

19880901HI - RADAR

E.5 Radar/Airborne Doppler Radar Scientist (On-Board)

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 Operate the system(s) as specified in the operator's manual and as directed by the HRD/RS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.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

2135 - Al Jarvi worked some more on Doppler. Isolated problem to Pulse pair box. No luck yet
Final - Jarvi thinks he found a bad chip on board in Pulse pair box

Radar Scientist Check List

Flight ID 880901H
Aircraft # 42RF
Operators Marls
Radar Tech. Jarri

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Number of digital magnetic tapes on board ~10

Number of tape labels on board ~100

Component systems up and checked:

RDSC	<u>✓</u>	DSC1	<u>✓</u>
Computer	<u>✓</u>	DSC2	<u>✓</u>
DMTR1	<u>✓</u>	DMTR2	<u>✓</u>
LF	<u>✓</u>	R/T#	<u>102</u>
TA	<u>✓</u>	R/T#	<u>201</u>

Time correction between radar time and digital time _____

Radar Postflight Summary

Number of digital tapes used: DMTR 1 3
DMTR 2 2

Significant recorder down time:

DMTR 1 None Radar LF SN 102
DMTR 2 None Radar TA SN 201

Other problems:

TA R/T appears to be off frequency
At Jarri adjusted frequency got it to work
but Doppler Coko not locking onto transmit
pulse can't get steady velocity of ground. (over)

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HRD Doppler Radar Tape Log

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Tape Number	Time On	Time Off	Source*			Comments** (#pulses, scan rate, range)
			V	H	S	
1-1	195420					radar tape
1	195515	1957				Doppler tape 150m gates
						Problem with 32 pulses
						Doppler system shut down
2-1		2140				2114 TA & LF data looks good. in anvil
1-2	2142					LF & TA at the Germany haze layer
						then LF after 214320
2-2		001030				000830 TA on / good haze layer
1-3						001315 TA off

*Vertical, horizontal, or full sweep scan.

**Number of pulses averaged (32, 64, 128, 256); scan rate (min, max); range resolution (150 m, 300 m).

HRD Radar Down-Time Log

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Operator Maule

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Item	Time Down	Time Up	Problem
			Popper down whole flight

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