E.5 Radar Scientist

The on-board Doppler radar scientist (DRS) is responsible for data collection from all radar systems on his/her assigned aircraft. Detailed operational procedures and check lists are contained in the operator's manual supplied to each operator. General supplementary procedures follow. (Check off and initial.)

E.5.1 Preflight

_____ 1. Determine the status of equipment and report results to the on-board lead project scientist (LPS).

_____ 2. Confirm mission and pattern selection from the on-board LPS.

_____ 3. Select the operational mode for radar system(s) after consultation with the on-board LPS.

_____ 4. Complete the appropriate preflight calibrations and check lists as specified in the radar operator's manual.

E.5.2 In-Flight

_____ 1. Operate the system(s) as specified in the operator's manual and as directed by the on-board LPS or as required for aircraft safety as determined by the AOC flight director or aircraft commander.

_____ 2. Maintain a written commentary in the radar logbook of tape and event times, such as the start and end times of F/AST legs. Also document any equipment problems or changes in R/T, INE, or signal status.

E.5.3 Post flight

_____ 1. Complete the summary check lists and all other appropriate check lists and forms.

_____ 2. Brief the on-board LPS on equipment status and turn in completed forms to the LPS.

_____ 3. Hand-carry all radar tapes and arrange delivery as follows:

a. Outside of Miami - to the LPS.
b. In Miami - to MGOC or to AOML/HRD. [**Note**: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]

_____ 4. Debrief at MGOC or the hotel during a deployment.

_____ 5. Determine the status of future missions and notify MGOC as to where you can be contacted.

HRD Radar Scientist Check List

Flight ID: ~~0920~~ 020921I

Aircraft Number: 43

Doppler Radar Operators: Dodge

Radar Technician: T. Lynch, J. Smith

Number of digital magnetic tapes on board: enough

Component Systems Status:

MARS _____ Computer _____

DAT1 _____ DAT2 _____

LF 102 ~~4~~ R/T Serial # _____

TA 201 ~~4~~ R/T Serial # _____

Time correction between radar time and digital time: _____

Radar Post flight Summary

Number of digital tapes used: DAT1 _____

DAT2 _____

Significant down time:

DAT1 _____ Radar LF _____

DAT2 _____ Radar TA _____

Other Problems:

2139 LF froze for ~ 1 min
2353 – 0001 Tail Stopped

Form E-5
Page 2 of 3

HRD Radar Tape Log

Flight 020921I **Aircraft** 43 **Operator** Dodge Sheet 1 of ____

LF RPM _____ TA RPM _____

(Include start and end times of DATs, as well as times of F/AST legs and any changes of radar equipment status)

Tape #	F/AST On?	Event Time (HHMMSS)	Event
1	~~Y~~ N	1710	ADC started tape
	YES	1739	switched to FIAST. PRF 2100
		~0100?	

020913 I (2)

1709: 27° 38' 89° 29'
AF fix, from 1500' 1003 mb

1800 Bird Smacked Radome so end of misson, Big Chunk of radome (NOSE) off so. No Sondes launched. Sent phony LF message to TG. Flew back at 1000' (to burn for fuel) Ed Walsh happy with his data. Should check nose camera v tape for bird splat.

1952 back at MacDill

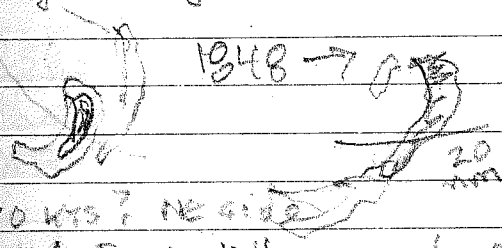
090221 I (1)

H. ISIDORE
HAIRSIN 1a Storm Pg
LPs: P Black, N. Shay,
Radar, WKstn, GPS: P. Dodge
BT's, CTD's, CP's: T. Cook, S. Guin
170150 T/O from MacDill

1746 WKSTN OK, ▽'s working
TAIL PRF 2100.

1818 descending to 5,000

182446 sonde #1 2286 84°41'
after turn
1823 start good in isl, kpsc
1838 eye 50 nmi SW of A/C
big ring ~40 nmi across.
I also convective feature / inner eye
maybe only 12 nmi across?



1836 →
1852
1846, 49, 52
EMPTY
1845 - 1852

110 kts; NE side

1851 Bouncy ride some str folding...

1905 - we're descending to 1,000'
Sent First LF composite

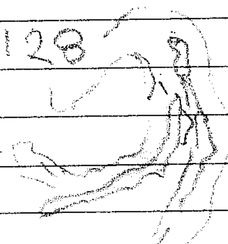
isi2.kpac starts at 1940

1957 ctr MSLP 946 mb
2nd LF CMP 1940-7 1956-2003
2004
2-07 2011

END 2021 for closer
1956-2011 good composite
SENT at 2028 ASDL [illegible] 34,35

2042 out in the clear — going
down to 1000' again on NW side
2056 now climbing back up

3rd isi3.kpac — start ~2110

2128  2129 orbit in
eye for Juan
Carlos Arkes.
They were in a free
fall BT. Then we head
E for the nastiest part of the
eye.

7 sondes were launched

2141 launched 3 sondes E eyewall
including one large parachute

2159 approaching strong
rainband 15 m/s ↑

2236 flying around in
popcorn ~140 nm E of [illegible]

2252 sent 3rd LF composite
covering 2141-2147, shows
rainbands on E side. M.IP 60, 61

2257 — we are at 23°48'
84°30', cruising at 1000'
again NE of storm but not for
long. Beautiful sea surface!

WKSTN NOTE: The only thing
different today is that Eric U.'s
PC was not turned on. Makes
you wonder...

2250 — Started isi4.kpac for
last pass into eye.
0015 turn at 22°39' 87°11'
for last pass to eye. 42 has
already left the scene...

0018 seems like convection
has rotated around E→W

020921I (4)

0026 - inside Barry hunting convection definitely on W side now

0029 FIX: 22°08'.3 86°34'
943 mB

0037 Climb out
4th Composite;
2419-2434-2444

Doing 2419-2449 I get the dreaded rings...
Go with 2419→2434
No 2430-2440 best. (still has rings)
sent at 0100 UTC -
because it shows how convection lined up in W eyewall

Landed 0201 UTC.

020922I (1) H. ISIDORE

LPS P Black ½/Wkstn P Dodge
Sondes Dodge/Goldenberg
BTS. Judy Gray
T/O from MacDill at 193255
after delay waiting for 42 to fix something (APU DOOR)

2036 - I just noticed that SQI/WSTN was not selected to record! I changed and restarted tape. I probably forced up yesterdays tape. Complacency (and Dave J!)
ERIC'S laptop is ON - and we reseated SERIAL cable - so everything seems to be working OK. If things start to go flaky on HP, EU's machine will be turned off

2054 at 23°53' 86°49' begin the descent to 5,000'

2101 - can see Anvil start with TA
2102 - at 5,000'

151. KPAC
start 2118 good.
on zoomed LF can see