19950816I1_RADAR

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.

_____ 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 Operate the system(s) as specified in the operator's manual and as directed by the HRD/DRS, unless superseded by directions from the on-board LPS or as required for aircraft safety as determined by the OAO flight director or aircraft commander.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 850816 I

Aircraft # 43

Operators Stan Goldenberg

Radar Tech. James Berr

Number of digital magnetic tapes on board 8 (gave Berr box of 5 to replace tapes used (cloud physics, radar both days)

Number of tape labels on board —

Component systems up and checked:

MARS	✓	Computer	✓
DMTR1	✓	DMTR2	✓
LF	✓	R/T# (LF)	103
TA	✓	R/T# (T)	201/202

Time correction between radar time and digital time (0)

Radar Postflight Summary

Number of digital tapes used:

DMTR1 1

DMTR2 —

Significant recorder down time:

DMTR 1	(none)	Radar LF	
DMTR 2		Radar TA	

Other problems:

AUG 16 1995

Copy of Radar "book" to James Barr
Acc
JB2

Form E-5
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HRD Radar Tape Log

Flight 850816I Aircraft 43 Operator Stan Goldenberg Sheet 1 of 1

Tape #	Time On	Time Off	Comments
1-1	18:27:00	21:19:36	Coast painted — storm visible
			Speed 10 at 18:31 (Tail)
			18:41 adjusted tilt —
			~19:00 — tilt to 2.3
			Bank at — 19:20:08 —
			(20° to left
			:37
			20° to rt.)
			finish → 19:21:14
			19:21:20 → turn to follow new fix 35.07 N
			turn at 20:02
			turn at 20:39
			turn at 20:56 (done with passes)
			At 21:00:00 tilt down to paint coast
			(tilt = 1)
			Then back to 2.3 tilt at 21:01
			(Had to clear error msg. several times)

HRD Radar Down-Time Log

Operator _____ Sheet ____ of ____

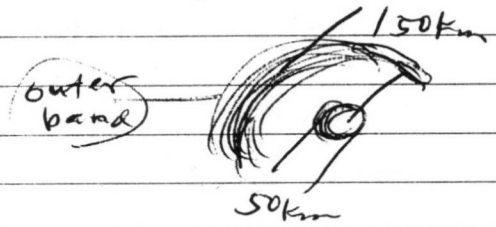
Item	Time Down	Time Up	Problem

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

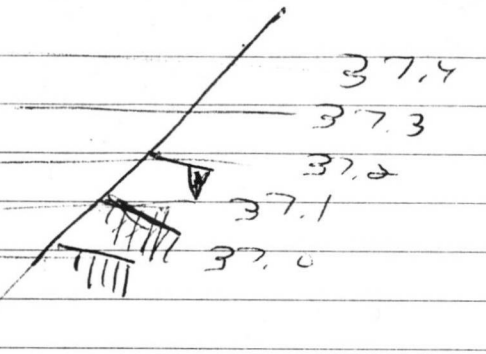
Notes by Stan Goldenberg

Felix NOAA 43 (950815I)

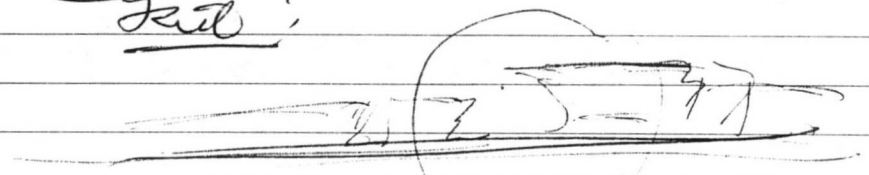
(ODW mission — closest point of approach was 400km)
Storm visible on LF
Starting at ~2130 –
at ~2200Z –
most of eye visible –



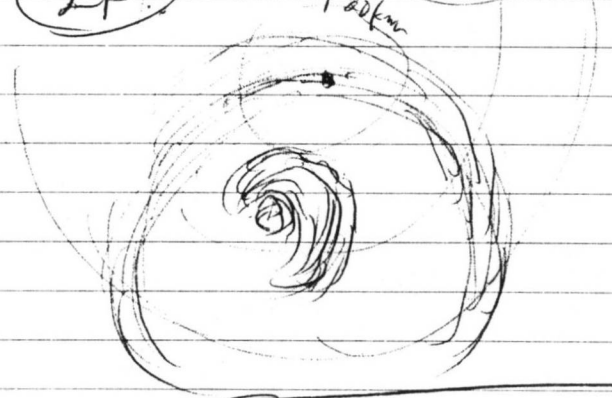
Felix also visible to the South at Northernmost leg (39 N)



(19:26) Felix:



LF:



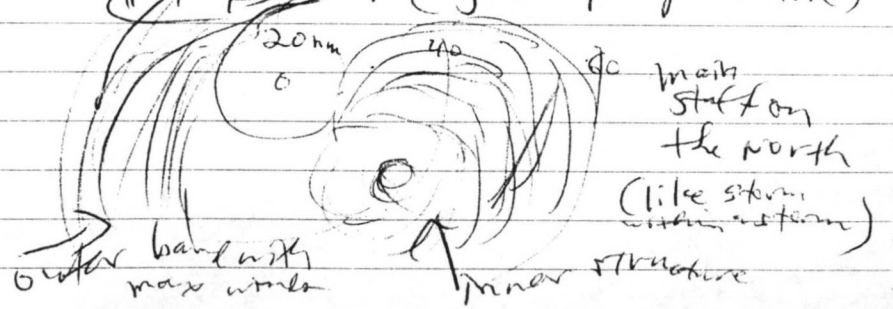
Felix 950816E NOAA 43

Radar operator Stan Goldenberg

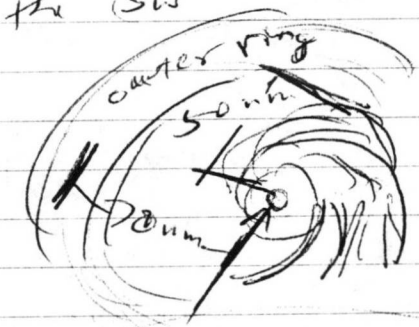
(19:06) – lots of clutter (typical) at 2.3 tilt

Storm center ~ 250 km

(19:43) LF (just before penetration)



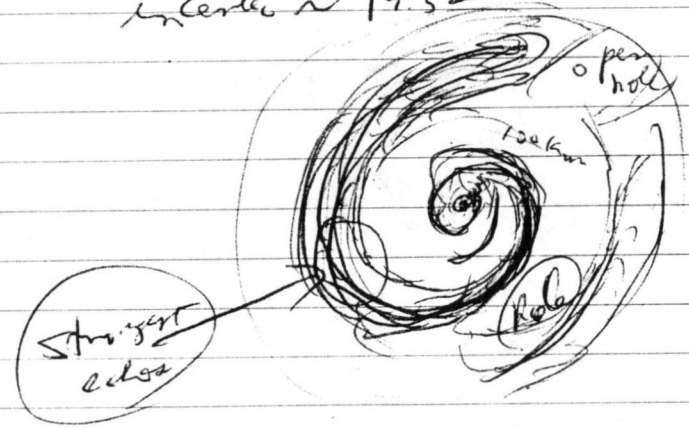
19:48 – some stronger echoes to the SW



inner portion of eye ~10nm diameter

like a small inner hurricane ~ 50 nm radius!

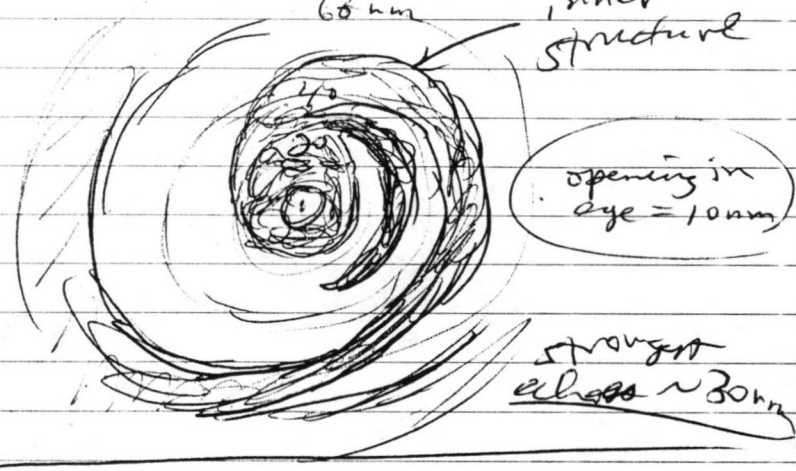
Some 30 dbz & a few 35's in center ~ 19:52



35.0 35 02
72.9 72 57 W] 19:52

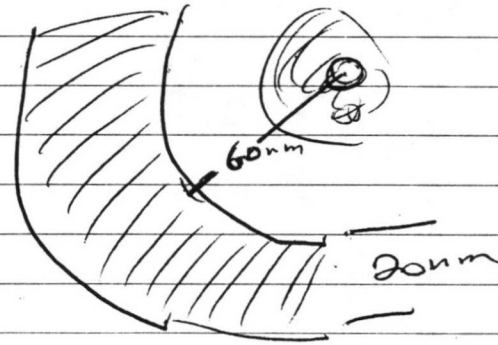
at 2029 (35 02 / 72 59)

at (20:30)



20:37

wide "outer-band" ~ 60nm from center to the SW



20:49 – 62kts to the SW in outer band

1993

1994

1995

Close Physics notes –

20:52 tape 2 start

To record:

A. Bias – Normal
Equ – Normal
ANRS – off
Input – Aux.

B. Record Levels
Left – Max
Rt – Max

C. Record Master –
Max → (–15 dB) ??

Mic is in Right only
Rec. Mode → Stereo

(old settings were – ANRS → Super
Input → Mic/Line
Rec. Master → (5)
(meter plugged)