19930828I1.DROPS

HRD Omega-Dropwindsonde Scientist Log

Form E-6

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Flight 930828 I

Storm EMILY

ODW Scientists FRANKLIN BURPEE

AOC Operator CARLOS

Drop No.	Sonde ID No.	Time GMT	Lat. (°)	Long. (°)	Wind (~~m/s~~ kts) (WD/WS)	Height (GA)	Temp. (TA)	Dew Pt. (TD)	Pressure (PS)	Remarks
1	00034	184840				54			52	
1A	LOD2	185300								
2	20036	190110								
2A	10822	190520								
3	00036	193444								
4	20034	194830								
5	10826	201000								
6	00035	202502								
7	21384	204445								
8	00032	212122								ODW/LOD2 COMPARISON
8A	LOD2	212149								
drops	two	sondes								
that	we	could pick up!								

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E.6 Omega Dropwindsonde Scientist (On-Board)

The on-board lead project scientist (LPS) on each aircraft is responsible for determining the distribution patterns for ODW releases. Predetermined desired data collection patterns are illustrated on the flight patterns. However, these patterns often are required to be altered because of clearance problems, etc. Operational procedures are contained in the operator's manual. The following list contains more general supplementary procedures to be followed. (Check off and initial.)

E.6.1 Preflight

_____ 1. Determine the status of equipment and report results to the on-board LPS.

_____ 2. Confirm the mission and pattern selection from the LPS and assure that the proper number and distribution (frequency) of ODW's are on board the aircraft.

_____ 3. Complete the appropriate preflight calibrations and check lists.

E.6.2 In-Flight

_____ 1. Operate the system as specified in the operator's manual.

_____ 2. Obtain drop release approval (for each drop) from the AOC flight director or navigator for each specific time and location of drop.

_____ 3. Report to the LPS as soon as it is determined that the ODW is (or is not) transmitting a good signal.

_____ 4. Report completion of each drop and readiness for the next drop.

_____ 5. Complete Form E-6.

E.6.3 Postflight

_____ 1. Complete the summary form for ODW's.

_____ 2. Brief the on-board LPS on equipment status and turn in reports and completed forms to the LPS.

_____ 3. Hand-carry all ODW data tapes and printouts and inform the AOC flight director that you are arranging delivery as follows:

a. Outside of Miami - to the HRD operations center (FGOC).
b. In Miami - to AOML/HRD (temporarily), either directly or via MGOC, for conversion to 9-track magnetic tapes.

_____ 4. Debrief at the appropriate operations center (FGOC or MGOC).

_____ 5. Determine the status of future missions and notify the appropriate operations center (FGOC or MGOC) as to where you can be contacted.

Vortex/Environment Interaction Experiment

Timing and Distance Tables

PRIMARY (UPPER) FLIGHT PATTERN

Navigation points:

Segment	Dist (nm)	GS (kt)	Seg/Tot Time (h:mm)
1-2	110	280	0:23 / **0:23**
2-3	100	280	0:21 / 0:44
3-4	71	320	0:13 / 0:57
4-5	100	280	0:21 / 1:18
5-6	118	260	0:27 / 1:45
6-7	160	300	0:32 / 2:17
7-**8**	110	280	0:23 / **2:40**
8-9	100	280	0:21 / 3:01
9-10	71	320	0:13 / 3:14
10-11	100	280	0:21 / 3:35
11-12	118	260	0:27 / 4:02
12-13	160	300	0:32 / 4:34
13-**14**	110	280	0:23 / **4:57**
14-15	100	280	0:21 / 5:18
15-16	71	320	0:13 / 5:31
16-17	100	280	0:21 / 5:52
17-18	118	260	0:27 / 6:19

Drop points:

Drop	Ch	Dist/Time to next drop (nm/:mm)	
D1	1	60	:13
D2	3	150	:32
D3	1	71	:13
D4	3	100	:21
D5	2	56	:13
D6	1	62	:14
D7	3	160	:32
D8	1	60	:13
D9	3	150	:32
D10	1	71	:13
D11	3	100	:21
D12	2	56	:13
D13	1	62	:14
D14	3	160	:32
D15	1	60	:13
D16	3	150	:32
D17	1	71	:13
D18	3	100	:21
D19	2	56	:13
D20	1	62	:14
D21	3	--	---

Note: **For a 9-h flight, maximum ferry distance to I.P. is ~400 nm. Maximum distance from base to storm center is ~540 nm.**

Sonde Back-up Strategy

1) Mission requires **31 ODWs (11/09/11), including backups.**

2) Do not back-up ODWs on the innermost ring.

3) Inbound legs:

   a) The first of the outer two sondes to fail gets backed up with a CH2 sonde. If both the outermost and middle sondes fail, only the outermost sonde gets backed up.

4) Outbound legs:

   a) If the middle ODW fails, back it up with a CH1 or CH3 sonde, and make the outer drop with a CH2 sonde.

   b) If the middle ODW is OK but the outermost (last) sonde fails, back up the outer drop with a CH2 sonde.

   c) If both the middle and outermost sondes fail, launch a CH1 or CH3 sonde on the outer downwind leg as soon as an open channel is available.