

PB1
3

U.S. Dep't. of Commerce / OMAO / NOAA / Aircraft Operations Center

FLT ID: 20180920N1	From: KLAL	To: KLAL
FLT #:	Blk In: 2134 z	Lnd Time: 2130z
ETD: 1300 z	Blk Out: 1249 z	T/O Time: 1300z
ETE: 8+30	Total Blk: 8.8	Total Flt: 8.5
Sponsoring Org: AOC	Program: PFT (Tra)	Purpose: HRD SAL

AOC Flight Crew

Aircraft Commander: COWAN	SSA: DEFEO
Co-Pilot: SIMS / OSS MURPHY	AVAPS: PATEL, WARNECKE
Navigator: /	Scientists: Jon Zawislak (HRD)
Flight Eng: /	Scientists:
Flt Director: HENNING	Scientists:
SEB: / /	Scientists:
Crew Chief:	Visitors: / /

	A/C - Takeoff	Wx Station - Takeoff	A/C - Land	Wx Station - Land
Pressure	PSM#2 1013.1	1012.6 30.05 + 28.0	1010.6	1010.5 29.98 + 32.0

AS REQUIRED BY ORM	YES / NO	REMARKS
VOLCANIC ASH		
SCIENCE MISSION WITHIN BOUNDARY LAYER		
LACK OF PRECIPITATION		
RELATIVE HUMIDITY AT OR ABOVE 80%		
LARGE AIR-SEA TEMPERATURE GRADIENT		
HIGH SURFACE WINDS		
LONG FETCH AND/OR DURATION OF SFC WIND		
SEA SALT ACCRETION FORECAST		
SEA SALT ACCRETION OBSERVED		

Dropsondes	42	Good: 40	Bad: 2	Sent: 40
AXBT		Good:	Bad:	Sent:

List other data sources in Remarks section

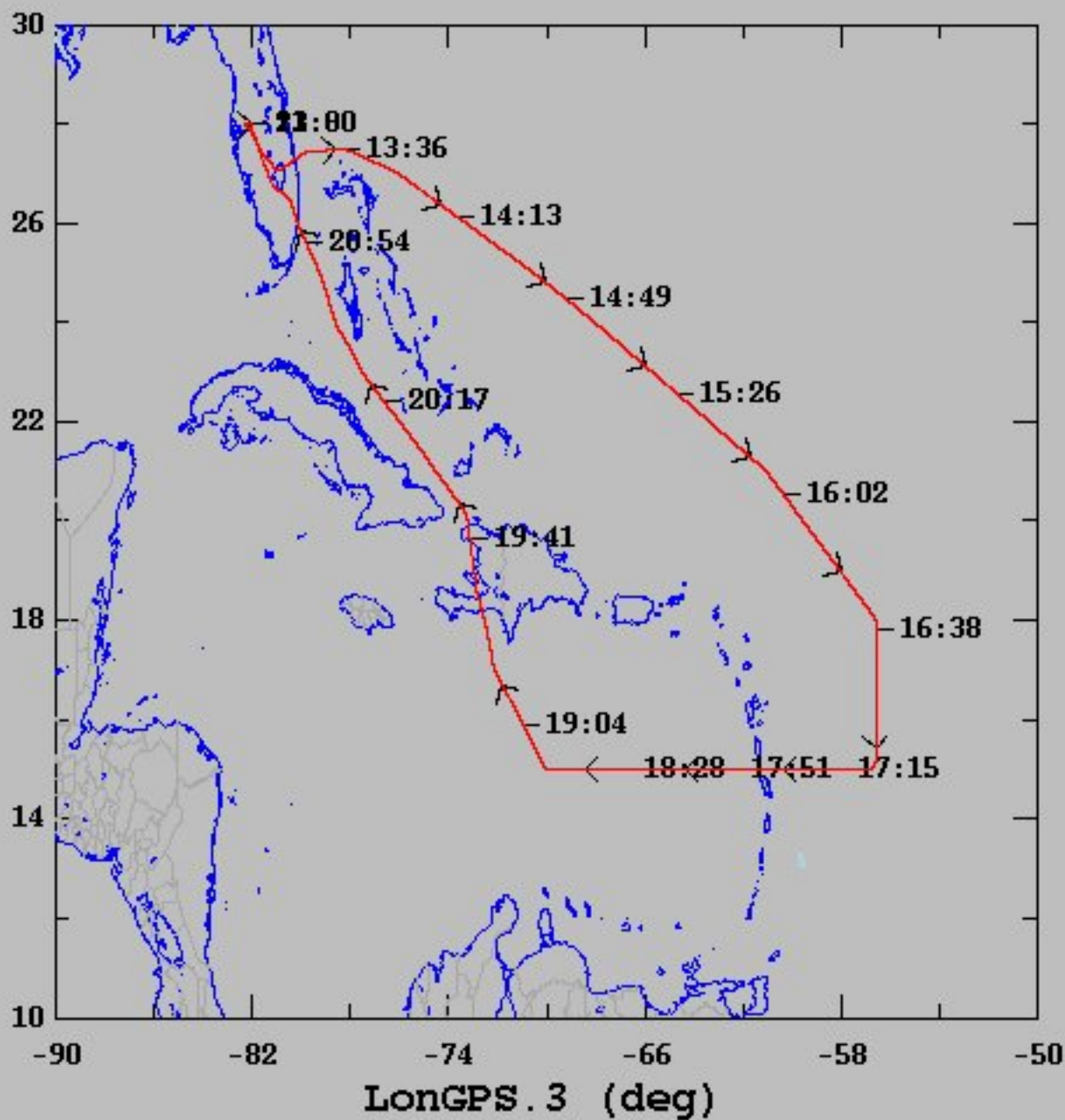
Remarks (Storm VDM Identifier, Mission ID, Fix Times)	Fix #	VDM Ob Num	Fix Time / SLP
Storm Number Identifier (VDM): (ie: AL072012)			
TCPD/WSPD Mission ID: WAWXA SAHARAN AIR			
(ie: NOAA2 2418A SANDY)			

Remarks:

1
 13354
 11309
 123.7

45 min

09/20/2018, 13:00:05-21:30:48



APPENDIX 2 – GIV QC Checklist

PSM # 2

Flight ID:	20180920N1
Flight Director(s):	HENNING

Pressure Comparison		
	T/O	Land
Aircraft	1013.1	1010.6
Tower	1012.6	1010.3

UWZ.d mean: GREATER THAN -2.9 raw UWZ
+0.06 after post-processing 30.05 29.98

	Raw 1Hz Mean File Parameters				C File Parameters	
<input checked="" type="checkbox"/> Accelerometer	AccAXI.1	AccAYI.1	AccAZI.1		AccZref	
	AccAXI.2	AccAYI.2	AccAZI.2			
	AccAXI.3	AccAYI.3	AccAZI.3			
<input checked="" type="checkbox"/> 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	
<input checked="" type="checkbox"/> Ground Speed	GsXI-GPS.1	GsXI.1	GsGPS.1	GsXGPS.1	GSXref	
	GsXI-GPS.2	GsXI.2	GsGPS.2	GsXGPS.2	GSYref	
	GsYI-GPS.1	GsXI.3		GsYGPS.1	GSZref	
	GsYI-GPS.2	GsYI.1	GsZI.1	GsYGPS.2		
	GsZI-GPS.1	GsYI.2	GsZI.2	GsZGPS.1		
	GsZI-GPS.2	GsYI.3	GsZI.3	GsZGPS.2		
<input checked="" type="checkbox"/> Lat/Lon	LatGPS.1	LatI.1	LonGPS.1	LonI.1	LATref	
	LatGPS.2	LatI.2	LonGPS.2	LonI.2	LONref	
	LatGPS.3		LonGPS.3			
<input checked="" type="checkbox"/> 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	PQM.11	PSM.11	PQALPHAref	PSMref
	PDBETA.2	PQBETA.2			PQBETAref	PS.c
<input checked="" type="checkbox"/> Air Speed	CasADDU.1	TasADDU.1	IasADDU.1		IAS.d	TAS.d
<input checked="" type="checkbox"/> 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		
<input checked="" type="checkbox"/> Temp/Dewpt	TTM.1	TTM.11	TDM.1		TD.c	TTMref
	TTM.2	TTM.13	TDM.2		TDMref	TA.d
	TTM.3	TTM.4	TDM.11			
<input checked="" type="checkbox"/> Miscellaneous (must check)					UWZ.d	WS.d
					DPJ_WSZ	WD.d
					HUM	

Mission Documents:

<input checked="" type="checkbox"/> Error Summary
<input checked="" type="checkbox"/> Crew Manifest
<input checked="" type="checkbox"/> QC checklist
<input checked="" type="checkbox"/> Dropwindsonde Log(s) – AVAPS and FD if completed
<input type="checkbox"/> Miscellaneous FD notes

NOTES:

SELECTING PDApha.2 in post processing removes the very large negative bias in vertical winds seen in RAWA.nc file coming off plane.

N42/3RF HRD GPS Dropwindsonde Scientist Log (Revised 5/2002)

Storm NESDIS SAL

Dropwindsonde Scientists ZAWISLAK

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Flight ID 20180920N1

Flight Director HENNING

Takeoff from LAL at 1300 UTC

Mission ID WAWXA
SAHARANAIR

AVAPS Operators PATEL / WIERMERE

Recovery at LAL at UTC

Drop #	Sonde ID #	Time (UTC)	Lat (°N)	Lon (°W)	Surface Pressure (mb)	Wind closest to surface dir/spd hgt (kt) (m)	BT SST (°C)	Eye, Eyewall, Rainband (direction)	Comments	Ob #
CH1	1 st 181920947	1337	27.49	78.18	1017	011/6			PREM CLEAR SKY	1
CH2	2 nd 182330636	1354	26.99	75.96	1018	327/4				2
CH3	3 rd 182340115	1405	26.49	74.60	1018	287/4			CLEAR BELOW BELOW, FEW CLOUDS ON MARINE TOP	3
CH4	4 th 182340139	1416	25.99	73.23	1018	285/12			SCATTERED CLOUDS BELOW SOME SHALLOW BUILD UP → REACHING MID DECK	4
CH1	5 th 182310500	1427	25.49	71.87	1018.1	187/4				5
CH2	6 th 182240287	1438	24.99	70.48	1017.5	153/12			CLEAR BELOW PARTIAL INITIAL PT. 6 FAST FALL STABLE AT ~3000	X
CH3	7 th 181921009	1439	24.96	70.40	1018.5	149/7			BACKUP AT PT 6 FOR PT. 6 INITIAL FAST FALL	6
CH4	8 th 182340117	1458	23.99	67.98	1018.7	124/19				7
CH1	9 th 182340155	1506	23.62	67.12	1017.3	113/13			CLOUDS BELOW, MOST CONVECTION IN AREA	8
CH2	10 th 182930331	1513	23.25	66.24	1018.3	142/8			ARRIVE AT FLIGHT LEVEL TRANSITION INTO SAL	9
CH3	11 th 182010472	1520	22.87	65.35	1019.1	149/12			ARRIVE TRANSITION	10
CH4	12 th 182010457	1527	22.49	64.49	1019.3	146/9			MOVE OUT OF CLOUDS. LOOKING @ BIT DIRT SAL	11
CH1	13 th 181930905	1539	22.15	63.68	1018.3	132/8			SAL	12
CH2	14 th 182330613	1541	21.75	62.74	1018.3	111/10			SAL, FEW CLOUDS W/IN THE SAL	13
CH3	15 th 182010731	1548	21.38	61.87	1018.3	103/9			SAL, FEW CLOUDS	14
CH4	16 th 182340168	1555	20.99	60.99	1018.1	97/10			SAL	15
CH1	17 th 182340137	1606	20.24	59.97	1016.3	78/12			SAL	16

EARLY COUNTER DETECT, BUT CLOUD

N42/3RF HRD GPS Dropwindsonde Scientist Log (Revised 5/2002)

Storm NESOS SAL

Dropwindsonde Scientists ZAWISWAK

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Flight ID 20180920N1

Flight Director HENNING

Takeoff from LAL at 1300 UTC

Mission ID WAWKA SAHARAVAIR

AVAPS Operators PATEL / WERNERKE

Recovery at LAL at UTC

Drop #	Sonde ID #	Time (UTC)	Lat (°N)	Lon (°W)	Surface Pressure (mb)	Wind closest to surface dir/spd (kt)	hgt (m)	BT SST (°C)	Eye, Eyewall, Rainband (direction)	Comments	Ob #
CH2 18 ^{PT} ₁₇	181930904	1617	19.49	58.74	1015.7	59	11			SAL. SCATTERED CLOUDS BELOW	17
CH3 19 ^{PT} ₁₈	181930902	1627	18.73	57.61	1014.9	76	10			SAL, BUT LOOKING A BIT CLEANER. MUCH CLEANER NO DUST	18
CH4 20 ^{PT} ₁₉	182010071	1638	17.94	56.53	1014.4	80	16			PRETTY CLEAR OF SAL NOW SCATTERED CLOUDS	19
CH1 21 ^{PT} ₂₀	182010090	1645	16.98	56.50	1013.7	62	19				20
CH2 22 ^{PT} ₂₁	181930910	1653	15.99	56.50	1013.6	60	20				21
CH3 23 ^{PT} ₂₂	182010722	1701	15.08	56.61	1012.8	76	16			STILL CLEARISH BELOW SCATTERED CLOUDS, NO DUST	22
CH4 24 ^{PT} ₂₃	182030351	1709	15.00	57.61	1013.1	68	19			TRANSITION BACK INTO DUST	23
CH1 25 ^{PT} ₂₄	182010725	1719	15.00	58.71	1014.0	63	20			BACK INTO SAL → W/LL, DUST SAL DUST SCATTERED / FEW SHALLOW CLOUD LAYER	24
CH2 26 ^{PT} ₂₅	182340160	1723	15.00	59.81	1013.9	59	20			SAL DUST	25
CH3 27 ^{PT} ₂₆	182330625	1737	15.00	60.92	1013.9	74	19			SAL DUST	26
CH4 28 ^{PT} ₂₇	181921006	1746	15.00	62.01	1013.6	91	18			SAL DUST	27
CH1 29 ^{PT} ₂₈	182240339	1753	15.00	62.84	1013.0	94	21			SAL DUST	28
CH2 30 ^{PT} ₂₉	182340138	1800	15.00	63.68	1012.8	86	22			SAL DUST	29
CH3 31 ^{PT} ₃₀	182310399	1807	15.00	64.51	1012.8	101	18			SAL DUST	30
CH4 32 ^{PT} ₃₁	182330633	1814	15.00	65.35	1012.7	91	23			SAL DUST	31
CH1 33 ^{PT} ₃₂	182340118	1821	15.00	66.18	1012.2	95	17			GETTING LESS DUST. IMPROVEMENT OF THE WAVE NOW	32
CH2 34 ^{PT} ₃₃	182330618	1828	15.00	67.02	1012.1	-	-			WAVE	33

N42/3RF HRD GPS Dropwindsonde Scientist Log (Revised 5/2002)

Storm NESDIS SAL Dropwindsonde Scientists ZAWISUDR Page 3 of 3

Flight ID 20180920NI Flight Director HENNING Takeoff from LAL at 1300 UTC

Mission ID WAWYA AVAPS Operators PATEL / WERNERKE Recovery at LAL at UTC

SOHRAWAIR

Drop #	Sonde ID #	Time (UTC)	Lat (°N)	Lon (°W)	Surface Pressure (mb)	Wind closest to surface dir/spd hgt (kt) (m)	BT SST (°C)	Eye, Eyewall, Rainband (direction)	Comments	Ob #
CU 3	35 ^{PR} 34	182010072	1841	15.00	68.51	1010.2	102/23			34
CU 4	36 ^{PR} 35	182330653	1853	15.03	70.00	1009.5	109/21			35
CU 1	37 ^{PR} 36	183010647	1905	16.00	71.00	1010.6	90/22		MUCH MORE CLEAR BELOW WS	36
CU 2	38 ^{PR} 37	182310501	1918	17.01	72.10	1011.1	74/20		IN CIRCUIT CLOUDS, CLOUDS CONVECTIVE	37
CU 3	39 ^{PR} 38	182340127	2015	22.24	76.33	1013.9	68/12			38
CU 4	40 ^{PR} 39	182210264	2026	23.01	77.51	1014.9	95/8		A LOT MORE MOIST	39
CU 1	41 ^{PR} 40	183010865	2047	25.00	79.21	1013.2	-/-		CLEAR BELOW <u>FAST FALL</u>	40
CU 2	42 ^{PR} 40	182330632	2049	25.16	79.35	1015.1	-/-		CLEAR BELOW P NOT GOOD 800 PARS? 8TH RAN	-

Project: Hurricane 2018

Mission: SALFlight ID: 20180920N1

Take Off: _____

Landing: _____

Flt Dir: Rich

Launcher S/N: _____

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
1	181920947	1	-0.5	13:37	AJP	SAT		✓
2	182330636	2	0	13:54				✓
3	182340115	3	-0.3	14:05	↓	↓		✓
4	182340139	4	0	14:16				✓
5	182310500	1	0	14:27				✓
6	182240287	2	-0.4	14:38			last fall, thrn stabilized	✓
7	181921009	3	0	14:39			Back up 6	✓
8	182340117	4	0	14:58			DP #7	✓
9	182340155	1	0	15:06				✓
10	182930331	2	-0.4	15:13				✓
11	182010472	3	0	15:20				✓
12	182010457	4	-0.3	15:27				✓
13	181930905	1	0	15:33				✓
14	182330613	2	0	15:41				✓
15	182010731	3	-0.6	15:48				✓
16	182340168	4	0	15:55				✓
17	182340137	1	0	16:06				✓
18	181930904	2	0	16:17				✓
19	181930902	3	0	16:27				✓
20	182010071	4	0	16:38				✓
21	182010090	1	0	16:45				✓
22	181930910	2	0	16:53				✓
23	182010722	3	0	17:01				✓
24	182930351	4	0	17:09				✓
25	182010725	1	0	17:19				✓
26	182340160	2	0	17:28				✓
27	182330625	3	0	17:37				✓
28	181921006	4	0	17:46				✓
29	182240339	1	0	17:53				✓
30	182340138	2	0	18:00				✓
31	182310399	3	0	18:07				✓
32	182330633	4	0	18:14				✓
33	182340118	1	0	18:21				✓
34	182330618	2	0	18:28				✓

Drop #	Sonde Serial #	Rcvr #	Press Offset	Launch Time	Operator	Charge \$\$ To	Comments	Good ?
35	182010042	3	0	18:41	AJP	SAT		✓
36	182330653	4	0	18:53	↓	↓		✓
37	183010647	1	0	19:05	↓	↓		✓
38	182310501	2	-0.5	19:18				✓
39	182340127	3	0	20:15				✓
40	182210264	4	0	20:26				✓
41	183010865	1	0	20:47			fast fall / Partial data	✓
42	182330632	2	0	20:49			NO RH part No Air Temp Hum.	✗
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								

Drop Station Operator Notes

Charge \$\$ To Options: AOC, NWS, HFIP, HRD, IR/SST, SAT (Special NESDIS/HRD sondes) or HRD ONLY– Do not use funding codes!

AVAPS Pre-Flight Check:

- If time-permits, verify cabin pressure sensor w/ lab standard
- Start AVAPS., then start Soundings and set the Project Name and Full Flight ID (example: 20120823N2).
- Verify the Frequency band allocation as required:
- Band A - W53rd, Band B - Research, Band C - N43RF, Band D - N49RF, Band E – Global Hawk
- Select the **GPS Reference** tab from the **Soundings Displays** page and verify good GPS data
- Perform a prelaunch check on each channel, look for reasonable data and no CRC error status lights. Verify data is available on Remote AVAPS at R1 and L1, then terminate the sonde by selecting **NoDrop** to cancel the sonde initialization. Verify the AVAPS Data mission folder has been created
- Verify AVAPS PC Time is correct – if time is off by >4sec, no data will display
- Early launch detects are caused usually by remanufactured sondes with the chute riser line not properly coiled below the PCB ear. This may also cause fast falls. If this is suspected, repack the riser line as time permits
- Perform RH Regeneration on all sondes – Multiple RD41 sondes may be processed at once

AVAPS Launch:

- Select a sonde frequency in the Green band and away from other sondes
- Enter sonde pressure error offset if 0.4mB or greater using cabin pressure sensor – warning, this can not be used during a climb
- If the Cal lab pressure standard and the cabin pressure standard match, apply pressure offset +/- 0.1 mB
- Select “begin data collection” and verify good data with winds prior to putting sonde in launch tube
- Do not shorten the ribbon on N49
- Loosen ribbon and extend end of ribbon to near, but not over, the sensor end of the sonde
- Place the sonde in the launch tube, sensor arm up, with the power pin socket facing starboard
- Verify the sonde is actively tracking GPS data prior to launch and no early launch detect