

N42RF ERROR SUMMARY
20241007H1

Flight ID: 20241007H1

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	AccZfilterI-GPS.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/2024/MET/20241007H1

Local Met Data	Takeoff KLAL (2005Z)	Landing KLAL (0254Z)
Dynamic Corrections		Yes
AttackAngleIntercept		2.32804
AttackAngleSlope		6.09319
SlipAngleIntercept		0.25
SlipAngleSlope		6.641
AttackAngleIntercept2		2.06219
AttackAngleSlope2		5.99068
SlipAngleIntercept2		0.125
SlipAngleSlope2		6.9873

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.

Took about the first 45 min of the flight for blended inertial .2 altitude solution (AltI-GPS.2) to align with blended inertial solution .1 (AltI-GPS.1)

One TDM.1 spike between 0046 and 0050 UTC, but doesn't affect any other variables

SFMR TB, WS SFMR, and RAIN RATE SFMR data should be used with caution as additional assessment occurs

Expendable Type	# deployed	# good	# transmitted
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Dropsondes	25	22	21
Test sondes	0	0	0
AXBTS	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Zawislak
Phone #: 305-707-4359

ACAT-4 Version = 7.4

U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - Flight Manifest

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20241007H1	FLT #:	FY25-	AC:	Abitbol	Other Crew:	sUAS		Dropsondes		
From:	KLAL	ETD:	1600L / 2000Z	CP(s):	Keith / Wood	Kethryn Sellwood (HRD)	Type	Released	Good	Bad	Sent
To:	KLAL	ETA:	0000L / 0400Z		Ellis	Sim Aberson (HRD)			22	3	21
Block Time		Flight Time		NAV(s):	Meier	Zorana Jelenak (NESDIS)					
Out:	19:56	T/O:	20:05	FE(s):	Tyson	Joe Sapp (NESDIS)	Other Expendables		Dropsonde Charge Codes		
					Wysinger	Athan Maragoudakis (AOC)	Type	Released	21 NWS, 4 HRD		
In:	03:00	Land:	02:54	FD(s):	Zawislak	Nikki Hathaway (AOC)	ASWD	1	AXBTs		
						Rep. Maxwell Frost (VIP)			Good	Bad	Sent
Total:	7.1	Total:	6.8	SSA:	McAlister	Rep. Scott Franklin (VIP)					
				IFT(s):	Dykeman						
Sponsoring Org:		NHC					Pennies		3 x CAT 5		
Program:		PRX					Storm ID: (i.e., AL072012)		AL142024		
Purpose:		TDR Mission + HRD Research Modules		MX:			Mission ID: (i.e., NOAA2 2418A SANDY)		NOAA2 1014A MILTON		
AS REQUIRED BY ORM			Y	N	REMARKS		OBSERVATIONS				
VOLCANIC ASH				X	Maragoudakis, Frost, Franklin first pennies		Fix Number	Obs Number	Fix Time	SLP	
SCIENCE MISSION WITHIN BDRY LAYER				X			1	0B03	22:20:04 21.86N, 90.67W	899 mb 220 / 24 kt	
LACK OF PRECIPITATION				X							
RELATIVE HUMIDITY ≥ 80%			X				2	0B13	23:35:20 21.84N, 90.49W	904 mb 320 / 31 kt	
LARGE AIR-SEA TEMP GRADIENT				X							
HIGH SURFACE WINDS			X				3	0B22	00:47:39 21.85N, 90.32W	911 mb 075 / 30 kt	
LONG FETCH / DURATION OF SFC WND			X								
SEA SALT ACCRETION FORECAST				X			4				
SEA SALT ACCRETION OBSERVED											
*Highlighted items must be completed before departure.											

P-3 QC Checklist

Overall Assessment	Minor instrument issue(s) - no mission impact.
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Flight ID:	20241007H1
Flight Director(s):	Zawislak
Mission:	Tasked/Operational
UWZ.d mean:	0.09

Pressure Comparison		
	Pre-flight	Post-flight
Aircraft	1002.2	Not reported
Airfield	1002.7	1003.0

This form uses:
_A.nc

SFMR Serial Unit	3
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Parameters	Raw				Derived, Corrected & Reference	
✓ Acceleration	✓ AccAXI.1	✓ AccAYI.1	✓ AccAZI.1	✓ AccZfilter-GPS.1	✓ AccZref	
	✓ AccAXI.2	✓ AccAYI.2	✓ AccAZI.2	✓ AccZfilter-GPS.2		
	✓ AccAXI-GPS.1	✓ AccAYI-GPS.1	✓ AccAZI-GPS.1			
	✓ AccAXI-GPS.2	✓ AccAYI-GPS.2	✓ AccAZI-GPS.2			
✓ Altitude	✓ AltGPS.1	✓ AltI-GPS.1	✓ AltPaADDU.1	✓ AltRA.1	✓ ALTref	✓ AltRA1.c
	✓ AltGPS.2	X AltI-GPS.2	✓ AltBCADDU.1	✓ AltRA.2	✓ ALTPA.d	✓ AltRA2.c
	✓ AltGPS.3				✓ ALTGA.d	
	✓ AltGPS.4					
✓ Ground Speed	✓ GsXI-GPS.1	✓ GsYI-GPS.1	✓ GsZI-GPS.1		✓ GSXref	
	✓ GsXI-GPS.2	✓ GsYI-GPS.2	✓ GsZI-GPS.2		✓ GSYref	
					✓ GSZref	
✓ Location	✓ LatGPS.1	✓ LatI-GPS.1	✓ LonGPS.1	✓ LonI-GPS.1	✓ LATref	
	✓ LatGPS.2	✓ LatI-GPS.2	✓ LonGPS.2	✓ LonI-GPS.2	✓ LONref	
	✓ LatGPS.3		✓ LonGPS.3			
	✓ LatGPS.4		✓ LonGPS.4			
✓ Pressure Sensors	✓ PDALPHA.1	✓ PQALPHA.1	✓ PQM.1	✓ PSM.1	✓ PQMref	
	✓ PDALPHA.2	✓ PQBETA.1	✓ PQM.2	✓ PSM.2	✓ PQ.c	
	✓ PDBETA.1		✓ PQM.3	✓ PTM.1	✓ PSMref	
	✓ PDBETA.2		✓ PQM.4		✓ PS.c	
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1	✓ IasADDU.1		✓ IAS.d	✓ TAS.d
✓ Pitch / Roll	✓ PitchI.1	✓ PitchRatI.1	✓ RollI.1	✓ RollRatI.1	✓ PITCHref	
	✓ PitchI.2	✓ PitchRatI.2	✓ RollI.2	✓ RollRatI.2	✓ ROLLref	
	inop PitchI.3	inop PitchRatI.3	inop RollI.3	inop RollRatI.3		
✓ Temperature, Dewpoint, Radiometers	✓ TTM.1	X TDM.1	✓ TRadD.1		✓ TD.c	✓ TTMref
	✓ TTM.2	✓ TDM.2	✓ TRadS.1		✓ TDMref	✓ TA.d
	inop TTM.3	inop TDM.3	inop TRadU.1		✓ HUM	
✓ Wind and Pressure		X CH 1 TB	X CH 4 TB		✓ UWZ.d	✓ WS.d
X SFMR	SFMR	X CH 2 TB	X CH 5 TB		✓ PSURF	✓ WD.d
		X CH 3 TB	X CH 6 TB		X WS SFMR	X RAIN RATE SFMR

FLID_Mission_Documents.pdf:
✓ Error Summary
✓ Crew Manifest
✓ QC Checklist
✓ Dropwindsonde Log(s) - AVAPS and FD, if completed
✓ Flight Track

QC Key:	
Valid	✓
Errors (see NOTES)	X
Sensor Inoperative	inop

NOTES:
Took about the first 45 min of the flight for blended inertial .2 altitude solution (AltI-GPS.2) to align with blended inertial solution .1 (AltI-GPS.1)
One TDM.1 spike between 0046 and 0050 UTC, but doesn't affect any other variables
SFMR TB, WS SFMR, and RAIN RATE SFMR data should be used with caution as additional assessment occurs

AVAPS Drop Log

Project: HX 2024

Mission: Milton

Flight ID: 20241007H1

Take Off: 2005

Landing: _____

Flt Dir: Zawislak

Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	233814594	1	-0.5	2154	RK	NWS	IP1	✓
2	233340902	2	-0.4	2207	RK	NWS	MP1-1	✓
3	233814615	3	-0.6	2219	RK	NWS	RMW1-1	✓
4	233550055	4	-0.6	2220	RK	NWS	CPI	✓
5	233560373	5	-0.6	2221	RK	NWS	RMW01-1	✓
6	233410818	6	-0.4	2221	RK	HRD	RMW01-2 Died @ 1200m	✓
7	234220151	7	-0.7	2221	RK	HRD	RMW01-3	✓
8	233560376	8	-0.6	2232	RK	NWS	MP01	✓
9	234220179	1	-0.6	2246	RK	NWS	EPI	✓
10	234310880	2	-0.3	2307	RK	NWS	IP1	✓
11	233140694	3	-0.5	2321	RK	NWS	MP	✓
12	233950661	4	-0.4	2334	RK	NWS	RMW (Lost signal)	X
13	233240899	5	-0.5	NO DROP	—	—	NO DROP (White Popped)	✓
13	234150032	6	-0.7	2335	RK	NWS	CP	✓
14	233814440	7	-0.5	2336	RK	NWS	RMW-1	✓
15	234220962	8	-0.5	2336	RK	HRD	RMW-2	✓
16	233950708	1	-0.6	2336	RK	HRD	RMW-3	✓
17	233251077	2	-0.4	2349	RK	NWS	MP	✓
18	234220083	3	-0.7	0002	RK	NWS	EP2	✓
19	234220122	4	-0.5	0026	BRD	NWS	IP3 Late Winds	✓
20	233541323	5	-0.6	0034	BRD	NWS	MP13	✓
21	233541312	6	-0.3	0046	BRD	NWS	RMW#3	✓
22	233541330	7	-0.5	0047	BRD	NWS	CP3	✓
23	233667951	8	-0.6	0049	BRD	NWS	RMW03	✓
24	233141023	1	-0.4	0059	BRD	NWS	MP03	✓
25	233251058	2	-0.7	0112	BRD	NWS	EP3	✓
26								
27								
28								
29								
30								
31								

Drifter SN: 64231450

All sondes NWS except 2nd and 3rd RMWs to HRD

25 Total 21 NWS
22 Good 4 HRD

Dropwindsonde Scientist Log

Storm:	MILTON	Flight ID:	20241007H1	Mission ID:	1014A	Takeoff:	2005Z	Landing:	0254Z
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Dropsonde Scientist(s):	Dahl	AVAPS Operator:	Dykeman/Keller
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Pre-flight

- ✓ Discuss the pattern with the Lead Project Scientist (LPS) and ensure that enough dropsondes are onboard.
- ✓ Complete the appropriate pre-flight set-up of your workstation and ASPEN (see [Dropsonde Processing Guide](#)).

In-flight

- ✓ Ensure the Flight Director is aware of upcoming drops and whether a backup is requested in case of failure.
- ✓ Ensure the AVAPS operator has determined that the dropsonde is (or is not) transmitting a good signal.
- ✓ Prioritize processing of center drops and report MSLP and surface wind speed and direction to the Flight Director.
- ✓ Fill in the Dropwindsonde Scientist log as drops are released and processed.
- ✓ Copy completed ASPEN files (e.g., FRD, netCDF, Skew-t, WMO txt, BUFR) into the “FRD” folder on the workstation desktop for automated transmission to the ground for archival.

Once “science is complete”...

- ✓ Make synoptic map plots in ASPEN and copy them to the “FRD” folder on the workstation desktop for automated transmission to the ground for archival.
- ✓ Ensure ASPEN files have been sent to the ground by locating and verifying all files in the “FLIGHTID” folder within the “FRD” folder on the workstation desktop.
- ✓ Archive ASPEN_DATA and RAW_DATA into a folder named with the FLIGHTID within the “Season Dropsonde Archive” folder on the workstation desktop and upload the same directories into StormName/FLIGHTID/Dropsonde/ folder on Drive.
- ✓ Download this Dropwindsonde Scientist Log as “PDF” and upload completed PDF and Google Doc to the StormName/FLIGHTID/Dropsonde/ folder within the “Mission Reports” directory in the HFP Google Drive.

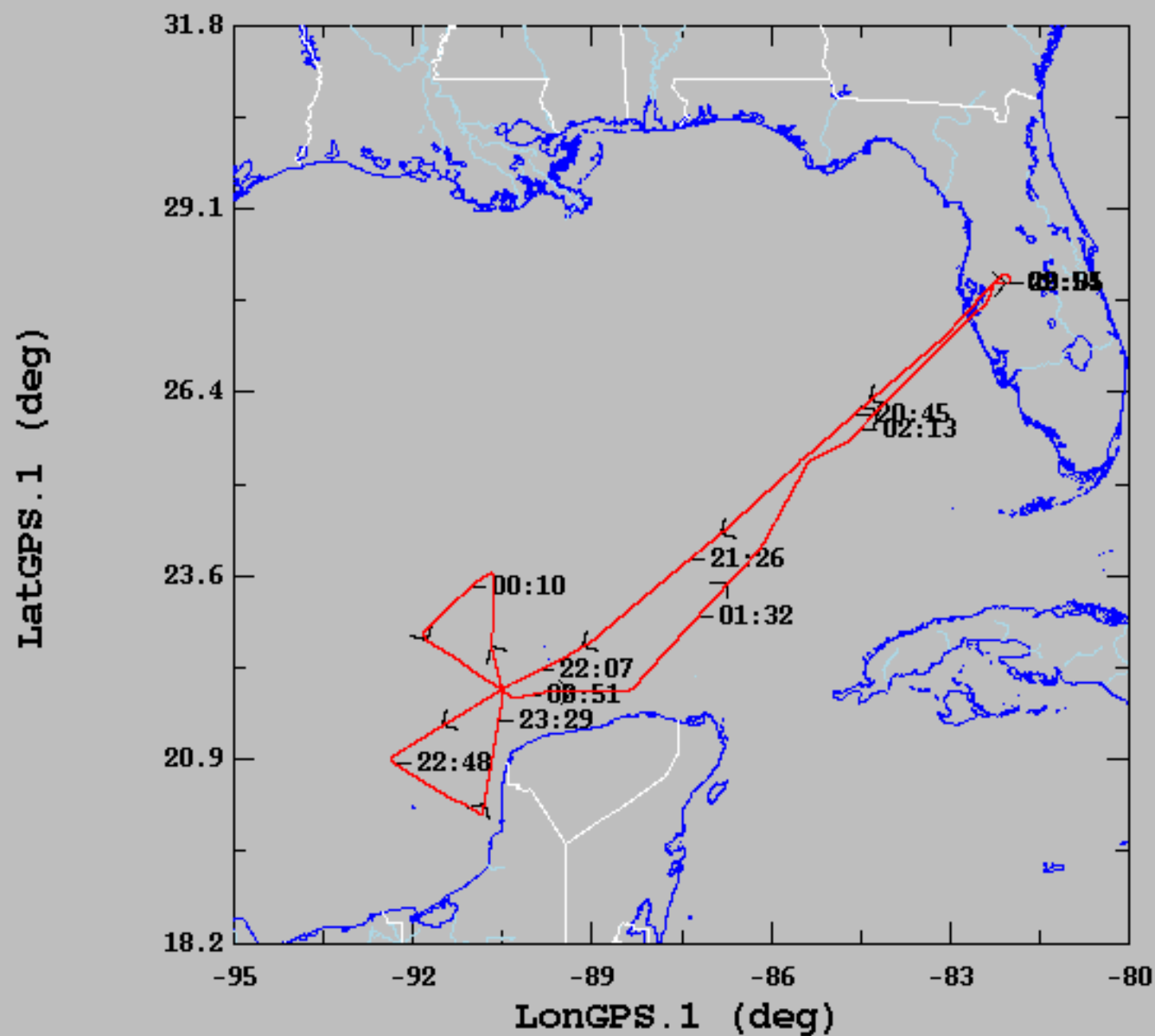
Drop #	Sonde ID	Time UTC	Lat (°N/S)	Lon (°E/W)	Sfc Pressure (mb)	Lowest Wind Direction/Speed (deg/kt)	Lowest Wind Height (m)	AXBT SST (°C)	Eye, Eyewall, Rainband, etc.	Ob #
1	233814594	215410	22.6568	-89.0054	1000	085/26	10	-		01
Comments: NE IP. Set end t = 258.75 s.										
2	233340902	220705	22.2554	-89.8456	996	140/27	10	-		02
Comments: NE MP. Set end t = 252.75 s.										
3	233814615	221907	21.8936	-90.6168	931	315/161	10	-	EYEWALL NE	04
Comments: NE RMW. Set end t = 341.75 s. Quite dry at top of sonde. Went halfway around the storm! May be a record WL150. (Note: VDM OB 3)										
4	233550055	222016	21.8936	-90.6168	899	220/24	10	-	CENTER	05
Comments: Center. Good sonde.										
5	233560373	222123	21.8187	-90.7423	945	225/120	10	-	EYEWALL SW	06
Comments: SW RMW outbound. Updraft near bottom.										
6	233410818	222134	21.8143	-90.7507	-	-	-	-	EYEWALL SW	-
Comments: SW RMW outbound. Fast fall flag, sonde quit transmitting after 94.25 s. Not transmitted.										
7	234220151	222147	21.8091	-90.7608	958	270/116	10	-	EYEWALL SW	-
Comments: SW RMW outbound. Fast fall flag, but dz/dt doesn't look suspect to me. TAG wouldn't take it because of time stamp. Not transmitted.										
8	233560376	223254	21.4414	-91.4456	997	325/37	10	-		07
Comments: SW mid outbound. Set end t = 242.50 s.										
9	234220179	224602	20.9855	-92.2863	1002	325/31	10	-		08
Comments: SW endpoint outbound. Set end t = 251.75 s.										
10	234310880	230729	20.1323	-90.8908	1001	275/35	10	-		09
Comments: S endpoint inbound. Good sonde.										

Drop #	Sonde ID	Time UTC	Lat (°N/S)	Lon (°E/W)	Sfc Pressure (mb)	Lowest Wind Direction/Speed (deg/kt)	Lowest Wind Height (m)	AXBT SST (°C)	Eye, Eyewall, Rainband, etc.	Ob #
11	233140594	232157	20.9967	-90.6466	997	280/37	10	-		10
Comments: S midpoint inbound. Post-splash warning. Set end t = 196.00 s.										
12	233950661	233413	21.7739	-90.4952	-	250/147	1506	-	EYEWALL S	11
Comments: S RMW inbound. Sonde encountered strong updrafts. Stopped transmitting at t = 46.25 s,, did not hit surface.										
13	234150032	233529	21.8503	-90.4932	904	320/31	10	-	CENTER	12
Comments: Center. Fast fall warning. End of drop t = 99.00 s. Flagging winds before t = 55.00 s to be cautious, but didn't look like an obvious fast fall case to me.										
14	233814440	233630	21.9075	-90.4941	932	335/133	10	-	EYEWALL N	-
Comments: N RMW 1. Turbulent. Not transmitted due to TAG.										
15	234220962	233645	21.9195	-90.4942	935	325/159	10	-	EYEWALL N	14
Comments: N RMW 2. Strongest winds of the RMW triplet, **transmit this one.** Set end t = 192.25 s. (Note: VDM OB 13)										
16	233950708	233654	21.9268	-90.4942	940	325/136	10	-	EYEWALL N	-
Comments: N RMW 3. Set end t = 195.25 s (increasing alt, sat dropout). Not transmitted due to TAG.										
17	233251077	234936	22.7039	-90.6535	997	025/40	10	-		15
Comments: N midpoint outbound. Set end t = 189.75 s.										
18	234220083	000202	23.4792	-90.6473	1001	040/24	10	-		16
Comments: N endpoint outbound. Good sonde.										
19	234220122	002535	22.6598	-91.7152	1001	040/29	10	-		17
Comments: NW IP inbound. Set end t = 195.50 s. AVAPS operator reports late winds. Wind data present, but almost all flagged by ASPEN except for lowest part of sonde. Going to leave those flags alone. N sats less than other sondes, 5-6.										
20	233541323	003428	22.3249	-91.1245	998	010/47	10	-		18

Comments: NW mid inbound. Set end t = 197.50 s.

Drop #	Sonde ID	Time UTC	Lat (°N/S)	Lon (°E/W)	Sfc Pressure (mb)	Lowest Wind Direction/Speed (deg/kt)	Lowest Wind Height (m)	AXBT SST (°C)	Eye, Eyewall, Rainband, etc.	Ob #
21	233541312	004639	21.8754	-90.3787	941	295/131	10	-	EYEWALL NW	19
Comments: NW RMW inbound. Humidity dropouts. Very turbulent.										
22	23351330	004750	21.8470	-90.3045	911	075/30	10	-	CENTER	20
Comments: Center. Set end t = 136.75 s.										
23	233667951	004940	21.8485	-90.1882	952	090/93	10	-	EYEWALL E	21
Comments: E RMW outbound. Good sonde.										
24	233141023	005945	21.9288	-89.4939	996	140/35	10	-		23
Comments: E MP outbound. Set end t = 196.50 s. (Note: VDM OB 22)										
25	233251058	011216	21.9340	-88.5648	999	150/18	10	-		24
Comments: E endpoint outbound. Good sonde.										

10/07/2024, 20:05:00-26:54:00



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	23.63	2.19	20.11	28.10
LongGPS.1 (deg), 1 s/sec	-87.93	3.13	-92.35	-81.98