

19900918I1-LP5

9/18/90 900918I ferry MZA → Barbados

60° roll for photo & SFMR cal
at 1727Z

1713-1727 side by side comparison
42 & 43 at

Calibration 6 m/s, 28.5°C
@ ~1900Z

9/19/90 900918I TD #11 5,000 ft

yesterday spare LF R/T unit out
today tail R/T unit out ~~spare~~ no transmit
spare not good either

graphs of Θ_e , SFMR WS, SFMR RR avail.

Calibration

Time Est WS Est SST Filename

Leg # Inlet Time SFMR WS ~~SFMR~~ SFMR RR PL WD/WS SST ESST

500 mB cal (5.4 km) at ~ 1530Z 5 m/s, 28.5°C

remove 2 km restriction on SST

* do smoothing of T_b 's first before WS, RR calc
x set.

* set different cal window from filter window

1550 start descent to 5k ft
sfc WD ≈ 0.50

1534 SFWS still good thru 3.0, 2.4 km RA
DV $\approx 1.4^\circ\text{C}$
gets bad at 2.3 km

Tant was 11.0, now 15.7

ESST # sign doesn't come off in clear at 1.5 km RA

1600 at 1.5 km RA, K6

1602 SFMR cal 10.0, 28.5

1608 SSRD = 25.6

$$\begin{array}{r} 25.6 \\ 1.7 \\ \hline 17.9 \\ 25.6 \\ \hline 43.5 \\ 17.2 \\ \hline 26.3 \end{array}$$

1612

sfc WD 070 sfc swell 040

1618 at FP NW center, turn head SIE, 136 tkr

1620 PL WD/ws = 69/32 SF = 22 RD = 25.4

ESST = 29.9

calc ESST = 29.3

1630 Tant = 24.5

sfc WD 070 SFWS = 13.0 ~~PL~~ PL WD/ws = 062/26

1635 ~~PL~~ SFWS = 14.0 PL WD/ws = 064/17

1640 small CU below, thin Ci overhead

1647 8.2fc WS min 2 min ago
~ 15 38.6 49 11.9
PL WD/WS 070/4

1649 130/7

center: 10°36' 48' 10' 2fc 4 kt

1651 2fc 0 kt

1653 2fc WD = 140° WS = 7.0
PL WD/WS = 218/16

1655 2fc WD = 180° WS = 8.0

1647 went to FAST scan mode on radar

θ_e 360° in center
350° @ 1704 + 1630

1705 swell from 050° 2fc WD = 195 7.8 m/s
PL 220 29 kt

Doppler sea return switches from dark blue right,
(±10 m/s) red left to red right & dark blue left
every other sweep; in between sweeps show
green & light blue

1723 going to 500 ft to check SST

RA	RD	Δ	WS
1200	26.4	1.8	32
1000	26.6	1.6	31
800	26.9	1.3	29
600	27.3	.9	28
500	27.4	.8	
400	27.5	.7	27
300	27.7	.5	26
200	27.9	.3	24

173130 150 28.0 2 24
25

173330 160 28.0 26 true SST = 28.2

173410 shower

1200	6-
600	27.3
1200	26.3
1500	25.7

1740 clouds top out at 1500 m

1°/1000m

1748 SKMR wind now low E_w T_{ant} = 27.4
SPWS = 1.2, RR = 3.1 ?

* something changed after descent + ascent
now need a new cal

same thing happened in cal flight

1602	1750	1807	1836	1905			
47.54	- 42.40	- .14	47.31	- .20	42.48	- .04	60 ⁺ .06
54.79	- 54.73	- .06	54.64	- .15	54.93	+ .14	189 ⁺ .10
56.54	> 56.50	- .04	56.56	+ .02	56.78	+ .02	182.72 ⁺ .18
59.61	59.62	+ .01	59.77	+ .16	59.88	+ .11	160.00 ⁺ .39
58.62	58.44	- .18	58.57	- .05	59.05	+ .43	59.12 ⁺ .50
53.61	53.51	- .10	53.55	- .06	53.73	+ .18	53.86 ⁺ .35

1755 turn to 045°

1800 heavy shower

RR = 5 mm/hr WS = 17 m/s

1804 wind rfc wind = 7 kt

SP WS = 10.7 m/s

before rain SP WS = 0, now = 10 m/s
rfc appearance unchanged

recall at 1807
again 1808

FLWD/WS 30 E / 13

turning ~~near~~ as approach center, can't cal

1817 center 15° 230' 49° 18'

181730 start new cal

1827 rfc WD = 085°

PL WD/WS = 170 / 14 Ch to our right

1836

cal again - last one not accepted
runtime error

est WS = 11 ~ 15 SST = 28.5

1941

afc WD = 070 SFWS = 14.3 ~ 15
PL WD/WS = 155/17 kt

1859

SFWS just dropped to 0

1905

recal

ahah! reason for changing SFWS +
SST calcs is that program is using
estimated SST (ESST) rather than
a constant ~~guess~~ first guess SST

al modified the program to use
const SST

1932

afc WD = 080 SFWS = 11.5
PL WS/WS 035/20 kt

1935

afc WD = 065 SFWS = 11.0
030/15

1946

calm beneath
enter 15 35 49 02

1948

FL WD/WS = 250/11

ch

1953 cloud tops at our alt, RA = 1490

$\text{aft WD} = 190$ $\text{SPWS} = 10 \text{ m/s}$
 $\text{F2 WD/WS} = 230/28 \text{ knot}$

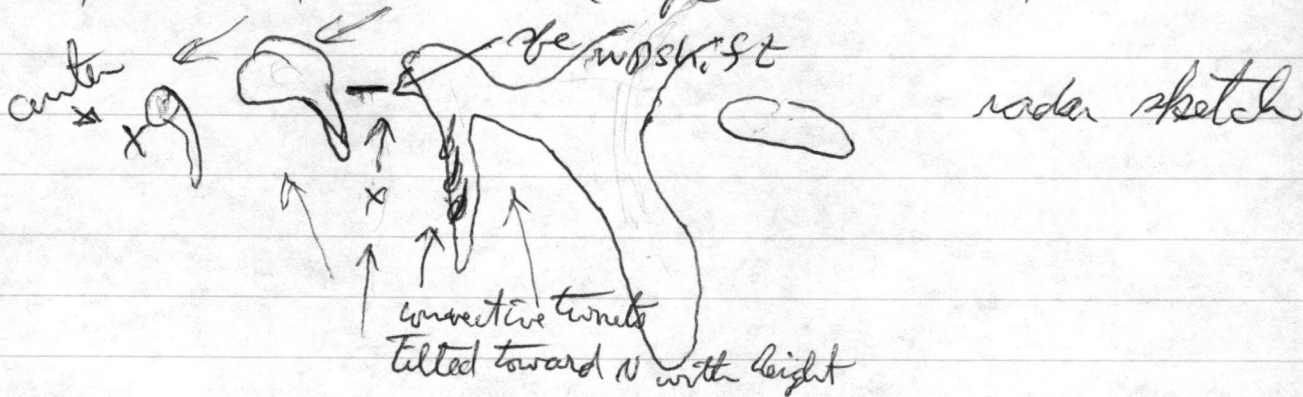
2.15 FLWD/ws = 218/42
sfe WD = 195 WS = 8 m/s

* there appears to be a 2 min lag in SFWS
is this due to filter

2021 SF-WS = 50 m/s PL-WS = 216/40

2026 SFWS = 0. old white caps, smooth surface
FLWD/WS = 21/32

31 still calm on sfc RZ 201/26



2035 pfc WD = 060 SF WS = 7.5 m/s
RZ WP/WS = 165/19

20 39 off WD = 085 SRWS = 10.5

2024/1 rfe WD = 070 spws = 11.1
PL WD/WS = 139/24 HDG = 340°

$$2045 \quad \text{afewd} = \text{090} \quad \text{sfws} = 12.0$$

$$\text{PLWD/WS} = 120/15$$

$$2052 \quad \text{PLWD/WS} = 115/9 \text{ bt}$$

$$\text{afewd} = 085 \quad \text{sfws} = 10.5$$

$$2057 \quad \text{PLWD/WS} = 125/17 \quad \text{sfws} = 8.0$$

$$2100 \quad \text{sfws} = 3.3 \quad \text{PLWD/WS} = 120/9$$

$$2103 \quad \text{af} \text{ sfws} = 1.5 \quad \text{PLWD/WS} = 130/6$$

$$2105 \quad \text{afewd} = \frac{230}{30} \quad \text{sfws} = 21.5 \quad \text{PL} = 155/3$$

$$15 \quad 43.6 \quad 48 \quad 551$$

$$2106 \quad \text{PLWD/WS} = 220/3 \quad \text{af} \text{ sfws} = 0.$$

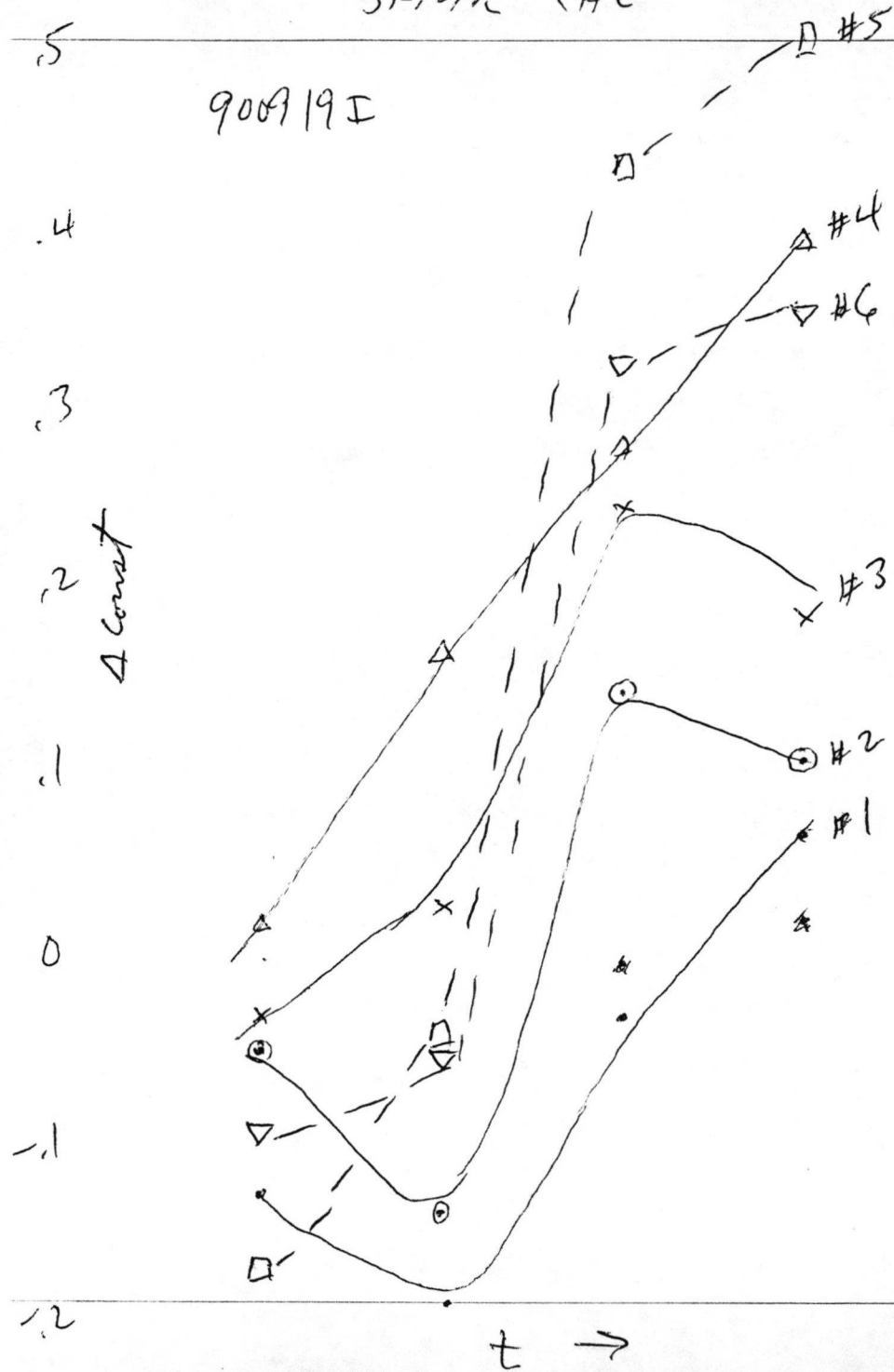
$$2108 \quad \text{PLWD/WS} = \frac{330}{15} / 4$$



42-381 50 SHEETS 5 SQUARE
42-382 100 SHEETS 5 SQUARE
42-389 200 SHEETS 5 SQUARE
Made in U.S.A.

SFMR CAL

900919I



TD#11

Hurricane Recco Plotting Chart

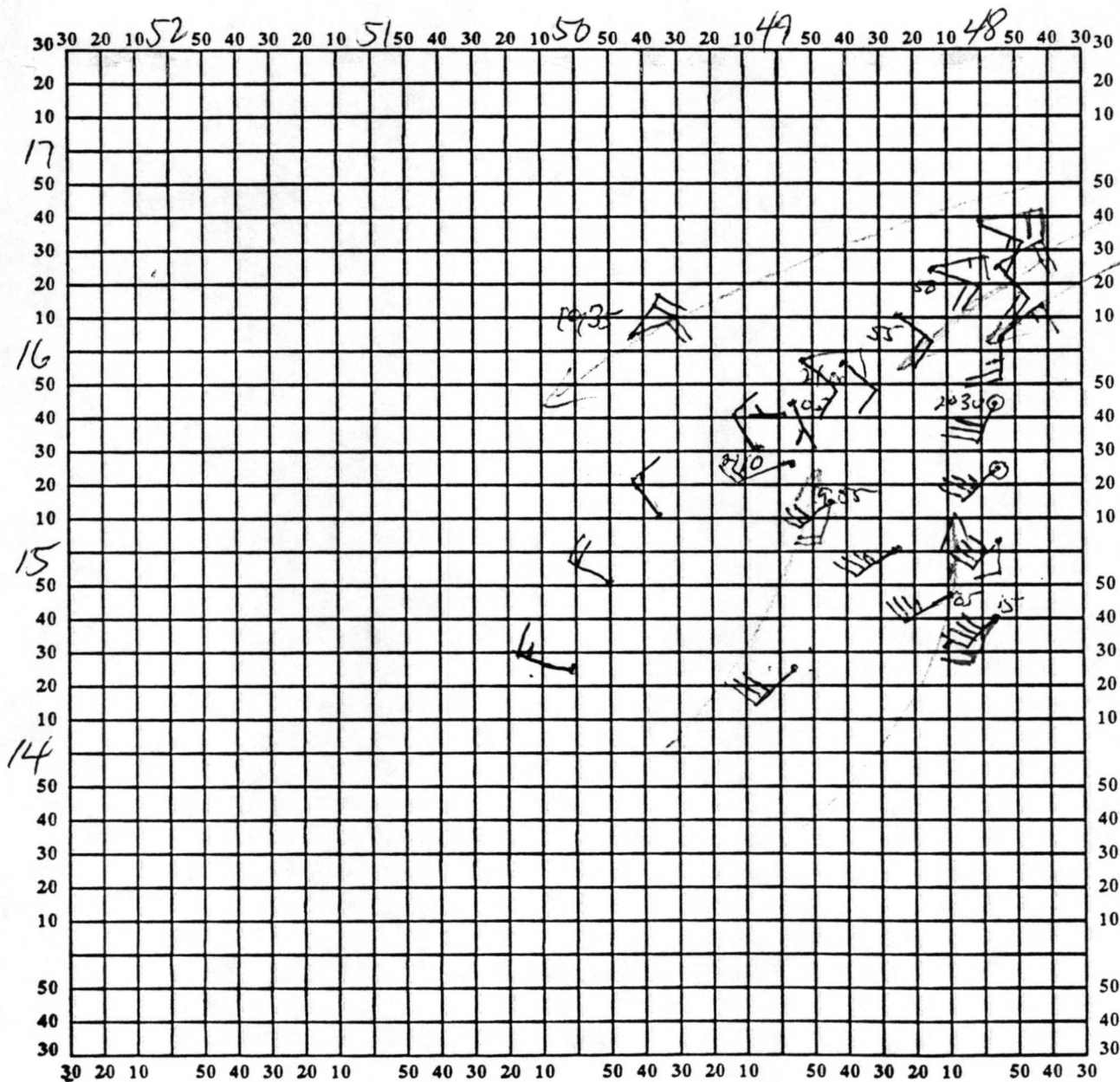
True at 25° Latitude, in Degrees and Minutes

900919I

Date 9/19/90

Aircraft 43RF

Observer Black



Note: Label full degrees according to location of flight area.