19910713HI_RADAR

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 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.

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 AOC 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.

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Doppler Radar Scientist Check List

Flight ID 910713H1

Aircraft # 42

Operators Samsury, Marks

Radar Tech. Salim Leyva

Number of digital magnetic tapes on board 15

Number of tape labels on board _____

Component systems up and checked:

MARS	✓	Computer	✓
DMTR1	✓	DMTR2	✓
LF	✓ Changed R/T from 910712H1	R/T#	~~S/N:102~~
TA	✓	R/T#	42671

Time correction between radar time and digital time _____

Radar Postflight Summary

Number of digital tapes used:

DMTR1 5

DMTR2 4

Significant down time: N/A

DMTR 1 _____ Radar LF _____

DMTR 2 _____ Radar TA _____

Other problems:

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HRD Radar Tape Log

Flight 910713H1 Aircraft 42 Operator Samsury Sheet 1 of 1

Tape #	Time On (HHMMSS)	Time Off (HHMMSS)	Comments
1-1	002030	0110	estimated time off @ 0110.
2-1	0110	014940	
1-2	014840	023218	
2-2	023218	031827	
1-3	031827	040817	
2-3	040817	045005	
1-4	045005	054850	TK N
2-4	054850	063723	637 SWEEP 49 - EOT
1-5	063723	074103	

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HRD Radar Down-Time Log

Operator _____ Sheet ___ of ___

Item	Time Down (HHMMSS)	Time Up (HHMMSS)	Problem

Item List: DMTR1, DMTR2, COMP, MARS, LF, TA.

Jul 13, 1991 : F. Marks, C. Samsury

TOP 2 : P-3 Part II "Barrelling into the Night"

Ft: 910713H1

Takeoff @ 234917

INEZ being used → changed from 910712H1

Reflectivities look better

Recording @ 002030

Tail set to FAST ± 22.0°
@ 002330

Approaching 1st bit of convection
005320

Descending 005642

Cruising @ 700 mb 0100

In rain (stratiform variety)
010430

Lots of scattered conv. 0109

EOT ~0110 (?)
(1-1)

0128 Still in stratiform rain, more "stuff" on radar, but not as organized (squall-less) as yesterday. Nice to see "yellows" on radar pictures.

013034 Turn

013205 Surrounded by convection
Tops ~ 14km !!

013715 middle of "ring" of conv. + rain.

D 14150 obs. of a couple of NW-SE squalls.

014330 Large precip area to SW of A/C (betw 50 - 100 nm).

EOT (2-1) 014940

Large echo to South of A/C 015655

020245 Big shear seen in TA.

020430 Plethora of echoes seen on radar screen.

020805 FM says we just hit that axis.

021400
CP for pattern 10°N 104.5°W
= (from Kerry)

021600 due W @ ~25 nm from A/C
A/C motion to West.

021925 turn to N abit

022000 large rain echo
"leading edge" encountered.

022200 going thru line of storms

022400 In it! Definite Shear + bright band seen in TA

EOT (1-2) 023218

Turn to South 023745

ODW 1 → 023925

025530 Turn to East

025730 Lots of echoes to the S. of A/C

030142 Turn to North
running @ 105:33:7°W

030415 large echo to NE of A/C @ 30nm.
Should pass rt. by it.

EOT 031827 (2-2)

033000
Seaclutter shows sfc wind SE

033125 Squall feature 30 nm ENE of A/C as we track to N.

033500 rt on edge of A/C tracking around conv.

Turn: 034045 → to East

034700 Scattered conv. throughout radar screen.

034755 Turn to South
South @ 105:5°W

ODW @ 034908 bad - lost signal right away
035100 Big Conv. just to our left.
035400 a to our Rt.

EOT (1-3) 040817

0400-0416 large stratiform area to west
· good Doppler area

042543 Turn E at 8°40" 105°3.5"

043121 Turn N at 8°40" 104°39"
ODW 043208 good, BUT...
0437 ODW system failed with
Sonde in the air.

045005 end Tape 2-3

050930 Turn to E

051655 Turn to S
@ ~104:8" but
turning around the conv.
located just to S of A/C

Boredom except that Autopilot
is out. Bouncy, bouncy, bouncy...

054300 Scattered "blobs" to
South of A/C

EOT (1-4) 054850

Turn 055600 to E

055845 Rt in middle of big
precip region w/ line of
convection included.

Turn to N @ 060220
@ 103:43°W

Descending 061530

Turn @ 062030

Turn 063915
EOT 063723 (2-4)

Turn 064900

Turn 070700

Ascending 072400

Retracted radome 0734

EOT 074103 (1-5)

Stop recording 074630

official end of recording 074103