TRANSECTS

Cruise	Event	Cycle (Transect)	Order Occupied (Tow)	Date	Latitude (degrees)(min) N	PORT Mesh (µm)	PORT Initial Revs	PORT Final Revs	PORT Total Revs	PORT Revs/sec	PORT Mrev	PORT Volume Water Strained (m3)	PORT Standard Haul Factor (10 m^2/unit area)	Comments
CCE-LTER-P1908		1	1	10-Aug-2019	N	202	378,457	383,341	4,884	31.3077	0.269	52.0	19.168	Transect not cycle, biomass not rinsed with ammonium forma
CCE-LTER-P1908		2	1	17-Aug-2019	N	202	624,132	628,566	4,434	27.2025	0.269	47.2	20.865	Transect not cycle.
CCE-LTER-P1908		2	2	17-Aug-2019	N	202	628,566	633,286	4,720	29.1358	0.269	50.2	19.713	Transect not cycle.
CCE-LTER-P1908		2	3	17-Aug-2019	N	202	633,283	637,788	4,505	27.638	0.269	48.0	20.537	Transect not cycle.
CCE-LTER-P1908		2	4	18-Aug-2019	N	202	637,782	641,666	3,884	24.1242	0.269	41.4	24.181	Transect not cycle. Time missing on petri dishes this tow.
CCE-LTER-P1908		2	5	18-Aug-2019	N	202	641,668	645,448	3,780	24.0764	0.269	40.2	24.710	Transect not cycle.
CCE-LTER-P1908		2	6	18-Aug-2019	N	202	650,394	654,400	4,006	25.5159	0.269	42.6	23.358	Transect not cycle. Initial and final revs flipped from what is w
CCE-LTER-P1908		2	7	18-Aug-2019	N	202	650,443	654,178	3,735	23.7898	0.269	39.8	25.144	Transect not cycle. Initial rev less than final for previous tow,
CCE-LTER-P1908		3	1	26-Aug-2019	N	202	963,113	967,461	4,348	25.5765	0.269	46.3	21.521	Transect not cycle. Small amount of gc cup spilled during filtra
CCE-LTER-P1908		3	3	26-Aug-2019	N	202	974,930	978,698	3,768	23.55	0.269	40.1	24.923	Transect not cycle.
CCE-LTER-P1908		3	4	26-Aug-2019	N	202	978,702	982,559	3,857	23.5183	0.269	41.1	24.111	Transect not cycle.
CCE-LTER-P1908		3	5	27-Aug-2019	N	202	982,556	986,135	3,579	21.3036	0.269	38.1	26.232	Transect not cycle.
CCE-LTER-P1908		3	6	27-Aug-2019	N	202	986,141	990,182	4,041	25.5759	0.269	43.0	23.241	Transect not cycle.
CCE-LTER-P1908		3	7	26-Aug-2019	N	202	990,185	994,045	3,860	23.3939	0.269	41.1	24.196	Transect not cycle.
CCE-LTER-P1908		3	8	27-Aug-2019	N	202	994,048	999,352	5,304	32.3415	0.269	56.4	17.115	Transect not cycle. Slowed down to maintain tension at 50m d
CCE-LTER-P1908		3	9	27-Aug-2019	N	202	999,352	1,004,820	5,468	32.9398	0.269	58.2	16.872	"100" added to front of final rev to make subtraction work. Tra

VERTICAL BONGOS

N=16

P1908 Vertical bongos

Logged? √√

NET TOW DATA SHEET

CRUISE	SHIP	~~CYCLE~~ Transect	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P 1908	ATL	T1, T1		20190811. 0613.001	190810	23:10	23:20

Live

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL	
SINKING (descend)	7	21"	NET NO.			TOW NO. 1	OF 1
			METER NO.	28540		SEA (Conditions): (Calm)	
TOWING (at depth)		30"	FINAL	383341		(Circle one) Moderate	
			INITIAL	378457	383341		Rough
Total (ascend)	2	06"	DIFF.	4884		WIND: 23	knots
			MESH SIZE	202 μ	202 μ		

AMT. OF WIRE OUT: 100 meters

TOTAL NO. OF ANGLES:

OBSERVERS: SAS

ANGLES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160	
ANGLES	X	X	X	X	X	5	10	10	0	5 5	10	15	10 15	25	15 35	UP DN
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	

	PORT	STB.					
No. OF JARS		1	NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	(P) Q					
FORMALIN & BORATE ADDED		✓	NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Transect Cycle	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
[illegible]	ATL	1	1	[illegible]	[illegible]	~2315	2329
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1	1/8	1/8	
Container Number	1	[illegible]	[illegible]	
Dewar	1	1	1	
Canister Number	1	1	1	

Notes:

Some green in sample, but not dense.

Only vertical bongo tow of transect 1

Did not rinse BM w/ Ammonium formate

Initials: CAS

Logged? ✓✓

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P	ATL	T2,T1		#237	2019/8/17	20:25	20:34

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL
SINKING (descend)	6	24 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Circle one) Calm / Moderate / Rough
TOWING (at depth)		30 "	FINAL	628566		
			INITIAL	624132		
Total (ascend)	2	13 "	DIFF.			WIND: 13.9 knots
			MESH SIZE			

AMT. OF WIRE OUT: meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						-10		-12 -11		-10 -12		-9 -10		-3 0	tR
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

-1+

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Transect ~~Cycle~~	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	2	1		1908 17	2025	2034
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/4	3/8	3/8	
Container Number	13	181, 183	50, 51	
Dewar	2	2	2	
Canister Number	3	3	3	

Notes: wire angles not ϕ. Calif. current water, not very green

Initials:

Logged? ✓✓

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P 1908	ATL	T2,T2		#241	2019 8 17	21:50	21:58

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL
SINKING (descend)	5	22"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Calm) Moderate Rough (Circle one)
TOWING (at depth)	0	30"	FINAL	633286		
			INITIAL	~~89~~ 628566		
Total (ascend)	2	12"	DIFF.			WIND: 11.8 knots
			MESH SIZE			

AMT. OF WIRE OUT: meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						-8		-10 -9		-11 -4	*	-13 0		-14 +3	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Cycle	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
CCE-P	Atlantis	Transect 2	2		2019 8 17	21:50	21:58
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/4	3/8	3/8	
Container Number	14	182,184 (added later MDO)	52,53,54 (added 4 Jan. 2023. MDO)	
Dewar	2	2	2	
Canister Number	3	3	3	

Notes:

Initials:

Logged? ✓✓

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT)	
						BEGIN TOW	END TOW
CCE-P	Atlantis	T2,T3		#246	2019 8 17	23:07	2315

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL	
SINKING (descend)	5	02 "	NET NO.			TOW NO. 1 OF 1	
			METER NO.			SEA (Conditions): (Circle one)	Calm / Moderate / Rough
TOWING (at depth)	0	30 "	FINAL	637788			
			INITIAL	633283			
Total (ascend)	2	13 "	DIFF.			WIND: 11.3 knots	
			MESH SIZE				

AMT. OF WIRE OUT: meters

TOTAL NO. OF ANGLES:

OBSERVERS: SAS et al

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						-10		-10 -5		-5 -10		0 -10		10 -5	10
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Transect ~~Cycle~~	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	2	3		190817	~2307	2315
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/8	3/8	3/8	
Container Number	15	185, 186	55, 56	
Dewar	2	2	2	
Canister Number	4	4	4	

Notes:

Initials: Sommer + MMT team

Logged?
√√

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P	Atlatis	T2T4		#251	299818	0029	0037

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL
SINKING (descend)	5	09 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Calm) Moderate Rough
TOWING (at depth)	0	30 "	FINAL	641666		(Circle one)
			INITIAL	637782		
Total (ascend)	2	11 "	DIFF.			WIND: 6.7 knots
			MESH SIZE			

AMT. OF WIRE OUT: meters

TOTAL NO. OF ANGLES:

OBSERVERS: SAS et al

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						0		-1 +1		-3 +1		-2 +8		+1 +3	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Transect ~~Cycle~~	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	2	9		190818	0029	0037
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/8	3/8	3/8	
Container Number	17	187, 188	57, 58	
Dewar	2	2	2	
Canister Number	4	4	4	

Notes:

Time missing from all petri dishes this tow

Initials:

Logged? ✓

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P	Atlantis	T2,T5		#257	2098 18	0224	0232

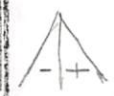
TIME	Min.	Sec.		PORT	STB.	TOW TYPE: ~~CALBOBL~~
SINKING (descend)	5	18"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Calm) Moderate Rough
TOWING (at depth)	0	30"	FINAL	645448		(Circle one)
			INITIAL	641668	645746	
Total (ascend)	2	07"	DIFF.			WIND: 7 knots
			MESH SIZE			

AMT. OF WIRE OUT: meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES								+4		+2		+1		-2	
						+6		0		-6		-12		-10	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10



	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one) Before station / After station	

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Transect ~~Cycle~~	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	2	5		19 08 18	0224	0232
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/8	3/8	3/8	
Container Number	16	189, 190	59, 60 +63 [added 4 Jan. 2023, MDB]	
Dewar	2	2	2	
Canister Number	5	5	5	

Notes:

Initials: L. Lilly + day crew

Logged? ✓✓

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P P1908	ATL	T2, T6		#261	2019-08-18	03:41	3:48

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL	
SINKING (descend)	5	17"	NET NO.			TOW NO. 1 OF 1	
			METER NO.			SEA (Conditions): (Circle one) Calm / Moderate / Rough	
TOWING (at depth)		30"	FINAL	650394			
			INITIAL	65440			
Total (ascend)	2	07"	DIFF.			WIND:	knots
			MESH SIZE				

AMT. OF WIRE OUT: meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						-5		-2 -10		-5 -9		-5 -10		0	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one) Before station / After station	

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Transect ~~Cycle~~	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	2	6		19 08 18	0341	0348
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/4	3/8	3/8	
Container Number	Cup 18 (??) ↑ not positive - check label	191, 192	64, 65	
Dewar	2	2	2	
Canister Number	5	6	6	

Notes: Very sparse sample

Initials: L. Lilly, I. Evans, J. Barrios, S. Chaubert

Logged? ✓✓

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P P1908	ATL	T2, T7		#267	19 08 18	05:30	5:38

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL
SINKING (descend)	5	31"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Circle one) Calm / Moderate / Rough
TOWING (at depth)		30"	FINAL			
			INITIAL	650443		
Total (ascend)	2	07"	DIFF.			WIND: knots
			MESH SIZE			

AMT. OF WIRE OUT: meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						Ø		Ø Ø		Ø -1		Ø 1		Ø Ø	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.		none or slight	moderate	heavy	very heavy
No. OF JARS			NET CLOGGING				
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one) Before station / After station	

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Transect ~~Cycle~~	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	2	7		19 08 18	~0530	0538
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/4	3/8	3/8	
Container Number	Cup 19, 20	193, 194	66, 67, 68	
Dewar	2	2	2	
Canister Number	6	6	6	

Notes: Last sample of the transect!

Initials: L. Lilly, J. Barrios, J. Evans, J. Chalbert

D/R ✓

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P	ATL	T3T1		#397	26Aug2019	18:45	18:57
					27/08/1	1:45	1:57

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL
SINKING (descend)	5	32 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Calm) Moderate Rough (Circle one)
TOWING (at depth)		30 "	FINAL	967461		
			INITIAL	963113		
Total (ascend)	2	20 "	DIFF.			WIND: knots
			MESH SIZE			

AMT. OF WIRE OUT: 100 meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						-5		-5 -7		-4 -7		-7 -5		-10 0	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Transect ~~Cycle~~	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	3	1		190826	1615	1857
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/4	3/8	3/8	
Container Number	31	264, 263	160, 159	
Dewar				
Canister Number				

Notes: Small amount of GC cup spilled during filtration

Initials:

Angle
(−) (+)

NET TOW DATA SHEET

No sample saved

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P	ATL	T3T2			26Aug2019	20:03	

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL
SINKING (descend)	5	20 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Circle one) Calm / Moderate / Rough
TOWING (at depth)		30 "	FINAL			
			INITIAL	967-464		
Total (ascend)		"	DIFF.			WIND: knots
			MESH SIZE			

AMT. OF WIRE OUT: meters

OBSERVERS:

TOTAL NO. OF ANGLES:

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						-8		-5 -8	*	-10		-9		-9	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:
* Winch all stop at 65 m ↑ 1:00
going back down to let wire out and wrap it carefully

sample thrown away

D/R/

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P	ATL	73T3		#404	26Aug20	21:25	21:35
					27/08	4:25	4:35

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: **CALBOBL**	
SINKING (descend)	5	55 "	NET NO.			TOW NO. 1 OF 1	
			METER NO.			SEA (Conditions): (Circle one) Calm Moderate Rough	
TOWING (at depth)		30 "	FINAL	978698			
			INITIAL	974930			
Total (ascend)	2	10 "	DIFF.			WIND: knots	
			MESH SIZE				

AMT. OF WIRE OUT: meters	OBSERVERS:
TOTAL NO. OF ANGLES:	

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES		-				0		+1 -2		+1 -5		+1 -8		0 -8	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT		STB.					
No. OF JARS				NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P	Q	P Q					
FORMALIN & BORATE ADDED				NET WASHING	none	rinsed	washed	
ALCOHOL ADDED								
COLLECTORS INITS.				RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Transect ~~Cycle~~	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
~~P~~1908	ATL	3	3		19 08 26	2125	2135
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	3 1/8	3/8	3/8	
Container Number	34	261, 262	123, 124	
Dewar	1	1	1	
Canister Number	5	5	5	

Notes:

Initials: S. Sommer, I. Mangolte, N. Morgan - [illegible], A. Fledderjohn

D, R
J, J

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P	ATL	T3T4		#409	26Aug2019	22:35	22:47
					27/08	05:35	05:47

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL
SINKING (descend)	5	59 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Circle one) Calm ~~Moderate~~ Rough
TOWING (at depth)		30 "	FINAL	982559		
			INITIAL	978702		
Total (ascend)	2	14 "	DIFF.			WIND: knots
			MESH SIZE			

AMT. OF WIRE OUT: meters

TOTAL NO. OF ANGLES:

OBSERVERS: S. Sommer et al.

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						-8		-5 -10		-2 -15		-4 -12		-6 -11	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Transect ~~Cycle~~	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	3	4		19 08 26	2235	2247
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/8	3/8	3/8	
Container Number	36	259, 260	125, 126	
Dewar	1	1	1	
Canister Number	5	5	5	

Notes:

Initials: S. Sommer, I. Mangolte, N. Morgan-Witts, A. Fleddermann

D, B

Angle

⊖ ⊕

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P	ATL	T3TS		413.1	27Aug2019	00:30	00:40
					28/08	7:30	7:40

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: **CALBOBL**	
SINKING (descend)	5	56 "	NET NO.			TOW NO. 1 OF 1	
			METER NO.			SEA (Conditions): (Circle one)	Calm
TOWING (at depth)		30 "	FINAL	986135			Moderate
			INITIAL	982556			Rough
Total (ascend)	2	18 "	DIFF.			WIND:	knots
			MESH SIZE				

AMT. OF WIRE OUT: meters	OBSERVERS:
TOTAL NO. OF ANGLES:	

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						0		0 -1		1 -2		0 0		1 0	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Trunk ~~Cycle~~	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	3	5		190827	0030	0040
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/4	1/8	1/8	
Container Number	35	258	127	
Dewar	1	1	1	
Canister Number	6	6	6	

Notes:

Initials:

D, R, J

Angle
⊖ | ⊕

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P	ATL	1356		417	27 Aug 2019	01:40	01:53
					28	8:40	8:53

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL
SINKING (descend)	5	38 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Circle one) Calm / Moderate / Rough
TOWING (at depth)		30 "	FINAL	990182		
			INITIAL	986141		
Total (ascend)	2	08 "	DIFF.			WIND: knots
			MESH SIZE			

AMT. OF WIRE OUT: 100 meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						1		0 0		0 1		2 2		2 3	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Cycle	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	T3	T6		27 Aug 19	01:40	01:53
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/4	3/8	3/8	
Container Number	118	256, 257	128, 129	
Dewar	1	1	1	
Canister Number	6	6	6	

Notes:

Initials:

D, R ✓ ✓

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P 1908	ATL	T3T7		421.1	27 Aug 2019	03:00	03:10
					28/Aug	10	10:10

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL
SINKING (descend)	5	45"	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Calm) Moderate Rough (Circle one)
TOWING (at depth)		30"	FINAL	990045		
			INITIAL	990185		
Total (ascend)	2	15"	DIFF.			WIND: knots
			MESH SIZE			

AMT. OF WIRE OUT: meters

TOTAL NO. OF ANGLES:

OBSERVERS: S. Sommer + The Night Crew

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						6		-12 0		-15 9		-17 25		-12 35	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one) Before station / After station	

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

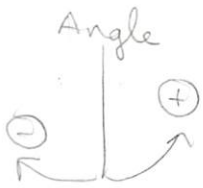
Cruise	Ship	~~Cycle~~ Trans	~~Tow~~	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	3	7		19 08 27	0300	0310
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/4	3/8	3/8	
Container Number	17	286, 287	130, 131	
Dewar	2	2	2	
Canister Number	1	1	1	

Notes:

Initials: S. Sommer + The Night Crew

D/R ✓/✓



NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P 1908	ATL	T3, T8		424.1	19 08 27	04:50	05:03
					28/ avg	11:50	12:03

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL
SINKING (descend)	6	40 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Circle one) Calm / Moderate / Rough
TOWING (at depth)		30 "	FINAL	999352		
			INITIAL	994048		
Total (ascend)	2	14 "	DIFF.			WIND: knots
			MESH SIZE			

AMT. OF WIRE OUT: meters

TOTAL NO. OF ANGLES:

OBSERVERS:

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						15		20 11		23 13		25 5		20 -4	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS.			RIPS AND HOLES IN NET	none	location	when mended: (Circle one) Before station / After station	

REMARKS:

slow down to maintain tension at 50 ↓
normal speed for the ascend

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Cycle	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	T3 T8			27Aug2019	04:50	05.03
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/4	3/8	3/8	
Container Number	124	288, 289	132, 133 + 134 [added 4 Jan. 2023, MDB]	
Dewar	2	2	2	
Canister Number	1	1	1	

Notes:

Initials: S. Sommer + A. Fram

D, R ✓

NET TOW DATA SHEET

CRUISE	SHIP	CYCLE	ORDER OCCUPIED	EVENT # (Deployed)	DATE YR MO DY	HOUR (PDT) BEGIN TOW	HOUR (PDT) END TOW
CCE-P	ATL	T3T9		427.1	27 Aug 2019	05:45	05:57
						12:45	12:57

TIME	Min.	Sec.		PORT	STB.	TOW TYPE: CALBOBL
SINKING (descend)	7	35 "	NET NO.			TOW NO. 1 OF 1
			METER NO.			SEA (Conditions): (Calm) Moderate Rough (Circle one)
TOWING (at depth)		30 "	FINAL	004820		
			INITIAL	999 352		
Total (ascend)	2	16 "	DIFF.			WIND: knots
			MESH SIZE			

AMT. OF WIRE OUT: meters	OBSERVERS:
TOTAL NO. OF ANGLES:	

ANGLES															
WIRE OUT	300	290	280	270	260	250	240	230	220	210	200	190	190	170	160
ANGLES						11		20 4		17 −5		13 −11		15 −9	
WIRE OUT	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10

	PORT	STB.					
No. OF JARS			NET CLOGGING	none or slight	moderate	heavy	very heavy
SIZE OF JAR (Circle One)	P Q	P Q					
FORMALIN & BORATE ADDED			NET WASHING	none	rinsed	washed	
ALCOHOL ADDED							
COLLECTORS INITS			RIPS AND HOLES IN NET	none	location	when mended: (Circle one)	Before station / After station

REMARKS:

Vertical Bongo Size Fractionated Data Sheet

Cruise	Ship	Cycle	Tow	Event # (Deployed)	Date YR MO DY	Hour (PDT) Begin Tow	End Tow
P1908	ATL	Transect 3	Tow 9		27 Aug 2019	05:45	05:52
Tow Type: Vertical Bongo (202 µm)				Port or Starboard			

	Gut Contents (Cup #)	Gut Fluorescence	Biomass (Pre-weighed filter #)	
Split	1/4	1/8	1/8	
Container Number	13	290, 291	135, 136	
Dewar	2	2	2	
Canister Number	2	2	2	

Notes:

Sea000 clear!
Filtered Live Plankton!

Initials: J. Sommer, E. Mangolte, N. Morgan-Witts, A. Fleshergian