

1984091211-RADAR

E.4 Radar Scientist (On-Board)

This individual is responsible for data collection from all radar systems on board his or 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.4.1 Preflight

- ✓ Pck 1. Determine status of equipment and report results to the on-board lead project scientist (LPS).
- ✓ Pck 2. Confirm mission and pattern selection from on-board LPS.
- ✓ Pck 3. Select operational mode for radar system after consultation with HRD radar scientist and on-board LPS.
- ✓ Pck 4. Complete appropriate preflight calibrations and checklists as specified in the radar operator's manual.

E.4.2. In-Flight

- ✓ Pck 1. Operate system as specified in the operator's manual and as directed by the HRD radar scientist, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.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.4.3 Postflight

- ✓ Pck 1. Complete summary checklists and all other appropriate checklists and forms.
- ✓ Pck 2. Brief on-board LPS on equipment status and turn in completed forms to LPS.
- _____ 3. Hand-carry all radar tapes and arrange delivery as follows:
 - a. Outside of Miami - the HRD operations center.
 - b. In Miami - the HRD/AOML offices.
- _____ 4. Debrief at operations center.
- _____ 5. Determine status of future missions and notify operations center as to where you can be contacted.

SEP 12 1984

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Radar Scientist Checklist

Flight # 840912 I 1 H Drone
 A. C. # N43AF
 Operator Kohler + Bluestein
 Radar Tech. Berles, Torri

Number of digital magnetic tapes on board 31Number of video tapes on board 4Number of tape labels on board enough

Component systems up and checked:

RDSC ✓VTR ✓Computer ✓DSC1 ✓DMTR1 ✓DSC2 ✓DMTR2 ✓Scopes —NO —LF okTA down-fixedTime correction between radar time and digital time 05

Radar Postflight Summary

Number of digital tapes used DMTR 1 4DMTR 2 ~~1~~ 1 rekNumber of video tapes used 2

Significant recorder down time (other than for tape changes):

DMTR: LF ~1920 onVTR: LF ~1920 onNO —NO —TA ~1906 onTA —

Other problems: (stabilization, interference, etc.)

lost 60 Hz power ~1903
 lost everything ~1920

HRD RADAR TAPE LOG

Sept 12, 1984

FLIGHT 840912FZ

AIRCRAFT N43RF

OPERATOR *Kowler*

SHEET 1 OF 1

[illegible]

SEP 12 1984

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H Drona

N43RF 840912IZ

OPERATOR Kohler/SteinSHEET 1 OF 1

HRD RADAR LOG

RADAR DOWN-TIME LOG

<u>ITEM</u>	<u>TIME DOWN</u>	<u>TIME UP</u>	<u>PROBLEM</u>
TA	1300Z	21450Z	Tail radar not operational this flight - wipes out Doppler also - fixed!
DMTR2	1740	1748	Drive was offline; ROSC was on stop - turned on both!
DMTR1, 2	1746		overheating - not recording
VTR	1903		lost 60 Hz power
LF, TA	21920	Re end!	down completely

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

17. Diana

Sept 12/1984

P. Willis, US

8909 12I1

Kohler

LF: 3 5 16 20 24 31

+ Buerstein

~~TA: 7 20 31 36 40 47~~ ~~Tail radar down~~

TA: 14 20 31 36 40 47

fixed - talk w/ Terry

settings higher because gain on tail

Shricker/Series

radar is higher - talk to F. Marks about this!

step thru VCR

150330

(282)

1510Z Penetrated several eyewalls

34.00 77.08

wind 190 @ 92 knots

973 mb

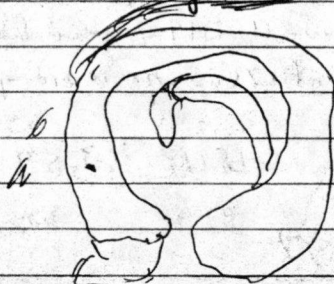
eye is filling in both outer and inner eyewalls present

1520Z heading 072



1529 43.8 m/s in eyewall

970 mb



hdg 113

trk 090 1536Z outer eye - 46.0 m/s

inner eye was 44.0 m/s

Step thru VCR 153830

(676)

1540-1548 ROSC for DMTR2 was off; Drive 2 was off line

1550Z pass thru a light, bumpy rain bank

Step thru VCR 1611 Z

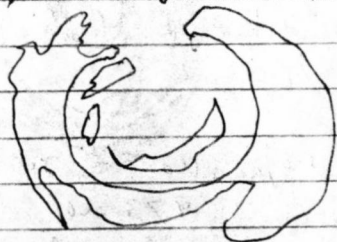
(933)

1630 Z hdg 240 47.7 m/s in outer eyewall

47.7 m/s in inner "

1634 Z fix 34.07 78.09

lv on track 240 eyewall open on the west



Step thru VCR 1640

(1149)

" " " 1707

(1331)

[Bob Berles adjusted the tilt to duck on land]

Step thru VCR 1733

(1498)

1741 Z Approaching eye from Hdg ~~320~~ 320 (TRK 330)
(from the southeast)

1754 Z 51.4 m/s 1st wall 49.7 second wall

tape drives out of service at 1746 - no recording this pass

1815 Z in eye again

1817 Hdg 120

1818 33.59 77.12



1819 51.7 m/s

1828 46 restarted drive 1 recording LF, TA (NO selected
only 182745 - 182846) DMTRZ FTS light red

1746 59 1827
1727 -51 31
19 1858

but ready

VCR 1 off at 1840 Z (~1876)

Step thru VCR 1842 Z (20)

lost 60 Hz power ~1903

restarted radar @ ~1914 on D174. Radar clock
said 1328 No fail radar display

Radars out completely here after overheated
1933 Z 55.0 m/s 41.9 m/s 970 mb 1.8 m/s

193808 33.56 77.12

51.6 m/s

49.2 m/s

LF and Tail Radar + computer DEAD

840913 ±1

H. Diona

Sept. 13, 1984

LPS: Steve Lord

Radar: L. Kohler, J. Berkely

Step thru VCR 1759 (306)

Hdg ~240 (SW ish) paralleling coast A lot of sea clutter
in the picture but I fear it will remove all features if I
remove it. Pressure altitude 310 meters

Step thru VCR 183230 (659)

pressure altitude 220 mtrs (~1000 ft)

Step thru VCR 1859 (899)

Flying box patterns 10 miles off shore.

1928 Z Flying right along the coast

Step thru VCR 1948 Z (1239)

" " " 2019 (1450)

" " " 2042 (1587)