19940820I1_RADAR Hurricane/TS Chris

E.5 Doppler Radar Scientist (On-Board)

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 HRD/DRS and 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 Operate the system(s) as specified in the operator's manual and as directed by the HRD/DRS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.

E.5.3 Postflight

_____ 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 HRD operations center (FGOC).
b. In Miami – to MGOC or to AOML/HRD. [Note: all data removed from the aircraft by HRD personnel should be cleared with the OAO flight director.]

_____ 4. Debrief at the appropriate operations center (FGOC or MGOC).

_____ 5. Determine the status of future missions and notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted.

INE = 2
LF R/T = 124
TA. R/T = 201/202 } From Jim Barr

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Doppler Radar Scientist Check List

Flight ID 940820I

Aircraft # RF43

Operators Samsury

Radar Tech. Jim Barr / Terry Lynch

Number of digital magnetic tapes on board 9 Dats

Number of tape labels on board N/A

Component systems up and checked: Used HURRI setup

MARS		Computer	
DMTR1		DMTR2	
LF		R/T#	
TA		R/T#	

Time correction between radar time and digital time _____

Radar Postflight Summary

Number of digital tapes used: 1 DAT

DMTR1 _____

DMTR2 _____

Significant recorder down time:

DMTR 1		Radar LF	2008-2013
DMTR 2		Radar TA	2237-2242, 2338-2340

Other problems:

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HRD Radar Tape Log

Flight 940820I Aircraft 43 Operator Sammy Sheet ___ of ___

Tape #	Time On	Time Off	Comments
1	174530	262310	~1900 LF not showing eclipses, problem fixed by Jim Burt - on MFC rather than AFC. LF looks OK
			200807 radar (LF + TA) ceased to update
			201225 TA reset + fine
			201310 LF reset + fine.
			223757 radar stopped updating
			224240 reset DSP - radars back up
			Kept tilt on LF most of flight at 2.5°. This was in an attempt to limit sea clutter, somewhat unsuccessful unfortunately.
			2338 radar stopped updating
			2340 radar up

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HRD Radar Down-Time Log

Operator Samsung Sheet 1 of 1

Item	Time Down	Time Up	Problem
1	200807	201310	radar stopped updating.
2	223757	2242	radar stopped updating
3	2338	2340	" " "

Item List: DMTR1, DMTR2, COMP, RDSC, LF, TA, DSC1, DSC2.

940820 I RF43 ChMS

Takeoff: 172407 UTC

Video time off from internal clock
~8 sec fast → eventually fixed –

1900 tilt at 1.0, noticed → 2309
1903 tilt at 1.3
1906 " " 2.0
1909 Despite tilt = 2.0, still fair
- amt of sea clutter betwn SP 150 nmi.
- Little sight of the storm on radar
- cold low convection may be appearing to our left (N) (of our position).

1943 - hunting for center.
Max 0 wind speed >40.
1946 - wind down to 6.
with cats below
1952 - light wind.
center looked to be near SW extension of precip.

1993

1994

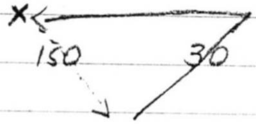
W wind speed up to 8
~ 2005

200807 clock stopped
201225 TA reset
201310 LF reset

~ 2042

0 => symbol used loosely.

2045
2nd spike back of scatterers will
change to FAST



212833 Turn to 150° ; back to 0° tilt on TA & back to continuous

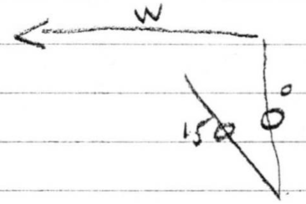
2220 convective cell
which TA shows 50+ dBz
near alleged center of Chris
to left (E) of a/c.

Good downdraft (>6).

223757 radar stopped updating again
Jim Barr reset the DSP & it
started up again @ 224240.

2338 radar stop again
2340 reset + up again.

2352 Turn to West



2408 Last bout w/ convection
WS = 53kts
pretty decent line of precip.

022310
(262310) radar shutdown.

2734 Landed San Juan.