

CRUISE
NUMBER

9829

DAILY LOG
INSTITUTE OF OCEAN SCIENCES
OCEAN PHYSICS

DATE

Aug 24 - Sep 20, 1998

VESSEL

John P Tully

PROJECT

Line P + Open Ocean Enclosures

Symphonie fantastique op 14
le Carnaval des Animaux

Deutsche Grammophon

24+25 August Load Tully for Line P. 9829

fluorometer	BNC	red	orange	} cable to thermo.
		black	white	
	BNC	red	black	
		black	white	

Duck tape Nashua 398 2 in x 60 yards

DAILY LOG

OCEAN PHYSICS

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YEAR		MONTH			SHIP			CRUISE					PAGE		OF	
1998		Aug			Tully			9829					1		1	
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS		
26	SI03	ROS	0057	BE	1	48 35.67	123 30.074		222		1-16	16		1800 local BE Time SAANICH INLET		
26	SI03	ROS	0110	BO	1	47 17.43	123 29.97			211				Something wrong with GPS		
26	SI03	ROS	0132	EN	1	47 17.54	123 29.89									
26	SI03	CTD	0303	BE	2	48 35.87	123 29 73		216					2nd test in Saanich Inlet Changed primary T +		
26	SI03	CTD	0308	BO	2	48 35.87	123 29.70			200		Ø		Sal. Sensors GPS better.		
26	SI03	CTD	0312	EN	2	48 35.85	123 29.73							Good cast		
26	JF1	loop	1351	BE	3	48 16.216	123 30.085		164		Ø	Ø		PAR & Fluor sensors removed		
26	JF2	loop	1549	BE	4	48 18.028	123 59.790		187		Ø	Ø				
27	JF3	Loop	0124	BE	5	48 26.998	124 29.730		221		-	-		Loops Taken		
27	JF4	Loop	03135	BE	6	48 32.220	124 59.402		52		-	-		Loops Taken		
27	P1	ROS	0552	BE	7	48 34.07	125 29.36		106.	100.	-			Loops Taken.		
27	P2	CTD	0834	BE	8	48 36. 10	126 00 11		118							
27	P2	CTD	0837	BO	8	48 36. 13	126 00.08			111	Ø	Ø				
27	P2	CTD	0840	EN	8	48 36. 15	126 00.06							loop taken		

CAST TYPE -

BOT -
CTD -
MOR -bottle cast
ctd
mooringROS -
NET -
DRF -rosette
net haul
drifter

USW - sea water loop

TIME CODE -

BE -
BO -
EN -beginning time of cast
bottom time of cast
end of castDE -
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RE -deployment time
messenger release
recover mooring

POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

Changed Rosette latching unit. Tested bottle 3. OK

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YEAR 1998			MONTH AUGUST			SHIP JOHN P TULLY			CRUISE 9829					PAGE 2 OF	
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS	
27	P3	CTD	1031	BE	9	48 37.67	126 20.19		736					loops taken	
27	P3	CTD	1047	BO	9	48 37.78	126 20.20			738					
27	P3	CTD	1101	EN	9										
27	P4	BOT	1242	BE	10	48 39 05	126 39 905		1314	1000				STRING (TO TENSION) OUT 1000m KEVLAR	
27	P4	BOT	1400	EN	11	48 39 100	126 40 650		1314	100				PRIM PROD CAST 100, 75, 33, 24, 13, 3, 2	
						PAR and FLUR sensors put on Rosette								trans. lns cleaned.	
27	P4	ROS	1754		12	48 39.11	126 40 27		1317		17-34	18		bottle 3 did not close	
						PAR and FLUR sensors removed									
27	P4	ROS	2104	BE	13	48 39 06	126 40.21		1317					loops taken	
27	P4	ROS	2127	BO	13	48 39.16	126 40.41			1326	35-51	17		Shipped at 192m went down because of twist in cable	
27	P4	ROS	2212	EN	13	48 39.41	126 40.75								
28	P5	CTD	0109	BE	14	48 41.49	127 10.33		2100					LOOPS TAKEN	
28	P5	CTD	0134	BO	14	48 41.32	127 10.62			1503					
28	P5	CTD	0202	EN	14	48 41.16	127 10.93								
28	P6	CTD	0421	BE	15	48 44.62	127 40.17		2550					on BOARD	
			0442	BO	15	48 44.72	127 40.31			1501.				loops taken @ 04:26	

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DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS	
28	P7	CTD	0732	BE	16	48° 46.78	128° 10.15		2511						
28	P7	CTD	0758	BO	16	48° 47.15	128° 10.44			1506	Ø	Ø			loops taken
28	P7	CTD	0829	EN	16	48° 47.66	128° 10.69		2505						Spooling problems @ 200m on way up.
28	P8	BONGO	1057	BE	17	48° 49.045	128° 39.880								
28	P8	Bongo	1101	BO	17	48° 49.075	128° 39.957								
28	P8	ROS	1127	BE	18	48° 49.02	128° 40.17	✓	2528						Loops TAKEN
28	P8	ROS	1210	BO	18	48° 49.40	128° 40.31			2535	52-71	20			
28	P8	ROS	1312	EN	18	48° 50.04	128° 41.39								
28	P9	CTD	1543	BE	19	48° 51.24	129° 10.11		2368.						Loops taken @ 1548
28	P9		1606	BO	19	48° 51.09	129° 10.15			1504					
28	P9	CTD	1630	EN	19										
28	P10	CTD	1854	BE	20	48° 53.59	129° 40.15		2649			Ø			loops taken @ 1859
28	P10	CTD	1919	BO	20	48° 53.67	129° 40.14		2653	1531					
28	P10	CTD	1944	EN	20	48° 53.62	129° 40.09								
28	P11	CTD	2212	BE	21	48° 55.86	130° 10.18		2762						loops taken
28	P11	CTD	2238	BO	21	48° 55.54	130° 10.34		2759	1508		Ø			
28	P11	CTD	2305	EN	21	48° 55.21	130° 10.64								
CAST TYPE - BOT - bottle cast ROS - rosette USW - sea water loop TIME CODE - BE - beginning time of cast															

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YEAR				MONTH		SHIP				CRUISE					PAGE 4 OF	
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS		
PAR SENSOR AND FLUORIMETER INSTALLED.																
29	P12	ROS	0124	BE	22	48° 58.19	130° 40.17		3015							
29	P12	ROS	0132	BO	22	48° 58.23	130° 40.25			400	72-89	18				
29	P12	ROS	0155	EN	22	48° 58.38	130° 40.52									
29	P12	loops	0200	BE	—	"	"		3240						Nut, Sal, Chl + Proto phyto	
29	P12	ROS	0414	BE	23	48 58.20	130 40.33		2992.		90-111	22.				
			0456	BO	23	48 58.30	130 40.56			3117						
29	P12	NET	0420		24	48 58.152	130 40 071		3249	150					BONGO	
29	P12	BOT	0445	BE	25										PRIMARY PRODUCTION	
29	P12	BOT	0615	EN	25	48 57.705	130 41.111		3013	100					+ 2 PHYTO NET TOWS	
29	P13	CTD	2007	BE	26	49° 02.52	131° 40.10		3020						loops + extra loops taken	
29	P13	CTD	2028	BO	26	49° 02.41	131° 40.28		3060	1508	—	Ø				
29	P13	CTD	2049	EN	26	49° 02.27	131° 40.34		3093							
30	P14	CTD	0149	BE	27	49° 07.37	132° 40.52		3329						Loops + TAKEN	
30	P14	CTD	0210	BO	27	49 07.33	132 41 04			1500						
30	P14	CTD	0228	EN	27	49° 07.28	132 41.54									

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The Dell 320LT old laptop computer hard drive has failed.

P17 CTD removed from Rosette, 100 pounds of weight used below CTD.

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1998		Aug.		Tully		9829		5						
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
30	P15	CTD	0648	BE	28	49 12.06	133 40.01		3410.					begin taken @ 06:55
30	P15	CTD	0711	BO	28	49 12 08	133 39.80			1504				
30	P15	CTD	0734	EN	28	49 12.14	133 39 58							
30	P16	NET		BE	29									
30			1551			PAR and FLUOR sensors on Rosette								cleaned trans. lens.
30	P16	ROS	1816	BE	30	49 16.97	134 40.14		3643		112-129	18.		
30	P16	ROS	1824	BO	30	49 17.04	134 40.14			402				
30	P16	ROS	1847	EN	30	49 17.28	134 39.96							
30	P16	—	1944	—		PAR and FLUORO Sensors removed								
30	P16	ROS	2048	BE	31	49 16.90	134 40.24		3643					GPS time seems to be early by 10 min.
30	P16	ROS	2133	BO	31	49 17.11	134 40.26			3686	130-152	23		
30	P16	ROS	2240	EN	31	49 16.86	134 39.64							
31	P17	CTD	0402	BE	32	49 20.88	135 40 05		3581.					CTD only no Rosette
31	P17	CTD	0428	BO		49 20.79	135 39.90			1505				loops taken.
31	P17	CTD	0443	EN		49 20 68	135 39.85							

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Can 19, 20, 26, 27, 28, 30, 31 have nearest date/time

.56517 .68850

P20 Rosette cast. Bottles sampled without stopping due to high winds and rough seas.

6333 6718

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1998		AUGUST			JOHN P TULLY			9829					6			
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31	P18	CTD	0952	BO	33	49° 26.04	136° 39.94		3843					CTD only FRESH-WARM WATER		
31	P18	CTD	1022	BO	33	49° 25.73	136° 39.92			1510	—	Ø		SALL PRESENT @ ~200m		
31	P18	CTD	1043	EN	33	49° 25.66	136° 39.61							loops taken		
31	P19	CTD	1603	BE	34	49° 29.93	137° 40.35		3939							
31	P19	CTD	1634	BO	34	49° 29.79	137° 40.96			1506				trans. signal on upcast no good inference from cable.		
31	P19	CTD	1655	EN	34	49° 29.90	137° 41.50									
01	P20	CTD	0138	BE	35	49° 33.91	138° 40.11		3980					CTD TO 1500 / ROSETTE		
01	P20	CTD	0156	BO	35	49° 33.77	138° 40.21			1503				CANCELLED - LOOPS TAKEN		
01	P20	CTD	0209	EN	35	49° 33.67	138° 40.31							14.0816 32.6486		
01	P20	BOT	0220	BE	36	49° 33.67	138° 40.35			1000m				30L GOFLO 1RON CAST		
01	P20	NET	0435	BE	37	49° 33.96	138° 39.84			150				BONGO NET		
01	P20	ROS	1425	BE	38	49° 34.44	138° 40.01		3973					DMS ROSETTE cast		
01	P20	ROS	1433	BO	38	49° 34.43	138° 39.85			400				14.0209 32.6391		
01	P20	ROS	1456	EN	39	49° 34.8	138° 40.37				153-170	18				
01	P21	CTD	2022	BE	40	49° 38.00	139° 40.31		3969					loops taken		
01	P21	CTD	2038	BO	40	49° 37.94	139° 40.37			1508	—	Ø		13.6154 32.5322		
01	P21	CTD	2050	EN	40	49° 37.89	139° 40.53									

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YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1998		Sept.		Tully		9829		7						
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
2	MP22	CTD	0451	BE	41	49 42.00	140 40 14		3916.					loops taken
2	MP22	CTD	0513	BO	41	49 41 98	140 40 54			1504				13,2847 32,6279
2	MP22	CTD	0531	EN	41	49 41.90	140 40 90							
02	MP23	CTD	1125	BE	42	49 46 25	141 39 50		4057					Loops TAKEN
02	MP23	CTD	1149	BO	42	49 46 34	141 39 52			1500				12,8613 32,5759
02	MP23	CTD	1210	EN	42	49 46 28	141 39 56							
2	MP24	CTD	1812	BE	43	49 50 17	142 40.20		3996.					loops taken @ 18:18
2	P24	CTD	1840	BO	43	49 50 12	142 40 56			1505				12,6678 32,5037
2	P24	CTD	1902	EN	43	49 50.01	142 40.89							
3	P25	CTD	0008	BE	44	50 00.05	143 36.04		4147					loops taken
3	P25	CTD	0034	BO	44	50 00 23	143 36 35			1508				12,4830 32,5784
3	P25	CTD	0054	EN	44	50 00 13	143 46 52							
3	P59	CTD	0306	BE	45	49 59.95	143 57.33		4133.					loops taken @ 03:10
3	P59	CTD	0317	BO	45	49 59.96	143 57.24							12,3684 32,6335
3	P59	CTD	0325	EN	45					502.				
3	P35	CTD	0529	BE	46	49 59 92	144 18.38		4162.					loops taken @ 05:33
3	P35	CTD	0553	BO	46	49 59.74	144 18.23			1503				12,3884 32,6297
3	P35	CTD	0616	EN		49 59.66	144 18 30							

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3	P71	CTD	0806	BE	47	50° 00.00	144° 39.16		4187					loops taken
3	P71	CTD	0815	BO	47	49° 59.90	144° 39.36			506	—	Ø		12.0873 32.6265
3	P71	CTD	0822	EN	47	49° 59.83	144° 39.46							
3	P26	CTD	1008	BE	48	50° 00.12	145° 00.14	✓	4258					loops taken
3	P26	CTD	1032	BO	48	50° 00.17	145° 00.71			1505	—	Ø		12.0932 32.6341
3	P26	CTD	1051	EN	48	50° 00.29	145° 01.08							
3	P84	CTD	1235	BE	49	50° 00.06	145° 21.01	✓	4029					
3	P84	CTD	1244	BO	49	50° 00.12	145° 21.14			500				Loops TAKEN
3	P84	CTD	1251	EN	49	50° 00.17	145° 21.24							
3	P39	CTD	1443	BE	50	50° 00.08	145° 42.00	✓	4318					Loops TAKEN
3	P39	CTD	1506	BO	50	50° 00.19	145° 41.96			1506				
3	P39	CTD	1526	EN	50	50° 00.24	145° 41.78							
3	P47	CTD	1728	BE	51	50° 00.00	146° 03.14	✓	4069		—	Ø		loops taken 17:30
3	P47	CTD	1737	BO	51	49° 59.95	146° 03.22			505				
	P47	CTD	1743	EN	51	49° 59.94	146° 03.17							

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3	P30	CTD	1937	BE	52	49° 59.91	146° 24.17	✓	4349					loops taken	
3	P30	CTD	1954	BO	52	49° 59.70	146° 24.29			1505	—	Ø			
3	P30	CTD	2007	EN	52	49° 59.60	146° 24.45								
3	P96	CTD	2327	BE	53	49 46 27	146 02 54	✓	3900					Loops TAKEN	
3	P96	CTD	2335	BO	53	49 46 18	146 02 83			500					
3	P96	CTD	2341	EN	53	49 46 14	146 03 05								
4	P38	CTD	0201	BE	54	49 32 97	145 42 11	✓	4421						
4	P38	CTD	0218	BO	54	49 32 96	145 42 53			1502					
4	P38	CTD	0232	EN	54	49 32 87	145 42 65							Loops TAKEN	
4	P38	PUMP	0238	BE	55	49 32 75	145 42 76							PUMP SAMPLES TO 10m	
4	P83	CTD	0641	BE	56	49 46 44	145 19 93	✓	4280					loops taken	
4	P83	CTD	0648	BO	56	49 46 46	145 19 92			501	—	Ø			
4	P83	CTD	0655	EN	56	49 46 51	145 19 81								
4	P26	CTD	0900	BE	57	49 59 97	145 00 14	✓	4260					2nd CTD @ sta P, after W-SW transect	
4	P26	CTD	0921	BO	57	49 59 67	145 00 14			1503	—	Ø		Loops taken	
4	P26	CTD	0937	EN	57	49 59 34	145 00 05								

Sep 4

1220 PDT

Along side sed. trap mooring.

Sep 5

0924 PDT

cleaned Thermosalinograph sensors with 10% HCl and cylinder with bleach. New file

98290010.CNV

first file after cleaning. Salinity reading 32.5

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	P26	ROS	1637		58	50 02.75	144 59.99	✓	4240.		171-191	21.			
4	P26	MOR	1730	RE	—	50 04.49	144 55.95		4245.		—	—		Recovery of single trap	
5	P26	BOT	1300	BE	59	50 00 240	144 59 89		4256	100m				Prim. PROD CASTS	
6	P26	MOR	0120	DE	—	50 01.626	144 53.835		4238		—	24	2w	BOTTLES IN HARD HATS for remineralization study	
6	P26	loop	0100			50 01.580	144 53.350		4238					loop sample	
6	P26	NET	2024	BE	60	50 00 991	144 52 685		4223					BONGO NETS	
6	L1	loop	0700		—	49 50.648	144 09 030		3568					loop sample	
6	L2	loop	1449		—	49 50.558	141 45.870		4044.					chain theme tank to remove bubbles	
6	L3	loop	1857		—	49 50.360	140 29.597		3664						
6	L4	LOOP	2300			49 49.925	139 16.202		3938					LOOPS TAKEN	
7	L5	Loop	02:52		—	49 47.640	138 05.283		3950.3					LOOPS TAKEN	
7	L6	Loop	(0700)			(49 45.2)	(136 50) est.	not recorded by watch 2. W.						LOOPS TAKEN	
7	L7	Loop	1650			49 42 690	135 37 423		3657					LOOPS TAKEN	
7	L8	Loop	14:53			49 40.546	134 22.436		3511					LOOPS TAKEN	

CAST TYPE -

BOT -

bottle cast

ROS -

rosette

USW -

sea water loop

TIME CODE -

BE -

beginning time of cast

DE -

deployment time

POSITION CODE -

RAD -

RADAR

CTD -

ctd

NET -

net haul

BO -

bottom time of cast

MR -

messenger release

GPS -

GLOBAL

MOR -

mooring

DRF -

drifter

EN -

end of cast

RE -

recover mooring

LOR -

LORAN

Eddy Survey

	200m T	400m T	50m Current	Bridge 100m Current
P15_50N	8.38	6.00		~ENE 0.6kt
P15_25N	8.31	6.82	0.6kt N	0.5kt N (ENE to NNW)
P15	8.08	6.85	1.0kt @ 350°	1.3kt @ 357° (~N)
P15_25S	8.29	6.41	0.9 050° ?	1.4 050-085° ?
P15_50S	8.49	5.97		
P15_75S	8.198	5.72	0.4kt 330°	0.4kt 346°
P15_100S	7.77	5.08	0.8kt 47°	0.9kt 57°

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POSITION CODE -	RAD -	RADAR
	GPS -	GLOBAL
	LOR -	LORAN

Sep 8/98

1000-1130 Deployed 2 OOE's near 47 45.3N 133 39.4W. One bag(OOE I) loosened successfully. Mixed layer ~30 m deep, sfc T ~ 16°C.

Oxygen samples	OOE I	Day 2	3m	no water seal, large air bubble in both samples	6.367 ml/l
	OOE II	Day 2	3m		6.209

YEAR	1998		MONTH	Sept		SHIP	Twilly		CRUISE	9829		PAGE	12 OF	
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
8	P15-50S	CTD	0445	BE	65	48 44.97	133 40.21	✓	3365					L13 loops, 0452
		CTD	0507	BO	65	48 44.95	133 40.59			1502				48.7495 133.6702 (49.8km)
			0526	EN	65	48 45.03	133 40.87							
8	P15-75S	CTD	0731	BE	66	48 31.39	133 40.04	✓	3731					L14 loops taken
8	P15-75S	CTD	0753	BO	66	48 31.25	133 40.46			1508	—	Ø		48.5232 133.6673 (49km)
8	P15-75S	CTD	0811	EN	66	48 31.06	133 41.01							
8	P15-100S	CTD	1058	BE	67	48 11.91	133 40.45	✓	3582	48.1985	133.6742 (111.1km)	Ø		loops L15 taken
8	P15-100S	CTD	1122	BO	67	48 11.68	133 41.23			1507				≠ T @ 370m ↑ and ↓
8	P15-100S	CTD	1144	EN	67	48 11.40	133 41.86							Fuzzy trans. ↑ from 600m
8	P15-160S	CTD	1513	BE	68	47 45.47	133 41.42	✓	3573					47.7578 133.6903 (160.1km)
			1523	BO		47 45.58	133 41.60			404.				
8	P15-160S	ROS	2045	BE	69	47 45.42	133 37.49	✓	3503					DAY Ø OF BAG EXP.
8	P15-160S	ROS	2054	BO	69	47 45.35	133 37.57			401	214-237	24		47.7570 133.6248 Mixed layer 33
8	P15-160S	ROS	2117	EN	69	47 45.11	133 37.64							

CAST TYPE - BOT - bottle cast
CTD - ctd
MOR - mooring

ROS - rosette
NET - net haul
DRF - drifter

USW - sea water loop

TIME CODE - BE - beginning time of cast
BO - bottom time of cast
EN - end of cast

DE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE - RAD - RADAR
GPS - GLOBAL
LOR - LORAN

	200m T ^o	400m T ^o	50m current (kts, dir)	100m current (kts dir)	Mixed layer	Loop #
15-160S	7.31	4.98	0.5 k, 027°	0.8 k, 048°	30m	16
160-1	7.05	5.01	0.4 k 151°	0.6 k 122°	33 m	17
160-2	7.06	4.87	0.2 k 214°	0.3 k 142°	33 m	18
160-3	6.86	4.88	.3 49	.3 85	28	19
160-4	6.94	4.83	.4 63	.5 45	24	20

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1998		Sept.		Tully		9829		13						
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
8	P15-1605	NET	1654	BE	70	47 45 226	133 35 948		3500	50m + 100m				TAKEDA'S BONGO TOWS / DAT
8	P15-1605	CTD	0145	BE	71	47 43.72	133 35.29	✓	3485					1 hr before sunset " cast
8	P15-1605	CTD	0152	BO	71	47 43.62	133 35.35			406	—	0		Mixed layer: ~35m
8	P15-1605	CTD	0156	EN	71	47 43.53	133 35 42							Start cast with PAR sensor out of the water.
9	P15-1605	NET	1127	BE	72	47 43 577	133 37 318		3537	50m + 100m				TAKEDA NIGHT Tow
9	P15-1605	CTD	1617	BE	73	47 41.51	133 34.04	✓	3600,					
			1626	BO		47 41.26	133 33.87			409				30m mixed.
			1633	EN		47 41 15	133 33.91							
			PAR + FLUOROMETER REMOVED											
9	P15-1605	CTD	2047	BE	74	47 37.22	133 35 91	✓	3595					30m mixed layer
9	P15-1605	CTD	2110	BO	74	47 37 16	133 36.52			1509				Loops taken (L16?)
9	P15-1605	CTD	2134	EN	74	47 37.22	133 37.02							
9	P15 E160-1	CTD	2314	BE	75	47 36 99	133 20 18	✓	3498					Loops TAKEN (L17?)
9	P15 E160-1	CTD	2340	BO	75	47 37 13	133 20 81			1505				
10	P15 E160-1	CTD	0004	EN	75	47 37 21	133 21 07							

CAST TYPE -

BOT -

bottle cast

CTD -

ctd

MOR -

mooring

ROS -

rosette

NET -

net haul

DRF -

drifter

USW -

sea water loop

TIME CODE -

BE -

beginning time of cast

BO -

bottom time of cast

EN -

end of cast

DE -

deployment time

MR -

messenger release

RE -

recover mooring

POSITION CODE -

RAD -

RADAR

GPS -

GLOBAL

LOR -

LORAN

09/16 PDT

Seawater loop shut down & again leaking sink drain.

10/17

Seawater pump on

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1998		Sept.		Tully		9829		14						
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
10	P15-E160-2	CTD	0200	BE	76	47 36 92	133 00 13	✓	3340					Loops TAKEN (L18?)
10	P15-E160-2	CTD	0217	BO	76	47 36 87	133 00 28			1508				
10	P15-E160-2	CTD	0231	EN	76	47 36 82	133 00 43							
10	E160-3	CTD	0413	BE	77	47 36 92	132 40 12	✓	2937					Loop #19 @ 04:19
		CTD	0434	BO	77	47 36 93	132 40 47			1507				
	E160-3	CTD	0454	EN	77	47 36 95	132 40 69							
10	E160-4	CTD	0639	BE	78	47 36 96	132 20 13	✓	3190					Loop #20 @ 06:44
10	E160-4	CTD	0704	BO	78	47 37 09	132 20 70			1507				
10	E160-4	CTD	0728	EN	78	47 37 27	132 21 03							
					PAR and FLUOR	Sensors	installed							
10	P15-1605	CTD	2022	BE	79	47 34 08	133 29 34	✓	3525	47.5680	133.4890 (181.6 km)			Trip 2 bottles @ 400m for O ₂ tests.
10	P15-1605	CTD	2030	BO	79	47 34 12	133 29 40			403	238-249	2		~37m mixed layer
10	P15-1605	CTD	2038	EN	79	47 34 06	133 29 41							
10	OOE-516 FD	★	2341	DE	—	47 37 50	133 33 32							TRAPS 50 to 400m near enclosures

CAST TYPE -

BOT -
CTD -
MOR -bottle cast
ctd
mooringROS -
NET -
DRF -rosette
net haul
drifter

USW - sea water loop

TIME CODE -

BE -
BO -
EN -beginning time of cast
bottom time of cast
end of castDE -
MR -
RE -deployment time
messenger release
recover mooring

POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1998		Sept.		Tully		9829		15						
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
11	Cobb 1	CTD	1507	BE	80	46 39.81	130 47.47	✓	1892					loop taken @ 15:10
			1515	BO		46 39.90	130 47.58			410.				
	Cobb 1		1521	EN	80	46 37.85	130 47.66							
11	Cobb 2	ROS	1541	BE	81	46 40.99	130 47.87		1178		250-255	6		loop taken
			1548	BO	81	46 40.98	130 47.99			405				
	Cobb 2	ROS		EN										
11	Cobb 3	CTD	1644	BE	82	46 42.08	130 47.93		930					loop taken
			1651			46 42.10	130 47.98			432.				
			1658			46 42.07	130 47.96							
11	Cobb 4	CTD	1721	BE	83	46 43.25	130 48.25		226					loop taken.
			1726			46 43.35	130 48.31			208				
			1730			46 43.41	130 48.30							
11	Cobb 5		1747		84	46 44.37	130 48.39		150					
			1753			46 44.46	130 48.45			143				
			1755			46 44.48	130 48.44							

CAST TYPE -

BOT - bottle cast
CTD - ctd
MOR - mooringROS - rosette
NET - net haul
DRF - drifter

USW - sea water loop

TIME CODE -

BE - beginning time of cast
BO - bottom time of cast
EN - end of castDE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE -

RAD - RADAR
GPS - GLOBAL
LOR - LORAN

YEAR		MONTH		SHIP		CRUISE		PAGE		OF				
1998		Sept.		Tully		9829		16						
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS
11	Cobb 6	ROS	1816	BE	85	46 45.36	130 48.43		35		256-261	3		only 3 bottles used
			1821	EN		46 45.40	130 48.51			33.				
11	Cobb 7	CTD	2035	BE	86	46 46.53	130 48 81		193					loops taken
11	Cobb 7	CTD	2041	BO	86	46 46.62	130 48 83			192				
11	Cobb 7	CTD	2045	EN	86	46 46.68	130 48 86							
11	Cobb 8	CTD	2109	BE	87	46 47.59	130 48.96		469?					loops taken
11	Cobb 8	CTD	2116	BO	87	46 47.68	130 48.92			405				
11	Cobb 8	CTD	2123	EN	87	46 47.81	130 48.99							
11	Cobb 9	CTD	2144	BE	88	46 48 57	130 49 08		934					loops taken
11	Cobb 9	CTD	2151	BO	88	46 48.78	130 49.10			408				
11	Cobb 9	CTD	2159	EN	88	46 48.83	130 49.12		1045					
11	Cobb 10	ROS	2222	BE	89	46 49.66	130 49.29		1231					loops taken
11	Cobb 10	ROS	2229	BO	89	46 49.72	130 49.32			405	262-267	6		
11	Cobb 10	ROS	2243	EN	89	46 49.57	130 49.41							

Changed computer/Deekunit interface to GPIB, set update rate to 1.0 sec (trouble guide in manual) but still system did not work. The Deekunit overflow light did not light up. The transmit light was flashing.

Changed update time to 1.5 sec - no good.

Changed back to RS232 interface.

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR			MONTH			SHIP			CRUISE			PAGE		OF	
1998			SEPTEMBER			JOHN P. TULLY			9829			17			
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS	
11	CoBB 11	CTD	2320	BE	90	46 50 72	130 49 49	GPS	1654						Loops TAKEN @ 2322
11	CoBB 11	CTD	2325	BO	90	46 50 72	130 49 46			400					
11	CoBB 11	CTD	2330	EN	90	46 50 66	130 49 54								
12	P15/1605	ROS	1723	BE	91	47 28.63	133 25.85	✓	3429		268-282				mixed layer 37m
12	"	ROS	1730	BO		47 28.54	133.25.79			403					47.4772 133.4298 (19.2 km from P15)
12	"	ROS	1744	EN											
13	P15/1605	ROS	1733	BE	92	47 24.03	133 24.24	47.4005 133.4007							mixed layer 37. m
13			1738	BO		47 22.01	133 23.78								cleaned trans lens.
PAR and FLUOR sensors removed.															
13	P15-1605	ROS	2150	BE	93	47 22.90	133 25.03		3336						CFCs + SAL cast
13	P15-1605	ROS	2213	BO	93	47 23.02	133 25 46			1502	283-301	19			47.3817 133.418 200 km from P15
13	P15-1605	ROS	2250	EN	93	47 22 78	133 25 95								BERNIE BUSTED THE WINCH
PAR and FLUOR installed															
14	P15-1605	MOR.	2106			47 24.89	133 19.74			50 m to 400m		5			Julian 256.95
PAR and FLUOR. removed.															
															COUNTER
															47.4148 133.329 (7.643)

CAST TYPE -

BOT -
CTD -
MOR -bottle cast
ctd
mooringROS -
NET -
DRF -rosette
net haul
drifter

USW - sea water loop

TIME CODE -

BE -
BO -
EN -beginning time of cast
bottom time of cast
end of castDE -
MR -
RE -deployment time
messenger release
recover mooring

POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR		MONTH			SHIP			CRUISE				PAGE		OF	
1998		Sept.			J.P. Tully			9829				18			
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS	
16	MP12	ROS	1818	BE	94	48 57.95	130 39.84	✓	3250.		302-323	22.		logs taken 18:21	
16	P12	ROS	1843	BO	94	48 57.55	130 39.42							transducer cleaned.	
16	P12	ROS	1926	EN	94	48 56.96	130 39.08							CFC cast	
16	P11	CTD	2143	BE	95	48 56.15	130 10.06		2762					loops taken	
16	P11	CTD	2209	BO	95	48 56.43	130 10.06			1507	-	0		Shark off the stern	
16	P11	CTD	2231	EN	95	48 56.68	130 10.00								
17	P10	CTD	0048	BE	96	48 53.53	129 39.85		2654					Loops TAKEN	
17	P10	CTD	0111	BO	96	48 53.46	129 39.78			1503					
17	P10	CTD	0132	EN	96	48 53.49	129 39.65								
17	P9	CTD	0354	BE	97	48 51.47	129 09.85		2345.					loops taken	
			0415	BO		48 51.61	129 09.39			1509					
			0436			48 51.78	129 09.03								
17	P8	CTD	0652	BE	98	48 49.02	128 40.09		2525					loops taken	
17	P8	CTD	0714	BO	98	48 48.73	128 39.90			1505				Spiky transducer	
17	P8	CTD	0735	EN	98	48 48.58	128 40.00								

CAST TYPE -

BOT -
CTD -
MOR -bottle cast
cid
mooringROS -
NET -
DRF -rosette
net haul
dritter

USW - sea water loop

TIME CODE -

BE -
BO -
EN -beginning time of cast
bottom time of cast
end of castDE -
MR -
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messenger release
recover mooring

POSITION CODE -

RAD -
GPS -
LOR -RADAR
GLOBAL
LORAN

DAILY LOG

OCEAN PHYSICS

INSTITUTE OF OCEAN SCIENCES

YEAR 1998			MONTH SEPTEMBER			SHIP JOHN P TULLY			CRUISE 9829					PAGE 19 OF	
DAY (UTC)	STATION ID	CAST TYPE	TIME (UTC)	TIME CODE	STD/HYDRO CONSEC #	LATITUDE	LONGITUDE	POSITION CODE	BOTTOM DEPTH (m)	MAX SAMPLING DEPTH (m)	CONSEC SAMPLE #	# OF BOTTLES	INIT	COMMENTS	
17	P7	CTD	0959	BE	99	48° 46.65	128° 10.07		2512					loops taken	
17	P7	CTD	1022	BO	99	48° 46.65	128° 09.63			1507	—	Ø			
17	P7	CTD	1043	EN	99	48° 46.72	128° 09.28								
17	P6	CTD	1252	BE	100	48° 44.68	127° 40.09		2551					Loops TAKEN	
17	P6	CTD	1317	BO	100	48° 44.90	127° 39.11			1500					
17	P6	CTD	1339	EN	100	48° 45.12	127° 38.58								
17	P05	CTD	1553	BE	101	48° 41.55	127° 09.96		2085						
			1616	BO		48° 41.75	127° 09.69			1509					
			1638			48° 42.20	127° 09.49								
17	P04	CTD	1855	BE	102	48° 39.02	126° 39.98		1314					Loops taken	
17	P4	CTD	1918	BO	102	48° 39.13	126° 40.06			1303	—	Ø			
17	P4	CTD	1936	EN	102	48° 39.21	126° 40.17								
17	P3	CTD	2111	BE	103	48° 37.41	126° 19.96		819					Loops taken	
17	P3	CTD	2125	BO	103	48° 37.37	126° 19.19			800					
17	P3	CTD	2138	EN	103	48° 37.31	126° 19.48								

CAST TYPE - BOT - bottle cast
CTD - ctd
MOR - mooring

ROS - rosette
NET - net haul
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TIME CODE - BE - beginning time of cast
BO - bottom time of cast
EN - end of cast

DE - deployment time
MR - messenger release
RE - recover mooring

POSITION CODE - RAD - RADAR
GPS - GLOBAL
LOR - LORAN

DAILY LOG

OCEAN PHYSICS

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[illegible]