

# TA-17-04-BLFN TAO Trip Report

Date: 10/17/2017

To: Distribution

File No.:

From: James Lenoir

Subject: TAO Field Operations

Cruise Instructions: TA-17-04-BLFN

Team Members: James Lenoir, Adam Herrin, Ronnie Watkins, Daniel Rutledge.

Itinerary: Apia, Samoa – Honolulu Hawaii.

Cruise Dates: August 28<sup>th</sup> – October 5<sup>th</sup>

Reason for Trip: To service TAO buoys along the 170W and 155W meridians as well as DART stations 51407

## **Problems Encountered; Safety, Technical, Quality, and Shipping:**

Arriving in Apia Soma we had issues with our luggage, myself and Daniel Rutledge were informed that our luggage was not transferred to the connecting flights and was held over at LAX. We received our luggage 4 days later from New Zealand air. No safety issues were noted during the cruise.

We encountered a lot of fishing gear on the 155'W line, 5 South and 2 South seemed to be impacted more than the others, and while the mooring was not damaged by the long line gear it did hinder recovery efforts.

We seemed to have difficulty in resupplying the food selection in Apia Soma; we were very limited on what could be found. A suggestion would be to double up on the supplies while in a more domestic port. We were noticeably light and or out of a lot of items.

## **Accomplishments:**

Days at Sea: 25

170W & 155W Meridian

TAO Recoveries: 12

TAO Deployments: 14

TAO Repairs: 0

TAO Visits: 0

Lost at Sea: 1

DART Deployments: 51407  
 DART Drifter Recovery 0  
 SOLO-2 Float Deployments: 4

**Cruise Comments:**

As always the crew of the MV Bluefin did a great job, The Captain did very well with handling the boat while on station and keeping the cruise on schedule.

**DART Operations:**

2.6D49 was successfully deployed with a new BPR. All data looked well throughout the ground truth period. Once this was conducted the station was released to the NDBC website for data availability.

**TAO Improvements:**

I would like to see a more stable platform of viewing the TAO data while underway, the TAO portal seemed intermittent at best.

### TAO Cruise Summary

<b>Buoy Site:</b> 8S 170W	
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM210A
<b>Deployed Location:</b> 04 58.114'S 170 02.354'W	<b>Deployed Date:</b> 09/03/2016
<b>Recovered Location:</b> 04 57.68'S 109 59.00'W	<b>Recovered Date:</b> 09/06/2017
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged/Fouled:</b> NONE	
<b>Fishing/Vandalism:</b> NO	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> NONE	

<b>Buoy Site:</b> 8S 170W	<b>Mooring Depth:</b> 5378 M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM257A
<b>Deployed Location:</b> 07 58.4'S 170 02.5'W	<b>Deployed Date:</b> 09/07/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b> NONE	

<b>Buoy Site:</b> 5S 170W	
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM209A
<b>Deployed Location:</b> 04 59 .535'S 170 00 .19'W	<b>Deployed Date:</b> 09/01/2016
<b>Recovered Location:</b> 04 59.736'S 170 00.468W	<b>Recovered Date:</b> 09/08/2017
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged/Fouled:</b> NONE	
<b>Fishing/Vandalism:</b> NO	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> NONE	

<b>Buoy Site:</b> 5S 170W	<b>Mooring Depth:</b> 5415
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM258A

<b>Deployed Location:</b> 04 58.9'S 169 59.2'W	<b>Deployed Date:</b> 09/08/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b> NONE	

<b>Buoy Site:</b> 2S 170W	
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM208A
<b>Deployed Location:</b> 02 09.8'S 170 01.2'W	<b>Deployed Date:</b> 08/31/2016
<b>Recovered Location:</b> 02 09.138'S 170 01.404'W	<b>Recovered Date:</b> 09/09/2017
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged/Fouled:</b> NONE	
<b>Fishing/Vandalism:</b> NO	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> NONE	

<b>Buoy Site:</b> 2S 170W	
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM233A
<b>Deployed Location:</b> 02 9.456'S 170 0.824'W	<b>Deployed Date:</b> 09/09/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b>	

<b>Buoy Site:</b> 0 170W Co2	
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM207A
<b>Deployed Location:</b> 0 00.9 170 01.9'W	<b>Deployed Date:</b> 08/29/2016
<b>Recovered Location:</b> 00 01.932 170 00.552'W	<b>Recovered Date:</b> 6/11/2017
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged/Fouled:</b> NONE	
<b>Fishing/Vandalism:</b> NO	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> NONE	

<b>Buoy Site:</b> 0 170W Co2	
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM260A
<b>Deployed Location:</b> 00 03.51N 109 53.90W	<b>Deployed Date:</b> 09/10/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b> Both Sontek and SBE 44 sensors at address 20 were swapped by mistake with the Sontek and SBE 44 sensors at address 22. MCC was notified post deployment and the corrections were made before the team was released from station.	

<b>Buoy Site:</b> 0 170W ADCP	
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> KA020
<b>Deployed Location:</b> 0 00.19N 169 43.049W	<b>Deployed Date:</b> 08/30/2016
<b>Recovered Location:</b> 0 00.19N 169 43.049W	<b>Recovered Date:</b> 08/30/2016
<b>Sensors/Equipment Lost at Sea:</b> NONE	

<b>Sensors Damaged/Fouled:</b> NONE
<b>Fishing/Vandalism:</b> NONE
<b>Sensors/Tubes Downloaded:</b> Sent to lab for download
<b>General Comments:</b> NONE

<b>Buoy Site:</b> 0 170W ADCP	<b>Mooring Depth:</b> 5443M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> KA021
<b>Deployed Location:</b> 00 00.53N 109 55.27W	<b>Deployed Date:</b> 09/11/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b>	

<b>Buoy Site:</b> 2N 170W	<b>Mooring ID#:</b> Dm206A
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> Dm206A
<b>Deployed Location:</b> 02 02.2'N 169 59.9'W	<b>Deployed Date:</b> 08/28/2016
<b>Recovered Location:</b> 02 02.2'N 169 59.9'W	<b>Recovered Date:</b> 09/12/2017
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged/Fouled:</b>	
<b>Fishing/Vandalism:</b> NONE	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> NONE	

<b>Buoy Site:</b> 2N 170W	<b>Mooring Depth:</b> 5398M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM261A
<b>Deployed Location:</b> 02 00.093'N 169 59.311W	<b>Deployed Date:</b> 09/12/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b> There was some concern with the acoustic release's release, enable, and disable codes. The fields that auto populated when the serial number was entered in the log did not match the codes on the release itself, they were as follows, ( Release: 344062, Disable: 357630, Enable: 357613).	

<b>Buoy Site:</b> 5N 170W	<b>Mooring ID#:</b> DM205A
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM205A
<b>Deployed Location:</b> 04 59.512'N 169 59.30'W	<b>Deployed Date:</b> 08/27/2016
<b>Recovered Location:</b> 05 01.68'N 169 58.83'W	<b>Recovered Date:</b> 09/13/2017
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged/Fouled:</b> T25 T50 ( slipped Mount) T250 TP500(Fouled)	
<b>Fishing/Vandalism:</b> YES	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> Ships sea temp was down.	

<b>Buoy Site:</b> 5N 170W	<b>Mooring Depth:</b> 5775M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM262A
<b>Deployed Location:</b> 05 00.603'N 169 58.803'W	<b>Deployed Date:</b> 09/13/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	

<b>Sensors Damaged During Deployment:</b> NONE
<b>General Comments:</b> Ships sea temp was not working.

<b>Buoy Site:</b> 8N 170W Refresh	
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM204A
<b>Deployed Location:</b> 07 59.7'N 170 04.7'W	<b>Deployed Date:</b> 08/25/2016
<b>Recovered Location:</b> 07 59.7'N 170 04.7'W	<b>Recovered Date:</b> 09/14/2017
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged/Fouled:</b> SSC damaged	
<b>Fishing/Vandalism:</b> Yes	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> Top Section severed and cable pulled off of SSC.	

<b>Buoy Site:</b> 8N 170W	<b>Mooring Depth:</b> 5534M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM263A
<b>Deployed Location:</b> 07 59.4'N 170 02.2'W	<b>Deployed Date:</b> 09/14/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b>	

<b>Buoy Site:</b> 8S 155W	
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM211A
<b>Deployed Location:</b> 08 16.788'S 155 02.831'W	<b>Deployed Date:</b> 10/01/2016
<b>Recovered Location:</b> 08 16.512'S 155 02.784W	<b>Recovered Date:</b> 09/20/2017
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged/Fouled:</b> T 125 slipped mount	
<b>Fishing/Vandalism:</b> YES	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> Top section was severed where it connects to Nilspin.	

<b>Buoy Site:</b> 8S 155W	<b>Mooring Depth:</b> 5333M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM238A
<b>Deployed Location:</b> 08 17.3'N 155 02.5'W	<b>Deployed Date:</b> 09/20/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b> None	

<b>Buoy Site:</b> 5S 155W	
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM177B
<b>Deployed Location:</b> 04 58.3'S 154 57.2'W	<b>Deployed Date:</b> 10/02/2016
<b>Recovered Location:</b> 04 59.454'S 154 57.366W	<b>Recovered Date:</b> 09/21/2017
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged/Fouled:</b> T50 slipped mount	
<b>Fishing/Vandalism:</b> Long line around gear	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> None	

<b>Buoy Site:</b> 5S 155W	<b>Mooring Depth:</b> 5021M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM265A
<b>Deployed Location:</b> 05 05.21N 94 57.08W	<b>Deployed Date:</b> 09/22/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b> NONE.	

<b>Buoy Site:</b> 2S 155W	<b>Mooring ID#:</b> DM213A
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM213A
<b>Deployed Location:</b> 01 58.4'S 154 59.5'W	<b>Deployed Date:</b> 10/3/2016
<b>Recovered Location:</b> 1 58.4'S 155 01.2'W	<b>Recovered Date:</b> 609/23/2017
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged/Fouled:</b> TP 500 Fouled	
<b>Fishing/Vandalism:</b> YES.. Long line gear was wrapped around sensor 9 @ 500m and the first three spools. Nylon still looked in great shape.	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> NONE	

<b>Buoy Site:</b> 2S 155W	<b>Mooring Depth:</b> 4985M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM266A
<b>Deployed Location:</b> 01 58.3'S 154 59.4'W	<b>Deployed Date:</b> 09/23/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b> NONE	

<b>Buoy Site:</b> 0 155W	<b>Mooring ID#:</b> DM179A
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM179A
<b>Deployed Location:</b> 00 00.1 154 56.2'W	<b>Deployed Date:</b> 10/04/2016
<b>Recovered Location:</b> 00 00.396 154 54.192'W	<b>Recovered Date:</b> 09/23/2017
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged/Fouled:</b> NONE	
<b>Fishing/Vandalism:</b> YES,	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> Wind monitor stanchion broke at the hose clamps. Stanchion was laid over still connected.	

<b>Buoy Site:</b> 0 155W	<b>Mooring Depth:</b> 4635M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM267A
<b>Deployed Location:</b> 00 05.70N 95 26.56W	<b>Deployed Date:</b> 09/24/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b> Tandem releases: #1: SN 34164 PN: 33214 Release: 243042 Disable: 255002 Enable: 241577 Tandem releases: #2: SN: 31162 PN: 24567 Release: 434560 Disable: 436124 Enable: 436107	

<b>Buoy Site:</b> 2N 155W	
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM215A
<b>Deployed Location:</b> 01 59.5N 154 59.3W	<b>Deployed Date:</b> 10/05/2016
<b>Recovered Location:</b>	<b>Recovered Date:</b>
<b>Sensors/Equipment Lost at Sea:</b> All, adrift	
<b>Sensors Damaged/Fouled:</b> None	
<b>Fishing/Vandalism:</b> Yes	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> Buoy Adrift	

<b>Buoy Site:</b> 2N 155W	<b>Mooring Depth:</b> 4662M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM268A
<b>Deployed Location:</b> 01 58.52S 95 08.82W	<b>Deployed Date:</b> 09/25/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments</b> Acoustic release not in database. Acoustic release: SN: 48981 PN: 37768 Enable: 610333 Release: 627430 Disable: 610356.	

<b>Buoy Site:</b> 5N 155W	
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM216A
<b>Deployed Location:</b> 5 00 108'N 155 56.989'W	<b>Deployed Date:</b> 10/07/2016
<b>Recovered Location:</b> 04 57.972'N 154 56.802'W	<b>Recovered Date:</b> 09/26/2017
<b>Sensors/Equipment Lost at Sea:</b> None	
<b>Sensors Damaged/Fouled:</b> SSC cable broken off.	
<b>Fishing/Vandalism:</b> YES,	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	
<b>General Comments:</b> NONE	

<b>Buoy Site:</b> 5N 155W	<b>Mooring Depth:</b> 4584M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM243A
<b>Deployed Location:</b> 04 58.162'N 154 56.679'W	<b>Deployed Date:</b> 09/26/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments:</b> NONE	

<b>Buoy Site:</b> 8N 155W	
<b>Mooring Operation:</b> Recovery	<b>Mooring ID#:</b> DM217A
<b>Deployed Location:</b> 07 57.2N 154 58.9''W	<b>Deployed Date:</b> 10/08/2016
<b>Recovered Location:</b>	<b>Recovered Date:</b> 09/27/2017
<b>Sensors/Equipment Lost at Sea:</b> Payload , Anemometer, AT/RH , tower was missing.	
<b>Sensors Damaged/Fouled:</b> SSC, T20-T60	
<b>Fishing/Vandalism:</b> Buoy was off station and missing the tower. Appears that it was drug about a mile away. The tower and all top side sensors were missing and appears all three bolts were removed.	
<b>Sensors/Tubes Downloaded:</b> Sent to Lab for download	

**General Comments:** Buoy was off station and missing the tower. Appears that it was drug about a mile away. The tower and all top side sensors were missing and appears all three bolts were removed.

<b>Buoy Site:</b> 8N 155W	<b>Mooring Depth:</b> 5219M
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> DM270A
<b>Deployed Location:</b> 07 57.024N 155 00.069W	<b>Deployed Date:</b> 09/27/2017
<b>Pre-Deployment On Deck Instrument Failures:</b> NONE	
<b>Sensors/Equipment Lost at Sea:</b> NONE	
<b>Sensors Damaged During Deployment:</b> NONE	
<b>General Comments</b> NONE	

AOML Floats				
Coordinates LAT/LONG		Date	SN#	Comments
0.00.064'N	169.57.647'W	09/10/2017	64826290	
0.00.060'N	169.57.605W	09/10/2017	64826100	
0.00.050'N	169.57.586,W	09/10/2017	64826400	
2.00.113'N	169.59.597'W	09/12/2017	64826400	
2.00.152'N	169.59.619'W	09/12/2017	64826010	
4.59.879'W	154.58.056'W	09/22/2017	64826020	
1.58.04'W	154.59.05'W	09/22/2017	64825550	
1.58.04'S	154.59.05'W	09/22/2017	64826000	
0.00.02'N	154.55.09'W	09/23/2017	64827500	
0.00.02'N	154.55.09'W	09/23/2017	64827060	
0.00.02'N	154.55.09'W	09/23/2017	64827290	
2.00.227'N	154.58.775'W	09/25/2017	64826550	
2.00.259'N	154.58.775'W	09/25/2017	64827040	

Profilers					
Coordinates LAT/LONG		Date	Time	SN#	Comments
2.03.151'N	170.02.881'W	09/12/17	03:57Z	819	
5.00. 587'S	155.00.729'W	09/22/2017	01:00Z	815	
03.29.702'S	155.04.817'W	09/22/2017	14:30Z	818	
1.58.390'S	155.02.937'W	09/23/2017	05:50Z	793	
0.00.4325	154.59.691'W	09/24/2017	02:10Z	817	
02.00.956'N	155.03.768'W	09/24/2017	22:47Z	770	
02.07.455'S	170.04.00'W	09/09/2017		788	



		<b>10:20Z</b>		
<b>0.02.763'W</b>	<b>170.05.538'W</b>	<b>09/10/2017</b>	<b>816</b>	
		<b>09:54Z</b>		

<b>NDBC Equipment Lost at Sea</b>		
<b>Property #</b>	<b>Description</b>	<b>Reason for Lost at Sea</b>
39690	Payload	Tower removed/ Vandalism
37037	Iridium	Tower removed/ Vandalism
35248	Wind	Tower removed/ Vandalism
40495	AT/RH	Tower removed/ Vandalism
CD0000536277	Acoustic Release	Couldn't communicate with the release
38733	Payload	Adrift
37004	Iridium	Adrift
36794	Iridium Antenna	Adrift
39168	Wind	Adrift
40488	AT/RH	Adrift
36458	SSC	Adrift
39052	Temp	Adrift
39053	Temp	Adrift
39054	Temp	Adrift
39055	Temp	Adrift
39056	Temp	Adrift
39057	Temp	Adrift
39058	Temp	Adrift
39059	Temp	Adrift

## Mission Objectives Summary

<b>Buoy Operations</b>			
Station	Operation	Completed	Not Completed
<b>8N 170W TAO</b>	R/D	X	
<b>5N 170W TAO</b>	R/D	X	
<b>2N 170W TAO</b>	R/D	X	
<b>0 170W TAO</b>	R/D	X	
<b>2S 170W TAO</b>	R/D	X	
<b>5S 170W TAO</b>	R/D	X	
<b>8S 170W TAO</b>	R/D	X	
<b>8N 155W TAO</b>	R/D	X	
<b>5N 155W TAO</b>	R/D	X	
<b>2N 155W TAO</b>	R/D	X	
<b>0 155W TAO</b>	R/D	X	
<b>2S 155W TAO</b>	R/D	X	
<b>5S 155W TAO</b>	R/D	X	
<b>8S 155W TAO</b>	R/D	X	
<b>0 170W ADCP</b>	R/D	X	
Total Objectives		15	
Objectives Completed		15	
Objectives Not Completed		0	
Percent of Objectives Met		100	