

N42RF ERROR SUMMARY
20230922H1

Flight ID: 20230922H1

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/2023/MET/20230922H1

Local Met Data	Takeoff TXKF (1337Z)	Landing KLAL (1650Z)
Dynamic Corrections		Yes
AttackAngleIntercept		2.305
AttackAngleSlope		6.07576
SlipAngleIntercept		0.235
SlipAngleSlope		7.01112
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.

I.3 for Pitch and Roll is not operational

TTM.3 is not operational

TRadU.1 is not operational

TDM.1 deviates from TDM.2 several degrees lower at times throughout the flight with some erroneous high frequency spikes between ~1355 and 1408 UTC

TDM.1 has 2 additional spikes later in the flight between ~1626 and ~1637 UTC at lower altitudes (more humid) where presumably this sensor perform better

TDM.2 is the better (consistently) behaving sensor and TDMref is set to TDM.2; TDM.1 should not be used; TDM.3 has erroneous data throughout the flight and should not be used

PDALPHAref, PDBETAref, PQALPHAref, PQBETAref, and DPJ_WSZ are not provided since _AC file is not produced; all other 'C' file parameters checked are from the _A file

AltGPS.1 deviates as much as 150 m lower than AltGPS.2, AltGPS.3, and AltGPS.4 early in the transit, spiking at ~1429-1430 UTC; after ~1434 UTC it tends to be within ~30 m; ALTref is set to AltGPS.3

LatGPS.1, LonGPS.1, LatI-GPS.1, and LonI-GPS.1 are subsequently not consistent with .2, .3, and .4 and should not be used; LONref and LATref set to LatGPS.1 and LonGPS.1, so should not be used

PQM.1 (Wingtip) erroneously drops in pressure at ~1601 UTC and recovers ~1624 UTC; PQMref set to PQM.2, which is good

Expendable Type	# deployed	# good	# transmitted
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Dropsondes	0	0	0
Test sondes	0	0	0
AXBTs	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

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

ACAT-4 Version = 7.4

U.S. Department of Commerce / NOAA / OMAO / Aircraft Operations Center - N42RF Manifest

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20230922H1	FLT #:	FY23-	AC:	Abitbol	Scientists:	Pressure		Dropsondes		
From:	TXKF	ETD:	1100L / 1400Z	CP(s):	Doremus	Paul Chang (NESDIS)	A/C Takeoff	1019.3	Good	Bad	Sent
To:	KLAL	ETA:	1330L / 1730Z		Gaston	Zorana Jelenak (NESDIS)			0	0	0
Block Time		Flight Time		NAV:	Utama / Schaefer	Joe Sapp (NESDIS)	ASOS Takeoff	1019.7	BTs		
Out:	13:34	T/O:	13:37	FE(s):	Gee		A/C Land		Good	Bad	Sent
In:	16:55	Land:	16:50	FD(s):	Zawislak				0	0	0
Total:	3.4	Total:	3.2	SSA:	McAlister	Visitors:	ASOS Land	1009.1			
Sponsoring Org:	HX - NESDIS			AVAPS:	Waggoner		Storm Number ID:		N/A		
Program:	PND			SEB:	Flaherty (PM)		(ie: AL072012)				
Purpose:	Repo Bermuda to KLAL			MX:	Kerns (CO)		TCPOD/WSPOD Mission		NOAA2 WXWXA TRAIN		
					Kregelka / Decker		(ie: NOAA2 2418A SANDY)				
AS REQUIRED BY ORM				Y	N	REMARKS	Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH					x		1				
SCIENCE MISSION WITHIN BDRY LAYER					x						
LACK OF PRECIPITATION				x			2				
RELATIVE HUMIDITY ≥ 80%					x						
LARGE AIR-SEA TEMP GRADIENT					x		3				
HIGH SURFACE WINDS					x						
LONG FETCH / DURATION OF SFC WND					x		4				
SEA SALT ACCRETION FORECAST					x						
SEA SALT ACCRETION OBSERVED					x		Pennies:				

*Highlighted items must be completed before departure.

Remarks:

P-3 QC Checklist

Overall Assessment	Minor instrument issue(s) - minimal mission impact.
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Flight ID:	20230922H1
Flight Director(s):	Zawislak / Parrish
Mission:	Ferry
UWZ.d mean:	0.26

Pressure Comparison		
	T/O	Land
Aircraft	1019.3	No good measurement
Tower	1019.7	1009.1

	Raw 1Hz Mean File Parameters				C File Parameters	
✓ Accelerometer	✓ AccAXI.1 ✓ AccAXI.2 ✓ AccAXI-GPS.1 ✓ AccAXI-GPS.2	✓ AccAYI.1 ✓ AccAYI.2 ✓ AccAYI-GPS.1 ✓ AccAYI-GPS.2	✓ AccAZI.1 ✓ AccAZI.2 ✓ AccAZI-GPS.1 ✓ AccAZI-GPS.2	✓ AccZfilter-GPS.1 ✓ AccZfilter-GPS.2	✓ AccZref	
✓ Altitude	X AltGPS.1 ✓ AltGPS.2 ✓ AltGPS.3 ✓ AltGPS.4	X AltI-GPS.1 ✓ AltI-GPS.2	✓ AltPaADDU.1 ✓ AltBCADDU.1	✓ AltRA.1 ✓ AltRA.2	✓ ALTref ✓ ALTPA.d ✓ ALTGA.d	✓ AltRA1.c ✓ AltRA2.c
✓ Ground Speed	✓ GsXI-GPS.1 ✓ GsXI-GPS.2	✓ GsYI-GPS.1 ✓ GsYI-GPS.2	✓ GsZI-GPS.1 ✓ GsZI-GPS.2			
✓ Lat / Lon	X LatGPS.1 ✓ LatGPS.2 ✓ LatGPS.3 ✓ LatGPS.4	X LatI-GPS.1 ✓ LatI-GPS.2	X LonGPS.1 ✓ LonGPS.2 ✓ LonGPS.3 ✓ LonGPS.4	X LonI-GPS.1 ✓ LonI-GPS.2	X LATref X LONref	
✓ Pressure	✓ PDALPHA.1 ✓ PDALPHA.2 ✓ PDBETA.1 ✓ PDBETA.2	✓ PQALPHA.1 ✓ PQBETA.1	X PQM.1 ✓ PQM.2 ✓ PQM.3 ✓ PQM.4	✓ PSM.1 ✓ PSM.2 ✓ PTM.1	X PDLAPHaref X PDBETAref X PQALPHaref X PQBETAref	✓ PQMref ✓ PQ.c ✓ PSMref ✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1	✓ IasADDU.1	✓ IAS.d ✓ TAS.d		
✓ Pitch / Roll	✓ PitchI.1 ✓ PitchI.2 X PitchI.3	✓ PitchRateI.1 ✓ PitchRateI.2 X PitchRateI.3	✓ RollI.1 ✓ RollI.2 X RollI.3	✓ RollRateI.1 ✓ RollRateI.2 X RollRateI.3	✓ PITCHref ✓ ROLLref	
✓ Temp / Dewpt	✓ TTM.1 ✓ TTM.2 X TTM.3	X TDM.1 ✓ TDM.2 X TDM.3	✓ TRadD.1 ✓ TRadS.1 X TRadU.1	✓ TD.c ✓ TDMref ✓ TTMref ✓ TA.d		
✓ Misc. (Must check)					✓ UWZ.d X DPJ_WSZ ✓ HUM	✓ WS.d ✓ WD.d

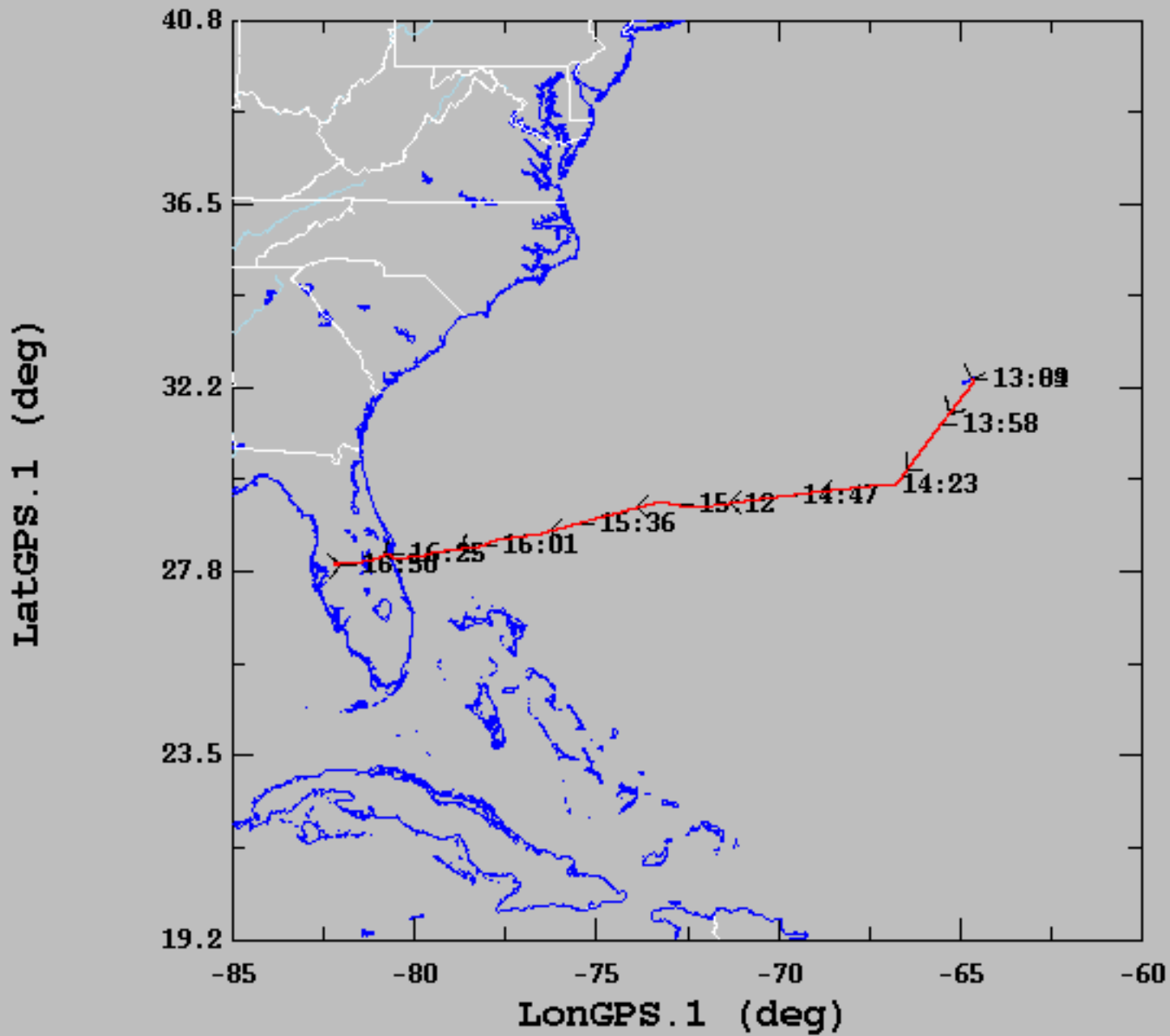
FLID_Mission_Documents.pdf.
✓ Error Summary
✓ Crew Manifest
✓ QC Checklist
X Dropwindsonde Log(s) - AVAPS and FD if completed
✓ Flight Track
✓ Miscellaneous FD Notes

QC Key	
Not checked	<input type="checkbox"/>
Valid	<input checked="" type="checkbox"/>
Errors (note)	X

NOTES:

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09/22/2023, 13:09:41-16:50:24



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	29.80	1.44	27.99	32.37
— LongGPS.1 (deg), 1 s/sec	-72.01	6.02	-82.15	-64.58