

N49RF ERROR SUMMARY  
20210907N1

Flight ID: 20210907N1

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.2
Differential Sideslip Pressure Probe	PDBETA.2
Dynamic Attack Pressure Probe	PQALPHA.2
Dynamic Sideslip Pressure Probe	PQBETA.2

Flight Directory                      acdata/2021/MET/20210907N1

Local Met Data	Takeoff TISX (1441Z)	Landing TISX (1603Z)
Dynamic Corrections		Yes
AttackAngleIntercept		6.4652
AttackAngleSlope		7.59375
SlipAngleIntercept		0.925
SlipAngleSlope		6.56381
AttackAngleIntercept2		5.05753
AttackAngleSlope2		5.52397
SlipAngleIntercept2		0.931
SlipAngleSlope2		6.57562

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.

Some parameters end before landing -- Aircraft landing pressure missing from QC Checklist

.1 and .2 GPS parameters data "stair steps"

PDBETA.1 & PDBETA.2 unrepresentative

PQBETA.1 & PQBETA.2 unrepresentative

TTM.3 has small oscillations

TDM.1 unrepresentative

All flight level wind speed and direction suspect

Expendable Type -----	# deployed -----	# good -----	# transmitted -----
Dropsondes	37	35	35
Test sondes	0	0	0
AXBTS	0	0	0

AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Kalen / Parrish  
Phone #: 863-500-3962

ACAT-4 Version = 7.4

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

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20210907N1	FLT #:		AC:	Mansour	Scientists:	Pressure		Dropsondes		
From:	TISX	ETD:		CP(s):	Varwig		A/C Takeoff		Good	Bad	Sent
To:	TISX	ETA:								<b>35</b>	<b>2</b>
Block Time		Flight Time		NAV:			ASOS Takeoff		BTs		
In:	<b>2158Z</b>	Land:	<b>2155Z</b>	FE(s):			A/C Land		Good	Bad	Sent
Out:	<b>1435Z</b>	T/O:	<b>1442Z</b>	FD(s):	Kalen		ASOS Land		-	-	-
Total:	<b>7.4</b>	Total:	<b>7.2</b>	SSA:	Defeo	Visitors:	Storm Number ID:		<b>AL122021</b>		
				AVAPS:	Greene		(ie: AL072012)				
Sponsoring Org:	HRD			SEB:			TCPOD/WSPOD Mission		<b>NOAA9 WD12A LARRY</b>		
Program:	PHX						(ie: NOAA2 2418A SANDY)				
Purpose:	Research			MX:			OBSERVATIONS				
AS REQUIRED BY ORM				Y	N	REMARKS	Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH					x		<b>1</b>				
SCIENCE MISSION WITHIN BDRY LAYER					x						
LACK OF PRECIPITATION					x		<b>2</b>				
RELATIVE HUMIDITY ≥ 80%					x						
LARGE AIR-SEA TEMP GRADIENT					x		<b>3</b>				
HIGH SURFACE WINDS					x						
LONG FETCH / DURATION OF SFC WND					x		<b>4</b>				
SEA SALT ACCRETION FORECAST					x						
SEA SALT ACCRETION OBSERVED					x		<b>Pennies:</b>				

\*Highlighted items must be completed before departure.

Remarks:


## G-IV QC Checklist

<b>Flight ID:</b>	<b>20210907N1</b>
<b>Flight Director(s)</b>	<b>Kalen / Parrish</b>

<b>UWZ.d mean:</b>	<b>0.05</b>
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Pressure Comparison		
	T/O	Land
<b>Aircraft</b>	<b>1013.3</b>	<b>--</b>
<b>Tower</b>	<b>1012.6</b>	<b>1010.9</b>

	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	✓ AltPaADDU.3	✓ AltBCADDU.1	✓ AltBCADDU.2	✓ ALTref	✓ ALTPA.d	✓ ALTGA.d						
✓ Ground Speed	✓ GsXI.1	✓ GsXI.2	✓ GsXI.3	✓ GsYI.1	✓ GsYI.2	✓ GsYI.3	✓ GsZI.1	✓ GsZI.2	✓ GsZI.3	☐ GsGPS.1	✓ GsGPS.2	☐ 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	x PDBETA.1	x PDBETA.2	✓ PQALPHA.1	✓ PQALPHA.2	x PQBETA.1	x PQBETA.2	✓ PQM.1	✓ PQM.2	✓ PSM.1	✓ PSM.2	✓ PDLAPHaref	x PDBETAref	✓ PQALPHaref	x 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	✓ TTM.4			x TDM.1	✓ TDM.2					✓ TD.c	✓ TDMref	✓ TTMref			✓ TA.d		
✓ Misc. (Must check)													✓ UWZ.d	✓ DPJ_WSZ	✓ HUM	x WS.d	x 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	☐
Valid	✓
Errors (note)	x

### NOTES:

Some parameters end before landing -- Aircraft landing pressure missing from QC Checklist  
 .1 and .2 GPS parameters data "stair steps"  
 PDBETA.1 & PDBETA.2 unrepresentative  
 PQBETA.1 & PQBETA.2 unrepresentative  
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 TDM.1 unrepresentative  
 All flight level wind speed and direction suspect

→ 54 Coix

18 27

35/33

### AOC GPS Dropwindsonde Log (updated Mar 2019)

Flight ID: 20210907NL

ASPEN Operator/Flight Director(s): Parrish/Kalen

Mission ID: WD12A

Storm Name/Track: LARRY

PG      of     

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?
1	1	154530	10498	1	23.2	59.0	100 low	1011.0	338/19.2	071604	
2	2	155446	50056	2	24.1	58.2	Mix conv	1007.4	319/12.8	071613	
3	3	160339	50887	3	25	57.6	Undercast	1004.8	2.8/18.5	071624	
4	4	161300	10095	4	25.9	58.3	" AS	1012.2	57/11.1	071631	
5	5	162112	40055	1	26.7	59	"	1012.6	57/9.8	071641	
6	6	162846	10060	2	26.6	58	"	1011.0	60/10.7	071650	
7	7	163747	10047	3	26.5	56.8	"	1008.4	49/20.2	071657	
8	8	164653	10582	4	27.5	56.3	ht AS	1011.9	85/13.1	071706	
9	9	165450	40776	1	28.3	55.9	AS Bkn	1014.4	100/14.2	071714	
10	10	170221	41005	2	27.5	55.5	"	1012.1	88.8/14.8	071721	
11	11	171123	50851	3	26.5	55.1	CS b, b	1008.9	100/16.8	071730	
12	12	171831	31079	4	26.5	54.1	"	1011.4	111/20	071737	
13	13	172442	20219	1	26.5	53.3	"	1012.4	133/18	071744	
14	14	173059	10048	2	25.9	53.8	"	1010.4	120/21	071750	
15	15	173840	40774	3	25.1	54.3	"	1003.3	118/21.5 Saw 1st eye	071758	
16	16	174606	50867	5	24.4	53.8	"	1007.0	139/23	071806	
17	17	175211	50863	4	23.8	53.5	"	1010.3	143/16.5	071812	
18	18	175822	10055	1	23.8	54.3	"	1006.1	143/19.4	071816	
19	19	180600	40777	2	23.8	53.3	low CDO	994.6	192/32 Close to eye	071825	
20	20	181259	10057	3	23.1	55.7	"	—	—	071833	Terminated early
21	21	181920	50848	4	22.5	56.2	"	1005.7	223/17	071841	
22	—	182632	10494	1	—	—	—	—	Late launch detect		NO launch
23	22	182638	10280	2	23.2	56.6	"	1002.7	248/20.3 backup	071847	
24	23	183326	91072	5	23.9	57.1	AS low scf	998.5	298/20	071853	
25	24	184300	20220	6	23.8	58.3	"	1006	305/13.5	071902	
26	25	185052	50953	3	23.7	59.3	AS Bkn	1009.0	308/10.3	071910	
27	26	185831	50864	4	24.4	58.7	AS + SC	1005.0	336/14.1	071919	
28	27	190819	31077	1	24.8	57.5	Over CDO	999.0	340/25	071930	
29	—	—	50850	2	—	—	↓	—	No launch detect		NO launch
30	28	192226	31090	3	26.1	56.4	↓	999.0	37/27.9 backup	071942	
31	29	193309	10500	4	26.0	55.0	Top of CDO	1004.1	93.6/26.5	071954	
32	30	194615	30393	5	24.8	54.2	↓	1005.2	133/19.8	072005	
33	31	195833	50860	1	23.5	55.0	↓	1004.0	177/20.9	072018	
34	32	201033	40502	2	23.6	56.6	Top of CDO	1000	279/23.2	072030	
35	33	202237	30423	3	24.6	57.5	Carthi CDO	1000	324/25.5 Last report	072042	
36											
37											
38											

NO launch  
22  
23  
24  
25  
26  
27  
NO launch  
28  
29  
30  
31  
32  
33

NO launch  
NO launch

COMMENTS: ASPEN Operator will ensure this form is delivered to the AOC Flight Director to be archived

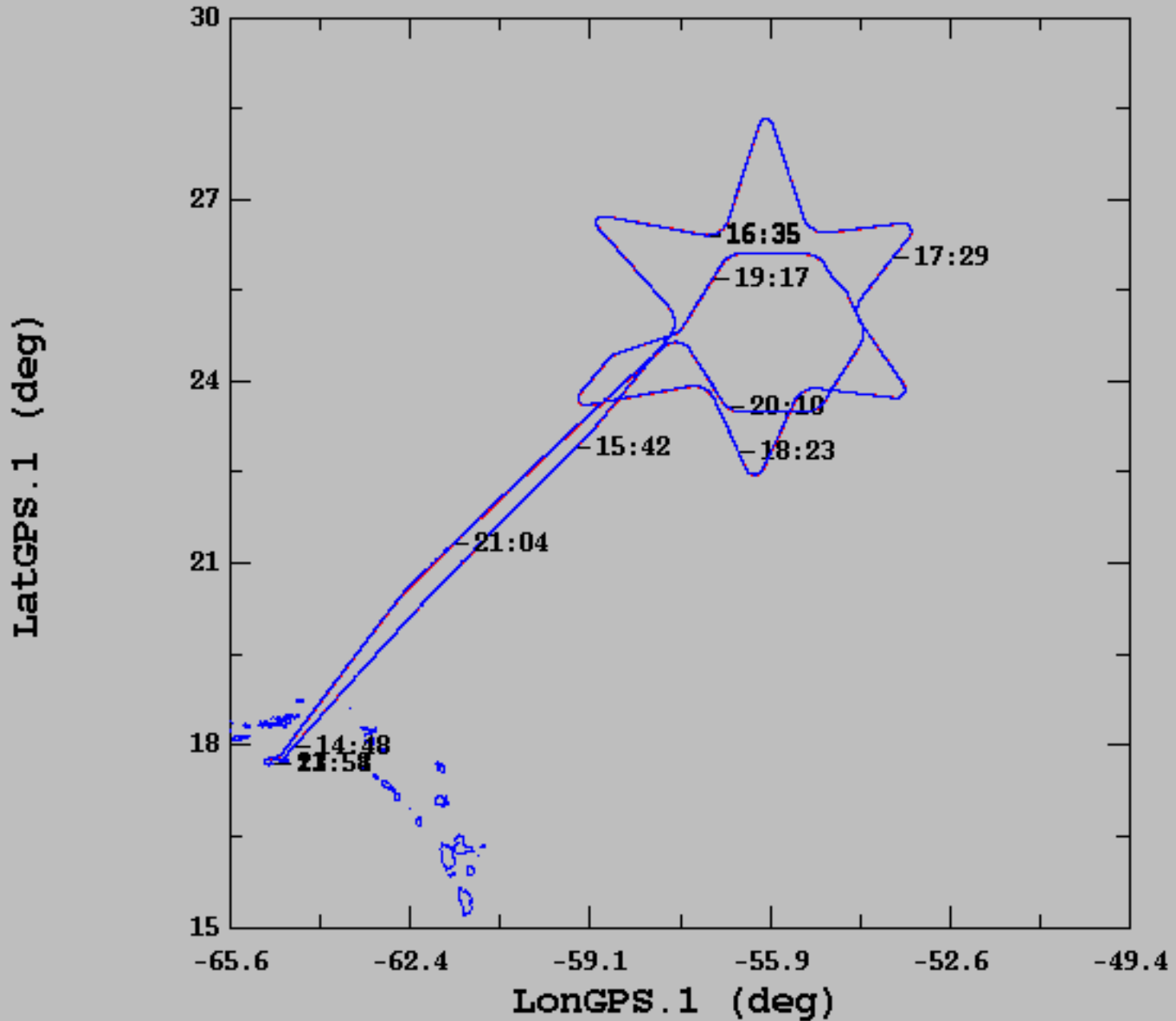
Obs Xmitted

Obs Missed

# of sondes launched

# of bad sondes

2021-09-07, 13:54:32-21:58:28



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	22.97	3.04	17.69	28.32
— LongGPS.1 (deg), 1 s/sec	-58.87	3.62	-64.99	-53.31
— LatI.1 (deg), 1 s/sec	22.97	3.04	17.68	28.32
— LonI.1 (deg), 1 s/sec	-58.87	3.62	-64.99	-53.31