



Flight Director: Carpenter / Henning  
Phone #: 863-500-3901

ACAT-4 Version = 7.3

**U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N49RF Manifest**

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20190929N1	FLT #:	19-122	AC:	Twining	Scientists:	Pressure		Dropsondes		
From:	TBPB	ETD:	12:00Z	CP(s):	Waddington	Dunion, Jason	A/C Takeoff	TBPB 12: 00Z 1006.8 mb	Good	Bad	Sent
To:	TBPB	ETA:	20:00Z		Norman		ASOS Takeoff		34	4	30
Block Time		Flight Time		Nav(s):					BTs		
In:	19:28	Land:	19:23	FE(s):			A/C Land		Good	Bad	Sent
Out:	11:33	T/O:	11:41	FD(s):	Carpenter	Visitors:	ASOS Land	TBPB 19: 00Z 1004.8 mb	0	0	0
Total:	7.92	Total:	7.70		Henning						
Sponsoring Org:	HRD			SEB:	Warnecke	Rick Smith	Storm Number ID:		AL132019		
Program:	PHX				Delgado		(ie: AL072012)				
Purpose:	Lorenzo research mission.			SSA:	Miller		TCPOD/WSPOD Mission		NOAA9 WE13A LORENZO		
				AVAPS:	Patel		(ie: NOAA2 2418A SANDY)				
AS REQUIRED BY ORM				Y	N	REMARKS	Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH					X						
SCIENCE MISSION WITHIN BDRY LAYER					X						
LACK OF PRECIPITATION					X						
RELATIVE HUMIDITY ≥ 80%				X							
LARGE AIR-SEA TEMP GRADIENT					X						
HIGH SURFACE WINDS				X							
LONG FETCH / DURATION OF SFC WND				X							
SEA SALT ACCRETION FORECAST					X						
SEA SALT ACCRETION OBSERVED					X						
Gmax:				Gmin:		*Highlighted items must be completed before departure.					
Remarks:											

## G-IV QC Checklist

Flight ID:	20190929N1
Flight Director(s):	Carpenter / Henning
UWZ.d mean:	0.15

Pressure Comparison		
	T/O	Land
Aircraft	1007.1	1004.6
Tower	1006.5	1004.5

	Raw 1Hz Mean File Parameters				C File Parameters	
✓ Accelerometer	✓ AccAXI.1 ✓ AccAXI.2 ✓ AccAXI.3	✓ AccAYI.1 ✓ AccAYI.2 ✓ AccAYI.3	✓ AccAZI.1 ✓ AccAZI.2 ✓ AccAZI.3		✓ AccZref	
✓ Altitude	✓ AltGPS.1 ✓ AltGPS.2 ✓ AltGPS.3	✓ AltI.1 ✓ AltI.2 ✓ AltI.3	✓ AltPaADDU.1 ✓ AltPaADDU.2 ✓ AltRA.1	✓ AltBCADDU.1 ✓ AltBCADDU.2	✓ ALTref ✓ ALTPA.d ✓ ALTGA.d	
✓ Ground Speed	✓ GsXI.1 ✓ GsXI.2 ✓ GsXI.3 ✓ GsXGPS.1 ✓ GsXGPS.2 <input type="checkbox"/> GsXGPS.3	✓ GsYI.1 ✓ GsYI.2 ✓ GsYI.3 ✓ GsYGPS.1 ✓ GsYGPS.2 <input type="checkbox"/> GsYGPS.3	✓ GsZI.1 ✓ GsZI.2 ✓ GsZI.3 ✓ GsZGPS.1 ✓ GsZGPS.2 <input type="checkbox"/> GsZGPS.3	✓ GsGPS.1 ✓ GsGPS.2 <input type="checkbox"/> GsGPS.3	✓ GSXref ✓ GSYref ✓ GSZref	
✓ Lat / Lon	✓ LatGPS.1 ✓ LatGPS.2 ✓ LatGPS.3	✓ LatI.1 ✓ LatI.2	✓ LonGPS.1 ✓ LonGPS.2 ✓ LonGPS.3	✓ LonI.1 ✓ LonI.2	✓ LATref ✓ LONref	
✓ Pressure	✓ PDALPHA.1 ✓ PDALPHA.2 ✓ PDBETA.1 ✓ PDBETA.2	✓ PQALPHA.1 ✓ PQALPHA.2 <input style="background-color: #f8d7da;" type="checkbox"/> PQBETA.1 ✓ PQBETA.2	✓ PQM.1 ✓ PQM.2	✓ PSM.1 ✓ PSM.2	✓ PDLAPHAref ✓ PDBETAref ✓ PQALPHAref ✓ PQBETAref	✓ PQMref ✓ PQ.c ✓ PSMref ✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1			✓ IAS.d	✓ TAS.d
✓ Pitch / Roll	✓ PitchI.1 ✓ PitchI.2 ✓ PitchI.3	✓ PitchRateI.1 ✓ PitchRateI.2 ✓ PitchRateI.3	✓ RollI.1 ✓ RollI.2 ✓ RollI.3	✓ RollRateI.1 ✓ RollRateI.2 ✓ RollRateI.3	✓ PITCHref ✓ ROLLref	
✓ Temp / Dewpt	✓ TTM.1 ✓ TTM.2 ✓ TTM.3	<input type="checkbox"/> TTM.4	✓ TDM.1 ✓ TDM.2		✓ TD.c ✓ TDMref	✓ TTMref ✓ TA.d
✓ Misc. (Must check)					✓ UWZ.d ✓ DPJ_WSZ ✓ HUM	✓ WS.d ✓ WD.d

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

QC Key	
Not checked	<input type="checkbox"/>
Valid	<input checked="" type="checkbox"/>
Errors (note)	<input style="background-color: #f8d7da;" type="checkbox"/> X

NOTES:
<p>PQBETA.1 unrepresentative for entire flight</p> <p>Moisture quantities unrepresentative</p> <p>TDM.2 trending 20 degrees lower</p> <p>Wind data remains suspect</p> <p>QC performed by Quinn Kalen</p>

AOC GPS Dropwindsonde Log (updated Mar 2019)

Flight ID: 190929N1

ASPEN Operator/Flight Director(s): J. Dunion / R. Henning, J. Carpenter

Mission ID: WE13A LORENZO

Storm Name/Track: Hurricane Lorenzo

PG 1 of 1

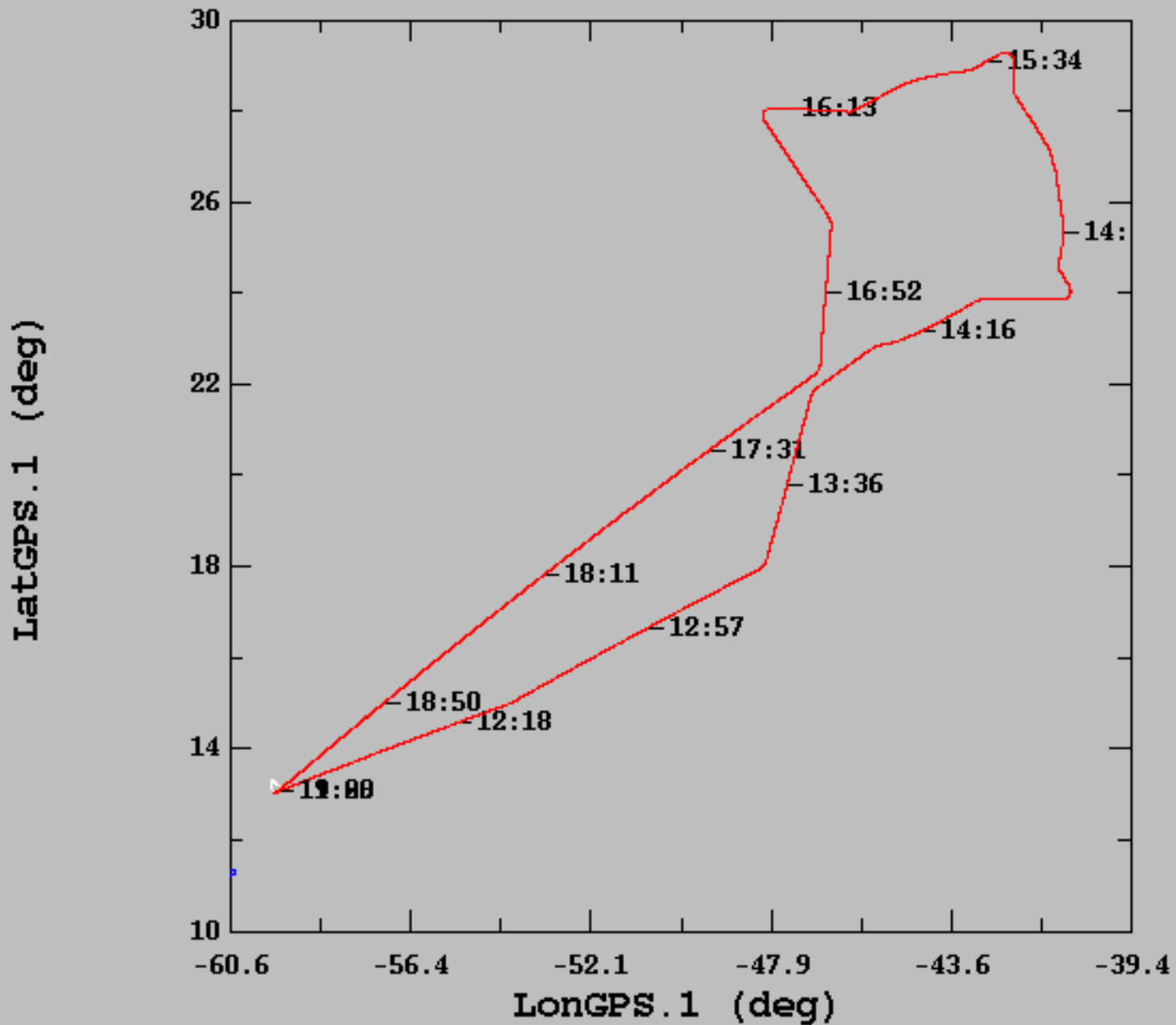
Sonde #	Ob #	Launch Time HHMMSS (Z)	Sonde ID (min last 5)	Ch # used	Lat (°N)	Lon (°E)	Prominent Wx Cond.	SFC Prs (mb)	Comments / Issues / QC / ASPEN Edits	KWBC #	Sonde Issues?	Sfc Wind
1	01	122925	20794	1	15.01	53.99	SAL	1014.9	SAL ~ 600-850mb (~40-45%RH)		N	07006
2	X	125601	20859	2	16.56	56.95	SAL	1014.1	no T/H - backed up		Y	NA
3	02	125646	20346	3	16.60	50.86		1013.7			N	25006
4	03	132158	20620	4	18.05	48.01		1013.6			N	27010
5	X	133238	20339	1	19.30	47.61		1012.1	no winds until ~580mb, backed up		Y	26016
6	04	133331	20993	2	19.40	47.58		1011.9	flagged last 2pts (0 sats)		N	25516
7	05	133952	20546	3	20.15	47.37		1011.9	NO T/RH		Y	NA
8	06	134334	20804	4	20.59	47.24		1010.5	dry air intrusion		N	25020
9	07	135420	21047	1	21.85	46.83		1008.7	moist 500mb to sfc		N	26018
10	08	140807	20865	2	22.84	45.35		1006.4			N	23522
11	09	142248	10910	3	23.55	43.52		1004.8	flagged last 2pts (0 sats)		N	20040
12	X	NO DROP										
13	10	143256	20562	1	23.85	42.19		1006.3			N	18043
14	11	144321	40670	2	23.96	40.79		1009.9	35-40% RH 600-800mb dry air intrusion wrapping		N	16529
15	12	145008	20342	3	24.70	41.04		1009.0	same 50kt jet collocated w/ dry air		N	15039
16	13	145817	20527	4	25.68	40.97		1009.9	same dry air intrusion TC Dunion pulse ice sublimation?		N	13036
17	14	150659	20334	1	26.73	41.14		1008.9	dry air 625-950mb		N	135/27
18		1516		2			NO LAUNCH	DET - Backed up				
19	15	151631	20867	6	27.77	41.68		1009.6	CHKG (NO RB) dry air 600-950mb flag last wind (0 sats)		X	105/25
20	16	151949	20534	3	28.12	41.92		1008.9	NO DATA UNTIL 256mb		Y	115/32
21	17	152244	40701	4	28.45	42.12		1010.4	DRY AIR 600-725mb last 2 winds flagged (0 sats)		N	110/32
22	18	152920	20525	1	29.26	42.22		1011.7	ALL MOIST last wind flagged 8 sats		N	115/21
23	19	152654	20340	2	28.93	43.04	CDD	1008.3	Some dry 600-800mb		N	110/36
24	20	154455	10902	3	28.75	44.07	CDD	1007.4			N	080/37
25	21	155403	20348	4	28.36	45.18	CDD	1003.2			N	060/31
26	22	160142	20552	1	27.98	46.09	CDD	1003.2			N	040/40
27	23	160939	30881	2	28.03	47.12	CDD	1006.3			N	025/19
28	→	161024	20563	3	28.04	47.22	CDD	1005.8	last 2 winds flagged (0 sats)		N	045/25
29	24	161742	20532	4	27.87	48.04	CDD	1007.3	last wind flagged (no speed) 0 sats		N	025/26
30	25	162402	20997	1	27.24	47.60	CDD	1006.1	last wind flagged (0 sats)		N	030/29
31	26	163225	30879	2	26.36	46.97	CDD	1000.9	lots of winds flagged 994-999mb		N	350/37
32	27	163957	30658	3	25.56	46.44	CDD	998.6			N	320/41
33	28	164853	10904	4	24.46	46.52	UCAST	1002.1			N	200/30
34	29	165749	20549	1	23.37	46.62	SCT	1005.3			N	265/26
35	30	170654	41812	2	22.28	46.75	SCT	1007.5	LAST REPORT		N	265/21
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IP

SEPT

NO TRX

2019-09-29, 11:00:23-19:29:22



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	20.00	5.27	13.02	29.29
LonGPS.1 (deg), 1 s/sec	-50.24	5.92	-59.59	-40.77