19870813I1. RADAR Calibration Flight

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.

____ 4. Complete the appropriate preflight calibrations and checklists as specified in the radar operator's manual.

E.5.2 In-Flight

10 km
20

____ 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 Operate the system(s) as specified in the operator's manual and as directed by the HRD/RS unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO/Flight Director or Aircraft Commander.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.

Form E-5
Page 1 of 4

Radar Scientist Checklist

Flight ID 870813~~I~~I 870813I1

Aircraft # 43

Operators N. Horst, M. Black

Radar Tech Terry Schaefer

Number of digital magnetic tapes on-board Plenty

Number of tape labels on-board Enough

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 +1

Radar Postflight Summary

Number of digital tapes used DMTR 1 1

DMTR 2 0

Significant recorder downtime:

DMTR 1 None Radar LF

DMTR 2 Radar TA

Other problems: None

Form E-5
Page 2 of 4
870813I1

HRD RADAR TAPE LOG

FLIGHT AUG 13 1987 AIRCRAFT 43 OPERATOR M. Black SHEET 1 OF 1

Tape #	Time On	Time Off	Source Radar TA	Source Radar LF	Comments
DIT1	13:32	13:50	✓	✓	13:31:49 - 13:49:53 Painted Florida

HRD RADAR LOG

OPERATOR_____

SHEET____ OF ____

RADAR DOWN-TIME LOG

ITEM	TIME DOWN	TIME UP	PROBLEM

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

August 13, 1987 870813 I

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.

_____ 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.

Form E-5
Page 1 of 4

Radar Scientist Checklist

Flight ID 870813I1

Aircraft # 43RF

Operators RADAR: BLACK, DORST, CRANE DOPPLER: GAMACHE

Radar Tech SCHRICKER

Number of digital magnetic tapes on-board ENOUGH

Number of tape labels on-board ENOUGH

Component systems up and checked:

RDSC ✓ DSC1 ✓

Computer ✓ DSC2 ✓

~~DMTR1~~ Dopplr ✓ DMTR2

Chugey as ever. LF ✓ R/T#

TA ✓ R/T#

Time correction between radar time and digital time

Radar Postflight Summary

Number of digital tapes used DOPPLER DMTR 1 1

DMTR 2

Significant recorder downtime:

DMTR 1 Radar LF

DMTR 2 Radar TA

Other problems:

Form E-5
Page 2 of 4

HRD RADAR TAPE LOG

FLIGHT_____ AIRCRAFT_____ OPERATOR_____ SHEET___OF___

Tape #	Time On	Time Off	Source Radar TA	LF	Comments

Form E-5
Page 3 of 4

HRD RADAR LOG

OPERATOR_____

SHEET_____ OF _____

RADAR DOWN-TIME LOG

ITEM	TIME DOWN	TIME UP	PROBLEM

ITEM LIST: DMTR1, DMTR2, COMP, RDSC, LF, TA, DSC1, DSC2

Form E-5
Page 4 of 4

HRD DOPPLER RADAR TAPE LOG

FLIGHT 870813H AIRCRAFT 43RF OPERATOR GAMACHE SHEET 1 OF 1

TAPE NO.	TIME ON	TIME OFF	SOURCE* V	H	S	COMMENTS**(#pulses,scan rate, range) 1600 PRF MAX RANGE: 38 km
1	1333	1350	✓	✓	✓	This ~~was a~~ data was obtained by scanning over a wide range of tilt angles and included ~~looks~~ nearly horizontal and vertical looks through a variety of tilt angles.

*Vertical, Horizontal, or Full Sweep Scan

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