

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MORANA WAVE	MW8508	0515	+5	1015	OFF PANAMA - CARIBBEAN	9°42.70N	79°50.75W	Eli Silver

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC.		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
12	MAY	85	07:32		005	1.3								Start 3.5 kHz — At Sea	DLR
		(132)	08:00		359	1.2									
			08:36		000	7.2									
			09:00		000	7.0									THS
			09:28:49											R/S FOR SEAMARC DEPLOYMENT	
			09:30			5.3								SPEED = 5.3	
			09:33:03		060									SPEED = 4.0 KNOTS	
			09:53											R/S 2 kts to deploy Seamarc	
			10:00		053	2.4						090°	4		
			10:03											1/S 5.0 KT DEPLOY SEAMARC	
			10:05											SEAMARC IN WATER, DEAD SLOW	
			10:30		051	2.4						125°	2		
			10:46											DEPRESSOR IN WATER	
			10:57											PUTTING EELS IN, MAGGIE (PT), SEAMARC IN	
			11:00		050	4.0						330°	2		
			11:03											MAGGIE ON	
			11:17:55	020°										C/C 020° 1/S 7.0, BOTH AIR GUNS IN	
			11:21:16											XNC 020°	
			11:30		020°	7.0						330°	8		
			12:00		020°	7.1						345°	9	(UP) 1155:50Z 9°52.58N 79°43.40W 40/2/34 CT	
			12:30		020°	7.7						350°	10	(UP) 1228:27Z 9°56.87N 79°41.48W 36/2/30 CT	
			13:00		020°	7.4						20°	12		
			13:30		020°	7.1						20°	12		
			14:00		020°	7.1						30°	12	(UP) 1401:14Z 10°09.39N 79°34.64W 37/3/30 CT	
			14:30		019	7.3						20°	14	(UP) 1423:35Z 10°12.02N 79°34.11W 23/2/33 CT	

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	1000	+5	1500	OFF PANAMA (CARIBBEAN)	10°16.62N	79°31.78W	Silver

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
12	MAY	85	1500	—	019°	7.4		2884	37299	—	—	030°	12		DJH
(132)			1530		019°	7.5		3061	37363	—	—	037°	11	(UP) 1547:32 Z 10°22.49N 79°29.73W 20/2/28CT	
			1600	—	020°	7.2		3170	37381	—	—	060°	10	(UP) 1612:12 Z 10°25.57N 79°28.30W 36/2/34CT	
			1630	—	019°	6.8		3337	37409	—	—	058°	8		
			1700		020°	7.4		3420	37442			VAR	8		DK
			1730		020°	6.0		3540	37477			085°	8		
			1800		020°	5.2		3535	37485			070°	8		
			1830		019°	6.5		3530	37514			350°	9	AG's / PT: STBD OFF - SEA MARC CALIBRATION	
			1833	30 280°										c/c 280°	
			1840	12 280°										XNC 280°	
			1835						37521					MAG HIGH	
			1900		280°	7.1		3530	37506			340°	8		
			1923	180°										c/c 180°	
			1929	32 180°										XNC 180°	
			1930		181°	7.1		3530	37531			355°	10		
			1935						37538					MAG HIGH	
			2000		181°	7.4		3530	37508			320°	18		
			2022	30 100°										c/c 100°	
			2027	48 100°										XNC 100°	
			2030		100°	7.6		3535	37452			045°	16		
			2100		100°	8.2		3540	37406	—	—	035°	10		JET
			2105	37 020°										c/c 020°	
			2111		020°									XNC 020°	
			2130		019°	8.1		3540	37437	—	—	090°	3		
			2131	53 280°										c/c 280°	

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW8508		1630	+5	2130	OFF PANAMA (CARIBBEAN)	10° 37.30N	79° 20.12W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
12	MAY	85	2139:09	280°							°		XNC 280°	JET
(132)			2200:		279°	8.2	3535	37447	—		330°	8	(UP) 10°39.18N 79°23.14W 9°/3	
			2216:51								°			
			2230:		280°	8.0	3530	37481	—		330°	9	(UP) 10°39.13N 79°24.75W 15/2/29 CT	
			2228:55								°		c/c 180°	
			2250:	180°							°		BOTH AG'S BACK IN	
			2252:								°		XNC 180°	
			2257:	180°							°		MAG. HIGH	
			2300:		180°	7.8	3530	37521	—		350°	10	c/c 218°	
			2315:11	218°							°		XNC 218°	
			2318:27	218°							°		(UP) 2337:33Z 10°34.19N 79°29.34W 51/2/34 CT	DJH
13	MAY	85	0000:		217°	8.0	3535	37479	—		010°	12	(UP) 0001:20Z 10°31.70N 79°31.00W 63/2/30 CT	
(133)			0021:00	202°							°		c/c 202°	
			0022:28	202°							°		XNC 202°	
			0030:		202°	8.0	3400	37379	—		015°	8		
			0100:		202°	8.0	3330	37345	—		025°	8		
			0130:		202°	8.5	3100	37316	—		030°	8	(GPS) 0202Z 10°17.26N 79°36.6W	
			0200:		202°	7.6	3066	37264	—		355°	18	(GPS) 0210Z 10°16.3N 79°37.0W	
			0230:		202°	7.9	2878	37223	—		355°	20	(GPS) 0230Z 10°13.9N 79°37.8W	
			0300:		201°	7.7	2450	37188	—		358°	21	(GPS) 0245Z 10°12.1N 79°38.4W	
			0317:52	209°							°		c/Adj 209°	
			0318:32	209°							°		XNC 209°	
			0330:	—	209°	8.2	2363	37155	—		358°	19	(UP) 0328:57Z 10°06.86N 79°39.99W 30/2/28 CT	
			0400:		209°	8.3	2045	37126	—		355°	20	(UP) 0354:45Z 10°03.96N 79°41.51W 51/2/33 CT	

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	2300	+5	0400	OFF PANAMA (Caribbean)	10°03.10N	79°41.79W	Silver

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
13	MAY	85	0430		209°	7.9	2199	37096			000°	22		DJH OK
			0500		209°	7.1	2200	37061			350°	20		
			0510								°		(GPS) 9° 55.84 N 79° 45.37 W	
			0530		209°	7.4	1765	37012			350°	20	(GPS) 9° 53.78 N 79° 46.26 W	
			0545								°		(GPS) 9° 52.19 N 79° 46.91 W	
			0600		209°	7.2	1525	36955			350°	23	(GPS) 9° 50.66 N 79° 47.54 W	
			0630		207°	7.6	1545	36887			005°	22	(GPS) 9° 47.59 N 79° 48.80 W	
			0700		207°	7.3	1525	36813			000°	22	(GPS) 9° 44.62 N 79° 50.00 W	
			0730		206°	7.4	1200	36765			355°	22		
			0735:30	295°							°		c/c 295°	
			0741:45	295°							°		XNC 295°	
			0740					36675			°		MAG Low	
			0800		295°	7.4	1270	36758			285°	16	(GPS) 9° 42.38 N 79° 53.46 W	
			0815								°		(GPS) 9° 43.47 N 79° 54.88 W	
			0830		295°	7.3	1410	36844			280°	10	(GPS) 9° 44.56 N 79° 56.33 W	
			0832:46	023°							°		c/c 023°	
			0838:27	023°							°		XNC 023°	
			0822:57								°		(UP) 9° 44.03 N 79° 55.46 W 36/2/34 CT	
			0900		022°	8.0	1270	36942			090°	4		JET
			0930		022°	7.9	1800	37017			110°	5		
			1000		022°	7.0	1945	37072			150°	2		
			1030		022°	8.0	2180	37117			130°	2		
			1100		022°	8.0	2325	37155			125°	2	(UP) 1119:55 10°05.95 N 79°46.14 W 50°/2	
			1130		021°	8.0	2590	37191			215°	2		
			1200	017°	021°	8.0	2630	37218			005°	2	c/c 017°	

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R/V MOANA WAVE	MW 8507	0700	+5	1200	OFF PANAMA (CARIBBEAN)	10°11.52N	79°43.41W	SILVER

DATE			GMT		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR						<input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
13	MAY	85	12	00	05	017°						017 °		XNC 017°	JET
												290°	2	(UP) 1252:58Z 10°17.34N 79°40.75W 8/2/23CT	
												345°	8	(UP) 1304:42Z 10°18.78N 79°40.18W 13/2/24CT	DJH
												355°	8		
												340°	8	(UP) 1400:43Z 10°25.64N 79°37.29W 15/2/28CT	
												335°	6		
												215°	8	(UP) 1457:38Z 10°32.51N 79°34.20W 50/2/30CT	
														c/c 270°	
														XNC 270°	
												295°	18	In middle of Seamarc + Compressor check	
												280°	8	(UP) 1549:34Z 10°35.95N 79°35.34W 54/2/34CT	
														I/s 7.5kt	
														c/c 210°	
														XNC 210°	
												330°	11		
												330°	16		
												345°	8		OK
												315°	8		
												350°	12		
												355°	12		
												000°	10		
												000°	10		
														(UP) 10° 11.16 N 79° 50.71 W 34/2 / 34 CT	
												355°	10		
												015°	9		

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	1630	+5	2130	OFF PANAMA (CARIBBEAN)	10° 03.80 N	79° 54.4 W	SILVER

DATE			GMT		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR						<input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
13	MAY	85	21	08:00	207							°		c/adj 207	JET
	(133)		21	30		206	7.3	2510	37121			005°	8		
			22	00		206	7.2		37104			015°	8		
			22	30		206°	7.0	2150	37079			020°	8	(UP) 2248:21 9° 56.58N 79° 56.85W 51°/2	
			23	00		206°	7.0	—	37061			010°	5		
			23	30		205	7.4	1800	37035			015°	5		
14	MAY	85	00	00		205	7.0	1125	36996			005°	4		
	(134)		00	22	295°							°		c/c 295°	
			00	28	57 295°							°		XNC 295°	
			00	30		295°	6.9	1035	36937			025°	8	(NW) 0035Z 9° 47.39N 80° 01.16W 14/2/24 CT	
			01	00		295°	7.4	1065	37015			025°	9	(NW) 0053:06Z 9° 48.62N 80° 02.54W 6/2/16 CT	DSH
			01	14	48 023°							°		c/c 023°	
			01	20	56 023°							°		XNC 023°	
			01	30	023° 023°	7.0	1463	37086				355°	10		
			02	00		022°	7.1	1842	37099			355°	12	(GPS) 9° 55.54N 80° 02.35W	
			02	30		023°	7.3	2115	37094			002°	10	(NW) 0234:03Z 10:00.33N 79° 59.48W 86/3/30 CT	
			03	00		023°	7.2	2485	37128			002°	10		
			03	30		022°	7.4	2905	37158			005°	12		
			03	36	34 021°							°		c/adj 021°	
			03	36	48 021°							°		XNC 021°	
			04	00		020°	7.0	2885	37191			005°	12		
			04	30		020°	7.2	2826	37235			020°	12		
			05	00		021°	7.5	2965	37282			020°	12	(GPS) 10° 17.16 N 79° 51.49 W	DK
			05	30		021°	7.3	3140	37325			015°	10	(GPS) 10° 20.72 N 79° 49.81 W	
			06	00		021°	7.1	3470	37374			020°	12	(GPS) 10° 24.25N 79° 48.24 W	

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW 8508		0130	+5	0630	PANAMA (CARIBBEAN)	10° 27.70 N	79° 46.77 W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
04	MAY	85	0630		020°	7.2	3500		37419			020°	10	(GPS) 10° 27.70 N 79° 46.77 W	DK
(134)			0700		021°	7.0	3520		37457			020°	12	(GPS) 10° 31.10 N 79° 45.43 W	
			0730		020°	7.1	3525		37511			020°	12	(GPS) 10° 34.66 N 79° 43.99 W	
			0731											c/c 270°	
			0741	270°										MAG HIGH	
			0745						37535					XNC 270°	
			0748	22 270°											
			0800		270°	7.5	3525		37529			080°	4	(UP) 10° 36.55 N 79° 45.35 W 24/2/33 CT	
			0759	36											
			0830		270°	7.6	3520		37544			100°	3	c/c 203°	
			0831	203°										XNC 203°	
			0835	30 203°											
			0900		202°	8.0	3520		37506	---		300°	8	(UP) 0948:17 10° 28.30 N 79° 53.35 W 35°/2	JET
			0930		202°	7.8	3520		37460	---		290°	8	0942Z STBD A/G OUT OF WATER	
			1000		202°	8.0	3510		37403	---		290°	9	(UP) 1011:15 10° 25.75 79° 54.16 W 10°/2	
			1011	31 200°										c/ADJ 200°	
			1030		199°	7.9	3495		37350	---		285°	8		
			1100		199°	7.9	3055		37309	---		290°	8	1115 STBD A/G BACK IN WATER	
			1130	210°	201°	7.8	3145		37281			305°	8	c/c 210°	
			1130	41 210°										XNC 210°	
			1200		209°	7.0	3265		37250	---		300°	6	(UP) 1156:18Z 10° 14.20 N 79° 58.62 W 66/2/28 CT	
			1218	15 207°					3					c/ADJ 207°	
			1230		207°	7.1	3015		37228	---		290°	5		
			1300		205°	6.8	3282		37198			300°	8		
			1330		205°	6.1	2700		37172	---		300°	8		DJH

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	0900	+5	1400	OFF PANAMA (CARIBBEAN)	10°01.60N	80°04.08W	Silver

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
14	MAY	85	1400		265°	6.8	2336	37156	---	---	325°	14	(UP) 1407:56Z 10°00.73N 80°04.50W 50/2/32CT	DJH
(134)			1430		207°	6.8	2100	37142	---	---	325°	12		
			1500		207°	7.5	1972	37137	---	---	335°	10		
			1530		207°	5.5	1400	37116	---	---	330°	10	(NU) 1526:39Z 9°53.04N 80°08.42W 83/2/34CT	
			1600		207°	7.0	1072	37070	---	---	325°	10	(UP) 1554:19Z 9°50.21N 80°09.50W 15/2/28CT	
			1650		207	6.0	1405	36997	---	---	315°	12		
			1700		207	6.2	1665	36884			335°	11		OK
			1730		207	6.4	1555	36729			340°	10		
			1755	360°									9/2 300°	
			1800		VAR	7.1	1200	---			340°	6	MAG OFF - AG OFF - SEAMARC CHECK	
			1801:16	300°									XNC 300°	
			1801:30										R/S 5 Kt	
			1812:28										R/S 2 Kt	
			1830		300°	2.6	1370	---			335°	4	I/S 5 Kt (1844:10 MAG ON)	
			1855:05	021°									9/2 021 I/S 7.5 Kt 9/2 021°	
			1900		VAR	7.4	1838	36843			345°	7	9/2	
			1901:05	021°									XNC 021°	
			1930		020°	8.3	2055	36981			335°	8		
			2000		021°	7.1	1605	37070			340°	8		
			1954:51										(UP) 9°49.40N 80°15.80W 22/2/34CT	
			2030		021°	7.4	1915	37131			345°	8		
			2100		020°	7.8	2410	37158	---	---	355°	9		JET
			2104:45	022°									9/ADJ 022°	
			2130		021°	8.0	2740	37186	---	---	355°	11	(UP) 2143:29 10°03.93N 80°08.69 38°/2	
			2200		021°	8.0	2730	37199	---	---	355°	10		

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW 8508		1700	+5	2200	OFF PANAMA (CARIBBEAN)	10° 6.54 N	80° 07.43 W	SILVER

DATE			GMT		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR								GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
14	MAY	85	2209	50	018°							°		c/ADJ 018°	JET
			(134)	2230		019°	7.5	3145	37231			355°	12		
				2159	36							°		(UP) 10° 06.10 N 80° 07.51 W 18/2/26 CT	
				2300		019°	8.0	3315	37269			005°	12		
				2330		019°	8.0	3285	37298			000°	12	(UP) 2345:54 10° 20.29 N 80° 01.98 W 41°/2	
15	MAY	85	0000			017°	7.8	3505	37347			005°	12		
			(135)	0030		019°	8.0	3510	37395			010°	12		
				0050	52	270°						°		c/c 270°	DJH
				0058	21	270°						°		XNC 270°	
				0100		271°	7.9	3510	37408			030°	5	(UP) 0114:36 Z 10° 29.65 80° 01.26 7/2/19 CT	
				0124	09	206°						030°	5	c/c 206°	
				0129	10	206°						030°	5	XNC 206°	
				0130	00	205°	7.8	3509	37428			105°	2	(UP) 0149:19 Z 10° 27.13 80° 03.98 34/2/33 CT	
				0200		205°	7.8	3513	37389			330°	1		
				0221	19	204°						°		c/adj 204°	
				0221	35	204°						°		XNC 204°	
				0230		204°	7.5	3501	37333			315°	2		
				0300		204°	7.8	3506	37299			300°	2	(NU) 0309:12 Z 10° 18.40 N 80° 08.20 W 72/2/34 CT	
				0330		204°	7.7	3331	37263			295°	4	(UP) 0335:44 Z 10° 15.50 N 80° 09.42 W 22/2/33 CT	
				0400		204°	7.6	2987	37236			275°	4		
				0430		204	7.5	2930	37217			005°	2		
				0500		204°	8.1	2905	37197			175°	2		
				0504								°		(GPS) 10° 06.02 N 80° 13.23 W	OK
				0456	29							°		(UP) 10° 06.97 N 80° 12.91 W 10/2/27 CT	
				0530		204°	7.4	2830	37181			260°	3	(GPS) 10° 03.29 N 80° 14.29 W	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW 8508		0045	+5	0545	PANAMA (CARIBBEAN)	10° 01.67 N	80° 14.90 W	SILVER

DATE			GMT		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR								GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
15	MAY	85	05	46:40	208°									c/ad; 208°	DK
(135)				0600:		208°	7.4	2750	37173			265°	2	(GPS) 10° 00.13 N 80° 15.60 W	
				0630:	208°	208°	7.4	2500	37148			275°	2		
				0631:										(GPS) 9° 56.96 N 80° 17.13 W	
				0648:25	210°									c/ad; 210°	
				0700:		210°	7.6	2050	37128			235°	2	(GPS) 9° 53.93 N 80° 18.63 W	
				0730:		210°	7.8	1885	37079			305°	2		
				0800:		210°	7.8	2115	36999			350°	6		
				0736:41										(UP) 9° 50.11 N 80° 20.66 W 14/2/29 CT	
				0830:		210°	7.6	2125	36954			020°	5		
				0900:		209°	8.0	1255	36874	—		000°	3		JET
				0904:32	295°									c/c 295°	
				0910:09	295°									XNC 295°	
				0930:		295°	7.9	1400	36894	—		045°	9	(UP) 0925:57 9° 41.49 N 80° 27.05 W 54°/2	
				0945:	021°									c/c 021°	
				0950:06	021°									XNC 021°	
				1000:		021°	7.8	1680	36974	—		355°	14		
				1030:		021°	7.2	1995	37022	—		000°	14	(UP) 1047:56 9° 50.45 N 80° 25.43 W 27°/2	
				1100:		021°	7.0	1860	37097	—		000°	14		
				1130:		020°	7.9	2200	37128	—		010°	15		
				1200:		020°	7.6	2545	37162	—		015°	14		
				1230:		020°	8.0	2825	37176	—		015°	16	(UP) 1232:46 Z 10° 03.78 N 80° 19.16 W 27/2/32 CT	
				0300:		021°	7.7	3021	37219	—		025°	18	(NU) 1301:22 Z 10° 07.25 N 80° 17.46 W 4/2/17 CT	DJH
				0330:		020°	7.4	3101	37248	—		005°	18	(UP) 1318:01 Z 10° 09.39 N 80° 16.44 W 17/2/25 CT	
				0400:		020°	7.8	3352	37283	—		015°	16		

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW 0508		0930	+5	1430	OFF PANAMA (CARIBBEAN)	10°18.50	80°12.08W	Soluer

DATE			G M T		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR								GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
15	MAY	48	5	1430		020°	7.5	3265	37324			005°	18		
				1500		020	6.9	3494	37368			010°	20		DJH
				1514:39	270°									c/c 270°	
				1521:57	270°									XNC 270° R/S 5KT	
				1530		270°	4.3	3500	OFF			120°	10	Sea MARC Check	
				1555:40										I/S 7.0 KT	
				1600		270°	8.0	3498	37407			100°	8		
				1618:03	209°									c/c 209°	
				1622:16	209°									XNC 209°	
				1630		210°	7.6	3493	37411			180°	2		
				1700		209°	7.5	3490	37377			230°	4		OK
				1730		209°	7.4	3160	37342			230°	4		
				1800		209°	7.3	3285	37324			240°	5		
				1830		209°	7.5	3105	37294			240°	6		
				1900		209°	7.8	3150	37252			270°	4		
				1930		209°	7.6	3025	37198			215°	3		
				2000		209°	7.6	2950	37151			245°	3		
				2010:50	203°									c/adj 203°	
				1931:57										(UP) 10° 05.67 N 80° 27.90 W 13/3/29 CT	
				2030		203°	7.5	2745	37128			265°	4		
				2032:10	200°									c/adj 200°	
				2100		200°	7.6	2385	37113			245°	2		JET
				2130		200°	7.6	2175	37111			295°	2		
				2200		200°	7.6	1960	37053			280°	2		

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	1700	+5	2200	OFF PANAMA' (CARIBBEAN)	9°48.76N	80°34.22W	SILVER

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
15	MAY	85	2120										(UP) 2120.47 9°53.57N 80°32.71W 59°/2	JET
(135)			2230	209°		7.6	1675	36985			140°	2	c/adj 209°	
			2220										(UP) 9°46.57N 80°34.52W 12/2/25 CT	
			2300	209°		7.8	1240	36942			080°	4	(UP) 2256:40Z 9°42.67N 80°36.60W 70/2/34 CT	
			2309:06	295°									c/c 295°	
			2315:05	295°									XNC 295° (23:13 MAG. LOW)	
			2330	295°		7.2	1275	36925			045°	10		
			2345	020°									c/c 020°	
			2349:51	020°									XNC 020°	
16	MAY	85	0000	019°		6.8	1475	36993			355°	14	(UP) 0005:28Z 9°44.62N 80°39.95W 47/2/25 CT	
(136)			0030	020°		6.8	1809	37051			000°	13		DJH
			0100	020°		6.7	2012	37110			355°	17	(UP) 0059:37Z 9°50.41N 80°37.01W 10/2/22 CT	
			0130	019°		6.7	2266	37137			350°	16		
			0200	019°		6.4	2593	37134			000°	18		
			0230	019°		6.7	2770	37140			355°	20		
			0300	019°		6.5	2820	37161			350°	22	(NW) 0245:41Z 11°01.62N 81°15.63W 70/5/11 CT	
			0330	019°		6.6	3100	37198			000°	20		
			0400	019°		6.4	3148	37255			355°	22		
			0430	019°		6.2	3124	37296			355°	20		
			0500	019°		6.4	3295	37321			355°	22	(GPS) 10°15.95N 80°26.18W	OK
			0434:02										(UP) 10°13.26N 80°27.25W 17/2/32 CT	
			0525:57	025°									c/adj 025°	
			0530	025°		6.1	3485	37340			355°	18	(GPS) 10°19.13N 80°24.95W	
			0600	025°		6.4	3485	37374			355°	20	(GPS) 10°22.22N 80°23.45W	
			0630	270°		6.4	3485	37409			355°	20	c/c 270° (GPS) 10°25.22N 80°22.02W	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME				CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE				MW 8508		0135	+5	0635	PANAMA (CARIBBEAN)	10° 25.79 N	80° 22.10W	SILVER

DATE			G M T		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR								GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
16	MAY	85	0637:45		270°									XNC 270°	OK
(136)			0700			270°	7.0	3420	37400			085°	12		
			0704		203°									c/c 203°	
			0708:30		203°									XNC 203°	
			0730			202°	7.5	3465	37376			205°	6		
			0713:18											(UP) 10° 25.04 N 80° 26.17 W 8/2/24 CT	
			0800			203°	7.2	3455	37342			VAR °	6		
			0830			203°	7.2	3200	37325			190°	8		
			0900			203°	7.1	3205	37289	—		200°	5	(N/U) 0903:06 10° 13.19 N 80° 31.83 W 81°/3 (R1) JET	
			0930			203°	7.0	3205	37235	—		210°	5		
			0933:30		205°									c/adj 205	
			0933:55		205°									XNC 205°	
			1000			205	7.6	3190	37198	—		215°	8		
			1030			205	7.2	3135	37175	—		175°	8		
			1026:10											(UP) 10° 04.17 N 80° 35.12 W 37°/2	
			1037:40		207									c/adj 207	
			1037:56		207									XNC 207	
			1100			207	7.3	2525	37149	—		180°	8	(UP) 1124:20 09° 57.95 N 80° 38.08 W 69°/2	
			1130			206	7.4	2627	37132	—		185°	7		
			1200			207	7.4	2225	37122	—		190°	5	(UP) 1212:36 09° 52.82 N 80° 40.05 W 21°/2	
			1224		209									c/adj 209	
			1230			210	7.6	1925	37115	—		210°	2		
			1300			209	7.4	1699	37065	—		180°	8	(UP) 1309:11 Z 09° 46.60 N 80° 42.76 W 9/2/23 CT	DJH
			1330			209	7.5	1440	37010	—		160°	6		
			1400			209	7.5	1540	36939	—		145°	7		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME				CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST		
R/V MOANA WAVE				MW 8508		D930	+5	1430	OFF PANAMA (Caribbean)	9°38' N	80°47' W	Silver		
DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
16	MAY	85	1430		209°	7.5	1552	36887			170°	2	(UP) 1414:40Z 9°39.64N 80°46.31W 66/2/34CT	DJH
	(136)		1500		209°	7.5	1550	36803			240°	2	(UP) 1440:50Z 9°36.83N 80°47.67W 42/2/34CT	
			1530		209°	7.5	1555	36699			135°	2		
			1600		209	7.8	1298	36640			120°	1	(UP) 1601:03Z 9°28.25N 80°52.09W 10/2/12CT	
			1613:41	000°									9/c 000° MAG Low 1617Z 36619	
			1624:23	000°									XNC 000°	
			1630		000°	6.4	1054	36641			005°	12	(UP) 1628:52Z 9°27.51N 80°53.55W 20/2/34CT	DK
			1700		000	6.4	1460	36731			005°	11		
			1730		359°	6.4	1555	36830			005°	11		
			1743:25										I/s 7 Kt.	
			1800		359°	7.3	1495	36902			355°	10		
			1830		359°	7.0	1580	36960			355°	12		
			1845:13	000°									c/adj 000°	
			1900		000°	7.2	1660	37033			355°	14		
			1908:54										(NU) 9°45.82 N 80°52.82 W 6/3/21 CT	
			1930		359°	7.0	1655	37108			005°	8		
			2000		000°	7.0	2115	37135			005°	14		
			2030		000°	7.2	2610	37163			000°	12		
			2100		000°	7.5	2795	37180			355°	14	(N/U) 2058:04 9°59.22N 80°50.33W 87°/4	JET
			2130		000°	7.2	3185	37197			005°	14		
			2200		000°	7.6	3267	37226			005°	14	(UP) 2207:55 10°07.64N 80°52.14W 24°/2	
			2230		359°	8.0	3285	37233			000°	10	(UP) 2257:05 10°11.13N 80°53.53W 34°/2	
			2233:33	270°									9/c 270°	
			2236:54	270°									XNC 270°	
			2300		270°	4.2	3275				055°	8		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MONA WAVE			MW 8508		1800	+5	2300	OFF PANAMA (CARIBBEAN)	10°11.13N	80°53.53W	SILVER

DATE			GMT		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR						<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC.		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
16	MAY	85	23	19:40											1/5 FOR A/G DEPLOYMENT	JET
	(136)		23	20:39			7.5								1/5 7.5 K	
			23	30		269°	7.6	3255		37248			045°	10		
			23	38:10	182°										1/5 182°	
			23	44:58	182°										XNC 182°	
17	MAY	85	00	00		182°	7.3	3230		37262			080°	2	(VP) 2354:19 10°09.39N 80°57.65 30°/2	DJH
	(137)		00	30		182°	7.2	3210		37229			090°	2	(VP) 0042:08 10°03.56N 80°57.90 17°/2	
			00	57:13	181°										1/5 ADJ 181°	
			01	00		181°	7.6	3188		37203			090°	2		
			01	30		182°	7.3	3125		37182			075°	2		
			02	00		182°	7.1	2787		37157			070°	2	(UP) 0155:44 Z 9°54.70N 80°57.93W 43/2/27 CT	
			02	30		182°	7.3	2190		37090			060°	8	(UP) 0223:20 Z 9°51.39N 80°57.89W 30/2/34 CT	
			03	00		183°	7.2	1895		37023			015°	8		
			03	30		181°	7.2	1580		36980			035°	9	(UP) 0342:18 Z 9°42.03N 80°58.11W 17/2/26 CT	
			04	00		181	7.4	1196		36922			035°	10		
			04	04:18	270°										1/5 270°	
			04	09:48	270°										XNC 270°	
			04	30		269°	7.9	1252		36898			350°	10	(UP) 0411:46 Z 9°39.17N 80°58.55W 28/2/34 CT	
			04	47:44	000										1/5 000	
			04	53:50	000										XNC 000°	
			05	00		000°	7.1			36952			035°	2		DK
			05	30		359°	7.0	2025		37005			275°	2		
			06	00		359°	7.1	2435		37060			VAR	6		
			06	11											(GPS) 9°49.34 N 81°02.40 W	
			06	30		000°	7.1	2815		37118			335°	8		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW 8508		0145	+5	0645	PANAMA (CARIBBEAN)	9°53.88 N	81°02.09 W	SILVER

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC.		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
17	MAY	85	0649:32	357°										c/adj 357°	DK
			(137)												
			0649:32												
			0650:00	357°	7.3	3115			37208			350°	10		
			0705:00											(GPS) 9°56.00 N 80°02.01 W	
			0730:00	357°	7.1	3150			37248			345°	10		
			0800:00	357°	7.4	3165			37293			355°	12		
			0815:00	270°										c/c 270°	
			0820:48	270°										XNC 270°	
			0830:00	270°	7.1	3160			37320			035°	11	(UP) 0840:18 10°05.05N 81°04.44W 66°/2	
			0857:36	182°										c/c 182°	JET
			0900:00	240°	7.4	3130			37353			050°	10		
			0905:07	182°										XNC 182°	
			0930:00	182°	7.2	3105			37331			090°	2	(UP) 0937:07 10°00.75N 81°07.05W 12°/2	
			1000:00	183°	7.0	3085			37250			050°	2	(UP) 1015:49 9°56.05N 81°07.01W 14°/2	
			1030:00	183°	7.4	3075			37158			030°	2	(UP) 1027:39 9°54.64N 81°06.98W 11°/2	
			1100:00	183°	7.6	3050			37103			100°	4	(UP) 1123:41 9°47.89N 81°06.79W 60°/2	
			1130:00	182°	7.5	2850			37057			080°	3		
			1200:00	182°	7.3	2480			37005			320°	2	(UP) 12:00:50 9°43.46N 81°06.66W 50°/2	
			1230:00	183°	7.4	2050			36936			315°	5		
			1300:00	183°	7.6	1623			36896			320°	4		
			1330:00	183°	7.6	1210			36848			355°	4	(UP) 1324:52 9°33.53N 81°06.12W 23°/2/29 CT	DJH
			1352:56	270°										c/c 270°	
			1358:46	270°										XNC 270°	
			1400:00	270°	7.3	0915			36777			360°	10		
			1430:00	270°	7.5	1353			36805			340°	12	(UP) 1417:51 9°29.82N 81°08.50W 27°/2/33 CT	
			1434:15	358°										c/c 358°	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MANA WAVE	MW8508	1000	+5	1500	OFF PANAMA (CARIBBEAN)	9°32.6'N	81°10.6'W	SILVER

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC.		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
17	MAY	85	1439:53	358°										XNC 358°	DJH
(13Z)			1500:	358°	359°	7.2	1860		36876			330°	5	(UP) 1511:14Z 9°34.13N 81°10.31W 34/2/33CT	
			1530:	358°	359°	7.2	2252		36920			295°	8		
			1600:		359°	7.5	2570		36947			000°	8	(UP) 1606:19Z 9°40.84N 81°09.90W 31/2/34CT	
			1604:08	355										c/adj 355°	
			1604:47	355										XNC 355°	
			1630:		354°	7.4	2885		37009			358°	10		
			1700:		355°	7.2	2980		37078			355°	10		
			1730:		355°	7.1	3020		37113			010°	7		
			1733:30	270°										c/c 270° R/S 5KT	DK
			1739:13	270°										XNC 270° R/S 5KT	
			1759:											SEA MARC CHECK R/S 2KT	
			1800:		271°	3.1	2990					010°	2		
			1809:30											1/5 5KT	
			1830:		270°	5.7	2960		37060			335°	10		
			1832:50	184°										1/5 75KT c/c 184°	
			1839:07	184°										184° XNC 184°	
			1900:		184°	7.5	2945		37085			010°	10		
			1930:		185°	7.5	2890		37004			010°	10		
			2000:		184°	7.4	2865		36916			005°	8		JET
			2030:		183°	7.7	2705		36902			340°	6	(UP) 2035:07 9°36.65N 81°14.10W 61°/2	
			2100:	187°	185°	7.8	2225		36882			340°	5	c/c 187° (UP) 2119:04 9°31.06N 81°14.00W 61°/2	
			2130:		187°	7.8	1880		36842			330°	8		
			2200:		189°	7.8	1315		36780			345°	6		
			2211:12	270°										c/c 220°	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW 8508		2230	+5	2230	OFF PANAMA (CARIBBEAN)	9° 23.81 N	81° 15.81 W	SILVER

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
17	MAY	85	221630	270°										XNC 270°	JET
			2236		270°	7.5		1150	36727			010°	6		
			222250											(UP) 9° 23.81 N 81° 15.81 W 12/2 /28 CT	
			224615	355°										c/c 355°	
			225119	355°										XNC 355°	
			2300		355°	6.9		1280	36774			020°	9	(N/V) 2304:59 9° 25.85 N 81° 17.32 W 87°/3 (N1)	DJH
			2330		354°	6.9		1730	36857			030°	8		
18	MAY	85	0000		355°	7.0		2115	36906			040°	8		
			0030		355°	7.0		2685	36923			035°	10		
			0100		354°	7.1		2755	36942			030°	10	(UP) 0106:04 Z 09° 39.77 N 81° 18.44 W 14/2/22 CT	
			012018	270°										c/c 270°	
			012559	270°										XNC 270°	
			0130		270°	7.4		2811	36937			005°	4		
			015837	185°										F/c 185°	
			0200		VAR	7.6		2773	36977			000°	8	(UP) 0200:16 Z 09° 41.42 N 81° 22.84 W 19/2/33 CT	
			020556	185°										XNC 185°	
			0230		185°	7.5		2760	36982			335°	10		
			0300		185°	7.6		2625	36911			330°	6	(UP) 0252:08 Z 09° 34.94 N 81° 23.38 W 51/2/30 CT	
			0330		185°	7.7		1772	36844			335°	10		
			0400		185°	7.5		1585	36796			335°	10	(UP) 0349:17 Z 09° 27.48 N 81° 23.60 W 43/2/34 CT	
			0430		185	7.9		1095	36746			345°	10		
			043306	270°										c/c 270°	DK
			043844	270°										XNC 270°	
			0500		269°	8.0		1100	36744			340°	8	(GPS) 9° 21.33 N 81° 24.76 W	
			0510		005°									c/c 005°	

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	0016	+5	0516	PANAMA (CARIBBEAN)	9° 21.67 N	81° 28.37 W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
18	MAY	85	0516										(GPS) 9° 21.67 N 81° 28.37 W	DK
(138)			0516:21	005°									XNC 005°	
			0530		005°	7.7	1365	36811			015°	6	(GPS) 9° 23.35 N 81° 28.09 W	
			0537:36	001°									c/adj 001°	
			0540					36822					MAG HIGH	
			0600		001°	7.7	1700	36801			350°	6		
			0630		001°	7.2	2065	36871			340°	6		
			0639:46	357°									c/adj 357°	
			0700		357°	7.4	2620	36908			340°	5		
			0730		357°	7.4	2695	36994			000°	4		
			0738										(GPS) 9° 38.32 N 81° 27.02 W	
			0742	080°									c/c 080°	
			0747:44	080°									XNC 080°	
			0800		080°	7.8	2740	37011			030°	8		
			0817:28										(UP) 9° 40.17 N 81° 22.66 W 43/2/34 CT	
			0830		080°	7.4	2725	36975			045°	8		JET
			0900	075°	080°	7.4	2790	36916	---		030°	10	c/ADJ 075°	
			0930	074	074°	7.3	2830	36901	---		040°	10		
			1000		075°	7.3	2510	36936	---		050°	9	(UP) 1005:17 9° 42.41 N 81° 08.29 W 19°/2	
			1030		074°	7.0	2185	36970	---		050°	10	(UP) 1034:42 9° 43.33 N 81° 04.28 W 52°/2	
			1100		075°	7.6	1675	36971	---		045°	5	(UP) 1052:20 9° 43.83 N 81° 01.98 W 38°/2	
			1130		075°	7.5	1680	36992	---		030°	9		
			1200		075°	7.6	1775	37034	---		055°	9	(UP) 1221:01 9° 46.85 N 80° 50.55 W 14°/2	
			1217:31	002°									c/c 002°	
			1223:45	002°									XNC 002°	

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW8508	0730	+5	1230	OFF PANAMA (CARIBBEAN)	9°48.34' N	80°49.82' W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
18	MAY	85	1230		001°	7.6		1675	37102			045°	8	(NU) 1234.51Z 9°48.34' N 80°49.82' W 5/11/11 CT	JET
			1300		001°	7.8		2105	37131			050°	4		DJH
			1330		001°	7.9		2424	37158			025°	8		
			1400		001°	7.8		2514	37185			030°	8	(UP) 1355:02Z 9°58.57' N 80°48.83' W 19/2/33 CT	
			1430		001°	7.8		2945	37221			030°	8	(NU) 1421:13Z 10°02.16' N 80°53.62' W 86/5/31 CT	
			1500		000°	7.7		3295	37257			030°	10		
			1528	28	090°									c/c 090°	
			1530		VAR	7.7		3310	37252			050°	10		
			1534	30	090°									XNC 090° MAG HIGH 1516Z 37267	
			1600		090	7.4		3324	37234			005°	12	(UP) 1543:47Z 10°10.53' N 80°46.30' W 45/2/34 CT	
			1608	31	195°									c/c 195° (NU) 1607:23Z 10°10.28' N 80°43.39' W 4/2/22 CT	
			1615	28	195°									XNC 195°	
			1630		195°	7.7		3275	37256			328°	12		
			1700		195°	7.8		2705	37245			330°	10		OK
			1730		195°	7.3		2625	37190			330°	8		
			1800		195°	7.3		2580	37147			340°	8		
			1830		195°	7.6		2325	37121			355°	4		
			1900		195°	7.4		2055	37103			355°	4		
			1914		090°									c/c 090°	
			1921	14										XNC 090°	
			1921	30										R/S 5 KI. SEA MARK CHECK - MAG/AG's off	
			1930		091°	4.7		1650	—			336°	10		
			1941	25										MISTAKE ERROR	
			2000		091°	5.4		1760	—			336°	10		
			2003	11	195°									c/c 195°	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	1511	+5	2011	PANAMA (CARIBBEAN)	9° 45.90 N	80° 42.51 W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
18	MAY	85	2011:57	195°									XNC 195°	DK
			2012:16										(UP) 9° 47.33 N 80° 42:41 W 43/2/34 CT	
			2022:15	270°									c/c 270°	
			2028:32	270°									XNC 270°	
			2029:07										1/5 2.5 Kt	
			2036:		270°	VAR	1595	37013			060°	6		
			2047:30	011°									c/c 011°	JET
			2055:36	011°									XNC 011°	
			2100:		011°	7.1	1630	37054			010°	12		
			2130:		010°	7.3	1870	37105			015°	12		
			2200:		011°	7.1	2315	37113			010°	14	(UP) 2200:21 9° 54.67 N 80° 43.55 W 19°/2	
			2216:	015°									c/ADS 015° (UP) 2216:11 Z 9° 56.61 N 80° 42.93 W 36/1/24 CT	
			2230:		015°	7.2	2555	37129			010°	14		
			2300:		015°	7.1	2680	37156			015°	14		
			2305:	020°									c/c 020°	
			2330:		020°	7.1	2800	37189			010°	12		
19	MAY	85	0000:		020°	7.0	3225	37211			010°	12	(UP) 0002:47 Z 10° 08.93 N 80° 34.14 W 20/2/29 CT	
			0030:		020°	7.0	3320	37235			025°	14		
			0100:		020°	7.1	3373	37263			020°	12		
			0113:08	090°									c/c 090°	DJH
			0117:46	090°									XNC 090°	
			0130:		090°	7.1	3407	37268			350°	18	(UP) 0136:57 Z 10° 17.07 N 80° 31.69 W 12/2/29 CT	
			0200:		090°	7.1	3245	37273			350°	18	(UP) 0202:25 Z 10° 17.13 N 80° 28.39 W 63/2/28 CT	
			0230:		090°	7.2	3217	37256			350°	20		
			0300:		090°	7.1	3111	37260			355°	18		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME				CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST		
R/V MOANA WAVE				MW 858		2230	+5	0330	OFF PANAMA (CARIBBEAN)	10° 17.1 N	80° 17.5 W	Silver		
DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
19	MAY	85	0327	04	206°								C/C 206°	DJH
(139)			0330		VAR	6.8	3036	37261			330°	18		
			0335	22	206°								XNC 206°	
			0400		205°	7.4	3048	37257			280°	8	(UP) 0349:13 Z 10° 15.03 N 80° 17.35 W 10/2/24 CT	
			0430		205	7.4	3092	37237			280°	10		
			0500		206°	7.6	3025	37219			280°	10	(GPS) 10° 07.65 N 80° 20.90 W	DK
			0530		206°	7.5	2840	37169			290°	8	(GPS) 10° 04.60 N 80° 22.33 W	
			0557	10	208°								Yadj 208°	
			0600		208°	7.3	2695	37136			295°	10	(GPS) 10° 01.45 N 80° 23.79 W	
			0621	38	211°			37123					Yadj 211°	
			0630		211°	7.5	2375	37123			290°	10	(GPS) 9° 58.50 N 80° 25.39 W	
			0700		211°	7.5	2435	37106			280°	8	(GPS) 9° 55.70 N 80° 27.14 W	
			0730		211°	7.4	2025	37099			300°	8	(GPS) 9° 52.83 N 80° 28.90 W	
			0800		211°	7.5	1770	37060			300°	10		
			0804	45	090°								C/C 090°	
			0754	23									(UP) 9° 50.37 N 80° 30.25 W 31/2/34 LT	
			0812	48	090°								XNC 090°	
			0830		090°	7.1	1905	37006			355°	12		
			0900		090°	7.0	1995	36997			010°	12		
			0930		090°	7.0	1975	37003			355°	16	(UP) 0942:41 9° 48.89 N 80° 18.78 W 27°/2	
			1000		090°	7.0	1655	37015			350°	14		
			1030		090°	7.0	1370	37021			340°	14		
			1100		090°	7.0	1050	37024			350°	14		
			1130		090°	7.0	1200	37021			345°	16		
			1200		090°	7.0	1050	36998			340°	14		

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	0700	+5	1200	OFF PANAMA (CARIBBEAN)	9°49.4N	80°01.2W	SILVER

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND DIRECTION KNOTS	COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION			
19	MAY	85	1230		090°	7.0	1160	36966			340° 15		JET
			1300		090°	7.2	1299	36938			330° 18	(NU) 1313:23Z 9°49.05N 79°51.25W 4/5/15 CT	OTH
			1330		090	7.1	1514	36929			330° 16	(UP) 1331:24Z 9°49.21N 79°48.76W 36/2/26 CT	
			1346									Interrupt Recorder #2 Proc. SS record - To repair the cyclic darkening of record.	
			1356									Recorder #2 back on	
			1400		090°	7.1	1459	36906			325° 14		
			1430		090°	7.0	1603	36881			325° 18		
			1433	54	019°							c/c 019°	
			1438	54	019°							XNC 019°	
			1500		019°	7.0	1727	36966			350° 16		
			1530		019°	6.8	2024	37035			005° 18	(UP) 1520:58Z 09°54.47N 79°37.99W 61/2/24 CT	
			1600		019°	7.0	2110	37084			350° 20		
			1630		019°	7.0	2042	37128			356° 18		
			1700		019°	6.8	2490	37177			005° 16		OK
			1730		019°	6.8	2245	37199			010° 16		
			1800		019°	6.5	2445	37228			010° 18		
			1830		019°	6.8	2875	37270			010° 18		
			1900		019°	6.8	3055	37321			010° 16		
			1930		019°	7.1	3100	37346			005° 18		
			2000		019°	7.0	3120	37367			005° 18		
			1949	31								(UP) 10° 24.90N 79° 25.13W 32/2/31 CT	
			2008		024°							c/adj 024°	
			2030		024°	6.8	3350	37383			005° 20		
			2100		023°	7.0	3460	37410			000° 20		JET
			2130		023°	7.0	3535	37428			005° 18		

VESSEL NAME				CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA		LATITUDE	LONGITUDE	CHIEF SCIENTIST		
R/V MOANA WAVE				MW8508		1700	+5	2200	OFF PANAMA (CARIBBEAN)		10° 39.5N	79° 19.0W	SILVER		
DATE			G M T		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR								GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
19	MAY	85	21	54	090°									9C 090° XNC 090°	JET
(139)			21	58	090°										
			22	00	090°	7.0	3535	37438				335°	18		
			22	30	090°	6.9	3537	37435				320°	20		
			22	31	201°										
			22	38	201°									9C 201° XNC 201°	DJH
			23	00	201°	8.0	3520	37416				215°	7		
			23	30	201°	7.7	3400	37404				215°	8		
20	MAY	85	00	00	201°	7.1	3015	37387				190°	5		
(140)			00	30	200°	7.4	3150	37357				210°	8		
			01	00	201°	7.7	3122	37332				220°	8	(UP) 0046:39 10° 24.74N 79° 20.28W 8°/2 (UP) 0112:44Z 10° 21.93N 79° 21.27W 25/2/27CT	DJH
			01	30	201°	7.5	3067	37298				210°	8		
			02	00	201°	7.7	2867	37260				215°	8		
			02	04	204°										
			02	24	208°										
			02	30	209°	7.8	2760	37230				180°	8		
			03	00	209°	7.8	2298	37199				215°	8		
			03	30	207°	7.7	2151	37164				215°	4		
			04	00	207°	7.8	2277	37131				190°	6		
			04	30	205°	7.6	2115	37085				185°	8		
			05	00	207°	7.6	2130	37037				185°	2	(GPS) 9° 55.05 N 79° 33.20 W (GPS) 9° 51.97 N 79° 34.69 W 9C 090° XNC 090°	DK
			05	30	207°	7.4	2125	36985				100°	6		
			06	00	207°	7.8	1940	36930				105°	8		
			06	22	090°										
			06	29	090°										

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME				CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE				MW8508	0130	+5	0630	PANAMA (CARIBBEAN)	9° 49.09 N	79° 35.33 W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
20	MAY	85	0630		090°	6.5	1625	36807			310°	18	(GPS) 9° 49.09 N 79° 35.33 W	DK
(140)			0700		090°	6.6	1615	36764			320°	16	(GPS) 9° 49.09 N 79° 31.58 W	
			0705	022°									c/c 022°	
			0709:30	022°									XNC 022°	
			0730		021°	6.6	1990	36872			005°	22	(GPS) 9° 51.51 N 79° 29.37 W	
			0731:19										(UP) 9° 51.73 N 79° 29.32 W 22/2/33 CT	
			0800											
			0752:10										1/5 7 Kt.	
			0800		021°	6.9	2140	36965			005°	18		
			0830		022°	7.2	2160	37040			005°	22		
			0900		021°	7.2	2160	37093			005°	20	(NU) 0856:25 10° 1.58 N 79° 24.53 W 5°/3 SET	
			0930		022°	7.0	2090	37155			005°	18	(UP) 0919:59 10° 04.65 N 79° 23.42 W 37°/2	
			1000		021°	6.8	2250	37210			005°	20		
			1030		020°	6.1	2515	37261			010°	22	(UP) 1020:06 10° 11.79 N 79° 19.94 W 26°/2	
			1043	019°							015°	22	9/2019 (NU) 1042:55Z 10° 14.45 N 79° 18.74 W 85/2/32 CT	
			1100		019°	6.2	2630	37297			015°	20		
			1130		019°	6.9	2920	37336			015°	22		
			1143	016°									c/ADT 016°	
			1200		013°	6.8	2885	37374			015°	21	(UP) 1204:57Z 10° 24.13 N 79° 15.20 W 30°/2	
			1230		016°	6.2	3010	37407			015°	20	(UP) 1241:17Z 10° 28.47 N 79° 13.73 W 12/2/21 CT	
			1300		015°	7.0	3211	37422			015°	20	(UP) 1309:12Z 10° 31.69 N 79° 12.80 W 71/3/22 CT	
			1330		014	7.0	3330	37446			015°	24		
			1400		015°	5.4	3541	37491			020°	22		
			1430		015	6.2	3527	37537			025°	22	(UP) 1427:38Z 10° 40.94 N 79° 10.71 W 58/2/30 CT	
			1443:19										R/S SKT (SeaMARC check)	

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	1000	+5	1500	OFF PANAMA (Caribbean)	10°44.25N	79°09.82	Silver

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
20	MAY	85	1500		05°	5.5	3525	OFF	5.5		025°	22	Sea MARC Check (NW) 1458:26Z 10°44.17N 79°09.55W	DJT
(140)			1530		049°	4.8	3525	OFF			000°	24	" " " 8512/34CT	
Approximate			1505		050°								1/2 050° [Note: There was no event marker so this time	
			1558:06		010°								1/2 010°	
			1600		VAR	5.8	3525	37553			330°	26		
			1602:20		010°								XWC 010°	
			1630		110°	6.4	3526	37539			315°	24		
			1655:45	202°									1/2 202°	DK
			1700		VAR	8.2	3525	37553			240°	14		
			1701:50	202°				357					XWC 202°	
			1730		202°	7.0	3525	37511			220°	11		
			1800		202°	6.8	3415	37498			220°	12		
			1814:43	204°									c/adj 204°	
			1830		204°	6.0	3150	37444			215°	10		
			1900		204°	7.1	3080	37433			210°	11		
			1930		204°	7.1	3160	37402			VAR	8		
			1926:35										(UP) 10° 22.96N 79° 02.10 W 22/2/33 CT	
			1950:15	210°									c/adj 210°	
			2000		211°	7.4	3080	37363			210°	10		
			2030		211°	7.3	3000	37341			205°	7		
			2100		211°	7.3	2645	37313			205°	11	(UP) 2115:07 10° 16.97N 79° 12.88W 39°/2	JET
			2130		210°	7.1	2760	37290			210°	10		
			2133	208°									1/2 ADJ. 208°	
			2200		207°	7.0	2685	37263			210°	9	(UP) 2153:03 10° 13.17N 79° 14.78W 11°/2	
			2230		207°	7.2	2105	37223			205°	12	(UP) 2224:32 10° 10.30N 79° 16.52W 60°/2	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	1730	+5	2230	OFF PANAMA (CARIBBEAN)	10° 9.5 N	79° 16.6 W	SILVER

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC.		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
20	MAY	85	2300		205°	7.1		2085	37179			205°	12		JET
			(140)		2305	30									
			2330		205°	7.0		2105	37123			215°	11	1/2 ADJ. 205°	
			2351	16	202°									(UP) 2337:39 10° 3.18 N 79° 19.69 W 50°/2	
														1/2 ADJ 202°	
21	MAY	85	0000		202°	7.0		2220	37057			215°	11	(UP) 0011:15 10° 00.00 N 79° 21.13 W 11°/2	
			(141)		0030	201°	7.0	2165	37026			210°	10	(NU) 0023:07Z 9° 59.02 N 79° 21.88 W 6/3/12 CT	DJH
			0100		201°	7.2		2157	36968			190°	10		
			0130		201°	7.1		1746	36889			225°	10		
			0200		201°	6.8		1116	36765			215°	10		
			0202	00	090°									1/2 090°	
			0209	20	090°									XNC 090° (NU) 0208:52Z 9° 48.05 N 79° 25.22 W 84/13/33 CT	
			0230		089°	4.2		0845	36760			325°	22	(UP) 0240:52Z 9° 47.84 N 79° 21.98 W 69/2/34 CT	
			0245	00	025°									1/2 025°	
			0249	17	025°									XNC 025°	
			0255	16	022°									1/2 adj 022°	
			0255	32	022°									XNC 022°	
			0300		022°	7.0		1135	36830			005°	24	MAG HIGH 0404Z 37043	
			0330		022°	7.5		1750	36926			002°	22	MAG LOW 0425Z 37021	
			0400		022°	7.1		2169	37033			000°	24	(NU) 0355:53Z 9° 56.44 N 79° 16.62 W 4/2/18 CT	
			0430		022°	6.5		2195	37028			005°	24	(UP) 0428:03Z 10° 00.67 N 79° 15.50 W 10/2/26 CT	
			0500		022°	7.3		2090	37145			605°	24	(GPS) 10° 04.55 N 79° 13.34 W	
			0530		021°	7.4		2100	37217			605°	22	(GPS) 10° 08.41 N 79° 11.57 W	
			0600		023°	6.7		2340	37258			005°	22	(GPS) 10° 12.24 N 79° 09.75 W	
			0630		021°	6.4		2585	37285			010°	22	(GPS) 10° 16.16 N 79° 07.95 W	
			0649		020°									1/2 adj 020°	DK

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME				CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA		LATITUDE	LONGITUDE	CHIEF SCIENTIST		
R/V MOANA WAVE				MW 85 08		0200	+5	0700	PANAMA' (CARIBBEAN)		10° 19.28N	79° 06.88W	SILVER		
DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	GRAVITY		SPRING TENSION	DIRECTION	KNOTS			
21	MAY	85	0700:		020°	7.1	2605	37319				010°	22		DK
(141)			0708:01									°		(UP) 10° 21.02N 79° 05.78W 15/2/32 CT	
			0730:		020°	7.3	2700	37348				010°	24		
			0800:		020°	6.5	3155	37394				010°	22		
			0830:		020°	7.1	3185	37427				010°	22		JET
			0900:		020°	7.1	3235	37456	—			005°	22	(UP) 0857:12 10° 35.18N 79° 00.63W 54°/2	
			0911:	022°								°		c/ADJ 022°	
			0930:		022°	6.0	3335	37501	—			010°	22		
			1000:		023°	7.0	3530	37548	—			015°	25	(UP) 0953:45 10° 42.40N 78° 58.01W 33°/2	
			1009:	025°								°		c/ADJ 025°	
			1030:		025°	6.7	3520	37560	—			015°	22		
			1040:47	090°								°		c/c 090°	
			1044:18	090°								°		XNC 090°	
			1100:		090°	4.2	3520	37563	—			330°	30	(UP) 1056:21 10° 48.41N 78° 54.59W 67°/2	
			1128:	201°								°		c/c 201°	
			1130:		123°	7.2	3515	37600	—			300°	22		
			1135:20	201°								°		XNC 201°	
			1158:55	212°								°		c/c 212°	
			1159:31	212°								°		XNC 212°	
			1200:		213°	7.6	3515	37578	—			210°	8	(UP) 1140:07 10° 47.05N 78° 49.32W 24°/2	
			1230:		212°	7.2	3460	37545	—			210°	10	(UP) 1241:12 10° 40.72N 78° 53.04W 10/2/24CT	OUT
			1253:38	208°								°		c/adj 208°	
			1253:55	208°								°		XNC 208°	
			1300:		209°	7.3	3380	37573	—			224°	10		
			1330:		207	7.2	3259	37476	—			215°	12		

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW 8588		0830	+5	1330	OFF PANAMA (Caribbean)	10°35.13N	78°56.45W	Silover

DATE			GMT		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR								GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
21	MAY	85	13	37	47									(UP) 10°35.13N 78°56.45W 53/2/30 CT	DTH
			13	50	18	204°								c/adj 204°	
			13	50	35	204°								XNC 204°	
			14	00		204°	7.0	3199	37440			225°	15		
			14	30		203°	7.6	3151	37400			215°	15	(UP) 1435:31Z 10°29.16N 78°59.25W 67/2/34 CT	
			14	49	43	202°								c/adj 202°	
			14	49	52	202°								XNC 202°	
			15	00		201°	7.6	3070	37377			225°	15		
			15	30		201°	7.0	2587	37349			220°	15	(UP) 1524:09Z 10°24.27N 79°01.13W 14/2/24 CT	
			16	00		200°	6.7	2636	37328			215°	15		
			16	30		200°	7.0	2536	37304			230°	17	(UP) 1623:13Z 10°18.01N 79°03.38W 11/2/28 CT	
			17	00		200°	7.0	2635	37284			230°	14		OK
			17	30		200°	6.5	2070	37246			220°	12		
			18	00		201°	7.1	1980	37214			230°	12		
			18	30		201°	7.2	2140	37176			235°	12		
			19	00		201°	7.2	2025	37087			230°	11		
			19	03	29									(UP) 10°01.48N 79°09.14W 13/2/28 CT	
			19	18	20	205°								c/adj 205°	
			19	30		205°	6.8	2165	37038			230°	11		
			19	25					37034			215°		MAG Low (local)	
			20	00		205°	7.3	1940	37007			215°	12		
			20	25	07	207°								c/adj 207°	
			20	30		207°	7.3	1625	36893			220°	9		
			21	00		207°	7.1	1125	36812			215°	8	(UP) 2052:17 9°50.51N 79°14.37W 59/2	JET
			21	04	33	60°								c/c 60	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME				CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA		LATITUDE	LONGITUDE	CHIEF SCIENTIST	
R/V MOANA WAVE				MW 8508		1600	+5	2100	OFF PANAMA (CARIBBEAN)		9°49.43N	79°14.54W	SILVER	
DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
21	MAY	85	21 10 45	060°		4.8							XNC 60	JET
			21 30	065°	4.5	1235	OFF			350°	20	(UP) 2135:36	9°50.18N 79°12.51W 21°/2	
			22 00	061°	4.6	1545	36838			350°	18			
			22 29	020°									c/c 020°	
			22 30	039°	5.0	1835	36874			360°	16	(UP) 2229:06	9°52.47N 79°08.35W 33°/2	
			22 31 33	020°									XNC 020°	
			23 00	020°	6.4	2130	37002			025°	22			
			23 30	020°	7.0	2160	37066			020°	20	(UP) 2321:58	9°59.26N 79°05.39W 34°/2	
			23 32 55	018°									SAD 018°	
22	MAY	85	00 00	017°	7.6	1930	37146			015°	22	(UP) 0014:15 Z	10°06.28N 79°03.08W 17/2123CT	
			00 30	017°	6.3	1975	37195			015°	20			
			01 00	017°	6.1	2235	37242			025°	22	(UP) 0119:13 Z	10°15.03N 79°00.26W 36/2132	DJH
			01 30	017°	5.2	2695	422???			015°	24	MAGGIE has gone berserk!!!	0130Z MAGGIE OFF	
			02 00	017°	6.7	2527				010°	22	(UP) 0217:44 Z	10°22.89N 78°56.94W 48/2134CT	
			02 08 30	025°									Yadj 025°	
			02 09	025°									XNC 025	
			02 30	025°	5.5	2690				005°	24			
			03 00	024°	5.3	3137				005°	24	(UP) 0305:48 Z	10°29.09N 78°54.05W 20/2131CT	
			03 30	023°	4.6	3200				005°	24			
			04 00	023°	5.9	3261				010°	22	(UP) 0405:22 Z	10°36.74N 78°50.42W 17/2130CT	
			04 30	025°	5.4	3262				015°	22			
			05 00	025°	6.0	3510				020°	22	(GPS) 10° 43.87N	78° 42.34 W	OK
			05 30	025°	7.8	3510				020°	23	(GPS) 10° 42.75 N	78° 45.61 W	
			05 55 15	090°								c/c 090°		
			05 59 36	090°								XNC 090°		

VESSEL NAME				CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA				LATITUDE		LONGITUDE		CHIEF SCIENTIST
R/V MOANA WAVE				MW 8508		0100	+5	0600	PANAMA (CARIBBEAN)				10° 51.43 N		78° 43.63 W		SILVER
DATE			GMT		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER				WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR								GRAVITY	SPRING TENSION		DIRECTION	KNOTS			
22	MAY	85	0600			091°	5.9	3505	—					340°	22	(GPS) 10° 51.43 N 78° 43.63 W (NOTE: MAG OUT)	DK
	(142)		0623	30	205°									°		c/c 205°	
			0630			VAR	9.0	3500	—					VAR	10	(GPS) 10° 50.86 N 78° 39.67 W	
			0631	20	205°									°		XNC 205°	
			0644	41										°		(UP) 10° 48.87 N 78° 41.05 W 8/2/26 CT	
			0700			204°	7.7	3500	—					250°	10		
			0657	58		2								°		R/S 8 Kt.	
			0730			205°	7.8	3495	—					240°	10	(GPS) 10° 43.59 N 78° 43.12 W	
			0800			204°	7.8	3275	—					255°	10		
			0830			205°	7.2	3210	—					255°	10		
			0834	29										°		(NU) 10° 36.48 N 78° 45.53 W 79/3/34 CT	
			0900			205°	7.0	3180	—					245°	10	(UP) 0904:41 10° 33.40 N 78° 47.80 W 11°/2	JET
			0930			205°	6.8	3110	—					245°	10		
			1000			205°	7.0	3045	—					245°	10	(UP) 0947:55 10° 29.14 N 78° 49.69 W 15°/2	
			1000	31	203°									°		c/ADS 203°	
			1030			204°	7.0	2860	—					240°	10		
			1100			204°	7.0	2790	—					225°	10	(UP) 1051:16 10° 22.82 N 78° 52.30 W 65°/2	
			1130			205°	7.1	2340	—					210°	12	(UP) 1132:55 10° 18.71 N 78° 54.03 W 50°/2	
			1200		202°	205°	7.0	2765	—					220°	10	c/ADS 202°	
			1230			202°	7.0	2145	—					225°	12	(UP) 1248 Z 10° 11.05 N 78° 56.69 W 19/2/28 CT	
			1300			200°	6.7	1924	—					240°	10		DJH
			1304	07	205°				—					°		c/adj 205°	
			1304	26	205°				—					°		XNC 205°	
			1330			205°	7.1	1832	—					225°	10		
			1400			205°	6.2	1860	—					215°	10		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA		LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW 8508		0900	+5	1400	OFF PANAMA (Caribbean)		10°03.89N	78°59.55W	Silver

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
22	MAY	85	1430		205°	7.2	1880	—			225°	10	(UP) 1412:28Z 10°02.50N 79°00.03W 45/2/34 CT	DJH
			(142) 1500		204°	6.3	2153	37042			220°	10	MAGGIE ON LINE 1500Z	
			1530		207°	7.2	2113	36938			230°	08	(UP) 1434:28Z 10°00.24N 79°01.04W 41/2/34 CT	
			1600		205°	7.5	1934	36836			245°	08	(UP) 1600:28Z 9°51.64N 79°05.31W 19/2/33 CT	
			1630		209°	6.9	1673	36729			220°	06		
			1700		205°	7.1	1205	36749			205°	5		OK
			1711:15	065°							°		1/2 065°	
			1720:45	065°							°		XNC 065°	
			1721:15								°		R/S 5 KT.	
			1730		065°	4.3	1080	—			345°	12	MAG OFF - SEA MARC CHECK	
			1800		065°	5.4	1765	—			345°	12		
			1824:46								°		MAG ON (1813 Z) 1/5 7.5 KT	
			1830		065°	VAR	1920	36658			335°	18	18	
			1841:17	020°							°		1/2 020°	
			1844:12	020°							°		XNC 020°	
			1840:28								°		(UP) 9°42.55N 79°01.61W 7/2/24 CT	
			1900		020°	7.3	1965	36794			355°	18		
			1930		020°	8.4	2115	36918			355°	20		
			2000		020°	7.7	1975	37042			355°	18		
			2030		020°	7.9	1800	37120			005°	20		
			2029:35								°		(NU) 10°02.62N 78°54.14W 04/3/34 CT	
			2100		019°	7.0	1965	37171			055°	20		JET
			2130		019°	7.1	1910	37214			005°	20		
			2200		019°	7.3	2315	37251			005°	22		
			2230		019°	6.9	2585	37283			005°	20		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME				CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA				LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE				MW 8508		1800	+5	2300	OFF PANAMA (CARIBBEAN)				10° 19.2 N	78° 49.3 W	SILVER
DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER	
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS			
22	MAY	85	2300		019	7.9	2850	37312				010° 20		JET	
			2330		020	7.4	2905	37341				015° 20			
23	MAY	85	0000		021	5.5	3045	37403				015° 22		DJH	
(143)			0030		021	6.0	3090	37440				015° 22	(UP) 0029:44 10° 34.74 N 78° 42.07 W 12°/3		
			0100		019	6.3	3189	37451				015° 24		DJH	
			0130		020	6.1	3351	37504				015° 22			
			0200		020	7.2	3488	37544				010° 22	(UP) 0154:34 Z 10° 45.45 N 78° 37.60 W 33/2/34 CT	DJH	
			0230		021°	6.2	3490	37582				015° 22	(UP) 0215:48 Z 10° 48.15 N 78° 36.58 W 57/2/32 CT		
			0247	090°									c/c 090°	DJH	
			0251	58 090°									XNC 090°		
			0300		089°	6.5	3486	37568				330° 22		DJH	
			0323	205°									c/c 205°		
			0330		VAR	9.2	3479	37559				240° 10	(UP) 0342:48 Z 10° 49.68 N 78° 30.15 W 25/2/34 CT	DJH	
			0330	49 205°									XNC 205°		
			0400		205°	8.0	3479	37537				240° 10		DJH	
			0422	23 203°				37537				240° 10	c/adj 203°		
			0430		202°	8.1	3471	37519				245° 10		DJH	
			0500		203°	8.1	3125	37458				250° 10			
			0530		203°	7.9	3120	37415				255° 10		DJH	
			0600		203°	8.2	3110	37395				260° 10			
			0630		203°	7.8	3085	37359				260° 8		DJH	
			0700		202°	8.3	2960	37324				250° 12			
			0718	35 205°									c/adj 205°	DJH	
			0730		205°	8.2	2770	37302				255° 10			
			0800		205°	8.2	2545	37279				265° 10		DJH	

VESSEL NAME			CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW 8508	0330 0330	+5	0830	PANAMA (CARIBBEAN)	10° 15.24 N	78° 44.16 W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
23	MAY	85	0830		206°	8.4	2250	37261			245°	10		DK
	(143)		0811	45									(NU) 10° 17.54 N 78° 43.01 W 72/2/34 CT	
			0900		204°	7.8	1935	37228	—		245°	6		JET
			0930		205°	7.3	1845	37176	—		230°	10		
			1000		207°	7.3	1785	37136	—		225°	8	(UP) 1002:21 10° 05.21 N 78° 48.08 W 48°/2	
			1014	30	209°								%AD 209 EXPERIENCING PRECIPITATION (RAIN)	
			1030		209°	7.3	1910	37091	—		250°	2	(UP) 1024:31 10° 02.92 N 78° 49.19 W 39°/2	
			1100		209°	8.0	1940	37053	—		240°	12		
			1130		209°	6.9	2035	36997	—		200°	8		
			1137	20	205°								%ADJ 205°	
			1200		203°	7.0	2025	36892	—		200°	9	(UP) 1148:46 9° 54.44 N 78° 53.86 W 16°/2	
			1230		204°	7.0	1875	36798			180°	12	(UP) 1209:27 9° 52.39 N 78° 54.82 W 20°/2	
			1300		204°	7.0	1715	36651	—		240°	8	MAG LOW 1304Z 36634	DJH
			1330		205	7.1	1601	36661	—		240°	8	MAG HIGH 1325Z 36672	
			1358		050°								C/C 050° SEA MARC Check	
			1400		VAR	6.8	0881	36789	—		275°	8	(UP) 1349:25Z 9° 42.32 N 78° 59.94 W 30/2/28 CT	
			1410	32	050°								XNC 050° R/S 5.0 kt	
			1430		050°	3.7	1047	OFF	—		000°	10		
			1500		050°	4.6	1300	36738	—		030°	12		
			1502	38									7.5 7.0 kt	
			1530		050°	5.4	1595	36656	—		035°	12	(UP) 1530:57Z 9° 45.69 N 78° 54.32 W 8/3/18 CT	
			1540					36632					MAG LOW	
			1600		050°	5.4	1720	36674	—		345°	22		
			1606		023°								C/C 023°	
			1607	51	023°								C/C 023° XNC	

ELECTRONICS LAB WATCH LOG "A"

VESEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8588	1100	+5	1600	OFF PANAMA (Caribbean)	9°47.63N	78°52.21W	Silver

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND DIRECTION KNOTS	COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION			
23	MAY	85	1614:59									I/S 7.5 kt	DJH
			(143)										
			1630:		023°	5.7	1937	36789			005° 22		
			1700:		023°	7.2	2045	36934			010° 20		OK
			1730:		023°	6.8	1935	37013			010° 22		
			1800:		023°	6.9	1960	37077			010° 22		
			1830:		023°	6.8	1720	37131			010° 22		
			1900:		023°	6.6	1700	37181			010° 20		
			1930:		023°	7.0	1920	37233			005° 22		
			2000:		024°	6.8	2550	37263			010° 21		
			2006:49									(UP) 10° 16.86N 78° 38.24W 69/3/34 CT	
			2020:53	018°								%adj 018°	
			2030:		018°	6.0	2595	37286			010° 20		
			2100:		017°	7.2	3635	37306			005° 20		JET
			2130:		017°	5.2	2935	37333			005° 22	(UP) 2144:04 10° 28.92N 78° 32.90W 33°/2	
			2155:30	015°								%ADJ. 015°	
			2200:		015°	5.9	2980	37370			010° 22		
			2230:		014°	5.6	3091	37390			010° 20		
			2300:		014°	7.3	3225	37433			010° 22		
			2330:		014°	7.7	3415	37502			015° 20	(UP) 2330:40 10° 42.92N 78° 29.11W 22°/2	
			2348:	020°								%ADJ. 020° (UP) 2342:09 10° 44.32N 78° 28.69W 30°/2	
24	MAY	85	0000:		020°	7.5	3470	37535			010° 22		
			0030:	090°	025°	6.0	3475	37552			010° 22	%c 090°	
			0034:33	090°								XNC 090°	
			0100:		090°	6.4	3468	37533			330° 24		DJH
			0114:	205°								%c 205°	

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	2030	+5	0130	OFF PANAMA (CARIBBEAN)	10°48.95N	78°21.11W	Silver

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
24	MAY	85	0121:37	205°									XNC 205°	DJH
			0130:		205°	7.6	3462	37539			220°	10	(UP) 0125:56Z 10°49.35N 78°20.53W 53/2/33CT	
			0148:24	201°									c/adj 201°	
			0149:09	201°									XNC 201°	
			0200:		201°	7.2	3462	37515			225°	10		
			0230:		200°	6.9	3453	37484			225°	10		
			0300:		200°	7.0	3286	37430			225°	14		
			0330:		199°	7.1	3076	37391			240°	10	(UP) 0312:36Z 10°38.38N 78°25.33W 13/2/28CT	
			0400:		201°	7.2	3096	37369			230°	12		
			0430:		201°	6.9	3055	37359			240°	10		
			0500:		211°	7.0	2990	37337			220°	8		DK
			0518:19	201°									c/adj 201° (had shifted to 211°)	
			0530:		201°	7.0	2800	37321			240°	8		
			0600:		201°	7.0	2725	37301			245°	8		
			0630:		201°	7.0	2635	37277			260°	8		
			0638:25	203°				37277					c/adj 203°	
			0700:		203°	7.1	2520	37261			250°	8		
			0703:40	205°									c/adj 205°	
			0730:		205°	6.8	2120	37231			220°	7		
			0748:50										(UP) 10° 10.75 N 78° 35.69 W 49/2/34 CT	
			0800:		205°	7.2	1925	37189			220°	8		
			0802:	208°									c/adj 208°	
			0830:		208°	7.2	1600	37150			220°	8		
			0900:		207°	6.8	1580	37114			220°	5	(UP) 0913:17 10° 02.70N 78° 39.73W 17°/2	JET
			0930:		209°	6.9	1955	37066			220°	6	(UP) 0936:36 10° 00.39N 78° 40.98W 17°/2	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME				CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA		LATITUDE	LONGITUDE	CHIEF SCIENTIST		
R/V MOANA WAVE				MW 8508		0500	+5	1000	OFF PANAMA (CARIBBEAN)		9°58.1 N	78°42.2 W	SILVER		
DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	GRAVITY		SPRING TENSION	DIRECTION	KNOTS			
24	MAY	85	1000		209	7.1		1970	37017			215°	5		J&T
(144)			1007	205										°/ADJ 205°	
			1030		205	7.0		2045	36958			230°	6		
			1100		205	7.0		1970	36850			230°	5	(NU) 1059:49Z 9°52.15 N 78°45.24 W 44/2/21 CT	
			1130		205	7.0		1900	36792			215°	5		
			1200		205	7.5		1630	36668			240°	5	MAG. LOW	DJH
			1230		205	7.2		1085	36639			250°	5	1215 MAG HIGH	
			1235	060°										°/C 060° R/S 5.0K	
			1241:36	060°										XNC 060° (UP) 1254:49Z 9°42.46 N 78°49.12 W 27/2/31 CT	
			1300		059°	4.9		0988	DEF			350°	20	Sea MARC check	
			1330		061	3.6		1300	36668			355°	17	(UP) 1326:26Z 9°43.65 N 78°46.78 W 20/2/33 CT	OK
			1336:18									355°		I/s 7.5kt Drift do. it. were trying operating on 1 engine for awhile	
			1400		059°	5.0		1645	36743			357°	20	(UP) 1441:10Z 9°47.02 N 78°41.17 W 28/2/32 CT	
			1430		059°	5.0		1750	36707			355°	18		
			1432:03											I/s 7.5kt	
			1440:33	030°										°/C 030°	
			1443:14	020°										XNC 020°	
			1500		020	7.2		1829	36807			005°	20	(UP) 1515:07Z 9°51.35 N 78°39.29 W 42/2/34 CT	
			1530		020	7.2		1990	36946			005°	20		
			1600		019°	6.6		1961	37015			004°	21		
			1630		019	7.0		1783	37079			010°	20		
			1700		019°	7.4		1540	37135			015°	20		
			1730		025	7.2		1780	37186			005°	18		
			1731:21	020											
			1800		020	7.7		2110	37238			010°	18	°/adj 020 - had drifted off 020	

VESSEL NAME				CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA		LATITUDE	LONGITUDE	CHIEF SCIENTIST		
R/V MOANA WAVE				MW 8508		1330	+5	1830	PANAMA (CARIBBEAN)		10° 14.08 N	78° 30.04 W	SILVER		
DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	GRAVITY		SPRING TENSION	DIRECTION	KNOTS			
24	MAY	85	1830		020°	7.4	2415	37282				010°	20		OK
(144)			1900		020°	7.4	2735	37310				010°	17		
			1930		020°	6.8	2740	37325				010°	20		
			1943:58											(UP) 10° 25.77 N 78° 26.20 W 47/3/34 CT	
			1958	022°										c/adj 022°	
			2000		622°	6.8	3030	37343				000°	22		JET
			2030		021°	6.6	3075	37352				005°	20		
			2100		020°	6.0	3185	37380	—			005°	20	(UP) 2055:22 10° 34.91 N 78° 21.71 W 11 1/2	
			2130		022°	7.0	3410	37409	—			355°	18	(UP) 2132:04 10° 39.75 N 78° 19.83 W 17 1/2	
			2200		022°	7.2	3445	37419	—			355°	18		
			2220	100°										c/c 100°	
			2225:17	100°										XNC 100°	
			2230		100°	7.4	3445	37451	—			320°	18	(UP) 2233:30 10° 45.97 N 78° 14.81 W 54 1/2	
			2245:32	204°										c/c 204°	
			2250:27	204°										XNC 204°	
			2258:30					37437	—					R/S 6.0K (ENGINE WORK)	JH
			2300		203°	6.0	3430	37433	—			170°	4		
			2330		205°	6.1	3435	37415	—			175°	5		
			2334:30									175°	8	I/S 7.5 K (ENGINE WORK FINISHED)	
25	MAY	85	0000		206°	7.2	3435	37412	—			175°	8	(UP) 0018:45Z 10° 36.47 N 78° 17.20 W 9/21/19 CT	
(145)			0030		204°	7.1	3150	37391	—			180°	5	(UP) 0036:13Z 10° 34.53 N 78° 18.10 W 18/2/29 CT	
			0100		204°	7.2	2975	37354	—			180°	9	(UP) 0108:23Z 10° 31.16 N 78° 19.10 W 14/2/30 CT	
			0104:08	201°										c/adj 201°	
			0104:29	201°										XNC 201°	
			0130		203°	7.2	2791	37326	—			210°	8		

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	2100	+5	0200	OFF PANAMA (Caribbean)	10°25.41N	78°21.40W	Silver

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
25	MAY	85	0200		201°	7.2	2920	37297			205°	8		DJH
		(145)	0230		202°	7.5	2800	37268			205°	8	(UP) 0222:21Z 10°23.60N 78°21.82W 40/2/34 CT	
			0243										Proc 55 rec. of 6	
			0244										" " " m	
			0300		201°	7.4	2736	37253			215°	5	(UP) 0257:44Z 10°19.89N 78°23.05W 56/2/34 CT	OK
			0325	46	204°								c/adj 204°	
			0326	03	204°								XWC 204°	
			0330		204°	6.9	2430	37239			220°	5		
			0400		204°	7.0	2291	37210			205°	2		
			0430		205°	7.1	2045	37186			170°	4		
			0500		205°	7.3	1750	37132			220°	1		
			0530		204°	7.4	1475	37092			120°	1		
			0535	30	202°								c/adj 202°	
			0600		202°	7.1	1510	37054			100°	1		
			0630		202°	7.1	1880	37003			210°	1		
			0633	30	200°								c/adj 200°	
			0700		200°	7.4	1885	36955			235°	1		JET
			0711	55	200°								c/adj 200° - had drifted off original heading	
			0730		200°	7.1	1920	36901			090°	2		
			0732	32	198°								c/adj 198°	
			0725	54									(UP) 9°52.45N 78°34.87W 33/2/34 CT	
			0800		197°	7.0	1775	36798			VAR	1		
			0830		197°	7.1	1500	36699			040°	2		JET
			0825	00				36694					MAG Low	
			0900		199°	7.2	985	36788			040°	2	c/c 090°	

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MA8508	0900	+5	0900	OFF PANAMA (CARIBBEAN)	9°42.54N	78°38.05W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC.		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
25	MAY	85	0908	02	090°									XNC 090° (VP) 0914:11 9°41.49N 78°37.75W 26°/2	JET
			0930		090°	7.2		860	36740			335°	12		
			0941	00	023°									% 023° EXPERIENCING PRECIPITATION (RAIN)	
			0946	15	023°									XNC 023°	
			1000		023°	7.0		1380	36752			355°	12	(VP) 0952:33 9°42.43N 78°33.42W 24°/2	
			1030		023°	7.0		1735	36771			005°	15	(NU) 1010:51 9°44.52N 78°32.54W 71°/2 (N1)	
			1100		023°	7.0		1910	36884			355°	15		
			1130		022°	6.6		1880	36964			000°	15	(UP) 1137:29Z 9°54.62N 78°28.92W 34°/2/34 CT	
			1200		023°	6.8		1865	36989			005°	20	(UP) 1157:05Z 9°57.07N 78°28.00W 9°/2/21 CT	
			1208	00	025°									%ADJ 025°	
			1230		025°	7.1		1520	37047			015°	18		
			1300		024°	6.1		1735	37098			005°	20	(UP) 1303:35Z 10°04.96N 78°24.51W 13°/2/30 CT	DJH
			1330		024°	6.7		2120	37145			015°	18		
			1400		024°	7.4		2003	37199			005°	18	(NU) 1351:09Z 10°11.23N 78°21.82W 77°/2/30 CT	
			1430		024°	8.3		2212	37239			005°	18	(UP) 1452:33Z 10°19.19N 78°17.26W 60°/2/34 CT	
			1500		024°	6.5		2372	37265			005°	20		
			1507	25	020°									%adj 020°	
			1507	48	020°									XNC 020°	
			1530		020°	6.6		2950	37311			025°	20	(NU) 1537:17Z 10°24.98N 78°14.96W 3°/6/16 CT	
			1541	59	018°									%adj 018°	
			1542	07	018°									XNC 018°	
			1600		017°	6.1		3103	37344			020°	20		
			1630		017°	6.7		3192	37407			020°	18		
			1700		016°	7.6		3410	37465			010°	18		
			1707	15	018°									%adj 018° return to course	OK

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW8508		2000	+5	0100	OFF PANAMA (CARIBBEAN)	10°11.36N	78°15.46W	SILVER

DATE			GMT		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> FATHOMS	MAG.	GRAVIMETER		WIND DIRECTION	WIND KNOTS	COMMENTS	OBSERVER
DAY	MONTH	YEAR								GRAVITY	SPRING TENSION				
26	MAY	85	01	07:53	205°									c/adj 205°	DJH
	(146)		01	08:30	205°									XNC 205°	
			01	30	205° 205°		7.5	1873	37114			250	4	(NU) 0132:19Z 10°08.12N 78°17.17W 74/2/34CT	
			02	00	205°		7.5	1708	37095			250	2		
			02	30	205°		7.6	1778	37060			315	2	(NU) 0235:05Z 10°01.80N 78°19.60W 82/2/34CT	
			03	00	205°		7.6	1589	37024			345	2		
			03	30	205°		7.4	1463	36968			125	2	(UP) 0319:09Z 9°57.18N 78°22.51W 81/2/22CT	
			03	32	202°									c/adj 202°	
			03	32	46 202°									XNC 202°	
			04	00		203°	7.6	1870	36937			045	2		
			04	30		201°	7.3	1872	36888			085	1		
			05	00		202°	7.2	1905	36801			085	4		OK
			05	30		202°	7.1	1645	36752			060	1		
			06	00		202°	7.0	1100	36723			100	2		
			06	04	05 090°									c/c 090°	
			06	11	29 090°									XNC 090°	
			06	30		090°	7.0	1035	36701			325	12		
			06	48	15 025°									c/c 025°	
			06	52	40 025°									XNC 025°	
			07	00		024°	7.7	1475	36758			335	12		
			07	02	54									(UP) 9°40.07 N 78°24.55 W 22/2/34 CT	
			07	30		024°	8.0	1875	36779			350	16		
			08	00		024°	7.7	1855	36822			350	16		
			08	04	28 024°									c/adj 024°	
			08	36		023°	6.8	1825	36884			355	16		

ELECTRONIC LAB WATCH LOG "A"

VESSEL NAME				CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE				MW8508		0334+5	0836		PANAMA (CARIBBEAN)	9°50.91 N	78°19.74 W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
26	MAY	85	0836	023°								°		c/ad. 023°	DK JET
(146)			0900	022°		7.1			1380	36947		350°	18	(VP) 0851:33 09°53.10N 78°18.62W 38°/2	
			0917	021°								°		c/ADJ 021°	
			0930	020°		7.0			1550	37020		350°	18	(VP) 0921:45 09°56.71N 78°16.78W 27°/2	
			1000	019°		6.6			1740	37063		350°	18		
			1030	021°		7.0			1765	37104		350°	18	(VP) 1028:53 10°04.80N 78°13.07W 60°/2	
			1033	019°								°		c/ADJ 019°	
			1100	019°		6.7			1580	37144		350°	15	(VP) 1108:06 10°09.66N 78°11.32W 29°/2	
			1130	019°		7.5			1970	37137		355°	18	11:35 MAG. LOW	
			1148	017°								°		c/ADJ 017°	
			1200	019°		5.7			2330	37167		355°	18	(UP) 1213:38Z 10°17.70N 78°08.08W 12/2/26CT	
			1230	019°		6.9			2925	37287		000°	17	(UP) 1240:44Z 10°21.26N 78°06.69W 7/2/21CT	
			1231:30	015°								°		c/ADJ 015°	
			1300	015		6.0			2991	37389		002°	20	(UP) 1301:14Z 10°23.60N 78°05.46W 40/2/29CT	DJH
			1330	015		6.0			3225	37445		002°	18	MAG HIGH 1327Z 37450	
			1400	014		7.2			3387	37373		005°	20	MAG LOW 1359Z 37369	
			1423:37	035°								°		c/c 035° R/s 5kt 0730Z Sea MARC Check	
			1425:53	035°								°		XNC 035°	
			1430	034°		4.0			3395	OFF	Sea MARC check	000°	18	(NU) 1429:51Z 10°34.46N 78°01.54W 85/2/34CT	
			1500	034		4.0			3394	OFF		000°	16	(UP) 1447:32Z 10°35.72N 78°00.53W 19/2/29CT	
			1516	090°								°		F/c 090° I/s 7.5 kt	
			1519:26	090°								°		XNC 090°	
			1530	089		6.3			3790	37405		330°	18		
			1546	208°								°		c/c 198°	
			1554:31	208°								°		XNC 208°	

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW 8508		1100	+5	1600	OFF PANAMA (Caribbean)	10°36.49N	77°55.62W	Silver

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
26	MAY	85	1600	208°	207°	8.4			3381	37415		210°	2		DJH
(146)			1630	208°	209°	8.9			3382	37437		215°	2	MAG HIGH 1620Z 37441	
			1700		209°	8.2			3375	37397		170°	4		DK
			1730		209°	8.2			3250	37374		185°	2		
			1800		209°	7.9			3045	37330		210°	1		
			1830		209°	8.3			2850	37216		280°	2		
			1900		209°	7.8			2525	37105		329°	1		
			1858:01											(UP) 10° 16.54N 78° 04.04 W 21/2/32 CT	
			1930		209°	8.0			2175	37066		075°	4		
			2000		209°	7.9			1950	37089		065°	2		
			2030		207°	7.9			1500	37094		070°	4		
			2057:30	204°										✓ADJ. 204°	JET
			2100	202°	201°	7.8			1730	37066		060°	2	✓ADJ. 202° (UP) 2103:27 10° 03.01N 78° 10.97W 17/2	
			2130		201°	8.1			1600	37027		030°	4		
			2200		202°	7.5			1500	36992		060°	2	(UP) 2201:12 09° 56.23N 78° 13.80W 29/2	
			2230		202°	7.2			1205	36920		090°	1	(UP) 2249:38 09° 50.73N 78° 16.23W 42/2	
			2200		201°	7.2			1665	36857		075°	5		
			2304:00	200°										✓ADJ 200°	
			2330		208°	7.1			1840	36784		035°	5	(UP) 2346:12Z 9°44.21N 78° 18.82W 20/2/28 CT	
27	MAY	85	0000		200°	7.1			1855	36775		060°	8		
			0030		200°	7.0			1770	36792		075°	8	(UP) 0042:27Z 9°37.66N 78° 21.00W 26/2/30 CT	
			0100		200°	7.3			1059	36781		075°	6		DJH
			0103:06	090°										✓c 090°	
			0110:14	090°										XNC 090°	
			0200		090°	6.6			1285	36774		295°	8		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MLW 8588	2030	TS	0130	OFF PANAMA (CARIBBEAN)	9°34.60N	78°19.31W	Silver

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND DIRECTION KNOTS	COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION			
27	MAY	85	0135:00	024°							0	c/adj 024°	DJH
	(147)		0139:26	024°							0	XNC 024°	
			0200:	024	023°	7.3	1801	36807	---		330° 16	MAG HIGH 0203Z 36810 (UP) 0212:21Z 9°38.23N 78°16.69W 68/2/34 CT	
			0230:	---	023°	6.9	1830	36758	---		340° 17	(UP) 0228:50Z 9°39.96N 78°15.83W 28/2/32 CT	
			0300:	---	024°	6.9	1836	36720	---		345° 16	MAG LOW 0307Z 36717	
			0330:		023°	7.3	1700	36777	---		355° 16		
			0400:		024°	7.5	1337	36857	---		345° 16	(UP) 0359:32Z 9°49.52N 78°11.28W 10/2/25 CT	
			0430:		024°	7.3	1066	36913	---		355° 12		
			0500:		023°	7.1	1435	36971	---		355° 16		OK
			0518:10	022°							0	c/adj 022°	
			0530:		022°	7.1	1615	37016			355° 15		
			0600:		022°	7.0	1600	37063			355° 16		
			0630:		022°	6.6	1400	37100			355° 14		
			0639:36								0	(UP) 10° 07.08N 78° 03.56W 14/2/31 CT	
			0653:01	024°							0	c/adj 023 024°	
			0700:		024°	6.3	2130	37088			350° 17	1/3 7 Kt.	
			0721:14								0		
			0730:		023°	6.9	2375	37074			355° 17		
			0800:		024°	7.1	2700	37103			355° 16		
			0830:		024°	7.3	3010	37190			355° 18		
			0828:48								0	(UP) 10° 19.71N 77° 52.94W 55/2/33 CT	
			0900:		023°	7.1	3120	37264	---		000° 15		JET
			0930:		023°	6.6	3360	37358	---		355° 18	(UP) 9:20:15 10°25.75N 77°54.72W 14°/2	
			0933:30	021°							0	%ADJ 021	
			1000:		021°	7.6	3370	37433	---		355° 18		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	05:00	+5	10:00	OFF PANAMA (CARIBBEAN)	10°30.6N	77°52.6W	SILVER

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
27	MAY	85	1013	090°							°		c/c 090°	JET
			1017:20	090°							°		XNC 090°	
			1030	090°	7.6	3365	37440	—			320°	18		
			1043:10	206°							°		c/c 206°	
			1050:36	206°							°		XNC 206°	
			1100:	206°	7.3	3355	37415	—			180°	4	(UP) 1105:11 10°30.34N 77°47.96W 55°/2	
			1130:	206°	7.9	3355	37350	—			205°	6		
			1200:	207°	7.7	3345	37283	—			230°	5	(UP) 1211:19 10°23.51N 77°51.14W 14°/2	
			1230:	206°	7.7	3060	37218	—			215°	5		
			1300:	205°	7.5	2821	37209	—			195°	4		DJH
			1330:	205°	7.5	2579	37103	—			215°	15	(UP) 1357:47Z 10°12.58N 77°56.99W 54/2/27 CT	
			1400:	205°	7.6	2370	37073	—			215°	5	MAG LOW 1345Z 37057	
			1414:32	203°							°		c/c adj 203°	
			1430:	203°	7.4	1851	37112	—			245°	4	MAG HIGH 1435Z 37121	
			1500:	203°	7.7	1575	37107	—			265°	5		
			1530:	203°	7.9	1721	37073	—			270°	4		
			1600:	203°	8.0	1758	37015	—			240°	4	(UP) 1554:37Z 9°59.83N 78°03.23W 12/3/28 CT	
			1630:	203°	8.0	1554	36970	—			235°	2		
			1634:27	200°							°		c/c adj	
			1634:48	200°							°		XNC 200°	
			1700:	200°	7.7	1140	36912				255°	6		
			1730:	200°	7.6	1305	36854				285°	2		
			1800:	199°	7.7	1635	36787				310°	4		
			1830:	199°	7.8	1825	36741				305°	6		
			1834:53								°		(UP) 9°41.05N 78°10.26W 13/2/27 CT	

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	1400	+5	1900	PANAMA (CARIBBEAN)	9° 32.6 N	78° 11.45 W	SILVER

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
27	MAY	85	1900		200°	7.5	1815	36789			330°	6		DK
(147)			190640	203°									c/adj 203°	
			1936		203°	7.6	1785	36807			335°	4		
			2000		203°	7.8	1235	36728			330°	4		
			201310	090°									c/c 090° 2015Z → SEA MARC CHECK	
			202052	090°									XNC 090° R/S 5 Kt.	
			2036		090°	5.0	6630	—			355°	6	(UP) 2023:41 09° 28.98 N 78° 14.98 W 60°/2	
			2100		090°	5.3	1125	—			350°	5	DEPTH = 690 m	JET
			211630	023°									c/c 023°	
			212135	023°									XNC 023°	
			2130		023°	5.0	905	36764			345°	8		
			2200		022°	7.6	1300	36725			345°	12	(NU) 2200:28 09° 32.71 N 78° 08.49 W 73°/2	
			213730										Ys 7.5 K	
			2230		022°	7.9	1800	36775			340°	12		
			2236	024°									c/adj 024°	
			2300		024°	7.0	1805	36781			345°	12	(NU) 2237:25Z 9° 32.00 N 78° 07.06 W 80°/3/33 CT	
			2330		024°	7.4	1655	36753			345°	14	(UP) 2347:22 09° 44.98 N 78° 03.53 W 8°/2	
28	MAY	85	0000		024°	7.7	1170	36803			340°	15		
(148)			0030		023°	6.9	1125	36861			340°	16		
			0055										SEA MARC is back in operation (stbd & port side, both)	DJH
			0100		023°	7.6	1354	36918			345°	20		
			0130		023°	7.7	1700	36972			350°	18		
			0200		024°	7.6	1675	37025			350°	18	(UP) 0149:15Z 9° 59.39 N 77° 56.69 W 47°/2/34 CT	
			0230		023°	7.5	2048	37033			345°	18		
			0300		023°	7.1	2415	37074			345°	20		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	2230	75	0330	OFF PANAMA (Caribbean)	10°10.92N	77°51.75W	Silver

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
28	MAY	85	0330	024°	023°	7.4	2364	37076	---	---	350°	20	MAG HIGH 0313Z 37096	DJH
(148)			0400		023°	7.1	2653	37095	---	---	355°	20	MAG LOW 0342Z 37067	
			0430		023	7.0	2837	37164	---	---	355°	18	(UP) 0336:57Z 10°11.82N 77°51.50W 17/2/30 CT	
			0500		023°	6.9	3125	37212			355°	18		OK
			0530		023°	6.9	3340	37274			350°	12		
			0600		023°	7.5	3340	37337			005°	18		
			0606:45	090°							°		c/c 090°	
			0611:15	090°							°		XNC 090°	
			0616:17								°		(UP) 10° 29.80N 77° 42.41W 8/2/26 CT	
			0630		090°	7.7	3325	37270			325°	16		
			0639	204°							°		c/c 204°	
			0646:40	204°							°		XNC 204°	
			0700		204°	7.8	3325	37241			VAR	4		
			0730		204°	7.9	3330	37268			170°	2		
			0800		204°	7.8	3320	37240			155°	8		
			0806:05	203							°		c/c 203° (NU) 10° 21.46N 77° 42.87W 80/3/34 CT	
			0830		203°	7.5	3095	37148			160°	6		
			0900		203°	7.9	3005	37084	---	---	150°	2		JET
			0930		202°	7.9	2595	37069	---	---	140°	4	(UP) 0930:06 10° 12.34N 77° 47.07W 40°/2	
			0942:00	201°							°		c/adj. 201°	
			1000		200°	7.9	2265	37059	---	---	110°	4	(UP) 0956:49 10° 09.39N 77° 48.41W 37°/2	
			1030		200°	7.9	2295	37035	---	---	90°	2		
			1100		201°	7.7	2045	37006	---	---	150°	4		
			1130		202°	7.6	1910	37003	---	---	115°	5	(UP) 1116:31 10° 00.57N 77° 52.00 19°/2	
			1200		201°	7.9	1755	36971	---	---	105°	2	(UP) 1141:44 09° 57.85N 77° 53.18 23°/2	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	0700	+5	1200	OFF PANAMA (CARIBBEAN)	9°55.9N	77°54.00W	SILVER

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC.		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
28	MAY	85	1230	201°	200°	7.6	1100		36930			085°	4		JET
			1300		201°	7.8	1018		36879			085°	5		DJH
			1330		201°	7.8	1108		36817			100°	6	(UP) 1308:02Z 9°48.25N 77°57.05W 57/2/34CT	
			1400		200°	7.7	1296		36767			110°	6	MAG LOW 1358Z 36763	
			1430		201°	8.1	1779		36798			120°	4	(UP) 1343:49Z 9°44.31N 77°58.66W 44/2/34CT	
			1500		201°	7.8	1805		36856			105°	5	MAG HIGH 1450Z 36887	
			1530		200°	7.8	1779		36670			090°	2	MAG LOW 1525Z 36663	
			1600		201°	7.8	1204		36715			100°	4		
			1606:31	040°										c/c 040° R/S Skt Sea MARC Check	
			1618:21	040°										XNC 040°	
			1630		039°	4.2	1193		OFF	Sea MARC		325°	12		
			1642	090°										c/c 090° 1/3 7 Kt.	OK
			1657	090°										c/c 090°	
			1700		090°							305°	10		
			1700:24	090°										XNC 090°	
			1725:30	025°										c/c 025°	
			1729:52	025°										XNC 025°	
			1730		025°	7.0	1755		36620			330°	18		
			1800		024°	7.3	1720		36820			330°	18		
			1810						36888					MAG HIGH	
			1811:52											(UP) 9°34.89N 77°56.64W 7/2/23 CT	
			1823:46	019°										c/c 019°	
			1830		019°	6.7	1755		36791			330°	18		
			1900		019°	7.4	1185		36729			335°	18		
			1850						36719					MAG LOW	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW 8508		1430	+5	1930	PANAMA (CARIBBEAN)	9°43.91W	77°53.18 W	SILVER

DATE			G M T		INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR								GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
28	MAY	85	19	30		019°	6.8	1100	36766			335°	18		OK
(148)			20	00		019°	7.3	1020	36864			335°	19		
			20	05	03	018°								c/adj 018°	
			20	01	01									(NU) 9°42.61N 77°51.10W 85/3/34 CT	
			20	30		019°	7.0	1100	36914			335°	18		
			21	00		019°	7.0	1840	36939	—		345°	20	(UP) 09°55.92N 77°48.64W 27°/2 [2111:4.2]	JET
			21	30		019°	7.1	1675	36964	—		345°	20	(UP) 2129:11 9°58.07N 77°47.76W 16°/2	
			22	00		019°	7.0	2000	36959	—		350°	18		
			22	19	30									Proc SS off for cleaning	
			22	24										Proc SS on	
			22	30		019°	7.1	2225	36995			350°	20		
			23	00		019°	7.2	2640	37026	—		350°	20	(UP) 2258:11 10°08.75N 77°43.66W 27°/2	
			23	30		019°	7.1	3020	37011	—		345°	20	(UP) 2314:03 10°10.64N 77°42.91W 34°/2	
29	MAY	85	00	00		019°	7.2	2950	37019	—		345°	22		
			00	30		019°	7.0	3305	37138	—		350°	20	(UP) 0049:12Z 10°21.97N 77°38.53W 39°/2/26 CT	
			01	00		019°	6.0	3322	37252	—		355°	21		DJH
			01	12	00	090°								9c 090°	
			01	16	46	090°								XNC 090°	
			01	30		090°	4.6	3258	37229	—		300°	18	(UP) 0126:04Z 10°25.02N 77°36.05W 32°/2/34 CT	
			01	52		205°								9c 205°	
			01	59	39	205°									
			02	00		205°	8.2	2961	37229	—		150°	9		
			02	30		205°	8.3	3245	37157	—		100°	4	(UP) 0235:45Z 10°20.35N 77°34.29W 19°/2/32 CT	
			03	00		205°	8.1	3311	37079	—		090°	8	(UP) 0314:24Z 10°15.71N 77°36.38W 26°/2/34 CT	
			03	30		204°	8.3	3027	37026	—		090°	4		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	2230	+5	0330	OFF PANAMA (Caribbean)	10°14.03N	77°37.18W	Silver

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
29	MAY	85	0335	202°							°		c/adj 202°	DJH
(149)			0335:17	202°							°		XNC 202°	
			0400:		202°	8.1	2996	37001	—		095°	4		
			0430:		201°	8.0	2830	37001	—		110°	8		
			0500:		202°	7.7	2115	36933			120°	8		
			0530:		202°	7.7	1745	36916			VAR	6		
			0600:		202°	7.8	1535	36926			095°	6		
			0608:	201°							°		c/adj 201°	
			0630:		201°	7.7	1450	36928			120°	6		
			0700:		201°	7.6	940	36899			120°	5		
			0730:		201°	7.8	1215	36845			155°	5		
			0743:26								°		(NU) 9° 44.85N 77° 48.82W 71 1/2/34 LT	
			0800:		201°	7.7	1240	36737			150°	4		
			0830:		201°	7.5	1410	36694			140°	3	(VP) 0841:13 9° 38.03N 77° 51.16W 14 1/2	
			0900:		201°	7.7	1700	36682	—		135°	4		JET
			0930:		200°	7.7	1740	36788	—		005°	2	(VP) 0930:44 9° 31.96N 77° 53.36W 10°/2	
			1000:		200°	8.0	1750	36727	—		355°	2		
			1030:		201°	7.9	1080	36614	—		345°	4	(VP) 1027:45 9° 24.86N 77° 56.06W 54 1/2	
			1034:	090°							°		c/c 090°	
			1040:24	090°							°		XNC 090°	
			1100:		090°	7.5	905	36583	—		020°	10		
			1109:03	021°							°		c/c 021°	
			1113:45	021°							°		XNC 021° EXPERIENCING RAIN, THUNDER, LIGHTNING	
			1130:		020°	7.0	1460	36682	—		090°	5	11:15 DIGITAL SEISMICS DOWN FROM LIGHTNING.	
			1149:								°		DIGITAL SEISMICS BACK ON LINE	

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8508	0630	+5	11:30	PANAMA (CARIBBEAN)	9°24.82N	77°51.63W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
29	MAY	85	1200	021°	021°	7.0	1730	36898			045°	14	RAIN, THUNDER + LIGHTNING	JET
(149)			1230		021°	7.1	1710	36823			345°	4	(UP) 1218:16 9°30.18N 77°49.87W 20°/2	
			1300		020°	7.6	1639	36704			060°	5	MAG LOW 1313Z 36678	DJH
			1304:57	022°							°		c/adj 022°	
			1305:10	022°							°		XNC 022°	
			1400:		021°	7.5	1240	36703			345°	8	(UP) 1404:35Z 9°42.39N 77°45.75W 38/2/29 CT	
			1430:		021	6.9	1043	36772			325°	8		
			1416:12	024°							°		c/adj 024°	
			1416:29	024°							°		XNC 024°	
			1430:		024°	7.1	0843	36887			320°	10		
			1500:		024°	7.7	1198	36931			315°	10	(UP) 1509:15 9°49.87N 77°42.15W 28/2/34 CT	
			1530:		023°	6.8	1260	36943			315°	8	MAG HIGH 1522Z 36950	
			1536:49	021°							°		c/adj 021°	
			1537:04	021°							°		XNC 021°	
			1600:		020°	7.7	1792	36916			300°	6		
			1630:		020°	7.8	2415	36899			315°	8		
			1700:		020°	7.2	2885	36943			295°	6		
			1730:		020°	7.8	2775	36984			285°	6		PK
			1800:		020°	7.8	3290	37002			295°	6		
			1830:		020°	7.4	3290	37061			285°	6		
			1840:40	030°							°		R/S 5 Kt c/adj 030 SEA MARC CHECK	
			1900:		039°	5.1	3235	—			265°	6		
			1924:10	100°							°		c/c 100° 1/5 7.5 Kt.	
			1929:	100°							°		XNC 100°	
			1930:		100°	7.8	3230	37107			065°	4		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW8508	1438	+5	1938	PANAMA (CARIBBEAN)	10° 19.3 N	77° 27.2 W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> AM <input type="checkbox"/> MSEC	MAG.	GRAVIMETER			WIND DIRECTION KNOTS	COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION				
29	MAY	85	1948	202°								°	c/c 202°	DK
(149)			1938:20									°	(UP) 10° 19.30 N 77° 27.19 W 68/2/34 CT	
			1954:52	202°								°	XNC 202°	
			2000:		201°	7.8	3025	36998				025° 13		
			2030:		201°	7.9	3125	36909				030° 12		
			2023:05									°	(UP) 10° 15.37 N 77° 26.52 W 8/2/17 CT	
			2034:	204°								°	c/adj 204°	
			2100:		204°	7.5	3255	36920	—			020° 11		JET
			2130:		204°	8.0	3265	36890	—			025° 12	MAG. LOW (UP) 2126:02 10° 08.41 N 77° 29.69 W 10/3	
			2200:		203°	7.8	3270	36919	—			030° 12	(UP) 2205:24 10° 04.10 N 77° 31.21 W 46°/2	
			2230:		203°	7.7	2835	36920	—			030° 12		
			2300:		205°	7.8	2450	36912	—			025° 10		
			2330:		204°	7.8	2425	36904	—			030° 10	(UP) 2350:35 Z 9° 52.32 N 77° 36.30 W 11/2/20 CT	
30	MAY	85	0000:		204°	8.1	1645	36912	—			030° 11		
			0030:		204°	8.0	1505	36906	—			035° 10		
			0100:		203°	8.0	1314	36883	—			045° 10	(UP) 0103:10 Z 9° 43.98 N 77° 39.94 W 21/2/32 CT	BJH
			0130:		203°	8.0	0902	36801	—			045° 10	(UP) 0145:27 Z 9° 39.07 77° 42.22 W 55/2/34 CT	
			0158:02	200°	200°			36801	—			°	c/adj 200°	
			0159:24	200°				36801	—			°	XNC 200°	
			0200:		200°	7.8	0918	36692	—			060° 10	MAG LOW 0158 Z 36685	
			0230:		200°	7.9	1379	36751	—			060° 10		
			0300:		200°	8.1	1695	36823	—			055° 10	(UP) 0252:03 Z 9° 31.19 N 77° 45.73 W 39/2/34 CT	
			0330:		200°	7.8	1723	36837	—			050° 10	MAG HIGH 0316 Z 36865	
			0400:		199°	7.8		36609	—			055° 8		
			0412:18	090°								°	c/c 090°	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MONA WAU			MW 8508		2300	+5	0400	PANAMA (CARIBBEAN)	9°23.07N	77°48.92W	Silver

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					X	M		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
30	MAY	85	0419:19	090°										XNC 090°	DJH
			(150) 0430		090°	8.0		1301	36544			305°	8		
			0446:45	023°										c/c 023°	DK
			0451:11	023°										XNC 023°	
			0500:		023°	7.9		1705	36619			335°	13		
			0530:		023°	7.5		1700	36724			335°	14		
			0600:		023°	7.9		1605	36786			330°	12		
			0630:		023°	7.5		1215	36769			330°	12		
			0700:		023°	7.8		945	36811			325°	12		
			0730:		023°	7.6		1450	36912			330°	10		
			0735:30	024°										c/ad; 024°	
			0720:31											(VP) 9°39.17N 77°32.81W 48/2/33 CT	
			0742:30	025°										c/ad; 025°	
			0800:		025°	7.0		1500	36933			350°	18		
			0830:		024°	7.5		1910	36934			005°	18		
			0900:		024°	7.1		2440	36931			005°	18	(VP) 0908:09 9°51.74N 77°32.16W 17°/2	JET
			0930:		025°	7.0		2620	36930			355°	18	(VP) 0924:51 9°53.54N 77°31.01W 22°/2	
			1000:		024°	6.9		3075	36966			355°	18	(VP) 0938:34 9°55.13N 77°30.13W 60°/2	
			1009:	023°										c/ADJ 023°	
			1030:		022°	6.9		3240	36951			005°	18		
			1100:		022°	6.6		3255	36886			010°	18	(VP) 1109:41 10°05.62N 77°25.23W 37°/2	
			1118:31	090°										c/c 090°	
			1123:35	090°										XNC 090°	
			1130:		090°	7.4		3045	36837			335°	15	(VP) 1124:50 10°07.09N 77°24.02W 12°/2	
			1156:15		205°									c/c 205°	

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME			CRUISE & LEG NO.		LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE			MW8508		0701	+5	1201	PANAMA (CARIBBEAN)	10°07.00N	77°19.7W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH		MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR					<input checked="" type="checkbox"/> M	<input type="checkbox"/> MSEC.		GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
30	MA	1985	1200		187°	7.8			2860	36810		270°	5	(UP) 1124:50Z 10°07.09N 77°24.02W 12/2/24 CT	JET
			1200:45	205°										XNC 205°	
			1230		205°	8.0			3220	36881		250°	5	↑ Already recorded	
			1300		205°	8.3			3231	36981		240°	4	(UP) 1257:57Z 9°59.68N 77°22.68W 20/2/32 CT	DJH
			1330		205°	7.2			3198	37024		240°	5	(NU) 1314:37Z 9°57.98N 77°23.33W 22/2/34 CT	
			1400		205°	7.0			2809	36958		260°	4	MAG HIGH 1327Z 37034	
			1430		205°	7.0			2629	36951		240°	4	MAG LOW 1420Z 36934 (UP) 1446:33Z 9°48.73N 77°27.73W 42/2/33	
			1500		205°	7.0			2655	36970		185°	2	MAG HIGH 1456Z 36980 (UP) 1500:57Z 9°47.24N 77°28.07W 7/2/23	
			1530		204°	7.1			2162	36952		150°	2	MAG LOW 1525Z 36941	
			1600		205°	7.2			1625	36973		155°	1		
			1630		204°	7.3			1435	36984		155°	2		
			1700		205°	7.1			1205	36930		VAR	4		OK
			1730		204°	7.2			1365	36823		130°	2		
			1800		205°	7.3			1580	36750		110°	4	MAG LOW 1820Z 36724	
			1830		205°	7.0			1600	36734		120°	4		
			1900		205°	7.2			1690	36662		085°	5		
			1915:07											(UP) 9°21.06N 77°41.37W 44/2/34 CT	
			1930		205°	7.0			1635	36580		090°	4		
			1949:15	040										c/c 040° R/S 5/K4.	
			2000		VAR	5.2			1435	—					
			2006:20	040										XNC 040°	
			2030		040	3.5			1585	—					
			2053	090°										Ys 7.5K c/c 090	JET
			2055:40	090°										XNC 090°	
			2100		090°	7.0			1660	36586		275°	10	(UP) 2119:50 9°20.59N 77°37.14W 39/2	

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW8508	1600	+5	2100	PANAMA (CARIBE)	9° 20.89N	77° 38.93W	SILVER

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
30	MAY	85	2111:31	028°							°		4c 028°	JET
			(150)	2114:24	028°						°		XNC 028°	
			2130		027°	7.0	1680	36690	—		325°	18		
			2200		027°	7.2	1580	36684	—		320°	16		
			2230		027°	7.5	1170	36735	—		340°	20	(UP) 2241:37 9° 29.55N 77° 32.42W 63°/2	
			2300		027°	6.8	1175	36869	—		340°	18	(UP) 2306:29 9° 32.33N 77° 31.01W 18°/2	
			2318	41	026°						°		9ADJ, 026°	
			2330		025°	7.0	1935	36962	—		340°	21		
31	MAY	85	0000		025°	7.1	1775	36972	—		340°	22		
			(151)	0030	025°	7.3	2255	36931	—		345°	23	(UP) 0040:01 Z 9° 42.42N 77° 25.65W 13/2/22 CT	
			0100		025°	5.6	2300	36922	—		345°	24	(UP) 0055:35 Z 9° 44.19N 77° 25.08W 55/2/30 CT	DJH
			0130		025°	6.2	2600	36933	—		355°	24	MAG HIGH 0122 Z 26938	
			0200		025°	6.3	3160	36913	—		358°	22	MAG LOW 0150 Z 36900	
			0230		025°	6.4	3193	36975	—		355°	22	(UP) 0229:15 Z 9° 54.46N 77° 19.89W 57/2/34 CT	
			0241		090°						°		4c 090°	
			0245	13	090°						°		XNC 090°	
			0300		090°	6.1	3180	36953	—		320°	20	(UP) 0242:22 9° 56.04N 77° 18.99W 12/2/20 CT	
			0317	24	207°						°		4c 207°	
			0324	56	207°						°		XNC 207°	
			0330		207°	8.5	3160	36934	—		210°	4		
			0400		205°	8.5	3128	36877	—		005°	2		
			0430		207°	8.5	3123	36886	—		325°	2	MAG LOW 0410 Z 36857	
			0500		206°	8.6	2500	36914			060°	2		
			0530		206°	8.6	2415	36966			060°	2		
			0558	47							°		R/S 8 KT.	DK

VESSEL NAME			CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/y MOANA WAVE			MW 8508	0100	+5	0600	PANAMA (CARIBBEAN)	9° 37.84 N	77° 22.92 W	SILVER

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
31	MAY	85	0600		206°	8.3	2490	36957			100°	3		DK
	(151)		0630		206°	7.9	1750	36923			110°	6		
			0700		207°	7.9	1240	36846			095°	8		
			0652:32										(UP) 9° 29.36 N 77° 22.99 W 33/2/34 CT	
			0718	205°									c/adj 205°	
			0730		205°	7.8	1135	36719			085°	8	MAG LOW (0725) 36714	
			0800		205°	8.0	1500	36669			090°	8		
			0830		206°	7.9	1585	36641			105°	8		
			0857:66	090°									c/c 090°	
			0845:51										(UP) 9° 12.02 N 77° 35.00 W 26/2/29 CT	
			0900		151	7.8	1630	36595	—		220°	8		JET
			0905:21	090°									XNC 090°	
			0930		090°	7.0	1525	36535	—		295°	12		
			0940:33	030°									c/c 030°	
			0945:09	030°									XNC 030°	
			1000		030°	7.0	1270°	36557	—		345°	18	(UP) 1001:29 09° 16.46 N 77° 29.69 W 54°/2	
			1030		030°	7.4	1300	36634	—		345°	18	245 028 (UP) 1036:09 09° 20.19 N 77° 27.83 W 36°/2	
			1100:00	028°	027°	7.0	1060	36737	—		340°	18	S/ADJ 028°	
			1130		027°	7.0	1535	36788	—		340°	18	(UP) 1146:15 09° 27.71 N 77° 24.01 W 14°/2	
			1133:00	030°									S/ADJ 030°	
			1200		029°	7.0	1890	36901	—		345°	18		
			1230		029°	7.3	2470	36950	—		350°	16	(UP) 1224:54 9° 31.88 N 77° 21.59 W 30°/2	
			1300		029°	7.4	2548	37001	—		345°	18		DTT
			1330		029°	6.8	~2710	36999	—		350°	18	MAG HIGH/313Z 37000	
			1400		029°	5.9	3053	36943	—		350°	18		

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW 8588	0900	+5	1400	PANAMA (Caribbean)	9°41.63N	77°16.27W	Silver

DATE			G M T	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
31	MAY	85	1424:13	110°									c/c 110° (UP) 1411:11Z 9°43.19N 77°15.85W 26/2/27	DJH
			1428:49	110°									XNC 110°	
			1430:		110°	7.4	3076	36863	—		300°	18	(UP) 1423:48Z 9°44.52N 77°15.08W 61/2/30 CT	
			1454:11	206°									c/c 206°	
			1500:	206°	206°	8.4	3039	36887	—				XNC 206°	
			1530:		207°	8.5	3021	36987	—		090°	2		
			1600:		205°	8.6	2346	37023	—		170°	2		
			1630:		205°	8.7	2565	36965	—		120°	1		
			1700:		207°	8.1	2540	36917			040°	1		OK
			1730:		205°	8.2	1860	36821			225°	1		
			1800:		206°	8.0	1425	36715			300°	4		
			1830:		206°	8.2	1395	36592			340°	6	LOW 1842Z MAG 1164 - 36549	
			1900:		205°	8.2	1420	36574			115°	8		
			1852:08										(UP) 9°14.81N 77°28.16W 30/2/33 CT	
			1909:	300°									c/c 300°	
			1915:15	300°									XNC 300°	
			1930:		300°	7.8	1545	36534			010°	18		
			2000:		300°	7.1	1640	36589			010°	10		
			2030:		300°	7.4	1515	36596			355°	10	(UP) 2031:02 9°17.48N 77°38.92W 13°/2	
			2100:		300°	7.4	1625	36575	—		360°	10		
			2130:		299°	7.4	1620	36582	—		000°	10	(UP) 2133:09 9°21.69N 77°46.25W 24°/2	
			2200:		300°	7.4	1440	36614	—		010°	18	(UP) 2217:13 9°24.57N 77°51.81W 54°/2	
			2230:		300°	8.0	1370	36671	—		015°	14		
			2300:		301°	8.0	1470	36645	—		010°	12	(UP) 2318:09 9°28.57N 77°59.24W 23°/2	
			2330:		300°	8.0	1545	36625	—		000°	12		

ELECTRONICS LAB WATCH LOG "A"

VESSEL NAME	CRUISE & LEG NO.	LOCAL TIME	TIME ZONE	= GMT	AREA	LATITUDE	LONGITUDE	CHIEF SCIENTIST
R/V MOANA WAVE	MW8508	0070	+5	0000	PANAMA (CARIBBEAN)	9°31.39N	78°04.40W	SILVER

DATE			GMT	INTENDED TRACK	GYRO COURSE	SPEED IN KNOTS	DEPTH <input checked="" type="checkbox"/> M <input type="checkbox"/> MSEC.	MAG.	GRAVIMETER		WIND		COMMENTS	OBSERVER
DAY	MONTH	YEAR							GRAVITY	SPRING TENSION	DIRECTION	KNOTS		
01	JUN	85	0000		300	299°	8.0	1510	36667		010°	12	(VP) 0005:53 9°31.55N 78°04.85W 18°/2	JET
			0030			299°	8.0	1490	36728		005°	16		
			0100			300°	7.4	1590	36777		340°	18		
			0130			299°	7.4	1790	36816		000°	12		
			0200			299°	7.4	1825	36759		005°	12	(VP) 0152:08 9°38.58N 78°17.78W 41°/2	
			0230			299°	8.0	1835	36760		010°	14		
			0300			300°	8.0	1790	36754		350°	12		
			0330			298°	8.2	1665	36725		350°	12		DJH
			0400			300	7.8	1645	36716		335°	10		
			0430			299°	8.0	1724	36741		330°	17		
			0500			300°	8.0	1895	36779		330°	16		OK
			0530			299°	7.8	1920	36843		340°	11		
			0600			299°	7.3	2030	36913		310°	18		
			0603	268°							°		c/c 268°	
			0605	05 268°							°		XNC 268°	
			0630			267°	8.0	2065	36933		345°	16		
			0634	13							°		(VP) 9°54.98N 78°51.04W 19°/2/33 CT	
			0700			269°	7.8	2115	36934		355°	12		
			0730			267°	7.8	2125	36917		010°	12		
			0800			269°	8.0	2130	36934		005°	8		
			0800	25							°		(NU) 9°55.20N 79°01.75W 3°/2/18 CT	
			0830			269°	8.0	2135	36967		015°	10		
			0838	264							°		c/c 264° (VP) 0823:12 9°55.82N 79°04.94W 45°/2	
			0900			264°	7.9	1960	36973		005°	12	(VP) 0852:46 09°55.74N 79°08.23W 9°/2	
			0930			264°	8.0	1955	36992		008°	8		

ELECTRONICS LAB WATCH LOG "A"

