Radar Scientist

The on-board radar scientist 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.)

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.

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.

Post flight

____ 1. Complete the summary checklists 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: ~~0409121~~ 04091211

Aircraft Number: N43RF

Radar Operators: GAMACHE

Radar Technician: LYNCH

Number of digital magnetic tapes on board: ~10

Component Systems Status:

MARS ✓ Computer ✓

DAT1 ✓ DAT2 ✓

LF ✓ R/T Serial # 102

TA ✓ R/T Serial # 202/102

Time correction between radar time and digital time: _____

Radar Post flight Summary

Number of digital tapes used: DAT1 2

DAT2 1

Significant down time:

DAT1 _____ Radar LF _____

DAT2 _____ Radar TA _____

Other Problems:

HRD Radar Event Log

Flight 040912I **Aircraft** N43RF **Operator** GAMACHE **Sheet** 1 **of** ___

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)

Tape #	F/AST On?	Event Time (HHMMSS)	Event
—	—	090030	T/O FROM MACDILL
1-1	FRENCH	090435	BEGIN REC
		091900	RADAR DOWN
1-1	FRENCH 2400	094353	RECORDING STARTED AGAIN
	"	111803	RADAR DOWN
	"	112150	RADAR UP
D1-T1		120214	CHANGING RADAR TAPES FOR TO_FB
D2-T1			
D2-T1		1204	RECORDING ON 2nd tape
D1 T2		N1355	RECORDING ON 3rd tape
			NOTE! 2nd tape would not to-fb
		1627	END RECORDING

040912 I1

RADAR OPERATOR GAMACHE
RADAR TECH LYNCH
LPS DODCE
WKSTN/SONDE LEIGHTON

THIS IS A TASKED SFMR MISSION
USAF HAS THE FIX AT 12Z

WE WILL TRY THE to_fb
option after either the first
or second pass through

~ 9Z T/O 9h mission
"Butterfly - 60°" pattern.

PLAN TO USE 2400 PRF
FIRST GOOD BIN - #4 @ 450 M RDL
DEALIASING AVERAGE 10 BINS

1030 IVAN HAS A PRONOUNCED
MOAT AND APPARENTLY CONCENTRIC
EYEWALL STRUCTURE ON
RADAR SCREEN. CENTER AT
ABOUT 20 NM ON RADAR

1041 IP

1042 21°17' 82°48' DROP

17.8m/s eyewall RA 2530 m

1831' 81°12' 1045
RADAR FIX

10937 Sonde 1946' 81°53'

1115 100 KM OUT
1126 40 KM OUT
NW
MAX WIND ~~WALL~~ SIDE 100 knots SFMR

920mb 1130 18 42 81°08'
18.7 81.13

1139 60-65 KM out

1146 115 KM OUT

88 km from center 4km res.
6.2 spectral width
1.5km .15 km profile

1224 DID A TOFD of first radar type of flight for leg 1.
Let's see what happens.

Started ground 1210-1215

1256 2nd of two legs

1301 110 km out on ENE side

1306 70 km out on ENE side

1307 18°58' 80°46' 3 sondes
RA 2335 NE windmax

1310 45 km out on ENE side

1316 18°49' 81°22' 922mb

1327 80 km out on WSW side
1330 for end of leg

Leg 2

1301 - 1330 18.81° -81.67
1316

This cloud and precipitation field is astonishing. It extends out >200 km in essentially all directions from the center. Much of the precip is stratiform.

18°56.4' 81°38'
1452Z
~~[illegible]~~ 18°56' 81°39' 922 mb

1535 Ended pattern ~~[illegible]~~

Last drop at 1538

Neat convection along very active line N of storm center ~~[illegible]~~ - 1545

Deep intensity flows

24

7

~~Things to close~~
040915 II ANAN
STILL CAT 4
WILL TRY TO RUN REAL-TIME RADAR SOFTWARE ONE MORE TIME

RADAR OPERATOR: GAMACHE, ALTHOUGH I'M ACTUALLY LOCKED OUT HERE IN THE JUMP SEAT

OTHER HRD
PETER DODGE: LFS
MIKE BLACK: WORKSTATION
FLIGHT MET: SHEPHERD

2340 IP

~~[illegible] KM 2351~~ LEG 1
~~10 KM 2358~~
10 KM 0000 Z
30 KM 0003 Z
60 KM 0006 Z

N 7 m/s
(u,v) = (0,7)

0014 28°53' 88°11' 931 mb
0022 50 KM
0026 90 KM