

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 Operate the system(s) as specified in the operator's manual and as directed by the HRD/DRS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.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

Doppler Radar Scientist Check List

Flight ID 940924J  
Aircraft # N4312F  
Operators WILLOUGHBY  
Radar Tech. LYNCH

Number of digital magnetic tapes on board PLENTY

Number of tape labels on board PLENTY

Component systems up and checked:

MARS	<u>↑</u>	Computer	<u>↑</u>
DMTR1	<u>↑</u>	DMTR2	<u>↑</u>
LF	<u>↑</u>	R/T#	<u>↑</u>
TA	<u>↑</u>	R/T#	<u>↑</u>

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

HRD Radar Tape Log

Flight 840924I Aircraft N43TF 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		15-58 118-05 G TRAKS G → TCE
	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



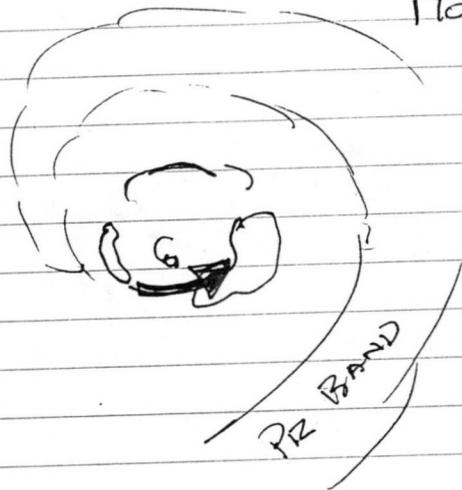
24 SEP 94

940924T OLIVIA KRFI

FIRST G 1944 15-47 117-54 950mb

LAST G 2249 16-10 118-22

NOTION 310/09



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

HIGHEST REFLECTIVITIES 50 dBZ,  
MOSTLY 35, SOME 40.

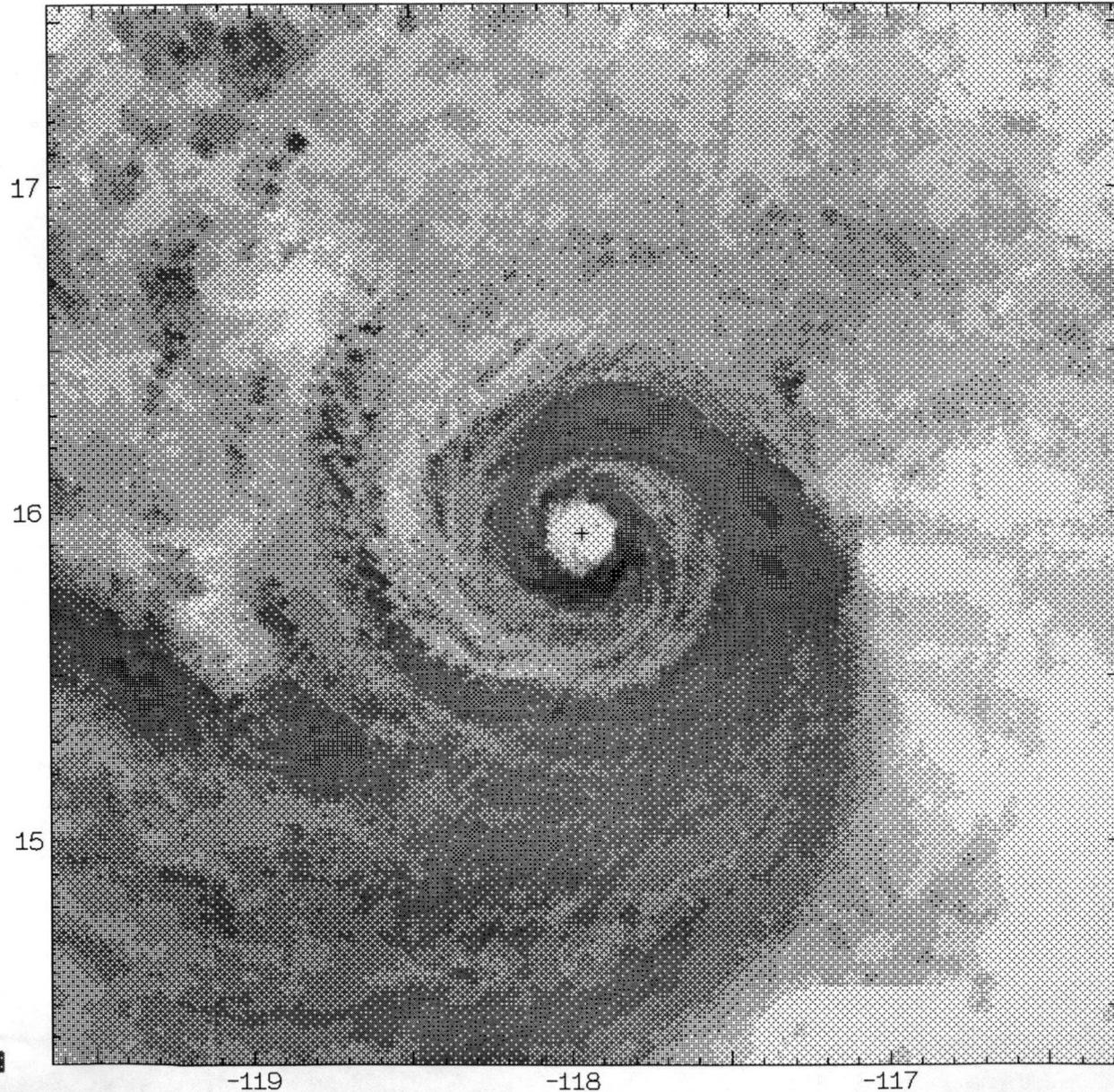
A LITTLE GRAUPEL <sup>sound</sup> ON ALC  
S & E SIDES.

(UP TO 20 mls)

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

940924I1

OLIVIA



(min.) (max.)

Pitch= 1.3; 2.0

52 Roll= -5; 9.8

49

46 Track=179.5;191.3

43

40 Drift= 9.8; 11.2

37

35 Tilt= 2.3; 3.4

32

29 Alt= 4444 m

26

23 Slat= 15.90 N

20 Slon= 117.96 W

17 Rlat= 16.63 N

15 Rlon= 117.98 W

dBZ

204236 Z

Lower Fuselage

360 X 360 km

produced by  
HRD / AOC

940924I1

OLIVIA

(min.) (max.)

Pitch= 3.5; 4.8

52 Roll= -.4; 1.4

49

46 Track= 66.9; 67.2

43

40 Drift=-12.8;-12.1

37

35 Tilt= .2; 1.3

32

29 Alt= 5590 m

26

23 Slat= 16.25 N

20 Slon= 118.33 W

17 Rlat= 16.23 N

15 Rlon= 117.13 W

dBZ

230435 Z

Lower Fuselage

360 X 360 km

produced by

HRD / AOC

