

Cruise 9431 (Leg. 2+3)

J. P. Tully

La Perouse / JGOFS

Aug. 11 - 19, 1994

x = DO_{app} - DO_{FF}

Cruise 9431 J. P. Tully La Perouse Aug. 11 - 19, 1994							
Time. UTC	Position	Ocean Depth(m)	Rosette/ CTD Conc. #	Station Hydro Conc. #	Oxygen #	Salinity # Cast / Loop	Comments
20:56	49° 39.14 127° 38.16		0093	/	/	/	Note: time is not UTC on this cast Station GSED Aborted, short in cable
23:21	49° 39.25 127° 38.19	578	0094	/	/	/	Time set to UTC GSED
23:37	49° 39.39 127° 38.22	587	0095	GSED	/	1-12	Upcast at GSED for water samples (12 bottles)
03:09	49 38.23 127 37.97	553	0096			/	Rosette to 500 db
03:23	49 38.10 127 37.70		0097		/	13-24	upcast.
07:06	49 26.00 127 59.30	2421	0098	WOCE CTD		/	Sta DEEP Downcast
07:50	49 26.14 127 59.57	2421	0099		/	25-36	Upcast for samples at 2400m → 2363.1m wind payout
10:14	49 26.15 127 59.61	2431	100	DEEP		/	Downcast Sta DEEP - new cond cell for 53507? - tensioner in place of trans
10:49	49 26.38 127 59.37	2431	101		/	37-48	- upcast for salinity samples
19:28	49 07.62 127 43.71	2501	102		/	/	Rosette to 500 db.
19:39	49 07.77 127 43.59		103		/	49-60	upcast.
04:14	49 16.06 127 47.71	2484	104		/	/	L509 Downcast with CTD6
05:01	49 15.91 127 46.97		105		/	61-72	L509 with CTD6 Upcast for sal samples

Date Time

- Aug. 11 0700 - Scientific Party departs I.O.S.
 in 5 vehicles carrying equipment
 and K. Deurman
 B. Green
 A. Pena
 D. Stueckli
 B. Minkley
 J. Love
 D. Foster
 R. Bigham
 G. Quinn
 R. Kashino
 + 3 seaman.
- destination Gov. jetty, Uclulet, 1300 hrs.
 - ship calls prior to our departure
 and explains there will be a 2 hr
 delay.
 - we leave regardless
 - M. Travorrow, also due to join ship on his
 own could not be contacted.
- 1430 - scientific party meets ship as
 arranged - cross loading completed
 - Any vehicle transferred to
 Tofino
 - 2 gov. vehicles depart with
 O. Ec. people (6) + 1 seaman.
 - 2 gov. vehicles parked at
 Coast Guard base for safe keeping.
- equipment setup + preparations commence.
- 1800 - depart for Waverider mooring sites
 - setup Dir. Waverider for deployment.
- 2055 - launched Dir. Waverider in 42 m water
 at $49^{\circ}01.519'$ $125^{\circ}47.767'$
- 2205 - launched Wavec in 34 m water
 at $49^{\circ}01.809'$ $125^{\circ}48.693'$
- 2318 - launched E/51-B in 36 m water
 at $49^{\circ}01.396'$ $125^{\circ}48.727'$
- 2320 - proceed to Tofino to drop Randy + Mark off
 then to mooring G-S

Aug. 12.
PDT 0944

- on station mooring G-S.
- 791 m 807m = 663 m dist.

0957

- moved back on station.
- 542 m range
- moving off 2 cables.
- bow Thruster on - too much noise
- declutched.

1012

- sent release - received positive response

~ 1400

- tried to do a profile with WOCE CTD/Rosette but at about 68m depth the cable shorted out and we blew the fuse in the Guildline deck unit. John + Bernard respliced the rosette and the conducting cable.

- noticed that salinity from the WOCE CTD was too low at 28 psu. Tried running GCTD and it also gave the same low salinity. Scrubbed the cell with bottle brush but it did not change the salinity values.

1600

- completed splice and reconnected CTD/Rosette to Lattec

1942

- deployed mooring G-T in 540 m water at $49^{\circ} 38.802$ $127^{\circ} 38.322$

PAT

0006

→

0200

CTD/rosette profile with WOCE CTD having original sea cond. sensor. (#59193)

0314

-

changed out cell, installed cell from 53501 + hooked up line tension meter but is giving full scale raw values (32767)

- John noted deposits of electrodes of C. cell #59193. He washed the cell in 10% HCl and cleaned off the deposits.

		Cruise 9431		J. P. Tully La Perouse		Aug. 11 - 19, 1994			
Date	Time UTC	Position	Ocean Depth (m)	Rosette/ CTD Conc. #	Station Hydro Conc. #	Oxygen #	Salinity #		Comments
							Cast	Loop	
14/8	0708	49 20.45 127 40.82	1697	0106	LJ08				LJ08 + CTD6 Downcast
	0744	49 20.17 127 40.60		107	LJ08	1060/1084 ✓	73-84	2315 2314	P 1682.00m T451 2.312 T647 2.306 LJ08 + CTD6 UPCAST HYDRO
	0948	49 24 42.2 127 34 49.6		108	LJ07				Down cast Temp
	1019	49 24.61 127 34.69		109	LJ07		85-93	2.237 2.236	T647 2.229 T451 2.233 2.236 P 6374 17.55 db
"	2003	48 47.021 127 59.234	2503	110	S-S				Program crashed at bottom of profile when ALT B entered. Overflow in the O FSRG CTDs
	2028	48 46.8 127 59.71	2500	111	S-S				
15/8/94	0354	49 16.17 127 47.64	2484	112	LJ09		94-105		Downcast with 58483
	0433	49 15.97 127 46.97		113	LJ09		94-105		Upcast for salinity Samples
15/8/94	0800	49 27.87 127 28.412	1033	114	LJ06				Downcast
	0816	49 27.72 127 28.87		115	LJ06	1003/1028 ✓	107	106.	Upcast for DO samples. Sal Sampler RTI @ 1000m.
									data errors aborted cast at 30 m.
	0846			116	LJ06				Triggered 20m bottle but program crashed after power up!

Aug. 13

- 0800 - on station mooring O-S for recovery
- sent CDF XPOND - ON command
- moving on top of site + declutching.
- sent CDF again several times.
- onsite declutched, ram down.
- sent CDF again several times.
- no response on trawpound.
- sent CDFG sent CDF
- pinger signal coming in.
- switch Command units * - not receiving signal on XPND on unit 3785025.

0834

- ranges on 6309061 2630 2626 2634
- sent ABCE - received positive response

0835

- sighted.
- 0835 range 2529 m.

0905

- bottom floats came to surface.

1030-1115

- RLT Testing

Dillon Dynamometer

RLT

0

390-410

1000

1220

2000

2020-2050

- these readings were repeatable for 3 cycles
- tension cycles (sometimes) over app. 60lbs up + down.
- offset shifted later to 9200 at 0lbs + again 200 at 0lbs.

~~1030~~ 1931

- launched mooring O-T in 2502.8 m at $49^{\circ}07.508'$ $127^{\circ}44.130'$

2115-1100

- CT06/rosette cast at LJ09

- on down cast Therm1 + Therm2 did not change but on the upcast they abruptly started to change and they agreed with the Guildline thermometer then at ~300m they stopped reading again?

		Cruise 9431		J. P. Tully La Perouse		Aug. 11 - 19, 1994		Comments
Date	Time UTC	Position	Ocean Depth (m)	Rosette CTD Consc. #	Station Hydro Consc. #	Oxygen #	Salinity # Cast Loop	
15/8/94	09:53	49° 31.643 127° 22.683	1067	117	LJ 05		108	Down cast
	10:10	49° 31.42 127° 22.77		118	LJ 05		109 ³⁴³⁰ ³⁴³¹	Upcast Sal + RT sample @ 1000m.
16/08/94	0408	49° 20.642 126° 34.665	55	119	LG01	1003 ✓ - 1014	110	Down + Up cast 8.935 on one file 8.937
"	0455	49° 18.611 126° 38.037	101	120	LG02			Downcast
	"	"	101	121	LG02	1016 - ✓ 1032	111 112	7.012 cast - program locked between 10m depth + 0m depth.
				121	LG02		113 -121	see notes on oxygen sheet
	0556	49° 14.905 126° 43.685	125	122	LG03		122	
	0715		142	123	LG04			Down cast
		49° 11.257 126° 48.956	142	124	LG04	1033 ✓ 1047	123-131 +133 132	6.285 cast HYDRO 6.285 - prog. locked O ₂ / Sal - part way up
		125 ARE BAD FILES DUE TO PROGRAM LOCK UP				NOTE: FILE EXTENSION WITH ZERO AITES		
		LEFT IN FOR BILL TO SEE.				SL		
			126					Short cast
	0856	49° 07.24 126° 55.10	267	127	LG05			CTD only

Aug. 14

0823 - on station mooring S-S
- 5035, 5036 = 4 km away?
- 2522, 2522, 2522 (double bounce)
↳ = 292 m away

- 2523

- confirming location with pingers

- declutching ship

- range 2533

- 2 pingers heard strong signal.

- range 2536 = 395 m distant.

0835 - release code scat CDEF

- received positive response

- range

0837 - on surface

0912 - bottom component surfaces.

1721 - launched mooring S-T in 2508 m
water at $48^{\circ}47.052$, $127^{\circ}58.612$.

AM - Bernard tightened rubber bands on all the bottles of the
12 x 102 bottle rosette. On some bottles the bands were loose.

1730 - tested load cell at rosette but it appears to be
malfunctioning

- tried running 58483.CFG with C706 deck unit but
it gave data errors. Switched to O.P. deck unit and
no errors occurred.

Aug. 15

0800 - on station mooring E01-S

0805 - right on station declutched.

- 82, 119 m 120 m, 120 m

0819 - 189 m = 160' distant.

gave release command received positive response

~~0820~~ - both pingers gave strong signals.

0821 - on surface.

0905 - all onboard + preparations for redeployment commence

- ship leaves for Totino to drop off 6 science staff who will return using 2 vehicles left in Uclulet CG base. (Totino Radio) - app. 3hr. steaming

- Release 206 - replies to every noise in lab.

- decide not to deploy this instrument because it is likely to exhaust its ~~trans~~ battery replying to fish boat sounders.

1200 - arrive Totino

1300 - launch takes D. Foster, D. Stucchi, B. Green, B. Borukhlo, R. Forbes, D. Yelland ashore.

- also J. Green the Bosun had injured his foot and went in to be seen by doctor and for X-ray.

1630 - launch comes back - we depart for E01 mooring site.

2028 - launch E01-T at $49^{\circ} 16.956$ + $126^{\circ} 35.644$ in 102 m water.

- proceed to LG1 for Rosettes.

		Cruise 9431		J. P. Tully La Perouse		Aug. 11 - 19, 1994		Comments
Date	Time UTC	Position	Ocean Depth (m)	Rosette/CTD Consc. #	Station Hydro Consc. #	Oxygen #	Salinity # Cast Loop	
16-8-94	1007	48° 03.083 127° 01.036	973	128	LG06			downcast
			973	129	LG06	This upcast crashed at bottom of downcast	bottle taken	Upcast Bottle 950M Rosette # 1
16/8/94	1029	49° 02.494 127° 00.81	973	130	LG06	1060 / 1084. ✓	134 1485 3.683 3.691 3.688 3.692 948.	Upcast Bottle Rosette # 2 - 12
	1157	48° 59.30 127° 07.27	1775	131	LG07			10m above bottom
				132	LG07		146-158 (RM) 157	upcast program bottle up at surface
16/8/94	1358	48° 55.24 127° 13.17	2080	133	LG08		7647 1.898 7451 1.902 P 2072	ver 1.31 1.906 1.905
	1430	"	"	134	LG08	1111 / 1129 ✓	156-168 (RM)	Upcast salinities
16/8/94	1931	48° 28.89 126° 42.89	1600	135	LD11			
	2002 2036 outd	"		136	" ↑	2411 / 2417 1609.	169-170 (RM)	Upcast sal. bottom chlorophyll 50, 35, 25, 15, 5
		48° 32.27 126° 36.50	1482	138	LD10	58, 40, 20 10, 0	tripped 2 @ bottom	To 50m for chl
						3 bottles @ 60m (2 on unconfirmed trip		7647
	2225	48° 32.18 126° 36.57	1482	139	LD10			
	2302	"	"	140	LD10 ↑	1147 / 1157 ✓	171 / 181 (RM)	upcast crashed & noob.

Sh LDO 8 program locked-up again. After each program crash, I run DISKSCAN to locate lost clusters. They are the damaged header file. This time I ran disk surface check. No faults found.

Changed Buellline Deckunits: old 58610
new 57160

Conn # 145:

Deck unit caused 45 errors in 60 meters. Program hung almost constantly. Changed back to sh 58610.

Aug. 16
2330

- oceanographic work is interrupted after LDO 6 was completed enroute LDO 5.
- the ship's freshwater supply was completely depleted by the Lantec power supply cooling system which was hooked to freshwater and the bypass valve was open.
- headed into Bainfield for freshwater changed winch cooling system onto seawater.

Aug. 17
1045

- depart Bainfield after taking on water and checking the bow thruster by CG divers. The bow thruster had failed for some reason and it was assumed that something was sucked into the thruster.

1450

- on station EISI-13
- sent CDF - ranges - 740, 737 m
= 739 distance

1455

- good pinger signal
- sent ABDF received positive response

1457

- on surface.

- preparing RWI on deck for deployment:

1629

- launched RWI-T in 39 m water at $49^{\circ} 01.904'$ $125^{\circ} 48.131'$

1637

- proceed to LDI to complete LD-Line

		Cruise		J. P. Tully		La Perouse		Aug. 11 - 19, 1994			
Date	Time. UTC	Position	Ocean Depth(m)	Rosette/ CTD Conc. #	Station Hydro Conc. #	Oxygen #	Salinity #			Comments	
							Cast	Loop			
		48 32.37 126 36.62		141	LD10			171-181			
17/8	0015	48 35.42 126 29.98	1093	142	LD09					1095	
17/8	0032	48 35.41 126 29.84		143	LD09		(RM)	182-183	3.196 3.204 3.203 3.207 1091.	upcast. crashed 2 po.	
	0143	48 39.23 126 23.26		144	LD08				5 bottles.	0-80 m crashed.	
	0216	48 39.39	758	145	LD08					cast stopped, too many errors.	
17/8	0226	48 39.40 126 23.53		146	LD08					0-7450h.	
	0241.			147	LD08	1158 ✓ -1168	4.300 4.302	184	T647 = 4.291 T451 = 4.298 P = 740	knived on #1 bottle caught in Rosette handwave = no sal. sample.	
	0348	48° 42.581 126° 16.848	466	148	LD07			185 186		Downcast.	
	0409	11	452	149	LD07		5.521 5.522		T647 = 5.512 T451 = 5.518 P = 446	Upcast for Chloro. 0, 10, 20, 35, 50 m.	
									#1 bottle leaks	Prog. locked up on upcast after 1st bottle trip.	
17/8	0516	48° 46.183' 126° 10.159'	137	150	LD06	1003 ✓ -1027		187		Up + Down cast. Prog. locked up on 3 bottle trip during up cast.	
			2330							work interrupted	
										Ship out of fresh water and heading in for resupply at Bamfield	

Aug. 18
Time PDT

- 0646 - on station AI-S.

- range = 610

661 = 432

0648 - sent ABCF no response or faint. ?

- range 715 726 753

- sent ABCF again got positive response.

- range 719 rising.

695

- sighted on surface.

0737 - all onboard.

- preparing mooring AI-T for deployment.

1025 - launched mooring AI-T in 505 m
corrected depth at position
48°32.063 126°12.475

1057 - proceed to offshore end LA-Line.

Aug. 19

0830 - in to Esquimaux to pick up toaster.

1000 - depart for CRD CTD stations.

1327 - deploy mooring CRD5-G in 62.8m
corrected depth at 48°23.736'
123°20.859'

- proceed to CRD1-F for recovery.

1352 - on station CRD1-F

- ranges 506, 510,

1353 - sent ABEG - received positive response

1354. - on surface

1524 - launched CRD1-G in 64. m water
at 48°23.930 123°24.109

		Cruise 9431		J. P. Tully La Perouse		Aug. 11 - 19, 1994		
Date	Time UTC	Position	Ocean Depth(m)	Rosette/CTD Consc. #	Station Hydro Consc. #	Oxygen #	Salinity # Cast Loop	Comments
Aug 17	1730	ship departs Bamfield.			to. Rogue	Wave moving site.		
	2356	4900.02 12543.73	37	151	LD01			
18/8	0042	4858.50 12547.00	43	152	LD02	1003 - 1020 ✓		program locked up at 25.16
	0138	4856.33 12550.23	48	153	LD03			
	0140	4856.28 12550.19		155	LD03	no card # 154		upcast
	0232	4853.15 12557.03	64	156	LD04	1025		
18	0234	4853.18 12557.05		157	LD04	1025 1039		upcast.
"	0407	48° 49.680' 126° 03.609	93	158	LD05		188	downcast
	0420	"	93	159	LD05			upcast for Chlorophyll
18/8	0742	48° 22.491 126° 03.602	450	160	A2			downcast
	0820	48 21 512 126 03 028	250		A2			Plankton Net Haul.
	22:12	47° 58.904 125° 43.416	926	163	LA10		189	downcast
Note two files made as the Deck unit was not plugged in. The RS232 plug did not erase 161 and 162								

Aug. 19

1534 — off to I.O.S.

1900 — arrive I.O.S.

Date	Time UTC	Cruise 9431		J. P. Tully La Perouse		Aug. 11 - 19, 1994		Comments
		Position	Ocean Depth(m)	Rosette/ CTD Conc. #	Hydro Conc. #	Oxygen #	Salinity # Cast Loop	
19	0014	48°05.75 125°30.10	139	164	LA08			
	0018		139	165	LA08	1003 1025		upcast
	0147	48°12.69 125°17.16	111.	166.	LA06			
	0150	48°12.69 125°17.27		167	LA06	1039 -1027		
	0315	48°19.447' 125°04.151'	191	168	LA04		190	Downcast
	2015	"		169	LA04	1040 -1057		Upcast Prog. failed on #8 bottle tip
	0520	48°26.597' 124°51.333'	306	170	LA02		191	Downcast
	2220	"	306	171	LA02	1147 -1156		Upcast.
19.	0644 2344	48°29.359 124°44.146	264	172	LA01		192	Downcast.
		"	264	173	LA01	1157 -1168	193 194 203	Upcast Computer Quit at 104
						10 meter and surface bottle taken without CTD data		Bottle
	1707	48°24.06 123°24.11	66	174	CRD1			

1629

4901.904

12548.131

39 m

[illegible]