

N49 Error Summary

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

Flight ID: 20210221N1 **Mission ID:** 10WSC IOP15 **Mission Type:** Tasked/Operational

T/O Time: 1924Z PHNL **Landed:** 0323Z PHNL

Flight Director(s): Hathaway / Kalen **QC performed by:** Hathaway / Kalen **Phone #:** 863-500-3911

Expendable Counts

	Deployed	Good	Bad	Transmitted
Dropsonde	32	30	2	30
AXBTs	0	0	0	0
UAS	0			

Information on Meteorological Sensors

Sensor or System	Number or Name
Static Pressure Probe	PSM.2
Dynamic Pressure Prob	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
Dynamic Corrections	Yes
Attack Angle Intercept	3.97
Attack Angle Slope	3.86
Slip Angle Intercept	1.258
Slip Angle Slope	6.69941
Attack Angle Intercept 2	5.05753
Attack Angle Slope 2	5.52397
Slip Angle Intercept 2	0.931
Slip Angle Slope 2	6.57562

QC Checklist

	PSM.1	PSM.2	Average PSM	Station Pressure
Takeoff	1018.58	1019.5	1019.04	1018.8
Landing	1016.48	1016.94	1016.71	1016.5
UWZ Mean:	0.15			

QC Key	Not checked(n/a)	Reference (R)	Valid(/)	Errors(X)								
Accelerometer	/	AccAXI.1	/	AccAYI.1	/	AccAZI.1	/	AccZI.1	/	AccZref		
	/	AccAXI.2	/	AccAYI.2	/	AccAZI.2	/	AccZI.2				
	/	AccAXI.3	/	AccAYI.3	/	AccAZI.3	/	AccZI.3				
Altitude	/	AltGPS.1	/	AltI.1	/	AltPaADDU.1	/	AltBCADDU.1	/	ALTref		
	/	AltGPS.2	/	AltI.2	/	AltPaADDU.2	/	AltBCADDU.2	/	ALTPA.d		
	/	AltGPS.3	/	AltI.3	/	AltRA.1			/	ALTGA.d		
Ground Speed	/	GsXI.1	/	GsYI.1	/	GsZI.1	/	GsGPS.1	/	GSXref		
	/	GsXI.2	/	GsYI.2	/	GsZI.2	/	GsGPS.2	/	GSYref		
	/	GsXI.3	/	GsYI.3	/	GsZI.3			/	GSZref		
	/	GsXIGPS.1	/	GsYIGPS.1	/	GsZIGPS.1						
	/	GsXIGPS.2	/	GsYIGPS.2	/	GsZIGPS.2						
Lat/Lon	/	LatGPS.1	/	LatI.1	/	LonGPS.1	/	LonI.1	/	LATref		
	/	LatGPS.2	/	LatI.2	/	LonGPS.2	/	LonI.2	/	LONref		
	/	LatGPS.3	/	LatI.3	/	LonGPS.3	/	LonI.3				

Pressure	/	PDALPHA.1	/	PQALPHA.1	/	PQM.1	/	PSM.1	/	PDALPHAref	/	PQMref
	/	PDALPHA.2	/	PQALPHA.2	/	PQM.2	/	PSM.2	/	PDBETAref	/	PQ.c
	/	PDBETA.1	/	PQBETA.1					/	PQALPHAref	/	PSMref
	/	PDBETA.2	/	PQBETA.2					/	PQBETAref	/	PS.c
Air Speed	/	CasADDU.1	/	CasADDU.2	/	TasADDU.1	/	TasADDU.2	/	IAS.d	/	TAS.d
Pitch/Roll	/	PitchI.1	/	PitchRateI.1	/	RollI.1	/	RollRateI.1	/	PITCHref		
	/	PitchI.2	/	PitchRateI.2	/	RollI.2	/	RollRateI.2	/	ROLLref		
	/	PitchI.3	/	PitchRateI.3	/	RollI.3	/	RollRateI.3				
Temp/Dewpt	/	TTM.1	X	TTM.4	X	TDM.1			X	TD.c	/	TTMref
	n/a	TTM.2			X	TDM.2			X	TDMref	/	TA.d
	X	TTM.3										
Misc.									/	UWZ.d	/	WS.d
									/	DPJ_WSZ	/	WD.d
									X	HUM		

QC/Data Comments:

There were no edits made in the measured parameters used to calculate meteorological and navigational parameters.

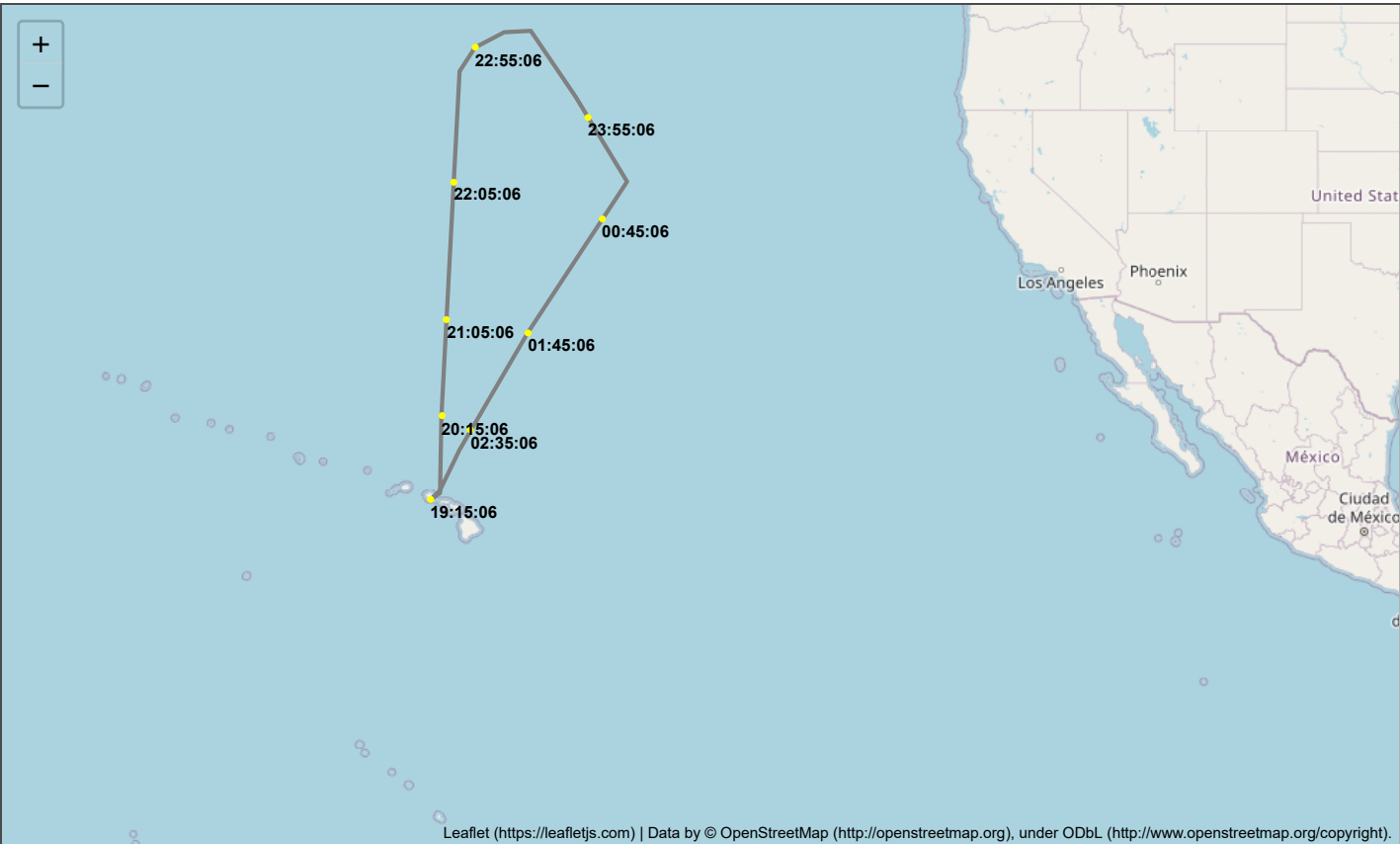
Takeoff/Landing data: Data during landing and takeoff are potentially suspect. It is recommended that ground data not be used for scientific analysis.

When examined at high resolution, data from the three inertials (IRUs) shows "stairstepping" for some parameters.

All three AccAXI parameters contain an unusual oscillation.

TDM.1 and TDM.2 were unrepresentative for the cruise portion of the mission above 41 K and also for intervals at low altitudes. Consider all relative humidity values to be suspect.

TTM. and TTM.4 have unnatural oscillations. Used TTM.1 as reference.



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

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20210221N1	FLT #:		AC:	Mansour	Scientists:	Pressure		Dropsondes		
From:	PHNL	ETD:	1915Z	CP(s):	Nardi		A/C Takeoff		Good	Bad	Sent
To:	PHNL	ETA:	0330Z						30	2	30
Block Time		Flight Time		Nav(s):			ASOS Takeoff		BTs		
In:	0330Z	Land:	0323Z						Good	Bad	Sent
Out:	1901Z	T/O:	1924Z	FE(s):			A/C Land		0	0	0
Total:	8.5	Total:	8.0	FD(s):	Hathaway Kalen	Visitors:	ASOS Land				
Sponsoring Org:		AR		SEB:			Storm Number ID:		NONE		
Program:		PAR					(ie: AL072012)				
Purpose:		AR2021 10P15		SSA:	DeFeo		TCPOD/WSPOD Mission		NOAA 10WSC IDP15		
				AVAPS:	Warnecke		(ie: NOAA2 2418A SANDY)				
AS REQUIRED BY ORM				Y	N	REMARKS	Fix Number	Obs Number	Fix Time	SLP	
VOLCANIC ASH					✓						
SCIENCE MISSION WITHIN BDY LAYER					✓						
LACK OF PRECIPITATION					✓						
RELATIVE HUMIDITY ≥ 80%					✓						
LARGE AIR-SEA TEMP GRADIENT					✓						
HIGH SURFACE WINDS					✓						
LONG FETCH / DURATION OF SFC WND					✓						
SEA SALT ACCRETION FORECAST					✓						
SEA SALT ACCRETION OBSERVED					✓						
Gmax:				Gmin:		*Highlighted items must be completed before departure.					
Remarks:				no laptop serial .dat file recorded							

AOC GPS Dropwindsonde Log (updated Mar 2019)

30/32

Flight ID: 20210221N1

ASPEN Operator/Flight Director(s): Kelen / Hathaway

Mission ID: NOAA9 10WSC IOP15

Storm Name/Track: Atmo River

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	205141	51033	1	30.00	-156.99	Clr	1025.0	20015	212115	N
2	2	210017	20262	2	30.92	-156.95	Clr	1026.4	13017	212124	N
3	3	210841	11600	3	31.83	-156.89	Undrcst	1026.8	13512	212131	N
4	4	211651	21629	4	32.72	-156.83	Undrcst	1027.1	15013	212141	N
5	5	212500	21628	1	33.64	-156.78	Undrcst	1027.0	15019	212147	N
6	6	213249	10486	2	34.54	-156.73	Undrcst	1026.1	15513	212155	N
7	7	214031	40937	3	35.44	-156.66	Undrcst	1026.4	17516	212202	N
8	8	214753	40716	4	36.34	-156.61	Undrcst	1024.8	19508	212207	N
9	9	215516	40017	1	37.26	-156.54	Undrcst	1024.7	16009	212214	N
10	10	220228	20221	2	38.17	-156.48	Undrcst	1025.9	22007	212222	N
11	-	220927	40938	3	-	-	-	-	NO PTH	-	Y
12	11	221027	20943	4	39.21	-156.40	Undrcst	1026.8	05508	212230	N
13	12	221624	51030	1	39.98	-156.35	Undrcst	1026.9	01502	212237	N
14	13	222318	21654	2	40.89	-156.28	Undrcst	1026.4	01007	212244	N
15	14	223002	11621	3	41.79	-156.21	Brkn	1026.6	24502	212248	N
16	15	223643	20286	4	42.69	-156.15	Clr	1027.0	24512	212257	N
17	16	224334	40591	1	43.59	-156.08	Clr	1026.0	26518	212304	N
18	17	225018	30447	2	44.47	-155.89	Clr	1024.6	23519	212311	N
19	18	225730	30117	3	45.02	-154.67	Clr	1023.8	25025	212318	N
20	19	230448	50649	4	45.52	-153.34	Few	1021.6	24524	212325	N
21	-	231151	20431	1	-	-	-	-	NO PTH	-	Y
22	20	231231	20627	2	45.84	-151.91	Brkn	1021.8	24017	212331	N
23	21	231834	30117	3	45.25	-151.27	Undrcst	1023.8	24520	212339	N
24	22	232556	10485	4	44.52	-150.55	Undrcst	1024.4	25013	212346	N
25	23	233358	10385	1	43.72	-149.82	Undrcst	1026.0	23010	212353	N
26	24	234058	11617	2	43.02	-149.20	Undrcst	1026.4	27507	220003	N
27	25	234828	40586	3	42.29	-148.54	Undrcst	1026.8	25508	220008	N
28	26	235614	10334	4	41.52	-147.90	Undrcst	1027.2	22519	220015	N
29	27	000343	21653	1	40.76	-147.28	Undrcst	1028.7	21020	220023	N
30	28	001101	21652	2	40.02	-146.67	Undrcst	1029.7	19522	220030	N
31	29	001827	11566	3	39.25	-146.07	Undrcst	1032.1	20017	220037	N
32	30	002548	40929	4	38.49	-145.49	Brkn	1032.9	18017 / Last Report		N
33											
34											
35											
36											
37											
38											

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

COMMENTS:

Obs
XmittedObs
Missed# of sondes
launched# of bad
sondes