



NOAA P-3 N42RF H. Rita

Flight ID: 050922H

Sensor or system

Number or Name

INE.....	2
Accelerometer.....	2
Temperature Probe.....	1
Dew Point Probe.....	1
Altimeter (for vertical wind).....	RA-159
Static Pressure.....	Rosemount (fuselage)
Dynamic Pressure.....	Rosemount (fuselage)
Time Source.....	Micro 99

Local Met. Data: Not copied at takeoff

Take off: 1533Z

Land: 2337Z

The RA-232 was substituted for the RA-159 during take off and landing due to spiking (T.O. 153001-153347; 232842-234000 Land).

Dew pointer #1 had a balancing spike removed and patched (191450-191859). Dew pointer #1 malfunctioned and was replaced by dew pointer #2 at 232925 until the flight ended at 234000.

All other instruments functioned normally during the flight.

There were data gaps noted: 183231-183231; 183621-183625; 191131-191131; 192201-192201; 194441-194450; 194631-194636; 195644- 195645; 195921-195927; 233315-233317.

There were times during heavy precipitation events (e.g. eye wall penetrations) when the dew point exceeded ambient temperature yielding a RH of greater than 100%. This is probably due to a wet bulb effect on the total temperature probe and/or the dew pointer over heating while trying to remove excess moisture. In these instances, no corrections were attempted.

SPECIAL NOTE: These data have not had Dr. Dave Jorgensen's vertical wind algorithm applied to them. Only the Aircraft Operations Center standard vertical wind algorithm has been applied. A new post-flight data processing algorithm was employed which currently lacks the Jorgensen method. The data can and will be rerun if required by the investigator.

	Take off	Land
Aircraft Static Pressure	1013.8 mb	1011.7 mb
Corrected Tower Pressure	1013.5 mb	1012.5 mb

Flight Director:

Tom Shepherd
813-828-3310 x3053

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

FLT ID: 050922H	From: KMCF	To: KMCF
Flt No: 05-	In: 2349Z	On: 2337Z
ETD: 1530Z	Out: 1520Z	Off: 1533Z
ETE: 8+30	Blk Time: 8+29 8.5 Hrs	Flt Time: 8+04 8.1 Hrs
Sponsoring Org: NOAA/NESDIS	Program: Hurr 05	Purpose: H. RITA

AOC Flight Crew

Aircraft Commander: KENNEDY, P	Data System: MC MILLAN, S
Co-Pilot: CHOY, B	AVAPS: KERR, B
Navigator: SIEGEL, P	System Engineer:
Flight Eng: WADE, S	AA:
Flight Director: SHEPHERD, T	AA:
Avionics: DLNEY, B	Crew Chief:

Participating Scientists / Visitors

Name (Last, First)	Activity on Aircraft	Affiliation
CHANG, P	PI	NOAA/NESDIS
ESTEBAN, D	SFMR/IWRAP	
ASUZUI, P		
CONTRERAS, R		
JELENAK, ZORANA		
BLACK, M	HAPS/RADAR	NOAA/HRD
BELL, M		NCAR

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)	Recco Times	Fix #	Fix Time
Storm Name: _____	I.P. 7-2052	1	1706
Mission ID: NOAA2 NX18A RITA	2511 8-2120	2	1805
TEAL 99 TO 1615Z	8613 9-2157	3	1833
05 1830		4	1919
12-14 PA		5	1956
		6	2025

(See reverse for additional remarks)

U.S. DEPT OF COMMERCE / NMAO / NOAA / AIRCRAFT OPERATIONS CENTER

FLT ID:

050922H

TIME OFF:

1533 Z

TIME ON:

2337 Z

A/C - Takeoff

WX Station - Takeoff

A/C - Land

WX Station - Land

Pressure

1013.8

29.93

1011.7

29.90

ATIS - Takeoff

ATIS - Land

Data Source

Number

Data Disposition / Date / Quality

Flight Level Tapes

2

Radar Tapes

1

Cloud Physics Tapes /
Cds

Video Tapes DVD

1

Dropsondes

37

Good: 36 Bad: 1

Total:

22 0 WINDS
15 RAINEX

AXBT

9

AXCP

AXCTD

SONOBUOY

REMARKS:

NOAA · AOC · SED
N42RF AVAPS DROP LOG

Project : Hurricane '05

Mission : RITA HRD/RX

Flight ID : 050922h

Take Off :

Landing :

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Winds Time	Operator	Comments	Good ?
1	044415164	1	0	1711	06	OLNEY	Rx BT	✓
2	051926271	2	0	1727	—		Rx NO SATS NO WINDS	
3	042815074	4	0	1730	06			✓
4	044535012	1	0	1800	08			✓
5	051926228	2	0	1805	15			✓
6	051926242	3	0	1809	05			✓
7	043625180	1	0	1814	06		↓	✓
8	053166105	1	0	1832	08		o.w.	✓
9	053166012	7	0	1832	08			✓
10	053166084	3	0	1832	08			✓
11	053166157	4	0	1833	10		↓	✓
✓* 12	053166013	15	0	1918	08		↓	✓
13	053166163	2	0	1919	08			✓
14	053166159	3	-0.8	1919	08			✓
15	053166073	4	0	1919	08		↓	✓
16	053166155	1	0	1955		Kerr	no winds	
17	053166018	2	0					
✓* 17	053166156	5	0	1956				✓
✓* 18	053166162	6	0	1956				✓
—* 19	053166077	2	0	1956			No launch detected	
20	053166099	1	0	2024				✓
✓* 21	053166108	5	0	2024				✓
✓* 22	053166017	6	0	2024				✓
23	053166006	2	0	2025				✓
24	051926243	1	0	2034			RX	✓
25	051926241	2	-0.4	2035			RX	✓
✓* 28	053166165	5	0	2100				✓
29	053166143	1	0	2100				✓
30	053166164	2	-0.4	2100				
✓* 31	051926235	6	0	2052			RX	✓
✓40* 32	041724016	7	0	2056			RX	✓

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/VOICE MF/CW
243.0 121.5 2182 KHZ 8364 KHZ 3000 KHZ 3000 KHZ

MAYDAY, MAYDAY, MAYDAY
THIS IS NOAA _____, NOAA 42

- 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 _____ 13 SOULS ON BOARD

- NATURE OF EMERGENCY _____

- ASSISTANCE DESIRED _____

- PILOT INTENTIONS _____

- WE HAVE _____ ENDURANCE REMAINING _____

POSITION REPORT

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

[illegible][illegible][illegible]

(G) - GPS (I) - INS (R) - RADIO (V) - VISUAL (C) - CELESTIAL (D) - DR

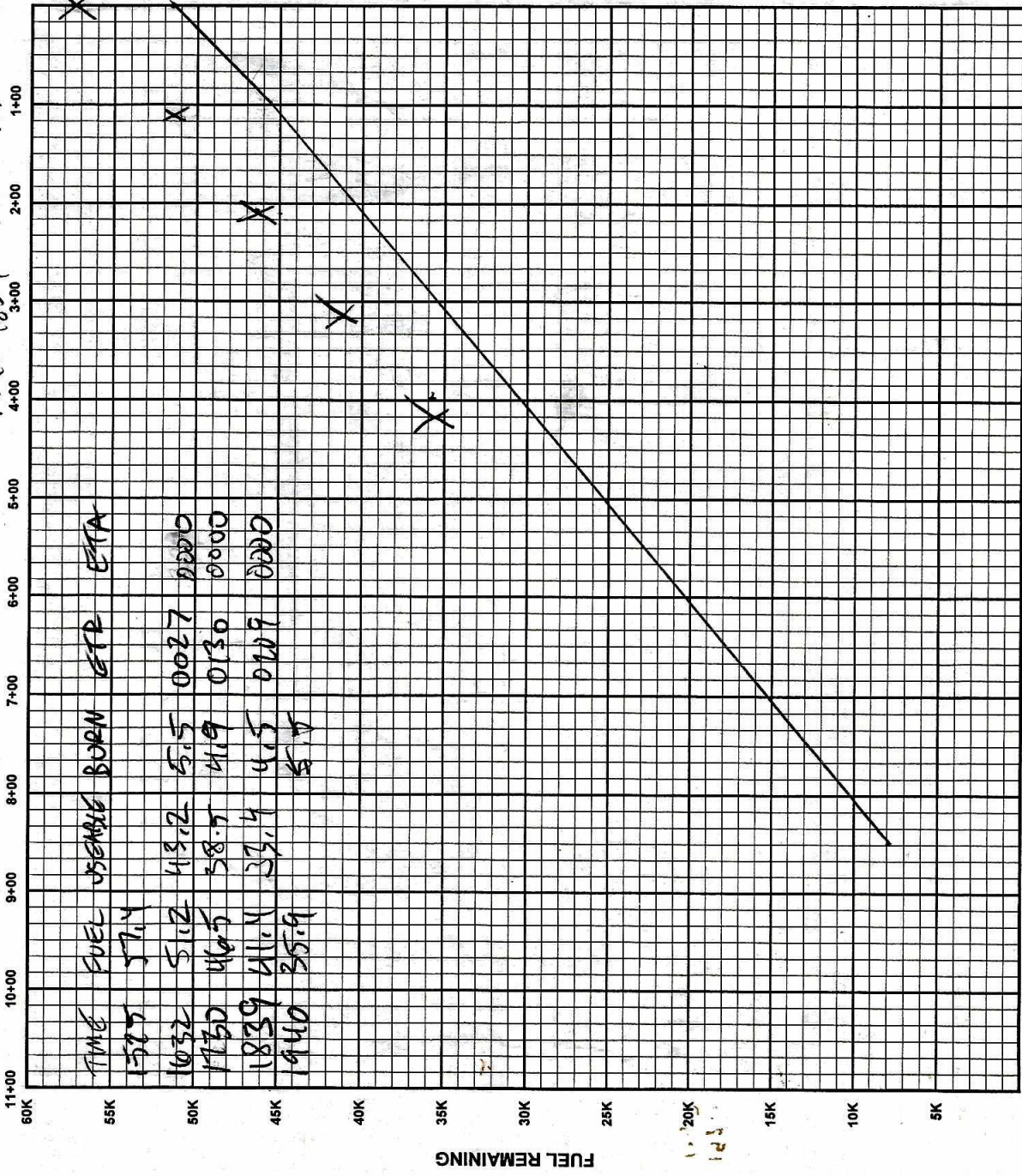
254

REMARKS
587 14P
43 10P
total 99 12P

6
35
2.5
43.7

RANGE CONTROL GRAPH

1940 1839 1730 1632 1525



ENROUTE FUEL	
ENROUTE TIME	8:30
ENROUTE FUEL (6K 5K 4K RULE)	43.5
RESERVE AT DESTINATION	8
REQUIRED RAMP	51.5
ACTUAL RAMP FUEL	57.4

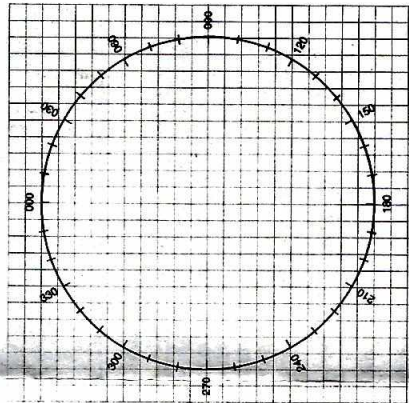
TACTICAL (OFFSTA TO DESTINATION)	
DISTANCE (OFFSTA TO DEST)	
ENROUTE TIME (OFFSTA TO DEST)	
BURN RATE (LBS/HR)	4500
ENROUTE FUEL REQUIRED	5500
RESERVE AT DESTINATION	
FUEL AT OFFSTA	

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

CEX - TRUE BEARING METHOD	
COMPASS TYPE	INS1
MCH (READING)	
MTH (SEXTANT)	
CE	
-VAR	
DEV	

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

CEX SIGHT	
GMT	
GHA	
CORR	
GHA	
LONGAW	
EXAST LHA	
LAT	
BODY	
DEC	
HC/D	
CORR	
HC	
Z	
ZN	



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

PRESS ALT					
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)

050922H

Time	Lat	Lon	TA	TD	Trk	Hdg	RA	PS	SP	WD	WS	WZ	Comments
152012	27.50.94	-82.29.58	26.6	23.4	137.0	134.6	10.0	1013.9	1015.0	130.6	3.7	61.4	Block out
153236	27.50.88	-82.31.32	26.5	23.3	40.5	41.5	2.0	1014.9	1015.1	127.3	4.1	.9	Take off
155653	27.12.42	-83.33.84	.1	-1.4	230.9	223.9	4688.0	582.3	1012.2	158.3	19.8	.1	14.5 PA; in cld
162058	26. 7.02	-84.58.98	1.4	-2.4	231.1	221.7	4447.0	597.9	1009.4	151.7	24.5	.3	Descend to 12.k PA
163720	25.35.46	-85.58.68	13.1	8.6	229.6	219.4	2512.0	753.2	1006.2	164.2	30.4	.2	Turn to trk 270
170201	25.34.92	-87.48.54	15.9	13.4	269.7	251.7	2124.0	776.1	989.7	172.8	39.1	.8	Abt 60 nm out
170206	25.34.92	-87.48.90	16.2	13.3	269.9	232.3	2117.0	776.8	989.6	172.9	39.3	.8	BT1
170622	25.35.16	-88. 7.80	16.5	14.2	270.4	248.9	2126.0	770.7	982.4	169.4	46.8	.2	D1 Rainex
171058	25.35.34	-88.28.26	16.5	15.9	270.8	246.6	2117.0	759.7	967.2	171.9	52.7	.2	BT2; PEN 1
171832	25.32.52	-89. 1.08	20.8	16.5	312.7	320.4	2142.0	728.4	914.2	15.4	15.4	-.3	D2 Rainex BAD
172545	25.35.16	-89. 8.64	16.6	17.5	268.6	295.9	2160.0	728.4	931.4	17.0	61.7	-.2	D3 Rainex
173039	25.35.04	-89.31.26	16.5	16.1	269.2	291.2	2107.0	764.1	971.6	13.4	48.5	-1.1	Now trk 135 to get to S side
173814	25.24.06	-89.50.88	16.0	15.8	133.8	124.4	2136.0	771.0	984.1	352.2	35.4	1.1	BT3 - misfire
175440	24.50.28	-89. 2.10	18.8	18.1	.8	343.7	1517.0	828.0	984.2	258.0	37.0	.8	BT4
175458	24.51.48	-89. 2.04	18.9	18.4	.1	344.2	1508.0	828.2	983.3	261.2	35.6	.2	D4 Rainex
180021	25.11.82	-89. 1.86	19.4	19.2	359.7	339.0	1518.0	813.5	966.5	273.9	42.7	1.9	D5 Rainex; PEN 2
180459	25.29.58	-89. 1.74	21.1	20.3	358.9	342.0	1513.0	777.9	922.7	257.7	36.1	1.6	D6 Rainex
180910	25.47.52	-89. 1.68	19.0	20.2	.3	30.6	1549.0	782.7	933.2	103.7	68.6	2.4	D7 Rainex
181404	26. 6.90	-89. 1.50	18.7	18.5	359.8	27.9	1518.0	817.9	972.3	97.0	56.0	-.5	Hit N end point; turn to trk 225
181830	26.23.52	-89. 5.94	18.4	18.3	333.9	351.7	1519.0	828.2	984.6	92.5	45.0	.2	Nxt pass from NW
181922	26.25.02	-89. 5.94	18.4	18.3	251.6	243.4	1523.0	828.3	985.4	97.2	45.0	.2	BT 5
182002	26.22.98	-89. 8.76	18.9	18.3	225.1	210.5	1513.0	828.4	984.1	89.0	46.1	-.1	Hdg back in; trk 135
182609	26. 1.98	-89.36.12	19.0	18.3	206.7	199.3	1522.0	822.4	977.9	44.3	49.6	-.6	D8 Nes
183228	25.43.50	-89.19.32	18.7	17.9	129.5	100.0	1537.0	790.3	941.5	23.5	63.4	3.4	D9 Nes
183242	25.42.96	-89.18.54	18.6	18.8	126.1	95.4	1545.0	786.4	937.6	23.1	65.7	3.5	D10 Nes
183252	25.42.60	-89.17.94	19.5	18.9	124.9	94.7	1523.0	786.4	934.7	18.5	64.8	3.6	D11 Nes PEN 3
183305	25.42.12	-89.17.16	19.0	19.8	123.8	93.8	1530.0	782.6	931.1	17.2	66.6	8.3	Just flew over splash for dps 8-11
185927	25.45.06	-89.23.46	18.0	18.1	274.5	303.9	1563.0	785.8	939.2	18.1	61.1	-1.5	BT 6
190953	25.51.18	-89.56.70	19.4	18.0	65.7	50.8	1509.0	825.6	980.0	19.1	40.3	-.2	Trk 105 back in
191345	25.52.08	-89.44.52	19.1	17.1	105.9	82.7	1538.0	816.3	972.4	19.8	47.9	1.0	D12 Nes
191838	25.47.52	-89.27.12	18.0	18.7	105.2	78.6	1531.0	792.7	944.0	23.5	58.2	2.5	D13 Nes
191858	25.47.22	-89.25.92	18.6	19.0	104.7	77.6	1524.0	789.8	939.4	25.5	59.8	4.7	D14 Nes
191928	25.46.80	-89.24.18	19.6	19.2	103.5	74.5	1495.0	787.0	932.4	20.8	60.5	-.6	D15 Nes PEN 4
191947	25.46.50	-89.23.04	19.1	19.3	105.8	76.5	1496.0	782.4	927.4	18.2	58.7	4.1	Now outbound to N
192431	25.44.64	-89.14.10	21.8	20.6	8.9	13.9	1528.0	769.7	914.0	154.5	11.1	.3	D16 Nes
194045	26. 2.46	-89.18.42	19.8	17.4	.5	29.9	1521.0	800.6	951.5	86.2	58.1	-.2	D17 Nes
195542	25.52.92	-89.29.76	19.5	18.7	125.9	96.6	1501.0	791.7	938.8	32.2	63.0	3.4	D18 Nes
195601	25.52.26	-89.28.74	19.0	18.3	124.9	93.8	1491.0	788.6	934.4	28.8	63.7	1.6	D19 Nes PEN 5
195614	25.51.78	-89.28.02	18.4	18.0	124.7	93.3	1500.0	785.2	931.6	26.0	62.8	4.7	Just marked splash pts outbound
195634	25.51.12	-89.26.94	20.1	19.3	123.2	99.5	1492.0	780.5	924.2	25.2	50.1	2.6	BT 7
200234	25.50.34	-89.29.82	19.3	20.0	299.9	330.0	1500.0	785.3	931.0	18.4	62.5	15.6	Turn to trk 075 inbnd
201320	25.57.36	-90. 4.80	19.5	18.1	179.7	172.7	1520.0	823.6	978.8	19.8	45.7	1.4	D20 Nes
201732	25.36.48	-89.58.38	19.2	17.5	131.8	121.3	1494.0	823.8	976.4	343.6	40.9	-.5	D21 Nes
202406	25.43.92	-89.34.20	19.1	18.3	65.9	39.1	1516.0	791.3	940.1	332.2	56.5	.2	
202422	25.44.28	-89.33.24	17.9	17.9	66.6	37.7	1510.0	788.2	936.5	333.9	60.6	1.9	

202440	25.44.70	-89.32.16	18.0	19.8	65.6	36.1	1541.0	781.3	931.2	331.1	61.9	8.4	D22 Nes
202504	25.45.36	-89.30.84	19.7	20.2	62.3	42.7	1462.0	783.8	925.1	337.1	44.6	2.4	D23 Nes PEN 6
203059	25.42.42	-89.30.60	19.4	20.1	238.3	265.3	1532.0	782.8	931.4	312.3	55.2	-1.2	Just marked spl pts
203442	25.35.88	-89.42.72	19.2	19.2	240.6	264.8	1514.0	808.1	959.7	338.9	50.0	.4	D24 Rainex
203537	25.34.08	-89.45.90	17.9	18.9	239.6	266.3	1541.0	810.2	966.0	323.7	53.7	-9	D25 Rainex
204350	25.20.28	-89.51.12	20.4	17.9	39.4	21.4	1504.0	824.4	977.5	306.8	36.9	.8	Inbound trk 040
205220	25.45.00	-89.28.14	21.0	19.2	39.4	22.6	1527.0	775.5	921.3	285.5	38.7	3.2	D26 Rainex PEN 7
205624	25.50.70	-89.15.96	20.0	19.4	135.0	159.1	1542.0	779.2	927.8	190.2	62.0	-4	D27 Rainex
210005	25.45.18	-89.4.92	19.4	18.8	114.9	141.0	1518.0	806.2	957.8	200.1	52.7	.8	D28 Nes
210024	25.44.70	-89.3.84	18.1	18.6	114.5	142.2	1558.0	804.0	960.3	192.1	59.9	-2.0	D29 Nes
210039	25.44.40	-89.3.06	18.3	17.2	115.9	145.4	1581.0	802.8	961.4	190.4	61.9	-2.7	D30 Nes
211611	26.16.74	-89.42.78	18.5	17.7	158.4	127.3	1507.0	812.9	965.4	68.1	63.6	.9	D31 Rainex
211708	26.14.10	-89.41.22	17.8	16.9	148.1	118.7	1514.0	807.9	960.6	67.4	64.1	1.5	D32 Rainex
211959	26.6.72	-89.36.48	19.0	18.3	149.0	118.3	1511.0	793.2	941.9	70.1	66.0	1.9	D33 Nes
212020	26.5.82	-89.35.88	18.5	17.8	149.8	118.6	1503.0	791.3	939.2	68.1	65.9	.2	D34 Nes
212044	26.4.74	-89.35.22	18.2	18.1	150.3	117.7	1503.0	787.3	934.5	67.2	67.7	1.8	D35 Nes PEN 8
212807	26.4.14	-89.38.16	17.8	18.5	326.2	359.8	1583.0	778.8	933.0	61.3	68.3	-1.0	Mark splash pts
213046	26.12.18	-89.44.16	18.2	18.6	327.9	359.6	1513.0	804.6	956.2	62.4	71.8	1.6	D36 Rainex
215711	25.54.60	-89.39.06	21.1	19.6	123.6	119.8	1532.0	770.6	915.9	335.5	12.2	.0	Orbit in eye - PEN 9
220720	25.56.04	-89.12.96	18.9	25.0	83.5	116.2	1517.0	805.5	956.4	181.7	63.5	1.2	D37 Rainex
220909	25.56.46	-89.6.06	18.4	15.6	85.0	115.3	1538.0	813.0	969.0	175.6	57.9	-4	BT8
221237	26.0.42	-88.52.20	19.0	17.1	67.2	89.1	1536.0	822.3	979.4	168.0	46.1	-3	BT9; Climb and RTB
223327	26.22.50	-87.18.78	9.4	3.9	91.6	104.3	3626.0	656.1	997.1	165.5	29.6	.3	11.5 PA
224412	26.40.68	-86.28.92	-2.7	-5.7	62.1	71.3	5613.0	516.2	1000.9	184.0	23.6	.6	FL175
233724	27.50.58	-82.31.68	26.4	-129.	39.2	40.9	-6.0	1013.5	1012.9	155.3	2.6	.3	Land
234849	27.50.94	-82.29.58	26.6	-129.	88.3	133.9	12.0	1012.1	1013.5	236.2	1.8	-1	Block in