

1.0 PERSONNEL

1.1 CRUISE LEAD AND PARTICIPATING SCIENTISTS:

Cruise Lead: William Thompson.

Participating Scientists:

Name	Gender	Nationality	Affiliation
William Thompson	M	US	NOAA/NDBC
James Rauch	M	US	NOAA/NDBC
Dave Parrett	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 times in this summary report are Coordinated Universal Time (UTC):

Cruise Summary

Buoy Site: 8N 180 ATLAS			
Mooring Operation: Recovery		Mooring ID#: PM996A	
Deployed Location: 07 59.54N/179 52.016W		Deployed Date: 11/30/2011	
Recovered Location: 07 59.4N/179 53.0W		Recovered Date: 7/23/2014	
Sensors/Equipment Lost at Sea: T150			
Sensors Damaged/Fouled: TP500 flooded			
Fishing/Vandalism: None			
Sensors/Tubes Downloaded: SSC – T125 Dead batteries, TP500 Flooded, TUBE – No Comms.			
General Comments: None			
Site Sensor Failures	Date Data Flagged	Why Data Flagged	Field Service Observations
Buoy	09/22/12	Primary xmits ceased	No comms with tube
Winds	09/04/12	Data stuck	Compass failure
T25	09/08/12	Data missing	No comms
T50, T75	12/01/11	Sensors appear to have been deployed at each other's depths	Dead battery
T100, T125	09/06/12	Data missing	Dead battery

T150	11/30/11	Data missing	Lost at sea
T200, T250, TP300	09/06/12	Data missing	None
TP500	09/06/12	Data missing	Flooded

Buoy Site: 8N 180 REFRESH	Mooring Depth: 5954m
Mooring Operation: Deployment	Mooring ID#: DM076A
Deployed Location: 08 01.128N/179 53.583W	Deployed Date: 7/24/2014
Pre-Deployment On Deck Instrument Failures: None	
Sensors/Equipment Lost at Sea: None	
Sensors Damaged During Deployment: None	
General Comments: Routine deployment	

Buoy Site: 5N 180 ATLAS			
Mooring Operation: Recovery		Mooring ID#: PM995A	
Deployed Location: 04 59.272N/179 53.339W		Deployed Date: 11/29/2011	
Recovered Location: NA		Recovered Date: NA	
Sensors/Equipment Lost at Sea: All sensors lost at sea			
Sensors Damaged/Fouled: N/A			
Fishing/Vandalism: Buoy Adrift			
Sensors/Tubes Downloaded: None			
General Comments: Buoy Adrift. Release on its side on the ocean floor.			
Site Sensor Failures	Date Data Flagged	Why Data Flagged	Field Service Observations
Buoy	01/22/13	Transmits ceased	Lost at sea
SSC	07/07/12	Data missing	Lost at sea
T25	10/31/12	Data missing	Lost at sea
T50-T125, T200, TP300	01/19/13	Data missing	Lost at sea
T150	02/14/12	Data missing	Lost at sea
TP500	01/18/13	Data missing	Lost at sea

Buoy Site: 5N 180 REFRESH	Mooring Depth: 5687m
Mooring Operation: Deployment	Mooring ID#: DM077A
Deployed Location: 04 59.740N/179 53.657W	Deployed Date: 7/25/2014
Pre-Deployment On Deck Instrument Failures: None	
Sensors/Equipment Lost at Sea: None	
Sensors Damaged During Deployment: None	
General Comments: No wireless communications.	

Buoy Site: 2N 180 REFRESH			
Mooring Operation: Recovery		Mooring ID#: DM041A	
Deployed Location: 02 01.585N/179 48.104W		Deployed Date: 5/22/2012	
Recovered Location: 02 01.31N/179 48.60W		Recovered Date: 7/26/2014	
Sensors/Equipment Lost at Sea: Anemometer			
Sensors Damaged/Fouled: T125 slid to 150m, SSC – Pins corroded off.			
Fishing/Vandalism: Cut to wire on nilspin, deep grooves wore into T125.			
Sensors/Tubes Downloaded: No comms. with SSC, T25, T50, T75, T125. TP300 Not logging due to low battery.			
General Comments: None			
Site Sensor Failures	Date Data Flagged	Why Data Flagged	Field Service Observations
Wind	06/12/12	WDIR erratic	Stanchion missing, lost at sea
SSC	02/07/14	Data missing	No comms
T25	05/13/14	Data missing	No comms
T50, T100, T150, T200, T250, TP500	06/12/14	Data missing	T50 – No comms
T75	06/02/14	Data missing	No comms
T125, TP300	11/26/13	Excessive spiking	No comms, low battery

Buoy Site: 2N 180 REFRESH		Mooring Depth: 5486m	
Mooring Operation: Deployment		Mooring ID#: DM078A	
Deployed Location: 02 00.96N/179 48.38W		Deployed Date: 7/26/2014	
Pre-Deployment On Deck Instrument Failures: None			
Sensors/Equipment Lost at Sea: None			
Sensors Damaged During Deployment: None			
General Comments: Routine deployment.			

Buoy Site: 0 180 REFRESH			
Mooring Operation: Recovery		Mooring ID#: DM031B	
Deployed Location: 00 01.88N/179 54.977W		Deployed Date: 11/25/2011	
Recovered Location: NA		Recovered Date: NA	
Sensors/Equipment Lost at Sea: All sensors lost at sea.			
Sensors Damaged/Fouled: N/A			
Fishing/Vandalism: Buoy adrift.			
Sensors/Tubes Downloaded: None			
General Comments: Buoy Adrift. Release on its side on the ocean floor.			

Site Sensor Failures	Date Data Flagged	Why Data Flagged	Field Service Observations
Buoy	10/10/13	Drifted out data grid	Lost at sea
ATMP	08/10/13	Data too low	Lost at sea
RH	08/01/13	Data too high	Lost at sea
Winds	07/05/12	WDIR erratic	Lost at sea
SSC	06/27/12	Data missing	Lost at sea
T25-T75	05/27/13	Excessive spiking	Lost at sea
T100	05/01/13	Excessive spiking	Lost at sea
T125	02/13/13	Sensor slid to 150m	Lost at sea
T150	07/28/13	Data missing	Lost at sea
T250, TP300	05/19/13	Data missing	Lost at sea

Buoy Site: 0 180 REFRESH	Mooring Depth: 5398m
Mooring Operation: Deployment	Mooring ID#: DM079A
Deployed Location: 00 01.785N/179 55.191W	Deployed Date: 7/27/2014
Pre-Deployment On Deck Instrument Failures: None	
Sensors/Equipment Lost at Sea: None	
Sensors Damaged During Deployment: None	
General Comments: Routine deployment.	

Buoy Site: 2S 180 REFRESH			
Mooring Operation: Recovery		Mooring ID#: DM030A	
Deployed Location: 01 59.452S/179 52.283W		Deployed Date: 11/24/2011	
Recovered Location: 02 00.00S/179 53.53W		Recovered Date: 7/28/2014	
Sensors/Equipment Lost at Sea: NONE			
Sensors Damaged/Fouled: SSC, T25 sea growth, Top Section severed.			
Fishing/Vandalism: Long line gear around the entire first spool. 20m of long line around the top of the nilspin.			
Sensors/Tubes Downloaded: NONE. Errors in all sensors, returned to lab.			
General Comments: NONE			
Site Sensor Failures	Date Data Flagged	Why Data Flagged	Field Service Observations
ATMP	03/16/14	Data erratic	None
RH	05/29/12	Data saturated	None
SST	08/09/12	Data missing	Fouled, top section severed, no comms
SSS	07/19/12	Data too low	Fouled, top section severed, no comms
T25-TP500	12/04/13	Data missing	Download failed, T25 fouled

Buoy Site: 2S 180 REFRESH	Mooring Depth: 5341m
Mooring Operation: Deployment	Mooring ID#: DM080A
Deployed Location: 01 59.475S/179 52.372W	Deployed Date: 7/28/2014
Pre-Deployment On Deck Instrument Failures: None	
Sensors/Equipment Lost at Sea: None	
Sensors Damaged During Deployment: None	
General Comments: None	

Buoy Site: 5S 180 ATLAS			
Mooring Operation: Recovery		Mooring ID#: PM993B	
Deployed Location: 04 57.577S/179 53.755W		Deployed Date: 11/22/2011	
Recovered Location: 04 57.385S/179 53.984W		Recovered Date: 7/29/2014	
Sensors/Equipment Lost at Sea: T100			
Sensors Damaged/Fouled: None			
Fishing/Vandalism: None			
Sensors/Tubes Downloaded: SSC, T50, T75, T125, T150, T200, TP300 No comms. All other sensors downloaded successfully.			
General Comments: Release covered in mud.			
Site Sensor Failures	Date Data Flagged	Why Data Flagged	Field Service Observations
Buoy	03/15/13	Transmits ceased	None
SST	02/28/13	Data flatlined	No comms
SSS	02/05/13	Data too low	No comms
T100/T125	07/04/12	Data missing	LAS/No comms

Buoy Site: 5S 180 REFRESH	Mooring Depth: 5672m
Mooring Operation: Deployment	Mooring ID#: DM081A
Deployed Location: 04 57.711S/179 53.535W	Deployed Date: 7/29/2014
Pre-Deployment On Deck Instrument Failures: None	
Sensors/Equipment Lost at Sea: None	
Sensors Damaged During Deployment: None	
General Comments: Routine deployment.	

Buoy Site: 8S 180 REFRESH	
Mooring Operation: Recovery	Mooring ID#: DM042A
Deployed Location: 07 58.627S/179 51.043W	Deployed Date: 5/26/2012
Recovered Location: 07 58.52S/179 51.54W	Recovered Date: 7/30/2014
Sensors/Equipment Lost at Sea: None	

Sensors Damaged/Fouled: None			
Fishing/Vandalism: Longline gear wrapped around the first 400m of nilspin.			
Sensors/Tubes Downloaded: None, all sent back to lab for downloading			
General Comments: None.			
Site Sensor Failures	Date Data Flagged	Why Data Flagged	Field Service Observations
Winds	07/01/12	WDIR out 180°	Alignment pin worn off lower stanchion
SSC	02/27/14	Data missing	No comms
RH	05/26/13	Data saturated	None
T100	12/05/13	Data missing	No comms
TP300	07/04/12	Data missing	No comms

Buoy Site: 8S 180 REFRESH	Mooring Depth: 3893M
Mooring Operation: Deployment	Mooring ID#: DM082A
Deployed Location: 07 58.901S/179 50.871W	Deployed Date: 7/31/2014
Pre-Deployment On Deck Instrument Failures: None	
Sensors/Equipment Lost at Sea: None	
Sensors Damaged During Deployment: None	
General Comments: None.	

Buoy Site: 8S 95W REFRESH			
Mooring Operation: Recovery		Mooring ID#: DM032A	
Deployed Location: 08 01.42S/95 14.99W		Deployed Date: 2/16/2012	
Recovered Location: 11 08.3N/118 39.1W		Recovered Date: 6/27/2014	
Sensors/Equipment Lost at Sea: T20-TP500, Acoustic Release			
Sensors Damaged/Fouled: SSC			
Fishing/Vandalism: Adrift			
Sensors/Tubes Downloaded: None			
General Comments: Adrift			
Site Sensor Failures	Date Data Flagged	Why Data Flagged	Field Service Observations
Buoy	10/11/13	Drifted out data grid	Top 1" shackle failed
ATMP	01/30/13	Data too low	None
T20-T500	09/21/12	Excessive spiking	Lost at sea
RH	09/18/12	Data erratic	None
SSC	10/13/12	Data missing	Fouled

Buoy Site: 0 165E ATLAS

Mooring Operation: Recovery		Mooring ID#: QM019A	
Deployed Location: 00 0.164S/164 59.785E		Deployed Date: 8/15/2013	
Recovered Location: N/A		Recovered Date: N/A	
Sensors/Equipment Lost at Sea: All sensors lost at sea			
Sensors Damaged/Fouled: N/A			
Fishing/Vandalism: Adrift			
Sensors/Tubes Downloaded: None			
General Comments: Acoustic release verified lying horizontal on ocean floor			
Site Sensor Failures	Date Data Flagged	Why Data Flagged	Field Service Observations
Buoy	08/25/13	Data missing, transmit failure	Lost at sea
SRAD	08/19/13	Data too low	None

2.2 *CTD Casts Completed*

No CTD casts were accomplished during this cruise.

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

Three (3) 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

or

Elizabeth Steffen, NOAA/PMEL
 Tel: (206) 526-6747
 E-mail: pmel_floats@noaa.gov

The following outlines the Argo floats deployed during the cruise:

ARGO Floats			
Coordinates	Date	SN#	Comments
04 59.8 N 179 53.9 W	7/25/2014	FO320	
02 00.0 N 179 48.8 W	7/26/2014	FO330	
00 00.0 179 59.8 E	7/27/2014	FO326	

Atlantic Oceanographic and Meteorological Laboratory (AMOL) Surface Drifting Floats

Twenty (20) 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

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

AOML Floats			
Coordinates	Date	SN#	Comments
06 00.0 N 179 56.0 W	7/24/2014	114779 (11-050)	
06 00.0 N 179 56.0 W	7/24/2014	114780 (11-040)	
04 00.0 N 179 51.8 W	7/25/2014	114792 (11-006)	
04 00.0 N 179 51.8 W	7/25/2014	114783 (11-087)	
02 00.0 N 179 48.8 W	7/26/2014	114795 (11-084)	
02 00.0 N 179 48.8 W	7/26/2014	114797 (11-072)	
00 00.0 179 59.8 E	7/27/2014	114796 (11-005)	
00 00.0 179 59.8 E	7/27/2014	114781 (11-048)	
02 00.0 S 179 59.5 W	7/28/2014	114778 (11-085)	
02 00.0 S 179 59.5 W	7/28/2014	114786 (11-073)	
04 00.0 S 179 51.7 W	7/29/2014	114798 (11-086)	
04 00.0 S 179 51.7 W	7/29/2014	114777 (11-093)	