

Transect 1, cast 1-16, PP1-14

Sampling logs on Cruise SPIROPA or TN-368

Station AS Date 05-07-2019 Water depth 8/m
 Longitude -70.8297 Latitude 40.4639
 Weather condition ^{very} calm Sampler YF Zhu

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
1	00:25(UTC)	2	70	C1-N2-(1~3)	X	X
		4	60	C1-N4-(1~3)		
		6	40	C1-N6-(1~3)		
		8	27	C1-N8-(1~3)		
		10	16	C1-N10-(1~3)		
		12	10	C1-N12~(1~3)		
		14	surface	No sampling		

Note
 Z forgot to sample Niskin bottle No. 14
 the first transect (OCN- and DON are not planned to be collected)

Sampling logs on Cruise SPIROPA

Station A6 Date 07062019 Water depth ~~100~~ 90 m
 Longitude -70.8303 Latitude 40.4004
 Weather condition Calm. Sampler YFZHU

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
2	01:12 (UTC)	2	78	A6-C2-N2(1-3)	X	X
		4	60	A6-C2-N4(1-3)		
		8	40	A6-C2-N8(1-3)		
		10	30	A6-C2-N10(1-3)		
		12	20	A6-C2-N12(1-3)		
		14	10	A6-C2-N14(1-3)		
		16	surf	X		

Note

I missed surface sampling of NH4⁺ due to lack of time

Sampling logs on Cruise SPIROPA

Station A7 Date 07-05-2019 Water depth 100m
 Longitude -70.8288 Latitude 40.3348
 Weather condition Calm Sampler YIFAN ZHU

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
3	02:29	2	90	C3-N2-(1-2)	X	X
		4	80	C3-N4-(1-2)		
		6	60	C3-N6-(1-2)		
		8	40	C3-N8-(1-2)		
		10	30 30	C3-N10-(1-2)		
		12	20	C3-N12-(1-2)		
		14	10	C3-N14-(1-2)		
		16	Surface	C3-N16(1-2)		

Note
filter clogged Duplicables (A filter was replaced for next station A8) ^{new}

Sampling logs on Cruise SPIROPA

Station A8 Date 07-05-2019 Water depth 120
 Longitude -70.8291 Latitude 40.2703
 Weather condition Calm Sampler Yifan Zhu

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	triplicates	(duplicates)	DON sampling bottle number
				Ammonium sampling bottle number	Cyanate sampling bottle number	
4	03:29	2	110	Cy-N2 (1~3)	Cy-N2 ✓	X
		4	100	Cy-N4 (1~3)	✓	
		6	80	Cy-N6 (1~3)	✓	
		8	60	Cy-N8 (1~3)	✓	
		10	40	Cy-N10 (1~3)	✓	
		12	30	Cy-N12 (1~3)	✓	
		14	20	Cy-N14 (1~3)	✓	
		16	10	Cy-N16 (1~3)	Cy-N10	
		18	Surface	Cy-N18-1	X	

Note
 and leached in the last Niskin bottle sampling)
 the filter is a bit clogged. (A ^{new} filter was replaced for next station (A9))
^{Mit}
 triplicates the surface sample was collected only 1
 ocn sample at surface ~~collected~~ collected.
 are not

Sampling logs on Cruise SPIROPA

Station A9 Date 07-06-2019 Water depth 129m
 Longitude -70.8297 Latitude 40.2045
 Weather condition Calm, Foggy Sampler YIFAN ZHU

CTD cast	Sampling time UTC	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
5	05:03	1	120	CS-N1-1+2	CS-N1	X
		2	100	CS-N2(1+2)	CS-N2	
		4	80	CS-N4(1+2)	↓	
		6	60	CS-N6(1+2)		
		8	40	CS-N8(1+2)		
		10	30	CS-N10(1+2)		
		12	20	CS-N12-1		
		14	10	CS-N14(1+2)		
16	Surface	CS-N16(1+2)	CS-N16			

Note
Singleate for Niskin 12 only next out Niskin 12

Sampling logs on Cruise SPIROPA

Station A10 Date 07-06-2019 Water depth 137m
 Longitude -70.8306 Latitude 40.1390
 Weather condition Very calm Foggy Sampler YiFA Zhu

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
7	02:06am	1	127	C7-N1-(1-2)	C7-N1	X
		3	100	X	X	
		6	80	C7-N6-(1-2)	C7-N6	
		8	60	C7-N8-(1-2)	C7-N8	
		10	40	C7-N10(1-2)		
		12	30	C7-N12(1-2)		
		14	20	C7-N14(1-2)		
		16	10	C7-N16(1-2)		
		19	Surface	C7-N19(1-2)	C7-N19	

Note

Niskin 2,4 → changed into N1,3 Niskin 3 was ^{not} sampled due to
 lack of water lefted

Sampling logs on Cruise SPIROPA

Station A11 Date 07-06-2019 Water depth 150 m
 Longitude -70.8309 Latitude 40.0751
 Weather condition very calm Foggy Sampler YIFAN Zhu

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
8	03:15 am	1	140	C8-N1(1~2)	C8-N1	X
		2	120	C8-N2(1~2)	C8-N2	
		4	100	↓	C8-N4	
		6	80		C8-N6	
		8	60		C8-N8	
		10	40		C8-N10	
		12	30		C8-N12	
		14	22		C8-N14	
		16	10	C8-N16		
		19	Surface	C8-N19(1~2)	C8-N19	

Note
 A new filter ^{was} changed

Sampling logs on Cruise SPIROPA

Station A12 Date 07-06-2019 Water depth 271 m
 Longitude -70.830214 Latitude 40.009501
 Weather condition CalM Sampler YIPAN zhu

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number		
9	4:20am	1	262	C9-N1 (1-2)	C9-N1	X		
		2	250	C9-N2 (1-2)	C9-N2			
		3	200		C9-N3			
		4	150		C9-N4			
		5 6	120		C9-N6			
		8	100		C9-N8			
		10	80		C9-N10			
		12	60		C9-N12			
		14	40		C9-N14			
		16	30		C9-N16			
		18	18		C9-N18			
		20	10		C9-N20			
		22 23	Surface		N9-N23 (1-2)		C9-N23	

Note ^{was} Niskin 23 changed to Niskin 22

Sampling logs on Cruise SPIROPA

Station A13 Date 07-06-2019 Water depth 478 m

Longitude -70.830462 Latitude 39.9446

Weather condition Sunrise, Calm, Sunny Sampler YIFAN ZHU

duplicates ~~(with caps labeled)~~ *duplicates*

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number			
10	06:00 am	1	300	C10-N1 (1~2)	C10-N1	X			
		2	250	C10-N2 (1~2)	C10-N2				
		3	200	C10-N3 (1~2)	C10-N3				
		4	150	C10-N4 (1~2)	C10-N4				
		5	120	↓	C10-N5				
		6	100		C10-N6				
		8	80		C10-N8				
		10	60		C10-N10				
		12	40		↓				
		14	29						
		16	20						
		18	10						
		24	Surface	C10-N24 (1~2)	C10-N24				

Note

1. New filter was replaced at this station.
when sampling, the new filter wasn't flushed with subsurface
seawater at all

Sampling logs on Cruise SPIROPA

Station 1814 Date 07-06-2019 Water depth 690 m
 Longitude -70.8303 Latitude 39.8802
 Weather condition Sunny. Calm Sampler YIFAN Zhu

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number		
11	08:00am	1	300	#C11-N1(1-2) ↓ C11-N23(1-2)	C11-N1	X		
		2	250		C11-N2			
		3	200					
		4	150					
		5	120					
		6	100					
		7	80					
		8	57					
		9	38					
		14	25					
		17.	16					
		18	11					
		20	6					
					23		5	C11-N23

Note

Sampling logs on Cruise SPIROPA

Station A15 Date 07-06-2019 Water depth 1116.1 m
 Longitude -70.8296 Latitude 39.8154
 Weather condition Calm, Sunny Sampler YIPAN Zhu

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
13	11:00am	1	300	C13-N1 (1m2)	C13-N1	X
		2	250	C13-N2 (1m2)	C13-N2	
		3	200			
		4	150			
		5	120			
		6	100			
		7	80			
		8	60			
		9	40			
		13	26			
		17	17			
		18	12			
		20	6			
		23	surface	C13-N23 (1m2)	C13-N23	

Note

~~the~~ A new filter was replaced before sampling.

Sampling logs on Cruise SPIROPA

Station A16 Date 07-06-2019 Water depth 1829 m
 Longitude -70.8294 Latitude 39.7502
 Weather condition Calm : sunny Sampler YIFAN Zhu

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number			
14	12:00 pm	1	300	C14-N1 (122)	C14-N1	X			
		2	250	↓	C14-N2				
		3	200						
		4	150						
		5	120						
		6	100						
		7	80						
		8	60						
		9	43						
		13	29						
		17	19						
		18	12						
		19	9						
		20	4		C14-N20(122)		C14-N20		
		23	Surface		X		X		

Note

I didn't sample surface due to no water left.

Sampling logs on Cruise SPIROPA

Station A17 Date 07-06-2019 Water depth 2122
 Longitude -70.8294 Latitude 39.6843
 Weather condition Calim, sunny Sampler Yifan Zhu

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number		
15	07:05	1	500	C15-N1(1-2)	C15-N1	X		
		2	300	C15-N2(1-2)	C15-N2			
		3	250	C15-N3(1-2)	C15-N3			
		4	200					
		5	150					
		6	120					
		8	100					
		10	80					
		12	60					
		14	40					
		16	28					
		18	20					
		20	10					
		24	Surface	C15-N4(1-2)	C15-N4			

Note

A new filter was replaced before sampling without any flushing.

Sampling logs on Cruise SPIROPA

Station A18 Date 07-06-2019 Water depth 2285
 Longitude -70.8294 Latitude 39.6196
 Weather condition Calm, Sunny Sampler YIFAN ZHU

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number				
16	18:33	1	300	C16-N11(1-2)	C16-N1	C16-N2				
		2	250							
		3	200							
		4	150							
		5	120							
		6	100							
		8	80							
		10	60							
		12	40							
		14	32							
		16	20							
		18	10							
		X	X							
		24	Surface				C16-N24(1-2)	C16-N24		

Note

~~Transcript 2~~

Sampling logs on Cruise SPIROPA

Station A16 Date 07072019 Water depth 2120m
Longitude -70.8292 Latitude 39.6848
Weather condition Calm Sampler YIFAN ZHANG

CTD cast	Sampling time UTC	Niskin bottle number	Depth (m)	duplicates		DON sampling bottle number		
				Ammonium sampling bottle number	Cyanate sampling bottle number			
28	13:50	1	300	C28-N1	C28-N1	X		
		2	250	C28-N2	C28-N2			
		3	200					
		4	150					
		5	120					
		6	100					
		7	80					
		8	60					
		9	49					
		11	32					
		14	21		C28-N14		C28-N14	
		17	13					
		18	10					
		20	5					
		24	0					

Note
bottle 17, 18, 20, 24 were not sampled due to no time.

