040924 H

Lead Project Scientist

Jeanne M. Black

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.
- ✓ 4. Contact HRD members of crew to:
  a. Assure availability for mission.
  b. Review field 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 (MGOC in Miami).
- ✓ 7. Before take-off, brief the on-board GPS dropsonde operator on times and positions of drop times.
- ✓ 7. Make sure each HRD flight crew members have life vests
- ✓ 7. Perform a headset operation check with all HRD flight crew members. Make sure everyone can hear and speak using the headset.
- None 8. Collect "mess" fee ($2.00) from all on-board HRD flight crew members.

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 Lead Project Scientist Form.
- ____ 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).

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 MGOC.
- ____ 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. Obtain a copy of the radar DAT tapes. Turn in with completed forms.
- ____ 6. Obtain a copy of the all VHS videos form aircraft cameras (3-4 approx.). Turn in with completed forms.
- ____ 7. Obtain a copy of CD with all flight data. Turn in with completed forms.
- ____ 8. Determine next mission status, if any, and brief crews as necessary.
- ____ 9. Notify MGOC as to where you can be contacted and arrange for any further coordination required.
- ____ 10. Prepare written mission summary using **Mission Summary** form (due to Field Program Director a week after the flight).

27-29

11 am
26.2
72.4 fix

Lead Project Scientist Check List

Date 9-24-04 **Aircraft** N42 **Flight ID** 040924 1f

A. Participants:

HRD		AOC	
Function	**Participant**	**Function**	**Participant**
Lead Project Scientist	M. Black /	Flight Director	Paul Flaherty
Radar	Paul Chang M. Black	Pilots	Kennedy, Nelson
Workstation	none	Navigator	Pete Siegal
Cloud Physics	none	Systems Engineer	Wade
Photographer/Observer /Guests	M. Black	Data Technician	Sean McMillan
Dropwindsonde		Electronics Technician	
AXBT/AXCP	M. Black	Other	Jack Parrish

B. Take-off and Landing Locations:

Take-Off: 1523 Location: MacDill

Landing: 0057 Location: MacDill

Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations: 24/09Z 26.1 71.6 969 mb 65 kts

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
24/18	26.1	73.1		85 kt
25/06	26.2	75.4		90 kt
25/18	26.6	77.6		95 kts
26/06	27.1	79.5		100 kt
27/06	30.0	81.5		80 / inland

D. Mission Briefing: 7 kFt radar, IP at 9/22 AXBT drop location, 26.9, 74.0, coordinated Fig 4 w/43 starting at 75 mi NW - S - SE - NE - SW. 75 nm legs. BT drops (see Fig.) at IP, 75 mi out, mid point, inner edge of eyewall. All BTs with sondes, eyewall BT/sondes also with sonobuoys

After Fig. 4 - racetracks (eyewall) for Ocean Wind + BT line along 26.5°N west of storm

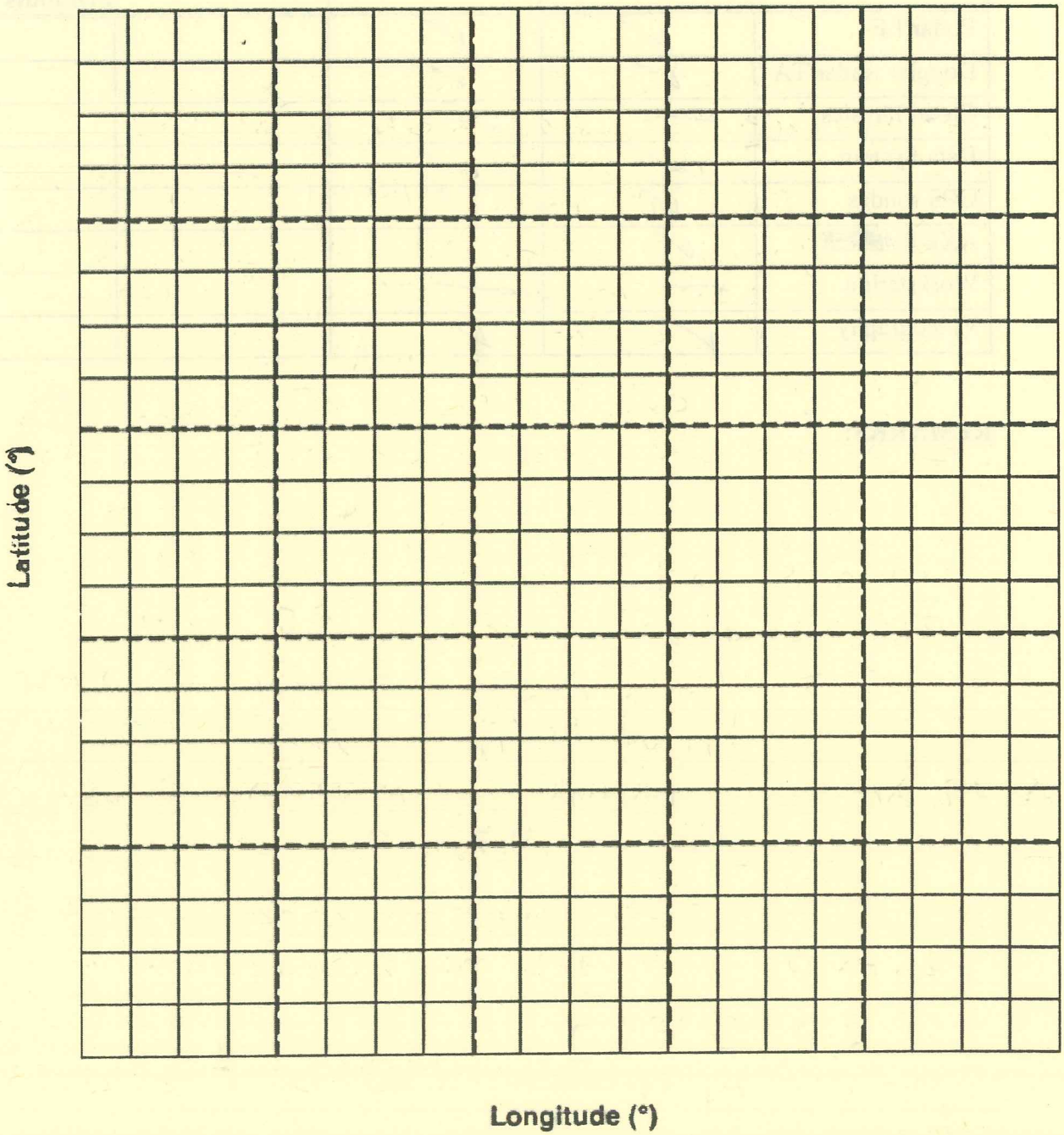
E. —Equipment Status (Up ↑, Down ↓, Not Available —, Not Used **O**)

Equipment	Pre-Flight	In-Flight	Post-Flight	# DATs / Cds /Expendables/ Printouts
Radar/LF	✓	✓		
Doppler Radar/TA	✓	✓		
Cloud Physics	—	—		
Data System	✓	✓		
GPS sondes	✓	✓		
AXBT/~~AXCP~~	✓			
Workstation	—	—		
Videography	✓	✓		

REMARKS:

Observer's Flight Track Worksheet

Date _____ Flight _____ Observer _____



Lead Project Scientist Event Log

Date 9/24/04 **Flight** 040924H **LPS** M. Black / Paul Chang

Time	Event	Position	Comments
1528	Start Radar Over Florida		
	F/AST		
1700	Eye 150 miles ESE		on LF radar
	Concentric eyewalls outer ~50 mile diam - closed		
	inner ~ 25 mile diam		looks weaker
	and open SE		
1709	Descend to 7K ft to IP		
1714	Interference from 43 radar - ring at 160 mi		
BT + sonde 172035	BT + sonde	26.9 74.0	27.8°C 45 m ML
172815	BT + sonde	Outside eyewall	27.8°C
173129	BT + sonde + buoy		
173220	Sonde buoy		
S 1738	26°23'	73°00'	967 mb
174630	Sonobuoy	26.76	72.43° inner edge
BT + S 174731	BT + sonde	26.14 72.38	SE wall 9-32 m/s SE
	24.6°C	45 m ML	
BT + S 175318	BT + sonde	26.0 72.0	85 mile SE
		25.5°C	
180110	BT From 42	Ch 12	75 mi SE · 24 m/s
S 180226	Sonde for 43 BT	25.9	71.85° SFMR
~1800	LF reflectivity way too low		
SFMR ~1805	LF reset		
26 m/s 181425	Sonde for BT	on 43 - 25.9°C	
182058	Sonde	For BT NE point	75 miles
BT 183718	BT + sonde	26.90 72.97	NE wall SFMR 40
1838	Sonobuoy		
eye 1844	966 mb	double eyewall	
	26°24' 73°14'	weak inner	

Lead Project Scientist Event Log

Date 9/24/04 Flight _____ LPS _____

Time	Event	Position	Comments
185057	Sonobuoys	26.09 73	53° SW wall
185206	Sonde	SW wall	38 m/s SFMR
185357	BT	25.92 73.61	30 m/s Outside SW wall
185840	BT + Sonde	25.63 73.72	50 miles out SW
	27.5°C	60 m ML	
190431	SW point	75 miles out	
BT+S 190530	BT & sonde	25 25	75.79° 27.8°C
191105	Turn to	North back to eye	
S 1930	eye		
1936	Switch TA to	continuous	
BT 193643	26.66	72.97 Sonde+BT	NE wall
S 1947	eye	26°24	73°25
2003	Sonde	NW wall	
2004	NW wall	100 kts	40 m/s SFMR
BT 201712	50 miles	North West	27.5°C 40m ML
2026	Sonde	55 miles west	
202829	sonde	eyewall	40 m/s
eye 203521	26.4	73.6 963 mb	
204203	Sonde	east eyewall	
BT+Sonde 204757	26.40	72.67° 30 miles	east of Eye 26.2°C
2051	Reverse course	head to eye	from east

Lead Project Scientist Event Log

(2)

Date 9-24-04 Flight _____ LPS _____

Time	Event	Position	Comments
§ eye 2107	26 22'	73 43'	964
2110	West eyewall		Sonde
2113	Radar Down		
2121	South eyewall		
§ 2126	South part of eye		
2131	Southwest eyewall		- big vps - Sonde
2137	turn around back to eye		
2144	South eyewall		42 m/s
§ 2149	26 22	73°50'	963 mb
2151 - Circling in eye to reset IWRAP			
2213 Stopping circle			
~~2222~~ 2222	east eyewall		closing up - Sonde 100+ kts
2228	turn around to head back in		88 kts SFMR
9 § 2242	~~sat~~ in eye	26° 22'	73° 47'
2246	South eyewall		Sonde
2246	Tail radar low - reset		
2256 -	Tail radar down		+ LF
10 § 2300	eye	Radar Down	26° 26'
2311	western eyewall		
2312	Sonde		
2320	Radar up		

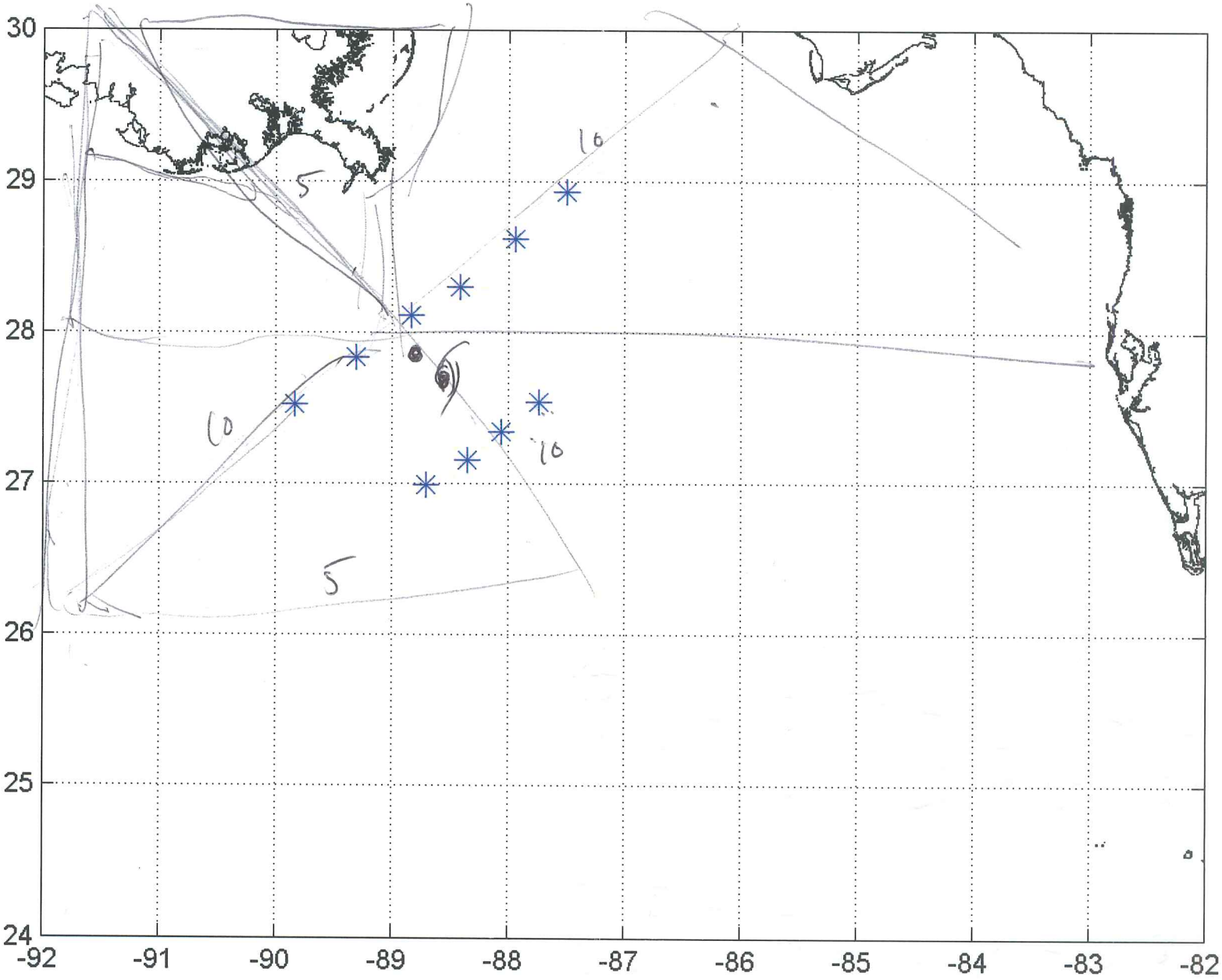
(3)

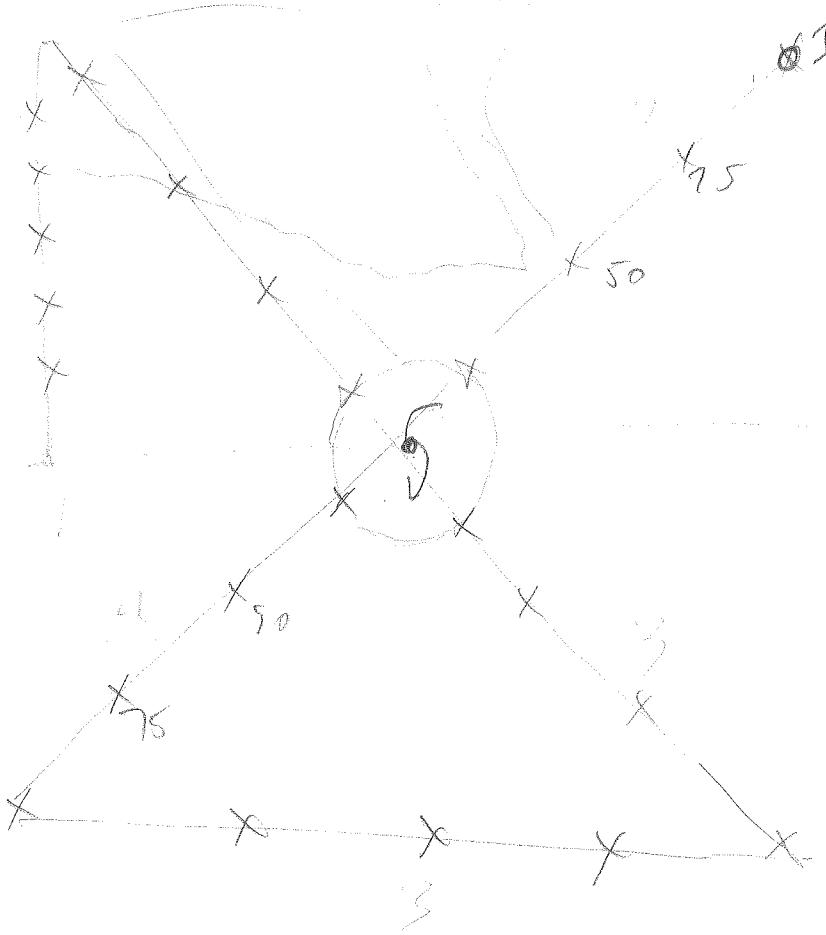
Lead Project Scientist Event Log

Date 9/24/04 Flight 040924H LPS M. Black

	Time	Event	Position	Comments
BT	233119	100mi west BT	26.44 76.02	
BT	233736	150mi west BT	26.43 76.5	150 miles west
BT	235637	200mi west	26.44 78.0	28.0°C 60m ML
	2357	Climb	Ron Home (M-CP-11)	
	0057	Landing		

4 mi/min 60/4





16

19

21

Texas Tech University
Stick-Net Deployment Report

Deployment Information
Storm name: Gustav
Report date: 8/31/2008
Report time: 23:15 UTC

ID	Latitude	Longitude	Start Date and Time (UTC)	Deployment Location	Comments
0213A	30.0887	92.0039	31Aug2008 12:25	New road - Construction Zone	In construction zone S of Savoy road. Open exposure N through S, some obstructions SW through NW. Compass heading 140. Elevation probably near 25 feet.
0214B	30.0386	92.2143	31Aug2008 13:50	Along side of Ben Fredrick Road	North side of Ben Fredrick Road. Deployment site has sugar cane fields around it. Some trees in the distance (200-300 yards) WNW. A small plant well to the ESE along the road. Compass heading 45. Elevation probably 20 feet.
0215A	30.0296	92.1348	31Aug2008 16:35	On top of landfill	On top of landfill north of Abbeville just west of US 167. Wide open every direction, with topographic speed up possible from several directions. There are some dirt mounds to the NE in relatively close proximity. Compass heading 350. Elevation is at least 50+ feet.
0216B	30.1618	92.1990	31Aug2008 18:10	Open Subdivision	Placed in Country Lake Subdivision. There are no houses in this subdivision with open fields in many directions. Exposure is good from each direction. House and trees located to the south at approximately 500 yards. Compass heading 210. Elevation is approximately 23 feet.

0217A	30.1788	92.3578	31Aug2008 22:55	LSU Rice Ag Center - East of SR 13	Deployed in middle of fielded area, wide open in every direction, a few buildings in the distance towards the WSW at 300 yards. Estimated elevation is 23 feet. Compass orientation = 200.
0218B	30.0519	92.2419	31Aug2008 20:57	Field Entrance	Placed at field entrance about 100 feet east of SR 700. Surrounded by sugar cane in every direction. Compass heading 150. Elevation is approximately 16 feet.
0219A	-99	-99	-99	-99	-99
0220B	30.0505	92.0540	31Aug2008 13:15	Road Intersection	Northeast corner of intersection of Perkins and Ranch Roads. Between Youngsville and Abbeville. Open exposure throughout, but sugar cane in the E through W, except down the road. Compass heading 310. Elevation probably near ~17 feet.
0221A	29.8963	91.8944	31Aug2008 15:00	Avery Island	On Avery Island southwest of the lake. Wide open exposure from NW through NE. Trees to the east are approximately 150 yards away. Trees are even closer trees to the south and southwest so these directions are compromised. Compass heading 90. Elevation is approximately 45 feet.
0222B	30.0794	92.1672	31Aug2008 17:15	Next to school	Placed east of sports complex attached to the school, and north of LA 699. The deployment is north of Abbeville. Good open exposure from all directions except house located SSE. Distance to school is estimated at 400-500 yards. Compass heading 160. Elevation is approximately 16 feet.
0223A	30.0064	92.3415	31Aug2008 22:20	Next to HWY 14	Placed on S. side of HWY 14, approximately 2 miles west of Kaplan. Open exposure each direction, but houses and trees periodically in the distance at ~300+ yards. Compass heading 300. Elevation is approximately 13 feet.
0224B	-99	-99	-99	-99	-99

Please note: Latitude and Longitude coordinates are preliminary and are subject to further qualification upon system retrieval.

Once the systems are successfully retrieved and all data are acquired, preliminary summary statistics will be distributed.

From Peter.Dodge@noaa.gov

Sent Monday, September 1, 2008 0:17 am
To Eric.Uhlhorn@noaa.gov , Paul.Leighton@noaa.gov , Frank.Marks@noaa.gov
Cc Sim.Aberson@noaa.gov , John.Gamache@noaa.gov
Subject Last p3 flight in Gustav.

Eric er al. As far as I know now the UAH team is at Bohulusa Airfield, South of Dlidell 30.81 V and 89.86 W. They are the easternost team. If you all can get oner there (maybe on the way in_ that might ve a good place to do an on oshote flow mofule.
The rest of the teams are from Houma on westward. Tob Foward and Forrest Masters have det up towers at the Houma aiirstrip and the Patterson aiustrip. I do not have the lat and lins vut thet sliuld show up on the flight nav maps. The TTU huts depliyed all over that trfion, as detailed in Jogn Scfrroeders email. TF onshore flow devekops in the New Iveria ot Vermillion Bay area then another onshore floe mofule woild be cool there.

but I do not know what you will have time to vecause of the buoy stuff. Vut if you could start and finish with coastal tuns that could ve hood and might give giid SRA data too. especially atound the Chandeleur Islands.

Part of me wishes I was there, part of mr is glad to be here in Fla. Excuse the many typos.
Peter

From "Schroeder, John" <john.schroeder@ttu.edu>

Sent Sunday, August 31, 2008 9:11 pm

To "Schroeder, John" <john.schroeder@ttu.edu> , Peter Dodge <Peter.Dodge@noaa.gov> , Daniel Cecil <cecild@uah.edu> , "Giammanco, Ian" <ian.giammanco@ttu.edu> , Forrest Masters <masters@ce.ufl.edu> , Kevin Knupp <knuppk@uah.edu> , sim aberson <Sim.Aberson@noaa.gov> , John Gamache <John.Gamache@noaa.gov> , Eric Uhlhorn <Eric.Uhlhorn@noaa.gov> , Sylvie Lorsolo <Sylvie.Lorsolo@noaa.gov> , paul leighton <Paul.Leighton@noaa.gov> , Bachir Annane <Bachir.Annane@noaa.gov> , Shirley Murillo <Shirley.Murillo@noaa.gov> , Michael L Black <Michael.Black@noaa.gov> , Mark Powell <Mark.Powell@noaa.gov> , Frank Marks <Frank.Marks@noaa.gov>

Subject RE: Possible Gustav Landfall Flighy

Attachments Gustav_deploy-2.pdf 43K

The second set of TTU coordinates from Ian's team is attached.

John

From: Schroeder, John
Sent: Sunday, August 31, 2008 6:29 PM
To: Peter Dodge; Daniel Cecil; Giammanco, Ian; Forrest Masters; Kevin Knupp; sim aberson; John Gamache; Eric Uhlhorn; Sylvie Lorsolo; paul leighton; Bachir Annane; Shirley Murillo; Michael L Black; Mark Powell; Frank Marks
Subject: RE: Possible Gustav Landfall Flighy

The coordinates for half of the TTU deployment sites are attached. These are focused between Youngsville to Abbeville to Kaplan to Crowley. One additional deployment was made at Avery Island.

I will need to meet up with Ian's team to forward the other coordinates from the second team, but they are focused on US HWY 90 from Lafayette to Franklin, and on HWY 1 from Donaldsonville to Thibodaux. There area also a few sites scattered just north and south of the Mississippi River just west of New Orleans. One deployment was also made at Weeks Island.

We have deployed about 20 probes, and have about 4 probes left. We may or may not deploy then later tonight.

I'll send the next iteration of coordinates ASAP.

John

From: Peter Dodge [Peter.Dodge@noaa.gov]
Sent: Friday, August 29, 2008 4:49 PM
To: Daniel Cecil; Schroeder, John; Giammanco, Ian; Forrest Masters; Kevin Knupp; sim aberson; John Gamache; Eric Uhlhorn; Sylvie Lorsolo; paul leighton; Bachir Annane; Shirley Murillo; Michael L Black; Mark Powell; Frank Marks
Subject: Possible Gustav Landfall Flighy

As you all ptobably knoe NORR P3s behan round the clock flighys into Gystav. NOAA 42 took off at 4 pm this afternoon and 43 is scheduled to rake off at 4 am. These flighrs will probably continure to landfall. Depending on oprational requirments, they will probablu be able to fo some modules like the tuainband moduls ot the SFMR validation mofule, etc. The flight nearest landfall could include passes and dropsonde drops neat your sites...but we have to lnow where you are.

Please let me know...my cell phone is 305 772 0492 and you can call me at any time.. If you have internet access it would be good to send an

email to evryone on this emial. especially Sim Aberson, John Gamache (42 Lps) and Eric Uhlhorn (43
P Lps). John Kaplan will NOY be available for phone calls because he wull doing night duty on the GIV.

Pleadr pass this on to Rob Howard.

Stay safe.

Peter