WX WXE Suspect

Dropsonde Scientist

The lead project scientist (LPS) on the P3 is responsible for determining the distribution patterns for dropwindsonde 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. On the G-IV the sole HRD person is designated the LPS. The following list contains more general supplementary procedures to be followed. (Check off or initial.)

Preflight

✓ SM 1. Determine the status of the AVAPS and HAPS. Report results to the LPS.

✓ SM 2. Confirm the mission and pattern selection with the LPS and assure that enough dropsondes are on board the aircraft.

✓ SM 3. Modify the flight pattern or drop locations if requested by AOC to accommodate changes in storm location or closeness to land.

✓ SM 4. Complete the appropriate preflight set-up and checklists.

In-Flight

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

SM 2. Ensure the AOC flight director is aware of upcoming drops.

SM 3. Ensure the AVAPS operator has determined that the dropsonde is (or is not) transmitting a good signal. Recommend if a backup dropsonde should be launched in case of failure.

SM 4. Report the transmission of each drop and fill in the Dropwindsonde Scientist Log.

Post flight

_____ 1. Complete Dropwindsonde Scientist Log.

_____ 2. Brief the LPS on equipment status and turn in completed forms.

_____ 3. Hand-carry all dropwindsonde data tapes or CDs as follows:

a. Outside of Miami-to the LPS or PI.
b. In Miami-to AOML/HRD.

[**Note**: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]

_____ 4. Debrief at the MGOC or the hotel during a deployment.

_____ 5. Determine the status of future missions and notify MGOC as to where you can be contacted.

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

IFEX TCSP

Storm Genesis Dropwindsonde Scientists Shirley Murillo Page 1 of 2

Flight ID 20050715H1 Flight Director Paul Flaherty Takeoff from MROC at 175342 UTC

Mission ID WXWXE Suspect AVAPS Operators John Hill Recovery at MROC at 022212 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 #	
✓ 1	042825032	183724	7.494	84.254	1010.1	229°/7	1295	27.5		RH heating cycles; press. bias -2.1 mb combo BT & sonde, lost winds near sfc	03	
✓ 2	043845009	185021	7.001	85.006	1009.9	305°/6	2816			press. bias -2.4 mb below 727 mb lost winds / no sfc winds	05	
✓ 3	042825088	190340	6.50	85.75	1009.2	—	—			"bad pressures in file" no launch detect, no winds	06	
✓ 3A	042825028	190419	6.47	85.79	1009.0	—	—			"bad press in file" no launch detect; backup to 3	07	
✓ 4	042825018	191556	6.003	86.512	1009.6	208°/15	7	27.1	3 30 m depth 29 S	combo BT & sonde, press bias 2.7 mb late launch detect, late winds 146 s	09	15
✓ 4A	042825015	191747	6.080	86.546	1010.0	223°/21	8			moist sounding, press bias -2.8 mb backup to 4, late winds 124 s	10	20
✓ 5	042825040	193311	7.125	86.117	1008.6	220°/15	7			press. bias -2.1 mb	11	15
✓ 6	042845003	194950	8.239	85.735	1008.9	230°/14	7			late transmitting, probs w/ AVAPS	16	15
✓ 7	042825036	200543	9.347	85.345	1008.5	209°/15	8	28.5	→ 15 m depth	late AXBT launch 2009; RH heating cycles combo BT & drop, clear sky conditions	13	15
✓ 8	043845067	202342	8.45	86.21	1008.1	—	—			"bad press. in file" no launch detect; no winds	15	
✓ 8A	043845066	202438	8.390	86.263	1009.2	229°/11	7			backup to 8, press. bias of -2.5 mb	17	10
✓ 9	042825051	204017	7.512	87.112	1003.5	217°/13	8			DLD 5.5 s; P values doubtful near some convection to our SE	18	10
✓ 10	042825039	205722	6.582	88.010	1008.9	198°/16	7	27.3		DLD 7.5 s; RH heating cycles combo BT & drop	20	15
✓ 11	042825033	211541	7.75	87.59	1008.3	—	—			no launch detect, no winds	21	
✓ 12	042825022	213235	8.875	87.179	1008.3	209°/16	7			RH heating cycles	23	15
✓ 13	042825031	214855	10.01	86.76	1007.8	—	—	28.3	→ less than 15 m depth	"bad press in file" no launch detect, no winds	25	
✓ 13A	043615109	215006	10.069	86.802	1007.8	157°/11	7			backup to 13.	26	10

IFEX TCSP

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

Storm Genesis Dropwindsonde Scientist: Shirley Murillo Page 2 of 2

Flight ID ~~2005071511~~ Flight Director Paul Flaherty Takeoff from MROC at 175342 UTC

Mission ID ~~WXWXE 505/2CT~~ AVAPS Operators John Hill Recovery at MROC at 022212 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 #
✓14	0436151110	220910	8.950	87.691	1007.8	206°/12	8			press bias -2.7mb convection to our NE E	27
✓15	0428250230	222702	7.892	88.612	1008.4	221°/18	7			RH heating cycles had to edit very bad humidity profile the humidity	30 20
✓16	0428250250	224549	6.833	89.522	1007.6	196°/14	7	—		combo BT & drop; RH heating cycles combo didn't work AXBT did launch	31 14
✓17	0436151711	230421	7.98	89.12	1007.8	—	—			no launch detect, no winds!	32
✓18	0428250280	232112	9.132	88.739	1007.7	253°/10	7			DLD 6.5 s; RH heating cycles	34 10
✓19	0428150934	232952	9.32	89.33	1007.2	—	—			"bad press. in file" no launch detect, no winds!	35
✓20	0428250210	234828	8.352	90.337	1008.8	251°/17	8			~~RH heating cycles~~ moist sounding, press bias of -2.9mb line of convection to our W	37 15
✓21	0436151010	000601	7.435	91.270	1008.8	236°/18	7	27.5 → 30m depth		moist below 850mb; RH heating cycles combo BT & drop, press bias -3.5mb	39 15
✓22	0436151060	002039	6.474	90.783	1008.9	228°/16	7			press bias -3.6mb; RH heating cycles	41 15
✓23	0436151700	003500	5.46	90.29	1008.0	—	—	27.2 → 30m depth		no launch detect, fast fall sonde combo BT & drop, cloudy	42
✓23A	0436151690	003535	5.463	90.290	1009.9	202°/17	48	27.2		press bias of 2.9mb; DLD 10 s back up to 23, moist through 850mb	43
✓24	0436151080	010456	6.938	88.659	1009.9	228°/17	8			press bias of -2.7mb, 19st sonde!	45 15