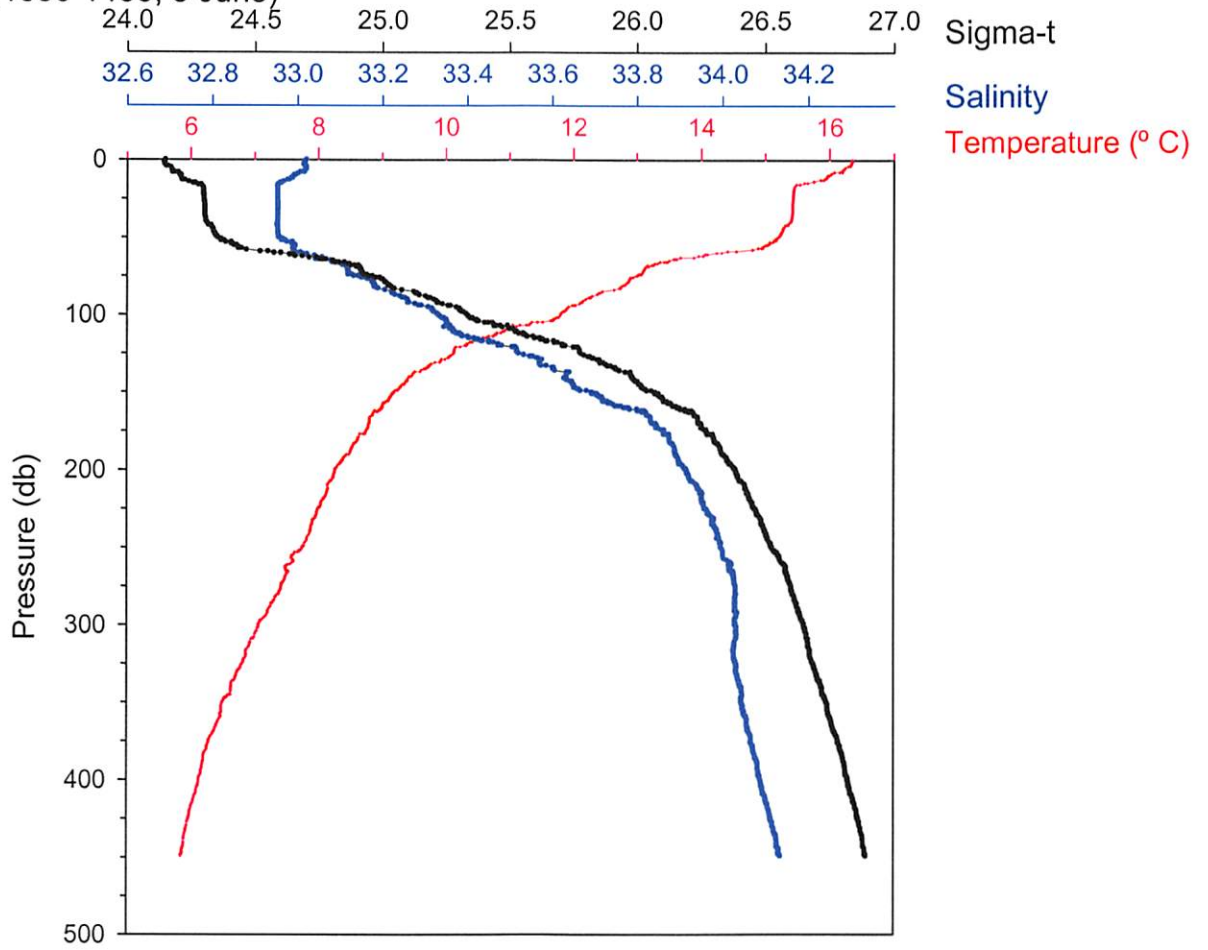
PD + JE

File names: .pro .raw .tab



# MOCNESS - Tow 24

Cycle 5, Tow 3 (1330-1433, 3 June)



TOW24.TAB

M-05-003  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -02.2 | 461.6 | 228.8 | 05.8 | 18.3 | 09.2 | 05.7  | 18.3  | 09.1  | 00.02 | 50.00 | 32.78 |
| 1    | -00.6 | 448.4 | 412.3 | 05.9 | 18.2 | 06.0 | 05.8  | 18.2  | 06.0  | 00.20 | 50.00 | 33.48 |
| 2    | 350.2 | 398.9 | 374.3 | 06.1 | 06.5 | 06.3 | 06.1  | 06.5  | 06.3  | 34.05 | 34.09 | 34.07 |
| 3    | 299.4 | 349.5 | 328.9 | 06.5 | 07.1 | 06.8 | 06.5  | 07.0  | 06.7  | 34.03 | 34.05 | 34.04 |
| 4    | 248.7 | 298.2 | 272.3 | 07.1 | 07.8 | 07.4 | 07.1  | 07.7  | 07.4  | 34.00 | 34.04 | 34.02 |
| 5    | 200.2 | 247.5 | 223.1 | 07.8 | 08.3 | 08.0 | 07.8  | 08.2  | 08.0  | 33.92 | 34.00 | 33.96 |
| 6    | 151.0 | 200.1 | 173.8 | 08.3 | 09.2 | 08.7 | 08.2  | 09.1  | 08.7  | 33.70 | 33.91 | 33.83 |
| 7    | 100.3 | 150.7 | 123.4 | 09.2 | 11.8 | 10.3 | 09.2  | 11.8  | 10.3  | 33.33 | 33.69 | 33.49 |
| 8    | 51.1  | 99.0  | 72.4  | 11.8 | 15.2 | 13.3 | 11.8  | 15.2  | 13.3  | 32.96 | 33.33 | 33.12 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|

| irradavg | irradmin | irradmax |       |       |       |       |       |       |       |      |      |      |
|----------|----------|----------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| 0        | -01.43   | 36.77    | 25.25 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 1        | -01.29   | 36.76    | 26.34 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 2        | 26.74    | 26.82    | 26.78 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 3        | 26.65    | 26.74    | 26.70 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 4        | 26.52    | 26.65    | 26.59 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 5        | 26.39    | 26.52    | 26.45 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 6        | 26.08    | 26.38    | 26.25 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 7        | 25.33    | 26.07    | 25.72 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |
| 8        | 24.37    | 25.33    | 24.87 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0 | 00.0 | 00.0 |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | 00.0 | 67.0 | 51.2 | 00.0  | 05.1  | 00.9  | -24.7 | 05.0  | -12.9 | 00523 | 01208 |
| 1    | 00.0 | 56.0 | 50.9 | 00.0  | 01.6  | 01.4  | -01.5 | 12.1  | 06.7  | 00109 | 00233 |
| 2    | 52.0 | 57.0 | 54.9 | 01.4  | 01.8  | 01.6  | 03.6  | 10.4  | 07.3  | 00101 | 00230 |
| 3    | 55.0 | 59.0 | 56.4 | 01.4  | 02.0  | 01.7  | 02.9  | 12.8  | 07.0  | 00106 | 00248 |
| 4    | 57.0 | 60.0 | 58.5 | 01.6  | 02.0  | 01.9  | 01.7  | 12.0  | 07.0  | 00108 | 00260 |
| 5    | 57.0 | 60.0 | 58.1 | 01.8  | 02.0  | 01.9  | 05.4  | 11.0  | 08.1  | 00090 | 00215 |
| 6    | 57.0 | 60.0 | 58.6 | 01.8  | 02.0  | 01.9  | 03.9  | 08.7  | 06.5  | 00114 | 00277 |
| 7    | 57.0 | 60.0 | 58.1 | 01.6  | 02.0  | 01.9  | 02.7  | 11.8  | 07.0  | 00106 | 00258 |
| 8    | 58.0 | 64.0 | 60.9 | 01.9  | 02.2  | 02.0  | 03.3  | 11.4  | 07.3  | 00103 | 00252 |

Environmental Parameters

Time: 14:33:18  
 Pressure: -0.1 m  
 Temp: 16.35 C  
 Salinity: 33.02 o/oo  
 Density: 24.148  
 Oxygen:   
 Fluoresc.:   
 LightXmis:   
 Irradiance:

Net Operation

Net\_Num: 9  
 OpenTime: 6.7 min  
 Vol\_Filtered: 233.4 m3  
 Angle: 51 deg  
 Flow\_Counts: 160  
 Hor\_Vel: 1.6 kts  
 Vert\_Vel: 10.1 m/min  
 Battery: 20.1 V

Net - Ship Position

Latitude: 32N 36.646  
 Longitude: 124W 15.58  
 Net\_Dist: 455.4 m  
 Total\_Dist: 7051.1 m

Program Settings

Reset  
 Baud Rate: 2400  
 Sample Rate: 4.0 sec  
 Printer: Off

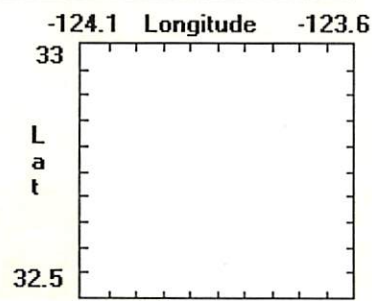
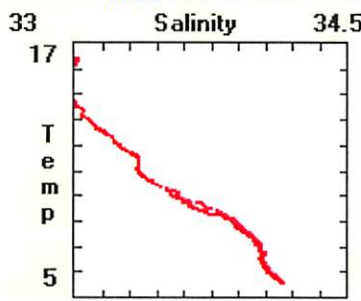
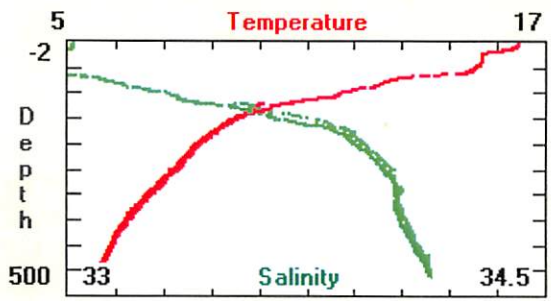
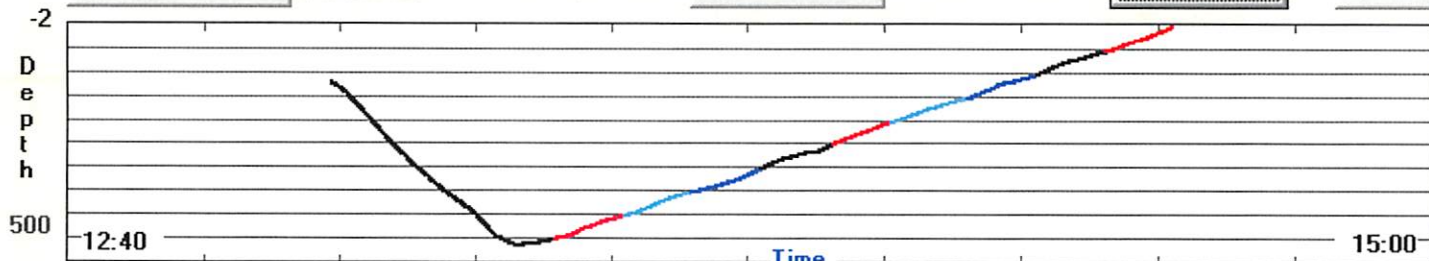
Processed File Name: C:\MOCNESS\MOCDATA\TOW24.PRO  
 Raw File Name: C:\MOCNESS\MOCDATA\TOW24.raw  
 Acquisition Ended. trys = 0

Step Net

Increment Net#

Pause Acqui

End Acqui



Event No: 764

Start: 154.9894

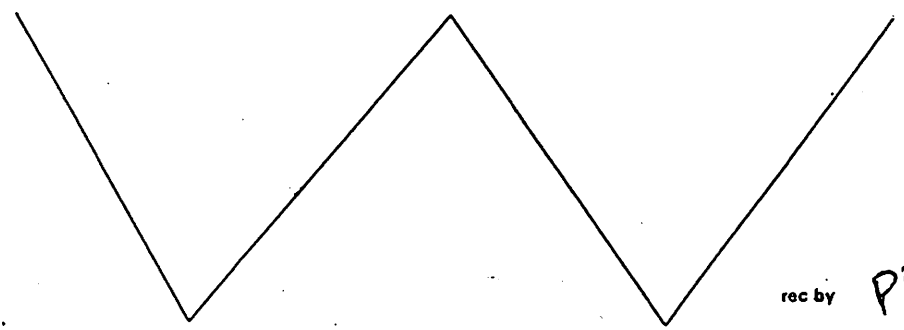
Revised 10/94

MOCNESS DATA SHEET

| CRUISE    | STATION        | HAUL | DATE (DST EST GMT) | MOCNESS TYPE |
|-----------|----------------|------|--------------------|--------------|
| CCE-P0605 | Cycle 5, tow A | 25   | 3-4 June 2006 PDT  | 1/4M (M) 10M |

|  | START              | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE |
|--|--------------------|----------|------------|-------|-------|------------|-----------|
| LATITUDE   | 32.21°<br>32.4967  | 32.5097  | NET 0 OPEN | 13:43 | 0     | 870        | 202µm     |
| LONGITUDE  | 124.13<br>124.2190 | 124.2692 | NET 1 OPEN | 00:10 | 447   | 204        |           |
| DEPTH  | 4372               |          | NET 2 OPEN | 00:17 | 399   | 248        |           |
| COMMENTS<br>T - 16.47<br>S - 33.02<br>wind 20-22 kn<br>35°<br>V - 20.2 |                    |          | NET 3 OPEN | 00:25 | 350   | 211        |           |
|  |                    |          | NET 4 OPEN | 00:32 | 300   | 212        |           |
|  |                    |          | NET 5 OPEN | 00:38 | 250   | 231        |           |
|  |                    |          | NET 6 OPEN | 00:45 | 200   | 245        |           |
|  |                    |          | NET 7 OPEN | 00:53 | 150   | 232        |           |
|  |                    |          | NET 8 OPEN | 00:59 | 100   | 218        |           |
|  |                    |          | NET 9 OPEN | 01:06 | 50    | 1836       |           |
|  |                    |          | SURFACE    | 01:12 | 0     |            |           |

TOW PROFILE



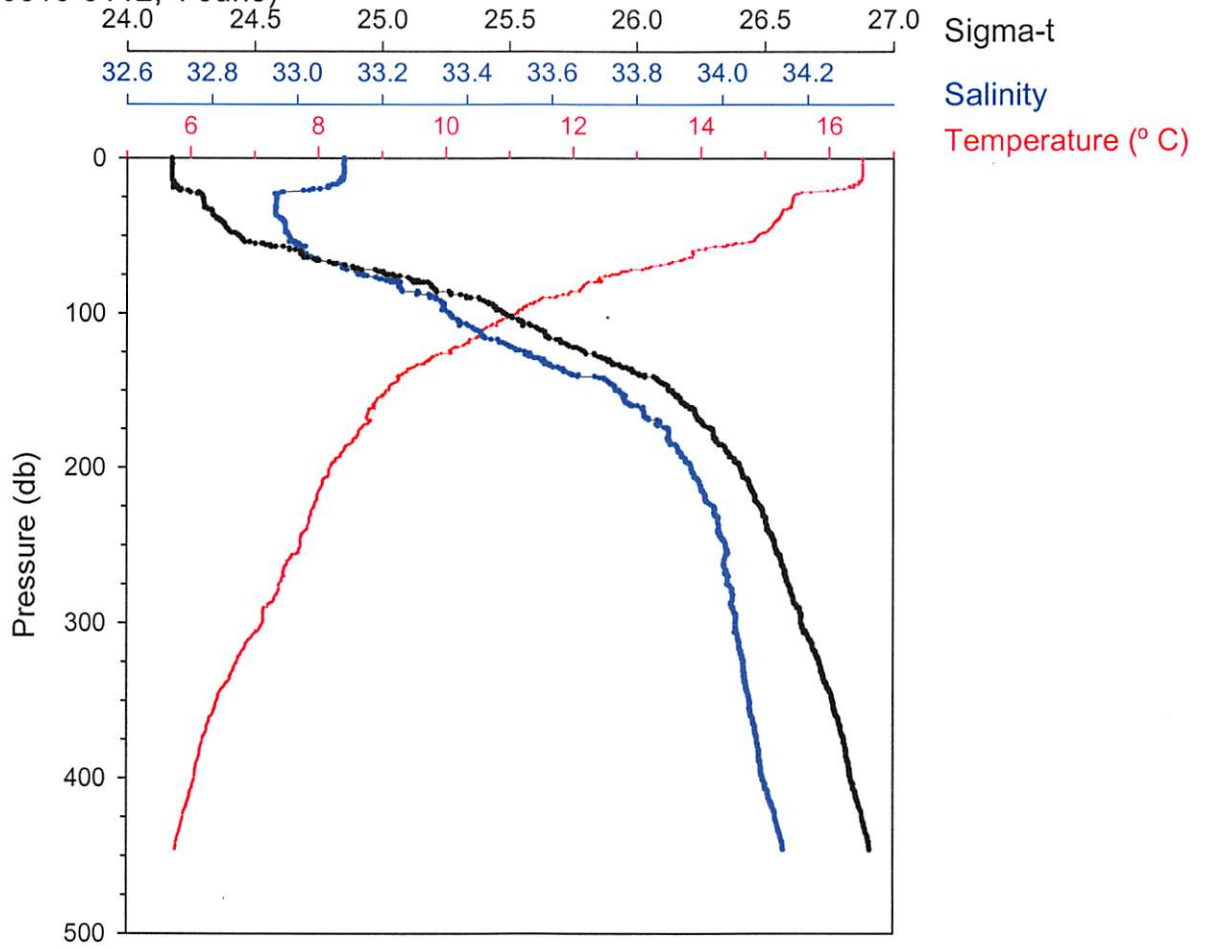
rec by PD WJE

File names: .pro .raw .tab

net 0 did not trigger

# MOCNESS - Tow 25

Cycle 5, Tow 4 (0010-0112, 4 June)





Environmental Parameters

Net Operation

Net - Ship Position

Program Settings

Time: 01:12:32  
 Pressure: 0.4 m  
 Temp: 16.52 C  
 Salinity: 33.11 o/oo  
 Density: 24.177  
 Oxygen:   
 Fluoresc.:   
 LightXmis:   
 Irradiance:

Net\_Num: 9  
 OpenTime: 6.1 min  
 Vol\_Filtered: 183.6 m3  
 Angle: 60 deg  
 Flow\_Counts: 117  
 Hor\_Vel: 1.5 kts  
 Vert\_Vel: 11.9 m/min  
 Battery: 20.0 V

Latitude: 32N 30.584  
 Longitude: 124W 16.15  
 Net\_Dist: 322.4 m  
 Total\_Dist: 5412.4 m

Reset  
 Baud Rate: 2400  
 Sample Rate: 4.0 sec  
 Printer: Off

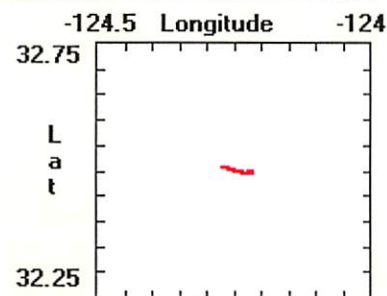
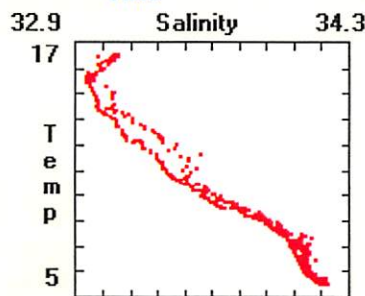
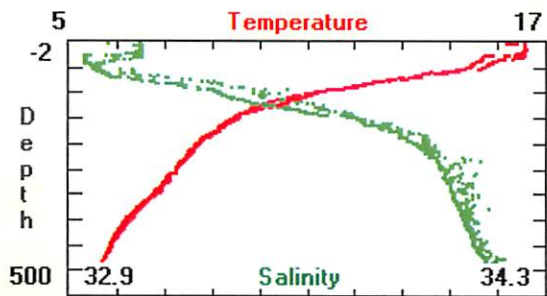
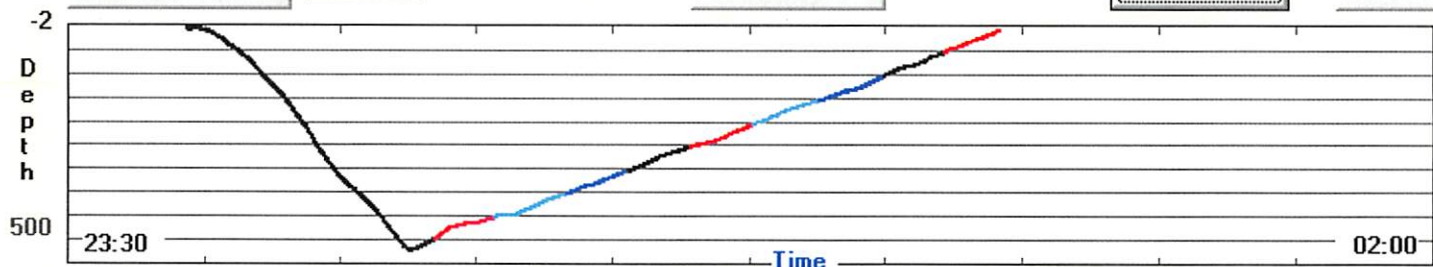
Processed File Name: C:\MOCNESS\MOCDATA\TOW25.PRO  
 Raw File Name: C:\MOCNESS\MOCDATA\TOW25.raw  
 Acquisition Ended. trys = 0

Step Net

Increment Net#

Pause Acqui

End Acqui



Tow 25

TOW25.TAB

M-05-004  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1    | -00.5 | 445.5 | 412.6 | 05.8 | 16.0 | 06.0 | 05.7  | 16.0  | 06.0  | 34.10 | 50.00 | 34.27 |
| 2    | 350.7 | 397.9 | 377.3 | 06.1 | 06.4 | 06.2 | 06.0  | 06.4  | 06.2  | 34.07 | 34.09 | 34.08 |
| 2    | 350.7 | 397.9 | 377.3 | 06.1 | 06.4 | 06.2 | 06.0  | 06.4  | 06.2  | 34.07 | 34.09 | 34.08 |
| 3    | 300.5 | 349.6 | 324.9 | 06.4 | 07.1 | 06.7 | 06.4  | 07.1  | 06.7  | 34.03 | 34.07 | 34.05 |
| 4    | 249.9 | 299.9 | 273.2 | 07.1 | 07.7 | 07.4 | 07.1  | 07.7  | 07.4  | 34.00 | 34.03 | 34.02 |
| 5    | 200.7 | 249.2 | 227.8 | 07.7 | 08.2 | 07.9 | 07.7  | 08.2  | 07.9  | 33.93 | 34.01 | 33.97 |
| 6    | 151.1 | 199.5 | 173.7 | 08.2 | 09.1 | 08.7 | 08.2  | 09.0  | 08.6  | 33.76 | 33.93 | 33.85 |
| 7    | 100.3 | 149.9 | 127.5 | 09.1 | 11.1 | 09.9 | 09.1  | 11.1  | 09.9  | 33.36 | 33.75 | 33.56 |
| 8    | 50.2  | 99.1  | 74.4  | 11.1 | 14.9 | 12.9 | 11.1  | 14.9  | 12.9  | 32.98 | 33.35 | 33.16 |

| net# | simin | simax | siavg | cmin  | cmax  | cavg  | fmin  | fmax  | favg  | oxmin    | oxmax    | oxavg    |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|----------|
|      |       |       |       |       |       |       |       |       |       | irradmin | irradmax |          |
|      |       |       |       |       |       |       |       |       |       |          |          | irradavg |
| 1    | 26.83 | 37.33 | 26.97 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0     |
| 2    | 26.77 | 26.83 | 26.81 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0     |
| 2    | 26.77 | 26.83 | 26.81 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0     |
| 3    | 26.64 | 26.76 | 26.71 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0     |
| 4    | 26.54 | 26.64 | 26.59 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0     |
| 5    | 26.41 | 26.54 | 26.49 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0     |
| 6    | 26.14 | 26.40 | 26.27 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0     |
| 7    | 25.48 | 26.12 | 25.85 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0     |
| 8    | 24.44 | 25.47 | 24.99 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.0     | 00.0     | 00.0     |

| net# | amin | amax | aavg | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1    | 00.0 | 53.0 | 45.7 | 00.1  | 01.5  | 01.2  | -00.1 | 17.4  | 07.1  | 00101 | 00204 |
| 2    | 46.0 | 52.0 | 49.2 | 01.1  | 01.6  | 01.3  | -03.4 | 12.2  | 06.2  | 00116 | 00248 |
| 2    | 46.0 | 52.0 | 49.2 | 01.1  | 01.6  | 01.3  | -03.4 | 12.2  | 06.2  | 00116 | 00248 |
| 3    | 47.0 | 54.0 | 50.4 | 01.2  | 01.6  | 01.4  | 02.5  | 10.4  | 07.5  | 00100 | 00211 |
| 4    | 49.0 | 55.0 | 51.1 | 01.4  | 01.6  | 01.5  | 04.1  | 12.0  | 07.5  | 00099 | 00212 |
| 5    | 50.0 | 55.0 | 52.5 | 01.4  | 01.8  | 01.5  | 02.5  | 10.5  | 07.0  | 00104 | 00231 |
| 6    | 52.0 | 59.0 | 55.7 | 01.5  | 01.8  | 01.7  | 04.1  | 10.3  | 07.0  | 00108 | 00244 |
| 7    | 52.0 | 57.0 | 54.5 | 01.5  | 01.8  | 01.6  | 02.7  | 11.2  | 07.2  | 00102 | 00232 |
| 8    | 50.0 | 55.0 | 52.2 | 01.4  | 01.8  | 01.5  | 00.4  | 11.6  | 07.7  | 00098 | 00218 |

Event #: 781  
 Start: 155.629

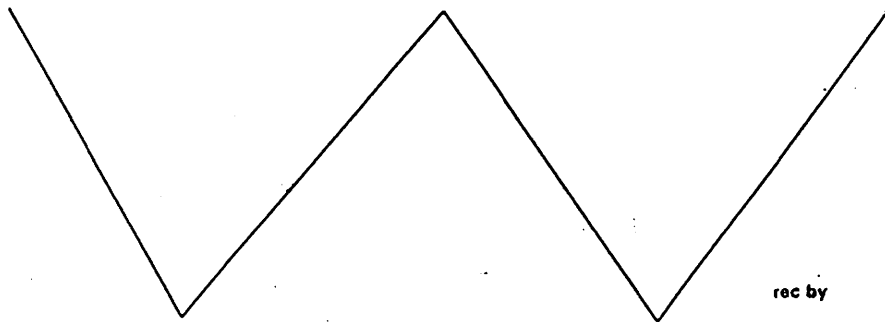
Revised 10/94

MOCNESS DATA SHEET

| CRUISE   | STATION        | HAUL | DATE (DST EST GMT) | MOCNESS TYPE  |
|----------|----------------|------|--------------------|---------------|
| CCEP0605 | Cycle 5, Tow 5 | 20   | 4-June, 2006 PDT   | 1/4M (1M) 10M |

|  | START                      | END      |            | TIME  | DEPTH | VOL FILTER | MESH SIZE             |
|--|----------------------------|----------|------------|-------|-------|------------|-----------------------|
| LATITUDE   | 32 N<br>23.029<br>32.3889  | 32.3820  | NET 0 OPEN | 14:42 |       | 980        | 202µm                 |
| LONGITUDE  | 124 W<br>15.76<br>124.2620 | 124.3082 | NET 1 OPEN | 15:53 | 300   | 510        | No pres. Net 1 sample |
| DEPTH  | 4263                       |          | NET 2 OPEN | 15:50 | 200   | 155        |                       |
| COMMENTS<br>T - 16.64<br>S - 33.11<br><br>V - 20.2 |                            |          | NET 3 OPEN | 15:55 | 173   | 137        |                       |
|  |                            |          | NET 4 OPEN | 15:59 | 151   | 144        |                       |
|  |                            |          | NET 5 OPEN | 16:04 | 123   | 113        |                       |
|  |                            |          | NET 6 OPEN | 16:07 | 101   | 151        |                       |
|  |                            |          | NET 7 OPEN | 16:13 | 75    | 108        |                       |
|  |                            |          | NET 8 OPEN | 16:16 | 49    | 127        |                       |
|  |                            |          | NET 9 OPEN | 16:20 | 25    | 159        |                       |
|  |                            |          | SURFACE    | 16:25 | 0     |            |                       |

TOW PROFILE



wind 22 knots  
316°

File names:

.pro

.raw

Net #1

Used for  
Live Expts  
Gut Filter.

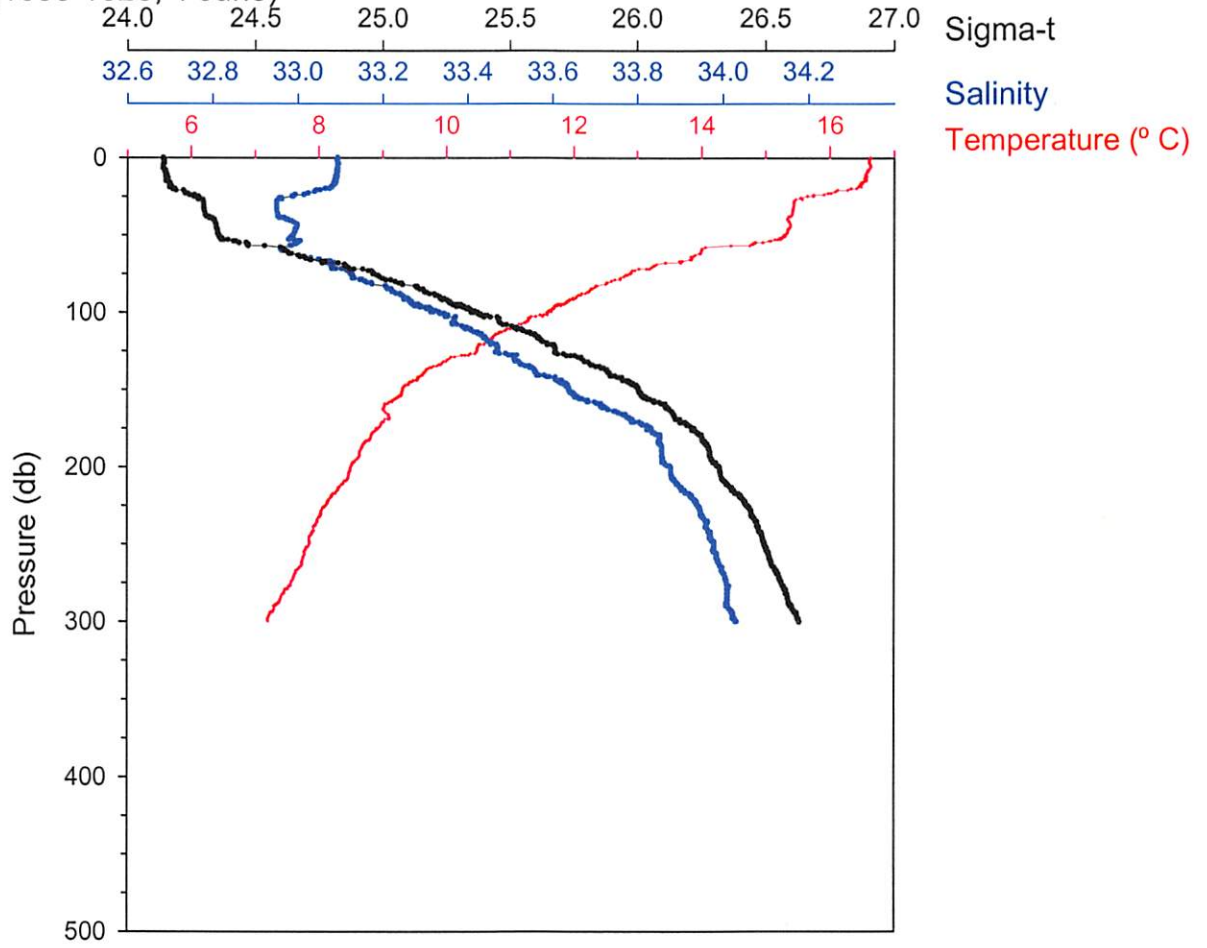
To 300m

Net 1: 300-200 m  
all other  
nets: 25 m. intervals

pres. in Formalin

# MOCNESS - Tow 26

Cycle 5, Tow 5 (1533-1625, 4 June)







Environmental Parameters

Time: 16:25:19  
 Pressure: -0.9 m  
 Temp: 16.62 C  
 Salinity: 33.09 o/oo  
 Density: 24.142  
 Oxygen:   
 Fluoresc.:   
 LightXmis:   
 Irradiance:

Net Operation

Net\_Num: 9  
 OpenTime: 5.0 min  
 Vol\_Filtered: 158.8 m3  
 Angle: 56 deg  
 Flow\_Counts: 101  
 Hor\_Vel: 1.2 kts  
 Vert\_Vel: 3.2 m/min  
 Battery: 20.0 V

Net - Ship Position

Latitude: 32N 22.920  
 Longitude: 124W 18.50  
 Net\_Dist: 284.1 m  
 Total\_Dist: 4507.3 m

Program Settings

Reset  
 Baud Rate: 2400  
 Sample Rate: 4.0 sec  
 Printer: Off

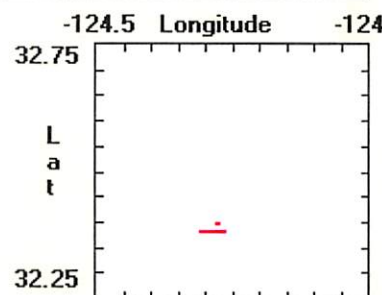
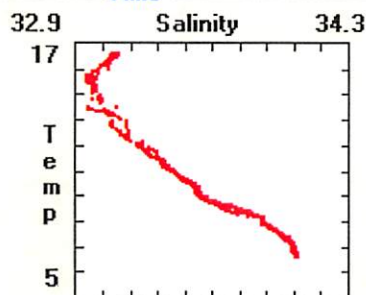
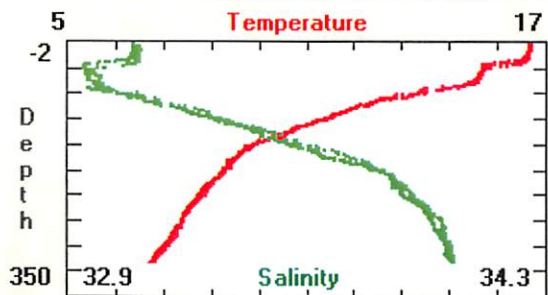
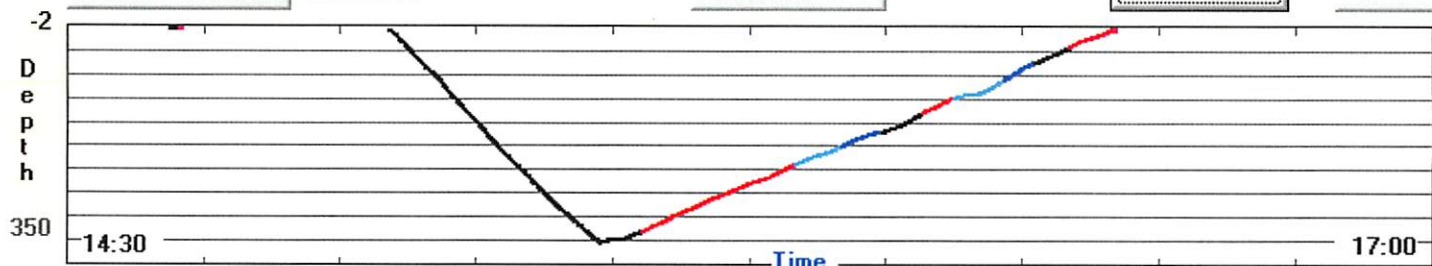
Processed File Name: C:\MOCNESS\MOCDATA\TOW26.PRO  
 Raw File Name: C:\MOCNESS\MOCDATA\TOW26.raw  
 Acquisition Ended. trys = 0

Step Net

Increment Net#

Pause Acqui

End Acqui



Tow 26

Event No: 807

Start: 155.9877

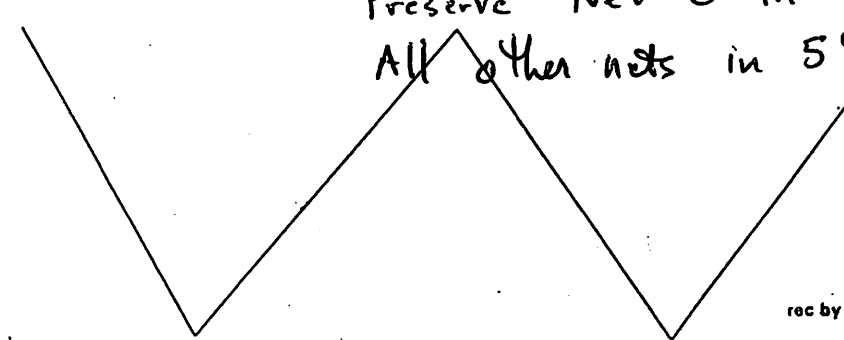
Revised 10/94

**MOCNESS DATA SHEET**

| CRUISE    | STATION        | HAUL | DATE (DST EST GMT) | MOCNESS TYPE  |
|-----------|----------------|------|--------------------|---------------|
| CCE-P0605 | Cycle 5, Tow 6 | 27   | 4-5 June PDT       | 1/4M (1M) 10M |

|  | START            | END      | TIME  | DEPTH | VOL FILTER | MESH SIZE   |
|--|------------------|----------|-------|-------|------------|-------------|
| LATITUDE   | 32N<br>32.2947   | 32.3053  | 23:39 |       | 975        | 202 $\mu$ m |
| LONGITUDE  | 124W<br>124.2559 | 124.2910 | 00:02 | 225   | 284        |             |
| DEPTH  | 4330             |          | 00:11 | 200   | 113        |             |
| COMMENTS<br><br>T - 16.54<br>S - 33.1<br><br>V - 200 |                  |          | 00:15 | 175   | 159        |             |
|  |                  |          | 00:20 | 149   | 152        |             |
|  |                  |          | 00:25 | 135   | 134        |             |
|  |                  |          | 00:29 | 100   | 140        |             |
|  |                  |          | 00:33 | 74    | 105        |             |
|  |                  |          | 00:37 | 50    | 169        |             |
|  |                  |          | 00:41 | 25    | 119        |             |
|  |                  |          | 00:45 | 0     |            |             |
|  |                  |          |       |       |            |             |
|  |                  |          |       |       |            |             |

TOW PROFILE



Preserve Net 0 in 95% EtOH  
All other nets in 5% Formalin

rec by

Wind  
20 knots  
3430

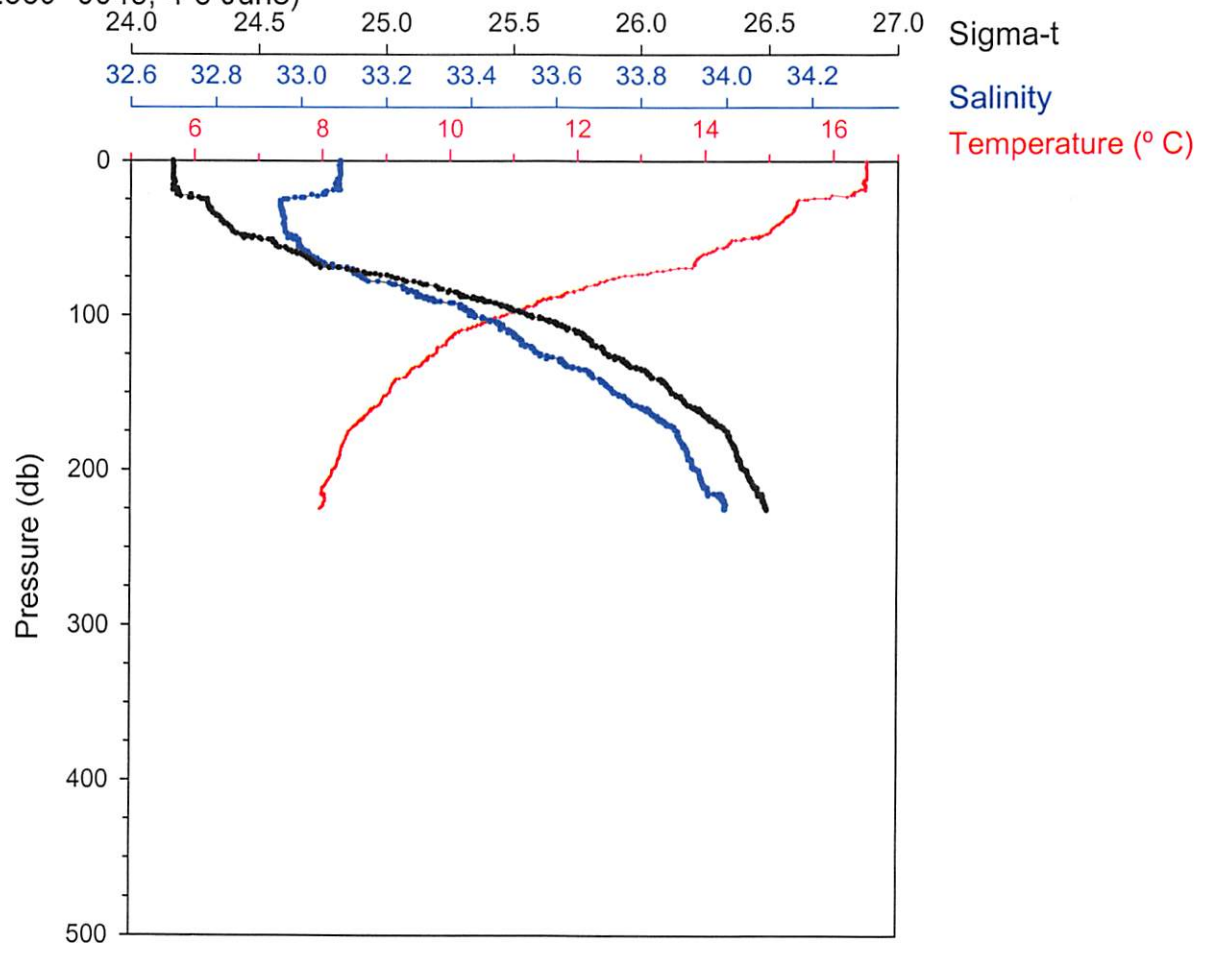
File names: .pro .raw .tab

Target depth 225m  
25 m strata

Net 7 no triggers

MOCNESS - Tow 27

Cycle 5, Tow 6 (2339 -0045, 4-5 June)



M-05-006  
08/05/06  
RV Knorr

MOCNESS STATISTICAL SUMMARY

| net# | pmin  | pmax  | pavg  | tmin | tmax | tavg | thmin | thmax | thavg | smin  | smax  | savg  |
|------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 0    | -00.9 | 245.2 | 135.4 | 07.8 | 16.6 | 10.2 | 07.7  | 16.5  | 10.2  | 00.01 | 50.00 | 31.94 |
| 1    | 199.9 | 225.5 | 214.8 | 08.0 | 08.2 | 08.0 | 07.9  | 08.2  | 08.0  | 33.93 | 34.00 | 33.97 |
| 2    | 175.0 | 199.1 | 187.9 | 08.2 | 08.4 | 08.3 | 08.2  | 08.4  | 08.3  | 33.89 | 33.93 | 33.91 |
| 3    | 149.8 | 173.8 | 163.3 | 08.4 | 09.1 | 08.7 | 08.4  | 09.0  | 08.7  | 33.74 | 33.88 | 33.82 |
| 4    | 125.5 | 148.7 | 135.5 | 09.1 | 09.7 | 09.4 | 09.1  | 09.7  | 09.4  | 33.56 | 33.73 | 33.66 |
| 5    | 100.0 | 124.5 | 112.0 | 09.8 | 10.8 | 10.2 | 09.8  | 10.8  | 10.2  | 33.40 | 33.56 | 33.49 |
| 7    | 49.0  | 72.7  | 59.7  | 13.1 | 14.7 | 14.1 | 13.1  | 14.7  | 14.1  | 32.98 | 33.13 | 33.03 |
| 0    | -00.9 | 245.2 | 135.4 | 07.8 | 16.6 | 10.2 | 07.7  | 16.5  | 10.2  | 00.01 | 50.00 | 31.94 |
| 8    | 25.3  | 49.5  | 36.1  | 14.8 | 15.5 | 15.2 | 14.8  | 15.5  | 15.2  | 32.95 | 32.98 | 32.96 |

| net# | simin | simax | siavg | cmin | cmax | cavg | fmin | fmax | favg | oxmin | oxmax | oxavg |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
| 0    |       |       |       |      |      |      |      |      |      |       |       |       |
| 1    |       |       |       |      |      |      |      |      |      |       |       |       |
| 2    |       |       |       |      |      |      |      |      |      |       |       |       |
| 3    |       |       |       |      |      |      |      |      |      |       |       |       |
| 4    |       |       |       |      |      |      |      |      |      |       |       |       |
| 5    |       |       |       |      |      |      |      |      |      |       |       |       |
| 7    |       |       |       |      |      |      |      |      |      |       |       |       |
| 0    |       |       |       |      |      |      |      |      |      |       |       |       |
| 8    |       |       |       |      |      |      |      |      |      |       |       |       |

| net# | irradavg | irradmin | irradmax | amin  | amax  | aavg  | spmin | spmax | spavg | armin | armax | aravg | #obs  | vol   |
|------|----------|----------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0    | -01.09   | 37.32    | 24.41    | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00374 | 00975 |
| 1    | 26.41    | 26.49    | 26.47    | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00135 | 00284 |
| 2    | 26.34    | 26.40    | 26.37    | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00055 | 00113 |
| 3    | 26.12    | 26.33    | 26.24    | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00073 | 00159 |
| 4    | 25.87    | 26.12    | 26.00    | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00069 | 00152 |
| 5    | 25.56    | 25.86    | 25.75    | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00061 | 00134 |
| 7    | 24.47    | 24.92    | 24.65    | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00050 | 00105 |
| 0    | -01.09   | 37.32    | 24.41    | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00374 | 00975 |
| 8    | 24.30    | 24.46    | 24.35    | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00.00 | 00071 | 00170 |

Environmental Parameters Net Operation Net - Ship Position Program Settings

|            |            |              |            |                             |                              |             |
|------------|------------|--------------|------------|-----------------------------|------------------------------|-------------|
| Time       | 00:45:18   | Net_Num      | 9          | Latitude                    | 32N 18.3200                  | Reset       |
| Pressure   | -0.2 m     | OpenTime     | 3.5 min    | Longitude                   | 124W 17.46                   | Baud Rate   |
| Temp       | 16.51 C    | Vol_Filtered | 119.1 m3   | Net_Dist                    | 200.2 m                      | 2400        |
| Salinity   | 33.09 o/oo | Angle        | 56 deg     | Total_Dist                  | 4078.3 m                     | Sample Rate |
| Density    | 24.165     | Flow_Counts  | 79         | Processed File Name         | C:\MOCNESS\MOCDATA\TOW27.PRO |             |
| Oxygen     |            | Hor_Vel      | 1.6 kts    | Raw File Name               | C:\MOCNESS\MOCDATA\TOW27.raw |             |
| Fluoresc.  |            | Vert_Vel     | 10.3 m/min | Acquisition Ended. trys = 0 |                              |             |
| LightXmis  |            | Battery      | 19.9 V     |                             |                              |             |
| Irradiance |            |              |            |                             |                              |             |

Step Net  Increment Net#  Pause Acqui  End Acqui

