U.S. Dept. of Commerce/NOAA/Aircraft Operations Center — AOCWEB

Flt ID: HO10923	From: KMCF	To: KILM
Flt No.: 01 = 44	Blk In: 0139Z	ATA: 0134Z
ETD: 1700Z	Blk Out: 1659Z	ATD: 1709Z
ETE:	Blk Time: 8:40 (8.7)	Flt Time: 8:25 (8.4)
Sponsor Org: NASA	Program: CAMEX	Purpose: TS ~~HUBERT~~ HUMBERTO

AOC Personnel

AC:	TENNESEN ✓	Sys Eng:	DELGADO ✓
CP:	JAGGART ✓	Data Sys:	McMILLAN ✓
Nav:	NEUMAN ✓	Radar:	
FE:	BAST ✓	GPS/BT:	~~CHRISTNER~~
Avionics:	ROGERS ✓	Cld Phys:	
FD:	DAMIANO ✓		

Participating Scientists/Visitors/AOC

Name (Last, First)	Activity on Aircraft	Affiliation
CURRY	MECH	AOC
MARKS ✓	PI	HRD
GAMACHE ✓	RADAR	↓
BLACK, R ✓	PMS	↓
LANDSEA ✓	HAPS	↓
HUDSON ✓	# CCN	DRI

Proposed/Actual Mission/Remarks (Recco, Fixes, Storm, PENET, NHOP #)

Bal OW1 1736Z (13K) 9 5 of cntr (2029Z) 32°17' 67°14' NO KING JW went out JW out 23327

2158 3235 6707 32°20' N43eF 6716 2027Z

AF Fix 1749Z 31°55' 67°23' 987 Drop 985 EXT 84kts FL SE QUAD

NE 90KTS 1916Z 32°10' 67°22' 980

9 2158Z 32°38' 67°09'

2328Z NE OF CNTR 9 32°54' 67°00' 240034 OB 46 (3)

01362

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center AOCWF2

Flt ID: H010923	Time Off: 17092	Time On: 01342

	A/C (Take Off)	Wx Stn (Take Off)	A/C (Land)	Wx Stn (Land)
Pressure	1015.7	30.01 (1015.9)	1016.0	30.03 (1016.7)

	Number	Data Disposition/Date/Quality
Slow/Fast Flt Lvl Tapes	~~1~~ 2	
Radar Tapes		
Cloud Physics Tapes		
Video Tapes	4	
AXBT	18	
AXCP		
AXCTD		
Dropsondes	~~48~~	
Total Messages	46	# 2 recon 44 dropsondes

Video

	Forward	Left Side	Right Side	Down	Remarks
Time On					
Time Off					
Rate					

Remarks ~~305 218 8218~~ 45 (46)

305 218-8221

661-400-0674

Dropmessages

Bill DW2 01252

CAMEX (H. Humberto)

Flight #2 010923H

Sensor or system	Number or Name
INE	2
Accelerometer	2
Temperature Probe	1
Dew Point Probe	3 (Buck Research)
Altitude (for vertical wind)	RA159
Static Pressure	Rosemount Fuselage
Dynamic Pressure	Rosemount Fuselage
Time Source	Micro 99
Constants File	CO2012.CON

Notes:

There were no time/data gaps.

Numerous small spikes were noted in the output from fuselage static pressure, PSF, during the following periods: 1712Z - 1715Z, 1750Z - 1755Z, 1755Z - 1800Z, 1903Z - 1906Z, 1935Z - 1938Z, 1946Z - 1949Z, 2253Z - 2257Z, 2315Z - 2318Z and 0015Z - 0018Z. The spikes were removed and patched over.

The dynamic slip pressure (DBP) output experienced some problems during the period 212835Z - 213045Z. The erroneous data was removed and patched.

The dynamic attack pressure (DAP) output experienced some problems during the periods 1935Z - 1939Z and 2109Z - 2112Z. The erroneous data was removed and patched.

Several small spikes were noted in the output from the radar altimeter, RA159, during the following periods: 1746Z - 1748Z, 1956Z - 1958Z and 2053Z - 2055Z. The spikes were removed and patched over.

Numerous small spikes were noted in the output from the Buck Research Dewpoint probe, DW3, during the following periods: 1743Z - 1746Z, 1748Z - 1751Z, 1751Z - 1754Z, 2310Z - 2313Z, 2313Z - 2315Z and 2315Z - 2318Z.
The spikes were removed and patched over.

During periods of heavy precipitation, the dewpoint temperature, TD, was greater than ambient temperature, TA.

The Johnson-Williams Liquid Water probe stopped working at 23:30:20Z.

The King Liquid Water probe was inoperative for the entire flight.

All other instruments worked optimally during the flight.

	Takeoff	Landing
Aircraft static pressure	1015.7mb	1016.0mb
Corrected tower pressure	1015.9mb	1016.7mb

The aircraft INE positions were renavigated with respect to GPS.

SPECIAL NOTE!!! Locations 80, 81 and 82 of record five on the standard tape contain vertical ground, vertical air and vertical speeds, respectively, computed using Dave Jorgensen's vertical wind algorithm.
It is recommended that these values be used for vertical wind analysis.

Flight Director: A. Barry Damiano, (813) 828-3310 ext. 3073

Flight ID: H010923 **Page** 1 **of** 2

U.S. Dept. of Commerce/NOAA/Aircraft Operations Center Form 418-50

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T_a	T_d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
174000	2825	8037	59	60	231	3	-1.2	-31.8	4557	4824	1017.6	572.9	79.8	CLR
180000	2910	7903	66	67	222	8	-2.1	-15.7	4724	5003	1016.0	560.9	76.7	BTN CLD
183600	3019	7600	66	67	223	5	-2.2	-34.3	4723	5003	1016.9	560.5	76.3	CLD BLW
192100	3131	7222	71	71	293	14	-2.6	-15.5	4767	5034	1014.4	557.2	62.0	CLD BLW
194400	3210	7036	59	59	292	9	-.7	-28.1	4768	5036	1011.2	557.2	58.5	CLD ABV
195958	3219	6950	81	80	315	16	-1.6	-24.1	4770	5035	1013.0	557.1	70.3	(13) DROP
200419	3220	6926	89	87	320	20	-2.1	-24.2	4767	5030	1012.2	557.2	73.5	(15) DROP
201000	3221	6955	89	85	327	24	-1.0	-20.5	4768	5037	1010.6	557.1	69.3	(20) DROP
201258	3221	6839	94	90	331	27	-.9	-22.2	4768	5019	1009.6	557.3	71.0	(30) DROP
201553	3220	6822	95	334	30									XBT
201559	3220	6822	90	334	31									DROP
201834	3219	6807	96	90	351	30	5.6	2.5	3795	3970	1006.5	633.2	72.5	(35) DROP
202152	3217	6750	96	89	353	38	4.2	3.2	3820	3976	1004.5	630.5	73.4	DROP
202508	3217	6733	94	82	347	57	5.6	7.2	3855	3954	995.0	627.9	68.2	(28) DROP
203166	3217	6659	89	99	230	66	9.9	2.8	3910	3974	986.0	624.9	67.2	(30) DROP
203357	3217	6643	8											XBT
203400	3217	6643	89	105	197	69	6.8	.0	3828	3968	1002.6	630.7	72.4	(14) DROP
203712	3217	6626	89	102	194	58	4.8	.7	3814	3984	1007.1	631.5	74.9	(15) DROP
204008	3218	6611												XBT
204008	3218	6610					.7	-5.9	4523	4776	1009.0	572.1	61.7	(35) DROP
204324	3218	6554	89	99	201	38	-.8	-5.7	4711	4972	1010.6	561.4	67.4	(64) DROP
204627	3218	6538												XBT
204627	3218	6537	90	98	206	39	-1.6	-4.2	4711	4979	1013.2	561.4	70.4	DROP
205203	3219	6506	90	97	205	33	-.9	-13.5	4711	4986	1013.0	561.4	71.3	DROP (2)
212601	3433	6550			171	24								XBT
212610	3433	6551			171	24								(30) DROP
213333	3407	6610			128	22								XBT
213338	3407	6610			128	22								(51) DROP
213942	3343	6626			116	37								XBT
213947	3343	6625			116	39								20 DROP
214257	3332	6633			132	37								(20) (34) DROP
214615	3320	6640			125	43								XBT
214618	3320	6640												(50) DROP
214920	3309	6650			129	51								BAD DROP
215242	3257	6659			109	55								XBT
215247	3257	6659												(51) DROP
215624	3243	6707			76	32								(20) DROP
215943	3236	6709		CNTR										NOW DROP

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U.S. Dept. of Commerce/NOAA/Aircraft Operations Center — Form 414-50

Time	Lat	Long	Trk	Hdg	Wind Dir	Wind Spd	T_a	T_d	Press. Alt.	Geo. Alt.	Sfc Press.	Press. Sfc	Dyn. Press	Remarks
R220204	3221	6718	209	224	290	64	9.5	2.9						(30) DROP
220545	3207	6725	204	216	294	44	1.8	-1.8						(25) DROP
220903	3155	6732	205	215										NO W DROP
221152	3143	6739	205	212	286	35	-1.3	-25.3	5037	5315				XBT (22) DROP
221448	3131	6745	206	213	288	29	-2.9	-23.6						(27) DROP
221807	3116	6759	207	213	290	24	-2.1							NO W DROP
222314	3054	6807	206	209	274	18	-2.7	-23.9	5036	5331	1012.5			NO W DROP (15) DROP
222644	3039	6815	170	173										
224000	3047	6704	83	86	245	25	-3.5	-23.8	5034	5326	1014.4	537.7	65.7	BTN CLD
225621	3055	6536	51	53	218	30	-3.7	-22.0	5031	5329	1016.5	537.8	62.9	(22) DROP
230241	3119	6552												XBT
230246	3114	6552	330	324	217	33	-4.0	-22.1	5032	5328	1016.9	537.7	64.9	(16) DROP
230847	3142	6607	330	325	229	35	-3.7	-20.6	5032	5326	1012.5	537.8	61.5	(25) DROP
231149	3154	6615	330	320	237	39	-3.1	-8.6	5033	5312				NO CLD DROP
231502	3206	6623	329											XBT
231516	3206	6623	328	320	222	49	-1.7	-12.0	5034	5300	1005.5	537.8	61.3	(66) DROP
231803	3217	6631	330	319	223	55	-2.1	-4.4	5034	5300	1005.6	537.8	62.0	(83) DROP
232108	3229	6639												XBT
232111	3229	6639	331	318	229	68	6.9	1.1	3824	3955	997.2	630.2	64.1	DROP
232425	3241	6647	330	316	211	75	8.7	4.4	3811	3866	985.7	633.0	66.3	(21) DROP
233000	3303	6706												(23) DROP
233258	3313	6716	320	331	87	50	4.6	5.5	3678	3818	1005.1	644.1	67.5	(15) DROP
233600	3325	6728	316	325	78	42	4.3	3.0						(18) DROP
233854	3333	6738												XBT
233858	3333	6738	316	325	81	37	3.2	3.1	3683	3866	1013.1	642.3		(36) DROP
234204	3344	6750	317	322	80	21	1.8	1.8	4032	4269	1014.0	647.3	64.6	(18) DROP
234500	3353	6800												XBT
234505	3353	6800												(26) DROP
235107	3413	6822												XBT
235111	3413	6822	316	320	41	13	-6.9	-20.2	5636	5964	1013.1	495.8	80.4	(60) DROP
235636	3433	6845												XBT
235639	3433	6845	318	320	356	8	-7.1	-23.1	5638	5971	1013.6	495.6	87.5	(28) DROP
235953	3436	6902	258	260	19	8	-8.3	-20.5	5639	5968	1015.3	495.6	89.5	XBT
005200	3426	7421	269	270	262	11	-9.3	-12.6	5638	5951	1016.3	495.7	92	DARK

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COVES EXPERIMENT

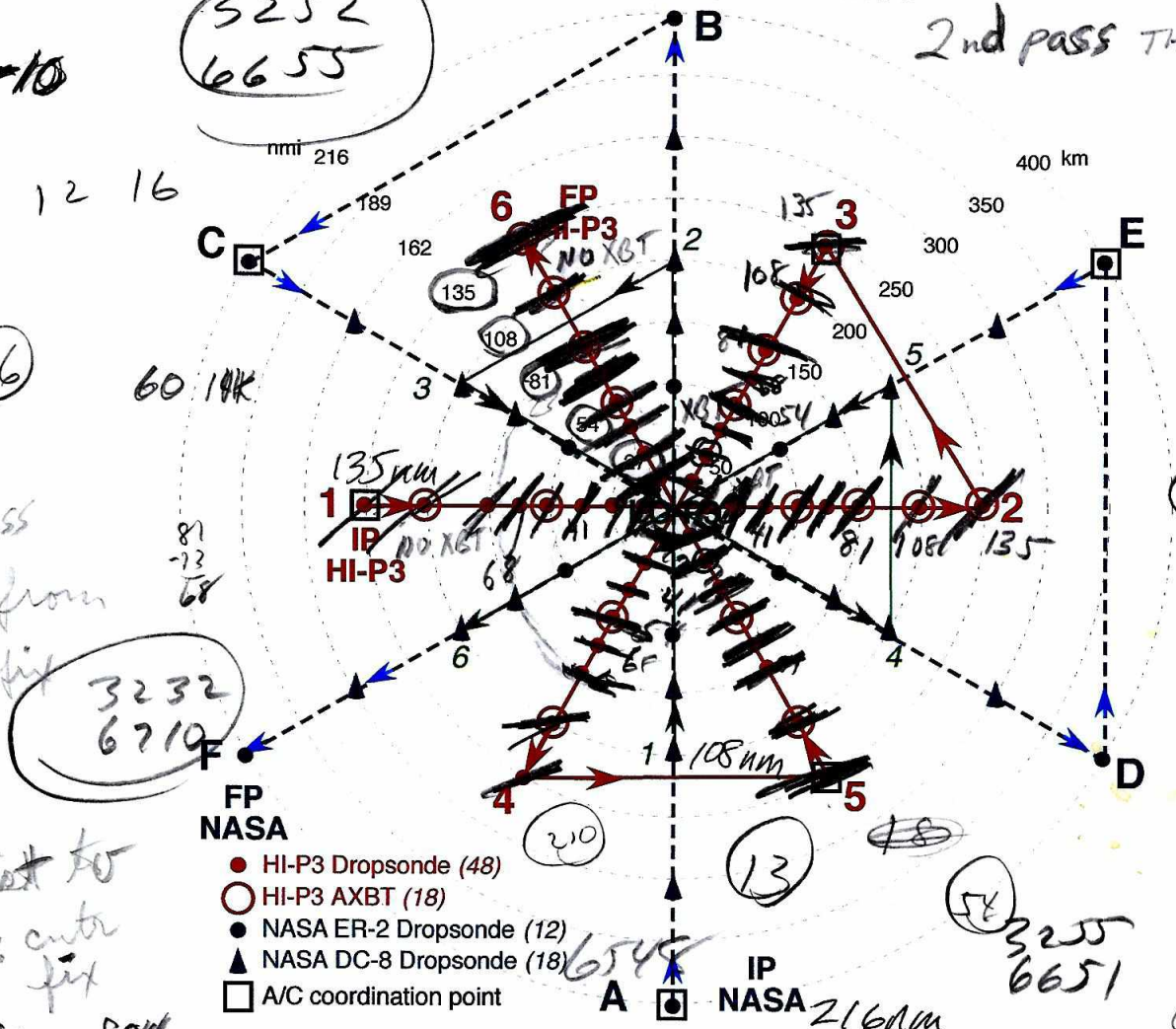

Fig. 3. Coordinated Short Pattern: (a) Upper WP-3D, DC-8, and ER-2

• Note 1.	All aircraft should reach their respective IP's as simultaneously as possible, and the upper WP-3D is responsible to ensure that all aircraft depart the coordination points together.
• Note 2.	Aircraft should not deviate from pattern to find the center in the eye.
• Note 3.	The pattern may be entered at any compass heading and the DC-8 and ER-2 entries should be along the same heading as the lower WP-3D, 90° downwind from the upper WP-3D.
Note 4.	The DC-8 should attain the 250-hPa level (about 37,000 ft or FL370) as early in the mission as possible and then maintain this altitude for the duration of the pattern. Upper WP-3D should begin the pattern at 18,000 ft, then climb to maintain maximum safe altitude.
• Note 5.	WP-3D Doppler radar should be operated in F/AST mode at a single PRF ≥2400 and 20° tilt.
• Note 6.	GPS-sondes and the downward-pointing laser on the NASA aircraft may pose a hazard to the WP-3D or WC-130. Communication with these aircraft is the responsibility of the NASA aircraft and must be obtained before sondes are released.

N42RF AVAPS DropSonde Log

N42RF Project: _____ Flight ID 010923H

Mission: Humberto Flight #: _____ System Status: ✓ good

Drop #	Sonde Serial Number	Chn. #	Time (Zulu)	Press. offset	Winds time	Operator Initials	Comments / Drop Status/ Failure Reason	GOOD ☑
1	003 438 003	1	2000		13	MER		✓
2	003 438 032	2	2004		15			
3	603 438 053	3	2010		20			
4	003 338 085	4	2013		38?			
5	003 148 152	1	2016		??		X	
6	003 115 065	2	2018		?			
7	003 338 035	3	2021		?			
8	003 338 148	4	2025		28			
9	003 338 087	1	2031		30			
10	001 378 167	2	2034		14		X	
11	011 378 103	3	2037		15			
12	010 715 169	4	2040		35		X	
13	011 245 188	1	2043		64			
14	011 245 375	2	2046		?			
15	003 338 032	3	2052		12			
16	011 378 104	4	2126		30		X	
17	003 475 095	1	2133		51		X	
18	011 345 110	2	2139		29		X	
19	011 315 007	3	2143		25			
20	011 245 373	4	2146		?		X	
21	011 245 410	1	2149				NO launch Dat	
22	011 245 409	2	2152		51		X	
23	003 515 038	3	2156		20			
24	011 245 423	4	2157		~~16~~		NO winds	
25	011 315 008	1	2202		16			
26	011 345 108	2	2205		25			
27	011 378 110	3	2209				NO winds	
28	011 245 022	4	2211		22		X	
29	011 335 044	1	2214					
30	011 315 006	2	2218				NO winds	
31	003 115 291	4	2223		?			✓
32	011 378 105	4	2226		15			✓
33	~~003 155 222~~	2						

Drop #	Sonde Serial Number	Chn #	Time (ZULU)	Press. offset	Winds time	Operator Initials	Comments/ Drop Status /Reason for Failure	GOOD ☑
383	003 135 322	1	2256		22			✓
384	004 255 073	2	2302		16		X ch16	
385	003 115 195	3	2308		25			
386	003 148 191	4	2311				NO launch Det	
387	004 255 044	1	2315		66		X ch16	
388	011 315 004	2	2318		83			
389	003 825 193	3	2321		40		X ch16	
410	003 115 199	4	2324		21			
421	003 135 157	1	2330		23			
432	011 245 235	2	2333		10			
443	011 378 109	3	2336		18		X	
454	004 255 062	4	2338		36		X ch12	
465	003 115 230	1	2342		16			
476	003 115 197	2	2345		26		X ch12	
487	011 345 095	3	2351		60		X ch12	
498	011 245 346	4	2356		28		X ch12	
~~509~~	~~003 135 327~~	1	0000	NO	sonde		X ch12	
510		2						
521		3						
532		4						
543								
554								
565								
57								
58								
59								
60								

06/21/00

AVAPS HINTS

- N43's **RED PHONE** appears to interfere with AVAPS telemetry, don't allow its use while sondes are in the air
- ASDL transmits on 401.8MHz, and will trash AVAPS telemetry +/- 1 MHz from that point
- Rawinsondes transmit at 403.0. Caribbean taxi drivers and bandit radio stations transmit wherever they want.
- The sonde GPS Oscillator needs at least 2 minutes to warm-up and stabilize. If you drop early, the winds data (if any) will be initially not accurate and probably late.
- Below 10,000', open the P3 launch chute cover holes at least 2/3 of the way. From 10,000' to 18,000', open about ½ way, above 18,000' open 1/3 of the way.
- Dropping a backup sonde prior to selecting BEGIN **COLLECTING DATA** is the single most frequent operator error.
- 60 seconds is the cut-off time for Good vs. Late winds. If no satellites are locked on by 60 seconds, or no winds data by 80 seconds, drop the backup.
- Frequency block assignments: **Air Force - Block A** **N42RF - Block B** **N43RF - Block C** **N49RF - Bloc**
- P3 Drops only.... Shorten the ribbon to about 20" - 25"
- When sonde telemetry fails prematurely, wait until the normal drop time has elapsed to terminate data collection.
- If Pre-launch sonde telemetry is dependent upon hand position while holding the sonde in order to **NOT** generate CRC errors, the sonde transmitter is bad and it should not be dropped.

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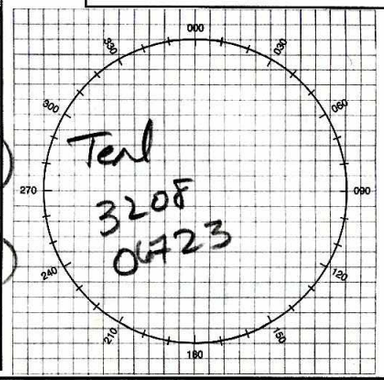
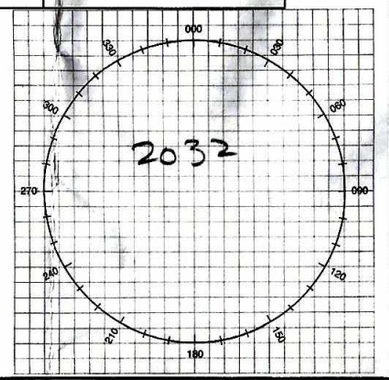
CLEARANCES			
FREQ	ALT	HDG	OTHER
			BRIST / WADE / CUMMY (CREDIT)
			66Φ3 NOAA 42
			66Φ7 NOAA 43

MISSION LOG PAGE ___ OF ___





POSITION REPORT

1. POSITION
2. TIME
3. ALTITUDE
4. NEXT POSITION
5. ETA
6. NEXT POSITION

EMERGENCY MESSAGE

TRANSMIT THE FOLLOWING MESSAGE TO ANY AGENCY ON THE AIR-GROUND FREQUENCY IN USE. IF UNABLE TO ESTABLISH COMMS, ATTEMPT CONTACT ON ANY OF THE FOLLOWING EMERGENCY FREQUENCIES:

UHF/VOICE	VHF/VOICE	MF/VOICE	HF/CW	MF/CW
243.0	121.5	2182 KHZ	8364 KHZ	500 KHZ

MAYDAY, MAYDAY, MAYDAY
THIS IS NOAA _____, NOAA _____, NOAA _____

- POSITION _____ N / S _____ E / W AT _____ Z
- HEADING _____ TRUE/MAG
- AT _____ KTS TRUE/INDICATED
- FLIGHT LEVEL OR ALTITUDE _____
- WE ARE A P-3 AIRCRAFT WITH _____ SOULS ON BOARD
- NATURE OF EMERGENCY
- ASSISTANCE DESIRED
- PILOT INTENTIONS
- WE HAVE _____ ENDURANCE REMAINING

TIME	FIX TYPE	POSITION	INS 1 POSITION	K ERR	INS 2 POSITION	K ERR	MH	VAR +E==>	TH	DR +R==>	TRK	GS	WD	WS	ALT	TAS	NEXT PT	DIST	TIME	ETA	REMARKS
1659	TAXI									VAR											57.8K 30.01 4
1709	TOFF																				
1742	△	28 31.3 80 25.1	28 31.2 80 24.8	-.1 +.3	28 31.5 80 25.0	-.2 -.2			058	1L	Ø57	287	234	4	15K	283	1P	547		194Ø	
TIME 1900 Z					32 16 N		67	12													980MB
TIME 1916		321Ø		67	22																
2002									203	2/31		cyc									41.7K
2113	△	33 43.1 65 23.9	33 37.8N 65 23.6	+5.3 +.3	33 43.3 65 23.8	-.2 +.1			358		337	292	164	3Ø	15.5	264					
2216								TIME	2336												31.1K
2259	△	31 04.9 65 40.2	30 58.4 65 41.3	+6.5 -1.1	31 04.3 65 40.2	+.6 Ø			313		317	264	224	25	16.5						
2330	FIX	32 48			67 Ø3																982 MB
0052	△	34 25.7 74 21.8	34 19.5 74 22.5	+6.2 -.7	34 24.1 74 21.8	+1.6 Ø			268	1L	267	306	264	14	18.5						
	CLM 7		CLR		30.03		17		11U												
Ø13B																					LAND
Ø139		CHOCK														61 KT		135.8		25.6	