

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.

Doppler Radar Scientist Check List

Flight ID 910728 HI
Aircraft # N42RF
Operators GAMACHE / DORST
Radar Tech. S. LEYVA

JUL 28 1991

Number of digital magnetic tapes on board 22

Number of tape labels on board 25

Component systems up and checked:

MARS	<u>✓</u>	Computer	<u>✓</u>
DMTR1	<u>✓</u>	DMTR2	<u>✓</u>
LF	<u>✓</u>	R/T#	<u>124</u>
TA	<u>✓</u>	R/T#	<u>202</u>

Time correction between radar time and digital time +1 sec

Radar Postflight Summary

Number of digital tapes used: DMTR1 6
DMTR2 5

Significant down time:

DMTR 1	<u> </u>	Radar LF	<u> </u>
DMTR 2	<u> </u>	Radar TA	<u> </u>

Other problems:

SYSTEM CRASH, DOWN FOR ~20 MIN. DUE TO
MISLOAD ON FAULTY TAPE (DRIVE 2)

Flight 910728HI Aircraft 42RF Operator GAMACHE
DORST Sheet 1 of

[illegible]

THERE IS NO TAPE D2T5 BECAUSE OF SYSTEM CRASH.

HRD Radar Down-Time Log

JUL 28 1991

Operator GAMACHE/DORST

Sheet 1 of

Item	Time Down (HHMMSS)	Time Up (HHMMSS)	Problem
COMPUTER	023148	025200	PROGRAM STOPPED ON TAPE CHANGE. RESTART

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

03:15 - Climb for Home.

910728H1 TEXMEX IOP4/1

TEXMEX experiment into TN #24

LPS - K. EMMANUEL, HRD sci - P. BLACK, JOANACHIE, N. D.

T/O - ACA 2016 Z LAND - ACA 0530 Z

MINOR DATA SYSTEM BUG PRIOR T/O. 2025 Z the

radar system is started AOK.

20:49:45 - Begin radar recording.

20:58: Record set. Sweeps: TILT - 3°, 21:08, 21:20, 21:31,
21:41, 21:46, 22:03, 22:33, 23:10, 23:25, 00:14, 01:05

JOINING TRACING RADAR ON TRANSPARENCY FOR
LATER USE.

01:07 - MISLOAD ON DITY LOST 3 MINS OF DATA
AT START.

02:52 - RADAR SYSTEM WENT DOWN WHEN BAD
TAPE MISLOADED & HUNG UP SYSTEM, SALIM
REBOOTED COMPUTER, ~30 MIN LOST