

030904I

E.2 Lead Project Scientist

E.2.1 Preflight

- ☒ 1. Participate in general mission briefing.
- ☒ 2. Determine specific mission and flight requirements for assigned aircraft.
- ☒ 3. Determine from field program director whether aircraft has operational fix responsibility and discuss with AOC flight director/meteorologist unless briefed otherwise by field program director.
No oper. but provide 1 or 2 fixes
- ☒ 4. Contact HRD members of crew to:
 - a. Assure availability for mission.
 - b. Review filed program safety checklist
 - c. Arrange ground transportation schedule when deployed.
 - d. Determine equipment status.
- ☒ 5. Meet with AOC flight director and navigator at least 3 hours before take-off for initial briefing.
- ☒ 5. Meet with AOC flight crew at least 2 hours before take-off for crew briefing. Provide copies of flight requirements and provide a formal briefing for the flight director, navigator, and pilots.
- ☒ 6. Report status of aircraft, systems, necessary on-board supplies and crews to appropriate HRD operations center (MGOOC in Miami).
- ☒ 7. Before take-off, brief the on-board GPS dropsonde operator on times and positions of drop times.
- ☒ 8. Perform a radio check with headsets. Make sure everyone's headsets is work properly.
- ☒ 9. Collect "mess" fee (\$2.00) from all on-board HRD flight crew members

E.2.2 In-Flight

- ☒ 1. Confirm from AOC flight director that satellite data link is operative (information).
- ☒ 2. Confirm camera mode of operation.
- ☒ 3. Confirm data recording rate.
- ☒ 4. Complete Form E-2.
- ☒ 5. Check in with the flight director to make sure the mission is going as planned (i.e. turns are made when they are supposed to be made).

E.2.3 Post flight

- ☒ 1. Debrief scientific crew.
- ☒ 2. Report landing time, aircraft, crew, and mission status along with supplies (tapes, etc.) remaining aboard the aircraft to MGOOC.
- ☒ 3. Gather completed forms for mission and turn in at the appropriate operations center. [Note: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]
- ☒ 4. Obtain a copy of the 10-s flight listing from the AOC flight director. Turn in with completed forms.
- ☒ 5. Determine next mission status, if any, and brief crews as necessary.
- ☒ 6. Notify MGOOC as to where you can be contacted and arrange for any further coordination required.
- ☒ 7. Prepare written mission summary using form E-2 p.3 (due to Field Program Director 1 week after the flight).

Lead Project Scientist Check List

Date Sept. 4, 2003 Aircraft 43 Flight ID 030904I

A. —Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>Landsea</u>	Flight Director	<u>MATEAUX/DAMIANO</u>
Cloud Physics/SEMR	<u>Uhlhorn</u>	Pilots	
Radar	<u>Rogers</u>	Navigator	
Workstation	<u>M. Black</u>	Systems Engineer	
Photographer/Observer	<u>11</u>	Data Technician	
Dropwindsonde		Electronics Technician	
AXBT/AXCP/Guest		Other	

Take-Off: 1703 Location: St. Croix Landing: 0044 Location: St. Croix

Number of Eye Penetrations: 2 planned

B. —Past and Forecast Storm Locations:

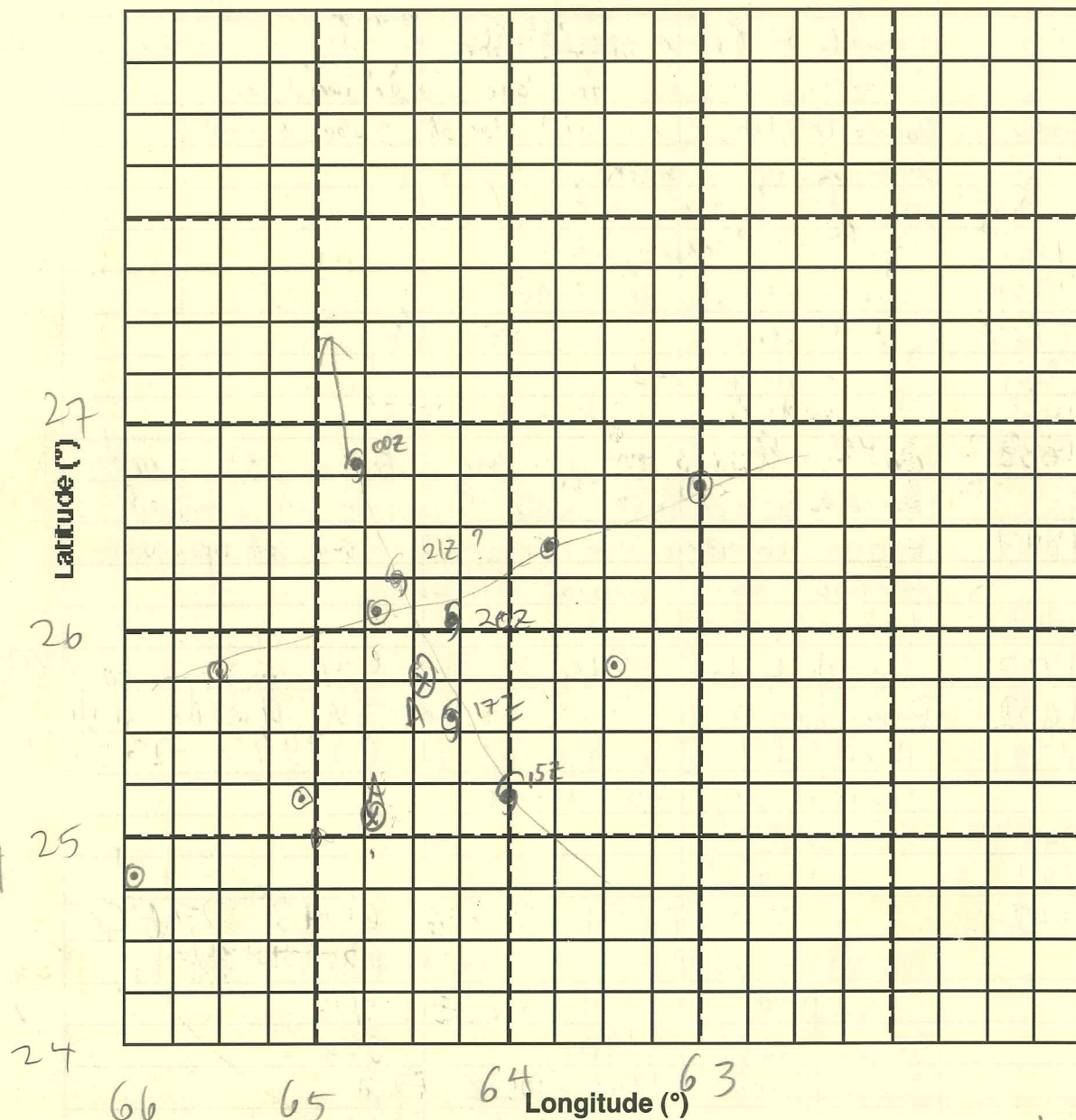
Date/Time	Latitude	Longitude	MSLP	Maximum Wind
<u>9/4/15Z Init.</u>	<u>25.2</u>	<u>64.0</u>		<u>105 kt</u>
<u>9/5/00Z 12hr</u>	<u>26.8</u>	<u>64.8</u>		<u>110</u>
<u>9/5/12Z 24hr</u>	<u>29.5</u>	<u>65.4</u>		<u>110</u>

C. —Mission Briefing:

Did a pre-briefing at Best Western at 0930 AM Local.
Decided on ^{one} set of stepped descents both along and
cross of winds followed by a ~~group~~ 4 with 12 sondes
(4 Arm 43) dropped every radial leg.

Observer's Flight Track Worksheet

Date 9/4/03 Flight 0309 04T Observer LANDSEA



P00RS 0

26.7 63.0

26.4 63.8

26.1 64.7

25.8 65.5

24.8 65.9

25.2 65.1

25.6 64.3

25.8 63.4

Fixes

1714Z 25°34' 64°16' 941ms 95kt SW side 25mi "ragged" eye

1845Z 25°55' 64°45' by radar

Plan is to
drop AXBTs (4)
near deployed
Buoys from
yesterday

AXBTs

26.4
64°18' W 441

Lead Project Scientist Event Log

Date Sep. 4, 2003 Flight 030904T LPS LANDSEA
FABIAN

Time	Event	Position	Comments
1703	Takeoff St. Eroxx - ETA 2hr to I.P. of 25.5N, 65.5W		
1740	Descending to 3000' for box-circle BAT probe calibration/test.		
1742	Power Glitch - wait 1 bit for BAT probe, but will do at 5000' instead.		
1745	Began box at 020 track.		
1748	Turned to 120 track		
1751	Turn to 210 track		
1754	Turn again to 300 track		
1757	End of leg - begin rt turn for circle		
1800	Begin circle to left		
1803	End of circle - climb back to 13000'		
1830	BAT Probe winds not working, Thermo still good. decided to continue with mission as planned.		
1847	Possible concentric eye structure - will set up west of eye for stepped descent		
1900	Descending		
1917	Switch to do 1st Leg of Azline 4 - back to 5000'		
1932	Begin Leg in to Eye - from (SW) quad.		
193217	AXBT #1 Dropped 25°10' 04°44' 27.9°C		
	Tracking in 25th track		
194143	GPS drop #1		
194203	Li #2		
194243	#3 + AXBT 25.76 64.43 27.6°C		
	Double wind peak - Flight level (SW side)		
	First peak 1936-1937Z		10kt
	SEMR peak	1940	804
	Second peak	1946 ~105kt	Flight
		Same Alt	80kt -

W3

Stepped
on
NNE
5000
of
TC

Tracking
25°
Heading ~5°

Lead Project Scientist Event Log

Date 9/4/03 Flight 030904I LPS LANDSEA
FABIAN

Time	Event	Position	Comments
1948Z	26° 7' 64° 19' center ~ 971 mb		
	LITTLE bit of searching for center		
1955	Had to wait for #2's AVAPS to be reset		
2000	Our AVAPS down - need 10 minutes to reboot		
2011	Both AVAPS fixed, ready to go		
	Almost ready...		
	6 hours 2:10 to get back - still have time to do stair steps		
	and then finish figure 4.		
2018	Finally track out begins - Track 25° - Heading ~ 40°		
	30' waves		
2022	GPS + AXBT drop 26° 25' 64° 3'		
	Thru eyewall on NAC side		
202310	#2, 3 GPS sondes drop		
202340	#4 GPS		
202410	AXBT #16		
	Peak flight winds 132 kt 2023		
	LAZARUS AREA ~ 120 kt		
	Prob w/ SFMR - interference with phone/AXBT		
2043	Looking for a spot for stepped descent		
2044	Descend to 2000		
2048	Descend Turn to 300° track - 240°		
2051	Descend to 1200' 62 kt 35-40 kt		
2055	Have to recheck track - Not enough space for log		
2057	100 Track 56 ft flight 35-40 kt		
	Leg started + sonobuoy launched		
	50 ft SFMR near end of 1200		

110
180
210

Lead Project Scientist Event Log

Date 2/4/03 Flight 030904I LPS Landsea
FABIAN

Time	Event	Position	Comments
2108	Turn to 790° track		
2110	Turn to 305, Descend to 400'		
2112	Leg at 400'		
2116	Light turn to 290° avoid rain		
2119	Turn to 110°		
2122	Begin leg 600, 5 knots		because of rain ahead
2125	Left + turn - 90° to 280°		
2128	Descend to 400'		
212853	Leg Started 400'		
213252	Leg End -		
2133	Descend to m35 cell		
2136	Track 215, winds 85		
2136	Leg started Down to 300' 55 m R, 40-45 kt		
2138	Leg, Ascending - finish star stopped		
2156	Hooping at 5 kt, waiting for 2 to begin 2nd half of figure 4		
2200	at 1st inbound		
221148	1st drop		
221216	2nd drop		
221250	3rd drop		
221318	4th drop - right about at flight-level max, ~ 8 miles from inner edge of fc max		
221316	broad wind field, 3 relative maxes on inbound leg		
2215	big radial diff. low fl & fc wind max (~ 8 mbs)		
222840	26° 45' 64° 27' - center fix		
222900	preparing for outbound leg, heading 110, west side		
223738	1st drop		
223910	2nd drop		
223840	3rd drop		

1200 U
900 D
400
4200

Lead Project Scientist Event Log

Date 9/6/63 Flight 030004 LPS randson
ABIAN

[illegible]

Mission Summary

Storm name

YYMMDDA# Aircraft 43RF

030904I

Scientific Crew (4 RF)

Lead Project Scientist Landsea / Rogers
 Radar Scientist Rogers
 Cloud Physics Scientist AXBT / G FMR Uhlhorn
 Dropwindsonde Scientist M. Black / Landsea
 Boundary-Layer Scientist _____
 Workstation Scientist _____
 Observers _____

Mission Briefing: (include sketch of proposed flight track or page #)

Mission for CBLAST - 2 plane : stair-stepped descents along + cross wind
 in clear air, then Figure 4 12 sondes (4 from 43, 8 from 42)
 in each 4 radial legs.

Mission Synopsis: (include plot of actual flight track)

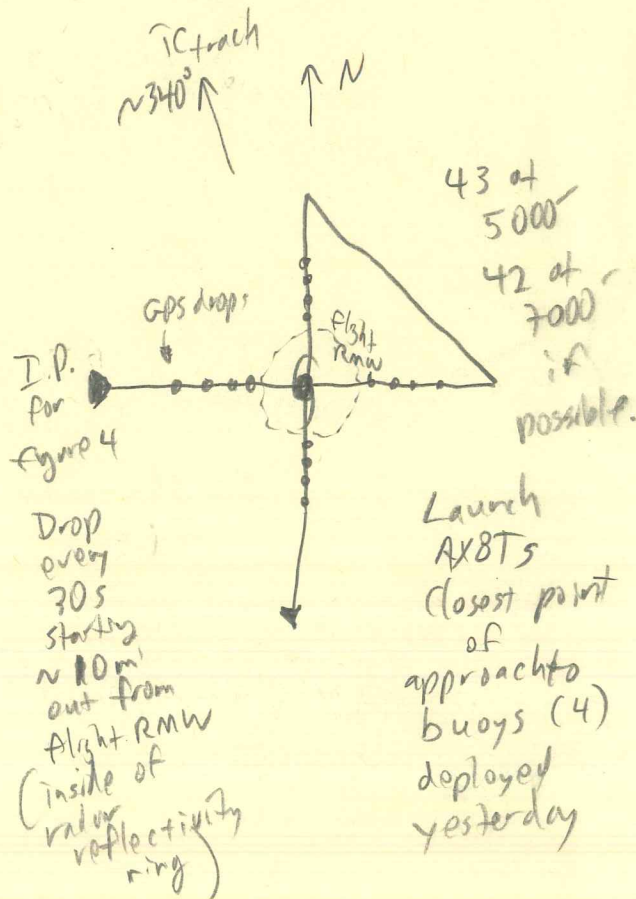
Stopped Descents: 1200 upwind
 ^
 along wind 900 down
 600 up
 (Launch sonobuoy at begin leg) 400 down
 200 up - if possible.

Evaluation: (did the experiment meet the proposed objectives?)

then cross wind at 900
 600
 400
 (42 joins us for first leg at 7000 only)

then Figure 4:

Problems: (list all problems)



4/15Z 25.2 64 105H 335-10
 5/00Z 26.8 64.0 110
 1/2Z 29.5 65.4 110



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 1-800-528-1234

4/09Z 24.2 63.5 105
 4/18Z 25.7 64.3 110
 5/06Z 28.3 65.3 110



Take off 1PM 17Z - IP at 19Z

September 4th

+23 05
 V1.0V
 V2

12 Sonde pattern - butterfly or Figure 4
 20-30 nmi eye diameter by satellite 60 nmi
 focus on eyewall -
 stair stepped

200' for 2 minutes?

(2+3) east eyewall
 12000
 1) STAIR step down along wind + one near end of Figure 4

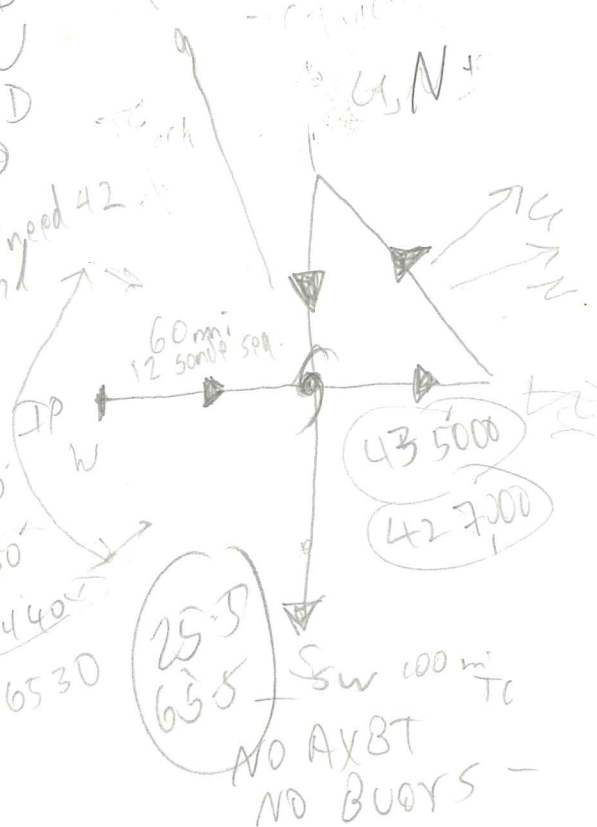
2) Figure 4

IP
 1200
 900
 600
 400
 (200)

2 1/2 hours
 ferry both ways

TC track

Not need 42 ft
 900
 600
 400

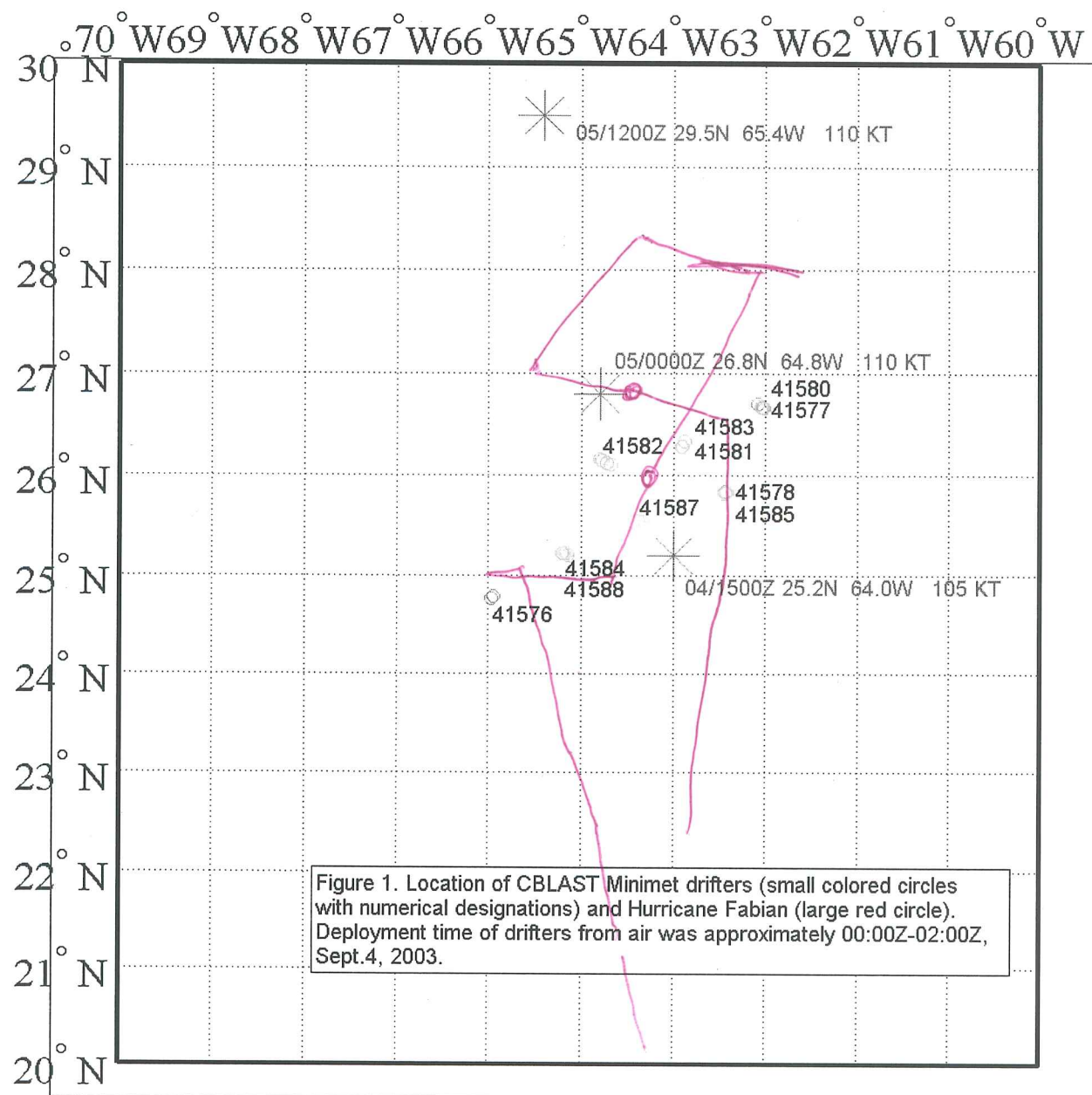


Buoy Drops

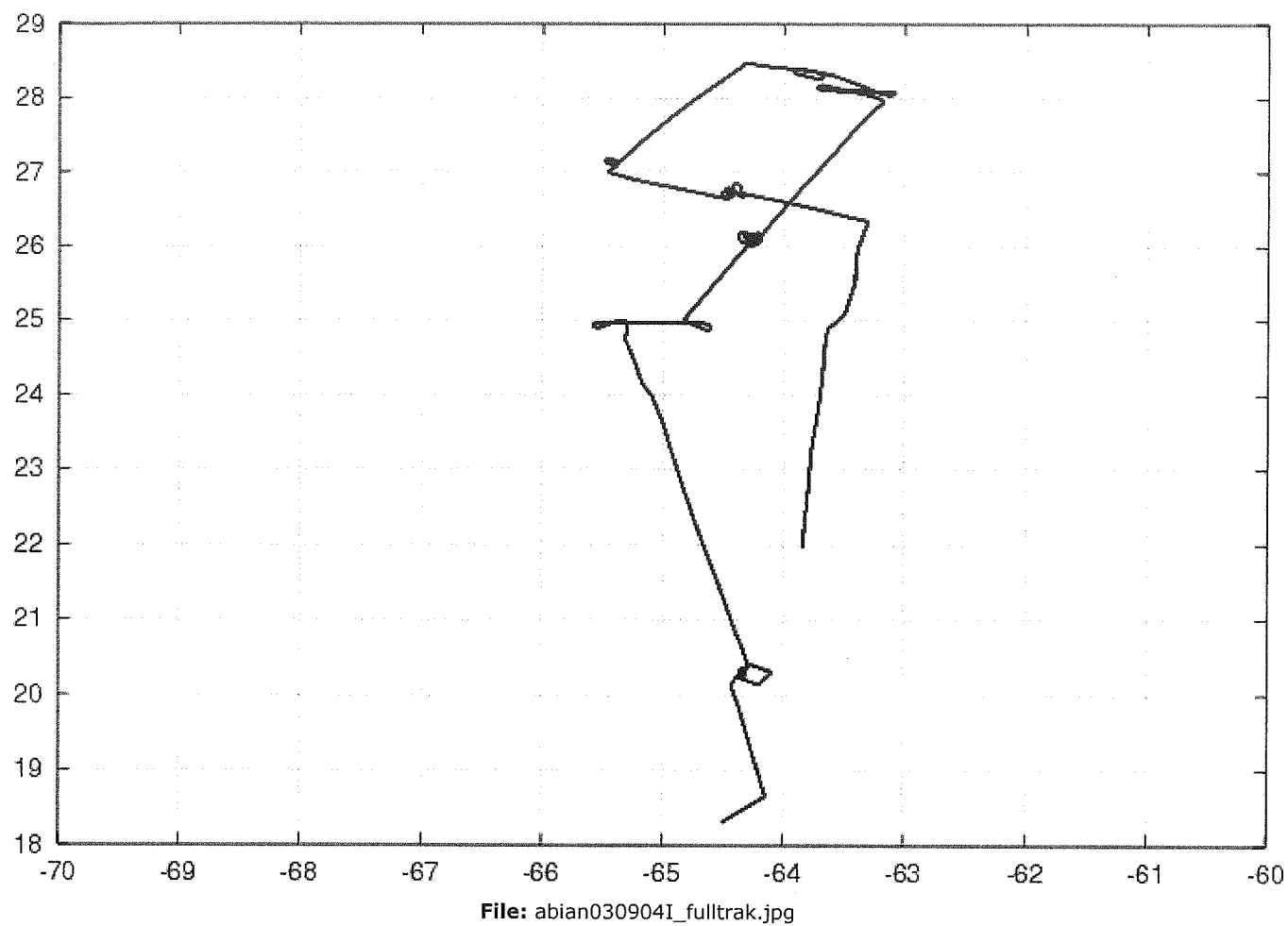
24° 50' 65° 55'
 25° 12' 65° 7'
 25° 32' 64° 19'
 25° 50' 63° 26'

26° 40' 63° 00'
 26° 24' 63° 50'
 26° 06' 64° 40'
 25° 50' 65° 30'

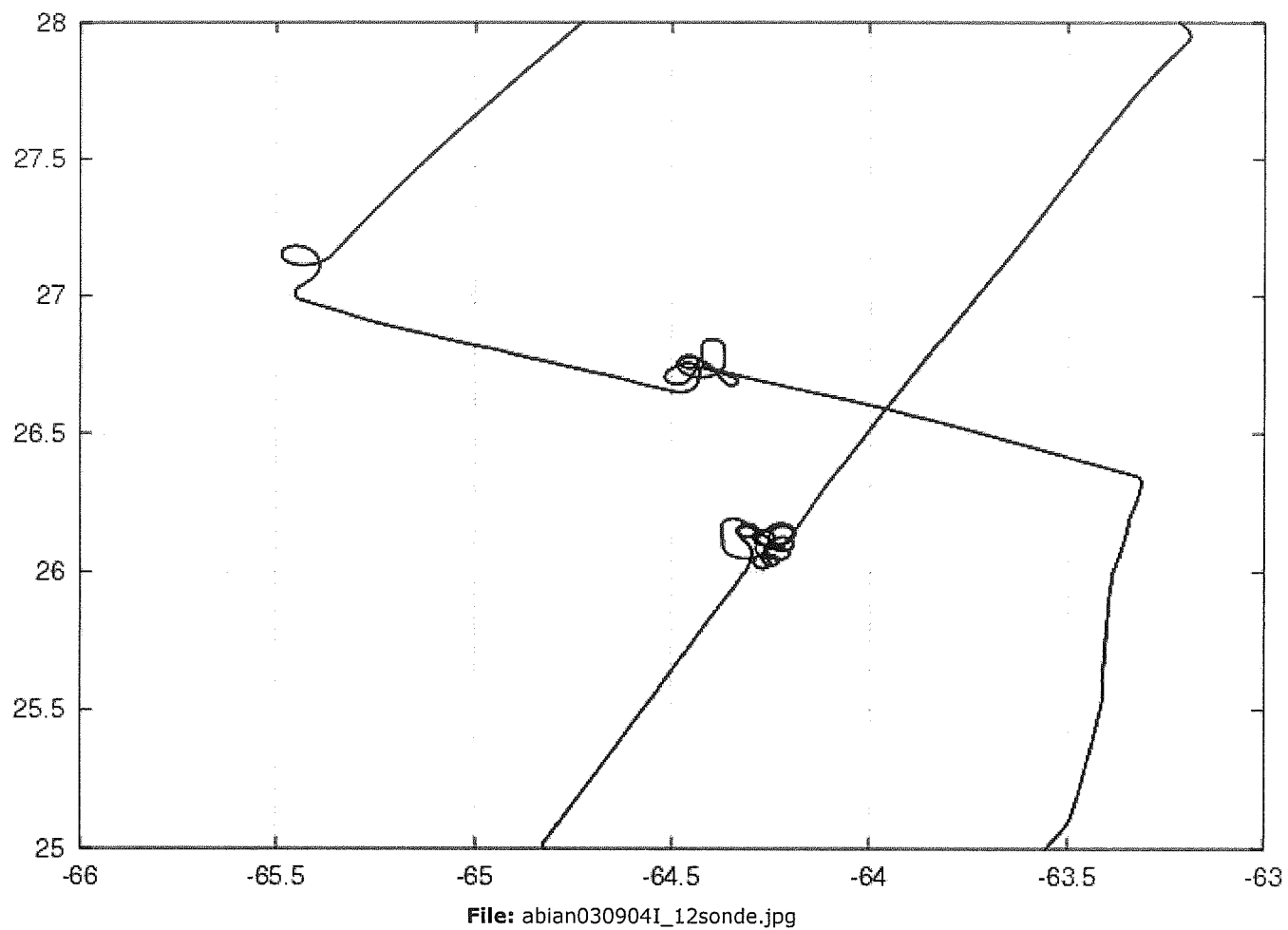
NO AXBT
 NO BUOYS -



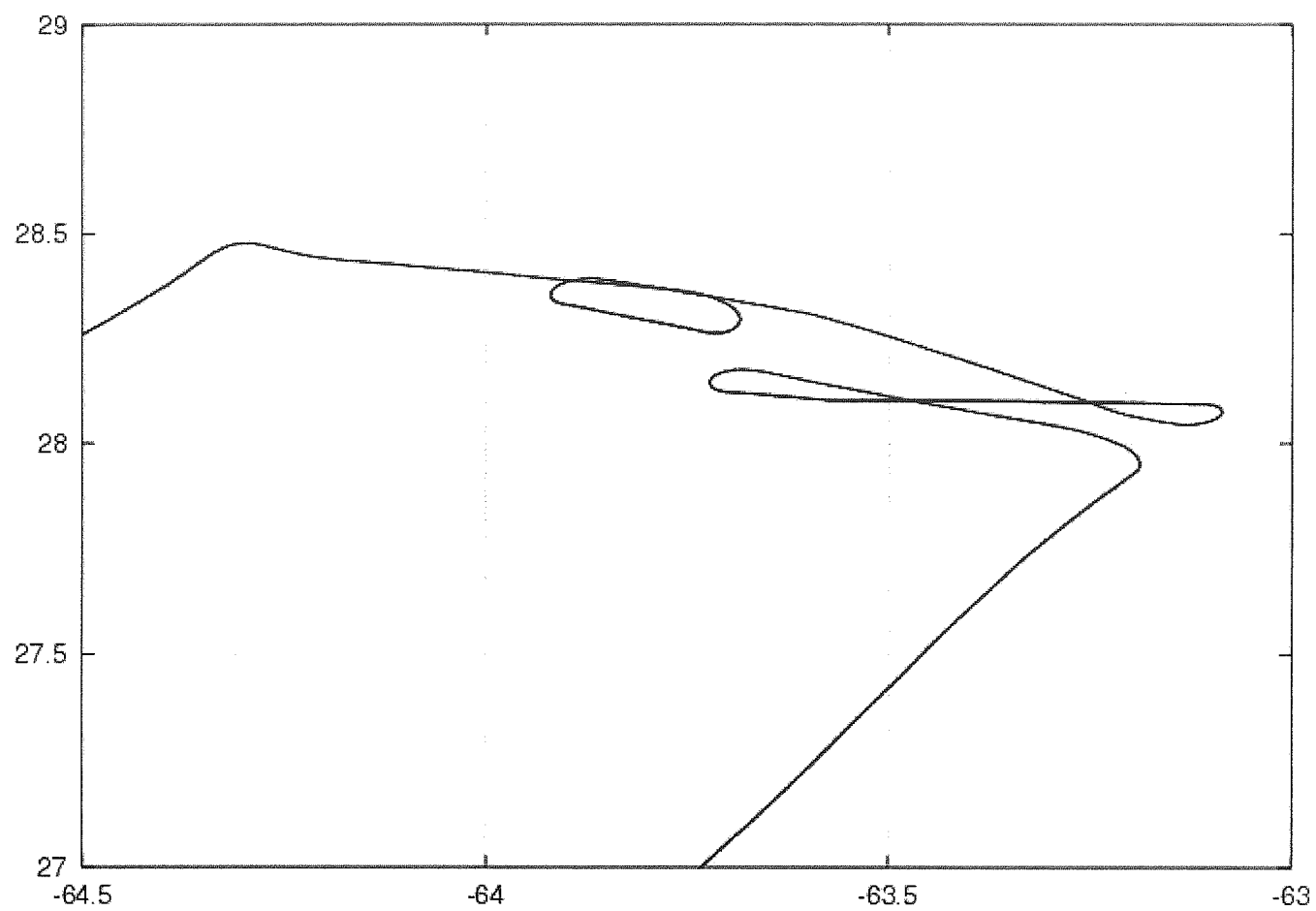
Fabian 030904I



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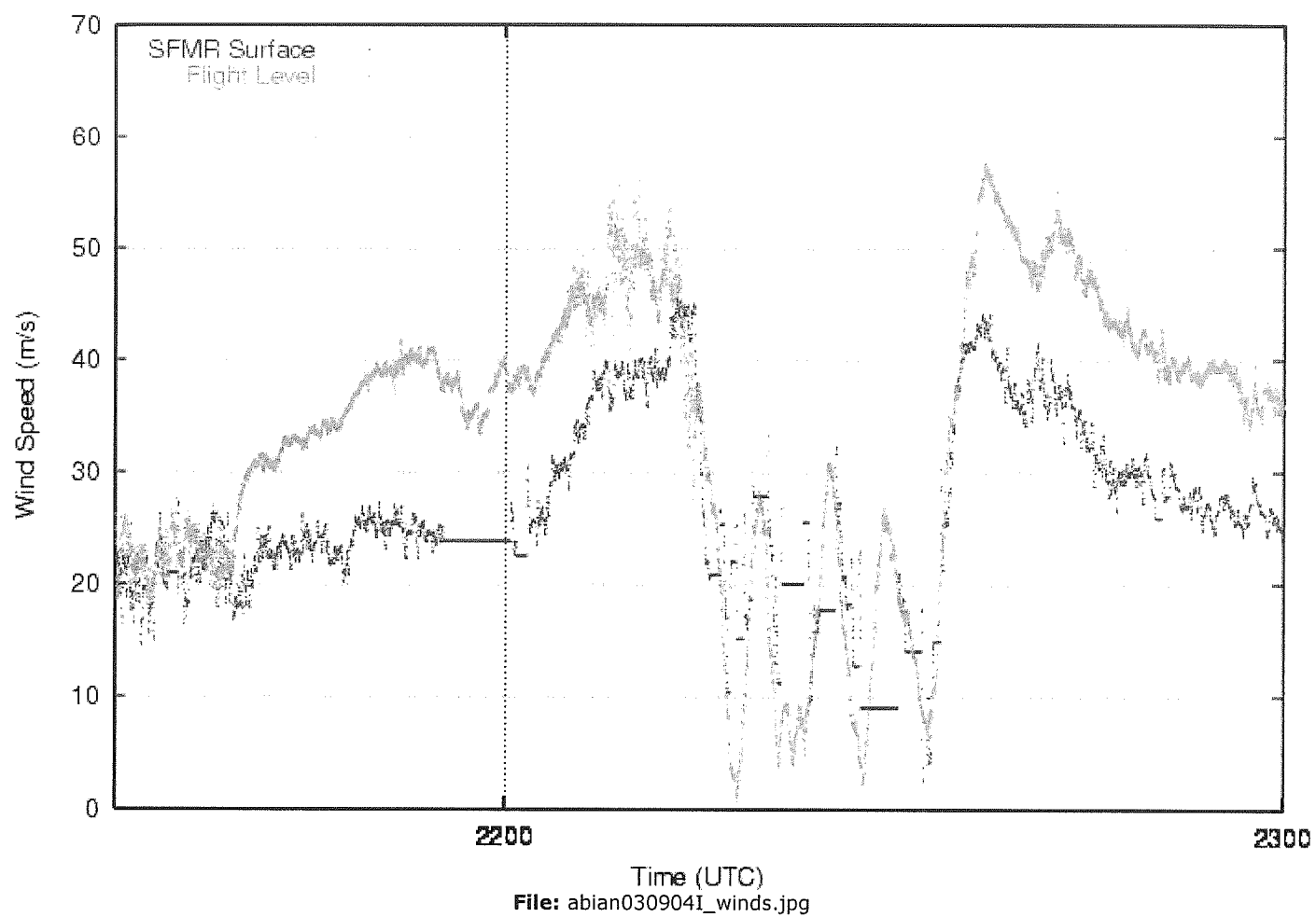


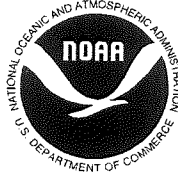
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File: abian030904I_stepdesc.jpg

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ATLANTIC HURRICANE TRACKING CHART

