

Deep Focus
CB-4

≈ 3824m
Knudsen

Rosette Log for IOS Cruise ID 2009-20

Ship: CCGS Louis S St-Laurent

Knudsen (w/+9 corr)

Cast # 023

UTC Date (ddmmmyyyy) 29 09 2009

Ice Coverage 0/10

Water Depth(below hull) 3825 m

Station CB-4

UTC Time 21:20

In Air pressure (before/after) -0.471/-0.43

Sound Speed 1478

CTD File 200920-023

Lat (N) 75 0.000

Lon (W) 149 59.965

CTD Operator MC

Samp #	Target Property	Depth(m)	Niskin #	Bottle Integrity (0=good, 1=bad)	Oxygen	Oxy Flask #, and draw tmp	Oxy Flask #, and draw tmp - Duplicate	Oxy Flask #, and draw tmp - Triplicate	Niskin #	DIC/ALK	DIC (KB)	13C-DIC (KB)	SDOM	Chla (Total)	Chla (RAM/Prod)	Bacteria	Niskin #	FW Alk	NUT	Sal	O18	Ba	NH4	Comments
445	bot-10	3816	✓1	✓✓	✓	1216 / -0.3			1	✓		✓				✓	1		3	✓	✓	✓		Chla max 465 m tmax @ ~478 m
446		3700	✓2	✓✓	✓✓	1447 -0.4	1429 -0.5	1484 -0.4	2								2							} Fill cube container for 5 L
447		3600	✓3	✓✓		1328 -0.5			3								3							
448		3500	✓4	✓✓		547 -0.5			4								4			✓				
449		3400	✓5	✓✓		462 -0.5			5	✓✓	✓✓						5							
450		3300	✓6	✓✓		1202 -0.4			6								6							
451		3200	✓7	✓✓	✓	1192 -0.4	429 -0.3		7								7							
452		3100	✓8	✓✓		329 -0.4			8	✓		✓					8							
453		3000	✓9	✓✓		1336 -0.3			9								9							
454		2900	✓10	✓✓		1417 -0.4			10								10							
455		2800	✓11	✓✓		1225 -0.4			11								11			✓				
456		2700	✓12	✓✓	✓	456 -0.3	425 -0.4		12								12							
457		2600	✓13	✓✓		1295 -0.4			13								13							
458		2500	✓14	✓✓		1270 -0.3			14	✓		✓					14							
459		2000	✓15	✓✓		1130 -0.3	1432 -0.3		15	✓		✓					15							Redraw dup → bubbles
460		1800	✓16	✓✓		1309 -0.3			16								16							Redraw dup → bubbles
461		1500	✓17	✓✓		1451 -0.2	1234 -0.2		17	✓		✓					17							
462		1200	✓18	✓✓		1358 -0.1			18								18							
463		500	✓19	✓✓		1443 +0.8			19								19							
464		450	✓20	✓✓		1275 +0.8			20								20							
465		400	✓21	✓✓		1448 +0.7			21								21			✓				
466	33.1	214	✓22	✓✓		1423 -1.1			22								22							
467	32.9	195	✓23	✓✓		1362 -1.2			23								23							← slowed to 30m/min here for rest of up cast.
468		20	✓24	✓✓	✓	1343 0.0			24							✓	24		3	✓	✓	✓		Usually this happens @ 300m.

Bottle integrity: First test lower petcock then test top valve. 0 means pass, 1 means fail. If niskin fails, explain this in the comments column.

Comments:

↑
dups chosen at specific locations

↑
7

Usually this happens @ 300m.

3830

oxygen → 2:08

Zu 3840
(Knudsen Depth)

Rosette Log for IOS Cruise ID 2009-20

Ship: CCGS Louis S St-Laurent

(TD+ALT) 3832+9

Cast # 024

UTC Date (ddmmmyyyy) 30_09_2009

Ice Coverage 0/10

Water Depth(below hull) 3844 m

Station CB-5

UTC Time 06:10

in Air pressure (before/after) -0.34 -0.39

Sound Speed 1478 m/s

CTD File 200920-024

Lat (N) 75 18.148

Lon (W) 153 16.588

CTD Operator MC(start) EF(finish)

FW ALK
@ 1000, 2000
0-300 ✓Because deep Alk's missed
on CB-4

Samp #	Target Property	Depth(m)	Niskin #	Bottle Integrity (0=good, 1=bad)	Oxygen	Oxy Flask #, and draw tmp	Oxy Flask #, and draw tmp - Duplicate	Oxy Flask #, and draw tmp - Triplicate	Niskin #	DIC/ALK	DIC (KB)	136 DIC (KB)	CDOM	Chl a (Total)	Chl a (RAM/Prod)	Bacteria	Niskin #	FW Alk	NUT	Sai	O18	Ba	NH4	Comments
469	bot-10	3837	1	✓	✓	1422 1.0			1						✓		1	3	✓					False start on CTD.
470		3100	2	✓	✓	1224 0.3	1434 0.0		2								2							
471		2500	3	✓		493 -0.3			3								3							
472		2000	4	✓		1452 -0.3			4								4	✓			✓	✓		
473		1500	5	✓		1499 -0.3	1363 -0.3		5								5							reDraw Rubble @ 1363
474		1000	6	✓		1418 0.2			6								6	✓			✓	✓		
475		750	7	✓		1402 0.1			7								7							
476		500	8	✓		1297 0.4			8								8			✓				
477	2m	440	9	✓		1381 0.4			9								9							
478	34.75	380	10	✓		1468 0.2			10								10							
479	34.9	359	11	✓		1340 0.2			11								11							reDraw @ 325
480	34.6	329	12	✓		1427 0.1			12								12							
481	34.4	292	13	✓		1110 0.3			13								13	✓			✓	✓		
482	34	255	14	✓	✓	1344 0.7	1382 0.7		14								14							
483	33.5	229	15	✓		1413 -1.2			15								15							
484	33.1	200	16	✓		1440 1.3			16				✓				16	✓			✓	✓		
485	32.9	184	17	✓		1471 -1.3			17								17			✓				
486	32.6	153	18	✓		1331 -1.2			18								18	✓			✓	✓		
487	32.3	124	19	✓		586 -1.0			19								19							
488		90	20	✓	✓	1233 -0.6	1286 -0.6		20								20							
489	* 31.0m	65	21	✓		1351 -0.3			21					✓			21			✓				
490		50	22	✓		1454 -0.3	1223		22					✓			22							reDraw Rubble @ 1454
491		20	23	✓		1426 0.7			23					✓			23							
492		5	24	✓	✓	1456 0.0			24	✓			✓		✓		24	✓	3	✓	✓	✓		

Bottle integrity: First test lower petcock then test top valve. 0 means pass, 1 means fail. If niskin fails, explain this in the comments column.

Comments:

include chitmax (6-10)
~45, 1290 } sample water types

Rosette Log for IOS Cruise ID 2009-20

Ship: CCGS Louis S St-Laurent

Cast # 025 UTC Date (ddmmmyyyy) 30-09-2009 Ice Coverage 0/10 Water Depth(below hull) 3824 m
 Station C13-4 UTC Time 13.48 In Air pressure (before/after) 0.57 / -0.26 Sound Speed 1478
 CTD File 200920-025 Lat (N) 75 0-085 Lon (W) 150 0-130 CTD Operator EF

1000 m cast
w/ISUS

⊛ 10 calibration
bottles:

30 sec wait
up, down, up!
30 sec wait

Samp #	Target Property	Depth(m)	Niskin #	Bottle Integrity (0=good, 1=bad)	Oxygen	Oxy Flask #, and draw tmp	Oxy Flask #, and draw tmp - Duplicate	Oxy Flask #, and draw tmp - Triplicate	Niskin #	DIC/ALK	DIC (KB)	13C-DIC (KB)	CDOM	Chl a (Total)	Chl a (PAM/Prod)	Bacteria	Niskin #	FW Alk	NUT	Sal	O18	Ba	NH4	POC	NO LABELS UNLESS KRISTINA ASKS	Comments
493 ⊛		1000	1	✓	✓	1231 0.2			1	✓		✓				✓	1		3	✓				✓		
494		800	2	✓	✓	575 -0.1	1457 -0.2		2	✓							2									redraw bubble → 575
495 ⊛		600	3	✓	✓	1194 -0.1			3	✓							3									which mistle wait dam then up
496	6max	500	4	✓	✓	1430 0.0			4	✓		✓					4							✓		
497	34.8	448	5	✓	✓	1364 0.1			5								5									
498	34.75	402	6	✓	✓	1150 0.0			6								6									
499	34.1	378	7	✓	✓	1023 -0.1			7								7									
500 ⊛	34.6	347	8	✓	✓	1341 -0.3			8								8	✓			✓	✓				
501	34.4	310	9	✓	✓	1293 -0.5			9								9									
502	34	275	10	✓	✓	1495 -1.0			10								10									
503 ⊛	33.5	246	11	✓	✓	1352 -1.2			11								11									
504 ⊛	33.1	215	12	✓	✓	1188 -1.3			12	✓		✓	✓				12							✓		drags @ end ray
505	32.9	198	13	✓	✓	1354 -1.4			13			✓					13							✓		
506	32.6	165	14	✓	✓	1366 -1.3			14								14									
507 ⊛	32.3	136	15	✓	✓	1212 -1.1			15								15									
508		115	16	✓	✓	1453 -1.0			16	✓							16									
509		90	17	✓	✓	1347 -0.7			17								17									
510 ⊛	6max	78	18	✓	✓	1428 -0.5	1299 -0.4		18								18			✓				✓		drags @ end cap
511 ⊛	6max	55	19	✓	✓	1204 -0.5	1216 -0.4		19			✓					19							✓		red cap 1204 (16 ground)
512	6max	40	20	✓	✓	1356 -0.1			20								20									drags @ end cap
513 ⊛	6max	36	21	✓	✓	1445 -0.2	1361 0.0		21	✓							21			✓	✓	✓				
514	6max	24	22	✓	✓	1136 0.0			22								22									
515 ⊛		5	23	✓	✓	1416 -0.6	1360 -0.7		23	✓		✓	✓			✓	23	✓	3	✓	✓	✓		✓		drags ISUS ON
			24						24								24									

Bottle integrity: First test lower petcock then test top valve. 0 means pass, 1 means fail. If niskin fails, explain this in the comments column.

Comments:

6max 68

3 min 493
START → FINISH
Nina → O₂ sample times: 10:14 10:33
SHIP time

Z 3827 m
(from Knudsen)

Rosette Log for IOS Cruise ID 2009-20

Ship: CCGS Louis S St-Laurent

target depth 3817 m (K-10)

Cast # 026

UTC Date (ddmmmyyyy) 01 10 2009

Ice Coverage 0/10

Water Depth(below hull) 3827 m

Station CB-7

UTC Time 02:45

In Air pressure (before/after) -0.38/-0.42

Sound Speed 1478

CTD File 200920-026

Lat (N) 75 56.998

Lon (W) 149 59.497

CTD Operator (M)

Samp #	Target Property	Depth(m)	Niskin #	Bottle Integrity (0=good, 1=bad)	Oxygen	Oxy Flask #, and draw tmp	Oxy Flask #, and draw tmp - Duplicate	Oxy Flask #, and draw tmp - Triplicate	Niskin #	DIC/ALK	DIC (KB)	13C-DIC (KB)	CDOM	Chl a (Total)	Chl a (PAR/Prod)	Bacteria	Niskin #	FW Alk	NUT	Sal	O18	Ba	TH4	Comments
516	bat-10	3818	✓1	✓✓	✓	1130 +0.5			1							✓	1		3	✓				WHol - mooring release test (x3) No Wait @ bottom ~ completed testing during downcast. ↳ they will radio when test is complete.
517		3100	✓2	✓✓	✓	1443 0.0			2								2							
518		2900	✓3	✓✓	✓✓	1362 -0.3	1433 -0.3	1448 -0.4	3								3							
519		2000	✓4	✓✓		1375 -0.5			4								4							
520		1500	✓5	✓✓		1358 -0.5			5								5			✓				
521		1000	✓6	✓✓		1284 -0.3			6								6							
522		750	✓7	✓✓		1451 0.0			7								7							
523		500	✓8	✓✓		1309 +0.3			8								8							
524	twine	475	✓9	✓✓		1432 +0.3			9								9							
525	34.75	375	✓10	✓✓		1270 +0.3			10								10							
526	34.7	353	✓11	✓✓		1295 +0.1			11								11							
527	34.6	326	✓12	✓✓		425 0.0			12								12				✓	✓		
528	34.4	289	✓13	✓✓		456 -0.4			13								13			✓				
529	34	252	✓14	✓✓	✓	1225 -1.0	1417 -1.0		14								14				✓	✓		
530	33.5	230	✓15	✓✓		1336 -1.2			15								15							
531	33.1	204	✓16	✓✓		329 -1.4			16				✓				16				✓	✓		
532	32.9	184	✓17	✓✓		439 -1.2			17								17							
533	32.6	152	✓18	✓✓		1192 -1.4			18					✓✓			18				✓	✓		
534	32.3	122	✓19	✓✓		1202 -1.4			19								19				✓	✓		
535	31.2	89	✓20	✓✓		462 -1.1			20								20				✓	✓		
536	chhwa	65	✓21	✓✓		547 -0.6			21					✓			21				✓	✓		
537	31.2	46	✓22	XX	✓	1325	1484		22								22	✓			✓	✓		Bottle didn't trigger - No samples taken
538	twine	21	✓23	✓✓	✓	1429 -0.4	1434 -0.4		23								23	✓			✓	✓		Took dup O ₂ here instead.
539		5	✓24	✓✓	✓	1343 -0.3			24	✓			✓	✓		✓	24	✓	3	✓	✓	✓		

Bottle integrity: First test lower petcock then test top valve. 0 means pass. 1 means fail. If niskin fails, explain this in the comments column.

Comments:

dups on 21

26

Cast # 027 UTC Date (ddmmmyyyy) 01 | 10 | 2009 Ice Coverage 0/10 Water Depth(below hull) 3825. m ~ 3826
 Station CB-8. UTC Time 10:14 In Air pressure (before/after) 0.5.1 - 0.4 Sound Speed 1478
 CTD File 200920- 027 Lat (N) 76 59.984 Lon (W) 150-022. CTD Operator EF

Samp #	Target Property	Depth(m)	Niskin #	Bottle Integrity (0=good, 1=bad)	Oxygen	Oxy Flask #, and draw tmp	Oxy Flask #, and draw tmp - Duplicate	Oxy Flask #, and draw tmp - Triplicate	Niskin #	DIC/ALK	DIC (KB)	135-DIC (KB)	CDOM	Chl a (Total)	Chl a (PAM/Prod)	Bacteria	Niskin #	FW Alk	NUT	Sal	O18	Ba	NH4	Comments
540	bot-10	3816	✓ 1	✓✓	✓	1456 -0.7			1						✓		1	3	✓					
541		3100	✓ 2	✓✓		1418 -0.3			2								2							
542		2500	✓ 3	✓✓		1223 -0.3			3								3							
543		2000	✓ 4	✓✓		1426 -0.5			4								4							
544		1500	✓ 5	✓✓		1454 -0.5			5								5							
545		1000	✓ 6	✓✓		1351 -0.3			6								6		✓					
546		750	✓ 7	✓✓		1286 -0.1			7								7							
547		500	✓ 8	✓✓	✓	1233 -6.1	586 -0.2		8								8							
548	EMAX	494	✓ 9	✓✓		1331 -0.1			9								9		✓					
549	34.75	404	✓ 10	✓✓		1471 -0.0			10								10							
550	34.7	388	✓ 11	✓✓		1440 -0.1			11								11							
551	24.6	361	✓ 12	✓✓		1413 -0.3			12								12				✓	✓		
552	34.4	329	✓ 13	✓✓		1382 -0.5			13								13							
553	34	308	✓ 14	✓✓		1344 -0.8			14								14				✓	✓		
554	33.5	273	✓ 15	✓✓		1110 -1.4			15								15		✓					
555	33.1	220	✓ 16	✓✓		1427 -1.6			16				✓				16				✓	✓		
556	32.9	178	✓ 17	✓✓		1340 -1.5			17								17							
557	32.6	122	✓ 18	✓✓	✓	1468 -1.2	1281 -1.2		18								18				✓	✓		
558	32.3	95	✓ 19	✓✓		1297 -0.8			19								19							
559	1/2	69	✓ 20	✓✓		1482 -0.5			20								20							
560	CANWAY	43	✓ 21	✓✓		1363 -0.5			21					✓✓			21							
561	EMAX	23	✓ 22	✓✓		1499 -0.5			22					✓✓			22	✓						
562		15	✓ 23	✓✓	✓✓	1452 -0.6	1493 -0.5	1434 -0.5	23					✓✓			23	✓						
563		5	✓ 24	✓✓	✓	1224 -0.8			24	✓			✓			✓	24	✓	3	✓	✓	✓		

Bottle integrity: First test lower petcock then test top valve. 0 means pass, 1 means fail. If niskin fails, explain this in the comments column.

Comments:

Sample # jump.
Sample labels correct
error is only on log sheet.

NINA-D2 Sample times
Start ~ 05:45 End ~ 06:15

27/10/09

Cast # 28UTC Date (ddmmmyyyy) 01/10/2009

2009-20

Ice Coverage 5/10Water Depth(below hull) 3825 mStation CB-9UTC Time 17:16In Air pressure (before/after) -0.5 / -0.2Sound Speed 1478CTD File 200920-28Lat (N) 78 01-14Lon (W) 150 7-49.8CTD Operator EF1000m
cast
w/ISUS

Samp #	Target Property	Depth(m)	Niskin #	Bottle Integrity (0=good, 1=bad)	Oxygen	Oxy Flask #, and draw tmp	Oxy Flask #, and draw tmp - Duplicate	Oxy Flask #, and draw tmp - Triplicate	Niskin #	DIC/ALK	DIC (KB)	13C-DIC (KB)	CDOM	Chl a (Total)	Chl a (PAM/Prod)	Bacteria	Niskin #	FW Alk	NUT	Sal	O18	Ba	PH4	Comments
564	34.75	353	✓	1	✓✓	✓	1447 -0.8		1	✓					✓		1	3	✓					34.75 353 34.8 402
565	34.7	334	✓	2	✓✓	✓	1231 -0.0	575 -0.0 1446 -0.0	2	✓							2		✓					redraw, problem #1231, new #1446
566	334.6	306	✓	3	✓✓		1194 -0.4		3	✓							3	✓			✓	✓		
567	34.4	265	✓	4	✓✓		1430 -0.7		4	✓							4	✓			✓	✓		
568	-	245	✓	5	✓✓		1364 -0.8		5	✗							5							
569	34	226	✓	6	✓✓	✓	1150 -1.0	1023 -1.0 1341 -1.0	6	✓							6							
570	33.5	205	✓	7	✓✓		1293 -1.2		7	✓							7		✓					
571	33.1	184	✓	8	✓✓		1495 -1.4		8	✓			✓				8							
572	32.9	167	✓	9	✓✓	✓	1352 -1.4	1453	9	✓✓							9		✓					redraw, problem 1352
573	32.6	133	✓	10	✓✓		1188 -1.3		10	✓							10							
574	32.3	106	✓	11	✓✓		1354 -1.2		11	✓							11							drips a bit
575	-	80	✓	12	✓✓		1366 -0.9		12								12							
576	-	70	✓	13	✓✓		1212 -0.7		13	✓							13					✓	✓	
577	chl	54	✓	14	✓✓	✗	1453		14					✓	✗	✗	14	✗	✗	✗	✗	✗	✗	Missed chl only
578	chl+Tmax	54	✓	15	✓✓		1347 -0.5		15	✓				✓	✓		15	✓			✓	✓		
579	Tmax	38	✓	16	✓✓		1428 -0.5		16					✓✓			16	✓			✓	✓		
580	chl	35	✓	17	✓✓		1299 -0.4		17					✓			17							
581	Tmin	33	✓	18	✓✓		1204 -0.4		18	✓				✓✓			18	✓			✓	✓		
582	chl	25	✓	19	✓✓		1356 -0.5	1136 -0.3	19					✓			19							redraw, problem 1356
583	Tmax	23	✓	20	✓✓		1445 -0.3		20	✓				✓			20	✓			✓	✓		
584	chl	14		21	✓✓		1360 -0.3		21					✓			21							
585	chl+T	8		22			1136 -0.7	1457	22	✓		✓		✓			22	✓			✓	✓		
586	chl	0		23		✓	1361	NO SAMPLE	23					✓			23	✓	3	✓	✓	✓		Rosette was out of water before cap is closed
				24					24						✓		24	3	✓					ISUS on frame

Bottle integrity: First test lower petcock then test top valve. 0 means pass, 1 means fail. If niskin fails, explain this in the comments column.

Comments:

Wait For cast to see what/where.
 Labels can't be made yet.
 chl - not
 NSTM + FWALK, O18, Ba, NUT + DIC

↑ ↑ ↑
O₂ start:

↑ ↑
End:

Cast # 29UTC Date (ddmm/yyyy) 02 / 10 / 2009

2009-20

Ice Coverage 10 / 10Water Depth(below hull) 3824 mStation CB-9UTC Time 2:27In Air pressure (before/after) -0.45 / -0.37Sound Speed 1478 m/sCTD File 200920-029Lat (N) 78 0.752 Lon (W) 150 11.182CTD Operator MC

make POC labels ✓

2nd cast
Deep Water
Focus

Samp #	Target Property	Depth(m)	Niskin #	Bottle Integrity (0=good, 1=bad)	Oxygen	Oxy Flask #, and draw tmp	Oxy Flask #, and draw tmp - Duplicate	Oxy Flask #, and draw tmp - Triplicate	Niskin #	DIC/ALK	DIC (KB)	13C-DIC (KB)	CDOM	Chla (Total)	Chla (PAM/Prod)	Bacteria	Niskin #	FW Alk	NUT	Sal	O18	Ba	NH4	POC	Comments
587	bot-10	3813	✓1	✓✓	✓	1433 -0.3			1	✓		✓				✓	1	✓	3	✓	✓	✓		✓	Chla max @ 56m
588		3700	✓2	✓✓	✓	1130 -0.3	1375 -0.3		2								2			✓					
589		3600	✓3	✓✓		1362 -0.4			3								3				✓	✓			
590	3500	3500	✓4	✓✓	4	1216 -0.5	1448 -0.3	1358 -0.3	4								4								← 4 extra oxy for Nunn (5 total)
591	3425	3200	✓5	✓✓		1309 -0.5	1284 -0.3	1451 -0.3	5								5								
592	3200	3100	✓6	✓✓		1432 -0.5			6	✓	✓						6							✓✓	dups to remain at 3100m Δ bottle 6 to 7
593	3100	3000	✓7	✓✓	✓	1270 -0.5	1295 -0.5		7								7			✓					
594	3000	2900	✓8	✓✓		425 -0.5			8								8								
595		2800	✓9	✓✓	✓	456 -0.5			9								9								
596		2700	✓10	✓✓		1225 -0.6			10								10								
597		2500	✓11	✓✓		1417 +0.3			11	✓		✓					11	✓			✓	✓		✓	
598		2000	✓12	✓✓		1336 -0.5			12	✓							12								
599		1500	✓13	✓✓	✓	329 -0.4	439 -0.3		13	✓							13								
600		1000	✓14	✓✓		1192 -0.1			14	✓							14								
601		800	✓15	✓✓		1202 +0.1			15	✓							15								
602		600	✓16	✓✓		462 +0.4			16	✓							16								
603		500	✓17	✓✓		1484 +0.5			17	✓							17			✓					
604	tmr	443	✓18	✓✓		1320 +0.7			18	✓							18								
605		400	✓19	✓✓		547 +0.7			19	✓		✓					19							✓	
606	34.75	354	✓20	✓✓		1343 +0.6			20								20								
607	34.7	334	✓21	✓✓		607 +0.5			21								21								
608	33.1	182	✓22	✓✓		1422 -1.1			22	✓		✓					22							✓	
609	32.9	164	✓23	✓✓		1443 -1.2			23								23								
610		8	✓24	✓✓	✓	1450 -0.7			24	✓		✓				✓	24		3	✓				✓	

Bottle integrity: First test lower petcock then test top valve. 0 means pass, 1 means fail. If niskin fails, explain this in the comments column.

Comments:

4130 No

Cast # 30UTC Date (ddmmYYYY) 02 | 10 | 2009

2009-20

Ice Coverage 9 / 10Water Depth(below hull) 2952 m

Z ~ 2700

Station CB-10UTC Time 10:02:00In Air pressure (before/after) -0.5 / -0.3Sound Speed 1478

2942

CTD File 200920-30Lat (N) 78 20.639 Lon (W) 153 1.241CTD Operator EF

Samp #	Target Property	Depth(m)	Niskin #	Bottle Integrity (0=good, 1=bad)	Oxygen	Oxy Flask #, and draw tmp	Oxy Flask #, and draw tmp - Duplicate	Oxy Flask #, and draw tmp - Triplicate	Niskin #	DIC/ALK	DIC (KB)	13C-DIC (KB)	CDOM	Chl a (Total)	Chl a (PAM/Prod)	Bacteria	Niskin #	FW Alk	NUT	Sal	O18	Ba	NH4	Comments
611	but-10	2969	✓1	✓✓	✓	1493 0.2			1						✓		1	3	✓					
612		2500	✓2	✓✓		1434 -0.3			2								2							wind stops after bottle is tripped, ship moves to avoid ice
613		2000	✓3	✓✓	✓✓	1418 -0.4	575 -0.5	1426 -0.5	3								3							
614		1500	✓4	✓✓		1454 -0.5			4								4							
615		1000	✓5	✓✓		1351 -0.3			5								5							
616		750	✓6	✓✓		1286 0.0			6								6		✓					
617		500	✓7	✓✓		1233 0.3			7								7							
618	tmax	465	✓8	✓✓		586 0.4			8								8							
619		400	✓9	✓✓		1331 0.4			9								9							
620	34.7	319	✓10	✓✓		1471 0.2			10								10							
621	34.6	288	✓11	✓✓		1440 0.2			11								11				✓✓			drips - spigot
622	34.4	247	✓12	✓✓	✓✓	1413 -0.3	1382 -0.3		12								12							
623	34	210	✓13	✓✓					13								13				✓✓			
624	(33.5)	184	✓14	✓✓					14								14							
625	33.1	164	✓15	✓✓	✓	1344 -1.2			15				✓				15		✓		✓✓			
626	32.9	147	✓16	✓✓					16								16							
627	32.6	124	✓17	✓✓					17								17				✓✓			
628	32.3	100	✓18	✓✓	✓	1110 -1.0			18								18				✓✓			
629		75	✓19	✓✓					19								19				✓✓			
630		50	✓20	✓✓					20					✓✓			20							
631	tmax	39	✓21	✓✓					21					✓✓			21				✓✓			
632	max	35	✓22	✓✓	✓	1427 -0.3			22								22	✓			✓✓			
633		20	✓23	✓✓					23								23	✓		✓	✓✓			
634		5	✓24	✓✓	✓✓	1340 -0.7	1468 -0.9		24	✓			✓✓	✓✓	✓		24	✓	3	✓	✓✓			

Bottle integrity: First test lower petcock then test top valve. 0 means pass, 1 means fail. If niskin fails, explain this in the comments column.

Comments:

20

Oxygen End time ~ 5:08

~ 5:30

400 IF tmax is
450 close to one of
500 these, use tmax

Rosette Log for IOS Cruise ID 2009-20

Ship: CCGS Louis S St-Laurent

Cast # 31 UTC Date (ddmmmyyyy) 02 10 2009

Ice Coverage 9 110

Water Depth(below hull) 1725 ^{CTD+alt} m

Station CB-10a2 UTC Time 13:29

In Air pressure (before/after) -0.47 -0.3

Sound Speed 1478

CTD File 200920-31 Lat (N) 78 20.515 Lon (W) 153 30-646

CTD Operator EF

Samp #	Target Property	Depth(m)	Niskin #	Bottle Integrity (0=good, 1=bad)	Oxygen	Oxy Flask #, and draw tmp	Oxy Flask #, and draw tmp - Duplicate	Oxy Flask #, and draw tmp - Triplicate	Niskin #	DIC/ALK	DIC (KB)	130-DIC (KB)	CDOM	Chl-a (Total)	Chl-a (RAM/Prod)	Bacteria	Niskin #	FW Alk	NUT	Sal	O18	Ba	NH4	Comments
635	bot-10	1713	✓1	W.	✓	1224 0.9			1							✓	1		3	✓				
636		1600	✓2	✓✓		1447 0.1			2								2							
637		1500	✓3	✓✓		1231 -0.1			3								3							
638		1200	✓4	✓✓	✓	1446 0	1195 0.1		4								4			✓				
639		1000	✓5	✓✓		1430 0			5								5							
640		750	✓6	✓✓		1364 0.1			6								6							
641		500	✓7	✓✓		1150 0.8			7								7							
642	6mox	448	✓8	✓✓		1023 0.9	1360 1.0		8								8							
643		400	✓9	XX		1341 0.9			9								9							
644	34.7	314	✓10	✓✓		1293 0.7			10								10							
645	34.6	284	✓11	✓✓		1495 0.4			11								11				✓	✓		
646	34.4	248	✓12	✓✓	✓	1352 0.0			12								12			✓				
647	34	206	✓13	✓✓					13								13							
648	33.5	184	✓14	✓✓					14								14				✓	✓		
649	33.1	162	✓15	✓✓	✓	1453 -0.8	1354 -0.7		15			✓					15				✓	✓		
650	32.9	148	✓16	✓✓					16								16							
651	32.6	121	✓17	✓✓					17								17							
652	32.3	98	✓18	✓✓	✓	1366 0.8			18								18				✓	✓		
653	0	83	✓19	✓✓					19								19			✓	✓	✓		
654	0	69	✓20	✓✓					20								20							
655	chl	54	✓21	✓✓					21								21				✓	✓		
656	6mox	39	✓22	✓✓	✓	1212 0.2			22								22	✓						
657		20	✓23	✓✓					23								23	✓						
658		5	✓24	✓✓	✓	1347 -0.7	1297 -0.7		24	✓			✓			✓	24	✓	3	✓	✓	✓		redraw problem 1347

Bottle integrity: First test lower petcock then test top valve. 0 means pass, 1 means fail. If niskin fails, explain this in the comments column.

Comments:

18

34

Oxygen End ~ 725

Z ~ 1900

1725

check if ☒ ISUS 2 ~ 1000
☒ Battery Plugged In ??

Rosette Log for IOS Cruise ID 2009-20

Ship: CCGS Louis S St-Laurent

Cast # 32

UTC Date (ddmm/yyyy) 21 10 2009

Ice Coverage 9/10

Water Depth (below hull) 1066 m

Station CB-10a

UTC Time 17:32

In Air pressure (before/after) -0.5, -0.2

Sound Speed 1478

CTD File 200920-32

Lat (N) 78 19.765 Lon (W) 158 0530

CTD Operator ET

Samp #	Target Property	Depth(m)	Niskin #	Bottle Integrity (0=good, 1=bad)	Oxygen	Oxy Flask #, and draw tmp	Oxy Flask #, and draw tmp - Duplicate	Oxy Flask #, and draw tmp - Triplicate	Niskin #	DIC/ALK	DIC (KB)	14C-DIC (KB)	CDOM	Chl a (Total)	Chl a (PAM/Prod)	Bacteria	Niskin #	FW Alk	NUT	Sal	O18	Ba	NH4	Comments
659	bot-10	1051	1	✓					1							✓	1		3	✓				
660		800	2	✓	✓	1482 1.0	1188 0.2		2								2							redraw probe at 1432
661		600	3	✓	✓	1363 0.3	1499 0.4		3								3							
662		500	4	✓	✓	1452 0.5			4								4							
663	EM-X	465	5	✓	✓	1381 0.6			5								5							
664	34.8	395	6	✓	✓	1428 0.7	1361 0.8		6								6							redraw probe at 1428
665	34.7	317	7	✓	✓	1299 0.4			7								7							
666	34.6	288	8	✓	✓	1204 0.3			8								8							
667	34.4	253	9	✓	✓				9								9							
668	34	217	10	✓	✓				10								10							
669	33.5	195	11	✓	✓				11								11							
670	33.1	170	12	✓	✓				12			✓					12							drops on bottom, cracks in bottle drips on end cap
671	32.9	152	13	✓	✓				13								13							
672	32.6	120	14	✓	✓				14								14							
673	32.3	94	15	✓	✓				15								15							
674		73	16	✓	✓				16								16							
675	31.1	52	17	✓	✓				17							✓	17	✓	✓					CHL ONLY
676	31.0	32	18	✓	✓				18							✓	18							
677		34	19	✓	✓				19							✓	19							
678		24	20	✓	✓				20							✓	20	✓						
679		14	21	✓	✓				21							✓	21							
680		8	22	✓	✓				22	✓		✓			✓	✓	22	✓						
681		0	23	✓	✓				23						✓	✓	23	✓						
			24						24						✓	✓	24	✓						ISUS

Bottle integrity: First test lower petcock then test top valve. 0 means pass, 1 means fail. If niskin fails, explain this in the comments column.

Comments: chosen by Misun