19870929I1-RADAR SEP 29 1987

SEP 29 1987

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 checklists 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.

every other sweep LF every sweep tail

✓ 4. Complete the appropriate preflight calibrations and checklists 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 Operate the system(s) as specified in the operator's manual and as directed by the HRD/RS unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO/Flight Director or Aircraft Commander.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 checklists and all other appropriate checklists 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.

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Radar Scientist Checklist

Flight ID 870429I1
Aircraft # N43rf
Operators Leighton (M. Black?)
Radar Tech Gonzalez L-tech Schriecker
Number of digital magnetic tapes on-board 29+
Number of tape labels on-board 0

Component systems up and checked:

RDSC	✓	DSC1	✓
Computer	✓	DSC2	✓
DMTR1	✓	DMTR2	✓
LF	✓	R/T#	101M
TA	✓	R/T#	201

Time correction between radar time and digital time +2

Radar Postflight Summary

Number of digital tapes used DMTR 1 2
DMTR 2 2

Significant recorder downtime:

DMTR 1		Radar LF	
DMTR 2		Radar TA	1910 → 1915

Other problems:

DMTR 1 finished after only 15 min for tape # 1/2
unknown reason
false E.O.T. suspected

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HRD RADAR TAPE LOG

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FLIGHT 870929I1 AIRCRAFT NOAA43 OPERATOR Leighton SHEET 1 OF

Tape #	Time On	Time Off	Source Radar		Comments
			TA	LF	
1/1	173132	1853?			LF every other sweep ~~TA every sweep~~ tail Notstarted 181818 tail started
2/1	1853?	1943			1910 => 1915 tail down?
1/2	1943	1958?			tape stopped after only 15min probably thought there was an EOT
2/2	1958	204545			at 2043 it was over continued to record anyway until 204545
~~1/3~~					

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HRD RADAR LOG

OPERATOR Leighton
SHEET 1 OF ____

RADAR DOWN-TIME LOG

ITEM	TIME DOWN	TIME UP	PROBLEM
Tail Radar	1910 ?	1915 ?	AFC problem

P.a.S.

ITEM LIST: VTR, DMTR1, DMTR2, COMP, ROSC, LF, NO, TA, DSC1, DSC2

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SEP 29 1987

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 checklists 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 checklists and all other appropriate checklists 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.

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Radar Scientist Checklist

Flight ID 870929H1
Aircraft # 43
Operators Gamache, Black M.
Radar Tech Terry Schricker

Number of digital magnetic tapes on-board Several Boxes

Number of tape labels on-board ~100

Component systems up and checked:

RDSC ____ DSC1 ____
Computer ____ DSC2 ____
DMTR1 ____ DMTR2 ____
LF ____ R/T# ____
TA ____ R/T# ____

Time correction between radar time and digital time ____

Radar Postflight Summary

Number of digital tapes used DMTR 1 6 tapes.
DMTR 2 ____

Significant recorder downtime:

DMTR 1 ____ Radar LF ____
DMTR 2 ____ Radar TA ____

Other problems:

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HRD DOPPLER RADAR TAPE LOG

SEP 29 1987 SEP 29 1987

FLIGHT 870929H1 AIRCRAFT 43 OPERATOR Gamache M. Black SHEET 1 OF 1

TAPE NO.	TIME ON	TIME OFF	SOURCE* V	H	S	COMMENTS**(#pulses,scan rate, range)
1	182408	184455			✓	
2	184653	~~18~~				190100 – Terry Schricker fixed ant. controller – better display
		~191300				191100 – Transmitter flaky ~10 display 191400 – fixed?
3	191945	193715				End Cloud #2
4	194345	2002			✓	Start on Leg trk 255° to
		EoF				new target W
5	200525	202600				201720 saw #2 going to
		EoF				our right tk 420°
6	202900	203800				left for Miami at 2038
		EoF				climbing

*Vertical, Horizontal, or Full Sweep Scan

** # of pulses averaged (32,64,128,256); scan rate(Min,Max); range resolution(150m, 300m)

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HRD RADAR LOG

OPERATOR____________

SHEET____ OF ____

RADAR DOWN-TIME LOG

ITEM	TIME DOWN	TIME UP	PROBLEM
TA AFC	1901 - ~~1958~~ 1914	1914	Afc was drifting during first part of flight. reflectivities are trash but should be enough information to make merged Doppler tapes later the dBZ's were Great

ITEM LIST: VTR, DMTR1, DMTR2, COMP, ROSC, LF, NO, TA, DSC1, DSC2