

Transect 19

Sampling logs on Cruise SPIROPA

Station SSF6 Date 07/02/09 Water depth 2262  
 Longitude -70.4510 Latitude 39.5829  
 Weather condition Caln. nice Sampler Yifan Zhang

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
62	08:30 pm	1	300	C62-N1	C62-N1	X
		2	250	C62-N2	C62-N2	
		3	200	↓	↓	
		4	150			
		5	120			
		6	100			
		7	80			
		9	60			
		13	45			
		★ 16	30			
		18	20			
		20	10			
		24	Surface			
		15	42	C62-N15	C62-N15	
		8	60m	X	X	
12	45m	C62-N12(1-3)				
22	0	C62-N22(1-3)				
15	42m	C62-N15(1-3)				
16	30m	C62-N16(1-3)				

Note

chl a ~ 35 mg·m<sup>-3</sup> SO high!

DON samples collected from Corday's

Transect 24

Sampling logs on Cruise SPIROPA

Station AC2 Date 07/12/19 Water depth 105 m  
 Longitude -70.8901 Latitude 40.3167  
 Weather condition Calm Sampler Y. Pazhr

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	X2		DON sampling bottle number				
				Ammonium sampling bottle number	Cyanate sampling bottle number					
64	14:21	1	95	C64-N1	C64-N1	X				
		3	80							
		5	60							
		7	49							
		9	32							
		11	21							
		13	14							
		<del>14</del>	<del>14</del>							
		15	10							
		17	5							
		19	0				C64-N19	C64-N19		

Note  
 Intertidal wave were observed at this station.

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transect 26, cast 65-80, pp 41-52

Sampling logs on Cruise SPIROPA

Station A18 Date 07/11/2019 Water depth 2289 m

Longitude -70.8296 Latitude 39.6180

Weather condition \_\_\_\_\_ Sampler YIPAN Zhu.

CTD cast	Sampling time UTC	Niskin bottle number	Depth (m)	X2		X3	
				Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number	
65	18:52	1	300	C65-N1	C65-N1		
		<del>2</del>	<del>250</del>	<del>X</del>	<del>X</del>		
		<del>3</del>	<del>200</del>	<del>X</del>	<del>X</del>		
		<del>4</del>	<del>150</del>	<del>X</del>	<del>X</del>		
		5	120	C65-N5	C65-N5		
		<del>7</del>	<del>100</del>	<del>X</del>	<del>X</del>		
		8	80	C65-N8	C65-N8		
		11	60	C65-N11	C65-N11		
		14	40	↓	↓		
		17	30				
		18	20				
		20	10				
		23	0	C65-N23	C65-N23		
		24	0	<del>X</del>	<del>X</del>		C65-N24 (1-3)
		15	30	<del>X</del>	<del>X</del>		C65-N15 (1-3)
9	60	<del>X</del>	<del>X</del>	C65-N9 (1-3)			

Note

No time for sampling, so 2 skipped few depth

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### Sampling logs on Cruise SPIROPA

Station A17 Date 07112019 Water depth 2121  
 Longitude -70.8304 Latitude 39.6852  
 Weather condition \_\_\_\_\_ Sampler YIPAN Zhu

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	x2	x2	DON sampling bottle number			
				Ammonium sampling bottle number	Cyanate sampling bottle number				
66	20:15	1	300	C66-N1	C66-N1	X			
		2	250	C66-N2	C66-N2				
		3	200	C66-N3	C66-N3				
		4	150	C66-N4	C66-N4				
		5	120	↓	↓		↓		
		6	100						
		8	80						
		11	60						
		12	40						
		14	28						
		16	20						
		18	10						
		24	Surf					C66-N24	C66-N24

**Note**

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### Sampling logs on Cruise SPIROPA

Station A16      Date 07/11/2019      Water depth 1776 m  
 Longitude -70.8360      Latitude 39.7590  
 Weather condition \_\_\_\_\_      Sampler YIFHW Zlw

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	X2		DON sampling bottle number		
				Ammonium sampling bottle number	Cyanate sampling bottle number			
67	22:42	1	300	C67-N1	C67-N1	X		
		2	250	C67-N2	C67-N2			
		3	200					
		4	150					
		5	120					
		7	100					
		8	80					
		9	60					
		12	40					
		14	37					
		18	25					
		20	20					
		22	0					

Note

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### Sampling logs on Cruise SPIROPA

Station   A15        Date   07112019        Water depth   1134    
 Longitude   -70.8295        Latitude   39.8147    
 Weather condition \_\_\_\_\_      Sampler   Yifan Zhu  

CTD cast	Sampling time	Niskin bottle number	Depth (m)	X2	X2	DON sampling bottle number																												
				Ammonium sampling bottle number	Cyanate sampling bottle number																													
69	9:30 pm	1	300	C69-N1	C69-N1	/																												
		2	250				C69-N2	C69-N2																										
		3	200						C69-N3	C69-N3																								
		5	150								C69-N4	C69-N4																						
		6	120										C69-N5	C69-N5																				
		8	100												C69-N6	C69-N6																		
		10	80														C69-N7	C69-N7																
		12	60																C69-N8	C69-N8														
		14	45																		C69-N9	C69-N9												
		16	30																				C69-N10	C69-N10										
		18	20																						C69-N11	C69-N11								
		20	10																								C69-N12	C69-N12						
		24	Surface																										C69-N13	C69-N13				

Note

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### Sampling logs on Cruise SPIROPA

Station A14      Date 07/11/2019      Water depth 690 m  
 Longitude -70.8301      Latitude 39.8794  
 Weather condition \_\_\_\_\_      Sampler YIFAN ZHANG

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number		
70	11:00pm	1	300	G10-N1	G10-N1	X		
		2	250	↓	↓			
		<del>3</del>	200					
		4	150					
		5	120					
		6	100					
		7	80					
		8	60					
		10	48					
		12	30					
		18	20					
		20	10					
		21	0				G10-N24	G10-N24
		24						

Note  
DCM is high ~ 32.5 mg·m<sup>-3</sup>  
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 \_\_\_\_\_  
 \_\_\_\_\_  
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### Sampling logs on Cruise SPIROPA

Station A13 Date 07/20/19 Water depth 474  
 Longitude -70.8309 Latitude 39.9453  
 Weather condition \_\_\_\_\_ Sampler Yifan Zhu

CTD cast	Sampling time	Niskin bottle number	Depth (m)	X2		DON sampling bottle number		
				Ammonium sampling bottle number	Cyanate sampling bottle number			
}	00:30 am	1	300	C71-N1	C71-N1	}		
		2	250	C71-N2	C71-N2			
		4	200	C71-N4				
		5	150					
		7	120					
		8	100					
		10	80					
		12	60					
		14	47					
		18	30					
		20	20					
		24	0					
		21	10		C71-N21		C71-N21	

Note

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### Sampling logs on Cruise SPIROPA

Station   A11        Date   07/22/19        Water depth   150m    
 Longitude   -70.8299        Latitude   40.0750    
 Weather condition \_\_\_\_\_      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			
73	06:15	1	140	x2 C73-M1	x2 C73-M1	/			
		2	120	C73-M2	C73-M2				
		5	100	↓	↓				
		7	80	↓	↓				
		9	60	↓	↓				
		11	40	↓	↓				
		13	25	↓	↓				
		15	20	↓	↓				
		17	10	↓	↓				
		19	0	C73-M19	C73-M19				

**Note**

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### Sampling logs on Cruise SPIROPA

Station A9      Date 07/22/19      Water depth 129  
 Longitude -70.8298      Latitude 40.2060  
 Weather condition \_\_\_\_\_      Sampler YIPAN ZHU

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number			
75	4:30am	1	116	<sup>X2</sup> G75-N1	<sup>X2</sup> G75-N1	<del> </del>			
		3	100	G75-N3	G75-N3				
		5	80	↓	↓				
		7	60	↓	↓				
		9	40	↓	↓				
		11	30	↓	↓				
		13	20	↓	↓				
		15	10	↓	↓				
		17	5	G75-N17	G75-N17				

**Note**

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## Sampling logs on Cruise SPIROPA

Station   A8        Date   07122019        Water depth   120    
 Longitude   -70.8303        Latitude   40.2700    
 Weather condition \_\_\_\_\_      Sampler   YIFAN ZHANG  

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
76	06:00:00	1	107	G76-N1	G76-N1	X
		3	100	G76-N3	↓	
		5	80	G76-N5	↓	
		7	60	↓	↓	
		9	40	↓	↓	
		<del>11</del>	27	↓	↓	
		<del>13</del>	20	↓	↓	
		<del>15</del>	10	↓	↓	
		17	5	G76-N17	G76-N17	

Note

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### Sampling logs on Cruise SPIROPA

Station A7      Date 07/22/19      Water depth 100  
 Longitude -70.8287      Latitude 40.3353  
 Weather condition \_\_\_\_\_      Sampler Yifan Zhu

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON x3 sampling bottle number					
77	07:00am	1	89	X	X	X					
		4	80								
		5	60								
		6	45								
		7	30								
		13	20								
		17	12								
		18	9								
		19	5								
		24	0								
							9	30	X	X	C77-N9(1-3)
							14	20			C77-N14(1-3)
							20	0			C77-N20(1-3)

Note no MCT, OCN sampling.      Don samples from Cordery's  
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 \_\_\_\_\_  
 \_\_\_\_\_  
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### Sampling logs on Cruise SPIROPA

Station A6      Date 07122019      Water depth 89m  
 Longitude -70.8279      Latitude 40.3994  
 Weather condition \_\_\_\_\_      Sampler Yif Anzhu

CTD cast	Sampling time UTC	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number		
79	13:04	1	79	C79-N1	C79-N1	X		
		3	60	↓	↓			
		5	45					
		7	30					
		13	20					
		15	12					
		17	9					
		<del>19</del>	<del>8</del>					
		20	5					
		24	0				C79-N24	C79-N24
		22	0				X	X
		12	20	X	X		C79-N12 (1-3)	
		10	30	X	X		C79-N10 (1-3)	

Note

DON samples are from cordons's

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### Sampling logs on Cruise SPIROPA

Station A5      Date 07/22/19      Water depth 81

Longitude -70.8287      Latitude 40.4648

Weather condition \_\_\_\_\_      Sampler YIFAN Zhu

CTD cast	Sampling time UTC	Niskin bottle number	Depth (m)	x2	x2	DON sampling bottle number
				Ammonium sampling bottle number	Cyanate sampling bottle number	
80	(14:08)	1	70	C80-N1	C80-N1	<del>        </del>
		3	60	C80-N3	C80-N3	
		5	43	↓	↓	
		8	29	↓	↓	
		10	19	↓	↓	
		13	12	↓	↓	
		15	9	↓	↓	
		17	4	↓	↓	
		23	0	C80-N23	C80-N23	

Note

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### Sampling logs on Cruise SPIROPA

Station A12      Date 07/13/2019      Water depth 271 m  
 Longitude -70.8308      Latitude 40.0099  
 Weather condition Sunny, Calm      Sampler YIFAN ZHANG

CTD cast	Sampling time	Niskin bottle number	Depth (m)	X2		DON sampling bottle number		
				Ammonium sampling bottle number	Cyanate sampling bottle number			
83	10:30am	1	260	C83-N1	C83-N1	X		
		2	250	C83-N2	C83-N2			
		3	200	C83-N3	C83-N3			
		4	150	C83-N4				
		5	120	C83-N5				
		6	100					
		8	80					
		10	56					
		12	37					
		14	25					
		16	16					
		18	11					
		20	6					
		23	Surf	C83-N23	C83-N23			

**Note**

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### Sampling logs on Cruise SPIROPA

Station A13 Date 07/22/09 Water depth 475  
 Longitude -70.8298 Latitude 39.9453  
 Weather condition Sunny, calm Sampler YIFAN ZH

CTD cast	Sampling time	Niskin bottle number	Depth (m)	x2		DON sampling bottle number		
				Ammonium sampling bottle number	Cyanate sampling bottle number			
84	11:40am	1	300	C84-N1	C84-N1	X		
		2	250	C84-N2	C84-N2			
		3	200	↓	↓		X	
		4	150					
		5	120					
		6	100					
		7	80					
		8	60					
		10	45					
		15	30					
		18	20					
		20	10					
		23	0	C84-N23	C84-N23			
		12	45	X	X		C84-N12 (1-3)	x3
		16	30	X	X		C84-N16 (1-3)	x3
		22	0	X	X		C84-N22 (1-3)	x3

Note

DON samples are from Corolay's

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Sampling logs on Cruise SPIROPA

Station A17 Date 07/14/2019 Water depth 2119m

Longitude -70.8289 Latitude 39.6846

Weather condition \_\_\_\_\_ Sampler YIFAN ZHU

CTD cast	Sampling time	Niskin bottle number	Depth (m)	X2		X4	
				Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number	
86	00:30	1	300.	C86-N1	C86-N1	X	
		<del>2</del>	<del>250.</del>				
		<del>3</del>	<del>200.</del>				
		4	150.				
		<del>5</del>	<del>120.</del>				
		6	100				
		8	80				
		10	60				
		12	40				
		16	30				
		18	20				
		20	10				
		24	5	C86-N24	C86-N24		
		21	5	X	X		C86-N21 (1-4) x4
		14	40	X	X		C86-N14 (1-4)
		11	60	X	X		C86-N11 (1-4)

Note

DON and urea samples from corclay's

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### Sampling logs on Cruise SPIROPA

Station A16 Date 0714 2019 Water depth 1824

Longitude -70.8296 Latitude 39.7499

Weather condition \_\_\_\_\_ Sampler YIFAN ZHU

CTD cast	Sampling time	Niskin bottle number	Depth (m)	X <sub>2</sub>	X <sub>2</sub>	X <sub>4</sub>
				Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
87	01:40am	1	300	C87-N1	C87-M1	<del>                    </del>
		3	200	C87-N3	C87-M3	
		6	100	↓	↓	
		7	80			
		9	60			
		12	42			
		15	30			
		17	20			
		19	10			
		24	0	C87-N24	C87-M24	
		23	5	<del>                    </del>	<del>                    </del>	C87-N23 (1-3)
		13	42			C87-M13 (1-3)
		10	60			C87-M10 (1-3)

Note  
DON samples are from Cowlay's  
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 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Sampling logs on Cruise SPIROPA

Station A15      Date 07/14/2019      Water depth 1122m  
 Longitude -70.8297      Latitude 39.8149  
 Weather condition \_\_\_\_\_      Sampler YIFAN ZHU

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	X2	X3	X4	
				Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number	
88	6:53	1	300	C88-N1	C89-N1	X	
		3	200	C88-N3	C89-N3		
		6	100	↓	↓		
		7	80				
		8	55				
		12	40				
		15	30	↓	↓		
		18	20				
		20	10				
		24	0				C88-N24
		10	<del>40</del>	X	X	C89-N10 (1-9)	X4
		13	40	X	X	C89-N13 (14)	X4
		24	0	X	X	C89-N24 (14)	X4

**Note**

DON and cyanate sample the cast number is labeled as 89 but they are from cast 88!!! when analysis should be aware of it.

### Sampling logs on Cruise SPIROPA

Station A14 Date 07/14/2019 Water depth 693

Longitude -70.8294 Latitude 39.8799

Weather condition \_\_\_\_\_ Sampler YIFAN Zhu

X2                      X2                      X1

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
89	04:30 am	1	300	C89-N1	C88-N1	X
		3	200			
		6	100			
		8	80			
		10	60			
		14	49			
		17	<del>30</del>			
		18	<del>20</del>			
		20	10			
		23	0			
		11	49	X	X	C88-N11 (1-3)
		15	15	X	X	C88-N15 (1-3)
		24	0	X	X	C88-N24 (1-3)

X4

**Note**

Cyanate and DON sample. the cast number should be 89 not 88