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

FLT ID: 090909N	From: KMCF	To: KMCF
FLT #: 09 - 108	Blk In: 1515 Z (2.8)	Lnd Time: 1507 Z (2.5)
ETD: 1200 Z	Blk Out: 1224 Z	T/O Time: 1234 Z
ETE: 4.5 hrs	Total Blk: 2hrs 51mins	Total Flt: 2hrs 33mins
Sponsoring Org: AOC	Program:	Purpose: Sonde Test

AOC Flight Crew

Aircraft Commander: ODELL	Data System: ROGERS
Co-Pilot: GLOVER /	Avaps: CARPENTER
Navigator: /	System Engineer:
~~Flight Eng~~ D.r: HENNING	AA:
Flt Director: ALMEIDA / WILLIAMS	AA:
Avionics:	Crew Chief:

Participating Scientists, Visitors, & Add'l Aircrew on back.	Total # of people on board:	# of people listed on back:

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

ATIS - Takeoff	
ATIS - Land	

Data Source	Number	Data Disposition / Date / Quality / File Name(s)
Flight Level Tapes	1	901ff19a.ads
Radar Tapes	✓	
Dropsondes	10	Good: 9 Bad: 1 Sent: 0
AXBT	✓	

List other data sources on back in Remarks section.

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)

Recco Times: Fix # Fix Time

Storm Name: _____

Mission ID: _____

38 kft picture

NOAA G-IV N49RF
Dropsonde Test Flight
09 Sept 2009

Flight ID: 090909*N*

Sensor or system	Number or Name
Accelerometer	ACINS
Altitude	PALT
Attack Angle	AKRD2
Dew Point Probe	DPR
Dynamic Pressure	QC2M
Geopotential Altitude	GPGALT
Inertial Selected	VEW, VNS
Static Pressure	PS2M
Slip Angle	SSRD1
Temperature Probe	AT3/TT3
True Air Speed	TAS2
Constants File	49cal093
Project Directory	/proj/905

Local Met Data:	Takeoff (1234Z)	Landing (1507Z)
Aircraft Static Pressure	101#.# mb	101#.# mb
Tower Pressure (corrected)	101#.# mb	101#.# mb

Notes:
INS #2 has a high position difference when compared to GPS so INS #1 used in meteorological calculations.

There is about a 2mb difference between PS1M and PS2M. From test flights comparing aircraft data to dropsonde data PS2M has been closer to representing the actual atmosphere.

There were periods where the dewpoint temperature exceeded the ambient temperature resulting in RH values > 100%. This was likely due to passing through a cloud layer, a wet-bulb effect on the total temperature sensor, and/or an artificial warming of the dewpoint sensor as it tried to burn off excess moisture. Corrections were not made to the data.

All other instruments worked optimally during the flight

10 dropsondes launched: 09 good, 01 bad
No drops were sent for ingestion into the models.
The purpose of this flight was to test the development of the latest batch of sondes.

Flight Director: *LTJG Jackie Almeida*
Phone #: *(813) 828-3310 ext. 3075*

t/o: 1507Z
ind: 1234Z

N49RF
Variable Checkoff List

Jackie Almeida

Flight: 090909N

Inertial Altitude
- ✓ ALT (m) — IRS Baro-Inertial Altitude
- ✓ ALT_PITR (m) — IRS Baro-Inertial Altitude
- ✓ ADCBCALT (m) — DADC Baro Corrected Altitude

GPS Altitude
- ✓ GHALT_SG1 (m) — Honeywell GPS Altitude (MSL)
- GHALT_SG2 (m) — Honeywell GPS Altitude (MSL)
- ✓ GPALT (m) — Collins GPS Altitude (MSL)

Pressure Altitude
- ✓ PALT (m) — NACA Pressure Altitude
- ✓ PALTF (feet) — NACA Pressure Altitude
- ✓ ADCPALT (m) — DADC Pressure Altitude

Radar Altitude
- ✓ HGM232 (m) — Geometric (Radar) Altitude

D-Value
- 68 DVALU (m) — D-VALUE Geopotential Alt Source - PALT)

Geopotential Altitude
- ✓ GPGALT (m) — Collins GPS Geopotential Altitude
- ✓ HGALT (m) — APN-232 Radar Geopotential Altitude

Pitch vs Alt
- ✓ PITCH (deg) — Aircraft Pitch Angle
- ✓ PITCH_PITR (deg) — Aircraft Pitch Angle

Roll vs Hdg
- ✓ ROLL (deg) — Aircraft Roll Angle
- ✓ ROLL_PITR (deg) — Aircraft Roll Angle

Heading vs Trk
- THDG (deg) — IRS1
- THDG_PITR (deg) — IRS2

Drift Angles
- ✓ AOCDA (deg) — Computed Drift Angle
- ✓ AOCDA_PITR (deg) — Computed Drift Angle
- ✓ DRFTA (deg) — IRS1 Drift Angle
- ✓ DRFTA_PITR (deg) — IRS2 Drift Angle

Track vs DA
- AOCTK (deg) — Computed Aircraft Track Angle from IRS1
- AOCTK_PITR (deg) — Computed Aircraft Track Angle from IRS2
- N/A TKAT (deg) — IRS1 Track Angle
- N/A TKAT_PITR (deg) — IRS2 Track Angle
- N/A TKAR (deg/s) — IRS1 Aircraft Track Angle Rate
- N/A TKAR_PITR (deg/s) — IRS2 Aircraft Track Angle Rate

Select the following variable references:

2	ATTACK	AKRD(1, 2)	2	QCX	QC(1, 2)M
3	ATX	AT(1, 2, 3, 4)	2	QCXC	QC(1, 2)C
R	DPX	DP(L, R)	1	SSLIP	SSRD(1, 2)
R	DPXC	DP(L, R)C	2	TASX	TAS(1, 2)
GPG	DVALU	(HG, GPG)ALT	3	TTX	TT(1, 2, 3, 4)
2	PSX	PS(1, 2)M	1	WI	IRS 1 or 2
2	PSXC	PS(1, 2)C	1	XLATC	IRS 1 or 2

✓ Print Trackline

Note: IRS = Inertial Reference System.
Equivalent to INS on P-3's. _PITR denotes IRS#2.

t/o: 1507Z
ind: 1234Z

N49RF
Variable Checkoff List

Jackie Almeida

Flight: 090909N

Latitudes

N/A GHLATF_SG1 (deg)
Honeywell GPS Latitude, Fine

N/A GHLATF_SG2 (deg)
Honeywell GPS Latitude, Fine

✓ GHLAT_SG1 (deg)
Honeywell GPS Latitude

✓ GHLAT_SG2 (deg)
Honeywell GPS Latitude

✓ GPLAT (deg)
Collins GPS Latitude

✓ LAT (deg)
IRS1 Latitude

✓ LAT_PITR (deg)
IRS2 Latitude

XLATC (deg)
GPS-Corrected Inertial Latitude

Longitudes

N/A GHLONF_SG1 (deg)
Honeywell GPS Longitude, Fine

N/A GHLONF_SG2 (deg)
Honeywell GPS Longitude, Fine

✓ GHLON_SG1 (deg)
Honeywell GPS Longitude

✓ GHLON_SG2 (deg)
Honeywell GPS Longitude

✓ GPLON (deg)
Collins GPS Longitude

✓ LON (deg)
IRS1 Longitude

✓ LON_PITR (deg)
IRS2 Longitude

✓ XLONC (deg)
GPS-Corrected Inertial Longitude

Off by ~.03°

GPS Differences

✓ GDIF1 ~3120
Position Difference (Collins - IRS1)

✓ GDIF2 ~3611
Position Difference (Collins - IRS2)

Compare GPS lat/lon to inertial lat/lon to see which inertial did better during the flight. Compare their differences.

HDOP

_____ GHHDOP_SG1 (none)
Honeywell GPS Horiz. Dilution of Precision

_____ GHHDOP_SG2 (none)
Honeywell GPS Horiz. Dilution of Precision

VDOP

_____ GHVDOP_SG1 (none)
Honeywell GPS Vertical Dilution of Precision

_____ GHVDOP_SG2 (none)
Honeywell GPS Vertical Dilution of Precision

HFOM

_____ GHHFOM_SG1 (m)
Honeywell GPS Horiz. Figure of Merit

_____ GHHFOM_SG2 (m)
Honeywell GPS Horiz. Figure of Merit

VFOM

_____ GHVFOM_SG1 (m)
Honeywell GPS Vertical Figure of Merit

_____ GHVFOM_SG2 (m)
Honeywell GPS Vertical Figure of Merit

t/o: 1507Z
Ind: 1234Z

N49RF
Variable Checkoff List

Jackie Almeida

Flight: 090909N

Temperatures

Ambient Temperature
- ✓ AT1 (degC) Ambient Temperature, Top Left
- N/A AT2 (degC) Ambient Temperature, Bottom Right
- ✓ AT3 (degC) Ambient Temperature, Top Right
- ✓ AT4 (degC) Ambient Temperature, Bottom Left
- 3 ATX (degC) Ambient Temperature, Reference

Total Temperature
- ✓ TT1 (degC) Total Temperature, Left Top
- N/A TT2 (degC) Total Temperature, Right Bottom
- ✓ TT3 (degC) Total Temperature, Left Bottom
- ✓ TT4 (degC) Total Temperature, Right Top
- 3 TTX (degC) Total Temperature Reference

Dewpoint Temperature
- ✓ DPLC (degC) Dew Point Temperature, Left
- ✓ DPRC (degC) Dew Point Temperature, Right
- R DPXC (degC) Dew Point Temperature, Reference
- ✓ DPL (degC) Left Dew/Frost Point Temperature
- ✓ DPR (degC) Right Dew/Frost Point Temperature
- R DPX (degC) Dew/Frost Point Temperature, Reference

Air Temperature
- ✓ ADCSAT (degC) DADC Static Air Temperature
- ✓ ADCTAT (degC) DADC Total Air Temperature

Potential Temperature
- ✓ THETA (K) Potential Temperature
- ✓ THETAE (K) Equivalent Potential Temperature
- ✓ THETAV (K) Virtual Potential Temperature

Hygrometers
- ____ BCRYO (volts) CR-2 Hygrometer Balance
- ____ CRYO (degC) CR-2 Hygrometer
- ____ CRYOC (degC) CR-2 Hygrometer, corrected
- ____ PCRYO (mb) CR-2 Hygrometer Pressure

Humidity
- ____ RHODL (g/m3) Absolute Humidity, T-Electric Left
- ____ RHODR (g/m3) Absolute Humidity, T-Electric Right
- ✓ RHUM (%) Relative Humidity

Mixing Ratio
- ✓ MR (g/kg) Mixing Ratio, T-Electric

Ambient Water Vapor Pressure
- ✓ EDPC (mb) Ambient Water Vapor Pressure, Reference

t/o: 1507Z
ld: 1234Z

N49RF
Variable Checkoff List

Jackie Almeida

Flight: 090909N

Pressures

QCC=QCM

Dynamic Pressure

✓ QC1C (mb)
Corrected Dynamic Pressure, Left

✓ QC1M (mb)
Left Raw Dynamic Pressure

✓ QC2C (mb)
Corrected Dynamic Pressure, Right

✓ QC2M (mb)
Right Raw Dynamic Pressure

2 QCX (mb)
Raw Dynamic Pressure, Reference

2 QCXC (mb)
Corrected Dynamic Pressure, Reference

Attack (compare to pitch)

✓ AP1 (mb)
Left Vertical Differential Pressure

✓ AP2 (mb)
Right Vertical Differential Pressure

✓ DAP1 (mb)
Left Raw Dynamic Attack Pressure

✓ DAP2 (mb)
Right Raw Dynamic Attack Pressure

ADCAOA (deg)
Air Data Computer Attack Angle

✓ AKRD1 (deg)
Attack Angle, Left Side

✓ AKRD2 (deg)
Attack Angle, Right Side

2 ATTACK (deg)
Attack Angle, Reference

PSC=PSM

Static Pressures

✓ PS1C (mb)
Corrected Static Pressure, Top Fuselage

✓ PS1M (mb)
Raw Static Pressure, Top Fuselage

✓ PS2C (mb)
Crrct'd Static Pressure, Bottom Fuselage

✓ PS2M (mb)
Raw Static Pressure, Bottom Fuselage

2 PSX (mb)
Raw Static Pressure, Reference

2 PSXC (mb)
Corrected Static Pressure, Reference

Sideslip (compare to roll)

✓ BP1 (mb)
Top Horizontal Differential Pressure

✓ BP2 (mb)
Bottom Horizontal Differential Pressure

✓ DBP1 (mb)
Top Raw Dynamic Slip Pressure

✓ DBP2 (mb)
Bottom Raw Dynamic Slip Pressure

✓ SSDF1 (deg)
Sideslip Angle, Diff. Pressure, Top

✓ SSDF2 (deg)
Sideslip Angle, Diff. Pressure, Bottom

✓ SSRD1 (deg)
Sideslip Angle, Top

✓ SSRD2 (deg)
Sideslip Angle, Bottom

1 SSLIP (deg)
Sideslip Angle, Reference

Surface Pressure

✓ PSURF (mb)
Calculated Surface Pressure

Cabin Pressure

✓ PCAB (mb)
Cabin Pressure

Horizontal Wind Direction

✓ IWD (deg)
Horizontal Wind Direction (IRS)

✓ IWD_PITR (deg)
Horizontal Wind Direction (IRS)

✓ WD (deg)
Horizontal Wind Direction

Horizontal Wind Speed

✓ IWS (m/s)
Horizontal Wind Speed (IRS)

✓ IWS_PITR (m/s)
Horizontal Wind Speed (IRS)

✓ WS (m/s)
Horizontal Wind Speed

North/South Component

✓ VI (m/s)
Wind Vector, North Component

East/West Component

✓ UI (m/s)
Wind Vector, East Component

Vertical Winds

1 WI (m/s)
Wind Vector, Vertical Gust Component

UTAN/URAD Winds

✓ UX (m/s)
Wind Vector, UTAN Longitudinal Component

✓ VY (m/s)
Wind Vector, Lateral Component URAD

t/o: 1507Z
ind: 1234Z

N49RF
Variable Checkoff List

Jackie Almeida

Flight: 090909N

Groundspeeds
- ✓ GHGSF_SG1 (m/s) Honeywell GPS Ground Speed
- ✓ GHGSF_SG2 (m/s) Honeywell GPS Ground Speed
- ✓ GPGSPD (m/s) Collins GPS Ground Speed
- ✓ GSF (m/s) Inertial Ground Speed
- ✓ GSF_PITR (m/s) Inertial Ground Speed

East/West Component
- ✓ GHVEW_SG1 (m/s) HoneyWell GPS Ground Speed Vector E/W
- ✓ GHVEW_SG2 (m/s) HoneyWell GPS Ground Speed Vector E/W
- ✓ GPVEW (m/s) Collins GPS Ground Speed Vector E/W
- ✓ VEW (m/s) Inertial Ground Speed Vector E/W
- ✓ VEW_PITR (m/s) Inertial Ground Speed Vector E/W
- ✓ XVEWC (m/s) GPS-Corrct'd Inertial Ground Spd Vector E/W

North/South Component
- ✓ GHVNS_SG1 (m/s) HnyWll GPS Grnd Spd Vector, Nrth/Sth Component
- ✓ GHVNS_SG2 (m/s) Hnywll GPS Grnd Spd Vector, Nrth/Sth Component
- ✓ XVNSC (m/s) GPS-Corrct'd Inertial Ground Spd Vector, North Component
- ✓ GPVNS (m/s) Cllns GPS Grnd Spd Vector, Nrth/Sth Component
- ✓ VNS (m/s) Inertial Ground Speed Vector, North/South Component
- ✓ VNS_PITR (m/s) Inertial Ground Speed Vector, North/South Component

Vertical Acceleration
- ACINS (m/s2) Aircraft Vertical Acceleration
- ACINS_PITR (m/s2) Aircraft Vertical Acceleration

Vertical Velocity
- ✓ GHVZI_SG1 (m/s) Hnywll GPS Comp'd aircraft Vert. Velocity
- ✓ GHVZI_SG2 (m/s) Hnywll GPS Comp'd aircraft Vert. Velocity
- ✓ GPVSPD (m/s) Cllns GPS Comp'd Aircraft Vertical Velocity
- ✓ VSPD (m/s) IRS-Computed Aircraft Vertical Velocity
- ✓ VSPD_PITR (m/s) IRS-Computed Aircraft Vertical Velocity
- ✓ WP3 (m/s) Damped Aircraft Vertical Velocity
- ✓ WP3_PITR (m/s) Damped Aircraft Vertical Velocity

Airspeeds
- ✓ ADCCAS (m/s) DADC Computed Airspeed
- ✓ IAS (Kts) Aircraft Indicated Airspeed
- ✓ ADCTAS (m/s) DADC True Airspeed
- ✓ TAS1 (m/s) Aircraft True Airspeed #1
- ✓ TAS2 (m/s) Aircraft True Airspeed #2
- ✓ TASHC (m/s) Aircraft True Airspeed, Humidity Corrected
- 2 TASX (m/s) Aircraft True Airspeed, Reference

Mach
- ✓ ADCMACH (none) DADC Mach Number
- ✓ MACH (none) Aircraft Mach Number
- ✓ XMACH2 (none) Aircraft Mach Number Squared

Last Updated: Oct 2008

							Update of Calibration: 05 Aug 2009					
DSM	CHAN	UPDATE	DESCRIPTION	MANUF.	MODEL	SERIAL NUMBER	RANGE (V)	C1 Insert Cal Lab	C2	G	Vos	C1'	C2'
FWD	00		Left AOA AP (AP1)	Rosemount	1221F2VL7B1B	2299	+/- 10	0.0021	6.8842	1	10	0.0021	6.8842
FWD	01		Left AOA DAPM (DAP1)	Rosemount	1221F2AF8B1B	2312	0 - 10	0.9327	34.4761	2	10	173.3132	17.2381
FWD	02		Right AOA AP (AP2)	Rosemount	1221F2VL7B1B	2309	+/- 10	-0.067	6.8901	1	0	-0.0670	6.8901
FWD	03		Right AOA DAPM (DAP2)	Rosemount	1221F2AF8B1B	2313	0 - 10	-1.2127	34.4983	2	10	171.2788	17.2492
FWD	04		Top Slip BP (BP1)	Rosemount	1221F2VL7B1B	2300	+/- 10	-0.1618	6.8935	1	0	-0.1618	6.8935
FWD	05		Top Slip DBPM (DBP1)	Rosemount	1221F2AF8B1B	2319	0 - 10	-0.3527	34.4729	2	10	172.0118	17.2365
FWD	06		Bottom Slip BP (BP2)	Rosemount	1221F2VL7B1B	2310	+/- 10	0.0028	6.8869	1	0	0.0028	6.8869
FWD	07		Bottom Slip DBPM (DBPM2)	Rosemount	1221F2AF8B1B	2318	0 - 10	-1.9627	34.4847	2	10	170.4608	17.2424
FWD	08		Left Dewpoint (DPL)	EdgeTech	137-C3 Ext. Range	1685 / 018269	0 - 5	-100.24	30.074	4	10	-25.055	7.5185
FWD	09		Right Dewpoint (DPR)	EdgeTech	137-C3 Ext. Range	1686 / 018268	0 - 5	-100.37	30.041	4	10	-25.2675	7.5103
FWD	0a		Total Temp #3 (TT3)	Rosemount	102LJ2AG w/ 510GB41E	A32555/0202	+/- 10	-0.1575	6.9931	1	0	-0.1575	6.9931
FWD	0b		Total Temp #2 (TT2)	Rosemount	102CL2AZ w/ 510GB43E	A20245 / 0199	+/- 10			1	0	0.0000	0.0000
FWD	0c		Total Temp #4 (TT4)	Rosemount	102CP2AF w/ 510GB41E	A6786 / 0141	+/- 10	0.0542	7.0261	1	0	0.0542	7.0261
FWD	0d		Total Temp #1 (TT1)	Rosemount	102CP2AF w/ 510GB41E	A18367/0140	+/- 10	0.2124	7.0005	1	0	0.2124	7.0005
FWD	0e		Static Pressure #1 (PS1M)	Rosemount	1281AF2B1B	588	0 - 10	-0.5869	108.3262	2	10	541.0441	54.1631
FWD	0f		Dynamic Pressure #1 (QC1M)	Rosemount	1281AF2B1B	588	0 - 10	-0.0815	33.8826	2	10	169.3315	16.9413
FWD	10		Static Pressure #2 (PS2M)	Rosemount	1281AF2B1B	826	0 - 10	-2.4031	108.3794	2	10	539.4939	54.1897
FWD	11		Dynamic Pressure #2 (QC2M)	Rosemount	1281AF2B1B	826	0 - 10	-0.3861	33.8788	2	10	169.0079	16.9394
FWD	12		Cr-2 Hygrometer	Buck	CR-2	207	0 - 10	-150	20	2	10	-50	10
FWD	13		Cr-2 Hygrometer Pressure	Buck	CR-2	207	0 - 10	100	100	2	10	600	50
FWD	14		Cr-2 Hygrometer Balance	Buck	CR-2	207	0 - 10	0	1	1	0	0.0000	1.0000
AFT	0		Cabin Pressure (PCAB)	Vaisala	PTB220	W3120002	0 - 5	500	120	4	10	800	30

C1' = (C2' x Vos) + C1
C2' = C2 / G
Units = C1 + C2*Vadc

*Note: This table has been modified from the official assignment sheet.
If the numbers contained in columns C1' and C2' are green, then they are actually C1 & C2 and are not calculations of C1' or C2'. They were copied over to make it easier to read when checking the calibration coefficients in Nimbus.

AOC GPS Dropwindsonde Log

Flight ID: 090909N

Flight Director: ALMEIDA / WILLIAMS / HENNING

Mission ID: WXWXA

Storm/Track: TRAIN

Pg ___ of ___

SPlash

Ch. #	Drop #	Sonde ID	Drop Time (UTC)	Lat (°N)	Lon (°W)	Wx Cond.	SFC Prs (mb)	Ob #	L5/R5	Last Winds R5 (ht, ws, wd)	Last Winds L5 (ht, ws, wd)	Sent Time/KWBC (UTC)
.7 1	1	09192906 2	130747	25 59.7	85 38'	OVC Anvil		—	R5			
1.6 L5	2			25 59.7	85 38				L5			
.4 2	3	08491927	132756	26 00	85 38							
1.75 L5	4			26 00	85 38							
1.99 1	5	09184902 0	134731	26 00	85 38		FAST FALL					
L5	6			26 00	85 38							
1.3 2	7	08443036	140643	26 00	85 38							
1.8 L5	8			26 00	85 38							
1	9	08325916 1	142602	26 00	85 38							
L5	10			26 00	85 38							

NCEP Winds Aloft Forecasts - SC US

FYI/Help

Low ◉ High ○

FB Winds Map

0800z 1500z 0000z 1200z

1135z

(Extracted from FBUS31 KWNO 090756)
FD1US1
DATA BASED ON 090600Z
VALID 091200Z FOR USE 0800-1500Z. TEMPS NEG ABV 24000

FT	3000	6000	9000	12000	18000	24000	30000	34000	39000
BHM	3308	9900+15	9900+08	3207+02	3219-09	3031-19	304134	314045	324356
HSV	3308	3506+15	9900+08	2913+02	3125-10	3038-19	304834	315145	315655
MGM	0109	9900+14	9900+09	3006+03	3117-07	3018-18	312434	322745	304256
MOB	1111	1311+14	1109+10	3608+04	3016-06	3021-17	293533	284643	285155
FSM	1413	2015+15	2214+09	2718+04	3223-07	3014-18	330934	351244	351656
LIT	1506	9900+15	0307+09	0108+03	3016-08	3018-18	312734	313344	313555
LCH	1409	1410+15	1710+10	9900+05	3014-06	2917-16	293032	284141	264853
MSY	1606	1312+16	1213+10	1106+04	3210-06	3018-16	283432	284342	284654
SHV	9900	1210+14	1010+09	0805+04	3211-06	3111-18	282633	283543	284654
JAN	1712	1210+15	1606+09	2807+03	3020-07	3119-17	292634	302644	293954
GAG		2616+19	9900+14	0811+06	9900-07	2805-18	311134	291644	251456
OKC	2122	2517+18	3010+11	0307+05	9900-08	9900-18	320535	291544	311655
TUL	1922	2624+16	3032+09	3325+04	3507-07	2311-18	990034	261145	321255
BNA	3406	3014+13	2916+08	2820+03	3125-12	3238-22	316235	317445	325854
MEM	2005	2105+15	2408+08	2709+03	2920-09	3225-18	303434	293244	294154
TRI		2905+12	2709+06	2713-01	2923-13	3018-23	312439	292644	303150
TYS	1506	2508+13	2615+06	2923+01	3128-13	3129-23	304137	315144	294251
ABI		2007+19	1009+11	1113+05	2108-08	2505-17	240934	242243	242554
AMA		2813	1105+14	0913+07	0506-07	9900-17	310934	281644	261856
BRO	1611	2014+16	2209+11	2408+06	3108-05	3008-15	270830	271840	272552
CLL	2207	1213+15	1011+10	9900+06	2908-06	2916-17	263532	254941	255454
CRP	1707	1707+15	2106+10	2308+06	2822-05	3025-15	281930	262040	251752
DAL	2009	1411+17	1109+10	0806+04	3111-07	2910-18	241933	243543	254154
DRT	1524	9900+18	3207+12	3409+06	2717-06	2424-16	244032	255041	255453
ELP		2808	2809+14	0411+07	9900-08	9900-18	260732	271043	271854
HOU	1408	1109+15	0812+11	0205+06	3106-06	3216-16	293431	252841	254053
INK		2908+20	3109+14	9900+06	9900-07	2910-18	280933	291343	272253
LBB		2108+18	9900+13	1008+06	0611-08	0708-17	990033	990044	290955
LRD	1615	1708+16	2806+12	3510+07	3214-05	2618-16	231830	242241	253253
MRF			3109+13	9900+07	3006-07	2511-18	271632	261842	262853
PSX	1105	9900+15	9900+11	9900+06	1005-06	0507-16	191730	222440	263453
SAT	2209	3009+15	0811+11	0514+07	3111-06	2621-15	242530	243341	254053
SPS	2114	2011+18	9900+11	0908+04	9900-08	9900-18	271333	251844	281754
T01	1413	1518+16	1516+11	1512+05	9900-05	3205-15	281230	241241	231853
T06	1608	1410+16	9900+11	9900+06	3317-06	3017-15	302732	294242	275653
T07	0905	1106+15	1210+10	9900+06	3609-06	3210-17	292932	284042	305655
4J3	1111	1210+14	0412+09	3308+06	3113-06	2811-17	302732	293942	305155
H51	9900	2809+16	2612+11	2511+06	2815-05	2210-14	251330	282541	283353
H52	1010	1008+16	1306+11	1305+06	2610-05	2817-15	302231	313441	304653
H61	0610	0705+15	0606+10	9900+06	3207-06	3014-16	302132	313242	315354

Drop @
2.5° 59'.63
85° 38'.13

39 000 – 310 53
34 000 – 310 32
30 000 – 300 21
24 000 – 300 14
18 000 – 320 07
12 000 –
9000 – 060 6
6000 – 070 5
3000 – 060 10

t/o wx: wd: Launch

poss. see @ 1kft ws: Drift

clouds: 3kft rel. posⁿ

turb: splash posⁿ

Boat Call Sign

RV Gulfstream

NOAA 49

Dale

Dr. Quest

T/O Brief

~~Outbound:~~

Flight Level vert profile

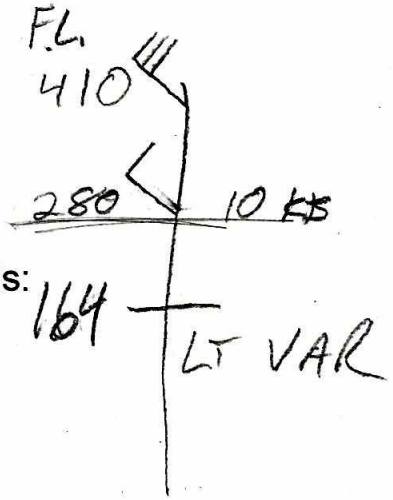
wd:

ws: 280 10 ~~kts~~

clouds: 164

turb: LT VAR

ice:



Drop Location

24 50 W

80 15 W

Marina Del Mar

~~Inbound:~~

Sfc Cond. MLRF1

wd: 2ft wvhts

ws: 70 POPS

clouds: T/RW

turb: 75% sky cover

ice: LT wnds SE

Homestead or Marathon

landing wx: wd:

ws:

clouds:

turb:

local conditions:

Sea Salt:

Volcanic Ash:

Environm Buoy 4	DB661	24.90	-80.4	24	99661	
Boca Raton	KBCT	26.38	-80.11	4	99999	
Key West	KEYW	24.55	-81.75	6	72201	(10.2sm)
Homestead	KHST	25.48	-80.38	2	99999	
Miami	KMIA	25.82	-80.28	4	72202	
Miami/Kendall	KTMB	25.65	-80.43	3	99999	(57.5sm)
Molasses Reef	MLRF1	25° 0'36"	80° 22'48"			(14.7sm)
Marathon	KMTH	- Metar				
Cudjoe key profiler	cjkFL	24.7	-81.5	elev [3m]		(78.9 sm)