

**1. Chief Scientist Narrative:**

Day #	Day & Date	Time (Local)	Event	SIC
1	Sat, 09/July/2016	0800	Depart BIOS for Hydrostation	CC
1	Sat, 09/July/2016	1025	GLIDER DEPLOYMENT  Arrive at 2 miles short of Hydrostation S to Deploy Glider Minnie.  Successful deployment at 32 11.213N 64 31.779W. Ruth confirmed comms were OK and moved to HS	CC
1	Sat, 09/July/2016	1104  1144	<b>CTD – CAST #1; LARGE VOLUME</b> Arrived at Hydrostaion S  Problem with bottle alignment and pylon on rosette. Need to align pylon position 1 to bottle 24. Pulled back on deck and realigned.  <b>Cast #1-</b> to 500m. Large volume collection for Giovannoni TFF (10 m) and Grazing experiments (40m and 200m)  DCM~90 SST~27 UMP- 19-20	CC
1	Sat, 09/July/2016	1200  1345	<b>IN SITU PUMPS A&amp;B</b>  After recovery of CTD we did not reposition back to HS but deployed pumps at 32 09.537 N 64 31.243W  Deployment all good. Pumps scheduled to turn on at 1210. Both pump A & B were in water at 1205. The bottom pump positioned at 12 m and surface pump at 9. They will pump for 90 min.  Recovery good. Data offload showed Pump A ran at ~ 1L/min but total volume was recorded at 44L. Pump B had a sudden pressure release and shut off after 12 seconds. Pressure release was due to improper order of orings around the bottom filter.  Proceed to Hydrostation	CC
1	Sat, 09/July/2016	1515	Arrive at Hydrostation: <b>CTD – CAST #2 1000 M</b>	CC

			<ul style="list-style-type: none"> <li>• 1000 m Cast Type A</li> <li>• DCM 95 m</li> <li>• OMZ ~850</li> </ul> <p>Cast went well but bottle 17 did not close.</p>	
1	Sat, 09/July/2016	1800	<b>CTD – CAST #3 (0-500m)</b> large volume cast <ul style="list-style-type: none"> <li>• Grazing experiment and viral free water.</li> <li>• Bifurcated DCM 80 and 95 min in btw seems coincident with slight reduction in salinity</li> <li>• Leo took water from 40 m for diluting tow into ...filled cooler</li> </ul>	CC
1	Sat, 09/July/2016	2105	<b>CTD – CAST #4 1000 m</b> <ul style="list-style-type: none"> <li>• 1000 m Cast Type B</li> <li>• DCM ~100m</li> <li>• OMZ ~850</li> </ul> <p>Missed DCNS on this cast</p>	CC
1	Sat, 09/July/2016	2230	<b>Zooplankton net tow.</b> Objective to collect zooplankton for Zoop Excretion Exp (ZE1614-1) <p>Successful tow. Winds are too strong to deploy at position at end of tow so need to reposition. We need to steam back to position to align with the gliders will take about ½ hour.</p>	CC
2	Sun, 10/July/ 2016	0018  0128	<b>MOCNESS</b> Deployment 32 10.747N 64 28.532W deployment went well. <p>Problem with brake on winch. Tow aborted. Engineers will look at the winch and we'll see how to proceed. Next shot will be 11 am.</p>	CC
2	Sun, 10/July/ 2016	0200	<p>Leo, Nick and Craig initiated the zooplankton excretion experiment. ZE1614-1. Lots of healthy copepods ~ 34</p> <p>Samples collected for DOC, DCNS, TOC then placed in incubator at 20°C</p>	CC mis
2	Sun, 10/July/ 2016	0300	<b>CTD – CAST #5 (1000m)</b> <ul style="list-style-type: none"> <li>• 1000m Cast Type A</li> </ul>	NH

			<ul style="list-style-type: none"> <li>• DCM ~ 105 m</li> <li>• OMZ ~ 860 m</li> </ul> <p>3 bottles misfired: N16 (300m), N20 (600m), N21(800m). Liz Harvey took DIC and TEP samples from N15 and N19 (300 and 600m). Our group took samples from N22 (800m).</p> <p>BP: Forgot to take water for coolers...</p> <p>Sampling took longer than expected and caused slight delay.</p>	
2	Sun, 10/July/2-16	0605	<b>CTD – CAST #6 (0-500m)</b> <ul style="list-style-type: none"> <li>• Large volume cast for grazing experiments and DNA/TFF</li> <li>• DCM ~ 90 m</li> </ul>	NH
2	Sun, 10/July/2-16	0740  0926	<b>IN SITU PUMPS A&amp;B</b> Deployment to 10 m. Both pump A &B had 36+ voltage. Retrieve pumps at ~0920  Recovered fine...both pumps worked. Pump A rate 1L/min but only got 44.1L through. Pump B rate 1L/min and again only 44.1 L through. Voltage is good 35 and 35.8 volts respectively.  Heading back to HS 20 min steam	CC
2	Sun, 10/July/2-16	1000	Arrive at HS <b>CTD – CAST #7 (0-1000m)</b> Type B but double trip at all depths  All parameters except POM  DCM ~100 OMZ ~825	CC
2	Sun, 10/July/2-16	1140	<ul style="list-style-type: none"> <li>• <b>MOCNESS</b> deployed..no issues.</li> <li>• Tow went in a little late but winch worked well. The instrument was recovered without issue.</li> <li>• Leo has good sample set.</li> </ul>	CC

			Needed to reposition and return to HS. Will take about an hour. This will cause delay in schedule but will try to make it up with quick turn rosette turnaround	
2	Sun, 10/July/2-16	1614	Arrive HS: <b>CTD – CAST #8</b> (0-1000m) Type A DCM ~100m	CC
2	Sun, 10/July/2-16	1830	<b>CTD – CAST #9</b> (0-500m) large volume collection for TFF and grazing experiment water  DCM ~110m • 4 bottles misfired or did not close ...need to go back in for an additional collection	CC
2	Sun, 10/July/2-16	1952	<b>CTD Cast #10-</b> quick dip to get 10 m water	CC
2	Sun, 10/July/2-16	2015 2205	<b>IN SITU PUMPS A&amp;B</b> Deployed to 10 m for size fractionated bacterial metagenomic work.  Pump A filtered 44.1 L of water but Pump B failed. Sudden pressure release error.	CC
2	Sun, 10/July/2-16	2230	Arrive at HS <b>CTD – CAST #11</b> (0-1000m) Type B but double trip at all depths  All parameters except POM  DCM ~100 OMZ ~825  Bottle 19 empty – DOC, DAPI, FCM, NUTS all taken from bottle 20 instead	CC
3	Mon, 11/July/2016	1245	<b>MOCNESS</b> • Recovered 0400- successful • Moving to reposition at Hydrostation S (30-45min)	NH
3	Mon, 11/July/2016	0500	<b>CTD – CAST #12</b> (0-1000m) Type A  DCM ~100 OMZ ~ 840  •bottle 12 misfired	NH
3	Mon, 11/July/2016	0725	<b>CTD – CAST #13</b> (0-1000m) Large volume collection for Liz Kujawinski's group for DOM ref material and for Liz Harvey's grazing experiments	CC

			DCM ~100 OMZ ~ 840	
3	Mon, 11/July/2016	940	<b>CTD – CAST #14</b> (0-1000m) Type B but double trip at all depths  All parameters except POM, DCNS, and TEP  DCM ~1000m OMZ ~840m	NH
3	Mon, 11/July/2016	1130 1500	<b>MOCNESS</b> <ul style="list-style-type: none"> <li>Recovered 1500- successful</li> <li>Leo reports large concentration of copepods in the 450m and 600m layer</li> </ul> Moving to reposition at Hydrostation S (30-45min)	CC
3	Mon, 11/July/2016	1630	<b>CTD – CAST #15</b> (0-1000m) Type A <ul style="list-style-type: none"> <li>DCM ~95m</li> <li>OMZ ~860m</li> </ul>	CC
3	Mon, 11/July/2016	1845	<b>CTD – CAST #16</b> (0-500m) Large volume for DNA TFF and for Liz's Grazing experiments.  We will take TFF filtrate and run it through the POC rig for a blank. Will do 5 reps. <ul style="list-style-type: none"> <li>DCM ~110m</li> </ul>	CC
3	Mon, 11/July/2016	2000 2135	<b>IN SITU PUMPS A&amp;B</b> Pump A worked fine but Pump B failed again. Sudden pressure release error.	CC
3	Mon, 11/July/2016	2200	<b>CTD – CAST #17</b> (0-10m) cast to collect water for ZE1614-2 Exp.  We decided to go for a 5 <sup>th</sup> MOCNESS deployment to make up for the aborted tow. To do this we shortened cast 17 and only used it to collect water for incubation experiment.	CC
3	Mon, 11/July/2016	2220	<b>Net Tow</b> – net tow to collect zooplankton for the Zooplankton Excretion experiment ZE1614-2 There will be 2 X 45 min tows	CC
4	Tues, 12/July/2016	0020	<b>MOCNESS</b>	CC

			Steam back to HS after recovery	
4	Tues, 12/July/2016	0400	Craig and Leo initiated the 2 <sup>nd</sup> Zooplankton excretion experiment ZE1614-2	CC
4	Tues, 12/July/2016	0400	<b>CTD – CAST #18</b> (0-1000m) Type A <ul style="list-style-type: none"> <li>• DCM ~120m</li> <li>• OMZ ~860m</li> </ul>	NH
4	Tues, 12/July/2016	0900	<b>CTD – CAST #19</b> (0-10m) sample collection for the remin experiment <ul style="list-style-type: none"> <li>• # 5 misfired</li> </ul>	CC
4	Tues, 12/July/2016	0945	<b>CTD – CAST #20</b> (0-10000m) sample collection for HR DOM ref all bottles at 1000 m  DCM ~120m OMZ~845	CC
4	Tues, 12/July/2016	1100	Recover Glider (Minnie)  Depart for Seabuoy estimated 1430 (local)  Start clean up  Depart for Seabuoy ...estimate 1900(local)	CC
4	Tues, 12/July/2016	1230	Craig, Nick and Shuting started the remineralization experiment from the zooplankton excretion work. Experiment name: ZE1614-2 REMIN	CC
4	Tues, 12/July/2016	1420	Arrive at SeaBuoy	CC
4	Tues, 12/July/2016	1530	Alongside BIOS Unload samples and chemicals <ul style="list-style-type: none"> <li>• De-Mob 12-13, July.</li> </ul>	CC

## 2. Data and Sample Transfer Status

Parameter	Location	Date	PI	Status
Data disk	With CAC to be posted to BIOS-SCOPE dropbox			
CTD cast sheets and Science Log (2 copies)	With CAC to be posted to BIOS-SCOPE dropbox			
Bacterial Production	Samples all run	7-12-16	CAC	
Bulk DOM	N 207	7-12-16	CAC	Will be shipped to

				UCSB late July
DCNS	N -20 live freezer	7-12-16	CAC	Will be shipped to UCSB late July
DAPI	N -20 Dead freezer or N-80 chest freezer	7-12-16	CAC	RP will prep and count
FCM	N-80 Chest Freezer	7-12-16	CAC	Will be shipped to UCSB late July
POCN	N -20C BIOS-SCOPE freezer	7-12-16	CAC	Will be shipped to UCSB late July
NUTS	N -20C BIOS-SCOPE freezer	7-12-16	CAC	Will be shipped to UCSB late July
DNA- Sterivex	N -70 upright	7-12-16	SG	Will be shipped to OSU late July
DNA – Pump filters	N -80 chest	7-12-16	SG	Will be shipped to OSU late July
TFF concentrate	N -80 chest	7-12-16	SG	Will be shipped to OSU late July
EM sample	N 4° dead fridge	7-12-16	SG	Will be shipped to OSU late July
Dilution Exp samples microscopy	N 4° fridge	7-12-16	LH	Will be shipped to OSU late July
Dilution Exp FCM	-80	7-12-16	LH	Will be shipped to OSU late July

Dilution Exp probe	N -80 and N-20 Dead	7-12-16	LH	Being processed by RP
MOCNESS Formalin Samples	N 204	7-12-16	LBB/ AM	
MOCNESS-ethanol Samples	N Zoop Fridge	7-12-16	LBB/AM	
Zooplankton dry mass	N204	7-12-16	LBB/AM	
Anodisc filter	Slides made in N-80	7-12-16	SG	Will be shipped to OSU late July
HR-DOM	N -20 BIOS-SCOPE / Molec freezer	7-13-16	LK/KL	Will be shipped after Sept cruise