

Lead Project Scientist Check List

Date 9-12-07 Aircraft 43 Flight ID 030912I1

A. - Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>M. Black</u>	Flight Director	<u>Paul Flaherty</u>
Cloud Physics	<u>Eric Ohlhorn</u>	Pilots	<u>Tennison, TeBeest</u>
Radar	<u>Rob Rogers</u>	Navigator	<u>Paul Newman</u>
Workstation	<u>Rob</u>	Systems Engineer	<u>Kevin, Greg Best</u>
Photographer/Observer	<u>Kay Zehr</u>	Data Technician	<u>Terry Lynch, Ray Tong</u>
Dropwindsonde	<u>Rob</u>	Electronics Technician	<u>Jeff Smith</u>
AXBT/AXCP/CST	<u>Suprindo</u>	Other	<u>BAT Jeff French</u>

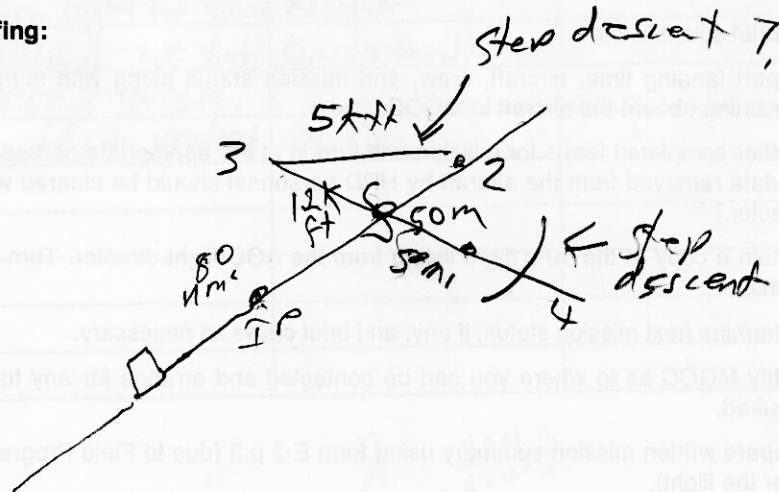
Take-Off: 1506 Location: St. Croix Landing: 2207 Location: St. Croix

Number of Eye Penetrations: 2

B. - Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
<u>12/18</u>	<u>22.0</u>	<u>58.4</u>	<u>920? mb</u>	<u>140 kts</u>

C. - Mission Briefing:



Isabel

(4)

Lead Project Scientist Event Log

Date 9-12-03 Flight 030912I LPS M. Black

Time	Event	Position	Comments
1547	Descend to 5,000'		for box calibration
154830	1st leg box pattern		~250m SW of eye
154950	End leg 1		
155128	Begin leg 2		
155248	End leg 2		10-15 kts
155344	Start leg 3		
155502	End leg 3		
155604	Start leg 4		
155728	End leg 4		
155849	TRK	52° towards LP	
1633	Ascend to 12kt		
1638	Leg 143	@10,000ft Trk 060° inbound	from 105nm out
1641	12,000 ft near eye		
1642	TRK 075° inbound		~90 mi
1651	In outer eye wall		~50mi out from eye
1658	outer portion of mzt eye wall		120kts west eye wall 4 drops eye
			cinching in eye - Radar down
172614	East eye wall		- 4 drops
	AF fix	930 mb	
	SRIA	down!	
1742	Cinching ~70mi EWF of eye		for step descent
1746	Descending to 1200 ft		for step descent
175107	Begin leg upward	1200' leg	x 70 kts
175917	End 1200' run		RLY

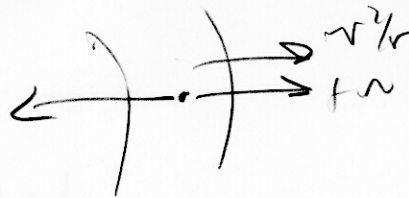
180030 Turn left descend to 900'

2

Lead Project Scientist Event Log

Date _____ Flight _____ LPS _____

Time	Event	Position	Comments
180354	900' downwind leg	wind 170°	Tot 1500
180804	End 900' leg - turn leg	frk 3500	
181038	Begin 600' upwind leg	frk 1350	
181804	end 600' leg		
182150	begin 400' downwind leg	wind 1400	
182020	end 400' leg	turn @ to 315°	frk 3500
182	descend to 200'	still downwind	
182820	begin 200' downwind		
183240	end 200' leg	downwind	
183545	start 400' crosswind		
184009	end 400' crosswind	11 miles	
184216	Begin 400-200' crosswind		
184802	end, 600' climb		frk 20
185033	begin 600' crosswind		
185059	Sonobuoy		
185645	End 600' leg - ascend		
185835	end begin 900' leg		
190515	end 900' leg		
190655	begin 1200' leg		
191234	be - end 1200' crosswind		
191254	ascend to 12,000 FT - downwind		NE or eye
193128	approaching Gray on inbound leg of figure 4 at 12kft		
193516	1st sonobuoy on inbound leg		
193550	2nd sonobuoy		
193607	3rd sonobuoy		
193637	4th sonobuoy; ch. 12 sonobuoy launched		
193826	launching center row; max FL wind 145 kts @ 12,000'; sfewind 115 kts		



Lead Project Scientist Event Log

Date _____ Flight _____ LPS _____

Time	Event	Position	Comments
194010	center fix fix	21° 43.9' 58° 28.5'	center fix
195302	1 st drop out bound leg		
195339	2 nd drop		
195407	3 rd drop		
195437	4 th drop; max FL wind 130 kts; cfc. wind 115 kts. on SE side		
200410			
200410	turning left to 030 for 60 miles		
201542	turn left to 270, inbound leg starting 50 mi. east, collect VI data		
201746	going thru outer inbound on E side; 40 dBZ echoes		
202031	outer wind max of 120 kts. (outer eyewall)		
202424	single drop just past FL wind max; max FL wind 140, sfc 105 kts		
202805	center fix 2028	21° 43.9' 58° 35.9'	
203122	single drop on out bound leg; max FL wind 145 kt; sfc wind 110 kts; broader wind field at sfc than on E side		
204055	turning to 270, RTB		
205340	climb to 16,000 ft		
213706	descend to 5000 ft. for BAT probe calibration maneuvers		
214612	turn left for box ^{circular} maneuvers for BAT probe calibration		
214837	turn right for same maneuver		
215250	holding at 230 track for 20 seconds		
215310	RTB at 5000 ft.		
2207	land at St. Croix St. Croix		

$$\frac{1}{\rho} \frac{dp}{dx} = fv + \frac{v^2}{r}$$

$$\frac{v^2}{r} + fv + \frac{1}{\rho} \frac{dp}{dx} = 0$$

$$\frac{dp}{dt} = \frac{9000 \text{ Pa}}{6 \times 10^5 \text{ m}}$$

$$\frac{(5 \times 10^5)(6 \times 10^5)}{2 \times 10^5} \text{ ft}$$

$$v = \frac{-f \pm \sqrt{f^2 - \frac{4}{\rho} \frac{dp}{dx}}}{2}$$

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