

PP16~23, Transect 8, cast 32-40.

Sampling logs on Cruise SPIROPA

Station S1 ~~A17~~ Date 07082019 Water depth 2651 m  
 Longitude -70.9991 Latitude 39.2495  
 Weather condition cloudy Calm Sampler YIFAN ZHANG

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	Singlecast	Singlecast	triplicates			
				Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number			
32	12:05	1	300	C32-N1	C32-N1	<del>XXXXXXXXXX</del>			
		2	250	C32-N2	C32-N2				
		3	200	C32-N3	C32-N3				
		4	150						
		5	120						
		6	100						
		7	80						
		8	57						
		9	38						
		14	25						
		17	16						
		18	11						
		20	6						
		24	0	C32-N24	C32-N24				
				10	38		<del>XXXXXX</del>	<del>XXXXXX</del>	C32-N10 (1~3)
				12	25		<del>XXXXXX</del>	<del>XXXXXX</del>	C32-N12 (1~3)
				22	0		<del>XXXXXX</del>	<del>XXXXXX</del>	C32-N22 (1~3)

Note

DON (triplicates) were collected from Cordan's bottles, since I am the first one ~~to~~ <sup>to</sup> collect, the contamination would be very small.

### Sampling logs on Cruise SPIROPA

Station S2      Date 07082019      Water depth 2680m  
 Longitude -70.8844      Latitude 39.2503  
 Weather condition Cloudy Calm      Sampler Yi Fan Zhu

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	X2	X2	triplicately					
				Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number					
34	13:55	1	300	↓	↓	↓					
		2	250								
		3	200								
		4	150								
		5	120								
		6	100								
		8	80								
		10	58								
		12	39								
		14	25								
		16	16								
		18	12								
		20	6								
		23	surf				C34-N23(1~3)				

Note

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### Sampling logs on Cruise SPIROPA

Station 53 Date 07082019 Water depth 2693  
 Longitude -70.7661 Latitude 39.2497  
 Weather condition Cloudy Calm Sampler YIFBN Zhu

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	duplicates		DON sampling bottle number					
				Ammonium sampling bottle number	Cyanate sampling bottle number						
35	<del>17:00</del> 17:01	1	300	C35-N1	C35-N1	X					
		2	250								
		3	200								
		4	150								
		5	120								
		6	100								
		8	80								
		10	60								
		12	40								
		14	26								
		16	17								
		18	12								
		20	6								
		24	surface				C35-N24	C35-N24			

Note

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### Sampling logs on Cruise SPIROPA

Station S4      Date 07082019      Water depth 2670  
 Longitude -70.6480      Latitude 39.7508  
 Weather condition cloudy calm      Sampler YIFAN ZH

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number			
36	18:53	1	300	x2 C36-N1	x2 C36-N1	x3			
		2	250						
		3	193						
		4	150						
		5	120						
		6	100						
		7	80						
		8	60						
		10	40						
		14	30						
		18	18						
		20	10						
		24	0		x2 C36-N24		x2 C36-N24		
				12	30		x3	x3	x3
				16	18		x3	x3	x3
				22	0		x3	x3	x3

**Note**

DON were collected from Cordery's bottles.

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### Sampling logs on Cruise SPIROPA

Station 55      Date 07082019      Water depth 2685 m  
 Longitude -70.5334      Latitude 39.2502  
 Weather condition cloudy calm      Sampler Vifa

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	duplicates		DON sampling bottle number		
				Ammonium sampling bottle number	Cyanate sampling bottle number			
37	20:22	1	300	C37-N1	C37-N1	X		
		2	250	C37-N2	C37-N2			
		3	200					
		4	150					
		5	120					
		6	100					
		8	80					
		10	60					
		12	40					
		14	27					
		16	23					
		18	19					
		20	10					
		24	surf	C37-N24	C37-N24			

Note

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### Sampling logs on Cruise SPIROPA

Station S6 Date 07082019 Water depth 2705

Longitude -70.4163 Latitude 39.2503

Weather condition cloudy calm Sampler YIFAN Zhu.

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	Ammonium sampling bottle number <sup>x2</sup>	Cyanate sampling bottle number <sup>x2</sup>	DON sampling bottle number <sup>x3</sup>
38	22:05	1	300	<del>C38-N1</del>	<del>C38-N1</del>	C38-N1(123)
		2	250	<del>C38-N2</del>	C38-N2	C38-N2(123)
		3	200	↓	↓	↓
		4	150			
		5	120			
		6	100			
		8	80			
		10	60			
		12	43			
		14	36			
		16	30			
		18	20			
20	10					
		24	surface	C38-N24	C38-N24	C38-N24(123)

Note  
 DON samples were collected from whole depths and were the last parameter, there probably be contaminations even though I thoroughly rinsed the nipples with ml water.

### Sampling logs on Cruise SPIROPA

Station S7 Date 07082019 Water depth 2682  
 Longitude ~~37~~ -70.3000 Latitude 39.2505  
 Weather condition Nice sunset 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
39	23:39	1	300	<del>C39-N1</del>	C39-N1	X
		2	250	C39-N2	C39-N2	
		3	200	C39-N3	C39-N3	
		4	150			
		5	120			
		6	100			
		8	80			
		9	60			
		12	<del>39</del>			
		16	<del>30</del>			
		18	<del>20</del>			
		20	<del>10</del>			
		24	0	C39-N24	C39-N24	
		10	60	X	X	X3 ✓ C39-N10
		14	39	X	X	X3 ✓ C39-N14
		22	0	X	X	X3 ✓ C39-N22

**Note**

Donw samples are from Corday's bottles.

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### Sampling logs on Cruise SPIROPA

Station S8      Date 07082019      Water depth 2672m  
 Longitude -70.1832      Latitude 39.2496  
 Weather condition Calm      Sampler YIFHW Zhu

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	X2		DON sampling bottle number
				Ammonium sampling bottle number	Cyanate sampling bottle number	
40	01:19	1	300	C40-N1(1+2)	C40-N1(1+2)	X
		2	250			
		3	200			
		4	150			
		<del>5</del> 6	120			
		8	100			
		<del>10</del> 8	80			
		12	60			
		14	39			
		16	30			
		18	20			
		20	10			
		24	surface			

**Note**

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Transect 11, Cast <sup>41</sup>~~41~~-52, pp 24-33

**Sampling logs on Cruise SPIROPA**

Station A5 Date 07092019 Water depth 79m  
 Longitude -70.8308 Latitude 40.4648  
 Weather condition Calm Sampler YIFAN ZH

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	X 2		DON sampling bottle number
				Ammonium sampling bottle number	Cyanate sampling bottle number	
41	10:06	1	69	C41-N1	C41-N1	X
		2	60	C41-N2	C41-N2	
		3	40	C41-N3	C41-N3	
		5	26	C41-N5	C41-N5	
		11	17	↓	↓	
		13	11	↓	↓	
		17	8	↓	↓	
		19	4	↓	↓	
		24	Surface	C41-N24	C41-N24	

Note

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### Sampling logs on Cruise SPIROPA

Station 186      Date 07092019      Water depth 89  
 Longitude -70 8302      Latitude 40.4008  
 Weather condition Cal. m. Sunny      Sampler YIPAN Zhu

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number
43	12:20	1	79	X	X	<del>C43-N<sub>1</sub></del> (1~3)
		3	60			C43-N <sub>3</sub> (1~3)
		5	40			
		7	34			
		9	22			
		11	15			
		13	9			
		15	7			
		17	3			
						19

**Note**

Only DON samples were collected. because 7 was the last one to sample. I used a lot of water to rinse nipples before sampling.

### Sampling logs on Cruise SPIROPA

Station A7 Date 07092019 Water depth 100  
 Longitude -70.8308 Latitude 40.3356  
 Weather condition Calm Sampler YFZhu

*\* it may be labeled as C43 X2*

CTD cast	Sampling time UTC	Niskin bottle number	Depth (m)	Ammonium <sup>X2</sup> sampling bottle number	Cyanate sampling bottle number	DON sampling <sup>X3</sup> bottle number		
44	13:24	1	90	C44-N1	C44-N1	<del>X</del>		
		3	80	C44-N3	C44-N3			
		5	60	↓	↓			
		7	40					
		9	30					
		13	23					
		17	10					
		19	0	C44-N19	C44-N19			
		16	23	<del>X</del>	<del>X</del>	C44-N16 (1~3)		
		12	30	<del>X</del>	<del>X</del>	C44-N12 (1~3)		
		22	0	<del>X</del>	<del>X</del>	C44-N22 (1~3)		

Note  
the label may be C43 instead of C44 should be  
double checked!

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## Sampling logs on Cruise SPIROPA

Station 188 Date 07092019 Water depth 170m  
 Longitude -70.8298 Latitude 40.2702  
 Weather condition calm Sampler YIFAN ZHANG

CTD cast	Sampling time UTC	Niskin bottle number	Depth (m)	Ammonium sampling <sup>x2</sup> bottle number	Cyanate sampling <sup>x2</sup> bottle number	DON sampling <sup>x3</sup> bottle number			
45	14:23	1	110	▲ C45-N1	C45-N1	X			
		2	<del>100</del> 100	C45-N2	C45-N2				
		3	<del>80</del> 80	C45-N3	C45-N3				
		5	<del>60</del> 60	↓	↓				
		7	<del>40</del> 40						
		11	<del>30</del> 30						
		<del>14</del> 14	<del>20</del> 20	↓	↓				
		17	<del>10</del> 10						
		19	5	C45-N19	C45-N19				
				12	30		X	X	C45-N12 (1-3)
				16	20		X	X	C45-N16 (1-3)
				22	0		X	X	C45-N22 (1-3)

Note

DON from Cordery

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### Sampling logs on Cruise SPIROPA

Station A9      Date 07092019      Water depth 128m  
 Longitude -70.8313      Latitude 40.2053  
 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			
46	15:29	1	118	C46-N1	C46-M1	X		
		2	100	C46-N2	<del>C46-M2</del>			
		4	80		<del>C46-M3</del>			
		6	60		<del>C46-M4</del>			
		8	41		<del>C46-M5</del>			
		10	27		<del>C46-M6</del>			
		14	18		<del>C46-M7</del>			
		16	11		<del>C46-M8</del>			
		18	8		<del>C46-M9</del>			
		20	4		<del>C46-M10</del>			
		23	0		C46-N2		C46-M2	

Note

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### Sampling logs on Cruise SPIROPA

Station A10 Date 07092017 Water depth 137  
 Longitude -70.8311 Latitude 40.1399  
 Weather condition \_\_\_\_\_ Sampler YIFAN Zhu

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	x2		DON sampling bottle number
				Ammonium sampling bottle number	Cyanate sampling bottle number	
47	16:27	1	127	C47-N1	C47-N1	X
		2	100	C47-N2	C47-N2	
		4	80	C47-N4	C47-N4	
		6	60	↓	↓	
		8	40			
		10	30			
		12	25			
		14	10			
		16	0			

Note  
filter was changed during sampling  
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 \_\_\_\_\_  
 \_\_\_\_\_  
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### Sampling logs on Cruise SPIROPA

Station   A11                        Date   0709 2019                        Water depth   151 m  

Longitude   -70.8302                        Latitude   40.0745  

Weather condition \_\_\_\_\_ Sampler   Yifan Zhu  

*all labeled 48 should be 49*

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	Ammonium sampling X2 bottle number	Cyanate sampling X2 bottle number	DON sampling bottle number
49	17:45	1	142	N49-N1	N49-N1	X
		2	120	N49-N2	N49-N2	
		4	100	↓	↓	
		6	80			
		8	60			
		10	40			
		12	30			
		14	20			
		16	10	N49-N18	N49-N18	
		18	0			

Note

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### Sampling logs on Cruise SPIROPA

Station A12      Date 07/09/2019      Water depth 272m  
 Longitude -70-8298      Latitude 40.0098  
 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				
50	18:52	1	262	C50-N1	C50-N1	X			
		2	200	C50-N2	C50-N2				
		3	150	C50-N3	C50-N3				
		4	120						
		5	100						
		6	80						
		8	60						
		10	40						
		14	30						
		18	20						
		20	10						
		24	0	C50-N24	C50-N24				
				12	0		X	X	C50-N12(123)
				16	20		X	X	C50-N16(123)
				22	30		X	X	C50-N22(123)

Note

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### Sampling logs on Cruise SPIROPA

Station A13 Date 07092019 Water depth 478

Longitude -70.8309 Latitude 39.9443

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		
51	18:00	1	300	<sup>x2</sup> C51-N1	<sup>x2</sup> C51-N1	X		
		2	250	C51-N2	C51-N2			
		3	200					
		4	150					
		<del>5</del>	<del>100</del>					
		6	100					
		8	80					
		10	60					
		12	40					
		14	30					
		16	20					
		18	10					
		24	0		C51-N24		C51-N24	

Note

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### Sampling logs on Cruise SPIROPA

Station A14      Date 07/09/2019      Water depth 715  
 Longitude -70.8304      Latitude 39.8793  
 Weather condition \_\_\_\_\_      Sampler YIFAN ZHANG

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number		
52	21:20	1	300	C52-N1	C52-N1	X		
		2	250	C52-N2	C52-N2			
		3	200	C52-N3	C52-N3			
		4	150					
		X-5	120	X	X			
		6	100					
		8	80					
		10	60					
		12	40					
		14	30					
		16	20					
		18	10					
		24	0		C52-N24		C52-N24	

Note

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Transect 16

Sampling logs on Cruise SPIROPA

Station AC2 Date 07/02/09 Water depth 105  
 Longitude -70.8905 Latitude 40.3169  
 Weather condition Calm, nice, 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		
54		1	95	C53-N1 (1-2)	C54-N1	X		
		2	80	C53-N2 (1-2)	C54-N2			
		4	60	C53-N4	C54-N2			
		5	41	C53-N5 (1-2)				
		7	27					
		10	18					
		13	11					
		17	8					
		19	4					
		23	Surface	C53-N23	C54-N23			
			22	0	X		X	C540-N22 (1-3)
			16	11	X		X	C54-N16 (1-3)
		10	18	X	X	C54-N10 (1-3)		

Note

N14<sup>+</sup> bottle 4 and 2 perhaps are ~~not~~ <sup>messed</sup> together

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### Sampling logs on Cruise SPIROPA

Station AL2      Date 07/02019      Water depth 220 m

Longitude \_\_\_\_\_      Latitude \_\_\_\_\_

Weather condition \_\_\_\_\_      Sampler YF Zhn

CTD cast	Sampling time	Niskin bottle number	Depth (m)	Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number	
55	13:24	1	210	C55-N1	C55-N1	X	
		2	200	C55-N2	C55-N2		
		3	150	C55-N3			
		4	120				
		5	100				
		7	69				
		9	60				
		11	40				
		13	30				
		15	20				
		19	10				
		23	0		C55-N23		C55-N23

Note

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Transsect 17

Sampling logs on Cruise SPIROPA

Station SSF2 Date 07/02/019 Water depth 2270m  
 Longitude -70.4027 Latitude 39.5847  
 Weather condition Caln Sampler YIPAN ZH

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	X2		X3	
				Ammonium sampling bottle number	Cyanate sampling bottle number	DON sampling bottle number	
56	16:36	1	300	C56-N1	C56-N1		
		2	250				
		3	200				
		4	150				
		5	120				
		6	100				
		7	90				
		8	80				
		11	60				
		16	50				
		17	40				
		18	25				
		19	18				
		20	9				
		24	Surface		C56-N24	C56-N24	
		<del>22</del>	<del>0</del>				C56-N22 (1-3)
		<del>14</del>	<del>50</del>				C56-N14 (1-3)
		<del>9</del>	<del>80</del>				C56-N9 (1-3)

Note  
 DON samples collected from Corday's

Transect 18, Cast 58-61, PP37-38

Sampling logs on Cruise SPIROPA

Station SSF1 Date 07/02/19 Water depth 2323

Longitude -70.2993 Latitude 39.5833

Weather condition Calm Sampler YIPAN Zhu

CTD cast	Sampling time (UTC)	Niskin bottle number	Depth (m)	x2		DON sampling bottle number				
				Ammonium sampling bottle number	Cyanate sampling bottle number					
58	19:21	1	300	C58-N1(1-2)	C58-N1(1-2)					
		2	250							
		3	200							
		4	150							
		5	100							
		6	100							
		8	80							
		10	60							
		12	46							
		14	40							
		16	30							
		18	20							
		20	10							
		24	surface				C58-N24	C58-N24		

Note

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### Sampling logs on Cruise SPIROPA

Station SSF3      Date 07/02/19      Water depth 2243  
 Longitude -70.4992      Latitude 39.5834  
 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			
59	21:00	1	300	<del>C59-N1</del>	<del>C59-N1</del>	X		
		2	250	<del>C59-N2</del>	<del>C59-N2</del>			
		3	200	<del>C59-N3</del>	<del>C59-N3</del>			
		4	150	<del>C59-N4</del>	<del>C59-N4</del>			
		5	120	<del>C59-N5</del>	<del>C59-N5</del>			
		6	100	<del>C59-N6</del>	<del>C59-N6</del>			
		8	80	<del>C59-N8</del>	<del>C59-N8</del>			
		10	60	<del>C59-N10</del>	<del>C59-N10</del>			
		12	54	<del>C59-N12</del>	<del>C59-N12</del>			
		14	45	<del>C59-N14</del>	<del>C59-N14</del>			
		16	30	<del>C59-N16</del>	<del>C59-N16</del>			
		18	20	<del>C59-N18</del>	<del>C59-N18</del>			
		(X) 20	10	<del>C59-N20</del>	<del>C59-N20</del>			
		24	0	<del>C59-N24</del>	<del>C59-N24</del>			

only one Sigitasen

Note

bottle 1~6 were not sampled due to lack of time.

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