

ship departed on *November 9, 2007* and conducted operations on the 95°W line. After completion of operations, NOAA Ship *Ronald H. Brown* proceeded to *San Diego, CA*, arriving on *November 9, 2007*.

1.0 PERSONNEL

1.1 CHIEF SCIENTIST AND PARTICIPATING SCIENTISTS:

Chief Scientist: Bill Hansen

Participating Scientists:

Name	Gender	Nationality	Affiliation
Bill Hansen	M	US	NOAA/NDBC
Jeffery Wise	M	US	NOAA/NDBC
Ezzard Charles	M	US	NOAA/NDBC

2.0 TAO DATA INFORMATION

2.1 TAO Data Recovery Summary

Operations were conducted from (8° 00' 00" N 95° 00' 00" W) to (8° 00' 00" S 95° 00' 00" W). The following provides details on the data recovery efforts for the buoys serviced. All noted time in the summary reports is Universal Time Code (UTC):

8S95W

Buoy ID: PM668A	Buoy Configuration: Standard
Buoy Type: ATLAS	Water Depth: 3971
Deployed Location: 08°01.356' S 95°15.021' W	Visit Location: 8° 0.7' S 95°15.9' W
Visit Buoy Start Date: 4/16/2007	Visit Buoy End Date: Still Active
Field Service Observations: There were noted discrepancies or indications of vandalism during the pass by of the buoy. All data transmitted on the pass were in tolerance limits. Due to this being a visit, no delayed-mode data was collected.	

5S95W

Buoy ID: PM642A		Buoy Configuration: Standard
Buoy Type: ATLAS		Water Depth: 3839 meters
Deployed Location: 5° 04.24S 95° 04.14W		Recovery Location: 5° 9.45 S 95° 7.61 W
Recovered Buoy Start Date: 11/8/2006		Recovered Buoy End Date: 11/13/2007
Field Service Observations: Recovery operations began on schedule and completed on schedule. The temperature sensor at 250 meters depth was missing resulting in the delayed-mode data being lost. The tube data and the remaining ocean sensor data was recovered after deployment operations were completed.		
Sensor	Date of Real-time Sensor Data Loss	Reason for Data Loss
Anemometer	16 Aug. 2007	Anemometer was damaged and wind direction was off approximately 90°.
180m Temperature Sensor	24 Jun. 2007	Sensor was lost at sea

2S95W

Buoy ID: PM669A		Buoy Configuration: Standard
Buoy Type: ATLAS		Water Depth: 3440 meters
Deployed Location: 1° 88.972 S 95° 10.509 W		Recovered Location: 1° 58.9 S 95° 31.0 W
Recovered Buoy Start Date: 4/18/2007		Recovered Buoy End Date: 11/14/2007
Field Service Observations: The buoy tower was missing upon arrival at location. This resulted in the loss of the tube and meteorological sensors delayed-mode data. The ocean sensor delayed-mode data was all recovered except the 140 meter temperature sensor data which had only 65 of 89 data records stored.		
Sensor	Date of Real-time Sensor Data Loss	Reason for Data Loss
Anemometer	10 Jun. 2007	Lost at Sea
Air Temperature/Relative Humidity Sensor	10 Jun. 2007	Lost at Sea
Rain Gauge	10 Jun. 2007	Lost at Sea

095W Buoy

Buoy ID: PM646B		Buoy Configuration: Standard
Buoy Type: ATLAS		Water Depth: 3327
Deployed Location: 00° 00.37 S 94° 59.78 W		Recovered Location: Lost at sea
Recovered/Repair Buoy Start Date: 11/10/2006		Recovered Buoy End Date: Adrift
Field Service Observations: Buoy was lost at sea. No delayed-mode data was recovered.		
Sensor	Date of Real-time Sensor Data Loss	Reason for Data Loss
All	6/17/07	Lost at sea.

2N95W

Buoy ID: PM648B		Buoy Configuration: Standard
Buoy Type: ATLAS		Water Depth: 3118 meters
Deployed Location: 1° 59.32 N 95° 17.93 W		Recovered Location: 2° 25.9 N 96° 44.6 W
Recovered/Repair Buoy Start Date: 11/12/2006		Recovered Buoy End Date: 11/16/2007
Field Service Observations: Buoy was set adrift but recovery of the buoy was successful. All buoy data was recovered.		
Sensor	Date of Real-time Sensor Data Loss	Reason for Data Loss
Anemometer	29 May 2007	All wind data went to zero

5N95W

Buoy ID: PM670A		Buoy Configuration: Standard
Buoy Type: ATLAS		Water Depth: 3510 meters
Deployed Location: 4° 57.19 N 95° 00.7 W		Recovered Location: Not annotated on the log
Recovered/Repair Buoy Start Date: 4/23/2007		Recovered Buoy End Date: 11/18/2007
Field Service Observations: The buoy was heavily vandalized resulting in the loss of anemometer and rain gauge. Upon recovery, long line fishing gear was wrapped around the mooring cable and buoy bridle assembly. All the ocean sensor delayed-mode data was recovered during the cruise.		
Sensor	Date of Real-time Sensor Data Loss	Reason for Data Loss
Anemometer	29 May 2007	Lost at sea
Rain Gauge	30 Apr. 2007	Lost at Sea

8N95W

Buoy ID: PM671A	Buoy Configuration: Standard
Buoy Type: ATLAS	Water Depth: 3651 meters
Deployed Location: 8° 3' 36"N 94 56'34"W	Recovered Location: 8° 3' 30"N 94 56'54"W
Repair Buoy Start Date: 11/19/2007	Repair Buoy End Date: Still Active
Field Service Observations: A dive operation was performed to swap the 20 meter temperature sensor. Sensor swap was successful. All buoy data has been recovered.	

2.2 CTD Casts Completed

A Sea-Bird 911plus CTD with dual temperature and conductivity sensors was provided by the program. Temperature and conductivity sensors are calibrated yearly at Sea-Bird and sent in for diagnostics as necessary. A Sea-Bird 24-position carousel and twenty four 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:

Date	Lat/Lon	Approximate Depth	Completion Time	Notes
11-12-2007	8°41'57"S 95°49'36"W	3000 Meters	18:24Z	None
11-13-2007	7°0'21"S 95°44'30"W	3000 Meters	00:26Z	None
11-13-2007	5°54'30"S 95°31'23"W	3000 Meters	06:20Z	None
11-13-2007	5°26'45"S 95°54'30"W	3000 Meters	11:28Z	None
11-14-2007	4°0'3"S 95°15'43"W	3000 Meters	07:13Z	None
11-14-2007	2°59'9"S 95°10'9"W	3000 Meters	12:58Z	None
11-15-2007	1°30'52"S 95°33'41"W	3000 Meters	04:26Z	None
11-15-2007	0°57'25"S 95°0'34"W	3000 Meters	10:28Z	None
11-16-2007	0°14'22"S 95°58'38"W	3000 Meters	00:55Z	None
11-16-2007	1°14'48"N 95°26'10"W	3000 Meters	07:28Z	None

11-17-2007	1°40'4"N 95°37'28"W	3000 Meters	09:06Z	None
11-17-2007	3°20'20"N 95°57'49"W	3000 Meters	15:09Z	None
11-17-2007	3°59'36"N 95°13'4"W	3000 Meters	22:43Z	None
11-18-2007	4°38'40"N 95°33'0"W	3000 Meters	06:55Z	None
11-19-2007	6°10'33"N 94°28'10"W	3000 Meters	03:00Z	None
11-19-2007	6°59'41"N 94°28'10"W	3000 Meters	09:13Z	None
11-19-2007	8°25'20"N 94°9'28"W	3000 Meters	16:55Z	None

The following outlines the scheduled CTD casts not completed and why:

Lat/Lon	Approximate Depth	Notes
2.5S 95W 1.5S 95W 0.5S 95W 0.5N 95W 1.5N 95W 2.5N 95W	1000 Meters	Not scheduled to stay within allotted sea days

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

11 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:

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The following outlines the Argo floats deployed during the cruise:

Serial Number	Location	Date	Time GMT
5238	8° 00.5''S 95° 15.26''W	12 Nov. 2007	19:40Z
5239	6° 00.0''S 95° 9.52''W	13 Nov. 2007	07:17Z
5255	4° 00.6''S 95° 13.18''W	14 Nov. 2007	08:09Z
5214	2° 59.99''S 95° 22.15''W	14 Nov. 2007	13:56Z
5213	1° 00.4''N 95° 44.2''W	16 Nov. 2007	08:19Z
5212	3° 00.3''N 95° 11.9''W	17 Nov. 2007	16:00Z
5211	4° 56.4''N 95° 00.8''W	18 Nov. 2007	21:12Z
5216	7° 00.0''N 94° 57.5''W	19 Nov. 2007	09:59Z
5215	9° 00.0''N 95° 50.1''W	20 Nov. 2007	01:02Z
5231	11° 00.0''S 97° 46.4''W	20 Nov. 2007	13:42Z
5234	13° 00.1''N 99° 45.3''W	21 Nov. 2007	04:52Z