

N49RF ERROR SUMMARY
NHC Hurricane HARVEY Surveillance Mission 1109A

Flight ID: 20170824N1

Sensor or System -----	Number or Name -----
Static Pressure Probe	PSM.2
Dynamic Pressure Probe	PQM.2
Total Temperature Probe	TTM.1
Dewpoint Temp. Probe	TDM.2
Vertical Accelerometer	AccZI.1
Altimeter	AltGPS.3
INE Selection	1
Differential Attack Pressure Probe	PDALPHA.1
Differential Sideslip Pressure Probe	PDBETA.1
Dynamic Attack Pressure Probe	PQALPHA.1
Dynamic Sideslip Pressure Probe	PQBETA.1

Flight Directory acdata/2017/MET/20170824N1

Local Met Data	Takeoff KLAL (0455Z)	Landing KLAL (1139Z)
Dynamic Corrections		Yes
AttackAngleIntercept		5.1083
AttackAngleSlope		5.91956
SlipAngleIntercept		1.05
SlipAngleSlope		6.80484
AttackAngleIntercept2		5.05312
AttackAngleSlope2		5.74156
SlipAngleIntercept2		0.8
SlipAngleSlope2		6.89644

Notes:

There were no edits made in the measured parameters used to calculate meteorological and navigational parameters.

Takeoff/Landing data: Data during landing and takeoff are potentially suspect. It is recommended that ground data not be used for scientific analysis.

TDM.2 too dry at lower altitudes but closer to TA.d at operational altitudes (smaller degree of supersaturation). TDM.2 is reference. AltRa.1 has many dropouts (prior to replacement after end of Harvey mission sequence), but is not used for calculation of GA (AltGPS.3 is the source of absolute altitude)

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Dropsondes	30	29	29
Test sondes	0	0	0
AXBTS	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Henning
Phone #: (863) 500-3982

ACAT-4 Version = 7.1

31
44
29
15

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

FLT ID: 20170824N1	From: KLAL	To: KLAL
FLT #:	Blk In: 1236 Z	Lnd Time: 1229 Z 6+45
ETD: 0530 Z	Blk Out: 0536 Z	T/O Time: 0544 Z
ETE: 7+00	Total Blk: 7.0	Total Flt: 6.8
Sponsoring Org: NHC	Program: PHS	Purpose: SURV TD Harvey

AOC Flight Crew

Aircraft Commander: TWINING	SSA: MILLER
Co-Pilot: FRITZLER SIMS	AVAPS: SMITH UNDERWOOD
Navigator: /	Scientists:
Flight Eng: /	Scientists
Flt Director: HENNING FLAHERTY	Scientists
SEB: ROLES, /	Scientists:
Crew Chief:	Visitors: /

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	#2 1007.3	25C 29.89 STA 1007.2	#2 1007.5	27C 29.89 STA 1007.2

AS REQUIRED BY ORM	YES / NO	REMARKS
VOLCANIC ASH		
SCIENCE MISSION WITHIN BOUNDARY LAYER		
LACK OF PRECIPITATION		
RELATIVE HUMIDITY AT OR ABOVE 80%		
LARGE AIR-SEA TEMPERATURE GRADIENT		
HIGH SURFACE WINDS		
LONG FETCH AND/OR DURATION OF SFC WIND		
SEA SALT ACCRETION FORECAST		
SEA SALT ACCRETION OBSERVED		

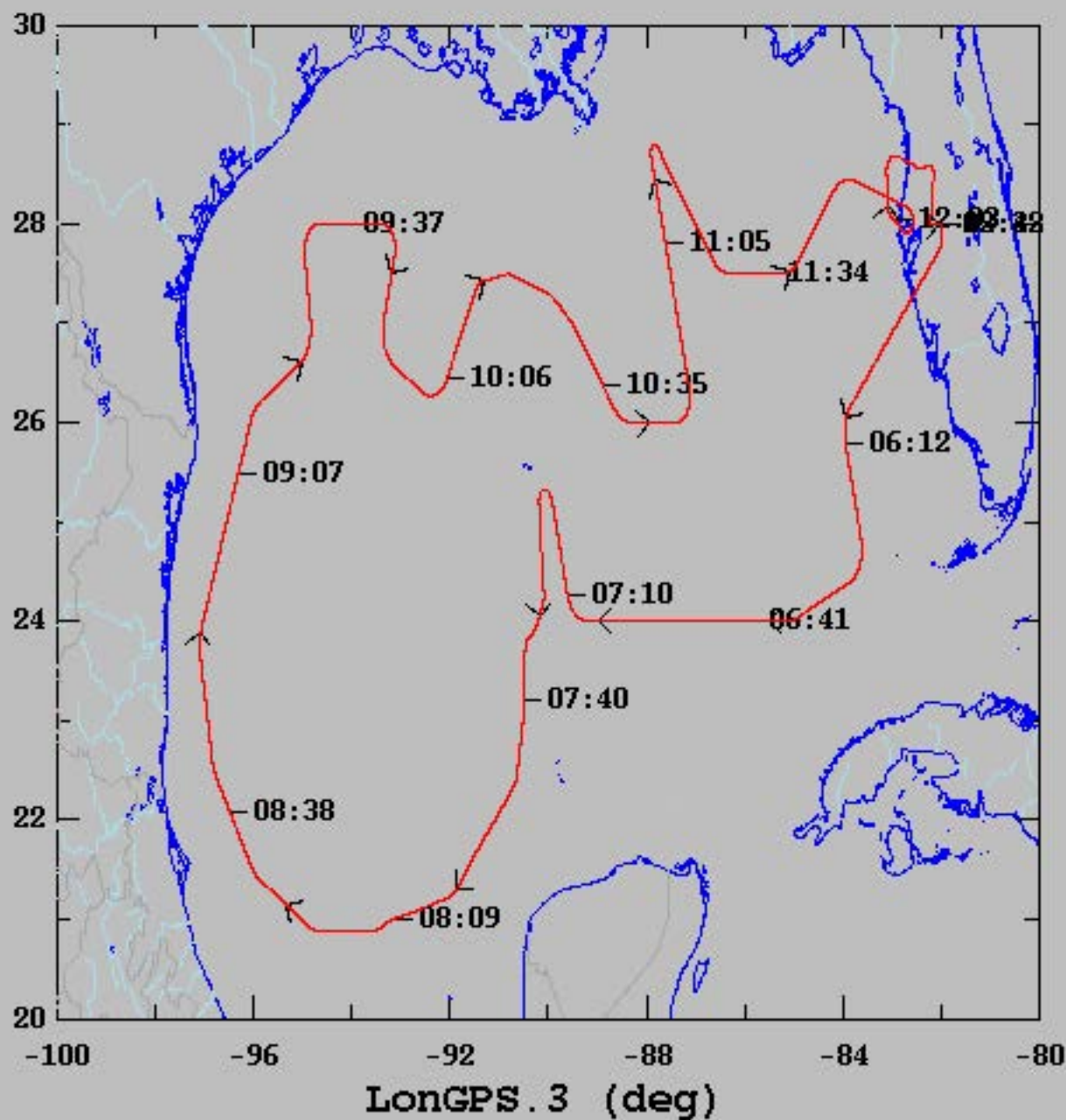
Dropsondes	30	Good: 29	Bad: 1	Sent: 29
AXBT		Good:	Bad:	Sent:

List other data sources in Remarks section

Remarks (Storm VDM Identifier, Mission ID, Fix Times)	Fix #	VDM Ob Num	Fix Time / SLP
Storm Number Identifier (VDM): (ie: AL072012)			
TCPOD/WSPOD Mission ID: (ie: NOAA2 2418A SANDY)			

Remarks: CTR 22 32N
- 117W -

08/24/2017, 05:42:48-12:33:01



AOC GPS Dropwindsonde Log

Flight ID: 20170824 N1

Flight Director: FLAHERTY/HENNING

Mission ID: 1109A HARVEY

Storm/Track: TD HARVEY

Pg 1 of 1

Drop #	CH #	Sonde ID	Drop Time (UTC)	Lat (°N)	Lon (°W)	Wx Cond.	SFC Prs (mb)	Ob #	L5/R5	Last Winds R5 (ht, ws, wd)	Last Winds L5 (ht, ws, wd)	Sent Time/KWBC (UTC)
1	1	15151	0610	26	-84	N/A-DARK	1010.1	1	R			
2	2	25061	0622	24.5	-83.5	"	1009.5	2	R			0629
3	3	15101	0633	24	-85	"	1009.0	3	R			0644
4	4	55030	0645	24	-86.5	"	1009.4	4	R			0654
5	1	25049	0657	24	-88	"	1008.9	5	R			0705
6	2	25061	0708	24	-89.5	"	1009.1	6	R	KEPT LAST WIND		0715
7	3	15101	0720	25.3	-90	"	1008.9	7	R			0728
8	4	25055	0735	23.7	-90.5	"	1007.4	8	R	DIVERGING FOR WX		0739
9	1	15313	0745				FAST FALL					0759
10	2	25061	0751	22	-91.1	"	1006.2	9	R			0811
11	3	25052	0802	21.2	-92.2	"	1005.2	10	R			0821
12	4	25055	0812	20.9	-93.4	"	1005.5	11	R			0831
13	1	25006	0822	20.9	-94.8	"	1004.5	12	R			0843
14	2	25061	0832	21.4	-96.0	"	1006.1	13	R			0851
15	3	35051	0842	22.5	-96.8	"	1007.3	14	R			0905
16	4	15293	0853	23.8	-97.1	"	1008.5	15	R			0913
17	1	15300	0913	26.1	-96	"	1008.9	16	R			0929
18	2	15291	0923	26.8	-94.8	"	1008.3	17	R			0946
19	3	45177	0932	27.9	-94.8	"	1009.5	18	R			0953
20	4	55180	0945	28.0	-93.0	"	1009.8	19	R	FLD		1005
21	1	35100	0955	26.7	-93.4	"	1008.9	20	R			1029
22	2	45111	1004	26.1	-92.2	"	1008.1	21	R			1037
23	3	5570	1018	27.5	-90.9	"	1009.9	22	R			1043
24	4	5547	1029	27.0	-89.5	"	1009.6	23	R			1051
25	1	5100	1039	26.0	-88.4	VCST	1010.0	24	R			1110
26	2	5034	1049	26.1	-87.1	VCST	1011.0	25	R			1111
27	3	5301	1115	28.8	-87.7	VCST	1011.8	26	R			1141
28	4	5005	1128	27.5	-86.5	SCT	1010.7	27	R			1146
29	1	5043	1138	27.5	-85.0	SCT	1010.9	28	R			1158
30	2	45018	1149	28.4	-83.9	FEW	1011.4	29	R	LAST REPORT		1208

2343
9257

APPENDIX 2 – GIV QC Checklist

Flight ID:	20170824N1
Flight Director(s):	HENNING/FLAHERTY

UWZ.d mean: 40.19

Pressure Comparison		
	T/O	Land
Aircraft	1007.3	1007.5
Tower	1007.2	1007.2

#2

	Raw 1Hz Mean File Parameters				C File Parameters	
Accelerometer	AccAXI.1	AccAYI.1	AccAZI.1		AccZref	
	AccAXI.2	AccAYI.2	AccAZI.2			
	AccAXI.3	AccAYI.3	AccAZI.3			
Altitude	AltGPS.1	AltI.1	AltPaADDU.1	AltBCADDU.1	ALTref	
	AltGPS.2	AltI.2	AltPaADDU.2	AltBCADDU.2	ALTPA.d	
	AltGPS.3	AltI.3	AltRA.1		ALTGA.d	
Ground Speed	GsXI-GPS.1	GsXI.1	GsGPS.1	GsXGPS.1	GSXref	
	GsXI-GPS.2	GsXI.2	GsGPS.2	GsXGPS.2	GSYref	
	GsYI-GPS.1	GsXI.3		GsYGPS.1	GSZref	
	GsYI-GPS.2	GsYI.1	GsZI.1	GsYGPS.2		
	GsZI-GPS.1	GsYI.2	GsZI.2	GsZGPS.1		
	GsZI-GPS.2	GsYI.3	GsZI.3	GsZGPS.2		
Lat/Lon	LatGPS.1	LatI.1	LonGPS.1	LonI.1	LATref	
	LatGPS.2	LatI.2	LonGPS.2	LonI.2	LONref	
	LatGPS.3		LonGPS.3			
Pressure	PDALPHA.1	PQALPHA.1	PQM.1	PSM.1	PDALPHAref	PQMref
	PDALPHA.2	PQALPHA.2	PQM.2	PSM.2	PDBETAref	PQ.c
	PDBETA.1	PQBETA.1	PQM.11	PSM.11	PQALPHAref	PSMref
	PDBETA.2	PQBETA.2			PQBETAref	PS.c
Air Speed	CasADDU.1	TasADDU.1	IasADDU.1		IAS.d	TAS.d
Pitch/Roll	PitchI.1	PitchRateI.1	RollI.1	RollRateI.1	PITCHref	
	PitchI.2	PitchRateI.2	RollI.2	RollRateI.2	ROLLref	
	PitchI.3	PitchRateI.3	RollI.3	RollRateI.3		
Temp/Dewpt	TTM.1	TTM.11	TDM.1		TD.c	TTMref
	TTM.2	TTM.13	TDM.2		TDMref	TA.d
	TTM.3	TTM.4	TDM.11			
Miscellaneous (must check)					UWZ.d	WS.d
					DPJ_WSZ	WD.d
					HUM	

Mission Documents:

<input checked="" type="checkbox"/>	Error Summary
<input checked="" type="checkbox"/>	Crew Manifest
<input checked="" type="checkbox"/>	QC checklist
<input checked="" type="checkbox"/>	Dropwindsonde Log(s) – AVAPS and FD if completed
<input type="checkbox"/>	Miscellaneous FD notes

NOTES:

AltRa.1 (prior to replacement) many dropouts
 TDM.2 too dry near surface but closer to TA.d
 at ops alt (less supersaturation)