

AXBTS	0	0	0
AXCPs	0	0	0
AXCTDs	0	0	0
UAS	0	0	0

Flight Director: Kalen / Henning
Phone #: 863-500-3962

ACAT-4 Version = 7.3

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

FLIGHT INFORMATION				CREW MANIFEST			MISSION INFORMATION				
FLT ID:	20210818N1	FLT #:		AC:	Waddington	Scientists:	Pressure		Dropsondes		
From:	KLAL	ETD:		CP(s):	De Triquet		A/C Takeoff		Good	Bad	Sent
To:	KLAL	ETA:		NAV:					38	6	38
Block Time		Flight Time		FE(s):			ASOS Takeoff		BTs		
In:	0016Z	Land:	0010Z	FD(s):			A/C Land		Good	Bad	Sent
Out:	1632Z	T/O:	1645Z	SSA:	Henning		ASOS Land				
Total:	7.7	Total:	7.4	AVAPS:	Kalen	Visitors:					
Sponsoring Org:	HRD / ONR			SEB:	Miller		Storm Number ID:				
Program:				MX:	Patel		(ie: AL072012)				
Purpose:	Hurricane Research						TCPOD/WSPOD Mission		WA07A GRACE		
							(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:

G-IV QC Checklist

Flight ID:	20210818N1
Flight Director(s)	Kalen / Henning

UWZ.d mean:	0.08
--------------------	-------------

Pressure Comparison		
	T/O	Land
Aircraft	1016.7	1014.8
Tower	1015.7	1014.4

	Raw 1Hz Mean File Parameters					C File Parameters	
✓ Accelerometer	✓ AccAXI.1 ✓ AccAXI.2 ✓ AccAXI.3	✓ AccAYI.1 ✓ AccAYI.2 ✓ AccAYI.3	✓ AccAZI.1 ✓ AccAZI.2 ✓ AccAZI.3			✓ AccZref	
✓ Altitude	✓ AltGPS.1 ✓ AltGPS.2 ✓ AltGPS.3	✓ AltI.1 ✓ AltI.2 ✓ AltI.3	✓ AltPaADDU.1 ✓ AltPaADDU.2 ✓ AltRA.1	✓ AltBCADDU.1 ✓ AltBCADDU.2		✓ ALTref ✓ ALTPA.d ✓ ALTGA.d	
✓ Ground Speed	✓ GsXI.1 ✓ GsXI.2 ✓ GsXI.3 ✓ GsXGPS.1 ✓ GsXGPS.2 ☐ GsXGPS.3	✓ GsYI.1 ✓ GsYI.2 ✓ GsYI.3 ✓ GsYGPS.1 ✓ GsYGPS.2 ☐ GsYGPS.3	✓ GsZI.1 ✓ GsZI.2 ✓ GsZI.3 ✓ GsZGPS.1 ✓ GsZGPS.2 ☐ GsZGPS.3	✓ GsGPS.1 ✓ GsGPS.2 ✓ GsGPS.3		✓ GSXref ✓ GSYref ✓ GSZref	
✓ Lat / Lon	✓ LatGPS.1 ✓ LatGPS.2 ✓ LatGPS.3	✓ LatI.1 ✓ LatI.2	✓ LonGPS.1 ✓ LonGPS.2 ✓ LonGPS.3	✓ LonI.1 ✓ LonI.2		✓ LATref ✓ LONref	
✓ Pressure	✓ PDALPHA.1 ✓ PDALPHA.2 x PDBETA.1 x PDBETA.2	✓ PQALPHA.1 ✓ PQALPHA.2 x PQBETA.1 x PQBETA.2	✓ PQM.1 ✓ PQM.2	✓ PSM.1 ✓ PSM.2		✓ PDLAPHaref x PDBETAref ✓ PQALPHaref x PQBETAref	✓ PQMref ✓ PQ.c ✓ PSMref ✓ PS.c
✓ Air Speed	✓ CasADDU.1	✓ TasADDU.1				✓ IAS.d ✓ TAS.d	
✓ Pitch / Roll	✓ PitchI.1 ✓ PitchI.2 ✓ PitchI.3	✓ PitchRateI.1 ✓ PitchRateI.2 ✓ PitchRateI.3	✓ RolLI.1 ✓ RolLI.2 ✓ RolLI.3	✓ RollRateI.1 ✓ RollRateI.2 ✓ RollRateI.3		✓ PITCHref ✓ ROLLref	
✓ Temp / Dewpt	✓ TTM.1 ☐ TTM.2 ✓ TTM.3	✓ TTM.4	x TDM.1 ✓ TDM.2			✓ TD.c ✓ TDMref	✓ TTMref ✓ TA.d
✓ Misc. (Must check)						✓ UWZ.d ✓ DPJ_WSZ ✓ HUM	x WS.d x WD.d

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:

.1 and .2 GPS parameters data "stair steps"
PDBETA.1 & PDBETA.2 unrepresentative due to spare radome
PQBETA.1 & PQBETA.2 unrepresentative due to spare radome
PQALPHA.2 large negative spike towards end of flight
All flight level wind speed and direction suspected errors due to spare radome
TTM.3 oscillates
TDM.1 unrepresentative at the beginning of flight - representative data begins @ 18:39:00

AOC GPS Dropwindsonde Log (updated Mar 2019)

Flight ID: 20210818N1

ASPEN Operator/Flight Director(s): KALEN / HENNING

Mission ID: W07A

Storm Name/Track: GRACE

PG 1 of 2

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	171246	40499	1	26.0	83.0	SCT	1019.6	105/20	1733	✓✓
2	2	172328	40921	2	26.0	84.5	SCT	1018.4	085/12	1752	✓✓
3	3	173313	40913	3	25.9	85.8	SCT	1018.2	055/22	1756	✓✓
4				4			NO LAUNCH DETECT				
5	4	174821	40008	1	24.5	84.7	SCT	1016.5	085/21 LATE LAUNCH DETECT	1812	✓✓
6	5	175822	40119	2	24.5	83.5	SCT	1016.8	090/20	1818	✓✓
7	6	181034	40950	3	24.5	82.0	SCT	1017.2	105/28	1836	✓✓
8	7	182325	30662	4	24.5	80.4	SCT	1019.1	100/23	1845	✓✓
9	8	183538	20668	1	24.4	78.9	SCT	1018.7	100/12	1903	✓✓
10	9	184143	31214	2	23.7	78.9	SCT	1018.2	095/21	1907	✓✓
11				3			SCT		BAD NOISY WINDS		
12	10	185845	40951	4	23.6	81.0	SCT	1017.1	090/21	1920	✓✓
13	11	190625	40500	1	23.6	82.0	SCT	1016.4	085/34	1930	✓✓
14				2			SCT		FAST FALL		
15	12	192330	40247	3	23.1	84.2	TCUs	1013.8	060/28	1946	✓✓
16	13	193505	30647	4	22.5	85.5	CDO	1014.1	100/39	1954	✓✓
17				1			CDO		NO LAUNCH DETECT		
18	14	194605	40947	2	21.2	86.0	CDO	1012.0	050/21	2005	✓✓
19	15	195327	30576	3	20.4	86.3	BKN	1011.9	060/23	2013	✓✓
20	16	200243	30574	4	19.4	86.9	BKN	1009.9	005/14	2029	✓✓
21	17	201424	20775	1	18.2	86.3	BKN	1009.8	040/13	2043	✓✓
22	18	202620	20762	2	17.0	85.5	BKN	1010.5	280/18	2049	✓✓
23	19	203840	30663	3	16.9	84.1	UCST	1009.2	225/14	2100	✓✓
24	20	205117	40946	4	17.0	82.6	CDO	1009.8	175/16	2116	✓✓
25	21	210411	46123	1	18.2	81.8	CDO	1012.1	130/26	2124	✓✓
26	22	211609	20672	2	19.6	82.0	CDO	1012.5	125/34	2138	✓✓
27	23	212248	20781	3	19.5	82.8	CDO	1009.2	125/47	2142	✓✓
28	24	212946	40012	4	19.0	83.4	CDO		TELEMETRY DIED AT 500MB	2152	✓✓
29	25	213608	21427	1	18.3	83.6	CDO	1008.1	190/25	2159	✓✓
30	26	214230	50387	2	18.3	84.4	CDO	1007.0	270/17	2201	✓✓
31	27	214838	20757	3	18.3	85.2	CDO	1008.6	255/13	2212	✓✓
32	28	215526	20793	4	18.9	85.6	CDO	1008.0	010/16	2216	✓✓
33	29	220138	20771	1	19.6	86.0	CDO	1007.8	035/29	2221	✓✓
34	30	220748	20794	2	20.2	85.7	CDO	1008.9	060/37	2233	✓✓
35	31	221414	20763	3	20.9	85.3	CDO	1010.4	070/32	2236	✓✓
36	32	222228	20786	4	21.0	84.3	CDO	1010.1	085/40	2247	✓✓
37	33	222920	20791	1	20.8	83.5	CDO	1010.3	110/47	2249	✓✓
38	34	223444	20761	2	20.4	83.1	CDO	1010.1	120/53	2256	✓✓

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

Obs Xmitted

Obs Missed

of sondes launched

of bad sondes

COMMENTS:

71kts @ 944mb

AOC GPS Dropwindsonde Log (updated Mar 2019)

Flight ID: 20210818N1

ASPEN Operator/Flight Director(s): KALEN / HENNING

Mission ID: WC07A

Storm Name/Track: GRACE

PG 2 of 2

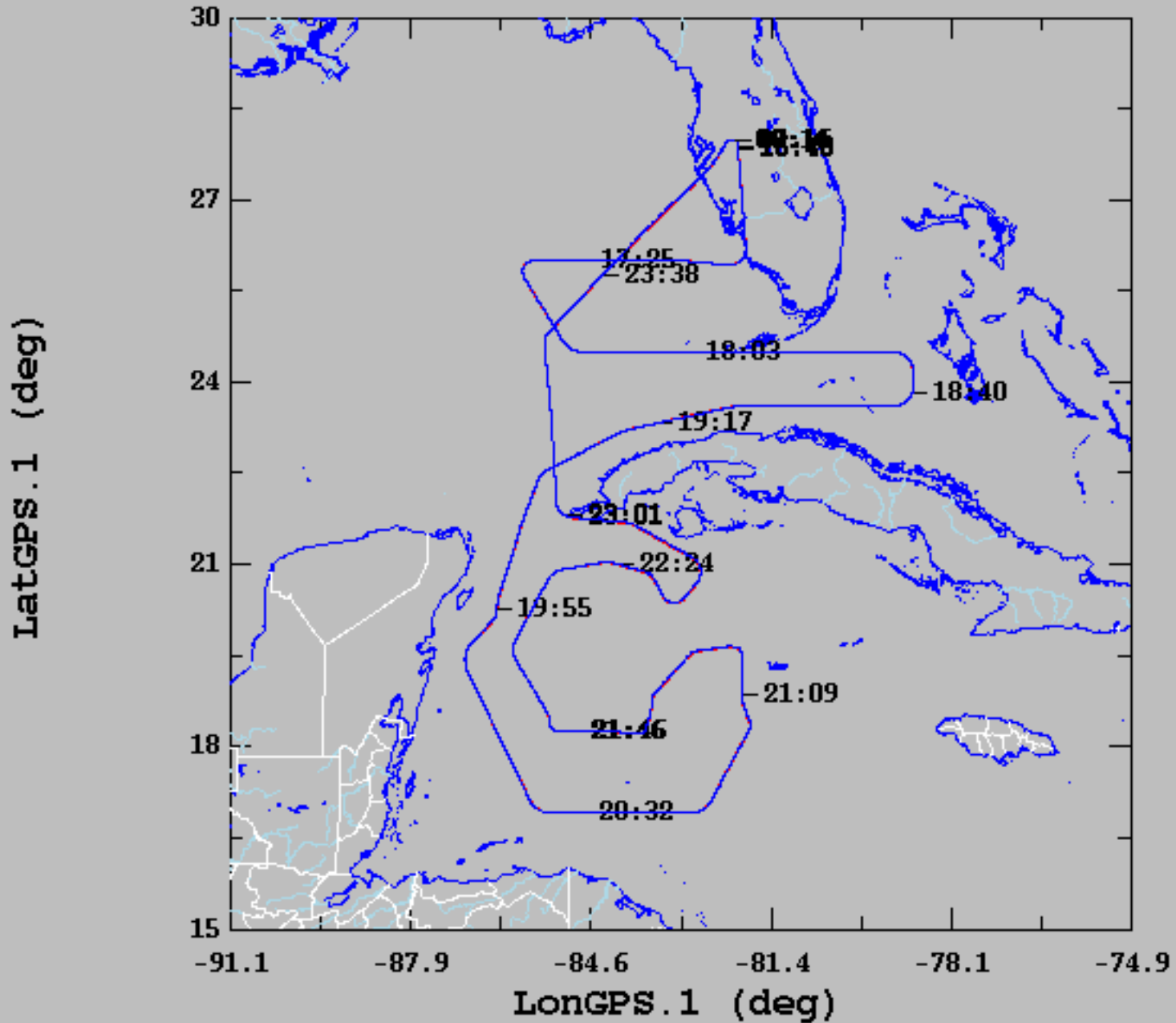
Sonde #	Ob #	Launch Time HHMMSS (Z)	Sonde ID (min last 5)	Ch # used	Lat (°N)	Lon (°E)	Prominent Wx Cond.	SFC Prs (mb)	Comments / Issues / QC / ASPEN Edits	KWBC #	Sonde Issues?
1				3			FAST FALL				
2	35	224254	40122	4	21.1	82.8	BKN	1012.3	120/34	2311	✓✓
3	36	225236	20769	1	21.7	83.9	BKN	1011.9	105/35	2314	✓✓
4				2			LATE LAUNCH DETECT				
5	37	230352	50382	3	22.0	85.2	BKN	1012.8	080/32	2325	✓✓
6	38	231632	20765	4	23.5	85.3	SCT	1015.4	080/15 R. LAST	2336	✓✓
7									REPORT		
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
32											
33											
34											
35											
36											
37											
38											

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

COMMENTS:

Obs Xmitted 38 Obs Missed 0 # of sondes launched 44 # of bad sondes 6

2021-08-18, 16:11:09-24:16:15



	mean	sigma	min	max
— LatGPS.1 (deg), 1 s/sec	22.77	3.41	16.92	27.99
— LongGPS.1 (deg), 1 s/sec	-83.52	1.87	-86.88	-78.80
— LatI.1 (deg), 1 s/sec	22.77	3.40	16.92	27.99
— LonI.1 (deg), 1 s/sec	-83.52	1.87	-86.87	-78.80