

Lead Project Scientist

Preflight

- _____ 1. Participate in general mission briefing.
- _____ 2. Determine specific mission and flight requirements for assigned aircraft.
- _____ 3. Determine from field program director whether aircraft has operational fix responsibility and discuss with AOC flight director/meteorologist unless briefed otherwise by field program director.
- _____ 4. Contact HRD members of crew to:
 - a. Assure availability for mission.
 - b. Review field program safety checklist
 - c. Arrange ground transportation schedule when deployed.
 - d. Determine equipment status.
- _____ 5. Meet with AOC flight director and navigator at least 3 hours before take-off for initial briefing.
- _____ 5. Meet with AOC flight crew at least 2 hours before take-off for crew briefing. Provide copies of flight requirements and provide a formal briefing for the flight director, navigator, and pilots.
- _____ 6. Report status of aircraft, systems, necessary on-board supplies and crews to appropriate HRD operations center (MGOC in Miami).
- _____ 7. Before take-off, brief the on-board GPS dropsonde operator on times and positions of drop times.
- _____ 7. Make sure each HRD flight crew members have life vests
- _____ 7. Perform a headset operation check with all HRD flight crew members. Make sure everyone can hear and speak using the headset.
- _____ 8. Collect "mess" fee (\$2.00) from all on-board HRD flight crew members.

In-Flight

- _____ 1. Confirm from AOC flight director that satellite data link is operative (information).
- _____ 2. Confirm camera mode of operation.
- _____ 3. Confirm data recording rate.
- _____ 4. Complete Lead Project Scientist Form.
- _____ 5. Check in with the flight director to make sure the mission is going as planned (i.e. turns are made when they are supposed to be made).

Post flight

- _____ 1. Debrief scientific crew.
- _____ 2. Report landing time, aircraft, crew, and mission status along with supplies (tapes, etc.) remaining aboard the aircraft to MGOC.
- _____ 3. Gather completed forms for mission and turn in at the appropriate operations center. [Note: all data removed from the aircraft by HRD personnel should be cleared with the AOC flight director.]
- _____ 4. Obtain a copy of the 10-s flight listing from the AOC flight director. Turn in with completed forms.
- _____ 5. Obtain a copy of the radar DAT tapes. Turn in with completed forms.
- _____ 6. Obtain a copy of the all VHS videos from aircraft cameras (3-4 approx.). Turn in with completed forms.
- _____ 7. Obtain a copy of CD with all flight data. Turn in with completed forms.
- _____ 8. Determine next mission status, if any, and brief crews as necessary.
- _____ 9. Notify MGOC as to where you can be contacted and arrange for any further coordination required.
- _____ 10. Prepare written mission summary using Mission Summary form (due to Field Program Director a week after the flight).

Lead Project Scientist Check List

Storm or Project Opheelia Experiment name ET
 Date 17/09/05 Aircraft N42RF Flight ID 050917H

A. Participants:

HRD		AOC	
Function	Participant	Function	Participant
Lead Project Scientist	<u>Aberson</u>	Flight Director	<u>Shepherd</u>
Radar	<u>Leighton</u>	Pilots	<u>Strong, Kennedy</u>
Workstation	<u>Leighton Valde</u>	Navigator	<u>Gallagher</u>
Cloud Physics	<u>N/A</u>	Systems Engineer	<u>MacMillan Bast</u>
Photographer/Observer	<u>Abraham, Tracy</u>	Data Technician	<u>Kerr Olney</u>
/Guests	<u>Prysiak</u>		
Dropwindsonde	<u>Valde</u>	Electronics Technician	
AXBT/AXCP		Other	

B. Take-off and Landing Times and Locations:

Take-Off: 161100 UTC Location: Peace / Portsmouth
 Landing: _____ UTC Location: Peace / Portsmouth

Number of Eye Penetrations: _____

C. Past and Forecast Storm Locations:

Date/Time	Latitude	Longitude	MSLP	Maximum Wind
<u>17/1500Z</u>	<u>40.7</u>	<u>69.0</u>	<u>999</u>	<u>50 kt</u>
<u>17/1800Z</u>	<u>41.3</u>	<u>68.2</u>	<u>999</u>	<u>50 kt</u>
<u>17/2100Z</u>	<u>42.4</u>	<u>66.3</u>		<u>50 kt</u>

D. Mission Briefing: ET mission NW → SE pass BT in center at location of yesterday's. Synoptic pattern, then two passes before landfall, 3 BTs. Drops throughout

TD17

181010 13 38N 54 52W 1607 XTRAP 22kt FL
 20/320 13 44N 54 54W 1006 XTRAP 40kt

E. —Equipment Status (Up ↑, Down ↓, Not Available —, Not Used O)

Equipment	Pre-Flight	In-Flight	Post-Flight	# DATs / Cds /Expendables/ Printouts
Radar/LF	↑			
Doppler Radar/TA	↑			
Cloud Physics	N/A			
Data System	↑			
GPS sondes	↑			
AXBT/AXCP	↑			
Ozone instrument	N/A			
Workstation	↑			
Videography	↑			

REMARKS:

yadda, yadda, yadda.

Lead Project Scientist Event Log

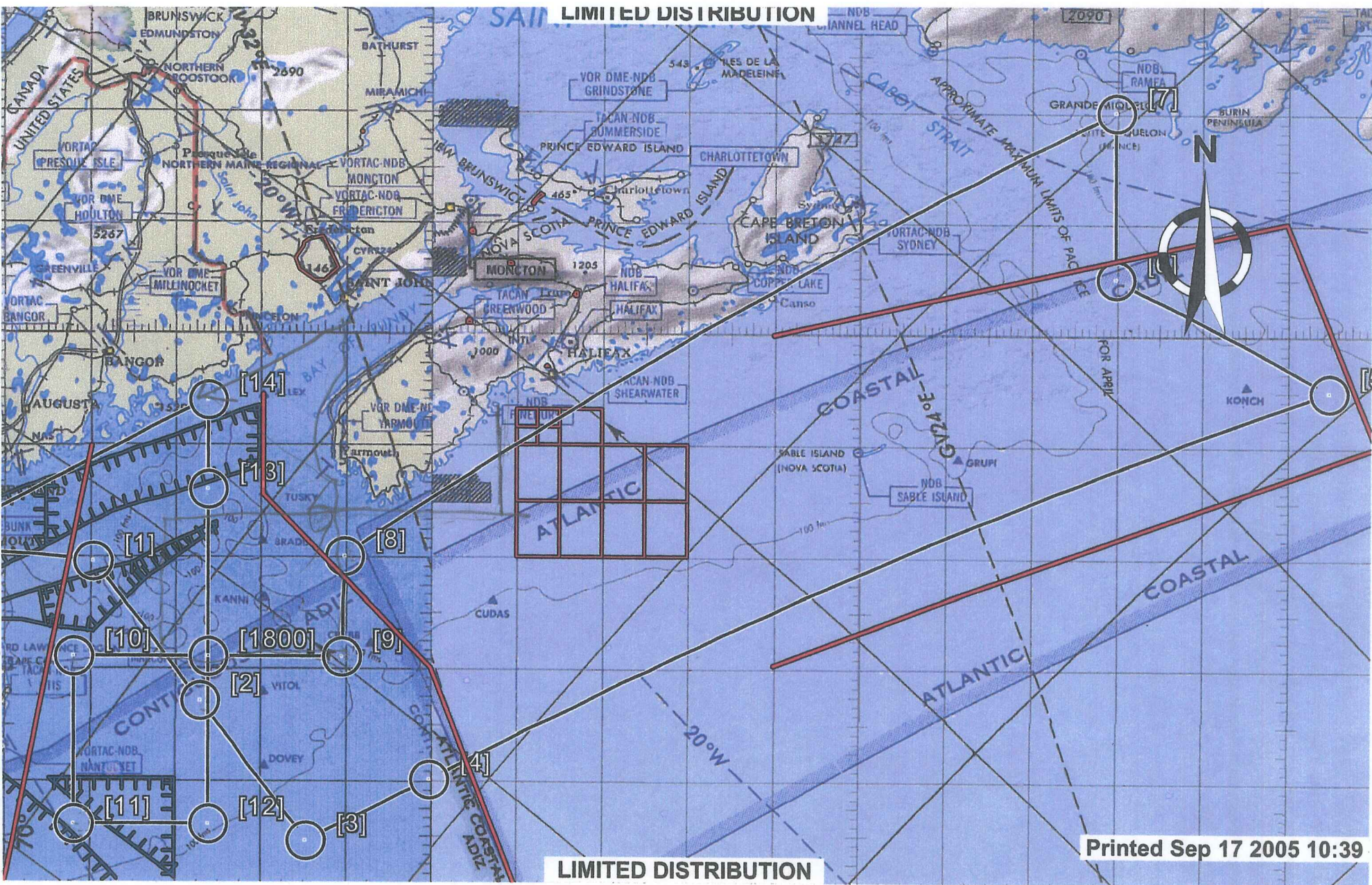
Date 17/09/05 Flight 050917 H7 LPS Aberson

Time	Event	Position	Comments
161100	Takeoff	Poore/Norfolk	Late takeoff to replace
163628	Drop #1		air bleeding valve.
	Turn to center		winds in 17
			Some turns to get
			to center. Pilots well
			look for center and navigate
165430	Drop #2 NW eye	Right winds	195 winds
165546	Drop #3 eye	BT 15.1° 15m	SFMR winds 100 (12 ms ⁻¹) 285 winds
170305	Drop #4 SE eye	SFMR very light again	winds 85
170742	Drop #5 RMW	42kt FL	flight level continues to rise
		winds 2045	60kt above BL
171105	FL, SFMR max > 50 m from center		
	Shot FL profile ~ 50kt	SFMR max 44kt	
171055	Turn		
171810	Drop #6 at turn	winds 305	
173015	Drop #7		
173305		Visible low band,	SFMR wind max, broad FL
174250	Drop #8	winds 115	
180320	Drop #9		
182343	Drop #10		
184335	Drop #11	unstable near surface,	wind shift in PBL, Gulf Stream
190200	Turn to NW		
190345	Drop #12	winds in 26	
191320	Radar worked, sent to 53p		wind shift, over Gulf Stream
193235	Drop #13		winds at 165 15km!
	Turn to N		
194936	Turn to coastal run		

Lead Project Scientist Event Log

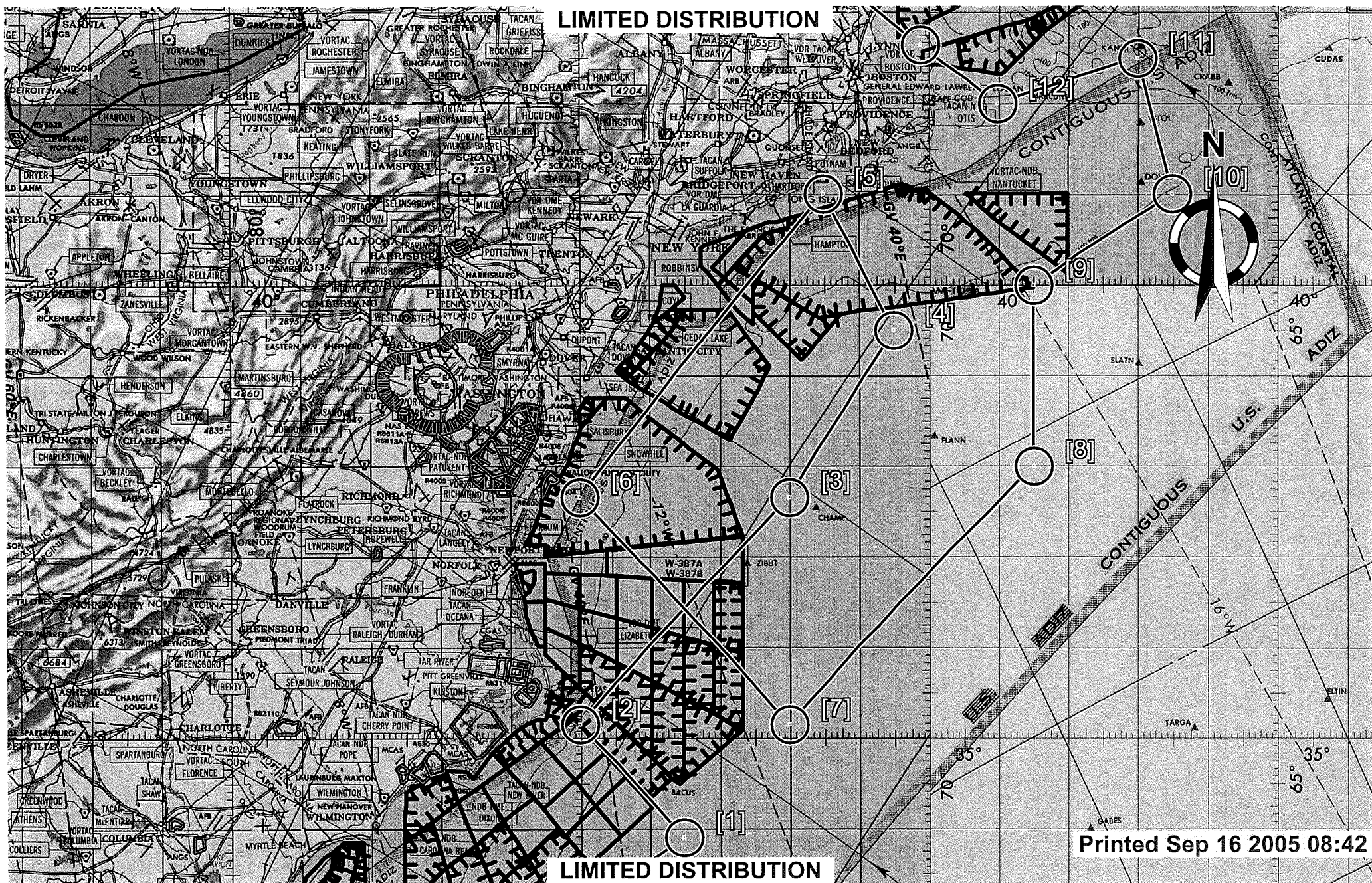
Date _____ Flight _____ LPS _____

Time	Event	Position	Comments
195059	Drop #14	Over Grand Michelson	no altitude
201220	Drop #15		
203400	Drop #16	Three different air masses in layers	highly aloft
204015	Step Frequency suddenly to 56 kt		
205922	Drop #17	No winds	
210040	Drop #18	late winds	
		Radial flight track with center from satellite	
210433	Just past FL wind speed maximum		
		On computer band on radar & satellite	
212121	Turn		
212142	Drop #19	no winds	
212330	Drop #20	winds 305	
213044	Drop #21	no winds	BT 16.5°C
213000	Turn due W		
213217	Drop #22	winds in 24s	
214638	Drop #23 near	satellite center	winds at 285 BT 10°C Real?
220200	Turn to S.		flat T for long time
220234	Drop #24	W of center	shallow
222231	Drop BT	no BT data SW of center	100 mb center
			surface center SE
			aloft center NW
225330	Drop #26	center	
	CHIPS light engine #2	end of mission	
234714	Landers (early)		
		27 sondes, 26 sondes sent	
		3 of 4 BTs worked	



CYHZ Light rain/mist 100/13 29.97 3/4 mi VIS 100ft ceiling 170C/170C 1015.1 mbs Fog
 CYQI " 90/08 29.85

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Printed Sep 16 2005 08:42