

E.5 Radar Scientist

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.
- _____ 2. Maintain a written commentary in the radar logbook of tape and event times, such as the start and end times of F/AST legs. Also document any equipment problems or changes in R/T, INE, or signal status.

E.5.3 Post flight

- _____ 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 LPS.
 - 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 MGOC or the hotel during a deployment.
- _____ 5. Determine the status of future missions and notify MGOC as to where you can be contacted.

HRD Radar Scientist Check List

Flight ID: 020925II

Aircraft Number: N43RF

Doppler Radar Operators: DODIE/GAMACHE

Radar Technician: LYNCH

Number of digital magnetic tapes on board: 28

Component Systems Status:

MARS ✓

Computer ✓

DAT1 ✓

DAT2 ✓

LF 102 ✓

R/T Serial # 102

TA _____

R/T Serial # _____

Time correction between radar time and digital time: RADAR IS 1 1/2
SECONDS AHEAD

Radar Post flight Summary

Number of digital tapes used: DAT1 _____

DAT2 _____

Significant down time:

DAT1 _____

Radar LF _____

DAT2 _____

Radar TA _____

Other Problems:

HRD Radar Tape Log

020925Z
Flight ~~32~~ Aircraft 43 Operator 000666 Machine Sheet 1 of 1
LF RPM 2 TA RPM 10

(Include start and end times of DATs, as well as times of F/AST legs and any changes of radar equipment status)

[illegible]

020925 ~~II~~

0209 25 I I N43 RF

LPS - CIONE

ASST FLD PRGR DIR - DODGE

WKS STATION

RADAR WKS STATION - GAMACHE

SPMR - VHL HORN

~~S~~ OBSERVER - NOLAN - RMSAS

SRA - ED WALSH

FLT DIRECTOR DAMIANO

NAVIGATOR - NEWMAN

PILOT - PHIL KENUL

ENGINEERS - TERRY LYNCH

J. SMITH

T.S. ISIDORE - ~~A~~

TASKED RECON.

T/O 2230 UTC

FROM MACDILL

23033 descending to 10,000'

2336 ~~in~~ underneath anvil

BT#1 2343 27°32' 88°3'

27°6' SST

020925I (2)

0003 Barry hunting for the center
- which is just a dent in the overall
circ...

0005 SND #1 $27^{\circ}39'$ $290^{\circ}15'$ 4
in eye, Barry got under 2 KTS

0028 $27^{\circ}43'$ $92^{\circ}10'$ turn

0029 BT#2 $28^{\circ}2'$ SST

0048 turned, now heading 41°

BT#3 0049 $26^{\circ}28'$ $91^{\circ}25'$

~114 BT#4 in center

0135 $28^{\circ}50'$ $88^{\circ}57'$ passing
by some echo. JO noticed that
tractor was not lifting much, so
adjusted it

0146 BT/SND at 12040

$29^{\circ}14'$ $89^{\circ}12'$ $28^{\circ}15'$ SST

0150 wind "max" ~ 54 KTS

200 72 KTS

206 outside turn to set up coastal
pass at $30^{\circ}06'$ $86^{\circ}57'$

020925I (3)

020846 $30^{\circ}03'$ $87^{\circ}03'$ SND
65 KTS - flt level winds good

021504 $30^{\circ}04'$ $87^{\circ}39'$
SND (70 KTS at FLTLVL)

ERIC U says 33 m/s on SENS

NO WINDS (of course, when we
are in the wind max)
(strong wind - winds at 350)

021832 SND $30^{\circ}04'$ $87^{\circ}59'$
(68 KTS at FLTLVL)

022217 $30^{\circ}04'$ $88^{\circ}19'$ SND

0229 turn at $30^{\circ}05'$ $88^{\circ}57'$
to track SSUI to BURL1

023055 SND $30^{\circ}00'$ $89^{\circ}03'$
NO WINDS, (said NO Backup
because we already heading S

0247 small hook like echo
causes pilots to deviate

024833 SND/BT $28^{\circ}54'$ $89^{\circ}28'$
or so - near BURL1 (NO WINDS!)

025046 SND (BACKUP) $28^{\circ}47'$

ERIC U says BT $89^{\circ}38'$
shows THIS "SONDE also no winds
10 m depth 230 water

0351 - R Pasch called -

(4)

wants us to do the coastal
run again - they have not
gotten some of our data - so
we get one more shot at F Fall
at all.

402 we turned at 26° 90°
40229 SND/BT (4200)

SND No Launch

040341 $26^{\circ}09'$ $89^{\circ}52'$ BACK
UP SND

413 radar hiccup

Will this flight ever end?

0502 Turning for coastal run...

505 snd $30^{\circ}10'$ $87^{\circ}09'$

0510 $30^{\circ}09'$ $87^{\circ}39'$ SND

(trying for wind max) (probably 30 knots - my
fault) NO F4SSING WINDS!

051330 SND $30^{\circ}08'$ $87^{\circ}53'$
very few winds

051836 $20^{\circ}07'$ $88^{\circ}19'$ SND NO WINDS

~~051836~~

051633 Launch at $30^{\circ}05'$ 89°
NO WINDS

(5)

020925 I

This is way too many sonde failures.
Hope it wasn't the NBC/freelance
camera man's cell phone...

545 at $29^{\circ}22'$ $90^{\circ}13'$ passed
EAST of intense hotbing cell

which showed
some elevated high
dBZ

This was in same general area
as "hook" echo at 224!

0557 $28^{\circ}56'$ $90^{\circ}57'$ "eye" SND

0614 Barry declares it on phone
(near 29° $90^{\circ}33'$) and we
are headed home. We are climbing
to 17,000 and we are heading back
to MSPillo.

Little radar feature ctr 29.3 , 90.45
could be a center

	<u>Event</u>	<u>LAT</u>	<u>Lon</u>	<u>Drops</u>
①	42036	28.51	84.51	BT/GPS
②	42039	28.78	86.08	BT/GPS
③	42040	29.21	88.20	BT/GPS
	CENTER	27.30	90.50	-
④	SW of CNTR	26.00	92.00	BT
		26.00	91.28	BT
⑤	S of CNTR	26	90.5	BT/GPS
	CENTER	27.3	90.5	BT
⑥	N. of center	29.5	90.5	-
⑦	W. of center	27.3	92.0	BT
⑧	E. of center	27.3	88.65	BT
	Coast	30.13	87.00	GPS
	"	30.13	87.65	GPS
	"	30.13	88.30	GPS
⑩	"	30.13	89.00	GPS

NOTES:

- * Points 1-2-3 on inbound. all should be @ diff altitudes
- * hit 2 CMAN sites sometime during flight

[GPS] GDIL 29.27; 89.96

[GPS] BWRL 28.90; 89.43

Check if you note down the ground targets to the radar system a thermometric we will take earlier.

28.90 89.43

LIMITED DISTRIBUTION
 CDRG GNC 1:5 M - Equal Arc Projection



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 GNC 09, Ed 13, Apr 09 1990

LIMITED DISTRIBUTION

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