

DAILY LOG

CRUISE
NUMBER

2001-21
22
23

INSTITUTE OF OCEAN SCIENCES

OCEAN SCIENCES AND PRODUCTIVITY DIVISION

DATE

JULY-OCTOBER 2001

VESSEL

SIR WILFRID LAURIER

PROJECT

ARCTIC - 2001

Captain: Nora Thomas First Officer: Steve Aldrich
Second Officer: Bill McIndoe Third Officer: Steve Payne
Mission Participants / Agencies: IOS / NSF / JATSTEC

Scientific Personnel: Party Chief: Bon van Heldenberg CRUISE 2001-21

Name	Watch	Cabin	Name	Watch	Cabin
<u>Bon van Heldenberg</u>					
<u>Kiyoshi Hatakeyama</u>					
<u>Masayuki Fujisaka</u>					
<u>Jackie Greuteler</u>					
<u>Holly Kelly</u>					
<u>Rebecca Prytte-John</u>					
<u>Lee Cooper</u>					
<u>Jack DiTullio</u>					
<u>Vince Kelly</u>					
<u>Erik Haberkern</u>					
<u>Emily Cooter</u>					
<u>Bryan Klostermeyer</u>					

Second leg of Mission: Party Chief: HUMPHREY HELLING CRUISE 2001-22

Name	Watch	Cabin	Name	Watch	Cabin
<u>HUMPHREY HELLING</u>			<u>JACKIE RICHTER-HENAGE</u>		
<u>MARY O'BRIEN</u>			<u>BRUCE ELDER</u>		
<u>LOUISE TAMMERMAN</u>			<u>SIGRID DALO</u>		
<u>BON VANHELDENBERG</u>			<u>SIM OVERLAND</u>		
<u>PETER GAMBLE</u>			<u>KOTI SHIMADA</u>		
<u>RON LINDSAY</u>					
<u>SHIAEID NISHINO</u>					
<u>HIRAKATSU UNO</u>					
<u>DARREN TUELE</u>					
<u>DOUG SIEBERG</u>					
<u>DAVID WALSH</u>					

THAN LEE 2001-23 → SEE OVER PAGE IN COMMENTS SECTION.
Data logging computer: DELL-2000hz
Data acquisition program: SEASAVE
CTD deck unit make: SEABIRD model: SBC 33 serial number: _____

Primary CTD

Make: SEABIRD model: SBE-25 serial number: 0293
Primary temperature sensor serial number: 03-4044 Calibration date: 01 JAN 01
Primary conductivity sensor serial number: 04-2232 Calibration date: 22 DEC 00
Secondary temperature sensor serial number: _____ Calibration date: _____
Secondary conductivity sensor serial number: _____ Calibration date: _____
Other sensors: PRESSURE STRAIN GAUGE s/n: 29-0442 MAX 1024
Other sensors: SBE 43 - DISSOLVED OXY s/n: 0071 (FACTORY LOAN)
Other sensors: FLUORIMETER SEAPPOINT s/n: 2336
Other sensors: TRANSMISSIOMETER SEATECH s/n: #139
PRESSURE SENSOR - DEEP CASS: s/n 29-0436 MAX 6800m

Secondary CTD

Make: _____ model: _____ serial number: _____
Primary temperature sensor serial number: _____ Calibration date: _____
Primary conductivity sensor serial number: _____ Calibration date: _____
Secondary temperature sensor serial number: _____ Calibration date: _____
Secondary conductivity sensor serial number: _____ Calibration date: _____
Other sensors: _____ s/n: _____
Other sensors: _____ s/n: _____
Other sensors: _____ s/n: _____
Comments: _____

Winches:

1. Swann model: serial #: use:
2. Swann model: serial #: use:
3. Swann model: serial #: use:
4. Swann model: serial #: use:
5. Swann model: serial #: use:
6. Swann model: serial #: use:
7. Swann model: serial #: use:
Comments:

Salinometer: make: model: serial number:
Comments:

Surface Temperature / Salinity Data Logging System:

Program:
Sampling interval (seconds):
Sensor serial number:
Comments:

ADCP Setup:

Program version:
Time zone:
Sampling interval (seconds):
Blank beyond transmit:
% pings good threshold:
Comments:

Number of depth bins:
Bin length (2X):
Pulse length:
Pings per ensemble:

Comments:

THIRD LEG OF MISSION CRUISE 2001-23
PARTY CHIEF BOB VAN HARNBERG
SCIENTIFIC PERSONNEL DOUG SIEBERG (LOS)
BILL FLOERIG (PMEL)
CAROL DEWITT (PMEL)
SARAH THORNTON (ALASKA)
DAVE KACHEL (PMEL)
TRACY SMITH (ALASKA)
DAVE SMITH (PMEL)
DAVE WISEGARNER (PMEL (GAINES DOTCH FOR))

START OF LEG 2 2001-22

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year 2001					Month SEPT			Ship LAURIER				INSTITUTE OF OCEAN SCIENCES			
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	Cruise I.D. 2001-22	# of Bottles	initials	Comments
8	DU01	CTD	1353		001	68 17.976	113 30.051		85	84.8	39		1		6000 m Pmax sensor #290436
8	DU02	CTD	1654		002	68 47.983	113 59.791		58.6		40		1		only resolving to ~2m, so switched to 1024 m Pmax sensor #290442
8	DU03	CTD	1958		003	69 06.057	115 24.037		115.0	110/104	41		1		Tx windows cleaned
8	DU04	CTD	2248		004	69 11.900	116 59.851		230.6	225-221	42		1		Tx windows cleaned
9	CP05	CTD/ROS	0241		005	69 39.126	118 35.013	SITING 429.6	530.6	510	495	101-112	12		FSI MCTD on Rosette
9	DT05	CTD/ROS	0607		006	69 58.905	120 04.779		491.8	476	463	113-124	12		Tx windows cleaned
9	AGT4	CTD/ROS	0934		007	70 14.979	121 40.070	429	440.4	425	413	125-136	12		FSI MCTD on Rosette
9	AG05	CTD/ROS	1323		008a	70 32.459	122 54.465		649.3	625	609	137-148	12		Tx windows cleaned
10	AGT	CTD/ROS	1006		009	70 59.079	125 10.649	344	355.5	341	332	149-160	12		see notes opposite pg 8
11	AS03	CTD	0612		010	72 00.817	128 41.497		418.6				1		Tx windows cleaned
(waiting for ice - started SBE)			0616		010	72 00.702	128 41.291		417.8	400	390	43	10350		FSI (MCTD) on rosette
11	AS04	CTD	0926		011	71 49.827	129 06.901	334	342	330		44	10315		Stopped @ 20 m to clean
11	AS05	CTD	1627		012	71 38.807	129 31.631	284	289.5	280	274	45	10275		Tx windows cleaned
11	AGT00	CTD	2105		013	71 33.947	130 35.443	184	273.7	262	255	46	10250		FSI MCTD on rosette
12	AS06	CTD	0045		014	71 24.793	130 04.080		85.2	80		47	10200		Tx windows cleaned
12	AG05	CTD	2036		015	70 33.341	122 53.600	625	643	621		161-172	12		Tx windows cleaned
Tx windows cleaned MCTD on rosette.															
13	AGT3	CTD	0751		016	71 26.500	126 19.883	450	462	445		173-184	12		Tx windows cleaned

Cast type:

BOT = otter cast
CTD = CTD
ROS = Rosette
NET = net haul
USW = sea water loop

Time Code

BE = beginning time of cast

DE = deployment time

Cast type:

BOT = otter 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
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RE = recover mooring time

Samples Broken on a roll:

#023	#012	#022
018	"	"
BRS-4	BRS-2	BRS-4
Bot #2	Bot #3	Bot #1

Sept 11/2001

uploading from SBE
Upl 6- casts 9-12

- status after upload: $V_{main} = 11.9V$ $N_{lith} = 5.2$
AGT $\rightarrow$ ASOS

Sept 13/2001

After Cast 16

uploading from SBE
Upl 7-

11.9V @ start

Cast 0 $\rightarrow$ data errors message, ~~started after others~~
Cast 23 $\rightarrow$ 1 data error (probably @ cast end)

11.7V @ end of upload

Sept 15/2001

Upl 8-

0340 UTC 3 Casts.

11.7V

18 Sept 2001
18:44 UTC

Upl 9-

6 casts

11.9V @ start
11.7V @ end

Cast 0
 $\downarrow$
Cast 5

09/17 1840

09/18 1830

Deploy ITT -8
 127 34.764 N 127 26.372 W
 370 FT. 105 m range
 127 26.372 W ship
 127 34.764 N
 MARK V 20717 UTC 17 SEP 2001

500000
 00.00-12

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Year 2001					Month SEPTEMBER			Ship LAURIER				Cruise I.D. 2001-22		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
13	CK5	CTD/ROS	1534		017	71 52.357	127 38.683		425.0	410	185-196	12		Tx windows cleaned
13	ASD2	CTD/ROS	2225		018	72 07.423	128 28.410		378	375 369	191-208	12		Tx windows cleaned
14	ITT99-8	CTD	1804		019	72 34.778	127 17.952		84.8 m	83 m	209	1		Tx windows cleaned
14	ITT99-8	CTD	1812		020	72 34.840	127 18.105		84 m	82 m + 83 m 2nd time		1		2 casts
17	ITT99-8	CTD	0738		021	72 34.773	127 26.807		116.4	110 m	210	1		Tx windows cleaned
17	CK5	CTD/ROS	1838		022	71 52.995	127 41.764		412 sunrad	422	410	211-222		Tx windows cleaned first bot @ 10 m
18	ITT99-2	CTD	1307		023	70 56.367	133 40.934		80 m	78	223	1		Tx windows cleaned
18	KC0075	CTD	1532		024	70 44.251	133 42.300		51 m RAD	69.6	224	2		Tx windows cleaned
18	KC0065	CTD	1710		025	70 32.178	133 43.663		62	59	225	1		Tx windows cleaned
18	KC0055	CTD	1832		026	70 21.149	133 48.962		54.4	50	226	1		Tx window cleaned

Cast type:

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Time Code

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DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year <u>2001</u>					Month <u>SEPTEMBER</u>			Ship <u>LAURIER</u>				Cruise I.D. <u>2001-22</u>		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
18	KC0045	CTD	2023		027	70 11.583	133 35.065		50 m	43	227	1 @ 30m		Tx windows cleaned
18	KB08	CTD	2134		028	70 17.405	133 25.657		SIMRAD 40.8	39	228	1 @ 20m		Tx cleaned
18	KB09	CTD	2225		029	70 15.083	133 09.075		SIMRAD 35.6	33	229	1 @ 24		Tx cleaned
18	KB10	CTD	2339		030	70 ^{11.418} 4.755	132 ^{49.729} 50.430		30.4	31m	230	1 @ 20		Tx cleaned
19	KB11	CTD	0048		031	70 07.820	132 30.210		SIMRAD 29		231	1 @ 5		Tx windows cleaned MANUAL WINCH DOWN + UP
19	KB12	CTD	0157		032	70 03.094	132 44.330		22 (SIMRAD 20)	21	232	1 @		Set speed to 1/2 m/s down (1/4 up) Tx windows cleaned
19	KB13	CTD	0252		033	69 58.743	132 58.790		SIM 21 16.9	16.7	233	1 @ 15		Tx windows cleaned
19	KB14	CTD	⁰⁴⁰⁰ 11:00		034	69 54.631	133 13.770		SIM 19.2 13.6	10 m	234	1 @ 8m		Tx windows cleaned Stayed @ bottom 10 Secs
19	KB15	CTD	0510		035	69 49.811	133 30.055		SIM 12 6.2	10	235	0		Tx windows cleaned ROPE IN BOTTLES (Drag experiment - no bottles triggered)
19	KB01	CTD	0617		036	69 52.776	133 46.943		SIM 12 6.8m		235	1		Tx windows cleaned

Cast type:

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Time Code

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Sept 19 - After cast 039, upload from SBE casts 0 - 13
(03:55 MDT) upl 10- total mem used ~ 33,299 scans of 74,000
cleared mem (init. log)

$V_{start} = 11.9 V$
 $V_{end} = 11.5 V$

Sept 20 - put in new batteries in SBE-25 and
put 6800 m pressure sensor on (instead of 1024 m)
use CON file from cast #01

Sept 20 after cast #43: upl 10- casts 0 - 7
2000 m deep cast total 43806 samples
clean & reattach transomiso connector

$V_{start} = 13.1 V$
 $V_{end} = 12.7 V$

Sept 21 Changed the sound profile in the Simrad based on Cast #43 STATION A3
using velocities between 0 and 2000 dbar then extrapolating (linear fit) to 6000 m

Sta A2 - air temp $-1.4^{\circ}C$

after cast #44 → upload data
upl 12-0 all 1 cast used all mem!

$V_{end} = 12.7 V$

[3 transomiso errors]

Cast 44 - down 1 m/s, up 2 m/s
during upcast: noise from sheave, speed showed only 1.7 m/s
→ reprogram - stop @ 2350, set to 1.5 m/s retrieve, restart -
reading 1.5 m/s on gauge

Stopped Cast @ 1026 m because wraps were jumping
on spool. Went back down to 1062 m & started
back up slowly.

at right side (forward side)

Sept 21 - doublechecked "init log" in morning

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Year <u>2001</u>					Month <u>SEPTEMBER</u>			Ship <u>LAURIER</u>			Cruise I.D. <u>2001-22</u>			
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude <u>N</u>	Longitude <u>W</u>	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
19	KB02	CTD	0736	BE	037	69 56.395	134 07.321		Sim 14.0	12	#236	10	BM	Tx windows cleaned
19	KB03	CTD	0835	"	038	69 59.323	134 28.212		Simrad 17.2	15	#237	1		Tx windows cleaned
19	KB04	CTD	0934	"	039	70 02.337	134 47.965		Simrad 25.6	22	#238	1		Tx cleaned
19	KB05	CTD	1049	"	040	70 07.832	134 31.809		Simrad 32.8	29	#239	1		Tx cleaned → had to restart on deck
19	KB06	CTD	1155	"	041	70 12.635	134 14.356		Simrad 38.8	36	#240	1		Tx cleaned (reluctant to start data)
19	KB07	CTD	1310		042	70 16.824	134 00.474	45.2	Simrad 43		#241	1		Tx window cleaned
20	A3	CTD/ROS	1455		043	72 31.613	139 47.470		Simrad 3005	2001 (1929 scratch)	225 m bottle @ 227m 242-253	12		RESET DESCENT SPEED TO 1 m/s Tx windows cleaned 6800 m pressure sensor on rosette
21	A2	CTD/ROS	0203		044	72 53.414	139 29.513		Simrad 3055	2962	254-265	12		SET ASCENT SPEED TO 2 m/s NO transmissometer lost 2962 m bottle.
21	A1	CTD/R	1536		044a	72 53.563	139 30.294	Repeat cast	Simrad 3024	2972	266-277	12		Repeat cast for winch adjustments
21	A1	CTD/ROS	2242		045	73 12.418	137 56.184		Simrad 3026	1000	278-289	12		FSI on rosette upcast in manual to speed winch
21	A1	CTD/ROS	2242		046	73 13.326	138 03.659		3026	1000	278-289	12		NO Tx

Cast type:

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DRF = drifter

USW = sea water loop

Time Code

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MR = messenger release time
RE = recover mooring time

500-489
1400 = 1356

Sept 21/01 After Cast 45 upload Data Upl 13 -
Vmain 12.9 V

Sept 23/01 upload after Cast 506.
Upl 14 - Vmain 12.4 V end 12.3 V
NCasts 6 Samples 74616 Free 0.

23 Sept - 0430 AM (MDT) : • NO NOTE FROM H.M. OR MOB RE CHANGE IN SAMPLING OR STN. LOCATION
CAST #51 • MATE (P. VISSER) SAID THIS STN (AS) WAS RELOCATED SOUTH, CTD ONLY
(NO SAMPLING) - IS AG NEXT? STILL IN SAME LOCATION?

DEPTH 1953 → FIRED BOTTLES AS PER DEEPER SCHEME FOR AG, TO LEAVE ON DECK
IF OTHER SAMPLING IS WANTED (IODINE? SALCAL?) BUT
DECK UNIT FIRED MULTIPLE BOTTLES AT #7, 8, 9 (300m) ??
(POSSIBLE CAUSE SLOWLY PRESSED BUTTON, ACTIVATED TOO LONG OR STICKY CONTACT?)
→ CHECK BL FILE!

SPOOLED OK DURING UPCAST EXCEPT FEW GAPS IN LAST LAY → NOT ADJUSTED SINCE NO FURTHER LAYS.
AFTER CAST #51: UPL 15-0 (1 FILE ONLY) [41766 FREE $V_{START} = 12.6V$ ($V_{LITH} = 5.2$)
2 TRANSMISSION ERRORS $V_{END} = 12.4V$

23 Sept - 1009 AM (MDT) UPL 16-0 AFTER CAST # 53
MEM USED 40508 FREE 34108

$V_{start} = 12.5V$

23 SEPT UPL 17-0 AFTER CAST # 54

$V_{start} = 12.6$, $V_{end} = 12.5V$

24 SEPT UPL 18- AFTER CAST # 58

$V_{start} = 12.5V$ $V_{end} = 12.5V$

DAILY LOG

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Year 2001					Month SEPTEMBER			Ship LAURIER			Cruise I.D.			
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
22	A1	CTD/ros	0020	UTC	047	73 13.867	138 04.716		3028	2300	290-301	12		NO Tx
22	A1	CTD/ros	1447		048	73 14.347	138 05.096		3030	600	302-305	12		Cesium - tripping triplicated on upcast NO Tx
23	A4	CTD/ros	0348	UTC	049	71 47.199	140 07.454		2644	125	306-309	4		NO Tx
23	A4	CTD/ros	0431	UTC	050	71 47.075	140 07.060		2642			12		Samples damaged
					50a	Restarted - problem w data stream								@ 400 m, data stream stopped restarted new cast - came back up to start cast again.
23	A4	CTD/ros	0500	UTC	050b	71 47.029	140 07.256		2642	2600	310-321	12		
						71 46.840	140 08.361							Spooling
23	A5	CTD	1053		051	71 08.728	139 01.154		1953	1950	—	12		Troubles with winch on upcast triggered bottles for deeper put but deck fired multiple! — UPL 15-0
23	A5b	CTD/R	1251		052	71 01.375	138 57.213		1885	50 1875	322-323	2	550	
											#324 NOT USED			
23	A5b2	CTD/R	1309		053	71 01.381	138 56.995		1886	1870	325-336	12		tripped 2 bottles @ 21.10 check Pylon & CTD connectors
23	MCJO1	CTD/R	2022		054	70 25.010	138 15.640		566	555		12 @ 550 depth		NO Tx, no samples taken
24	ASB	CTD	0607		055	70 16.597	139 07.636		464	460	#365	1	SALON	Monkey Cal. Cast Tx

Cast type: BOT = otter 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 time DE = deployment time MR = messenger release time RE = recover mooring time

(10) Charlie → T_{sfc} - .1 → - .4

Sept 25/01 After Cast 61

Doug shortened ^{bottom} 1 bottle lanyards on bottles 3, 7, 8, 9, 12 so that when cocked, the ~~bot~~ stoppers were perpendicular to the base of the bottles rather than at an angle.

DOUG:
8:11AM

"Suspicion is that these bottles could possibly close on descent of rosette at ANY time."

AFTER CAST CONSECUTIVE # 058 - ~~Bottom~~ O'RING ON BOTTLE #6 - IT WAS CRIMPED BY CRIMP ON LOWER LANYARD. - ~~DOUG~~

Sept 26/01 Upl-19 after Cast 64 $V_{main}(start) = 12.5 V$ $V_{main}(finish) = 12.3 V$

Sept 27/01 Doug replaced the Y-cable module on the CTD.

Took off the (corroded) 4-pin connector SBE 17797, DWG 31551 Rev. B

Found the problem when we tried to trip carousel latches on deck, but there didn't seem to be enough voltage delivered to pylon to open latches.

Sept 27/01 After Cast 67 upload

Upl-20

$V_{main start} = 12.3$

$V_{main end} = 12.1$

Sept 27/01 After Cast 68 Upload

$V_{main start} = 12.3 V$ end = 12.1

~~Upl-21~~ Upl 21-

Appears that I did not init. log after last upload as there are 4 casts in can.

Upl 21-003
will be deep
Cast #68

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Year <u>2001</u>					Month <u>SEPTEMBER</u>			Ship <u>LAURIER</u>			Cruise I.D. <u>2001-22</u>			
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude <u>N</u>	Longitude <u>W</u>	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
24	A8	CTD/R	0734		056	70 17.937	138 33.757		499	488	337-348	12		
24	A7	CTD/R	0922		057	70 34.182	138 42.526		1017	1001	349-360	12		transm. windows cleaned!
24	A7b	CTD/R	1054		058	70 34.208	138 42.506		1017	600	361-364	12		cesium bottles
											(*#365 was used for SALCAL cast #055)			
24	KC0100	CTD	2107		059	70 59.641	133 44.584		109	105	366	1 Sal cal		Tx windows cleaned
														Tx windows cleaned
25	KC0055	CTD	0057		060	70 19.668	133 43.667		52	35 Pres sensor	367	1		↓ Note: There is about 8m off set in p sensor to consider when stopping @ bottom. 0m = -8 db
25	KC0045	CTD	1103		061	70 11.492	133 34.860		43	36	368	1		Tx windows cleaned
25	BMH9	CTD	1331		062	70 04.896	133 29.635		35.6	32	369	1		Tx windows cleaned
26	MC500	CTD	1704		063	69 59.765	138 27.673		249	235	370	1		Tx windows cleaned
26	ASB	CTD	2130		064	70 16.247	139 08.401		459.6	438	371	1		Tx windows cleaned
27	NP2500	CTD/ROS	1953		065	71 15.487	145 15.364		2329	125	NO SAMPLES	4		no Transmissometer on Ros something wrong

Cast type:

BOT = otter cast
CTD = CTD
MOR = mooring

ROS = Rosette
NET = net haul
DRF = drifter

USW = sea water loop

Time Code

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RE = recover mooring time

↓
down + up
to try to get
proper data.

with sensors / pump
ice?

Sept 28/01

After Cast 69

Upl 22-

$V_{\text{main}} = 12.2 \text{ V}$
Start

$V_{\text{main}} = 12.1$
Finish

After Cast 73

Upl 23-

$V_{\text{main}} = 12.1 \text{ V}$
Start

$V_{\text{main}} = 11.8$
Finish

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Year <u>2001</u>					Month <u>SEPT</u>			Ship <u>LAURIER</u>				Cruise I.D. <u>2001-22</u>		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
27	NP2500	CTD/ROS	2032	UTC	066	71 15.641	145 15.844		2302	125	402-403			Some bottles still did not trip - ice? Came up & warmed the rosette/CTD w. heaters & hot water
27	NP2500	CTD/ROS	2105	UTC	067	71 15.8	145 16.2 W	Aldebaran not working called bridge.	2290	127	400, 401, 428	12		ALL BOTTLES TRIPPED
27	NP2500	CTD/ROS	2207	UTC	068	71 16.073	145 17.045		2529 2474	2500	372-383	12		Upcast - stopped @ 475m & went back down to respool.
28	NP1200	CTD/ROS	0120	UTC	069	71 ^{02.986} 06.734	145 22.400		1372	1360	384-395	12		Tx on & cleaned Bottle 12 tripped @ 1360m Had to go down & up a bit near bottom for re-spooling again @ 475m on upcast
28	NP1200	CTD/ROS	⁰³ 15 14	UTC	070	71 02.915	145 22.762		1372	200		4		Cs Cast.
28	NP1200	CTD/ROS	⁰³ 15 38	UTC	071	71 02.874	145 22.808		1366	200	399	4		NO SAMPLES TAKEN Bottle valves not closed - re-cast.
28	NP1200	CTD/ROS	⁰⁴ 16 06	UTC	072	71 02.796	145 22.974		1358	600	396-398	12		Good Cs samples taken this time
28	NP0700	CTD/ROS	0838	UTC	073	71 01.129	145 23.261		994			12		Obstruction in the cell.
28	NP0700	CTD/ROS	0909	UTC	073	71 01.236	145 23.851		1022	1035	404-405	12		Tx cleaned before
28	NP0300	CTD/ROS	1124	UTC	074	70 53.311	145 26.784		316 326	305	416-427	12		Tx cleaned

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Time Code

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RE = recover mooring time

Sept 29/01

Upload after Cast 76.

Upl 24-

$$V_{\text{main start}} = 12.2 \text{ V}$$

$$V_{\text{main end}} = 12.1 \text{ V}$$

Upload after Cast 82

Upl 25-

$$V_{\text{main start}} = 12.2 \text{ V}$$

$$V_{\text{main end}} = 12.1 \text{ V}$$

Upload after Cast 83

Upl 26-

$$V_{\text{main start}} = 12.1 \text{ V}$$

$$V_{\text{main end}} = 12.0 \text{ V}$$

Upload after Cast 84

Upl 27-

$$V_{\text{main start}} = 12.1 \text{ V}$$

$$V_{\text{main end}} = 11.8 \text{ V}$$

Sept 30/01
NO data from
CTD when started
Cast ~~84~~ 85. Brought
it inside to warm-up
check parts etc.

Sampling from cast 84 - Spigots were freezing up - many heaters, lights, blowers.

→ ice crystals in Y-tube.

DAILY LOG

Ocean Sciences and Productivity Division

INSTITUTE OF OCEAN SCIENCES

Year <u>2001</u>					Month <u>SEPT</u>			Ship <u>LAURIER</u>				Cruise I.D. <u>2001-22</u>		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
28	NSJ01	CTD	UTC	2242	075	71 13.599	148 59.560		575	565	429	1 @ 550		winch troubles @ 475 m Tx cleaned (UPCAST)
29	NS1500	CTD	UTC	0041	076	71 24.999	148 59.313		2007	1900	430, 431	2 ^{1600m} _{1900m}		#75 did a 30m. pre-cast to check instrument. Cleaned Tx stopped @ 1860 m UPCAST winch adjustments.
29	NS0200	CTD	UTC	0329	077	71 12.811	148 59.606		340	315	432	1		Tx cleaned Test cast 1st
29	NS0050	CTD	UTC	0409	078	71 10.965	148 59.064		54.4	44	448	0		Tx cleaned Test Cast 1st
29	NS0030	CTD	UTC	0518	079	71 01.483	149 00.852		35.2	29	433	1		Tx cleaned Test Cast 1st
29	HB1200	CTD/ROS	UTC	2020	080	71 55.579	152 48.920		1443	600	446 - 448	12		Tx cleaned Cs Cast Test Cast 1st
29	HB1200	CTD/ROS	UTC	2117	081	71 55.590	152 50.058		1468	200	449	4		Tx cleaned 2nd Cs cast Test Cast 1st
29	HB1200	CTD/ROS	UTC	2144	082	71 55.585	152 50.824		1522	1533	434-445	12		Tx cleaned Test cast → 20m
30	HB2500	CTD/ROS	UTC	0102	083	72 09.156	152 20.786	@ end	1545					
								@ end	2505					
30	HB0700	CTD/ROS	UTC	0550	084	71 49.370	153 01.356		919.6	1000 m	464-473	12		no transmissometer in cage (Test cast → 20m) Tx cleaned (back in cage)

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2nd 1025 m

Bottle #2 did not close.
Down again to 50m to trip #2. Cast #85

Sept 30 Upload after Cast 88
upl 28-

$$V_{\text{main start}} = 12.3 \text{ V}$$

$$V_{\text{main end}} = 12.2 \text{ V}$$

Note: Starting from cast 73 a test cast down to ~30m is done prior to the Cast. This is to ensure that the instrument is working properly & not suffering ice problems etc.

It has been as cold as -10°C on deck + wind & we are only taking the CTD outside + on to Rosette ~5 mins before the Cast.

Warm water ($\sim 5.7^{\circ}\text{C}$ @ $\sim 25\text{m}$) so let instrument sit here for a few minutes before the Cast.

Oct 1/01 Cast 93 when starting cast, Skasane finds the Carousel and the CTD, but no data appears!

Thompson + I tried several times with same results. Cleaned CTD & pylon connector and re-connected several times.

Talked to CTD ^{directly} + batts etc. ok.

Tried one last time _{through pylon} + all worked as usual.

UPLOAD

After cast 93
{casts 0-11} 11-93

upl 29-

$$V_{\text{main start}} = 12.0 \text{ V}$$

$$V_{\text{main end}} = 11.6 \text{ V}$$

DAILY LOG

Ocean Sciences and Productivity Division

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Year <u>2001</u>					Month <u>SEPT/OCT</u>			Ship <u>LAURIER</u>				Cruise I.D. <u>2001-22</u>		
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
30	HB0700	CTD/ROS	UTC	0747	085	71 50.702	153 03.935		1131	50m	462, 463	6		1st attempt @ cast #85: NO DATA FROM CTD TOO COLD? -8°C
30	HB0300	CTD/ROS	UTC	0918	086	71 47.235	153 05.679		400	380	2@5 2@50 2@5 474-485	12		Bringing in to warm up. Tx cleaned
30	HB0100	CTD	UTC	1139	087	71 42.573	153 13.730		110	110	486	1		Tx cleaned
30	HB0055	CTD	UTC	1304	088	71 36.289	153 25.424		52	49	487	0		Tx cleaned
<u>OCT</u> 1	BC01	CTD	UTC	0941	089	71 38.604	154 57.591		62.4	58	487	1		Tx cleaned
1	BC02	CTD	UTC	1037	090	71 40.046	155 01.492		105.6	99	488	1		Tx cleaned
1	BC03	CTD	UTC	1137	091	71 41.894	155 06.390		174	166	489	1		Tx cleaned
1	BC04	CTD	UTC	¹²³⁷ 1037	092	71 43.537	155 11.091		279.6	210	490	1		Tx cleaned Depth entered incorrectly in header. should be 279.6 m
1	BC05	CTD	UTC	1402	093	71 45.730	155 15.810		207 207	200	491	1		Tx cleaned

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2nd attempt
all OK

Oct 2, 2001 Doug put fresh batteries in CTD and cleaned connector on pylon.

Oct 3 Upload after Cast 101

Upl 30 -
(casts 0 → 3)

$V_{\text{main}} = 12.9 \text{ V}$
Start

$V_{\text{main}} = 12.7 \text{ V}$
end

upload kept cutting out ("instrument not responding") so tried running it in batches.
Moved it out of CTD room as it may have been too close to other equipment.

Upl 31 -

(casts 4 → 10)

Oct 4 Upload after Cast 106

Upl 32 -

Cleared memory

$V_{\text{main}} = 13.2 \text{ V}$
Start

$V_{\text{main}} = 13.0 \text{ V}$
end

DAILY LOG

Ocean Sciences and Productivity Division

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Year 2001					Month OCTOBER			Ship LAURIER			Cruise I.D. 2001-22			
Day	Station I.D.	Cast Type	Time (UTC)	Time Code	Consec. Number	Latitude	Longitude	Position Code	Bottom Depth	Max Depth	Consec Sample #	# of Bottles	initials	Comments
1	BC06	CTD	1529	UTC	094	71 47.995	155 22.070		152	148	492	1		Tx cleaned
														TRUBBLE STARTING LOGGING - AGAIN & Doug cleaned pylon connector
1	BC07	CTD	1628	UTC	095	71 50.221	155 27.183		147	137	493	1		Tx cleaned cleaned pylon connector after same troubles & all was fine.
2	CS0200	CTD	2332	UTC	096	72 50.028	159 05.645		220	205	494	1		Tx cleaned
3	CS0250	CTD/ROS	0059	UTC	097	72 53.730	159 02.780		280	270	495-506	12		Tx cleaned CS CAST
3	CS0350	CTD/ROS	0222	UTC	098	72 57.306	158 57.367		364	355		12		Tx cleaned
Cast #1 @ CS1000														
3	CS1000	CTD/ROS	0347	UTC	099	73 01.536	158 51.071		1022	998	519-530	12		Tx cleaned
Cast #2														
3	CS1000	CTD/ROS	0535	UTC	100	73 01.339	158 51.412		978	600	531-533	12		Tx cleaned CS CAST
Cast #3														
3	CS1000	CTD/ROS	0630	UTC	101	73 01.262	158 51.790		958.8	200	534	5		Tx cleaned 2nd CS CAST
3	CS0150	CTD/ROS	2158	UTC	102	72 43.242	158 53.888		170	160	535-541	12		Tx cleaned
3	CS0100	CTD/ROS	2322	UTC	103	72 39.280	158 59.689		111	98	542-548	7		Tx cleaned

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DAILY LOG

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INSTITUTE OF OCEAN SCIENCES

[illegible]

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10/10/2001 AFTER CAST #119 CHANGED SCANTROL SETTINGS AS SPECIFIED
IN WRITE-UP FROM HANDCOLD? FOR AUTOMATICS MODES:

- CHANGED: DEPLOY - MODE 2 PRESS GAIN FROM 25 TO 75
- MODE 2 FIXED FLOW FROM ... TO -100
- MAX TENSION FROM 2000 TO 3000
FOR PMEL: - WIRE SPEED LEFT @ 0.3 m/s

RETRIEVE - MODE WAS 1 SET TO 2
- ~~MODE 2~~ PRESS GAIN FROM 10 TO 25
- MODE 2 FIXED FLOW FROM -50(?) TO -100
- MAX TENSION FROM 2000 TO 3000

HOLD - MODE WAS 1 SET TO 2
M1 FLOW GAIN FROM 10(?) TO 30
M2 PRESS GAIN FROM 25 TO 75
M2 FIXED FLOW
MAX TENSION FROM 2000 TO 3000

NOTE: CAST #⁵
STARTED NUMBERING
0117 - REVISED TO 001
118 002
(INFORM SARAH T.)

← RESET TO 1
AFTER CAST 005
AS LTD KEPT COMING UP
WHEN IN "HOLD"

10/11/2001 UPLOAD Up1-000 → 004 (IN DIR = C:\2001-23)

START: $V_{main} = 13.0$ END $V_{main} = 12.7$

CHANGED REAL-TIME DATA TO 1 scan/sec (WAS 8/sec)
ALSO CHANGED PRESS. SENSOR RANGE TO 1500 PSIAS (SHOULD HAVE BEEN DONE)
CHANGED COND. TURNON FROM 2670 TO 2700 (AFTER NOTE)
CHANGED P-SENSOR T-COMPENSATION VALUE FROM 19 TO -140 (OFF CALIBR. SHEET)

- SET INTERNAL BAUDRATE TO 600 FROM 4800 (COMMAND IS: "SR1" for 600 BAUD)
- CHANGE TERM25 BAUDRATE ALSO (FROM 4800 TO 600) (BR 4 for 4800)

- DISCONNECT CABLE FROM WINCH TO SBE33 DECK UNIT
- PLUG GREY CABLE (w/ BLUE CONNECTOR) BETWEEN SEA CABLE & COM. PORT ON PC
- IN SEASAVE / REAL TIME DATASETUP / COM. PORT CONFIG / SET RATE BETWEEN SBE33 & COMPUTER TO 600
- CONFIG WATER SAMPLER CONFIG / FROM SBE CAROUSEL TO NONE