N42RF ERROR SUMMARY
20230920H1

Flight ID: 20230920H1

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/20230920H1

Local Met Data	Takeoff TXKF (1430Z)	Landing TXKF (2242Z)
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 transits with some erroneous spikes higher and lower than TDM.2 while in storm
TDM.2 is the better (consistently) behaving sensor and TDMref is set to TDM.2; TDM.1 can be used in storm; 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 250 m higher than AltGPS.2, AltGPS.3, and AltGPS.4 while in-storm, with also a very large spike at 2026 UTC; same with AltI-GPS.1; ALTref is set to AltGPS.3
LatGPS.1, LonGPS.1, LatI-GPS.1, and LonI-GPS.1 are not consistent with .2, .3, and .4 in storm 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 ~2120 UTC and recovers ~2234 UTC (period on the transit back to TXKF, not in storm), PQMref set to PQM.2, which is good
TAS.d drops out between 22:31:18 and 22:34:02 UTC on descent to TXKF, other times unaffected, so checked green; TA.d, TD.c, HUM, UWZ.d, WS.d, and WD.d similarly affected, but checked green

Expendable Type	# deployed	# good	# transmitted
Dropsondes	3	3	3
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

FLT ID:	20230920H1	**FLT #:**	FY23-
From:	TXKF	**ETD:**	1030L / 1330Z
To:	TXKF	**ETA:**	1830L / 2130Z
Block Time		**Flight Time**	
Out:	14:24	T/O:	14:31
In:	22:49	Land:	22:42
Total:	8.4	Total:	8.2
Sponsoring Org:	HX - NESDIS		
Program:	PND		
Purpose:	HX Research Mission		

CREW MANIFEST

AC:	Abitbol	**Scientists:**
CP(s):	Doremus	Paul Chang (NESDIS)
	Gaston	Zorana Jelenak (NESDIS)
NAV:	Utama / Schaefer	Joe Sapp (NESDIS)
FE(s):	Gee	
	Wysinger	
FD(s):	Zawislak	
	Parrish	
SSA:	McAlister	**Visitors:**
AVAPS:	Waggoner	
SEB:		
MX:		

MISSION INFORMATION

Pressure		Dropsondes		
		Good	Bad	Sent
A/C Takeoff	1017.3	3	0	3
ASOS Takeoff	1017.7			
		BTs		
A/C Land		Good	Bad	Sent
ASOS Land	1017.7	0	0	0
Storm Number ID: (ie: AL072012)		AL152023		
TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)		NOAA2 WD15A NIGEL		

AS REQUIRED BY ORM

	Y	N
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

REMARKS

OBSERVATIONS

Fix Number	Obs Number	Fix Time	SLP
1			
2			
3			
4			
Pennies:	8 x CAT 1		

*Highlighted items must be completed before departure.

Remarks:

P-3 QC Checklist

Overall Assessment	Minor instrument issue(s) - minimal mission impact.

Flight ID:	20230920H1
Flight Director(s):	Zawislak / Parrish
Mission:	Non-tasked Science Collection/Research
UWZ.d mean:	0.19

Pressure Comparison		
	T/O	Land
Aircraft	1017.3	No good measurement
Tower	1017.7	1017.7

	Raw 1Hz Mean File Parameters				C File Parameters	
✓ Accelerometer	✓ 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	X AltGPS.1	X AltI-GPS.1	✓ AltPaADDU.1	✓ AltRA.1	✓ ALTref	✓ AltRA1.c
	✓ AltGPS.2	✓ 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	
✓ Lat / Lon	X LatGPS.1	X LatI-GPS.1	X LonGPS.1	X LonI-GPS.1	X LATref	
	✓ LatGPS.2	✓ LatI-GPS.2	✓ LonGPS.2	✓ LonI-GPS.2	X LONref	
	✓ LatGPS.3		✓ LonGPS.3			
	✓ LatGPS.4		✓ LonGPS.4			
✓ Pressure	✓ PDALPHA.1	✓ PQALPHA.1	X PQM.1	✓ PSM.1	X PDLAPHAref	✓ PQMref
	✓ PDALPHA.2	✓ PQBETA.1	✓ PQM.2	✓ PSM.2	X PDBETAref	✓ PQ.c
	✓ PDBETA.1		✓ PQM.3	✓ PTM.1	X PQALPHAref	✓ PSMref
	✓ PDBETA.2		✓ PQM.4		X 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	
	X PitchI.3	X PitchRateI.3	X RollI.3	X RollRateI.3		
✓ Temp / Dewpt	✓ TTM.1	X TDM.1	✓ TRadD.1		✓ TD.c	✓ TTMref
	✓ TTM.2	✓ TDM.2	✓ TRadS.1		✓ TDMref	✓ TA.d
	X TTM.3	X TDM.3	X TRadU.1			
✓ Misc. (Must check)					✓ UWZ.d	✓ WS.d
					X DPJ_WSZ	✓ WD.d
					✓ HUM	

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

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1 ADWSD
2 MINI

AVAPS Drop Log

Project: NIGEL Mission: 2 Flight ID: 20230920H1

Take Off: 1431 Landing: _____ Flt Dir: JT Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	180440253	1	-1.0	1748	LW	AOC	RMW MINI	✓
2	151325152	2	-1.8	1820	LW	AOC	RMW MINI	✓
3	222230431	5	-1.2	1923	LW	GOMD	ADWSD FLYOVER	✓
4								
5								
6								
7								
8								
9								
10								
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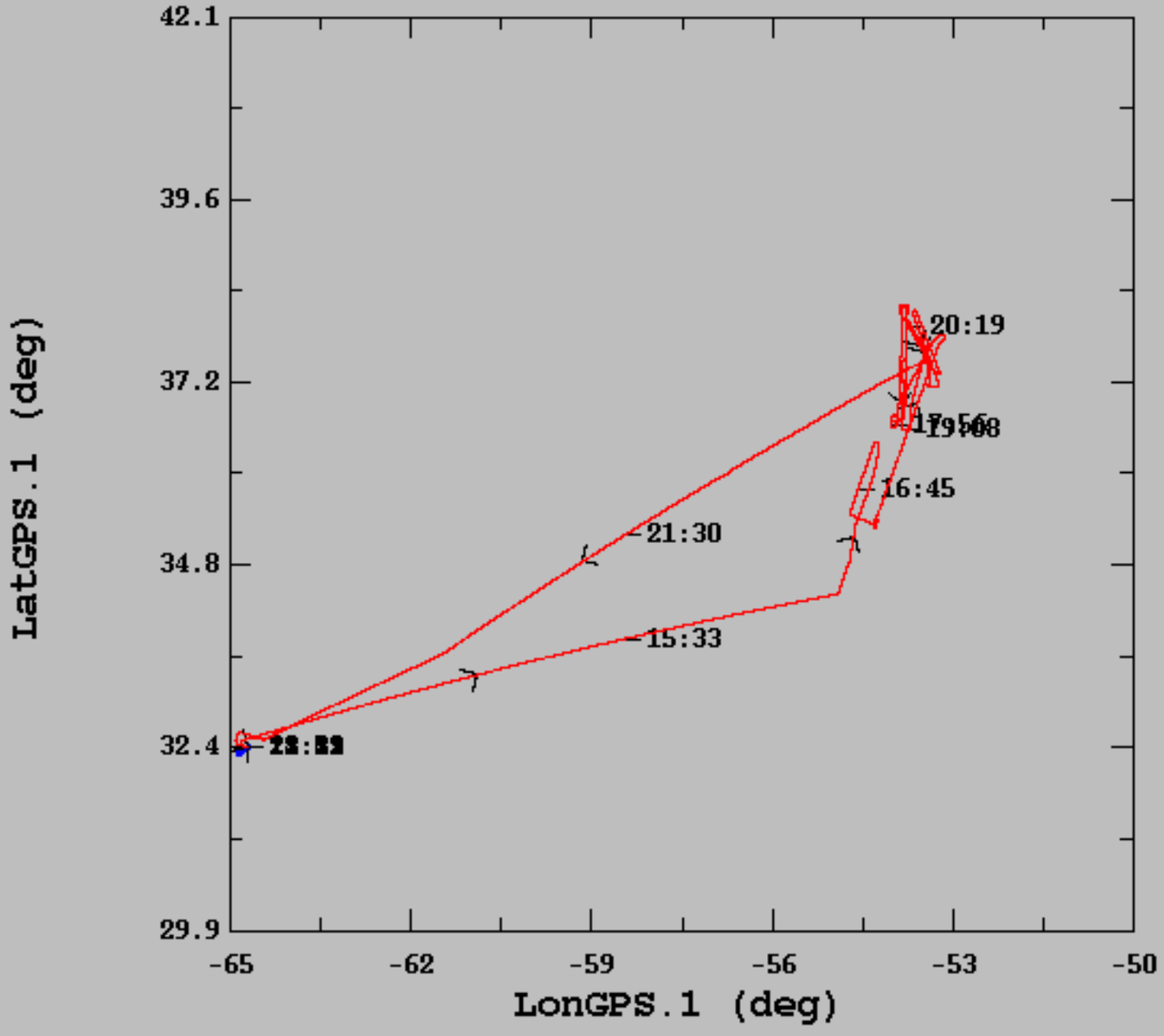
31								

time, location, ch., good/bad, mini?

09/20/2023, 11:59:42-22:42:10



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	34.94	2.13	32.36	38.24
LonGPS.1 (deg), 1 s/sec	-58.37	4.75	-64.89	-53.12