

TROPICAL ATMOSPHERE-OCEAN (TAO) PROGRAM  
FINAL CRUISE REPORT  
KA-11-04

Area: Equatorial Pacific between 8°N and 8°S latitude along 110°W longitude and 0° to 8°S latitude along 125°W longitude.

Itinerary:

KA-11-04 DEP *July 20, 2011 San Diego, CA*  
ARR *August 20, 2011 Papeete Tahiti*

**CRUISE DESCRIPTION**

The Tropical Atmosphere Ocean (TAO) array consists of 70 buoys utilizing a taut line mooring configuration used to mount data collection sensors for climate research purposes. Fifteen buoys are serviced by JAMSTEC and the remaining 55 buoys from 95°W longitude to 165°E longitude are serviced by National Data Buoy Center (NDBC). Repair and maintenance of the buoys is performed by NDBC contracted personnel on an annual basis utilizing the NOAA Ship *Ka'imimoana* and other ships.

TAO Program Points of Contact:

NDBC Program Manager	NDBC Operations Manager
Stephen Cucullu	Lex LeBlanc
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TAO Cruise Objective and Plan:

The objective of this cruise was the maintenance of the TAO Array along the 110°W and 125°W meridians.

The scientific complement for the cruise embarked at San Diego, CA on **July 19, 2011**. The ship departed on **July 20, 2011** and conducted operations as listed in Section 2.1. The ship arrived in Papeete, Tahiti on August 20, 2011.

1.0 **PERSONNEL**

1.1 CRUISE LEAD AND PARTICIPATING SCIENTISTS:

Cruise Lead: Aaron Boutwell

Participating Scientists:

Name	Gender	Nationality	Affiliation
Aaron Boutwell	M	US	NOAA/NDBC
James Haden	M	US	NOAA/NDBC
James Rauch	M	US	NOAA/NDBC

2.0 **OPERATIONS**

2.1 TAO Data Recovery Summary

Mooring Operations conducted are shown in the tables below. The following provides details on the data recovery efforts for the buoys serviced. All noted time in the summary reports is Coordinated Universal Time (UTC):

**Cruise Summary**

<b>Buoy Site:</b> 8N 110W			
<b>Mooring Operation:</b> Recovery		<b>Mooring ID#:</b> PM881A	
<b>Deployed Location:</b> 08 2.32N 110 09.41W		<b>Deployed Date:</b> 3/11/2010	
<b>Recovered Location:</b> 08 02.8N 110 08.3W		<b>Recovered Date:</b> 7/28/2011	
<b>Previous Repair Date:</b> 7/17/2010			
<b>Sensors/Equipment Lost at Sea:</b> T180			
<b>Sensors Damaged/Fouled:</b> SSC, T20			
<b>Fishing/Vandalism:</b> None			
<b>Sensors/Tubes Downloaded:</b> All sensors downloaded successfully except: SSC, TP300, TP500 could not be downloaded.			
<b>General Comments:</b> None			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
Salinity	2/24/11-3/13/11 6/26/11-7/18/11	Reporting high Reporting low	Sensor fouled
T180	12/11/10-7/28/11	Data missing	Broken Mount/L.A.S.

<b>Buoy Site:</b> 8N 110W	<b>Mooring Depth:</b> 4220m
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> PM976A
<b>Deployed Location:</b> 08 00.70N 110 11.60W	<b>Deployed Date:</b> 7/28/2011
<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> 5N 110W			
<b>Mooring Operation:</b> Recovery		<b>Mooring ID#:</b> PM910A	
<b>Deployed Location:</b> 04 59.39N 110 04.42W		<b>Deployed Date:</b> 7/18/2010	
<b>Recovered Location:</b> 4 59.9N 110 03.6W		<b>Recovered Date:</b> 7/29/2011	
<b>Previous Repair Date:</b> None			
<b>Sensors/Equipment Lost at Sea:</b> Anemometer			
<b>Sensors Damaged/Fouled:</b> SSC, T20, T60, T140 fouled.			
<b>Fishing/Vandalism:</b> Fishing gear present around buoy and on Nilspin, floats found.			
<b>Sensors/Tubes Downloaded:</b> All sensors and the tube were downloaded successfully.			
<b>General Comments:</b> Buoy had large hole on the side			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
Wind	4/29/11-7/29/11	Data flatlined	Bird broken off, L.A.S.

<b>Buoy Site:</b> 5N 110W	<b>Mooring Depth:</b> 3948m
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> PM977A
<b>Deployed Location:</b> 04 59.6N 110 03.5W	<b>Deployed Date:</b> 7/30/2011
<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> Due to weather conditions, anchor was not dropped at intended location, scope now 1.05, was unable to recover due to time constraints.	

<b>Buoy Site:</b> 2N 110W			
<b>Mooring Operation:</b> Recovery		<b>Mooring ID#:</b> PM884A	
<b>Deployed Location:</b> 02 02.473N 110 01.563W		<b>Deployed Date:</b> 3/14/2010	
<b>Recovered Location:</b> 02 01.291N 110 52.207W		<b>Recovered Date:</b> 7/31/2011	
<b>Previous Repair Date:</b> Visit 7/19/2010			
<b>Sensors/Equipment Lost at Sea:</b> TP300			
<b>Sensors Damaged/Fouled:</b> None			
<b>Fishing/Vandalism:</b> Heavy line tied to buoy, buoy moved off station			
<b>Sensors/Tubes Downloaded:</b> All sensors downloaded successfully except TP300 (lost) & T20 (lithium battery exploded).			
<b>General Comments:</b> Shackles on bridle head missing cotter pins & nuts. Wires exposed at top of Nilspin.			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
ATMP/RH	12/6/10-3/26/11	Reporting low	N/A
Inductive Line	Intermittently Missing	N/A	Wire Exposed

<b>Buoy Site:</b> 2N 110W		<b>Mooring Depth:</b> 3749m	
<b>Mooring Operation:</b> Deployment		<b>Mooring ID#:</b> PM978A	
<b>Deployed Location:</b> 02 02.06N 110 02.15W		<b>Deployed Date:</b> 8/1/2011	
<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 110W			
<b>Mooring Operation:</b> Recovery		<b>Mooring ID#:</b> PM911A	
<b>Deployed Location:</b> 00 00138N 109 53.903W		<b>Deployed Date:</b> 7/22/2010	
<b>Recovered Location:</b> Lost at Sea		<b>Recovered Date:</b> Lost at Sea	
<b>Previous Repair Date:</b> None			
<b>Sensors/Equipment Lost at Sea:</b> Entire mooring			
<b>Sensors Damaged/Fouled:</b> N/A			
<b>Fishing/Vandalism:</b> N/A			
<b>Sensors/Tubes Downloaded:</b> None			
<b>General Comments:</b> Release was in last known position laying horizontal.			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
N/A	N/A	N/A	N/A

<b>Buoy Site:</b> 0 110W	<b>Mooring Depth:</b> 3798m
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> PM979A
<b>Deployed Location:</b> 00 01.81N 109 55.61W	<b>Deployed Date:</b> 8/2/2011
<b>Pre-Deployment On Deck Instrument Failures:</b> TP300 SN#11592, BARO 101762	
<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 110W ADCP			
<b>Mooring Operation:</b> Recovery		<b>Mooring ID#:</b> EA018	
<b>Deployed Location:</b> 00 00.357N 109 56.664W		<b>Deployed Date:</b> 7/21/2010	
<b>Recovered Location:</b> Lost at Sea		<b>Recovered Date:</b> Lost at Sea	
<b>Previous Repair Date:</b> None			
<b>Sensors/Equipment Lost at Sea:</b> Entire mooring			
<b>Sensors Damaged/Fouled:</b> N/A			
<b>Fishing/Vandalism:</b> N/A			
<b>Sensors/Tubes Downloaded:</b> None			
<b>General Comments:</b> N/A			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
N/A	N/A	N/A	N/A

<b>Buoy Site:</b> 0 110W ADCP	<b>Mooring Depth:</b> 3833m
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> EA019
<b>Deployed Location:</b> 00 00.506N 109 56.448W	<b>Deployed Date:</b> 8/2/2011
<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 110W			
<b>Mooring Operation:</b> Recovery		<b>Mooring ID#:</b> PM912A	
<b>Deployed Location:</b> 02 01.8S 109 58.1W		<b>Deployed Date:</b> 7/22/2010	
<b>Recovered Location:</b> 02 04.605S 109 59.529W		<b>Recovered Date:</b> 8/3/2011	
<b>Previous Repair Date:</b> None			
<b>Sensors/Equipment Lost at Sea:</b> Anemometer, T180			
<b>Sensors Damaged/Fouled:</b> T140 had a broken mount			
<b>Fishing/Vandalism:</b> ½ inch line attached to tower leg.			
<b>Sensors/Tubes Downloaded:</b> All sensors downloaded successfully but T180 (lost) and TP500 (No communications)			
<b>General Comments:</b> None			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
Winds	2/15/11-8/3/11	Data flatlined	Anemometer gone
TP500	10/23/10-8/3/11	Data missing	No comms
T180	12/3/10-8/3/11	Data missing	Lost at Sea

<b>Buoy Site:</b> 2S 110W		<b>Mooring Depth:</b> 3927m	
<b>Mooring Operation:</b> Deployment		<b>Mooring ID#:</b> PM980A	
<b>Deployed Location:</b> 02 01.90S 109 58.16W		<b>Deployed Date:</b> 8/3/2011	
<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 110W			
<b>Mooring Operation:</b> Recovery		<b>Mooring ID#:</b> PM913A	
<b>Deployed Location:</b> 04 59.472S 109 58.945W		<b>Deployed Date:</b> 7/24/2010	
<b>Recovered Location:</b> 05 25.7S 116 02.0W		<b>Recovered Date:</b> 8/7/2011	
<b>Previous Repair Date:</b> None			
<b>Sensors/Equipment Lost at Sea:</b> T180, acoustic release.			
<b>Sensors Damaged/Fouled:</b> TP300 (lost), Anemometer (broken), SSC (fouled).			
<b>Fishing/Vandalism:</b> Hawser line attached to buoy and buoy had a hole in it.			
<b>Sensors/Tubes Downloaded:</b> All sensors downloaded successfully except T180 (lost) and T100 (no communications).			
<b>General Comments:</b> Buoy was adrift, release at bottom of ocean at anchor site.			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
T180	7/16/11-8/7/11	Data missing	Lost at Sea
Winds	10/23/10-8/7/11	Data flatlined	Shaft loose, fin bent
ATMP/RH	6/6/11-8/7/11	Reporting low	N/A

<b>Buoy Site:</b> 5S 110W	<b>Mooring Depth:</b> 3612m
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> PM981A
<b>Deployed Location:</b> 04 59.459S 109 59.336W	<b>Deployed Date:</b> 8/4/2011
<b>Pre-Deployment On Deck Instrument Failures:</b> TP500 SN#11247	
<b>Sensors/Equipment Lost at Sea:</b> None	
<b>Sensors Damaged During Deployment:</b> None	
<b>General Comments:</b> None	

<b>Buoy Site:</b> 8S 110W			
<b>Mooring Operation:</b> Recovery		<b>Mooring ID#:</b> PM887A	
<b>Deployed Location:</b> 07 59.283S 110 04.597W		<b>Deployed Date:</b> 3/18/2010	
<b>Recovered Location:</b> 07 57.371S 110 04.919W		<b>Recovered Date:</b> 8/5/2011	
<b>Previous Repair Date:</b> None.			
<b>Sensors/Equipment Lost at Sea:</b> None			
<b>Sensors Damaged/Fouled:</b> anemometer (broken), SSC (fouled) and T20 (no communications).			
<b>Fishing/Vandalism:</b> None			
<b>Sensors/Tubes Downloaded:</b> All sensors downloaded successfully except T20 (lost)			
<b>General Comments:</b> None			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
T20	7/17/10-8/5/11	Data missing	No comms

<b>Buoy Site:</b> 8S 110W	<b>Mooring Depth:</b> 3416m
<b>Mooring Operation:</b> Deployment	<b>Mooring ID#:</b> PM982A
<b>Deployed Location:</b> 07 59.771S 110 03.828W	<b>Deployed Date:</b> 8/6/2011
<b>Pre-Deployment On Deck Instrument Failures:</b> None	
<b>Sensors/Equipment Lost at Sea:</b> None	
<b>Sensors Damaged During Deployment:</b> Anemometer SN#101166	
<b>General Comments:</b> None	

<b>Buoy Site:</b> 0 125W			
<b>Mooring Operation:</b> Visit		<b>Mooring ID#:</b> PM969A	
<b>Deployed Location:</b> 00 10.56S 24 23.85W		<b>Deployed Date:</b> 5/2/2011	
<b>Visit Location:</b> 00 11.33S 124 24.368W		<b>Visit Date:</b> 8/9/2011	
<b>Sensors/Equipment Lost at Sea:</b> None			
<b>Sensors Damaged/Fouled:</b> None			
<b>Fishing Vandalism:</b> Fishing gear around buoy.			
<b>General Comments:</b> Buoy riding well in the water.			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
N/A	N/A	N/A	None

<b>Buoy Site:</b> 2S 125W			
<b>Mooring Operation:</b> Recovery		<b>Mooring ID#:</b> PM946A	
<b>Deployed Location:</b> 02 01.627S 124 53.016W		<b>Deployed Date:</b> 12/6/2010	
<b>Recovered Location:</b> 02 02.25S 124 53.0W		<b>Recovered Date:</b> 8/10/2011	
<b>Previous Repair Date:</b> None.			
<b>Sensors/Equipment Lost at Sea:</b> TP300			
<b>Sensors Damaged/Fouled:</b> Anemometer damaged during recovery.			
<b>Fishing/Vandalism:</b> None			
<b>Sensors/Tubes Downloaded:</b> All sensors downloaded successfully except TP300 (lost)			
<b>General Comments:</b> None			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
TP300	7/26/11-8/10/11	Data missing	Lost at Sea

<b>Buoy Site:</b> 2S 125W		<b>Mooring Depth:</b> 4757m	
<b>Mooring Operation:</b> Deployment		<b>Mooring ID#:</b> PM983A	
<b>Deployed Location:</b> 02 02.154S 124 53.660W		<b>Deployed Date:</b> 8/11/2011	
<b>Pre-Deployment On Deck Instrument Failures:</b> Tube 517 was not storing data.			
<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 125W			
<b>Mooring Operation:</b> Recovery		<b>Mooring ID#:</b> PM945A	
<b>Deployed Location:</b> 04 59.465S 124 56.786W		<b>Deployed Date:</b> 12/5/2010	
<b>Recovered Location:</b> 04 59.04S 124 57.82W		<b>Recovered Date:</b> 8/11/2011	
<b>Previous Repair Date:</b> None			
<b>Sensors/Equipment Lost at Sea:</b> T100, T140			
<b>Sensors Damaged/Fouled:</b> None.			
<b>Fishing/Vandalism:</b> None			
<b>Sensors/Tubes Downloaded:</b> All sensors downloaded successfully except T100 (lost), T140 (lost) and Tube (No communications)			
<b>General Comments:</b> T100 & T120 were inverted.			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
T100	1/16/11-8/11/11	Slid down nilspin	Lost at Sea
T140	Intermittently missing	N/A	Lost at Sea
Tube 479	6/10/11-8/11/11	Transmission outage	No comms

<b>Buoy Site:</b> 5S 125W Refresh			
<b>Mooring Operation:</b> Recovery		<b>Mooring ID#:</b> DM016B	
<b>Deployed Location:</b> 05 02.538S 124 51.348W		<b>Deployed Date:</b> 12/4/2010	
<b>Recovered Location:</b> 04 59.04S 124 57.82W		<b>Recovered Date:</b> 8/12/2011	
<b>Previous Repair Date:</b> None			
<b>Sensors/Equipment Lost at Sea:</b> None			
<b>Sensors Damaged/Fouled:</b> None			
<b>Fishing/Vandalism:</b> None			
<b>Sensors/Tubes Downloaded:</b> All sensors downloaded successfully.			
<b>General Comments:</b> T60 sensor clock time was off.			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
N/A	N/A	N/A	N/A

<b>Buoy Site:</b> 5S 125W Refresh		<b>Mooring Depth:</b> 4527m	
<b>Mooring Operation:</b> Deployment		<b>Mooring ID#:</b> DM023A	
<b>Deployed Location:</b> 05 02.364S 124 51.293W		<b>Deployed Date:</b> 8/13/2011	
<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> T20 bolt hole stripped out on clamp, no signal on wireless remote.			

<b>Buoy Site:</b> 8S 125W			
<b>Mooring Operation:</b> Visit		<b>Mooring ID#:</b> PM968A	
<b>Deployed Location:</b> 07 59.097S 124 58.939W		<b>Deployed Date:</b> 4/28/2011	
<b>Visit Location:</b> 07 58.43S 124 59.49W		<b>Visit Date:</b> 8/13/2011	
<b>Sensors/Equipment Lost at Sea:</b> None			
<b>Sensors Damaged/Fouled:</b> None			
<b>Fishing Vandalism:</b> None			
<b>General Comments:</b> Buoy riding well in the water.			
<b>Site Sensor Failures</b>	<b>Date Sensors Failed</b>	<b>Why Sensors Failed</b>	<b>Field Service Observations</b>
N/A	N/A	N/A	None

## 2.2 *CTD Casts Completed*

A Sea-Bird 911plus CTD with dual temperature and conductivity sensors was provided by the NMAO. Temperature and conductivity sensors are calibrated yearly at Sea-Bird and sent in for diagnostics as necessary. A Sea-Bird 12-position carousel and twelve 5-liter Niskin bottles were used to collect water samples for the analysis of salinity.

The following outlines the CTD casts completed during the cruise:

<b>CTD Operations</b>				
<b>Coordinates</b>		<b>Date</b>	<b>Cast #</b>	<b>Comments</b>
0804.977N	11004.346W	4/17/2011	KA30011	3000m
0500.449N	11002.202W	4/17/2011	KA30021	1000m
0201.123N	11004.732W	4/18/2011	KA30031	1000m
0002.423N	10959.346W	4/18/2011	KA30041	1000m
0059.952S	11004.290W	4/19/2011	KA30051	1000m
0204.262S	11001.703W	4/20/2011	KA30061	1000m
0458.472S	10955.380W	4/20/2011	KA30071	1000m
0757.595S	11004.651W	4/21/2011	KA30081	1000m
0758.644S	12501.309W	4/21/2011	KA30091	1000m
<i>Data from EMOA</i> <b>CTD Operations</b>		4/22/2011	KA30101	3000m
<b>Coordinates</b>		4/22/2011	KA30111	1000m
0804.977N	11004.346W	4/23/2011	KA30121	1000m
0500.449N	11002.202W	4/23/2011	KA30131	1000m
0201.123N	11004.732W	4/23/2011	KA30141	1000m
0002.423N	10959.346W	4/24/2011	KA30151	3000m
0059.952S	11004.290W	4/28/2011	KA30161	3000m
0204.262S	11001.703W	4/29/2011	KA30171	1000m
0458.472S	10955.380W	4/29/2011	KA30181	1000m
0757.595S	11004.651W	4/29/2011	KA30191	1000m
0758.644S	12501.309W	4/30/2011	KA30201	1000m

### 2.3 Ancillary Science Projects Completed on the Cruise

The following outlines the ancillary science work performed in conjunction with the TAO operations on the cruise:

#### Pacific Marine Environmental Laboratory (PMEL) Argo Profiling CTD Floats

Six (6) Argo floats were scheduled for deployment on this cruise. The chief scientist verified and briefed the Operations Officer on the deployment positions prior to the start of the cruise. All Argo Float deployments were completed as scheduled.

Questions concerning ARGO Floats should be directed to:

Gregory Johnson, NOAA/PMEL  
Tel: (206) 526-6806  
E-mail: [pmel\\_floats@noaa.gov](mailto:pmel_floats@noaa.gov)

or

Elizabeth Steffen, NOAA/PMEL  
Tel: (206) 526-6747  
E-mail: [pmel\\_floats@noaa.gov](mailto:pmel_floats@noaa.gov)

The following outlines the Argo floats deployed during the cruise:

ARGO Floats				
Coordinates		Date	SN#	Comments
0056.094N	11005.627W	8/1/2011	5417	
0002.852N	11000.070W	8/2/2011	5423	
0059.979S	11004.409W	8/3/2011	5414	
0013.019S	12426.781W	8/10/2011	5413	
0100.265S	12438.528W	8/10/2011	5411	
0202.994S	12453.655W	8/11/2011	5410	

Atlantic Oceanographic and Meteorological Laboratory (AMOL) Surface Drifting Floats

Eighteen (18) AOML Surface Drifters were scheduled for deployment on this cruise. The chief scientist verified and briefed the Operations Officer on the deployment positions prior to the start of the cruise. All AOML Surface Drifter deployments were completed as scheduled.

Questions concerning AOML Surface Drifters should be directed to:

Shaun Dolk, NOAA/AOML  
 Global Drifter Center,  
 Tel: (305) 361-4546  
 Fax: (305) 361-4436  
 E-mail: [shaun.dolk@noaa.gov](mailto:shaun.dolk@noaa.gov)

The following outlines the AOML Drifting floats deployed during this cruise:

AOML Floats				
Coordinates		Date	SN#	Comments
0401.520N	11019.612W	7/31/2011	92925	
0401.449N	11019.632W	7/31/2011	81985	
0201.227N	11005.121W	8/1/2011	42791	
0201.218N	11005.125W	8/1/2011	81983	
0002.851N	11000.079W	8/2/2011	42761	
0002.829N	11000.147W	8/2/2011	81986	
0002.818N	11000.182W	8/2/2011	92928	
0002.810N	11000.222W	8/2/2011	81984	
0204.142S	11001.841W	8/3/2011	92923	
0204.143S	11001.841W	8/3/2011	42764	
0359.964S	10958.782W	8/4/2011	92922	
0359.975S	10958.786W	8/4/2011	92927	
0013.074S	12426.796W	8/10/2011	92926	
0013.108S	12426.804W	8/10/2011	42760	
0013.138S	12426.810W	8/10/2011	42763	
0100.414S	12438.602W	8/10/2011	92921	
0203.081S	12453.689W	8/11/2011	92924	
0359.878S	12452.863W	8/11/2011	42795	

