

U.S. Dep't. of Commerce / NMAO / NOAA / Aircraft Operations Center

FLT ID: 0808.31N2	From: KMCF	To: KMCF
FLT #: 08-051	Blk In: 0113 (28.1)	Lnd Time: 0106 Z
ETD: 1730 Z	Blk Out: 1709 Z	T/O Time: 1718 (7.8)
ETE: 8hrs	Total Blk: 8hrs 4min	Total Flt: 7hrs 48min
Sponsoring Org: NHC	Program: HURRO8	Purpose: SURVEILLANCE

AOC Flight Crew

Aircraft Commander: HAGAN	Data System: ROGERS
Co-Pilot: LONGENECKER	Avaps:
Navigator: 1	System Engineer:
Flight Eng: 1	AA: CARPENTER
Flt Director: ALMEIDA / MAYEAUX	AA: MILLER
Avionics:	Crew Chief:

Participating Scientists, Visitors, & Add'l Aircrew

Name (Last, First)	Activity on Aircraft	Affiliation

Remarks (Storm Name, Mission ID, Recco Times, Fix Times)

Storm Name: GUSTAV

Mission ID: NOAA 9 2307A

Teal 70 007 42

Recco

Times: Fix # Fix Time

U.S. Dep't. of Commerce / NMAO / NOAA / Aircraft Operations Center

FLT ID: 080831N2		T/O Time: Z		Lnd Time: 5 Z	
	A/C - Takeoff	Wx Station - Takeoff	A/C - Land		Wx Station - Land
Pressure					
ATIS - Takeoff					
ATIS - Land					
Data Source	Number	Data Disposition / Date / Quality			
Flight Level Tapes	0				
Radar Tapes					
Cloud Physics Tapes/CD's					
Video Tapes/DVD's					
Dropsondes	33	Good: 32 Bad: 1 Sent: 32			
AXBT					
AXCP					
AXCTD					
SONOBUOY					
Remarks:					

N49RF AOC GPS Dropwindsonde Log

Flight ID 080831N

Flight Director Mayeaux/Almeida

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Mission ID Wood9 2307A

Storm Gustav

Drop#	Channel# SONDE ID	Time (UTC)	Lat (°N)	Lon (°W)	Sfc Prs mb	WX Cond.	Comments	OB #	SatComm Failures	Sent Time	
1	060396162	174008	2800	7900	1014.4	Winds 23	141428	1		1814	
2	062249059	180159	2800	7700	1013.2	Winds 23	142408	2	1	1824	NWS
3	062249067	181538	2800	7500	1012.9	Winds 5	143035	3		1836	Snd
4	062249077	183138	2600	7600	1010.8	Winds 5	145047	4		1850	NWS
5	062249166	184606	2500	8000	1011.1	Winds 5	150441	5		1904	NWS
6	061519066	192217	2545	8245	1006.7	Winds	154040	6		1940	NWS
7	062249087	193403	2600	8424	1002.0	Winds 10	155049	7		1950	NWS
8	062049213	194515	2442	8442	1002.2	Winds 7	160248	8		2003	NWS
9	060212155	195613	2339	8532	1001.8	Winds 10	161338	9		2013	NWS
10	054556290	200228	2305	8644	1002.5	Winds 3	162404	10		2024	NWS
11	062249106	201701	2305	8804	1002.0	Winds 5	163500	11		2035	NWS
12	054626294	202604	2339	8532	1002.9	Winds 20	164747	12		2048	NWS
13	062249125	203842	2200	8640	1004.4	Winds 9	165608	13		2056	NWS
14	054626289	205413	2245	9100	-	Winds 3	Lost Winds	-	-	-	
14b	062249146	210508	2330	9150	1004.3	Winds 20	172023	14		2120	NWS
15	054556313	210858	2400	9230	1004.6	Winds 2	172821	15		2128	NWS
16	062249170	212301	2515	9400	1006.3	Winds 10	174047	16		2140	NWS
17	054556462	213719	2700	9530	1007.0	Winds 3	175847	17		2159	NWS
18	054556289	220008	2700	9530	1007.7	Winds 2	182309	18		2223	NWS
19	061229103	221205	2800	9430	1007.6	Winds 5	184051	19		2241	NWS
20	062049165	220536	2700	9300	1006.4	Winds 3	184515	20		2245	NWS
21	062249124	223731	2600	9200	1004.6	Winds 1	185816	21		2258	NWS
22	062049237	225510	2742	9006	1002.7	Winds 5	191230	22		2313	NWS

Almeida/Mayeaux

Flight Director

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Storm Oosterv

[illegible]

N49RF-AOC GPS Dropwindsonde Log

Flight ID: 080831N

Flight Director: Almeida / Mayeaux

Mission ID: NOAA9 2307A

Track #: GUSTAV

Pg 1 of

Ch. #	Drop #	Sonde ID	Drop Time (UTC)	Lat (°N)	Lon (°W)	SFC Prs (mb)	Wx Cond.	Comments	Ob #	SatComm failures	Sent Time (UTC)
1	1	060356162	174805	28 00	79 00	1013.8	OVC CS CU				
2	2	062249059	180159	28 00	77 00	1013.2	OVC CS AS CU				
1	3	062249067	181535	27 55	75 06	1012.2	OVC CS SC CU				
2	4	062249113	183138	26 02	76 02	1010.8	OVC CS CU				
1	5	062839166	184606	25 59	78 34	1011.1	OVC CS CU				
1	6	061519060	192217	25 45	82 46	1006.7	OVC				
2	7	062339082	193423	25 56	84 21	1002.6	OVC				
1	8	062049213	194515	24 42	84 42	1002.2	OVC CS CU				
2	9	060226151	195613	23 39	85 33	1001.8	OVC CS CU SC				
1	10	054556290	200628	23 06	86 45	1002.5	OVC CS CU ST				
2	11	062339126	201701	23 07	88 07	1002.0	OVC CS CU	missing upper lvl winds			
1	12	054626294	202604	23 31	89 12	1002.9	OVC CS CU				
2	13	062249315	203842	22 06	89 05	1004.4	BKN CU HAZE				
1	14	054626289	205413	22 45	91 00	1004.6	OVC CS CU	lost winds			
2	15	062839016	210219	23 27	91 50	1004.3	OVC CS CU	HAZE	14		
4	16	054556313	210858	24 00	92 31	1004.6	OVC CS CU	HAZE	15		
1	17	062049210	212301	25 10	94 00	1006.3	HAZE BKN CU Cb		16		
2	18	054556462	213719	24 10	95 27	1007.0	CS BKN CU	HAZE	17		
1	19	054556289	220308	27 14	95 16	1007.7	OVC CS CU	delayed b/c of storm @ drop	18		
2	20	061229103	221205	27 54	94 22	1007.6	HAZE BKN CU Cb		19		
1	21	062049165	222536	27 00	93 00	1006.4	OVC CS	below lvs	20		
2	22	062249124	223731	26 00	92 00	1004.6	OVC CS	below lvs	21		
1	23	062049229	225510	24 52	90 11	1002.7	OVC in clouds		22		
	24	060226044	230436	26 00	90 24	1001.4	OVC in clouds	(L5)	23		
	25	062049240	231503	27 16	90 10	1002.8	OVC in clouds		24		
8	26	061329058	233111	28 18	91 42	1005.9	OVC CS	(L5)	25		
4	27	054556294	233826	28 57	90 59		OVC CS	(L5)	26		
2	28	054556465	235258	28 23	89 16		OVC in clouds	(L5)	27		
1	29	062049090	000223	28 54	88 04		OVC in clouds		28		
2	30	062049069	001257	28 54	86 43		OVC CS		29		
4	31	062439009	002302	28 20	85 32		DARK		30		
1	32	054556285	003335	27 25	84 40		DARK		31		
2	33	062249113	004609	28 37	83 36		DARK		32		

080831n.log	Latitude	Longitude	Press	Temp	DP	WD	WS	MSL Alt	G Alt	Heading	Track	TAS	GS	V Vel	Event Comments
16:55:33	27 50.94'N	82 29.54'W	1009.9	34.2	24.2	221.1	142.8	10.7	10.7	30.0	45.0	0.4	103.0	-3.05	test
17:08:55	27 50.94'N	82 29.54'W	1009.9	38.0	24.4	237.9	0.4	11.3	11.3	314.9	5.8	0.4	0.5	0.01	block out
17:18:13	27 50.65'N	82 31.58'W	1009.0	29.5	24.0	102.2	9.5	11.6	11.6	41.2	40.0	76.7	71.8	0.20	t/o
17:29:36	27 43.99'N	81 31.79'W	437.8	-10.5	-14.0	160.6	14.1	6875.6	6862.2	86.4	82.7	220.8	217.2	9.95	light turb in clouds
17:48:06	27 59.95'N	78 59.59'W	195.4	-51.7	-49.8	272.7	13.9	12573.1	12537.6	87.2	87.3	225.2	239.0	3.33	drop 1
17:52:47	28 00.19'N	78 18.93'W	175.4	-56.1	-56.3	315.0	13.6	13249.8	13211.0	87.6	89.9	225.6	235.0	0.16	light turb thin cs
18:01:59	27 59.99'N	76 59.87'W	175.6	-56.9	-59.8	340.3	15.6	13249.2	13210.4	86.3	90.0	228.5	233.3	0.01	drop 2
18:15:34	27 55.35'N	75 06.08'W	175.5	-57.7	-61.5	352.4	15.4	13232.9	13194.1	154.5	154.1	229.3	243.9	0.25	drop 3
18:31:39	26 02.49'N	76 02.43'W	174.7	-57.1	-62.3	5.7	7.2	13245.9	13205.1	242.2	239.9	228.9	233.0	-0.29	drop 4
18:35:25	26 00.18'N	76 32.79'W	175.8	-57.0	-62.4	353.3	6.8	13254.9	13214.0	272.7	270.8	230.4	229.4	-0.50	light turb thin cs
18:46:07	25 59.98'N	78 00.21'W	175.6	-56.6	-62.5	314.0	7.4	13261.8	13220.9	269.9	268.5	230.7	225.4	-0.24	drop 5
18:50:20	25 58.69'N	78 34.20'W	174.0	-56.4	-62.6	314.9	5.4	13320.2	13279.1	268.8	267.6	229.8	226.0	4.06	climbing to FL420
18:56:04	25 56.70'N	79 20.58'W	167.6	-58.1	-63.2	280.8	0.5	13562.4	13519.9	267.5	267.1	229.0	228.5	-0.21	light turb cs layer
19:22:18	25 45.20'N	82 45.56'W	167.4	-57.7	-62.1	238.0	14.6	13559.7	13517.0	272.5	273.9	230.5	218.5	0.55	drop 6
19:34:23	25 55.86'N	84 21.09'W	167.6	-57.2	-62.8	153.2	13.1	13548.8	13506.4	230.5	234.5	228.6	226.2	0.09	drop 7 - light turb
19:45:14	24 42.13'N	84 42.51'W	167.4	-57.3	-60.8	184.9	13.4	13549.8	13506.2	204.1	204.7	230.7	218.0	-0.17	drop 8
19:56:16	23 39.04'N	85 33.03'W	167.4	-57.2	-63.6	170.4	12.7	13540.4	13495.9	229.8	232.2	230.1	223.8	-0.09	drop 9
20:06:30	23 05.47'N	86 44.72'W	167.4	-58.4	-63.9	175.6	20.5	13535.7	13490.7	254.0	258.6	229.3	225.8	-0.27	drop 10
20:17:02	23 06.67'N	88 07.33'W	167.5	-58.1	-64.6	202.0	17.8	13531.9	13486.9	288.9	292.8	229.8	229.3	-0.33	drop 11
20:18:34	23 11.83'N	88 18.33'W	167.3	-57.9	-64.7	204.8	17.7	13528.6	13483.7	293.4	297.7	229.1	229.3	0.96	climbing to FL430
20:26:05	23 31.15'N	89 11.68'W	159.5	-60.3	-65.3	189.0	14.6	13813.1	13766.9	219.6	222.8	227.2	214.9	0.17	drop 12
20:38:41	22 06.30'N	89 05.10'W	159.5	-60.7	-65.4	185.7	13.8	13820.9	13773.4	229.9	231.1	226.4	216.4	-0.39	drop 13
20:54:13	22 45.44'N	90 59.94'W	159.6	-59.7	-65.8	197.9	17.7	13798.1	13751.3	298.4	302.1	227.6	231.3	-0.16	drop 14
21:02:22	23 26.75'N	91 49.74'W	159.6	-59.2	-65.7	197.9	17.8	13792.8	13746.7	308.0	311.9	228.5	235.1	0.27	drop 15 - ob 14
21:08:59	24 00.82'N	92 30.97'W	152.0	-58.9	-65.8	179.0	16.7	14085.6	14038.4	310.0	312.7	228.8	240.0	0.09	drop 16 - ob 15
21:23:01	25 10.38'N	94 00.24'W	152.0	-60.2	-65.7	175.2	18.6	14073.2	14027.3	264.3	269.5	227.9	228.5	0.36	drop 17 - ob 16
21:37:20	24 10.12'N	95 27.47'W	151.8	-62.7	-65.9	257.4	2.3	14061.3	14014.4	312.5	311.3	227.0	225.6	0.35	drop 18 - ob 17
21:53:55	26 10.57'N	95 29.99'W	148.5	-61.5	-66.5	62.0	3.5	14212.4	14166.7	1.3	0.3	225.2	223.5	-0.28	climbing to FL450
22:03:05	27 13.96'N	95 16.17'W	144.7	-62.4	-67.0	110.2	5.7	14375.2	14329.7	43.8	42.4	226.8	224.6	0.22	drop 19 - ob 18
22:12:03	27 54.44'N	94 22.36'W	144.7	-61.7	-67.2	143.9	14.6	14386.7	14341.9	115.3	112.5	227.5	214.9	-0.76	drop 20 - ob 19
22:25:35	26 59.89'N	93 00.00'W	144.8	-61.0	-66.6	145.9	20.5	14386.5	14340.7	134.8	133.2	226.8	206.7	0.14	drop 21 - ob 20
22:37:30	25 59.98'N	91 59.82'W	144.9	-63.8	-67.1	139.4	17.2	14388.9	14342.0	132.3	131.9	223.9	206.8	0.26	drop 22 - ob 21
22:55:09	24 51.73'N	90 11.52'W	144.5	-63.6	-67.7	99.2	8.6	14426.0	14377.8	47.9	47.7	230.3	224.9	-0.14	drop 23 - ob 22 -
ovc in clouds	so RH = 100%														
23:04:35	26 00.11'N	90 23.51'W	144.9	-63.8	-68.1	141.3	8.1	14418.5	14371.5	2.8	0.9	226.8	233.0	0.16	drop 24 - ob 23 -
ovc in clouds	RH = 100%														
23:15:01	27 16.20'N	90 10.16'W	145.1	-63.7	-67.9	134.6	6.6	14407.8	14362.1	332.3	332.4	226.8	233.0	0.71	drop 25 - ob 24 -
ovc in clouds															
23:31:09	28 18.43'N	91 41.73'W	145.0	-64.0	-68.2	170.8	12.1	14411.7	14367.2	45.0	42.2	223.6	230.9	-0.11	drop 26 - ob 25
23:38:25	28 56.59'N	90 58.85'W	144.8	-64.5	-68.4	128.5	15.9	14416.4	14372.6	82.7	78.9	226.1	215.5	0.15	drop 27 - ob 26
23:52:57	28 23.16'N	89 15.53'W	144.8	-65.4	-68.6	96.7	13.7	14424.1	14379.6	86.5	86.1	223.1	209.6	0.03	drop 28 - ob 27
00:02:53	28 54.43'N	88 03.54'W	144.8	-64.3	-68.9	85.4	8.2	14426.0	14382.1	77.3	76.5	224.6	216.5	0.23	drop 29 - ob 28
00:12:54	28 54.03'N	86 42.83'W	145.0	-63.4	-68.7	145.6	13.8	14442.4	14398.4	109.7	107.0	226.2	215.2	-0.02	drop 30 - ob 29
00:23:02	28 20.19'N	85 31.96'W	145.1	-63.2	-68.4	142.8	11.1	14439.4	14394.8	133.7	132.6	224.0	213.1	0.09	drop 31 - ob 30
00:33:38	27 24.66'N	84 40.04'W	145.0	-64.5	-68.6	151.2	4.6	14446.5	14400.8	79.6	79.4	224.5	223.0	0.21	drop 32 - ob 31
00:46:07	28 36.69'N	83 36.45'W	145.1	-65.3	-68.9	273.2	7.6	14448.9	14404.5	53.8	54.2	223.2	229.1	0.29	drop 33 - ob 32
01:05:58	27 50.36'N	82 31.85'W	1008.5	28.4	25.3	73.8	5.7	13.9	13.9	43.4	41.1	67.5	62.6	-1.12	landed
01:13:11	27 50.92'N	82 29.54'W	1009.4	28.2	24.8	53.7	3.7	9.0	9.0	316.8	239.7	0.4	3.8	0.03	block in

NOAA G-IV Flight Track for GUSTAV (AL072008)

On 2008090100 the storm was centered at 26.0;-87.4

30N

25N

20N

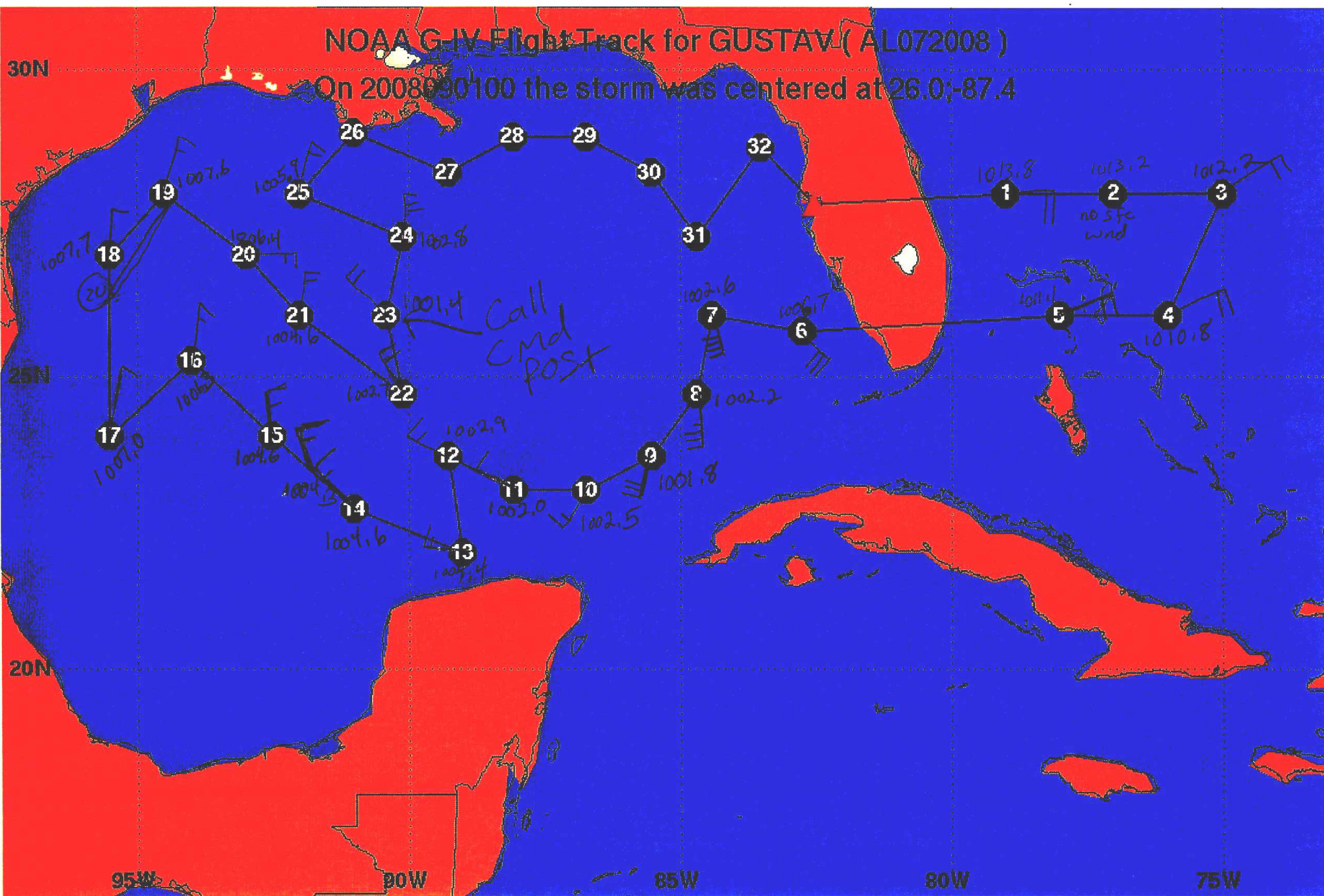
95W

90W

85W

80W

75W



NOAA9

Approx. Distance Scale (Statute Miles)

SM 125 250 375 500
True at 30.00N

Hurricane Gustav

August 31, 2008

4 PM CDT Sunday

NWS TPC/National Hurricane Center
Advisory 29

Current Center Location 26.4 N 87.3 W

Max Sustained Wind 115 mph

Current Movement NW at 18 mph

● Current Center Location

● Forecast Center Positions

H Sustained wind > 73 mph

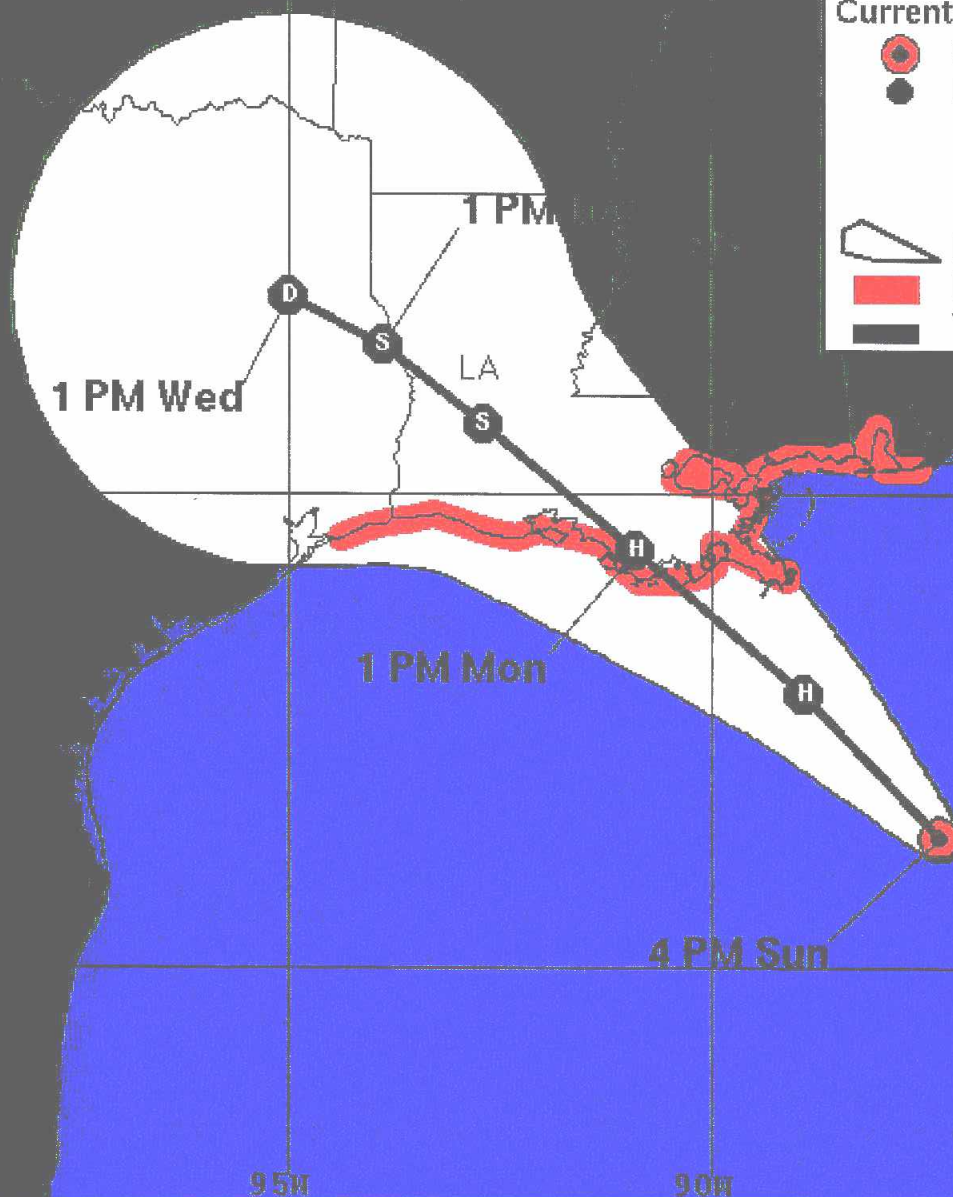
S Sustained wind 39-73 mph

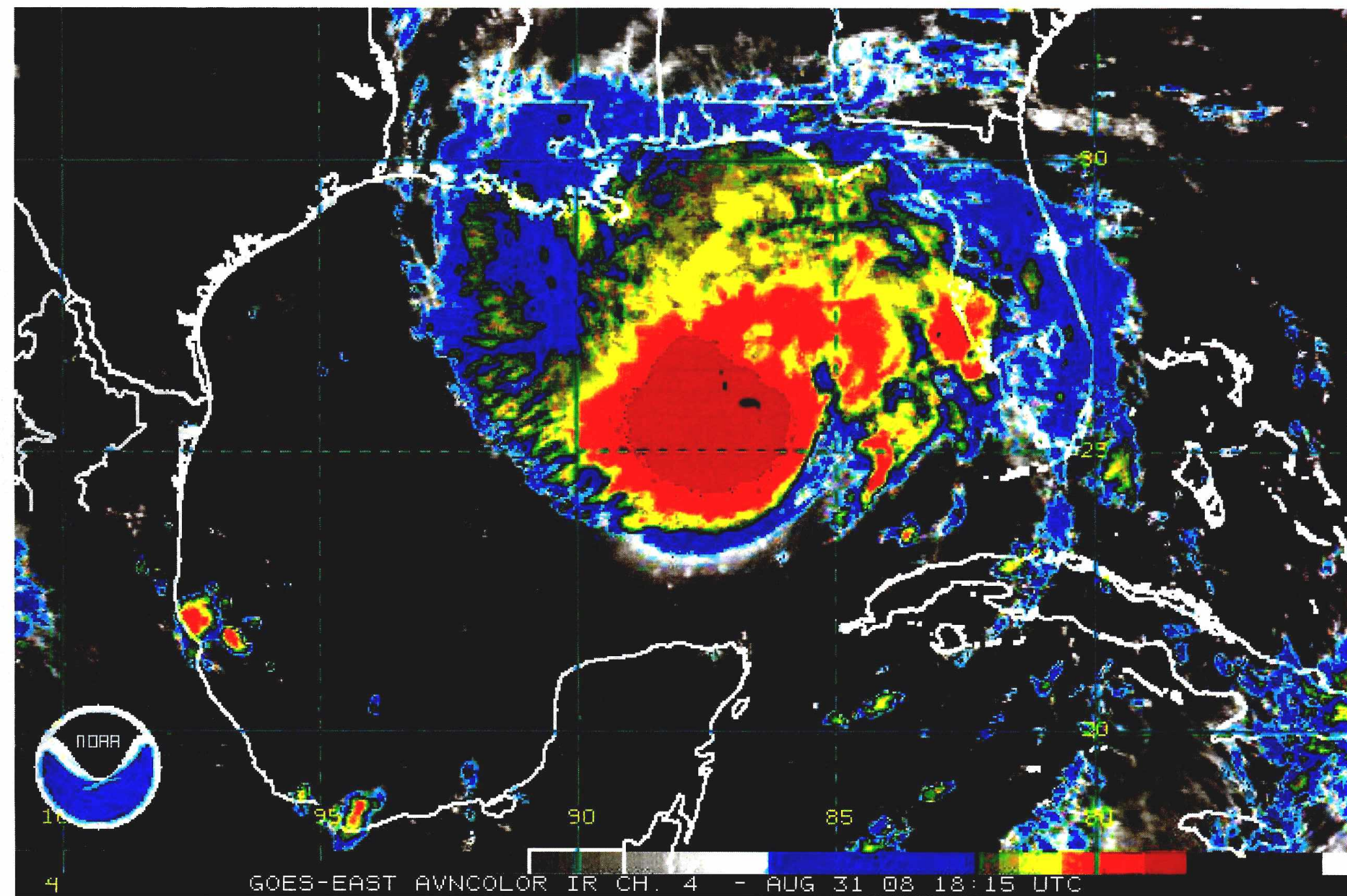
D Sustained wind < 39 mph

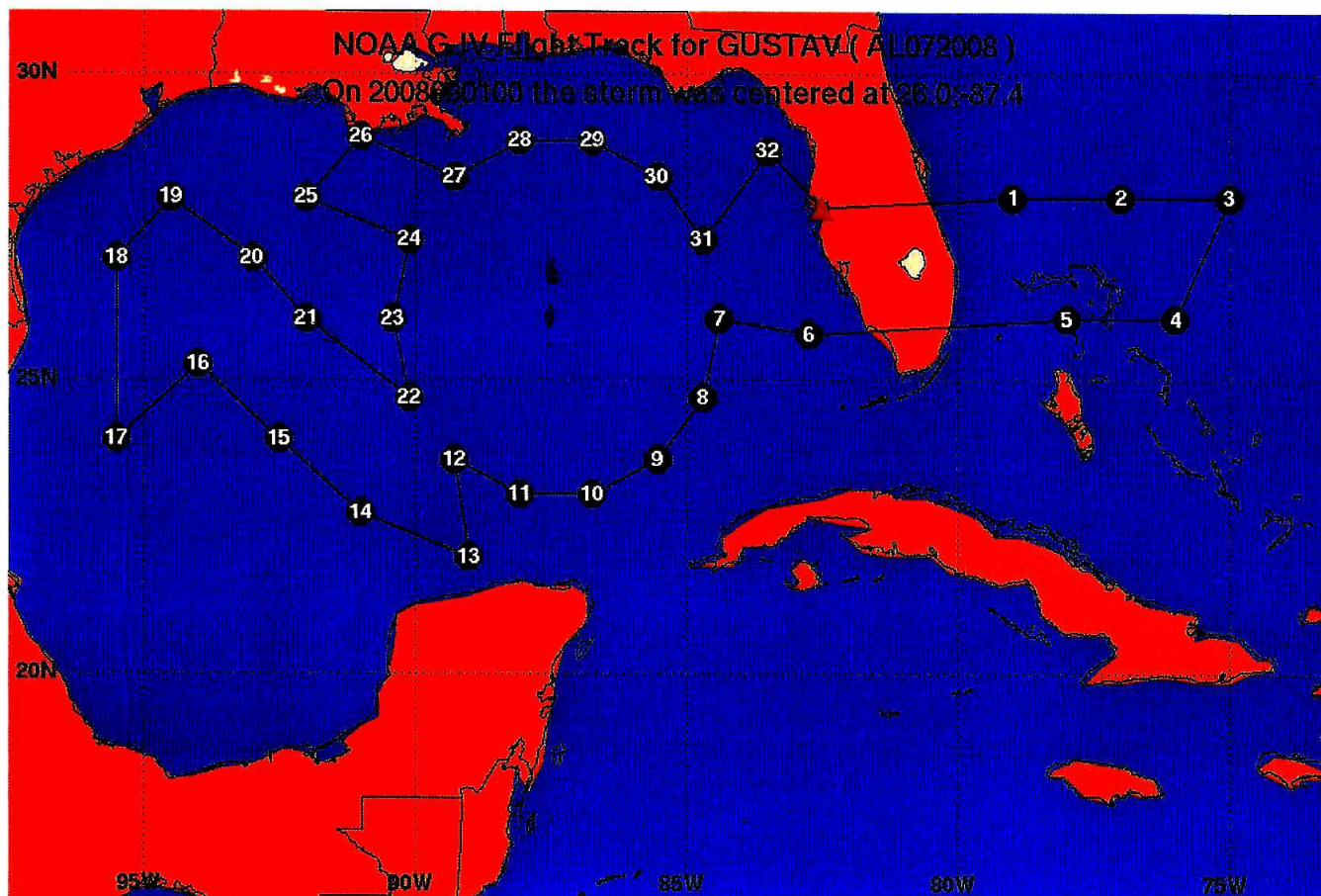
▭ Potential Day 1-3 Track Area

■ Hurricane Warning

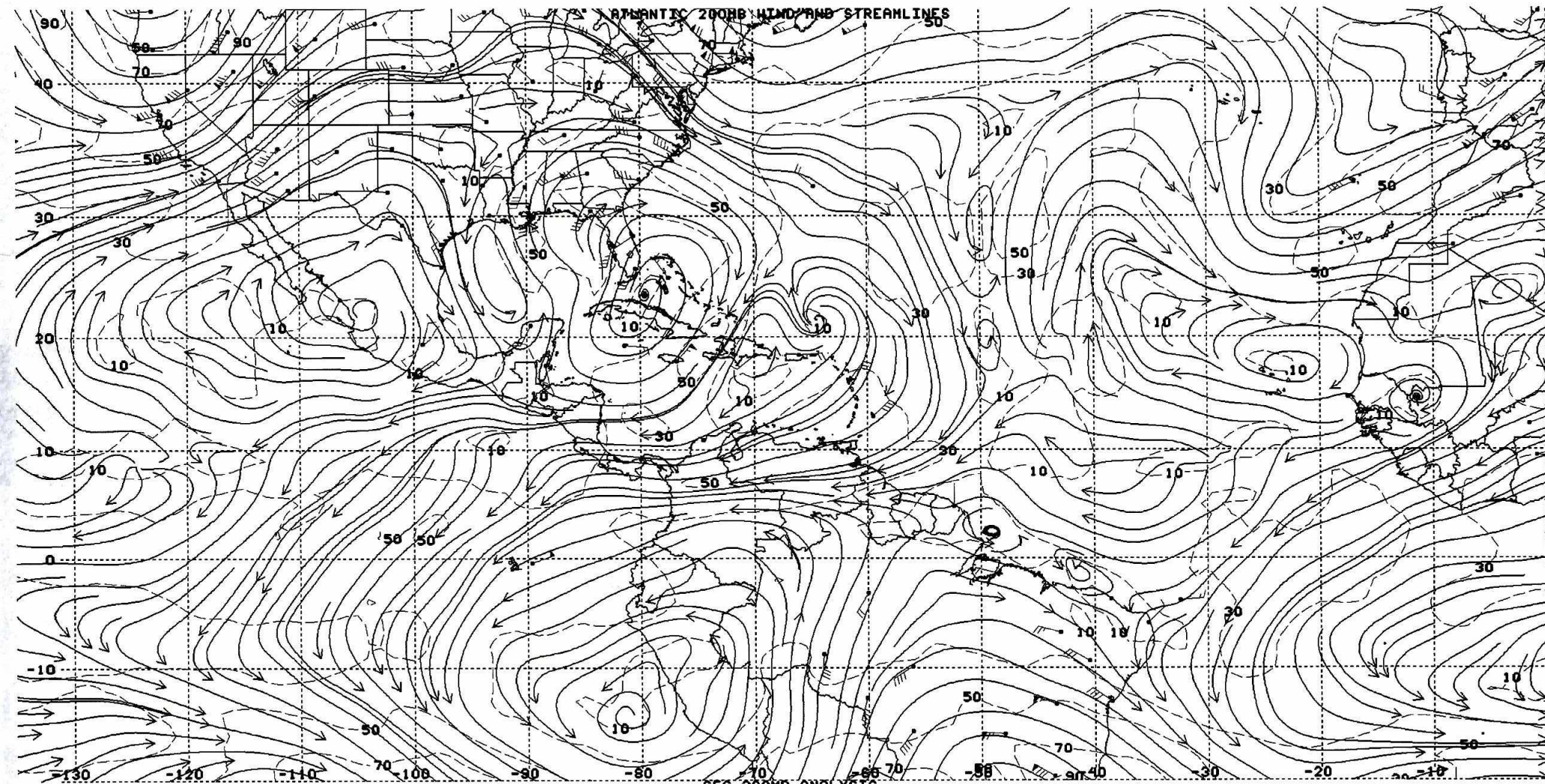
■ Tropical Storm Warning







ATLANTIC 200MB WIND AND STREAMLINES



AUG 31 2008 1200 UTC

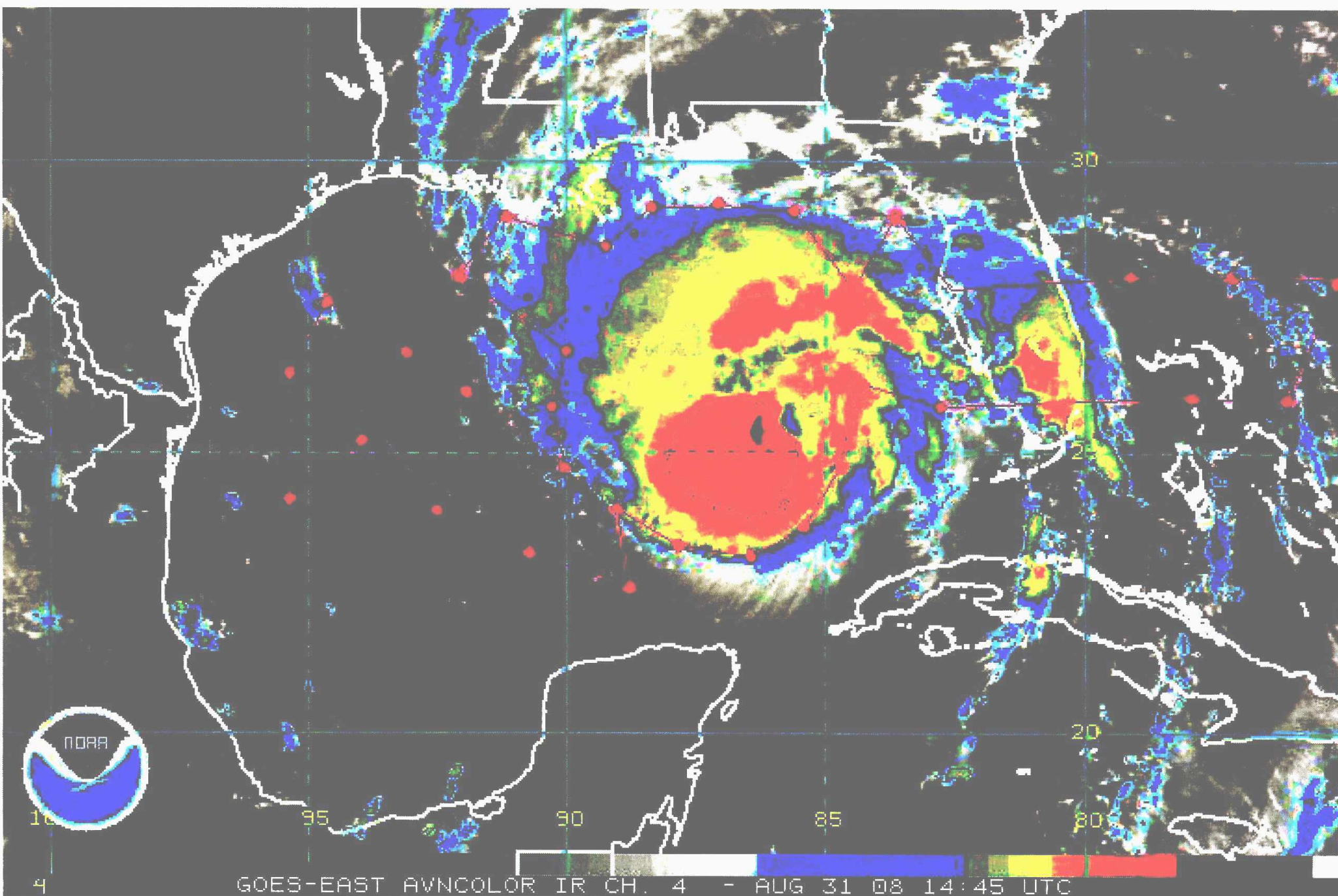
GFS 200MB ANALYSIS
STREAMLINES... ISOTACHS... DATA

TPC MIAMI FL

T.S. HANNA
22.9N 67.8W 0300 UTC TPC PSN
MOVG 300 DEG 07 KT
MAX WIND 45 KT G 55 KT

HURCN GUSTAV
23.1N 83.8W 0300 UTC TPC PSN
MOVG 320 DEG 13 KT
MAX WIND 120 KT G 150 KT

WORLDWIDE METEOROLOGICAL PREDICTION CENTER
MIAMI, FLORIDA
00Z SURFACE PRESSURE ANALYSIS
ISSUED: Sun Aug 31 02:40:53 UTC 2008
TAFB ANALYST: MKH
COLLABORATING CENTERS: T, V OPC HPC HFO



GOES-EAST AVN COLOR IR CH. 4 - AUG 31 08 14:45 UTC

Convective Cloud Top Heights in Kft
Naval Research Laboratory MRY

