

Flight ID: 20140702I1

<u>Sensor or system</u>	<u>Number or Name</u>
Static Pressure Probe	PSM.2
Dynamic Pressure Probe	PQM.2
Total Temperature Probe	TTM.1
Dewpoint Temp. Probe	TDM.2X
Vertical Accelerometer	AccZfilterI-GPS.1
Altimeter	AltGPS.3
INE Selection	1
Differential Attack Pressure Probe	PDALPHA.1
Differential Sideslip Pressure Probe	PDBETA.1
Dynamic Attack Pressure Probe	PQALPHA.1
Dynamic Sideslip Pressure Probe	PQBETA.1
Flight Directory	acdata/MET/2014/20140702I1

Local Met Data:	<u>Takeoff (1812Z)</u>	<u>Landing (0127Z)</u>
Aircraft Static Pressure	1013.6 mb	1012.8mb
Tower Pressure (corrected)	1013.6 mb	1013.6 mb

Notes:

The Edgetech dewpoint sensor (TDM.2) erroneously recorded unrealistic spikes in temperature at the following times: 20:11:57Z-22:12:38Z, 20:33:00Z-20:33:13Z, and 21:29:31-21:29:45Z. TDM.2 was manually corrected between these periods. Also, a number of anomalous -100m to -200m drops in the uncorrected Novatel (ALTGPS.4) data were observed throughout the flight. These anomalies were not present in the corrected Novatel (ALTGPS.3) data and therefore ALTGPS.3 was used as the altitude source for the entire mission. All other instruments performed nominally.

Takeoff/Landing data: Data during landing and takeoff are potentially suspect. It is recommended that ground data not be used for scientific analysis.

Supersaturation: It is common when flying through heavy precipitation in tropical environments to observe dewpoint temperatures that exceed the ambient temperature and generate relative humidity values that exceed 100%.

SPECIAL NOTE!!! The variable names dpj_wgs, dpj_was, and dpj_wz in the netCDF file represent vertical ground, vertical air, and vertical wind speeds respectively, computed using Dave Jorgensen's vertical wind algorithm. It is recommended that these values be used for vertical wind analysis.

Expendable Type	Number deployed	Number good	Number of messages transmitted
GPS dropwindsonde	22	21	21
AXBT	0	0	0
Test Sondes	0	0	0

Flight Director:
Phone #:

Mike Holmes
(813) 828-3310 ext. 3140

U.S. Dep't. of Commerce / OMAO / NOAA / Aircraft Operations Center

FLT ID: 20140701I1 From: KMLF → TS Arthur To: KMLF
 FLT #: 1 Blk In: 0137 Z Lnd Time: 0527 Z
 ETD: 18Z Z Blk Out: 1803 Z T/O Time: 1812 Z
 ETE: 03/02Z Total Blk: 7.6 Total Flt: 7.3
 Sponsoring Org: HRD Program: 0801A/Cyclon Purpose: TS. Arthur

AOC Flight Crew

Aircraft Commander: CAPT Halverson SSA: Machir
 Co-Pilot: LCDR Martin 1 LCDR Didier AVAPS: Wernecke 1
 Navigator: LCDR Sloan 1 Scientists: Sim Aberson
 Flight Eng: Hystek 1 Lalonde Scientists: Jun Zhang
 Flt Director: Holmes 1 Sears Scientists: Kathryn Selwood
 SEB: T Lynch 1 Scientists:
 Crew Chief: Visitors: Joseph Patton / Kelly Nunez Ocasio 1 Randall Hargett

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure				

AS REQUIRED BY ORM	YES / NO	REMARKS
VOLCANIC ASH	✓	
SCIENCE MISSION WITHIN BOUNDARY LAYER	✓	
LACK OF PRECIPITATION	✓	
RELATIVE HUMIDITY AT OR ABOVE 80%	✓	
LARGE AIR-SEA TEMPERATURE GRADIENT	✓	
HIGH SURFACE WINDS	✓	
LONG FETCH AND/OR DURATION OF SFC WIND	✓	
SEA SALT ACCRETION FORECAST	✓	
SEA SALT ACCRETION OBSERVED	✓	

Dropsondes	22	Good: 21	Bad: 1	Sent: 21
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AXBT	0	Good:	Bad:	Sent:
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List other data sources in Remarks section

Remarks (Storm VDM Identifier, Mission ID, Fix Times)

Fix #	VDM	
	Ob Num	Fix Time / SLP

 Storm Number Identifier (VDM):
 (ie: AL072012)

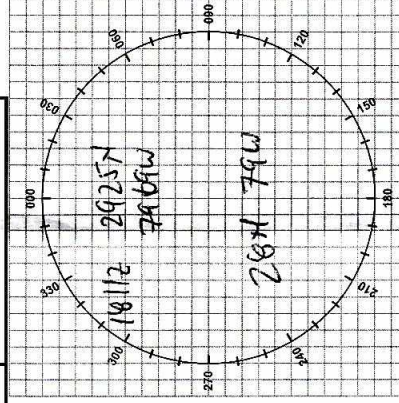
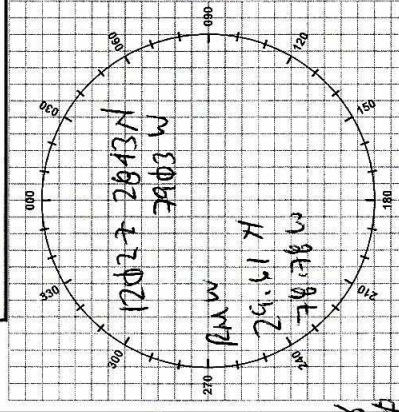
 TCPOD/WSPOD Mission ID:
 (ie: NOAA2 2418A SANDY)

Remarks:

22 sondes 1 bad

QWY 27	CHC	NR F	QWY	HV	T	19φ	1.6L

CLEARANCES					
FREQ	ALT	HDG	OTHER		
135.75	JAX	BK			12095
120.15	CAL MAF				
126.35	JAX				
119.82	MIA				
				(5) H 3017 W 07409	00021
				(4) H 3004 W 7907	2329
				(3) H 3001 W 7906	2261
				(2) H 2944 W 07906	2834
				(1) H 2930 35 W 07908.4	191

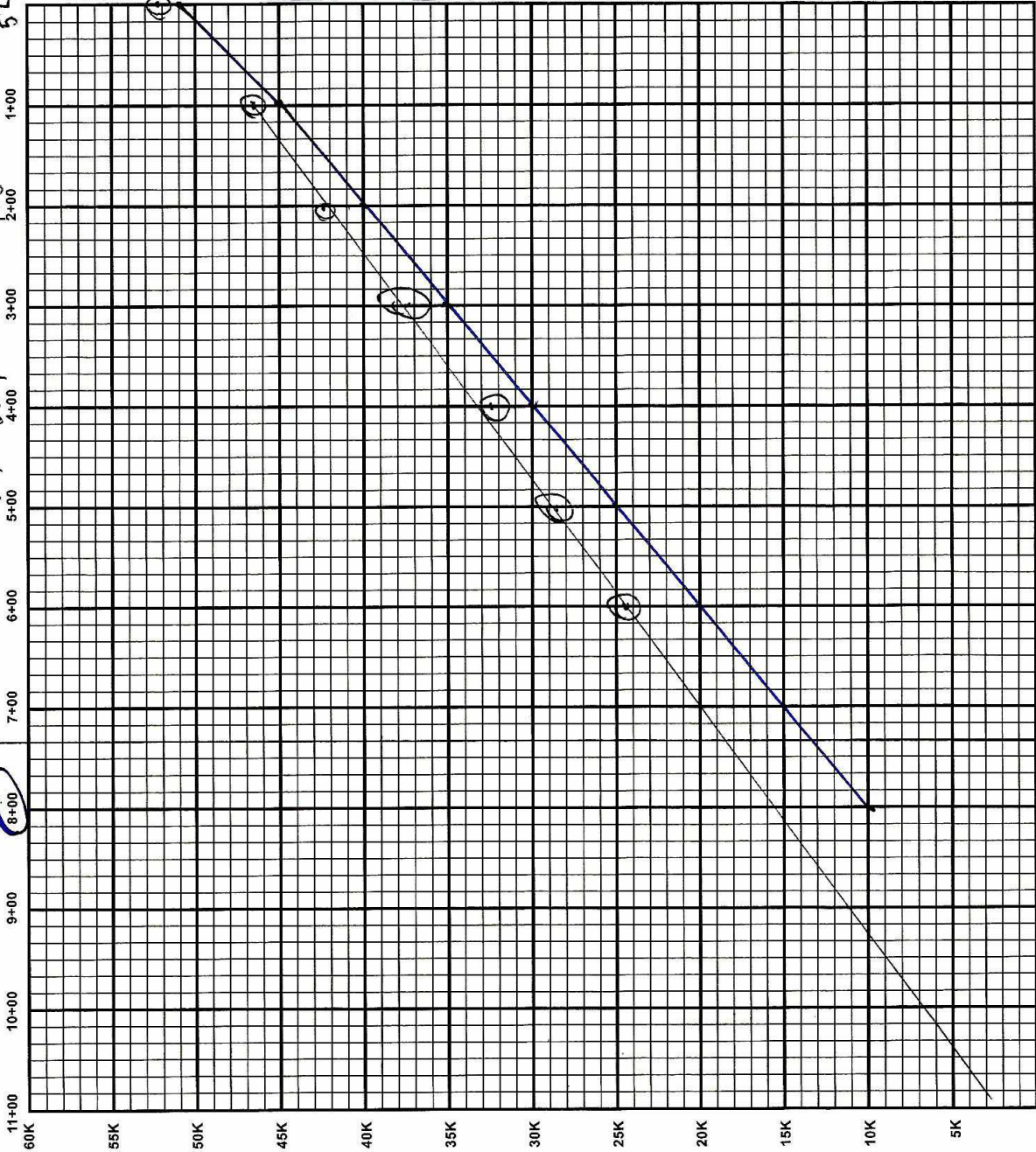
[illegible]

24.5

0110 0610 2310 2215
RANGE CONTROL GRAPH

TIME REMAINING 26.7
8+00

2111 2610 1913 1816
375 425 46.5 52.2



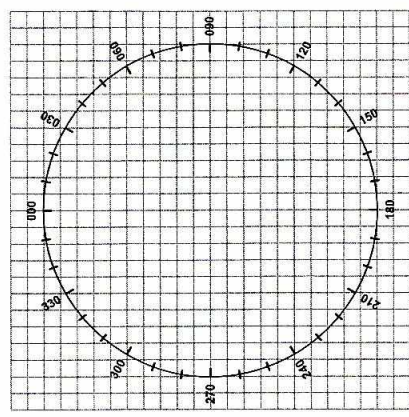
ENROUTE FUEL	
ENROUTE TIME	8+00
ENROUTE FUEL (8K, 5K, 4.5K RULE)	41K
RESERVE AT DESTINATION	16K
REQUIRED RAMP	51K
ACTUAL RAMP FUEL	52.2

TACTICAL (OFFSTA TO DESTINATION)	
DISTANCE (OFFSTA TO DEST)	4 ENG 3 ENG
ENROUTE TIME (OFFSTA TO DEST)	
BURN RATE (LBS/HR)	4500 5500
ENROUTE FUEL REQUIRED	
RESERVE AT DESTINATION	
FUEL AT OFFSTA	

POINT OF SAFE RETURN	
ETP DISTANCE (TO DEPARTURE)	4 ENG 3 ENG
ENROUTE TIME (TO DEPARTURE)	
BURN RATE (LBS/HR)	4500 5500
FUEL REQUIRED	
RESERVE AT DEPARTURE	
PSR FUEL	

CEX - TRUE BEARING METHOD				CEX SIGHT	
COMPASS TYPE	INS1	INS2	WET	GMT	
MCH (READING)				GHA	
- MTH (SEXTANT)				CORR	
CE				GHA	
- VAR				LONG +W .E	
DEV				EXACT LHA	
				LAT	
				BODY	
				DEC	
				HC / D	
				CORR	
				HC	
				Z	
				ZM	

CEX - ERB METHOD			
COMPASS TYPE	INS1	INS2	WET
MERB (DIAL 000)			
+ ZN			
= MTH			
MCH (READING)			
CE			
- VAR			
= DEV			



WIND FACTOR		
WINDSPEED	HEADWIND	TAILWIND
10	1.03	.97
20	1.06	.94
30	1.10	.92
40	1.14	.89
50	1.18	.87
60	1.22	.85

F" FACTOR					
PRESS ALT	200	250	300	350	
10,000	1.0	1.0	.99	.99	
20,000	.99	.98	.97	.97	
30,000	.97	.96	.95	.94	
40,000	.96	.94	.92	.90	

TRUE AIRSPEED CROSS-CHECK					
TIME	IAS	PRESS ALT	"F" FACTOR	EAS	OAT

DISTANCE REMAINING

ETP = .5(TOTAL DISTANCE x OUTBOUND WIND FACTOR)

