

POWOW #3 (KM13-12)

CTD#____01____ / Station#____01____ / Cast#____01____

max CTD depth: 800
 bottom depth: 1323
 Start Time UTC: 04:15
 Start Lat: 21 23.467
 Start Lon: -158 17.445

Operator(s): EZ/ZJ
 Year Day UTC: 183
 Finish Time UTC: 05:02
 Finish Lat: 21 23.431
 Finish Lon: -158 17.473

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	EZ
1	200	200											
2	200	200											
3	200	200											
4	200	200											
5	200	200											
6	200	200											
7	200	200											
8	200	200											
9	200	200											
10	200	200											
11	200	200	X								X		
12	200	200		X					X				
13	0	3											
14	0	3											
15	0	3											
16	0	3										X	
17	0	3										X	
18	0	3										X	
19	0	3										X	
20	0	3											
21	0	3											
22	0	3						X					
23	0	3	X								X		
24	0	3		X					X				

Notes: First cast – test station (just north of Kahe)

POWOW #3 (KM13-12)

CTD#____02____ / Station#____02____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4743
 Start Time UTC: 21:54
 Start Lat: 22 45.005
 Start Lon: -158 00.009

Operator(s): EZ/ZJ
 Year Day UTC: 183
 Finish Time UTC: 22:48
 Finish Lat: 22 45.005
 Finish Lon: -158 00.011

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X						
2	200	200		X	X				X				
3	150	150	X				X						
4	150	150		X	X				X				
5	Chlmax=130	130	X				X						
6	Chlmax=130	130		X	X				X				
7	125	125					X						
8	125	125		X	X				X		X		
9	125	125								X			
10	100	100	X				X						
11	100	100		X	X				X				
12	75	75	X				X						
13	75	75		X	X				X				
14	50	50	X				X						
15	50	50		X	X				X				
16	25	25											
17	25	25	X				X						
18	25	25		X	X				X				
19	25	25											
20	15	15					X			X			
21	15	15		X	X				X		X		
22	0	3											
23	0	3	X				X						
24	0	3		X	X				X				

Notes: Station ALOHA, second ~fluorescence peak at ~160 m

POWOW #3 (KM13-12)

CTD# ____ 03 ____ / Station# ____ 02 ____ / Cast# ____ 03 ____

max CTD depth: 800
 bottom depth: 4742
 Start Time UTC: 13:53
 Start Lat: 22 44.999
 Start Lon: -158 00.021

Operator(s): EZ/ZJ
 Year Day UTC: 184
 Finish Time UTC: 14:49
 Finish Lat: 22 44.960
 Finish Lon: -158 00.014

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X						
4	150	150		X	X				X				
5	Chlmax=125	125	X			X	X	X					
6	Chlmax=125	125		X	X				X				
7	100	100	X			X	X	X					
8	100	100		X	X				X				
9	88	88				X	X						
10	88	88		X	X				X				
11	75	75								X			
12	75	75	X			X	X				X		
13	75	75		X	X				X				
14	50	50	X			X	X	X					
15	50	50		X	X				X				
16	25	25											X
17	25	25											X
18	25	25	X			X	X	X					
19	25	25		X	X				X				
20	15	15					X						
21	15	15		X	X	X			X		X		
22	0	4								X			
23	0	4	X				X	X					
24	0	4		X	X				X				

Notes: Station ALOHA, second fluorescence peak at ~135 m

POWOW #3 (KM13-12)

CTD#____04____ / Station#____03____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4496
 Start Time UTC: 21:57
 Start Lat: 24 05.299
 Start Lon: -157 59.933

Operator(s): EZ/ZJ
 Year Day UTC: 184
 Finish Time UTC: 22:49
 Finish Lat: 24 05.302
 Finish Lon: -157 59.926

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	0	4											
2	0	4											
3	0	4											
4	0	4											
5	0	4											
6	0	4											
7	0	4											
8	0	4							X				
9	0	4											
10	0	4											
11	0	4											
12	0	4											
13	0	4											
14	0	4											
15	0	4											
16	0	4											
17	0	4											
18	0	4											
19	0	4											
20	0	4											
21	0	4											
22	0	4											
23	0	4											
24	0	4											

Notes: bottle #11 did not trip – jammed lanyard

POWOW #3 (KM13-12)

CTD#____05____ / Station#____04____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5392
 Start Time UTC: 13:58
 Start Lat: 27 03.954
 Start Lon: -157 59.853

Operator(s): EZ/ZJ
 Year Day UTC: 185
 Finish Time UTC: 14:55
 Finish Lat: 27 03.920
 Finish Lon: -157 59.832

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X						
4	150	150		X	X				X				
5	125	125	X				X	X					
6	125	125		X	X	X			X				
7	Chlmax=110	110					X	X					
8	Chlmax=110	110		X	X				X				
9	100	100	X				X	X					
10	100	100		X	X	X			X				
11	87	87											
12	87	87				X			X				
13	75	75								X			
14	75	75	X				X				X		
15	75	75		X	X	X			X				
16	50	50	X				X	X					
17	50	50		X	X	X			X				
18	25	25	X				X	X					
19	25	25		X	X	X			X				
20	15	15					X						
21	15	15		X	X	X			X		X		
22	0	4								X			
23	0	4	X				X	X					
24	0	4		X	X				X				

Notes: July 4! Party in the USA.

POWOW #3 (KM13-12)

CTD#____06____ / Station#____05____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5531
 Start Time UTC: 21:56
 Start Lat: 28 17.376
 Start Lon: -157 59.928

Operator(s): EZ/ZJ
 Year Day UTC: 185
 Finish Time UTC: 22:43
 Finish Lat: 28 17.373
 Finish Lon: -157 59.926

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes: July 4! Born in the USA!

POWOW #3 (KM13-12)

CTD#____07____ / Station#____06____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5936
 Start Time UTC: 11:53
 Start Lat: 30 43.755
 Start Lon: -157 59.946

Operator(s): EZ/ZJ
 Year Day UTC: 186
 Finish Time UTC: 12:49
 Finish Lat: 30 43.725
 Finish Lon: -157 59.920

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X						
4	150	150		X	X				X				
5	Chlmax=125	125	X				X	X					
6	Chlmax=125	125		X	X	X			X				
7	100	100	X				X	X					
8	100	100		X	X	X			X				
9	90	91					X						
10	90	91		X	X	X			X				
11	75	75								X			
12	75	75	X				X						
13	75	75		X	X	X			X		X		
14	50	50	X				X	X					
15	50	50		X	X	X			X				
16	25	25											X
17	25	25											X
18	25	25	X				X	X					
19	25	25		X	X	X			X				
20	15	15					X						
21	15	15		X	X	X			X		X		
22	0	4								X			
23	0	4	X				X	X					
24	0	4		X	X				X			X	

Notes: shallow mixed layer of ~30 m

POWOW #3 (KM13-12)

CTD#____08____ / Station#____07____ / Cast#____01____

max CTD depth: 800
 bottom depth: 6000
 Start Time UTC: 21:54
 Start Lat: 32 23.314
 Start Lon: -157 59.890

Operator(s): EZ/ZJ
 Year Day UTC: 186
 Finish Time UTC: 22:43
 Finish Lat: 32 23.332
 Finish Lon: -157 59.896

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	0	4											
2	0	4											
3	0	4											
4	0	4											
5	0	4											
6	0	4											
7	0	4											
8	0	4							X				
9	0	4											
10	0	4											
11	0	4											
12	0	4											
13	0	4											
14	0	4											
15	0	4											
16	0	4											
17	0	4											
18	0	4											
19	0	4											
20	0	4											
21	0	4											
22	0	4											
23	0	4											
24	0	4											

Notes:

POWOW #3 (KM13-12)

CTD#____09____ / Station#____08____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5956
 Start Time UTC: 11:58
 Start Lat: 34 51.400
 Start Lon: -157 59.923

Operator(s): EZ/ZJ
 Year Day UTC: 187
 Finish Time UTC: 12:51
 Finish Lat: 34 51.389
 Finish Lon: -157 59.915

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	201		X	X				X				
3	150	150	X				X						
4	150	150		X	X				X				
5	125	125	X				X						
6	125	125		X	X	X			X				
7	100	100	X				X	X					
8	100	100		X	X	X			X				
9	80	80					X						
10	80	80		X	X	X			X				
11	Chlmax=75	75								X			
12	Chlmax=75	75	X				X	X					
13	Chlmax=75	75		X	X	X			X		X		
14	62	62											
15	62	62				X			X				
16	50	50	X				X	X					
17	50	50		X	X	X			X				
18	25	25	X				X	X					
19	25	25		X	X	X			X				
20	15	15					X						
21	15	15		X	X	X			X		X		
22	0	3								X			
23	0	3	X				X	X					
24	0	3		X	X				X				

Notes:

POWOW #3 (KM13-12)

CTD#____10____ / Station#____09____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5729
 Start Time UTC: 21:55
 Start Lat: 36 31.872
 Start Lon: -157 59.975

Operator(s): EZ/ZJ
 Year Day UTC: 187
 Finish Time UTC: 22:50
 Finish Lat: 36 31.858
 Finish Lon: -157 59.988

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	800	800											
2	800	800		X									
3	600	600											
4	600	600		X									
5	400	400											
6	400	400		X									
7	200	200											
8	200	200		X									
9	150	150											
10	150	150		X									
11	125	125											
12	125	125		X									
13	100	100											
14	100	100		X									
15	50	50											
16	50	50		X									
17	0	3											
18	0	3		X					X				
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes:

POWOW #3 (KM13-12)

CTD#____11____ / Station#____10____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5794
 Start Time UTC: 11:55
 Start Lat: 38 33.734
 Start Lon: -158 00.017

Operator(s): EZ/ZJ
 Year Day UTC: 188
 Finish Time UTC: 12:54
 Finish Lat: 38 33.760
 Finish Lon: -158 00.019

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	149	X				X						
4	150	149		X	X				X				
5	125	125	X				X						
6	125	125		X	X	X			X				
7	100	100	X				X	X					
8	100	100		X	X	X			X				
9	75	75	X				X						
10	75	75		X	X	X			X		X		
11	75	75								X			
12	Chlmax=60	60					X	X					
13	Chlmax=60	60		X	X	X			X				
14	50	50	X				X	X					
15	50	50		X	X	X			X				
16	25	25	X				X	X					
17	25	25		X	X	X			X				
18	15	15											X
19	15	15											X
20	15	15					X						
21	15	15		X	X	X			X		X		
22	0	3								X			
23	0	3	X				X	X					
24	0	3		X	X	X			X				

Notes: large chlorophyll max, shallow mixed layer ~15 m

POWOW #3 (KM13-12)

CTD#____12____ / Station#____10____ / Cast#____02____

max CTD depth: 200
 bottom depth: 5792
 Start Time UTC: 14:00
 Start Lat: 38 33.748
 Start Lon: -158 00.024

Operator(s): ZJ
 Year Day UTC: 188
 Finish Time UTC: 14:24
 Finish Lat: 38 33.726
 Finish Lon: -158 00.028

Niskin #	Desired Depth (m)	Actual Depth (m)	T-shift	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	15	15	X										
2	15	15	X										
3	15	15	X										
4	15	15	X										
5	15	15	X										
6	15	15	X										
7	15	15	X										
8	15	15	X										
9	15	15	X										
10	15	15	X										
11	15	15	X										
12	15	15	X										
13	15	15	X										
14	15	15	X										
15	15	15	X										
16	15	15	X										
17	15	15	X										
18	15	15	X										
19	15	15	X										
20	15	15	X										
21	15	15	X										
22	15	15	X										
23	15	15	X										
24	15	15	X										

Notes: T-shift #1 fill cast

POWOW #3 (KM13-12)

CTD#____13____ / Station#____11____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4676
 Start Time UTC: 21:52
 Start Lat: 39 58.147
 Start Lon: -157 59.860

Operator(s): ZJ
 Year Day UTC: 188
 Finish Time UTC: 22:40
 Finish Lat: 39 58.197
 Finish Lon: -157 59.719

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3										X	
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes: PAR cast

POWOW #3 (KM13-12)

CTD#____14____ / Station#____12____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5774
 Start Time UTC: 11:51
 Start Lat: 42 29.277
 Start Lon: -158 00.104

Operator(s): EZ/ZJ
 Year Day UTC: 189
 Finish Time UTC: 12:46
 Finish Lat: 42 29.348
 Finish Lon: -158 00.172

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	199	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X						
4	150	150		X	X				X				
5	100	100	X				X	X					
6	100	100		X	X				X				
7	75	75	X				X						
8	75	75		X	X				X				
9	75	75								X			
10	Chlmax=50	50	X				X	X					
11	Chlmax=50	50		X	X	X			X		X		
12	40	40					X	X					
13	40	40		X	X	X			X				
14	35	35	X				X						
15	35	35		X	X	X			X				
16	25	25	X				X	X					
17	25	25		X	X	X			X				
18	15	15					X						
19	15	15		X	X	X			X		X		
20	0	2											X
21	0	2											X
22	0	2								X			
23	0	2	X				X	X					
24	0	2		X	X	X			X				

Notes: shallow mixed layer ~5 m; lots of small creatures at surface

POWOW #3 (KM13-12)

CTD#____15____ / Station#____13____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5450
 Start Time UTC: 21:50
 Start Lat: 44 14.078
 Start Lon: -158 00.095

Operator(s): EZ/ZJ
 Year Day UTC: 189
 Finish Time UTC: 22:40
 Finish Lat: 44 14.086
 Finish Lon: -158 00.102

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	0	2											
2	0	2											
3	0	2											
4	0	2											
5	0	2											
6	0	2											
7	0	2											
8	0	2		X									
9	0	2											
10	0	2											
11	0	2											
12	0	2											
13	0	2											
14	0	2											
15	0	2											
16	0	2											
17	0	2											
18	0	2											
19	0	2											
20	0	2											
21	0	2											
22	0	2											
23	0	2											
24	0	2										X	

Notes:

POWOW #3 (KM13-12)

CTD#____16____ / Station#____14____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5261
 Start Time UTC: 12:01
 Start Lat: 46 41.327
 Start Lon: -157 59.900

Operator(s): EZ/ZJ
 Year Day UTC: 190
 Finish Time UTC: 12:53
 Finish Lat: 46 41.319
 Finish Lon: -157 59.868

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X						
4	150	150		X	X				X				
5	100	100	X				X	X					
6	100	100		X	X				X				
7	75	75	X				X						
8	75	75		X	X	X			X				
9	75	75								X			
10	50	50	X				X	X					
11	50	50		X	X	X			X		X		
12	45	45					X						
13	45	45		X	X	X			X				
14	Chlmax=35	35	X				X	X					
15	Chlmax=35	35		X	X	X			X				
16	25	25	X				X	X					
17	25	25		X	X	X			X				
18	15	15					X						
19	15	15		X	X	X			X		X		
20	0	2										X	
21	0	2										X	
22	0	2								X			
23	0	2	X				X	X					
24	0	2		X	X	X			X				

Notes: shallow mixed layer ~5 m

POWOW #3 (KM13-12)

CTD#____17____ / Station#____15____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5351
 Start Time UTC: 21:58
 Start Lat: 45 42.796
 Start Lon: -156 54.338

Operator(s): EZ/ZJ
 Year Day UTC: 190
 Finish Time UTC: 22:48
 Finish Lat: 45 42.804
 Finish Lon: -156 54.286

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	0	2											
2	0	2											
3	0	2											
4	0	2											
5	0	2											
6	0	2											
7	0	2											
8	0	2							X				
9	0	2											
10	0	2											
11	0	2											
12	0	2											
13	0	2											
14	0	2											
15	0	2											
16	0	2											
17	0	2											
18	0	2											
19	0	2											
20	0	2											
21	0	2											
22	0	2											
23	0	2											
24	0	2											

Notes: PAR cast, exceptionally misty

POWOW #3 (KM13-12)

CTD#____18____ / Station#____16____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5302
 Start Time UTC: 21:54
 Start Lat: 42 26.642
 Start Lon: -153 21.871

Operator(s): EZ/ZJ
 Year Day UTC: 191
 Finish Time UTC: 22:43
 Finish Lat: 42 26.599
 Finish Lon: -153 21.831

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	25	25					X						
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3					X						

Notes: PAR cast, flow through SST and uSST appear to be too hot by ~1.5 – 2C

POWOW #3 (KM13-12)

CTD#____19____ / Station#____17____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5016
 Start Time UTC: 10:57
 Start Lat: 40 36.768
 Start Lon: -151 28.052

Operator(s): EZ/ZJ
 Year Day UTC: 192
 Finish Time UTC: 11:50
 Finish Lat: 40 36.670
 Finish Lon: -151 28.158

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X						
4	150	150		X	X				X				
5	100	100	X				X	X					
6	100	100		X	X				X				
7	75	75	X				X						
8	75	75		X	X	X			X				
9	75	75								X			
10	Chlmax=62	62	X				X	X					
11	Chlmax=62	62		X	X	X			X				
12	50	50	X				X	X					
13	50	50		X	X	X			X		X		
14	40	40					X						
15	40	40		X	X	X			X				
16	25	25	X				X	X					
17	25	25		X	X	X			X				
18	15	15											X
19	15	15											X
20	15	15					X						
21	15	15		X	X	X			X		X		
22	15	15								X			
23	0	2	X				X	X					
24	0	2		X	X	X			X				

Notes: Lots of birds, shark!

POWOW #3 (KM13-12)

CTD#____20____ / Station#____18____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5634
 Start Time UTC: 21:10
 Start Lat: 39 16.226
 Start Lon: 150 06.242

Operator(s): EZ/ZJ
 Year Day UTC: 192
 Finish Time UTC: 22:02
 Finish Lat: 39 16.247
 Finish Lon: 150 06.275

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes: PAR cast, slight delay in deployment due to winch issues, shark sitings

POWOW #3 (KM13-12)

CTD#____21____ / Station#____18____ / Cast#____02____

max CTD depth: 800
 bottom depth: 5636
 Start Time UTC: 10:55
 Start Lat: 39 16.185
 Start Lon: -150 06.297

Operator(s): EZ/ZJ
 Year Day UTC: 193
 Finish Time UTC: 11:45
 Finish Lat: 39 16.214
 Finish Lon: -150 06.319

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	200	200	X					X					
2	200	200		X									
3	150	150	X				X						
4	150	150		X	X				X				
5	100	100	X				X	X					
6	100	100		X	X				X				
7	75	75	X				X						
8	75	75		X	X				X				
9	75	75								X			
10	Chlmax=62	62					X	X					
11	Chlmax=62	62		X	X	X			X				
12	50	50	X				X	X					
13	50	50		X	X	X			X		X		
14	45	45	X				X						
15	45	45		X	X	X			X				
16	35	35					X						
17	35	35		X	X	X			X				
18	25	25	X				X	X					
19	25	25		X	X				X				
20	15	15					X						
21	15	15			X	X			X		X		
22	15	15								X			
23	0	2	X				X	X					
24	0	2		X	X	X			X				

Notes:

POWOW #3 (KM13-12)

CTD#____22____ / Station#____18____ / Cast#____03____

max CTD depth: 200
 bottom depth: 5638
 Start Time UTC: 12:57
 Start Lat: 39 16.236
 Start Lon: -150 06.340

Operator(s): EZ/ZJ
 Year Day UTC: 193
 Finish Time UTC: 13:23
 Finish Lat: 39 16.228
 Finish Lon: -150 06.340

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	23	23											
2	23	23											
3	23	23											
4	23	23											
5	23	23											
6	23	23											
7	23	23											
8	23	23											
9	23	23											
10	23	23											
11	23	23											
12	23	23											
13	23	23											
14	23	23											
15	23	23											
16	23	23											
17	23	23											
18	23	23											
19	15	15											
20	15	15											
21	15	15											
22	15	15											
23	15	15											
24	15	15											

Notes: T-Shift Fill #2, lots of squid

POWOW #3 (KM13-12)

CTD#____23____ / Station#____19____ / Cast#____03____

max CTD depth: 800
 bottom depth: 5540
 Start Time UTC: 21:00
 Start Lat: 38 09.008
 Start Lon: -148 59.195

Operator(s): EZ/ZJ
 Year Day UTC: 193
 Finish Time UTC: 21:50
 Finish Lat: 38 09.017
 Finish Lon: -148 59.267

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	0	2											
2	0	2											
3	0	2											
4	0	2											
5	0	2											
6	0	2											
7	0	2											
8	0	2							X				
9	0	2											
10	0	2											
11	0	2											
12	0	2											
13	0	2											
14	0	2											
15	0	2											
16	0	2											
17	0	2											
18	0	2											
19	0	2											
20	0	2											
21	0	2											
22	0	2											
23	0	2											
24	0	2											

Notes: PAR Cast

POWOW #3 (KM13-12)

CTD#____24____ / Station#____20____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5316
 Start Time UTC: 10:56
 Start Lat: 36 11.917
 Start Lon: -147 05.231

Operator(s): EZ/ZJ
 Year Day UTC: 194
 Finish Time UTC: 11:48
 Finish Lat: 36 11.942
 Finish Lon: -147 05.239

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X						
4	150	150		X	X			X	X				
5	125	125	X				X						
6	125	125		X	X	X			X				
7	Chlmax= 115	115					X	X					
8	Chlmax= 115	115		X	X	X			X				
9	100	100	X				X	X					
10	100	100		X	X	X			X				
11	75	75	X				X						
12	75	75		X	X	X			X				
13	75	75								X			
14	50	50	X				X	X					
15	50	50		X	X	X			X		X		
16	25	25	X				X						
17	25	25		X	X	X			X				
18	15	15					X						
19	15	15		X	X				X		X		
20	15	15								X			
21	0	3	X				X	X					
22	0	3		X	X	X			X				
23	0	3											
24	0	3											

Notes: used CTD06 PAR for light depths

POWOW #3 (KM13-12)

CTD#____25____ / Station#____21____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5490
 Start Time UTC: 20:53
 Start Lat: 34 52.315
 Start Lon: -145 49.243

Operator(s): EZ/ZJ
 Year Day UTC: 194
 Finish Time UTC: 21:44
 Finish Lat: 34 52.253
 Finish Lon: -145 49.233

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes: PAR Cast

POWOW #3 (KM13-12)

CTD#____26____ / Station#____22____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5497
 Start Time UTC: 10:56
 Start Lat: 33 59.988
 Start Lon: -145 00.013

Operator(s): EZ/ZJ
 Year Day UTC: 195
 Finish Time UTC: 11:46
 Finish Lat: 34 00.035
 Finish Lon: -145 00.010

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X						
4	150	150		X	X			X	X				
5	125	125	X				X						
6	125	125		X	X	X			X				
7	Chlmax= 115	115					X	X					
8	Chlmax= 115	115		X	X				X				
9	100	100	X				X	X					
10	100	100		X	X	X			X				
11	75	75	X				X						
12	75	75		X	X	X			X		X		
13	75	75								X			
14	50	50	X				X	X					
15	50	50		X	X	X			X				
16	25	25											
17	25	25	X				X						
18	25	25		X	X	X			X				
19	15	15					X						
20	15	15		X	X				X		X		
21	15	15								X			
22	0	3											
23	0	3	X				X	X					
24	0	3		X	X	X			X				

Notes: weak chlorophyll max

POWOW #3 (KM13-12)

CTD#____27____ / Station#____22____ / Cast#____02____

max CTD depth: 200
 bottom depth: 5496
 Start Time UTC: 12:54
 Start Lat: 33 59.943
 Start Lon: -145 00.028

Operator(s): EZ/ZJ
 Year Day UTC: 195
 Finish Time UTC: 13:16
 Finish Lat: 33 59.957
 Finish Lon: -145 00.043

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	25	25											X
2	25	25											X
3	25	25											X
4	25	25											X
5	25	25											X
6	25	25											X
7	25	25											X
8	25	25											X
9	25	25											X
10	25	25											X
11	25	25											X
12	25	25											X
13	0	3										X	
14	0	3										X	
15	0	3										X	
16	0	3										X	
17	0	3										X	
18	0	3										X	
19	0	3										X	
20	0	3										X	
21	0	3										X	
22	0	3										X	
23	0	3										X	
24	0	3										X	

Notes: weak chlorophyll max

POWOW #3 (KM13-12)

CTD#____28____ / Station#____22____ / Cast#____03____

max CTD depth: 800
 bottom depth: 5497
 Start Time UTC: 20:59
 Start Lat: 33 59.992
 Start Lon: -145 00.001

Operator(s): EZ/ZJ
 Year Day UTC: 195
 Finish Time UTC: 21:55
 Finish Lat: 34 00.030
 Finish Lon: -145 00.016

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	800	800		X									
2	800	800											
3	600	600		X									
4	600	600											
5	400	400		X									
6	400	400											
7	300	300		X									
8	300	300											
9	200	200		X									
10	200	200											
11	150	150		X									
12	150	150											
13	100	101		X									
14	100	101											
15	75	75		X									
16	75	75											
17	50	50		X									
18	50	50											
19	0	3		X					X				
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes:

POWOW #3 (KM13-12)

CTD#____29____ / Station#____23____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5532
 Start Time UTC: 10:51
 Start Lat: 34 13.581
 Start Lon: -143 11.754

Operator(s): EZ/ZJ
 Year Day UTC: 196
 Finish Time UTC: 11:43
 Finish Lat: 34 13.587
 Finish Lon: -143 11.757

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X	X					
4	150	149		X	X				X				
5	Chlmax=125	125	X				X	X					
6	Chlmax=125	125		X	X	X			X				
7	100	100	X				X	X					
8	100	100		X	X				X				
9	85	85					X						
10	85	85		X	X	X			X				
11	75	75	X				X						
12	75	75		X	X	X			X		X		
13	75	75								X			
14	50	50	X				X	X					
15	50	50		X	X	X			X				
16	25	25											
17	25	25	X				X						
18	25	25		X	X	X			X				
19	15	15					X						
20	15	15		X	X	X			X		X		
21	15	15								X			
22	0	3											
23	0	3	X				X	X					
24	0	3		X	X	X			X				

Notes: weak chlorophyll max

POWOW #3 (KM13-12)

CTD#____30____ / Station#____24____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5373
 Start Time UTC: 20:55
 Start Lat: 34 28.770
 Start Lon: -141 10.200

Operator(s): EZ/ZJ
 Year Day UTC: 196
 Finish Time UTC: 21:42
 Finish Lat: 34 28.745
 Finish Lon: -141 10.181

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes: PAR cast

POWOW #3 (KM13-12)

CTD#____31____ / Station#____25____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5263
 Start Time UTC: 10:54
 Start Lat: 36 53.079
 Start Lon: -140 36.211

Operator(s): EZ/ZJ
 Year Day UTC: 197
 Finish Time UTC: 11:47
 Finish Lat: 36 53.081
 Finish Lon: -140 36.216

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X	X					
4	150	150		X	X				X				
5	125	125	X				X						
6	125	125		X	X				X				
7	Chlmax= 115	115					X	X					
8	Chlmax= 115	115		X	X				X				
9	100	100	X				X	X					
10	100	100		X	X	X			X				
11	75	75	X				X						
12	75	75		X	X	X			X		X		
13	75	75								X			
14	50	50	X				X	X					
15	50	50		X	X	X			X				
16	25	25	X				X						
17	25	25		X	X	X			X				
18	15	15					X						
19	15	15		X	X	X			X		X		
20	15	15								X			
21	15	15											X
22	15	15											X
23	0	3	X				X	X					
24	0	3		X	X	X			X				

Notes:

POWOW #3 (KM13-12)

CTD#____32____ / Station#____25____ / Cast#____02____

max CTD depth: 800
 bottom depth: 5248
 Start Time UTC: 12:56
 Start Lat: 36 53.103
 Start Lon: -140 36.269

Operator(s): EZ/ZJ
 Year Day UTC: 197
 Finish Time UTC: 13:22
 Finish Lat: 36 53.104
 Finish Lon: -140 36.272

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	28	28											
2	28	28											
3	28	28											
4	28	28											
5	28	28											
6	28	28											
7	28	28											
8	28	28											
9	28	28											
10	28	28											
11	28	28											
12	28	28											
13	28	28											
14	28	28											
15	28	28											
16	28	28											
17	28	28											
18	28	28											
19	28	28											
20	28	28											
21	28	28											
22	28	28											
23	28	28											
24	28	28											

Notes: T-Shift #3 Fill

POWOW #3 (KM13-12)

CTD#____33____ / Station#____26____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4712
 Start Time UTC: 20:59
 Start Lat: 38 12.443
 Start Lon: -140 17.131

Operator(s): EZ/ZJ
 Year Day UTC: 197
 Finish Time UTC: 21:45
 Finish Lat: 38 12.430
 Finish Lon: -140 17.113

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes: PAR Cast

POWOW #3 (KM13-12)

CTD#____34____ / Station#____27____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4583
 Start Time UTC: 10:54
 Start Lat: 40 34.534
 Start Lon: -139 42.177

Operator(s): EZ/ZJ
 Year Day UTC: 198
 Finish Time UTC: 11:46
 Finish Lat: 40 34.530
 Finish Lon: -139 42.197

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X	X					
4	150	150		X	X				X				
5	100	100	X				X	X					
6	100	100		X	X	X			X				
7	Chlmax=75	75	X				X	X					
8	Chlmax=75	75		X	X	X			X		X		
9	Chlmax=75	75								X			
10	65	65	X				X						
11	65	65		X	X	X			X				
12	50	50	X				X	X					
13	50	50		X	X				X				
14	40	40					X						
15	40	40		X	X	X			X				
16	25	25	X				X						
17	25	25		X	X	X			X				
18	15	15					X						
19	15	15		X	X				X		X		
20	15	15								X			
21	15	15											
22	15	15											
23	0	3	X				X	X					
24	0	3		X	X	X			X				

Notes:

POWOW #3 (KM13-12)

CTD#____35____ / Station#____28____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4291
 Start Time UTC: 20:54
 Start Lat: 42 14.269
 Start Lon: -139 16.734

Operator(s): EZ/ZJ
 Year Day UTC: 198
 Finish Time UTC: 21:41
 Finish Lat: 42 14.267
 Finish Lon: -139 16.741

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	0	2											
2	0	2											
3	0	2											
4	0	2											
5	0	2											
6	0	2											
7	0	2											
8	0	2							X				
9	0	2											
10	0	2											
11	0	2											
12	0	2											
13	0	2											
14	0	2											
15	0	2											
16	0	2											
17	0	2											
18	0	2											
19	0	2											
20	0	2											
21	0	2											
22	0	2											
23	0	2											
24	0	2											

Notes: PAR Cast

POWOW #3 (KM13-12)

CTD#____36____ / Station#____29____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4192
 Start Time UTC: 10:55
 Start Lat: 44 42.886
 Start Lon: -138 37.653

Operator(s): EZ/ZJ
 Year Day UTC: 199
 Finish Time UTC: 11:46
 Finish Lat: 44 42.817
 Finish Lon: -138 37.621

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X	X					
2	200	200		X	X				X				
3	150	150	X				X	X					
4	150	150		X	X				X				
5	100	100	X				X	X					
6	100	100		X	X				X				
7	65	65	X				X						
8	65	65		X	X	X			X				
9	55	55					X						
10	55	55		X	X	X			X				
11	50	50	X				X	X					
12	50	50		X	X	X			X		X		
13	50	50								X			
14	Chlmax=35	35	X				X	X					
15	Chlmax=35	35		X	X	X			X				
16	25	25	X				X						
17	25	25		X	X	X			X				
18	15	15					X						
19	15	15		X	X	X			X		X		
20	15	15								X			
21	15	15										X	
22	15	15										X	
23	0	2	X				X	X					
24	0	2		X	X	X			X				

Notes:

POWOW #3 (KM13-12)

CTD#____37____ / Station#____30____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4297
 Start Time UTC: 18:53
 Start Lat: 46 01.636
 Start Lon: -138 16.087

Operator(s): EZ/ZJ
 Year Day UTC: 199
 Finish Time UTC: 19:44
 Finish Lat: 46 01.645
 Finish Lon: -138 16.112

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X						
2	200	200		X	X				X				
3	150	150	X				X						
4	150	150		X	X				X				
5	100	100	X				X						
6	100	100		X	X				X				
7	75	75	X				X						
8	75	75		X	X				X				
9	67	67					X						
10	67	67		X	X				X				
11	Chlmax=60	60	X				X						
12	Chlmax=60	60		X	X				X				
13	Chlmax=60	60								X			
14	50	50	X				X						
15	50	50		X	X				X				
16	25	25	X				X						
17	25	25		X	X				X				
18	15	15					X						
19	15	15		X	X				X				
20	15	15								X			
21	0	2										X	
22	0	2										X	
23	0	2	X				X						
24	0	2		X	X				X				

Notes:

POWOW #3 (KM13-12)

CTD#____38____ / Station#____31____ / Cast#____01____

max CTD depth: 800
 bottom depth: 3591
 Start Time UTC: 09:56
 Start Lat: 43 59.996
 Start Lon: -135 59.995

Operator(s): EZ/ZJ
 Year Day UTC: 200
 Finish Time UTC: 10:46
 Finish Lat: 43 59.967
 Finish Lon: -136 00.018

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	EZ
1	200	200	X				X						
2	200	200		X	X				X				
3	100	100	X				X						
4	100	100		X	X				X				
5	75	75	X				X						
6	75	75		X	X	X			X		X		
7	75	75								X			
8	Chlmax=60	60	X				X						
9	Chlmax=60	60		X	X	X			X				
10	55	55					X						
11	55	55		X	X	X			X				
12	50	50	X				X						
13	50	50		X	X	X			X				
14	40	40	X				X						
15	40	40		X	X	X			X				
16	25	25	X				X						
17	25	25		X	X	X			X				
18	15	15					X						
19	15	15		X	X	X			X		X		
20	15	15								X			
21	0	2											X
22	0	2											X
23	0	2	X				X						
24	0	2		X	X	X			X				

Notes:

POWOW #3 (KM13-12)

CTD#____39____ / Station#____31____ / Cast#____01____

max CTD depth: 800
 bottom depth: 3975
 Start Time UTC: 20:04
 Start Lat: 42 24.229
 Start Lon: -135 00.856

Operator(s): EZ/ZJ
 Year Day UTC: 200
 Finish Time UTC: 20:53
 Finish Lat: 42 24.167
 Finish Lon: -135 00.760

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	EZ
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes: PAR Cast

POWOW #3 (KM13-12)

CTD#____40____ / Station#____34____ / Cast#____01____

max CTD depth: 800
 bottom depth: 3658
 Start Time UTC: 10:01
 Start Lat: 40 09.100
 Start Lon: -133 41.768

Operator(s): EZ/ZJ
 Year Day UTC: 201
 Finish Time UTC: 10:54
 Finish Lat: 40 09.102
 Finish Lon: -133 41.755

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X						
2	200	200		X	X				X				
3	100	100	X				X						
4	100	100		X	X				X				
5	75	75	X				X						
6	75	75		X	X				X				
7	Chlmax= 66	66								X			
8	Chlmax= 66	66	X				X	X					
9	Chlmax= 66	66		X	X	X			X		X		
10	50	50	X				X	X					
11	50	50		X	X	X			X				
12	50	50											X
13	50	50											X
14	43	43					X						
15	43	43		X	X	X			X				
16	35	35	X				X						
17	35	35		X	X	X			X				
18	25	25	X				X						
19	25	25		X	X	X			X				
20	15	15					X						
21	15	15		X	X	X			X		X		
22	15	15								X			
23	0	3	X				X	X					
24	0	3		X	X	X			X				

Notes: Station 33 was ARGO deployment only

POWOW #3 (KM13-12)

CTD#____41____ / Station#____36____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4544
 Start Time UTC: 19:56
 Start Lat: 38 35.783
 Start Lon: -132 50.059

Operator(s): EZ/ZJ
 Year Day UTC: 201
 Finish Time UTC: 20:44
 Finish Lat: 38 35.781
 Finish Lon: -132 50.036

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	0	2											
2	0	2											
3	0	2											
4	0	2											
5	0	2											
6	0	2											
7	0	2											
8	0	2							X				
9	0	2											
10	0	2											
11	0	2											
12	0	2											
13	0	2											
14	0	2											
15	0	2											
16	0	2											
17	0	2											
18	0	2											
19	0	2											
20	0	2											
21	0	2											
22	0	2											
23	0	2											
24	0	2											

Notes: PAR Cast, Station 35 was ARGO deployment only

POWOW #3 (KM13-12)

CTD#____42____ / Station#____38____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4875
 Start Time UTC: 09:56
 Start Lat: 36 12.294
 Start Lon: -131 59.884

Operator(s): EZ/ZJ
 Year Day UTC: 202
 Finish Time UTC: 10:50
 Finish Lat: 36 12.308
 Finish Lon: -131 59.908

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X						
2	200	200		X	X				X				
3	150	150	X				X	X					
4	150	150		X	X				X				
5	100	100	X				X						
6	100	100		X	X				X				
7	Chlmax=90	91											
8	Chlmax=90	91	X				X	X					
9	Chlmax=90	91		X	X	X			X				
10	75	75								X			
11	75	76	X				X						
12	75	75		X	X	X			X		X		
13	50	50	X				X						
14	50	50		X	X	X			X				
15	38	38					X						
16	38	38		X	X	X			X				
17	25	25	X				X						
18	25	25		X	X	X			X				
19	15	15					X						
20	15	15		X	X	X			X		X		
21	15	15								X			
22	0	3											X
23	0	3	X				X	X					
24	0	3		X	X	X			X				

Notes: Station 37 was ARGO deployment only

POWOW #3 (KM13-12)

CTD#____43____ / Station#____39____ / Cast#____01____

max CTD depth: 800
 bottom depth: 5084
 Start Time UTC: 19:53
 Start Lat: 34 28.764
 Start Lon: -131 59.979

Operator(s): EZ/ZJ
 Year Day UTC: 202
 Finish Time UTC: 20:41
 Finish Lat: 34 28.770
 Finish Lon: -132 00.005

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes:

POWOW #3 (KM13-12)

CTD#____44____ / Station#____39____ / Cast#____02____

max CTD depth: 4500
 bottom depth: 5077
 Start Time UTC: 21:34
 Start Lat: 34 28.773
 Start Lon: -132 00.014

Operator(s): SL/AL/MS
 Year Day UTC: 202
 Finish Time UTC: 00:40
 Finish Lat: 34 28.826
 Finish Lon: -132 00.132

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	4500	4497	X	X									
2	4500	4496											
3	4500	4499											
4	4000	4000	X	X									
5	4000	4000											
6	4000	4000											
7	3000	3000	X	X									
8	3000	2999											
9	3000	3000											
10	2000	2000	X	X									
11	2000	2001											
12	2000	2000											
13	1000	1000	X	X									
14	1000	1000											
15	1000	999											
16	500	500	X	X									
17	500	501											
18	500	500											
19	100	100	X	X									
20	100	100											
21	100	100											
22	0	3	X	X									
23	0	3											
24	0	2											

Notes: deep cast

POWOW #3 (KM13-12)

CTD#____45____ / Station#____40____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4494
 Start Time UTC: 09:56
 Start Lat: 33 10.700
 Start Lon: -130 48.914

Operator(s): EZ/ZJ
 Year Day UTC: 203
 Finish Time UTC: 10:57
 Finish Lat: 33 10.695
 Finish Lon: -130 48.909

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X						
2	200	200		X	X				X				
3	150	150	X				X	X					
4	150	150		X	X				X				
5	125	125	X				X						
6	125	125		X	X				X				
7	Chlmax=100	100	X				X	X					
8	Chlmax=100	100		X	X	X			X				
9	75	75								X			
10	75	75	X				X						
11	75	75		X	X	X			X		X		
12	65	65					X						
13	65	65		X	X	X			X				
14	50	50	X				X						
15	50	50		X	X	X			X				
16	25	25	X				X						
17	25	25		X	X	X			X				
18	15	15											X
19	15	15											X
20	15	15					X						
21	15	15		X	X	X			X		X		
22	15	15								X			
23	0	2	X				X	X					
24	0	2		X	X	X			X				

Notes:

POWOW #3 (KM13-12)

CTD#____46____ / Station#____40____ / Cast#____02____

max CTD depth: 800
 bottom depth: 4495
 Start Time UTC: 11:58
 Start Lat: 33 10.686
 Start Lon: -130 48.883

Operator(s): EZ/ZJ
 Year Day UTC: 203
 Finish Time UTC: 12:23
 Finish Lat: 33 10.686
 Finish Lon: -130 48.889

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	25	25											
2	25	25											
3	25	25											
4	25	25											
5	25	25											
6	25	25											
7	25	25											
8	25	25											
9	25	25											
10	25	25											
11	25	25											
12	25	25											
13	25	25											
14	25	25											
15	25	25											
16	25	25											
17	25	25											
18	25	25											
19	25	25											
20	0	4										X	
21	0	4										X	
22	0	4										X	
23	0	4										X	
24	0	4										X	

Notes: T-Shift Fill #4 (+ 10°C shift)

POWOW #3 (KM13-12)

CTD#____47____ / Station#____41____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4621
 Start Time UTC: 19:51
 Start Lat: 32 14.602
 Start Lon: -129 42.544

Operator(s): EZ/ZJ
 Year Day UTC: 203
 Finish Time UTC: 20:40
 Finish Lat: 32 14.609
 Finish Lon: -129 42.559

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes: PAR Cast

POWOW #3 (KM13-12)

CTD#____48____ / Station#____42____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4326
 Start Time UTC: 09:51
 Start Lat: 31 26.192
 Start Lon: -128 44.700

Operator(s): EZ/ZJ
 Year Day UTC: 204
 Finish Time UTC: 10:43
 Finish Lat: 31 26.206
 Finish Lon: -128 44.44.718

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	EZ
1	200	200	X				X						
2	200	200		X	X				X				
3	150	150	X				X	X					
4	150	150		X	X				X				
5	125	125	X				X						
6	125	125		X	X				X				
7	Chlmax=115	115					X	X					
8	Chlmax=115	115		X	X	X			X				
9	100	100	X				X	X					
10	100	100		X	X	X			X				
11	100	100											
12	75	75								X			
13	75	75	X				X						
14	75	75		X	X	X			X		X		
15	50	50	X				X						
16	50	50		X	X	X			X				
17	25	25	X				X						
18	25	25		X	X	X			X				
19	15	15					X						
20	15	15		X	X	X			X		X		
21	15	15								X			
22	0	3											X
23	0	3	X				X	X					
24	0	3		X	X	X			X				

Notes:

POWOW #3 (KM13-12)

CTD#____49____ / Station#____43____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4385
 Start Time UTC: 19:53
 Start Lat: 30 46.461
 Start Lon: -127 52.559

Operator(s): EZ/ZJ
 Year Day UTC: 204
 Finish Time UTC: 20:44
 Finish Lat: 30 46.484
 Finish Lon: -127 52.630

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	EZ
1	0	2											
2	0	3											
3	0	2											
4	0	2											
5	0	2											
6	0	2											
7	0	3											
8	0	2							X				
9	0	3											
10	0	2											
11	0	2											
12	0	2											
13	0	2											
14	0	3											
15	0	2											
16	0	3											
17	0	2											
18	0	2											
19	0	3											
20	0	2											
21	0	2											
22	0	2											
23	0	2											
24	0	2											

Notes: PAR Cast

POWOW #3 (KM13-12)

CTD#____50____ / Station#____44____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4283
 Start Time UTC: 09:56
 Start Lat: 29 47.993
 Start Lon: -126 36.498

Operator(s): EZ/ZJ
 Year Day UTC: 205
 Finish Time UTC: 10:49
 Finish Lat: 29 47.981
 Finish Lon: -126 36.529

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X	X	X		X		X				
2	150	150	X				X	X					
3	150	150		X	X				X				
4	125	125	X				X						
5	125	125		X	X				X				
6	Chlmax=110	110					X	X					
7	Chlmax=110	111		X	X	X			X				
8	100	100	X				X						
9	100	100		X	X	X			X				
10	75	75								X			
11	75	75	X				X						
12	75	75		X	X	X			X		X		
13	50	50	X				X						
14	50	50		X	X	X			X				
15	25	25	X				X						
16	25	25		X	X	X			X				
17	15	15											X
18	15	15								X			
19	15	15											X
20	15	15		X	X	X	X		X		X		
21	0	2										X	
22	0	2										X	
23	0	2	X				X	X					
24	0	2		X	X	X			X				

Notes:

POWOW #3 (KM13-12)

CTD#____51____ / Station#____45____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4345
 Start Time UTC: 19:01
 Start Lat: 29 39.061
 Start Lon: -125 38.123

Operator(s): EZ/ZJ
 Year Day UTC: 205
 Finish Time UTC: 19:52
 Finish Lat: 29 39.081
 Finish Lon: -125 38.093

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes: PAR Cast

POWOW #3 (KM13-12)

CTD#____52____ / Station#____44____ / Cast#____02____

max CTD depth: 800
 bottom depth: 4345
 Start Time UTC: 20:09
 Start Lat: 29 39.066
 Start Lon: -125 38.108

Operator(s): EZ/ZJ
 Year Day UTC: 205
 Finish Time UTC: 20:14
 Finish Lat: 29 39.065
 Finish Lon: -125 38.113

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3							X				
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes: Go-Pro Cast

POWOW #3 (KM13-12)

CTD#____53____ / Station#____46____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4373
 Start Time UTC: 08:53
 Start Lat: 29 49.984
 Start Lon: -124 00.027

Operator(s): EZ/ZJ
 Year Day UTC: 206
 Finish Time UTC: 09:46
 Finish Lat: 29 50.013
 Finish Lon: -124 00.000

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	200	200	X				X						
2	200	200		X	X				X				
3	150	150	X				X	X					
4	150	150		X	X				X				
5	125	125	X				X						
6	125	125		X	X				X				
7	Chlmax= 115	115					X	X					
8	Chlmax= 115	115		X	X	X			X				
9	100	100	X				X						
10	100	100		X	X	X			X				
11	75	75								X			
12	75	75	X				X						
13	75	75		X	X	X			X		X		
14	50	50	X				X						
15	50	50		X	X	X			X				
16	25	25	X				X						
17	25	25		X	X	X			X				
18	15	15								X			
19	15	15		X	X	X	X		X		X		
20	0	2										X	
21	0	2										X	
22	0	2											X
23	0	2	X				X	X					
24	0	2		X	X	X			X				

Notes:

POWOW #3 (KM13-12)

CTD#____54____ / Station#____47____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4234
 Start Time UTC: 18:56
 Start Lat: 29 34.358
 Start Lon: -123 15.378

Operator(s): EZ/ZJ
 Year Day UTC: 206
 Finish Time UTC: 19:45
 Finish Lat: 29 34.355
 Finish Lon: -123 15.382

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	MS
1	0	2											
2	0	2											
3	0	2											
4	0	2											
5	0	2											
6	0	2											
7	0	2											
8	0	2							X				
9	0	2											
10	0	2											
11	0	2											
12	0	2											
13	0	2											
14	0	2											
15	0	2											
16	0	2											
17	0	2											
18	0	2											
19	0	2											
20	0	2											
21	0	2											
22	0	2											
23	0	2											
24	0	2											

Notes: PAR Cast

POWOW #3 (KM13-12)

CTD#____55____ / Station#____47____ / Cast#____02____

max CTD depth: 10
 bottom depth: 4237
 Start Time UTC: 20:13
 Start Lat: 29 34.352
 Start Lon: -123 15.383

Operator(s): EZ/ZJ/MS
 Year Day UTC: 206
 Finish Time UTC: 20:18
 Finish Lat: 29 34.349
 Finish Lon: -123 15.387

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	MS
1	0	3											
2	0	3											
3	0	3											
4	0	3											
5	0	3											
6	0	3											
7	0	3											
8	0	3											
9	0	3											
10	0	3											
11	0	3											
12	0	3											
13	0	3											
14	0	3											
15	0	3											
16	0	3											
17	0	3											
18	0	3											
19	0	3											
20	0	3											
21	0	3											
22	0	3											
23	0	3											
24	0	3											

Notes: GoPro Cast, no ISUS

POWOW #3 (KM13-12)

CTD#____56____ / Station#____48____ / Cast#____01____

max CTD depth: 800
 bottom depth: 4380
 Start Time UTC: 08:54
 Start Lat: 29 14.998
 Start Lon: -122 20.013

Operator(s): EZ/ZJ
 Year Day UTC: 207
 Finish Time UTC: 09:46
 Finish Lat: 29 15.010
 Finish Lon: -122 20.057

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	EZ
1	800	800											X
2	200	200	X				X						
3	200	200		X	X				X				
4	150	150	X				X	X					
5	150	150		X	X				X				
6	125	125	X				X						
7	125	125		X	X				X				
8	Chlmax=105	105					X	X					
9	Chlmax=105	105		X	X	X			X				
10	100	100	X				X						
11	100	100		X	X	X			X				
12	75	75								X			
13	75	75	X				X						
14	75	75		X	X	X			X		X		
15	50	50	X				X						
16	50	50		X	X	X			X				
17	25	25	X				X						
18	25	25		X	X	X			X				
19	15	15								X			
20	15	15		X	X	X	X		X		X		
21	0	2										X	
22	0	2										X	
23	0	2	X				X	X					
24	0	2		X	X	X			X				

Notes: Last 02:00 cast!

POWOW #3 (KM13-12)

CTD#____57____ / Station#____49____ / Cast#____01____

max CTD depth: 10
 bottom depth: 3987
 Start Time UTC: 17:54
 Start Lat: 30 28.316
 Start Lon: -121 19.988

Operator(s): EZ/ZJ
 Year Day UTC: 207
 Finish Time UTC: 18:05
 Finish Lat: 30 28.319
 Finish Lon: -121 19.979

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	EZ
1	0	2											
2	0	2											
3	0	2											
4	0	2											
5	0	2											
6	0	2											
7	0	2											
8	0	2							X				
9	0	2											
10	0	2											
11	0	2											
12	0	2											
13	0	2											
14	0	2											
15	0	2											
16	0	2											
17	0	2											
18	0	2											
19	0	2											
20	0	2											
21	0	2											
22	0	2											
23	0	2											
24	0	2											

Notes: Go-Pro Cast

POWOW #3 (KM13-12)

CTD#____58____ / Station#____50____ / Cast#____01____

max CTD depth: 200
 bottom depth: 418
 Start Time UTC: 13:21
 Start Lat: 33 05.025
 Start Lon: -118 40.042

Operator(s): EZ/ZJ
 Year Day UTC: 208
 Finish Time UTC: 13:46
 Finish Lat: 33 05.012
 Finish Lon: -118 40.058

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	EZ
1	15	15	X										
2	15	15		X	X				X				
3	15	15								X			
4	15	15											
5	15	15											
6	15	15											
7	15	15											
8	15	15											
9	15	15											
10	15	15											
11	15	15											
12	15	15											
13	15	15										X	
14	15	15										X	
15	15	15										X	
16	15	15										X	
17	15	15										X	
18	15	15											
19	15	15											
20	15	15											
21	15	15											
22	15	15											
23	15	15											
24	15	15											

Notes: Offshore San Clemente

POWOW #3 (KM13-12)

CTD#____59____ / Station#____51____ / Cast#____01____

max CTD depth: 25
 bottom depth: 349
 Start Time UTC: 16:25
 Start Lat: 33 31.025
 Start Lon: -118 40.035

Operator(s): MS/ZJ
 Year Day UTC: 208
 Finish Time UTC: 16:33
 Finish Lat: 33 31.019
 Finish Lon: 118 40.034

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/ DIC	Nut s	RNA	PP	qPCR	virus/ b-prod	Chl/ FCM /FIRe	Sterivex /Isolates	Ap	Nana	EZ
1	15	15	X										
2	15	15		X	X				X				
3	15	15								X			
4	15	15											
5	15	15											
6	15	15											
7	15	15											
8	15	15											
9	15	15											
10	15	15											
11	15	15											
12	15	15											
13	15	15										X	
14	15	15										X	
15	15	15										X	
16	15	15										X	
17	15	15										X	
18	15	15											
19	15	15											
20	15	15											
21	15	15											
22	15	15											
23	15	15											
24	15	15											

Notes: Offshore North Shore Catalina

POWOW #3 (KM13-12)

CTD#____60____ / Station#____52____ / Cast#____01____

max CTD depth: 25
 bottom depth: 1059
 Start Time UTC: 19:10
 Start Lat: 33 14.935
 Start Lon: -118 18.960

Operator(s): EZ/ZJ
 Year Day UTC: 208
 Finish Time UTC: 19:15
 Finish Lat: 33 14.930
 Finish Lon: -118 18.959

Niskin #	Desired Depth (m)	Actual Depth (m)	pH/DIC	Nut s	RNA	PP	qPCR	virus/b-prod	Chl/FCM/FIRe	Sterivex/Isolates	Ap	Nana	EZ
1	15	15	X										
2	15	15		X	X				X				
3	15	15								X			
4	15	15											
5	15	15											
6	15	15											
7	15	15											
8	15	15											
9	15	15											
10	15	15											
11	15	15											
12	15	15											
13	15	15										X	
14	15	15										X	
15	15	15										X	
16	15	15										X	
17	15	15										X	
18	15	15											
19	15	15											
20	15	15											
21	15	15											
22	15	15											
23	15	15											
24	15	15											

Notes: Offshore South Shore Catalina, Last Cast!