N42RF ERROR SUMMARY
20230919H1

Flight ID: 20230919H1

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/20230919H1

Local Met Data	Takeoff TXKF (1318Z)	Landing TXKF (2108Z)
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 from AltGPS.2, AltGPS.3, and AltGPS.4 by about ~90-100 m lower from ~19:58:40 until ~20:16:00 UTC (on the transit back to TXKF)

AltGPS.1 deviates slightly again beginning on descent ~2052 UTC and then periodically drops out beginning at ~2105 UTC on final approach; ALTref is set to AltGPS.3
AltI-GPS.1, LatGPS.1, LonGPS.1, LatI-GPS.1, and LonI-GPS.1 thus exhibits similar behavior as AltGPS.1
LATref and LONref are set to LatGPS.1 and LonGPS.1, but the deviations from the other sensors only occurs at end of flight, so in-storm time is unaffected -- refs checked green
TAS.d drops out between 20:57:46 and 21:01:59 UTC on final approach, all 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	8	8	1
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

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

FLIGHT INFORMATION

FLT ID:	20230919H1	**FLT #:**	FY23-
From:	TXKF	**ETD:**	1000L / 1300Z
To:	TXKF	**ETA:**	1800L / 2100Z
Block Time		**Flight Time**	
Out:	13:13	T/O:	13:19
In:	21:11	Land:	21:08
Total:	8.0	Total:	7.8
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:	Kerns (CO)	
MX:		

MISSION INFORMATION

Pressure		Dropsondes		
		Good	Bad	Sent
A/C Takeoff	1016.4	8	0	1
ASOS Takeoff	1016.7	**BTs**		
		Good	Bad	Sent
A/C Land		0	0	0
ASOS Land	1015.7			
Storm Number ID: (ie: AL072012)		AL152023		
TCPOD/WSPOD Mission (ie: NOAA2 2418A SANDY)		NOAA2 WB15A 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 2		

*Highlighted items must be completed before departure.

Remarks:

P-3 QC Checklist

Overall Assessment	Minor instrument issue(s) - no mission impact.

Flight ID:	20230919H1
Flight Director(s):	Zawislak / Parrish
Mission:	Non-tasked Science Collection/Research
UWZ.d mean:	0.19

Pressure Comparison		
	T/O	Land
Aircraft	1016.4	No good measurement
Tower	1016.7	1015.7

	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	✓ LATref	
	✓ LatGPS.2	✓ LatI-GPS.2	✓ LonGPS.2	✓ LonI-GPS.2	✓ LONref	
	✓ LatGPS.3		✓ LonGPS.3			
	✓ LatGPS.4		✓ LonGPS.4			
✓ Pressure	✓ PDALPHA.1	✓ PQALPHA.1	✓ 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

NOTES:
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5 mini
2 GOMO
1 NWS

AVAPS Drop Log

Project: NIGEL Mission: FLT. 1 Flight ID: 20230919H1

Take Off: 1319 Landing: _____ Flt Dir: JZ. Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge $$ To	Comments	Good ?
1	19022051 1	1	-1.2	1524	LW	AOC	RMW	✓
2	222231042	3	-1.3	1533	LW	NWS	CTR	✓
3	19022029 2	2	-1.3	1541	LW	AOC	RMW	✓
4	19052009 0	5	-1.2	1615	LW	AOC	RMW	✓
5	19015D912	6	-1.3	1631	LW	AOC	RMW	✓
6	222231502	1	-1.6	1655	LW	GOMO	ADWSD Flyover	✓
7	222230805	4	-1.1	1711	LW	GOMO	ADWSD Flyover	✓
8	19055024D	7	-1.3	18216	LW	AOC	ADWSD FD MINI	✓
9								
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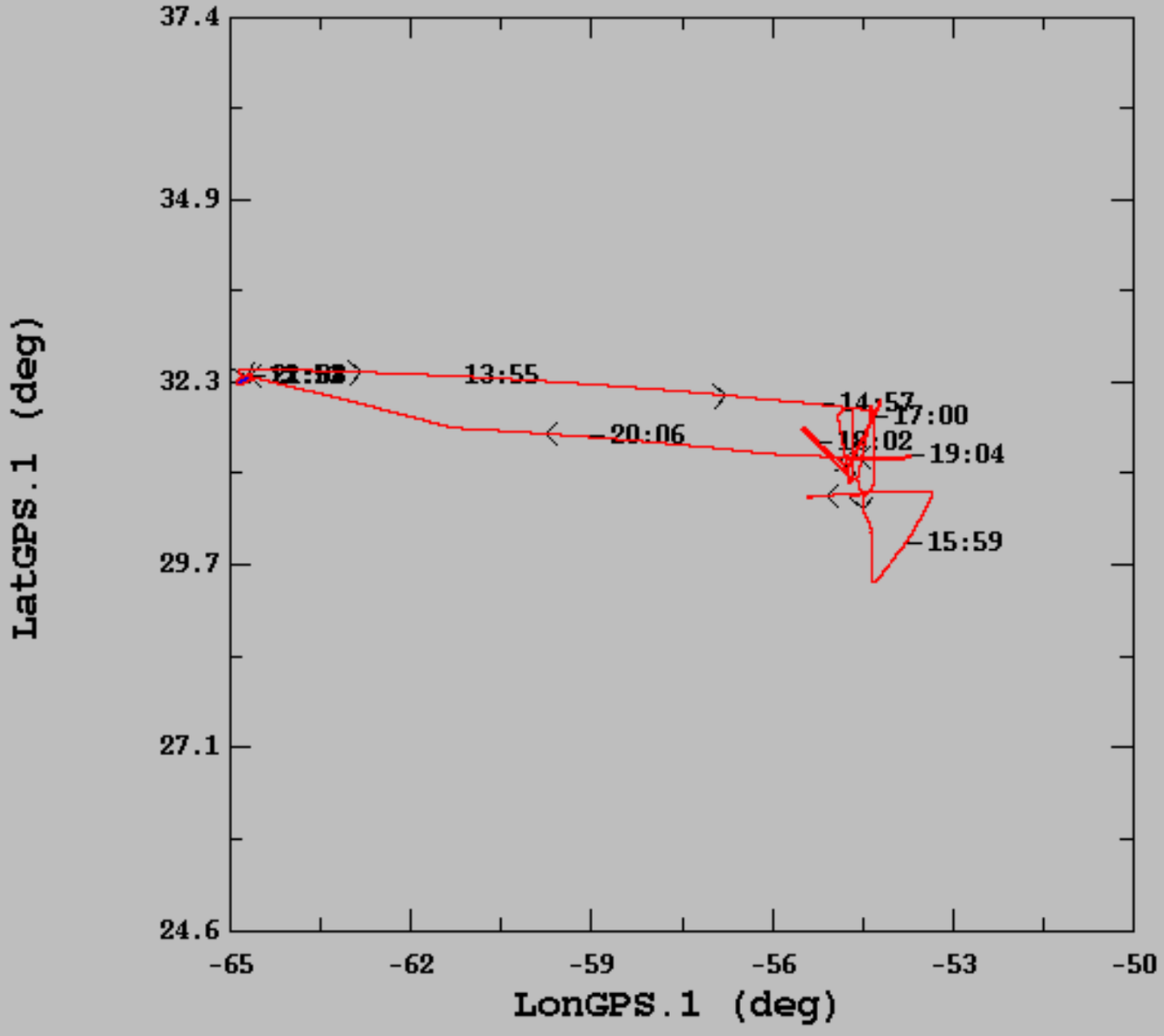
09/19/2023, 11:51:29-21:08:30



	mean	sigma	min	max
LatGPS.1 (deg), 1 s/sec	31.63	0.68	29.47	32.47
LonGPS.1 (deg), 1 s/sec	-58.13	4.24	-64.89	-53.32