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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 HRD/DRS and the on-board LPS.

N/A 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 Operate the system(s) as specified in the operator's manual and as directed by the HRD/DRS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.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 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 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.

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Doppler Radar Scientist Check List

Flight ID 940924I

Aircraft # N432F

Operators MCCLOUGHAN

Radar Tech. LYNCH

Number of digital magnetic tapes on board PLENTY

Number of tape labels on board PLENTY

Component systems up and checked:

MARS	↑	Computer	↑
DMTR1	↑	DMTR2	↑
LF	↑	R/T#	↑
TA	↑	R/T#	↑

Time correction between radar time and digital time -0-

Radar Postflight Summary

Number of digital tapes used: DMTR1 2

DMTR2 _____

Significant recorder down time:

DMTR 1	2028-2041	Radar LF	_____
DMTR 2	_____	Radar TA	_____

Other problems: NONE

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HRD Radar Tape Log

Flight 840924I Aircraft N43RF Operator WILLOUGHBY Sheet 1 of 2

Tape #	Time On	Time Off	Comments
1	1856	2028	OLIVIA VISIB. AT EXTREME RANGE
	~1930		IP TRAK W → G
	1944		15-47 117-54 G 115 KT 950 mb
	1957		FASTING DOWNWIND LEG
	2005		FAST OFF TURN NE → G
	2019		X-937 15-52 117-57 G TRAK NE G →
	2028		RADAR DOWN
2	2041	0055	RADAR UP
	2042		TRAK S → G
	2052		15-58 TCE 118-05 G TRAK S G →
	2103		FASTING DOWNWIND LEG
	2110		FAST OFF TRAK NW → G
	2123		949 mb 16-02 118-06 TRAK NW G →
	2134		FASTING
	2145		FAST OFF TRAK E → G
	2155		16-05 118-14 G TRAK E G →
	2208		TURN TRAK W → G
	2223		16-09 118-17 G TRAK W G →
	2234		TURN TRAK E → G
	2238		WINGS LEVEL TRAK E → G
	2249		16-10 118-22 G TRAK E → FP
	2300		FINAL POINT CLIMBING
	2332		TA OFF LF STILL ON
	0055		RECORD OFF

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HRD Radar Down-Time Log

Operator WILLOUGHBY Sheet 2 of 2

Item	Time Down	Time Up	Problem
COMP	2028	2041	HANG UP

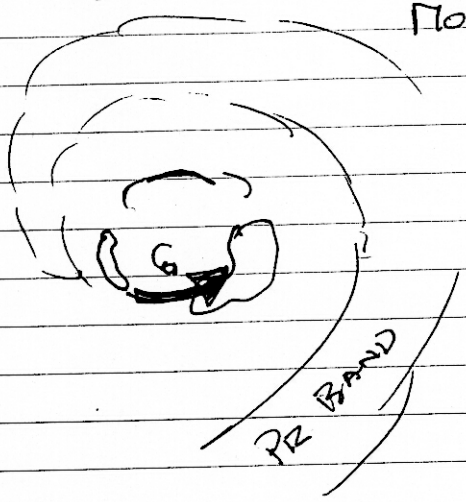
Item List: DMTR1, DMTR2, COMP, RDSC, LF, TA, DSC1, DSC2.

24SEP94

940924I OLIVIA KAKFT

FIRST G 1944 45-47 117-54 950mb
LAST G 2249 16-10 118-22

MOTION 310/09



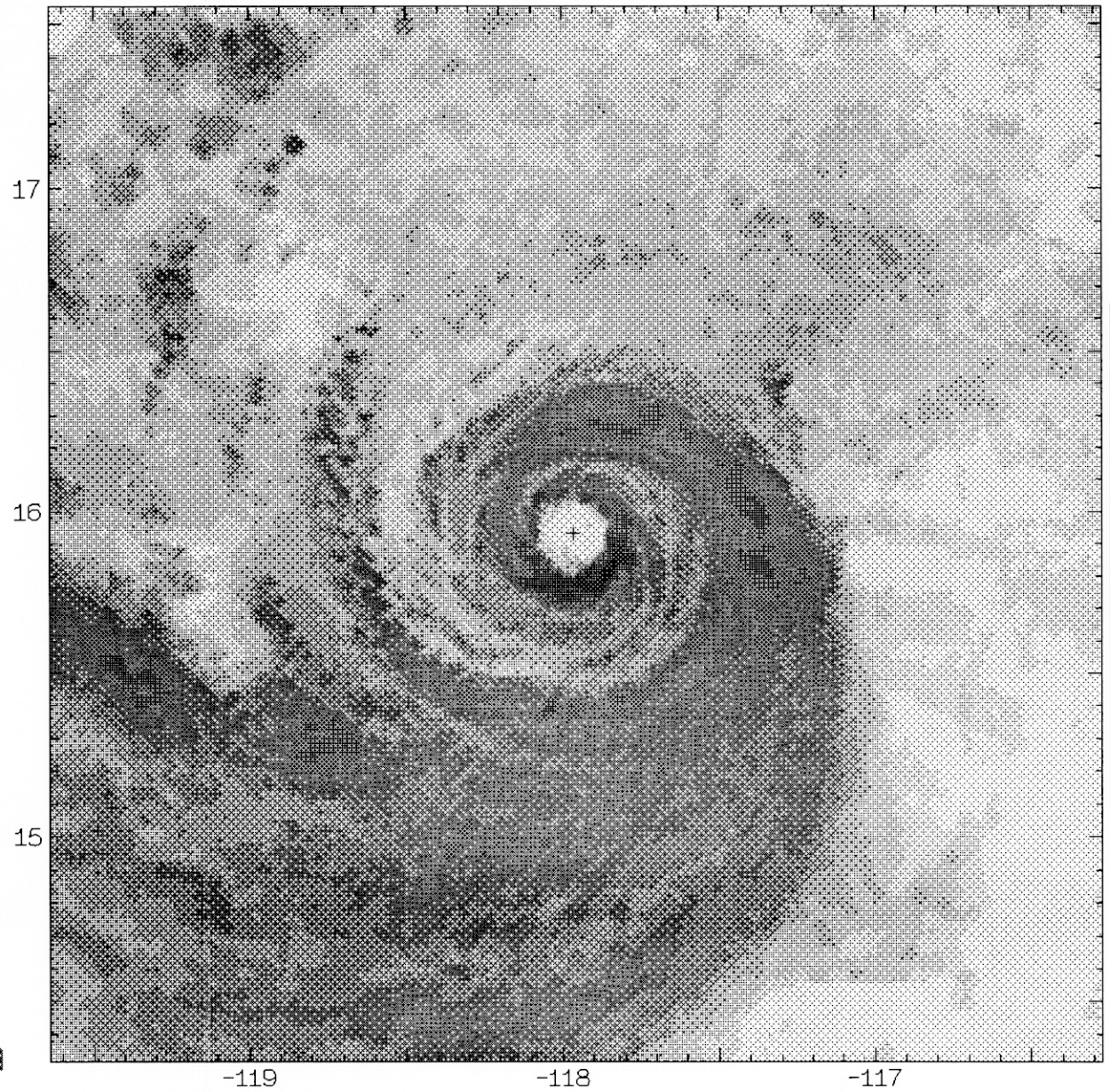
CELLS FORMED ON W SIDE, MOVED AROUND TO E SIDE, PASSING S OF OF G.

HIGHEST REFLECTIVITIES 50 dBZ, MOSTLY 35, SOME 40.

A LITTLE GRAUPEL/SOUND ON A/C S & E SIDES.

(UP TO 20 m/s)

BROAD UPDRAFTS E SIDE OF ETC DOWNDRAFTS OUTSIDE & UNDER HIGHEST REFLECTIVITIES



940924I1

OLIVIA

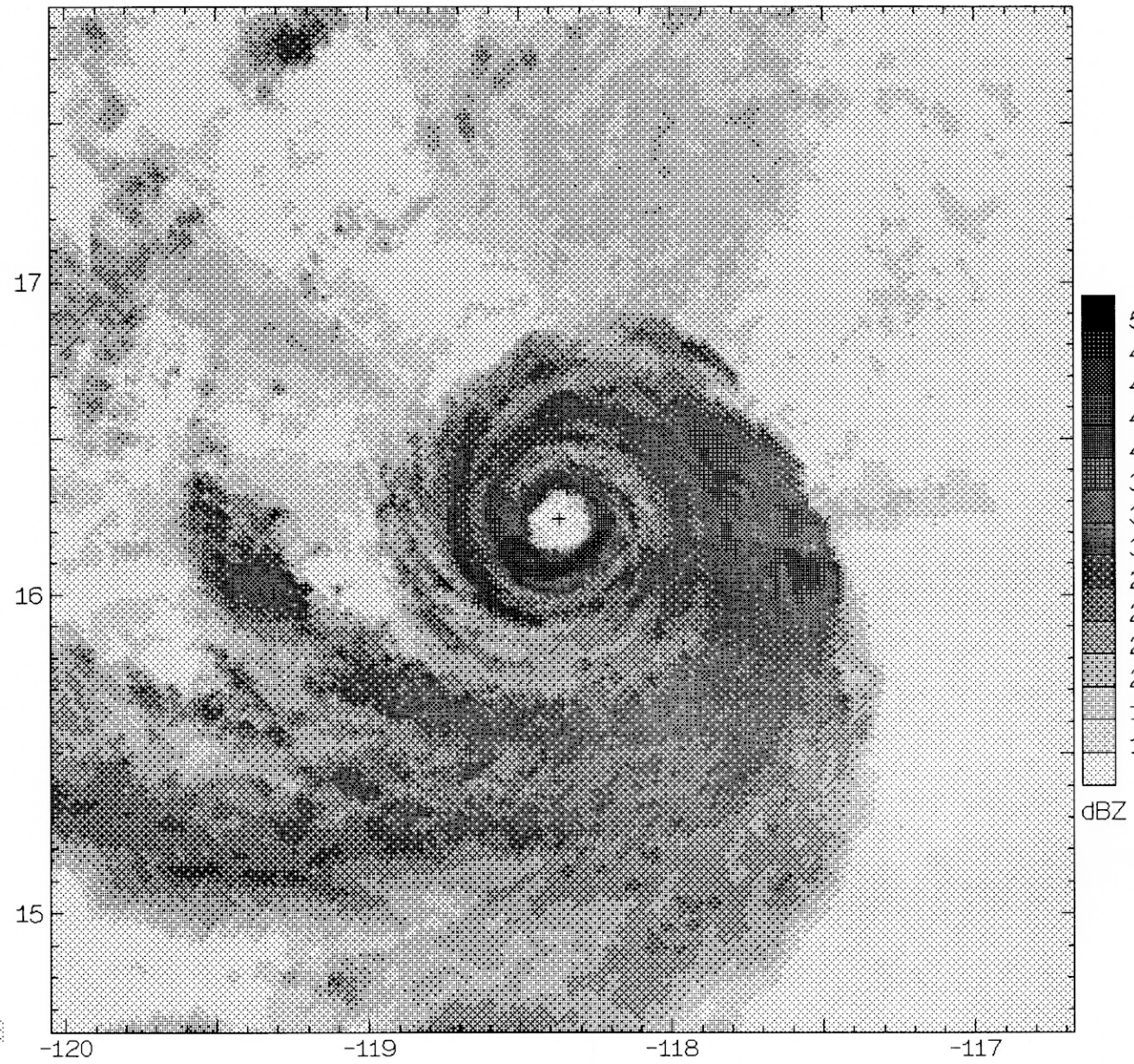
	(min.)	(max.)
Pitch=	1.3;	2.0
Roll=	-.5;	9.8
Track=	179.5;	191.3
Drift=	9.8;	11.2
Tilt=	2.3;	3.4

Alt= 4444 m

Slat= 15.90 N
Slon= 117.96 W
Rlat= 16.63 N
Rlon= 117.98 W

204236 Z
Lower Fuselage
360 X 360 km

produced by
HRD / AOC



940924I1

OLIVIA

	(min.)	(max.)
Pitch=	3.5;	4.8
Roll=	-.4;	1.4
Track=	66.9;	67.2
Drift=	-12.8;	-12.1
Tilt=	.2;	1.3
Alt=	5590 m	
Slat=	16.25 N	
Slon=	118.33 W	
Rlat=	16.23 N	
Rlon=	117.13 W	

230435 Z

Lower Fuselage

360 X 360 km

produced by

HRD / AOC