DAILY SCIENCE LOG BOOK

CRUISE NUMBER 2018-01

DATE: From: 18 FEBRUARY To: 8 MARCH 2018

VESSEL: SIR W. LAURIER

PROJECT(S): LINE P

Water Properties Group
Fisheries and Oceans Canada
Institute of Ocean Sciences
Ocean Sciences Division

WaterProperties.ca

Captain: SIMON DOCKERILL First Officer: IAN COPPING

Second Officer: THOMAS BANFAI Third Officer: KAITLIN SCURR

Fishing Master: _____ Chief Engineer: RANDY MORFORD

Mission Participants / Agencies:

DFO/IOS, UVIC, UBC, UW, UND

**** Chief Scientist to complete section below OR cut and tape from cruise plan ****

1st Leg Scientific Personnel: Chief Scientist: MARIE ROBERT 06-18 516

Name	Watch	Cabin	Name	Watch	Cabin
MARK BELTON	00-12	524			
KYLE SIMPSON	12-24	514			
JADE SHILLER	00-06	508			
SARAH BERCOVICI	06-12	508			
YUANHENG (ERIC) XIONG	18-24	647			
MICHAEL ARYCHUK	12-24 DMS	647			
DANIELLE CALEB	00-12	644			
THERESA VENELLO	12-24	644			

2nd Leg Scientific Personnel: Chief Scientist: _____

Name	Watch	Cabin	Name	Watch	Cabin

**** The following 3 pages are VERY IMPORTANT as they document equipment and settings used on board ****

These pages are to be completed by the CTD Technician setting up the equipment, the Watch Leader on board, and the Chief Scientist MUST verify that all relevant sections are completed prior to leaving the vessel. *Any mid-cruise changes to be noted by watch leader in the notes.*

Data logging computer: Vector Laptop

Data acquisition program: Seasave

CTD deck unit make: SBE model: 11+ serial number: 425

Primary CTD

Make: SBE model: 9+ serial number: 1222

Primary temperature serial number: 2106

Primary conductivity serial number: 2280

Secondary temperature serial number: 2663

Secondary conductivity serial number: 2754

Transmissometer: WetLabs Model: C-STAR s/n: 1185DR

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model Seapoint Cable gain: 10X s/n: 3642 P, (S) or NO pump?

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Oxygen sensor: SBE Model: 43 s/n: 3038 (P) S or NO pump?

PAR sensor: Biospherical Model: QSP2350 s/n: 70613 Surface PAR? Y / (N)

Other sensors: Altimeter s/n: 62355 P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Secondary CTD

Make: _____ model: 9+ serial number: 443

Primary temperature serial number: ~~2128~~ 2710

Primary conductivity serial number: ~~2710~~ 2128

Secondary temperature serial number: ~~2399~~ 4752

Secondary conductivity serial number: ~~4752~~ 2399

Transmissometer: _____ Model: _____ s/n: 1185DR

Transmissometer: _____ Model: _____ s/n: _____

Fluorometer: Model _____ Cable gain: _____ s/n: 3641 P, (S) or NO pump?

Fluorometer: Model _____ Cable gain: _____ s/n: _____ P, S or NO pump?

Oxygen sensor: SBE Model: 43 s/n: 0997 (P) S or NO pump?

PAR sensor: _____ Model: _____ s/n: 70613 Surface PAR? Y / (N)

Other sensors: Altimeter s/n: 62355 P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

Other sensors: _____ s/n: _____ P, S or NO pump?

CTD calibration bottle location (height above CTD in metres): _____

This also includes the bottle location above the CTD on non-rosette casts (e.g., W.E. Ricker)

This page is for any notes or observations

Event 2- SB1 WIND S-SE 5kn
CURRENT Southerly.
TIDE 2m and falling
BTM 189m

EVENT 3 SB2 WIND E-SE - 10kn
CURRENT 1.4kn S
TIDE 1.5m and falling.
BTM 202m

EVENT 4 SB3 WIND SE 15 KNTS
CURRENT 1.20 knts S
TIDE 1.14m FLOOD
BTM 94

EVENT 5 SB4 WIND: SE 10 KNTS
CURRENT: 1.56 m
TIDE: ESE 1KNT
BTM. 138

EVENT 7 SB5 WIND: SE 10 KNT
CURRENT: W 1 KNT
TIDE 1.86 m
BTM

EVENT 9 SB6 WIND: ENE 13 KNT.
CURRENT 0 KNT
TIDE: 2.19m
BTM: 178m

EVENT 11 SB7 WIND ENE 16 KNTS
CURRENT W 0.2 KTS
TIDE 2.6m
BTM 247

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month FEBRUARY **Year** 2018 **Vessel** LAURIER **Cruise ID** 2018-01 Page 1 of 14

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
1	SI	20	01:10	BE	ROS	US	48° 39.70	123° 29.92	166		-			☑ ☒	TEST CAST
			01:14	BO			48° 39.70	123° 29.92		158	—	—	MB	☐ ☐	SAANICH INLET
			01:18	EN			48° 39.71	123° 29.93			-			☐ ☐	
2	SB1	20	06:40	BE	SPONGE BOB	-	48° 42.09	123° 16.02	~~185~~ 192		-	3	K.S./TV	☐ ☐	SN 831, 835, 836
3	SB2	20	07:24	BE	SPONGE BOB	-	48° 30.9	123° 12.9	202		829-837	2	KS./TV	☐ ☐	→ SEE NOTES
4	SB3	20	08:12	BE	DRF	DE	48° 20.86	123° 11.85	94	-	-	—	MB	☐ ☐	SPONGE BOB 823, 823
5	SB4	20	09:03	BE	DRF	DE	48° 15.33	123° 25.15	138	-	-	—	MB	☐ ☐	SPONGE BOB 830, 824
6	JF1	20	09:24	BE	LOOP	-	48° 15.44	123° 30.41	166	-	5006 -	—	MB	☐ ☐	2×CH 1521 1 NUT
7	SB5	20	10:19	BE	DRF	DE	48° 16.41	123° 48.28	169		-		MB	☐ ☐	SPONGE BOB 826, 828
8	JF2	20	10:57	BE	LOOP	-	48° 18.44	123° 59.54	178	-	5008 -	—	MB	☐ ☐	2×CH 1521 1 NUT
9	SB6	20	11:49	BE	DRF	DE	48° 22.54	124° 15.81	178	-	-	-	MB	☐ ☐	SPONGE 832, 825
10	JF3	20	12:40	BE	LOOP	-	48° 26.91	124° 30.53	234	-	5010 -	—	MB	☐ ☐	2×CH 1521 1 NUT
11	SB7	20	13:08	BE	DRF	DE	48° 28.57	124° 38.41	247	-	-	-	MB	☐ ☐	SPONGE 833, 834
12	JF4	20	14:15	BE	LOOP	-	48° 32.11	124° 58.56	45	-	5012 -	—	MB	☐ ☐	2×CH 1521 1 NUT
13	P1	20	16:17	BE	ROS	US	48° 34.46	125° 30.02	133		1 - 4	4	MB	☑ ☐	
			16:19	BO			48° 34.45	125° 30.01		125	-			☐ ☐	
			16:26	EN			48° 31.46	125° 30.03			-			☐ ☐	
			:				° .	° .			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set

LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

This page is for any notes or observations

p 1.5/14

#824 - no door stopper

#826 - no door stopper

#825 - no door stopper

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month FEBRUARY | **Year** 2018 | **Vessel** LAURIER | **Cruise ID** 2018-01

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
14	P2	20	18:19	BE	ROS	US	48° 36.03	126° 0.04	118		~~1-8~~	8	MB	☐☐	DEEP CAST
			18:21	BO			48° 36.03	126° 0.04		105	5-12			☐☐	BOTTLE 5 did not fire
			18:29	EN			48° 36.00	126° 0.07			-			☐☐	
15	P2	20	19:04	BE	NET	UN	48° 36.095	126° 00.052	119	108	—	-	MB	☐☐	BONGO TO
			19:14	BO			48° 36.15	126° 00.06			-			☐☐	
			19:16	EN			48° 36.16	126° 00.06			-			☐☐	
16	P2	20	19:33	BE	NET	UN	48° 36.01	126° 00.01	119	108	—	-	MB	☐☐	RING NOT
			19:37	BO			48° 36.15	126° 00.06			-			☐☐	
			19:39	EN			48° 36.08	126° 00.03			-			☐☐	
17	P2	20	20:08	BE	ROS	US	48° 35.987	125° 59.998	115		13-32	20	KS. MB.	☑☐	DMS
			20:11	BO			48° 35.983	125° 59.983		105	-			☐☐	
			20:31	EN			48° 36.010	125° 59.971			-		KS	☑☐	
18	P3	20	22:40	BE	ROS	US	48° 38.578	126° 20.084	780	770	33-34	2	K.S	☑☐	A 5 P D
			22:54	BO			48° 37.594	126° 20.17			-			☐☐	
			23:08	EN			48° 37.606	126° 20.192			-			☐☐	
19	P4	21	00:52	BE	ROS	US	48° 39.00	126° 39.98	1310	300	35-57	23	KS	☑☐	DMS CAST
			00:58				48° 39.00	126° 39.98			-			☐☐	2 x CTD LOOPS
			01:20				48° 38.99	126° 39.99			-			☐☐	
			:				° .	° .			-			☐☐	

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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month FÉVRIER | **Year** 2018 | **Vessel** LAURIER | **Cruise ID** 2018-01

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
20	P4	21	02:21	BE	ROS	US	48°38.98	126°39.98	~1315		58 - 77	20	MR/	☑ ☐	S 1314 P 1322 A 11 D 1307
			02:43	BO			48°38.97	126°39.97		1322	-			☐ ☐	SOUNDOR: 1304-1318
			03:26	EN			48°38.97	126°39.94			-			☐ ☐	
21	P4	21	04:31	BE	NET		48°38.996	126°39.979	1310	250	-		KS/TV	☐ ☐	BONGO
			04:40	BO			48°39.006	126°39.995			-			☐ ☐	
			04:44	EN			48°39.015	126°40.003			-			☐ ☐	
22	P4	21	04:54	BE	NET		48°38.994	126°40.027	1310	1200	-		KS/TV	☐ ☐	BONGO
			05:35	BO			48°39.050	126°40.127			-			☐ ☐	
			05:56	EN			48°39.022	126°40.117			-			☐ ☐	
23	P4	21	06:18	BE	NET		48°39.050	126°40.050	1310	250	-		KS/TV	☐ ☐	WHITE NET
			06:28	BO			48°39.07	126°40.05			-			☐ ☐	
			06:32	EN			48°39.07	126°40.05			-			☐ ☐	
24	P4	21	07:33	BE	ROS	US	48°39.04	126°40.02	1300		78 - 93	16	MB	☐ ☐	UBC CAST
			07:56	BO			48°38.95	126°40.20		1317	-			☐ ☐	
			08:25	EN			48°39.02	126°40.46			-			☐ ☐	
25	P5	21	10:43	BE	ROS	US	48°41.67	127°10.07	2050		94 - 95	2	MB	☐ ☐	PILE OFF
			11:19	BO			48°41.68	127°10.31		2013	-			☐ ☐	
			11:54	EN			48°41.68	127°10.56			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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DN = Down / No stop

Time Code:
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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month FEBRUARY **Year** 2018 **Vessel** LANCELOT **Cruise ID** 2018-01

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
26	P6	21	14:20	BE	ROS	US	48°44.67	127°39.90	2523		96 - 97	2	MB	☑☐	
			14:53	BO			48°44.77	127°39.88		2005	-			☐☐	
			15:32	EN			48°44.77	127°39.76			-			☐☐	
27	P7	21	17:58	BE	ROS	US	48°46.58	128°9.99	2483		98 - 99	2	MB	☒☐	
			18:32	BO			48°46.59	128°9.97		2005	-			☐☐	
			19:09	EN			48°46.58	128°10.02			-			☐☐	
28	P8	21	21:37	BE	ROS	US	48°48.991	128°39.890	2497	300	100 - 111	12	K.S.	☑☐	PAR ON
			21:43	BO			48°48.984	128°39.857			-			☐☐	
			22:02	EN			48°49.000	128°39.799			-			☐☐	
29	P8	21	22:27	BE	NET	UN	48°49.050	128°39.953	2497	250	-		KS TV/MA	☐☐	BONGO
			22:40	BO			48°48.99	128°39.96			-			☐☐	
			22:45	EN			48°48.99	128°39.93			-			☐☐	
30	P8	21	22:53	BE	NET		48°48.982	128°39.976		1200	-		TV/MA	☐☐	BONGO
		21	23:40	BO			48°48.936	128°40.062			-			☐☐	
		22	00:02	EN			48°48.878	128°40.210			-			☐☐	
31	P8	22	00:18	BE	NET		48°48.991	128°39.963	2499	250	-		TV/MA	☐☐	RING
			00:26	BO			° .	° .			-			☐☐	
			00:31	EN			48°48.953	128°40.027			-			☐☐	
			:				° .	° .			-			☐☐	

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CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month FÉVRIER | **Year** 2018 | **Vessel** LAURIER | **Cruise ID** 2018-01

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
32	P8	22	00:58	BE	ROS	US	48° 48.914	128° 40.052	2509	2005	112 - 135	24	K.S.	☑ ☐	LOOPS 2 CHL 1 SAL 1 NUT
			01:32	BO			48° 48.91	128° 40.09			-			☐ ☐	
			02:36	EN			48° 48.78	128° 39.64			-			☐ ☐	
33	P12	22	15:21	BE	ROS	US	48° 58.22	130° 39.72	3233		136 - 159	24	MB	☑ ☐	PAR OFF
			:	BO			48° 58.	130° 39.		2190	-			☐ ☐	ABORTED
			:	EN			48° 58.	130° 39.			-			☐ ☐	
34	P12	22	17:13		NET		48° 58.17	130° 39.88	3233		-			☐ ☐	BONGO
			17:23				48° 58.17	130° 39.88		250	-			☐ ☐	
			17:28				48° 58.17	130° 39.88			-			☐ ☐	
35	P12		17:43		NET		48° 58.24	130° 40.01			-			☐ ☐	RING NET
			17:51				48° 58.17	130° 39.91			-			☐ ☐	
			17:56				48° 58.16	130° 40.00			-			☐ ☐	
36	P12	22	18:40	BE	ROS	US	48° 58.07	130° 39.94	3233		160 - 182	23	MB	☐ ☐	DMS CAST 2 CHL LOOPS
			18:45	BO			48° 58.08	130° 39.94		300	-			☐ ☐	PAR ON
			19:04	EN			48° 58.07	130° 39.99			-			☐ ☐	CTD 0443!
37	P12	22	20:03	BE	ROS	US	48° 58.17	130° 39.91	3800		136 - 159	24	MR/KS	☑ ☐	PAR OFF
			20:54	BO			48° 58.17	130° 40.05		3275	-			☐ ☐	DEEP CAST
			22:05	EN			48° 58.08	130° 39.92			-			☐ ☐	LOOPS 1 SAL 1 NUT
38	P12	22	:		NEXT	PAC	° .	° .			-			☐ ☐	ERIC

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

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Notes: _____

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PUMP FAILED @ 2200m ✓, WOULD NOT TURN BACK ON TRIED RESTARTING PUMP BUT DID NOT START

After cast 0033, swap CTD to #0443

CASTS 36 + 37 MAY HAVE WRONG GAIN CABLE IN CONFIG FILE.
"BLACK" VALUE TOO HIGH, 0.22
CONFIG: LinePbackup.xmlcon
↳ YES! GAIN WAS WRONG FOR CASTS 36+37.
SET TO 3x, SHOULD HAVE BEEN 10x.

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38	P12	22	22:44	BE	INSTR		48°58.1723	130°39.970	3233		-		ERIC	☐☐	ERIC
			22:46	BO			48°58.1677	130°39.925		60	-			☐☐	
			22:53	EN			48°58.1538	130°39.950			-			☐☐	
39	P12	22	23:09	BE	NET	UN	48°58.1705	130°40.0122	3233		-		KS	☐☐	BONGO
			23:50	BO			48°58.1169	130°39.9782		1200	-			☐☐	
			00:09	EN			48°58.115	130°39.980			-			☐☐	
40	P12	23	01:03	BE	ROS	US	48°58.121	130°40.001	3233	2005	183-198	16	MR/KS	☑☐	UBC CAST PAR ON
			01:36	BO			48°58.123	130°39.949			-			☐☐	FLUO GAIN SET TO X10
			02:14	EN			48°58.110	130°39.906			-			☐☐	IN CONFIG FILE
W1	P13	23	06:35	BE	ROS	US	49°02.603	131°39.918	3030	150	199-200	2	K.S.	☑☐	WINCH problems RECOVERED
42	P13	23	07:59	BE	ROS	US	49°2.600	131°39.976	3030		199-200	2	MB	☐☐	
			08:34	BO			49°2.686	131°39.888		2005	-			☐☐	
			09:07	EN			49°2.687	131°39.823			-			☐☐	
43	P14	23	14:11	BE	ROS	US	49°7.30	132°39.898	3315		201-224	24	MB	☑☑	PAR OFF DOX + SAL CAST
			15:15	BO			49°7.390	132°39.430		3360	-			☐☐	P=3360 A=17 D=3303 S=?
			16:40	EN			49°7.226	132°38.962			-			☐☐	
44	P15	23	21:06	BE	ROS	US	49°11.94	133°39.6146	3415		225-226	2	KS	☑☐	PAR ON
			21:43	BO			49°12.00	133°39.22		2006	-			☐☐	
			22:20	EN			49°12.031	133°38.782			-			☐☐	

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Version: 6 December 2016

This page is for any notes or observations

ABORTED DUE TO WINCH PROBLEMS

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month FÉVRIER **Year** 2018 **Vessel** LANGARA **Cruise ID** 2018-01

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
45	~P18	24	14:55	BE	Loop	-	49°26.153	136°40.429	3768	-	5045	-	MB	☐☐	2 CH1 + 1 SAL
46	~P20	25	00:24	BE	LOOP	—	49°34.091	138°41.200	3965	—	5046	—	KS.	☐☐	2 CH1 + 1 Salt.
47	~P21	25	06:54	BE	Loop	—	49°37.813	139°43.166	3960	—	5047	—	K.S.	☐☐	2 CH1 + 1 Salt TSG MUNKY
48	~P21.5	25	10:21	BE	Loop	—	49°39.858	140°12.650	3780	—	5048	—	MB	☐☐	2 CH1 + 1 Salt
49	~P22.5	25	15:30	BE	Loop	—	49°43.432	140°53.456	3818	—	5049	—	MB	☐☐	2 CH1 + 1 Salt
50	~P23.5	26	00:12	BE	Loop	—	49°50.037	142°05.537	4000	—	5050	—	KS	☐☐	2 CH1 + 1 Salt TSG MUNKY
51	~P24.5	26	06:41	BE	Loop	—	49°54.084	143°20.404	~4000	—	5051	—	K.S	☐☐	2 CH1 + 1 Salt TSG MUNKY
52	~P25.5	26	9:36	BE	Loop	—	49°56.804	144°2.138	4241	—	5052	—	MB	☐☐	2 CH1 + 1 Salt
53	P26	26	16:21	BE	Cast	US	49°59.803	141°59.926	4200		227 - 250	24	MB	☑☐	1 x SAL 1 x ADJUST LOOP
			17:44	BO			49°59.940	141°59.798		4316	-			☐☐	A: 12.6 P: (3055) 4316 D: 4234.5 - 4200
			19:26	EN			49°59.899	144°59.896			-			☐☐	PAR IS OFF
54	P26	26	20:46	BE	NET	UN	50°00.12	141°59.85	4250		-		KS.	☐☐	1st Attempt aborted Redone.
			21:04	BO			49°59.96	144°59.73		250	-			☐☐	BONGO
			21:09	EN			49°59.73	141°59.69			-			☐☐	
55	P26	26	21:31	BE	NET	UN	50°00.00	144°59.94	4250		-		KS	☐☐	
			21:42	BO			50°00.03	144°59.86		250	-			☐☐	RING NET
			21:46	EN			50°00.05	144°59.85			-			☐☐	
			:				° .	° .			-			☐☐	
			:				° .	° .			-			☐☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
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DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
Version: 6 December 2016

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month FÉVRIER | **Year** 2018 | **Vessel** LAURIER | **Cruise ID** 2018-01

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
56	P26	26	22:04	BE	ROS	US	50° 0.085	144° 59.960	4250	300	251 - 270	20	MP/KS	☑ ☐	DMS PAR IN ~~2 x CHL bottles~~
			22:10	BO			50° 0.067	144° 59.903			-			☐ ☐	BTM GPS recorded @ 250m on UP cast
			22:34	EN			50° 0.124	144° 59.171			-			☐ ☐	
57	P26	26	23:44	BE	INSTR	INT	49° 59.96	145° 00.00	4250		-			☐ ☐	ERICS
			23:46	BO			49° 59.95	145° 00.02		60	-			☐ ☐	INSTRUMENT
			23:52	EN			49° 59.91	145° 00.00			-			☐ ☐	
58	P26	27	00:10	BE	ROS	US	49° 59.97	144° 59.94	4250		271 - 292	22	MP/KS	☑ ☐	UBC + OPT
			00:43	BO			49° 59.95	144° 59.87		2005	-			☐ ☐	
			01:27	EN			49° 59.988	144° 59.876			-			☐ ☐	
59	PA-11	27	02:47	BE	ROS	US	50° 08.515	144° 49.903			-			☐ ☐	
			02:57	BO			50° 08.533	144° 49.775		500	293 - 295	3	KS	☑ ☐	
			03:11	EN			50° 08.569	144° 49.700			-			☐ ☐	
60	P35	27	05:30	BE	ROS	US	49° 59.947	144° 18.196	4200		295 - 296	2	KS	☑ ☐	295 repeated!
			06:05	BO			49° 59.957	144° 18.234		2005	-			☐ ☐	Closed BTL 1-6
			06:43	EN			49° 59.993	144° 18.124			-			☐ ☐	Wasn't contacted on 12TL 1-3 Bong prped
61	P25	27	09:24	BE	ROS	US	50° 0.005	143° 36.233	4140		297 - 320	24	MB	☑ ☑	CALIBRATION
			10:00	BO			49° 59.958	143° 36.308		2005	-			☐ ☐	CAST
			10:37	EN			49° 59.897	143° 36.262			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

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P26 loops collected but NOT filtered

~~Event~~ Event # 56

P 8.5/14

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month FEBRUARY/MARCH **Year** 2018 **Vessel** LAURIER **Cruise ID** 2018-01

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
62	P24	27	13:56	BE	ROS	US	49° 50.164	142° 39.968	4344		321-344	24		☑ ☐	PAR OFF
			15:05	BO			49° 50.297	142° 39.872		4043	-			☐ ☐	LARGE BUCKET ON
			16:38	EN			49° 50.388	142° 39.764			-			☐ ☐	ROSETTE D:39.79:13 P:4435:430
63	P23	27	19:57	BE	ROS	US	49° 45.982	141° 39.829	4050		345-348	5	K.S	☑ ☐	PAR ON
			20:30	BO			49° 46.045	141° 39.816		2006	-			☐ ☐	
			21:10	EN			49° 46.164	141° 39.883			-			☐ ☐	
64	P22	28	00:48	BE	ROS	US	49° 42.076	140° 39.944	3900		350-373	24	KS/MK	☑ ☐	PAR OFF
			02:01	BO			49° 42.052	140° 39.516		3950	-			☐ ☐	Alt - 13m
			03:41	EN			49° 42.490	140° 38.647			-			☐ ☐	
65	~ P21	28	15:44	BE	LOOP		49° 38.299	139° 39.514	4349		5065	—	MB	☐ ☐	salt, 2 chl 1 nut
66	~ P20	1	15:56	BO	LOOP		50° 02.503	139° 39.757	4251		5066	—	MB	☐ ☐	salt, 2 chl
67	~ P20 (isw)	2	05:35	BE	LOOP		49° 02.52	138° 41.128	4300		5067	—	K.S.	☐ ☐	Salt, 2 chl mark #7 TSG
68	~ P20	2	16:35	BE	LOOP		49° 50.672	138° 50.009	3983		5068	—	MB	☐ ☐	salt, 2 chl
69	P20	3	00:00	BE	ROS	US	49° 33.502	138° 40.100	4000		-			☑ ☐	PAR ON
			00:08	BO			49° 33.875	138° 40.046		300	374-397	24	K.S.	☐ ☐	
			00:34	EN			49° 33.823	138° 39.998			-			☐ ☐	
70	P20	3	01:00	BE	NET		49° 34.057	138° 39.8068			-		K.S.	☐ ☐	Bongo - 250m
			01:15	BO			49° 33.9187	138° 39.9759		250	-			☐ ☐	
			01:19	EN			49° 33.9317	138° 40.0228			-			☐ ☐	

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Notes: _____

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'... YOU CAN'T STOP THE CUPS...' MR 2018

DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month MARS **Year** 2018 **Vessel** LAURIER **Cruise ID** 2018-01

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
71	P20	03	01:29	BE	NET		49 °33.925	138 °40.041	3965		-		KS	☐☐	BONGO
			02:16	BO			49 °33.658	138 °39.974		1200	-			☐☐	
			02:38	EN			49 °33.581	138 °40.003			-			☐☐	
72	P20	03	03:00	BE	ROS	US	49 °33.90	138 °40.07	3920		398-421	24	KS/MR	☑☐	PAR OFF
			04:08	BO			49 °33.522	138 °39.962		4620	-			☐☐	13m from BTM
			05:47	EN			49 °33.547	138 °39.907			-			☐☐	
73	P19	03	11:17	BE	ROS	US	49 °29.944	137 °39.992	3930		422-423	2	MR/DK	☑☐	KEPT PAR OFF → DARK
			11:54	BO			49 °29.936	137 °39.790		2005	-			☐☐	
			12:31	EN			49 °29.968	137 °39.982			-			☐☐	
74	P18	03	16:45	BE	ROS	US	49 °25.870	136 °40.055	3835		424-447	24	MR	☑☐	D=3891 A=9.8 D=3822 S=4047
			17:48	BO			49 °25.843	136 °40.040		3890	-			☐☐	
			19:09	EN			49 °25.962	136 °40.181			-			☐☐	
75	P17	03	23:05	BE	ROS	US	49 °20.975	135 °39.852	3640		448-449	2	KS.	☑☐	PAR ON
			23:37	BO			49 °20.950	135 °39.757		2005	[illegible]			☐☐	
			00:13	EN			49 °20.959	135 °39.641			-			☐☐	
76	P16	04	04:14	BE	ROS	US	49 °17.070	134 °40.084	3635		450-472	23	KS	☐☐	DMS cast
			04:20	BO			49 °17.027	134 °40.040		300	-			☐☐	
			04:48	EN			49 °16.931	134 °39.984			-			☐☐	
~			:				° .	° .			-			☐☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month MAR **Year** 2018 **Vessel** LAURIER **Cruise ID** 2018-01

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77	P16	04	05:11	BE	INSTR	—	° .	° .			-			☐☐	ERIC'S Instrument
			05:18	BO			49°16.781	134°39.905	3635	60	—	—	ERIC	☐☐	
			05:25	EN			49°16.781	134°39.905			-			☐☐	
78	P16	04	05:33	BE	NET		49°16.58	134°39.80	3635		—	—	K.S.	☐☐	BONGO 200m
			05:40	BO			49°16.72	134°39.75		250	-			☐☐	
			05:45	EN			49°16.71	134°39.77			-			☐☐	
79	P16	04	06:27	BE	ROS	US	49°16.912	134°39.954	3635		473-496	24	K.S/MB	☑☐	Deep Cast PAR OFF
			07:34	BO			49°16.708	134°39.773		3680	-			☐☐	P=3680 A: 15.8 D: 3617 S: 3914
			08:53	EN			49°16.633	134°39.706			-			☐☐	+ LooP Sal×1, Nut×1
80	P11	05	01:57	BE	ROS	US	49°55.999	130°10.052	2735		497-498	2	K.S	☑☐	PAR ON
			02:30	BO			48°56.000	130°09.877		2006	-			☐☐	
			03:05	EN			48°55.858	130°9.553			-			☐☐	
81	P10	05	05:20	BE	ROS	US	48°53.533	129°39.985	2640		499-500	2	K.S.	☑☐	
			05:55	BO			48°53.513	129°39.914		2005	-			☐☐	
			06:33	EN			48°53.539	129°39.764			-			☐☐	
82	P9	05	8:48	BE	ROS	US	48°51.433	129°9.958	2350		501-502	2	ME/DC	☑☐	
			9:18	BO			48°51.482	129°9.868		2005	-			☐☐	
			9:47	EN			48°51.526	129°9.790			-			☐☐	
			:				° .	° .			-			☐☐	

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Produced by the Water Properties Group, IOS

WaterProperties.ca
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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month March | **Year** 2018 | **Vessel** Laurier | **Cruise ID** 2018-01

Event Number	Station Name	Day	Time (UTC)	Time Code	Event Type	Firing Method	Positional Information Latitude	Positional Information Longitude	Bottom Depth	Max Cast Pressure	Sample Serial Numbers	# of Bottles	Watch Keepers	Trns/Fl Cleaned	Comments
83	JF2	6	06:01	BE	NET		48°17.884	124°00.126	185		-		MA/T.V.	☐☐	
			06:06	BO			48°17.893	124°00.176		172	-			☐☐	
			06:13	EN			48°17.919	124°00.261			-			☐☐	
84	JF2	6	06:34	BE	ROS	US	48°17.957	124°00.247			503-521	19	K.S.	☑☐	
			06:38	BO			48°17.998	124°00.332		183.5	-			☐☐	Altimeter 4.5m
			06:57	EN			48°18.068	124°00.869			-			☐☐	
85	HAROS9	6	13:46	BE	NET		48°37.038	123°15.252	231		-		MB	☐☐	
			13:53	BO			48°35.756	123°16.930		226	-			☐☐	
			13:57	EN			48°35.756	123°16.930			-			☐☐	
86	HAROS9	6	14:15	BE	ROS	US	48°36.863	123°14.861	236		522-541	20	MB	☑☐	
			14:18	BO			48°36.93	123°14.91		225	-			☐☐	
			14:36	EN			48°37.277	123°14.797			-			☐☐	
87	S6	6	17:21	BE	NET	-	48°46.173	123°01.644	237		-	-	MB	☐☐	
			17:29	BO			48°46.070	123°01.771		227	-			☐☐	
			17:33	EN			48°46.071	123°01.759			-			☐☐	
88	S6	6	17:51	BE	ROS	US	48°46.472	123°1.558	208		542-556	15	MB	☑☐	ALT = 4.3
			17:55	BO			48°46.472	123°1.578		203	-			☐☐	
			18:12	EN			48°46.397	123°1.734			-			☐☐	
			:				° .	° .			-			☐☐	

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Ocean Sciences Division, Institute of Ocean Sciences

Month MARCH **Year** 2018 **Vessel** LAURIER **Cruise ID** 2018-01

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89	46	6	19:40	BE	NET	UN	48°51.29	123°10.47	190		-		TV/MA	☐☐	
			19:44	BO			48°51.25	123°10.42		178	-			☐☐	
			19:48	EN			48°51.2	123°10.4			-			☐☐	
90	46	6	20:07	BE	ROS	US	48°51.16	123°10.22	179		557-559	3	MR/KS.	☑☐	SOUNDERS: BRIDGE 175
			20:11	BO			48°51.09	123°10.16	190	184	-			☐☐	LAB 190 ALT 78
			20:20	EN			48°50.954	123°10.030			-			☐☐	
91	42	6	22:11	BE	NET	UN	49°01.7921	123°26.147	318		-		TV/MA,	☐☐	
			22:22	BO			49°01.707	123°26.193		308	-			☐☐	
			22:27	EN			49°01.675	123°26.22			-			☐☐	
92	42	6	22:43	BE	ROS	US	49°01.776	123°26.319	319		577-592	16	KS.	☑☐	AIT 5.7
			22:49	BO			° .	° .		315	-			☐☐	
			23:12	EN			49°1.632	123°26.308			-			☐☐	
93	41	6	23:55	BE	NET	UN	49°03.2536	123°22.3406	246		-			☐☐	
		7	00:02	BO			49°03.245	123°22.399		230	-		MA TV	☐☐	
		7	00:06	EN			49°03.242	123°22.472			-			☐☐	
94	41	7	00:24	BE	INSTR	UN	49°03.2437	123°22.5289	246		-		ERIC	☐☐	OPTICS
			00:30	BO			49°03.244	123°22.563		60	-			☐☐	
			00:32	EN			49°03.249	123°22.569			-			☐☐	
			:				° .	° .			-			☐☐	

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DAILY SCIENCE LOG

Ocean Sciences Division, Institute of Ocean Sciences

Month MARCH | **Year** 2018 | **Vessel** LAURIER | **Cruise ID** 2018-01

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95	41	07	00:48	BE	ROS	US	49° 03.257	123° 22.594	247		560-576	17	K.S.	☑ ☐	
			00:53	BO			49° 03.252	123° 22.603		242	-			☐ ☐	Alt: 5.0
			01:13	EN			49° 03.260	123° 22.745			-			☐ ☐	
96	GEO1	07	03:32	BE	NET	UN	49° 14.995	123° 45.113	402		-		TV/MA	☐ ☐	
			03:41	BO			49° 15.017	123° 45.090		250	-			☐ ☐	
			03:45	EN			49° 15.02	123° 45.089			-			☐ ☐	
97	GEO1	07	03:53	BE	NET	UN	49° 15.025	123° 45.083	402		-		TV/MA	☐ ☐	
			04:06	BO			49° 15.048	123° 45.073		392	-			☐ ☐	
			04:16	EN			49° 15.05	123° 45.045			-			☐ ☐	
98	GEO7	07	04:29	BE	ROS	US	49° 15.050	123° 45.026	402		593-608	16	K.S.	☑ ☐	
			04:36	BO			49° 15.045	123° 45.012		398	-			☐ ☐	
			04:58	EN			49° 15.036	123° 44.971			-			☐ ☐	
99	CPF1	07	07:05	BE	NET	UN	49° 22.022	124° 04.887	245		-		TV/MA	☐ ☐	
			07:13	BO			49° 22.025	124° 04.825		235	-			☐ ☐	
			07:17	EN			49° 22.050	124° 04.836			-			☐ ☐	
100	CPF1	07	07:33		ROS	US	49° 22.055	124° 04.829	245		612-625		K.S/MB	☑ ☐	
			07:57				49° 22.054	124° 04.757		240	-			☐ ☐	Alt: ~8m
			07:57				49° 22.079	124° 4.584			-			☐ ☐	
			:				° .	° .			-			☐ ☐	

Event Type:
BOT = Bottle cast (no CTD)
CTD = Standalone CTD
ROS = CTD in Rosette
SET = Fish Set
LOOP = Sea Water Loop
MOR = Mooring
NET = Plankton Net Haul
DRF = Drifter
____ = _____

Bottle Firing Method:
US = Up / Stop (default)
UN = Up / No stop
DN = Down / No stop

Time Code:
BE = Beginning Time of Cast
BO = Bottom Time of Cast
EN = End Time of Cast
DE = Deployment Time
MR = Messenger Release Time
RE = Recover Mooring Time

CTD Transmissometer and Fluorometer to be cleaned before each cast -- do not use Ammonia products

Notes: _____

Produced by the Water Properties Group, IOS

WaterProperties.ca
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